



COMMUNICATIONS CONTENT AND INFRASTRUCTURE



**REALISING A BETTER  
FUTURE THROUGH CONTENT  
AND CONNECTIVITY**



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2017 was a banner year for the communications content and infrastructure (CCI) sector, with the NKEA contributing RM58.7 billion to GNI. Strong progress was recorded in both the financial and social initiatives undertaken by the Government, especially those under the Broadband for All programme. The Government is committed and remains on track to double broadband speeds while maintaining the same price levels to improve the rakyat's socio-economic wellbeing, especially the bottom 40% of income earners (B40). Affordable high-quality broadband will enable the rakyat to leverage the digital platforms to create additional income on a sustainable basis.

Communication and internet coverage in Malaysia has improved with the completion of more than 800 upgraded and new telecommunication towers. These initiatives, supplemented by the expansion and improvement of 3G and Long-Term Evolution (LTE) wireless broadband coverage, have greatly bridged the digital divide between urban and rural areas. I am also happy to report that the LTE wireless broadband coverage has increased to 77% in populated areas nationwide.

Another milestone this year has been the completion of the 3,800-km national submarine cable project, known as the Sistem Kabel Rakyat 1Malaysia (SKR1M), which started operations on 16 September 2017. The completion of this project has enhanced connectivity links between Peninsular Malaysia with Sabah and Sarawak, and lowered Internet traffic congestion between the three regions.

Parallel to this, Malaysia's creative sectors have continued to flourish. The export value of creative content such as films, animation, games for both finished products and related services reached RM737.84 million by Q3 2017.

Malaysia is also becoming an increasingly popular destination for international movie producers who have responded well to the various initiatives introduced through the Film in Malaysia Incentive (FIMI). Throughout the year, a slew of international productions have either selected Malaysia as a location to shoot their movies or utilise our state-of-the-art studios, such as the Pinewood Iskandar Malaysia Studios. The FIMI will, from time to time, be enhanced to ensure Malaysia continues to attract high-quality investments from the entertainment world and create jobs and opportunities for our local practitioners across the creative industry value chain.

As we seek to accelerate the adoption of high speed broadband, the Nationwide Fiberisation Plan (NFP) is being developed to expand the country's fixed broadband infrastructure, covering about six million premises, of which two million premises are located in rural areas. This is to further improve coverage that began with the High Speed Broadband (HSBB) project in 2008.

The move to expand high-speed broadband nationwide is crucial to ensure the country remains competitive and Malaysians, including those living in rural areas, participate and benefit fully from the digital economy. With these strategic measures in place, Malaysia is well on its way to achieve its communications, creative content and infrastructure aspirations.

## IMPROVING INTERNET CONNECTIVITY TO ENABLE INCLUSIVE GROWTH

To ensure fast and robust nationwide connectivity, the High Speed Broadband (HSBB) project continued to gain momentum throughout 2017 amid its second and final phase. During the year, 480,084 ports with speeds of up to 100Mbps were rolled out in capital cities and major towns, achieving 183% of the 2017 target, thus completing the entire HSBB project as per the contract signed between the Government and Telekom Malaysia via the public-private partnership (PPP) model.

Nonetheless, completing the HSBB project is not without challenges. Some of the issues encountered in the implementation of this project include the insufficiency of appropriate infrastructure required for installation and for the service to work optimally, namely fibre optic wiring in buildings. Telecommunication companies also faced inconsistent application processes at the local authority level to build telecommunication towers and conduct civil works. Telecommunication Infrastructure Meetings were held at state level, where appropriate resolutions were passed on a case by case basis to overcome this challenge, and hit the roll-out target.

Meanwhile, under the Sub-Urban Broadband (SUBB) project, 146,904 ports were added in 2017, making the total number of ports reach 366,294 since the inception of the project, surpassing the cumulative target of 317,000 ports by 2017. The initiative is at 150% completion and is targeted to be completed in 2019. Some of the new towns and cities that received SUBB coverage include Kota Belud in Sabah, Lundu in Sarawak, Jengka in Pahang, Batu Kikir in Negeri Sembilan, Bedong in Kedah and Kuala Perlis in Perlis.

