COMMUNICATIONS CONTENT AND INFRASTRUCTURE

> Communications, content and infrastructure is no longer just an enabler to other industries but a new growth area for the country and globally

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Q&A

WHAT IS THE IMPORTANCE OF THE COMMUNICATIONS CONTENT AND INFRASTRUCTURE (CCI) INDUSTRY AND HOW CAN THIS SECTOR CONTRIBUTE TO MALAYSIA'S PATH TOWARDS A HIGH-INCOME AND GLOBALISED ECONOMY?

As Malaysia's transformation strategy approaches a crucial mid-point towards 2020, the growth of the CCI industry is key to other National Key Economic Areas (NKEAs) such as Electrical and Electronics (E&E), Financial Services, Tourism, Healthcare and Education, which rely on communication infrastructure to further boost economic potential. In the global business environment, adopting these new communication infrastructures will allow industries to seize opportunities for expansion, either into new product lines or to reach out to a wider global market.

In this hyperconnected world, the CCI industry is quickly converging, with communications and content being almost synonymous in the near future. As a result, CCI is no longer just an enabler to other industries but a new growth area for the country and globally. With a global market size for filmed entertainment and video games of approximately US$158.9 billion (based on PwC's Global Entertainment and Media Outlook 2014-2018 Report) and key CCI initiatives emphasising on Malaysia as a filming destination, it will certainly increase velocity in pushing Malaysia towards a high-income and globalised economy.

FROM THE BUSINESS ASPECT, THIS NKEA PLAYS AN IMPORTANT ROLE AS AN ENABLER FOR GROWTH IN OTHER NKEAS SUCH AS FINANCIAL SERVICES AND HEALTHCARE, AMONG OTHERS. WHAT DOES THIS MEAN TO THE RAKYAT? HOW DOES THIS CONTRIBUTE TO OUR HIGH-INCOME ASPIRATIONS?

As an enabler for greater economic activity of other industries, this NKEA has both direct and indirect impact on Malaysian citizens. With a technologically advanced communication infrastructure, industries can turn their focus on the inherent strategic possibilities in riding the wave of growth in emerging markets, which in turn, spurs innovation and cements the case for increased human capital expansion to facilitate growth.

New growth areas explored by this NKEA have translated into large-scale investments and job creation. An example of this is the Film in Malaysia Incentive. As more foreign productions turn to Malaysia as the preferred location for both production and post-production, this enables Malaysians to be involved in large-scale international and high-quality domestic productions, leading to invaluable knowledge transfer and thus improving their capabilities. This will subsequently have significant positive impact on income levels. With all eyes on Malaysia as a filming destination, international production services or infrastructure providers will be attracted to doing business in Malaysia, not forgetting the expansion of the other non-creative related industries such as logistics, hospitality and site construction, thus creating jobs for the rakyat.
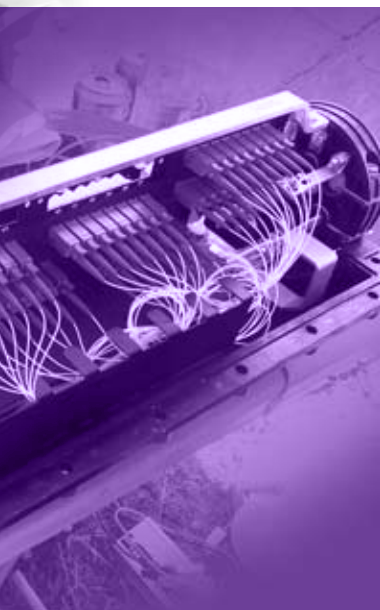
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WITH THE ETP REACHING ITS MID-POINT, HOW WILL GROWTH BE SUSTAINED FOR THIS NKEA GOING FORWARD?

Broadband access will continue to remain the crux of this NKEA's aim as access to the Internet is deemed vital to socio-economic progress. As such, I'd expect Long-Term Evolution (LTE), High-Speed Broadband (HSBB) and Suburban Broadband (SUBB) segments to drive investments in the coming years while international Internet bandwidth is expected to see further improvements with the rollout of international submarine cables in 2015. Improving the national broadband connectivity between Peninsular Malaysia and Sabah and Sarawak, which comes under Sistem Kabel Rakyat 1Malaysia (SKR1M), will be emphasised as well.

While the infrastructure aspect remains important, the creative industry is expected to continue to grow, seeing as the country has positioned itself in the global production industry as an attractive production location. This is expected to be translated into positive spillovers for the hospitality, tourism and logistics segment. Additionally, the industry's focus on exporting creative content and services, continuous upskilling via Creative Industry Lifelong Learning Programme (CILLP) with validation of industry players, coupled with availability of good infrastructure in the industry will surely spur the industry towards a sustainable future.

