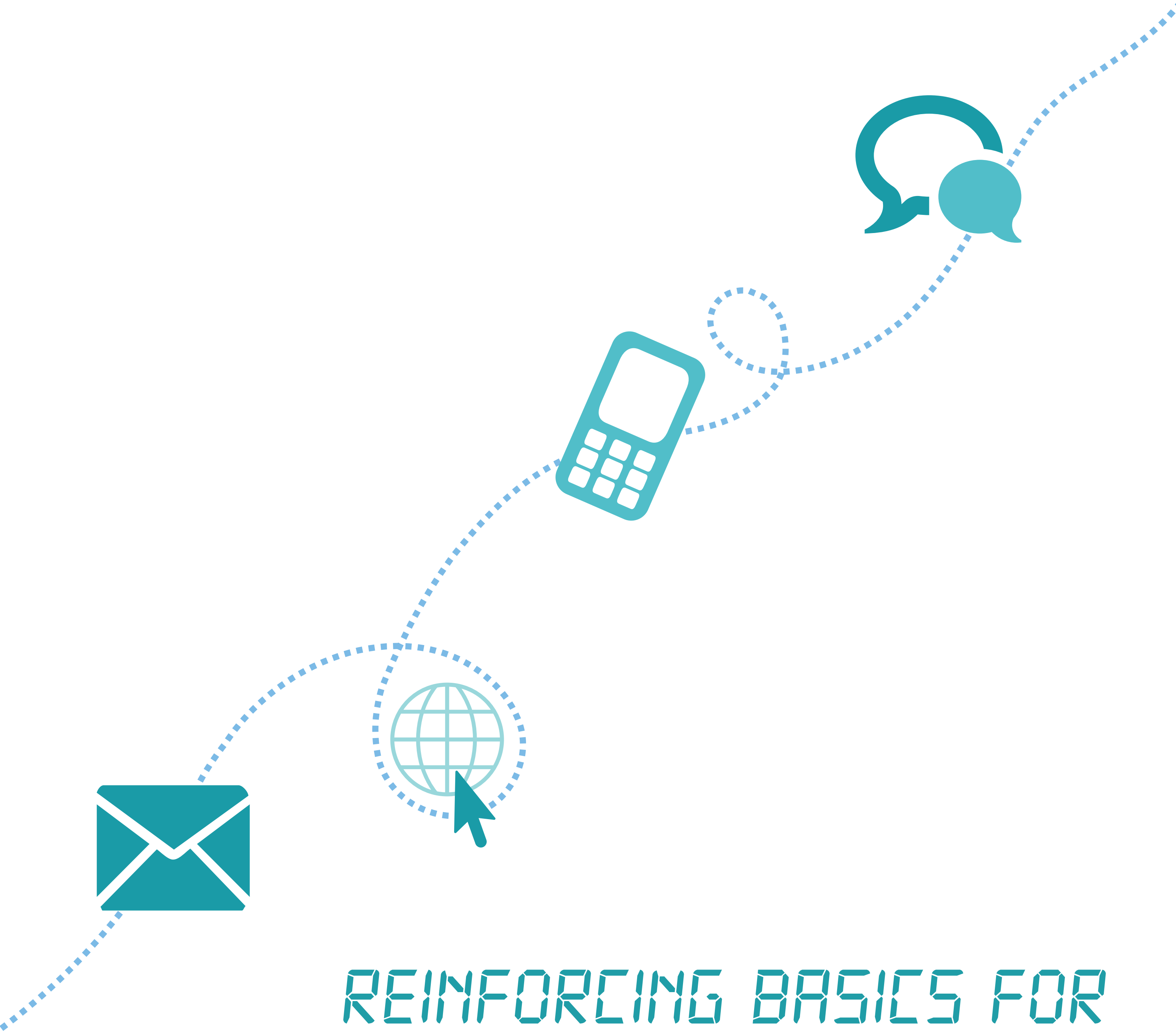
Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission



REINFORCING BASICS FOR CONNECTED SERVICES

INDUSTRY PERFORMANCE REPORT 2013

STATUTORY REQUIREMENTS

In accordance with Part V, Chapter 15, Section 123-125 of the Communications and Multimedia Act 1998, and Part II, Section 6 of Postal Services Act 2012, Malaysian Communications and Multimedia Commission hereby publishes and has transmitted to the Minister of Communications and Multimedia a copy of this Industry Performance Report (IPR) for the year ended 31 December 2013.

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ISSN 1823 – 3724

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CHAIRMAN'S STATEMENT

For the year 2013, mobile capital expenditure per capita for Malaysia was above RM100. As a comparison, mobile capital expenditure per capita for United States is more than three times at RM340, where service providers are spending more capital on network improvements and for upgrading their wireless infrastructure. Hence, mobile service providers in Malaysia would have to raise their capital expenditure in an effort to expand network coverage and capacity improvement. Such investments are important to further enhance their 4G LTE services offerings started in 2013 as wireless broadband services take-up is projected increasing by the day.

For the last five years, the focus was on getting people connected with a broadband service. The next potential growth area is to intensify Information and Communications Technology (ICT) usage and in particular Internet services. Therefore, service providers must ensure availability of a reliable and secure network service apart from satisfying consumer demand for affordable services. The balance of supply and demand at appropriate cost is a constant challenge.

Nevertheless, in 2013 Malaysia managed to gain a notch higher in the World Economic Forum (WEF) Competitive Index with a score of 5.03 from a maximum score of 7. These rankings project an image abroad of the competitiveness of Malaysia in today's global world due among other factors to high broadband penetration.

In addition, Malaysia became the number one emerging country for broadband affordability as ranked by the Affordability Index produced by Alliance for Affordable Internet in their report. Malaysia also won the ITU 'Transformational Power of Broadband Digital Icon Award 2013' for the most successful entrepreneur in this worldwide programme.

This augurs well for Malaysia, capitalising on ICT usage and the skills of people to grow their business and improve their quality of life vis-à-vis a highly connected nation. It is an honour for us to witness and work together in the next phase of growth for the Communications and Multimedia (C&M) industry which continues to be an enabler supporting individuals and at national scale, the economic growth sectors.

Greater bandwidth is required to support smart devices which has increasingly becoming common in Malaysia. This scenario paints Malaysia going into another leg of growth for the C&M industry.