As people increasingly access the Internet via mobile technologies, significant strides were made to improve access to high speed

mobile broadband nationwide, with Long-Term Evolution (LTE) and 4G coverage continuing to expand in 2017. The initiatives are driven by private sector participation and coordinated by the Malaysian Communications and Multimedia Commission (MCMC). As a result, LTE and 4G coverage reached 77% in populated areas, providing connectivity to additional locations such as Penampang in Sabah, Bintulu in Sarawak, Kulaijaya in Johor, Seberang Perai Utara in Pulau Pinang and Seremban in Negeri Sembilan.

**“LTE and 4G coverage reached 77% in populated areas.”**

As part of further efforts to bring connectivity to the rakyat, the Pusat Internet 1Malaysia (PI1M) initiative continues to play a key role in connecting rural areas by providing computers, Internet facilities, IT-related workshops and community programmes. 52 new centres were established under the NKEA CCI by the end of 2017.

In addition, the public can now enjoy free WiFi within a one kilometre radius of a PI1M, further enhancing high speed Internet accessibility. This has also enabled entrepreneurs in rural areas to increase their income and living standards by using online channels to expand their customer reach.

In tandem with initiatives to enhance broadband connectivity, a 3,800-kilometre submarine fibre optic cable connecting Peninsular Malaysia with Sabah and Sarawak has been completed under the Sistem Kabel Rakyat 1Malaysia (SKR1M) programme. Using the latest 100 Gbps wavelength technology with initial capacity of four terabits per second (Tbps), SKR1M is one of the Government's game-changing efforts to accelerate connectivity between Peninsular Malaysia and Sabah and Sarawak by providing diversity in the country's networks, as well as to cater for future bandwidth requirements between states. This project started in 2015 with a cost of RM619 million via a PPP where the Government and Telekom Malaysia allocated RM412 million and RM207 million, respectively.



## Bringing the Digital Economy to Rural Entrepreneurs

The Pusat Internet 1Malaysia (PI1M) programme has not only successfully fulfilled the objective of bridging the digital divide between rural and urban populations, but it has also been a boon to rural entrepreneurs by extending their geographical marketing reach, offering new social media channels to market their products as well as making it easier to apply for grants and certifications.

Thanks to the push provided by the National Transformation Program, there are now some 840 PI1Ms operating nationwide with over 550,000 registered members. The PI1M centres serve as broadband access centres as well as places for rural communities to receive free ICT training, including online entrepreneurship training. The facilities and courses have encouraged more rural businesses to promote their products and services – whether food, handicraft or homestays – on the internet, bringing them in line with the rise and growing acceptance of e-commerce globally.

One such beneficiary is Masinah binti Paris of Kampung Medong Dalat in Dalat, Sarawak. Masinah has been marketing sago products under the Sago Medang brand since 1999. Prior to her introduction to the world of online marketing via PI1M, Masinah had marketed her sago products via conventional advertisements in the Dalat district villages. But she realised that the internet aids greatly in expanding her marketing reach.

“The conventional way is no longer as relevant in the current marketplace,” she said. To bring her business online, Masinah attended ICT training and online marketing workshops conducted at the PI1M in Kampung Medong Hilir.

Masinah’s online marketing efforts met with encouraging response from her customers in Sarawak and she even received orders from customers in Peninsular Malaysia. Her products were also marketed by PI1M Kampung Medong Hilir which helped attract more people to seek out her products.

Thanks to the training and guidance provided by PI1M Kampung Medong Hilir, Masinah said her income has now exceeded RM10,000 a month.

Additionally, a Hulu Terengganu based cake and cookie vendor, Mazni binti Muhamad has also made use of PI1M to further grow her business. Before using internet facilities at PI1M, Mazni said that she relied on regular customers, enquiries through the WhatsApp application and help from friends to promote her products via word of mouth.