Content being a new growth driver, will need a strategic transformation in its ecosystem. Content Malaysia, a concept that puts all development roles for content under a single purview and drive, will help harness resources and optimise opportunities both locally and internationally. With a single focal entity for content, this will help rebrand Malaysian content and its services, reducing duplication and improving transparency and accountability.

Lastly, I also expect the implementation of Digital Terrestrial Television Broadcasting in 2016 to drive investment among industry players in equipment and technical skills as productions in Malaysia increase.

YOU'VE OUTLINED IMPORTANT DEVELOPMENTS FOR 2015. COULD YOU ALSO ELABORATE ON THE SPILLOVER EFFECTS FROM THESE DEVELOPMENTS TO THE RAKYAT?

The Internet, in its entirety, holds immense potential for Malaysians. The infrastructure plans under this NKEA will ensure faster and more reliable access to the Internet, benefitting not just major businesses but also individual consumers and small, upstart entrepreneurs in Malaysia. At the same time, citizens will also benefit from the increased availability of e-Government services of which more than 70 per cent of services are available online across various devices and at multiple locations. This NKEA also strives to improve e-healthcare which will see more health facilities implement e-healthcare applications and e-learning which will continue to transform the way education is provided.

The Government is very much committed to the growth of the communications, creative content and multimedia sector. As industries and technologies evolve, we need to ensure that the talent pool in Malaysia is equipped with the ability to meet changing requirements. The Government is already tackling this with the continuous upskilling of industry players through programmes such as the CILLP, the Creative Content Industry Guild (CCIG) and Integrated Content Development Programme (ICON). This will ensure that our thriving creative sector has access to skilled home-grown talent.

COMMUNICATIONS CONTENT AND INFRASTRUCTURE

In a global arena where information is shared and connections are forged with the click of a button, it is vital that a nation's communications infrastructure be robust, fast and easily accessible to everyone.

More than that, a stable and widely available communications infrastructure is the backbone on which a nation progresses in a networked world of business, education, healthcare, and entertainment.

The past year has seen Malaysia continue to push the availability of broadband access to the rakyat, with household penetration now at 67.3 per cent. This is now relatively better than most ASEAN countries. Beyond broadband, LTE penetration is now at an encouraging 25 per cent, and is expected to reach 50 per cent by 2017.

CREATIVE CONTENT CONVERGENCE

The convergence of creative content and communications providers is a clear trend today, with leading communications players around the world such as Verizon and ComCast working to provide not only fast connection speeds, but also content via Internet Protocol television (IPTV).

Netbook distribution to schools, particularly in rural areas can help students to access information for broader learning

Malaysia is no different: traditional communications providers and content creators are now working together through IPTV services such as HyppTV, Astro On-The-Go and Tonton.TV to deliver music, video, movies and more at the tap of a button.

Since the ETP, Malaysia's connection to the global network has become faster with an international bandwidth capacity of 3.2Tbps while this year saw the Konsortium Rangkaian Serantau managing to reduce international Internet wholesale bandwidth cost by 34 per cent.

The Government is also priming Malaysia to capture a portion of the lucrative creative content industry, which has a global market size of US$158.9 billion based on PwC's Global Entertainment and Media Outlook 2014-2018 Report.

Animation production services are among the biggest contributors to export revenues in the industry. This can be seen from the increasing revenue of exports from creative content, which has more than doubled to RM608.7 million as at end 2014 from approximately RM200 million before the ETP. This year, events such as KL Converge, the launch of MyCC4dWorld and the Intellectual Property Financing scheme under Malaysian Debt Ventures sought to further boost the quality and marketability of Malaysia's creative content.

The continuation of Film in Malaysia Incentive (FIMI) in 2014 has maintained the momentum of estimated production spend in the country from approximately RM149 million in 2013 to approximately RM335 million in 2014. The launch of

Pinewoods Iskandar Studios Malaysia also signalled Malaysia's ambition and capacity to attract international quality productions, such as the blockbuster Marco Polo.

BUILDING FOR THE FUTURE AND BEYOND

In encouraging the future development of home-grown talent, the Multimedia Development Corporation (MDeC)-led CILLP was offered to professionals eager to upskill or re-skill their talents in the creative field. Students also benefited from the ETP with 90 per cent of targeted schools having been connected with high-speed broadband (2-10Mbps).

Areas of healthcare, governance and business also benefited from improved communications infrastructure. To date, 95 per cent of targeted healthcare facilities are connected with high-speed broadband, a marked contrast to the approximately 580 facilities with minimal Internet speeds prior to the ETP.

Just as developed nations have done, Malaysia's Government services are moving steadily towards digitisation. This year, over 70 per cent of Government services are online and two more agencies have adopted Digital Document Management Systems (DDMS).

The coming years will see a greater focus on harnessing Big Data, which is now a key component in succeeding in this age of ubiquitous information. Effective use of it can, among other things, improve crime-prevention measures, create successful disease prevention models and improve understanding of consumer behaviour.