The development of C&M industry is crucial not only from the infrastructure build up perspective but also for fulfilling end users' expectation for quality services. Excellent service delivery requires zero defect. This, for example, is in the case of dropped calls where regulatory compliance should be absolute. In 2013, the MCMC has fined service providers for breaching their licence conditions in meeting the accepted standards and level of service against dropped calls.

In a converging environment where Internet Protocol based services allow more cross platform business orientations and services, there is a need for continued assurance in balancing between a light touch regulatory framework and industry development.

On a lighter note, the year 2014 marks a new milestone for the broadcasting sector in Malaysia. The roll-out of Digital Terrestrial Television Broadcasting services is expected in the near future. The migration to digital will be for the current Government owned and private stations. This is a growth opportunity for Free-To-Air broadcasters to expand their business on digital platforms.

Today, the postal service is experiencing declining mail volume. However, new consumer behaviour such as online shopping opens up significant opportunity for the postal service provider and courier companies. The service providers can be an enabler to the eCommerce businesses ecosystem by offering one stop centre for services such as warehousing, packaging and shipment delivery directly to the customers' doorstep.

The Digital Malaysia project is a case in point towards creating value to accelerate development and adoption of new applications and content services for growth by using various ICT tools at home, work and community level.

Moving forward, quality of service will remain as the key aspiration for the MCMC in ensuring the best consumer experience in telecommunications services. MCMC plays an important role in promoting and regulating the C&M industry for continued growth and development with the ultimate goal of connecting the nation and reaping the benefits. Thus, the MCMC envisions for more private initiatives and efforts by service providers in upgrading their services. With that, it is my pleasure to present the Industry Performance Report 2013.

Dato' Mohamed Sharil Tarmizi
Chairman, MCMC

EXECUTIVE SUMMARY

Communications & Multimedia (C&M) Industry Continues to Perform Well

The C&M industry performed respectably, recording 4.5% growth in revenue to RM53.4 billion from RM51.1 billion in 2013. This steady performance of the C&M industry was contributed mainly by telecommunications with nearly 85% revenue share, broadcasting 11% and the remaining from the postal sector and others including ACE market and digital signature.

In terms of capital market valuation, the C&M industry performed moderately based on market capitalisation in Bursa Malaysia with a marginal 2.3% growth to RM195.3 billion in 2013. This represents 11.5% of total market capitalisation of RM1,702.2 billion.

Of significance in 2013 is that the 15 licensees listed through holding companies on the ACE Bursa Malaysia garnered revenue of close to RM1 billion, with market capitalisation of more than RM2 billion.

From Connectivity to Usage

In 2013, Malaysia achieved over 67% household broadband penetration. Malaysia ranked 12^{th} from a list of 146 developing countries by household penetration in 2012, as reported by Broadband Commission[1]. The Republic of Korea continues to have the world's highest household broadband penetration at over 97%.

Traditionally, Internet usage was mainly for electronic communications such as e-mail, instant messaging and others like eCommerce. However, nowadays, consumers are watching video and streaming content online with acceptable speed/seamless viewing experience.

The coverage and connectivity services offered by service providers enabled more consumers to have sufficient access to cater to these online experience. Specifically in 2013, there were 3.8 million household broadband subscriptions. High speed broadband (HSBB) added 126,000 new subscriptions throughout 2013 to a total of 668,000 subscriptions. Mobile broadband continued as the biggest contributor in terms of broadband connections in Malaysia with a total of 3.3 million subscriptions. To reap the benefits of value added services from greater bandwidth and high speed Internet, mobile subscribers have the option to subscribe to 4G LTE services that was started in the beginning of 2013.

Existing voice services in terms of fixed telephony service as represented by Direct Exchange Line (DEL) subscriptions reached penetration of 32.4 per 100 household. DEL subscriptions continued to decline whilst mobile subscription penetration rate is reaching almost 150% in Malaysia. That is, on average, each person carries more than one mobile phone. Notably, out of these mobile phone users, about one third uses smartphones.

On mobile subscriptions market share by service providers, Celcom captured 30% (13.1 million), Maxis 28% (12.3 million) and DiGi 25% (11 million) as at end 2013. In comparison, U Mobile registered a total of 10.3% of market share compared with 8.5% in 2012.

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[1] Broadband Commission, The State of Broadband 2013: Universalising Broadband, September 2013.

Online Viewing Complementing Linear TV

TV content today is delivered via cable, satellite, Internet and Free-To-Air (FTA) terrestrial platform. Cumulatively, there are more than 200 channels in the TV market today. Currently, broadcasters and telecommunication service providers are working together to diversify broadband services by offering TV content vis-à-vis triple play packages.

These service providers are beginning to drive on increasingly rich entertainment environment, taking advantage of digitisation and the online medium. Such development presents an opportunity for telecommunications companies to diversify revenue streams beyond data and voice services. For example, ASTRO is supplying content over Maxis network and is in partnership with TIME to deliver TV and broadband services. For the record, the number of IPTV subscriptions from these partnerships has exceeded 20,000 in 2013.

Quality of Service and Consumer Protection

With increased awareness of their C&M service or usage rights, consumers are exercising their rights by lodging their complaints on service providers through various channels such as service providers, self-regulation forums and MCMC. All complaints received represent an important supply of pertinent issues, that acts as a feedback mechanism for improvement on many areas of C&M development including quality of service. This approach adds to the effectiveness of Mandated Standards under the Communications and Multimedia Act 1998 and other guidelines.

The MCMC monitors service quality, compliance of content to requirements and standardisation of communication equipment and takes enforcement actions on non-compliant licensees after investigation.

From the regulatory perspective, 2013 marked the first year for implementation of accounting separation in Malaysia for telecommunications service providers with revenue and/or total assets above RM3 billion. They are required to produce regulatory accounts at the service level, detailing the costs, revenues, assets and liabilities for identified services at the wholesale and retail business units. The service providers and MCMC have been working out the final details over the year.

Development Management in 2013

The MCMC is involved in the National Key Economic Area Communications, Content and Infrastructure (NKEA CCI) initiative to expand creative local content export revenue through global market exploration together with the National Film Development Corporation Malaysia (FINAS), Multimedia Development Corporation (MDeC) and local companies. For 2013, local content has garnered revenue totalling RM138.72 million. This is through agreements made at the international trade shows such as MIPTV, MIPCOM and Asia Television Forum (ATF).

