



**SURUHANJAYA KOMUNIKASI DAN MULTIMEDIA MALAYSIA
MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION**

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MCMC | ANNUAL REPORT 2021 | SHAPING THE DIGITAL FUTURE

SHAPING THE DIGITAL FUTURE

ANNUAL
REPORT 2021



STATUTORY REQUIREMENTS

According to Part V, Chapter 15, Section 123 – 125 of Communications and Multimedia Act 1998, and Part II, Section 6 of the Postal Services Act 2012, the Malaysian Communications and Multimedia Commission hereby submits a copy of the Annual Report for the year ending 31 December 2021 to the Minister of Communications and Multimedia.

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FRONT COVER RATIONALE

SHAPING THE DIGITAL FUTURE

A digital generation in the form of Artificial Intelligence (AI) on the front cover references scholarship in a cultured digital society – in its ability to identify, search, understand, evaluate, analyse and think in a way critical to “**Shaping the Digital Future**” – fueled by aspirations, driving Malaysia to be a country leading digital progress and high technology in the future. The AI feature represents the future and readiness of the Malaysian Communications and Multimedia Commission (MCMC) to lead and drive technology, find fit and adapt to the digital future.

The MCMC logo and graphic images are symbolic of the MCMC as a driving force for Malaysia’s Digital Nation and Digital Economy aspirations, enabling all levels of society to practice a prosperous digital lifestyle, comfortable and safe, for the sake of empowering and driving the nation’s hope in realising the ideal *Keluarga Malaysia*. The icons displayed are symbolic of the Government’s aspiration to transform Malaysia into a country driven by technology and digitalisation, as well as a regional leader in the digital economy and Industrial Revolution 4.0 (4IR). Graphic effects illustrated through axial image sketches present a digital future in accordance with the founding principles and the function of the MCMC in coordinating all forms of dealings related to regulation, and a more efficient, fast and effective enforcement.

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YEAR 2021 AT A GLANCE

BROADBAND

45,215

Total Broadband Subscriptions

128%

Mobile Broadband Penetration Rate per 100 Population

41%

Fixed Broadband Penetration Rate for 100 Premises

42,016 million

Total Mobile Broadband Subscriptions

3,727 million

Total Fixed Broadband Subscriptions

500

5G Transmitter Sites Completed*

*As at 9 January 2022

MOBILE CELLULAR

47,202 million

Total Mobile Cellular Subscription

144%

Mobile Cellular Penetration Rate per 100 Population

PAY TV

6,700 million

Total Pay TV Subscriptions

81%

Pay TV Penetration Rate per 100 Households (%)

16,911 million

Total Digital Signature Subscriptions

305 million

Postal Services – Total Postal Traffic in 2021

575 million

Courier Services – Total Courier Traffic in 2021

ABOUT THIS REPORT

THE MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION (MCMC) ANNUAL REPORT 2021 highlights several changes compared to previous reports in an effort to provide exposure to the content and the way it is presented. This Integrated Report provided is part of the integrated reporting (IR) information in accordance with the International Integrated Reporting Council (IIRC), which among other things aims to provide a concise and compact assessment of value creation activities by MCMC for the financial year 2021.

Adopting IR information, we believe this will allow us to communicate strategy, actions and results to stakeholders in a more meaningful way. Through this new reporting standard, we are committed to present our service model or core function more clearly by showing how we integrate our main mission and vision to create value for the stakeholders i.e., customers, members, business partners, suppliers, Government agencies, media and the regulatory body and especially the community.

SCOPE AND BOUNDARIES OF REPORTING

This report covers the main activities of MCMC and provides important information related to financial performance and non-financial performance, covering the period from 1 January 2021 to 31 December 2021. This report provides a comprehensive and holistic overview of the resources used, challenges faced, actions taken and the value created for stakeholders. It also aims to bridge the gap between risks and opportunities, and give stakeholders a clear picture of short-term initiatives, long-term prospects and growth potential of the MCMC.

The Integrated Report is built on eight (8) content elements to formulate an approach to practice value throughout the reporting period.



STRATEGIC PLAN

In this report we emphasise on the strategic plan of MCMC set the Commission's direction and focus to ensure the growth of the Communications and Multimedia industry, and to improve the efficiency and effectiveness of the Commission's regulatory role and function. Inclusive are reports on the performance of the Commission's organisational management in coordinating MCMC's strategic plan with National plans such as the 12th Malaysia Plan (RMK-12), MyDIGITAL and other plans for the well-being of *Keluarga Malaysia*. Additionally, strategic coordination of policies, periodical reports and special ad-hoc requests regarding communication and multimedia issues that explains governance, risk management policies and business models driving MCMC value creation is also highlighted. Stakeholder engagement initiatives are also emphasised in this report. This is in line with our motivation to strive for excellence in corporate and financial reporting as part of our aim to regulate and develop the Malaysian communications and multimedia industry. We hope that this sharing of best practices and our goals will be useful for other Government organisations and agencies in their preparation of their respective Integrated Reports.

This Integrated Report aims to provide a balanced assessment of the ability of MCMC to create value based on six (6) strong capitals namely Financial Capital, Human Capital, Social and Relationship Capital, Intellectual Capital, Natural Capital and Manufactured Capital. Stakeholders will gain an understanding of the purpose, strategy, operational targets and expected value creation outcomes of the MCMC for the short term and the long term. The strategic and operational plans of MCMC, as well as its key targets are reviewed continuously to ensure the integrity of the report.

The report on Environmental, Social and Governance (ESG) continues this year. MCMC adopts ESG initiatives in administrative affairs in order not to be left behind in the global economy. MCMC recognises that ESG is important as a key performance compliance driver and value strategy to generate new returns for long-term interests. The ESG is seen as a complete ecosystem for the industry to grow with support from the Government, regulator and stakeholders; and stakeholder awareness of the importance of sustainability. MCMC is responsible towards the stakeholders with regards to sustainability practices.

We have introduced a new report content to reveal the core essence of who we are, what we are aiming for next and how we plan to achieve it. In addition to IR, our non-financial statements reflect management in Malaysian Corporate Governance which is based on three (3) key principles of good corporate governance:

- Leadership and effectiveness of Commission members;
- Audit and effective risk management; and
- Integrity in reporting and good relations with stakeholders.

Our financial statements have been audited and prepared based on the requirements of the Companies Act 1965 and the Financial Reporting Standards (FRS). We strive to ensure that this Annual Report presents a balanced and accessible assessment of information on strategy, performance, governance and prospects. Issues and developments include those determined with quantitative and qualitative considerations that will impact our performance, now and in the future.

CREATING VALUE

HOW MCMC CREATES VALUE

This concept is formed on a solid corporate base of integrity, and good and orderly governance principles. A sound and visionary business strategy supported by sound risk management also contributes to this integrated concept. The approach of MCMC to the concept of value is based on six (6) types of Capital: Financial, Human, Intellectual, Manufactured, Social and Relationship, and Natural Resources.



FINANCIAL CAPITAL



HUMAN CAPITAL



INTELLECTUAL CAPITAL



MANUFACTURED CAPITAL

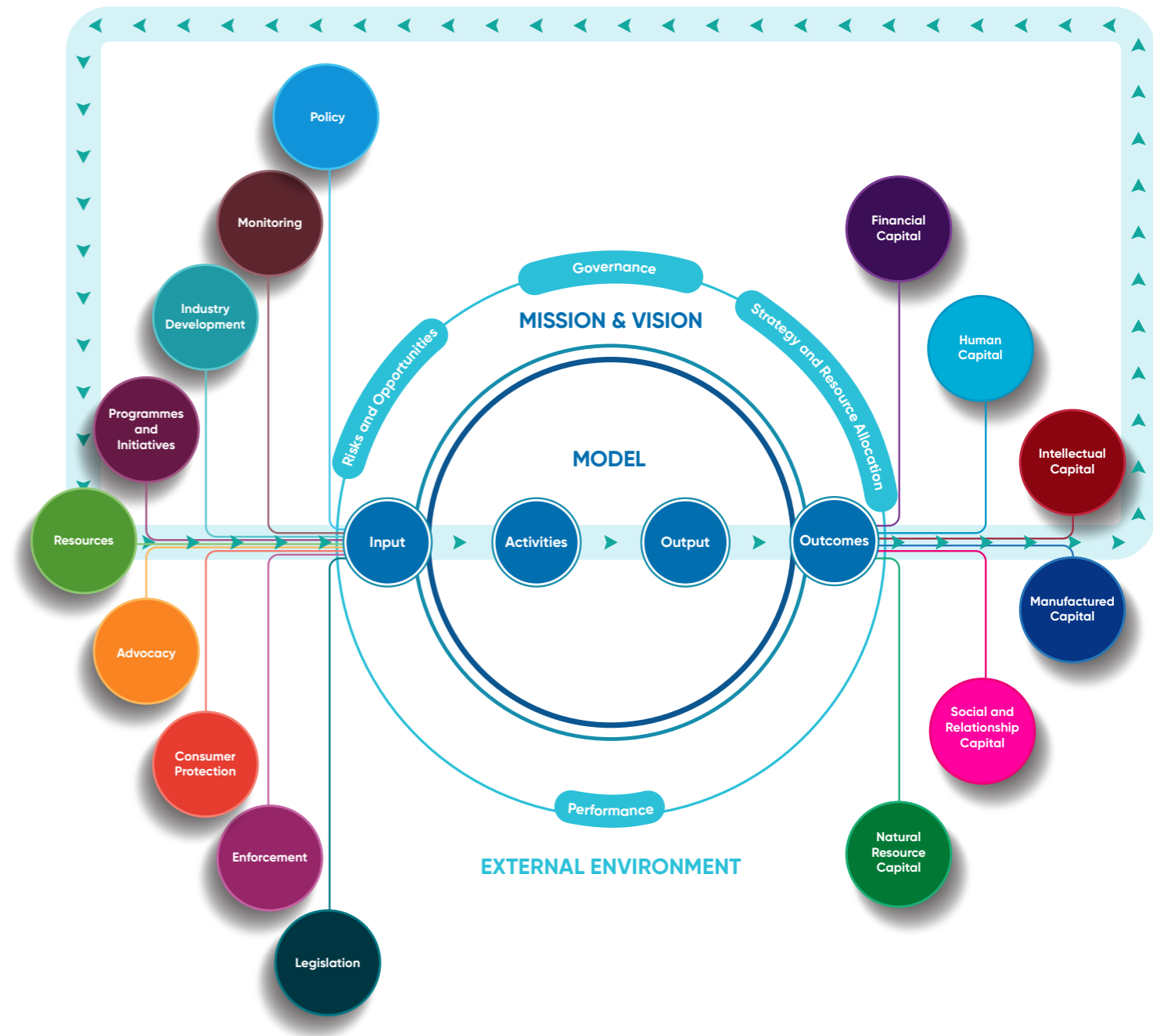


SOCIAL AND RELATIONSHIP CAPITAL



NATURAL CAPITAL

Organisation value concept driven by the MCMC



OUR VALUES

Our values concept aims to guarantee good performance and achievement to benefit all stakeholders. It even becomes a catalyst for the nation's digitalisation efforts and thus fosters an effective and prudent digital society. We create value that includes the main core functions and various services offered to all stakeholders.

KEY INTEGRATED CONCEPTS



FINANCIAL CAPITAL

Every year, MCMC optimises expenses according to the needs and allocated budget. Details are presented on all types of expenditure made to ensure that no wastage occurs and to control expenditure in a disciplined manner, placing importance on the best value and quality at a reasonable cost. MCMC also focuses on the most efficient and responsible core functions and value-added activities.

CAPITAL INPUT

Strong and prudent financial management performance.

- Income
 - o Operating Licence Fee
 - o Spectrum Fee
 - o Numbering Allocation Fee
 - o Interest Income
- Assets
- Liability
- Accumulated Funds

ACTIVITIES

Performance improvement programmes through the maintenance and improvement of revenue, profit retention, cash flow improvement and productivity improvement. Activities throughout 2021:

- o Disciplined and sustainable OPEX management to drive operational efficiency
- o Prioritising operational efficiency and focusing on driving growth in National level projects
- o Strengthening the procurement process
- o Strengthening the integrity process in finance and procurement
- o Strengthening financial processes and procedures, including cash flow and asset management
- o Hold seminars to explain policies and procedures for financial and procurement processes
- o Continuous planning of action plans to be taken to reduce risks that may affect the financial position of MCMC

CAPITAL OUTPUT

- o A more systematic and comprehensive review of financial performance
- o Increase operational efficiency and optimise expenses according to the requirements and allocated budget
- o Viability and sustainability of funds to support the core functions of MCMC

OUTCOMES

Income RM1,330.41 MIL	RM25.23 MIL Total Capital Expenditure (CAPEX)	RM1,422.39 MIL Accumulated Funds
Expenditure RM384.10 MIL	RM927.61 MIL Surplus After Tax	

OUR CHALLENGES

- o The MCMC is exposed to financial risks that may arise from the operation and use of financial instruments. This includes credit risk, liquidity risk, interest rate risk and fair value information

REVIEW – OUR CONTINUED FOCUS

- o Regulatory and development aspects will continue to be strengthened in 2022 to ensure organisational sustainability and financial stability

CROSS CAPITAL



HUMAN CAPITAL

Skills and performance are important criteria in the selection for the members of MCMC. A highly skilled and experienced workforce will contribute to a more efficient and effective implementation of human capital. This high emphasis on human capital will help shape and boost the performance of MCMC and to achieve the goals and objectives of the country and all stakeholders.

918 MCMC Workforce

CAPITAL INPUT

A diverse workforce with a high-performance service culture

ACTIVITIES

The Human Capital Division is also responsible for ensuring that the human capital function is in line with the MCMC strategic objectives and implemented in accordance with the MCMC Act, the Workers' Act as well as human capital policies. The activities and initiatives carried out will always take proactive steps to avoid or reduce any human capital risk to the Commission. Activities throughout 2021:

- o State Transformation
- o "GET Trainee" Programme
- o Career Development Plan for Staff
- o Leadership Development
- o Employee Relations Activities
 - a. Ramadan Programme with Orphans
 - b. Town Hall Sessions
 - c. HR2U session
 - d. MCMC *Kasih Careline* Counseling Programme
 - e. MCMC *Ramadan Care Pack*
 - f. Health & Wellness Week Programme
- o Rewards & Recognition Programmes
 - a. Long Service Award
 - b. Staff Retirement
 - c. Secretary's Day
- o Integrity & Governance Programmes
 - a. Whistle-blower Policy
 - b. Individual Development Assistance Programme
 - c. Integrity and Code of Ethics Programme with Stakeholders
 - d. Organisational Anti-Corruption Plan
 - e. The MCMC Integrity Day
 - f. Integrity Talk
 - g. Property and Gift Declaration System
 - h. Integrity Website Launch
 - i. Integrity Committee Meeting

CAPITAL OUTPUT

- o Highly skilled and experienced employees
- o Fostering a digital culture
- o A diverse, skilled and inclusive workforce
- o Benefits and remuneration to employees
- o Employees of MCMC are also seen as ambassadors of the Commission's core values of Competence, Integrity and Efficiency
- o MCMC has human capital resources from various backgrounds that lead to a diversity of opinions and experiences in driving a more accurate organisational culture
- o Continuous improvement of productivity through robust and innovative programmes
- o Digitalisation of HR services to enable new ways of working anytime, anywhere
- o Promote balance in the workplace and flexibility towards employee needs

OUTCOMES

1,649 BENEFICIARIES Through the welfare activities of the MCMC Sports Club	99 VOLUNTEERS Involved in OPS BAHIS (staff and family members)	ASSISTANCE WORTH RM15,895 To eight (8) employees whose homes were affected by the floods in Selangor	726 PARTICIPANTS Participated in the MCMC E-Sport Carnival 2021 organised by the MCMC Sports Club
101 STAFF Long Service Award Recipient	PROGRAMME 12% MEP MCMC Executive Pathway	40 EMPLOYEES Participated in the Accelerated Programme Series (ALPs)	98 HEADS OF DEPARTMENT Participated in the ALL-STAR Leadership Programme
133 COUNSELING SESSIONS <i>Kasih Careline</i>			

OUR CHALLENGE

- o The impact of the COVID-19 pandemic has led to a new norm of working and requires some robust approaches in implementing programmes that support employee engagement and their physical and mental well-being
- o Encouraging teamwork and cooperation to help the Commission meet current and future challenges

REVIEW – OUR CONTINUED FOCUS

- o Nurturing and equipping the workforce by building capabilities, future skills and new ways of working including fostering a customer-oriented culture
- o We will continue to identify initiatives in 2022, based on the system of rules, practices and work processes to achieve excellence, efficiency, transparency and future-proofing in administrative management

CROSS CAPITAL





INTELLECTUAL CAPITAL

The MCMC intellectual capital not only serves to guarantee the integrity of the Commission's performance as an industry regulator, but also as a centre of excellence that produces quality intellectual capital with extensive knowledge, and with a variety of skills that can be utilised. The investment made to develop this intellectual capital is considered an important step that will help the country enhance its competitiveness in the region.

INPUT CAPITAL

- Strengthen MCMC brand through various media channels such as mainstream media and social media
- Building a social media platform for effective communication and developing the industry through capacity building

ACTIVITIES

- Media Briefing and Analyst Community
- Program Klik Dengan Bijak®
- Malaysia ICT Volunteer Programme® (Malaysia ICT Volunteer - MIV)
- Digital Society Research Grant (DSRG)
- Collaboration between the Integrity Department and the Academy to hold a briefing on the Code of Ethics
- Cooperation between the Procurement Department and the Integrity Department

OUTPUT CAPITAL

- Communicate effectively on the Commission's policies and procedures
- Development and management of social media platforms in delivering the Commission's aspirations
- Cultivate close relationships with industry players, the media and the analyst community
- Develop future talent by holding various trainings
- Provide grants for researchers related to the digital society to promote the digital industry

OUTCOMES

95 MEDIA STATEMENTS

1,034 ARTICLES
Published in mass media

MEDIA VALUE RM81.4 MIL
Published throughout 2021

477,000 FOLLOWERS

On the MCMC social media platforms (Instagram, Facebook, YouTube)

53 IMPLEMENTATION OF ACTIVITIES
Klik Dengan Bijak Programme®

99.5 HOURS

Conducted training (*Sembang Santai* and Workshops) for Malaysian ICT Volunteers® (MIV)

271 APPLICATIONS

A total of 45 universities have applied for the Digital Society Research Grant

OUR CHALLENGES

- To connect communities in remote areas and create awareness about the importance of digital literacy

REVIEW – OUR CONTINUED FOCUS

- The imbalance in communication access often referred to as the digital divide can have complex social effects at the national level if not addressed. We will continue to work to bridge this gap so that no one in the community is left behind

CROSS CAPITAL



Human Capital



Manufactured Capital



Social and Relationship Capital



MANUFACTURED CAPITAL

MCMC identifies efficient and reliable assets for future demand. Various initiatives are made to utilise all physical assets to provide the best and continuous digital services and experiences for Malaysians.

INPUT CAPITAL

An efficient and reliable asset for future demands.

- JENDELA
 - Fibre Optic Connectivity
 - Mobile Broadband Speed
- 4G Coverage
- Satellite Connectivity
- Implementation of 5G

ACTIVITIES

- JENDELA and *Garis Panduan Perancangan Infrastruktur Komunikasi* (GPP-I) were presented at the National Physical Planning Council (MPFN) Meeting on 27 October 2020
- Announcement of JENDELA in MyDIGITAL on 19 February 2021 and RMK-12 on 19 February 2021
- JENDELA, GPP-I and Telecommunications as the Third Public Facility approved at the State and Local Government Council Meeting (MNKT) on 3 March 2021
- Recognition of Telecommunications as a Public Facility by the Cabinet on 2 June 2021
- UBBL 1984 amendment which also includes the use of the new G20 form approved by MNKT on 13 July 2021
- JKT sent a letter to 11 SUK states in the Peninsula and KSU of the Ministry of Federal Territories (KWP) on 13 August 2021 to gazette the approved UBBL amendment
- Taking a more structured approach in delivering JENDELA's aspirations, in terms of programme management and stakeholders including industry, media and the analyst community
- Structuring begins with clear goals, close monitoring through bi-weekly JENDELA Implementation Committee (JIC) meetings and quarterly JENDELA Steering Committee (JSC) meetings chaired by the Minister
- A step-by-step approach to achieve the target and deliver within a set period of time

OUTPUT CAPITAL

- Holding various initiatives in utilising physical assets and providing digital experiences to Malaysians
- Enforcement of Communications Services as a Public Utility since the connectivity of digital infrastructure is an important element to promote economic growth and increase the competitiveness of a country
- The Commission has brought a proposal for communication services as a public utility to coordinate and accelerate the provision of digital infrastructure at the state and national levels
- On 3 June 2021, the Cabinet agreed to include communication services as one of the basic requirements
- Communication services will be included as a condition in development approval for new development in any particular location
- This recognition is important to ensure that access to high quality communication services can be provided quickly and comprehensively at a reasonable operating cost. Following the surge in demand due to the new norms people are facing, many things need to be done online such as work, education, shopping and interaction
- The need becomes more urgent due to the global trend that is shifting towards 5G-based innovation, the Fourth Industrial Revolution (4IR) and the Digital Economy
- This recognition will pave the way for better connectivity across the country

OUTCOMES

6.848 MIL
Premises Approved

95.4%
4G Coverage in Populated Areas

37.3 Mbps
Speed of Mobile Broadband

13,807 UPGRADES
Existing Transmitter Stations to 4G Technology

250 CONSTRUCTION
New 4G Towers

500 SITES
5G Transmitter Stations

Data collected from September 2020 until 31 December 2021

OUR CHALLENGES

- To connect communities in less populated and remote areas due to terrain issues and with no regular or stable power supply
- This initiative cannot be implemented successfully without the cooperation of the Local Authority (PBT)

REVIEW – OUR CONTINUED FOCUS

- It is our priority to ensure that all of our physical assets are functioning properly, at optimal levels and generating revenue
- Through these initiatives, it will improve the economy and standard of living in line with the 12th Malaysia Plan (RMK-12)

CROSS CAPITAL



Human Capital



Financial Capital



Social and Relationship Capital



Natural Capital



SOCIAL AND RELATIONSHIP CAPITAL

This Social and Relationship Capital represents the basic function of MCMC, as a regulator of the telecommunications and multimedia industry in fostering good relations with stakeholders whether the Government, service providers, industry players, consumers, or employees and the media, among others. MCMC invests resources to hold various programmes that are of benefit to all parties in the industry to foster a spirit of harmony and unity for the sustainability of the social and relationship agenda.

INPUT CAPITAL

- Cultivate good relationships among stakeholders such as the public and local communities
- ◆ PEDI Management
- ◆ Digital Advocacy
- ◆ Corporate Social Responsibility (CSR)

ACTIVITIES

MCMC also plays a role in empowering communities, developing workforces, supporting business partners and new businesses and collaborating with Government and stakeholders to achieve its socioeconomic agenda. Activities throughout 2021:

- ◆ Branding of the Community Internet Centre (PIK) to the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI).
- ◆ Launch of PAKEJ
- ◆ Strengthening PEDI functions with the appointment of advisory panels and digital partners
- ◆ Flood Relief Operation

OUTPUT CAPITAL

- ◆ Provision of social programmes for the community
- ◆ Digital training programme for micro entrepreneurs around PEDI
- ◆ Create transparency and reliability

OUTCOMES

883 Community Internet Centres (PIK) transformed to *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI)

879 IKON PEDI Entrepreneurs

RM115,995 DONATED

To the National Disaster Trust Fund for COVID-19

72 Of 600 PEDI *Rakan Digital*

21,188 ACHIEVED
Compared to the target of 17,000 PAKEJ Network Locations

60 EMPLOYEES OF THE MCMC

Participated in the Flood Relief Operation - "Bantu Sampai Habis" (BAHIS)

OUR CHALLENGES

- ◆ Ensuring the role and function of PEDI is strengthened with four (4) transformations – design of PEDI, IKON *Usahawan*, appointment of 600 Digital Partners and implementation of digitalisation programmes in collaboration with local government, private sector and industry

REVIEW – OUR CONTINUED FOCUS

- ◆ In the period 2021-2025, the target is to have 800,000 entrepreneurs switch to digitalisation and continue various digital entrepreneurship programmes with collaboration partners
- ◆ Improve lifestyle and socioeconomics based on RMK-12

CROSS CAPITAL



NATURAL CAPITAL

MCMC uses movable and immovable Natural Resource Capital to support the prosperity of the Commission. Various initiatives and development activities to upgrade assets and facilities are carried out in an effort to provide the best service to all stakeholders. Management consistently monitors all activities taking place to identify any impact on the environment and strives to address the carbon footprint of MCMC activities.

INPUT CAPITAL

- Using movable and immovable natural resources to support organisational prosperity

ACTIVITIES

- ◆ Conduct studies on the electromagnetic field radio frequency emission from the radio communication infrastructure
- ◆ Continue efforts to address hazardous electronic waste generated from the telecommunications industry
- ◆ KITAR (Mobile e-Waste) Campaign

OUTPUT CAPITAL

- ◆ Build infrastructure/facilities equipped with green technology
- ◆ Run awareness programmes on the importance of sustainable living
- ◆ Adoption of international standards
- ◆ Efficient use of energy
- ◆ Green lifestyle practices
- ◆ Financial savings

OUTCOMES

RM6,816.60 SAVINGS ON WATER

Through alternative sources (rain harvesting and cold water recycling)

4,175.3 MWh COOL WATER

Savings for air conditioning

268.3 KG

KITAR collection amount

1,904.1 MWh

Saving electricity consumption

BEST GREEN BUILDING AWARD

Energy Efficient Building Category of the National Energy Award 2021

301 UNITS

Total collection of communications equipment

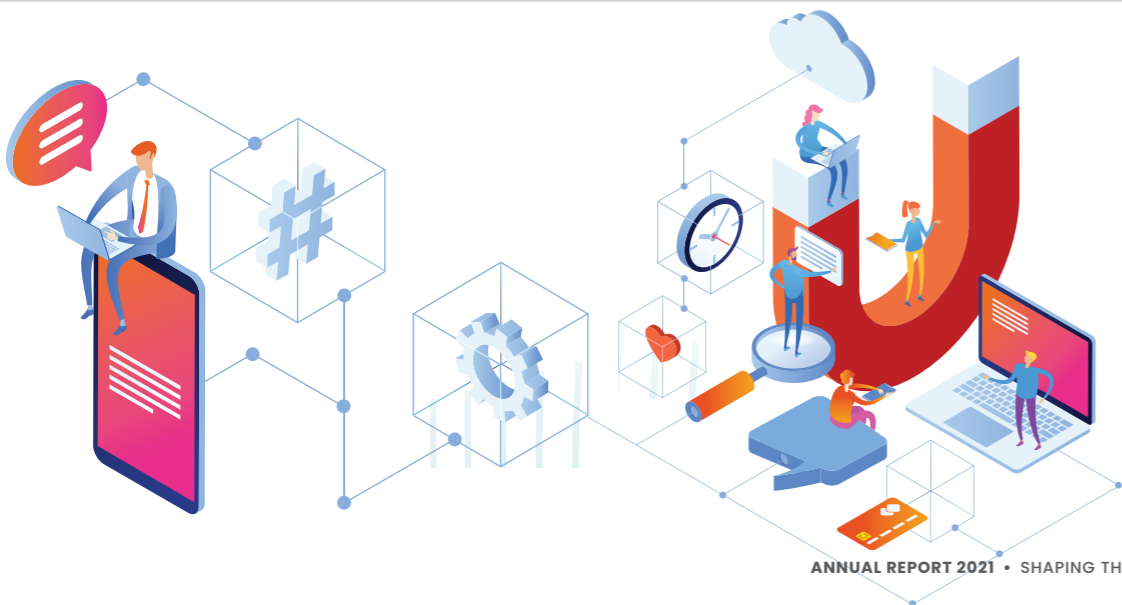
OUR CHALLENGES

- ◆ Various efforts have been implemented to ensure better efficiency in the use of resources such as energy, water and materials while reducing the impact of building use on human health and the environment during the building's life cycle
- ◆ Obstacles to get a high e-waste collection for 2021

REVIEW – OUR CONTINUED FOCUS

- ◆ MCMC will continue to monitor and ensure that everything done inside and outside the building is environmentally friendly and does not negatively impact the environment. In addition, MCMC will also actively strive to share knowledge and environmentally friendly practices with all stakeholders
- ◆ Continue ongoing awareness activities and devise new strategies to ensure the success of Kitar Mobile e-Waste programme initiative

CROSS CAPITAL



ESG IMPLEMENTATION

DRIVING ENVIRONMENTAL MANAGEMENT, SOCIAL EMPOWERMENT AND GOVERNANCE (ESG)

OUR GOAL

Ensure operations of MCMC are sustainable and take clearly consider between the progress and harmony of each action in line with the principles and values of Environmental, Social and Governance (ESG) Management.



GOVERNANCE

- To achieve our business objectives while applying good governance practices and ensuring compliance with laws and regulations
- To institutionalise good governance through the adaptation of internationally recognised standards
- To meet stakeholder expectations and ensure business sustainability by actively identifying and managing risks and opportunities

ACTION:

- Ethics and Integrity
- Crisis Management
- Response to Crisis and Emergencies
- Data Security
- Compliance with Laws and Regulations
- Financial Management

SOCIAL

- To support our mission and vision, and apply core values in meeting stakeholders' expectations
- To create a positive social and economic impact for all stakeholders across the country and our business ecosystem
- To promote the importance of security and equip our workforce and ecosystem to adopt technology and prepare for the future
- To create a comfortable situation for all stakeholders impacted by the COVID-19 pandemic throughout 2021

ACTION:

- Well-being and Safety of Workforce
- Infrastructure Development
- Traffic Management/ Parking Lot
- Customer Experience
- Efficient Workforce
- Human Capital Development
- Employee Rights and Practices
- Digitalisation and Innovation
- Supporting the Community
- Fair and Efficient Procurement Practices
- Branding and Reputation
- SOP Practices for Dealing with the COVID-19 Pandemic

ENVIRONMENTAL

- To intensify efforts towards reducing carbon emissions in operations and increasing the use of renewable energy
- To leverage green technology for operational excellence and competitiveness
- To apply good environmental practices and establish a sustainability mindset in making strategic and operational decisions
- Using Electromagnetic Field (EMF) standards that have been set by International Regulatory Bodies

ACTION:

- Energy Management
- Air Pollution (Greenhouse Gas Emission)
- Water Management
- Waste Management
- Sustainable Material
- Ecological Impact
- Green Building
- EMF Guidebook
- Create a Custom Website <http://rfemf.mcmc.gov>
- KITAR (Mobile e-Waste) Campaign



MCMC IMPLEMENTATION OF THE ESG

MCMC introduced principles and values in the concept of Environmental, Social and Governance (ESG) management in the Annual Report in 2020 and will continue the implementation of the ESG aspects in 2021. The implementation of the ESG refers to the application of the ESG concept in organisations from the aspects of governance, social and environmental. ESG aspects are criteria used to evaluate the impact of practices and their implementation in an organisation.

Aspects of Governance Management

MCMC acts as the country's regulatory body in the communications and technology sector. As a regulatory body, MCMC is committed to applying good governance practices in addition to ensuring compliance with laws and regulations. MCMC aims to create and increase sustainable value within the organisation's governance structure.

There are several factors that contribute to creating and increasing sustainable value, among them the transformation and development plan for human capital where MCMC fosters a high performance, fast-paced service-oriented work culture, with a diversity of expertise and skills. Next, the governance and audit factor where it carries out an audit function that provides independent and objective assurance of the adequacy and effectiveness of internal controls and the implementation of risk management at MCMC. Effective audit governance can ensure that corrective actions are adequate and reduce risk in a timely manner.

MCMC takes seriously the importance of digital development including the provision of Internet access to the community which aims to reduce the digital divide. Throughout 2021, the Commission actively supervised and coordinated initiatives related to JENDELA and the development of digital infrastructure which generally involved the construction of new communication structures, the upgrading of existing communication transmitter stations and the availability of premises with fibre optic connections.

Through JENDELA, from September 2020 until 31 December 2021, as many as 95.4 percent of populated areas have been covered with 4G mobile broadband service access; the average speed of mobile broadband services reached 37.3Mbps; and 6.8 million premises have fixed broadband access. A total of 437 out of 839 locations were provided with collective WiFi broadband services, 1,189 new communication structures were built, and 30,174 existing communication transmitter stations were upgraded to 4G technology to expand 4G coverage in populated areas throughout the country.

The implementation of 5G throughout the country has a great impact in driving the national digital transformation. Based on RMK-12 which sets the direction of Malaysia as a high-income and high-tech country, MCMC is given the responsibility of monitoring implementation, evaluating and reporting progress, facilitating and supporting development to ensure the smooth implementation of 5G. A total of 500 activated 5G transmitter stations cover areas in Cyberjaya, Putrajaya and Kuala Lumpur, covering 5.8 percent of the population.

The details of MCMC Governance will be explained in the next segment under the topic Governance Structure: Creating and Enhancing Sustainable Value.

Aspects of Social Management

Social management in the ESG refers to things that have a positive impact on the development and advancement of social society. With social empowerment as the theme of creating an inclusive digital society, MCMC has held various campaigns based on digitalisation in everyday life as well as improving the local socio-economic level and contributing to the country's digital economy.

The Community Internet Centre (PIK), upgraded to the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) on 21 November 2021 is an initiative under MCMC aimed at providing collective Internet access to communities in areas that lack broadband coverage such as rural and interior areas. The launch ceremony was officiated by YAB Prime Minister Datuk Seri Ismail Sabri Yaakob.

The role and function of PEDI has been streamlined and strengthened with transformation initiatives including the involvement of *KON Usahawan* in each PEDI, the implementation of various economic digitalisation programmes as well as plans and appointments of digital partners.

The *Program Pemerkasaan Pendigitalan Usahawan Kecil* (PUPUK) was introduced in June 2021 as an initiative to help micro-entrepreneurs transition to a digital platform in collaboration with partners. The programme targets 800,000 entrepreneurs to switch to digitalisation in the next five (5) years, and PEDI serves as a one-stop centre for digitalisation and local community economic activities.

In addition to the provision of digitalisation infrastructure, MCMC is also responsible for developing technical standards or codes that cover interoperability and security requirements as well as other technical aspects. With the mission of creating a digital society, various initiatives and programmes such as Communication Equipment Certification, Efficiency Certification and Market Monitoring are implemented. At the same time, various awareness-based campaigns are also highlighted to the community, including Check Your Label (CYL), which aims to educate the community about the importance of buying equipment that has MCMC label. With the label in place, it is a sign that the equipment is certified and in accordance with the established standards, thereby increasing the reliability of MCMC as an agency that controls and monitors the telecommunications and postal industry.

In 2021, through the *Klik Dengan Bijak*® (KDB) and the *Malaysian ICT Volunteers*® (MIV) initiatives, MCMC directly or indirectly realised some of the Government's main efforts. The implementation of advocacy activities and community involvement by KDB and MIV was in line with the core of these efforts. Under the Social Empowerment: Creating an Inclusive Digital Society segment, information on the initiatives, efforts and campaigns implemented by MCMC are detailed.

Environmental Aspects

Green Sustainability focuses on the effective and efficient use of energy, recycling campaigns and various activities related to environmental issues and human health.

Through environmental sustainability governance, MCMC pays special attention to the preservation of the environment in line with the sustainable values of nature in all activities or actions of the Commission. Among the actions taken is compliance with the "Mandatory Standards for Electromagnetic Field Emissions from Radio Communication Infrastructure." This audit activity is carried out throughout Malaysia which includes urban, suburban and rural areas. The results of measurement and data analysis found that the emission of Radio Frequency Electromagnetic Fields (RF-EMFs) from the radio communication infrastructure involved complies with the exposure limits allowed to the public - according to the Mandatory Standard for Electromagnetic Field Emissions from Radio Communication Infrastructure (MS-EMF).

MCMC is still continuing the Mobile e-Waste campaign which is now rebranded as the Small Information Technology and Telecommunication Device Recycling

Project (KITAR). Through the KITAR campaign, MCMC takes the initiative in dealing with the dangers of electronic waste generated from the telecommunications industry. Despite facing the COVID-19 pandemic, MCMC still carries out e-waste collection through the collaboration of recycling companies, logistics companies and technology companies that can develop a digital platform for this initiative.

In 2021, MCMC won the title of Best Large Green Building in the Energy Efficient Building category, National Energy Award 2021. The award is one of the most prestigious awards in Malaysia that recognises outstanding achievements and best performance for local institutions and organisations in driving the sustainable energy sustainability agenda.

Environmental Sustainability Segment: Building a trusted, safe and ethical Digital Environment further details the initiatives and efforts by MCMC in implementing environmental sustainability.



Chapter

01

CORPORATE INFORMATION



ABOUT MCMC

THE MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION (MCMC) which was established in 1998 aims, among other things, to regulate the telecommunications and multimedia industry based on the powers given pursuant to the Malaysian Communications and Multimedia Commission Act (MCMCA) 1998 and the Communications and Multimedia Act (CMA) 1998. The role of MCMC is to implement and foster the Malaysian Government's national policy objectives for the telecommunications and multimedia sector and oversee the new regulatory framework for the activities of the telecommunications and multimedia industries. The function of the MCMC is to regulate, monitor and control all matters related to telecommunications and multimedia by stakeholders and safeguard their interests through customer charters.

MAIN FUNCTIONS OF THE COMMISSION

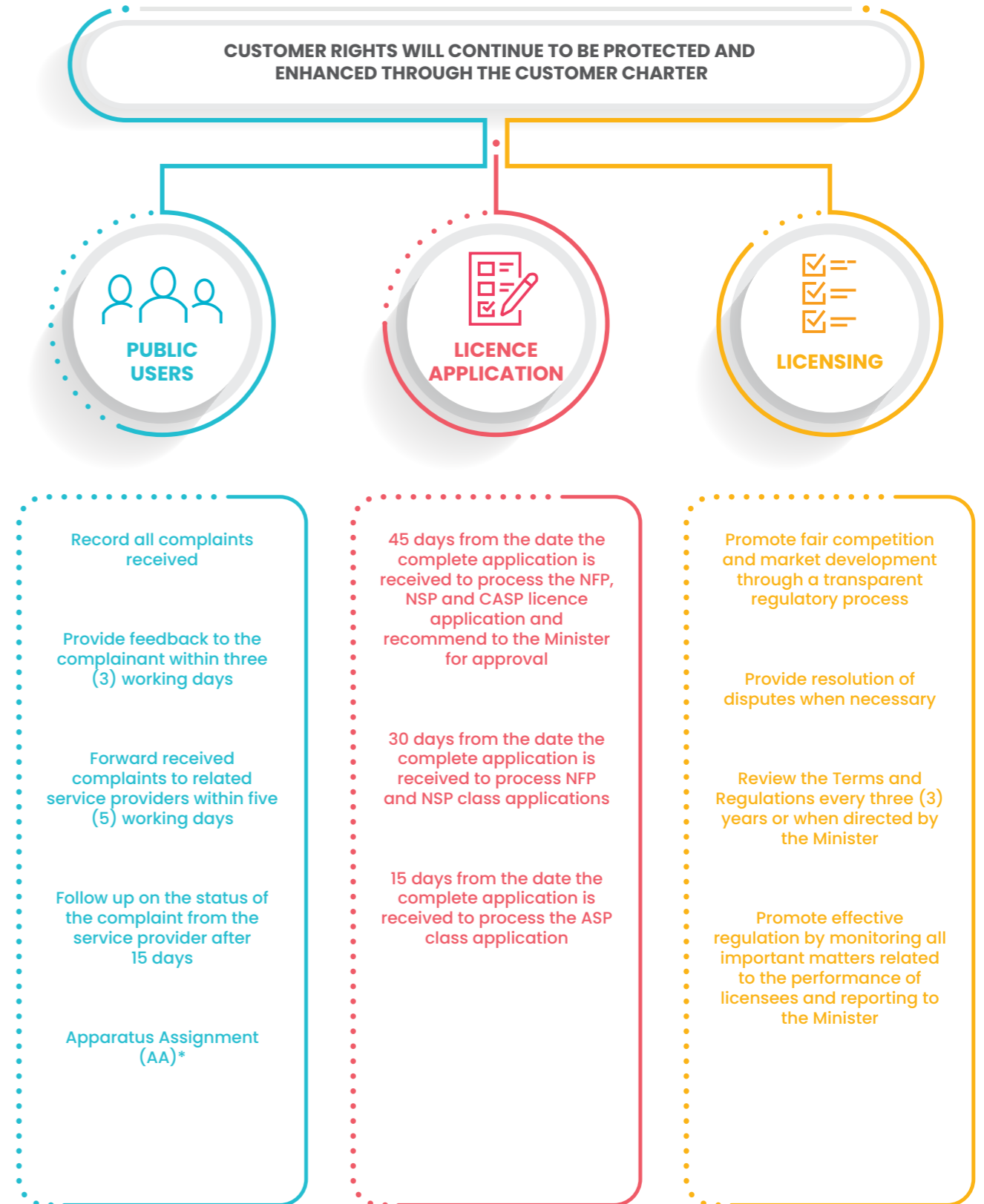
- Advising the Minister on all matters related to national policy objectives specifically for communications and multimedia activities;
- Implement and enforce the provision of communications and multimedia laws;
- Regulating all matters related to communications and multimedia activities that are not stipulated in the communications and multimedia law;
- Consider and propose reforms to communication and multimedia laws;
- To control and monitor communications and multimedia activities;
- To encourage and promote the development of the communications and multimedia industry;
- To encourage and promote regulation in the communications and multimedia industry;
- To promote and maintain the integrity of all licensees in the communications and multimedia industry, as authorised;
- Provide assistance in any form and encourage cooperation and coordination among people involved in communications and multimedia activities;
- To carry out every function as written in the law that may be determined by the Minister as published in the periodical brochure;
- To add, MCMC also regulates the Postal industry and licensing of the Certification Authorities under the Digital Signature Act 1997.

ADDITIONAL DUTIES

- **Economic Regulation**
Including the promotion of competition and the prohibition of anti-competitive conduct, as well as the development and enforcement of access codes and standards. It also includes licensing, enforcement of licence conditions for network providers and applications and ensuring compliance for regulations and performance/quality of service.
- **Technical Regulation**
Includes spectrum frequency efficiency tasks, development and enforcement of technical codes and standards, numbering and electronic administration.
- **Consumer Protection**
Ensuring user rights and user protection such as dispute resolution, ability to subscribe to their services, and service availability.
- **Social Regulation**
Including content development, content regulation and bans as well as public education on related content issues.
- **Postal Regulation**
Includes safeguard the provision postal service and promote competition in the postal and courier market.
- **Certification Authority regulation**
Includes control of the Certification Authority's operation through licensing and audit mechanism to ensure its trustworthiness.

OUR COMMITMENT

CUSTOMER RIGHTS WILL CONTINUE TO BE PROTECTED AND ENHANCED THROUGH THE CUSTOMER CHARTER



* In general, the processing of AA applications requires 60 days from the date the complete application is received and it is on a best effort basis. This 60-day period is not provided for under the Communications and Multimedia (Spectrum) Regulations 2000 and does not apply if the application requires international coordination with neighbouring countries.

Create a competitive, efficient and self-regulating communications and multimedia industry to generate growth and meet the country's economic and social needs.

VISION

We are committed to:

- Promoting access to communications and multimedia services
- Ensuring that consumers enjoy a satisfactory choice and level of service at a reasonable price
- Providing a transparent regulatory process to generate healthy and fair competition in the industry
- Ensuring optimal use of spectrum and numbering
- Conducting consultation with users and service providers on a regular basis and facilitating joint ventures in the industry

MISSION

Assalamualaikum Warahmatullahi Wabarakatuh and Best Wishes to All Digital Citizens and Keluarga Malaysia

Congratulations and well done to the Malaysian Communications and Multimedia Commission (MCMC) for successfully publishing this 2021 Annual Report with the theme **“Shaping the Digital Future”**. Towards achieving this goal, MCMC is given an important role to empower a quality and reliable digital telecommunications network and infrastructure, as well as drive the growth of the digital economy. MCMC also plays a role in educating future-proof digital talent and workforce, capable and knowledgeable in aspects of innovation, automation and high technology.

This is in line with the role of the Ministry of Communications and Multimedia Malaysia (K-KOMM) in shaping scholarship in a digitally cultured society and K-KOMM's core responsibility which is to strengthen the telecommunications infrastructure and ensure that no Malaysians are left behind in the digitalisation wave. MCMC bears great responsibility in the mission of preparing the country to compete in the Fourth Industrial Revolution (4IR). The Government remains committed under the 12th Malaysia Plan (RMK-12) in focusing on and improving the connectivity and performance of the digital economy as well as providing added value and benefiting *Keluarga Malaysia*.

For the transformation of the country towards digitalisation, the Government takes into account the provision of access to the latest broadband, thereby creating an ecosystem that allows all parties to contribute towards a higher standard of living for all. In order to support and realise the country's aspiration to become a regional digital economy leader, the *Pelan Jalinan Digital Negara* (JENDELA) was launched in September 2020, earlier than expected. To bridge the digital gap between urban and rural areas in addition to generating the country's digital economy, JENDELA (2021 - 2025) targets 100 percent 4G coverage in populated areas, wider 5G coverage and fixed line broadband to nine (9) million premises by the year 2025.

MINISTER'S SPEECH

**YB. TAN SRI DATUK SERI PANGLIMA
TPr ANNUAR HAJI MUSA**

*Minister of Communications and Multimedia
Malaysia*



Throughout 2021, the implementation of Phase 1 of JENDELA which was expected to continue until the end of 2022 successfully achieved all set targets and is on track. Next, the implementation of 5G, has been accelerated a year earlier than the original target of the end of 2022 to the fourth quarter of 2021. Digital Nasional Berhad (DNB), a special purpose company (SPV), was established to lead the implementation of 5G through the Single Wholesale Network (SWN) in Malaysia. DNB is responsible for providing infrastructure for 5G spectrum such as building telecommunication towers for network operators to use.

Providing reliable Internet connection in rural and remote areas and 4,323 identified schools within five (5) years until 2025 is a priority. Achieving this goal will attract greater investment in fibre technology that will future-proof the country. The use of new technology will be a key component in achieving all the set targets. With the achievements made, various new technologies such as TV White Spaces (TVWS) for rural communities, long-distance wifi, and high throughput satellite (HTS) for example, can be explored effectively.

As a result of the commitment and dedication shown by the Commission, various planned digital economy initiatives have been successfully implemented despite the various obstacles faced due to the global pandemic. Among them, strengthening the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) to realise the Malaysian Government's desire to expand various entrepreneurship programmes for the local community to get acquainted with digital economy. Congratulations on MCMC's commitment and efforts to ensure that as many as 1,083 PEDI across the country will be enhanced and intensified to produce and empower small entrepreneurs towards innovative digitalisation. In line with the vigorous development of the digital economy, I also hope to see the *Mercu Ekonomi Digital* (MEDi) policy realised. The plan to provide one MEDi centre in each state is aimed at enabling young entrepreneurs in the country to move digital economy to a higher level.

The country's wise move in efforts to consolidate its strength in ICT is seen to be very effective in meeting the needs of the people in the future. This is reinforced by the emergence of 4IR and the rapid development of disruptive technology. This change is also driven by the global situation with the emergence of the COVID-19 pandemic which has become a catalyst for change. This encourages the people, businesses and the Government to immediately adapt digitalisation in daily life affairs which will drive the progress and prosperity of the country as a whole. In line with the Government's efforts to bridge the gap between communities, the *Aspirasi Keluarga Malaysia* initiative was realised. The Government through the MCMC launched the *Keluarga Malaysia* Youth Package and the *Keluarga Malaysia* Device Package to help the B40 group and students. This initiative proves the Government's commitment in helping students, teenagers and those who are less able to access the Internet in addition to having affordable smart devices.

National digitalisation efforts also pay attention to the development of efficient and responsible postal and courier services as well as better customer protection. The 'Rangkaian Pakej' is one of the strategic approaches under the PAKEJ blueprint that supports the pillar of 'Industry Sustainability Achievement' towards achieving the main goals as targeted under the National Courier Accelerator Plan (PAKEJ). At the national level, PAKEJ can contribute towards the achievement of the *Aspirasi Digital Nasional* through the Malaysian Digital Economy Blueprint or simply MyDIGITAL by increasing economic competitiveness through digitalisation.

Strong cooperation between all parties is necessary to achieve the set goals comprehensively. The *Bantu Hingga Selesai* (OPS BAHIS) initiative, organised by the K-KOMM with the help of MCMC and the telecommunications industry to help those affected by the recent floods, should be emulated and continued for the well-being of *Keluarga Malaysia*. The restoration work on the communication towers are progressing along quickly to ensure that connectivity is not affected.

Based on this effort, the Malaysian Government under the K-KOMM together with other ASEAN members expressed their readiness to realise the ASEAN Digital Master Plan 2025 (ADM 2025). This will be a framework of direction in supporting digital aspirations and strengthening regional cooperation in developing the ASEAN digital sector and leading a digital economy driven by digital services, technology, as well as a safe and transformative ecosystem, post-pandemic. Guided by the goals and aspirations of RMK-12 and MyDIGITAL, I am confident that MCMC will excel in its development role.

I am very concerned about the needs of the people and the country as a whole, especially when the country is dealing with the peak of the pandemic that has changed our way of life. MCMC has proven its resilience and effectiveness in difficult times and I believe the MCMC will continue to thrive into a better future.

Finally, to everyone in MCMC, well done once again for your service and efforts throughout 2021.

Thank you.

**Bismillahirrahmannirrahim
Assalamualaikum Warahmatullahi Wabarakatuh and Salam Sejahtera**

I am grateful to Allah SWT because only by His permission and blessings that myself and all the employees of the Malaysian Communications and Multimedia Commission (MCMC) are able to carry out our responsibility to provide dedicated service throughout the year 2021. We are excited because we have the opportunity to continue to give our best effort especially from the aspect of protection and consumer safety, ecosystem governance, policy, and enforcement through the empowerment of the act even though the country is dealing with the COVID-19 pandemic that limits various activities and changes the landscape of services. The MCMC Annual Report 2021 which is themed **"Shaping the Digital Future"**, among other things, shows the direction of MCMC as an industry regulatory agency responsible for transforming Malaysia into a country centred on digitalisation and sustainability of connectivity.

The year 2021 is seen as a year of recovery from the effects of the COVID-19 pandemic which is very challenging compared to the previous year. The global landscape that has changed almost overnight due to the impact of the pandemic has opened up space for MCMC as the regulator of critical service industries such as telecommunications, postal and courier as well as broadcasting to reorganise the survival of the people through the cooperation of Government agencies and telecommunications service providers in the formation of an action plan that comprehensive to meet the new needs of Malaysia's digital citizens.

CHAIRMAN'S FOREWORD

Various steps have been taken by the MCMC to ensure that Malaysia continues to move forward in driving the country's communications and multimedia sector. Among them, the implementation of the *Pelan Jalinan Digital Negara* (JENDELA). JENDELA is the foundation for the provision of comprehensive and high-quality broadband service coverage. This effort is able to position the country as a leader in the digital economy and the Fourth Industrial Revolution (4IR). The implementation of this JENDELA plan which is led and monitored by MCMC is expected to be able to provide a higher quality broadband service experience to people throughout the country. The implementation of JENDELA involves the termination of the 3G network which aims to strengthen the performance of 4G coverage in addition to speeding up the preparation of the 5G network.

**DATO' DR. FADHLULLAH SUHAIMI
ABDUL MALEK**

Chairman of Malaysian Communications and Multimedia Commission

In order to ensure that the country's Internet connectivity agenda continues to be empowered, various proactive measures have been taken by MCMC, among them, an allocation of RM28 billion announced during the launch of MyDIGITAL to be invested over a period of five (5) years. JENDELA aims for 100 percent 4G coverage in populated areas, wider 5G coverage and fixed line broadband to nine (9) million premises by 2025.

In line with the grassroots awareness of the importance of digital transition and transformation, Internet services have been recognised as public utilities. Communication facilities need to be used as public utilities in the development of an area. Planning for Internet connectivity as a third utility such as the location of towers and routes for optical fibre should be taken into account as well as water and electricity planning, in an effort to strengthen the country's digital infrastructure.

Throughout the year 2021, the implementation of JENDELA for Phase 1 has achieved all the targets set and is on track to achieve the next target. As of the fourth quarter of 2021, approximately 6.848 million premises have access to fibre optic broadband while 95.4 percent of all populated areas have access to 4G networks. Mobile broadband speed has also increased to 37.3Mbps, far exceeding the initial target of 35Mbps in Phase 1 which is expected to be completed by the end of 2022. In addition, the provision of broadband coverage in rural areas and Orang Asli villages by utilising satellite technology is also progressing smoothly where as many as 798 out of a total of 839 locations have been completed.

The year 2021 ends with the successful implementation of 5G services in Cyberjaya, Putrajaya and Kuala Lumpur. A total of 500 locations in the three (3) areas concerned have been equipped with 5G. A total of 3,518 locations are targeted to be completed by the end of 2022 and the coverage is expected to reach as much as 80 percent in populated areas by 2024. The Government's decision to accelerate the implementation of 5G a year earlier to the end of 2021 is to meet the urgent economic needs for quality improvement and progress.

In an effort to expand global connectivity, MCMC also strives to create a large-scale data centre ecosystem to offer high-tech cloud computing services to meet user demand. MCMC Together with Government agencies and the private sector are trying to attract more international submarine cable landings to this country.

The effort will complete the service provider's ecosystem infrastructure to meet user demands. In order to improve the smoothness and efficiency of data exchange in the country, the existing 12 Internet Exchange Points (IXP) will be increased to 75 by 2022. This planning is done to ensure that the exchange of Internet traffic between service providers is faster and smoother, in line with MCMC's goal to provide best Internet services for stakeholders.

In addition to JENDELA, the PEDI initiative was also implemented and is a transformational effort that will drive the development of Malaysia's digital economy to meet national aspirations, towards the year 2025 under the 12th Malaysia Plan (RMK-12). The transition of the existing economy to a digital economy will accelerate local and national economic growth, with the driving force being mostly entrepreneurs and Small and Medium Enterprises (SMEs).

PEDI is an initiative that is quite synonymous with life for most people in this country. PEDI plays a role in empowering digital economic activities by developing Internet usage skills and increasing e-commerce engagement. This step is in line with the Government's target and intention to create one (1) PEDI in each constituency of the State Assembly (DUN).

The upgrading of PEDI will allow it to become more sustainable. Various entrepreneurship programmes are carried out in 873 existing PEDI across the country. A total of 37 new PEDI will open in the first quarter of 2022. At the end of 2022, a total of 173 new PEDI will start operating at once, making a total of 1,083 PEDI operating nationwide. As of the end of 2021, a total of 883 PEDI have been digitally transformed and are operating nationwide.

Apart from infrastructure facilities, PEDI Advisory Panels, PEDI *Rakan Digital* and IKON are also appointed for each PEDI, this will encourage the local community to get involved in organised activities and make full use of the services at the PEDI.

In order to strengthen the local digital economy, especially the B40 group, the *Program Pemerkasaan Pendigitalan Usahawan Kecil* (PUPUK) was created to help local micro-entrepreneurs. I also welcome the efforts of MCMC together with key players in the telecommunications industry to mobilise the MYBAIKHATI campaign, which is an initiative to collect and repair used communication devices for low-income families (B40) through the Strategic Programme for *Program Strategik Memperkasa Rakyat dan Ekonomi* (PEMERKASA). The MYBAIKHATI campaign is one of PEMERKASA's focuses to strengthen the country's competitiveness and to bridge the digital divide. This campaign which uses the concept of crowdsourcing will involve the collection of donations of used devices from businesses and individuals through selected branches of six (6) telecommunications companies.

Digital transformation also has an impact on the country's postal and courier sector which is the backbone of e-commerce activities. As such, the National Courier Accelerator Plan (PAKEJ) is a strategic action plan that forms the core of e-commerce activities and the development of the latest digital economy with its focus on the merger of the logistics sector, e-commerce platforms, e-hailing and financial transaction systems. Among PAKEJ initiatives is a comprehensive package delivery network with the addition of collection and delivery centres throughout the country, increasing convenience for consumers when purchasing or picking up ordered goods. MCMC aims to add about 4,000 new collection and delivery centres every year, totalling over 30,000 by 2025. This is in addition to the existing 10,000 centres. These efforts as a whole are expected to contribute to more than 10 percent towards digital economy.

Also organised by MCMC are various laboratories to determine the direction of the sectors under the supervision of the MCMC. This includes the Community Internet Centre Laboratory, the National Internet Exchange Laboratory, the National Broadcasting Industry Laboratory and so on which provide opportunities for the MCMC to obtain input from the industry and experts involved to ensure the sustainability and effectiveness of the transformation of the industries involved.

The Internet Centre Transformation Lab that took place in January 2021 reflects the commitment of the MCMC to ensure that the Internet Centre acts as a centre that is not only capable of generating new jobs, driving the growth of e-commerce activities but also providing more online services for the convenience of the people. The Internet Centre has also been empowered to PEDI since the third quarter of 2021.

Likewise with the National Interconnection Ecosystem Laboratory (NIEL) organised by MCMC for three (3) weeks from 24 May to 11 June 2021 which aims to increase the country's competitiveness and connectivity at the international level. NIEL has set high aspirations to position Malaysia as an international business destination of choice by providing a competitive interconnected infrastructure ecosystem, including Data Centres, increasing IXPs which are part of NIEL's goals and achievements.

The objective of the broadcast lab that took place in Q4 was to ensure the sustainability of the TV and radio broadcasting industry, that it evolves with technological trends along with changes in consumer attitudes, through facilitating the growth of Malaysian-produced content for export to international and domestic markets. Restructuring the Content Regulation Framework and optimising Adex for TV and radio through STAM and RAM were among the key focus areas.

The MCMC also underwent a transformation so that employees remain relevant to current developments. The State Planning and Coordination Department acts as a reference agency at the state level.

One of the focus areas of the MCMC for 2021 was for the State Office to function as a microcosm for the MCMC. Under this State Transformation, the basis and role of the State Office is strengthened. Throughout 2021, office preparations have been carried out with a total of 14 State Offices operating in each state. Also implemented is the addition of a workforce of 240 people including 36 PEDI personnel, allocation of vehicles for smooth operations in the field, as well as strengthening in the aspects of planning, compliance and enforcement.

The transformation of the State Office as a microcosm of the MCMC is to drive and assist the MCMC to ensure that project implementation can be fully achieved. The State Office is also closer to the Local Authority (PBT) in implementing the MCMC initiative more effectively.

In order to provide support for the growth of the digital economy, strengthen digital infrastructure and services and develop the digital talent available in the future, the MCMC is also focusing on organisational realignment efforts including the establishment of a new sector, the Industry Development Sector. At the same time, the Central Monitoring Division (CMD) was also created to monitor the implementation of MCMC's main projects and ensure that they achieve the set targets.

Recognising that digital talent provision will be key to future growth, the MCMC has provided various training courses, research grants, as well as activities and knowledge resources to internal and external stakeholders. For the year 2021, the MCMC has placed emphasis on cooperation and partnership programmes with external parties including institutions of higher learning (IPT), government bodies, professional institutions and training providers; also, to promote industrial capability programmes.

Among the main activities that have been successfully carried out include the External Stakeholder Capacity Building Programme (MCBP). Through this programme, the MCMC focuses on selected topics under its supervision and that of the communication and multimedia industry; collaboration with IPT for the development of a Micro Credential (MC) Course related to the 5G ecosystem and areas of competence related to communication and multimedia (C&M).

The success of the MCMC in winning the National Energy Award (NEA) 2021 for the category of Energy Efficient Building i.e., Best Large Green Building proves MCMC's commitment to the principles and values under the concept of Environmental, Social and Governance management or ESG which emphasises the balance between progress and harmony in every initiative implemented. This is a very significant development in an effort to help reduce carbon emissions into the air in line with the Government's actions to empower sustainable development in Malaysia. In this context, efforts such as energy saving, water efficiency, environmental quality in buildings and environmental sustainability are emphasised.

It is the intention of the MCMC and all parties concerned to ensure that the country and Malaysians are not left behind in this digital technology competition. The vision of the MCMC is to create a self-regulating, competitive, efficient and growing communication and multimedia industry that generates growth to meet the country's economic and social needs. All the initiatives introduced by the MCMC throughout the year 2021 are witnesses to the continuous dedication and commitment of the MCMC in ensuring that no one is lagging behind in enjoying the best digital services even though there will certainly be various challenges trying to meet the needs of all stakeholders. MCMC will continue to strive to improve services and performance to ensure all parties reap valuable benefits from all efforts carried out.



From left to right (Seated) :
YBhg. Dato' Sri Hj. Mohammad Mentek
YBhg. Dato' Dr. Fadhlullah Suhaimi Abdul Malek
YBhg. Tan Sri Tajuddin Atan

From left to right (Standing) :
YBhg. Datuk Muhammad Azmi Mohd Zain
YBrs. Ts. Dr. Zaidi Razak
YBhg. Tan Sri Mohamad Salim Fateh Din
YBhg. Tan Sri Hj. Mazlan Lazim
YBrs. Prof Dr. Tharek Abd Rahman
YBhg. Datuk Wan Ahmad Uzir Hj. Wan Sulaiman

MEMBERS OF THE COMMISSION

PROFILE OF COMMISSION MEMBERS



YBHG. DATO' DR. FADHULLAH SUHAIMI ABDUL MALEK

YBhg. Dato' Dr. Fadhlullah Suhaimi Abdul Malek started his career at the MCMC in 2017 as Member of the Malaysian Communications and Multimedia Commission (MCMC) and also the Chief Sector Officer of Network Security, New Media Monitoring, Compliance and Advocacy, from 1 March 2017 until 30 June 2018. He then left the MCMC to serve at Universiti Perdana as Senior Lecturer for Public Health and Director of Business Development and was promoted to Deputy Chief Executive Officer and Registrar before being appointed Vice Chancellor in January 2019. He graduated with a Medical Degree from Universiti Kebangsaan Malaysia in 1988 and obtained a Masters of Medicine in Public Health from the National University of Singapore and a Master of Arts in Health Management Planning and Policy with distinction from the University of Leeds, United Kingdom in 1993 and 1996 respectively. He has attended senior management training at the Institute of European d'Administration des Affaires (INSEAD) and the University of Strathclyde. On 10 June 2020, he returned as Chairman of the Malaysian Communications and Multimedia Commission (MCMC).

YBHG. DATO' SRI HJ. MOHAMMAD MENTEK

YBhg. Dato' Sri Haji Mohammad Mentek was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 17 November 2020 for a period of two (2) years. He holds a Bachelor of Science in Mathematics and a Master of Science in Statistics from the University of Minnesota, USA and has obtained a Diploma in Public Administration from the National Institute of Public Administration (INTAN) in 1992.

Before being appointed as Secretary-General of the Ministry of Communications and Multimedia Malaysia (K-KOMM) in 2020, he had served as Secretary-General at the Ministry of Entrepreneur Development and Cooperatives and the Ministry of Housing and Local Government (KPKT). He began his career in the public service as Assistant Secretary of the Personnel, Services and Training Branch at the Ministry of Energy, Telecom and Post, and at various Government agencies including the Ministry of Education, the Prime Minister's Department and the Malaysian Immigration Department. In 1994 and 2003, he received the Outstanding Service Award as a public servant.



YBHG. TAN SRI TAJUDDIN ATAN

YBhg. Tan Sri Tajuddin Atan holds a Bachelor of Science (Agribusiness) from Universiti Putra Malaysia and a Master of Business Administration from Ohio University. He was awarded an Honorary Doctorate in Finance by Universiti Putra Malaysia and is recognised as a Fellow Chartered Banker by the Asian Institute of Chartered Bankers. He has been recognised as the 2020 Chief Executive Officer by the Minority Shareholder Watch Group (MSWG).

Tan Sri Tajuddin was appointed on 7 July 2020 as a Member of the Malaysian Communications and Multimedia Commission and brings with him over 38 years of experience in the corporate and financial industry which includes banking and capital markets, domestically and internationally. He currently serves as Independent Non-Executive Chairman of MMC Corporation Berhad from 1 September 2020, and as Chairman of Bank Muamalat Malaysia Berhad. He is also a member of the Capital Markets Foundation Board of Trustees (*Lembaga Pemegang Amanah Yayasan Pasaran Modal*) which is under the jurisdiction of the Malaysian Ministry of Finance.



YBHG. TAN SRI MOHAMAD SALIM FATEH DIN

YBhg. Tan Sri Mohamad Salim Fateh Din was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 1 January 2022 for a period of two (2) years. He was also previously appointed as a Member of the MCMC Commission from 2010 to 2014. He is currently the Deputy Executive Chairman of Malaysian Resources Corporation Berhad (MRCB). YBhg. Tan Sri who is also the Founder and Managing Director of Kumpulan Gapurna Sdn Bhd, has held various positions throughout his career, including Non-Executive Chairman of Giant Malaysia (2009-2013), Chairman of British American Tobacco (Malaysia) Berhad (2012-2016) and Chairman of the Malaysia-Pakistan Business Council.

Throughout his career, Tan Sri has received various awards including the Tamgha-i-Imtiaz Award by the Government of Pakistan; Masterclass Property Icon of the Year at Pangkor Dialogue Awards 2016; Masterclass Excellence Award - Business Icon of the Year, Utusan Business Awards 2015; Masterclass Global CEO of the Year in the 6th Middle East Business Leaders Awards 2015; Outstanding Category winner in the Asia Pacific Entrepreneurship Awards 2015; and THE Masterclass CEO of The Year in the Global Leadership Awards 2014.

YBHG. TAN SRI HJ. MAZLAN LAZIM

YBhg. Tan Sri Hj Mazlan Lazim was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 15 February 2022 for a period of two (2) years. He graduated with a Bachelor of Science in Resource Economics from Universiti Pertanian Malaysia (UPM) and completed his Master's studies at the same university in the field of Human Resource Development Science in 1994.

YBhg. Tan Sri has served in the Royal Malaysian Police (PDRM) for 35 years and was the former Deputy Chief of Police in June 2021 before his mandatory retirement on 25 December of the same year. His important positions in the field of policing include being the Director of the Logistics and Technology Department, Bukit Aman in 2020. In addition, he has also held positions as the Chief of Police of Kelantan (July 2014 - June 2016) and Kuala Lumpur (October 2017 - September 2020). As a result of his unceasing contribution to the community in particular and the country in general, especially in the field of policing, he received the National Hero Service Medal (PJPN) in 2018 and the Gallant Commander of the Police Force (PGPP) in 2021.



YBHG. DATUK WAN AHMAD UZIR HJ. WAN SULAIMAN

YBhg. Datuk Wan Ahmad Uzir started his career as an Administrative and Diplomatic Officer - as Assistant Director at the Economic Planning Unit (EPU) in the Prime Minister's Department. He has previously served in various Government agencies including the Ministry of Domestic Trade and Consumer Affairs, the Ministry of Agriculture and agro-based Industry, and the Ministry of Health. YBhg. Datuk Wan Ahmad Uzir is now the Secretary General of the Ministry of Public Works.

YBhg. Datuk Wan Ahmad Uzir has been appointed as a member of the Malaysian Communications and Multimedia Commission (MCMC) for a period of two (2) years starting on 1 April 2022. He has been awarded the Outstanding Service Award as a public servant in 2008 and 2011. He has also been awarded with various State Government awards throughout his tenure in public service.

YBHG. DATUK MUHAMMAD AZMI MOHD ZAIN

YBhg. Datuk Muhammad Azmi holds a Master of Social Science from the Universiti Kebangsaan Malaysia and a Bachelor of Economics from the University of Malaya. He started his career as an Administrative and Diplomatic Officer in 1996 as an Assistant Director in the Economic Planning Unit (EPU) of the Prime Minister's Department and in several government agencies, including the Public Service Department (JPA), Ministry of Federal Territories and once held the position of President of the Putrajaya Corporation. He currently holds the position of Director General at the Office of the Director General of Federal Land and Mines.

YBhg. Datuk Muhammad Azmi has been appointed as a member of the Malaysian Communications and Multimedia Commission (MCMC) for a period of two (2) years starting on 1 April 2022. He has been awarded the Outstanding Service Award in 2001, 2004, 2009 and 2013. He has also been awarded honorary degrees of Provincial Crown Knight (KMW) and Provincial Crown Commander (PMW), respectively in 2009 and 2018.



YBRS. PROF. DR. THAREK ABD RAHMAN

YBrs. Prof. Dr. Tharek holds a Bachelor's Degree in Electrical Engineering from the University of Strathclyde, United Kingdom; Master's Degree in Communication Engineering from UMIST, Manchester, United Kingdom; and a PhD in Mobile Communications from the University of Bristol, United Kingdom. YBrs. Prof. Dr. Tharek Abd Rahman has been appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) for a period of two (2) years starting on 7 July 2020.

He is an Adjunct Professor at the School of Electrical Engineering, Universiti Teknologi Malaysia (UTM) and an active academic in several research entities at the national and international level in conducting research related to mobile communications, antennas and propagation. He has also been appointed as a Fellow of the Malaysian Academy of Sciences. He has played a role in providing effective cooperation and partnership in connecting the world of academia and industry in an effort to develop 5G initiatives in Malaysia.

YBRS. TS. DR. ZAIDI RAZAK

Ts. Dr. Zaidi Razak holds a PhD in Image Processing, especially in Javanese Character Recognition from the University of Malaya. Dr. Zaidi is a Senior Lecturer in Computer Science at the University of Malaya while at the Sarawak Service Modernisation Unit, he is the Head of the Secretariat for the State Digital Economy Initiative, the State's Chief IT Security Officer and the State's Open Sharing Data Coordinator. Additionally, he has held the position of Head of Revenue Generation Team and consults on Telecommunications, MS ISO Standards, Control Systems, Character Recognition and Internet of thing (IoT) for Government agencies.

He was awarded a gold medal at the Islamic Innovation Exhibition in Kuala Lumpur (2014), Gold Medal British Invention at the 8th British Invention Show (2008) and a silver medal at the International Exhibition 'IDEAS-INVENTIONS-NEW PRODUCTS' (iENA) in Germany (2008).



WITH UTMOST GRATITUDE AND APPRECIATION

YBHG. TAN SRI DATUK DR. ABDUL SAMAD HAJI ALIAS

YBhg. Tan Sri Datuk Dr. Abdul Samad Haji Alias was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 7 July 2020 and to 1 January 2022. He is the founder of the Board of the Financial Institutions Directors' Education (FIDE) Forum and serves as Chairman of the Malaysian Deposit Insurance Corporation (PIDM). He is a fellow of the Institute of Chartered Accountants in Australia, and has extensive experience in business advisory and audit services.

YBhg. Tan Sri Abdul Samad served as Deputy Managing Partner of Arthur Andersen in 1991 and retired in 1999. He was also a member of the Malaysian Accounting Standards Board (MASB) and the Financial Reporting Foundation (FRF). Tan Sri Abdul Samad was the first Malaysian to be elected to the International Federation of Accountants (IFAC) which consists of 22 members. In 2006, he received international recognition when he was awarded The Association of Chartered Certified Accountants' Award for his contribution to the industry in Asia.



YBHG. DATUK ZAINAL ABIDIN ABU HASSAN

YBhg. Datuk Zainal Abidin Abu Hassan was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 7 July 2020 to 6 October 2021. He holds a Bachelor's Degree in Science (Human Development) from Universiti Pertanian Malaysia (UPM). He also holds a Diploma in Public Administration from the National Institute of Public Administration (INTAN) and a Master's Degree in Public Administration from the University of New Haven, USA in 1994.

He started his career in public service as an Administrative and Diplomatic Officer in the Public Service Department (JPA) in 1988. Before his appointment as Secretary General of the Ministry of Housing and Local Government (KPKT), Datuk Zainal Abidin had served in several Government agencies such as Subang Jaya Municipal Council (MPSJ), Ministry of Higher Education (KPT), Bureau of State Affairs (BTN), Ministry of Home Affairs (KDN) and the Prime Minister's Office. He has served as Member of the Board of Universiti Malaysia Terengganu (UMT) (2007 - 2013), the Skills Development Fund Corporation (PPTK) (2016 - 2018), the Malaysian Industry-Government Group for High Technology (MIGHT), the Malaysian Stadium Corporation (2017 - 2019), and now he is Member of the Construction Industry Development Board (CIDB).

YBRS. MR. CHEW LIONG KIM

YBrs. Mr. Chew Liong Kim was appointed Member of the Malaysian Communications and Multimedia Commission (MCMC) on 7 July 2020 to 1 January 2022. He holds a Bachelor's Degree in Commerce from the University of Auckland, New Zealand. He is a fellow of the Chartered Accountants of Australia and New Zealand and is a member of the Malaysian Institute of Accountants and the Malaysian Institute of Administrative and Chartered Secretaries. He served as managing partner for Arthur Anderson's (AA) business consulting practice in Asia Pacific from 1992 to 1998 and was a member of AA's Worldwide Board Nominating Committee from 1997 to 1998.

YBrs. Mr. Chew currently holds the position of Executive Chairman of CLK Advisors and Senior Advisor at Roland Berger Strategy Consultants, Southeast Asia. He is also a Non-Independent Non-Executive Director at Zico Holdings Inc., an Independent Non-Executive Director at MISC Berhad since 1 September 2021, and co-founder of HRM Business Consulting Sdn Bhd. He also served as Executive Director/Chief Executive Officer of Dataprep Holdings Berhad, Managing Director of Maybank Investment Bank Berhad in the Strategic Advisory Division and Managing Director of Bina Fikir Sdn Bhd. He served as Member of the Malaysian Communications and Multimedia Commission from 2013 to 2015.