2015 Outlook

The upcoming year sees a tremendous potential for growth in the creative content industry, especially with FIMI continuing its role to increase the momentum of the Government's effort to improve the development of agencies.

Demand for the consumption of creative content is also expected to increase with better connectivity (HSBB2, SUBB, LTE, SKR1M), as well as the encouragement to move towards digital terrestrial television broadcasting. The year will also see the MyCC4dWorld undertaking efforts to sell its content, turning the site into a new avenue of sale both to local and international markets.

It is important, however, to focus efforts in creative content to explore markets beyond Malaysia, as growth may be limited if producers are creating content solely for the local market. The Government will also embark on improving the creative industry's development agencies with the

In view of this, the enforcement of the Personal Data Protection Act 2010 will be equally vital in ensuring that Malaysians are protected from having their personal information abused by corporations or individuals.

This NKEA's performance will continue to be driven significantly not only by the telecommunications industry but also by the increasing contribution of content.

introduction of a centralised organisation. This includes a centralised agency to manage pitching for Government funds.

An encouraging year for the increasing rollout in applications among Government health facilities is expected with the recent budget approvals, with 200 health facilities with e-health applications targeted to be implemented.

Internal Government processes are also expected to be more efficient in the coming year, with 10 more agencies coming on board the Digital Document Management System (DDMS).

Utilisation of online Government services will be one of the key drivers next year, with an aim to increase utilisation of Government services by 10 per cent at Ministries and selected agencies.

To ensure the smooth implementation of projects within the NKEA, each project will continue to be monitored through monthly Operations and Steering Committee Meetings.

2014 KPI Analysis

The CCI NKEA achieved most of its KPIs in 2014. Among the highlights in creative content production was FIMI's success in attracting 21 productions since its launch in 2013, including 16 foreign productions, bolstering Malaysia's reputation as a destination where its infrastructure and talent can support international-quality productions.

However, Government processes require continuous improvements to cater to the influx of medium to large-scale productions.

Other key initiatives that helped promote the development and marketing of creative content home and abroad included KL Converge, which included initiatives such as Content Malaysia. During this event, communications providers, content producers, and investors gained insights from each other in a series of talks, workshops and seminars.

The successful implementation of DDMS and initiation of HSBB2 was a result of better engagement with relevant Government agencies to identify solutions to roadblocks, and was an encouraging step towards smoother execution in the coming years.

The Creative Content Association Malaysia (CCAM) and CCIG will continue to increase revenue from exports of creative content and attracting production investment into Malaysia by connecting the various stakeholders in the industry.

Finally, efforts will be focused on ensuring that the national blueprint for international cable will be successfully implemented to help grow the international capacity catering for new demand.

2014 Key Performance Indicators

COMMUNICATIONS CONTENT AND INFRASTRUCTURE NKEA		KPI (Quantitative)							
				Achievement					
No.	**KPI**	**Target (FY)**	**Actual (YTD)**	**Method 1**		**Method 2**		**Method 3**	
				%		**%**			
EPP #1	Revenue of export from Creative Content (RM mil)	600	608.71	101	🟢	100	🟢	1.0	🟢
	Total estimated production spending under the "Film in Malaysia Incentive" (RM mil)	200	335.03	168	🟢	100	🟢	1.0	🟢
EPP #4	Percentage of schools with high-speed Internet connection achieving a minimum of 4Mbps and adheres to the Service Level Agreement terms	100%	99.9%	100	🟢	100	🟢	1.0	🟢
EPP #6	Agencies adopting Digital Document Management System (unit)	1	2	200	🟢	100	🟢	1.0	🟢
	Utilisation of MyGovernment Portal - Number of Logins (units)	300,000	352,709	118	🟢	100	🟢	1.0	🟢
EPP #7	Percentage completion of Year 1 implementation of high-speed broadband project expansion	25%	0%	0	🔴	0	🔴	0	🔴
	Access to LTE wireless broadband – supply (% population coverage)	25%	25%	100	🟢	100	🟢	1.0	🟢
EPP #8	Number of new programme sites commission	1,250	1,225	98	🟢	98	🟢	0.5	🟡
EPP #10	Percentage of implementation of submarine cables (linking Sabah, Sarawak and Peninsular Malaysia) rollout	100%	15%	60	🟡	60	🟡	0.5	🟡
	Percentage of bandwidth wholesale price reduction	20%	34%	170	🟢	100	🟢	1.0	🟢
	Development of a national blueprint for international cable	100%	90%	90	🟢	90	🟢	0.5	🟡
				110%		**86%**		**77%**	

Exhibit 9.1

Method 1   Scoring is calculated by a simple comparison against set 2014 targets. The overall NKEA composite scoring is the average of all scores