The Universal Service Provision (USP) programmes continue to assist in narrowing digital divide between urban and underserved communities as they bring Internet access to these communities. To date, 424 1Malaysia Internet Centre (PI1M), 4,679 1Malaysia Wireless Village (KTW1M) and 699 Time 3 Telecommunication Towers have been built. A total of 1,000 telecommunications transmission towers will be built over the next three years, with an investment of RM1.5 billion as indicated in the national Budget 2014.

Security and Trust

As at end 2013, Digicert and Trustgate together has issued nearly 6.2 million digital certificates, with Digicert capturing 92% of this market. The other Certifying Agency (CA) namely, Telekom Applied Business was granted licence in 2013 and has yet to market its products. Analysis based on user categories show the Government sector consumed 96% of total certificates issued while the balance 4% was taken by the private sector such as financial institutions, pharmaceutical companies and individuals.

Postal and Courier Services

Postal Services Act 2012 was *Gazetted* on 1 April 2013. This new Act consists of provisions to effectively regulate the postal service industry in a multiplayer environment. The Act also encourages a planned development of the industry and maintain universal postal service. In a prior development, the new international postage rates were set when Postal Rates Rules 2010 under the Postal Services Act 1991 were amended and *Gazetted* on 31 March 2013.

Pos Malaysia recorded total revenue of RM1.3 billion in 2013, an increase of 8.3% from RM1.2 billion in 2012. Mail segment at RM0.73 billion in 2013 still remains as the largest revenue contributor, accounting for 56.1% of total revenue. The mail segment posted marginal growth of 2.8% from RM0.71 billion in 2012. Meanwhile, the courier segment saw a double digit growth of 13.3% to RM0.34 billion in 2013.

On the courier service side, a total of 93 courier service providers registered with MCMC in 2013. As at end 2013, the top 10 courier companies recorded a total revenue of RM2.2 billion. This is a respectable growth of 3.9% from 2012 in highly competitive market environment.

Outlook 2014

Moving forward, it is envisaged that the infrastructure and coverage made ready by the C&M industry will be leveraged with more innovation and creativity, accompanied by high monetisation. The MCMC has a key role guided by national policy objectives to steer towards establishing Malaysia as a global centre for C&M information and content services. In line with this vision, the Digital Lifestyle Malaysia project is highlighted. The project started in 2013, is working to create value towards accelerating development and adoption of new applications and content services for growth by using various ICT tools and technologies.

All these developments are designed to deliver economic and social growth such as increase in Gross National Income (GNI) contribution, enable infusion of technology and encourage usage to uplift quality of life.

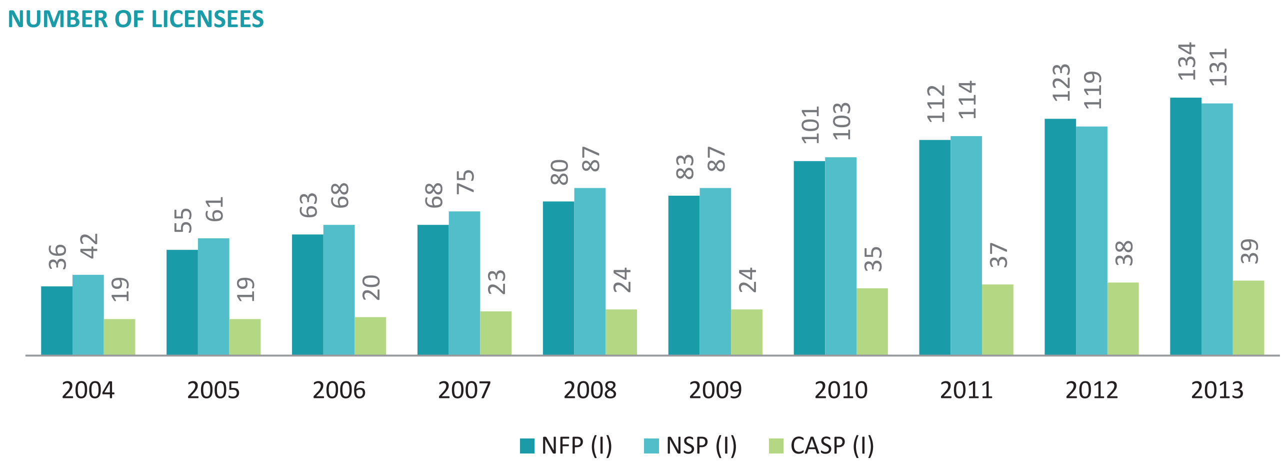
LICENSING UNDER CMA

Under the Communications and Multimedia Act 1998 (CMA), there are two types of licences, Individual and Class. These licences under the CMA are technology neutral and designed to allow services in different and distinct markets. There are four categories of licences, namely Network Facilities, Network Services, Applications Services (Class licence only) and Content Applications Service licences[2].

Licensing Profile over the Years

The number of Individual licences has increased over the years. In 2013, there were a total of 304 Individual licensees. By respective categories, there are 134 NFP (Individual or "I"), 131 NSP (I) and 39 CASP (I) licensees.

C&M Licensees (Individual) 2004 – 2013



Source: MCMC
Figure i C&M Licensees (Individual) 2004 – 2013

In 2013, there were a total of 35 new individual licensees comprising 15 NFP (I), 18 NSP (I) and two CASP (I) licensees. Their services are shown in the figure below.

[2] NFP – Network Facilities Provider; NSP – Network Service Provider; CASP – Content Applications Service Provider; ASP – Applications Service Provider; I – Individual; C – Class.