YBhg. Dato' Dr. Fadhullah Suhaimi Abdul Malek
Chairman (seated, centre)

YBhg. Dato' Mohd Ali Hanafiah Mohd Yunus
Chief Operations Officer (seated, left)

Ms. Nor Fadhilah Mohd Ali
Chief Financial Officer and Strategy (seated, right)

From left to right (standing) :

Mrs. Nor Akmar Shah Minan
Head of Division, Monitoring Centre

Mrs. Long Hui Ching
Head of Division, Risk Management

Mrs. Shirley Tan
Head of Division, Strategic Communications and Industry Relations

Mr. Haji Roslan Mohamad
Head of Division, State Transformation and Coordination

Mr. Muhammad Razali Anuar
Chief Officer, Corporate and International

Mr. Nizam Arshad
Chief Development Officer

Dr. Murugappan Subramaniam
Head of Division, Human Capital

Mr. Shamsul Izhan Abdul Majid
Chief Officer, Technology and Innovation

Mrs. Zaitul Akmam Ghaifullah
Head of Department, Internal Audit

Mrs. Bawani Selvaratnam
Chief Officer, Industrial Development

Mrs. Noor Syahira Surya Noordin
Chief Officer, Legal

Mr. Zulkarnain Mohd Yasin
Chief Officer, Regulatory

ORGANISATION LEADERS

SHAPING THE DIGITAL FUTURE

The year 2021 is a year of recovery for many business sectors and national enterprises. Two (2) years since the outbreak of the COVID-19 pandemic, the global economy is now poised to achieve an unexpected post-recession recovery. The national economy is expected to record strong growth while the service sector continues to increase its contribution.

Various challenges that threaten the world economy have accompanied the COVID-19 pandemic, however, the country and people have never given up, instead becoming more creative and innovative in dealing with it. Moving in the same direction, together, both try to adapt themselves and the industry in various aspects of development. This comprises the new normal economy, business, and lifestyle – venturing into digital economy areas such as cross-border online businesses and services, virtual learning, and more.

MCMC like other organisations is also faced with challenges that come from various directions. Despite this, MCMC remains persistent in its efforts to create a competitive, efficient and increasingly self-regulating communication and multimedia industry. MCMC is committed to ensuring that consumers benefit from options and a satisfactory level of service at a reasonable price. This in turn will help with the socio-economic growth of the country. MCMC strives to help the industry become sustainable through transformational efforts for suppliers, while increasing efforts to upgrade telecommunications services, broadcasting, postal and courier services and digital signatures. MCMC continues to drive active participation and play an important role in regulating and developing the industry to boost the country's economic competitiveness, to ensure the well-being of all.

AT A GLANCE THE MCMC THROUGHOUT 2021

Raising the curtain to 2021, MCMC has implemented various key initiatives targeting progress under the jurisdiction of the Commission. Among them is the organisation of the Internet Centre Transformation Lab in January 2021. The initiative aims for the Internet Centre to continue to act as a centre that is not only capable of generating new jobs, but also driving the growth of e-commerce activities and even providing more online services for the convenience of the local community.

On 17 March 2021, MCMC together with the main service providers launched the MyBAIKHATI campaign. The campaign was organised based on the awareness that every family needs smart devices for survival, in order not to be left behind. MyBAIKHATI collects and repairs used communication devices for low-income families (B40).

In an effort to transform the country's postal and courier sector, the National Courier Accelerator Plan or PAKEJ was launched in June 2021. PAKEJ was born from the initiative of the National Postal and Courier Industry Laboratory (NPCIL) aimed at creating first-class postal and courier services with extensive coverage throughout country. In addition, it also targets the rapid growth of the e-commerce sector from 14 parcels per capita to 30 parcels per capita by 2025 through the implementation of various strategic initiatives.

In addition, in an effort to increase Malaysia's competitiveness and connectivity at the international level, the National Connectivity Ecosystem Laboratory (NIEL) was organised by the MCMC for three (3) weeks starting from 24 May to 11 June 2021. NIEL has set high aspirations to position Malaysia as a preferred international business destination by providing a competitive interconnected infrastructure ecosystem, including Data Centres, Internet Exchange Points (IXP), and International Connectivity. This is a JENDELA effort setting effort that was started in 2020.

In line with the efforts to strengthen the Commission's operations and work, the process of realigning the organisation was implemented in mid-August 2021. Various series of reshuffles involving senior leadership at levels and divisions were implemented. Additionally, a new sector, Industrial Development to support RMK-12 planning in was established in November 2021.

Following the realignment process at the MCMC, the Ministry of Communications and Multimedia Malaysia (K-KOMM) also witnessed a change when the Honourable Tan Sri Datuk Seri Panglima TPr Annuar Haji Musa officially began his duties as the new Minister of Communications and Multimedia (MenKOMM) replacing the Honourable Dato' Seri Saifuddin Abdullah on 30 August 2021. The approach he took was that K-KOMM should be a Ministry that is proactive and always responsive to the needs of the people. His mandate to the MCMC is to improve the country's connectivity to a better level in addition to ensuring that the affordability of devices for the B40 group is given attention. The two mandates are also part of K-KOMM's Performance Indicator Index (KPI) for the first 100 days.

Realising the KPI, the *Pakej Peranti Remaja Keluarga Malaysia* and the *Pakej Peranti Keluarga Malaysia* were launched by the Ministry of Education and Culture on 15 September 2021 to help teenagers and students gain access to the Internet, and for all, especially the underprivileged, affordable smart devices. Going into the third quarter of 2021, the Government had presented the 12th Malaysia Plan (RMK-12) on 27 September 2021 with the hope of providing high-quality and comprehensive access to digital infrastructure in line with its desire for Malaysia to become a high-tech and high-income country with better quality of life. The Government is committed to improving digital infrastructure and services to address various digital divides. In line with the development of the Fourth Industrial Revolution (4IR), the implementation of the National Digital Interconnection Plan (JENDELA) will provide 100 percent 4G coverage in populated areas, wider 5G coverage, and fixed line broadband to nine (9) million premises by the year 2025.

The day, 21 November 2021 is a historic moment when the MCMC-supervised *Pusat Internet Komuniti* (PIK) was officially upgraded to *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) or Keluarga Malaysia Digital Economy Centre. The ceremony was officiated by the Honourable Prime Minister, Dato' Sri Ismail Sabri Yaakob at *Dewan Orang Ramai*, Kg. Durian Tawar, Bera, Pahang. This upgrade is to enable PEDI to become more sustainable. Various entrepreneurship programmes are conducted in 873 existing PEDI across the country. A total of 37 new PEDI will be opened in the first quarter of 2022. By the end of 2022, 173 new PEDI will start operating thus increasing the number of PEDI operating nationwide to 1,083. This is in line with the Government's target to create "1 PEDI in every State Assembly".

The day, 9 December 2021, was the 100th day the ruling Government had been leading the nation. Throughout the 100-day period, various KPIs were outlined by the Prime Minister to all Cabinet Ministers. For K-KOMM, one of the KPIs that had successfully achieved its target was the *Pakej Remaja Keluarga Malaysia* and the *Pakej Peranti Keluarga Malaysia*. Encouraging responses were logged from recipients of the packages.

In order to instil a culture of recycling among Malaysians to deal with the increasingly alarming dumping of e-waste, the MCMC has announced a Call for Cooperation to companies interested in the implementation of the Small Information Technology and Telecommunication Equipment Recycling Project (KITAR) where consumers can dispose of their old or damaged devices to be recycled (Mobile e-Waste). Furthermore, at the National Energy Awards (NEA) 2021, the MCMC was named the Best Large Green Building for the Energy Efficient Building category. The award was given to MCMC HQ Tower 1 based on several aspects such as the design of the green building, and its operation and maintenance.

Throughout December 2021, the Kembara Connectivity tour series across the country continues to closely monitor the development of Internet access in remote and rural areas across the country. In the tour series, telecommunication companies are reminded to take proactive actions to ensure that service quality and user experience can be improved. MCMC was also instructed to carry out a technical audit on broadband services to ensure that the services offered by telecommunication companies are satisfactory in addition to meeting the needs of the people. The 2021 curtain drew to a close with the successful implementation of 5G in Cyberjaya, Putrajaya and Kuala Lumpur in mid-December 2021. All three (3) locations became the first locations in the country to enjoy 5G.

Clearly, all the initiatives implemented are to prepare Malaysia towards a digital country where its citizens are always connected and enjoy the national development agenda in line with the concept of togetherness and inclusiveness of *Keluarga Malaysia*.

RANCANGAN MALAYSIA KE-12 (RMK-12)

As the communications and multimedia regulatory body, MCMC welcomed the 12th Malaysia Plan (RMK-12) and identified various initiatives towards realising the objectives of the plan. RMK-12 will accelerate the adoption of technology and innovation and make Malaysia a high-tech and high-income country, with a better quality of life overall.

The presentation of the RMK-12 shows an emphasis on the growth of the digital economy as well as efforts to strengthen infrastructure and digital services in particular to develop future talent to catalyse the growth of the national economy is welcomed. The digital economy, digital infrastructure and productivity are the government's main focus in strengthening the existing connectivity throughout the country. This includes a five (5) year national digital infrastructure plan which is the JENDELA Plan starting September 2020. JENDELA is also targeted to connect fibre optic lines to nine (9) million premises in addition to targeting 100 percent 4G coverage in populated areas with Internet speeds exceeding 100Mbps by the end of 2025.

The plan consists of two (2) phases namely, Phase 1 (2020 – 2022) which focuses on optimising existing resources and infrastructure for mobile and fixed broadband services while Phase 2 (2023 – 2025) focuses on the use of 5G network services aimed at increasing digital connectivity throughout the country. Achievements as of 31 December 2021 saw a total of 6.848 million premises covered with fibre optic access and 4G coverage in populated areas recording a rate of 95.4 percent.

Sustainable infrastructure will bring changes to the lifestyle of a larger, keener and more efficient digital community, driving the country towards the Fourth Industrial Revolution (4IR) and attracting investors. At the same time, MCMC will create a large-scale data centre ecosystem to offer high-tech cloud computing services to meet increasing user demand.



Best Large Green Building Award for the Energy Efficient Building category, National Energy Award (NEA) 2021

In order to realize the country's objective to expand global connectivity, MCMC together with government agencies and the private sector are trying to attract more international submarine cable landings to Malaysia. This effort will complete the ecosystem infrastructure of service providers to meet user demands. In order to improve the efficiency of data exchange in the country, the existing 12 Internet Exchange Points (IXP) will be increased to 75 by 2022. This is to enable faster and smoother Internet traffic exchange between service providers.

INTRODUCTION TO 4IR AND THE ROLE OF THE MCMC

The establishment of the National Council for Digital Economy and Fourth Industrial Revolution (MED4IR) reflects the Government's determination to ensure inclusive digital economic development that benefits 4IR technology.

The Council functions as the highest administrator in setting policy, implementation and monitoring of digital economy and MED4IR strategies and initiatives in Malaysia. High-speed broadband infrastructure has been identified as an important component in particular to support Government service institutions and education. This project aims to provide fibre optic infrastructure near schools, government premises, business areas, public and other commercial facilities to enable the people to have access to fibre optic infrastructure and enjoy broadband access at a higher speed, in accordance with the Government's desire to build highly knowledgeable and ethical national digital communities.

MCMC intends that when this project is completed by the end of 2025, digital connectivity based on optical fibre networks especially in rural areas will be able to bridge the digital divide, support balanced and inclusive regional development and further become a catalyst for the development of new technologies such as 5G and various the next generation of communication technology. In December 2021, 5G was

successfully implemented according to plan which was 500 locations in Cyberjaya, Putrajaya and Kuala Lumpur. It is targeted that 3,518 locations will be completed by the end of 2022 and coverage will reach as much as 80 percent of populated areas by 2024.

JENDELA

The declaration of the first Movement Control Order (MCO) in Malaysia almost two (2) years ago proves how important Internet connectivity is in people's lives when household Internet use rose dramatically. The demand for broadband is still increasing due to the increased use of video conferencing, learning and shopping activities via the Internet.

JENDELA aims to build a robust digital infrastructure to strengthen digital transformation and bridge the digital divide between urban and rural communities. As a result, Malaysians are empowered with the necessary facilities and skills to enable them to thrive and succeed in the digital economy.

JENDELA is a transformation effort to strengthen existing connectivity across the country with a target of 7.5 million premises covered by the end of 2022 to nine (9) million premises. This fixed-line fibre optic network with a speed of 100Mbps will cover 100 percent of populated areas in stages by the end of 2025.

JENDELA's implementation is not only focused on urban areas, but also provides digital infrastructure for rural and interior residents.

With the recognition of telecommunications as the third public utility, MCMC through a Working Committee consisting of communication industry players, professional bodies as well as relevant Government Departments and Agencies has taken the initiative to develop the *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)* to ensure aspects of development planning that are more sustainable.



JENDELA has gained recognition and approval on various national platforms. Among them are:

- JENDELA and *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)* presented at the National Physical Planning Council (MPFN) Meeting on 27 October 2020
- JENDELA announcement in MyDIGITAL on 19 February 2021 and RMK-12 on 27 September 2021
- JENDELA, GPP-I and Telecommunications as the 3rd Public Facility approved at the State and Local Government Council Meeting (MNKT) on 3 March 2021
- Recognition of 'Telecommunications as a Public Facility' by the Cabinet on 2 June 2021
- UBBL 1984 amendment which also includes the use of the new G20 form approved by MNKT on 13 July 2021
- JKT sent a letter to the State Secretary (SUK) of 11 states in the Peninsula and to the Secretary General of the Ministry of Federal Territories (KWP) on 13 August 2021 to gazette the approved UBBL amendment

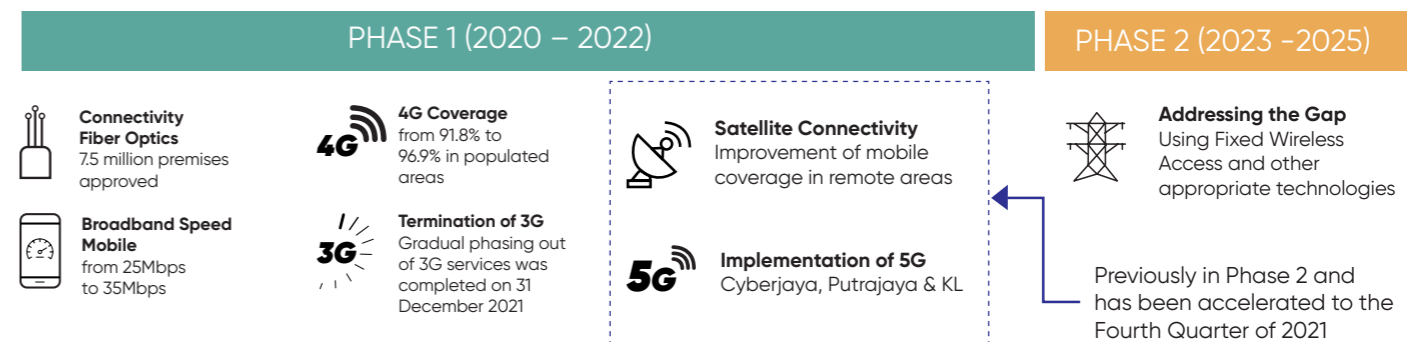
JENDELA Phase 1 Targets

MCMC and telecommunications service providers implemented a total of eight (8) initiatives aimed at improving overall connectivity. MCMC has completed four (4) out of eight (8) initiatives and the rest will be completed by the end of 2022. In addition to this, four (4) more initiatives have been used for policy support and coordination for the implementation of JENDELA.

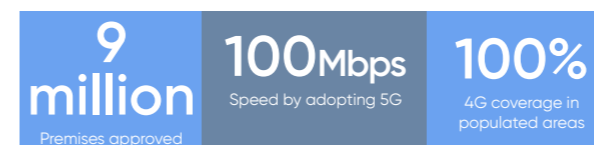
Included in the initiatives are fiberisation of premises, building new communication towers, upgrading existing base stations, termination of 3G networks, and other initiatives related to support policies. JENDELA Map is available to the public in July 2021 to check coverage of telecommunications services by service providers and also for users to submit feedback.

The support of all stakeholders has enabled MCMC to advance the planning and roll-out of 5G services and satellite connectivity from Phase 2 to Phase 1. This effort is to help address connectivity challenges in rural and remote areas. Selected locations such as Cyberjaya, Putrajaya and Kuala Lumpur are now enjoying 5G services after a successful launch in December 2021.

JENDELA JOURNEY



Targets to accomplish by 2025 (RMK-12)

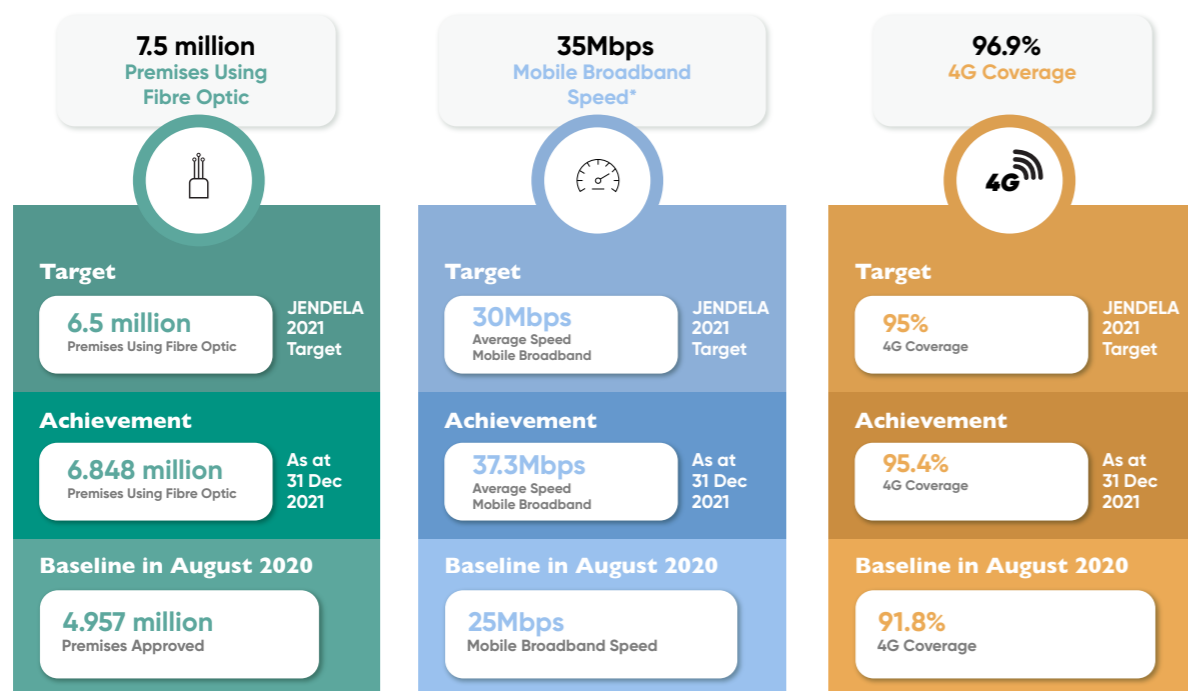


2020/2021

JENDELA has gained recognition and approval on various national platforms. Some of them are:

- JENDELA and *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)* presented at the National Physical Planning Council (MPFN) Meeting on 27 October 2020;
- Announcement of JENDELA in MyDIGITAL on 19 February 2021 and RMK-12 on 27 September 2021;
- JENDELA, GPP-I and Telecommunications as the Third Public Facility approved at the State and Local Government Council Meeting (MNKT) on 3 March 2021;
- Recognition of 'Telecommunications as a Public Facility' by the Cabinet on 2 June 2021;
- UBBL 1984 amendment which also includes the use of new G20 borings approved by MNKT on 13 July 2021;
- JKT sent a letter to the 11 state SUK in the Peninsula and KSU of the Ministry of Federal Territories (KWP) on 13 August 2021 to gazette the approved UBBL amendment.

JENDELA PHASE 1 ACHIEVEMENTS



*Based on monthly data from the Ookla Global Speed Test Index

Together, MCMC and industry exceeded the JENDELA target for 2021. As of 31 December 2021, approximately 6.848 million premises have access to fiber optic broadband while 95.4 percent of all populated areas have access to 4G networks. The average speed of mobile broadband has also increased to 37.3Mbps, well above the initial target of 35Mbps in Phase 1 which is expected to be completed by the end of 2022.

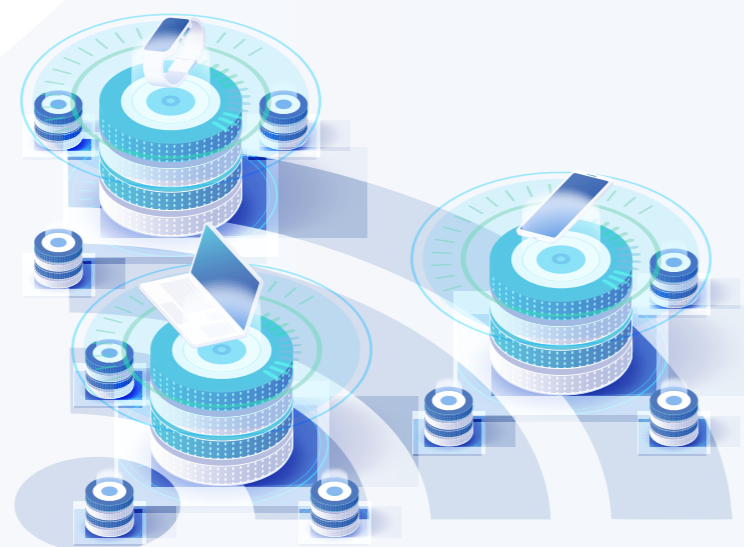
EVOLUTION FROM PIK TO PEDI

In addition to developing digital infrastructure, support and facilities are also provided especially for people in rural areas through *Pusat Internet Komuniti* (PIK) which has now been upgraded to become the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI). Each PEDI is equipped with access to broadband services and digital infrastructure facilities, and even offers trained personnel to provide the services and support needed by the local community. PEDI's main focus is to create and empower small entrepreneurs towards innovative and competitive digitalisation. This allows all residents regardless of social or geographic position to be able to participate in and take advantage of opportunities in the digital economy.

Various entrepreneurship programmes are conducted throughout the country at 873 existing PEDI locations. PEDI was launched by the Prime Minister, YAB Datuk Seri Ismail Sabri Yaakob in November 2021. In the first quarter of 2022, a total of 37 new PEDI will be opened and by the end of the period, it is expected that 173 new PEDI will start operating. With a total of 1,083 PEDI operating across the country, this is in line with the Government's target to create "1 PEDI in every State Legislative Assembly".

It is hoped that the presence of Advisory Panels, *Rakan Digital* and Local Icon Entrepreneurs in each PEDI will encourage the local community to get involved in organised activities and fully utilised the services at PEDI.

Through PEDI, various programmes are provided to help entrepreneurs start their business or increase demand for their products with online access and using e-commerce platforms. The ability of small entrepreneurs to adapt to digitalisation and technological developments will increase efficiency and sustain their business in the long term.



PAKEJ

Since the MCO came into effect, e-commerce platforms in Malaysia have been flooded with orders, putting unprecedented pressure on courier service providers and the long-distance delivery segment. Courier service providers are experiencing difficulties in dealing with customer expectations under the MCO.

Service providers are aware of the need to invest more in technologies such as artificial intelligence (AI), machine learning, robotics, automation and smart warehousing to improve efficiency and thus prepare for more opportunities that will arise from e-commerce.

The production of an action plan known as the National Courier Accelerator Plan or simply 'PAKEJ' for the implementation of the period 2021 - 2025, in line with the country's aspiration to create a first-class postal and courier service with extensive coverage throughout the country. PAKEJ which targets the rapid growth of the e-commerce sector which is expected to grow from 14 packages per capita (2020) to 30 packages per capita by 2025 also focuses on increasing productivity through network sharing, an efficient Pick-Up Drop-Off system (Rangkaian PAKEJ) and industry consolidation through a new courier licensing scheme. As of December 2021, the Rangkaian PAKEJ has exceeded the package target for this year, which is 21,188 packages have been recorded. This is equivalent to 70.6 percent of the target set for 2025.



PUPUK

The Micro, Small and Medium Enterprises (MSME) sector is a pillar of the country's economy, making up almost 1.2 million or 97.2 percent of the total number of businesses as of the end of 2020. However, most of the MSME are still less competitive and need to be strengthened after being affected by the COVID-19 pandemic. Now, the Government provides incentives to modernise businesses by adopting advanced technology and digitalisation, and further opens up opportunities for MSME entrepreneurs to explore the world market.

Pemerkasaan Pendigitalan Usahawan Kecil (PUPUK) Programme which started this year is expected to benefit 800,000 small entrepreneurs by 2025. The PUPUK initiative is coordinated by MCMC with the involvement of other Government agencies such as the Ministry of Entrepreneur Development and Cooperatives (MEDAC), the Malaysian Digital Economy Corporation (MDEC), SME Corp, MyNIC, the Companies Commission of Malaysia (SSM), the *Institut Keusahawanan Negara* (INSKEN), the Human Resources Development Corporation (HRD Corp), the Bank Simpanan Nasional (BSN), the Bank Negara Malaysia (BNM) as well as private sector cooperation.

To begin with, the PUPUK@Shopee programme was implemented on 28 June 2021 at PEDI and a total of 549 small entrepreneurs followed the programme through this e-commerce platform. PEDI acts as a touch point for the implementation of PUPUK.

On 3 August 2021, the PUPUK@AEON programme was officially launched and this will open up opportunities for 100 small entrepreneurs through PEDi to sell their products at AEON Supermarkets physically and online.

The main goal of the PUPUK programme is to provide guidance to small entrepreneurs so that they can grow their business to a better level with a strategy that is compatible with the new norms at a time when the country is hit by the COVID-19 pandemic. Among them, small entrepreneurs will be guided to do business online through e-commerce platforms such as Shopee and then be able to sell their own range of products at well-known supermarkets such as AEON.

The PUPUK programme uses PEDi as a one-stop center where *Rakan Digital* PEDi can undergo the Train the Trainer (TTT) programme. They play the role of digital ambassadors for local micro businesses from the aspects of on boarding, business development, sharing information, details and answering common questions for all programmes and funding under the participating agencies.

STATE TRANSFORMATION

Digital transformation efforts are not limited to digital infrastructure. MCMC is also undergoing transformation so that MCMC employees remain relevant. The State Planning and Coordination Department acts as a reference agency at the State Government level in matters related to infrastructure development. State-level joint ventures are also foreseen through programmes to provide universal services, improve coverage, develop local entrepreneurs and other major projects such as JENDELA, PEDi, PUPUK and PAKEJ. It is also responsible for regulating communication and multimedia activities through service quality management and field enforcement including related activities. This regulation is to increase the coverage and quality of user experience in addition to educating the public about multimedia communication through various awareness, development and complaint management programmes.

One of MCMC's focus areas for 2021 is for the State Office to function as a microcosm for MCMC. Under this State Transformation, the basis and role of the State Office that has been empowered and the achievement in 2021 includes the preparation of offices with a total of 14 State Offices operating in each state. Other facilities include the addition of a workforce of 240 people including 36 PEDi personnel; provision of vehicles for smooth operations in the field; and strengthening planning, compliance and enforcement activities.

State transformation is important because of the large role and responsibility of the State Office which here, 'the rubber hits the road'. The State Office has the role of driving and assisting MCMC to ensure that the implementation of projects such as JENDELA can be fully achieved.

The State Office is also closer to the people in implementing MCMC initiative and is the main channel to receive and submit feedback regarding the MCMC initiative more effectively. The State Transformation Programme achieved in 2021 has further strengthened the operation of the State Office in improving the monitoring of the quality of communication services to the people.

EFFECTIVE COMMUNICATION

Communication that is carried out strategically and effectively is the key to delivering effective and comprehensive information to users. An accurate explanation, solid and comprehensive facts, it can have a positive impact on the reputation of an organisation.

Because of that, as the front line, MCMC has taken various important steps to ensure that the targeted groups, namely the media, analysts and the public, obtain various important information in a clear and consistent manner.

MCMC also pays attention to the community of analysts, economists and industry by organising discussion sessions, face-to-face meetings and briefings from time to time. This step is important to enable the delivery of more accurate and clear information about the Commission's initiatives and direction. This approach will also help MCMC in disentangling any uncertainty on the part of the analyst in relation to an issue or policy. A total of six (6) briefing sessions were organised covering issues related to the latest developments, namely the JENDELA Plan, 5G, spectrum planning and PAKEJ. Also organised are industry lab discussion sessions, hosting webinars and information sessions for MCMC's main initiatives.

In addition, MCMC is also involved in various face-to-face activities with the public, organised by K-KOMM. Among them, the *Kembara Connectivity* tour series which aims to closely monitor the development of Internet access in remote and rural areas across the country as well as the launch of PEDi across the country.

Engagement Session With The Media

Throughout 2021, MCMC has issued a total of 95 media statements, responded to 65 media inquiries, 33 notification notices and 31 speaking engagements. A total of 111 interview sessions were conducted involving television stations, radio and print media. Among them, the interview series in *The Nation* slot published by BERNAMA TV, *Selamat Pagi Malaysia* and *BizMalaysia* produced by RTM, *Agenda Awani* produced by Astro Awani and so on.

A total of 1,034 articles related to MCMC have been published in the mass media. Most of the published articles revolve around topics such as JENDELA Plan, 5G, PEDi, *Pakej Peranti Keluarga Malaysia*, *Pakej Remaja Keluarga Malaysia*, fake news, fraud or scam, spreading of pornographic images, uncertified devices and many more. This means that an average of three (3) articles come out every day. MCMC has received 20,124 media mentions in media reports throughout the year 2021.

Overall, the media value for the news published throughout 2021 amounted to RM81.4 million. Meanwhile, the total percentage of positive news published related to MCMC is 83 percent.

The delivery of such information comes in various forms such as broadcasting media statements on emerging issues, giving feedback to media inquiries, interview sessions or webinars/speaking engagement sessions organised by certain parties.

MCMC also celebrates important days for the telecommunications, broadcasting and postal and courier sectors such as World Radio Day (13 February), World Telecommunications and Information Society Day or WTISD (17 May), World Post Day (9 October), World Standards Day (14 October) and World TV Day (11 November). MCMC uses social media to spread the word and share information about the days. This is one of MCMC's contributions in improving public knowledge.

Various media engagement activities are carried out by MCMC to ensure that the message delivered is accurate and understood by the public and has a positive impact on MCMC.

Strengthening the MCMC Brand

In an effort to ensure that the MCMC brand remains relevant to current developments, emphasis continues to be placed on the presentation of interesting, interactive and easy-to-understand infographics and videographics. Infographic and videographic displays are produced when there are important issues or specific matters that require further explanation while providing a clear picture of the resulting matter. For example, infographics or videographics about the dangers of spreading fake news, prudent use of the Internet, PAKEJ and KITAR (formerly known as Mobile e-Waste).

The same goes for the overall promotion or announcement of other MCMC initiatives such as the JENDELA Plan and the Digital Society Research Grant (DSRG). Interestingly, most of the MCMC infographics are also uploaded/retweeted by the media and the general public and this is proof that the MCMC brand continues to gain public attention.

In addition, the strengthening of the MCMC brand is actively carried out through several mediums and media channels which include continuous governance, public service announcements and various awareness initiatives. Also implemented is consulting and brand management to departments and divisions within the organisation to ensure brand alignment and its essence is maintained. The Mobile Journalism (MoJo) approach is also practiced by State Offices when they are in the field. With MoJo, through the videos, they can highlight the efforts that have been taken to solve a concern. The videos are used as content on social media platforms. Additionally, they serve to publicise how MCMC takes public concerns seriously.



MCMC 2021 JOURNEY

- JENDELA FIRST QUARTER REPORT
- PUSAT INTERNET KOMUNITI (PIK) TRANSFORMATION LAB

JAN

- WORLD RADIO DAY CELEBRATION

FEB

- CHILD ONLINE PROTECTION (COP) AWARENESS AND EDUCATION MODULE
- LAUNCHING OF THE MyBAIKHATI CROWD FUNDING PROGRAMME

MAR

- LAUNCH OF NATIONAL COURIER ACCELERATOR PLAN (PAKEJ)
- NATIONAL INTERCONNECTION ECOSYSTEM LABORATORY (NIEL)

JUL

JUN

- CELEBRATION OF WORLD TELECOMMUNICATION AND INFORMATION SOCIETY DAY (WTISD)

MAY

- THE DAILY 1GB FREE DATA GIVEAWAY WAS EXTENDED
- JENDELA SECOND QUARTER REPORT

APR

- JENDELA THIRD QUARTER REPORT

- LAUNCH OF PEMERKASAAN PENDIGITALAN USAHAWAN KECIL (PUKUK)
- SPECIAL TWITTER EMOJI LIVENED THE 2021 NATIONAL DAY AND MALAYSIA DAY CELEBRATIONS

- YB TAN SRI DATUK SERI PANGLIMA HAJI ANNUAR BIN HAJI MUSA APPOINTED AS MINISTER OF COMMUNICATIONS
- DIGITAL SOCIETY RESEARCH GRANT 2021

AUG

- PROJECT KITAR CALL FOR COLLABORATION
- WORLD POST DAY CELEBRATION
- MINISTER DIALOGUE SESSION WITH TELECOMMUNICATION COMPANY CHIEF EXECUTIVE OFFICER
- TABLING OF RMK-12
- NATIONAL ENERGY AWARD (NEA) 2021-BEST LARGE GREEN BUILDING

SEP

- LAUNCH OF 100-DAY ASPIRASI KELUARGA MALAYSIA PROGRAMME
- SMALL INFORMATION TECHNOLOGY AND TELECOMMUNICATION DEVICES RECYCLING PROJECT (KITAR)

- LAUNCH OF PUSAT EKONOMI DIGITAL KELUARGA MALAYSIA (PEDI)
- WORLD TV DAY CELEBRATION

DEC

NOV

- JENDELA FOURTH QUARTER REPORT
- LAUNCH OF PAKEJ REMAJA/PAKEJ PERANTI KELUARGA MALAYSIA
- MALAYSIAN BROADCASTING INDUSTRY LABORATORY (MBIL)
- WORLD POST DAY CELEBRATION

OCT

Social Media Management

To ensure optimum visibility of the Commission's brand, MCMC has used social media platforms such as Facebook, Instagram, Twitter and YouTube which has 477,000 followers to reach out to the public and convey information regarding the implementation of various initiatives, programmes and advocacy activities. For that, MCMC's social media platforms are best utilised according to the unique characteristics of each one either through sharing the latest information through media statements, videos, infographics, campaign announcements, links to websites and so on.

For example, infographics such as the JENDELA Plan, 3R campaign, Fake News (*Tak Nak Fake*) and others have been uploaded on MCMC's official social media account for effective information delivery and relationship building with the public. Other contents that are also uploaded on MCMC's social media are campaign announcements, the latest information on MCMC activities such as Promotion of Awareness Campaigns, Communication Preparedness for Flood Disasters, and MCMC Success Stories through MoJo Videos. MCMC website has recorded a total of 3,168,605 visitors with a total of 2,502,528 regular visitors and 666,077 new visitors throughout the year 2021.

In the meantime, the use of the Internet has become a norm practiced by every age group to increase knowledge, communicate and deal using online services. However, there are dangers in using the Internet if you are not careful. Therefore, MCMC has created several platforms to improve media literacy so that the community is literate and smart in handling the Internet, and among them are:

Portal [Sebenarnya.my](https://sebenarnya.my)

This portal was launched on 14 March 2017 as one of K-KOMM's initiatives through MCMC to act as a one-stop center for the public to check and channel information on unverified news received online. This portal is now one of the reference sources for the public to determine the validity of a viral news.

As of December 2021, the portal has received 287 million visits since its launch and on average receives up to five (5) million "hits" every month. In addition, Portal [Sebenarnya.my](https://sebenarnya.my) has also received 15,010 information channels from the public (information about news whose authenticity has not been verified), with an average of 249 information channels every month. The sudden increase in "hits" and the distribution of information is due to the spread of various news about the COVID-19 pandemic whose validity is doubtful.

A total of 572 articles have been published on the [Sebenarnya.my](https://sebenarnya.my) portal on mitigating fake news, explaining and fostering public awareness regarding the spread of news involving COVID-19.

As of December 2021, a total of 324 investigations were launched by the Royal Malaysian Police (PDRM). Of those, 50 cases have been prosecuted in court. Enforcement actions can be taken under the provisions of Section 233 CMA 1998 or Section 505 of the Penal Code. An official Telegram channel [Sebenarnya.my](https://t.me/sebenaryamy) was also created at the link <https://t.me/sebenaryamy> on 16 March 2020, and has over 26,064.

SEBENARNYA.MY
Tidak Pasti Jangan Kongsi

All of those steps are important in establishing good relations with the public as well as improving the effectiveness of communication that can have a positive impact on MCMC's image and reputation.

LABORATORY, PUBLIC ENGAGEMENT AND CONSULTATION - INVITING PUBLIC AND INDUSTRY FEEDBACK

Consumer rights have always been the main focus of MCMC and as such, MCMC makes the effort to improve communication. Among the efforts to ensure effective communication include conducting public consultation on the Mandatory Standard of RF EMF emission, public consultation on Wireless Local Area Network (WLAN) in the 6GHz frequency band, public consultation on Information Package for Mobile Virtual Network Service Providers (MVN), consultation public Implementation of Fixed Number Portability (FNP) and so on. Public consultation is held with the aim of obtaining a comprehensive view of the public and stakeholders before making decisions and changes to policy.

Furthermore, MCMC also organises various laboratories to determine the direction of the sectors under the supervision of MCMC. This includes the Community Internet Centre Laboratory, the National Internet Exchange Laboratory, the National Broadcasting Industry Laboratory and so on which provide opportunities for MCMC to obtain input from the industry and experts involved to ensure the sustainability and effectiveness of the transformation of the industries involved.

In addition, the year 2021 also saw the *Klik Dengan Bijak* (KDB) initiative together with Malaysian ICT Volunteers (MIV) in helping MCMC realise some of the government's main efforts directly or indirectly. The implementation of advocacy activities and community involvement by KDB and MIV this year is done in line with the core efforts.

For the MyDigital initiative, the implementation of KDB and MIV activities supports Core 5 of the initiative which is to Create an Inclusive Digital Society through Strategy 1: the core which is to Increase the Inclusive Participation of Malaysians in Digital Activities. In particular, KDB and MIV have been tasked to support the implementation of Initiative 1: Introducing the My Ikrar Programme to Encourage Volunteerism in Conducting Digital Training Led By K-KOMM. Cumulatively, KDB and MIV have managed to contribute more than 100 percent of what was targeted.

In terms of achievements for the year 2021, KDB has conducted a total of 53 nationwide safety awareness and education activities online with an audience reach of 192,527. While the audience reach through social media posts is 1,256,848. Overall since its launch in 2012 until 2021, the KDB initiative has reached an audience of more than 7 million and garnered nearly 90,000 followers on social media platforms.



CONSUMER PROTECTION

Most notably, when the MCO came into effect due to the COVID-19 pandemic, many Malaysians became victims of scam and financial fraud. Such cases are among the most reported since scammers take advantage of people's increasing dependence on digital technology. Most fraud is done through digital platforms such as e-commerce.

Therefore, the #TakNakScam campaign was launched in collaboration with organisations such as Facebook (now known as Meta) with the aim of educating and increasing the level of awareness among Malaysians to avoid being caught and becoming victims of the increasing number of cybercrimes. This kind of campaign is very important considering that many users in Malaysia are already moving online.

Cases of deception and fraud in online or e-commerce purchases recorded the highest cases and this was followed by complaints of non-existent loans and investment fraud. The focus of the #TakNakScam Campaign is focused on calling on the public to remember three (3) simple steps: Identify, Check, Report in order to remain vigilant in identifying, verifying and reporting financial fraud.

Every element of technology and modernity if used excessively can have a harmful effect. Excessive or uncontrolled use of the internet can expose users to physical and mental health threats, cyber threats such as online fraud, cyber harassment, cyber theft, bullying and others. MCMC is committed to creating a safe Internet usage environment for the community on an ongoing basis.

In addition to the #TakNakScam initiative, MCMC also plays an important role in curbing scams and matters related to the spread of fake news through the #TakNakFake initiative. MCMC directly monitors the use of Internet services to ensure a more conducive and secure digital environment.

Among concerns identified is that most netizens still cannot distinguish between real and fake news, especially when fake news tend to be accompanied with convincing infographics. Realising that fact, MCMC has a clear objective which is to ensure that the public understands the need to verify any news or information received before disseminating it further, especially if the news or information received may jeopardise the harmony and security of the community and the country.

In this context, self-control is very important and MCMC intends to continue to educate the community in cultivating prudent use of the Internet. MCMC also launched the [Sebenarnya.my](#) portal in March 2017 with the aim of making it easier for the public to check the validity of news or information received. Any statement of denial or clarification made will be published in the [Sebenarnya.my](#) portal as a repository for verified news and to be a reference source for the public to verify viral news.

CREATING A FUTURE-PROOF WORKFORCE

Advances in technology and the transition to Industrial Revolution 4.0 (4IR) are expected to change most of the world's labour market landscape, including in Malaysia. The workforce needs to learn new skills to perform tasks and today's students will be working in jobs that don't exist yet. The skills gap not only affects the prospects of each individual but also has a systemic impact on the ability of companies, industries and communities to fully realise the potential of this digital transformation. This digital transformation involves changes to employers in applying appropriate training and guidance methods to their employees.

Faced with the changing employment landscape in the industry in the future, MCMC provides various training courses, research grants such as the Digital Society Research Grant (DSRG), as well as activities and knowledge resources to internal and external stakeholders. The DSRG grant launched in July 2020 aims to build the evidence-

based research needed to promote and improve understanding of the human and social factors that influence and contribute to the use and practice of digital technology and services.

Through this grant, MCMC seeks a combination of open and guided research projects to clarify regulatory and development gaps, and to propose appropriate actions. The two (2) areas of study that are focused on are Digital Citizens and Cyber Well-being and Digital Inclusion, both of which are closely related to the priority areas of digital socio-economic development, namely digital services, e-commerce, Internet of Things (IoT), Artificial Intelligence (AI), identity and digital security and privacy issues.

The year 2021 was a year in which the Academy's role was expanded. This move was to support MCMC internal talent development programme; to facilitate continuous learning and improving the skills of the employees; to initiate cooperation and partnership programmes with external parties such as Higher Learning Institutions (HLIs), government bodies, professional institutions and training providers; and to promote industrial capability programmes. This effort made part of MCMC a learning and development centre.

For 2021, among the main activities that have been successfully carried out is MCMC Capacity Building Programme (MCBP). Through this programme, MCMC focuses on selected topics under the supervision of MCMC and the communication and multimedia industry; collaborate with HLIs for the development of Micro Credential (MC) Courses related to the 5G ecosystem and also areas of competence related to communication and multimedia (C&M). Other programmes include continuing the e-Learning Platform (iLearn) in 2020 which gives employees the flexibility to access courses from anywhere and at any time, particularly from LinkedIn and Coursera learning platforms; and the implementation and management of internal and external courses for employees which in 2021 involved 183 programmes with 161 of them conducted virtually.

GOVERNANCE AND BEST PRACTICES

The year 2021 proves challenging with the pandemic still in our midst. COVID-19 triggered a health crisis and further impacted the operations of MCMC and the industry worldwide. Therefore, MCMC took steps to review and implement new ways of working that are adapted to the new norms.

MCMC is also a self-regulatory body that ensures compliance with its processes and policies. Accordingly, MCMC has six (6) internal regulatory committees that ensure effectiveness in its governance. The committee in question is as follows:

Commission Committee

1. Audit and Risk Committee
2. Disciplinary Committee
3. Appeals Committee
4. Tender Committee
5. Nomination and Remuneration Committee
6. Whistle-blower Committee

MCMC is always ready to adopt best practices to be efficient and effective. Thus, this year's annual report introduces an Integrated Reporting (IR) framework to translate various initiatives along with their progress for better understanding.

The integrated reporting method aims to ensure:

- a. Transparency
- b. Accuracy
- c. Accountability
- d. Integrity



FUTURE OUTLOOK

The COVID-19 pandemic accelerated the process of digital transformation and the development of technology that has been developed over the past few decades. At a time when the Government is acting quickly to contain the spread of COVID-19 and reduce the impact of the closure of the economic sector, the Government has also taken the opportunity of the potential of digital transformation in catalysing short-term economic recovery efforts, increasing economic resilience and ensuring the well-being of the *Rakyat*.

Because the impact of the pandemic has resulted in changes in current needs, the Government takes into account the importance of prioritizing the well-being of the *Rakyat* by improving digital connectivity. MyDIGITAL was launched in 2021 with the aim of attracting new investments worth RM70 billion for the digital sector in the country and abroad for the period 2021 – 2025.

Developments surrounding the COVID-19 pandemic are seen to continue to have an impact on economic growth prospects in the country as well as at the global level. Malaysia's economy has grown by 3.1 percent in 2021 despite facing a challenging environment. The reopening of national borders and recovery from the pandemic is expected to open up opportunities to accelerate sustainable and inclusive growth. Most recently, Malaysia's economic growth grew by 5 percent in the first quarter of 2022.

Here is the strategic focus for 2022:

Pelan Jalanan Digital Negara (JENDELA)

With demand for connectivity increasing among users whether in the business sector, Government or the general public, continuous efforts in addition to increased investment to improve broadband coverage and quality remain a priority in line with national aspirations under JENDELA. At the same time, this improvement effort also takes into account the networks built by service providers that are resilient and secure. Investment in the construction of fibre optic networks is a key factor in ensuring strong, robust, fast, smooth and uninterrupted digital connectivity.

Implementation of JENDELA Phase 1 (2020 – 2022) remains on schedule. Next, in order to meet the increasing demands and needs of the digital society holistically, the details of the implementation of JENDELA Phase 2 will be refined together with service providers and other stakeholders. In line with this growing need, the 2022 National Budget also emphasises the expansion of 5G service coverage by 36 percent in populated areas. With the recognition of infrastructure as the third public utility, the implementation of the construction of communication infrastructure in the state will be simplified since the coordination of this policy is intended to address the challenges faced by service providers in the provision of infrastructure and communication networks. The value of Government and private investment for Phase 1 reached RM28 billion through JENDELA and the PoP project managed by K-KOMM.

National Courier Accelerator Plan (PAKEJ)

The National Courier Accelerator Plan or PAKEJ is a strategy that aims to improve the quality of service and the coverage of courier delivery services to Malaysians to support the growth of the e-commerce industry from 14 packages per capita (2020) to 30 packages per capita by 2025. Achieving industry sustainability is an important component for Malaysia through PAKEJ, with the 4R approach:

- Reliability – Service Quality (Delivery Time and Customer Service)
- Reach – Smooth Coverage (e-Commerce and Final Reach)
- Relevance – Through Industry Growth (in the Digital Economy)
- Resilience – Sustainability

In an effort to bring this service closer to the people, the *Rangkaian PAKEJ* initiative (or Pick up Drop Off points - PUDO) was implemented to facilitate the integration and coverage of last-mile delivery as an option for consumers and e-commerce merchants for trading activities. In catalysing the implementation of the PAKEJ Network throughout the country, the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) is utilised and optimised for this purpose.

Along with the healthy growth of the postal and courier sector, consumer protection measures are important, supported by relevant regulatory policies and frameworks, such as the General Terms and Conditions (GTC) to be introduced.

Pusat Ekonomi Digital Keluarga Malaysia (PEDI) and Pemerkasaan Pendigitalan Usahawan Kecil (PUPUK) Programme

If the focus of JENDELA is digital infrastructure to bridge the digital divide, the focus of the *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) programme is to increase the community's ability to use online technology for economic improvement, as well as providing services to communities in underserved areas. Through the transformation programme that has been implemented, PEDI has become a learning centre that aims to empower the local community's digital economic activities. Furthermore, PEDI also functions as a touch point in approaching the local community regarding the implementation of Government and MCMC initiatives.

PUPUK is a programme implemented in selected PEDI to empower small local entrepreneurs towards the digital economy and promote digitalisation in business. The implementation of programmes under PUPUK is through smart partnerships with participating Government agencies and also collaboration with the private sector, telecommunications companies and also e-commerce platform providers.

In 2022, a total of 600 PEDI *Rakan Digital* are targeted to be appointed to make the local entrepreneur development programme a success. This is seen to drive the use of digital services such as broadband, cloud computing (cloud service), e-commerce, cyber security, the Internet of Things and analytical data among rural communities. In the last four (4) months of 2021, a total of 10,893 small entrepreneurs were trained and successfully achieved an online sales value of RM11.8 million.

Empowering Trusted Ecosystems

In 2022, a comprehensive study examining the relevant laws for the use of digital signature processes in Malaysia will be conducted and is expected to be completed by the end of the year. This study will look at the applicability of existing legislation on digital signatures. This is one of the overall efforts under the National Digital Economy and Fourth Industrial Revolution (4IR) Council to review legislation to facilitate the use of digital signatures in Malaysia.

Next, in order to provide a trusted ecosystem in preparation for the implementation of policies for 80 percent of government data to hybrid cloud systems by 2022, as targeted by MyDIGITAL, the approach to regulate through cloud service licensing methods begins on 1 January 2022 and will be fully implemented on 1 April 2022. This is a new initiative in the region.

Broadcasting Services

Digitalisation and merger trends have resulted in users from existing platforms tending towards digital platforms.

With the growth of over-the-top (OTT) services and digital advertising, the income of traditional broadcasters is also affected which makes it difficult for them to survive in the industry. To deal with this, Single Television Audience Measurement or STAM will be introduced as a single form of measurement to measure the number of viewers on various platforms. Among other things, it will help broadcasters and advertisers to evaluate viewership and viewership trends for the purpose of purchasing media slots. STAM is seen as one of the efforts to help broadcasters survive in an increasingly competitive industry market. This is the result of the Malaysian Broadcasting Industry Lab (MBIL) held together with the industry and other stakeholders.

Although radio broadcasting remains significant for listeners in Malaysia, the radio market will also be affected by the growth of digital technology in 2022 which includes music streaming services, mobile applications and broadcast audio offered by OTT providers such as Apple, JOOX, Spotify and YouTube. The broadcasting segment also needs to change and implement the use of more innovative technology to remain relevant and resilient.

Moving forward, MCMC will continue to follow the development of global trends regarding the adoption of technology, especially those involving, among others, next-generation networks and cybersecurity. Consultation with industry experts will be carried out regularly by prioritising and taking into account initiatives to improve the user experience in ensuring the resilience of the communication and multimedia industry.

Strategically, MCMC will take a proactive approach to make appropriate regulatory interventions to ensure that the industry under MCMC's regulation continues to grow and be competitive not only in Malaysia but also in the region.

¹ Reference from Bank Negara Malaysia, Economic and Financial Development in Malaysia in the First Quarter of 2022. The information can be found on this website: https://www.bnm.gov.my/-/qb22q1_en_pr

THE MCMC IN PERSPECTIVE

STRATEGIC COMMUNICATION

As a front-line agency, MCMC is transparent in delivering the latest information to the community in addition to disseminating disclosures and stipulations related to policies and programmes under its management.

The corporate communication main task area is divided into two (2) units, the Media Management unit and the Social Media Management unit.

MEDIA MANAGEMENT

- Preparation of Media Statements
- Preparation and Hosting of Press Conferences
- Preparation of Speech Text and Speech Notes
- Photos and Images
- Media Monitoring and Analysis

SOCIAL MEDIA ACCOUNT MANAGEMENT

- Complaint Management
- Portal Content Management and Social Media
- Periodical Publications

Media Management and Activities

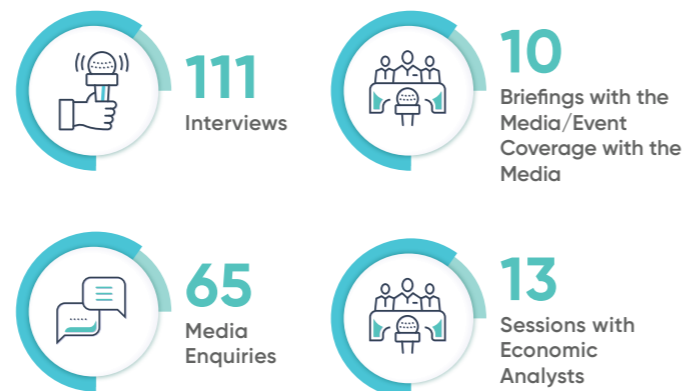
Throughout 2021, MCMC has established good relations with various media parties for activities such as interview sessions, talks, briefings, media coverage, media conferences, preparation of media inquiries, and informing policies and other programmes under its management.

Among press conferences and media briefings held in 2021:

- MyDIGITAL Future - Accelerating 5G (22 February 2021)
- JENDELA Quarterly Report (7 April 2021, 9 July 2021, 15 October 2021)
- National Courier Accelerator Plan or PAKEJ (17 June 2021)
- Spectrum Planning (24 June 2021);
- MCMC briefing session with Senior Media Editor (10 September 2021);
- Pre-launch of *Pakej Remaja Keluarga Malaysia* and *Pakej Peranti Keluarga Malaysia* (14 September 2021)
- Launch of *Pakej Remaja Keluarga Malaysia* and *Pakej Peranti Keluarga Malaysia* (at K-KOMM, 14 October 2021)
- Launch of *Pusat Ekonomi Digital Keluarga Malaysia* (PEDI) in Bandar Bera, Pahang (21 November 2021)

The total number of media activities managed throughout 2021:

Total Media Activities Throughout 2021



In total, 111 interview sessions were held throughout 2021. These interview sessions involved local TV and radio stations such as RTM, Bernama TV, Bernama Radio, Astro Awani, TraxxFM, KLFM and others. Interview sessions conducted received close cooperation from MCMC state offices involved. These state offices act as official spokesperson on behalf of MCMC. Corporate communication is involved in the preparation of conversation notes in addition to helping MCMC spokespersons prepare themselves so that they can give a cohesive and effective presentation.

Corporate communication is also tasked with preparing responses to enquiries from the media. There were approximately 65 questions received from various media and most of them revolved around the following topics:

- 3G Network Termination
- Regulatory Planning of Data Centres and Cloud Service Providers
- Implementation of 5G
- Connectivity/JENDELA
- 12th Malaysia Plan (RMK-12)
- *Pakej Peranti Keluarga Malaysia*
- Fake News
- PAKEJ
- Malaysia ICT Volunteer® (MIV)
- Emergency Ordinance Necessary Powers

SOCIAL MEDIA MANAGEMENT

Digital communication, especially through social media, plays an important role in MCMC's strategy to deliver information and disclosure related to MCMC's policies and programmes/activities implementation and further establish good relations with the public in addition to improving the effectiveness of communication.

MCMC uses website and social media platforms such as Facebook, Instagram, and Twitter to strategically placed messages and optimise the social media channels involved according to their respective specialties by sharing videos, serial infographics, campaign announcements, links to websites and so on.

Various information is uploaded on MCMC's official social media account for effective information delivery and relationship building with the public. Information such as announcements, campaigns, and latest info are uploaded for public consumption. MCMC activities and serial infographics such as awareness campaigns and promotions like flood disaster preparedness, MCMC success stories through MoJo and JENDELA videos, 3R campaigns, Fake News (*Tak Nak Fake*) are also uploaded. The MCMC website has recorded a total of 3,168,605 visitors with a total of 2,502,528 regular visitors and 666,077 new visitors throughout the year 2021. There have been several official events and important programmes implemented in 2021. Among them:

ACHIEVEMENTS IN 2021

Launch of the *Pakej Remaja Keluarga Malaysia* and the *Pakej Peranti Keluarga Malaysia*

MCMC together with service providers have continued efforts to help the B40 group in particular to own devices and have access to the Internet at reasonable prices through the launch of the *Pakej Remaja Keluarga Malaysia* and the *Pakej Peranti Keluarga Malaysia*.

The launch ceremony was held at K-KOMM on 15 October 2021 and was officiated by YB Minister of Communications and Multimedia, Tan Sri Annuar Musa. A press conference was also held on the day to allow the members of media present, the opportunity to pose their questions.

This package provides an opportunity for every Malaysian citizen to own or upgrade to the latest mobile device so as not to miss out on their ability to earn a living whilst enjoying good connectivity in this digital era.

The *Pakej Peranti Keluarga Malaysia* offers several benefits:

- Own or upgrade to a 4G and VoLTE mobile device for free, at a monthly subscription as low as RM40 per month;
- 1GB free data daily for productivity activities; and
- Using the same identification card, each eligible user can have up to two (2) subscriptions



The registration of this package is subject to the terms and conditions set by the service provider. This package is only open to new or existing postpaid subscriptions where the applicant will be bound to a 12-to-24-month contract (subject to the type of device and service subscribed to).

The *Pakej Remaja Keluarga Malaysia* is a new prepaid package specifically to help teenagers and IPT students obtain Internet access for online learning from home without any data restrictions while increasing daily productivity.

Among the attractive offers of this affordable prepaid package:

- Students can take advantage of 20GB data for three (3) months with only RM30 (RM10/month) for daily productivity activities as well as unlimited basic Internet;
- As for the 20GB data, it can be used for all activities including video downloads or online games. Access to entertainment can indirectly help teenagers/students unwind. This package offers convenience for teenagers/students because there is no need to add value (top up) every month; and
- For three (3) months, 1GB (90GB during the offer period) of daily data is given free for productivity activities.

Service providers involved in making this initiative a success:

- Celcom Axiata Berhad (Celcom);
- DiGi Telecommunications Sdn Bhd (DiGi);
- Maxis Berhad (Maxis);
- U Mobile Sdn Bhd (U Mobile);
- Telekom Malaysia Berhad (TM); and
- YTL Communications Sdn Bhd (YES)



Launch of the *Pusat Ekonomi Digital Keluarga Malaysia (PEDi)*

In order to face the challenges of the digital world and meet the needs of today's digital economy, a total of 873 Community Internet Centres (Pusat Internet Komuniti) nationwide were transformed into *Pusat Ekonomi Digital Keluarga Malaysia* or PEDi. In addition to the collective provision of broadband infrastructure to the local community, PEDi focuses on empowering entrepreneurship online by providing training classes and digital entrepreneurship modules that meet the needs of today's entrepreneurs.

On 21 November 2021, the PEDi launch ceremony was completed by YAB Prime Minister, Datuk Seri Ismail Sabri Yaakob at the Anjung Warisan Building, Kampung Durian Tawar, Bandar Bera, Pahang. Also present were YAB Menteri Besar, Datuk Seri Wan Rosdy Wan Ismail, YB Minister of K-KOMM, Tan Sri Annuar Musa and Minister in the Prime Minister's Department (Economy), Datuk Seri Mustapa Mohamed.

The ceremony took place and was made possible with the cooperation of all parties including service provider TM, K-KOMM and MCMC Pahang State Office. A press conference with YB Minister K-KOMM, Tan Sri Annuar Musa was also held immediately after the launch ceremony and was attended by local media representatives such as RTM, Bernama, China Press, Sinar Harian, Kosmo, Malaysia Gazette and others.



In order to ensure that PEDi actively offers programmes and support that are compatible with current demands, the PEDi Advisory Panel has been introduced where each PEDi will have its own Advisory Panel made up of local community representatives, non-Government organisations and trade associations. Members of this Advisory Panel will work hand in hand as an administrative congregation capable of empowering rural communities. This panel is also more sensitive in delivering recommendations or suggestions that are appropriate to local needs.

In addition, a total of 879 *Rakan Digital* PEDi will also be appointed to run programmes organised by various Government and private agencies. All of these activities will be monitored by the Advisory Panel in each PEDi so that the programmes held receive a positive response in terms of participation from the local community. In addition to that, the IKON (PEDi Entrepreneur Icon) was also introduced to support and encourage entrepreneurial activities in the local community.

At the launch ceremony, the PEDi Advisory Panel, PEDi Entrepreneur ICON and *Rakan Digital* PEDi were celebrated. Their involvement is expected to contribute towards the development of digital economy activities of the local community. An exhibition of local goods from entrepreneurs who had successfully taken advantage of PEDi to develop and expand their businesses were also held during the launch event. Saplings, health products, garden decorations and frozen food were among the products on display.



The existence of PEDi can give birth and empower small entrepreneurs towards innovative and competitive digitalisation to improve socio-economic status, especially rural communities. All 883 existing PEDi will be enhanced and intensified as a one-stop centre for rural digital economy activities with 37 new PEDi opening in the first quarter of 2022 followed by another 173 PEDi by the end of 2022. This will make a total of 1,083 PEDi operating nationwide from next year.

In addition to acting as a learning centre providing various trainings, awareness programmes and community involvements, PEDi also functions as a centre for information channels and initiatives of various Government and private agencies.

In order to carry out public relations management as well as promote policy programmes and activities, MCMC needs to constantly establish and maintain effective relationships with local and international media. In addition, the monitoring of the results of related communication activities needs to be emphasised in order to obtain the comprehensive impact of the success of the strategy that has been set up in which effective communication makes an organisation appear stable and successful.

When implementing communication crisis management for critical issues, MCMC needs to be proactive and always ready to provide quick and accurate feedback. The collection of information for the preparation of media statements and so on needs to be done effectively and requires cooperation from all parties to ensure that the information provided is accurate, clear and does not raise doubts in order to manage public perception.

MCMC EVENT HIGHLIGHTS

As a regulatory body of the communications and multimedia industry, branding is important in creating trust, transparency and credibility of this organisation to the general public.

Branding reflects the identity of an organisation. MCMC is branded as a regulatory body for the communications industry as well as being a credible and reliable organisation in delivering information to prevent the spread of inaccurate or false information.

Among the branding introduced include JENDELA, the rebranding of Mobile e-Waste to KITAR, NPCIL to PAKEJ (an initiative under the Postal and Courier sector) and PEDI. The Brand Communications Department also collaborates with other departments by providing branding consultancy, advisory and implementation services.

In addition to corporate communication and branding, the Strategic Communications and Industry Relations Division is also responsible for planning, coordinating and implementing official events and programmes at MCMC level itself, at the ministry level and at the national level.

Among official events and important programmes implemented in 2021:

1.1 MyDIGITAL K-KOMM Virtual Exhibition (31 August –31 December 2021)

An initiative by K-KOMM to introduce, promote and showcase various comprehensive digital and broadband technologies to *Keluarga Malaysia*. MCMC gets involved by participating in a virtual exhibition highlighting several MCMC initiatives namely:

- National Digital Network (JENDELA)
- Klik Dengan Bijak (KDB)
- Malaysia ICT Volunteer (MIV)
- Sebenarnya.my

1.2 Launch of the Pakej Remaja Keluarga Malaysia and the Pakej Peranti Keluarga Malaysia (14 October 2021 at K-KOMM Multipurpose Hall, Putrajaya)

The Government's initiative to help students, teenagers and the disadvantaged to acquire affordable smart devices and have access to the internet. This initiative is supported by service providers such as Celcom, Digi, Maxis, U Mobile, TM and YTL.

1.3 K-KOMM Project and Programme Briefing and Casual Meeting with Government Members of Parliament (15 November 2021, Seri Pacific Hotel, Kuala Lumpur)

- JENDELA briefing prepared by MCMC and delivered by YBhg. Dato' Sri Hj. Mohammad bin Mentek, Secretary General of K-KOMM.
- Also shared during the briefing were K-KOMM programmes for 2022.
- Jointly, telecommunications companies namely Celcom, DiGi, Maxis, TM, U Mobile and YTL made this programme a success by hosting exhibition and enquiry booths on the *Pakej Peranti Keluarga Malaysia* for Malaysian Members of Parliament.

1.4 Launch of the Pusat Ekonomi Digital Keluarga Malaysia (PEDI) (21 November 2021 at PEDI Kampung Durian Tawar, Bandar Bera, Pahang)

PEDI is an initiative by MCMC to:

- Provide connectivity and support the digital economy of local communities.
- Empower and train the community to be digitally literate.
- Opening job opportunities and increasing income through e-commerce and online platforms.

1.5 Launching Ceremony of the National Micro, Small and Medium Enterprise Digitalisation Summit (PMKS) (21 November 2021 at the Bera District Council Convention Hall, Bera Town, Pahang)

- A programme that aims to empower SMEs to accelerate digitalisation initiatives by fostering a digital transformation mindset among entrepreneurs.
- Cooperate with the organisers, namely the Strategic Change Management Office (SCMO), the Economic Planning Unit (EPU) and the Prime Minister's Department (JPM).
- During this programme, MCMC participated in the exhibition by highlighting the *Pemeriksaan Pendigitalan Usahawan Kecil* (PUPUK) Programme initiative through PUPUK@Shopee and PUPUK@AEON.

1.6 Digital Outlook Series 2021 (24 November 2021)

- A half-day virtual seminar themed "Driving Digital Connectivity Towards Achieving Shared Prosperity Vision 2030".
- This seminar provides a platform for industry stakeholders to highlight and discuss the latest technology applications, developments and challenges faced in line with Industrial Revolution 4.0.
- Featuring a line-up of speakers from home and abroad who are experienced in the field of communications technology and multimedia.

1.7 100-Day Aspirasi Keluarga Malaysia Programme (9-12 December 2021 at Kuala Lumpur Convention Centre)

- A national level programme that opens up space for the community to get information about successes and achievements implemented under the leadership of Prime Minister YAB Dato' Seri Ismail Sabri Yaakob.
- MCMC participates in this programme by opening an exhibition space that promotes the *Pakej Remaja Keluarga Malaysia* and the *Pakej Peranti Keluarga Malaysia* which become elements and the Key Performance (KPI) of YB Minister of Communications and Multimedia. The KPIs for these two packages have successfully exceeded the set targets.
- Telecommunications companies involved in making the event a success include Celcom, Digi, Maxis, TM, U Mobile and YTL.
- Quizzes and lucky draws related to the packages offered were some of the activities held during the exhibition.

INDUSTRY RELATIONS

Despite facing challenges due to the COVID-19 pandemic throughout 2021, MCMC remains committed to establishing good relationships with industry players, analysts and economic experts through several briefing sessions so that the initiatives implemented by MCMC can be delivered to stakeholders accurately and correctly.

MCMC also regularly holds face-to-face meetings with licensees, industrial lab discussion sessions, webinars and information sessions for MCMC's main initiatives. Here are the 13 sessions with economic analysts in 2021:

DATES	ACTIVITIES
21 January 2021	"RHB's Small Cap Corporate Access" Discussion Session
22 February 2021	MyDIGITAL: 5G Acceleration Briefing
2 April 2021	Networking session between IRD and UOB Kay Hian
7 April 2021	JENDELA Second Quarter Progress Report
17 June 2021	PAKEJ Briefing Session with Analysts
24 June 2021	Dialogue session with MCMC Chairman regarding Spectrum Management
6 July 2021	Networking session with MIDF and Kenanga Investment
9 July 2021	JENDELA Third Quarter Progress Report
16 July 2021	Briefing session with TM regarding JENDELA Map
23 July 2021	Networking session between IRD and HLIB
25 August 2021	Briefing session with Digi regarding JENDELA Map
15 October 2021	JENDELA Fourth Quarter Progress Report
27 October 2021	Bursa HLIB Stratum Focus Series XII – Cloud Computing: It's Now or the Future

The response from analysts and economists was very encouraging. This effort is important to ensure that every stakeholder knows and understands the initiatives implemented by MCMC.

The coordination, management and implementation sessions with the industry are as follows:

DATES	ACTIVITIES
4 August 2021	Discussion session with Chief Executive Officers of Broadcasting industry
17 August 2021	Collaboration with e-commerce platform operators regarding the 3G network shutdown awareness programme
14 September 2021	Dialogue session with YB Minister, MCMC and service providers
15 September 2021	YB Minister's Media Conference on the <i>Pakej Remaja Keluarga Malaysia</i> and <i>Pakej Peranti Keluarga Malaysia</i>
14 October 2021	Launch ceremony of <i>Pakej Remaja Keluarga Malaysia</i> and <i>Pakej Peranti Keluarga Malaysia</i> Special briefing on the status of connectivity and digitalisation in Ketereh district, Kelantan
15 November 2021	Special briefing to YB Members of Parliament
9-12 December 2021	100-Day Aspirasi Keluarga Malaysia Exhibition

MCMC also participated in industry transformation labs such as:

- Community Internet Center Lab (25 Jan – 9 Feb 2021)
- National Internet Exchange Laboratory (24 May – 21 June 2021)
- Malaysian Broadcasting Industry Lab (8 Nov – 19 Nov 2021)

YEAR 2021 MAIN HIGHLIGHTS

09 JAN

The Chief Minister of Melaka omit working visit to MCMC



12 JAN 2021

MCMC Chairman on working visit to Gerik



04 FEB

Conversation with MCMC Chairman in The Nation JENDELA programme discussing the topic of 'Connectivity Driving the Nation Forward'



06 MAR

Working visit to the Pusat Internet Komuniti (PIK) in Kuala Berang and Kampung Tengawang, Hulu Terengganu, Terengganu



06 MAR

MCMC delegation on working visit to Kampung Machang and Hutecs College in Hulu Terengganu, Terengganu



01 APR

Conversation with the Chairman of MCMC in The Nation programme on the topic of 'Digital Inclusion - Patching Up the Digital Divide'

02 APR

Working visit to Melaka Waterfront Economic Zone and Community Internet Centre (PIK) in Batang, Melaka



03 APR

MCMC delegation on working visit to the ZTE-MMU Training Centre at Multimedia University (MMU), Melaka



JANUARY

13 JAN

Perak State Government Council (MMKN) Meeting



21 JAN

Conversation with the Chairman of MCMC on The Nation programme discussing the topic 'Towards Realising and Achieving the Digital Nation Agenda'

28 JAN

Conversation with the Chairman of MCMC in The Nation JENDELA show discussing the topic of 'The Way Forward with PDP'

27 JAN

Conversation with the Chairman of MCMC in the SPM TV1 programme discussing the topic of 'COVID-19: Accelerating the Growth of Malaysia's Digital Economy'



FEBRUARY

10 FEB

MCMC working visit to Kampung Pandan Community Internet Centre, Kuantan, Pahang



10 FEB

MCMC work visit to Felda Bukit Sagu, Kuantan, Pahang



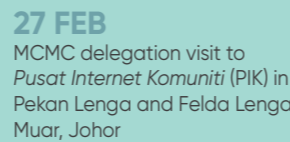
18 FEB

Site visit for coverage complaints by Sungai Air Tawar Assemblyman, Sabak Bernam



19 FEB

Conversation with MCMC Chairman in the AWANI Agenda programme discussing the topic 'MyDIGITAL: New Approach and Strengthening the National Digital Ecosystem'



26 FEB

MCMC delegation on working visit to Pagoh Higher Education Hub in Pagoh University Town



MARCH

07 MAR

Presentation of the Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I) at the Terengganu State Planning Committee Meeting



12 MAR

Conversation with MCMC Chairman in RTM's Narrative Talk programme discussing the topic 'MyDIGITAL: Catalyst for 5G Implementation in Malaysia'



09 MAR

MCMC delegation working visit with KETENGAH and Telecommunications Service Providers to Lake Kenyir



25 MAR

Briefing session for officers and students at the National Resilience College, Putrajaya



APRIL

03 APR

Briefing session by Allo Technology Sdn Bhd at TNB Tower, MITC, Melaka



15 APR

Conversation with the Chairman of MCMC in The Nation programme on the topic 'JENDELA: 2nd Quarterly Report'



07 APR

JENDELA Second Quarter Report briefing session



27 APR

Conversation with the Chairman of MCMC on Astro Awani on 'Implementation of JENDELA and Towards Accelerating 5G'



05 MAY
Virtual launch ceremony,
Jaringan Prihatin



06 MAY
KL FM interview with the
Federal Territories MCMC
Director discussing the topic of
'Development of the National
Digital Infrastructure Plan
(JENDELA)'



02 JUN
The Asia Pacific Institute for
Broadcasting Development
(AIBD) - Leaders' Web -
Summit



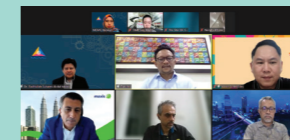
11 JUN
Conversation with the
Chairman of MCMC in the
Evening Edition (BFM)
programme on the '*Pelan
Accelerator Kurier Negara
(PAKEJ)*'



05 JUL
Forum session 'Accelerating
Digital Transformation in
Challenging Times'



09 JUL
JENDELA Third Quarter Report
briefing session



03 AUG
Collaboration between MCMC
and AEON through
PUPUK@AEON to ensure the
Digitalisation Empowerment of
Small Entrepreneurs (PUPUK) is
a success



05 AUG
Traxx FM interview with MCMC
Chairman discussing the topic
of 'Entrepreneur Digitalisation
Empowerment Programme
(PUPUK)'



MAY

17 MAY
World Telecommunication and
Information Society Day
(WTISD 2021)



20 MAY
Asia Pacific 5G Industry Forum



21 JUN
The AHIBS- MCMC Influential
Leaders Talk on 'Disruption Led
Transformation and Developing
High Performing Organisation'



22 JUN
Conversation with the
Chairman of MCMC in the
Agenda Awani programme on
the topic '*PAKEJ: Powering the
National Postal and Courier
Industry*'



JULY

22 JUL
Interview with the Chairman of
MCMC on RTM TV1's Biz
Malaysia show discussing the
topic '*PAKEJ: Power of the
National Postal and Courier
Industry*'



14 JUL
Perlis FM's interview with the
Director of MCMC Perlis
discussing the topic '*Beware of
Spreading Fake News*'



24 JUL
Webinar on 'The Influence of
Social Media on Children'



25 JUL
Kelantan FM's interview with
the Director of MCMC Kelantan
talks about the topic '*Together
Tackling the Spread of Fake
News*'



AUGUST

16 AUG
Selangor FM interview with
MCMC Chief Operating Officer
on the '*Pelan Accelerator
Kurier Negara (PAKEJ)*'



23 AUG
MCMC Chief Operating Officer
interview with Labuan FM on
'*PAKEJ: Powering the National
Postal and Courier Industry*'



26 AUG
RTM News interview with the
Director of MCMC Kedah
discussing the topic of '*Fake
News*'



26 AUG
MCMC delegation working visit
to Port Dickson, Negeri
Sembilan



02 SEP

MCMC working visit to the telecommunication tower site in Kampung Relai, Lipis, Pahang



06 SEP

MenKOMM official visit to MCMC



07 SEP

MCMC working visit to Taman Anggerik, Juasseh Kuala Pilah, Negeri Sembilan



10 OCT

Minister of Communications and Multimedia, YB Tan Sri Annuar Musa and Chairman of MCMC, YBrs. Dato' Dr. Fadhlullah Suhaimi Abdul Malek on a work visit to PIK Taman Sedia, Tanah Rata in Cameron Highlands, Pahang



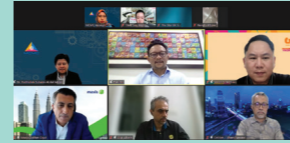
15 OCT

YBhg. Dato' Sri Acryl Sani Abdullah Sani, Inspector General of Police at MCMC Office in Cyberjaya for the PDRM Master Committee Meeting



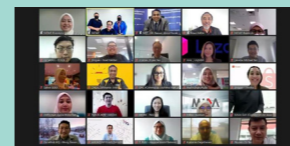
09 NOV

JENDELA Third Quarter Report briefing session



12 NOV

Organising MCMC's first webinar on PAKEJ, in collaboration with MITI and MIDA



9-12 DEC

100-Day Aspirasi Keluarga Malaysia Exhibition



SEPTEMBER

15 SEP

Briefing session with the Minister of Communications and Multimedia on Malaysia's 5G Demonstration Project at Langkawi Port, Dermaga Tanjung Lembung, Kedah



19 SEP

YB Minister of Communications and Multimedia on a working visit to PIK Padang Palang, Langkawi, Kedah

19 SEP

A briefing session by Telecommunications representatives to the Minister of Communications and Multimedia at the Telecommunications Tower Site Jalan Bukit Malut, Langkawi, Kedah



OCTOBER

23 OCT

Minister of Communications and Multimedia with MCMC Chairman on visit to the SMA tower, Kampung Terbat, Serian, Sarawak



23 OCT

Minister of Communications and Multimedia with Chairman of MCMC visit the Long House of Kampung Mongkos, Sarawak



23 OCT

Kembara Connectivity and the delivery of the Pakej Remaja and Pakej Peranti Keluarga Malaysia respectively



NOVEMBER

21 NOV

Launch ceremony of the Pusat Ekonomi Digital Keluarga Malaysia (PEDI) in Bera, Pahang



24 NOV

Inauguration of MyDIGITAL.KKMM (Broadband Promotion Programme)



DECEMBER

16 DEC

ICT engagement session with the community



29 DEC

MCMC Chairman together with the personnel of MCMC Selangor State Office visit flood victims



MCMC IN THE MEDIA

MCMC terajui pelaksanaan ekonomi digital RMC-12

15 | 15 October 2021

Komentar

Perkembangan ekonomi digital yang pesat telah membuka peluang kepada sektor perkhidmatan digital untuk berkembang. MCMC terajui pelaksanaan ekonomi digital RMC-12 untuk memastikan pelaksanaan projek-projek ini berjalan lancar dan memberi manfaat kepada masyarakat.