Method 2   Scoring is calculated by dividing actual results against set 2014 targets with an added rule:
- If the scoring is less than 100%, score #2 is taken as the actual percentage
- If the scoring is equal or more than 100%, score #2 is taken as 100%. The overall NKEA composite scoring is the average of all scores

Method 3   Scoring is calculated by dividing actual results against set 2014 targets with an added rule:
- If the scoring is equal and less than 50%, score #3 is indicated as 0
- If the scoring is more than 50% and less than 100%, score #3 is indicated as 0.5
- If the scoring is equal or more than 100%, score #3 is indicated as 1

ENTRY POINT PROJECTS

NURTURING MALAYSIA'S CREATIVE CONTENT

With an estimated worth of RM18.7 billion, the Malaysian creative multimedia industry is not only a lucrative one, but has the potential to grow as digital connectivity becomes faster and more fluid around the world.

The EPP's efforts was epitomised in the inaugural three-day KL Converge event, which brought together investors, entrepreneurs and content creators to network. The event also positioned the country as an attractive hub for local and international filming, production and post-production, offering an immersive experience to differentiate it from other such events internationally.

During the three-day event, keynote speakers such as the Executive Vice President and Head of the Telenor Asia operations Sigve Brekke; Dean of Carnegie Mellon Ramayya Krishnan; and

Chairman of Malaysian Communications and Multimedia Commission Shahril Tamizi shared insights into how various stakeholders can work towards a future where the development of creative content and communications infrastructure are intertwined.

September 2014 also saw the launch of MyCC4dWorld, another effort that offers producers an avenue to sell their creative works directly to consumers via its website. Currently, the site is open to the public, offering free viewing of content from Government agencies, namely FINAS, Bernama, RTM, as well as Arkib Negara. The site's goal is to be a one-stop location in which creators – from news agencies to the man-on-the-street – can sell their photographs, films, documentaries, and stock footage to students, advertisers, researchers, and broadcasters.

On the heels of last year's achievements such as War of the Worlds: Goliath, this year saw the production of Ribbit, a 3D computer-animated comedy film; the result of an international partnership by KRU International. The movie was screened in over 80 countries since July, and won the award for Best Family Film at its world premiere at the Niagara Integrated Film Festival 2014.

FIMI attracted 11 productions that are potentially worth up to RM335 million, with a majority of the spending from foreign productions, realising an increased investment into Malaysia. As of December 2014, the revenue from the exports of creative content amounted to RM608.7 million, which has exceeded the performance of the previous years.

ICON, which was launched in 2009 to spur the creation of smartphone applications by providing training and mentoring to developers, had 1,193 recipients as of December 2014, producing RM1.67 million sales revenue until then. Among the standout achievements via this programme this year was Gain Secure, which gained prominence when it launched the AirAsia Windows Phone mobile application in 2013. With ICON's guidance, the company went on to launch its first consumer-based Edutainment mobile game, Mathgician, in June 2014. Such successes increase the value of the company which is key apart from sales revenue.

Vice President of Creative Multimedia Department (MDeC) Dato' Kamil Othman, speaking to the recipients of CILLP

The response for the Creative Industry Lifelong Learning Programme (CILLP) has been very encouraging, with more than 672 people benefiting from its implementation as at December 2014. New participants have included professional services such as lawyers and accountants, which were lacking in the industry.

The CCIG database continues to grow. As of December 2014, it had over 5,863 members and 228 validated practitioners, which include practitioners from clusters such as media producing, creative writing, VFX and animation, make-up and sound engineering.

In the coming year, CCIG will focus on increasing the number of validated practitioners to 600 in various clusters to support the creative industry ecosystem. Other projects within the EPP that are now operational include the Digital Live Transit TV by Asia Media and Hospitality IPTV by Select-TV.

KEY TAKEAWAYS

In line with an overarching theme of convergence, a holistic approach will continue be taken in developing the creative content industry. This includes an effort to introduce a centralised agency to manage pitching for Government funds. In this model, this agency would be a single point of contact between the Government and producers to allow for a smoother pitching process.

As seen with the success of FIMI, the industry needs to continue exploring international markets for funding and increasing revenues, while the development of a validated talent directory remains crucial to its continued success. Among the main challenges experienced by FIMI were budget constraints that led to a few projects not receiving the incentives. Nonetheless, budget matters have been resolved and FIMI approvals will continue. Process improvements and Ministry-level coordination – particularly in various areas such as FINAS-FIMI, PUSPAL – are also required to ensure seamless processing of production applications.

The CCIG database is another key touchpoint for various industry players, whose relevance can be bolstered through the implementation of MoUs with JPK-MoHR and other relevant international accreditation bodies.

EPP 3

CONNECTING 1MALAYSIA

The key development for 2014 was the Telematics Project, a joint collaboration between Telekom Malaysia Bhd and Milan Utama. The Telematics Service Platform (TSP) provides a common platform and market place for content and solution providers to connect with vehicle drivers/owners.