Infrastructure and/or Services Offered by Approved Individual Licensees in 2013				
Infrastructure and/or Services	**Company**	**NFP (I)**	**NSP (I)**	**CASP (I)**
Deploying communications infrastructure and services for broadband	Adil Bestari Sdn Bhd	√	√	
	Al Karismi Technologies Sdn Bhd	√	√	
	Eminent Display Sdn Bhd	√	√	
	Felda Prodata Systems Sdn Bhd	√	√	
	IDC Network (M) Sdn Bhd	√	√	
	Komasi Enterprise Sdn Bhd	√	√	
	Majubina Resources Sdn Bhd	√	√	
	Oscatel Sdn Bhd	√	√	
	Reach Ten Communications Sdn Bhd	√	√	
	Sinar Suri Komunikasi Sdn Bhd	√	√	
	Suria Strategic Multi Media Sdn Bhd	√	√	
	Verticom Resources Sdn Bhd	√	√	
Deployment of communications infrastructure	Omnix (M) Sdn Bhd	√		
	Premium Radius Sdn Bhd	√		
Provisioning of bandwidth services via MEASAT-3b satellite for broadcasting and communications services	Measat International (M) Sdn Bhd*	√	√	
Mobile Virtual Network Operator (MVNO)	Enabling Asia Tech Sdn Bhd		√	
	Telekomunikasi Indonesia (M) Sdn Bhd		√	
Bandwidth and switching services	Wilayah Persekutuan Infrastructure Sdn Bhd		√	
	Formis Development Sdn Bhd		√	
	Tele-Flow Corporation Sdn Bhd		√	
Subscription broadcasting (IPTV)	Rimbun HybridTV Sdn Bhd			√
Terrestrial radio broadcasting	Genmedia Sdn Bhd			√
	Total	**15**	**18**	**2**

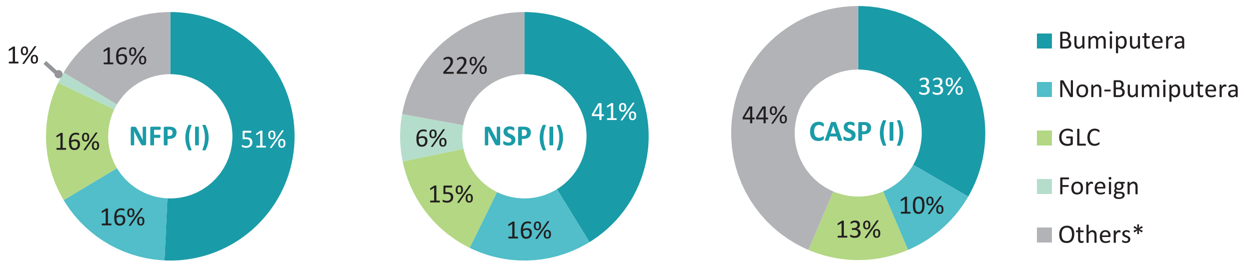
**Granted with a 10-year licence for both NFP (I) and NSP (I) licences*

Source: MCMC

Figure ii Infrastructure and/or Services Offered by Approved Individual Licensees in 2013

For 2013, no foreign-owned companies that were issued with Individual licences. The breakdown of shareholding composition by ethnicity/nationality/institution for the Individual licensees is shown as in figure below.

Individual Licensees – Composition by Ethnicity/Nationality/Institution

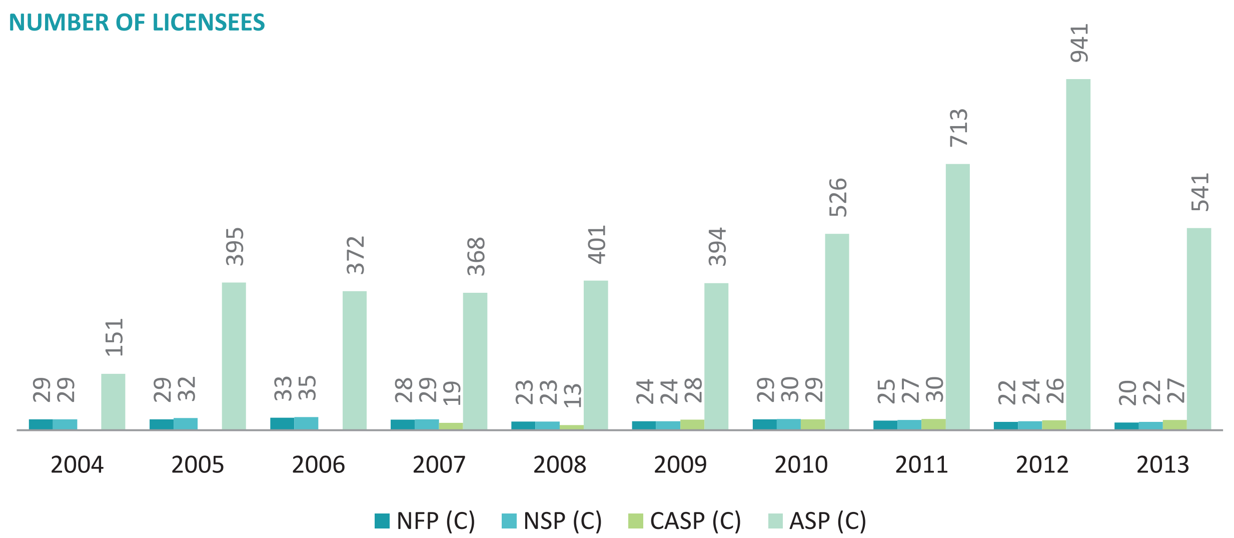


Notes:
Bumiputera-owned – company that has 51% or more Bumiputera shares
Non-Bumiputera owned – company that has 51% or more non-Bumiputera shares
GLC – Government-linked company
Foreign-owned – company that has 51% or more shares held by foreign entities or individuals
Others – mixed shareholding, with no particular type of shareholder having a controlling interest in the company

Source: MCMC
Figure iii Individual Licensees – Composition by Ethnicity/Nationality/Institution

As for Class licences, 20 NFP (Class or "C"), 22 NSP (C), 27 CASP (C) and 541 ASP (C) licences registered. The number of ASP (C) licences registered a decline in terms of the total number of licences issued compared with the 2012 figures, which stood at 941 licences. In 2013, there were only 126 new ASP (C) licences issued compared to 504 new licences issued in 2012. This substantial number of new applications recorded in 2012 was due to the 1Malaysia Netbook programme and Internet access service tender exercise.