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Network Centre Transformation (NCT) 千禧社区网络中心转型

PEDI推动乡区数字经济

网络中心转型为 PEDI 致力培训数字企业家

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网络中心转型为 PEDI 致力培训数字企业家

THE JOURNEY TO IMPROVED DIGITAL CONNECTIVITY

Achieving fair and equal, quality internet access for all

IN this day and age, internet access is essential for a good quality of life. The Digital Nation (DN) initiative was launched to improve digital connectivity and achieve country-wide 4G coverage, allowing all households to surf the Internet.

The government has allocated RM200 to strengthen and increase coverage to nine million of populated areas in stages with speeds up to 100Mbps by 2025.

Some notable achievements so far - 94.02% of populated areas have 4G access. Mobile broadband services now hit average speed of 13.3Mbps.

74 out of 1,394 transmitting stations have been upgraded to 4G technology. 362 new towers will be built by the end of 2022 to increase 4G coverage of populated areas nationwide.

Our aim is to provide 4G coverage to all populated areas of Sabah and Sarawak, and Orang Asli villages. Broadband services will be improved using satellite technology. A total of 819 telecentres countryside have been identified to ensure that broadband coverage in remote areas with fibre optics and mobile technology can be provided.

This is currently in the process of implementation and is expected to be completed in September/November this year till early 2022.

The end of 3G

As we know, 3G facilities will shut down completely as we gradually switch to 4G services. The main goal of Jendela too is to ensure

MCMC FORESEES GREAT POTENTIAL IN 12TH MALAYSIA PLAN

4th WORLD

MCMC Chairman Dr Fadzilah Yusoff Yusoff said that the 12th Malaysia Plan (12MP) will focus on digital economy and digital services.

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JENDELA tingkat akses, ketersambungan digital

Nasional

Untuk ke arah visi transformasi digital, Kementerian Komunikasi dan Multimedia (MCMC) telah melancarkan projek Jendela.

Jendela adalah projek yang bertujuan untuk meningkatkan akses dan kualiti perkhidmatan internet di seluruh negara.

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5G DRIVES MALAYSIA'S DIGITALISATION

New generation of network to accelerate digitalisation and digital adoption

5G technology is on track to fully launch before the end of this year. 12 months earlier than announced previously, making Malaysia one of the earliest countries in the region to build a 5G ecosystem.

Similar to what 3G was to 2G, 5G technology is a successor of 4G cellular networks. The first step of this technology is to enable voice, data and short messaging services (SMS and MMS). 5G is revolutionary for its use as it also allows for mobile data connections.

However, the use of portable devices capable of network connectivity created a demand for faster data transfer and smoother user experience which is needed for the development of 5G and 4G networks offer services like high download speeds, instant websites and seamless mobile video streaming.

Some new generation of networks also helped encourage the growth of applications and digital start-ups in the market like Grab, Foodpanda, and iFix to name a few. Malaysia is transitioning to 5G which is more capable of transforming the function of mobile technology of the country.

The three main differentiating advantages between 5G and 4G are faster speeds, low latency rate (ms), and being capable of connecting more devices per sqkm.

High speeds

5G is capable of reaching speeds of 1 Gbps per second, which is 100 times faster than 4G. This is a high-speed internet in an area of 100 times faster than 4G. For example, downloading movies in high definition (HD) with 5G will take mere seconds. Achieving

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78 telecommunication towers completed in Sabah

BERNESE POST ONLINE

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Polis, SKMM buka 289 kertas siasatan berita palsu

Nasional

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SKMM tinjau masalah capaian internet

Nasional

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网络中心转型为 PEDI 致力培训数字企业家

5G DRIVES MALAYSIA'S DIGITALISATION

New generation of network to accelerate digitalisation and digital adoption

5G technology is on track to fully launch before the end of this year. 12 months earlier than announced previously, making Malaysia one of the earliest countries in the region to build a 5G ecosystem.

Similar to what 3G was to 2G, 5G technology is a successor of 4G cellular networks. The first step of this technology is to enable voice, data and short messaging services (SMS and MMS). 5G is revolutionary for its use as it also allows for mobile data connections.

However, the use of portable devices capable of network connectivity created a demand for faster data transfer and smoother user experience which is needed for the development of 5G and 4G networks offer services like high download speeds, instant websites and seamless mobile video streaming.

Some new generation of networks also helped encourage the growth of applications and digital start-ups in the market like Grab, Foodpanda, and iFix to name a few. Malaysia is transitioning to 5G which is more capable of transforming the function of mobile technology of the country.

The three main differentiating advantages between 5G and 4G are faster speeds, low latency rate (ms), and being capable of connecting more devices per sqkm.

High speeds

5G is capable of reaching speeds of 1 Gbps per second, which is 100 times faster than 4G. This is a high-speed internet in an area of 100 times faster than 4G. For example, downloading movies in high definition (HD) with 5G will take mere seconds. Achieving

Chapter **02**

ESG
GOVERNANCE



GOVERNANCE STRUCTURE

CREATING AND IMPROVING SUSTAINABLE VALUE

MCMC is administered by the Chairman and Commission Members who are responsible to the Minister of Communications and Multimedia, in aspects related to national telecommunications and multimedia. MCMC's functions and roles in organisational governance are implemented by each Division, Section and 14 state offices in the states and branches across the country. They are transparently responsible, accountable and prudent in terms of decision-making and delivery of results and play a role in achieving excellence, efficiency, equality, comprehensive involvement, transparency in administrative management at MCMC. Good governance, it will instill and increase the confidence of stakeholders in the Commission, the policy that has been mandated. MCMC is strongly committed to promoting the values of a culture of good governance among MCMC management and citizens. Greater emphasis is placed on self-regulation to complement the existing comprehensive regulatory framework. MCMC believes that a strong corporate governance culture should be based on a dynamic synthesis of Cooperation between regulators and stakeholders.

Governance strategies and objectives carried out by MCMC:



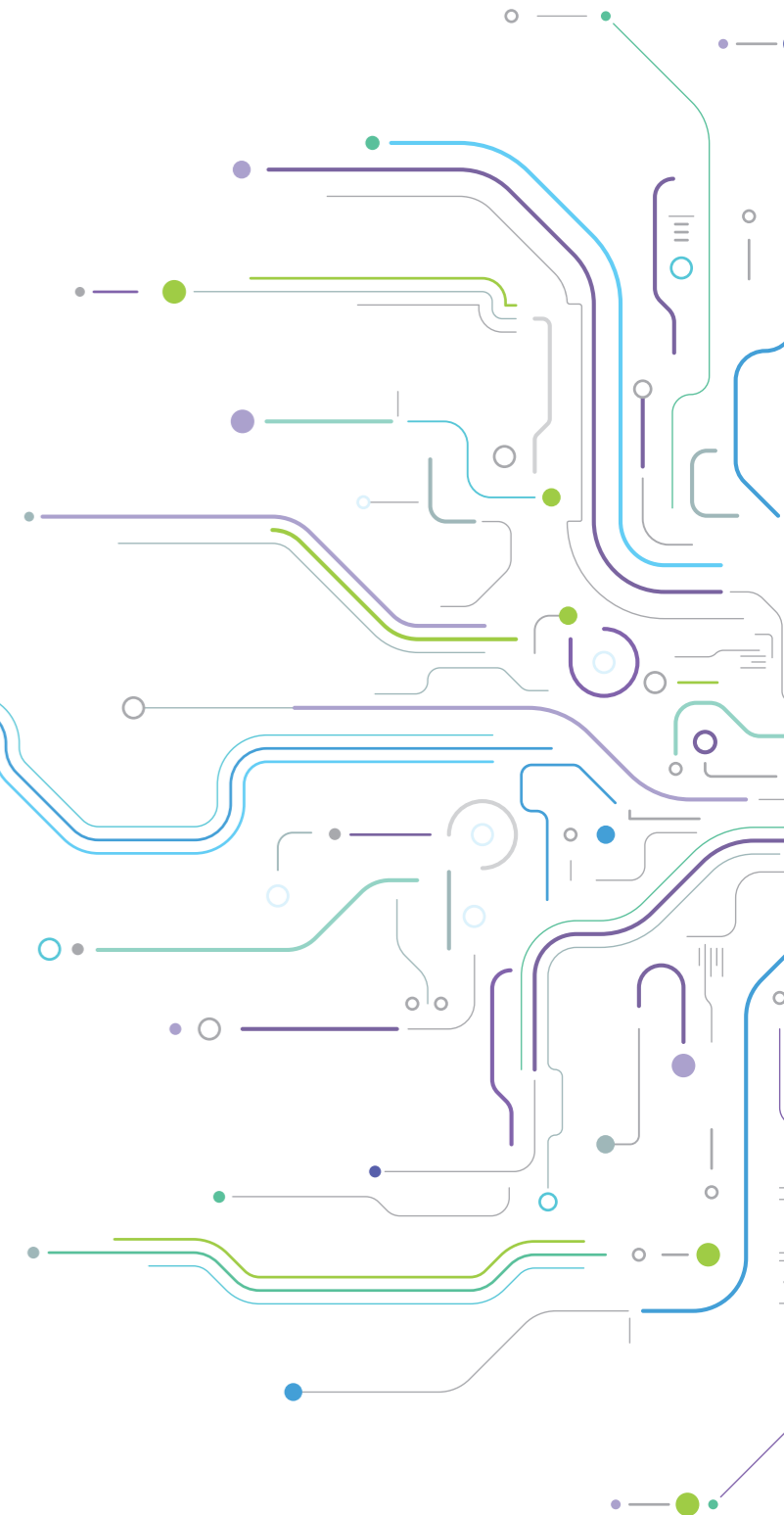
Integrity governance practices can identify the distribution of rights and responsibilities among various different parties in the organisation and outline, among other things, rules and procedures for decision making, internal control and risk management. In addition to protecting stakeholders, corporate governance also requires balancing the needs of other stakeholders including employees, customers, suppliers, communities and communities in which companies conduct their business.

MCMC's good corporate governance practices will help MCMC foster the vision, processes and structures necessary to ensure its long-term sustainability. MCMC needs to act as a good corporate citizen that includes a commitment to ethical behaviour in the business strategy, operations and culture of an organisation. In today's global and interconnected world, other stakeholders are increasingly recognising that good governance is an important aspect of MCMC's long-term performance and sustainability. Therefore, the Commission should understand and apply this new dimension into their decision-making process to ensure that MCMC operates with excellence and sustains growth. The Commission should also understand that key governance principles such as effective management, a corporate culture based on ethical behaviour and transparency can reduce risk, corruption and mismanagement. Based on this effort, the MCMC has developed the Organisational Anti-corruption Plan (OACP) of the Malaysian Communications and Multimedia Commission for a period of three (3) years from 2022 to 2024. This OACP outlines the initiatives that will be implemented by MCMC as a mechanism MCMC's governance strengthening management, integrity and anti-corruption. In addition, it is to ensure that the initiatives implemented by MCMC are in accordance with the corporate governance that has been set in the Malaysian corporate governance code 2017.

Features and governance principles practiced by MCMC:-

- Provide services efficiently and effectively, and avoid wastage of resources.
- Compliance with applicable laws, regulations, and standards such as the practice of honesty, accountability, integrity and transparency in the sharing of information and any actions in the execution of tasks where integrity and accountability are the most important elements of good governance.
- Effectiveness and efficiency are important elements practiced in the workplace and MCMC will ensure that the organisation has a dynamic, fast and accurate system, through the use of minimal resources with maximum work output.
- MCMC emphasises on managing and dealing with change in securing its position as a dynamic and competitive organisation.
- Focus on the customer. MCMC gives total priority to its customers in an effort to increase the level of customer satisfaction.
- Ethical, ensuring that MCMC citizens have high ethics and practice good values in the implementation and delivery of services.
- Transparency is emphasised in sharing information with stakeholders.

MCMC will continue to play a role in ensuring that governance in the organisation continues to be built on the basis of confidence, integrity and the highest ability to meet the needs and expectations of stakeholders. This goal will be achieved by upholding the principles of transparency and accountability in providing national initiatives that are more accessible, efficient and effective. In addition, governance supported by integrity, openness and innovation will be strengthened to create a more robust, dynamic and responsive MCMC. In shaping a proactive digital future, a transparent and accountable organisation is essential to ensure that stakeholders are the true beneficiaries of the benefits and enjoy the prosperity of *Keluarga Malaysia*.



TRANSFORMATION AND DEVELOPMENT PLAN

HUMAN CAPITAL DEVELOPMENT

MCMC plays an important role as a regulatory body providing the best services to the industry, the country and the people as a whole. To this end, MCMC is always committed to maintaining a high-performance diverse workforce, driven by a culture of service with integrity. Employees of MCMC are seen as ambassadors of the Commission's core values of Competence, Integrity and Efficiency.

MCMC is always committed to formulating strategies that improve professional skills and focus on strengthening the excellent service culture of MCMC. For that, MCMC has human capital resources from various backgrounds that lead to a diversity of opinions and experiences in driving a more precise MCMC culture.

MCMC always fosters a high-performance work culture where every idea and innovation are taken into account, debated fairly and implemented for the benefit of all parties. The combination of diverse skills and the involvement of all employees indirectly guarantee the ability of MCMC to fulfil the mandate that has been given by the people and the country, at the same time delivering high quality and valuable services to all parties efficiently and consistently.

The Human Capital Division plays an important part in ensuring that initiatives implemented by the Commission are employee-oriented, fostering a high-performance work culture, quality task execution and compliance with set standards, strengthening productivity towards the achievement of the goals of the Commission and the recruitment of superior workforce for the development of the Commission as a whole. MCMC is also responsible for ensuring that the human capital function is in line with the objective strategy of the MCMC and is implemented in accordance with the MCMC Act, the Workers' Act as well as human capital policies. The Human Capital Division also always takes proactive steps to avoid or reduce any human capital risk to the Commission.

Main objectives:

- Provide strategic advisory services and assist the Commission in developing and implementing the Commission's strategy through accurate human capital principles.
- Lead the development of the Commission's culture and assist in refining and implementing the Commission's values.
- Increase employee engagement and integrate the Commission's support system.
- Holistically implement cross-functional and improve employee relations initiatives for staff.
- Lead the Commission to move more dynamically in line with current changes.

Primary Initiatives in 2021

1. State Transformation

- a. Transformation of the State Office as a mini MCMC office.
- b. Mobilisation of personnel from the Headquarters to the State Office to improve and strengthen the functions of the State Office for the implementation of MCMC's regulatory duties as a whole at the state level.
- c. All 14 State Offices have been equipped with sufficient resources to carry out the Commission's functions comprehensively.

2. "GET Trainee" Programme

- a. MCMC Human Capital Division in collaboration with the Ministry of Entrepreneur Development and Cooperatives (MEDAC) has launched the 'Graduate Employability Track' (GET) Programme branded as Protégé as one of the initiatives to increase the marketability and entrepreneurship of graduates who have yet to find a job. This programme allows graduates to adapt to working methods, organisational culture and helps prepare graduates for the world of work. This programme is one of MCMC's initiatives to lower the unemployment rate in the country. Fifty-one (51) graduates have been given the opportunity to undergo training at the MCMC in the hopes that they can use the experience to obtain employment outside or be absorbed into the MCMC as permanent or contract personnel.

3. Career Development Plan for MCMC Workforce

MCMC Executive Pathway (MEP)

The MEP is a career development plan for the executives that focuses on upgrading positions based on the scope of work to meet the increasingly challenging needs of the Commission. This plan will also provide an opportunity for the eligible candidate to be promoted to a higher position without having to wait for a vacancy.

Non-Executive Pathway (NEP)

The NEP is a career development plan for non-executive employees that focuses on upgrading support positions to positions that can bring added value to the Commission. Several career development plans have been drawn up for non-executive employees taking into account academic qualifications, experience at the MCMC and professional certificates relevant to their scope of work.

4. Leadership Development

Accelerated Leadership Programme Series (ALPs)

- a. The main objective of this programme is to identify high potential staff within the Commission and prepare them with the skills, knowledge and competencies required to act as future leaders of the MCMC.
- b. 40 employees with high potential have been shortlisted to participate in this programme. The ALPs programme includes an MBA module in collaboration with Universiti Teknologi Malaysia (UTM), PRINCE2 project management certification, visits to industries such as Microsoft, AmBank, Silverlake and DHL, interaction sessions with leaders from leading organisations, as well as professional coaching sessions.
- c. This programme emphasises the "Learn, Apply, Share" model that allows participants to gain knowledge and experience through formal learning, applying the knowledge learned through activities in the industry and finally, participants are given the opportunity to share and improve their knowledge through forums and exchange sessions with leaders from leading organisations.

- d. The ALPs programme has been successfully implemented throughout 2021 and will end in March 2022.

ALL STAR Leadership Programme

- a. The main objective of this programme is to empower executive leadership at the Head of Department/Director level in the organisation to improve their skills, knowledge and competence in digital leadership aspects, and in line with current developments in this digital era.
- b. A total of 98 Department Heads/Directors were given the opportunity to participate in the ALL STAR programme designed to run over three (3) months. The programme emphasises on interactive learning that includes formal learning as well as simulation activities through online gamification modules.

5. Employee Relations Activities

a. Ramadan bersama Anak Yatim Programme

Objective: This programme is implemented in parallel with the MCMC CARE campaign where orphans have been invited to celebrate the month of Ramadan together with MCMC. They are celebrated with Ramadan meals, new clothes and *duit raya* to fuel joy and the feeling of gratitude in welcoming the month of Ramadan.

b. Town Hall Sessions

Objective: The Town Hall session is important in strengthening communication relationships with employees and it is held to lead all employees towards sharing common goals.

c. HR2U session

Objective: The HR2U session aims to strengthen employee engagement through frequent communication especially regarding policies and guidelines newly developed by the Human Capital Division.

d. MCMC Kasih Careline Counselling Programme

Objective: This counselling programme aims to assist employees in dealing with career and personal problems and other related problems while maintaining employee involvement in an effort to maintain harmony in the organisation.

e. MCMC CARE Pek Berkat Ramadan

Objective: In welcoming Ramadan and Syawal, MCMC CARE *Pek Berkat Ramadan* containing dates and Raya cookies were distributed to MCMC employees.

f. Health & Wellness Week Programme

Objective: This programme aims to encourage MCMC employees to practice a healthy lifestyle throughout the Health & Wellness week in addition to maintaining the same routine as an effort to stay healthy. Several activities were carried out throughout the Health & Wellness Week including pocket talks, exercise sessions and so on in collaboration with Columbia Asia Hospital, Pantai Hospital and NIOSH

6. Reward and Recognition Programme

a. Long Service Award

Objective: This programme extends appreciation to the employees of the MCMC who have served with the Commission for a continuous period of 10, 15 and 20 years or more, subject to the prescribed eligibility conditions. This programme has recognised 101 employees as of December 2021.

b. Employee Retirement

Objective: This programme celebrates and gives appreciation to employees who are about to retire from their service with the Commission.

c. Secretary's Day

Objective: This programme is implemented to appreciate secretaries for their skills, loyalty and efficiency in providing the best service to their respective Chief Officers and Heads of Divisions.

7. Integrity and Governance Programme

a. Whistle-blower Policy

Objective: This whistle-blower medium was created to encourage employees of the MCMC and outside parties to make disclosures about improper conduct within the Commission without fear of possible repercussions following the disclosure. This whistle-blower medium also acts as an early detection of any illegal and unethical behaviour within the Commission.

b. Individual Development Assistance

Objective: This programme gives employees the opportunity to improve their work performance and overcome their disciplinary problems.

c. Integrity Programme and Code of Ethics for MCMC Stakeholders

Objective: This programme has been created as a platform to increase awareness of integrity standards, ethics, and compliance with MCMC rules to all parties dealing with MCMC in an effort to improve the effectiveness of MCMC's operations, based on integrity.

d. Organisational Anti-Corruption Plan (OACP)

Objective: OACP was established to address challenges in governance, corruption and integrity issues within the organisation. The Human Capital Division has successfully published the OACP MCMC 2022 – 2024 in December 2021, an anti-corruption policy document to address issues of governance, integrity and potential corruption in the organisation.

e. MCMC Integrity Day

Objective: This programme is held every year to foster a culture of integrity among MCMC citizens and parties dealing with MCMC through a series of lectures and forums.

f. Integrity Talk

Objectives: Among the main objectives of this programme is to promote a culture of integrity in the organisation in addition to strengthening the ethics of employees towards excellent practices.

g. Property and Gift Declaration System (Declare)

Objective: This system was developed to manage assets and gifts received by employees more effectively in addition to generating data for reporting purposes.

The Human Capital Division has developed the Declare System in July 2021 to record assets and gifts earned by employees. As of August 2021, 99 percent of the MCMC workforce have declared their assets through the Declare system.

h. Launch of Integrity Website

Objective: The Integrity Website was developed to provide information on MCMC's Whistle-blower Policy and other Integrity-related policies and procedures to the public.

i. Anti-corruption Committee Meeting (JAR)

Objective: The Anti-Corruption Committee (JAR) aims to increase MCMC's commitment in an effort to reject corruption and uphold a culture of integrity in the organisation. The implementation of JAR is also in line with the Prime Minister's Directive No. 1 Year 2018.

8. Contribution to the National Disaster Trust Fund for COVID-19




- a. Further to the situation of the COVID-19 pandemic which has affected the well-being of Malaysians, the Malaysian Government has taken the initiative to withdraw part of the remuneration of public officials to be donated to the National Disaster Trust Fund to deal with the effects of the threat of COVID-19. This donation also symbolises the solidarity of public officials in helping the Government curb the spread of infection of COVID-19 in the country.
- b. Following the above initiative, MCMC is also committed to contribute to the initiative through employee salary deductions. This contribution has been implemented through salary deduction for a period of three (3) consecutive months, starting in June and ending in August 2021. During this period, MCMC has successfully contributed a total of RM 115,995.00 (RM38,665.00 x 3 months) into the National Disaster Trust Fund.
- c. In addition, MCMC citizens also showed continued support for the Government's efforts to deal with COVID-19 by exchanging employee benefits earned such as annual leave for the purpose of financial contributions. MCMC has successfully contributed a total collection of RM7,600.00 to the National Disaster Trust Fund through this initiative in December 2021.

9. Flood Relief Operation (OPS BAHIS)

Following the major flood situation that occurred on 18 December 2021, YB Minister of the Ministry of Communications and Multimedia Malaysia (K-KOMM) has instructed the OPS BAHIS programme be implemented in which volunteers from K-KOMM and agencies under K-KOMM gathered to help flood victims from helping clean their houses to distributing necessities to the flood victims. The Human Capital Division played an important role in the participation of 60 employees of the MCMC in the OPS BAHIS mission which began on 22 December 2021 and ran until 1 January 2022.

At the end of the programme, YB Minister expressed his appreciation to all the volunteers involved and recognised the operation as a success.

CATEGORY

LEADERSHIP DEVELOPMENT	EMPLOYEE RELATIONS	REMUNERATION
 <p>Overall Value: RM1,014,925.31</p>	 <p>Overall Value: RM333,572.13</p>	 <p>Overall Value: RM138,800,000.00</p>

The digital transformation and hybrid work environment during the pandemic situation has had a huge impact on interaction and communication with the workforce. In addition, with the needs of the rapidly growing scope of work nowadays, employees need to ensure that they carry out their tasks more efficiently to ensure the sustainability of the Commission's operations. The Human Capital Division has provided a proposed solution to the Commission to address this issue by supporting the approach of working from home when needed in addition to the use of online communication through the provision of mobile devices under the Digital Allowance initiative for all MCMC staff.

In addition, the Human Capital Division also implemented a Succession Management Plan for the MCMC employee who will retire within the next one (1) year to ensure that sharing their knowledge and experience with other staff can be done more smoothly and effectively.

INTERNAL AUDIT STATEMENT

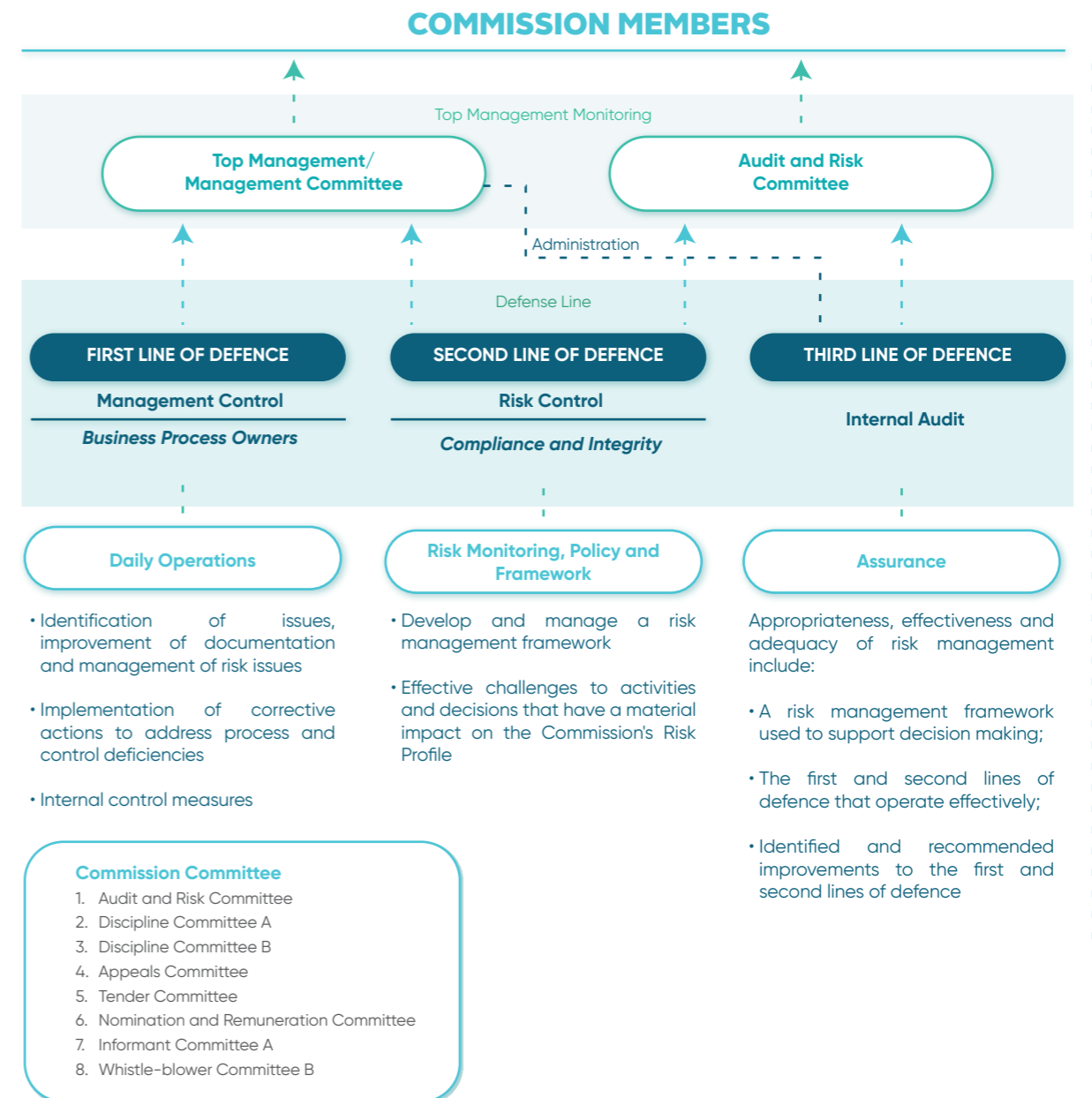
MCMC provides independent and objective assurance on the adequacy and effectiveness of internal controls, governance and risk management implementation.

The Internal Audit Department of MCMC carries out audit functions as stated in the MCMC Internal Audit Charter and adopts the International Professional Practices Framework (IPPF) as a mandatory and recommended guide for internal auditing.

The internal audit plan is prepared using a risk-based approach and presented to the Audit and Risk Committee (ARC) for approval each year. The audit plan is updated and monitored regularly to ensure the commencement of the audit engagement is according to plan and to take into account any changes and instructions from the ARC. The audit area focuses on high risk and critical areas to ensure that adequate corrective actions are in place to mitigate risk in a timely manner.

Detailed reports are discussed at senior management level and action plans are prepared to implement the necessary preventive and corrective actions for governance and operational improvement.

Findings and management feedback are also presented to the ARC to ensure that the Management implements the agreed remedial actions and then, executes the follow-up action plan agreed by the respective department or operating unit to ensure that the expected results are achieved.



The Three Lines of Defence

To ensure the professionalism of the audit function and governance, MCMC has maintained Corporate Membership of The Institute of Internal Auditor Malaysia since 2009. As of 31 December 2021, a total of nine (9) professionally qualified employee and/or certification in the Internal Audit Department (IAUD), as follows ;

No. of Employees	Educational and Professional Background
1	Chartered Accountant
5	Associate Member of the Institute of Internal Auditors Malaysia (IIAM)
2	Member of the Information Systems Audit and Control Association (ISACA)
2	Member of the Board of Engineers Malaysia (BEM)
1	Member of the Malaysian Institute of Accountants
1	Master of Mechanical Engineering
3	Bachelor's Degree in Accounting
1	Bachelor's Degree in Electronics Engineering
1	Bachelor of Business Administration
1	Bachelor's Degree in Software Development
1	Bachelor's Degree in Information Systems
1	Diploma in Healthcare Management

Total Resources: Nine (9) employees including the Head of the Internal Audit Department (IAUD) and one (1) administrative personnel.

Current resources are encouraged to obtain professional certification as necessary to demonstrate competence and due professional care.

Creating Value Through the Right Governance Approach

2021 was a challenging year with the COVID-19 pandemic still in our community, which triggered a health crisis and further impacted MCMC's operations as well as industry around the world. Organisations take steps to review and implement new ways of working that are adapted to new habits. The Internal Audit Department (IAUD) adapted by converting some audits to hybrid remote auditing, providing agility for guidance and ensuring governance does not lag behind.

2021 Audit Focus Area

1. Engagement and Audit Operations

Audit matters are conducted based on the approved Annual Audit Plan for 2021 taking into account the current resources and the situation of the COVID-19 pandemic. A total of seven (7) audit assignments and three (3) audit governance activities were carried out throughout the year.

2. Governance and Audit Development

Despite the pandemic situation, IAUD managed to carry out several additional governance and development activities in addition to the main task of the audit assignment.

- i. Acculturation of Governance (A-Go)
- ii. Internal Control Awareness Programme
- iii. Audit Support Tool (Audit Command Language)

i. Acculturation of Governance (A-Go)

Governance Acculturation or simply A-Go is a self-assessment assurance programme where process owners actively monitor, evaluate, review and take corrective action in ensuring effective governance and controls are in a healthy state at all times.

Operations management is responsible for maintaining internal controls. that are effective and to implement risk controls and procedures on a daily basis. Operational management identifies, assesses, controls and mitigates risks, guides the development and implementation of internal policies and procedures and ensures that activities are consistent with goals and objectives. Through a hierarchical structure of responsibility, their middle managers form and implement detailed procedures that serve as controls and supervise the implementation of those procedures by their employees.



The A-Go programme involves 96 identified departments including state offices throughout Malaysia; it will be implemented in stages starting from January 2021. Assurance Champions (AC) appointed from each department are given the responsibility to carry out a self-assessment to assess the effectiveness of internal control and management risk in their respective departments. Each appointed AC is given training related to the A-Go programme and self-assessment activities and is required to attend an awareness programme on the importance of effective governance and internal control.

Selected ACs have attended training conducted by the Institute of Internal Audit Malaysia (IIAM) from 25 to 26 January 2021 and the Institute of Corporate Governance Malaysia (ICGM) on 21 and 23 September 2021.

This programme benefits MCMC in promoting good governance practices in day-to-day processes including the following:

- The implementation of governance and internal control in operations is expected to be successfully introduced.
- Process owners understand well their role as the first line of defence in the organisation.
- A culture of self-awareness about good governance and adherence to processes is practiced among the employees of the MCMC.

ii. Internal Control Awareness Programme

This programme initiative is based on the Strategic Risks, Priorities and MCMC Action Plans approved, and Operational Risks from the Risk Profiling Task by the Risk Management Department in the Management Committee Meeting (MCM).

The main objective of the programme is to increase the overall level of awareness about the importance of governance and risk management among employees of the MCMC especially among management. Through this programme, some of the impact of audit findings were shared as a lesson on the importance of efficient governance and internal control.

The first session was held on 15 November 2021 where the guest speaker was Head of the Internal Audit Unit at K-KOMM, Puan Nor Hasimah Binti Rahmat.

iii. Audit Support Tool (Audit Command Language)

The IAUD began using the Audit Command Language (ACL) software in auditing work since 2019 where two (2) techniques are used for this purpose. Below are the methods practiced:

Method 1: Direct Data Access

This method uses a direct connection between the ACL and MCMC database system. By using this method, the audit samples will be more accurate and up-to-date because they get direct data feed. To guarantee data integrity and security, ACL software is only given access to a system with the "Read and View only" setting.

Method 2: File Extraction

This method is used to analyse data that is still recorded manually using PDF, Excel, Word and other formats. The data that has been extracted will be uploaded into the ACL software for the purpose of analysis.

CENTRAL MONITORING OFFICE

Central Monitoring Division (CMD)

The Central Monitoring Division (CMD) was established and is responsible for monitoring and reporting on project implementation to ensure the goals and vision in producing positive digital economic growth. The goals and visions can be achieved through the implementation of high-impact, quality initiatives as well as effective project compliance in order to continue developing the communication and multimedia industry.

Tasks of the MCMC Central Monitoring Office

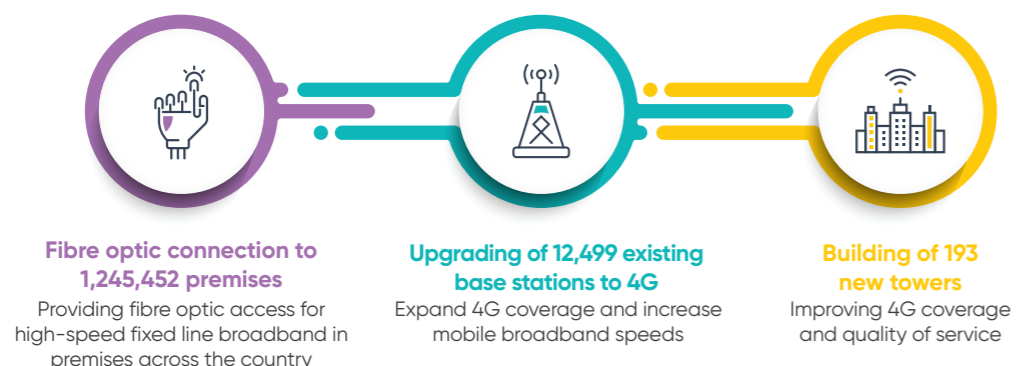
- Monitoring of projects under JENDELA as well as reporting on the status of implementation progress to stakeholders, among others, YB Minister, Cabinet Ministers, Council of Rulers, Digital Economy Council, Creative Industry and Communication, Digital and Data Infrastructure Cluster Committee, K-KOMM Top Management Meeting, and the MCMC Commission Member Meeting
- Monitoring of MCMC Transformation Plans related to JENDELA+, PEDI, PAKEJ and PUPUK;
- Monitoring of projects under the National Action Plan such as RMK-12, MyDIGITAL, the National Digital Economy and 4IR Council (MED4IRN) and the 2022 Budget as well as reporting the implementation progress status to stakeholders such as YB Minister, Cabinet Ministers, Council of Rulers, Digital and Data Infrastructure Cluster Committee, K-KOMM Top Management Meeting, MCMC Commission Members Meeting, and others.

Business Model

- Monitor the implementation of projects under JENDELA, JENDELA+, PEDI, PAKEJ and PUPUK so that they are in line with the Key Performance Indicators (KPI) and the set timeline;
- Ensure that identified projects are implemented as planned, and according to the schedule;
- Report the development and achievements of JENDELA, JENDELA+, PEDI, PAKEJ and PUPUK to the top management; and
- Help facilitate the resolution of problems involving the jurisdiction of other ministries/agencies.

2021 Achievements

- Strengthening of the country's digital infrastructure to provide quality and comprehensive broadband services for the community.



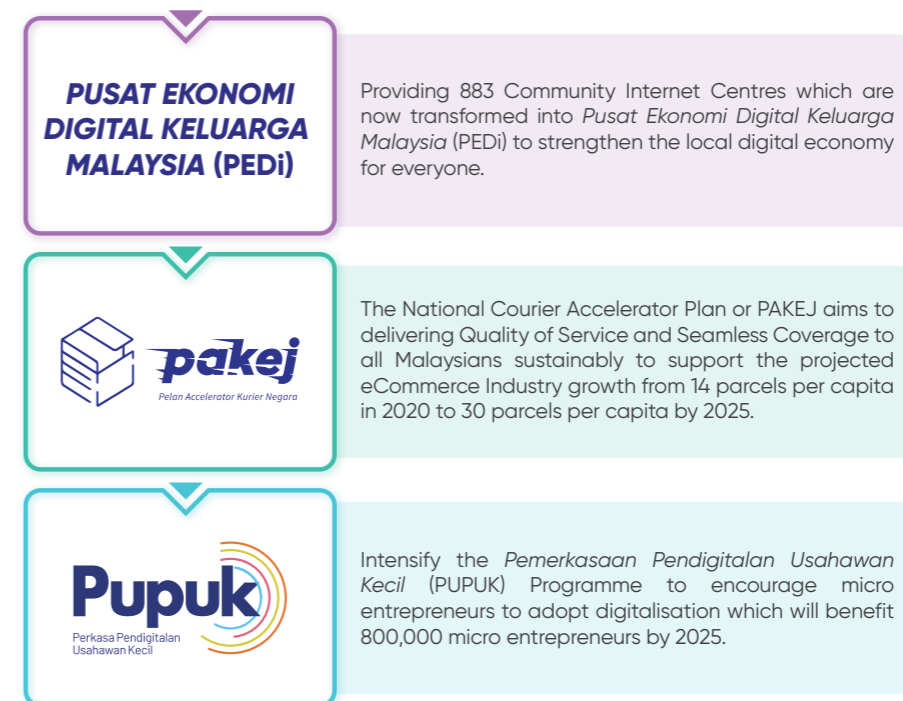
These projects are to ensure that the targets set under JENDELA Phase 1 (2020-2022) can be achieved, namely 7.5 million premises with fibre optic access, 35Mbps average mobile broadband speed, and 96.9 percent 4G mobile broadband coverage in populated areas.

Other projects implemented to support JENDELA's achievements include:

- Termination of 3G networks throughout the country to ensure that the relevant spectrum bands can be reused to further strengthen the quality of 4G services;
- The provision of broadband access services through satellite technology will be implemented in 839 identified locations throughout the country and are expected to be fully completed in the second quarter of 2022;
- The implementation of 5G which was initially scheduled to start in 2022 has been accelerated to the fourth quarter of 2021 where 5G technology began to be implemented in stages in three (3) locations namely Cyberjaya, Putrajaya and Kuala Lumpur;
- The JENDELA Map portal that operates as a one-stop centre for people to get information (<https://jendela.my>) on the availability of digital infrastructures in their respective areas.
- The use of the Communication Infrastructure Planning Guidelines (GPP-1) at State level to support the implementation to make communication services as a third public utility. All states in Peninsular Malaysia agreed on the use of the GPP-1 as a reference in the development of communication infrastructure development. Meanwhile, Sarawak and Sabah have their own legal procedures, whereby Sarawak will use TPPG (Telecommunications Processes, Procedures and Guidelines) as reference and Sabah gazetted UBBL Sabah 2020 and GP Construction of Communication Tower by DBKK as a reference.

- Amendments to the Uniform Building Bylaws 1984 which have been approved at the 78th Meeting of the National Council for Local Government (MNKT) include the use of the new G20 Form to ensure the installation of communication infrastructure is verified by qualified individuals as a condition for obtaining a Certificate of Completion and Compliance (CCC).
- A study regarding the standardisation of charge rates and fees imposed on the development of communication infrastructure. This proposal will be brought to the Council of Ministers Meeting before being raised to the Chief Minister Meetings for notification and approval.

- Empowering digital economic activities by developing Internet use skills as well as increasing e-commerce engagement and intensifying digitalisation empowerment programmes to encourage micro-entrepreneurs to switch to digitalisation.



These projects are to ensure that the targets set in the National Action Plan such as RMK-12, MyDIGITAL, Digital Economy Council 4IR (MED4IRN), Budget 2022 and MCMC Transformation Plans can be achieved.

STATE TRANSFORMATION AND COORDINATION DIVISION

State Planning and Coordination

The State Transformation and Coordination Division (STCD) through the State Office acts as a reference agency at the State Government level in matters related to the development of communication infrastructure, and plans activities aimed at bridging the digital divide, especially in rural areas through the implementation of programmes to provide universal services, improve coverage, develop local entrepreneurs and others such as the main projects of JENDELA, PEDI, PAKEJ and PUPUK.

The STCD is also responsible for regulating communication and multimedia activities through service quality management and field enforcement activities including related activities to improve coverage and quality of user experience and educate the public about multimedia communication through awareness, development, and complaint management programmes.

STCD is important in ensuring that the stated roles and functions can be achieved and implemented properly. The State Office under the STCD is responsible for implementing projects and assignments at the state level and helping to build MCMC's image as a proactive and responsible regulatory agency for the communications industry and services.

For this reason, the State Transformation agenda is one of the focus areas of MCMC in 2021. It aims to empower State Offices through the opening of MCMC offices in each state, procurement of appropriate equipment and sufficient vehicles, increasing the number of employees by category, and empowering the scope of tasks identified. The well-managed role of the State Office and the close relationship with the State Government that has been established will ensure that the Government's aspirations and goals achieve their objectives successfully.

Plans and Planning 2021

1. State Transformation

i. One of MCMC's focus areas for 2021 is for the State Office to function as a microcosm for MCMC. Under this State Transformation, the basis and role of the State Office that has been empowered and achieved in 2021 include:

Office Availability



- The availability of 14 State Offices.
- The Selangor State Office and the Federal Territory Office were separated and moved to MCMC Tower 2.
- The relocation of the Kelantan State Office to a new building equipped with a new concept i.e.; 'Hot-Desking'.
- Renovation to the Negeri Sembilan State Office and Terengganu State Office in 2021 added workspace and evidence room.
- Relocation and renovation of the Kedah State Office and the Melaka State Office in 2022.
- Renovation of six (6) State Offices namely the State Offices of Perlis, Perak, Sabah, Sarawak, Johor and Pahang which will be implemented in 2022.

Work Forces



- Employee work forces were strengthened to 240 including 36 from PID (STCD employees totaled 162 in January 2021).
- Section Director positions with Grade P6 were created in nine (9) State Offices.

Vehicle Acquisitions



- 20 new vehicles were approved for procurement in 2022 to strengthen the smooth operation in the field.
- Three (3) vehicles were redeployed between states in 2021.

Empowered Activities



- State Regulatory and Compliance Department (SRCD) and State Implementation and Monitoring Department (SIMD) were created under the STCD to strengthen the planning activities, compliance and enforcement by the State Office.
- New coverage quality test equipment handed over to the State Office including the training.
- Full implementation of network complaints handling, quality audits, enforcements and communications infrastructures planning.
- The enforcement of several new Standard Operating Procedures (SOP) are being finalised.

ii. State transformation is important because of the great role and responsibility of the State Office as emphasised by MCMC Chairman. The State Office is where the rubber hits the road. The State Office can drive and help MCMC ensure the implementation of projects such as JENDELA can be fully achieved. For this reason, the State Office needs to be empowered so that effective implementation of each MCMC project can happen through the role played by the State Office in the field and the close cooperation of the State Office with the State Government and Local Authorities (PBT).

iii. The State Office is also closer to the people in implementing the MCMC initiative and is the main channel to receive and submit feedback regarding MCMC initiatives more effectively.

The State Transformation Programme achieved in 2021 has further strengthened the operations of the State Office in improving the monitoring of the quality of communication services to the people.

All 14 states including Sabah and Sarawak have agreed to adopt GPP-I (Communications Infrastructure Planning Guidelines). The State Office achieved a milestone by successfully obtaining the approval of the State Government to adopt GPP-I which also recognises communication services as the third Public Utility. This agreement will further launch the development of communication infrastructure and approval matters by PBT.

The working papers have been completed and presented to 14 states, and ten (10) states have approved the Communication Infrastructure Permit Management (CIPM) System to be implemented. The Federal Territories of Kuala Lumpur and Labuan have also agreed. Efforts are still underway to obtain approval from the State Governments of Johor, Kelantan, Sarawak, and the Federal Territory of Putrajaya. The use of CIPM is essential to monitor communication infrastructure and identify unauthorised infrastructure. CIPM will also assist in a more efficient management of fee and permit payments to MCMC and the PBT.

Through the roles and responsibilities that have been successfully carried out by the State Office, several State Directors have been appointed and entrusted to hold important positions in the communication-related committee at state level. They will continue to play an important role, advising and assisting the State Government in determining infrastructure development and direction of communication services. The State Director was also active in the state radio interview session regarding communication service issues such as the implementation of JENDELA and the termination of the 3G network. The State Office has also received and handled 104 high-profile complaints of which 83 complaints have been successfully resolved. The resolution of the remaining 21 complaints is included in the upcoming JENDELA planning.

DEVELOPMENT
Building Digital Infrastructure

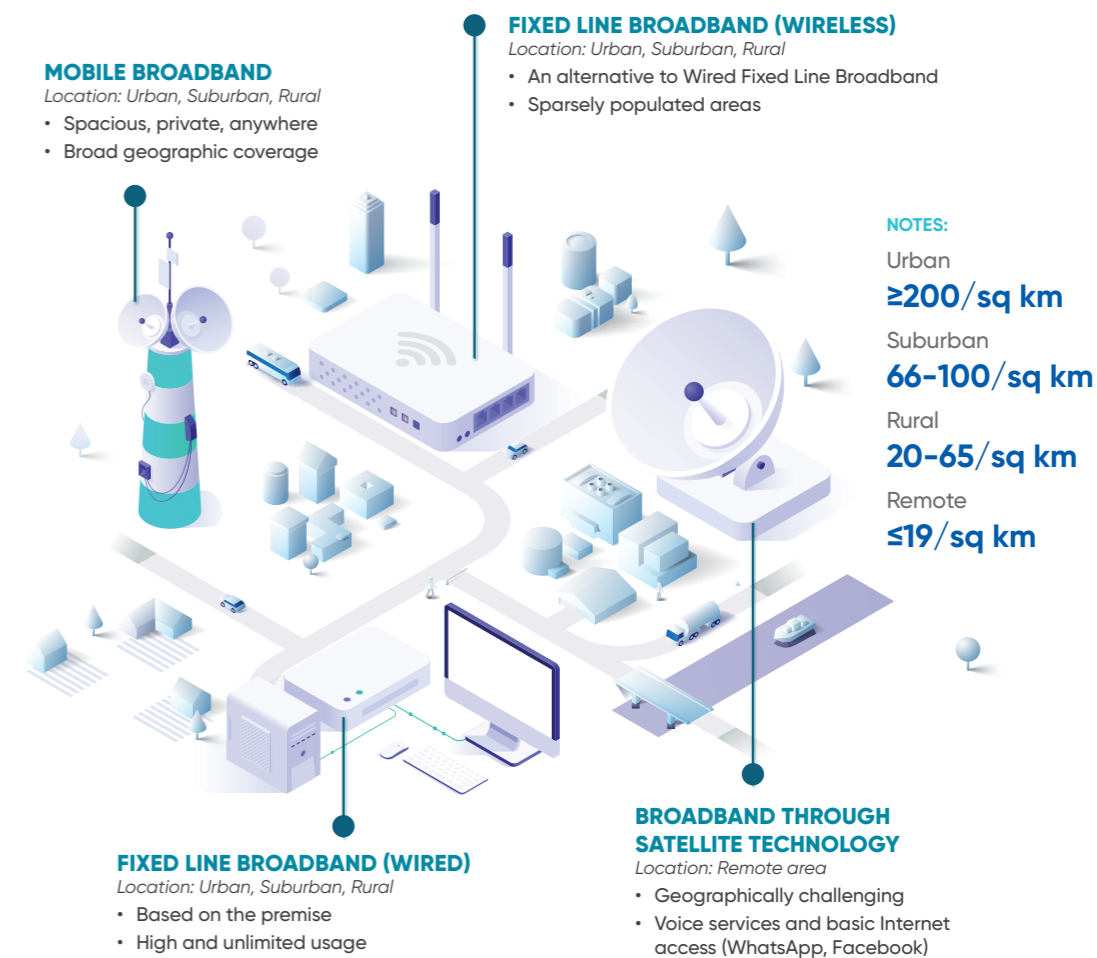
INFRASTRUCTURE PLANNING AND MANAGEMENT

The spread of COVID-19 around the world in early 2020, including in Malaysia, changed the landscape of how people live. The COVID-19 pandemic created a high dependence on the Internet among people in urban and rural areas. It also further encouraged digital business and the transformation of traditional enterprises into online enterprises; and the use of services for working, social activities, entertainment, education and so on virtually.

Nowadays, one of the basic needs of the people in facing the new norm is a comprehensive and quality high-speed broadband connection. A wider choice of broadband services allows people to enjoy the quality of fast and stable broadband access services in their daily activities such as working from home or home teaching and learning (PdPR). The digital divide between urban and rural communities needs to be addressed urgently because broadband usage is now across ages, living standards, residential locations, economic fields, as well as activities in daily life.

An ubiquitous, affordable and quality digital infrastructure and services available to the public are of utmost importance, accordingly, the *Jalinan Digital Negara* (JENDELA) plan was introduced in 2020 to provide a comprehensive framework and high-quality broadband coverage to meet public demand. JENDELA is also a platform to accelerate the nation's digital connectivity through the provision of extensive mobile broadband, fibre optic and fixed wireless service coverage while paving the way for the implementation of 5G under the 12th Malaysia Plan (RMK-12) (2021 - 2025). JENDELA will ensure that Malaysians will have access to quality digital connections and to achieve the country's aspirations, namely gigabit access to nine (9) million premises, an average mobile broadband speed of 100Mbps, and 100 percent Internet coverage in populated areas by the year 2025.

To ensure that people can get the best access with solutions using existing technology, fit-for-purpose solutions are planned for the implementation of digital infrastructure in different areas to maximise broadband coverage.



Source : Population Census 2010 data by the Department of Statistics Malaysia (DOSM)



Throughout 2021, the Commission actively supervise and coordinate initiatives related to the development of digital infrastructure including JENDELA. It generally involves the construction of new communications structures, the upgrading of base stations at existing communications structures and the availability of premises with fibre optic connections.

Through JENDELA, from September 2020 until 31 December 2021, 95.4 percent of populated areas have been covered with 4G mobile broadband service access; the average speed of mobile broadband services reached 37.3Mbps; and 6.8 million premises have provided with fixed broadband access. A total of 437 out of 839 locations have been provided with collective WiFi broadband services, 1,189 new communications structures have been built, and 30,174 base stations at existing communications structures have been upgraded to 4G technology to expand 4G coverage in populated areas throughout the country.

Additionally, the development of several other projects under JENDELA throughout 2021 are as follows:



On 15 January 2021, the Commission issued a Request for Proposal (RFP) to all licensees to register interest in participating in the JENDELA Phase 1 project involving the construction of new communications towers and mobile broadband services that will be provided based on the network sharing concept by service providers.

A total of 1,661 locations have been identified and distributed to 106 clusters across the country. These locations include areas of public complaints and areas that not having sufficient 4G service coverage as identified by service providers in the National Digital Infrastructure Laboratory (NDIL). In line with the Government's goal of sunsetting the frequency band for 3G services throughout the country by the end of 2021, 4G services must be provided if the areas have sufficient 2G service coverage. This project is in line with JENDELA's action plan which targets to achieve an average speed of 35Mbps in 96.9 percent of populated areas by 2022.

The Commission aims to issue the Notification of Approval in January 2022 after all draft plans have been assessed by the Commission.

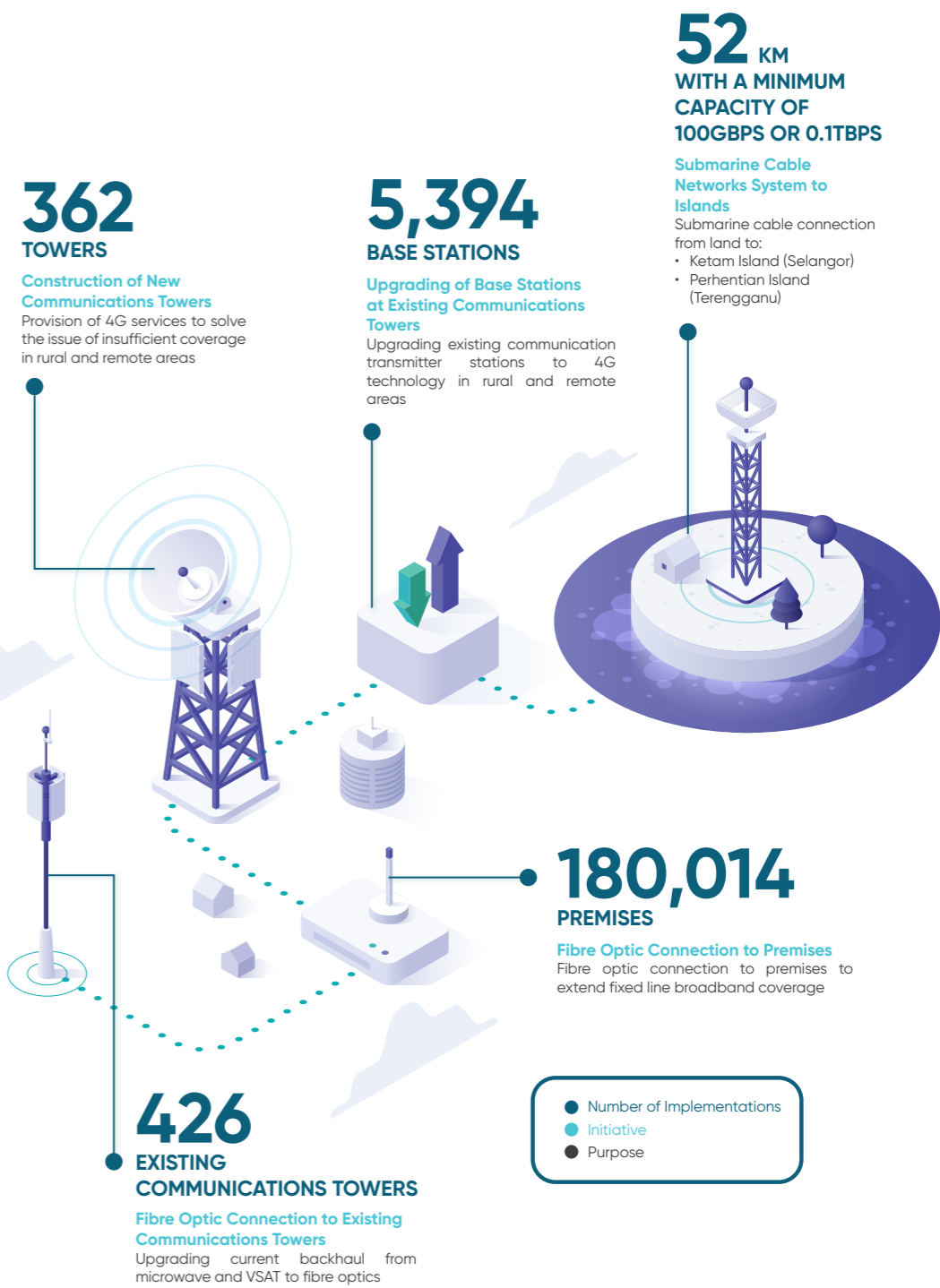
Broadband Wireless Access Service Project through Satellite Technology (Broadband Wireless Access - BWA)

This project is a temporary measure to address connectivity issues in remote areas, while a long-term solution is being developed. Providing mobile broadband services takes quite a long time due to the challenging geographical factors of the terrain. The allocation of broadband access services will be based on collective access (the designation of public WiFi hotspots will be proportional to the number and distribution of the population in each location).

There are a total of 839 locations identified under this project; 178 locations in the Peninsular, 523 locations in Sarawak, and 138 locations in Sabah. These locations consist of Orang Asli settlements in Peninsular Malaysia, and remote areas in Sabah and Sarawak. The implementation of this project is to meet the increased demand of the internet by Malaysians to manage socio-economic activities and Home Teaching and Learning (PdPR) programmes in rural and remote areas.

Implementation of Major Contribution Project in 2021

Under the JENDELA plan, several initiatives have also been identified and approved by the Commission for implementation from 2021 until 2023 pursuant to Regulation 36A (Major Contributor) of the Communications and Multimedia (Universal Service Provision) Regulations 2002. These projects are implemented based on the draft plans proposed by licensees who have been identified as Major Contributor. The approved initiatives are as follows:



Enforcement of Communications Services as a Public Utility

Since the connectivity of digital infrastructure is an important element to promote economic growth and increase the competitiveness of a country, the Commission has proposed communications services as a public utility to coordinate and accelerate the provision of digital infrastructure at the state and national levels. On 3 June 2021, the Cabinet agreed to include communications services as one of the basic requirements. Communications services will be included as a condition approval in new development proposal.

This recognition is important to ensure that access to high-quality communications services can be provided quickly and comprehensively at reasonable operating costs, following the surge in demand due to the new norms people are faced with. Many activities such as interaction, working, learning, and shopping are done online. The need has become more urgent due to the global trend is shifting towards 5G-based innovation, the Fourth Industrial Revolution (4IR) and the Digital Economy. This recognition will pave the way for better connectivity across the country.

Adoption of *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)*

In order to strengthen digital infrastructure planning in development plans, the Ministry through the Commission has taken the initiative to draw up the *Garis Panduan Perancangan Infrastruktur Komunikasi (GPPI-I)* as a reference for State Authorities (PBN), Local Authorities (PBT), developers and all stakeholders in making planning related to the provision of digital infrastructure.

Among the things provided in GPP-I are in terms of proposed sites of communications towers or structures and the use of fibre optic technology for the provision of fixed line broadband services. In addition, GPPI-I aims to ensure that the digital infrastructure i.e. towers, multi-functional structures, In-Building Coverage (IBC) system and fixed line communications structures in new development areas are implemented based on the technical specifications set by the Commission.

Therefore, the Commission held discussions with developers, State Planning Committees (SPC), State Governments, and PBTs in adopting GPPI-I and reviewing aspects of regulations and fees imposed, to ensure the success of digital infrastructure development. As of the fourth quarter of 2021, all State Governments in the Peninsular have principally agreed to adopt GPP-I.

Among the challenges in digital infrastructure development efforts is connecting communities that are less populated and in remote areas due to topography issues, location accessibility two (2) or more different modes of transportation and travel and the absence of stable and permanent power supply sources. Compared to urban areas, there are constraints in the provision of broadband coverage in rural areas due to their remote location and lack of continuous and stable electrical power supply required at base stations. As an alternative, the generator uses for supply electricity are possible exposed to vandalism and cable theft would indirectly affecting the quality and availability of broadband services to users. These factors hike up the cost of project implementation in order to provide or maintain good service quality in the area.

Other matters that can impede digital infrastructure development include exclusive rights, non-uniform processes and procedures, high permit fees, various charges imposed, as well as difficulties in obtaining the right of way for the construction work.

In addition, there are other risk factors such as weather (floods/landslides), damage of communications infrastructure equipment due to human actions (cable theft/towers being burned with intent), and the current country's situation (e.g. the MCO imposed by the Government to control the spread of the COVID-19 brings difficulties in communications equipment delivery for implementation of digital infrastructure development projects.

The JENDELA Phase 1 project involving a total of 1,661 locations was the first time the Commission makes decision to implement the new communications towers project which involving a great numbers at one time. This project will have a significant impact on the coverage and quality of mobile broadband services in the country. The users living in rural and remote areas will enjoy an average speed of 35Mbps.

Although there are various challenges in the process of developing the country's digital infrastructure, MCMC with the industry and related stakeholders are always committed in achieve the targets that have been set under the JENDELA action plan. This is a continuous effort in bridging the digital gap and strengthening the country's digital infrastructure.

With a sustainable infrastructure under the JENDELA initiative, the issue of speed and coverage can be comprehensively and adequately overcome, allowing the public to enjoy holistic changes especially in the digital economy, as well as the creation of new job opportunities to increase income and economic standards. This is in line with the Government's aspiration to make Malaysia as a high-technology country and people generating higher income with a better quality of life through the implementation of the Twelfth Malaysia Plan (RMK-12).

5G IMPLEMENTATION: DEVELOPMENT PLAN AND CHALLENGES

On 19 February 2021, YAB Prime Minister launched the Malaysian Digital Economy Blueprint, MyDIGITAL which sets the direction to make Malaysia the regional digital heart by 2030. The MyDIGITAL initiative is a critical benchmark to realise the 12th Malaysia Plan for the period 2021-2025. The MyDIGITAL initiative is seen as a driver for the commercial implementation of 5G services in Malaysia.

YAB Prime Minister has also announced that the implementation of 5G throughout the country will be carried out by a special purpose company owned by the Government of Malaysia (GOMSPV) under the Ministry of Finance. The company is incorporated as the sole leader in building 5G infrastructure and networks and offering wholesale 5G services. The new approach through GOMSPV is intended to facilitate better digital network access to reduce network overlap, as well as enable existing 4G service providers to continue to focus investment on upgrading infrastructure and 4G networks and optical fibres for the benefit of users including from the aspect of coverage and competitive prices. This approach also ensures that the implementation of 5G can begin at the end of 2021.

In order to ensure smooth implementation of 5G, MCMC formed an internal working group on 24 February 2021 made up of officers from various Divisions and Departments that look at three (3) critical aspects for the implementation of 5G, namely the regulatory, spectrum and technical aspects, and demand strategy. This network is used through a single wholesale network (SWN) approach by Digital Nasional Berhad (DNB), a government-owned entity with 70 percent stake offered to existing industry players.

Through a media statement issued on 1 March 2021, the Ministry of Finance announced that Digital Nasional Berhad (DNB), a GOMSPV will be the sole provider of 5G infrastructure and networks offering wholesale services to other telecommunications providers. Although fully owned by the Government, in accordance with the existing regulatory provisions under the CMA 1998, DNB has been granted an Individual Network Facility Provider NFP (I) Licence and an Individual National Service Provider (NSP) Licence on 1 June 2021 to ensure that DNB's activities are fully regulated under CMA 1998.

DNB has drawn up a 5G network development plan targeting five hundred (500) 5G transmitter station sites under Phase 1A which ends on 31 December 2021. Phase 1A involves areas in Putrajaya, Cyberjaya and Kuala Lumpur which cover 5.8 percent of populated areas. DNB is also set to ensure that 5G services begin at the end of 2021.

- a 5G infrastructure and networks can be provided on a set timeline
- b Equal access can be offered to other retail telecommunication service providers, with non-discriminatory terms and conditions
- c Ensuring the continuity of DNB's operations as well as ensuring that the services to be provided are not interrupted
- d Cost effective provision of infrastructure and network by sharing existing physical infrastructure
- e Optimal use of resources
- f Citizens benefit fully from the wholesale services offered by DNB to retail service providers through innovative and competitive packages
- g Reliable services are offered by DNB especially in terms of security, quality of service and other regulatory requirements

5GDO also provided comments on issues raised by certain parties such as 5G radio electromagnetic frequency radiation that will have a negative impact on health and the environment, addressed to YB Minister K-KOMM in particular and to the Government in general. In this matter, 5GDO has also taken advantage of several forums in and outside the country to provide information on the implementation of 5G in Malaysia. This includes the following:

- Digital Policy Consultative Forum (21 September 2021)
- Advancing Digital Malaysia Webinar (14 December 2021)

Additionally, DNB, as the operator of the 5G network and services has held a series of special briefings with the:

- Council of Backbenchers (1 December 2021)
- Opposition Member of Parliament (16 December 2021)
- Media (3 December 2021)

DNB also responded to issues raised through the mass media and social media.

Until 31 December 2021, it is estimated that four (4) percent of populated areas will have 5G coverage. Telekom Malaysia Berhad (TM) and YTL Communications Sdn Bhd (Yes) are among the first telecommunications companies to use DNB's network capacity in offering 5G products and services to users.

From 15 December 2021, Yes allowed their customers to enjoy 5G services, but YTL has not yet created a 5G service package. However, access to the 5G network is dependent on selected device models from brands such as Honor, Huawei, Nokia, Oppo, Realme, Vivo, Xiaomi and ZTE supporting the DNB network. DNB is working so that more devices from brands such as Apple, Motorola, Asus, Samsung, TCL and others can support the DNB network in the future.

Based on the performance of 5G network usage since its launch, analysis of 5G network usage data found that a total of 1,600 active users were recorded with an average speed per user of 700Mbps for download and 55Mbps for upload.

SPECTRUM PLANNING AND ASSIGNMENT

The use of spectrum needs to be well managed and regulated at the domestic and international levels to ensure it is free from any interference and provide a high quality of service. Among the measures taken to optimize the use of spectrum resources is to align the use of spectrum with the latest developments and technologies.

For the year 2021, MCMC has implemented and participated in several activities so that the spectrum can be used optimally.

a. Technical Coordination Between Border Countries

Technical coordination between border countries is important to ensure more efficient use of spectrum along common border areas while also overcoming interference issues. This coordination is conducted according to specifications, guidelines and regulations that have been set at the domestic and international level.

Throughout 2021, a total of 13 meetings have been successfully conducted virtually, listed as follows:

- Frequency Assignment Committee between Singapore, Malaysia and Brunei Darussalam (FACSMAB) – 919th to 924th meetings;
- Frequency Assignment Committee between Singapore, Malaysia and Brunei Darussalam Review (FACSMAB Top Management Meeting) – 22nd meeting;
- Hetnet and Spillage Coordination Sub-Working Group Meeting between Singapore, Malaysia and Brunei Darussalam (HSG-SWG) – 7th meeting;
- Meeting of Joint Committee on Communications between the Republic of Indonesia and Malaysia (JCC) – 18th meeting;
- Joint Technical Committee on Coordination and Assignment of Frequencies along Malaysia-Thailand Common Border Meeting (JTC) – 35th meeting;
- Special Meeting on Exemption of Low Power FM Stations from Minimum Frequency Separation Requirement between Malaysia and Thailand (JTC Special Meeting) – 1st meeting;
- Trilateral Coordination Meeting between the Republic of Indonesia, Malaysia and Singapore (Trilateral) – 19th meeting; and
- Special Trilateral on Frequency Registration, Coordination Guideline and Compilation of Handbook between the Republic of Indonesia, Malaysia and Singapore (Trilateral Special Meeting) – 1st meeting.

Among the activities carried out by the committees are planning and harmonisation of radio spectrum usage, preparation of guidelines, agreement on coordination specifications, frequency assignments registration and resolving any reported frequency interference.

b. Bilateral Coordination with Government Agencies

In 2021, the 16th Bilateral Coordination Meeting between the Malaysian Armed Forces and the Malaysian Communications and Multimedia Commission was held in March 2021 at the Haigate ATM Complex, Kuala Lumpur.

The activities carried out by the meeting includes the following:

- Exchange of information regarding spectrum usage;
- Plan and coordinate spectrum requirements for government use;
- Resolve radio frequency interference; and
- Create an appropriate framework, including establishing a sub-committee to discuss and deal with emerging issues.

c. Satellite Coordination

The International Telecommunication Union (ITU), a specialized agency under the United Nations (UN) has established procedures and provisions in the Radio Regulations (RR) for the purpose of regulating the operation of satellites in space. Therefore, the use of satellite orbits and spectrum must go through the satellite network filing registration process at the ITU to obtain international recognition and protection.

Accordingly, in 2021, MCMC has received and approved registration applications for the following three (3) satellite network filings:

- MEASAT-89.5E-21 (89.5E);
- MEASAT-87E-FSS (87E); and
- MEASAT-87E-BSS (87E).

The processing of satellite network filing by the ITU is subject to cost recovery charges based on the principles decided by the ITU Council, in accordance with ITU Council Decision 482. However, every administration is entitled to processing of one satellite network filing each year without the charges mentioned above, with certain conditions to be complied. Following that, taking into account the single application received, MCMC has nominated the satellite network filing MEASAT-87E-BSS (87E) for the year 2021.

In addition, MCMC has also coordinated satellite frequency coordination activities with related countries to ensure the use of frequencies and coverage areas between Malaysian satellite networks and satellite networks of other countries do not cause interference with each other.

d. The establishment of the National Preparatory Working Group for the World Radiocommunication Conference 2023 (NPWG-23)

The World Radiocommunication Conference ("WRC") is a treaty-level forum held every three (3) to four (4) years by the ITU, where 193 ITU Member States review, and if necessary, revise the RR. The RR is an international treaty governing the use of radio frequency, geostationary satellite and non-geostationary satellite orbits, ensuring that these limited natural resources are used rationally, efficiently and economically. The next WRC, the World Radiocommunication Conference 2023 (WRC-23) will address more than 33 agenda items which cover a wide range of radiocommunication services and applications.

In September 2021, MCMC has established the National Preparatory Working Group for the World Radiocommunication Conference 2023 (NPWG-23). The working group is a national platform that aims to study and develop Malaysia's positions and views on each WRC-23 agenda items. Malaysia's positions and views will be developed taking into account input, discussions and consultations conducted through the NPWG-23 working group.

NPWG-23 is comprised of representatives from Ministries, Government agencies, industry players and academics interested in matters related to the WRC-23 agenda items.

e. Standard Radio System Plan (SRSP)

SRSP serves as a guide on the specifications of radio systems and equipment operating in specific frequency bands including the type of assignment, list of frequency channels, coordination requirements with existing services and neighbouring countries, as well as conditions for use of the equipment.

SRSP is an important document in ensuring frequency bands can be used efficiently without any interference. SRSP will be reviewed and updated as and when necessary to reflect the latest requirements.

For year 2021, MCMC had updated six (6) SRSPs, namely:

- i. SRSP MS 800 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the Frequency Bands 839 MHz to 844 MHz and 798 MHz to 803 MHz;
- ii. SRSP MS 2100 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the Frequency Bands 1915 MHz to 1980 MHz, 2010 MHz to 2025 MHz, and 2110 MHz to 2170 MHz;
- iii. SRSP 504 – Requirements for Mobile Cellular Systems and International Systems Mobile Telecommunications (IMT) Operating in the Frequency Band 824 MHz to 834 MHz paired with 869 MHz to 879 MHz and 880 MHz to 915 MHz paired with 925 MHz to 960 MHz;
- iv. SRSP 508 – Requirements for Mobile Cellular Systems and International Mobile Telecommunications (IMT) Operating in the Frequency Band 1710 MHz to 1785 MHz paired with 1805 MHz to 1880 MHz;
- v. SRSP 523 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the 2500 MHz to 2690 MHz Frequency Band; and
- vi. SRSP 532 – Requirements for Broadband Wireless Access (BWA) Systems Operating in the 2300 MHz to 2400 MHz Frequency Band.