Among the highlights of the Telematics Project is the Automatic Vehicle Location System that was launched with more than 800 subscribers and the completion of the Anti-Theft System. The TSP stage 1 backend, which is essentially a "backend service delivery platform" was also completed in 2014.

In 2015, this project will focus on a front-end application on car rental systems which includes the development and localisation of an onboard unit with display and online system for the purpose of reporting and viewing items such as the booking status, vehicle health & GPS location tracking to support Malaysia's first Electric Vehicle Car Sharing programme. The application will be linked to the TSP backend and includes the ability to perform remote firmware updates.

Digital Malaysia Projects that were implemented by MDeC include the improvement of e-payment and e-fulfilment for SMEs. Now under the purview of the CCI NKEA for monitoring and reporting, the two projects are aimed at improving the e-commerce market, of which only 28 per cent of SMEs are tapping into.

The performance of both projects has fallen short of the intended targets, with RM48.4 million in revenue targeted from the e-commerce fulfilment hub. To date, this project has secured RM26.4 million and attracted well-known brands such as Robinsons, Swarovski, Anakku and Eu Yan Sang. However, the target was not achieved due to the withdrawal of one major contract holder and the delays in obtaining land to begin the e-fulfilment services rollout.

For e-payment, 123,282 solutions were targeted to be deployed to SMEs by 2014, with transaction value worth of RM1.07 million by the end of 2014. Most recent data shows that 135,000 solutions have been deployed and RM1.83 million transacted.

KEY TAKEAWAYS

The lack of promotional activity during the initial stages of the e-commerce programme resulted in lower-than-expected participation from SMEs. Over time, however, roadshows and campaigns held by MDeC ensured that the take-up improved, and more SMEs are expected to join the programme in the coming year.

The challenge for e-payment to reach a transaction value of more than RM1 million by the year's end was the need to ensure that the solution terminals were deployed around Malaysia in large numbers. In order to encourage e-payment among SMEs and micro-enterprises, the Government is providing subsidies for purchasing solution terminals.

EPP 4

ESTABLISHING E-LEARNING
FOR STUDENTS AND WORKERS

Students using ICT for learning at schools

For 2014, the target was to ensure that every school connected with high-speed Internet connection of at least 4Mbps was consistently provided with that speed. With a sample size of more than 4,000 schools each time a survey was conducted, it was found that at least 99.9 per cent of schools met this criterion.

Previous years have seen this EPP aimed at connecting primary and secondary schools with high-speed Internet access through its 1BestariNet programme, which provides schools with 4G connectivity and access to Frog's Virtual Learning Environment (VLE). More than 8,000 schools have been connected with high-speed Internet of 2Mbps – 10Mbps over the past 2.5 years as compared to five years taken in the previous initiative to connect schools with the Internet.

The utilisation rate of the VLE platform has shown encouraging signs. Over the course of the year, the average percentage of students logging into the VLE for more than 30 minutes was 51 per cent out of an average sample size of 94,000 students. This exceeds the initial target of at least 30 per cent of the students logging in and spending at least 30 minutes in the VLE. This achievement indicates actual usage of VLE, which enables the Ministry of Education to gauge the use of VLE by students, and enhance its programmes accordingly to encourage the use of VLE amongst students, teachers and parents.

In 2014, 10,000 lesson sites were targeted to be created and uploaded into the VLE. To date, there are more than 11,500 lesson sites on the VLE platform.

KEY TAKEAWAYS

Having ensured that schools are connected with a high-speed Internet connection of at least 4Mbps, 2015 will see a greater focus on increasing the use of VLE by students, teachers and parents through various programmes. Ultimately, the aim is to have one million students accessing VLE for more than 30 minutes.

Additionally, this EPP will continue to increase connection speeds to schools to enhance user experience, and potentially increase the utilisation of e-learning facilities.

EPP 5

LAUNCHING E-HEALTHCARE

This EPP targets to connect selected health facilities via the Internet as part of the 1Gov*Net project managed by MAMPU and Government Integrated Telecommunications Network (GiTN).

As of December 2014, close to 3,000 healthcare facilities were upgraded with Internet connectivity, with connectivity speeds that ranged from 2-10Mbps. The focus for 2014 was to monitor and optimise the utilisation of these facilities. Health facilities which did not use the bandwidth services had theirs reduced, while those that showed encouraging use of the online applications enjoyed an increase in bandwidth supply.

Budget 2015 has also provided for an increase in e-health applications, and a growing number of Pharmacy Hospital Information Systems (PHIS) are expected to be rolled out at health facilities with upgrades to existing health facilities with TelePrimary Care (TPC) and Health Information Systems (HIS).