C&M Licensees (Class) 2004 – 2013



Source: MCMC
Figure iv C&M Licensees (Class) 2004 – 2013

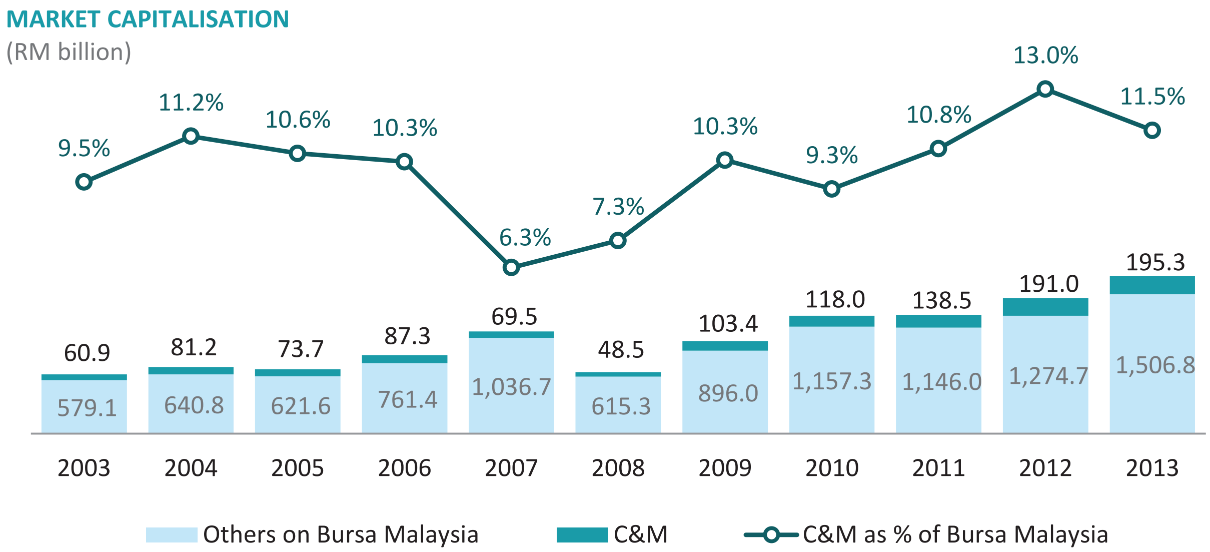
MODULE 1: ECONOMIC PERFORMANCE OF C&M INDUSTRY

Market and Financial Performance

C&M industry contributed 11.5% or RM195.3 billion to Bursa Malaysia market capitalisation in 2013

The C&M industry based on the performance of major public listed companies in telecommunications, broadcasting and the postal sector, captured RM195.3 billion in market capitalisation in 2013 (2012: RM191 billion). This represents 11.5% of the Bursa Malaysia market capitalisation of RM1,702.2 billion compared with 13% in 2012. The contrast is due to other sectors such as banking and utilities that garnered higher market capitalisation in 2013 amidst a relatively stable C&M industry performance.

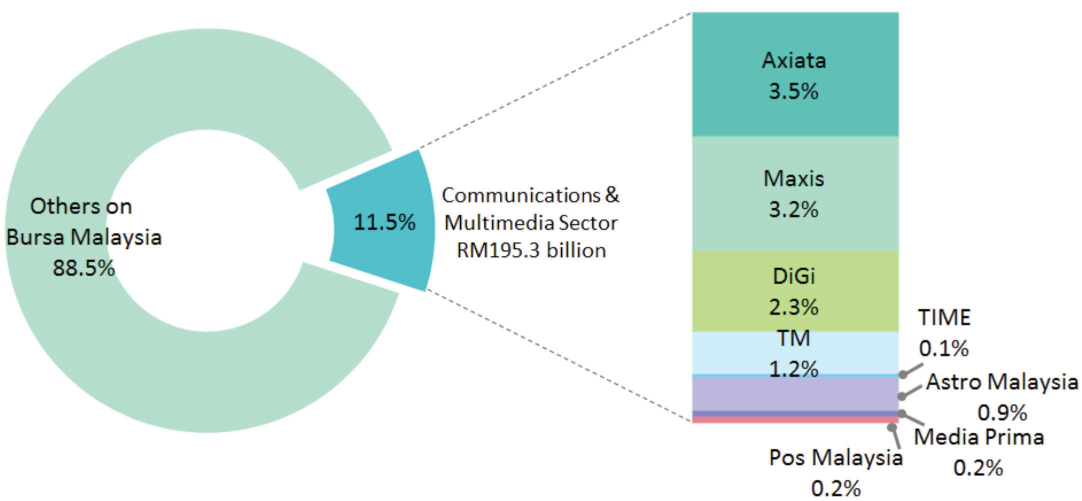
Contribution of C&M Industry to Bursa Malaysia



Source: Bloomberg, MCMC

Figure 1.1 Contribution of C&M Industry to Bursa Malaysia

Individual C&M Companies Contribution to Bursa Malaysia 2013



Source: Bloomberg, MCMC

Figure 1.2 Individual C&M Companies Contribution to Bursa Malaysia 2013

The overall C&M industry market capitalisation in 2013 registered a marginal growth of 2.3% or RM4.3 billion compared with 2012. This was mainly due to favourable contribution by Axiata and Maxis.

In terms of gains by percentage, Pos Malaysia registered market capitalisation increase of 52.6% to RM2.9 billion from RM1.9 billion in 2012. The surge was driven by implementation of new international postal tariffs effective May 2013, indicative of potentially higher profitability from the rates increase.

Meanwhile, Media Prima posted 16% or RM0.4 billion increase in market capitalisation to RM2.9 billion. This was buoyed by Media Prima revenue growth, supported by digital advertising and company expansion plan to further strengthen its content and programming offerings.

Overall, the C&M industry continued to grow in 2013, but at a relatively slower pace compared with 2012. This was partly due to pressure on margin in view of intensive 4G LTE roll-out commitment and upgrading of current network. Nevertheless, the 4G LTE investment is paving the way for a positive return on investment as 4G LTE deployments increase in coverage and usage. The eventual improvement in network quality is expected to stimulate profitability through new revenue generating and innovative services in the near future.