But since engaging with PI1M, Mazni said that she could promote her business more easily and the PI1M centre even helped to promote her products through programs and events, whether they were conducted within PI1M or outside PI1M.

**“I hope that PI1M continues to be a platform to help small entrepreneurs.”**

“I hope that PI1M continues to be a platform to help small entrepreneurs like me,” she said. “Although the support is more on training and knowledge sharing and not financial support, I still feel very proud and thankful,” she added.

Another entrepreneur who gained from the offerings of PI1M is Mohd Jaid bin Aspar of Bagan Datoh in Perak. Jaid, who markets dodol and soy milk, used the facilities of PI1M at Simpang 4 Rungkup to take advantage of the time saving features of e-government and applied for grants and certifications online.

“In Bagan Datoh, even to get a good cell phone connection is difficult, so the PI1M is really helpful since it provides good internet connection,” he said.

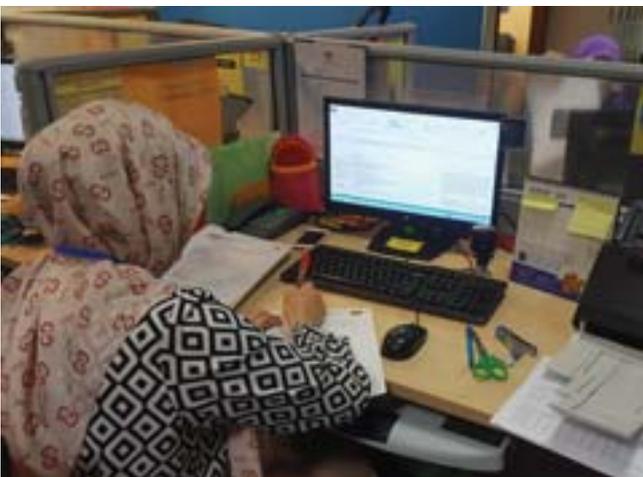
Among the courses that Jaid took at the PI1M were e-government, social media and training on how to fill out online applications such as for the MeSTI and Halal certifications as well as for grants from Ministry of International Trade and Industry (MITI) and SME Corp.

As a token of appreciation, Jaid is currently a loyal supporter of PI1M centres and he has collaborated with Public Private Research Network (PPRN) to promote internet facilities and training which are available at PI1M to entrepreneurs in the area.

## ENHANCING PUBLIC SERVICE DELIVERY THROUGH TECHNOLOGY

The Digital Document Management System 2.0 (DDMS 2.0) forms part of the Government's efforts to improve file management efficiency, promote eco-friendliness and improve services to the rakyat. As at December 2017, 32 new Government agencies have adopted the DDMS system against the target of 30 new agencies for the entire year. A total of 65 agencies have adopted the DDMS since 2011, with 21,000 users and 1.2 million records digitised. Among the new agencies and Ministries which have come on board are the National Sports Council of Malaysia (Majlis Sukan Negara - MSN), Shah Alam Hospital, Human Rights Commission of Malaysia (Suruhanjaya Hak Asasi Malaysia - SUHAKAM), Department of Islamic Development Malaysia (Jabatan Kemajuan Islam Malaysia - JAKIM) and Universiti Putra Malaysia.

The roll out of DDMS has its challenges. The practice of printing out digitised documents remains deeply embedded within the general work culture. Altering long-standing practices in order to transition users to a greener way of working requires a fundamental change in user mind-sets. For example, to diminish the culture of printing, the Government is constantly engaging with DDMS users to raise awareness on the benefits of the system in increasing efficiency and reducing wastage.



Inputting into DDMS 2.0 system by Ministry of Education.