MCMC had also issued three (3) new SRSPs, namely:

- i. SRSP MS 700 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the Frequency Bands 703 MHz to 743 MHz And 758 MHz to 798 MHz;
- ii. SRSP MS 3500 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the 3400 MHz to 3600 MHz Frequency Band; and
- iii. SRSP MS 28000 – Requirements for International Mobile Telecommunications (IMT) Systems Operating in the 26.5 GHz to 28.1 GHz Frequency Band.

f. Conversion of Apparatus Assignment to Spectrum Assignment

Following the publication of several Ministerial Decisions in 2021, the use of the 850 MHz, 900 MHz, 2300 MHz and 2600 MHz frequency bands through Apparatus Assignment will be converted to Spectrum Assignment. The conversion process is expected to be completed in 2022.

g. Revision of Class Assignment

MCMC had revised the Class Assignment issued in May 2021 for overall improvements to the Class Assignment. The revision includes the removal of leased channel radio access devices from the Class Assignment, for which public notices on the matter have been published through several local newspapers and the MCMC website. In addition, MCMC had also included 12.568 GHz to 12.622 GHz frequency band for the use of satellite broadcasting receiver devices.

h. Guidelines on the Use of Radio Spectrum for Unmanned Aircraft Systems (UAS)

Guidelines on the use of radio spectrum for UAS document was published in October 2021 on the MCMC website. It is intended as a guide for the use of spectrum including the need to obtain certification of communications equipment for the operation of UAS in Malaysia.

i. Public Consultation on the Use of the six (6) GHz Frequency Band for WiFi Technology

MCMC has conducted a Public Consultation from 12 August to 11 October 2021 to invite industry experts, interested parties and the public to submit suggestions, opinions and comments regarding the potential use of the six (6) GHz frequency band for Wi-Fi technology in Malaysia under Class Assignment.

Through the Public Consultation, MCMC has received 24 proposals, opinions and written comments from telecommunications companies, satellite operators, system and equipment manufacturers, software and application providers and international organisations.

j. TV White Space (TVWS) Technology Testing

MCMC has received applications from parties interested in testing TVWS technology to provide broadband Internet services to rural communities. MCMC has approved testing for TVWS technology in Pekan Lenga, Pagoh, Johor beginning in February 2021. For the purpose of this testing, the use of certain frequency channels has been allowed in part of the Digital TV broadcasting frequency band (470 MHz to 694 MHz) through the Apparatus Assignment.

k. 5G Spectrum

MyDIGITAL initiative includes the blueprint for the National Digital Economy Development Plan that was announced on 19 February 2021, which outlined plans to accelerate the implementation of a single 5G infrastructure throughout the country, which will be carried out by a special purpose company under the Malaysian Government, namely Digital Nasional Berhad (DNB).

In accordance with the announcement, MCMC has allocated several frequency bands for the implementation of 5G networks throughout the country as follows:

- i. 703 MHz to 743 MHz paired with 758 MHz to 798 MHz;
- ii. 3400 MHz to 3600 MHz; and
- iii. 26.5 GHz to 28.1 GHz.

l. Waiver of Apparatus Assignment Fees for Amateur Stations (Class A and B) and Ship Stations (Fishing Vessel)

In support of MyDIGITAL initiative and public interest, MCMC has considered the exemption of the Apparatus Assignment fee as follows:

i. Online Re-application (Renewal) for Apparatus Assignment for Amateur Stations (Class A and B)

Apparatus Assignment fee will only be charged on new application and renewal for Apparatus Assignment submitted in person or via post. Apparatus Assignment renewal fee will be waived for applications received online. The exemption of the Apparatus Assignment fee is given to promote and raise awareness regarding the use of amateur radio to the community, especially during disasters or emergencies.

ii. Ship Station Application (Fishing Vessel)

Apparatus Assignment fee for ship station (fishing vessel) for the use of Automatic Identification System (AIS) devices is exempted, taking into account the safety factor of fishermen in emergency and distress situations as well as to reduce the burden of regulatory costs borne by fishing community. Exemption of Apparatus Assignment fee for fishing boats under ship station is applicable only for AIS devices registered with the Department of Fisheries Malaysia.

m. Issuance of Apparatus Assignment for 5G Implementation by DNB

DNB has been appointed by the Malaysian Government to develop 5G infrastructure and networks throughout the country for the purpose of providing wholesale 5G services. DNB has been allowed to use frequency bands allocated through Apparatus Assignment.

The 5G implementation locations under Phase 1A cover the areas of Cyberjaya, Putrajaya and Kuala Lumpur.

In order to minimise the potential interference from 5G transmitter stations to station in the Fixed-Satellite Service, MCMC has coordinated the commissioning of 5G stations together with DNB and Fixed-Satellite Service users/operators (for use in the C band) starting from 11 October until 31 December 2021.

As of 31 December 2021, a total of 736 Apparatus Assignment (368 Apparatus Assignment in the 3500 MHz frequency band and 368 Apparatus Assignment in the 700 MHz frequency band) have been issued by MCMC to DNB for the 5G service.

Achievements in 2021

a. Spectrum Planning

Among the achievements in 2021:

- i. Technical coordination between Malaysia and border countries was successfully held in a virtual and hybrid format.
- ii. The establishment of NPWG-23 to initiate the study and development of Malaysia's views on each WRC-23 agenda.
- iii. The publication of guidelines for the use of radio spectrum for UAS has helped stakeholders and industry players plan and develop such systems in compliance with the rules set by MCMC. This can also develop the national economy in the aviation industry.
- iv. TVWS technology provides a starting point to explore appropriate methods to ensure Internet access connectivity in areas in need.
- v. The allocation of several frequency bands for the implementation of 5G networks throughout the country.

b. Spectrum Assignment

The list of Spectrum Assignment holders and spectrum bands involved:

Frequency Bands (MHz)	Spectrum Assignment Holders
900	Celcom Axiata Berhad
	Digi Telecommunications Sdn Bhd
	Maxis Broadband Sdn Bhd
	U Mobile Sdn Bhd
1800	Celcom Axiata Berhad
	DiGi Telecommunications Sdn Bhd
	Maxis Broadband Sdn Bhd
	U Mobile Sdn Bhd
2100	Celcom Axiata Berhad
	DiGi Telecommunications Sdn Bhd
	Maxis Broadband Sdn Bhd
	U Mobile Sdn Bhd

List of Spectrum Assignment Holders for the 900 MHz, 1800 MHz and 2100 MHz Frequency Bands

c. Apparatus Assignment

A total of 181,315 Apparatus Assignment had been issued as at 31 December 2021, as shown in table below:

Types of Services	New Application	Re-Application	Total Application
Radiodetermination Services	64	483	547
Aeronautical Services	73	361	434
Broadcasting Services	57	793	850
Maritime Services	1,166	1,375	2,541
Amateur Services	791	3,221	4,012
Satellite Services	3,347	2,018	5,365
Mobile Services	10,866	52,797	63,663
Fixed Services	28,201	75,701	103,902
Space Operation Service	1	0	1
Total	44,566	136,749	181,315

Total number of Apparatus Assignment issued by types of services as at 31 December 2021

d. Verification of Apparatus Assignment and Apparatus Assignment Trial Commissioning

All verification activities have been made virtually through an online platform during the Movement Control Order (MCO) period due to the COVID-19 pandemic. Details related to all these activities are shown in the table below:

No.	Activity	Total Apparatus Checked
1	Verification of Apparatus Assignment Trial Commissioning for Radiolocation Service, as follows: i. Foreign Object Debris Detection Radar System (FODDS) ii. Ground Based Synthetic Aperture Radar System (GBSR)	13
2	Verification of Apparatus Assignment Trial Commissioning for TV White Space (TVWS) technology	4
3	Verification of Apparatus Assignment Trial Commissioning for Network Radio Service for LRT 3 Project	13
4	Verification of Apparatus Assignment Trial Commissioning for 5G service	77
5	Verification of Apparatus Assignment for commercial use of 5G services and coordination with Fixed Satellite Service users	736
6	Verification of Apparatus Assignment Trial Commissioning for Fixed Wireless Access (FWA) Service	2
7	Verification of Apparatus Assignment Trial Commissioning for Private LTE service	1
Total		846

Verification of Apparatus Assignment and Apparatus Assignment Trial Commissioning Activities

Challenges and Opportunities

Due to the current global COVID-19 pandemic situation, where physical confinement is one of the aspects that must be followed in curbing the spread of the pandemic, several coordination meetings have been postponed and could not be held as planned. This situation necessitates a number of adjustments in order to maintain the spectrum requirements which require coordination.

In order to adapt to the new norms following the COVID-19 pandemic, the Apparatus Assignment verification which was previously done physically where the officers will go to the field has been carried out virtually through various online platforms.

The introduction of new technologies such as TVWS requires comprehensive policy and technical studies. Existing policies and regulatory requirements was used to facilitate the TVWS technology trials.

There are various new opportunities that can be learned especially in this global COVID-19 pandemic situation when meetings need to be held virtually and/or in a hybrid format. This situation also provides an opportunity for the document digitization process to be done earlier than planned.

In addition, in 2021, MCMC will introduce the use of spectrum to new technologies in Malaysia such as 5G, UAS and also TVWS which require close monitoring to ensure there is no interference to existing spectrum users.

STANDARDS DEVELOPMENT

MCMC is responsible for developing standards and technical codes that cover the requirements for interoperability and security as well as other technical aspects related to the provision of communications network facilities and services and the approval of communications equipment through industry forums.

Certification of Communications Equipment

Communications and Multimedia (Technical Standards) Regulations 2000 require all communications equipment to be certified by MCMC or a registered certification agency based on registered standards.

Certification of Competency

Communications and Multimedia (Technical Standards) Regulations 2000 require any person who wish to undertake any activity in the designated skill areas to be certified by MCMC or a registered certification agency to ensure compliance with the specified level of proficiency.

TECHNICAL CODE

In accordance with the provisions of CMA 1998, MCMC has registered the Malaysian Technical Standards Forum Berhad (MTSFB) as an Industry Forum starting from 17 October 2004 to develop technical codes.

12 technical codes have been successfully registered as voluntary industry codes under Section 95 CMA 1998 throughout 2021. The details of the document are as listed in the table below:

01	MCMC MTSFB TC T016:2021 - IMT-2020 (Fifth Generation) – User Equipment
02	MCMC MTSFB TC T017:2021 - IMT-2020 (Fifth Generation) – Base Station
03	MCMC MTSFB TC T018:2021 - Global System for Mobile Communications and Long Term Evolution – Cellular Booster Equipment
04	MCMC MTSFB TC T019:2021 - IMT-2020 (Fifth Generation) – Cellular Booster Equipment
05	MCMC MTSFB TC G017:2021 - Information Network Security - Cloud Service Provider Selection (First Revision)
06	MCMC MTSFB TC G027:2021 - IMT-2020 (Fifth Generation) – System Architecture and Specifications
07	MCMC MTSFB TC G028:2021 - IMT-2020 (Fifth Generation) – Security Requirements
08	MCMC MTSFB TC G029:2021 - Information Network Security - Capability Development and Capacity Building
09	MCMC MTSFB TC G030:2021 - Information Network Security – Personal Information Management Systems
10	MCMC MTSFB TC G031:2021 - Internet of Things - Application Security Requirements
11	MCMC MTSFB TC G032:2021 - Prediction and Measurement of RF EMF Exposure from Base Station
12	MCMC MTSFB TC G033:2021 - Prediction and Measurement of RF EMF Exposure from Terrestrial Radio and Television Broadcasting Transmitter Station

List of Technical Codes Registered in 2021

CERTIFICATION PROGRAMME

All certification programmes are conducted by Registered Certifying Agencies appointed under the provisions of Section 186 CMA 1998 except for the certification of amateur radio operators which is handled by MCMC.

As of 31 December 2021, four (4) organisations have been appointed as Registered Certifying Agencies as listed in the table below. The number of certifications issued in 2021 by MCMC and its Registered Certifying Agencies is as listed in the table.

Organisation	Registration Category	Date of Appointment
SIRIM QAS International Sdn Bhd (SQASI)	Certification of Communications Equipment	3 September 2003
Akademi Laut Malaysia (ALAM)	Certification of proficiencies in the designated skill areas for Maritime radio operators	3 September 2003
Telekom Malaysia Berhad (TM)	Certification of proficiencies in the designated skill areas for other than radio operator (Cabling Provider)	15 July 2002
University Malaysia Terengganu (UMT)	Certification of proficiencies in the designated skill areas for Maritime radio operators	1 March 2011

List of MCMC Registered Certifying Agencies

Certification Agency	Category	Total Issued
MCMC	a. Amateur Radio Operators (Class A)	28
	b. Amateur Radio Operators (Class B)	290
	Total	318
SQASI	a. Communications Equipment	5,816
	Total	5,816
ALAM	a. General Operator's Certificate (GOC)	924
	b. Restricted Operator's Certificate (ROC)	151
	Total	1,075
TM	a. Cabling Provider (New)	11,096
	Total	11,096
UMT	a. General Operator's Certificate (GOC)	0
	Total	0
	Overall Total	17,230

Total Certifications Issued In 2021

In 2021, the MCMC conducted 80 computerised Radio Amateur Examination (RAE) sessions (e-RAE). A total of 33 sessions were managed to be conducted at 14 Pusat Ekonomi Digital Keluarga Malaysia (PEDi) throughout Malaysia before the implementation of the Movement Control Order (MCO). MCMC has also taken a new initiative to conduct fully online e-RAE sessions to replace the e-RAE sessions that had to be cancelled to comply with MCO (47 sessions). MCMC also conducted four (4) computerised Morse Code (CW) test sessions (e-CW) in Cyberjaya. The e-RAE examination centres are as listed in the table.

PEDi	District	State
PPR Kerinchi	Kuala Lumpur	Kuala Lumpur
Kelang Lama	Kulim	Kedah
Taman Murai Jaya	Melaka	Melaka
Peramu Jaya	Pekan	Pahang
PPR Sri Titingan	Tawau	Sabah
Kampung Luak	Miri	Sarawak
Semenyih	Semenyih	Selangor
Taman Klebang Utama	Ipoh	Perak
Kg. Sri Jaya	Kota Tinggi	Johor
Kuala Berang	Hulu Terengganu	Terengganu
Kg. Muhibbah	Putatan	Sabah
Tanjung Budong	Kota Samarahan	Sarawak
RTC Napoh	Jitra	Kedah
Putrajaya Presint 9 Fasa 3	Putrajaya	Putrajaya

e-RAE Examination Centres Year 2021

Candidates who pass the e-RAE session will get a Class B amateur radio operator certification and candidates who pass the e-CW session will get a Class A amateur radio operator certification.

MARKET SURVEILLANCE

MCMC in collaboration with SIRIM QAS International Sdn Bhd (SQAS) conducted a market surveillance programme for the sale of communications equipment periodically. This programme aims to monitor and ensure continuous compliance of communications equipment with registered standards and technical codes. This is important in ensuring user safety and avoiding radio frequency interference to communication networks.

In an effort to enhance compliance of communications equipment in the market, this market surveillance programme focused on three (3) activities: engagement sessions with the industry; monitoring of certified communication equipment; and market monitoring for customer premises equipment (Customer Premises Equipment - CPE) from April until December 2021.

a. Engagement session with the industry

To curb the spread of COVID-19 pandemic in the country, all planned engagement sessions with the industry were replaced with webinar sessions.

This industry engagement session aimed to ensure that the identified companies were aware of their responsibilities as required under the Communications and Multimedia (Technical Standards) Regulations 2000 which require all communication equipment to be certified and have a certification label.

A total of four (4) engagement sessions were held as shown in the table:

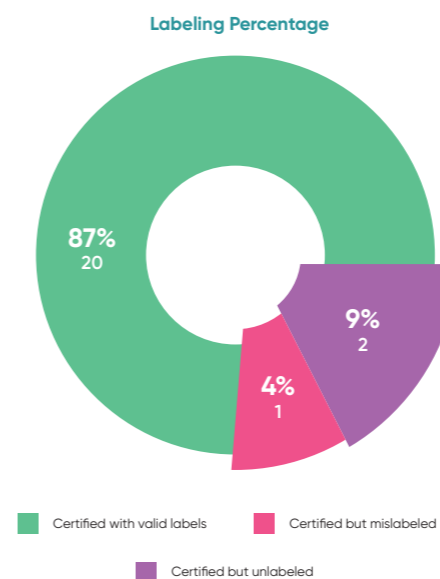
Company/Organisation	Total Present
Malaysian Mobile and Communication Association (PPTM)	162
Automotive Accessories Associations (AAA) in Malaysia	86
The National Technology Association of Malaysia (PIKOM)	65
Online E-Commerce Platform (Lazada & Presto Mall)	12

List of Companies and Organisations Engagement Session 2021

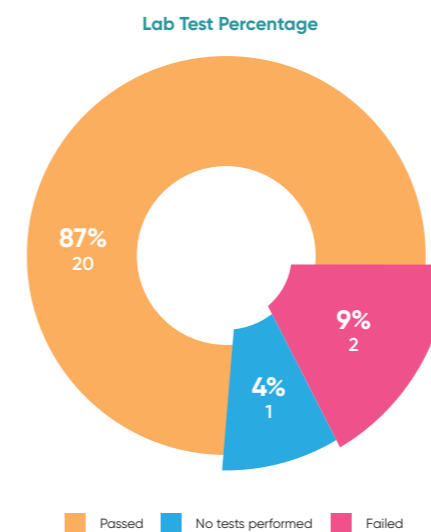
b. Market surveillance for certified communications equipment

This activity allows MCMC to assess the level of compliance of communications equipment that has been certified and sold in the market against the standards and technical code. This is considering that the certificate issued is based on the evaluation made of the product samples submitted during the application.

The activity in 2021 focused on 23 models of communications equipment that were certified based on several sampling criteria including the risk of non-compliance against the requirements set. The results of this activity are as follows:



Labeling Percentage for Certified Communications Equipment



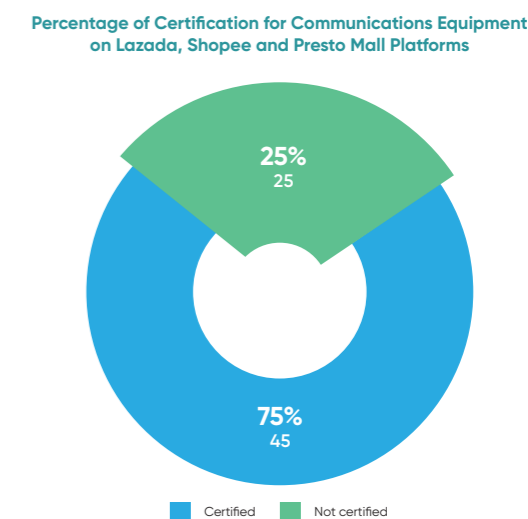
Percentage of Laboratory Tests for Certified Communications Equipment

c. Market surveillance for Customer Premises Equipment (CPE)

Monitoring of customer premises equipment is an activity that involves the purchase of communications equipment from the market based on the approved sampling plan.

The communications equipment is then tested and evaluated to ensure their compliance with the registered standards and technical codes which include the requirements for safety, interoperability, radio frequency and electromagnetic compatibility.

A total of 60 models of communications equipment were purchased through online platforms such as Lazada, Shopee and Presto Mall under the market surveillance programme for customer premises equipment and the results are as follows:



Percentage of Certification for Communications Equipment

Follow-up action will be taken based on the results of the analysis carried out, and feedback from the suppliers involved, including the suspension or cancellation of the certification issued.

CHECK YOUR LABEL CAMPAIGN

'Semak Label Anda' or 'Check Your Label - CYL' is an awareness campaign to educate the public about the importance of buying communications equipment that has the MCMC label as a sign that the equipment has been certified according to the standards that have been set. The public is also encouraged to check for the MCMC label to ensure the validity of the label found on the communications equipment by using the CYL mobile application which can be downloaded from Google Play and App Store.

In 2021, the promotion of the CYL programme was carried out using social media platforms (Facebook, Instagram and YouTube) considering the high amount of online traffic during the MCO and in line with the Government's recommendation to stay home unless absolutely necessary. Various types of informative and creative content have been uploaded to CYL's official social media sites for the benefit of the public. The uploaded content focuses on the importance of MCMC label, types of equipment, methods to check the validity of MCMC label and the negative implications of using non-certified communications equipment.

To further boost the promotion of the CYL programme on social media, a series of contests were conducted to attract the public's attention. The response received was positive and very encouraging.

The cumulative total of CYL application downloads up to December 2021 was 199,377 and the total number of serial number and IMEI information searches of communications equipment recorded for the same period was 1,932,194.

MAJOR TECHNOLOGY DEVELOPMENT INITIATIVES

i. Training Course on Management of Public Complaints and Awareness on the Radio Frequency Electromagnetic Fields (RF-EMF) Emissions from Telecommunications Infrastructures

The one and a half day training course aims to promote further knowledge on the importance and benefits of wireless technology while providing stakeholders with a reliable source of information on Radio Frequency-Electromagnetic Field (RF-EMF) from radiocommunication infrastructure, including 5G.

For the year 2021, this course involved officers from the Local Authority (PBT) office as well as state government agencies from four (4) states namely Pahang, Perak, Sabah, and Sarawak.

Towards the end of 2021, the PBTs from the states that were involved that were involved in the course session in 2019 were re-invited for a refresher course as well as the PBTs that could not participate in the previous sessions. The states involved were Johor, Melaka, Negeri Sembilan and Selangor.

A total of 354 participants took part in this course from 89 PBTs (71 of them participated in the course for the first time in 2021).

ii. Review of Mandatory Standards for Electromagnetic Field Emissions from Radio Communications Infrastructure

Determination No. 1 year 2010 (Mandatory Standard Electromagnetic Field - MS EMF)

MCMC updated the Mandatory Standard for Electromagnetic Field (EMF) Emissions from Radio Communication Infrastructure (MS EMF) issued in 2010 as an effort to ensure that it remains relevant in line with current communication technology developments such as 5G. This review aims to provide assurance to the public that EMF emissions from communication infrastructure within the country are safe and effectively and efficiently regulated.

This MS EMF revision takes into account EMF exposure limits based on the 2020 International Commission on Non-Ionising Radiation Protection (ICNIRP) guidelines recognised by the World Health Organisation (WHO) and refers to the latest international benchmarks in the aspects of EMF implementation, monitoring and evaluation.

A Public Inquiry was held on the review of MS EMF which began on 19 July through 17 September 2021 to ensure that the contents of the reviewed documents taking into account the public concerns as well as the industry's capability to adhere to the standard.

The new MS EMF (Determination No. 5 of 2021) entered into force on 1 November 2021. Among the main improved features are the timeline for the submission of EMF compliance reports and declarations, EMF compliance assessment methods, and guidance on preventive and safety measures.

iii. A Study on the Short-Term Effects of 5G Base Station Exposure on Cognitive Performance, Well-Being Parameters, Physiology and Electroencephalogram (EEG) of Malaysian Adults

A research collaboration on the short-term effects of 5G base station exposure was conducted with Universiti Malaysia Perlis (UniMAP) which lasted for 14 months until August 2021.

This research involved 60 volunteers of different ethnicities aged between 18 and 41 years old, contingent to the definition of adults in Malaysia. Based on statistical G-power techniques to represent the effects of 5G base station EMF exposure to Malaysian adults, the sample size was deemed sufficient.

The volunteers were exposed to 5G base station frequencies of 700 MHz, 3.5 GHz and 28 GHz, as well as sham (no exposure signal) which runs for a period of at least three (3) days in a shielded room at UniMAP. During the frequency exposure, several tests including cognitive, EEG, EMF perception, self-wellness such as temperature, pulse and blood pressure as well as physiology were also conducted on the volunteers to study any possible short-term implications.

The results of the research as a whole showed no significant effect of short-term exposure to 5G frequency on cognitive performance, well-being parameters, physiology and EEG of Malaysian adults.

iv. The National Interconnection Ecosystem Laboratory (NIEL)

The National Interconnection Ecosystem Lab (NIEL) was organised from 24 May to 11 June 2021.

NIEL sets high aspirations to position Malaysia as an international business destination of choice by providing a competitive interconnected infrastructure ecosystem, including Hyperscale Data Centres, Internet Exchange Points, and International Connectivity.

The three (3) week long virtual laboratory was attended by more than 250 participants from 75 organisations comprising the private and public sectors.

As a result of the laboratory, a total of nine (9) initiatives under JENDELA+ have been identified with an estimated private investment potential of RMI billion.

v. Digital Outlook Series 2021

The Digital Outlook Series 2021 seminar (DOS) was conducted virtually on 24 November 2021, with the theme Driving Digital Connectivity towards Achieving Shared Prosperity Vision 2030.

The DOS seminar provides a platform for industry stakeholders to discuss about the latest technology applications, developments and challenges faced in line with JENDELA, MyDIGITAL and the National 4IR Policy.

DOS 2021 featured the sharing of experts from home and abroad on the importance of digital connectivity in order to achieve the objectives of the 12th Malaysia Plan and the Shared Prosperity Vision 2030.

A total of 230 participants registered to attend this seminar online through the Zoom platform.

vi. Malaysia Internet Exchange (MyIX)

Malaysia Internet Exchange or "MyIX" was established in 2006 and is a non-profit organisation. MyIX is the first neutral Internet traffic exchange platform that connects Internet service providers (ISPs) where content provider connect to exchange Internet traffic.

The existence of MyIX leads to significant cost reductions and foreign exchange savings while increasing the speed, resilience and efficiency of the local Internet.

Since its establishment, there has been an increase in the number of MyIX peers and maximum bandwidth usage. As of December 2021, the number of MyIX peers was 125 compared to 116 in December 2020.

The maximum bandwidth utilisation is at a rate of 1424.5Gbps, with an increase of 45% compared to 2020.

vii. Industrial Promotion and Development Grant (IPDG)

The Industry Promotion and Development Grant (IPDG) was established in 2012 for the development of Green Information and Communication Technology (GICT) with an initial fund of RM1 million. This grant is managed by MTSFB to encourage the development and use of new technologies and increase technological proliferation in local industries. Starting in 2015, another grant category was introduced to encourage technology development in the Internet of Things (IoT) category and new technologies.

For the year 2021, six (6) projects were accepted as grant recipients as follows:

Category	Project	Duration	Project Cost
GICT	Designing a Green Delivery Network for Medicine and Vaccine Delivery in Rural Areas Using Drone Grant Recipient: UCSI University	12 months	RM 276, 500
GICT	Lightning Interference in 4G Wireless Communication Links Grant Recipient: UTeM	12 months	RM 142,000
IoT	AI-IoT Based Interactive Children Educational Application Grant Recipient: UTeM	10 months	RM 33,946
IoT	Internet of Things (IoT) Based Aquaculture Grant Recipient: UPM	18 months	RM 200,660
IoT	Monitoring System and Localisation of COVID-19 Patient Grant Recipient: UniMAP	12 months	RM 44,800
IoT	Vision Based Intelligent Traffic Monitoring System (VBITMS) Grant Recipient: UMP	18 months	RM 200,000

Large-scale project management during a pandemic requires careful planning and effective planning enforcement during the project implementation.

There are new regulations and norms established by the authorities that need to be followed to avoid any action being taken or worse, having the officers involved affected by the pandemic. In order to ensure that everything meets the standards, good relationship and communication with the agencies and companies involved are necessary so that any issues arising can be resolved efficiently.

The maximum bandwidth utilisation pattern and the number of peers from 2014 to 2021 are as follows:

Year	Maximum Bandwidth Usage (Gbps)	Total Peers
2014	77.4	75
2015	135	83
2016	201	88
2017	245	85
2018	391	94
2019	500	108
2020	779	116
2021	1424.5	125

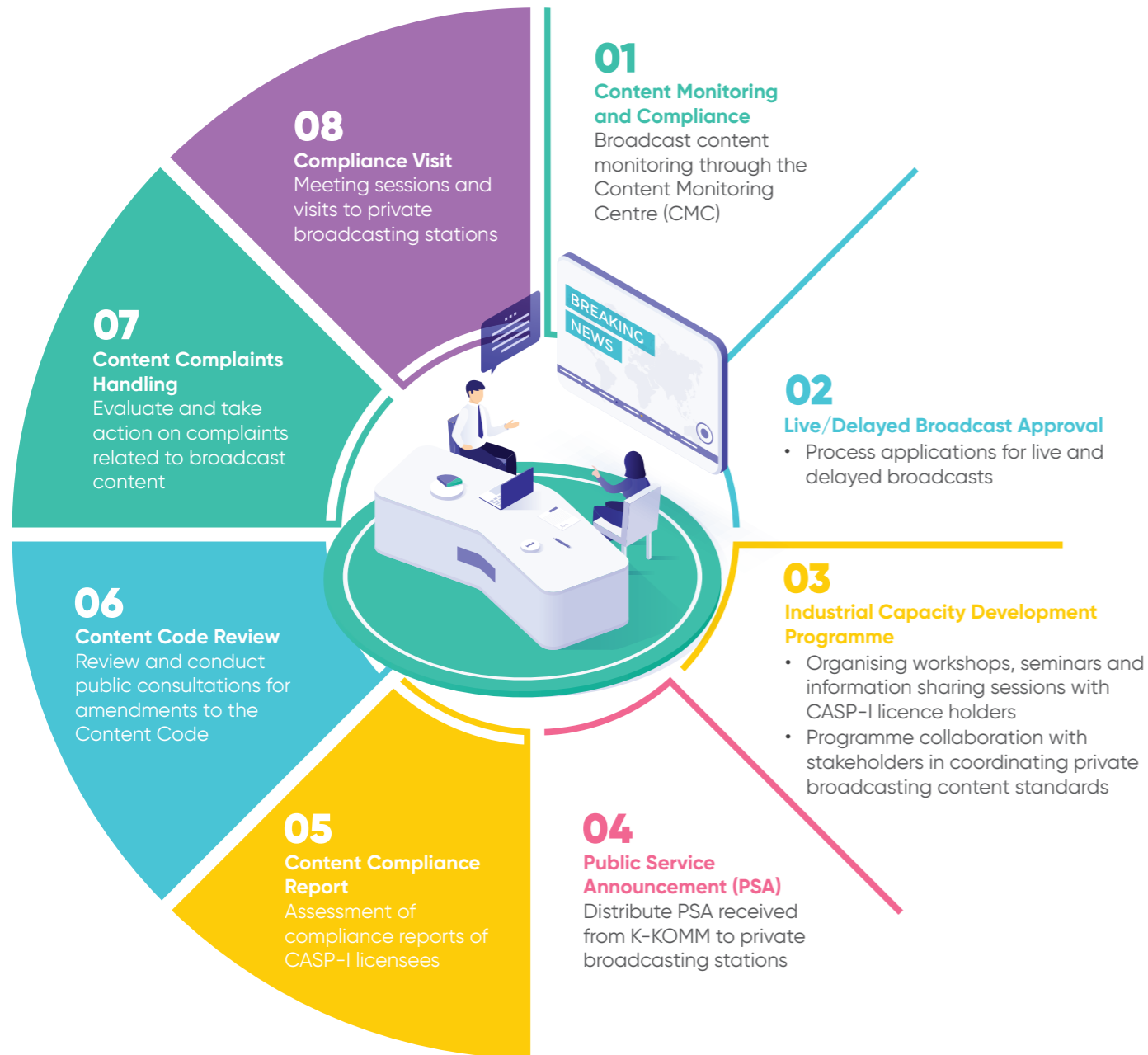
REGULATION

Committed to Consumer Wellbeing

REGULATION OF CONTENT

MCMC remains committed to improving the level of compliance of Content Application Service Provider (Individual) (CASP-I) licence holders by strengthening monitoring and compliance activities so that the content that is broadcast reflects the culture, identity and norms of society, in accordance with the CMA 1998 and the Content Code.

Among the main monitoring activities carried out on private broadcasting stations are:



Content Code Review

The Malaysian Communications and Multimedia Content Forum (Content Forum or CMCF) is an industry self-regulatory body that was established through CMA 1998 in February 2001 and operates under the auspices of the MCMC.

CMCF is responsible for the implementation and enforcement of the Malaysian Communications and Multimedia Content Code (Content Code), which sets out guidelines for content standards and best practices to be used by those involved in the production and consumption of content. This Content Code was registered by MCMC as per Section 95 (4) of the CMA 1998 and was developed by industry practitioners to ensure that content standards are fair and adaptable to the ever-changing landscape of the communications and multimedia industry.

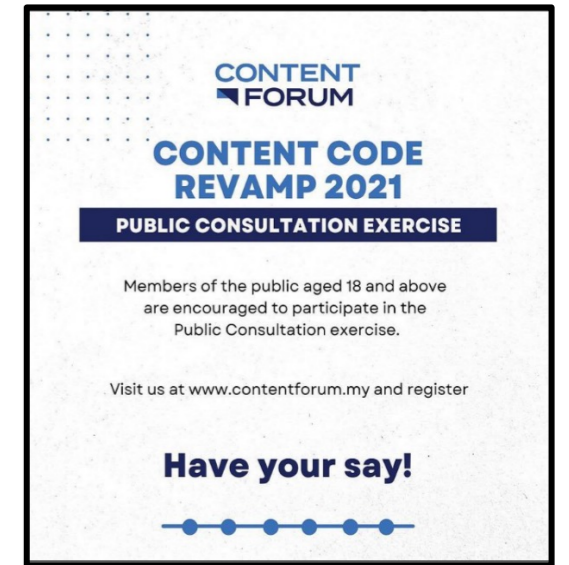
The revision of the Content Code aims to address policy gaps in regulating content and facilitate self-regulation among users. All parties are given the opportunity to contribute to the preparation of the new version of the Content Code, as it will continue to be a reference for the interpretation of offences under Section 211 and Section 233 of the CMA 1998. This public consultation process is carried out as the essential step before the registration of the latest version of the Content Code by the MCMC.

Among the activities held in the Content Code Public Consultation process are as follows:

- Presentation of Public Consultation Papers**
To inform key stakeholders and the public the proposed revisions to the Content Code
- Public Consultation Feedback**
The public is given the opportunity to submit their views and suggestions on the official Content Forum website which is <https://contentforum.my/>
- Town Hall**
Town Hall sessions were held virtually to discuss the revision of the Content Code

MCMC has also publicised this matter through the broadcasting of Public Service Announcement (PSA) on television and radio platforms, short service messages (SMS) and also on the Content Forum social media site.

Since the establishment of the Content Forum, MCMC has provided annual operating grants to ensure that they can operate and carry out the activities that have been planned. The table on the side shows the details of the amount of grants approved by MCMC for the Content Forum for the year 2020 and 2021.



Source : Content Forum

Year	Amount of Grants approved by MCMC RM' (000)
2020	854
2021	1,498

Annual Grant for the Content Forum which has been disbursed by MCMC

Issues and Challenges

There are two (2) challenges faced by Content Application Service Provider (Individual) (CASP-I) licensees to licence conditions:

1. Difficulty Complying with Live Broadcast Application Guidelines

The application process for live and delayed broadcasts must be applied for at least 21 days before the broadcast by the licence holders. Applicants also need to complete the application by submitting relevant information and documents. In 2021, MCMC found that there were applications that were incomplete and submitted late. Thus, these applications may need to be reviewed further and obtain management approval. If the application does not comply with the Guidelines set by MCMC, the station's application would be rejected and potentially not be broadcasted.

2. Application for Immediate Release of Public Service Announcement (PSA)

Private radio and television stations are required to broadcast PSA in accordance with the licence conditions set by the MCMC. MCMC received various PSA materials in 2021; some of them require immediate broadcast by radio and television stations. Since the scheduling of the PSA has been done in advance by the radio and television stations, the stations may be unable to broadcast the PSA in a timely manner.

MCMC has also identified a number of risks and opportunities involving content compliance duties as follows:

i. Delay in taking action on the issue of non-compliance and violation of the CMA 1998

There were some content that MCMC was late in taking action on. This issue occurs when the content became viral on social media and it was not reported directly to MCMC. This lack of notification may delay MCMC's action and may result in MCMC's reputation being damaged in the eyes of the public as MCMC is seen to be unconcerned in dealing with the issue of breach of licence conditions in a timely manner.



Source : Ministry of Women, Family and Community Development

ii. Industry Collaboration and Referral Programme Opportunities

The MCMC continues to be committed to ensuring the effectiveness of regulatory governance among broadcasters through collaboration and interweaving of strategic partners from several Government ministries and agencies by organising seminars, workshops and knowledge sharing programmes.

In 2021, the MCMC supports the Government's intention to promote the full participation of the Disabled (OKU) in society as announced in the 2022 budget presentation. MCMC has taken the initiative to start preparing a Guideline for the Broadcasting Industry: Accessibility of the Disabled (OKU) to Private Television Content to assist the broadcasting industry in implementing accessibility and facilities (such as sign interpreter services in news delivery) for the disabled in collaboration with various parties including the Ministry of Women, Family and Community Development (KPWKM).

Achievements in 2021

1. Content Complaints Handling

In 2021, a total of 34 complaints related to the content of radio and television broadcasts were referred to MCMC. There are six (6) complaints on Free-to-Air Television, followed by 26 complaints on Subscription Television and two (2) complaints on radio as shown in the figure below:

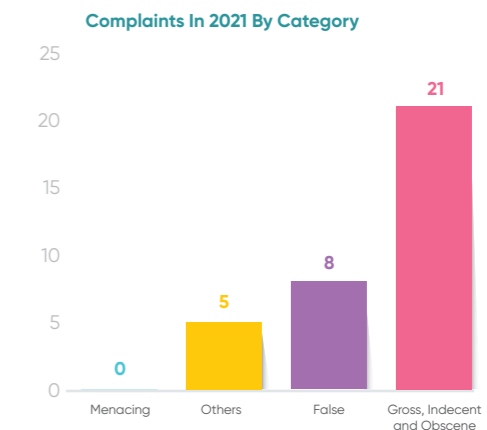
Trends in Complaints Received by Platform		
Platform	2020 (No. of Complaints)	2021 (No. of Complaints)
Free to Air Television	18	6
Subscription Television	14	26
Radio	5	2
Total No. of Complaints	37	34

Complaint Trends By Platform

Out of the 34 complaints received, 21 cases were indecent and obscene content, eight (8) cases of false content and five (5) cases involving violations of the COVID-19 (SOP) of broadcast programmes.

In 2021, all complaints received are related to the content of programmes such as news, movies, dramas, talk shows and comedy. There are no complaints related to advertisements.

Following are the actions that have been taken on complaints that have been referred to MCMC:



Complaints by Category for the Year 2021

Broadcast Content Complaints Category		
Category	2020 (No. of Complaints)	2021 (No. of Complaints)
Advertisement	2	-
Programme Content	35	34
Total No. of Complaints	37	34

Complaints by Broadcast Content Category for the Year 2021

Enforcement Actions	Quarterly				Total No. of Complaints
	First	Second	Third	Fourth	
First Information Report (FIR)	-	-	1	8	9
Reminder/Advice Letter	2	2	1	-	5
Show Cause Letter	-	-	-	-	-
No Violation	5	4	8	3	20
In Investigation Process	-	-	-	-	-
Total No. of Complaints	7	6	10	11	34

Enforcement Actions on Complaints



2. Live or Delayed Broadcast Approval

For live and delayed broadcast programmes, all applications from CASP-I licensees require MCMC's approval. Throughout 2021, a total of 144 applications were received and approved. The following table is an analysis of applications by platform for each quarter.

MCMC has taken proactive measures such as giving compliance briefings to broadcasters before a programme is aired. In addition to this, MCMC also monitors the programmes that are broadcast live by attending rehearsal sessions and live broadcast programmes to ensure that the station complies with the provisions applicable to it such as the Content Code, CMA 1998 and other related provisions.

3. Public Service Announcement (PSA)

In this regard, MCMC cooperates with the Strategic Communications Division (BKS), Malaysian Ministry of Communications and Multimedia (K-KOMM) which acts as the focal point in distributing PSA materials to private television and radio broadcasters to publicise to the public. Throughout 2021, a total of two hundred and four (204) PSA materials have been distributed in the form of video/audio, announcements and infographics.

The PSAs distributed were from the K-KOMM, Malaysian Ministry of Health (MOH), Ministry of Housing and Local Government (KPKT), Malaysian National Film Development Corporation (FINAS), Ministry of Finance (MOF), Prime Minister's Office (PMO), and Ministry of Youth and Sports (KBS), among others.

In 2021, most of the PSAs included themes that were in line with the aspirational goals of *Keluarga Malaysia*, where unity and harmony are the basic principles of the country. In addition, PSA alerts related to the COVID-19 Vaccination Programme such as the importance of vaccines and complying with the prescribed SOP continued to be delivered to the public.



Source : Ministry of Communications and Multimedia Malaysia



Source : Ministry of Health Malaysia

Application by Platform			
Platform	Free to Air Television	Subscription Television	Radio
First Quarter	19	6	2
Second Quarter	16	3	3
Third Quarter	19	4	0
Fourth Quarter	63	6	3
Total Number of Complaints	117	19	8

Application for Live Broadcast by Platform

POSTAL COMMUNICATION AND REGULATION

In order to protect consumer rights and support the progress of the industry, the scope of duties under the communications and postal regulatory division includes to form effective and relevant regulatory instruments, engage with service providers and stakeholders to resolve consumer issues, take action on non-compliance by providers services, and other duties deemed necessary.

MCMC is also responsible for implementing various initiatives that involve the industry such as involvement in the Star Rating Award, public service announcements via SMS, critical SMS related to the COVID-19 pandemic as well as the formation of Industry Best Practices and Guidelines for the general benefit of consumers.

Achievements in 2021

1. Ensuring Compliance with Mandatory Service Quality Standards (Mandatory Standards For Quality Of Service - MSQoS)

A. Quality of Service for Customer Service

The Mandatory Quality of Service Standard (MSQoS) for Customer Services has been enforced under CMA 1998 to monitor and regulate the performance of services offered to users by relevant service providers.

The main goals of this MSQoS enforcement are to:

- Improve and protect user rights.
- Ensure users receive clear and specific criteria to measure the quality of services received or adopted.
- Increase international competitiveness by strengthening local industries.

From 2002 until 2016, a total of eight (8) Mandatory Service Quality Standards have been registered, namely:

- Public Switched Telephone Network (PSTN) Service
- Dial-up Internet Access Service (DIAS)
- Content Application Services (CAS)
- Public Pay Telephone Service (PPS)
- Digital Rental Circuit Service (DLL)
- Public Cellular Service (PCS)
- Wireless Broadband Access Service (WBAS)
- Broadband Access Service (BAS)

The licensee is required to submit a report to the Commission every quarter and half year depending on the services provided. For the 2021 reporting period, MCMC has evaluated a total of 214 reports submitted by 81 licensees.

Under MSQoS, there are two (2) main areas to measure the level of compliance namely:

- Accurate and timely submission of reports.
- Compliance with minimum standards.

Based on monitoring, non-compliance with MSQoS is due to non-compliance with minimum standards, late submission of reports, and failure to submit reports. This is an offense under Section 105 (3) CMA 1998 for which the offender can be fined not more than RM100,000 or imprisoned not more than two (2) years or both.

Administrative action and enforcement action will be taken for non-compliance. The approach adopted is to issue non-compliance notices for each offense provision. Then, MCMC will file a First Information Report (FIR) for further enforcement action.

For the year 2021, MCMC has issued a total of 18 FIRs and nine (9) non-compliance notices against service providers for various offenses under the Mandatory Standard.

B. Implementation of Report Audit for Mandatory Standards for Service Quality regarding Customer Service Performance

As provided in Clause seven (7) in MSQoS, MCMC performs random audit activities from time to time to check the accuracy and validity of reports submitted by service providers.

In December 2021, MCMC carried out audit activities to review and verify the quality of service (QoS) performance report for customer services submitted by service providers. The selection of criteria used is based on the number of customers, main licence holders for certain services and licence holders who have participated in the 'Star Rating Award' for the years 2016 and 2018. This audit activity involved nine (9) service provider companies as shown in the following table:

No.	Type of Service	Audited Service Provider Company
1	Public Cellular Service (PCS)	Celcom, Maxis, Digi and U Mobile
2	Broadband Access Service	TM, TT Dotcom and Measat Broadcast Network Systems (Astro)
3	Wireless Broadband Access Service	Webe and YTL Communications

The auditing activity started on 7 January until 13 August 2021 to confirm the submission of reports for the reporting period of the fourth quarter of 2019 until the third quarter of 2020. Based on the audit findings, MCMC has found that four (4) licensees have reported inaccurate data for the QoS standard regarding accuracy in resolving customer complaints for billing and non-billing related complaints as well as for service activation and restoration fulfillment.

Following that, MCMC has issued a non-compliance notice to the service provider companies to implement a mitigation action plan to ensure compliance with the Commission's determination of the MSQoS standard.

C. New Customer Service Mandatory Standards for Service Quality Determined by the Commission

The Mandatory Standard for Quality of Service (MSQoS) for Customer Services is a new regulatory instrument that sets standards for the scope of customer service as follows:

1. Complaint management
2. Customer service response
3. Service Fulfillment
4. Notification/information

MCMC issued a Public Inquiry Paper on the proposed MSQoS for new Customer Services on 8 April 2021 and published a Public Inquiry Report on 3 July 2021.

In accordance with Section 55 (5) CMA 1998, MCMC has registered and published a new Commission Determination on Mandatory Standards for Service Quality for Customer Services (Determination No.4 of 2021) on 16 July 2021. This Commission Determination comes into force on 1 August 2021.

2. Monitoring of Complaints related to Mobile Content Services (MCS)

Based on the analysis of complaint data from the Complaint Portal, MCMC identified a total of 2,042 complaints under the SMS category in 2021. Of these, 594 complaints or 29 percent are related to Mobile Content Services (MCS) which consists of the subcategories of unsubscribed SMS, SMS promotion and Failure to Terminate Service. The graph below shows the trend of complaints under the SMS category in 2021, per quarter.

SMS Related Complaints For 2021 (Quarterly)



Through monitoring, involvement and administrative actions throughout 2021, complaints related to MCS have been successfully reduced to 370 compared to 1,696 in the previous year (a decrease of 78 percent). From the point of view of industry performance, the majority of service providers recorded a decreasing trend in the number of complaints compared to 2020.

Throughout 2021, MCMC has suspended 11 simple codes, issued nine (9) notices of non-compliance, and opened seven (7) investigation papers for various non-compliance with licence conditions, the Mandatory Standard for Mobile Content Services (MSMCS) and the General Consumer Code (GCC).

In an effort to ensure that regulatory instruments for this service are always relevant in line with technological progress, MCMC has started a study on user issues related to MCS beginning in December 2021 and scheduled to end in the first term of 2022. The results of this study will add value to MCMC's plan to design an MCS regulatory instrument that is in line with technological development.

3. Ensuring Compliance with Prepaid Card Registration Guidelines

MCMC identified that fake prepaid card registration activities are closely related to various fraud and criminal issues that adversely affect consumers and the telecommunications industry. Therefore, MCMC continues to ensure compliance with the Prepaid Public Cellular Service User Registration Guidelines (Prepaid Guidelines) MCMC/G/01/17 by all licensees providing prepaid services.

MCMC also implemented the customer data verification process with the National Registration Department for the purpose of verifying the integrity of the prepaid customers' data registered.

Based on the verification of 4,001,683 prepaid lines that were registered in 2020, MCMC detected a total of 55,379 dubious prepaid lines. Data findings showed 24,830 or 45 percent of the lines had been terminated, 18,491 or 33 percent of the lines had been updated with valid information, and 12,058 or 22 percent were still in the process of being updated.

Accordingly, MCMC filed 18 FIRs leading to a compound amounting to RM900,000. These compounds were imposed on service providers in 2021 for failing to comply with the Prepaid Registration Guidelines, as shown in Table 2 below.

No.	Service Provider Company	FIR Total	Compound Total (RM)
1.	DiGi Telecommunications Sdn Bhd	2	100,000
2.	Maxis Broadband Sdn Bhd	3	150,000
3.	U Mobile Sdn Bhd	12	600,000
4.	XOX Com Sdn Bhd	1	50,000
Total		18	900,000

4. Dealing with Online Fraud Issues involving Calls and SMS

As in previous years, MCMC carried out monitoring and enforcement on the modus operandi of irresponsible parties based on cases of fraud involving calls and SMS that had adverse effects and caused huge losses to consumers and the industry. MCMC implemented several initiatives to curb and block fraudulent calls and SMS activities, namely:

1. The formation of a special task force for Telecommunications Fraud with the cooperation of telecommunications service providers and the Commercial Crime Investigation Department of PDRM.
2. Implement improvements to the Industry Reference document to outline additional restriction rules to reduce the number of dubious calls reaching users.

Through joint efforts between the MCMC, service provider companies and PDRM, a total of 1.6 billion suspicious calls have been successfully blocked from reaching consumers.

In 2021, MCMC also formulated the need to establish a new Guideline to curb fraud through Short Message Service (SMS) services. At the same time, several awareness campaigns were also held in collaboration with service providers and PDRM through SMS platforms, social media and broadcasting (television and radio).

5. Termination of Telephone Lines involved in Illegal Advertisements

Throughout 2021, the MCMC continued to provide cooperation to Local Authorities (PBT) to combat the issue of illegal advertisements found to be in violation of the Regulations and Bylaws on Advertisements in their administrative areas. The CPRD found that among the contents of illegal advertisements or placed without a permit were money-lending services from unlicensed agents/agencies (Ah Long), promotion of "ubat kuat", masseur services and promotion of other social activities.

Under the provisions of Section 263 (2) CMA 1998, MCMC recorded a total of 335 telephone numbers involved in illegal advertising activities. Of these, 137 phone numbers had been terminated, while 198 phone numbers were found to be inactive.

6. Termination of Telephone Numbers Making Fake Calls to the 999 Emergency Line

MCMC has coordinated the False Emergency Call Committee (FEC Committee) whose membership consists of K-KOMM, TM and telecommunications service providers to deal with the issue of false calls including prank and silent calls to the 999 Emergency Line.

Based on the provision under section 263(2) CMA 1998, MCMC has ordered the telecommunications service provider company to terminate a total of 365 telephone numbers for the offense of making false calls to the 999 Emergency Line.

Until the end of 2021, MCMC had issued a total of five (5) warnings to individuals who had been reported to have made false emergency calls. The warning letter served to warn of the first offense after making an assessment of the appeal received.

7. Dissemination of Information to the Public and Development of Operational SOPs for Necessary Services Throughout the COVID-19 Pandemic

MCMC with the joint efforts of the National Security Council (MKN), the Ministry of Health Malaysia (MOH) and the service provider companies involved have implemented messages through short message service (SMS) to the public to convey information about the COVID-19 pandemic. This initiative aims to ensure that the public does not overlook the latest status and get accurate information regarding the management of COVID-19 in the country.

Until the end of 2021, a total of 390 SMS series have been sent to 38.8 million recipients. In total, MCMC has coordinated the delivery of a total of 14.8 billion SMS since 26 February 2020, involving the cooperation of 13 service providers.

In addition, MCMC is also involved in developing Standard Operating Procedures (SOP) for the operation of the communication sector throughout the movement control period. Through the site

The website of the COVID-19 Intelligent Management System (CIMS), MCMC is responsible for examining applications by the communications sector as Essential Services in order to be able to operate in accordance with the application conditions imposed by the Ministry of International Trade and Industry (MITI).

8. Establishment of Guidelines for General Terms and Conditions for Licensees below Postal Services Act 2012

In 2021, MCMC has held a public consultation (Public Consultation) regarding the proposed setting of General Terms and Conditions Guidelines for Licensees under APP 2012. Following that, MCMC has formed Guidelines for Setting General Terms and Conditions for Licensees under APP 2012 which was issued in December 2021 to be adopted by all licence holders starting in April 2022.

In general, these Guidelines were created to ensure that the minimum general terms and conditions of services posted by each licensee are comprehensive and include all aspects, especially in ensuring that the rights of users and licensees are always protected.

Through this initiative, all 123 licensees under APP 2012 have been advised to adopt these Guidelines as the main reference in developing the General Terms and Conditions of the Company's services; or update the existing General Terms and Conditions of service.

Challenges Encountered

Faced with the COVID-19 pandemic, MCMC was also affected by the MCO and strict SOP by the Government. MCMC has taken its own initiative by increasing monitoring activities and engaging with stakeholders online.

MCMC is also facing an increase in consumer issues that are indirectly affected by operational constraints by service providers. Among the notable issues are complaints about service installation and restoration that cannot be resolved within the specified period.

Monitoring and auditing activities are also affected when CPRD and auditors are faced with constraints to access the service provider's system, files and physical reports.

In order to adapt the scope of duties to the current challenges, the members of this department have given a firm commitment to implement monitoring activities and audit procedures online and improve internal processes.

The performance of service providers in meeting service quality standards is also affected due to human resource constraints to provide services and provide customer service. CPRD has collaborated with MKN to ensure that telecommunications, postal and courier services can operate smoothly as essential services.

SERVICE QUALITY STANDARDS

The development of policies for quality of service aims to ensure that consumers always have connection and access to services that comply with standards from service providers. The Mandatory Standard for quality of service will always be updated according to the technology upgrade in Malaysia and efficient consumer protection principles.

In accordance with CMA 1998 - Section 104(2), the Commission shall determine a mandatory standard if it is subject to a direction from the Minister to determine a mandatory standard in place of a voluntary industry code.

In addition, Section 106(1) also stipulates that the Commission may determine the modification, variation or revocation of a mandatory standard, in accordance with section 55, if it is satisfied that the mandatory standard is no longer consistent with all the matters listed in paragraphs 105(1)(a), (b) and (c).

Based on the stipulation of this act, MCMC constantly evaluate whether a new Mandatory Standard needs to be developed or if the existing Mandatory Standard needs to be updated according to current needs.

Achievements in 2021

In 2021, the Quality Standards Development Department (QSDD) published three (3) Mandatory Standards for quality of service as follows:

- i. Mandatory Standards for Quality of Service (Wired Broadband Access)
- ii. Mandatory Standards for Quality of Service (Wireless Broadband Access)
- iii. Mandatory Standards for Quality of Service (Public Cellular Service)

These Mandatory Standards have been updated and improvised according to user needs, latest technology deployment and to support JENDELA targets.

The main objective of the Mandatory Standard is to provide a minimum standard to be adhered by all service providers. This will indirectly have a positive impact on consumers such as better service rates and improving the growth rate of the country's digital economy. Failure to comply with this Mandatory Standard will result in fines and legal action against service providers.

In the development of Mandatory Standards, there are time requirements that must be complied with in accordance with CMA 1998. Failure to meet these deadlines will result in the cancellation of Mandatory Standard development.

The three (3) main processes in developing the Mandatory Standards are as follows:



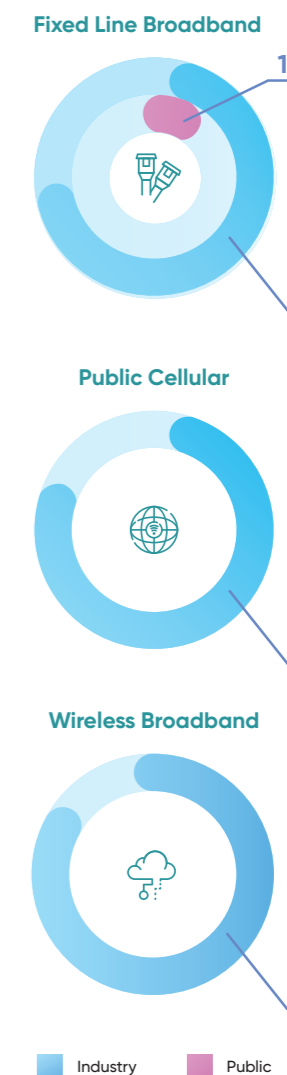
- i. Publication of Public Inquiry - This document includes all inquiries and proposed standards to be enforced. The Act specifies a minimum duration of 45 days for public feedback before it can be closed.
- ii. Publication of Public Inquiry Report - After the closing of Public Inquiry process, a report shall be published within 30 days based on the public feedback. This report will be the basis for the preparation of Mandatory Standards.
- iii. Registration of Mandatory Standards - Once the public inquiry is closed, the Mandatory Standard must be issued and registered in the form of a Commission Determination within 45 days from the date of public inquiry closing.

The required approvals for each processes shall be obtained within the specified duration so that the Mandatory Standard can be finalised accordingly.

Among the challenges in developing a new Mandatory Standard:

- i. Balancing the needs of consumers who expected good quality services at reasonable prices;
- ii. Understanding the constraints by service providers in providing good quality services with extensive coverage to the consumers;
- iii. Finding relevant objectives between the standards to be developed as well as supporting national aspirations.

The public inquiry process was held for 57 days, starting from 8 April 2021 to 4 June 2021. A total of 24 responses were received throughout the period of the public inquiry comprising the public and the industry. The breakdown of feedback received for each Mandatory Standard is as below:



From the feedback received, the final report for the public inquiry was published on 3 July 2021. This report summarised the feedback from industry and the public who responded to the published public inquiry.

These three (3) new Mandatory Standards were successfully registered under CMA 1998 on 16 July 2021, and was enforced on 1 August 2021.

In addition, this department also provides consultation, training and guidance to State offices in conducting the measurement for Mandatory Standard for Quality of Service for Wireless Broadband Services, Fixed Line Broadband and Cellular. This is important to ensure that the results produced from the measurements are in accordance with the standards set and credible for enforcement purposes.

CONSUMER PROTECTION

The MCMC Consumer Protection Department (CPD) was established on 15 August 2007 with the aim of receiving complaints from various consumers who are subject to the CMA 1998, including the delivery of services in the fields of telecommunications, broadcasting, Internet services, postal and digital certification. Complaint channels are through the complaint line (1 800 188 030), complaint portal, email, postal, fax, WhatsApp application, newspaper clippings and also counters at MCMC offices nationwide.

Consumer protection has always been the main agenda of MCMC which plays a role as a regulatory body for the communication and multimedia industry. MCMC emphasises the excellence of service delivery to customers, monitors and analyses the compliance of Licensees under the telecommunications sector. This is to ensure consumer protection is in line with CMA 1998 and the General Consumer Code of Practice (GCC).

Regarding the complaint handling process, MCMC has also conducted quarterly monitoring of the Mandatory Service Quality Standard (MSQoS) on service providers in addition to conducting comprehensive monitoring of the handling and resolution of complaints by service providers.

In 2021, MCMC has issued a total of 24 investigation papers for violations of the CMA 1998, 20 Notices of Non-Compliance for violations of MSQoS and seven (7) Commission Instruction Notices to service providers for offenses involving network services.

Throughout 2021, MCMC had implemented various development and regulatory initiatives in empowering users' rights as follows:

Amendment of the General Consumer Code of Practice for the Malaysian Communications and Multimedia Industry

This General Consumer Code of Practice was registered in 2003 and spearheaded by the Communications and Consumer Forum Multimedia Malaysia (CFM) which serves as a guideline and benchmark for service providers in providing communication and multimedia services in Malaysia.

In 2021, MCMC conducted a follow-up questionnaire session following the public consultation conducted by the CFM to obtain public feedback on several clauses proposed to be amended in the GCC.

This new GCC has been fully approved by MCMC management and is currently in the registration process and is expected to be adopted in the second quarter of 2022.

Develop Service Network Complaint Handling Standard Operating Procedures (SOP)

In the third quarter of 2021, MCMC has developed an SOP as an effort to empower state offices as focal points in managing, monitoring as well as handling user complaints for network services. In addition, MCMC has also held an information sharing session on complaint handling for complaint handling officers at the state office level. In addition, MCMC always holds discussions from time to time in an effort to improve the quality-of-service network complaint handling.

Improvements to MCMC's User Complaint System

In order to strengthen the efficiency of complaint handling operations, MCMC has identified several gaps that need to be improved in order to ensure that MCMC fulfils its vision in delivering quality services to consumers.

Among them is the improvement of MCMC's User Complaint System which has been operating since 2016 with optimal capacity covering overall handling. With this system in place, MCMC has the ability to track and monitor the resolution of consumer complaints as well as various non-compliance activities under CMA 1998 by service providers.

The use of this complaint system has proven to be able to strengthen MCMC's supervision in terms of consumer protection in accordance with Section 195 relating to disputes between consumers and licensees under the CMA 1998.

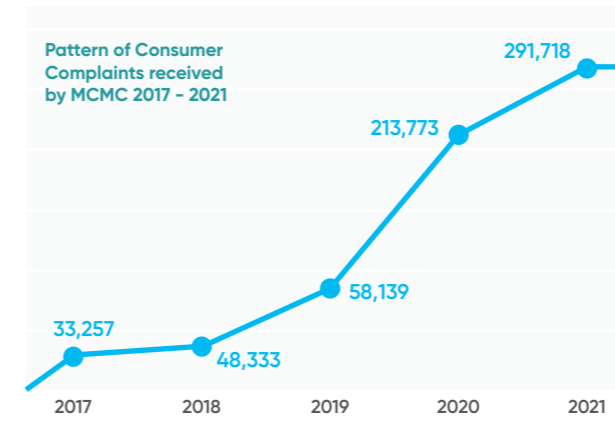
Strategic Cooperation with Industry and Government Agencies

To strengthen and ensure compliance with CMA 1998 and GCC, MCMC holds regular meetings and interactions with the industry to discuss and resolve consumer issues.

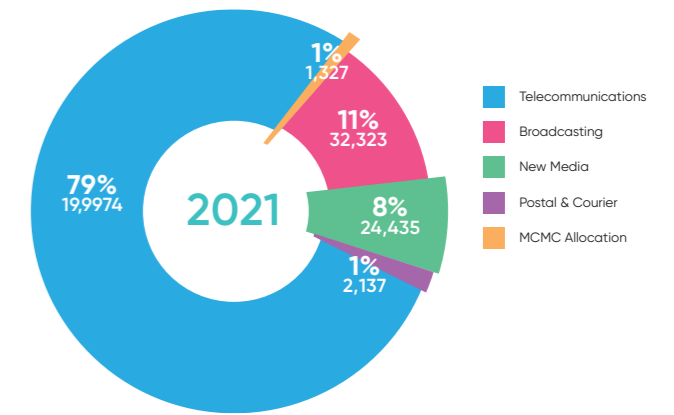
Through interagency involvement, MCMC participated in task forces on consumer policies such as reviewing the Consumer Protection Act (APP 1999) and reviewing the court process by the Consumer Claims Tribunal (TTPM). In addition, MCMC cooperates with PDRM, KPDNKK, Bank Negara, Public Complaints Bureau, and K-KOMM in dealing with consumer problems.

Consumer Complaint Statistics for 2021

In 2021, a total of 291,718 complaints were received by the MCMC for all services under the communications and multimedia industry with an increase of 36 percent compared to the 213,773 complaints received in 2020. Overall, complaints against the telecommunications sector recorded the highest number of complaints at 79 percent from all the complaints received by various sectors namely new media, postal and courier, broadcasting and also MCMC allocation.



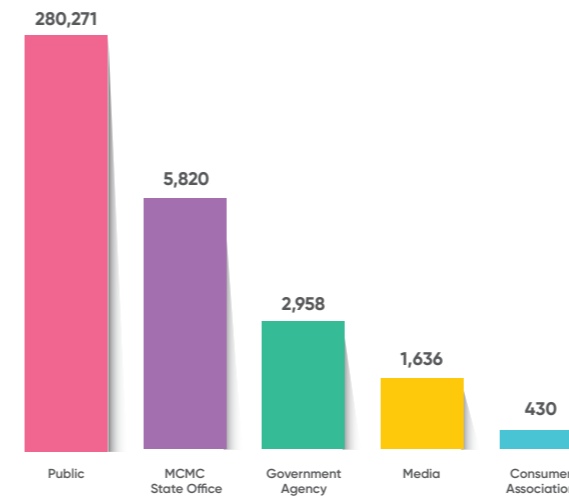
Pattern of Complaints Received by MCMC 2017 - 2021



Industry Based Complaints in 2021

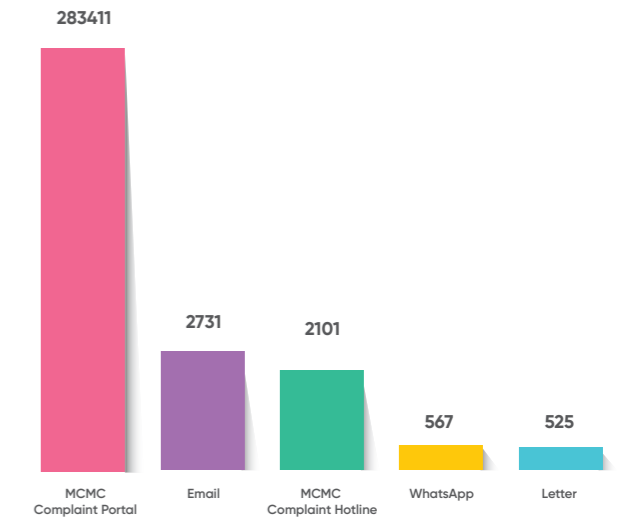
The majority of complaints received were directly from the public, which was 280,271 (96 percent) and the rest from various other enforcement agencies, Government agencies and consumer associations. Complaints through the MCMC complaint portal also recorded the highest number of complaints at 283,411 (98 percent).

Top Five (5) Sources of Complaints Received by MCMC in 2021



Top Complaints Received by MCMC 2017 - 2021

Top Five (5) Complaint Channels Received by MCMC in 2021

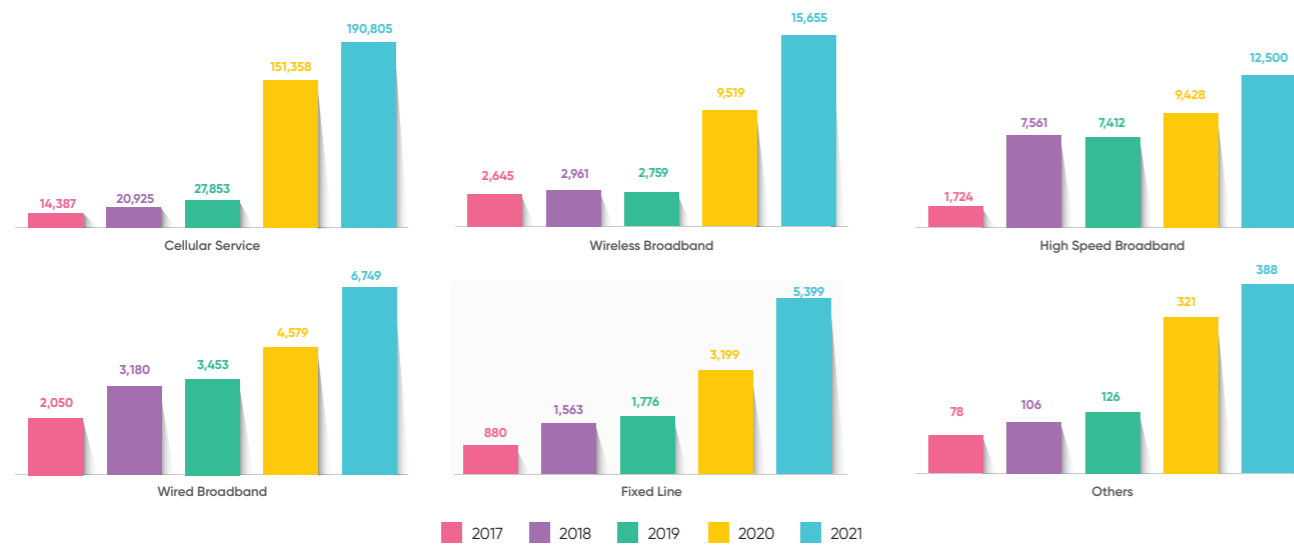


Top Complaint Channels Received by MCMC 2017-2021

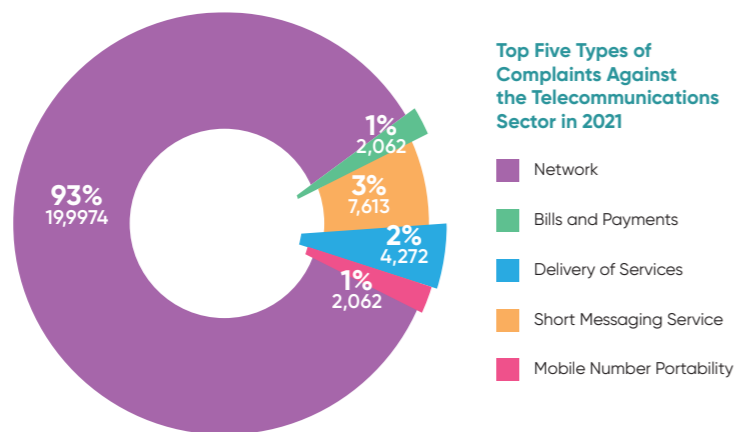
Complaints Against the Telecommunications Sector

During the last five (5) years, MCMC found that complaints about cellular services still recorded the highest number of complaints in the telecommunications sector. In 2021, a total of 82 percent of complaints from this sector are monopolised by cellular services, followed by seven (7) percent by wireless broadband services, five (5) percent by high-speed broadband services, three (3) percent by broadband services wired broadband, two (2) percent of fixed line services, and one (1) percent of complaints in other services.

Types of Complaints Against the Telecommunications Sector 2017 - 2021



Types of Complaints Against the Telecommunications Sector 2017 - 2021



Top Five (5) Types of Complaints Against the Telecommunications Sector 2021

Based on the statistics of complaints received, network problems recorded the highest number of complaints which was 199,974 (93 percent) of the total complaints received in 2021.

It was noted that the increase in network complaints were due to the surge in Internet demand from households following the implementation of the enforced MCO.

Users demanded a consistent Internet network connection to support work from home initiatives as well as online learning processes for university and school students.

Most of the problems reported were related to network service quality or availability of 4G/LTE and high-speed broadband services, service interruptions and unstable Internet connection problems due to network congestion.

In addition, the second highest complaint statistics was about bills and payments which recorded a total of 7,613 (Three (3) percent) complaints from the entire telecommunications sector. Most billing issues and disputes stemmed from hidden charges and unclear terms and conditions during the subscription process.

Based on the analysis that had been made, complaints about service delivery contributed to 4,272 (Two (2) percent) of the total complaints received in the telecommunications sector in 2021. Consumers were mostly dissatisfied with customer service, abuse of services by traders and agents, debt collection agencies, slow recovery and activation of services.

For SMS-related complaints, users disputed unknown charges added to their bills. A total of 2,062 (One (1) percent) complaints received were about illegal charges related to unsolicited SMS from short codes generated by External Content Providers (ECP). Apart from this, there were also complaints about gambling SMS, fraudulent SMS and spam SMS from mobile numbers.

Mobile Number Portability (MNP) gives users the flexibility to keep and transfer their existing mobile numbers to other service providers. In 2021, MNP-related issues recorded 2,062 (One (1) percent) complaints mainly about the transfer process being slow or rejected by the service provider following an error in the registered MyKad number or an overdue bill from the customer.

Complaints Against Postal and Courier Services

Over the past few years, complaints about postal and couriers have shown a very noticeable pattern of increase. In 2021, the number of complaints increased significantly by 135 percent (32,323) compared to the number of complaints reported in 2020 (13,769).

It was noted that, since the MCO came into effect in 2020, postal and courier services continued to play an important role in ensuring that essential goods reached the hands of consumers. The demand for parcel delivery increased due to a very significant increase in online purchasing patterns during the MCO period.

Consumer dissatisfaction was mostly due to slow delivery which accounted for 54 percent (17,373) of complaints in the sector. In addition, complaints about poor service delivery accounted for 18 percent (5,917), lost letters/packages 17 percent (5,633), other complaints four (4) percent (1,325) and unsatisfactory customer service 2 percent (731).

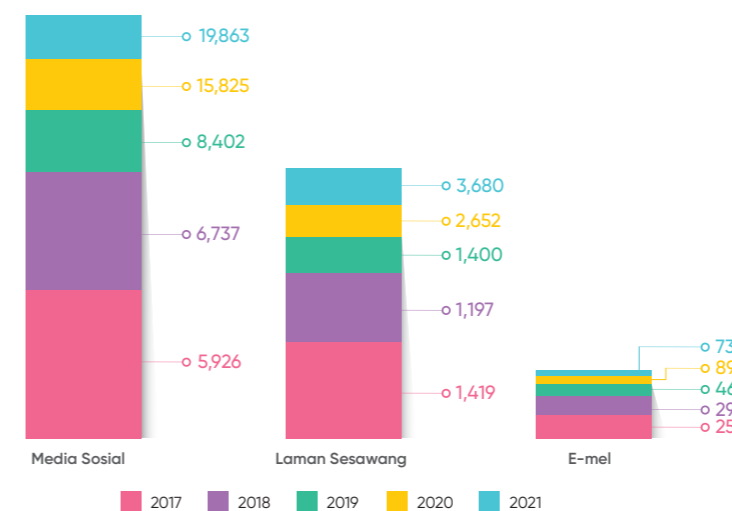
No.	Type of Complaint	Number of Complaints
1	Slow delivery	17,373
2	Poor service delivery	5,917
3	Lost packages/documents	5,633
4	Others	1,325
5	Unsatisfactory customer service	731

Top Five (5) Complaints Against Postal and Courier Services in 2021

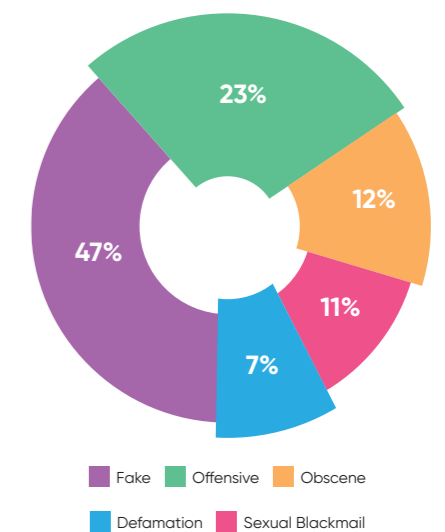
New Media Complaints

MCMC recorded a total of 24,435 complaints from the public on issues involving new media content in 2021. It was noted that complaints related to social media were the highest number of complaints received by MCMC over the past five (5) years. Overall, 81 percent or 19,863 complaints related to social media, followed by 15 percent of complaints (3,680) on websites/blogs/forums and four (4) percent (892) were about email abuse. A large number of reported cases were related to fake content (47 percent), offensive/ugly comments (23 percent), obscene or indecent content (12 percent), defamation (seven (7) percent) and sexual blackmail (11 percent).