C&M Companies Market Capitalisation

Companies	Market Capitalisation (RM billion)			% Change (2011 – 2012)	% Change (2012 – 2013)
	2011	2012	2013		
Telecommunications					
Axiata	43.5	56.1	58.9	29.0	5.0
Maxis	41.1	49.9	54.5	21.4	9.2
DiGi	30.2	41.1	38.6	36.1	-6.1
TM	17.7	21.6	19.9	22.0	-7.9
TIME	1.8	2.3	2.0	27.8	-13.0
Broadcasting					
ASTRO*	n.a.	15.6	15.6	n.a.	No Change
Media Prima	2.8	2.5	2.9	-10.7	16.0
Postal					
Pos Malaysia	1.4	1.9	2.9	35.7	52.6
Total	**138.5**	**191.0**	**195.3**	**37.9**	**2.3**

**Astro All Asia Networks Plc was privatised and delisted on 14 June 2010. Astro Malaysia Holdings Bhd was listed on 19 October 2012*

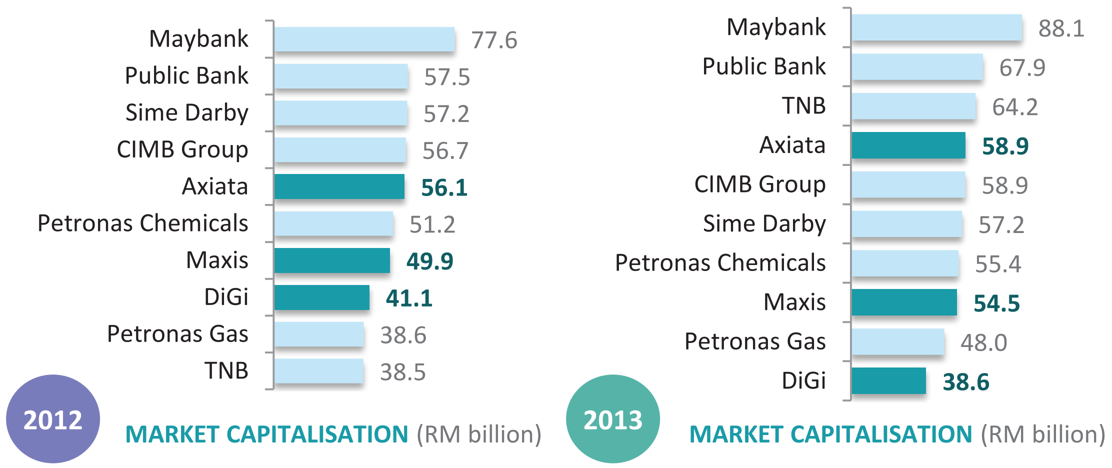
Note: Axiata Group Bhd (Axiata), Maxis Bhd (Maxis), DiGi.Com Bhd (DiGi), Telekom Malaysia Bhd (TM), TIME dotCom Bhd (TIME), Astro Malaysia Holdings Bhd (ASTRO), Media Prima Bhd (Media Prima), Pos Malaysia Bhd (Pos Malaysia)

Source: Bloomberg, MCMC
Figure 1.3 C&M Companies Market Capitalisation

Axiata, Maxis and DiGi as in 2012 have remained in top 10 best companies in terms of market capitalisation in Bursa Malaysia. However, in 2013, except for Axiata which increased a notch, both Maxis and DiGi showed lower ranking, outperformed by utility company, Tenaga Nasional Bhd (TNB).

The utility stock market capitalisation value almost doubled from 2012 to RM64.2 billion in 2013. This reflects positive investor sentiment on potential earnings growth upon increased electricity rates announced in December 2013 (effective 1 January 2014).

Top 10 Market Capitalisation 2012 – 2013

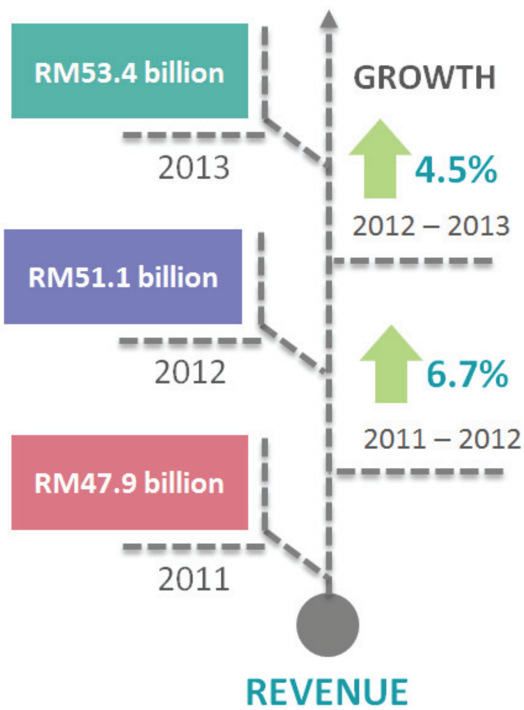


Note: Top 10 largest stocks based on market capitalisation among the 30 stocks that comprise the FTSE Bursa Malaysia KLCI Index

Source: Bloomberg, MCMC

Figure 1.4 Top 10 Market Capitalisation 2012 – 2013

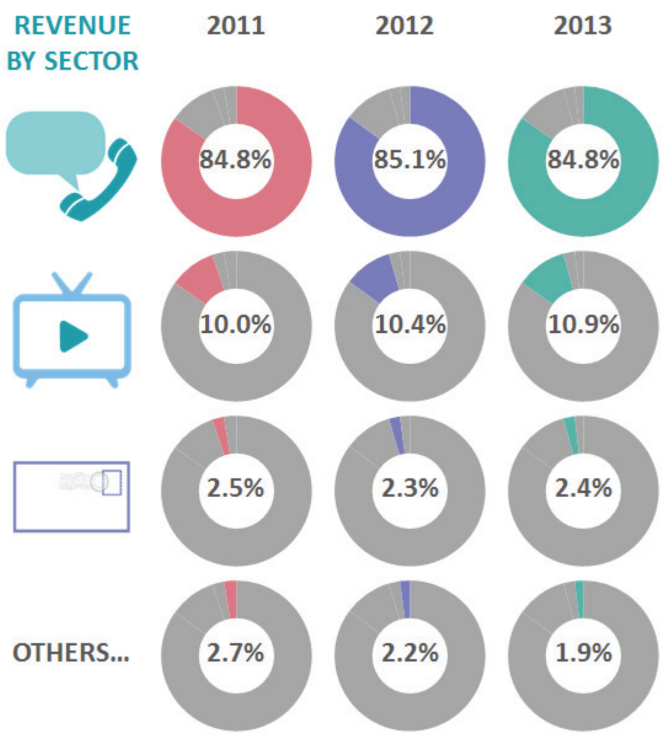
C&M industry total revenue at RM53.4 billion, a growth of 4.5% from RM51.1 billion



Note[1]: Excludes Media Prima print revenue
Note[2]: ASTRO revenue adjusted on a calendar year basis

Source: Industry, MCMC

Figure 1.5 C&M Industry Revenue 2011 – 2013



Note: Others include ACE Market and digital signature revenue

Source: Industry, MCMC

Figure 1.6 C&M Industry Revenue by Sector

The C&M industry total revenue in 2013 was RM53.4 billion, a growth of 4.5% compared with 2012. The total revenue incorporated the respective revenues of major companies in telecommunications, broadcasting and the postal sector.