KEY TAKEAWAYS

Despite the strides taken to improve the e-healthcare system, there remain several speedbumps that hinder the adoption of new technology. Among them are the integration issues of stand-alone systems that differ from one healthcare facility to another, the lack of available infrastructure and the varied processes and policies among individual facilities that make it difficult to replicate and improvise ICT systems.

Another issue faced was the lack of subject matter experts to manage and utilise healthcare-related ICT systems. This, combined with the incomplete ICT infrastructure at health facilities, also slowed the adoption rate.

All of the above are to be addressed via MoH's ICT transformation plan, which is in the midst of being finalised for implementation by mid-2015. While the initial focus is on public facilities, it is intended to inter-connect with private facilities at a later date.

EPP 6

DEEPENING E-GOVERNMENT

This year, the Ministry of Transport and Ministry of Youth and Sports adopted DDMS, bringing the total number of agencies adopting DDMS to five. These Ministries have largely completed re-classifying documents digitally and disposing of their documents in accordance with the National Archive Department's requirements, which was one of the major hurdles towards its adoption.

The implementation of the myGovernment Portal was followed by more than 352,000 logins, double the target set for 2014. This indicates a relatively healthy utilisation of the portal as a single destination for Government services, and awareness activities remain crucial in educating the public sector on the services and convenience offered online.

Approximately 77 per cent of Government services are online and 65 Federal Government premises in Putrajaya are connected with Putrawifi,

"NKEA Day" Negeri Sembilan organised by MAMPU to promote government's online services and other initiatives provided to the rakyat

which provides Internet access to both the public and Government employees.

The National Phytosanitary Certification System (NPCS) and eCert are due to be completed by the end of 2014. With the completion of this project, a phytosanitary certification system at all certificate issuance offices for exporting agricultural plant products and a system for submission of phytosanitary data for imports will be in place.

Other projects in the pipeline for e-Government include the 1GovAppStore, which will house all Government-related mobile applications under one trusted directory, and further encourage the development of future mobile applications related to e-Government services.

KEY TAKEAWAYS

There remains low public awareness of the capabilities offered by the Government through online services like the myGovernment Portal. Recognising

this issue, a communications plan is being developed to increase public understanding, and will include monitoring of utilisation of online services at the administrative level.

The year was an encouraging one for DDMS. Having cleared the issues that bogged down its adoption, 10 more agencies are targeted to be on-board DDMS in 2015. Barring any budget constraints during the process, a smooth acceptance of the system is expected in the coming year.

**EPP
7**

ENSURING BROADBAND FOR ALL

In this age where access to information marches in tandem with socio-economic progress, it is vital that broadband access be readily available to all Malaysians. As of 1Q 2014, household broadband penetration stood at 67.3 per cent.

HSBB 2, the second phase of the high-speed broadband rollout that aims to expand coverage in urban and suburban areas, encountered several inter-Ministry process issues that required escalation to a Problem-

Solving Meeting chaired by the Prime Minister. Once the issues are resolved, the groundwork for HSBB 2 is expected to commence in 2015 and deliver a targeted number of ports by end 2015.

A type of telecomunication site for wireless services such as 3G and LTE

The coverage of LTE wireless broadband is now at 25 per cent of the population, and is expected to increase to 30 per cent in 2015 with service providers bound to the rollout requirements of the regulator to achieve this target.

In order to make Internet access more universal to the public, efforts were continued to push for the gazetting of the amended Uniform Building By-laws (UBBL) 1984 Act, which requires all developers to provide communication infrastructure such as internal and external ducting for all new housing and commercial developments.

In 2014, Pahang was the latest state to have gazetted the amended UBBL, bringing the total to eight states. Kedah, Penang, Negeri Sembilan and the Federal Territories remain ungazetted, while Sabah and Sarawak are still deliberating this recommendation, as the laws in those states are different.

KEY TAKEAWAYS

Having achieved a 67.3 per cent broadband penetration, growth in this area is expected to plateau in the coming years as it approaches the saturation point. Coverage for mobile broadband services, including 3G and LTE, will continue to make access to the Internet highly available at home, at work and on-the-go.

The delay in the HSBB 2 project affected the targeted timeline, but is expected to roll out smoothly following the escalation of the issues to the Problem-Solving Meeting chaired by the Prime Minister. Moving forward, very close monitoring of the HSBB 2 project will be required in order to ensure progress in accordance to agreed timelines.

**EPP
8**

EXTENDING REACH

In an effort to extend broadband subscription to non-urban areas, 89 Pusat Internet 1Malaysia (PI1M) centres, 973 Kampung Tanpa Wayar 1Malaysia (KTW1M), and 163 rural telecommunication towers were established in 2014. Since the EPP's implementation, over 4,000 KTW1M, 400 PI1M and 1,100 telecommunication towers have been built in rural areas.