Types of Complaints Against New Media 2017 - 2021



Types of Complaints Against New Media 2017 - 2021

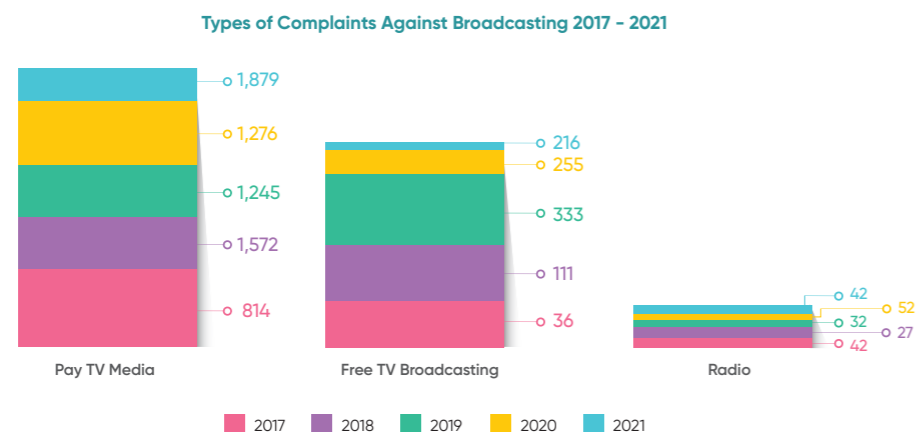


Types of Complaints against New Media 2017- 2021

Top Five (5) New Media Complaints of 2021

Broadcasting Sector Complaints

MCMC has identified complaints related to pay TV broadcasts have contributed the highest number in the last five (5) years with 88 percent (1,879) in 2021. Despite this, it is noted that free TV broadcast complaints recorded a decrease of 15 percent from the number of complaints in the year then. Similarly, complaints against radio broadcasts also recorded a decrease of 19 percent compared to 2020.



Types of Complaints Against Broadcasting 2017 - 2021

Complaints Regarding MCMC Allocation

The three (3) most complaints under the provisions of MCMC are related to telecommunication tower structures, spectrum interference and devices that do not meet standards.

Type of Service	2017	2018	2019	2020	2021
Telecommunication Towers/Structures	112	112	151	146	433
Spectrum Interruption	308	154	129	118	195
Non-Compliant Devices	84	45	76	155	100
Wireless Village	124	52	70	70	133
Tower Application	8	21	42	125	217
Officer Conduct	15	35	41	37	85
Time Tower 3	46	85	48	8	23
Internet Centre	40	53	31	39	30
Satellite TV	31	27	29	30	20
Radiation	16	26	24	25	15
Tower Site Preparation Offer	0	2	49	19	34
Apparatus Allocation	33	34	21	6	10
Others	8	11	14	21	32

Complaints Related to MCMC Allocation 2017 - 2021

Complaints Outside MCMC Jurisdiction

In line with technological advances in cyberspace, MCMC receives various complaints such as hacking, online purchases, Internet fraud, phishing, spam, financial investment, gambling and prostitution.

Although these issues are not supervised by the MCMC under the CMA 1998, the MCMC has always provided technical assistance with solid cooperation with relevant law enforcement agencies to eradicate such illegal activities.

In 2021, the top three (3) complaints reported to MCMC were social media account hacking which recorded the highest number of complaints with 2,542 followed by Internet fraud with 2,214 and online purchases with 1,696 complaints.

Type of Complaint	2017	2018	2019	2020	2021
Hacking	550	719	955	1497	2542
Online Purchase	218	265	607	907	1696
Internet Fraud	315	168	387	2766	2214
Spam	72	71	99	1079	1047
Banking/Investment	24	36	10	104	106
Phishing	23	18	16	71	9
Gambling	64	316	146	809	1314
Prostitution	39	37	44	100	116

Complaints Not Under MCMC Jurisdiction 2017 - 2021

Complaints Resolution

Ninety percent of complaints were resolved and closed. In terms of complaint resolution, complaints would be resolved first and required consent from the complainant. Complainants were given 30 working days to respond before the complaint was automatically closed. Ten (10) percent of the complaints are still under investigation and are currently being investigated by the service provider and MCMC.



MARKET REGULATION

The Market Regulation Division (MRD) comprises two (2) departments namely, the Competition Department and the Access Department. The main role of MRD is to enhance competition in the communications, multimedia, postal and courier sectors, to ensure the long-term benefit of end users. The main functions of MRD are as follows:

- a. Develop policies and regulatory instruments on competition and access matters;
- b. Develop policies on market structure;
- c. Monitor licensees to ensure they do not engage in anti-competitive conduct which has the purpose or effect of substantially lessening competition in the market;
- d. Monitor to ensure access to network facilities or network services are provided on reasonable terms and conditions; and
- e. Evaluate mergers and acquisitions cases involving licensees.

The Access Department is responsible for developing the policy and regulatory instruments on access. These policies and instruments aim to ensure that access to network facilities and network services is offered on reasonable terms and conditions. The Access Department also plays a role in reviewing and registering the Access Agreements that have been entered into by the Access Providers and Access Seekers and reviewing the Reference Access Offers (RAO) that have been published on the Access Provider's website so that the agreements and the RAOs are in compliance with the Communications and the Multimedia Act 1998 (the CMA 1998) on the access instruments such as the Access List, the Mandatory Standard on Access and the Mandatory Standard on Access Pricing. In addition, this department is also responsible for resolving disputes between service providers in relation to access issues.

The Competition Department is responsible for reviewing and developing competition policies and regulatory instruments for the communications, multimedia, postal and courier sectors. Instruments and policies are developed to ensure an optimal market structure and these are used to monitor licensees' compliance with provisions under the CMA 1998. This includes preventing, investigating and resolving complaints about anti-competitive conducts to ensure a level playing field in the market. In addition, the Competition Department also monitors the level of competition in the retail market.

The competition policy under the CMA 1998 aims to create a level playing field to enable smaller service providers to compete with existing service providers in the market. MCMC's role is to protect competition in the market for the long term benefit of end users. A regulatory framework is established to ensure that anti-competitive practices do not undermine the national policy objectives for the communications, multimedia, postal and courier sectors.

Achievements in 2021

a. Implementation of the Access List, the Mandatory Standard on Access (MSA) and the Mandatory Standard on Access Pricing (MSAP)

Throughout 2021, MCMC actively carried out the implementation, monitoring and regulatory activities involving the following access instruments:

- Commission Determination on Access List (Determination No. 6 of 2021) issued on 2 December 2021, which came into effect on 15 December 2021;
- Commission Determination on the Mandatory Standard on Access, Determination No. 3 of 2016 issued on 8 December 2016, which came into effect on 1 January 2017;
- Commission Determination on the Mandatory Standard on Access Pricing (Determination No. 1 of 2017) issued on 20 December 2017, which came into effect on 1 January 2018; and
- Variation to the Commission Determination on the Mandatory Standard on Access Pricing (Determination No. 1 of 2017), Determination No.1 of 2020 issued on 18 December 2020 which came into effect on 1 January 2021.

b. Registration of Access Agreements

One of the functions of MCMC under the CMA 1998 is the registration of the Access Agreements under section 150 of the CMA 1998. Prior to registration of Access Agreements, MCMC reviews the agreements to ensure compliance the access instruments and the CMA 1998. In the event that the Access Agreements are non-compliant with the CMA 1998 and the access instruments, the service providers would be required to amend the agreement. As at 31 December 2021, MCMC has received and reviewed 40 Access Agreements for registration purposes of which 12 Access Agreements have been registered pursuant to Section 150 of the CMA 1998.

c. Reference Access Offer

Pursuant to the MSA, the Access Providers are required to publish the RAO for the facilities and services in the Access List. The RAO will contain terms and conditions for the facilities and services offered by the Access Provider. As of 31 December 2021, MCMC has assessed 15 RAOs that have been published by the Access Providers on their respective websites.

d. Awareness Session on Access Framework

A key activity regularly carried out by the Access Department as part of implementation of the access instruments is educating the industry about the access framework and the roles and responsibilities of licensees. In year 2021, MCMC has conducted two (2) awareness sessions for 16 new individual licensees.

e. Reporting Obligations on Access

Pursuant to the MSA, service providers who supply Transmission Services, Network Co-location Service, Duct and Manhole Access, HSBB Network Services, Mobile Virtual Network Operator Access and Digital Terrestrial Broadcasting Multiplexing Service are required to provide reports to MCMC in the month of April and October. MCMC had contacted a total of 26 service providers in this regard and has received and assessed more than 111 reports to ensure compliance with the relevant instruments.

f. Resolution of Access Complaints and Access Dispute

Another important role by MCMC in 2021 is the resolution of complaints and disputes between licensees on matters related to access. MCMC has received a Notice of Appeal in relation to the decision made by MCMC on Access Dispute No.1 of Year 2019. At the same time, MCMC has also received a general complaint and two (2) access complaints with regards to the supply of facilities and services under the Access List and/or pertaining to compliance to the MSA and MSAP. MCMC has facilitated the negotiations between the parties to ensure effective competition and for the long-term benefit of end users and industry.

g. The Review of Access List

In year 2021, MCMC has also conducted a review of the Access List. This review is timely in light of the decision by the Government to appoint Digital Nasional Berhad (DNB) as a single wholesale provider for the 5G network. MCMC has published the Public Inquiry Paper on the review of Access List in August 2021 followed by the Public Inquiry Report on 17 November 2021. On 2 December 2021, The MCMC issued the Commission Determination on Access List, Determination No.6 of 2021, which came into effect on 15 December 2021. The 5G wholesale services offered by DNB are regulated via this instrument to ensure that access to 5G services are offered on reasonable terms and conditions and on an equitable and a non-discriminatory basis.

h. Implementation of a Fast Track Process in High Priority Areas

In February 2021, MCMC has developed a fast track process in high priority areas in which the service providers are required to promptly resolve their commercial negotiations within ten (10) Business Days. The implementation of the fast track is important to address the numerous complaints by consumers about communications services in some high priority areas being delayed due to prolonged commercial negotiations among service providers.

The high impact areas identified for implementation of fast track process by MCMC for this initiative is as follows:

- a. Federal and State government administration centres;
- b. Transportation hubs (such as MRT stations, airports and train stations) and the transportation lines (such as railways and highways);
- c. High economic impact areas (such as industrial parks and economic corridors);
- d. Identified government projects under RMK-12;
- e. JENDELA projects;
- f. High priority areas identified for 5G deployment; and
- g. Areas where there are exclusive providers.

This initiative was particularly important during the COVID-19 pandemic as consumers, businesses and government agencies are highly dependent on communications services to carry out their activities. MCMC has also established a new email account, that is, fast.track@mcmc.gov.my where the service

providers are required to escalate their issues for resolution by MCMC in the event that they are unable to conclude their commercial negotiations within the specified timeframe.

i. Merger and Acquisition Between Digi.Com Berhad and Celcom Axiata Berhad

On 7 April 2021, Axiata Group Bhd and Telenor Asia Pte Ltd, major shareholders of Celcom Axiata Berhad (Celcom) and Digi.Com Berhad, notified MCMC of their intention to merge and form Celcom Digi Berhad (Mergerco). The announcement was made on 8 April 2021. MCMC thereafter received the merger applications from Digi Telecommunications Sdn Bhd and Celcom. As the merger involves the second and third largest mobile network service providers in Malaysia, MCMC carried out a detailed assessment to ensure that consumer welfare would not be compromised.

j. Complaints of Anti-Competitive Conduct

In 2021, MCMC received a total of 15 complaints from the Consumer Protection Department of which 14 complaints were about exclusive and one (1) was about cross subsidy. The number of complaints received had declined by 72 percent compared to the previous year. This is mainly due to the collaboration between MCMC and Malaysian Competition Commission (MyCC), whereby both parties have committed to work together in addressing exclusivity arrangements involving telecommunications service providers and property developers or building managements in high-rise residential complex. As for the complaint on cross-subsidy, MCMC's assessment revealed that it was a promotional package offered to selected customers and hence was not in breach of any provision under the CMA 1998.

k. Accounting Separation

Beginning 2013, MCMC implemented accounting separation on vertically integrated telecommunication service providers offering wholesale and retail services. In 2021, seven (7) service providers submitted regulatory financial statements (RFS) for financial year ending 2020. Based on the Accounting Separation Guidelines, Telekom Malaysia Bhd, Celcom Axiata Bhd, Digi Telecommunications Sdn Bhd and Maxis Bhd are required to produce RFS by the identified wholesale and retail services, while TT dotCom Sdn Bhd, U Mobile Sdn Bhd and YTL Communications Sdn Bhd are only required to provide RFS by the wholesale and retail segments. MCMC observed that most service providers generated revenue from the retail segment rather than the wholesale segment. Retail services contributed between 30 percent to 95 percent of the total revenue while wholesale services contributed between 5 percent to 54 percent. In general, most wholesale and retail services recorded positive rates of return. For the simplified RFS, which is segment-based reporting, the rate of return was positive for all segments, except for one (1) service provider who reported a negative rate of return for the retail segment due to high operating costs and the termination of certain projects.

I. Retail Rate Monitoring

MCMC monitors retail rates offered by service providers to assess the level of competition in the market and identify anti-competitive pricing practices. In 2021, MCMC monitored over 50 service providers offering fixed, mobile and pay TV services to consumers.

The mobile market is competitive. 70 percent of mobile subscriptions are on prepaid packages. In order to stay competitive, service providers began introducing innovative prepaid packages such as unlimited mobile data packages from as low as RM30 per month, hybrid packages that offer data quotas with unlimited speeds followed by unlimited data at speed caps, data packages with validity period of one year as well as price reduction of 17 percent to 43 percent for certain data packages with data quotas between 10GB and 40GB. In addition, between 1 April 2020 and 31 December 2021, to ease the burden of citizens during the COVID-19 pandemic, the mobile network service providers had offered free Internet of 1GB per day (equivalent to 30GB of free data per month), for productive activities.

For high-speed fixed broadband services, new service providers such as Celcom, Digi and U Mobile had entered the market to compete with the existing service providers such as Telekom Malaysia, Maxis and TIME. In July 2021, TM had increased the data quota for the Broadband Lite package from 1GB to 50GB while maintaining the price at RM38. Between the third quarter of 2020 to the third quarter of 2021, fixed broadband subscription increased by 12 percent. In the third quarter of 2021, 60 percent of total subscriptions were on speeds 100Mbps and above.

As for pay TV packages, customers could choose to subscribe to Astro, Unifi TV or over-the-top (OTT) video streaming services. Unifi TV packages are bundled with a high-speed fixed broadband, however, Astro customers have the option of either subscribing to a pay TV packages only or subscribing to a pay TV packages bundled with high-speed fixed broadband services as a result of Astro's collaboration with Maxis and Allo. Beginning June 2021, Astro customers are able to enjoy packages bundled with Disney+ Hotstar. In November 2021, Astro introduced new packages where new and existing customers are able to select packages according to their preferences, which included sports, movies, entertainment, streaming applications such as Netflix and so on.

LICENSING AND MONITORING

a. Licensing

MCMC is responsible in matters related to licensing under CMA 1998 and the Postal Services Act 2012 (PSA 2012). This encompasses evaluating and assessing all licensing applications (new applications, applications for transfer of licences, and making recommendations for the cancellation and suspension of licences).

MenKOMM had announced a new policy regarding the regulation of cloud services under light regulation which will come into force on 1 January 2022. The introduction of this regulation on cloud services was to ensure that the provision of cloud services was made in a trusted environment to guarantee data security, privacy data, data protection and user data flow.

For the year 2021, there were several activities undertaken by Licensing Department and the profile of Individual licence applications and Class licences that have been approved are as follows:

i. Licence Management System (LMS)

The system developed by the Licensing Department was already in the final stages ahead of its scheduled launch in early 2022. LMS is a system that will be introduced to all Individual and Class licence holders. This system will act as a management platform for all activities related to licensing. This LMS system is a digitalisation effort by the Licensing Department in addition to reducing the use of paper and lowering the carbon footprint in line with MCMC's green initiative.

ii. Regulating Cloud Service Providers

Regulation of cloud services under light touch regulation was introduced by MCMC. The regulation of these services will come into force from 1 January 2022. Under the light touch regulation, cloud services will be licensed under an Applications Service Provider Class Licence [ASP (C)].

iii. Profile of Individual Licence Applications and Class Licences That Have Been Approved in 2021

Types of Applications Related to Approved Individual Licences	
Type of Applications	Total Applications
New Licence	27
Licence Renewal	23

Breakdown of Individual New Licence Applications and Individual Licence Renewals		
Type of Licences	New Application	Renewal Application
NFP(I)	20	12
NSP(I)	7	7
CASP(I)	0	4
Total	27	23

List of Individual Licensees Surrendered Individual Licences

Licensee Name	NFP(I)	NSP(I)	CASP(I)
Amanra Engineering & Trading Sdn Bhd	/		
Array Technology Sdn Bhd		/	
Compudyne Sdn Bhd	/	/	

Total Class Licence Registration

Licence Type	Number of Licences
NFP(C)	11
NSP(C)	11
CASP(C)	9
ASP(C)	465
Total	496

Among the challenges in facing the COVID-19 pandemic, almost all matters and discussions involving external parties had to be conducted virtually. The situation was also a catalyst for the digitalisation of the licence application process where all documents were sent in the form of digital copies.

b. Strategic Trade

MCMC is also responsible for implementing and enforcing the Strategic Trade Act (STA) 2010, particularly in managing the issuance of export, transit and transshipment permits for two (2) categories of strategic items, namely category four (4) (Computers) and category five (5) (Telecommunications and Information Security).

Among the benefits of the implementation and enforcement of STA 2010 are as follows:

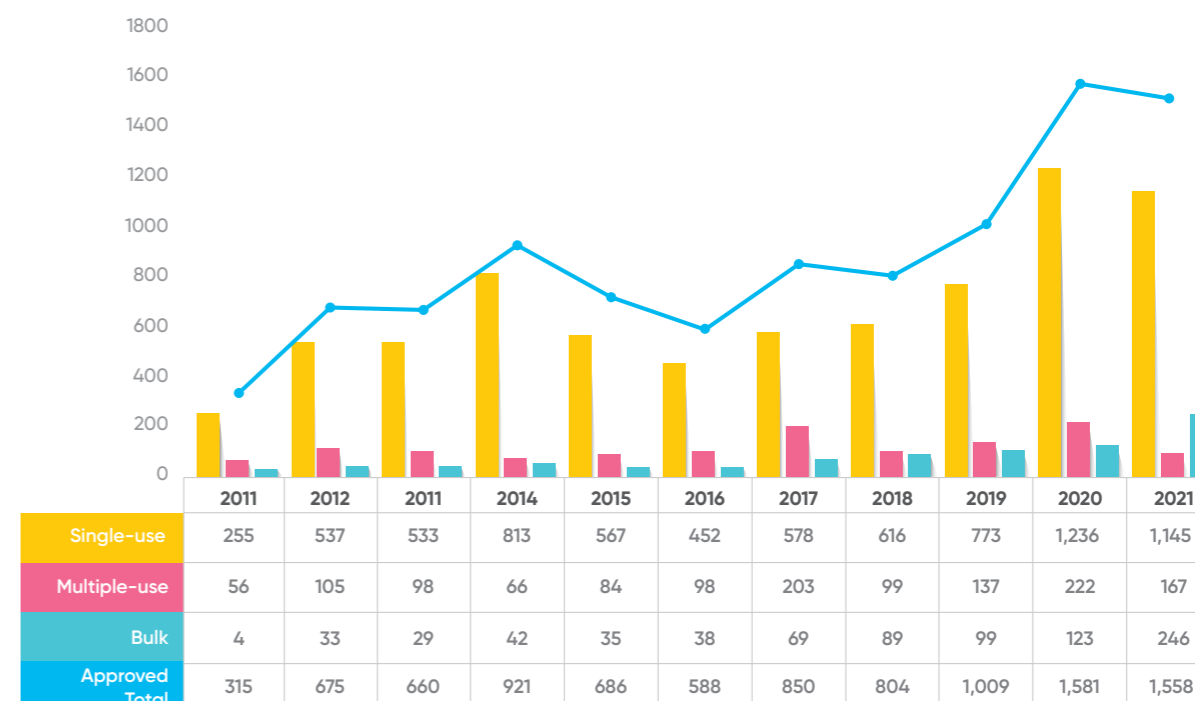
- Improve Malaysia's image and confidence among foreign investors looking to invest in Malaysia;
- Facilitating and managing the export of high-tech items and components from Malaysia to other countries;
- Protecting Malaysia and its exporters from being exploited by irresponsible parties and illegal profiteers without interfering with legitimate trading activities of strategic items; and
- Promote Malaysia as a safe trading partner.

Among the activities carried out by STDD in 2021 are as follows:

i. Issuance of STA Permit 2010

A total of 1,558 STA permits were assessed and approved for the export of both categories of strategic items. A total of 73.49 percent (1,145) were from 'Single-use' export permits, followed by 'Multiple-use' and 'Bulk' export permits with a percentage of 10.72 percent (167) and 15.79 percent (246) respectively.

STA Permit Issuance for Category 4 & Category 5



STA Permit Issuance Record Year 2011-2021

ii. STA 2010 Compliance Assessment of Permit Holders

MCMC led an assessment team comprising representatives from the Ministry of International Trade and Industry (MITI) and the Royal Malaysian Customs Department (JKDM) in carrying out a compliance assessment of five (5) permit holders. Overall, all permit holders who were assessed had a good level of compliance in terms of record keeping and strategic items export transactions.

iii. Inter-agency Cooperation Programme

MCMC's involvement in the Inter-agency Cooperation programme comprised the following:

- a. The Strategic Trade Action Committee (STAC) meeting was held in every quarter of 2021 to discuss and resolve issues related to the implementation and enforcement of STA 2010.
- b. National Integrated Authorised Economic Operator (AEO) Programme to strengthen the effectiveness of "Trading Across Border" which involves border management and logistics services. MCMC was assigned as a member of the task force charged with developing the Authorised Economic Operator - Internal Compliance Programme (AEO-ICP) pilot programme framework.
- c. Strengthening The Implementation of STA 2010 Forum with Agencies was held on 2 December 2021 in Kuantan, Pahang which was attended by 28 representatives from the Ministry of International Trade and Industry, the Atomic Energy Licensing Board, the Pharmaceutical Services Division, the Royal Malaysian Police and the Royal Malaysian Customs Department. This forum was successful in producing a work plan for the year 2022 that includes the scopes of work below:
 - i. Assessment of STA 2010 compliance;
 - ii. Classification of strategic items STA 2010;
 - iii. Enforcement of STA 2010; and
 - iv. STA 2010 awareness programme collaboration (inside and outside of the country)

In 2021, STD spent as much as RM63,287.80 for the following activities:

- a. 2010 STA Compliance Assessment = RM8,800
- b. Strengthening The Implementation of STA 2010 Forum with Agencies = RM52,701
- c. Net Trading System for STA permit processing 2010 = RM1,786.80

Companies faced challenges in submitting complete applications during the COVID 19 pandemic. This also affected the Commission's ability to evaluate and assess permits in a timely manner.

c. Monitoring

The Monitoring Department is responsible for monitoring compliance with the Special Licence Conditions of individual licenses by new individual licence holders under CMA 1998 as follows:

- i. Commence the service within 12 months from the date the licence is issued;
- ii. Commencing services according to the Detailed Business Plan/Rollout Plan;
- iii. Own at least 30 percent Bumiputera shareholding and a maximum of 49 percent foreign shareholding in the company; and
- iv. Submit two (2) half-yearly progress reports regarding the steps taken to fulfill the commitments of the Detailed Business Plan/Rollout Plan. These half-yearly progress reports must be submitted no later than 31 July each year for the half-yearly progress report for the period ending on 30 June and 31 January each year for the half-yearly progress report for the period ending on 31 December.

Activities carried out in 2021 include the following:

i. Compliance Visits to the Site to Ensure Compliance with the Special Licence Conditions of the Individual Licence

Throughout 2021, a total of 24 compliance visits to licensees' premises and selected sites were conducted to ensure compliance with the Special Licence Conditions on Commencement/Deployment within 12 months and Compliance with the Detailed Business Plan/Rollout Plan.

Following the relaxation of the MCO which was put in place to curb the spread of the pandemic, by the Government, the number of successful compliance visits exceeded the number of the previous year, which was 15 visits in 2020.

Monitoring of the deployment of facilities and services by the new Individual licence holders was assessed through Rollout Questionnaires and Half-Yearly Progress Reports submitted by them.

No.	Licence Holder	Licence Type	Month
1	Krypton Global Networks (M) Sdn Bhd	NSP(I)	March
2	Excel Commerce Solutions Sdn Bhd	NSP(I)	March
3	KUB Telekomunikasi Sdn Bhd	NFP(I)	March
4	OSI Technology Sdn Bhd	NFP(I)	March
5	Merah Network Sdn Bhd	NFP(I) & NSP(I)	March
6	Mulia Property Development Sdn Bhd	NFP(I)	March
7	X86 Network Sdn Bhd	NSP(I)	March
8	Global Forway Sdn Bhd	NFP(I) & NSP(I)	March
9	IP Core Network Sdn Bhd	NSP(I)	March
10	Borneo Restu Sdn Bhd	NFP(I) & NSP(I)	April
11	Prosontech Sdn Bhd	NFP(I)	April
12	Prasarana Niaga Sdn Bhd	NFP(I)	April
13	NIP Global Logistics (Malaysia) Sdn Bhd	NFP(I)	September
14	Virtech Engineering Sdn Bhd	NFP(I)	September
15	Smart Digital International Sdn Bhd	NFP(I), NSP(I) & CASP(I)	September
16	Eminent Display Sdn Bhd	NFP(I) & NSP(I)	September
17	Verticom Sdn Bhd	NFP(I)	October
18	Umeran Resources Sdn Bhd	NFP(I)	October
19	TP Works Engineering Sdn Bhd	NFP(I) & NSP(I)	October
20	Navigate Global Network Sdn Bhd	NSP(I)	November
21	SHCORP Sdn Bhd	NFP(I)	November
22	Nexgen Ventures Sdn Bhd	NFP(I)	November
23	Satellite NOC Sdn Bhd	NFP(I) & NSP(I)	November
24	Ha Megah Technology Sdn Bhd	NFP(I)	December

List of Compliance Visits Conducted

Picture 1: Access Point, Transmitter and Radio Communications Link inside The Exchange 106 Tower, Kuala Lumpur



Picture 2: Holes for fibre optic cables and fixed links on the West Coast Expressway (WCE)



Picture 3: Green screen room for news broadcast for a new television station



Picture 4: Communications mast installed on a rooftop

ii. Application for Extension of Time to Comply with Special Licence Condition for Individual Licenses – Commencement of Deployment/Service(s) within 12 months

There were new individual licence holders which applied for an extension of time due to failure to commence their facilities/services within 12 months from the date the licence was granted. A total of five (5) applications were considered but only four (4) applications were approved based on the following reasons:

- a. The process of obtaining approval permits from local authorities took a long time;
- b. The time-consuming process of changing the management structure caused delays in the conversion of the business plan;
- c. Delay in receiving the amount of funding from the parent company or shareholders, and;
- d. The economic situation due to the COVID-19 pandemic and financial constraints have forced them to change their business plans and delay the launch of their services.

The table below shows the list of new individual licence holders which applied for an extension of time to commence facilities/services:

No.	Licence Holder	Licence Type	Activity Licensed
1	Media Digital An Nur MainJ Sdn Bhd	CASP(I)	Terrestrial radio broadcasting using the digital terrestrial television broadcasting platform (DTTB)
2	DNF Group Sdn Bhd	CASP(I)	Terrestrial television broadcasting using the DTTB platform
3	MyHankuk TV Sdn Bhd (Formerly known as Daeyun Broadcasting Sdn Bhd)	CASP(I)	Terrestrial television broadcasting using the DTTB platform
4	Neo Universe Sdn Bhd	CASP(I)	Terrestrial television broadcasting using the DTTB platform
5	Datastream Sacofa Telecommunications Alliance Sdn Bhd	NSP(I)	Broadband service

List of New Individual Licensees who have made an Application for Time Extension to Launch Facilities/Services

iii. Application for Extension of Time to Comply with Special Licence Condition for Individual Licence – Additional Shareholding Requirements

For compliance with the Special Licence Condition of individual licences involving the ownership of at least 30 percent of Bumiputera shares, there were five (5) applications for time extension that were considered, of which only three (3) applications were approved.

The table below shows the list of individual licence holders which applied for an extension of time to meet the requirement of at least 30 percent Bumiputera shareholding:

No.	Licence Holder	Licence Type
1	Orissa Wicomm (M) Sdn Bhd	NFP(I)
2	Red One Network Sdn Bhd	NSP(I)
3	Excel Commerce Solutions Sdn Bhd	NFP(I)
4	U Mobile Sdn Bhd	NFP(I) & NSP(I)
5	Datastream Sacofa Telecommunication Alliance Sdn Bhd	NSP(I)

List of Individual Licensees Who Have Made an Application for Time Extension to Meet the Requirements of at Least 30 Percent Bumiputera Shareholding

iv. Application for Variation of Detailed Business Plan/Rollout Plan

For the variation of the Detailed Business Plan/Rollout Plan from the original target of the Detailed Business Plan/Rollout Plan, a total of two (2) applications were considered and approved based on the following reasons:

- a. Changes in management structure that caused changes in the business plan; and
- b. The economic situation due to the spread of the COVID-19 pandemic and financial constraints have forced them to change their business plan.

The table below shows the list of individual licensees which applied for variation to the Detailed Business Plan/Rollout Plan from the original target of the Detailed Business Plan/Rollout Plan.

No.	Licence Holder	Licence Type
1	Ha Megah Technology Sdn Bhd	NFP(I)
2	Summernet Sdn Bhd	NFP(I) & NSP(I)

List of Individual Licensees Who Have Made an Application for variation to the Detailed Business Plan/Rollout Plan from the Original Target of the Detailed Business Plan/Rollout Plan

Despite facing the COVID-19 pandemic, compliance visits to service facility sites were successfully conducted in collaboration with officials from MCMC State Offices. All compliance visits were conducted in accordance with the guidelines and procedures set by the Ministry of Health Malaysia.

d. Numbering and Electronic Addressing Management

In accordance with the responsibilities vested to MCMC via Section 179 (1) CMA 1998, the Numbering and Electronic Addressing Management Department (NEAMD) is responsible for the control, planning, administration, management and assignment of network services and applications services.

Starting in the 4th Quarter of 2020, NEAMD is also responsible for processing applications to obtain CA licence and certificates of recognition as provided under the Digital Signature Act (DSA) 1997.

As a Department, NEAMD functions based on the legal provisions subject to the CMA 1998 and DSA 1997 as well as additional instruments developed under those Acts. Section 180(1) of the CMA 1998 provides for the development of a Numbering and Electronic Addressing Plan (NEAP) which explains the rules and regulations for the assignment of numbering and electronic addressing as one of the country's important digital resources. NEAP was created in 2006 and has been amended several times along with the development of technology and industry demand.

The functions of NEAMD are as follows:

i. Numbering Assignment

Numbering assignment in Malaysia is based on the categories used in the network system and application services as follows:

- i. Geographic numbers;
- ii. Non-geographic numbers; and
- iii. Other numbers.

For 2021, a total of 1,857,004 new numbers were assigned while 2,009 numbers were surrendered. This brought the total numbering assignments in 2021 to 148,663,238.

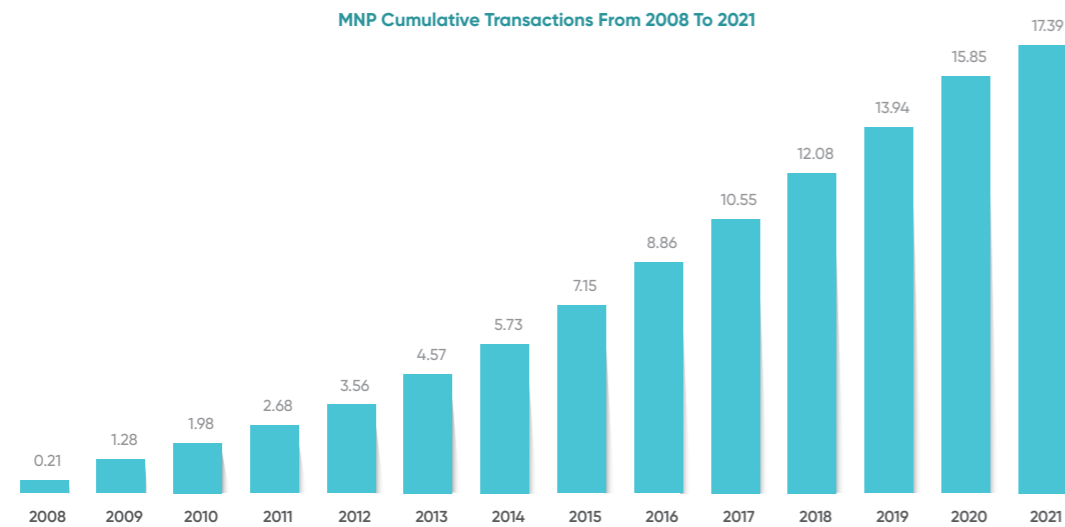
Summary of Numbering Assignments for the Year 2021

No.	Number Type	A. Existing Assignments (Data until 1 Jan. 2021)	B. New Assignments	C. Surrendered	
Geographic Numbers	Public Switched Telephone Network (PSTN)	36,595,000	127,000	2,000	
Non-geographic Numbers	Short Numbers	CKSC	9	-	-
		CISC	16	-	1
		ISC	200	-	-
		CSC	3	-	-
	Special Service Numbers (SSN)	1-300	100,000	-	-
		1-800	130,000	-	-
		1-700	20,000	-	-
Mobile Number	109,960,000	1,730,000	-		
Other Numbers	International Mobile Subscriber Identity (IMSI)	MNC	95	2	-
		ISPC	43	-	-
	Signalling Point Codes	NSPC	2,870	2	8
		Routing Number	7	-	-
Total		146,808,243	1,857,004	2,009	
Total Numbers Assigned		A + B - C = 148,663,238			

Source : NUMSYS, January 2022

CKSC	Commonly Known Short Code	1-600	Premium Service Numbers
CISC	Common Inter-carrier Short Code	1-700	Call Forwarding Service Numbers
ISC	Independent Short Code	MNC	Mobile Network Code
CSC	Carrier Selection Code	ISPC	International Signalling Point Codes
1-300	Toll Free Service Numbers	NSPC	National Signalling Point Codes
1-800	Freephone Service Numbers		

For Mobile Number Portability (MNP), a total of 17.39 million numbers have been ported from 2008 to 2021.

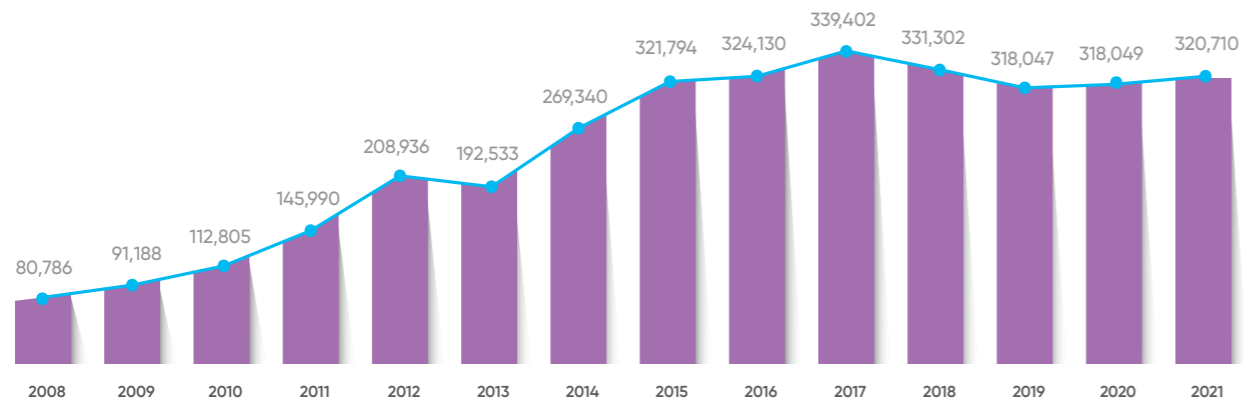


ii. Electronic Addressing

Based on Section 181(i) of the CMA 1998, MCMC has appointed MYNIC Berhad (MYNIC) to manage and maintain an integrated electronic address database including 11 categories of domain names ending with .my:



As of 31 December 2021, a total of 320,710 domain names registered under .my:



Total Domain Name Registrations (2008 - 2021)

iii. Licensing and Certificate of Recognition under the Digital Signature Act 1997

Under the DSA 1997, MCMC is responsible for monitoring and regulating the activities of all licensed Certification Authority (CA) that issue digital certificates to enable digital signature services to be used. NEAMD is responsible for processing applications for CA's licenses and certificates of recognition for services subject to the DSA 1997, namely, the Certificate of Recognition for Repository and the Certificate of Recognition for Date/Time Stamping Services.

As of the 3rd Quarter of 2021, a total of 16.8 million digital certificates have been issued in Malaysia.

No.	List of Licensed CA and Recognised Repositories and Recognised Date/Time Stamp Service	Licence/Recognition		
		Certification Authority Licence	Repository Recognition	Recognition
1	Pos Digicert Sdn Bhd	✓	✓	✓
2	MSC Trustgate.Com Sdn Bhd	✓	✓	✓
3	Telekom Applied Business Sdn Bhd	✓	✓	-
4	Raffcomm Technologies Sdn Bhd	✓	✓	✓

List of Licensees and Recognitions

iv. E-commerce Website Certification

The Inland Revenue Board (LHDN) introduced the Income Tax (Deduction for Cost of Developing Website) Rules 2003 which provides tax reduction incentives to applicants who meet the criteria and conditions to develop or own an e-commerce website in Malaysia. Through the Rules, MCMC is given the role of an agency that performs verification, covering aspects of website validity, technical and security on websites that are equipped with e-commerce platforms, before the tax reduction application is forwarded to the LHDN.

Throughout 2021, a total of 55 applications were processed by MCMC; out of that number, ten (10) applications were approved, while the remaining 45 applications were rejected.

In 2021, NEAMD successfully started the initiative of Fixed Number Portability (FNP) through the establishment of an Industry Working Group (IWG) to discuss matters related to the implementation of FNP including commercial, technical, legal/regulatory aspects, and awareness/promotional programmes.

NEAMD had also successfully taken the necessary steps to introduce .my domain name category registration globally. These steps were taken considering the great potential of the .my domain name and ensuring a more sustainable domain name resource management.

These two initiatives will open up new potentials, expand the market and accelerate the development of the numbering and domain name industry in Malaysia. It shows the seriousness of MCMC not only as a regulator but also functioning to increase healthy competition, thus empowering the growth of the communication and multimedia industry in Malaysia.

In ensuring smooth operations and functions, NEAMD set its performance indicators that were translated from related acts and regulations into becoming the standard operating procedures (SOPs) for numbering assignments, electronic addressing and e-commerce. The performance targets set in these SOPs are measured periodically to ensure that the working procedures implemented meet the requirements as outlined by the existing acts and regulations. These performance indicators also help in managing data and documents for audit purposes and good governance.

Department achievements in 2021 include:

i. Fixed Number Portability – FNP

NEAMD has issued a Public Consultation Report on the implementation of FNP in Malaysia in 2021. Based on the results of public findings and the data obtained, the implementation of FNP will increase competitiveness among industry players, especially in offering more affordable services with better quality. Accordingly, MCMC has decided to implement FNP in Malaysia and to establish an Industry Working Group (IWG).

ii. Review of MYNIC Appointment Letters and Amendments to Provisions Related to Domain Names under NEAP

In order to explore the potential and increase the competitiveness of the domain.my name in the global domain name market, MCMC has agreed to open the registration of the domain.my name category at the international level. For that, a review of MYNIC's appointment letter and amendments to the provisions related to domain names under NEAP have been implemented to support the effort in addition to strengthening the regulatory aspect.

iii. Licensing Handbook (Digital Signature)

MCMC has produced a Licensing Guidebook (Digital Signature) aimed at simplifying the application process as well as licence renewal and recognition under DSA 1997. This guidebook has been uploaded to the MCMC website for general guidance.

iv. Process Review and Standard Operating Procedures (SOP)

To ensure continued efficiency and work performance in line with current requirements, MCMC has improved two (2) existing SOPs and developed one (1) new SOP in 2021.

The COVID-19 pandemic has created a new norm and the implementation of "working from home" is a new challenge for MCMC, especially in ensuring operations run smoothly. Additionally, MCMC needs to maintain the effectiveness of communication with stakeholders such as holding meetings and discussions that were previously conducted physically. However, MCMC remains able to carry out its functions by maximising the use of alternative online platforms and minimising face-to-face contact including no longer accepting manual payments.

Faced with the challenges of new work norms, MCMC has started an initiative to improve the existing functionality of the Numbering Allocation Management System (NUMSYS). This includes aspects of streamlining the online payment system, improving the data search and reporting process as well as automatically activating notifications and alerts to reduce manual interactions.

In dealing with business continuity risks, MCMC is also involved in developing Business Continuity Plans and IT Disaster Recovery Plans.

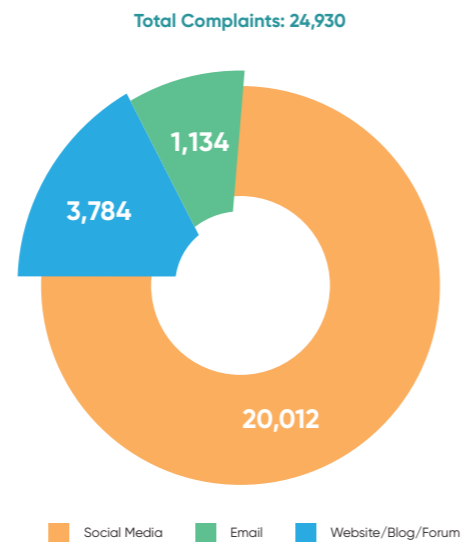
NETWORK SECURITY

MCMC plays an important role in ensuring the National Policy Goals enshrined in CMA 1998, which is to ensure information security and reliability as well as network integrity, are achieved through the implementation of planned activities that focus on security and efficiency aspects of the network.

The evolution of current technologies and the emergence of social media networks have increased the challenge for MCMC to regulate Internet content and curb new media abuses.

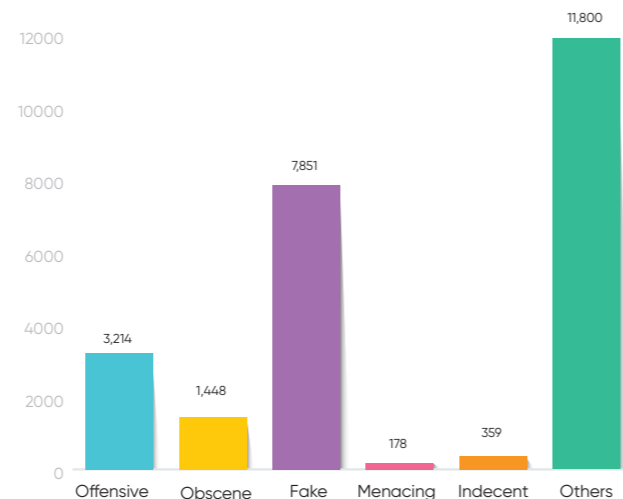
Network Media Abuse Complaints

In 2021, MCMC received a total of 24,930 complaints from the public regarding abuse of new media, including social media. The increase in the number of complaints in 2021 was due to the increase in cases involving fraud and hacking, which were not within MCMC's jurisdiction. The breakdown of complaints received by MCMC, based on platform type is as follows:



Complaint Statistics by Platform Type (2021)

The following is a breakdown of complaints based on the category of abuses and offences in year 2021.

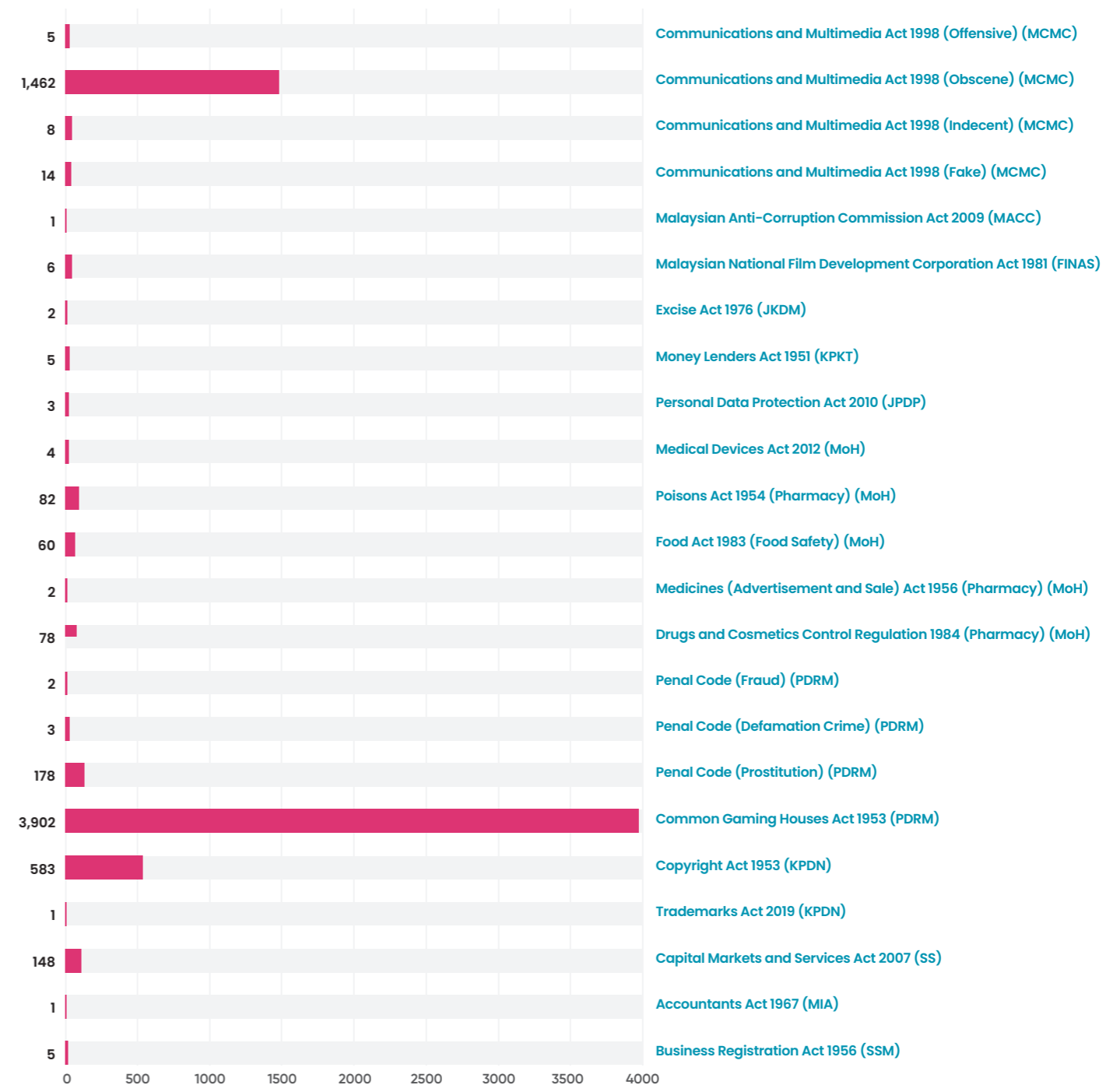


Statistics on complaints according to the type of abuses/offences for 2021

Regulating New Media Content

The highest number of complaints received, totalling 11,880, includes new media abuses which have been referred to other Law Enforcement Agencies (LEAs), such as hacking, fraud, gambling and misuse of personal information. MCMC joined forces with the respective Ministries and LEAs, providing technical assistance in accordance with the requirements, which included redirecting access to websites that violate the written laws of Malaysia, in coordination with the Internet Service Providers (ISPs).

The following are the statistics of website redirections for the year 2021, categorised according to applicable written laws of Malaysia.



Statistics on Website Redirection (2021)

In 2021, the highest number of website redirection recorded was gambling websites with a total of 3,902 sites blocked based on violations of the Common Gaming Houses Act 1953. The increase in the number of restrictions on gambling websites was due to the implementation of MCMC's initiative in order to curb online gambling activities. In addition, a total of 1,462 pornographic websites have also been blocked based on complaints received from public as well as proactive action by MCMC.



The **Sebenarnya.my** portal which was launched on 14 March 2017, is an initiative by K-KOMM through MCMC. The **Sebenarnya.my** portal has become the national one-stop centre for the public to check and channel information on unverified news received online.

The statistics on public visits to the portal from January 2021 to December 2021 was 54.9 million with around 4.5 million hits every month. The portal also received information from the public about unverified news, which will then be referred to the relevant Government agencies for further attention and action. The top ten (10) most viewed articles by the public on the **Sebenarnya.my** portal are as follows:

Articles	Browse	Link to Articles
Tuntutan Berkaitan Dengan Bantuan Prihatin MySalam COVID-19 (RM50/sehari) Perlu Dimohon Melalui MySalam	267,487	https://sebenarnya.my/tuntutan-berkaitan-dengan-bantuan-prihatin-mysalam-covid-19-rm-50sehari-perlu-dimohon-melalui-mysalam/
Tiada Pengelasan Warna Gelang Bagi Individu Di Bawah Pengawasan (PUS)	55,332	https://sebenarnya.my/tiada-pengelasan-warna-gelang-bagi-individu-di-bawah-pengawasan-pus/
SMS Berkenaan Moratorium Dari Shortcode 66628 Adalah Sah Dari Maybank	46,273	https://sebenarnya.my/sms-berkenaan-moratorium-dari-shortcode-66628-adalah-sah-dari-maybank/
4 Nota Suara Yang Menggunakan Nama MKN Dakwa Darurat Akan Diisytihar Adalah Palsu	40,640	https://sebenarnya.my/-4nota-suara-yang-menggunakan-nama-mkn-dakwa-darurat-akan-diisytihar-adalah-palsu/
Tiada SOP PKPKP (Perintah Kawalan Pergerakan Keluarga) Dikeluarkan Oleh KKM	36,800	https://sebenarnya.my/tiada-sop-pkpkp-perintah-kawalan-pergerakan-keluarga-dikeluarkan-oleh-kkm/
Borang Permohonan Bantuan Ihsan COVID-19 Negeri Johor Yang Tular Di Media Sosial Bukan Untuk Edaran Awam	35,739	https://sebenarnya.my/borang-permohonan-bantuan-ihsan-covid-19-negeri-johor-yang-tular-di-media-sosial-bukan-untuk-edaran-awam/
Penguatkuasaan Saman Bagi Kesalahan Naik Kenderaan Lebih Daripada Seorang Dan Tidak Memakai Topeng Muka Adalah Palsu	33,740	https://sebenarnya.my/penguatkuasaan-saman-bagi-kesalahan-naik-kenderaan-lebih-daripada-seorang-dan-tidak-memakai-topeng-muka-adalah-palsu/
Pelajar Tingkatan 1 Hingga 4 Akan Kembali Ke Sekolah Pada 12 Julai 2020 Adalah Palsu	33,029	https://sebenarnya.my/pelajar-tingkatan-1-hingga-4akan-kembali-ke-sekolah-pada-12-julai-2020-adalah-palsu/
Pemberian Elaun Sebanyak RM3,000 Kepada Sesiapa Yang Dibuang Kerja Semasa Tempoh PKP Daripada PERKESO Adalah Palsu	27,367	https://sebenarnya.my/pemberian-elaun-sebanyak-rm-3000kepada-sesiapa-yang-dibuang-kerja-semasa-tempoh-pkp-daripada-perkeso-adalah-palsu/
Duit BPN Dianggap Hangus Jika Tunggu Fasa Ke-2 Adalah Tidak Benar	22,024	https://sebenarnya.my/duit-bpn-dianggap-hangus-jika-tunggu-fasa-ke-2-adalah-tidak-benar/

Top ten (10) viewed articles on the **Sebenarnya.my Portal**

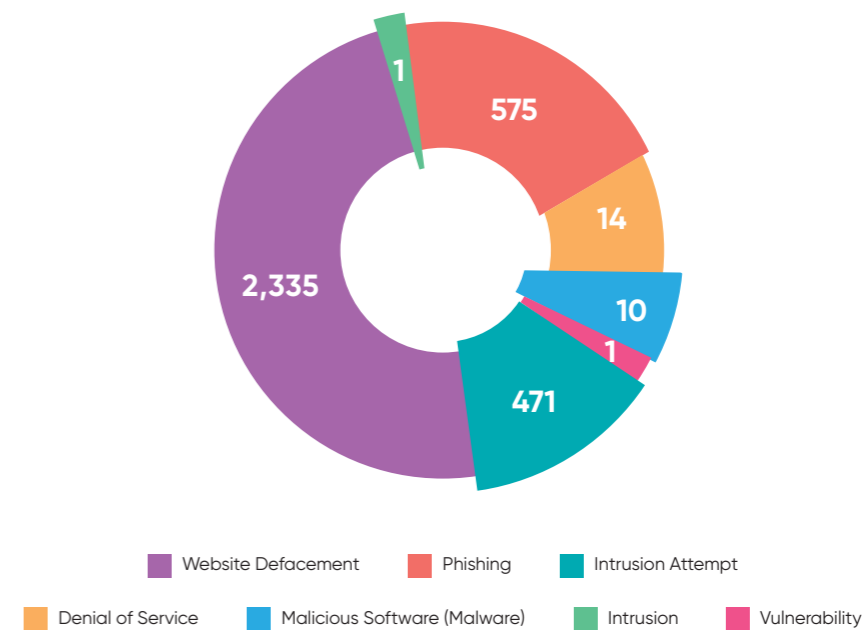
To strengthen the enforcement action on fake news and content related to the proclamation of emergency and COVID-19, the Network Security Division through the New Media Department, Network Intelligence Department, as well as Digital Forensic Department, collaborated with PDRM in enforcing the Emergency (Essential Powers) (No. 2) Ordinance 2021, particularly providing technical assistance, coordinating with appointed officers by the relevant Ministry or Government agencies in verifying a certain content, communicating with the platform provider to remove fake content, providing assistance on profiling for investigation purposes, as well as assistance on evidence preservation and digital forensic analysis.

The Emergency Ordinance was enforced throughout the period of the Emergency Proclamation until 1 August 2021 to prevent and impose action against the spread of fake news related to COVID-19 that had the potential to undermine the Government's efforts to combat the pandemic. Throughout this period, MCMC and PDRM have worked together to investigate 30 cases.

Incident Handling

MCMC through the Network Security Centre (NSC) handled a total of 3,407 network security incidents throughout 2021.

The category with the highest number of incidents was Website Defacement with 2,335 incidents, followed by Phishing with 575 incidents. The breakdown of the incidents is as shown in the chart below:



Incident Handling Breakdown

Security Incidents Involving Licensees

In 2021, MCMC NSC recorded and addressed six (6) security incidents involving licensees under MCMC regulatory purview. Two (2) incidents involved licensees under the Communications and Multimedia Act 1998, and four (4) incidents involved licensees under the Postal Service Act 2012.

These security incidents consisted of Ransomware attacks, Distributed Denial of Service (DDoS) attacks, and Intrusion. The affected licensees were required to submit Root Cause Analysis (RCA) reports, and security control improvement measures for MCMC's further action.

Security Advisory

MCMC through the Network Security Centre also undertakes measures to promote security vigilance among service providers under the communications and multimedia sector through the security advisory initiatives.

Throughout 2021, a total of 20 security advisories were issued for the following issues, incidents, and topics:

1. WhatsApp Account Takeover Advisory
2. Internet Banking Scam Advisory
3. Attack Exploiting Vendor and Supply-Chain Vulnerabilities
4. Exploitation of Microsoft Exchange Server Vulnerabilities
5. Virtual Machine (VMWare vCenter) Vulnerability
6. Threat Actors (TAs) Targeting ICT Infrastructure
7. Ransom Distributed Denial of Service (Ransom DDoS) Attacks

8. Berkeley Internet Name Domain (BIND) Vulnerability
9. Possible Attacks Arising from Online Activism and Hacktivism Activities
10. Threats of Ransomware Attacks Targeting Organisations
11. Kaseya VSA Supply Chain Ransomware Attacks
12. Threats of Rising Cyber Attacks
13. Network Time Protocol (NTP) GPS Daemon (GPSPD) Rollover Bug
14. ISC BIND Resolver Denial of Service Vulnerability
15. Vigilance During the Holidays
16. Zero Day Log4J Logging Framework Vulnerability
17. Zero Day Log4J Logging Framework Vulnerability (Update)
18. Apache HTTPD Server Vulnerability
19. Malicious Indicators of Compromise associated with multiple Threat Actor

Cyber Drill

Cyber drill is a simulated exercise in handling and countering cyber security incidents which is implemented with the participation of various stakeholders and key agencies at domestic and international levels.

In 2021, MCMC participated in the following regional and international cyber drill exercises:

1. ASEAN-Japan (AJ) Cyber Drill 2021

MCMC through the National Cyber Security Agency (NACSA) represented Malaysia in the ASEAN-Japan cyber drill exercise which was held on 24 June 2021. A total of 12 countries were involved in the cyber drill. Other countries that were involved: Indonesia, Cambodia, Singapore, Brunei, Vietnam, Myanmar, Laos, Philippines, Thailand, and Japan. Four (4) officers from the Network Security Management Department represented MCMC in this drill exercise.

In this drill exercise, simulations as well as incident and threat coordination processes were relayed by ASEAN-Japan representatives to the participants through the Mattermost communications platform. This drill exercise assisted participants in handling cyber-attacks in accordance with the correct procedures, and the accurate method to communicate between the stakeholders involved.

2. ASEAN Computer Emergency Response Team (CERT) Incident Drill (ACID) 2021

MCMC represented Malaysia in the 16th ACID cyber drill exercise which was held on 5 October 2021. ACID cyber drill is an annual event organised to test incident handling procedures and strengthen the cooperation among CERT groups within ASEAN member states and key dialogue partners. A total of 15 countries were involved in the drill exercises. The CERT team invited were from ASEAN member states and main dialogue partners namely: Australia, Brunei, China, India, Indonesia, Japan, Cambodia, Korea, Laos, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Seven (7) officers from MCMC were involved in this drill exercise.

The theme for 2021 was "Responding to Supply Chain Attacks Against Businesses" where participants were required to address simulated incidents involving exploited software being used to compromise various organisations. MCMC officers achieved the top five (5) position after successfully completing the all the assigned training tasks. This drill exercise assisted participants to address the latest cyber threats in the supply chain, while strengthening capacity building in incident handling among the participants.

3. International Telecommunication Union (ITU) Global Cyber Drill 2021

MCMC represented Malaysia in the ITU Global cyber drill held from 2 to 4 and 9 to 11 November 2021. ITU organised drill exercises at regional and international levels to improve cyber security readiness, protection and incident response capabilities among the countries involved. The ITU Global cyber drill exercise is an annual event where cyber-attacks, information security incidents, or other cyber threats are simulated to test the organisation's ability to detect security incidents, to respond appropriately, and to minimise impact that could cripple the organisation's operations. A total of 349 participants from around the world representing various Computer Emergency Response Team (CERT), Ministries and Member States were involved in the drill exercise. Four (4) officers from the Network Security Management Department represented MCMC in the drill exercise.

This drill exercise focused on the various incident scenarios faced by incident response teams and stakeholders in their day-to-day operations; these are simulated through the Cyber Range provided. These include technical analysis, system and network forensics, as well as simulated challenges in handling Operations Technology (OT) related incidents, ransomware, and lateral movement. The cyber drill exercise is comparatively more challenging than other cyber drills participated by MCMC.

Security Assessment

MCMC also performed security assessments focusing on the management and protection of information, as well as the protection of important and critical national infrastructure installations.

1. Security Assessments on Critical Installations, Protected Areas and Protected Places

MCMC continues its close cooperation with the Chief Government Security Office (CGSO) under the Prime Minister's Department of Malaysia, via the Critical Installations Inspectorate (TNSP) and the Security Assessment Sub-Committee (JKPK).

Physical and information security assessments were jointly conducted on important and critical national infrastructure installations, including telecommunications and broadcasting infrastructures. The assessments were undertaken to ensure that the level of security readiness continues to be in good order. A total of 33 assessments were performed in 2021, and in general, the level of security was found to be satisfactory.

Capacity Building

MCMC have taken the initiative to conduct training and capacity building programme since 2016. Through the initiative, a total of 177 security professionals from the Communications and Multimedia Industry (CMI) have been trained thus far.

MCMC have taken proactive measures by organising several series of capacity building training and workshops to support the implementation of Information Security Management System (ISMS) and Business Continuity Management System (BCMS) certifications, catered for officers from the MCMC and Critical National Information Infrastructure (CNII) organisations under the Communications and Information sector.

In 2021, MCMC organised the professional training workshop entitled "ISO/IEC 27001 Information Security Management System Lead Implementer" where 20 participants from organisations under MCMC regulatory purview attended and passed the certification exam.

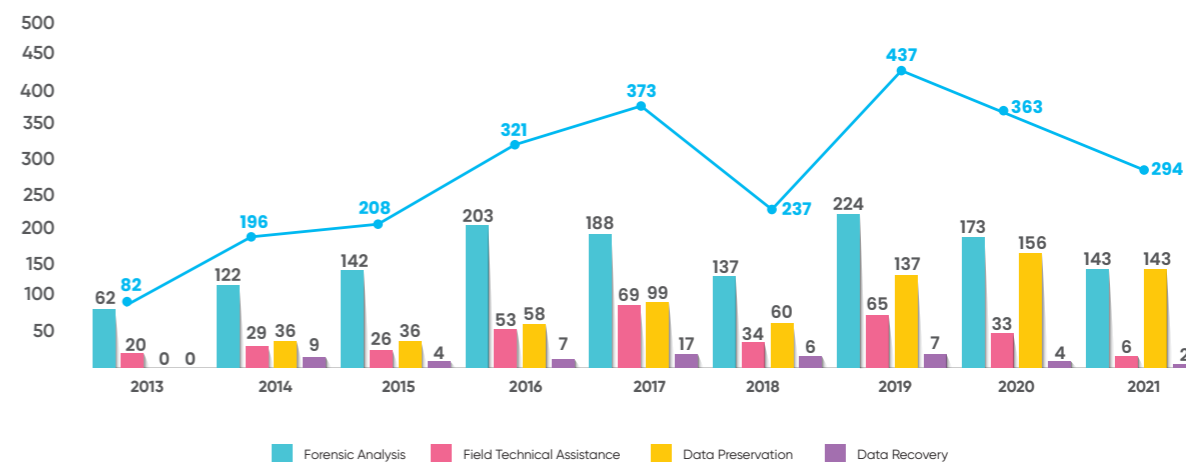
Digital Forensics

MCMC provides a professional and impartial digital forensics service to internal and external stakeholders, including selected law enforcement agencies in Malaysia. The services provided use internationally recognized forensic methods and are assisted by the latest equipment and operated by qualified experts.

The laboratory operates based on guidelines and best practices in accordance with MS ISO/IEC 17025:2017. As a result, the entire process of digital forensic analysis can be managed systematically and produced quality forensic reports. MCMC offers services in digital forensics, on-site technical assistance, data preservation, data recovery and advisory services related to electronic evidence.

In 2021, MCMC's Digital Forensic Laboratory received 294 cases, including those under the jurisdiction of MCMC and other local law enforcement agencies. Among the cases assisted by MCMC includes cases of spreading fake news related to the COVID-19 pandemic, information leakage, abuse of network services and obscene or offensive content through social media platforms.

In addition, MCMC is also directly involved with the Emergency Ordinance Task Force and responsible for data preservation, analysis and issuing forensic reports for 52 cases investigated under the Emergency Ordinance Act (Necessary Powers) (No.2) (2021) for the period from March to September 2021.



Case Statistics by Digital Forensic Services Category (2013-2021)

The total number of cases in 2021 received by category includes forensic analysis, 143 cases (48.6 percent); technical assistance in the field, six (6) cases (2 percent); data preservation, 143 cases (48.6 percent) and data conservation, two (2) cases (0.6 percent).

The MCMC Department of Digital Forensics still maintains its laboratory accreditation status under the Malaysian Laboratory Accreditation Scheme which is regulated by the Department of Standards Malaysia since 2016. More information on the MCMC Department of Digital Forensics' laboratory accreditation can be obtained at the following website: <https://www.jsm.gov.my/documents/11396/300433/SAMM0798>.

ENFORCEMENT

The Enforcement Division is responsible for ensuring that all enforcement activities are carried out effectively and efficiently in accordance with the provisions of the law under the CMA 1998, the Digital Signature Act 1997 (DSA 1997), the Postal Services Act 2012 (APP 2012) and the Strategic Trade Act 2010 (PSA 2012), and the subsidiary laws under it.

In carrying out its enforcement and regulatory functions, MCMC has jurisdiction to investigate any offense that violates the provisions under the relevant acts. The basis of the investigation action will be initiated based on the First Preliminary Report received. Acting on the report, the investigation will be conducted comprehensively taking into account all the elements of the offence. For this purpose, the investigation process will be carried out to collect information and evidence that can link an individual, corporation or company to the offense suspected to have been committed. Among the processes carried out are recording witness conversations, searches and seizures. After the investigation is completed, the investigation paper will be briefed to the Deputy Public Prosecutor for case evaluation and decision.

Achievements in 2021

Total Cases in 2021

Throughout the year 2021, there were as many as 58 cases prosecuted in Court. Of these, 29 cases or 50 percent have been convicted in Court and sentenced to fines with a total value of RM176,000.00. The fines imposed by the Court ranged between RM2,000.00 and RM10,000.00 for each case. The remaining 29 cases are still under trial in Court.

Status	Number of Allegations	Fine
Resolved	29	RM176,000
Ongoing	29	-
Total	58	RM176,000

Allegations Table

Unit	Number of Allegations	Fine
Social	4	RM4,000
S.233(1)(a) CMA 1998	2	RM4,000
S.292 Kanun Keseksaan	2	-
Technical	54	RM172,000
P.16 (1)(b) PPKM (ST) 2000	31	RM172,000
S.235 CMA 1998	22	-
S.239(1)(b) CMA 1998	1	DNAA
Total	58	RM176,000

Offense Provisions Table

Offense Compound Offer

Throughout the year 2021, there were a total of 264 compound offers worth RM12,620,000.00 issued against telecommunications companies, service providers and individuals who committed offenses under the CMA 1998 and its subsidiary laws. From that amount, a total of four (4) compounds worth RM20,000.00 were issued against four (4) individuals who committed an offense under section 233(1)(a) CMA 1998 for using network facilities or services to send communications that were obscene, threatening and ugly in nature.

Category of Offense	No. of Compounds	Value of Compounds
Regulatory	257	RM12,570,000
Fake Registration	18	RM900,000
Numbering Rules Non-compliance - MNP	225	RM11,150,000
Mandatory Standard Non-compliance: Public Cellular Service	1	RM50,000
Mandatory Standard Non-compliance: Wired Broadband Access Service	7	RM290,000
Mandatory Standard Non-compliance: Wireless Broadband Access Service	2	RM60,000
Obligation to submit a statement of net revenue from named services (RONR)	1	RM10,000
Compliance with licence conditions - Broadcasting	3	RM110,000
Social	4	RM20,000
Transmission of threatening content through WhatsApp application	1	RM5,000
Sending obscene content through WhatsApp application	1	RM5,000
Uploading content on Facebook that is offensive to the Government in dealing with the COVID-19 pandemic	1	RM5,000
Uploading content on Facebook that is threatening to the Chinese and offensive to the PDRM	1	RM5,000
Technical	3	RM30,000
Use of spectrum without Apparatus Allocation (AA)	3	RM30,000
Total	264	RM12,620,000

Compounded Offense Category Table

• **Strategic Cooperation with Enforcement Agencies**

The Enforcement Division is responsible for ensuring the strengthening of cooperation with the PDRM and other enforcement agencies in combating crime and ensuring that society continues to be protected and safe in the digital ecosystem. This is in line with the objectives that have been achieved through the signing of strategic cooperation between the PDRM and the MCMC in the PDRM-MCMC Master Committee Meeting which was jointly chaired by the Chief of Police and the Chairman of MCMC in the fourth quarter of the year. The strengthening of this cooperation leads to the strengthening of actions in the aspects of investigation, operations, crime prevention and training.



Courtesy visit by the PDRM delegation led by Chief of Police, YDH IG Dato' Sri Acryl Sani bin Haji Abdullah Sani to the office of the Chairman of MCMC 15 October 2021

• **Skills Course for Authorised MCMC Officers**

In order to ensure that authorised MCMC officers are always provided with the latest skills and abilities in the field of investigation, the Enforcement Division organised a number of programmes in the form of specific skills (functional) that can help officers strengthen their knowledge in the field of enforcement.

For effective cost management, the Enforcement Division always ensures that the use of the budget, including management and operational costs, is in line with the allocation the Enforcement Division has been accorded.

Despite being faced with the COVID-19 pandemic, enforcement activities were carried out effectively and efficiently to ensure that the interests and rights of consumers are always protected. This is proven by the success of the Enforcement Division based on the statistics of cases investigated, the number of prosecutions, and compound offers issued.

Enforcement and investigation activities always involve physical meetings, therefore officers in the Enforcement Division are exposed to various risks, especially during the pandemic. However, precautionary measures and compliance with the new rules and norms set by the authorities were adhered to by the Enforcement Division.

The Enforcement Division ran an engagement programme involving important individuals such as the Inspector General of Police, Heads of Departments and Directors at enforcement agencies such as the PDRM, SPRM, KPDNHEP and SIRIM as policy makers and decision makers in line with the objective of increasing consumer trust in enforcement and transparent investigations by the MCMC.

PROSECUTION

The MCMC Prosecution Department was established on 15 April 2017 and is now under Legal Sector. The Prosecution Department was established to implement the following objectives:

- a. To peruse the investigation papers referred to the Prosecution Department by the Investigation Department and to ensure that the investigation is complete.
- b. To obtain instructions from the Deputy Public Prosecutor whether to charge, offer to compound, issue a warning letter, or take no further action (NFA) on Investigation Papers.
- c. To prosecute cases in Court for offenses under the CMA 1998, the Digital Signature Act 1997, the Strategic Trade Act 2010, the Postal Services Act 2012 and all subsidiary legislations.

Achievements in 2021

In 2021, a total of 379 cases were successfully resolved by the Prosecution Department. Of these, 62 cases were convicted in court for various offences, while 266 instruction to compound orders were issued by the Deputy Public Prosecutor.

In 2021, a total of 58 cases were registered in Courts throughout Malaysia. The majority of cases were for offenses under rule 16(1)(b) of the Communication and Multimedia (Technical Standards) Regulations 2000 for possessing for the purpose of selling non-certified communication equipment (31 cases), followed by Section 235 CMA 1998 for damage to network facilities (22 cases), and Section 233 CMA 1998 due to misuse for improper use of network services (two cases).

- a. The Prosecution Department held 13 Competency Training sessions on Conduct of Criminal Prosecution for Prosecuting Officers, Investigating Officers, Forensic Analysts and MCMC Legal Officers.
- b. The Prosecution Department produced six (6) new work processes to improve certain work processes, namely:
 - i. Witness Statement Procedures Manual
 - ii. Preparation Facts of the Case Procedures Manual
 - iii. Registration of Court Summon Procedures Manual
 - iv. Management of Investigation Papers Procedures Manual
 - v. Plea Bargaining Procedures Manual
 - vi. Forfeiture of Exhibits Procedures Manual



FINANCIAL GOVERNANCE AND STRATEGY

MCMC strives to continuously improve financial governance; carrying out operations sustainably, through a combination of technology, digitalisation and innovation.

The year 2021 saw MCMC take a more comprehensive approach to continue creating new value while increasing operational efficiency and optimising costs. Among the steps taken are as follows:

- Improve the financial governance of MCMC through the quality and robustness of the financial reporting system, internal control and the effectiveness of the internal governance process which is a major contributor to compliance with the Malaysian Financial Reporting Standards that have been set to give a true and fair view of the financial position.
- Establish an Investment Advisory Team at the management level responsible for examining investment activities and risks, and aiming to optimise investment returns and liquidity management in accordance with MCMC's investment policy, strategy and financial objectives.
- Strengthening the governance of the annual budget through the preparation of a budget based on results in line with the main focuses that have been identified based on the MCMC's mission, vision and objectives.
- Strengthen the management of the development, maintenance and use of technology infrastructure through the establishment of an ICT Technical Committee responsible for planning, coordinating and identifying the priority of system requirements as well as monitoring the MCMC's ICT projects in addition to optimising ICT expenditure and services effectively towards quality improvement to meet the needs of MCMC and that of the customer as a whole.
- Improve the performance of bill payments and claims in order to continue to reach zero payments that exceed a period of 14 days from the date they are received.

Additionally, MCMC also took strategic steps towards the digitalisation of more holistic operations, especially those involving the empowerment of digitalisation to improve the quality and service delivery system of MCMC so that it is always in line with the Government's aspirations.

- Digitalisation of the personnel claims system online through the development of a comprehensive system supported by workflow technology that complies with MCMC's internal procedures. This implementation is proven to save the MCMC operational costs as well as provide more transparent control while supporting a paperless, environmentally friendly work environment.
- Strengthen collaboration between MCMC and external parties to empower the management of online bill and claim payments towards zero cash and cheque payments. As of 2021, MCMC has achieved 99 percent payment of bills and claims without cash and cheques. MCMC aims to achieve zero cash and cheque payments by 2022.
- To support the Government's efforts to achieve a developed country status through MyDIGITAL initiative driven by technology and digitalisation, MCMC is actively devising a digitalisation strategy for a cashless revenue collection management that will be implemented by 2022 thus helping the country towards a cashless society. As of 2021, more than 60 percent of MCMC's revenue will come through the e-payment system developed since 2013.