## REALISING THE GLOBAL POTENTIAL OF MALAYSIAN CREATIVE CONTENT

Malaysian creative content continued to perform well in 2017, recording forecasted export value of RM737.84 million against the target of RM650 million. Since 2012 to 2017, creative content exports have grown at a rapid CAGR of 6.15%. Being the agency tasked with developing Malaysia's digital economy, the Malaysia Digital Economy Corporation (MDEC) continues to facilitate export activities through promotion, capabilities development programmes and collaborations to support creative content development and export.

This has enabled home-grown intellectual property (IP) to strengthen its global competitiveness in work-for-hire agreements. Key examples of locally made IPs which have reached the global stage are Chuck Chicken, Seafood, Saladin, Upin & Ipin, Boboiboy, Ejen Ali, Kuku Harajuku, Boing, Origanimals, Didi & Friends and Hogie the Globehopper.

**“From 2012 to 2017, creative content exports have grown at a rapid CAGR of 6.15%.”**

Video game development, another component of creative content, has also gained positive momentum in Malaysia with more than 30 AAA games created by Malaysian talents. AAA is an informal rating recognised across the gaming industry used for video games with the highest development budgets and levels of promotion. Some notable examples of games created using Malaysian talents include Final Fantasy XV, Uncharted, Tekken 7, Gears of War 4, Fable Legends, Street Fighter V, Dark Souls 3 and Bloodborne.

In order to take locally made content to the next level, the Kre8tif! Conference 2017 was organised under MDEC's #animationMY platform. The programme was initiated to spark innovation and exploration of major trends across the creative sector. It drew over



550 participants from seven countries and featured 35 speakers from North America, Europe, Australia and Southeast Asia. Meanwhile, to develop Malaysia into a Game Hub by 2025, MDEC has organised the annual Level UP KL event to catalyse business opportunities and share technical insights and future-shaping trends from thought leaders from all over the world.

In terms of film and video production, the National Film Development Corporation Malaysia (FINAS) continues to lead efforts in attracting foreign investments via the Film in Malaysia Incentives (FIMI) programme. The programme offers a 30% cash rebate on all Qualifying Malaysian Production Expenditure (QMPE) and has succeeded in attracting the filming of foreign productions in Malaysia as well as increase local productions, both for studio-based and location-based productions. Among the beneficiaries of this programme include ASTRO Shaw (Ola Bola), Animonsta Studios (BoboiBoy Season 3), KRU Studios (Cicakman 3D) and foreign productions such as the Hi-5 TV Series, Prey and Asia's Got

Talent. FINAS has also strategically partnered with Khazanah Nasional Berhad to promote Pinewood Iskandar Malaysia Studios, attracting international film-makers into the country and thus generating a good source of revenue for the industry.



**Example of locally made IP which has reached the global stage.**

## Connecting 1Malaysia

The Connecting 1Malaysia focus area works to create an ecosystem which accelerates the adoption of new communications technologies.

Following the completion of Connecting 1Malaysia initiatives such as the Get Malaysian Business Online (GMBO) and Telepresence, a new initiative known as the Digital Mailbox was introduced in 2017. The service was developed by Pos Malaysia in line with the declining trend in the use of physical letters as well as the increasing demand for mailing security.

As most e-mail servers are hosted in foreign countries and has no restriction on the sending or receiving end, organisations and individuals are hesitant and mostly unwilling to share confidential details via conventional e-mail pathways. Therefore, the Digital Mailbox creates a secure environment for the exchange of information through an online platform hosted on a Malaysian-based server. The features are:

- Only registered users in the platform can communicate with one another – e-mails cannot be received from, or sent to other e-mail servers (outside of Digital Mailbox);
- The security of this platform is guaranteed further as all senders and recipients are required to go through a one-off verification process which involves them identifying themselves at the post office, along with providing proof of identification.

The Digital Mailbox will be launched to the public in 2018 and has underwent a soft launch in 2017 for Pos Malaysia staff, with 19,000 new subscribers signed up during this period. Pos Malaysia will continue to conduct rigorous testing and will seek feedback from various Ministries and agencies regarding the service before its launch. It is also working to gain consumer buy-in to ensure the success of the service.