This year also saw the focus of the EPP shift from quantity to quality. The lower than expected number of sites this year was due to the more stringent commissioning criteria: it was decided that KTW1M sites would be commissioned only if there is a well-established PI1M to ensure the quality of service.

KEY TAKEAWAYS

The main challenge faced by the EPP's implementation was internal decision-making delays. However, having resolved these issues, further delays are not expected, and 2015 will see the commissioning of 950 sites (500 of which are KTW1M sites). It should be noted however that the monsoon season may affect construction.

Children enjoying the benefits of PI1M

The Government also recognises the demand for faster connectivity from 385Kbps in 2011 to 4Mbps in 2014. This will require the development of new implementation models to cater to the demand.

As the nation progresses, these initiatives will start to play a less important role as a more robust and advanced network is rolled out in these areas, thus improving quality of connectivity through wired and wireless broadband that is available at affordably priced packages.

EPP 9

OFFERING SMART NETWORK

This EPP has achieved its objectives of ensuring availability of differentiated broadband packages that cater to a wide range of customers, and did not see any new projects in 2014.

Key Takeaways

Moving forward, the EPP will continue to monitor the broadband revenues generated, number of packages and prices available in the market. The information on its progress will be shared via the consumer forum made available on http://www.consumerinfo.my/.

EPP
10

EXTENDING THE REGIONAL NETWORK

This year saw Konsortium Rangkaian Serantau (KRS) obtaining a 20Gbps demand from its shareholders for international Internet wholesale bandwidth. As a result, KRS was able to reduce the international Internet bandwidth wholesale price by 34 per cent.

Another initiative to expand the regional network was the Sistem Kabel Rakyat 1Malaysia (SKR1M), which aims to improve national broadband connectivity within Peninsular Malaysia and Sabah and Sarawak at affordable rates.

As of December 2014, 15 per cent of the rollout of the submarine cable was completed, which was slightly delayed due to internal decision-making processes that have since been resolved. The initiative has completed the tender process and 2015 may see the execution of this project according to timelines. It is expected to be completed by mid-2017.

This year also saw the development of the national blueprint for Internet cables, which will provide clear direction and strategies for ensuring availability of international Internet bandwidth at potentially competitive prices.

KEY TAKEAWAYS

As the KRS has been proven effective, the Government's prime focus in 2015 will be to monitor its progress in seeking further price reductions on international Internet wholesale bandwidth, which may translate into lower costs for the rakyat.

Other key areas to monitor in 2015 include the progress of SKR1M and implementation of the national blueprint by ensuring completion of 50 per cent of an international submarine cable by next year.

A special vessel used to lay the submarine cable

TRACK AND TRACE

RFID container tagging process

Both projects that fall under this EPP – the security clearance process jointly led by SMTrack Berhad (SMTrack), the Royal Malaysian Customs Department and the MCMC; and the Swiftlet Nest tracking and traceability system led by the MCMC and the Department of Veterinary Services – are operational but are not mandatory practices in their respective industries.

KEY TAKEAWAYS

The use of RFID has not been actively pursued this year. Since 2012, more than 32,000 RFID tags have been deployed for security and trade, and no longer require facilitation. From this point, its future implementation and progress will depend on the decisions made by the Royal Malaysian Customs Department.

Similarly, the RFID tracking of swiftlet nests is not a compulsory practice. The implementation of the system hinges on demand from traders and whether they view it as beneficial to their trade.

BUSINESS OPPORTUNITIES

1

Fixed Services

The projected growth of sophisticated, data-heavy Internet applications and content will create a corresponding increase in demand for high-speed broadband which is largely delivered over fixed-line services.

It is projected that fixed broadband subscribers will increase at a compound annual growth rate (CAGR) of 10.5 per cent with services such as IPTV, online gaming and music driving much of this increased uptake. Fixed data lines meanwhile are projected to grow by 2.6 per cent CAGR as more companies require their own internal networks.

2

Mobile Services

As smartphones become the primary tool for accessing the Internet, mobile services are expected to boom with mobile broadband subscription projected to record up to 10.5 per cent CAGR.

Voice line subscribers are also expected to grow, although at a slower pace of 2.7 per cent CAGR.

The biggest opportunity for mobile service providers lies in deployment of LTE which would allow them to offer new services that can result in an increased average revenue per user (ARPU). This trend will have a spillover effect for tower-related work, integration work and application development.

The new trend of mobile providers aggregating tower operations provides a new opportunity for network players. This opportunity lies in the economies of scale gained from aggregated tower operations.

3

Courier, Post and Broadcast

The growing acceptance of e-commerce in the country is expected to spur growth in the post and courier sector which provides logistical support to the increasing number of online merchants. These services include transaction fulfilment, warehousing, inventory management, demand planning for manufacturers and assembly services.

IPTV or television over the Internet is also a new frontier with incumbents as well as new entrants rushing to stake a claim. Broadcasting will see new technology being adopted by providers and broadcasters with the incoming implementation of Digital Terrestrial Television Broadcasting (DTTB).