RISK MANAGEMENT

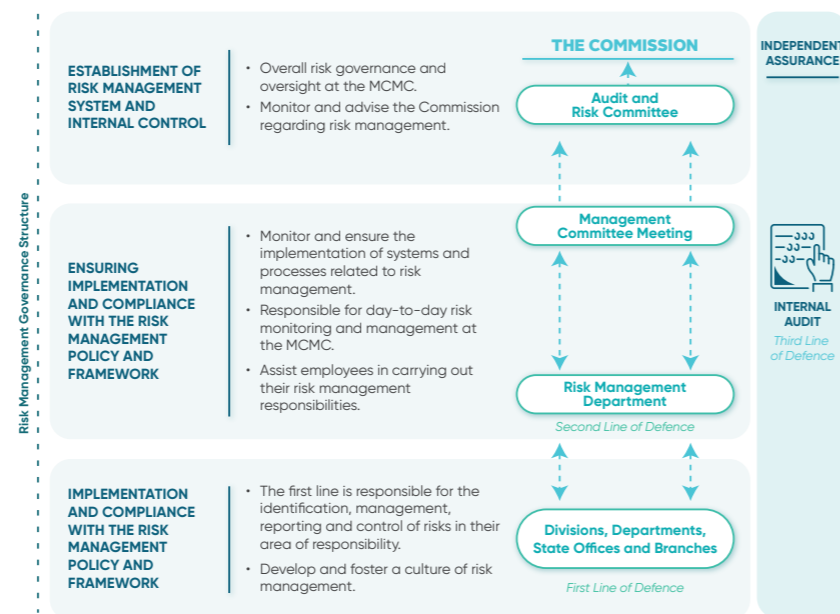
In today's new norm and rapidly evolving business world, MCMC is exposed to various risks which if not controlled and addressed could affect its ability to achieve strategic objectives.

As the regulator and developer of communications and multimedia, postal and courier, and digital signature industries, MCMC plays an important role in balancing the interests of service providers, consumers, the State and the Federal Government.

The MCMC risk management governing principles covering Risk Policy, Guidelines and Procedures were established to guide internal operations and activities so they can be carried out prudently and conscientiously, meet strategic goals, fulfil corporate governance responsibilities and comply with legal provisions.

Governance Structure

The MCMC's risk governance structure provides a clear demarcation of responsibility and accountability regarding the risk management process based on the Three Lines of Defence principle. An illustration of the risk management governance structure is illustrated as follows:



Risk Management Governance Structure

Source : MCMC Risk Management Policy

Enterprise Risk Management

MCMC Enterprise Risk Management (ERM) adopts ISO31000:2018 standard for all the employees to identify, analyse, evaluate, monitor, mitigate and report risks consistently. Throughout 2021, various planned activities were implemented to further improve the robustness of the ERM implementation. Among the main activities carried out include:

Activity	Description
Risk Evaluation	<p>Reassess MCMC Risk Register and new emerging risks in line with MCMC's business plan and the impact and lessons learned from the COVID-19 pandemic through:</p> <ul style="list-style-type: none"> Bottom-up Approach: Risk identification by the department's risk coordinator (Risk Champion), Head of Department and Division focusing on operational risks that occur at the first-line of MCMC operations. Top-Down Approach: Identifying strategic risks which may threaten the objectives and functions of MCMC as a regulator and industry developer under its jurisdiction. These strategic risks are identified from Senior Management's direct input.
Engagement Session	<p>Engagement with leaders on the submitted departmental risk assessment and agreement/determination through challenge sessions.</p> <p>Quarterly engagement with risk owners to monitor action plans addressing risks.</p> <p>Quarterly engagement with leaders on the status of the Risk Register for attention and reporting to higher management.</p>
Awareness and Training Programme	<p>Risk awareness programmes were emphasised to ensure risk management culture is fostered at all levels. Two (2) programmes were conducted involving senior management and the department's risk coordinator (Risk Champion) to discuss the risk landscape and improve MCMC's risk assessment techniques.</p>

Strategic Risk Management

In previous years, ERM implementation at MCMC has been more focused on operational risks. Consequently, in 2021, MCMC took steps to further improve its position by implementing risk assessments at the business strategy level, and taking into account the risks at all levels by using a "top-down approach".

The main risks are identified and monitored regularly to ensure that the main impact of strategic, reputational, technological and corporate operations can be protected with effective controls.

Risk	Risk Description
Regulatory Objectivity	<p>External factors may affect the ability of MCMC to act objectively and may impact the effectiveness of MCMC as a regulator:</p> <ul style="list-style-type: none"> Ensure a continuous supply chain in the delivery of services from the industry by avoiding excessive intervention. Ensure the agility and responsiveness of MCMC regarding new emerging technologies and end-user issues.
Rapid Trend Changes	<p>The pace of technology and global economic change allows for rapid improvement and change to trends and demands. This affects the regulatory landscape:</p> <ul style="list-style-type: none"> Matters that need to be regulated; How it should be regulated; The impact on the industry and the long-term benefits to consumers.
Policy Changes	<p>Changes in policy decision lead to changes in policy direction and priorities for the communications and multimedia, postal and courier and digital signature industries.</p>
Management of Key Initiatives	<p>In an effort to improve broadband coverage and access throughout Malaysia, various initiatives have been implemented by MCMC. Any obstacles and failures in the management of the initiatives will have an impact on the planned results and affect the development of Malaysia's communications and multimedia industry.</p>
Stakeholder Management and Communication	<p>MCMC engages with various stakeholders. Gaps in communication and perception challenges with authorities, industry players, and consumers will impact the MCMC's reputation, implementation of initiatives and ability to achieve its objectives.</p>

Moving Forward

As the world recovers from the effects of the COVID-19 pandemic, drastic changes can be seen by most businesses and individuals in adapting to the new norm. MCMC will continue to remain firm with its objectives and will continue to pay attention to emerging risks in dealing with and generating value from those risks.

Among the risks observed is the digital divide between urban and rural areas due to new norms and service supply disruptions from industry to consumers. In addition, work and learning arrangements from home have seen dependence on the Internet, network stability and data storage and access in the cloud. This situation presents a significant cyber security risk. It is crucial for MCMC to implement effective mitigation to ensure data protection, and to prevent leakage of confidential information.

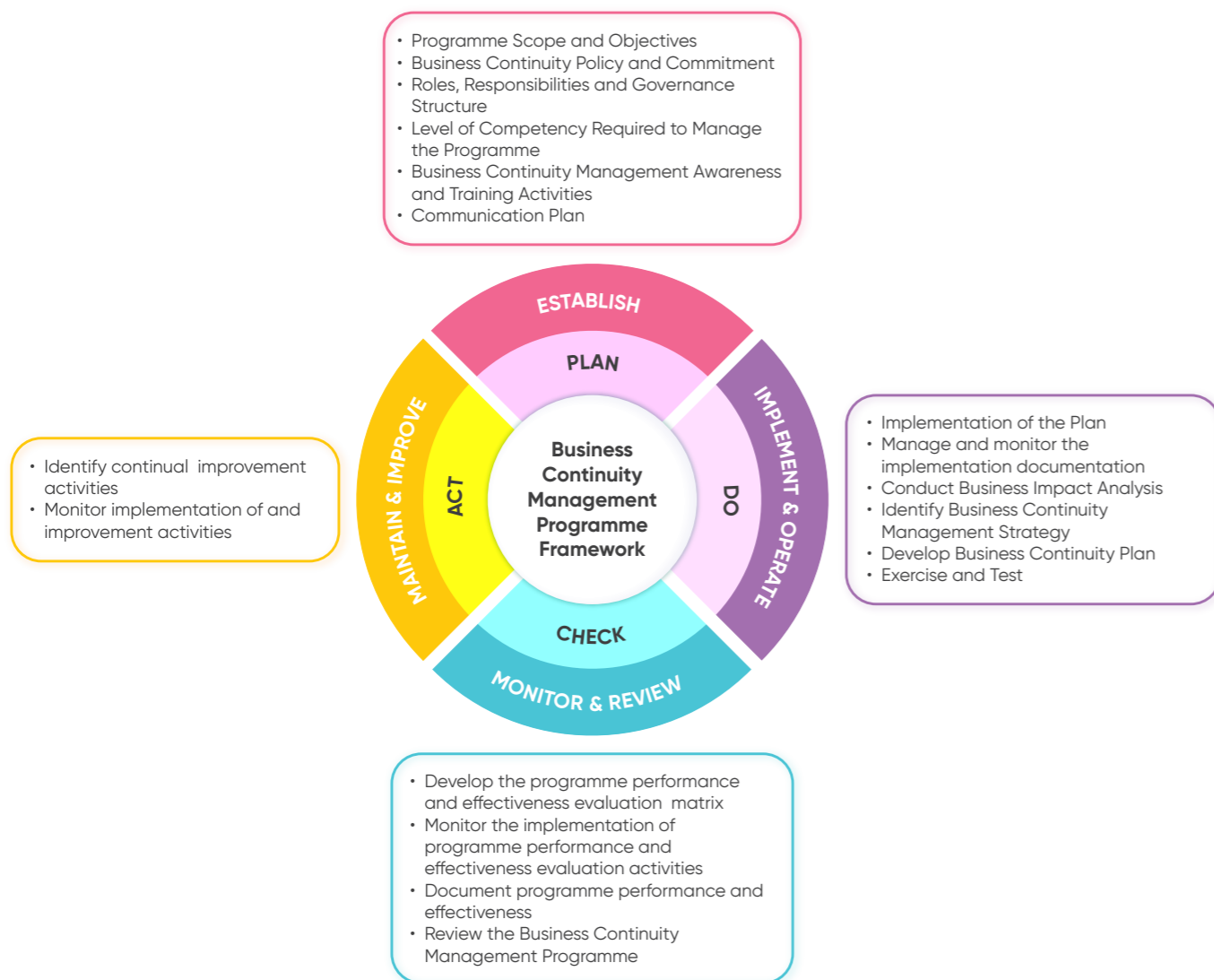
As such, MCMC will continue to apply strong risk management and improve the implementation of its controls and resilience to continue to combat emerging risks and to continue moving forward.

Business Continuity Management (BCM)

In 2021, MCMC established its Business Continuity Management Programme, a nine-month implementation project expected to conclude in March 2022. The project will then be maintained as one of MCMC's regular programme to ensure continuity of services as a Government agency in service delivery.

The first step of the implementation was to design the components of MCMC Business Continuity Management Framework in line with ISO 22301 - Social Security - Business Continuity Management System - Requirement, to ensure the implementation of the framework was in line with changes in the standard.

MCMC Business Continuity Management Framework is illustrated below:



Components of the Business Continuity Management Programme Framework

MCMC has approved the establishment of a governance committee for the Business Continuity Management Programme comprising the senior management. They, together with the outlines of policy and commitment, will ensure critical functions, services, systems, and key processes in can be restored promptly or within a reasonable period of time during any disruption.

In addition, MCMC has conducted a service impact analysis to identify its critical functions and the minimum operational resources required in the event of any disruption.

Using the results of the analysis, MCMC has developed a Business Continuity Plan and a Crisis Management Plan to ensure effective execution of the procedures and activities required to manage the disruption and resume critical functions.

In 2022, MCMC plans to conduct testing and simulation exercises to test and identify issues and necessary corrective actions to improve the plan.

Management of COVID-19

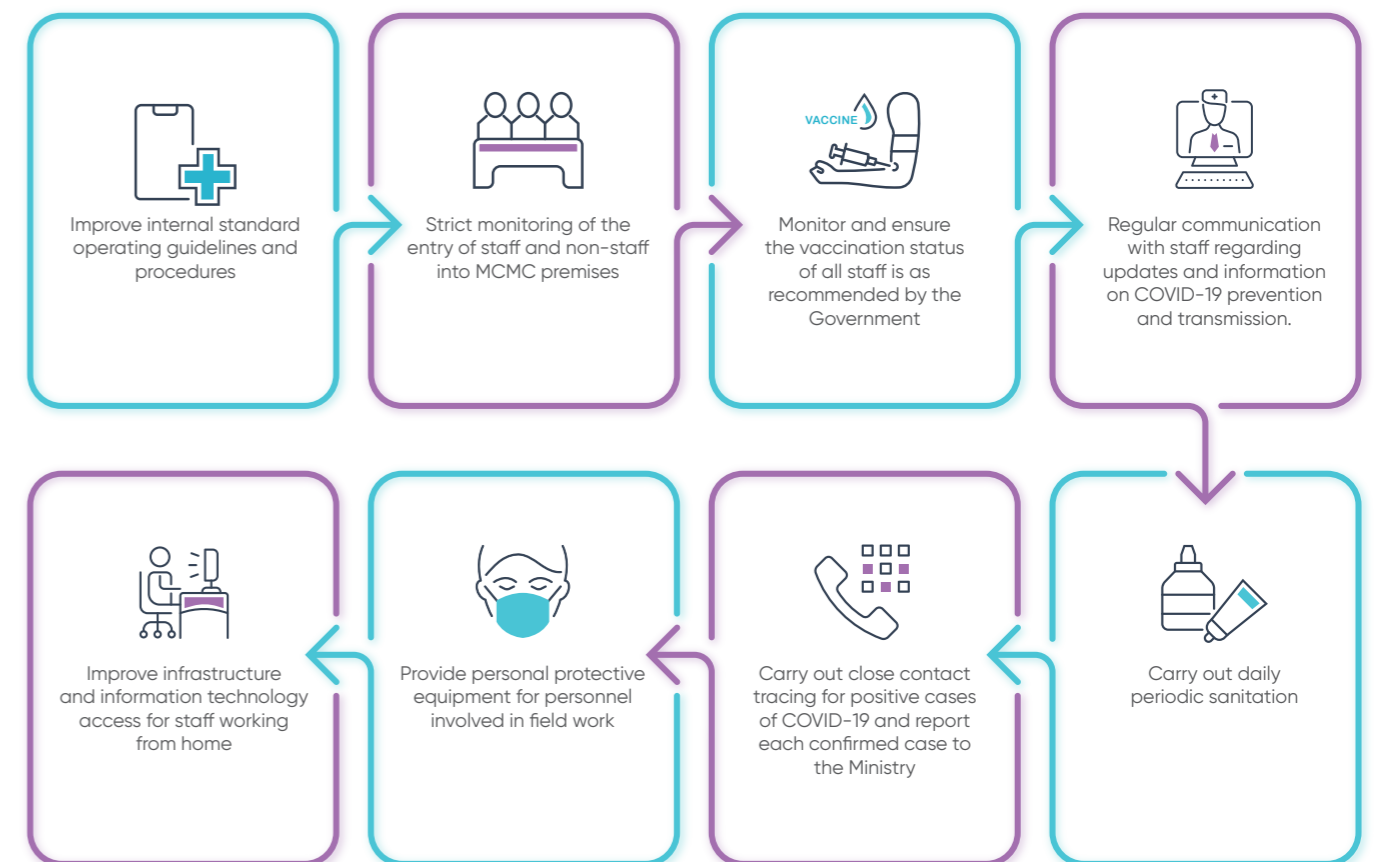
The world entered the second year of COVID-19 pandemic in 2021, and this has been the biggest pandemic for Malaysia since early 2020. The pandemic triggered drastic changes and posed new challenges that changed the norms of life and the way of working, and consequently, challenging the resilience of MCMC.

Despite the implementation of the Movement Control Order (MCO) by the Government that limits outdoor activities to curb the spread of COVID-19 infection, new opportunities emerged and there was a surge of online transactions due to people having to work and learn from home.

In MCMC context, the communications and multimedia industry and courier services remain sustainable throughout this period. While many industries were impacted by the MCO, this industry was gazetted as one of the critical services that needs to continue operating during the pandemic.

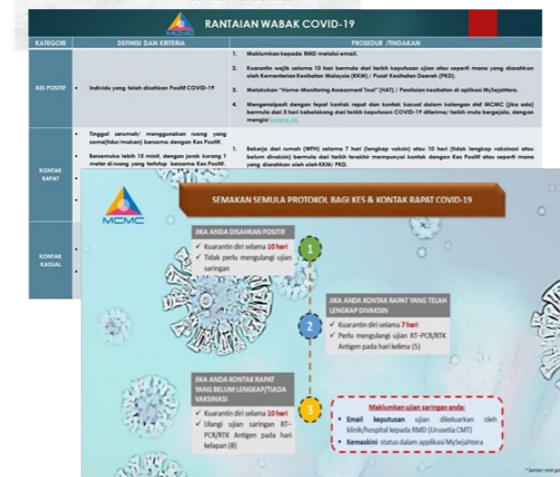
The MCMC implemented various drastic and proactive measures to ensure the continuity of its functions and services as well as to guarantee the safety and well-being of all employees throughout the global pandemic.

The following initiatives were implemented by MCMC to deal with the COVID-19 pandemic:





Monitoring of personnel and non-personnel entry based on MySejahtera profiles complete with body temperature checks.



Among the gazetted guidelines and information issued and communicated to employees from time to time and in line with the National Recovery Plan

In order to control the COVID-19 transmission rate among employees in the office, MCMC implemented a rotational schedule office for employees required to work in the office. This was in response to the Government's recommendations for the National Recovery Plan (NRP), in moving towards the endemic phase. Employees' presence in the office was monitored to curb possible outbreaks on the premises. At the beginning of the year, for presence in the office, the set limit was a maximum of 30 percent and not exceeding four (4) hours at any time. The limit was then increased to 50 percent and 70 percent before returning to normal hours. By the end of 2021, 100 percent of the employees were back in the office. During this period, Heads of Divisions and Departments were instructed to ensure that the rotational work activities had no impact on the daily operations of MCMC as a whole.

The invaluable experience gained from the pandemic crisis management is used to evaluate and improve the risk management practices and crisis preparedness to enhance MCMC readiness in facing future challenges.

Continuous Improvement

MCMC will continue to improve on sustainability and resilience through more effective risk management, regularly improving work methods, as well as processes and approaches to ensure continued effectiveness.

ASSETS AND FACILITIES

The Property and Administration Division (PRAD) of MCMC is supported by the Facilities Management Department and the Asset Management Department. Both departments have an important role in handling the day-to-day operations of the MCMC building. In addition, PRAD also ensures that all facilities and assets belonging to the MCMC are in good condition to provide the best and conducive work environment for all employees at MCMC.

PRAD is also responsible in ensuring that all facilities and maintenance work in the MCMC building can reach the maximum level of operation. MCMC also has an area of office space of around 1,000,000 square feet, including the MCMC HQ Tower 1, Tower 2, Centre of Excellence (CoE) and NU Sentral Tower 1. PRAD has managed assets worth more than RM700 million including buildings, furniture and equipment, telecommunication equipment and information technology. All relevant employees need to, and have reached the required level of online class training organised by the MCMC in an effort to improve on the skills, competence and knowledge of employees, which is one of the steps towards high quality performance, especially when performing certain tasks in the organisation.

PRAD has the authority and responsibility to carry out and manage the following activities:

- a. Ensure facility management services can be carried out efficiently and reduce operating costs from the estimated amount.
- b. Ensure the sustainability of all investment properties under the management of MCMC.
- c. Ensure all employees at MCMC are provided with a sustainable, safe and secure workplace environment.
- d. Ensure best asset management for the MCMC.

Achievements in 2021

a. State Office Transformation

The State Office Transformation Programme was one of the main focus areas of MCMC for 2020 and continued to grow through 2021. MCMC has opened state offices since 2000 followed by the opening of State Offices and Branches in stages throughout the country. The State Office has gone through a transformation when starting on 1 November 2019, the administrative structure of MCMC in the states shifted from a regional concept to a state concept. The State Office Transformation framework was developed and through the State Office restructuring, was implemented from 15 September 2020.

This transformation process involves an increase in office space following the increase in the number of employees of MCMC and the development of operational functions in each State Office.

b. New Initiatives

Goal

To explore any latest technologies, approaches, systems, products in the market that can be introduced at the MCMC, especially related to operations at PRAD.

Objectives

- i. Increase the efficiency in the building by providing the employees better direction, as well as enhancing income and savings.
- ii. Improve processes and safety in the organisation.
- iii. Increase the value of buildings and value proposition of employees.
- iv. Practice new ways of working.

Method

Proof of Concept (POC) or Direct Purchase

- i. MCMC conducts a POC process to examine the latest technology available in the market to disinfect using ultraviolet-C (UV-C) light. The technology is believed to be able to deactivate the DNA of bacteria, viruses and other pathogens, thereby destroying their ability to reproduce and grow.

- ii. MCMC implements the digitalisation process by transforming manual processes into a computerised system that aims to increase efficiency and to facilitate monitoring and daily operations.

Status

- i. POC installation of the Air Disinfection Solution Unit using UV-C technology in Level 2 meeting rooms (M204 and M205), the Air Handling Unit (AHU) on Level 9, and the room of the PRAD Division Head were completed in the fourth quarter of 2021. PRAD will check the proven effectiveness and results of the POC installation through the Microbiological Air Sampling Lab Test.

- ii. Direct purchase of the Air Disinfection Solution units for the elevator system. Installation in Elevator A and Elevator D, and in the MCMC HQ TI was completed in the fourth quarter of 2021.

c. MCMC Digitalisation Project 2021

Migration of customer satisfaction system from manual touch screen to QR code.

d. Asset Auditing

Conducted annually and includes auditing at Headquarters, all State offices and branches. In 2021, asset audits were only carried out in some state offices such as Perlis State Office, Johor State Office and Negeri Sembilan State Office due to the COVID-19 pandemic.

e. Establishment of the Occupational Safety and Health Administration (OSHA)

PRAD re-established the Occupational Safety and Health Administration Committee at MCMC and appointed new members. The importance of OSHA is to provide safety and health measures in different work environments and sectors and to empower a framework that is concerned with the health, safety, and welfare of people involved. Every type of work at MCMC has the potential to expose individuals to hazards, and therefore the management of health and safety in the workplace is very important because along with protecting staff, it can also improve when employees can work in a conducive and competitive environment. OSHA in the MCMC is the main pillar for law, economy and morality. Its establishment can be shown as a starting point to emphasising aspects of occupational health and safety policies and procedures at MCMC.

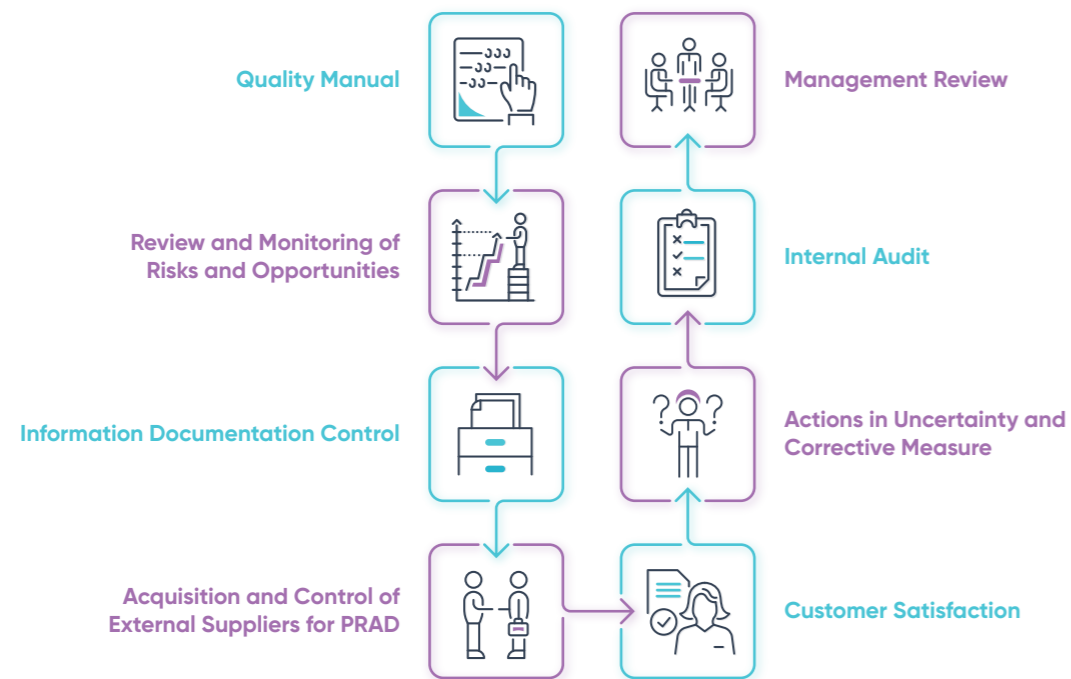
f. ISO 9001:2015 certified

ISO 9001 is defined as an international standard that outlines the requirements for a quality management system (QMS), which is a system that focuses on and controls the quality of an organisation. PRAD has been awarded ISO 9001:2015 since 15 July 2018 and received re-certification on 29 January 2021.

a. Scope of Quality Management System (QMS)

Property Management and Administrative Services for all MCMC Offices and Services through Project Portfolio, Facilities, Assets and Office Management by PRAD Operating in Cyberjaya.

b. Procedures and Process Flows for Quality Management System (QMS)



c. ISO 9001:2015 Recertification



d. PRAD Quality Policy

The Property and Administration Division at MCMC is responsible for ensuring that all workspaces and services within the building and organisation can be implemented through a portfolio of projects, facilities, assets and office management. This can be achieved through:

- P** Par excellence services in project, facilities, asset and office management
- R** Reliability through engaging stakeholder's needs effectively, efficiently and in a well-defined future state with continuous improvement
- A** Always improving to ensure QMS objectives are met
- D** Delivering services and managing our objectives through team work

FACILITIES MANAGEMENT DEPARTMENT PROJECT

1. State Office Transformation Project

State Office Focus Sector	Perlis	Kelantan	Selangor and Wilayah Persekutuan	Negeri Sembilan
Completion and Submission Status	Completed in the first quarter of the year 2021	Completed in the fourth quarter of the year 2021	Completed in the fourth quarter of the year 2021	Completed in the fourth quarter of the year 2021
Transformation Category	New Transformation of State Office	Transfer of State Office	Transfer of State Office	State Office Upgrade

2. Evidence Centre (Exhibit Room) at MCMC HQ Tower 2 (T2)

Completion and Handover Status	Completed in the fourth quarter of 2021
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The transformed Perlis State Office

3. Building Automation System (BAS) upgrade at MCMC CoE

The importance of BAS is to keep the temperature of the building within the specified range, light the room according to the occupancy schedule, monitor performance and device failures in all systems and manage the alarm facility in case of failure. This also refers to all mechanical and electrical systems (M&E) of the main building. The operation of the BAS system is critical to ensure that services in the building are not affected.

List of functions of the existing BAS at MCMC CoE:

- Control, schedule and monitor air conditioning systems, chilled water pump systems and façade lighting system
- Control and monitor all water pump systems (domestic, sprinkler – hose reel)
- Monitor heat conversion performance and readings to control the building environment
- Monitor mechanical and electrical room performance and readings
- Monitor the status and performance of the standby generator system
- Connected to the main fire alarm panel for the fire protection system which is intended to sound a warning or alarm when needed

Background

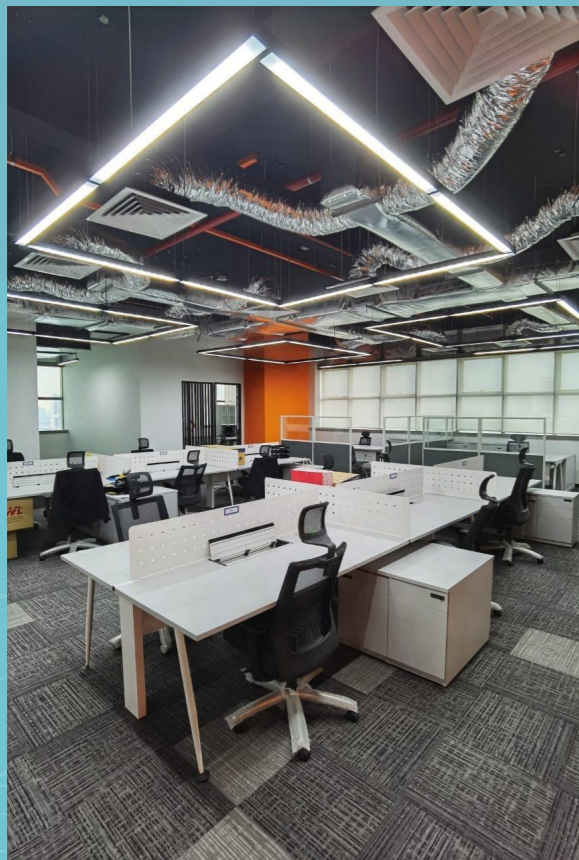
The system upgrade includes supplying and installing new BAS software, replace all hardware, sensors, Direct Digital Control (DDC) and all other related parts and accessories. With the improvement and upgrading, more efficiency will be achieved:

- Remote access capability
- Responsive control and monitoring of M&E equipment
- User-friendly Graphical User Interface (GUI)

Suggestions

Completion and Handover Status

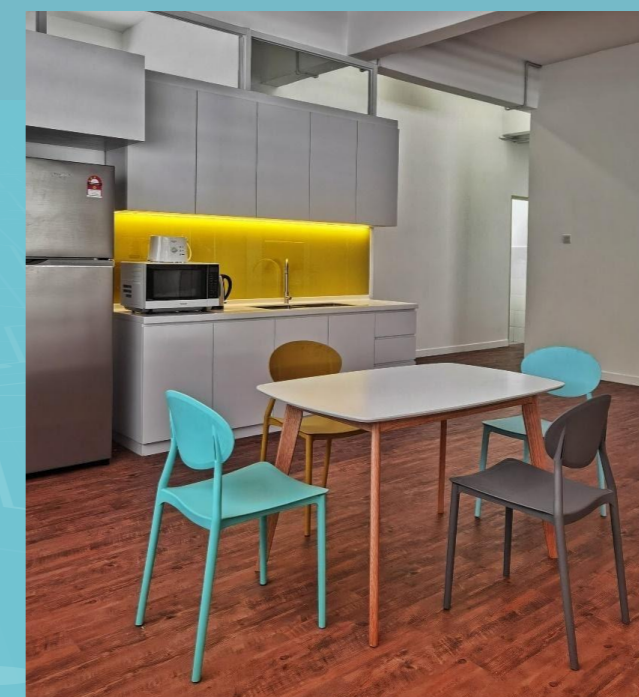
Completed in the fourth quarter of 2021



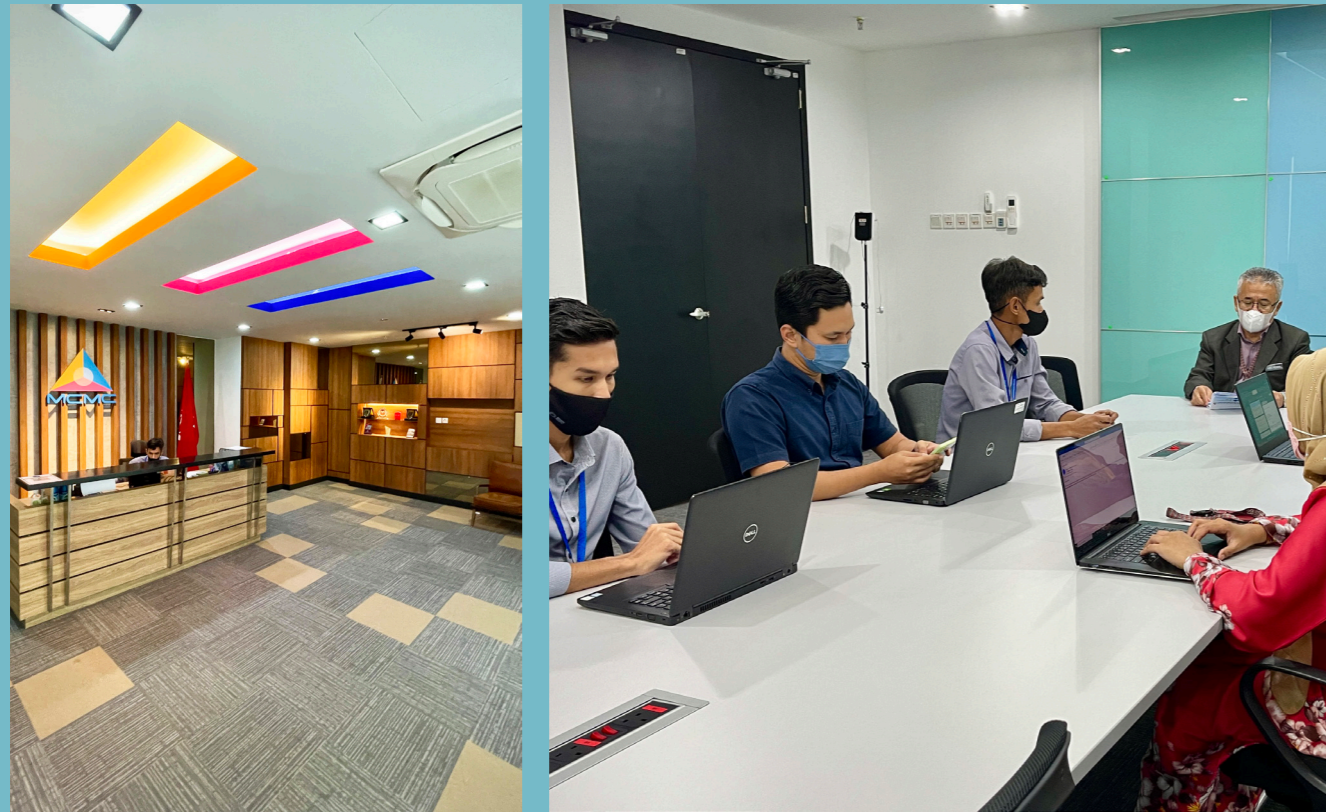
The transformed and transferred Selangor State Office and Federal Territory Office respectively

4. Investment Management

	NU Sentral Tower 1	MCMC Tower 2	ICOM Square Kuching
Background	In total, the building has 26 floors and 24 floors are fully rented out.	The building consists of 21 floors, 6 floors will be used for MCMC employees and 15 floors for rent. The ground floor has been leased to Gomez Polyclinic.	A 7-storey building where four (4) floors are for MCMC use and three (3) floors are for rent.
Occupancy Rates in 2021	92%	5%	100%
Targets in 2022	8%	20%	0
Total (NU Sentral T1, MCMC TOWER 2 (T2), ICOM Square Kuching)			
Area that can be rented out	485,032 square foot		
Leased area in 2021	260,454 square foot		
Income	RM1.48 Million		
Contract	40		
Tenant	16		



The transformed and upgraded Negeri Sembilan Office



The transferred and transformed Kelantan State Office

ASSET MANAGEMENT DEPARTMENT PROJECT

1. Asset Auditing

Background

Conducted annually and includes auditing at Headquarters, all State and Branch offices. In 2021, asset audits can only be carried out in some State offices such as Perlis State Office, Johor State Office and Sembilan State Office due to the COVID-19 pandemic.

2. Vehicle Management

Background

- a. MCMC has 108 types of vehicles such as 4WD, SUV, Sedan, MPV and DCMU.
- b. Replacement of vehicles for Headquarters, States and Branches
 - Replacement of vehicles used for more than five (5) years according to the asset disposal policy, which may affect the condition of the vehicle and increase maintenance costs. It is uneconomical to continue maintaining the vehicle.

Challenges

• The COVID-19 pandemic

PRAD continued to strengthen its operations by identifying potential risks and challenges that had the potential to negatively impact the organisation's performance. The COVID-19 crisis worsened in the middle of 2021 with the increase of COVID-19 cases. PRAD focused on the efforts to ensure the safety of MCMC employees and stakeholders. PRAD had planned and taken immediate action to deal with the pandemic by devising solutions to raise awareness about it as follows:

- i. Assisting in sanitation work - a total of 36 sanitation works throughout the MCMC Headquarters, including State and Branch Offices, with a total cost of RM56,081.
- ii. Providing thermal scanners and hand sanitisers (sanitisation).
- iii. Assisting in the preparation of the programme in terms of safety requirements and Standard Operating Procedures (SOP).
- iv. Providing signs, advisory notices and warnings related to SOPs for COVID-19.

• Annual Audit

PRAD conducts an annual audit service performance evaluation for the Quality Management System (QMS).

• MCMC's Emergency Response Plan (ERP)

Purpose

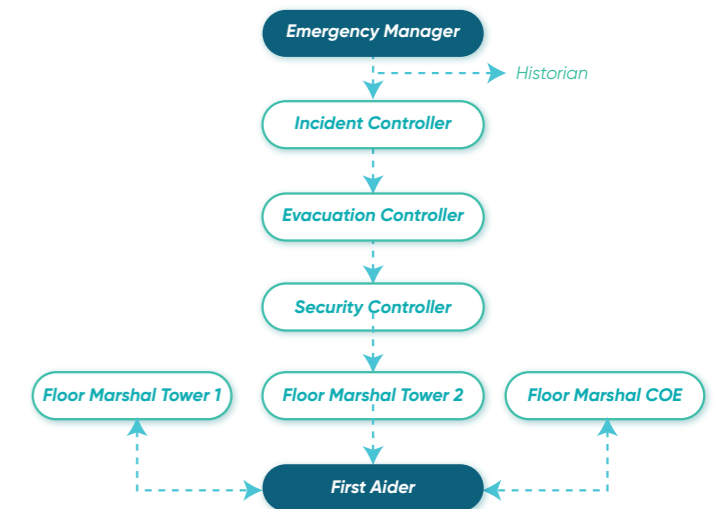
The MCMC's Emergency Response Plan (ERP) aims to protect its workforce from serious injury, from loss of property or life in the event of a major disruption or disaster on the premises such as fire, flooding in buildings, earthquakes and so on. In the event of such a disruption, this plan explains the actions and responsibilities that need to be taken.

Scope

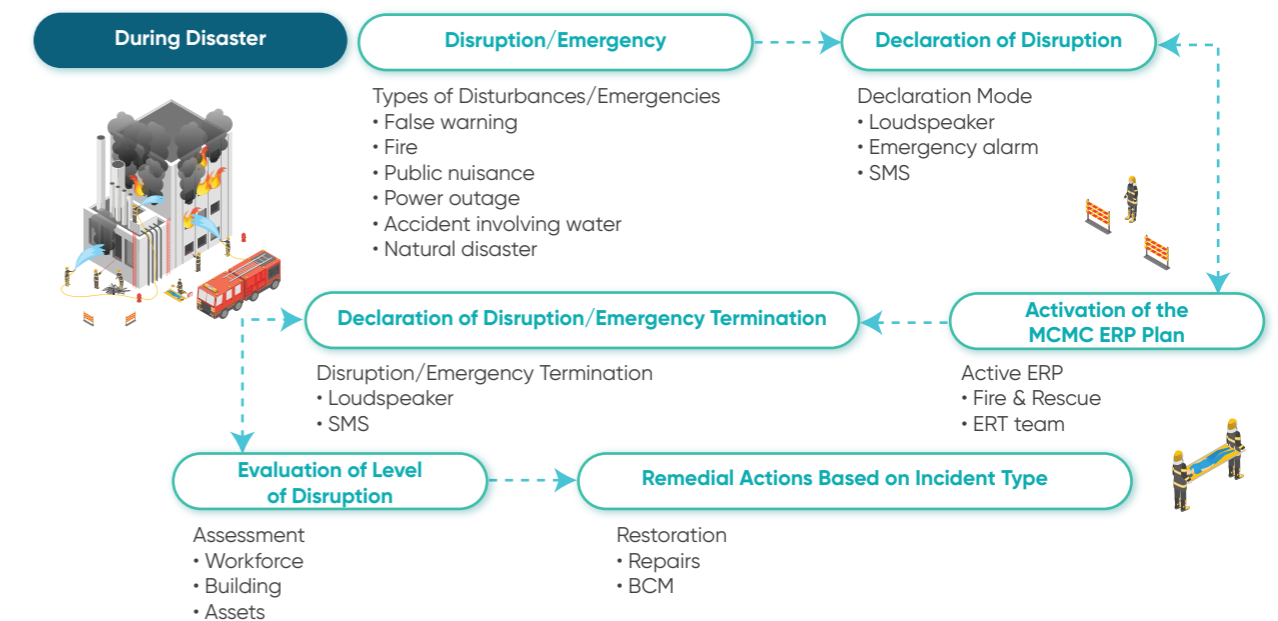
The MCMC's ERP covers all disruption or emergency situations that may involve injury and destruction to MCMC workforce and their property, and to assets of MCMC, covering the premises of MCMC at the following:

- i. MCMC Headquarters Tower 1 and Tower 2
- ii. MCMC Centre of Excellence (CoE) Office

The MCMC Emergency Response Team (ERT) Structure



ERP Process Flow



THE MCMC ACADEMY – TRAINING, RESEARCH KNOWLEDGE MANAGEMENT AND RESOURCE CENTRE

The MCMC Academy is the main gateway to the capacity and capability development learning activities. The MCMC Academy provides various training courses, research grants, knowledge management, activities and resources to internal and external stakeholders.

The MCMC Academy consists of three (3) departments:

1. Training Centre (TC)
2. Research Enterprise Department (RED)
3. Knowledge Management and Resource Centre (KMRC)

1. Training Centre

The role of the Training Centre was expanded in 2021. In addition to continuing support in the implementation of development programmes and facilitating continuous learning for MCMC employees, the Training Centre has taken steps to implement collaboration and cooperation with Higher Learning Institutes (HLIs), Government bodies, professional institutions and training providers in an effort to promote programmes for capacity development for the industry.

The Training Centre is committed to achieving a status of excellence as a leader in training, capacity development and knowledge sharing for the Communications and Multimedia (C&M) industry through various initiatives of value to the MCMC and industry development, thus making the Academy as the main point for learning and development.

Among the main activities successfully implemented in 2021 include:

a. MCMC Capacity Building Programme (MCBP)

For the first time, the Training Centre inaugurated four (4) training programmes for the external stakeholders of the MCMC. The programme focused on selected topics under supervision of the MCMC and the Communications and Multimedia industry. This programme gets participation from the Local Authorities, the Government and related agencies, law enforcement agencies and institutions of higher education. Until December 2021, a total of 14 MCBP programmes had been successfully implemented.

The Training Centre also collaborates with stakeholders of MCMC to provide programmes according to learning needs. In collaboration with the MCMC Melaka State Office recently, two (2) successful programmes were implemented, namely Open-Source Intelligence (OSINT) for the Melaka PDRM branch and the Briefing on the Use of Communication Planning Guidelines (Transmitter Structure) which was attended by the PBT and related consultants. The Maritime Radiocommunication Training Programme was also conducted in collaboration with the Malaysian Maritime Academy (ALAM).

b. Collaboration with Higher Learning Institutes (HLIs) for the development of Micro Credential (MC) Courses

The Training Centre has established cooperation with MMU and UTM in the development of the Micro Credential (MC) course related to the 5G ecosystem and areas of competency related to C&M. A Micro Credential is a learning certification of a set of smaller courses or modules or units designed to provide students, executives, professionals with knowledge, skills, values and competencies in a more specific field of study or practice. This credential or certification has been accepted or assessed as part of the credit contributing to an academic degree qualification by MQA. The Micro Credential can be a one-off qualification or be part of the training required by the employer for the final qualification of the employee.

c. Continuation of the e-Learning Platform (iLearn)

The iLearn online learning platform launched in 2020 provides MCMC employees flexibility to access courses anytime and from anywhere.

Two (2) online learning platforms provided:

LinkedIn Learning

LinkedIn is an eLearning platform that provides more than 10,000 online courses and is offered to all MCMC employees. As of 31 December 2021, the MCMC's LinkedIn Learning account activation rate was at 96 percent. The Training Centre had also utilised LinkedIn Learning to provide appropriate learning paths to meet training and internal development needs according to the applications received. Among them are Excel Learning Path and Microsoft Excel: Dashboards and Charts for Strategic Information Technology Division, and Mastery Development Series (M-Series) for all employees of the MCMC.

COURSERA

COURSERA is an eLearning platform that offers more than 3,000 certification/specialisation courses. Specifically in 2021, the Training Centre in collaboration with the Coursera Skills Transformation consultant launched the MCMC Coursera Employee Resilience Programme which provides 61 selected courses that can be accessed by all MCMC employees.

d. Implementation and management of internal and external learning and development programmes for MCMC employees

In 2021, a total of 183 programmes involving 29,146 hours of learning were conducted. Due to the pandemic, 161 out of 183 programmes were conducted virtually. It is a long-term commitment for the Training Centre to provide appropriate courses to meet technical/functional requirements for employee competency development. Among them is the implementation of Learning and Development Property and Admin. Division (PRAD) (Phase 1 and 2) and Converged Telecommunications Policy and Regulations (CTPR) Series consisting of Foundation, Advance I, Advance II and Master Class.

Despite the COVID-19 pandemic, the planned important training programmes have been successfully implemented virtually, physically and also hybrid. The challenges of online training programmes include unstable Internet connection and the lack of a conducive learning environment

when the employees are at home. In addition, for hybrid and physical training programmes, everything is carried out in accordance with the SOP guidelines and procedures set by the Ministry of Health.

Due to the movement restrictions (MCO) during the pandemic, face-to-face training was affected. E-learning, however, has become the new norm for the MCMC employees since the beginning of 2020. Online learning as a basic platform makes the learning process a more creative and flexible for the employees. The online courses are cost-effective and easily accessible especially for employees of the MCMC based in state offices.

In order to improve the agility and resilience of the employees in dealing with the challenges brought upon by the COVID-19 pandemic, the Training Centre was responsible to ensure the continuity of training and development of the employees, as well as increasing the effectiveness of skills development and life-long learning of the MCMC workforce.

2. Research Enterprise

MCMC facilitates collaboration with research institutions to support the interest and mandate in improving the Communications and Multimedia industry in Malaysia by providing research grant under the Digital Society Research Grant (DSRG).

In 2021, the DSRG programme has been expanded to two (2) grant cycles in a year. In total, 271 applications from 45 universities were received in 2021.

DSRG Research Grant

Research funded under DSRG builds the research evidence base necessary to promote and improve society's understanding of the human and social factors that affect and contribute to the adoption and usage of digital technologies and services. Awarded research will receive a grant of up to RM10,000 in value for each project based on a research period of not more than six (6) months. All completed research will be featured in MCMC's Media Matters publications, which are published annually. In 2021, MCMC collaborated with 16 researchers from both public and private universities. Awarded research projects for the year were developed to clarify regulatory and developmental gaps and inform actionable outcomes in the following two (2) categories:

- **Research on Digital Citizenship and Cyberwellness** aimed at clarifying gap areas influencing participation, positive uptake and wellness in an increasingly digitally dependent world; and
- **Research on Digital Inclusion** aimed at gap areas related to factors that impede equality of access and challenge the paradigm of ensuring that no one is left behind or is deprived of digital connectivity and its benefits.

MCMC Research Symposium

The research findings from DSRG were presented at the MCMC's annual research symposium held on 7 July 2021 and 1 December 2021. Both symposiums were conducted virtually in a webinar format.

Communicate@MCMC Programme

In 2021, the Communicate@MCMC programme was introduced and launched on 7 October 2021. The one (1) hour webinar aimed to support the dissemination of research work under DSRG. The webinar complemented the dissemination works comprising of MCMC Research Symposiums, Media Matters publications and Media Articles produced in 2021.

Disrupting Harm Collaborative Research Initiative

Furthermore, the year 2021 witnessed this department continue their role as Secretariat to the Technical Working Group for the Disrupting Harm programme established in 2020. This project is led by the Global Partnership to End Violence Against Children (End Violence Fund) in collaboration with ECPAT International, INTERPOL and UNICEF Office of Research – Innocenti, with support from Government departments and agencies, including MCMC, KPWK, and PDRM. This study is part of a research project to generate new evidence on the scope and nature of online exploitation and sexual abuse of children in 14 countries in South and East Africa and Southeast Asia. For Malaysia, the launch of the National Report is expected to take place in the third quarter of 2022.

Survey on PerantiSiswa Keluarga Malaysia

In support of the *PerantiSiswa Keluarga Malaysia* package announced in the 2022 Budget, MCMC has taken the initiative to conduct a survey entitled *Kajian Persepsi dan Penerimaan Pelajar B40 IPT terhadap Pakej PerantiSiswa Keluarga Malaysia* to understand the perception, level of acceptance, and verify suitability of the devices among the Institute of Higher Learning (IHL) students from the B40 family. The first phase of data collection took place in December 2021 at six (6) HLIs in Selangor and Negeri Sembilan. However, moving forward, MCMC, intends to expand the survey to obtain statistics at the national level where the next survey data collection is expected to take place in the first quarter of 2022.

3. Knowledge Management and Resource Centre (KMRC)

Knowledge Management and Resource Centre (KMRC), serves as a platform for various knowledge and information sharing activities to encourage and cultivate a knowledge-sharing culture among the employees of the MCMC and the industry. It is also a centre for collecting, organising, sharing and maintaining knowledge and information resources in the form of printed materials, compact discs and online information. The provision of knowledge and information materials is specific to telecommunications and multimedia materials.

Additionally, KMRC is developing a Knowledge Management System (KMS) to ensure that the cultivation of knowledge and information sharing can be carried out continuously, systematically, and in an integrated manner.

Focus and responsibilities:-

- Organising and implementing knowledge and information sharing activities.
- Coordinate, collect, organise, share and maintain information resources in printed materials, compact discs or online.
- Improve the capacity and accessibility of information in the organisation.
- Publication of the annual (dot)myConvergence magazine and KMRC monthly newsletter.
- Develop a Knowledge Management (KM) application system to centralise and coordinate the organisation's activities to acquire, update, share and disseminate knowledge.

Achievements in 2021

a. Publication of the 20th issue of the (dot)myConvergence Magazine

The 20th Issue of (dot)myConvergence Magazine which was published in August 2021 highlights initiatives by the MCMC and current issues in the field of telecommunications and multimedia. The (dot)myConvergence e-magazine is also available on the MCMC website and social media.

b. Knowledge Sharing Platform TeaTalk@3

TeaTalk@3's knowledge sharing activity aims to share the latest knowledge and information related to telecommunications, multimedia, technology and current issues. Throughout 2021, a total of 32 knowledge sharing sessions were held and "The Human Library" series was introduced.

c. Mini Libraries at MCMC State Offices

In order to create a culture of knowledge among MCMC staff, KMRC, in collaboration with the State Transformation and Coordination Division, sparked the idea of forming Mini Libraries in MCMC State Offices. To begin with, this mini library project was implemented in two (2) state offices, namely in Terengganu and Pahang.

d. Knowledge Management System

KMRC is collaborating with Strategic Information Technology Division to carry out the development work of the Knowledge Management (KM) System at MCMC to coordinate sharing and dissemination of knowledge activities. The system is expected to be completed in the third quarter of 2022.

e. Acquisition and Cataloguing of Resource Centre Materials

KMRC serves as a centre for purchase of reference materials and subscription. KMRC also provides advisory services to the user department for each reference material to be purchased. Each material purchased will go through a cataloguing process to facilitate users' access to the library system to obtain accurate information.

With the amount of work and preparation required for a one (1) hour knowledge sharing session, it is challenging to find a speaker who is credible and ready for an agreed upon session. There have been many instances where session details and content have been changed or updated at the last minute and even cancelled due to lack of commitment from the speakers.

The processing of library materials during the MCO period turned out to be a test of perseverance and ability. It requires a physical presence in the office for the process of receiving, cataloguing and organising using specialised library equipment such as barcode printers and scanners, barcode stickers, stamps, etc.

The COVID-19 pandemic increased the use of technology where knowledge sharing sessions, meetings with vendors and discussions with stakeholders are conducted virtually. Before COVID-19, the number of attendees physically present had to be considered. However, with the employment of virtual meetings such as Zoom, KMRC can invite and encourage many more employees to participate, especially employees in State Offices, while adapting to the transition from physical to online settings. Although a stable Internet connection and speed is critical, online activities open up opportunities for all employees to participate regardless of location, and support use with multiple devices such as laptops, tablets, mobile phones and others.

During MCO 3.0, KMRC faced delays in the delivery and arrival of library materials, as bookstores around the world were closed and deliveries were restricted to essential services only which affected the processing, cataloguing and distribution of KMRC materials. However, KMRC managed to resolve and complete the processing on time with excellent teamwork.

PROCUREMENT

The Procurement Division aims to ensure that every procurement activity of goods and services carried out is balanced in terms of finances and the final value obtained. The Procurement Division also manages the tender process, develops procurement policies and procedures, manages procurement data, and administers the MCMC procurement system. All these functions are carried out with care, integrity, and efficient governance.

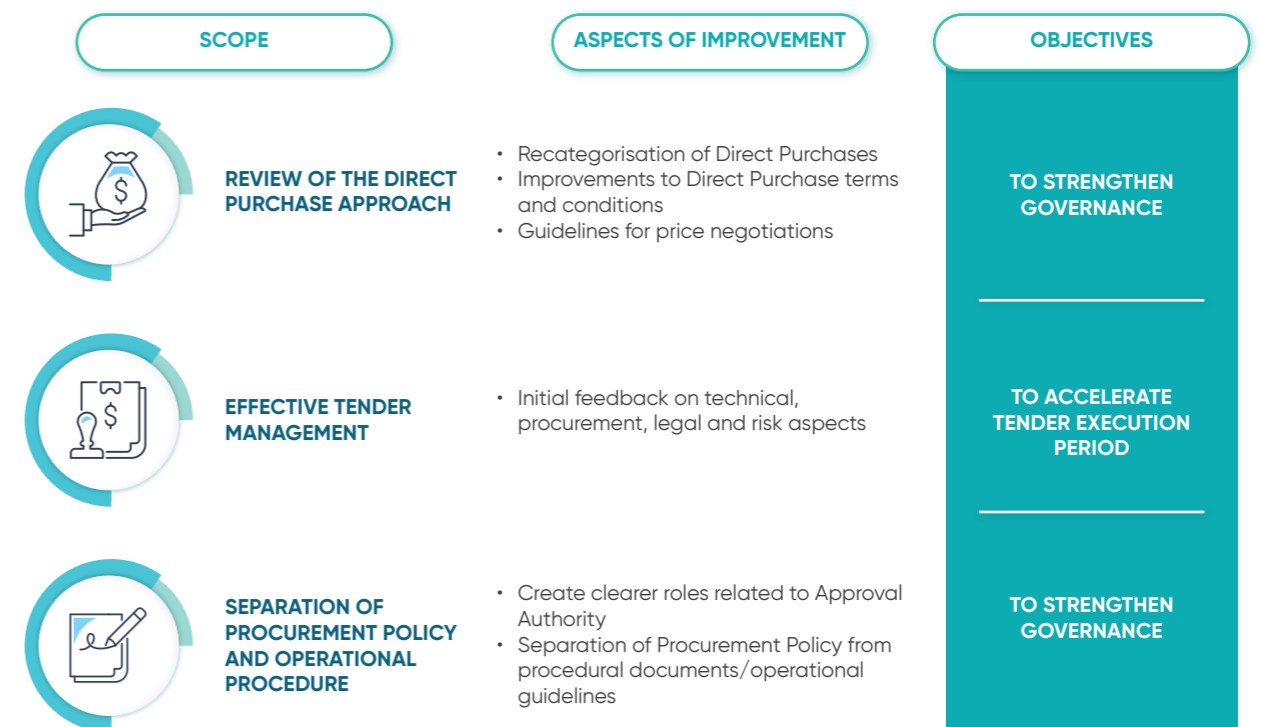
In 2021, in line with the MCMC target perspective, identified focus areas and related strategic objectives; the Procurement Division focuses on strengthening the efficiency of its operational governance and procurement process and increasing compliance with audit requirements. For this purpose, several key projects have been identified, the success of which ensures a more effective rate of risk management in procurement activities, higher accuracy in the procurement implementation process, increased effectiveness of the procurement process, and strengthening of procurement governance.

Strategic Review of Procurement Policies and Procedures

The Procurement Division continuously transforms its processes and procedures through improvement efforts such as developing procurement reference documents, reviewing existing processes, and introducing better procurement process management methodologies. For example, Tender Guidelines, the procurement process related, and Standard Operating Procedures (SOP) were reviewed, developed, and completed in 2016 E-procurement, introduced in 2017, involved digitising the Request for Quotation (RFQ) process, Supplier Registration, and Sale of Tender Documents. Then, between 2019 and 2020, the Procurement Division strengthened its governance by reviewing the Financial Authority Limit and tightening the Direct Purchase criteria.

In 2021, a comprehensive strategic review of procurement processes and procedures that includes a review of the Universal Service Provider (USP) Nomination process and the empowerment of the MCMC State Offices was carried out. This study was conducted after obtaining input and suggestions from relevant stakeholders and referencing benchmarks of other agencies.

The diagram below shows the five (5) main solutions with suggested improvements and expected results, which the Procurement Division has formulated under this comprehensive strategic study. At the end of the study, three (3) procurement documents and one (1) new procurement process were introduced, namely Procurement Policy 2021, Direct Purchase Guidelines and Tender Guidelines 2021.



Strategic Review of Procurement Processes and Procedures: Suggested Improvements and Expected Results

a. Procurement Policy 2021

The 2021 Procurement Policy aims to streamline the procurement processes and procedures of the MCMC by providing a standard reference as a guiding principle. It is to ensure that all procurement processed re-orderly to maintain transparency, governance, and get the best value for money for MCMC.

This Procurement Policy 2021 also details procurement methods and processes and guides the preparation of procurement documents, financial authority limits, valuation ethics, currency usage policy, and priority policy for Bumiputera companies.

b. Direct Purchase Guidelines

The development of Direct Purchase Guidelines aims to provide more precise references on the steps and processes to be followed for Direct Purchase and Direct Appointment. This is part of the Procurement Division's initiative to improve and strengthen governance while obtaining the best value for MCMC in procurement activities. This method is only allowed for procurement that can't be carried out through a tender and request for quotation process, and must be carried out according to a strict procedure.

c. Tender Guidelines 2021

The Tender Guidelines were developed in April 2010 and have been updated four (4) times in 2013, 2016, 2019, and 2021. Periodic review is vital to ensure the continuity of effective management in the tender process and to update tender procedures to improve operational efficiency and governance.

The most recent review in 2021 aimed to improve the tender management process, where the Tender Specification Challenge (TSC) process was introduced to replace the Specification Committee. Introducing TSC will optimise the entire tender process, shorten the tender cycle time, and speed up the closing of tenders and the awarding of tenders to successful bidders.

The MCMC Procurement Code of Ethics Handbook 2021

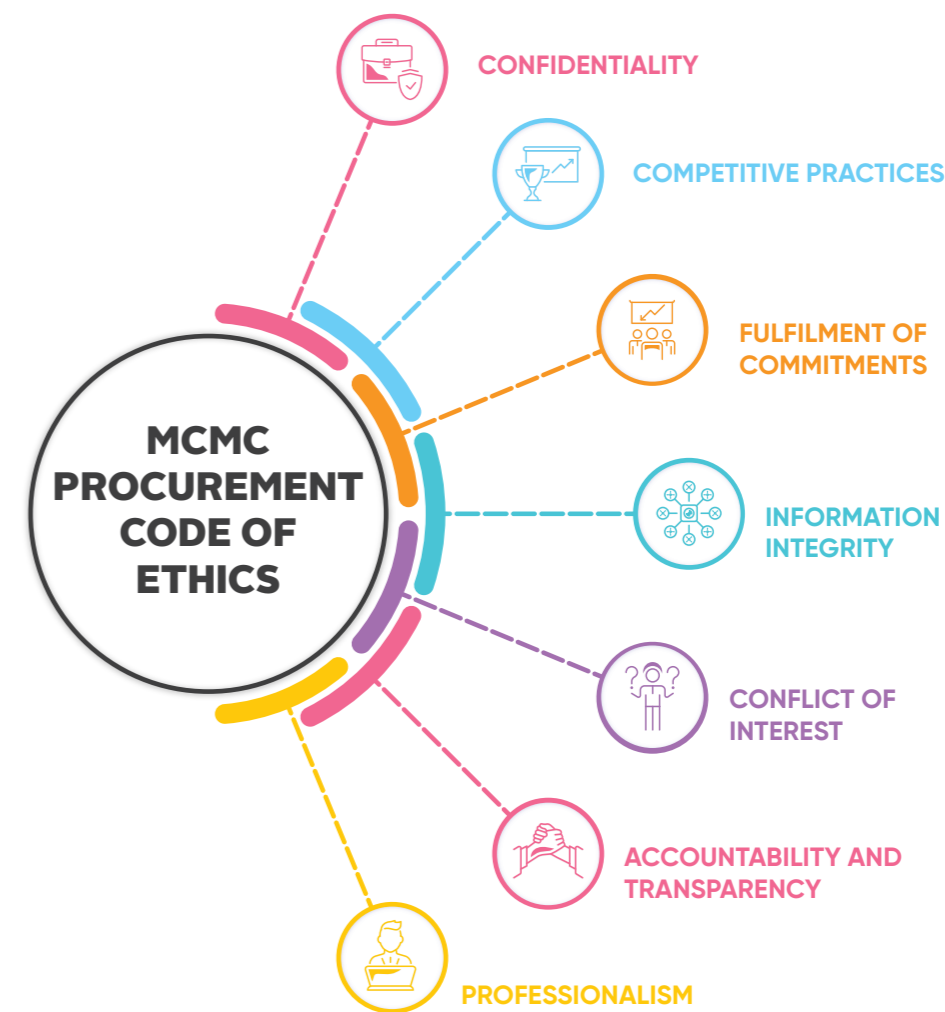
The MCMC Procurement Code of Ethics Handbook was developed in 2017 and updated in October 2021. The Handbook is updated with reference to various industry governance best practices. It serves as a guideline to ensure that the MCMC's procurement process is conducted with integrity, transparency, and good governance. This Handbook applies to all the MCMC internal and external stakeholders. It should be read with the relevant Acts, the MCMC Employee Terms and Conditions, the MCMC Circulars and internal policies, and the MCMC procurement policies and procedures.

This Handbook covers seven (7) main topics and emphasises the MCMC's main code of ethics in carrying out procurement activities. All procurement matters must be carried out with a high level of commitment and professionalism, as well as being fair, honest, and with high integrity.

MCMC also adheres to the principles of accountability and transparency in sharing relevant information with all stakeholders through the e-procurement platform. Stakeholders are responsible for ensuring that all information provided to the MCMC is accurate and true. All parties involved in procurement activities must also always avoid any form of conflict of interest. However, in the event of a conflict, MCMC must be informed in a written report. The person in conflict must immediately exclude himself from engaging in the procurement activity.

Stakeholders are also responsible for protecting confidential information and ensuring the accuracy and integrity of information shared with MCMC, the Tender Committee, and the MCMC Management. MCMC will not tolerate any form of anti-competitive behaviour.

Suppliers and other stakeholders can access this Handbook through the MSMAART Procurement portal and the MCMC website.



Supplier's Letter of Undertaking (LOU)

To ensure continued compliance with the MCMC's procurement policy and ethical procurement procedures, the Procurement Division has issued a 'Letter of Undertaking to Comply with the Malaysian Communications and Multimedia Commission's Procurement Code of Ethics Handbook (LOU)' to registered suppliers of MCMC from October 2021. This LOU was distributed after completing a webinar titled 'Integrity and Code of Ethics Programme' (ICoE) held on 21 October 2021 and 24 November 2021, respectively. This webinar was conducted in collaboration with the MCMC Academy and is part of the MCMC's initiative to deliver effective communication to its stakeholders.

By signing the LOU, the supplier undertakes and agrees:

1. To remain bound by the contents of the Handbook (including revisions);
2. To uphold the principles and comply with all the requirements stated in the Handbook; and
3. To comply and be fully committed in carrying out the supplier's responsibilities and/or obligations.

The supplier further undertakes to protect the interests of MCMC throughout their involvement in the procurement activities. The supplier also agrees to indemnify the MCMC against any costs or expenses resulting from the supplier's breach or failure to perform their commitments.

Empowerment of MCMC State Offices

Although the COVID-19 pandemic had a major impact on the national economy, 2,688 procurements activities were recorded in 2020, of which 930 were at the state level. The trend of this activity is expected to continue to increase annually as more projects have been planned to be implemented throughout the country. In order to ensure more efficient and productive implementation of initiatives/programmes, MCMC acted to empower the role of the MCMC State Office in managing low-value procurement activities. This aligns with the MCMC's strategic objective to transform the internal processes of the State Offices and enable them to function as a microcosm of MCMC.

The scope of this empowerment is focused on low-value and low-risk procurement activities only. Within the set financial limits, the empowerment enables the MCMC State Offices to make low-value purchases, carry out vehicle maintenance, approve food and beverage orders for meeting purposes, as well as confirm approvals for domestic flight and hotel purchases. As a control measure approach, some restrictions will be imposed. Low-value purchases must include something other than purchasing IT equipment/systems, assets, events, and training. The MCMC headquarters must approve any food and beverage orders for purposes other than planned meetings.

In addition to improving procurement efficiency and enabling a more efficient procurement process at MCMC State Offices, potential savings through purchasing from local suppliers in each state due to lower delivery charges are also expected. This empowerment is also seen as a measure of support and encouragement for local suppliers to register as suppliers, which in turn helps promote local economic development by generating new businesses.

Supplier Management Committee (SMC)

The Supplier Management Committee (SMC) serves as a platform to review and approve new registrations and renewal applications as registered suppliers of the MCMC. Applications are open to private and sole limited companies, sole proprietorships, associations, registered consortiums, and partnerships operating for at least three (3) years. Applicants must also have a minimum paid-up capital of RM50,000.00 and have supporting documents, appropriate qualifications, and experience relevant to each job category applied. Additional relevant documents should also be included, depending on the applicant's type of business. This mandatory requirement is part of the applicant's evidence of credibility and suitability to participate in procurement activities as a registered supplier.

The SMC meets monthly following with the MCMC's 45-day customer charter. All decisions made by the SMC will be communicated to the applicant immediately.

Supplier Performance and Consequence Committee (SPCC)

The establishing Supplier Performance and Consequence Committee (SPCC) objective is to continuously monitor and evaluate supplier performance through a transparent review process. This ensures that MCMC gets the best value for money through the procurement of better-quality goods and services. The SPCC will meet quarterly or as needed. The SPCC's Terms of Reference (TOR) is to discuss supplier

performance as well as determine appropriate action on suppliers who do not achieve the required performance level. The evaluation results that have been made by the SPCC will also be presented to the Supplier Management Committee as a reference in considering the supplier's registration renewal application. The SPCC has convened three (3) times in 2021 to finalise the composition and TOR of the SPCC. The supplier performance evaluation began on 1 September 2021 in the third quarter of 2021 and is to be presented to the SPCC after the close of the first quarter of 2022.

Digitalisation of the Procurement Process

The digitalisation of the procurement process through developing and implementing the MSMART portal ensures compliance with procurement policies, improves efficiency, and reduces the MCMC's overall cost. It also provides a comprehensive perspective on spending that can be scrutinised through a centralised platform. This will enable better cash flow planning while monitoring the MCMC's spending patterns comprehensively and in detail. The MCMC's transparent procurement practices are also proven by ensuring that the MSMART portal displays information related to quotations and tenders to participating suppliers.

The successful improvement of the MSMART portal and the integration of the procurement system with the financial system in 2021 will increase operational productivity by simplifying the procurement workflow. This is achieved by automating repetitive processes that further streamline the procurement process. It also enables the Procurement Division to obtain up-to-date data to support daily procurement activities. In addition, better interaction and cooperation between the Procurement Division and other stakeholders will also be achieved. The digitalisation of the procurement process also facilitates the empowerment transformation of MCMC State Offices. It enables them to handle procurement functions at the state level with limited financial capacity.

In the meantime, the digitalisation of the tender process improves governance and transparency, increasing operational productivity and working effectively through the automation of standard documents, which in turn reducing the risk of human error. A more effective and efficient tender process management can also be seen from a shorter cycle time to process tender documents with a higher level of compliance by the user department.

'Red Book' Adaptation Programme for K-KOMM Agency

In line with the aspirations of MenKOMM during the mind-setting session with MenKOMM in conjunction with the K-KOMM Retreat Programme 2021, agencies were asked to speed up initiatives in the programme to strengthen good governance, including activities related to procurement. For this purpose, MenKOMM had suggested agencies to make reference to the guidebook, 'Red Book', used by Government Linked Companies (GLC) during the GLC transformation programme which was carried out in 2004 through 2015. MCMC is tasked to be the facilitator to carry out the 'Red Book' programme with related agencies.

MCMC collaboration with K-KOMM had implemented one (1) workshop on implementation of the 'Red Book' with the management of the agencies on 1 March 2021. This

programme was chaired by the Chairman of MCMC, Dato' Dr. Fadhlullah Suhaimi Abdul Malek. It was attended by all agencies under K-KOMM, namely MDEC, FINAS, CyberSecurity Malaysia, MYNIC, and MyCreative Ventures/Cendana. Also present was the Deputy Secretary General (TKSU) of K-KOMM, Mr. Ma Savanesan Marimuthu, representing the Secretary-General (KSU) of K-KOMM. In this programme, the MCMC's Chief Financial and Strategy Officer explained the 'Red Book' programme for the GLC, including an emphasis on appropriate adaptation procedures at the agency level.

Based on further discussions at the level of agency procurement officers and implementation reports from each agency, MCMC made a report with recommendations to the Minister of Education and Culture, as summarised below:

1. The implementation of procurement best practices based on the guidance from the 'Red Book' has been adapted at the level. However, the agencies will implement improvements to the existing initiatives such as the action plan provided, so that it coincides with the Government's aspirations to strengthen good governance in procurement-related activities; and
2. The workshop programme among agency procurement officers will continue to be held periodically to ensure that the procurement process in each agency is always guided by principles and best practices, including those outlined in the 'Red Book'.

STRATEGIC PLANNING

The Strategic Planning Division (STRAPD) is responsible for developing the MCMC Strategic Plan and strategic priorities that supports the direction and focus areas of the organisation in alignment with national plans. In addition, STRAPD identifies a strategic approach that is in line with the initiatives implemented at the organisational level in planning as well as coordinating the implementation of strategic initiatives that contributes to the strategic priorities. process involved in setting communication and multimedia policies.

STRAPD plays a role in the following aspects:

- Preparation Developing MCMC Strategic Plan and strategic priorities in setting to set the direction and focus of the Commission based on the stewardship provided by on the decision of the leadership in terms of ensuring the long term benefits of the end users, continuous development of the Communications and Multimedia industry and improve the efficiency and effectiveness of the Commission's role and regulatory functions;
- Coordinates the implementation of the MCMC Strategic Plan by monitoring and reporting on the organisational performance of the topline key performance indicators to the Commission;
- Ensures alignment of the MCMC Strategic Plan with national plans such as RMK-12, MyDIGITAL, and others;
- Supplying timely inputs to the Ministry of Communications and Digital and key stakeholders through strategic coordination of feedback on policy matters, periodical reports and special administration matters pertaining to the communication and multimedia issues;
- Synthesising inputs for development of policy recommendation to improve corporate and administration matters of the Commission; and
- Leading cross sector initiatives and supporting the implementation of organisation wide strategic initiatives by other Divisions.

Key Performances and Achievements 2021

The STRAPD led the consultative process for the development of the MCMC Strategic Plan and priorities at the Commission level based on the Balanced Scorecard methodology to ensure:

- Implementation of a top-down approach in setting annual work objectives and targets;
- Cultivation of teamwork;
- Emphasis on qualitative in addition to quantitative approaches; and
- Work planning based on four (4) BSC perspectives that comprise of financial, customer service, internal process improvement as well as learning and capacity development.

Through the implementation of the MCMC 2021 Strategic Plan, 16 Key Performance Indicators (KPIs) have been set as the performance indicator for MCMC's main focus. The following are prominent examples of the main achievements of 2021 which is a result pursuant to the facilitation process that has been implemented:

KPI	2021 TARGETS	ACHIEVEMENTS (31 DECEMBER 2021)
% 4G coverage in populated areas	95%	A total of 95.4% of populated areas have been covered by mobile broadband
# Average mobile broadband speed	30Mbps	An average of 37.3Mbps mobile broadband speed had been recorded following improvements in communication infrastructure throughout 2021
# Premises accessible to fibre network	6.5 mil	A total of 6.85 million premises are available with fibre optic network access
# New spectrum bands allocated	2	The designation of two (2) new spectrum bands aims to prepare the country towards the implementation of 5G. Following the 5G planning that has been brought forward a year early, all three (3) spectrum bands for 5G use have been allocated on 31 May 2021
# Successful new entrepreneurs developed via the support of PEDi	500	A total of 10,893 new entrepreneurs were successfully developed
# New jobs created in local communities	400	Successful activities carried out at PEDis actively nationwide resulted in 3,374 new jobs created in various local communities.
# Rangkaian PAKEJ	17,000	A total of 20,510 Rangkaian PAKEJ were successfully established

Value Generation

- Facilitation of direction setting in 2022 through the 2022 MCMC Annual Work Plan is based on four (4) main Focus Areas and eight (8) Strategic objectives which is a continuation from the 2021 MCMC Business Plan (examples of main focus include JENDELA initiatives and new focuses such as Digital Economy and Industry Development).
- Prepare 5G implementation framework by the 5G Implementation Group including the issuance of a licence to Digital Nasional Berhad and the setting of activities for 2021 and beyond.
- Develop Infrastructure Asset Management (IAM) Framework via phased implementation.
- Set 5G implementation framework detailing critical activities to ensure targets are achieved.

INTERNATIONAL AFFAIRS

The International Affairs Department (IAD) of MCMC leads, coordinates and implements responsibilities in terms of representation, negotiation and information related to international regulation for the communications and multimedia sector.

IAD is divided into several units based on regional portfolios, namely ASEAN, ITU and APT, Postal and Bilateral Relations portfolios, and also APEC and Trade portfolios.

The IAD portfolio includes:

a. ASEAN Portfolio

Responsible for matters related to regulation and relations at the ASEAN level. This includes liaising directly with stakeholders such as K-KOMM, the ASEAN Secretariat, counterparts at the ASEAN level, other ministries such as the Ministry of Foreign Affairs and the Ministry of International Trade and Industry (MITI), as well as related stakeholders. The ASEAN Portfolio also attended ASEAN-level meetings, presenting proposal papers and arguments to highlight K-KOMM's joint views, suggestions, and motions related to regulatory activities, development and direction of the communications and multimedia industry for Malaysia.

b. Postal Portfolio and Bilateral Relations

The Postal and Bilateral Relations Unit manages international regulatory matters for the postal and courier industry, as well as matters related to bilateral relations between Malaysia and other countries. This unit works closely with the Postal and Courier Division of the MCMC, including liaising directly with stakeholders such as K-KOMM, counterparts at the Universal Postal Union (UPU), and industry-related bodies such as Pos Malaysia Berhad.

The UPU (Universal Postal Union) is a specialised UN agency responsible for the development and cooperation of international postal services where the Administrative Council (CA) functions as the main decision-making body of the UPU and the Postal Operations Council (POC) focuses on technical and operational matters. Malaysia has been a member of the UPU since 1958 and is actively involved through MCMC, K-KOMM and Pos Malaysia Berhad.

c. ITU and APT Portfolios

The International Telecommunication Union (ITU) and Asia Pacific Telecommunication Community (APT) are responsible for matters related to Malaysia's membership and position in international organisations. This unit deals with various stakeholders such as K-KOMM and the Ministry of Foreign Affairs.