The telecommunications sector is a major revenue contributor at 84.8% (RM45.3 billion) in 2013, while the broadcasting sector contributed 10.9% (RM5.8 billion) and postal at 2.4% (RM1.3 billion). The steady performance of the C&M industry reflects the service providers' continued drive for growth through innovative new ways in capturing revenue opportunities on slightly moderated Gross Domestic Product (GDP) growth of 4.7% in 2013 (2012: 5.6%). In part, the sustained financial performance also resulted from the following:

- **Continued increase in mobile subscriptions**
  In 2013, mobile subscriptions increased by two million or 4.9% to 43 million. This was supported by proliferating new mobile devices market driving greater smartphone adoption which in turn drove the data services market growth.

  The increase in mobile subscriptions was partly attributed to the current trend of consumers owning a second device. Also supporting subscription take-up in 2013 was the Government youth communication package or Pakej Komunikasi Belia (PKB) offering a RM200 rebate to those with a monthly income of RM3,000 and below to purchase selected 3G smartphones. As at end 2013, there were nearly 1.5 million applicants who have redeemed the PKB.

- **Increased demand for Internet usage and bandwidth consumption**
  Internet usage and bandwidth consumption is accelerating, driven by increasing demand for video viewing as well as higher adoption of connected devices, such as tablets and home entertainment smart TVs.

  The fast data service speeds offered in the country has allowed consumers to use bandwidth intensive applications such as video/audio streaming, online games and other entertainment aside from traditional communication needs.

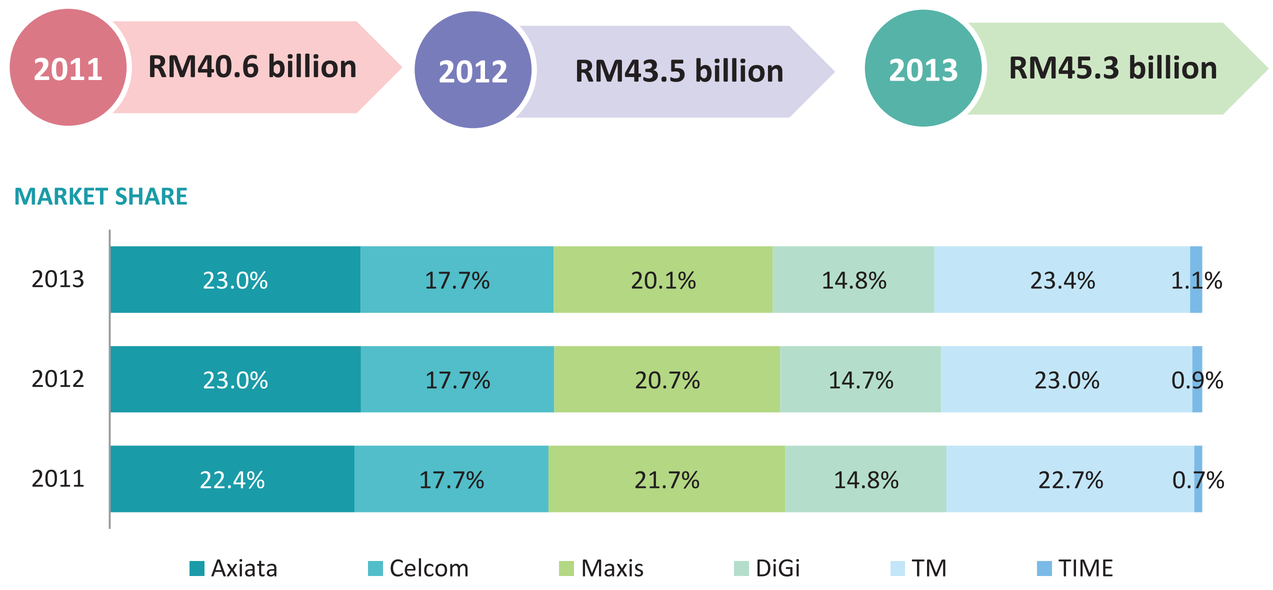
- **Product innovation and diversification from service providers**
  Telecommunications service providers today offer cross channel services like Internet Protocol Television (IPTV) and other video based service packages that are affordable and attractive as alternative services to meet user demand. Note that this is way beyond basic voice telecommunications services.

  Furthermore, broadcasters are also offering services such as Video on Demand (VOD) and multiplatform services to meet consumers demand for new, immediate and live content. Such development provides opportunities for new ways of delivering advertisement that prompts online advertising revenue growth.

Telecommunications

Telecommunications sector revenue grew by 4.1% to RM45.3 billion

Telecommunications Revenue 2011 – 2013



Note: Axiata revenue excludes Celcom revenue which is shown separately here

Source: Industry, MCMC
Figure 1.7 Telecommunications Revenue 2011 – 2013

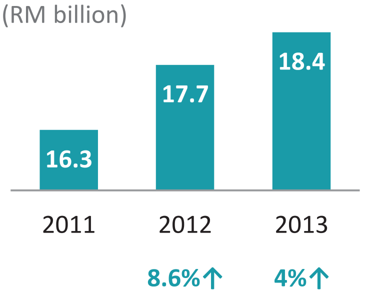
In 2013, the telecommunications sector revenue grew by 4.1% to RM45.3 billion (2012: RM43.5 billion). The respective market shares in terms of revenue for the respective telecommunications companies were relatively consistent over the last three years. This is based on aggregated revenue from major telecommunications service providers namely, Axiata, Maxis, TM, DiGi and TIME.