This will intensify competition in an industry which has seen incumbents upgrading their broadcasting facilities from analogue to digital as well as offering High-Definition (HD) channels. Together, contributions from courier, post and broadcast are expected to grow by 5.2 per cent annually over the next 10 years.

4

Regional Operations

Malaysia is strategically located in the world's fastest growing region and Malaysian telecommunications companies continue to seek opportunities to grow their business in regional markets.

The liberalisation of the Malaysian telecommunication sector has removed what was formerly a major stumbling block for regional expansion and companies can now negotiate on equal terms with their counterparts in other countries.

The footprint created by the likes of Axiata opens up opportunities for the industry to tap into regional markets. For example, mobile applications can be deployed over the Axiata network to serve different customers in different geographies.
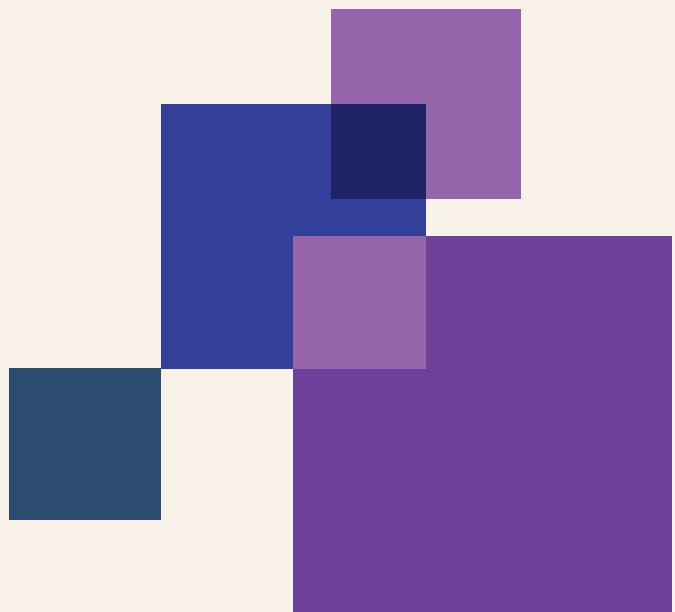
ENABLERS

As a knowledge and skills intensive industry, a key enabler for the Communications Content and Infrastructure NKEA is human capital, with the industry requiring a workforce of 43,162 by 2020.

Of these, 25,899 employees will be required to support the EPPs while existing Business Opportunities require an additional 17,263 employees. Most of these new jobs will be considered to be in the high-income bracket, with 67 per cent located in the over RM4,000 per month salary bracket requiring high-level qualifications.

Initiatives have therefore been put in place to ensure a supply of talent for the continued growth of the industry. For the telecommunications sector, a consolidated approach between PEMANDU, TalentCorp and the Ministry of Education was initiated to ensure that the number of graduates in relevant telecommunications and engineering fields will be met by 2020.

To support the creative content and multimedia sector, the Ministry of Communications and Multimedia via its agency, MDeC and in collaboration with the Public Services Department undertook the implementation of CILLP from the Ministry of Science, Technology and Innovation (MOSTI).

The programme assists students to pursue tertiary studies in creative content at local or foreign universities or educational centres. It also provides financial assistance for professionals in the creative content sector to pursue master classes taught by the industry's best.

The CCIG will introduce accreditation of creative talents to foster a higher standard of professionalism within the industry. The efforts are aimed at shifting jobs in the sector into a higher income bracket level and encouraging more Malaysians to consider a career in creative content.

Summary of Communications Content and Infrastructure NKEA

	2020 Target
Incremental GNI Impact	RM35.7 billion
Additional Jobs	43,163

Critical targets for 2015

- To record RM600 million of revenue from the export of creative content
- To attract RM400 million total estimated production spent under Film in Malaysia Incentive
- To ensure 7,000 schools are connected with high-speed broadband in the range of 4Mbps – 10Mbps
- To ensure 200 health facilities are rolled out with e-health applications.
- To ensure 10 new agencies onboard the Digital Document Management System
- To ensure at least 10% increase in number of online transactions at Ministries and selected agencies
- To provide access to high-speed broadband with speeds up to 50Mbps in capital cities and major towns by setting up 40,000 new HSBB ports
- To provide access to high-speed broadband with speeds up to 100Mbps in sub urban areas by setting up 25,000 new SUBB ports
- To ensure 30% population coverage for LTE wireless broadband service
- To commission 950 new programme sites i.e. Kampung Tanpa Wayar, Pusat Internet 1Malaysia and Time3 Towers
- To ensure 45% of project implementation of submarine cables (linking Sabah, Sarawak and Peninsular Malaysia) (SKR1M)
- To ensure 50% completion of the international submarine cable