The International Telecommunication Union (ITU) is a specialised agency of the United Nations that is responsible for developing and administering telecommunications worldwide. Malaysia has been a member of ITU since 1958. The Asia-Pacific Telecommunication Community (APT) is a multi-Government organisation that works with the telecommunications industry to advance the communications, information and innovation technology sector for the Asia Pacific region. Malaysia has been a member of APT since 1979.

d. APEC Portfolio and Trade

APEC (Asia Pacific Economic Cooperation) and Trade is responsible for all affairs and positions for Malaysia in economic development and trade in the communication and multimedia sector. In this regard, the IAD officer in charge of this unit cooperates with several other ministries, especially K-KOMM and MITI.

Achievements in 2021

Some projects and presentations of proposal papers from the communication and multimedia sector involving IAD are as listed:

a. ASEAN: Presentation of the proposal 'Identification and Codification of Areas of Regulatory Best Practices for ASEAN' which has been approved at the ASEAN Digital Senior Officer level (ADGSOM), and supported at the Ministerial level during the ASEAN Digital Ministers Meeting (ADGMIN); to be implemented in the year 2022.

b. ITU/APT: Two (2) proposal papers were sent to the 3rd Meeting of the APT Preparatory Group for WTDC-21 (APT WTDC21-3) and were unanimously approved as PRELIMINARY APT COMMON PROPOSALS to represent the Asia Pacific region. This paper will be presented at the WTDC-21 Conference which will take place in June 2022. The proposed paper is:

- Proposed modification TO WTDC-17 RESOLUTION64 - Protecting and Supporting Users/Consumers of Telecommunication/Information and Communication Technology Services
- Proposed Modifications to Resolution 37 - Bridging the Digital Divide

c. APEC/Trade

In fulfilling its responsibility to coordinate and advocate Malaysia's position for the communications and multimedia sector, the MCMC has been involved in several trade negotiations throughout 2021, namely:

- ASEAN - Australia - New Zealand FTA (AANZFTA)
- WTO Joint Initiative on E-Commerce
- Malaysia - European Free Trade Association (EFTA) Partnership (MEEPA).

Negotiations for the three (3) agreements and the Cooperation are still ongoing, of which there are several parts that have been successfully agreed upon and finalised by the parties involved.

In 2021, the world witnessed how most countries were still enforcing movement control, restricting travel, especially international travel. As such, activities like workshops, conferences and meetings had to be held virtually. Many international level meetings were held according to the time zone of the organising party. This was a challenge especially for attending virtual meetings organised by the ITU which has its headquarters in Geneva, Switzerland, where the time difference is significant.

Also affected by the pandemic situation affecting the whole world, are two (2) main ITU meetings, namely the World Telecommunication Development Conference (WTDC) and the World Telecommunication Standardisation Assembly (WTSA). Both were supposed to be held in 2021 and now postponed to 2022. WTSA has already been postponed twice since 2020, and should be held in Hyderabad, India. In March 2022, Geneva will replace Hyderabad as the host of this WTSA meeting. For the same reason, the WTDC which was supposed to be held in November 2021 in Addis Ababa, Ethiopia was postponed to June 2022.

Although events and meetings attended by MCMC officers at the international level had to be cancelled or held virtually, this was to ensure the safety and well-being of all employees of MCMC. Movement control and restricted international travel, contributed to virtual meetings and events becoming the new norm.

In 2021, IAD generally succeeded in reducing the department's expenses. There was significant savings especially on expenses for travel and registration fees for events and conferences that require personnel to be physically present.

Based on this, IAD is now continuing efforts to optimise budget allocation, and encouraging the presence of representative from MCMC attend virtual international events. This, over time, will have a positive impact on the operating expenses of MCMC.

a: ASEAN Portfolio

ASEAN Meetings in 2021:

- i. ASEAN Digital Ministers Meeting (ADGMIN)
- ii. ASEAN Digital Senior Officials Meeting (ADGSOM)

For both ADGMIN and ADGSOM for 2021, these meetings will be held in January 2022 given the pandemic situation which still does not allow physical meetings. The meeting for the year 2021 will be chaired by Myanmar.
- iii. Meeting of the ASEAN Telecommunications Regulatory Council (ATRC)
- iv. ADGSOM ATRC Cooperation Group (JWG) Meeting
- v. ADGSOM Cooperation Group Meeting with ASEAN Dialogue Partners (ADGSOM JWG-DP)
- vi. Other ASEAN sub-sector meetings, attended by relevant field officers: Spectrum Management, Network and Cyber Security, Statistics and Data Analytics, and others.

b: UPU Portfolio

Malaysia has been elected to be a member of the Administrative Council (CA) and the Postal Operations Council (POC) in the Universal Postal Union (UPU) during the 27th Congress which took place in Abidjan, Côte d'Ivoire from 9 to 27 August 2021. Malaysia was chosen among 41 out of 43 countries lobbied for CA seats and 48 out of 62 countries for POC seats. The victory reflects the trust and recognition given by 192 member countries to Malaysia's leadership in the UPU to ensure a truly universal postal system, beneficial to the global community and promoting the UN's Sustainable Development Goals through postal services.

The Abidjan Postal Strategy and Business Plan 2021-2025 as well as the Postal Vision 2030 will also be a valuable guide for the postal industry in Malaysia in the next four (4) years.

As a trading nation, Malaysia's micro and small businesses will benefit from the development of cross-border e-commerce through a seamless and integrated global postal supply chain and UPU's integrated product plan tailored to the e-commerce segment.

UPU meetings attended by MCMC in 2021:

- i. UPU Council of Administration (CA)
- ii. APPU Executive Council Meeting
- iii. UPU Exceptional CA
- vi. 27th Universal Postal Congress
- v. UPU CA 25

c: ITU and APT Portfolios

APT Meetings held in 2021
The 2 nd Meeting of the APT Preparatory Group for WTDC-21 (APT WTDC21-2)
The 27 th Meeting of the APT Wireless Group (AWG-27)
The 2 nd Meeting of the APG for WRC-23 (APG23-2)
The 33 rd APT Standardisation Programme Forum (ASTAP-33)
The 1 st Meeting of the APT Preparatory Group for PP-22 (APT PP22-1)
The 21 st APT Policy and Regulatory Forum (PRF-21)
The 18 th APT Telecommunication/ICT Forum (ADF-18)
The 28 th Meeting of the APT Wireless Group (AWG-28)
The 14 th APT Policy and Regulation Forum for Pacific (PRFP-14)
The 3 rd Meeting of the APT Preparatory Group for WTDC-21 (APT WTDC21-3)
The 9 th Meeting of the Working Group of Management Committee on APT Legal Instruments (WGMC-9)
The 3 rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)
Extraordinary Meeting of the APT Preparatory Group for WTSA-20 (APT WTSA20-e)
The 45 th Session of the Management Committee of the APT (MC-45)

1. ITU-T SG/WP17 – Security
2. ITU-TSG/WP12 – Performance, QoS and QoE
3. ITU-T ITU-T-TSAG – ITU-T Telecommunication Standardisation Advisory Group
4. ITU-SG CWG-COP – Council Working Group on Child Online Protection
5. ITU-T WP 1/9 – SG9 Working Party 1 (Broadband Cable & TV)
6. ITU-SG CWG-INTERNET – Council Working Group on International Internet-related Public Policy Issues
7. ITU-R WP 4C – Efficient Orbit/Spectrum Utilisation for MSS RDSS
8. ITU-R WP 4A – Efficient Orbit/Spectrum Utilisation for FSS and BSS
9. ITU-R WP 5D – IMT Systems
10. ITU-T SG/WP 13 – Future Networks
11. ITU-R WP-6A – Terrestrial Broadcasting Delivery
12. ITU-T SG/WP 11 – Protocols and Test Specifications
13. ITU-R SG06 – Broadcasting Service
14. ITU-R WP 7C – Remote Sensing Systems
15. 17th Asia Pacific Forum on Intelligent Transport System (ITS)
16. ITU-T (SG/WP 15) – Transport, Access and Home
17. ITU-T SG/WP 16 – Multimedia
18. ITU-T SG/WP 17 – Security
19. ITU-R WP5A – Land mobile service above 30MHz* (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services
20. ITU-R WP5C – Fixed wireless systems; HF and other systems below 30 MHz in the fixed and land mobile service
21. ITU-R WP5B – Maritime mobile service including lobar Maritime Distress and Safety System (GMDSS); aeronautical mobile service and radiodetermination service
22. ITU-T SG/WP 5 – Environment, climate change and circular economy
23. ITU Virtual Workshop on Digital/OTT Taxation
24. ITU-T SG3 – Tariff and accounting principles and International telecommunication/ICT economic and policy issues
25. ITU-T SG/WP 20 – IoT and Smart Cities
26. ITU-R WP 5D – IMT Systems
27. ITU-R WP 1B – Spectrum Management Methodologies and Economic Strategies
28. ITU-R SG 4 – Satellite Services
29. ITU-R SG 6 – Broadcasting Service
30. ITU-T SG/WP 9 – Broadband cable and TV
31. ITU-T SG/WP 5 – Environment, Climate Change and Circular Economy
32. ITU-T SG/WP 11 – Protocols and Test Specifications
33. ITU-R 1st ITU Inter-Regional Workshop on WRC-23 Preparation
34. ITU-R SG 5 – Terrestrial Services
35. ITU-R WP 1B – Spectrum Management Methodologies and Economic Strategies
36. ITU-R SG 4 – Satellite Services
37. ITU-R SG 6 – Broadcasting Service
38. ITU-T SG/WP 9 – Broadband Cable and TV
39. ITU-R WP 5A – Land mobile service above 30 MHz* (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services
40. ITU-R WP 5C – Fixed wireless systems; HF and other systems below 30MHz in the fixed and land mobile services
41. ITU-R Study Group 7 – Science Services
42. ITU-R Working Party 7A – Time Signals and Frequency Standard Emissions
43. ITU-R Working Party 7B – Space Radiocommunication Applications
44. ITU-D Forum 12th meeting of the Expert Group on Telecommunication/ICT Indicators (EGTI) and 9th meeting of the Expert Group on ICT Household Indicators (EGH)
45. ITU TDAG Working Group on WTDC Resolutions, Declaration and Thematic Priorities

TECHNOLOGY AND INNOVATION

Global technological progress is constantly changing and growing, this development is mainly driven by the increased use of very fast innovation-catalysing technologies such as the Internet of Things (IoT), artificial intelligence (AI), and also Augmented & Virtual Reality (AR/VR). With the latest digital technology, we expect a new generation of highly skilled and forward-thinking groups. Technological developments are changing very quickly and will always drive productivity, collaboration and efficiency to be achieved in various ways.

MCMC is responsible for providing infrastructure and digital throughout the country. Through MCMC, various initiatives have been implemented to achieve technological improvements and innovations – innovations related not only to the public, but also to players in the communication and multimedia industry which includes the broadcasting industry (TV and Radio). The broadcasting industry experienced a new challenge, with the advent of Internet TV services. Because Internet TV content is easier to access, it has resulted in declining viewership as well as advertising revenue on traditional TV broadcasting platforms.

In addition, the Digital Transformation and Adoption Department (DTAD), MCMC was established with the aim of leading the digital transformation initiative, by holding various promotions and awareness regarding the Digital Transformation initiative namely the National Digital Identity and Digital Signature for use by agencies Government. National Digital Identity (NDI) is a platform for identity verification and secure and reliable electronic certificates.

As a centre for industrial research and data analysis, MCMC is committed to ensuring that the data and statistics obtained from the research carried out are accurate, quality and reliable.

DIGITAL ECOSYSTEM DEVELOPMENT

The broadcasting industry faces new challenges with the emergence of new media and Internet TV services such as Facebook, YouTube, Netflix, Apple TV, Amazon TV. Internet TV content is easier to enjoy with smartphones, tablets and computers among the public and the majority have enjoyed entertainment content through new media. This situation has resulted in a decrease in viewership and advertising revenue for TV broadcasters in Malaysia.

In view of this fact, MCMC has taken the initiative to set up the Malaysian Broadcasting Industry Lab to provide a plan that can support and address the challenges faced by the TV broadcasting industry and ensure continued growth in the TV and Radio broadcasting sector.

MCMC has also taken the initiative to implement the Single Television Audience Measurement System (STAM) service which is expected to drive growth in the TV broadcasting industry with higher investment and advertising revenue through accurate, comprehensive and credible audience measurement data.

In addition, MCMC has conducted a survey regarding free-to-air TV viewing, myFreeview, in Sabah to obtain information related to viewing behaviour in Sabah. The study was carried out by the Multimedia University (MMU) to obtain TV viewer information data in Sabah for the first time in East Malaysia after the analogue switch-off by October 2019.

Achievements in 2021

Malaysian Broadcasting Industry Lab (MBIL)

MCMC has implemented the Malaysian Broadcasting Industry Lab (MBIL) from 1 October to 3 December 2021. MBIL is designed to identify and address challenges faced by the domestic broadcasting industry to generate tangible targets and solutions to guide industry towards the goals and aspirations of the new media era.

MCMC held engagement sessions with various stakeholders such as local TV and radio broadcasters, government agencies, content providers, marketing agencies, and others for the local broadcasting industry to adapt in this new media era.

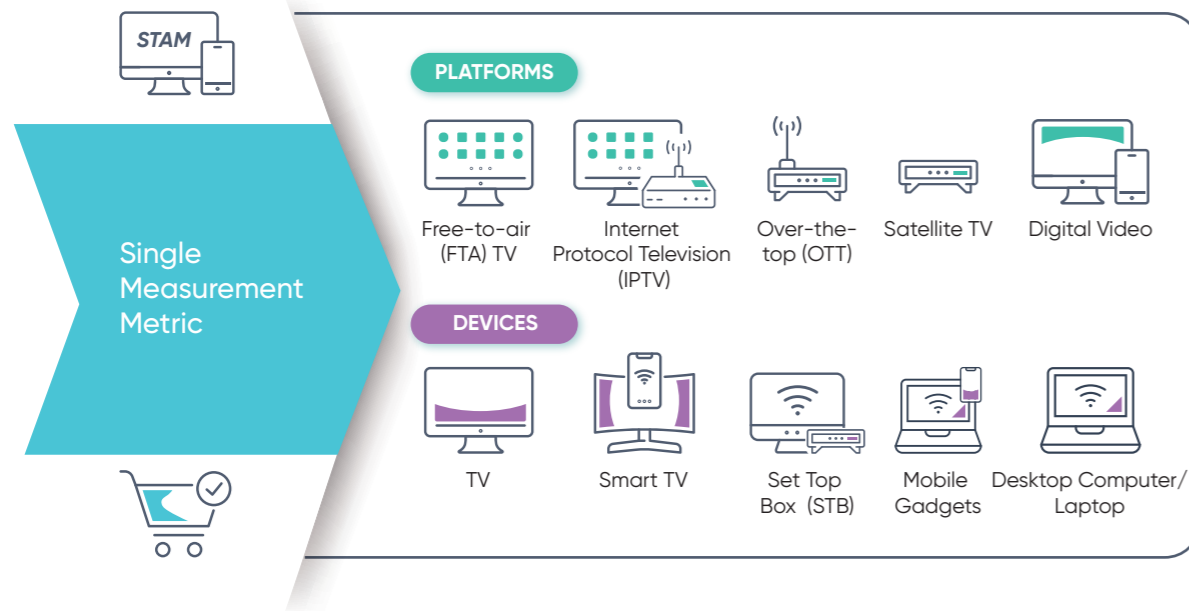
MBIL has received favourable reactions from industry players. A total of more than 250 participants from 62 organisations that include the government and private sectors have participated throughout the duration of the lab. MBIL has focused on initiatives relevant to regulatory framework and development of the broadcasting industry that is comparable to developed markets. The results of the initiatives from MBIL will encourage the growth of domestic TV and Radio broadcasting industry to ensure the future sustainability of the industry.

The initiatives that have been developed through MBIL as True North are to ensure the sustainability of the TV and Radio broadcasting industry so that the local broadcasting industry develops according to the technology trends and viewing behaviour to facilitates the export of media content made in Malaysia to the international market.

Single Television Audience Measurement (STAM)

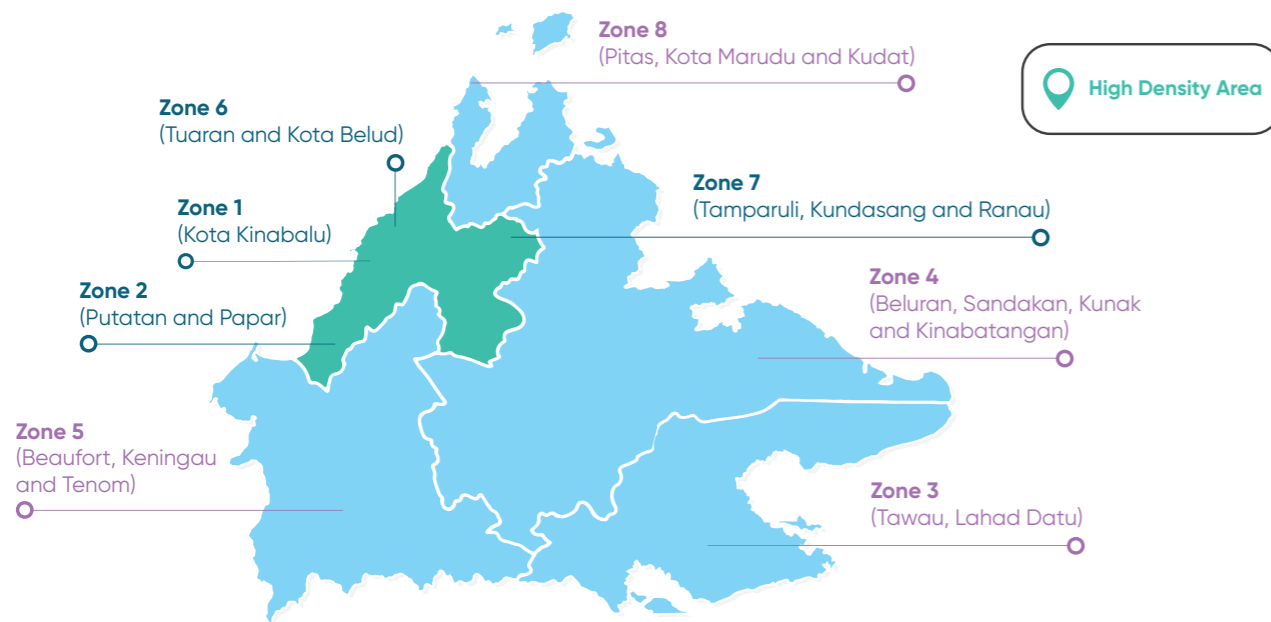
MCMC has developed a framework for implementation of the Single Television Audience Measurement System (STAM) together with various industry stakeholders to ensure that TV broadcasting is still relevant and remain competitive to cope with the competition from international online content providers and Internet TV providers.

MCMC will facilitate the TV broadcasting industry in the implementation of STAM which is a unified TV audience measurement system that measures the viewership for TV content and advertisements on various media platforms and devices using the latest metering technology and audience measurement methods.



Viewership Research Study in Sabah

MCMC appointed Multimedia University (MMU) to conduct a survey on myFreeview viewership in Sabah from 1 July to 10 November 2021. The purpose of this research was to study myFreeview usage behaviour, motivation factors that drive viewers to watch myFreeview digital TV broadcast in Sabah and gratification level with myFreeview digital TV broadcast service. Data collection from 533 respondents was done randomly over a period of two (2) weeks at the beginning of August 2021 across eight (8) zones in Sabah as shown in the following diagram:



The survey results of the myFreeview digital TV viewership are as follows:

Subscription to MyFreeview Service		
Item	YES	NO
Heard about myFreeview service	76.4%	23.6%
Has watched TV via myFreeview service	62.3%	37.7%
Currently using myFreeview Set-Top Box	40.3%	59.7%
Readiness to utilise myFreeview service	73.5%	26.5%

Usage and gratification scores among myFreeview viewers are generally higher compared to the overall respondents who are watching free-to-air TV channels through other media platforms as shown in the following table:

Item	Overall Respondents (n = 533)		myFreeview viewers (n = 214)	
	Uses	Gratification	Uses	Gratification
Conducting a research	3.92	4.15	3.97	4.26
Formal education	3.70	3.90	3.66	3.91
Informal education	3.99	4.16	4.04	4.18
Communication	3.88	4.09	3.95	4.17
Interact with family members	4.02	4.23	4.07	4.35
Interact with others	3.77	3.77	3.82	4.04
Socialising with others	3.73	3.99	3.80	4.03
Observation towards source credibility	4.12	4.19	4.17	4.23
Observation to overcome anxiety	4.03	4.12	4.11	4.18
Entertainment	4.42	4.41	4.46	4.47
Social utility	4.16	4.19	4.19	4.24
Searching for information (religious)	4.07	4.21	4.14	4.30
Searching for information (social)	4.21	4.29	4.26	4.37
Searching for information (economy)	4.30	4.36	4.36	4.44
Searching for information (politic)	4.27	4.33	4.35	4.42
Searching for information (culture)	4.27	4.34	4.29	4.40
Searching for information (health)	4.34	4.40	4.39	4.50
Rest	4.25	4.34	4.31	4.40
Release emotional pressure	4.12	4.17	4.14	4.22

Mean Score Comparison Between Overall Respondents Versus myFreeview Respondents

Item	Overall Respondents (n = 533)		myFreeview Viewers (n = 214)	
	Uses	Gratification	Uses	Gratification
Isolation from family members	2.94	3.14	2.85	3.07
Get rid of boredom	4.21	4.27	4.22	4.34
Access to materials that is not available via Internet	3.99	4.13	4.00	4.14
Easy access to information	4.05	4.14	4.02	4.19
Faster access to information	3.96	4.10	3.98	4.14
Access to reliable information	4.17	4.27	4.24	4.39
Product information	4.01	4.16	4.08	4.28
Technical support information	3.97	4.07	4.03	4.17
Business/Customer Online transaction	3.51	3.77	3.57	3.84

Note : Score = 1 – Strongly Disagree; 2 – Disagree; 3 – Uncertain; 4 – Agree; 5 – Strongly Agree

The MMU survey findings showed that:

- MyFreeview digital TV broadcast is the main source that functions to disseminate information and communicate with viewers in Sabah.
- MyFreeview digital TV broadcast makes it easier for people to access information faster and it is considered to have high credibility because myFreeview is perceived as a reliable source for information that has been verified prior to dissemination.
- myFreeview viewers perceive the myFreeview service to facilitate the viewers' interaction on current issues among family members.
- The majority watch myFreeview for educational purposes. Some viewers gain new knowledge and information through myFreeview to stimulate their mind. MyFreeview digital TV broadcast is used as a source of information for religious, social, economic, political, cultural and health aspects.
- Viewers were satisfied with the entertainment from myFreeview as a social utility channel, or to relax. Viewers have a high level of satisfaction when accessing information made available on myFreeview channels but not available via the Internet. The quality of content on myFreeview is a significant factor in viewer satisfaction.
- The survey suggested that myFreeview service providers to provide more choice of channels and content options such as education, sports as well as new targeted channels for local content and local dialects such as TV Sarawak.

DIGITAL TRANSFORMATION AND ADOPTION DEPARTMENT (DTAD)

The Digital Transformation and Adoption Department was established in October 2021 to lead digital transformation initiatives in the Government sector as outlined in MyDIGITAL and the Fourth National Industrial Revolution Policy (4IR) which will complement the other national action plans namely RMK-12 and the Shared Prosperity Vision 2030.

DTAD was established in October 2021 to lead the following:

- Conduct promotion and awareness regarding the Digital Transformation initiative namely National Digital Identity and Digital Signature to be adopted by Government agencies as outlined in the MyDIGITAL and 4IR action framework.
- Develop a strategic framework to drive the use of National Digital Identity and Digital Signature.
- Plan and implement initiatives to drive the use of end-to-end digital services across the public sector.
- Initiate an internal Working Group to develop a framework for the 5G First Policy to drive 5G deployment, demand and supply in line with the MyDIGITAL and 4IR policies.
- Lead the facilitation and coordination of the use of National Digital Identity and Digital Signature throughout the public sector.

Major Projects

- MCMC participates in the implementation of Smart City at the state level namely Smart City Johor, Smart Melaka Blueprint 2035 and MySmart Wilayah 2030 to support the use of Digital Signatures and National Digital Identity.
- MCMC formed a strategic partnership with Government agencies namely the Department of Town and Country Planning (PLANMalaysia) and the Malaysian Industry-Government Group for High Technology (MIGHT) to facilitate advisory services on the use of Digital Signatures and National Digital Identity.
- MCMC formed an internal Working Group to discuss the development of the 5G First Policy and Data Classification Policy, which will be the guiding principles for MCMC's internal use.
- MCMC provides a Consultation Kit to be presented to Government agencies if they need advice on the use and promotion of Digital Signatures and National Digital Identity.

Achievements in 2021

- Provided opportunities for Government agencies to generate profits by following the right business model, by adopting Digital Signatures in online services from start to finish.
- Actively participated in discussions with the state and federal governments, especially in the Smart City initiative.
- Formed strategic partnerships with Government agencies such as PLANMalaysia, MIGHT and others.
- Formed a strategic plan to produce policies namely the 5G Policy and Data Classification Policy
- Provided a Consultation Kit on the use of Digital Signatures and the promotion of National Digital Identity.

STRATEGIC INFORMATION TECHNOLOGY

The COVID-19 pandemic caused a change in movement patterns or new mobility norms that limit people's movement causing various economic sectors across the country to face difficulties in carrying out business. Consequently, more companies are leveraging remote workforces to ensure they remain competitive and sustainable in the new environment.

Because of this, employers need to provide network connectivity to support remote users, to help employees interact digitally. Paperless work processes and transaction culture have helped accelerate digital transformation initiatives. The impact of the COVID-19 pandemic has also caused companies to realise the importance of digital transformation in running day-to-day operations to ensure they remain competitive despite a more challenging external environment.

Continuous improvement is evident in the areas of Help Desk, Bit and Byte IT, enterprise applications, ePayment, Digital Signature, Robotic Process Automation (RPA), Data Driven Organisation, Analytics, Risk Management, Disaster Recovery Plan, Hybrid MultiCloud (SAAS and PAAS), and Cyber Security.

Achievements in 2021

- The JENDELA Portal and JENDELA Map are formulated to provide wider coverage and better broadband quality for the consumer, while preparing the country for 5G technology to improve connectivity and communication.
- PAKEJ was introduced to streamline the delivery network in Malaysia to meet the requirements in the new norm and achieve first-class courier services through the 4Rs – Reliability, Reach, Relevance and Resilience.
- The MCMC Portal is formulated as a centralised platform to unify all applications in the Intranet and provide various services such as Single Login, Self-Service Password Reset, and Online Documents.

INDUSTRY RESEARCH AND DATA ANALYSIS

The process of data collection, analysis and dissemination of statistics implemented is in accordance with the plan that has been set.

The findings from the study carried out serve as a guide for various parties including ministries and other Government agencies. They also serve as a source of reference and guidance in the formation, implementation and evaluation of policies especially in the communications and multimedia industry as well as post and courier, in addition to being the main reference for researchers, students and the general public.

Despite the efforts put in to ensure that the published statistics are accurate and of good quality, there is still the possibility that the published statistics are misinterpreted by users, thereby affecting the image and reputation of the MCMC.

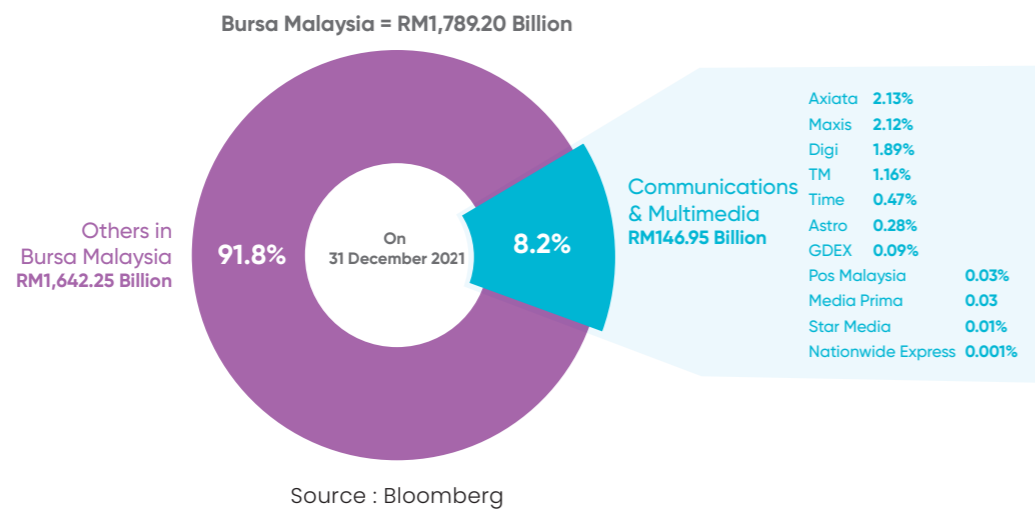
As such, the MCMC has implemented quality control to curb this risk by making it a requirement for users to refer to the MCMC for further explanation regarding the statistics to which they are referring.

Among the main challenges when conducting the study was the primary data collection process, including the longer period of time required for the sample collection process for each survey.

Statistics from 2020 – 2021

Indicator	2020	2021
a) Fixed Broadband Penetration Rate For 100 Premises (%)	37.2	41.4
b) Mobile Broadband Penetration Rate Per 100 Population (%)	118.7	128.2
c) Mobile Cellular Penetration Rate Per 100 Population (%)	133.6	144.0
d) Pay TV Penetration Rate Per 100 Households (%)	83.4	81.1
e) Number of Fixed Broadband Subscriptions ('000)	3,349.5	3,727.4
f) Number of Mobile Broadband Subscriptions ('000)	38,837.2	42,016.1
g) Number of Mobile Cellular Subscriptions ('000)	43,723.6	47,201.7
h) Number of Pay TV Subscriptions (Households) ('000)	6,880.5	6,699.6
i) Number of Digital Signature Subscriptions ('000)	15,486.1	16,911.3
j) Courier Traffic (million)	462.0	575.3
k) Postal Traffic (million)	522.1	304.5

C&M Company's Contribution to Bursa Malaysia 2021

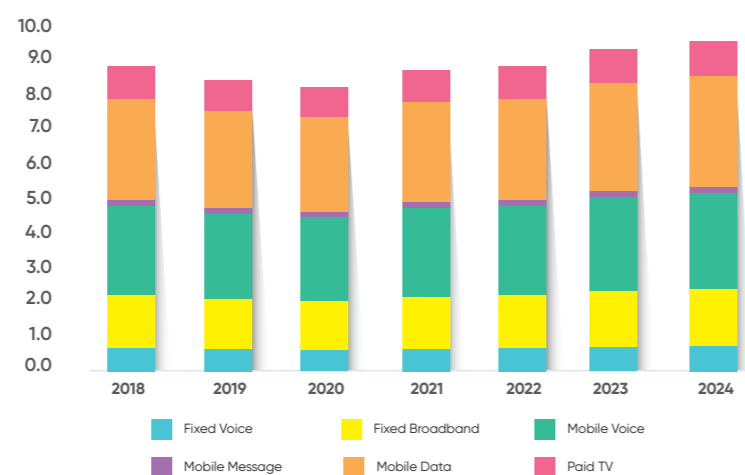


Industry Forecast

The communication and multimedia industry is projected to be on a growth track that parallels the growth of the Malaysian economy. According to GlobalData, overall telecommunications revenue is expected to increase and recover starting in 2021 and reach RM36.9 billion or USD9.1 billion in 2024, with an average growth (CAGR) of 1.1 percent throughout 2019 - 2024, driven by increased service revenue from the mobile data, fixed broadband and Pay TV segments.

Revenue from fixed broadband services is expected to be the fastest growing segment with revenue forecast up to RM9.7 billion (USD2.4 billion) by 2024. This growth is expected to be driven by an increase in the number of Fibre to the Home (FTTH) subscriptions following continued investment by the Government in fixed broadband network expansion.

Total Revenue of Telecommunications Services by Category in Malaysia 2018 - 2024 (RM Billion)



SOCIAL EMPOWERMENT

CREATING AN INCLUSIVE DIGITAL SOCIETY

Based on noble values and the improvement of human capacity to achieve social cohesion and stability, national resilience and the well-being of a developed and stable *Keluarga Malaysia* based on the National Social Policy, the Malaysian Communications and Multimedia Commission (MCMC) will continue to drive the promise of shared prosperity for Malaysians by focusing on empowering the people through digital skills, digitally generated socio-economic empowerment and boosting digital businesses.

In order to shape the digital future, the MCMC will continue the social empowerment of *Keluarga Malaysia* through initiatives carried out for the well-being of Malaysians including ensuring that every individual, family and community regardless of ethnic group, religion, culture and political leaning can participate and contribute to the current socio-economic development of the country while continuing to empower social development in underlying issues such as the education sector, health, employment, culture, security, agriculture, environment, industry and so on.

The MCMC social empowerment is generally the commitment of the telecommunications and multimedia regulatory organisations to operate economically taking into account the conditions of the social environment around them. MCMC needs to take into account the social interests and welfare of the surrounding community. For this reason, corporate social responsibility is emphasised by the Government in helping to ensure that the welfare of the community is always maintained. It is related to how companies and organisations shape social goals ethically by taking into account the effects on the economy, social, environment and also human rights.

The MCMC is a statutory body that is also responsible for various initiatives involving social empowerment for the community. Therefore, various activities have been planned in the context of consumers, society and the country. Among them is MCMC's proactive approach to protect consumers. Consumer protection is one of the main thrusts in CMA 1998. The KDB programme has basically increased user awareness of the importance of prudent Internet use.

The goal of creating a developed and sustainable Malaysian society must go hand in hand with the social development of Malaysians. It is very important due to the changes in the social values of the society due to the increasingly competitive lifestyle, the effects of globalisation, liberalisation as well as the growing social problems.

Along with the growth spurt in the digital economy in Malaysia, various efforts are being carried out by the MCMC to trigger the transformation of the people towards digitalisation. One of the important roles of the MCMC is to shape the country's future towards a more viable digital economy, so that no Malaysians are left behind in the digitalisation wave. The support of various community groups such as consumers, workers, capital owners, non-consumer groups and the general public helps greatly in improving the performance and progress of organisations such as the MCMC. The MCMC welcomes the announcement of RMK-12 regarding the provision of high-quality and comprehensive access to digital infrastructure, in line with the Government's desire for Malaysia to become a high-tech, high-income country and offering a better quality of life. To strengthen the local digital economy for all levels of people, especially for the B40 group, as many as 883 PIK are transformed into PEDI.

This number will increase to correspond with the target: one (1) PEDI in each State Assembly. PEDI plays a role in empowering digital economic activities by developing Internet usage skills and increasing e-commerce engagement. MCMC will continue to intensify the Small Entrepreneurs Digitalisation Empowerment programme to encourage micro-entrepreneurs to switch to digitalisation. The programme will benefit a total of 800 thousand micro entrepreneurs by 2025. MCMC is also exploring the potential of PEDI to be used as a local delivery point for the *Rangkaian PAKEJ* under the PAKEJ@PEDI Network initiative for the convenience of residents in rural areas.

The strength in digital technology is seen to be very effective in meeting the needs of the people in the future. This is reinforced by the emergence of the Fourth Industrial Revolution (4IR) and the rapid development of disruptive technologies including digital technologies that have the potential to significantly change the economic and social landscape around the world. This encourages citizens, businesses and the Government to adopt digitalisation in their daily lives.

Not to be left out is the role played by ASEAN countries when the COVID-19 pandemic proved a catalyst enabling ASEAN member countries to accelerate their respective digitalisation efforts. The ASEAN Community Action Plan 2025 has recognised the importance of information and communication technology (ICT) as the main driver in the economic and social transformation of ASEAN countries. AEC 2025 aims to boost ASEAN into an economy with digital capabilities that is guaranteed, sustainable and able to transform and further utilise ICT to create an innovative, inclusive and mutually integrated ASEAN. This is important in the efforts to advance the ASEAN Community in the field of cyber security, personal data protection, 5G technology and promoting innovation and e-commerce.

To ensure that no Malaysians are left behind in the wave of digitalisation, it is time for us to lay the foundation for the country's transformation towards digitalisation that is more advanced and inclusive. This foundation means building infrastructure, encouraging innovation and creating an ecosystem that allows all parties to contribute to a better standard of living. The results of that will be enjoyed by all Malaysians. To achieve sustainable national development, all parties must play a role in improving the efficiency, effectiveness, quality and accessibility of information and services that will contribute to the socio-economic growth of Malaysians.

DIGITAL ECONOMY

a. Pusat Ekonomi Digital Keluarga Malaysia (PEDi)

PEDi is one of the initiatives implemented under the Universal Service Provision programme. The programme has been running since 2007 when it was introduced by the MCMC. The USP programme is an approach to bridge the digital divide by acting as a mechanism to channel private sector investment to unprofitable rural areas by using the USP Fund that has been established under the provisions of Section 204 of the CMA 1998.

The main objective of PEDi is to bridge the digital divide by providing collective Internet access to communities and areas that lack broadband coverage such as in rural and interior areas as well as communities living in low-cost housing in urban areas.

As of 31 December 2021, there are 883 PEDi established and operating nationwide. Also in 2021, a total of 37 Rural Internet Centres (PID) under K-KOMM was transferred to the MCMC to be transformed into PEDi. Of these, 10 PIDs have been transformed into PEDi and began serving the community in December 2021. The rest are targeted to start operating in 2022.

Recently, PEDi not only provides collective Internet access facilities to the people, but also becomes a driver in efforts to encourage the community, especially local entrepreneurs, to adapt digitalisation in their business affairs, thereby improving the local socio-economic level and contributing to the growth of the country's digital economy. This also indirectly bridges the digital divide between urban and rural communities.

Launch Ceremony of the Pusat Ekonomi Digital Keluarga Malaysia (PEDi)

The PEDi launch ceremony was completed by YAB Prime Minister, Datuk Seri Ismail Sabri Yaacob on 21 November 2021 at Anjung Warisan Building, Kampung Durian Tawar, Bandar Bera, Pahang. Also present were Pahang Chief Minister, Datuk Seri Wan Rosdy Wan Ismail, Minister of KOMM, Tan Sri Annuar Musa and Minister in the Prime Minister's Department (Economy), Datuk Seri Mustapa Mohamed.

Through the ceremony, PIK was officially branded as PEDi.

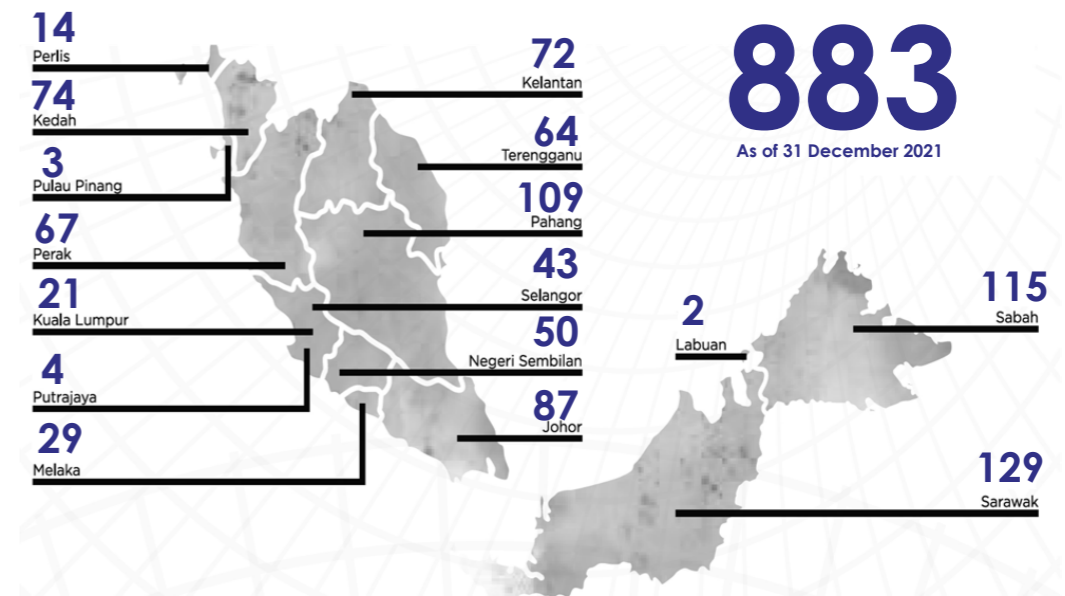
The dignitaries were taken to visit PEDi in Kampung Durian Tawar where YAB Prime Minister signed the PEDi launch plaque in addition to engaging with several PEDi entrepreneurs and users.

In 2021, the role and function of PEDi have been streamlined and further strengthened with four (4) transformation initiatives as follows:

- PIK coordination by transforming 1,083 PEDi across the country;
- IKON Entrepreneur involvement in each PEDi;
- The plan and appointment of 600 PEDi *Rakan Digital* through the activation of 600 PEDi as One Stop Centre (OSC) for the Program Pemerkasaan Pendigitalan Usahawan Kecil (PUPUK); and
- Implementation of various economic digitalisation programmes through PEDi in collaboration with various Government agencies, digital platform providers, telecommunications companies and private companies.



DISTRIBUTION OF PUSAT EKONOMI DIGITAL KELUARGA MALAYSIA (PEDi) NATIONWIDE



Note: This number includes the 10 Rural Internet Centres (PID) that have been transformed into PEDi; ready and operational in December 2021



b. Program Pemerkasaan Pendigitalan Usahawan Kecil (PUPUK)

The Program Pemerkasaan Pendigitalan Usahawan Kecil (PUPUK) was introduced on 28 June 2021 as a digitalisation initiative to help micro-entrepreneurs transition to a digital platform.

As a result of the commitment and cooperation of digital platform providers, telecommunications companies, private companies and Government agencies, until 31 December 2021, there are as many as 10 entrepreneurship programmes that have been introduced and offered to encourage small entrepreneurs around PEDi to adopt digitalisation in their business.

PERIOD OF IMPLEMENTATION
July 2021 - December 2025

TARGET
800,000 entrepreneurs opt for digitalisation

PUSAT EKONOMI DIGITAL KELUARGA MALAYSIA (PEDi)
A **One Stop Centre** for digitalisation and local community economic activities

PROGRAMME
Various digital entrepreneurship programmes in collaboration with partners



The two (2) main programmes run by MCMC are the PUPUK@Shopee and PUPUK@AEON programmes.

PUPUK@Shopee

Beginning on 29 June 2021, PUPUK@Shopee has managed to get a very encouraging response from entrepreneurs around PEDi. As of 31 December 2021, a total of 10,893 entrepreneurs have marketed their products on the Shopee e-commerce platform. In total, for the period from 29 June to 31 December 2021, the sales revenue recorded for this PUPUK@Shopee programme was as much as RM11.8 million.

The list of the top two (2) products that recorded the best-selling unit sales in conjunction with the PUPUK@Shopee programme is as below:

Shopee Store	Location	Start Date with Shopee	Total Sales During the Campaign Period	Product Category
Sahidah Fresh Kitchen http://shopee.com.my/shop/291624603	Pasir Gudang, Johor	8 August 2021	> RM40,000 by taking advantage of the incentive vouchers offered	Health and Beauty, Grocery, Dry Food
Lovelybabiesshop http://shopee.com.my/shop/58665261	Hulu Langat, Selangor	1 March 2018	> RM30,000 by taking advantage of the incentive vouchers offered	Health and Beauty, Baby Items

PUPUK@AEON

The PUPUK@AEON programme introduced by MCMC in collaboration with AEON CO. (M) Berhad was launched in a press conference on 3 August 2021. As of 31 December 2021, a total of nine (9) entrepreneurs have been successfully selected to place their products at AEON Supermarkets physically and online.

For the period from 16 September to 31 December 2021, a total of RM8,888.12 in sales was recorded when the Kambing Tough brand marinated lamb was identified as the best-selling product with sales recorded at RM3,808.00.

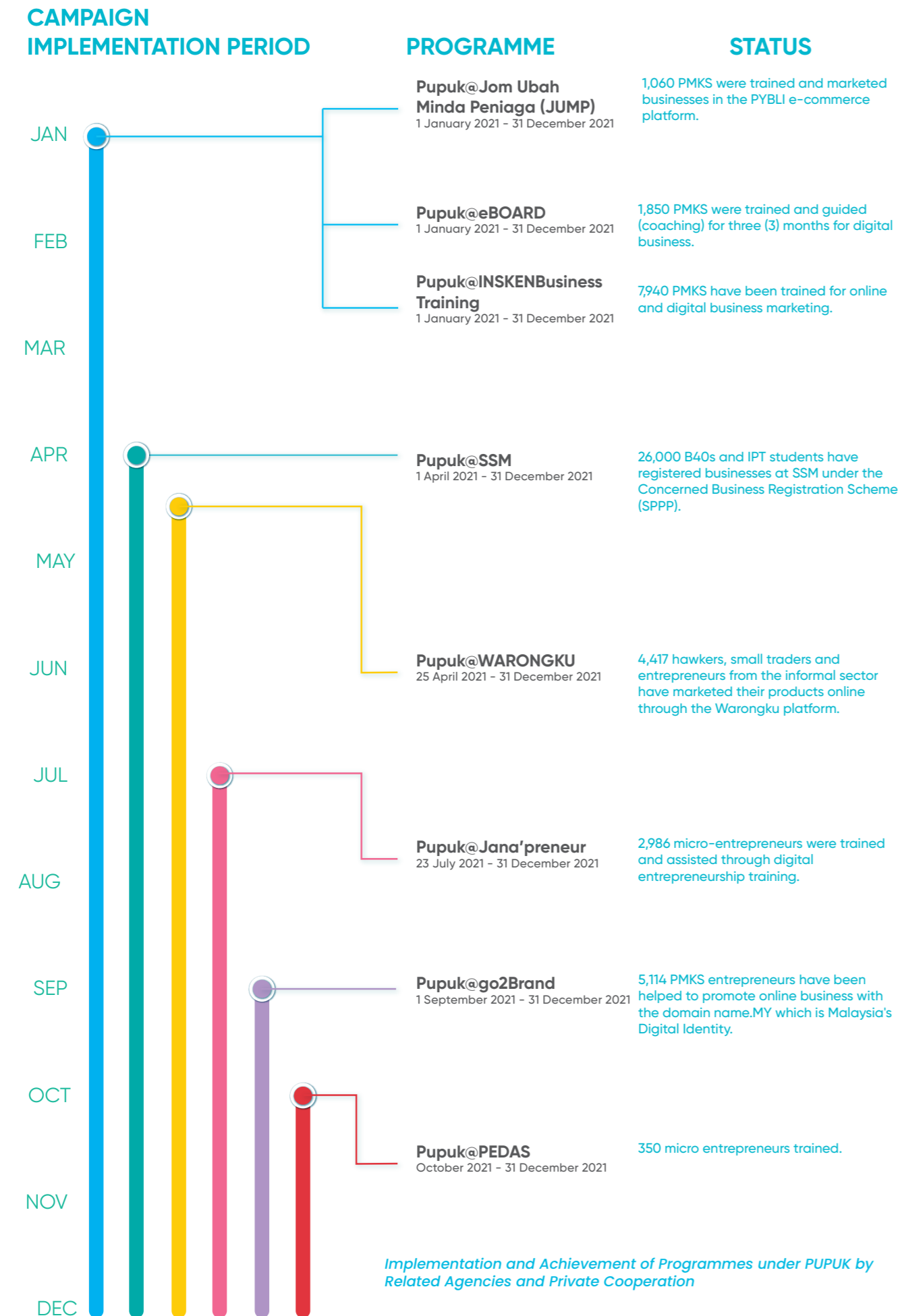
The list of the top three (3) products that recorded the best-selling unit sales in the PUPUK@AEON programme is as below:

Product	Total Sales (RM)	AEON	Location	Entrepreneur
Kambing Sahabat – Kambing Tough	3,808.00	10 AEON Chains in Klang Valley	Pahang	Nor Amirah Binti Hassan
Cravings of Life Sauces	1,308.60	8 AEON Chains in Klang Valley	Kuala Lumpur	Nur Fasihah Binti Khairudin
Sambal Adinda (Sambal Pes)	1,236.00	2 AEON Chains in Klang Valley	Selangor	Rahayu Binti Abdullah

MCMC is also proactive in streamlining and strengthening PEDi's role as a centre for digitalisation and empowering the local community. Until 31 December 2021, 72 Digital Partners have been appointed by the service provider company that manages and operates PEDi to help further strengthen various economic digitalisation programmes under PUPUK. In addition, the involvement of 879 IKON Entrepreneurs in 870 PEDi also aims to strengthen PEDi's role to boost digitalisation activities onsite.

The programme under PUPUK offers training and guidance opportunities to the community around PEDi, especially existing local entrepreneurs to increase their sales through e-commerce platforms and online business promotion. In addition, it has also opened job opportunities for the surrounding community through various economic digitalisation programmes that have been implemented under PUPUK. Indirectly, initiatives at PEDi and programmes under PUPUK have created a digitally literate community and further bridged the digital divide between urban and rural communities.

Apart from the initiatives of the PUPUK@Shopee and PUPUK@AEON programmes, the implementation and achievement of selected PUPUK programmes in PEDI have been successfully implemented by the implementing agencies involved and through MCMC's collaboration with the private sector as shown in the diagram below:



POSTAL, COURIER AND E-COMMERCE

The National Courier Accelerator Plan, or PAKEJ is an action plan for 2021-2025 period, developed by the Postal, Courier Services and E-Commerce Division (PCESD) to achieve the country's aspiration to create a first-class postal and courier service with wide coverage all over the country. PAKEJ targets the rapid growth of the e-commerce sector which is expected to grow from 14 packages per capita (2020) to 30 packages per capita by 2025 also focuses on increasing productivity through the provision of an efficient PAKEJ Network strategy and platform and industry consolidation through a new courier licensing scheme.

In order to realise the achievement of the two (2) main milestones that have been outlined through PAKEJ, throughout 2021 the MCMC has mobilised activities such as:

- Implementation of Industrial Sustainability Achievement milestones
- Infrastructure development
- Research
- Production of guidelines
- Negotiations
- Working visit
- Implementation of various engagement sessions and discussion sessions with various stakeholders

All planned activities are in line with the country's aspirations to create a first-class courier service with extensive coverage throughout the country to create a first-class courier service with extensive coverage throughout the country. In addition, aspects of improving the quality of postal and courier services are also taken into consideration by improving the Quality of Service (QoS) through real-time, up-to-date and accurate delivery. Anti-competitive practices are also given attention and this is where the basic pricing of courier services is located which can provide equality of opportunity to all industry players. Based on this challenge, a study on the implementation of the basic price rate was carried out to further propose appropriate action steps.

Postal Development

i. Universal Postal Union (UPU)

In 2021 at the 27th Universal Postal Congress in Abidjan, Côte d'Ivoire, Malaysia graced the country's name on the international stage with two (2) achievements. The first achievement was when Malaysia managed to retain the seat of the Council of Administration (CA) of the Universal Postal Union (UPU) and won the seat of the Postal Operations Council (POC) for the 2022-2025 term.

ii. Integrated Index for Postal Development

As a body entrusted with the enforcement of the Postal Services Act, the MCMC remains active in improving the country's mail and courier services both domestically and internationally. Under MCMC's management, Malaysia is ranked 23rd out of 168 countries in the UPU 2021 Integrated Postal Development Index (2IPD) which is an improvement from 36th place last year.

The index not only reveals the relative performance of postal administrations around the world, but also serves as a guide to excellence in postal infrastructure. It is a guideline to assist policy makers, regulators, postal administrations and any interested parties from other sectors in understanding the role that postal services can play in e-commerce and in accelerating the transformation.

A comparative indicator of postal development worldwide, the 2IPD is a composite index summarising information on the performance of postal operators in 168 countries. Therefore, 2IPD built on four (4) main foundations is a unique tool to analyse the state of the postal sector:



Source : Universal Postal Union (UPU)

- Reliability reflects performance in terms of speed and predictability of delivery, across all major segments of physical postal services (letter post, parcel post and express).
- Service reach describes global connectivity by assessing the breadth and depth of a postal operator's international network. This is measured by the number of partner networks and international exchange rates, respectively, across all major segments of physical postal services.
- Relevant services in line with the growth of the digital economy that measure the intensity of demand for the full portfolio of postal services against the best performance in each category of postal activity, also taking into account elements such as the number of international transactions and the number of post offices.
- Resilience indicates the degree of diversification of revenue streams, as well as the capacity for innovation and inclusive delivery of postal services.

Rangkaian PAKEJ Development

- The online implementation of the 'PAKEJ NETWORK UNIVERSE' survey aimed to obtain information, data and initial input on the distribution of coverage and tendencies for the PAKEJ NETWORK (Pick-Up, Drop Off) service and thus be able to provide an overall strategy to the postal and courier industry in relation to this service to the People. This Research was carried out from 27 January to 3 February 2021 with the participation of 13 industry players. The preliminary results of this survey found that more than 90 percent of these services are provided at the premises of retail chains such as convenience stores and more than 65 percent of the services provided include Pick-Up, Drop Off and Return.
- Meeting MCMC's target of 17,000 PAKEJ Network locations for 2021 with a total of 21,188 achieved by the end of 31 December 2021 (PAKEJ Network initiative).
- The development of PAKEJ Map Network platform to access service locations (Pick-Up, Drop Off) locally and act as a second address for receiving/delivering packages anytime and anywhere.
- Production of PAKEJ Network Service Implementation Guidelines at PEDI.
- Publication of infographics related to PAKEJ Network services on MCMC's social pages.
- MenKOMM press release on the PAKEJ Network service initiative.

Implementation of the National Mobile Application Initiative

- Establishment of the Task Force and Working Group Committee of the National Mobile Application Initiative with the approval of the Minister of Education and Culture.
- Implementation of a National Mobile Application Proposal Implementation Questionnaire for Citizens and Service Providers.
- Preparation of Cabinet Memorandum Papers to get Cabinet approval titled 'Proposals for the Implementation of National Mobile Applications'.
- Issuance of a Request for Information (RFI) for the Development of a Concept Proposal for a National Mobile Application for the Malaysian Government.
- Issuance of Request for Quotation (RFQ) for the appointment of a consultant for the Development of the National Mobile Application Reference Tender Document.

Price Monitoring Guidelines

- The rapid growth of e-commerce has changed the landscape of the country's courier industry. As it is the importance of Just as important as the broadband infrastructure, the country's third utility, is the courier infrastructure (e-commerce supply chain) which needs to be seen from a strategic perspective to ensure that the entire national digital economy ecosystem is developed neatly in order to reach its true potential.
- However, the courier industry faces its own challenges. The unhealthy financial status of the industry for instance, does not allow industry players to make future investments. The significant increase in the number of complaints in parallel with the increase in the number of packages handled also needs to be given due attention.
- National Postal and Courier Industry Lab (NPCIL) that was held from 12 October to 4 December 2020 has produced PAKEJ, a five (5) year strategic plan that was announced in June 2021 aimed at providing high quality services, extensive service coverage in a sustainable manner for the benefit of Malaysians, and supporting the growth of the e-Commerce industry.
- A consulting firm has been appointed to verify complaints of unhealthy price competition at the Laboratory. As a result of the study carried out by appointed consultants and feedback from stakeholders, a Price Monitoring Guideline for the Malaysian Courier Industry has been prepared.
- The Price Monitoring Guidelines are policies to curb predatory pricing by industry players. It requires each licensee to submit price disclosure records to the MCMC for monitoring purposes. Price monitoring will be done throughout the year and if there is a need, the MCMC can conduct an audit on the disclosure made by the licensee.
- MCMC can also instruct the licensee to provide a reasonable explanation to MCMC and it must be in line with the pricing principles under the Postal Services Act where the price charged must be cost-oriented and not contain discounts that unreasonably harm another licensee's competitive opportunities.
- It is hoped that the Price Monitoring Guidelines will help to create a sustainable domestic courier market.

DIGITAL SOCIETY

ADVOCACY AND COMMUNITY ENGAGEMENT

The year 2021 saw the Klik Dengan Bijak® (KDB) and Malaysia ICT Volunteer® (MIV) initiatives had supported MCMC to realise several national initiatives by the government. The implementation of advocacy activities and community engagement by KDB and MIV had been done in line with Malaysia's national initiatives' strategic thrusts.

For MyDIGITAL initiative, the implementation of KDB and MIV activities had contributed to Thrust 5 which is "Creating an Inclusive Digital Society through Strategy 1: Increasing the Inclusive Participation of Malaysians in Digital Activities". KDB and MIV had been tasked to support the implementation of Initiative 1: "Introducing the My Ikrar Programme to Encourage Volunteerism in Conducting Digital Training Led by K-KOMM". Cumulatively, KDB and MIV had managed to exceed the initial target set.

Klik Dengan Bijak®

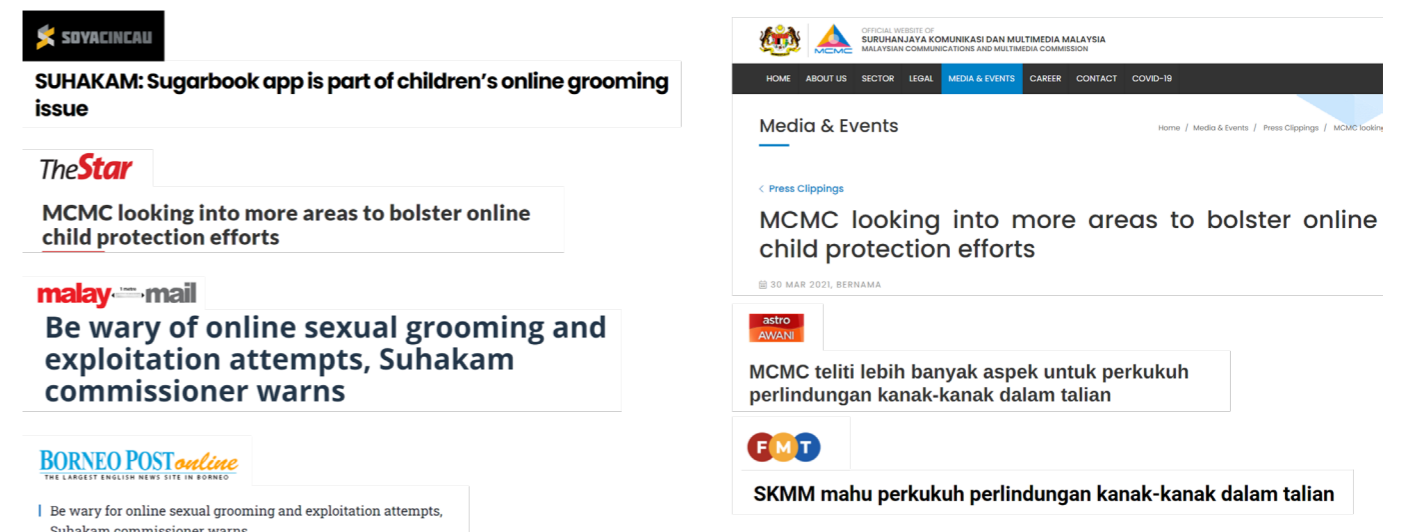
Today, the growth rate of Internet and mobile devices users among children is the highest. The desire to fulfil their rights to information and self-expression will inevitably shape the content available online. The MCMC Internet User Survey (IUS) 2020 had found that the number of children aged five (5) to 17 who used Internet had increased by 155 percent since 2016. Among child Internet users, 56 percent had their own devices.



The Bicara Klik Dengan Bijak series had been implemented online throughout 2021

a. MCMC-UNICEF Online Child Protection Seminar

On 30 March, MCMC and the United Nations Children's Fund (UNICEF) had organised an international seminar on child online protection. The one-day seminar received an overwhelming response with the attendance of over 1,300 participants through the Zoom online meeting platform and live broadcasts on the KDB and MIV Facebook pages.



Wide media coverage on the MCMC-UNICEF Child Online Protection Seminar

Since the issue of child online protection had involved various sectors and stakeholders, this seminar had been attended by participants from various organisations such as government agencies, private sector, institutions of higher education, PEDI, non-governmental bodies, activists, schools, the media, and the public. The seminar also saw the participation of officials from ASEAN member countries such as Brunei, Cambodia, Indonesia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Other international participation had been Australia, Germany, the Netherlands, Switzerland, the United Kingdom, and the United States.



The Online Child Protection Seminar saw the participation of local and foreign expert speakers and participants

Among the key takeaways from the seminar had been:

1. Cooperation and partnerships within and between sectors had been especially important in improving and promoting digital literacy, safe, and ethical use of technology, and for parents to play a stronger and more active role in online protection and prevention of cyber bullying.
2. Children must be equipped with the resilience, knowledge, and skills needed to protect them in all situations. This includes digital literacy skills to help them navigate the online world safely and take advantage of what the digital age has to offer.
3. Children needed to be given an active role in the measures taken to protect themselves and other children online. They should be informed, consulted, and empowered in developing solutions to problems that affect them. It had been essential to understand their needs and realities.
4. There needed to be a strong link between the efforts to protect children from violence in the online and offline sphere. Efforts needed to be increased to ensure the effectiveness of prevention and response initiatives focusing on victims and children. Investment had also been necessary in parenting education programmes for parents and their involvement in protecting children online, mental health services, and skills development to promote behavioural change, and building resilience against online threats.
5. Efforts needed to be made to strengthen data collection, data systems, monitoring, reporting, and referral mechanisms to enable better and effective reporting on materials with criminal elements including sexual abuse and exploitation of children.

The seminar had received wide coverage from the media such as Bernama, Astro Awani, The Star, Borneo Post, FMT, Soya Cincau, and Berita Kini as well as PEDI websites and social media.

b. GICT21

One way to close the gender gap in ICT work force had been to equip young women with the knowledge, skills, and opportunities needed to enter the fields of science, technology, engineering, and mathematics (STEM). Through the International Girls in ICT Day (GICT) platform, the International Telecommunication Union (ITU) had worked with its partners to provide and strengthen awareness of the digital divide related to gender, support education, and skills training in technology, and encourage more girls and young women to choose STEM related careers.

In 2021, GICT had celebrated its 10th anniversary with the theme "Girls in ICT: Creating A Brighter Future". The Malaysian government through K-KOMM held a GICT21 celebration together with corporate partners and its agencies such as MCMC, MDEC, CyberSecurity Malaysia, Microsoft Malaysia, Internet Society, Gorgeous Geeks, and Axiata to organise programmes that would stimulate the interest of girls and young women in the field of ICT and STEM.

The GICT21 sharing session had suggested girls and young women should dare to take up opportunities and space in ICT and STEM fields

MCMC through the Community Engagement Department (CMED) had organised a Pocket Talk entitled "Women, Youth, and ICT: Towards a Bright Future" on April 30. The sharing session had aimed to:

1. Highlight the achievements of young women and girls in ICT in Malaysia.
2. Empower them to get involved and contribute in areas related to ICT, and
3. Empower men, especially fathers, brothers, uncles, husbands, and friends to support and encourage the involvement of young women and girls in their families and communities in ICT as practitioners and professionals.

The panellists for the sharing session had been Viviantie Sarjuni, General Manager of the Sabah Creative Economy and Innovation Centre (SCEIC); Faezrah Rizalman, Executive Officer of Rambutan Code Academy; and Sharifah Nadira, Content Entrepreneurship Student (UiTM) and ICT practitioner.

The session had been attended by more than 670 participants from various government agencies, PEDI personnel, schools, non-governmental bodies, institutions of higher education, the private sector, and the public.

Sessions had been held on Zoom and the live broadcast had been watched on KDB and MIV Facebook pages. The broadcast on FB has reached over 2,000 unique viewers.

c. Bicara Klik Dengan Bijak

Having received encouraging response since its launch in 2020, the *Bicara Klik Dengan Bijak* sharing session had continued in 2021 with an increase in the number of sessions- 28 compared to 24 sessions in the previous year. This had been due to the continued enforcement of strict regulations on in-person activities to curb the COVID-19 pandemic. *Bicara KDB* had been once again made possible in collaboration with MCMC state offices where advocacy officers had been invited to deliver a talk on online safety topics. A total of 28 advocacy officers had been involved in the implementation of *Bicara KDB* last year. The casual sessions had attracted the participation from PEDI nationwide which had also helped to publicise the programme to their local community.

d. Recognition and Strategic Cooperation

The recognition of KDB's educational modules and MCMC's authority in matters related to online safety had been evident through the many invitations of speaking engagement. COMPD had received 23 invitations throughout the year from government agencies, institutions of higher education, non-governmental bodies, as well as the private sector. This included the National Senior Citizens Celebration Day and the Launch of the MyDIGITAL Initiative. COMPD had also received requests from various institutions of higher education for expert reference or to adopt KDB educational modules in their research on online safety topics.

Strategic collaboration with various organisations should have been held to broaden the scope of the audience, combine expertise from different fields, and organise more effective implementation strategies. For 2021, KDB had five (5) strategic collaborations for these reasons.

e. Launching of New KDB Website

The revamped KDB website had been launched in May to ensure updated information on Internet safety guidelines and practices. The new website had been important to attract public interest in KDB's initiative as well as to reflect focus on youths, adults, and professionals as target audience. In protecting children online, awareness and education should have been given to adults, especially parents or guardians and teachers as they had usually been in the closest proximity to children.

f. KDB Achievements

A total of 53 online safety awareness and educational activities had been implemented across the country with an audience reach of 192,527 (online). The audience reach achieved through social media posts had been 1,256,848. Overall, since its launch in 2012 until 2021, KDB initiative had reached more than seven (7) million audiences and garnered nearly 90,000 followers on social media platforms.

Malaysia ICT Volunteers®

The new approach of ICT volunteering through social media platforms had been important for MIV brand visibility while at the same time reducing and preventing the risk of COVID-19 infection among volunteers and their communities.

Most of MIV activities had been implemented through the virtual world e.g., the workshops where the volunteers had been trained before the volunteering activity began. These sessions had provided volunteers with guidelines on their roles and responsibilities while collecting preliminary data on the volunteers at the same time. These workshops had helped prepare the volunteers to implement their projects by equipping them with necessary knowledge and skills to convey information about MCMC initiatives, advocacy messages, and content available on social media platforms.

The modules taught at the workshops had depended on the volunteers focus group. For example, the volunteers in *MIV Bersama PERKEP* programme had only needed to undergo training on a few KDB topics compared to *MIV Bersama IMFutures* where they had been trained in various modules including:

1. IMfutures
2. KDB
3. Soft Skills (communication and interaction skills)
4. E-payment system in Malaysia
5. Delivery and courier system
6. Photography and videography using smartphones and related applications
7. Marketing on social media

In monitoring the projects implemented by the volunteers, CMED had held multiple casual meetings between project managers and volunteers online. The *Sembang Santai* had been the best approach to engage with the volunteers as the sessions had been able to bridge the communication gap between CMED and the volunteers. Through *Sembang Santai*, the volunteers had been able to improve their understanding and express the challenges or issues they had been facing while carrying out their volunteering tasks.



a. MIV with the Community

MIVO 1 and 2

Before the COVID-19 pandemic, the *MIV Bersama Komuniti* programme had been implemented face-to-face in the identified areas throughout the country. This had resulted in people who had registered their interest in volunteering not able to participate in the programme due to living far away from the identified volunteering areas or had been faced with time constraint. MIV Online or MIVO had been launched to overcome these challenges and enable those interested to contribute to their local community as volunteers. The online approach had enabled the volunteers to achieve more than four (4) million audience reach through social media platforms in 2020.

Themed "*MIVO: Sukarelawan Untuk Semua*" (MIVO: Volunteers for All), MIVO in year 2021 had been held to provide the opportunity to those who had involved in previous MIV programmes to continue contributing as MIV volunteers.

In general, MIVO had targeted the online community with a focus on social media users. At the same time, volunteers had been also encouraged to involve the offline community, especially family members, friends, and the local community.

MIVO volunteers had been expected to perform the following tasks:

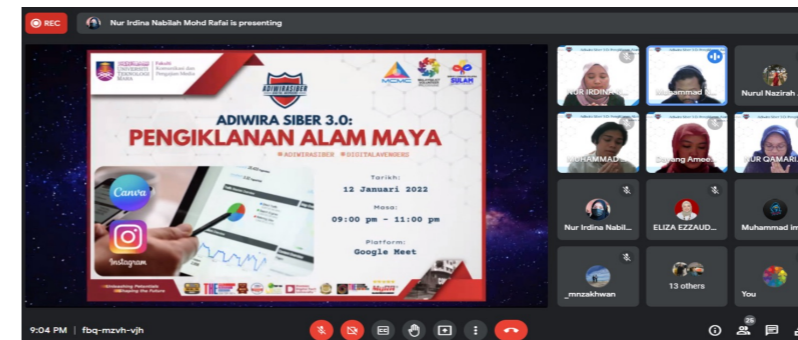
- Spread awareness messages on the positive, productive, and responsible use of ICT in their respective local communities,
- Promote digital literacy,
- Improve the lifestyle of local communities through digital platforms, and
- Promote digitalisation as the new norm.

For their ICT project last year, MIVO 1 volunteers had made a social media postings with the theme "SOP COVID-19 in Schools/ Workplaces" while the theme for MIVO 2 had been "Dissemination of Quality Information Is Everyone's Responsibility". The information that had been disseminated include MCMC's advocacy messages taken from KDB modules, Mobile e-Waste, Check Your Label, child online protection and, Sebenarnya.my.

MIVO 1 3 June - 12 August 2021

Volunteer Period	Off-line Audience Reach
2 Months	1,256
Number of Volunteers	Total Reach
104	421,448
Online Audience Reach	Online Content Creation
420,183	102 Posts with More Than 70 Videos

MIVO 1 and 2 volunteers who had higher education background in ICT, engineering, computer studies, or pure science had been encouraged to share their knowledge in those fields and conduct online classes such as coding, Adobe Photoshop, programming, mobile application development, and cyber security. MIVO 2 which had kicked-off on 28 November 2021 had been expected to end on 28 January 2022.



UiTM Shah Alam student volunteers had organised the Adiwira Siber 3.0: Virtual advertising workshop for local community members



The new norm as a result of COVID-19 pandemic had caused MIV activities being carried out online including the monitoring the work of volunteers' progress

b. MIV Bersama IMFutures

The *MIV Bersama IMFutures 2021* programme had been a collaboration between MIV and IMfutures, a non-governmental organisation that had been managed by the Indera Mahkota Parliamentary Service Centre in Kuantan, Pahang. The initiative had aimed to encourage the students and youths in Indera Mahkota to become creative digital natives and subsequently lead the industries in that area. Through IMFutures, they had learned various basic skills related to robotics, artificial intelligence, Internet of Things, and others.

The programme that began on 20 December had been expected to last from two (2) to three (3) months. Unlike MIV programmes that had been implemented online during the peak of COVID-19 pandemic and strict standard operating procedure (SOPs), *MIV Bersama IMFutures* volunteers had been allowed to carry out volunteering activities online and/or face-to-face on ground. This had been during the time when, the Majlis Keselamatan Negara had loosen up the restriction because of the lower rate of transmission and infection. Nevertheless, volunteers had been reminded to fully comply with the SOPs by MKN and Kementerian Kesihatan Malaysia and to practice physical distancing during face-to-face sessions.

The volunteers had implemented projects based on two (2) categories. While the mandatory project had focused on spreading advocacy messages from KDB modules either online or offline, the elective projects to choose from had included online business marketing tools for local and micro-entrepreneurs, e-communication learning for the elderlies, and online safety and child online protection for parents/guardians/educators.

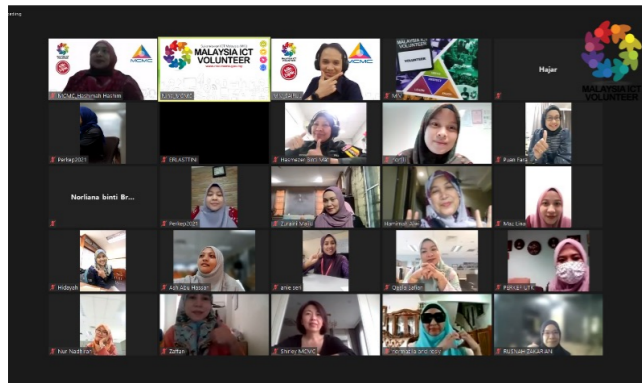


The workshop for volunteers in the MIV with IMFutures programme had been conducted in Kuantan, Pahang, from 17 to 19 December 2021. It had been the first in-person workshop for MIV volunteers since COVID-19 pandemic started in year 2020

c. MIV with PERKEP

Another MIV collaborative programme had been MIV Bersama PERKEP 2021 that had been held in partnership with the Police Family Association (PERKEP). Aiming to expand the scope of MIV to include enforcement agencies in the country, the programme had encouraged volunteering activities among PERKEP members that include using the social media in a positive and ethical manner and promoting digital literacy among their community members. These activities had helped toward improving the quality of community life and the acceptance of digitalisation as part of the new norm. A total of 30 PERKEP members and personnel at the Department of Internal Security and Public Order (JKDNKA) including police officers from the Bukit Aman Contingent, Kuala Lumpur, had joined the programme as volunteers from April to July 2021.

PERKEP's involvement in this programme had increased their members' knowledge on the ethical use of social media to help reduce the spread of fake news and cyber bullying. Equipped with proper knowledge, PERKEP members would have been able to deal with content related to sensitive issues in the Malaysian society, such as those related to religion, belief, political sentiment, and culture, more effectively.



MIV had also collaborated with other government agencies and organisations; for example, MIV Bersama PERKEP

d. MIV with Schools

The MIV with School had been a volunteering programme for secondary and primary school teachers across the country aiming at improving digital literacy among the students and share the importance of ICT and online safety with students and schools' community. The programme had supported the Government's Malaysian Education Development Plan (2013-2025) to upgrade the Malaysian education system and utilise ICT to improve the quality of learning and prepare students to face the needs and challenges of the future. The group of volunteers under the MIV programme had comprised of school principals, ICT teachers, school counsellors, and other teachers at the primary

and secondary school levels who had been selected by the State Education Departments. Staff and officials at the departments and Ministry of Education had played an important role in the implementation of the programme. They had been expected to monitor the activities that had been carried out by the schools under their respective supervision in addition to ensure the teachers had submitted the reporting to MCMC at the end of their project.