## Preparing Our Infrastructure for the Digital Economy

As the world evolves to integrate more technology, advanced and reliable communication infrastructure increases in importance. Thus, dedicated efforts by the Government to expand Malaysia's communications infrastructure in urban and rural areas have intensified of late. The nation's coverage of high speed broadband of both fibre and wireless varieties continue to expand in line with the Communication Content and Infrastructure NKEA's aim to improve promote the uptake of world-class digital services and content.

Towards this end, connectivity via High Speed Broadband (HSBB), Sub-Urban Broadband (SUBB), the Sistem Kabel Rakyat 1Malaysia (SKR1M), increased mobile coverage, 4G/LTE coverage and 3G coverage has been ensured by the Malaysian Government.

To uplift the whole nation in line with this technological movement, there was a need to ensure that rural areas were advancing at the same pace as urban areas. Hence, to bring connectivity in rural areas on par with urban cities, rural sites have been covered by the Government's Universal Service Provision (USP) scheme which allocates funds to build communication towers in remote rural areas as well as establishes Pusat Internet 1Malaysia (community internet centres).

Dato' Mohd Ali Hanafiah Mohd Yunus, Chief Officer, Communications and Digital Ecosystem Sector, said that the government's USP initiative was vital to encourage telecommunication companies to provide services to the less profitable rural areas of the country. "We know the industry will come in when there is profit, but they are not keen on going into

rural areas," he said. "This is where the USP comes in. With the funding, they can build the towers and expand their coverage in rural areas and this is a benefit to the industry."

Dato' Mohd Ali outlines that PI1M goes beyond merely providing internet facilities, and also carries out sessions for basic ICT training which includes online entrepreneurship lessons.

"We teach PI1M users how to market their food products, handicrafts and homestays online," he said. "Because of this, they have expanded their reach to the whole country and some, overseas."

A challenge in moving forward is the sustainability of PI1M. The centres are not self-sustaining, hence some countries in the region are turning similar centres in their home countries to co-operative type centres which are able to generate revenue through methods such as collecting a membership fee.

In terms of infrastructure roll-out; charges are imposed by Malaysian states for site acquisition to build communication towers and fibre optic cables.

"For fibre rollouts, a few agencies now charge RM30-40 per 100 meters," he said. "Before this, there were no charges. This introduces new costs. You can imagine the cost if you roll out many kilometres of fibre. Everyone is talking about the digital economy and we need to have fibre everywhere."

To overcome these issues MCMC is conducting ongoing engagements with state governments. The major telecommunication companies are also involved in the discussions and all parties are encouraged to give their views and try to find a solution. Dato' Mohd Ali said that the issue is one which is critical to ensure cost effective roll out of communication infrastructure.

By weeding out and identifying these issues; the Government continues towards working alongside its states and agencies to streamline the infrastructure processes.



**Dato' Mohd Ali Hanafiah Mohd Yunus, Chief Officer, Communications and Digital Ecosystem Sector, MCMC.**



## MOVING FORWARD ▶▶

The development of the CCI sector is crucial in transitioning Malaysia from a middle-income to high-income economy. The sector has come a long way since the beginning of the NTP in 2011, with many major milestones achieved throughout the years - notably the expanded high-speed Internet coverage nationwide which has impacted many Malaysians, and the growth of the creative industry. Despite the challenges along the way, the sector continues to showcase great development in communication services, government services and the creative content segment.

In line with the sector's aim to provide new and compelling content and services to stimulate demand and driving high growth in communications, the Government will remain committed to work towards achieving its targets. The sector also plays a role in achieving inclusive transformation as the Government continues to bridge the digital divide between urban and rural areas through the expansion of high speed broadband in rural areas, providing rural communities access to the digital economy.

Following global trends and in the effort to boost connectivity, MDEC is spearheading the Digital Free Trade Zone (DFTZ) initiative which is now supported with high speed broadband connectivity at KLIA Aeropolis and in the near future, Bandar Malaysia.

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