The MIV with School series of workshops had been held online to ensure teacher volunteers understand their roles, responsibilities, and tasks. By attending the workshops, volunteers had gained sufficient knowledge and skills to deliver MCMC's advocacy message to students in their respective schools and increased their knowledge about the abuse of Internet usage.

The exposure to MIV with School 2021 had brought a positive impact on the teacher volunteers by helping them transform the delivery of educational content through online learning. For example, several teachers had developed websites for members of the school community, especially students, to disseminate information and tips on how to use the Internet in a positive, productive, and responsible manner. In 2021, the MIV with School saw the participation of 592 teachers from 392 schools in Perlis, Kelantan, and Pahang.

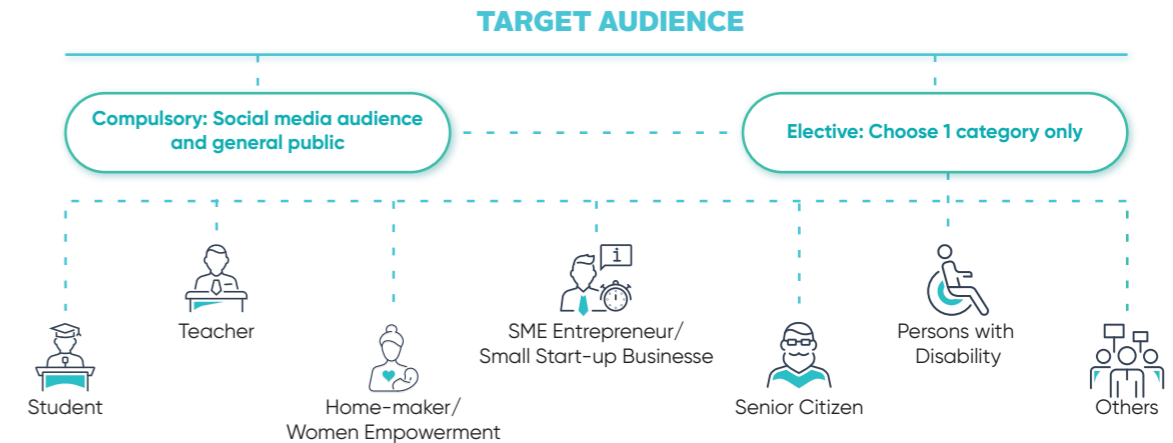


SK Chengal Lempong in Balok, Pahang, had developed MIV and KDB Publicity Corner to give exposure to the initiatives and child online protection

e. MIV with IHE

The MIV with IHE is a platform for undergraduate and graduate students at institutions of higher education to give back to the community as ICT volunteers. Joining the programme would also help to inculcate the culture of ICT training as well as increase the students' employment opportunities as it would set them apart from other candidates. MIV with IHE (UiTM) 2021 programme had been the first collaboration with the Universiti Teknologi MARA (UiTM). The programme implementation was done through the Service-Learning Malaysia-University for Society or SULAM, an initiative by the Ministry of Higher Education to give exposure to students by combining learning objectives in the lecture room with real life applications in the community. The project had provided the students with an experience in solving real problems in the community by putting theories into practice. This had been in line with the objectives of MIV with IHE programme where volunteers' knowledge and skills had been used to support ICT development in their targeted community by encouraging the use of ICT applications.

Running from 23 October 2021 to 17 January 2022 the project had involved 84 UiTM students where they had disseminated the advocacy messages of KDB, Sebenarnya.my, Mobile E-Waste, and Check Your Label either online or offline. In addition, the students had an option to develop an elective ICT project based on guided theme.



f. Impact Study on Malaysia's ICT Volunteer Programme®

Since its launch in 2016, MIV had many achievements in terms of audience reach, and quantity of volunteers, activities or implemented programmes. However, the effectiveness of the MIV programme had not been tested with rigorous scientific methods. To address this gap, MCMC through the Digital Society Research Grant (DSRG) had approved a research grant to the Institute for Advanced and Smart Digital Opportunities (IASDO), School of Computing to do an impact study on the MIV initiative. Led by Associate Professor Dr. Mazni Omar the research team had studied the effectiveness of the MIV initiative based on the Theory of Planned Behaviour (TPB) on a group of MIV with Community programme volunteers and the community members who had benefitted from the programme.

The findings from the study had indicated that the programme had successfully changed the behaviour of MIV volunteers in supporting ICT volunteering behaviour and that members of the community where the volunteering programme had been conducted had demonstrated enhanced digital literacy behaviour.

Further, the study had recommended that the benefits gained from the MIV programme could have been improved by strengthening collaboration with schools, higher education institutions, private/ government agencies, and non-governmental organisations, as well as through more active use of social media to promote knowledge sharing and ICT engagement.

g. Media Visibility

The branding of MIV and the introduction or reinforcement of the public's awareness of MIV activities had been emphasised through interviews on TV and radio channels. These interviews had been conducted on main channels such as Selamat Pagi Malaysia (RTM) and Radio Bernama or platforms at the state level such as Kupu-kupu FM (Sabah), Mutiara FM (Pulau Pinang), KLFM, and Roger-Roger Labuan. This collaboration had expanded the audience reach of MIV brand which would not have been possible otherwise.

Additionally, MIV had also benefitted from the appeal of online platforms such as Facebook, Instagram, and YouTube to promote its brand and the volunteering activities. MIV volunteers' postings of their volunteering activities had also been shared on MIV social media.

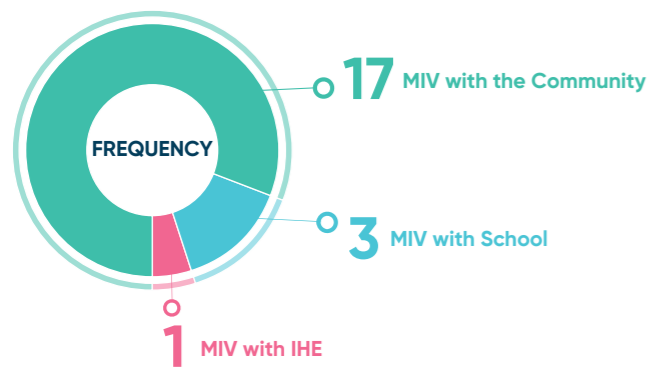
h. MIV Achievements

Overall, from 2016 to 2021, MIV had garnered a total of 8,627 volunteers through the implementation of 178 programmes and activities and achieved over 13 million in audience reach through volunteering activities. For online activities, MIV had reached an audience of 3,319,834 from the postings on its social media as well as MIV account followers.

MIV ACHIEVEMENTS IN 2021



IMPLEMENTATION OF THE MIV INITIATIVE



IMPLEMENTATION OF THE MIV PROGRAMMES

PROGRAMME	VOLUNTEERS	AUDIENCE REACH
MIV with Community - MIVO (104); PERKEP (30); MIV02 (169)	303	426,424
MIV with IHE	84	TBA
MIV with IIV	None	None
IIV (International ICT Volunteer)	None	None
MIV with School (Perlis: 91/Kelantan: 390/Pahang: 111)	592	116,169
Online Postings - 369 273 4 86,600 - Followers on Social Media	-	1,109,590
OVERALL TOTAL	979	1,652,183

ENVIRONMENTAL SUSTAINABILITY

Building a Trusted, Safe and Ethical Digital Environment

On 5 June every year we celebrate World Environment Day. The theme for 2021, "Ecosystem Restoration", aimed to increase the global awareness on environmental issues and promote involvement in any changes that occur to the environment. The purpose is to preserve the environment from being affected or destroyed as a result of irresponsible or negligent human behaviour. MCMC's role is to invite and educate all stakeholders continuously to preserve and conserve the global environment through initiatives carried out internally or through telecommunications industries that have been given the responsibility to provide telecommunications facilities and infrastructure to stakeholders. MCMC will continue to practice an "eco-friendly" lifestyle widely in life and in business affairs and be actively involved in preserving and conserving the national and global environment. Each MCMC member needs to realise that the efforts must be at the ore of their being, as individual awareness is crucial.

MCMC's environmental sustainability governance coincides with the National Environmental Policy (NAPA) in driving continuous economic, social and cultural progress as well as improving the quality of life of Malaysians through environmental well-being and sustainable development. For the sake of environmental well-being and sustainable development, MCMC has paid attention to environmental preservation in line with sustainable environmental values in all activities or actions from the early stages of project planning.

ELECTROMAGNETIC FIELD (RF-EMF) RADIO FREQUENCY RADIATION COMPLIANCE

MCMC has conducted random monitoring of Radio Frequency Electromagnetic Field (RF-EMF) emissions from radio communication infrastructure (RCI) to ensure the accuracy of RF-EMF emission readings and verify compliance with the "Mandatory Standard for Electromagnetic Field Emissions from Radio Communication Infrastructure". This audit activity was carried out through measurement and simulation methods in 33 locations across Malaysia, namely 15 in urban locations, 11 in the suburbs, and seven (7) in rural areas.

Comparative analysis between measurement data and simulation data was also performed to assess the validity and accuracy of simulation data compared to measurement data.

The results of measurement and data analysis found that the RF-EMF emissions from the radio communication infrastructure involved in this study complied with the exposure limits allowed to the public as stated in MS-EMF.

Additionally, found that the best method to assess compliance was with on-site measurements of the RCI.

KITAR – MOBILE E-WASTE RECYCLING PROGRAMME

For 2021, with the challenges that the COVID-19 pandemic, MCMC continued to deal of electronic waste generated from the telecommunications industry through the mobile e-waste recycling programme; KITAR.

Since the awareness and collection activities could not be fully carried out, MCMC took the initiative to devise a new strategy to ensure the sustainability of this initiative. Accordingly, in September 2021, MCMC issued a call for collaboration to invite interested parties, particularly e-waste recycling companies, logistics companies such as postal, courier, and shipping, as well as technology companies that can develop a digital platform for this initiative.

Despite facing obstacles with collections in 2021, Mobile e-Waste still recorded collections as follows:

Category	Total Collection (units)	Total Collection (kg)
Smartphone	76	8.6
Camera Phone	64	11.6
Regular Phone	131	14.9
Accessories	15	80.7
Laptops	15	39.7
Others	-	112.8
Total	301 units	268.3 kgs

NATIONAL ENERGY AWARD 2021

The National Energy Awards (NEA) is one of the ideal and prestigious awards in Malaysia which recognises the outstanding achievements and best performance of local institutions and organisations in driving the agenda to maintain sustainable energy in the country. MCMC has won the 2021 National Energy Award (NEA) for the Energy-Efficient Building category which is the Best Large Green Building in 2021.

MCMC Tower 1 is a green building built specifically for office use that is efficiently designed and uses comprehensive elements and has original sustainable features by achieving the Green Building Index (GBI) Gold category for renewal certification and maintaining it throughout the ownership of the engagement for the following year.

Significant green features include a rainwater recycling system, greywater and renewable energy (RE) through Photovoltaic (PV) generation off-setting 2 percent of the total energy consumption, utilising chilled water from the District Cooling Plant in Cyberjaya to meet the cooling load in the building.



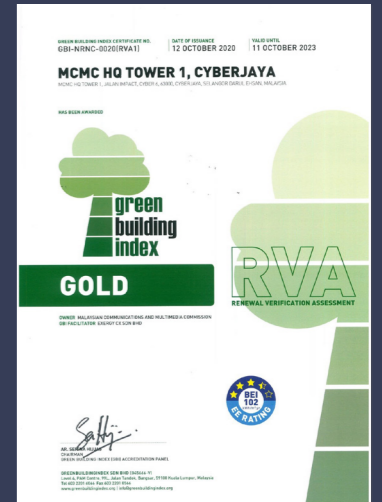
National Energy Award 2021

GBI NRNC RVA GOLD MCMC HQ TOWER 1

MCMC HQ Tower 1 was built and designed under the Non-Residential New Construction (NRNC) category that received a Building Energy Index (BEI) with a Design Assessment (DA) of 110kWh/m²/year.

For the achievement of the latest GBI NRNC RVA (Renewal Verification Assessment) record, MCMC was awarded a gold rating with a score of 84 points out of 100 points and a BEI of 102kWh/m²/year. BEI decreased from 109kWh/m²/year in 2017 under the GBI NRNC CVA (Completion and Verification Assessment) category to 102kWh/m²/year in 2020. Therefore, MCMC's involvement in energy management implementation and conservation programmes can be demonstrated through the effectiveness of design building form based on GBI requirements.

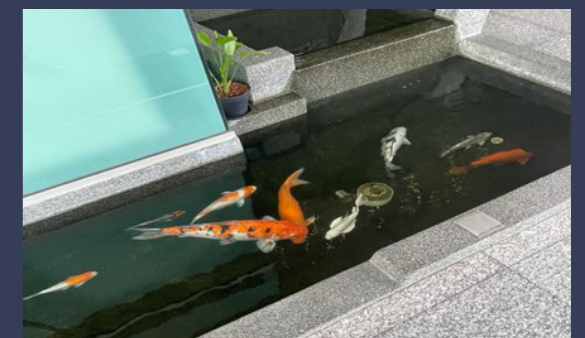
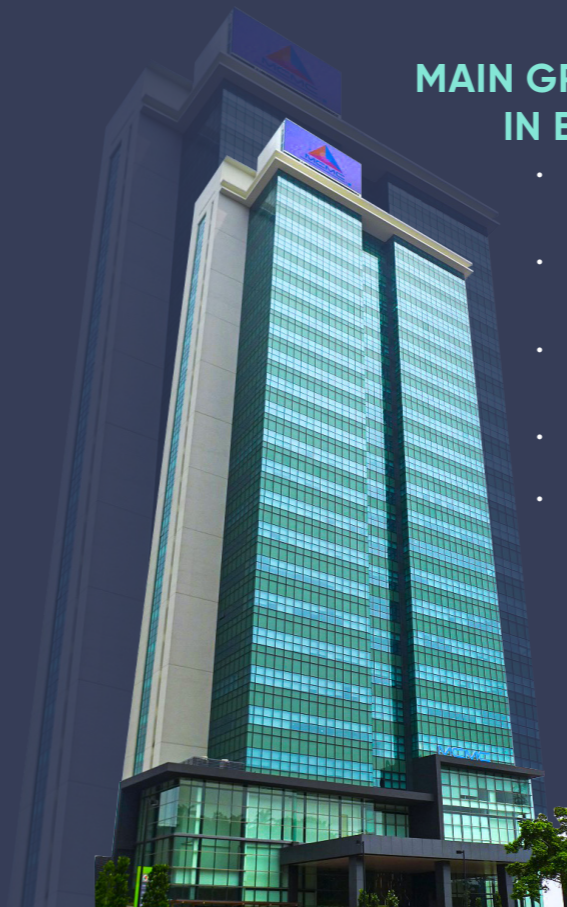
To continue the commitment to sustainable development and green building initiatives, various efforts have been implemented to ensure better efficiency in the use of resources such as energy, water and other materials while reduce the impact of building usage on human health and the environment during the building's life cycle through design placement, construction, and the best operations and maintenance.



RVA MCMC HQ Tower 1 Certificate

MAIN GREEN FEATURES INCORPORATED IN BUILDING DESIGN

- The use of low-E glass and rear panes for building façades to achieve an Overall Thermal Transfer Value (OTTV) of less than 40 for better overall energy use efficiency of the building.
- Installation of photovoltaic panels on the rooftop which serves to harvest solar energy equivalent to up to 2 percent of the total electricity consumption.
- Addition of efficient lighting design with automatic control, as well as an air conditioning system for the MCMC building that managed to achieve less than 110kWh/m²/year.
- Incorporation of rainwater and greywater harvesting and recycling systems to achieve potable water consumption savings.
- Installation of interior finishes including furniture, to fully comply with indoor environmental quality (IEQ) requirements.



MCMC will continuously to monitor the impact of the environment on daily operations vice versa, whether involving MCMC itself or involving the communication and multimedia industries on network expansion projects. MCMC will always support all stakeholders' efforts in ensuring environmental sustainability is maintained. It is very important for stakeholders to play their role in a committed manner because environmental challenges cannot be overcome without collective action. Public lack of awareness of environmental issues will affect sustainable development. MCMC is committed to programmes that help change society's behaviour and perspective towards the environment. Through green campaigns, we are able to address growing concerns among stakeholders.

Chapter **03**
FINANCIAL



FINANCIAL HIGHLIGHTS

Financial Year Ending 31 December 2021

FINANCIAL YEAR ENDING 31 DECEMBER 2021

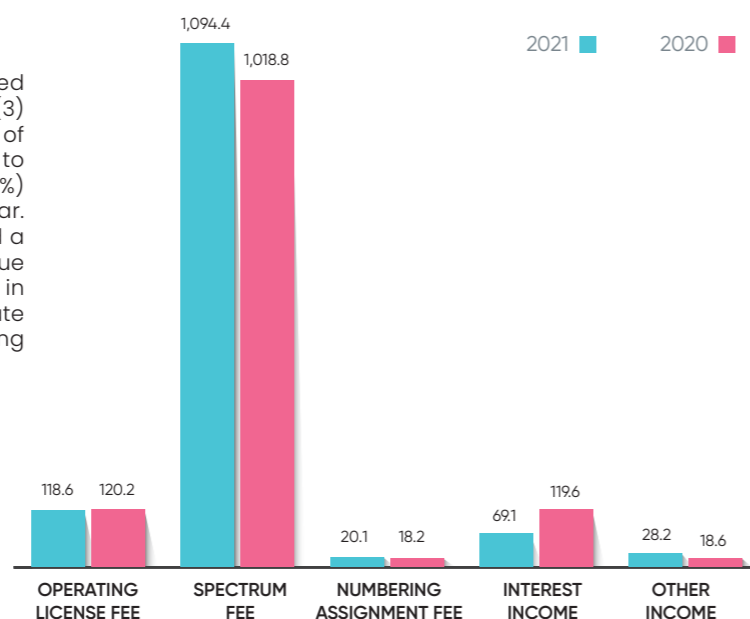
The year 2021 proved to be a very challenging year. It can be said that the global pandemic greatly affected everyone. The government, businesses, the public and MCMC were all feeling the impact of the uncertain economic environment brought upon by the COVID-19 pandemic. Nevertheless, the telecommunications sector, the broadcasting sector as well as the postal and courier sector regulated by MCMC remained committed to ensuring the continuity of their respective operations, and even more so in the face of the pandemic.

MCMC works hand in hand with the telecommunications industry in implementing various initiatives and programmes to accommodate the increased demand for services by customers while at the same time ensuring the improvement of network service performance, especially in critical areas. This is important because mobile and fixed connectivity has become very important in the new norm environment that encourages Malaysians to take advantage of online connectivity whether for work or for learning, as an effort to break the chain of transmission of the fast-spreading virus.

As for the broadcasting sector, users are encouraged to take advantage of business channels through television and radio that can be accessed through digital platforms. As for postal and courier services, various efforts have been made by the industry to accommodate the increased use of these services while reducing contact between personnel and customers during parcel delivery. The COVID-19 pandemic has greatly changed the landscape of life of Malaysians and the world in general. MCMC works hard to ensure that all stakeholder and consumer needs continue to be prioritised.

INCOME

For the financial year ending 2021, the MCMC recorded an income of RM1.33 billion, an increase of three (3) percent (3%) or RM35.1 million compared to 2020 of RM1.30 billion. Spectrum fee income continued to record an upward trend, by seven (7) percent (7%) to RM1.09 billion compared to the previous year. Nevertheless, interest income continued to record a decrease of 42 percent (42%) or RM50.5 million due to a decrease in funds for investment purposes, in addition to a decrease in the Overnight Policy Rate (OPR) with the average interest rate for 2021 being 2.23% compared to 2.36% recorded in 2020.



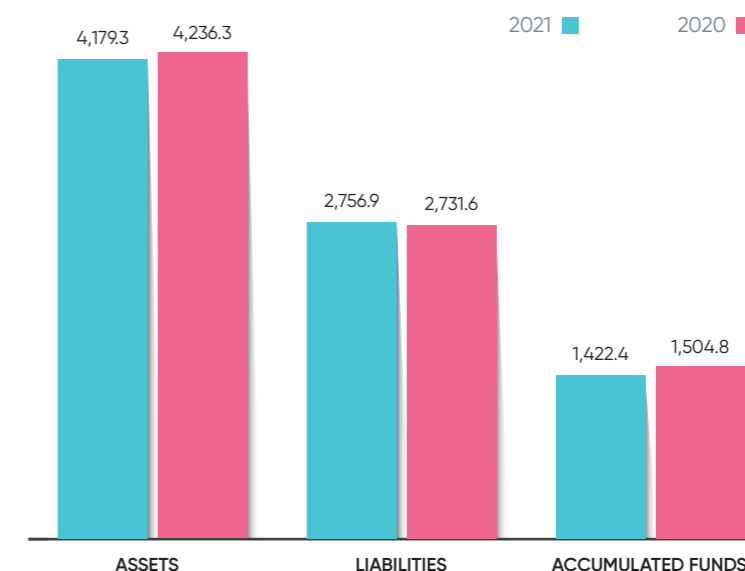
EXPENDITURE

MCMC recorded a significant decrease in expenses of 62% or RM630.9 million to RM384.1 million compared to 2020, amounting to RM1.01 billion. This decrease in expenditure is due to the provision of stimulus in the form of a one-off grant in 2020 to support the implementation of the National Digitalisation Broadcasting Project (NDBP) amounting to RM764 million. It is a Government initiative to provide the best TV and radio broadcasting services for the people without any charge. Nevertheless, due to the increasingly challenging landscape of the broadcasting industry in 2021, MCMC channelled a total of RM117 million in the form of grants to ensure the development and growth of the broadcasting industry remain competitive and consistent while also encouraging new participation on the Digital TV platform.

In addition, MCMC also recorded an expected credit loss reversal (ECL) on receivables fees of RM3.3 million for the financial year ending 2021 compared to the previous year which had recognised an ECL amounting to RM10.5 million. The reversal is due to the immediate debt recovery efforts carried out in 2021.

SURPLUS AFTER TAX REPRESENTS THE AMOUNT OF RECOGNISED PROFIT

The surplus after tax recognised in the financial year ending 2021 experienced a significant increase to RM927.6 million compared to the previous year amounting to RM250.5 million. Comparatively, the after-tax surplus representing recognised profits had increased mainly due to the provision of one-off grants in 2020 for the implementation of the NDBP.



ASSETS

MCMC closed the end of the financial year with assets totalling RM4.18 billion compared to RM4.24 billion at the end of the previous financial year. This decrease was driven by a decrease in other investments which included deposits placed with licensed banks in line with the increase in expenses recorded in the financial year ending 2020.

Property values recorded a decrease of RM14.1 million compared to the previous year due to depreciation charges and impairment losses amounting to RM9.5 million and RM4.6 million respectively. MCMC has performed an impairment test on its investment properties through a registered independent valuer and has recognised this impairment loss as the carrying amount of one of its properties is higher than the fair value determined by the independent valuer using the income method.

LIABILITIES

The liabilities position at the end of the financial year 31 December 2021 slightly increased by RM25.4 million to RM2.76 billion compared to the RM2.73 billion recorded the previous year.

ACCUMULATED FUNDS

For the financial year ending 2021, Accumulated Funds recorded a decrease of 5.5% or RM82.4 million to RM1.42 billion compared to RM1.50 billion the previous year although the MCMC recorded a surplus after tax amounting to RM927.6 million. This decrease is due to the channelling of funds to the Government's Consolidated Fund amounting to RM1.01 billion in accordance with the provision of 38(3) of the MCMCA compared to RM318 million in the previous year.



Malaysian Communications and Multimedia Commission

Statement by the Commission Members of the Malaysian Communications and Multimedia Commission

We, Dato' Dr. Fadhlullah Suhaimi Abdul Malek and Datuk Seri Tajuddin Atan, being two of the Commission Members of the Malaysian Communications and Multimedia Commission, do hereby state that in the opinion of the Members of the Commission, the financial statements set out on pages 198 to 243 are drawn up in accordance with Malaysian Financial Reporting Standards and International Financial Reporting Standards so as to give a true and fair view of the financial position of the Commission as of 31 December 2021 and of its income and expenditure and cash flows for the financial year then ended.

Signed in accordance with a resolution by the Commission Members of the Malaysian Communications and Multimedia Commission:

Dato' Dr. Fadhlullah Suhaimi Abdul Malek

Datuk Seri Tajuddin Atan

Cyberjaya, Selangor
7 April 2022

Malaysian Communications and Multimedia Commission

Statutory declaration

I, Nor Fadhilah Mohd Ali, the officer primarily responsible for the financial management of Malaysian Communications and Multimedia Commission, do solemnly and sincerely declare that the financial statements set out on pages 198 to 243 are, to the best of my knowledge and belief, correct and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1960.

Subscribed and solemnly declared by the above named at Putrajaya, Wilayah Persekutuan on 7 April 2022.

Nor Fadhilah Mohd Ali

Before me:



AIMI ZAINURITHA & CO
Peguambela & Peguamcara
No. 22A, Tingkat 1,
Jalan Diplomatik, Presint 15,
050 Wilayah Persekutuan Putrajaya
Tel: 6010-201-8885

Independent auditors' report to the Commission Members of Malaysian Communications and Multimedia Commission

Report on the audit of the financial statements

Opinion

We have audited the financial statements of Malaysian Communications and Multimedia Commission (the "Commission"), which comprise the statement of financial position as at 31 December 2021, and statement of income and expenditure and recognised gains and losses and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, as set out on pages 198 to 243.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Commission as at 31 December 2021, and of its financial performance and cash flows for the year then ended in accordance with Malaysian Financial Reporting Standards and International Financial Reporting Standards.

Basis of opinion

We conducted our audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing. Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence and other ethical responsibilities

We are independent of the Commission in accordance with the By-Laws (on Professional Ethics, Conduct and Practice) of the Malaysian Institute of Accountants ("By-Laws") and the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants ("IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the By-Laws and the IESBA Code.

Information other than the financial statements and auditors' report thereon

The Commission Members are responsible for the other information. The other information comprises the annual report, but does not include the financial statements of the Commission and our auditors' report thereon. We expect the annual report to be made available to us after the date of the auditors' report.

Our opinion on the financial statements of the Commission does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements of the Commission, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements of the Commission or our knowledge obtained in the audit or otherwise appears to be materially misstated.

When we read the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the members of the Commission and take appropriate action.

Responsibilities of the members for the financial statements

The Commission Members are responsible for the preparation of financial statements of the Commission that give a true and fair view in accordance with the Malaysian Financial Reporting Standards and International Financial Reporting Standards. The Commission Members are also responsible for such internal control as the Commission Members determine is necessary to enable the preparation of financial statements of the Commission that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements of the Commission, the Commission Members are responsible for assessing the Commission's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the members either intend to liquidate the Commission or to cease operations, or have no realistic alternative but to do so.

Independent auditors' report to the Commission Members of Malaysian Communications and Multimedia Commission (contd.)

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements of the Commission as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with approved standards on auditing in Malaysia and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements of the Commission, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Commission Members.
- Conclude on the appropriateness of the members' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Commission's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements of the Commission or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Commission to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements of the Commission, including the disclosures, and whether the financial statements of the Commission represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the members of the Commission regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other matters

This report is made solely to the members of the Commission, as a body, in accordance with Section 47(2) of the Malaysian Communications and Multimedia Commission Act 1998 and for no other purpose. We do not assume responsibility to any other person for the content of this report.

Ernst & Young PLT
202006000003 (LLP0022760-LCA) & AF 0039
Chartered Accountants

Kuala Lumpur, Malaysia
7 April 2022

Ong Chee Wai
No. 02857/07/2022 J
Chartered Accountant

Malaysian Communications and Multimedia Commission

Statement of financial position As at 31 December 2021

	Note	2021 RM'000	2020 RM'000
Assets			
Non-current assets			
Property, plant and equipment	3	256,709	256,769
Right-of-use asset	12	8,626	9,389
Investment properties	4	310,000	324,135
Intangible assets	5	6,925	2,305
		582,260	592,598
Current assets			
Fees and other receivables	7	29,173	25,869
Contract assets	13	12,158	11,362
Other investments	6	3,443,739	3,441,713
Tax recoverable		-	712
Cash and cash equivalents	8	111,972	164,078
		3,597,042	3,643,734
Total assets		4,179,302	4,236,332
Represented by:			
Accumulated funds	9	1,422,390	1,504,778
Liabilities			
Non-current liabilities			
Contract liabilities	10	2,028,958	1,958,395
Lease liabilities	12	6,254	7,014
		2,035,212	1,965,409
Current liabilities			
Contract liabilities	10	538,364	600,398
Lease liabilities	12	2,810	2,717
Other payables	11	178,246	163,030
Current tax payable		2,280	-
		721,700	766,145
Total liabilities		2,756,912	2,731,554
Total accumulated funds and liabilities		4,179,302	4,236,332

The notes form an integral part of these financial statements.

Malaysian Communications and Multimedia Commission

Statement of income and expenditure and recognised gains and losses For the year ended 31 December 2021

	Note	2021 RM'000	2020 RM'000
Income			
Operating licence fees	13	118,619	120,168
Spectrum fees	13	1,094,410	1,018,764
Numbering assignment fees	13	20,123	18,190
Interest income		69,091	119,635
Gain on disposal of property, plant and equipment		359	57
Reversal of provision for ECL on:			
- fees receivables	7	3,328	-
- other receivables	7	150	-
Rental income	4	16,954	18,046
Gain on disposal of right-of-use asset	12	14	11
Other income	14	7,365	438
		1,330,413	1,295,309
Expenditure			
Depreciation of property, plant and equipment	3	18,289	24,609
Property, plant and equipment written off	3	-	-
Depreciation of investment properties	4	9,557	9,448
Impairment loss on investment properties	4	4,578	5,417
Amortisation of intangible assets	5	2,366	4,128
Provision for ECL on fee receivables	7	-	10,488
Contract assets written off		-	742
Rebate entitlement expenses		16,846	4,924
Amortisation of right-of-use asset	12	2,936	3,089
Interest expenses	12	367	384
Employee benefit expenses	15	138,760	118,752
Administrative expenses		67,502	73,493
Audit fee		190	150
Rental expenses		2,272	2,367
Industry development grant expenses		145	60
GST rebates expenses	18	244	(5,316)
Projects expenses	19	1,066	(3,344)
Stimulus grant for the National Digitalisation Broadcasting project	20	117,000	764,000
Other expenses		1,982	1,581
		384,100	1,014,972

Malaysian Communications and Multimedia Commission

Statement of income and expenditure and recognised gains and losses For the year ended 31 December 2021 (contd.)

	Note	2021 RM'000	2020 RM'000
Surplus before tax		946,313	280,337
Tax expense	16	(18,701)	(29,808)
Surplus after tax representing total recognised gains	9	927,612	250,529

Malaysian Communications and Multimedia Commission

Statement of cash flows For the year ended 31 December 2021

	Note	2021 RM'000	2020 RM'000
Cash flows from operating activities			
Surplus before tax		946,313	280,337
Adjustments for:			
Depreciation of property, plant and equipment		18,289	24,609
Depreciation of investment properties		9,557	9,448
Amortisation of intangible assets		2,366	4,128
Depreciation of right-of-use asset		2,936	3,089
Impairment loss on investment properties		4,578	5,417
Gain on disposal of property, plant and equipment		(359)	(57)
Gain on disposal of right-of-use asset		(14)	(11)
Net (reversal)/addition of provision for ECL on fee receivables		(3,328)	10,488
Reversal of provision for ECL on other receivables		(150)	-
Interest expense on lease liabilities		367	384
Interest income		(69,091)	(119,635)
Operating surplus before changes in working capital		911,464	218,197
Changes in working capital:			
Contract liabilities		8,529	14,953
Contract assets		(796)	(187)
Fees and other receivables		174	(55,059)
Other payables and accrued expenses		15,216	(733,816)
Cash generated from/(used in) operations		934,587	(555,912)
Tax paid		(15,709)	(35,421)
Net cash generated from/(used in) operating activities		918,878	(591,333)

The notes form an integral part of these financial statements.

Malaysian Communications and Multimedia Commission

Statement of cash flows For the year ended 31 December 2021 (contd.)

	Note	2021 RM'000	2020 RM'000
Cash flows from investing activities			
Acquisition of property, plant and equipment	(i)	(24,101)	(10,278)
Acquisition of intangible assets		(1,114)	(852)
Interest received		69,091	152,402
Proceeds from disposal of property, plant and equipment		359	57
(Placement in)/withdrawal from other investments		(2,026)	775,113
Net cash generated from investing activities		42,209	916,442
Cash flows from financing activities			
Net repayment of lease liabilities		(3,193)	(3,262)
Payments made to Consolidated Fund pursuant to Section 38(3) of Malaysian Communications and Multimedia Commission Act 1998 (Act 589)		(1,010,000)	(318,000)
Net cash used in financing activities		(1,013,193)	(321,262)
Net (decrease)/increase in cash and cash equivalents		(52,106)	3,847
Cash and cash equivalents at 1 January		164,078	160,231
Cash and cash equivalents at 31 December	8	111,972	164,078

(i) Acquisition of property, plant and equipment

During the year, the Commission acquired property, plant and equipment in the following manner:

	2021 RM'000	2020 RM'000
Property, plant and equipment		
Satisfied by cash payments	24,101	10,278
Payable to suppliers	-	625
	24,101	10,903

The notes form an integral part of these financial statements.

Malaysian Communications and Multimedia Commission

Notes to the financial statements For the year ended 31 December 2021

1. Corporate Information

The principal activities of the Malaysian Communications and Multimedia Commission ("Commission") are to implement and to enforce the provisions of the communications and multimedia laws as stipulated in the Communications and Multimedia Act 1998 (Act 588) ("CMA") and the Malaysian Communications and Multimedia Commission Act 1998 (Act 589) ("MCMCA").

The Commission is a statutory body established under the MCMCA. The registered office of the Commission is located at MCMC Tower 1, Jalan Impact Cyber 6, 63000 Cyberjaya, Selangor Darul Ehsan.

The financial statements were approved and authorised for issue by the Commission's Members on 7 April 2022.

2. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to the years presented unless otherwise stated.

2.1 Basis of preparation

The financial statements of the Commission have been prepared in accordance with Malaysian Financial Reporting Standards ("MFRSs") and International Financial Reporting Standards ("IFRSs"). At the beginning of the current financial year, the Commission adopted new and revised MFRS which are mandatory for financial periods beginning on or after 1 January 2021 as described fully in Note 2.2.

The financial statements have been prepared on the historical cost basis except as disclosed in the accounting policies below.

The financial statements are presented in Ringgit Malaysia ("RM") which is also the functional currency of the Commission and all values are rounded to the nearest thousand ("RM'000") except otherwise indicated.

2. Summary of significant accounting policies (contd.)

2.2 Changes in accounting policies

On 1 January 2021, the Commission adopted the following new and amended MFRSs mandatory for annual financial periods beginning on or after the dates stated below:

Description	Effective for annual periods beginning on or after
-------------	--

Interest Rate Benchmark Reform - Phase 2 (Amendments to MFRS 9, MFRS 139 and MFRS 7)	1 January 2021
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The adoption of the amendments to MFRSs and the revised conceptual framework does not have any material impact on the financial statements in the period of initial application.

2. Summary of significant accounting policies (contd.)

2.3 Standards issued but not yet effective

The standards that are issued but not yet effective up to the date of issuance of the Commission's financial statements are disclosed below. The Commission intends to adopt these standards, if applicable, when they become effective.

Description	Effective for annual periods beginning on or after
-------------	--

Amendments to Annual Improvements to MFRS Standards 2018-2020	1 January 2022
Property, Plant and Equipment-Proceeds before Intended Use (Amendments to MFRS 116 Property, Plant and Equipment)	1 January 2022
Onerous Contracts-Cost of Fulfilling a Contract (Amendments to MFRS 137 Provisions, Contingent Liabilities and Contingent Assets)	1 January 2022
Classification of Liabilities as Current or Non-current (Amendments to MFRS 101 Presentation of Financial Statements)	1 January 2022
Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to MFRS 112 Income Taxes)	1 January 2023
Disclosure of Accounting Policies (Amendments to MFRS 101 Presentation of Financial Statements)	1 January 2023
Definition of Accounting Estimates (Amendments to MFRS 108 Accounting Policies, Changes in Accounting Estimates and Errors)	1 January 2023
Amendments to MFRS 17 Insurance Contracts	1 January 2023
Classification of Liabilities as Current or Non-current-Deferral of Effective Date	1 January 2023

The Commission Members expect that the adoption of the above standards will not have a material impact on the financial statements in the period of initial application.

2. Summary of significant accounting policies (contd.)

2.4 Financial assets

Initial recognition

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income ("OCI") or fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Commission's business model for managing them. With the exception of fees receivables that do not contain a significant financing component or for which the Commission has applied the practical expedient, the Commission initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, directly attributable transaction costs. Fees receivables that do not contain a significant financing component or for which the Commission has applied the practical expedient are measured at the transaction price determined under MFRS 15. Please refer to the accounting policies stated in Note 2.13.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Commission commits to purchase or sell the asset.

In order for a financial asset to be classified and measured at amortised cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest ("SPPI") on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Commission's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- (i) Financial assets at amortised cost (debt instrument);
- (ii) Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments);
- (iii) Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments); or
- (iv) Financial assets at fair value through profit or loss.

2. Summary of significant accounting policies (contd.)

2.4 Financial assets (contd.)

Subsequent measurement (contd.)

The Commission categorises its financial assets based on the following:

(i) Financial assets at amortised cost

The Commission measures financial assets at amortised cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

The Commission's fees and other receivables are categorised as financial assets at amortised cost.

(ii) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading, financial assets designated upon initial recognition at fair value through profit or loss, or financial assets mandatorily required to be measured at fair value. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortised cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

The Commission's other investments are categorised as financial assets at fair value through profit or loss.

2. Summary of significant accounting policies (contd.)

2.4 Financial assets (contd.)

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognised (i.e., removed from the Commission's statement of financial position) when:

- (i) The rights to receive cash flows from the asset have expired; or
- (ii) The Commission has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Commission has transferred substantially all the risks and rewards of the asset, or (b) the Commission has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Commission has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Commission continues to recognise the transferred asset to the extent of its continuing involvement. In that case, the Commission also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Commission has retained.

2.5 Financial liabilities

Initial recognition

Financial liabilities are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability.

Financial liabilities are recognised in the statement of financial position when, and only when, the Commission becomes a party to the contractual provisions of the financial instrument. The Commission's financial liabilities are classified as subsequently measured at amortised cost. The Commission has not designated any financial liabilities as at fair value through profit or loss.

Subsequent measurement

Trade and other payables are recognised initially at fair value plus directly attributable transaction costs and subsequently measured at amortised cost using the effective interest rate method.

2. Summary of significant accounting policies (contd.)

2.5 Financial liabilities (contd.)

Derecognition

A financial liability is derecognised when the obligation under the liability is extinguished. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognised in profit or loss.

2.6 Property, plant and equipment

All items of property, plant and equipment are initially recorded at cost. The cost of an item of property, plant and equipment is recognised as an asset if, and only if, it is probable that future economic benefits associated with the item will flow to the Commission and the cost of the item can be measured reliably.

Subsequent to recognition, property, plant and equipment except for freehold land are measured at cost less accumulated depreciation and accumulated impairment losses. When significant parts of property, plant and equipment are required to be replaced in intervals, the Commission recognises such parts as individual assets with specific useful lives and depreciation, respectively. Likewise, when a major inspection is performed, its cost is recognised in the carrying amount of the property, plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognised in profit or loss as incurred.

The present value of the expected cost for the dismantling and decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met and is depreciated over the lease term.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

- Office and communication equipment 6 - 7 years
- Computer equipment 3 years
- Furniture and fittings 6 - 7 years
- Motor vehicles 5 years
- Buildings 50 years
- Renovation 3 years

Freehold land has an unlimited useful life and therefore is not depreciated.

2. Summary of significant accounting policies (contd.)

2.6 Property, plant and equipment (contd.)

Work-in-progress assets are not depreciated as these assets are not yet available for use and will be transferred to the relevant category of assets and depreciated accordingly when the assets are completed and ready for their intended use.

The carrying values of property, plant and equipment are reviewed for impairment when events or changes in circumstances indicate that the carrying values may not be recoverable.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss on derecognition of the asset is included in the profit or loss in the year the asset is derecognised.

The residual value, useful life and depreciation method are reviewed at each reporting date, and adjusted prospectively, if appropriate.

2.7 Investment properties

Investment properties are properties which are owned to earn rental income or for capital appreciation or for both, but not for sale in the ordinary course of business, use in the production or supply of goods or services or for administrative purposes.

Investment properties are stated at cost less any accumulated depreciation and any accumulated impairment losses.

Depreciation is recognised in the statement of income and expenditure on a straightline basis at 2.5% per annum.

An investment property is derecognised on its disposal, or when it is permanently withdrawn from use and no future economic benefits are expected from its disposal. The difference between the net disposal proceeds and the carrying amount is recognised in profit or loss in the period in which the item is derecognised.

2. Summary of significant accounting policies (contd.)

2.8 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. Following the initial recognition, intangible assets are carried at cost less accumulated amortisation and any accumulated impairment losses. Intangible assets with finite useful lives are amortised on a straight line basis over the estimated economic useful lives of three years and assessed for impairment whenever there is an indication that the intangible assets may be impaired. The amortisation period and the amortisation method for an intangible asset are reviewed at each reporting date, and adjusted prospectively, if appropriate.

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite useful lives are amortised on a straight-line basis over the economic useful lives and assessed for impairment whenever there is an indication that the intangible may be impaired. The amortisation period and method are reviewed at least at each financial year end. Changes in the expected useful lives or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortisation period or method and treated as changes in accounting estimates. The amortisation expense on intangible assets with finite lives is recognised in profit or loss.

2.9 Leases

The Commission assesses at contract inception whether a contract is, or contains, a lease, that is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Commission as lessee

The Commission applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Commission recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

2. Summary of significant accounting policies (contd.)

2.9 Leases (contd.)

Commission as lessee (contd.)

(i) Right-of-use assets

The Commission recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straightline basis over the shorter of the lease term and the estimated useful lives of the assets, as follows:

- Copiers 5 years
- Office 2 to 9 years
- National Spectrum Monitoring (“NASMOC”) equipment 2 to 11 years

If ownership of the leased asset transfers to the Commission at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset. The right-of-use assets are also subject to impairment. Refer to the accounting policies in Note 2.18 Impairment of non-financial assets.

2. Summary of significant accounting policies (contd.)

2.9 Leases (contd.)

Commission as lessee (contd.)

(ii) Lease liabilities

At the commencement date of the lease, the Commission recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including insubstance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Commission and payments of penalties for terminating the lease, if the lease term reflects the Commission exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Commission uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a material modification, a material change in the lease term, a material change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

(iii) Short-term leases and leases of low-value assets

The Commission applies the short-term lease recognition exemption to its shortterm leases of office equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

2. Summary of significant accounting policies (contd.)

2.9 Leases (contd.)

Commission as a lessor

Leases in which the Commission does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

2.10 Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, balances and deposits with banks and highly liquid investments which have an insignificant risk of changes in fair value with original maturities of three (3) months or less, and are used by the Commission in the management of their short term commitments.

2.11 Impairment of financial assets

The Commission recognises an allowance for expected credit loss ("ECL") for all debt instruments not held at fair value through profit or loss. ECL is based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Commission expects to receive.

ECL is recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECL is provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For fees receivables, the Commission applies a simplified approach in calculating ECL. Therefore, the Commission does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECL at each reporting date. The Commission has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the licensees and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

2. Summary of significant accounting policies (contd.)

2.12 Employee benefits

(i) Short-term employee benefits

Wages, salaries, bonuses and social security contributions are recognised as an expense in the year in which the associated services are rendered by employees of the Commission. Short term accumulating compensated absences such as paid annual leave are recognised when services are rendered by employees that increase their entitlement to future compensated absences. Short term nonaccumulating compensated absences such as sick leave are recognised when the absences occur.

(ii) Defined contribution plans

Defined contribution plans are post-employment benefit plans under which the Commission pays fixed contributions into separate entities or funds and will have no legal or constructive obligation to pay further contributions if any of the funds do not hold sufficient assets to pay all employee benefits relating to employee services in the current and preceding financial years. Such contributions are recognised as an expense in profit or loss as incurred. As required by law, entities in Malaysia make such contributions to the Employees Provident Fund ("EPF").

2.13 Revenue from contracts with customers

The Commission is the regulatory body of the communications and multimedia industry. Revenue from contracts with its licensees is recognised when control of the services are transferred to the licensees at an amount that reflects the consideration to which the Commission expects to be entitled in exchange for those services.

(i) Operating licence fees

Income relating to granting of operating licence are recognised when (or as) the Commission satisfies over time, a performance obligation by transferring a promised service (i.e. a licence) to the licensee. The right to use the licence is transferred when (or as) the licensee obtains control of that licence.

Income relating to the application fee of individual licence are recognised at the point in time when the Commission approves and processes the application of the interested licensees.

2. Summary of significant accounting policies (contd.)

2.13 Revenue from contracts with customers (contd.)

(ii) Spectrum fees

Spectrum fees consist of apparatus and spectrum assignment fees. There is a performance obligation by transferring a promised service (i.e. the right to operate in the spectrum) to the licensee and the income from apparatus and spectrum assignment fees are recognised over the licence period (i.e. over time) which has a tenure ranging from 1 to 16 years. An asset is transferred when the licensee obtains the control to operate in the spectrum.

Income relating to the application fee of apparatus assignments are recognised at the point in time when the Commission approves and processes the application of the interested licensees.

(iii) Numbering assignment fees

There is a performance obligation by transferring a promised service (i.e. the right to use the number assignments) to the licensee and the income from numbering assignment is recognised over the agreed time frame (i.e. over time). An asset is transferred when the licensee obtains the control to use the number assignments.

Income relating to the application fee of numbering assignments are recognised at the point in time when the Commission approves and processes the application of the interested licensees.

(iv) Interest income

Interest income is recognised on a time proportion basis that reflects the effective yield on the asset, unless recoverability is in doubt, in which case, it is recognised on receipt basis.

2. Summary of significant accounting policies (contd.)

2.14 Contract balances

(i) Contract assets

Contract asset is the Commission's right to consideration in exchange for granting operating licences to the licensees.

Billings to licensees are performed at the end of the licensees' anniversary date for the licence. As the revenue from operating licenses are recognised over time, however, the Commission has accrued the licence income but has not billed the licensees. This unbilled licence income gives rise to a contract asset. Upon billing to licensees at the end of the anniversary, the amount recognised as contract assets is reclassified to fees receivables.

(ii) Contract liabilities

A contract liability is recognised if a payment is received or a payment is due (whichever is earlier) from a licensee at the beginning of its anniversary date or before the Commission grants the related operating licenses, spectrum or numbering assignments to the licensees or assignment holders. Contract liabilities are recognised as revenue over the licence period.

2.15 Income tax

Income tax expense is in respect of tax on interest and rental income earned during the financial year. All other income is exempted from taxation as the Commission is tax exempt under Section 127(3)(b) of the Income Tax Act, 1967.

Income tax expense comprises current tax. Current tax is recognised in the statement of income and expenditure.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous financial years.

2. Summary of significant accounting policies (contd.)

2.16 Fair value measurement

The Commission measures financial instruments and non-financial assets at fair value at each reporting date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- (i) In the principal market for the asset or liability; or
- (ii) In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible to or by the Commission.

The fair value of an asset or liability is measured using the assumptions that the market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participants that would use the asset in its highest and best use.

The Commission uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

2. Summary of significant accounting policies (contd.)

2.16 Fair value measurement (contd.)

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- (i) Level 1 - the fair value is measured using quoted prices (unadjusted) in active markets for identical assets or liabilities.
- (ii) Level 2 - the fair value is measured using inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- (iii) Level 3 - the fair value is measured using inputs for the asset or liability that are not based on observable market data (unobservable inputs).

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Commission determines whether transfers have occurred between Levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

2. Summary of significant accounting policies (contd.)

2.17 Provisions

Provisions are recognised when the Commission has a present obligation as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount can be made. Provisions are reviewed at each reporting date and adjusted to reflect the current best estimate. Where the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as finance cost.

2.18 Impairment of non-financial assets

The Commission assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Commission estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's ("CGU") fair value less costs to sell and its value in use. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. For the purpose of impairment assessment, assets are grouped at the lowest level for which there is separately identifiable cash flows.

Impairment losses of continuing operation are recognised in statement of income and expenditure in those expense categories consistent with the function of the impaired asset.

An assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Commission estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in profit or loss unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

2. Summary of significant accounting policies (contd.)

2.19 Current and non-current classification

The Commission presents assets and liabilities in the statement of financial position based on current and non-current classification.

An asset is classified as current when it is:

- expected to be realised or intended to be sold or consumed in normal operating cycle;
- held primarily for the purpose of trading;
- expected to be realised within 12 months after the reporting period; or
- cash and cash equivalents unless restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- it is expected to be settled in normal operating cycle;
- it is held primarily for the purpose of trading;
- it is due to be settled within 12 months after the reporting period; or
- there is no unconditional right to defer the settlement of the liability for at least 12 months after the reporting period.

All other liabilities are classified as non-current.

2.20 Significant accounting judgements and estimates

The preparation of the Commission's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amount of the asset or liability affected in the future.

(i) Critical judgements made in applying accounting policies

There were no critical judgements made in applying the accounting policies of the Commission which may have significant effects on the amounts recognised in the financial statements.

2. Summary of significant accounting policies (contd.)**2.20 Significant accounting judgements and estimates (contd.)****(ii) Key sources of estimation uncertainty**

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Provision for expected credit losses (“ECL”) for fees receivables

The Commission uses a provision matrix to calculate ECL for fee receivables. The provision rates are based on days past due for groupings of various licensees segments that have similar loss patterns.

The provision matrix is initially based on the Commission’s historical observed default rates. The Commission will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., overnight policy rate) are expected to deteriorate over the next year which can lead to an increased number of defaults, the historical default rates are adjusted. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

The provision matrix was calibrated using the multi regression. The ECL, which is the dependent variable in the model, is computed by applying the regression coefficients to the independent variables, i.e. macroeconomic factors. The regression coefficients are derived from analyzing the relationships between the actual historical losses incurred on trade receivables, and the historical movements in the macroeconomic factors. A prerequisite of the selection of the macroeconomic factors to be used in the model is the existence of a strong correlation between the variables. Based on the Commission’s analysis, the Commission concluded that overnight policy rates (“OPR”) and unemployment rates show a strong correlation with the actual historical losses on incurred on trade receivables, and hence was selected to be used in the ECL model.

2. Summary of significant accounting policies (contd.)**2.20 Significant accounting judgements and estimates (contd.)****(ii) Key sources of estimation uncertainty (contd.)****(a) Provision for expected credit losses (“ECL”) for fees receivables (contd.)**

The assessment of the correlation between historical observed default rates, forecast economic conditions and ECL is a significant estimate. The amounts of ECL are sensitive to changes in circumstances and of forecast economic conditions. The Commission’s historical credit loss experience and forecast of economic conditions may also not be representative of licensees actual default in the future.

The information about the ECL on the Commission’s fees receivables is disclosed in Note 7.

(b) Useful lives of property, plant and equipment, investment properties and intangible assets

The Commission estimates the useful lives of property, plant and equipment, investment properties and intangible assets based on the period over which the assets are expected to be available for use. The estimated useful lives of property, plant and equipment, investment properties and intangible assets are reviewed periodically and are updated if expectations differ from previous estimate due to physical wear and tear, technical or commercial obsolescence and legal or other limits on the use of the assets. Changes in expected level of usage and economic development could impact the economic useful lives and the residual values of these assets, and hence future depreciation charges on such assets could be revised.

2. Summary of significant accounting policies (contd.)

2.20 Significant accounting judgements and estimates (contd.)

(ii) Key sources of estimation uncertainty (contd.)

(c) Determining the lease term of contracts with renewal and termination options - Commission as a lessee

The Commission determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Commission has several lease contracts that include extension and termination options. The Commission applies judgement in evaluating whether it is reasonably certain to exercise the option to renew the lease. It considers all relevant factors that create an economic incentive for it to exercise the renewal. After the commencement date, the Commission reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate.

(d) Incremental borrowing rate for leases

The Commission cannot readily determine the interest rate implicit in the lease, therefore it uses the incremental borrowing rate ("IBR") to measure lease liabilities. The IBR is the rate of interest that the Commission would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Commission 'would have to pay', which requires estimation when no observable rates are available or when they need to be adjusted to reflect the terms and conditions of the lease. The Commission estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates (such as the Commission's stand-alone credit rating).

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3. Property, plant and equipment

	Office and communication equipment RM'000	Computer equipment RM'000	Furniture and fittings RM'000	Motor vehicles RM'000	Freehold land RM'000	Buildings RM'000	Renovation RM'000	Capital work-in progress RM'000	Total RM'000
Cost									
At 1 January 2021	16,348	372,299	3,718	14,624	10,873	260,633	10,912	3,878	693,285
Additions	492	416	121	1,377	-	-	-	21,695	24,101
Disposals	-	-	-	(1,161)	-	-	-	-	(1,161)
Reclassification	134	5,624	7	-	-	-	1,272	(7,037)	-
Transfer to intangible assets (Note 5)	-	-	-	-	-	-	-	(5,872)	(5,872)
At 31 December 2021	16,974	378,339	3,846	14,840	10,873	260,633	12,184	12,664	710,353
Accumulated depreciation									
At 1 January 2021	12,697	363,280	2,884	11,531	-	38,412	7,712	-	436,516
Charge for the year	1,673	7,776	258	1,472	-	5,213	1,897	-	18,289
Disposals	-	-	-	(1,161)	-	-	-	-	(1,161)
At 31 December 2021	14,370	371,056	3,142	11,842	-	43,625	9,609	-	453,644
Net carrying amount as at 31 December 2021	2,604	7,283	704	2,998	10,873	217,008	2,575	12,664	256,709

3. Property, plant and equipment (contd.)

	Office and communication equipment RM'000	Computer equipment RM'000	Furniture and fittings RM'000	Motor vehicles RM'000	Freehold land RM'000	Buildings RM'000	Renovation RM'000	Capital work-in-progress RM'000	Total RM'000
Cost									
At 1 January 2020	15,367	368,452	3,373	14,244	10,873	260,633	9,393	591	682,926
Additions	981	3,011	345	705	-	-	22	5,839	10,903
Disposals	-	-	-	(325)	-	-	-	-	(325)
Reclassification	-	836	-	-	-	-	1,497	(2,333)	-
Transfer to intangible assets (Note 5)	-	-	-	-	-	-	-	(219)	(219)
At 31 December 2020	16,348	372,299	3,718	14,624	10,873	260,633	10,912	3,878	693,285
Accumulated depreciation									
At 1 January 2020	10,841	349,513	2,633	10,234	-	33,199	5,812	-	412,232
Charge for the year	1,856	13,767	251	1,622	-	5,213	1,900	-	24,609
Disposals	-	-	-	(325)	-	-	-	-	(325)
At 31 December 2020	12,697	363,280	2,884	11,531	-	38,412	7,712	-	436,516
Net carrying amount as at 31 December 2020	3,651	9,019	834	3,093	10,873	222,221	3,200	3,878	256,769

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4. Investment properties

	2021 RM'000	2020 RM'000
Cost		
At 1 January/31 December	472,092	472,092
Accumulated depreciation		
At 1 January	54,783	45,335
Charge for the year	9,557	9,448
At 31 December	64,340	54,783
Accumulated impairment loss		
At 1 January	93,174	87,757
Charge for the year	4,578	5,417
At 31 December	97,752	93,174
Net carrying amount		
At 31 December	310,000	324,135
Fair value of investment properties	310,000	331,000

The following is recognised in the statement of income and expenditure in respect of the investment properties:

	2021 RM'000	2020 RM'000
Rental income	16,954	18,046
Rental related expenditure	(12,723)	(8,712)

4.1 Fair value information

Fair value of investment properties are categorised as follows:

	Level 3 2021 RM'000	Level 3 2020 RM'000
Land and building	310,000	331,000

During the current financial year, the Commission engaged an independent valuer with recognised qualifications and relevant experience to assess the fair values of the investment properties. Based on its assessment, there is an indication of impairment to the value of the investment properties. The fair value for the properties were determined based on the income approach method.

4. Investment properties (contd.)

4.1 Fair value information (contd.)

In assessing the fair values using the income approach, the independent valuer considered inputs such as monthly gross rental per square feet and monthly maintenance cost per square feet. These inputs were adjusted from its base value derived from existing rental agreements and historical information maintained by the Commission. The values were then discounted at a discount rate of 6% to arrive at the fair value of the investment properties.

Sensitivity analysis

A significant increase or decrease in the unobservable inputs used in the valuation would result in a correspondingly higher or lower fair value of the investment property.

4.2 Impairment loss of investment properties

During the year, the Commission reviewed the investment properties for indication of impairment and as a result, the Commission recognised an impairment loss of RM4.58 million (2020: RM5.42 million) in the statement of income and expenditure.

5. Intangible assets - software

	Note	2021 RM'000	2020 RM'000
Cost			
At 1 January		22,666	21,595
Addition		1,114	852
Reclassified from property, plant and equipment	3	5,872	219
At 31 December		29,652	22,666
Accumulated amortisation			
At 1 January		20,361	16,233
Charge for the year		2,366	4,128
At 31 December		22,727	20,361
Net carrying amount			
At 31 December		6,925	2,305

6. Other investments

	2021 RM'000	2020 RM'000
Deposits placed with licensed banks	3,443,739	3,441,713

The weighted average effective interest rate and the average maturity of the deposits as at 31 December are as follows:

	Weighted average effective interest		Average maturity	
	2021 %	2020 %	2021 days	2020 days
Deposits placed with licensed banks	2.23	2.36	308	339

7. Fees and other receivables

	2021 RM'000	2020 RM'000
Fees receivables		
Fees receivables	38,939	37,972
Less: Provision for ECL	(13,790)	(17,118)
Fees receivables, net	25,149	20,854
Other receivables		
Interest receivable	-	36
Deposits	1,780	1,740
Staff loans	424	502
Advances to staff	38	60
Others	1,812	2,857
	4,054	5,195
Less: Provision for ECL	(30)	(180)
	4,024	5,015
Fees and other receivables	29,173	25,869
Add: Cash and cash equivalents (Note 8)	111,972	164,078
Total financial assets at amortised cost	141,145	189,947

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7. Fees and other receivables (contd.)

Provision for expected credit loss

	2021 RM'000	2020 RM'000
At 1 January	17,118	6,630
Net (reversals)/addition during the year	(3,328)	10,488
At 31 December	13,790	17,118

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit loss ("ECL"). The provision rates are based on days past due for groupings of various licensees segments with similar loss patterns. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, fees receivables are written-off if past due for more than one year and are not subject to enforcement activity.

Set out below is the information of the credit risk exposure on the Commission's fees receivables using a provision matrix:

31 December 2021	Average ECL rate %	Gross carrying amount RM'000	Provision for ECL RM'000
1 to 30 days	5%	19,798	903
31 to 60 days	19%	381	74
61 to 90 days	22%	433	96
91 to 120 days	2%	634	10
121 to 365 days	41%	11,527	4,694
More than 365 days	100%	6,166	6,166
		38,939	11,943
Adjustment arising from forward-looking factors			1,847
			13,790

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7. Fees and other receivables (contd.)

Provision for expected credit loss (contd.)

31 December 2020	Average ECL rate %	Gross carrying amount RM'000	Provision for ECL RM'000
1 to 30 days	3%	19,074	561
31 to 60 days	8%	354	30
61 to 90 days	19%	221	41
91 to 120 days	34%	10,875	3,727
121 to 365 days	43%	1,613	699
More than 365 days	100%	5,835	5,835
		37,972	10,893
Adjustment arising from forward-looking factors			6,225
			17,118

8. Cash and cash equivalents

	2021 RM'000	2020 RM'000
Cash and bank balances	30,244	72,401
Deposits placed with licensed banks	81,728	91,677
Cash and cash equivalents	111,972	164,078

The weighted average effective interest rate and the average maturity of the deposits as at 31 December are as follows:

	Weighted average effective interest		Average maturity	
	2021 %	2020 %	2021 days	2020 days
Deposits placed with licensed banks	1.98	1.68	17	18

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9. Accumulated funds

	Note	2021 RM'000	2020 RM'000
Accumulated surplus brought forward		3,012,778	2,762,249
Initial fund		60,000	60,000
Surplus after tax		927,612	250,529
Accumulated payments made to the Consolidated Fund pursuant to Section 38(3) of the Malaysian Communications and Multimedia Act 1998 (Act 589)		(2,578,000)	(1,568,000)
		1,422,390	1,504,778

The initial fund has been utilised in the previous years to finance the working capital of the Commission.

10. Contract liabilities

	2021 RM'000	2020 RM'000
Current		
Spectrum fees		
3G spectrum assignment fees	29,600	29,600
Apparatus assignment fees	292,574	342,683
SA 900 fees	93,239	100,887
SA 1800 fees	102,873	112,872
Operating licence fees		
Class licence fees	573	646
Numbering assignment fees		
Numbering assignment fees	18,152	12,634
Courier licence fees		
Courier licence fees	1,353	1,076
	538,364	600,398

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10. Contract liabilities (contd.)

	2021 RM'000	2020 RM'000
Non-current		
Courier licence fees		
Courier licence fees	-	60
Spectrum fees		
3G spectrum assignment fees	333,000	362,600
Apparatus assignment fees	536	826
SA 900 fees	813,119	777,793
SA 1800 fees	882,303	817,116
	2,028,958	1,958,395
Total contract liabilities	2,567,322	2,558,793

Contract liabilities relates to the amount of unearned income from payments ranging from 1 to 14 years (2020: 1 to 14 years) made by licensees that will be recognised in future financial periods.

11. Other payables

	2021 RM'000	2020 RM'000
Sundry payables	14,103	28,105
Accrued expenses	164,143	134,642
GST Rebates	-	283
Total other payables	178,246	163,030
Add: lease liabilities	9,064	9,731
Total financial liabilities at amortised cost	187,310	172,761

12. Leases

(a) Commission as a lessee

Set out below are the carrying amounts of right-of-use assets recognised and the movements during the period:

	Copiers RM'000	Office rental RM'000	NASMOC equipment RM'000	Total RM'000
At 1 January 2020	1,144	5,116	3,752	10,012
Additions during the financial year	211	1,932	634	2,777
Disposal during the financial year	-	(28)	(283)	(311)
Amortisation expense	(327)	(1,793)	(969)	(3,089)
At 1 January 2021	1,028	5,227	3,134	9,389
Additions during the financial year	63	1,900	776	2,739
Disposal during the financial year	-	(104)	(462)	(566)
Amortisation expense	(345)	(1,683)	(908)	(2,936)
At 31 December 2021	746	5,340	2,540	8,626

Set out below are the carrying amounts of lease liabilities recognised and the movements during the period:

	2021 RM'000	2020 RM'000
At 1 January	9,731	10,154
Additions during the financial year	2,739	2,777
Accretion of interest	367	384
Disposal	(580)	(322)
Payments	(3,193)	(3,262)
At 31 December	9,064	9,731
Current lease liabilities	2,810	2,717
Non-current lease liabilities	6,254	7,014
Total lease liabilities	9,064	9,731

12. Leases (contd.)

(b) Commission as a lessor

The Commission have entered into operating leases on its investment properties. These non-cancellable leases remaining lease terms of 5 months to 30 months (2020: 5 months to 33 months).

Future minimum rentals payable under non-cancellable operating leases at the reporting date are as follows:

	2021 RM'000	2020 RM'000
Not later than 1 year	16,553	14,063
Later than 1 year but not later than 5 years	11,233	18,515
	27,786	32,578

13. Income

Disaggregated income information

Types of services	2021 RM'000	2020 RM'000
Operating licence fees	118,619	120,168
Spectrum fees	1,094,410	1,018,764
Numbering assignment fees	20,123	18,190
	1,233,152	1,157,122

Timing of revenue recognition

The Commission recognises income over time, with the exception of income from application fees, which is recognised at a point in time.

	2021 RM'000	2020 RM'000
Services transferred over time	1,223,037	1,143,237
Services transferred at a point in time	10,115	13,885
	1,233,152	1,157,122

13. Income (contd.)

Details of balances arising from the various income recognised versus their collections by the Commission are as follows:

Contract balances

(a) Fees receivables

Information relating to trade receivables balances arising from contracts with customers is disclosed in Note 7.

(b) Contract liabilities

The current portion contract liabilities balance as at 1 January 2021 of RM600.40 million was fully recognised as revenue during the year.

(c) Contract assets

Contract assets primarily relate to rights to consideration for operating licensees that should be recognised over the licence period but have yet to be billed at the reporting date as invoice is only issued on the anniversary date. Contract assets are transferred to receivables when the rights become unconditional. As at 31 December 2021, the Commission has contract assets of RM12.16 million (2020: RM11.36 million).

14. Other income

	2021 RM'000	2020 RM'000
Sundry income	7,365	438

15. Employee benefit expenses

	2021 RM'000	2020 RM'000
Wages, salaries and allowances	94,439	86,253
Social security costs and employee insurance	6,172	5,901
Bonus	13,292	5,594
Defined contributions plan	17,416	14,702
Other staff related expenses	7,441	6,302
	138,760	118,752

Included in the employee benefit expenses are the allowances, expenses and ex-gratia of the Commission Members amounting to RM921,933 (2020: RM702,733).

16. Tax expense

	2021 RM'000	2020 RM'000
Current tax expense		
Current year	18,699	30,957
Under/(over) provision in prior years	2	(1,149)
Total income tax expense	18,701	29,808

The Commission has been granted tax exemption from Year of Assessment 2000 onwards by the Ministry of Finance under Section 127(3)(b) of the Income Tax Act, 1967. The current tax expense is in respect of interest and rental income not exempted from tax.

A reconciliation of income tax expense applicable to surplus before tax at the statutory income tax rate to income tax expense at the effective income tax rate of the Commission is as follows:

	2021 RM'000	2020 RM'000
Surplus before tax	946,313	280,337
Income tax calculated using Malaysian tax rate of 24% (2020: 24%)	227,115	67,281
Expenses not deductible for tax purposes	89,740	241,809
Income not subject to tax	(298,156)	(278,133)
Under/(over) provision of income tax expense in prior years	2	(1,149)
Total income tax expense	18,701	29,808

17. Audit fees

The Commission's audit fee of RM190,000 (2020: RM150,000) is recognised in the statement of income and expenditure and recognised gains and losses. The Commission also bears the audit fees of the Universal Service Provision Fund amounting to RM90,000 (2020: RM80,000), which is recognised in the said statement.

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18. Goods and Services Tax Rebates ("GST Rebates") expenses

This relates to the GST Rebates payable to eligible licensees in respect of the provision of prepaid cellular services to the Malaysian citizens which was announced in the Budget 2016 by the then Finance Minister. There was also an announcement made by the latter in 2017 that Malaysian prepaid cellular users will continue to enjoy GST Rebates. The Commission was then directed to pay the GST Rebates claims made by the eligible licensees. Upon clarification and approval of the Commission, the GST Rebates payable will be borne by the Commission in implementing the policy announced in the Budget 2016.

In prior years, a provision was made for such rebates totaling RM670 million. In the financial year 2020, upon completion of verification by the Commission, RM664.40 million was paid to the eligible licensees which resulted in an overprovision of RM5.32 million being recognised in that year. During the year, the expense amounting to RM244,000 relates to a GST Rebates claim made by a licensee that is undergoing liquidation.

19. Projects expenses

The projects expenses of the Commission during the year are shown below:

	2021 RM'000	2020 RM'000
Communication services	916	38,187
Refund of unutilised funds for the supply of tablets to teachers and students from 2016 to 2018	-	(41,531)
Community touchpoint initiatives	600	-
Disaster relief programme	600	-
Reversal of accruals for costs of upgrading of network and ICT equipment in rural areas	(1,050)	-
	1,066	(3,344)

20. Stimulus grant for the National Digitalisation Broadcasting project

This relates to a stimulus development grant to assist in the implementation of Free-to-Air Digital Terrestrial Television ("DTT") project in Malaysia. DTT is a government initiative to upgrade the TV and radio broadcasting services provided to the public via the transition from analogue television broadcast to digital television broadcast. The grant was paid and recognized in the years the grant was made to DTT.

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21. Capital commitment

	2021 RM'000	2020 RM'000
Property, plant and equipment		
Authorised but not contracted for	111,097	153,558

22. Financial risk management objectives and policies

The Commission is exposed to financial risks arising from its operations and the use of financial instruments. The key financial risks include interest rate risk (both fair value and cash flow), liquidity risk and credit risk.

The Commission Members review and agree policies and procedures for the management of these risks, which are executed by the Chairman. The audit committee provides independent oversight to the effectiveness of the risk management process.

(a) Credit risk

The Commission's credit risk is primarily attributable to fees and other receivables and deposits placed with licensed banks. The maximum credit exposure on trade receivables is limited to the carrying amount of the receivables less provision for expected credit loss.

Details of expected credit loss in relation to fees and other receivables are disclosed in Note 7.

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Management has taken reasonable steps to ensure that receivables that are neither past due nor impaired are stated at their realisable values. A significant portion of these receivables are major licensees that have been transacting with the Commission. The Commission uses ageing analysis to monitor the credit quality of the fees receivables. Any receivables having significant balances past due more than 365 days, which are deemed to have higher credit risk, are monitored individually.

The credit risk of the Commission's other financial assets, which comprise of cash and cash equivalents, arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these financial assets.

22. Financial risk management objectives and policies (contd.)

(b) Liquidity risk

Liquidity risk is the risk that the Commission will not be able to meet its financial obligations as they fall due. The Commission's exposure to liquidity risk arises principally from its various payables.

The Commission maintains a level of cash and cash equivalents deemed adequate by the management to ensure, as far as possible, that it will have sufficient liquidity to meet its liabilities when they fall due.

It is not expected that the cash flows included in the maturity analysis could occur significantly earlier, or at significantly different amount.

Maturity analysis

The financial liabilities of the Commission are all due within the next 12 months from the reporting date.

(c) Interest rate risk

The Commission is exposed to interest rate risk on its deposits placed with licensed banks. The Commission does not transact in any interest rate swaps.

Exposure to interest rate risk

The interest rate profile of the Commission's significant interest-bearing financial instruments, based on carrying amounts as at the end of the reporting period was:

	2021 RM'000	2020 RM'000
Fixed rate instruments		
Financial assets		
Deposits with licensed banks		
Fixed deposits	2,855,000	2,815,000

Fair value sensitivity analysis for fixed rate instruments

The Commission does not account for any fixed rate financial assets and liabilities at fair value through statement of income and expenditure, as their carrying values are approximated to fair value. Any change in fair value at the end of the reporting period would not significantly affect the statement of income and expenditure.

22. Financial risk management objectives and policies (contd.)

(d) Fair value information

The carrying amounts of other investments, cash and cash equivalents, fees and other receivables and other payables reasonably approximate their fair values due to the relatively short term nature of these financial instruments.

Information regarding the investment properties' fair values are disclosed in Note 4.

23. Related parties

Identity of related parties

For the purposes of these financial statements, parties are considered to be related to the Commission if the Commission has the ability, directly or indirectly, to control or jointly control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Commission and the party are subject to common control. Related parties may be individuals or other entities.

Related parties also include key management personnel defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Commission either directly or indirectly. The key management personnel includes all the Commission Members, and senior management of the Commission.

The Government of Malaysia ("GOM") including those entities controlled, jointly controlled or under significant influence by the GOM are considered as related parties of the Commission. All the transactions processed by the Commission for the GOM-related entities are conducted in the ordinary course of business.

Related party transactions have been entered into the normal course of business. The related party transactions of the Commission during the year are shown below:

	2021 RM'000	2020 RM'000
Payments made to Consolidated Fund pursuant to Section 38(3) Malaysian Communications and Multimedia Commission Act 1998 (Act 589)	1,010,000	318,000
Key management personnel's compensation (Note a)	6,406	4,587

23. Related parties (contd.)

(a) Key management personnel compensation

Compensation paid to key management personnel which forms part of the Commission's employee benefit expenses in Note 15, for the financial years ended 31 December 2021 and 31 December 2020 are as follows:

	2021 RM'000	2020 RM'000
Wages, salaries and allowances	5,068	3,312
Bonus	381	581
Defined contributions plan	957	694
	6,406	4,587

24. Fund management policy

The primary objective of the Commission's fund management is to ensure that it is able to meet its liabilities as and when it falls due and to achieve its operational objectives.

The Commission manages its accumulated funds by budgeting its funding needs ahead and adjust its expenditures as required. The Commission continuously monitors its budget against actual results and identifies efficiencies in its operations.

No changes were made in the objectives, policies or processes during the years ended 31 December 2021 and 2020.

25. Legal proceedings

Nuamera (M) Sdn Bhd

The Commission entered into an Agreement with Nuamera Sdn Bhd in respect of Public Cellular Blocking Service ("PCBS") on 3 May 2013 ("PCBS Agreement"). On 18 October 2017, the Commission discovered a leakage of subscribers' data of telecommunication companies which was made available at Lowyat.net/forum and decided to suspend the arrangement in respect of the PCBS solution via a letter to Nuamera dated 26 January 2018.

Nuamera served the Commission with a Notice of Arbitration dated 27 February 2018 to dispute the suspension and demand payment under the PCBS Agreement before the Asian International Arbitration Centre (Kuala Lumpur) ("AIAC") for an amount of RM407,243,315. The Commission, on the other hand, had submitted a counter claim of RM215,153,370.

The arbitration hearings commenced on 26 February 2020 at the AIAC and were concluded on 6 December 2021. The parties were directed by the Arbitral Tribunal to file in all their written submissions by 1 April 2022. There is no date yet fixed for decision by the Arbitral Tribunal.