Axiata Group Bhd/Celcom Axiata Bhd

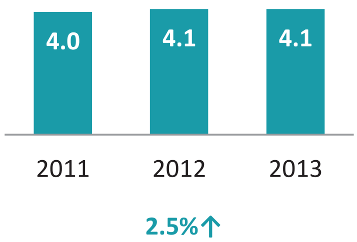
Employees		Market Capitalisation	Share Price
23,000	**4,523**	**RM58.9 billion**	**RM6.90/share**
Axiata	Celcom	Axiata	Axiata
2013	2013	As at 31 December 2013	As at 31 December 2013

AXIATA

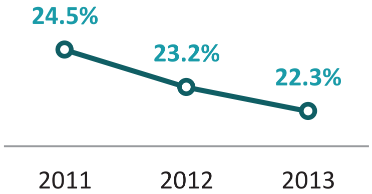
REVENUE
(RM billion)



OPERATING PROFIT
(RM billion)

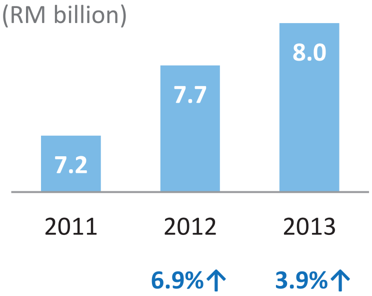


OPERATING PROFIT MARGIN

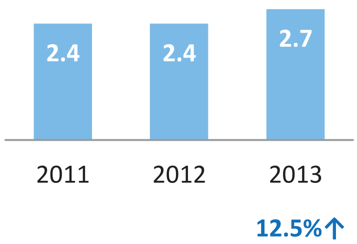


CELCOM

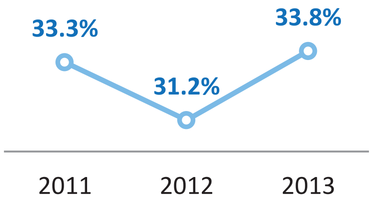
REVENUE
(RM billion)



OPERATING PROFIT
(RM billion)



OPERATING PROFIT MARGIN



AXIATA SEGMENTATION
(RM billion)

	2011	2012	2013
Voice	9.2	9.5	9.6
Data	1.8	2.3	2.8
SMS	2.4	2.5	2.2
VAS	1.0	0.9	0.9
Others	2.1	2.4	2.9

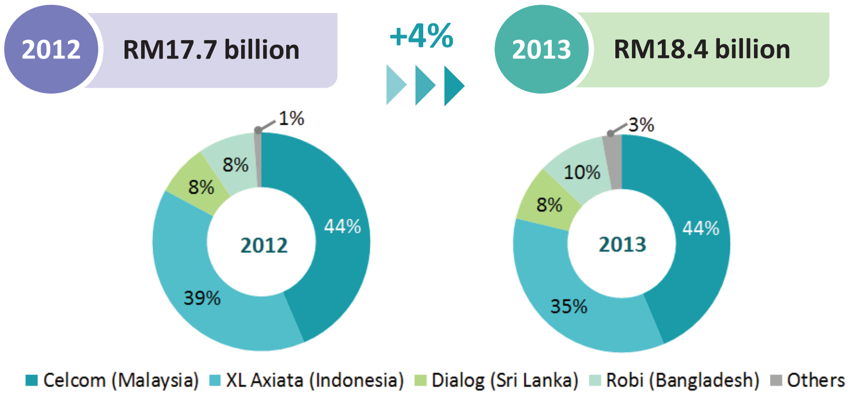
CELCOM SEGMENTATION
(RM billion)

	2011	2012	2013
Voice	4.4	4.7	4.6
Data	1.0	1.2	1.4
SMS	0.9	0.8	0.7
VAS	0.6	0.6	0.6
Others	0.3	0.4	0.7

Source: Industry, MCMC

AXIATA

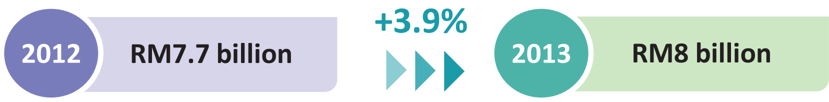
- Axiata Group revenue increased by 4% in 2013 on the back of higher revenue contribution from all key operating companies except the Indonesian operations.



- Axiata is a diversified regional service provider which promotes the Malaysian brand abroad. In 2013, Axiata has presence in over 10 countries setting the stage for future market expansion.
- Indonesia XL Axiata was the second largest contributor (35%) to the Group's revenue after Celcom at 44%. However, due to unfavourable currency exchange rate fluctuations resulting from depreciation of Indonesian Rupiah (IDR) against the Malaysian Ringgit (RM), XL Axiata revenue contribution to the Group is at RM6.4 billion in 2013, a decline of 7.2% from RM6.9 billion in 2012.

CELCOM

- The largest contributor to the Axiata Group, Celcom has recorded three years of consecutive growth in revenue. There was a 3.9% increase in 2013 to RM8 billion, driven by higher revenue from data, mobile broadband and sales of devices.



- Data services revenue which posted strong growth has contributed 17.5% to Celcom revenue. Data services revenue which consists of broadband and mobile Internet was at RM1.4 billion, representing a growth of 16.7% from 2012. Varieties of attractive voice and data packages with smartphones as well as value added services and applications, also fuelled this growth.
- As at end 2013, Celcom posted total subscriptions of 13.1 million of which smartphone subscriptions represented close to 32%. Total subscriptions grew 3.1% compared with 12.7 million in 2012.
- Celcom launched ‘Digital Shopping’ in August 2013, with three different web portals catering to digital lifestyle services such as online reading platform and eCommerce.
- As part of its value added services, Celcom introduced Over-the-Top (OTT) TV service in September 2013 providing entertainment across multiple devices including smartphones, tablets and PCs. This new service recorded more than 1.2 million hits within a month of its launch.
- Investment in network delivery and capability including continuous upgrade is anticipated to improve quality of service. This is reflected in Celcom’s capital expenditure which amounted to RM856 million in 2013.

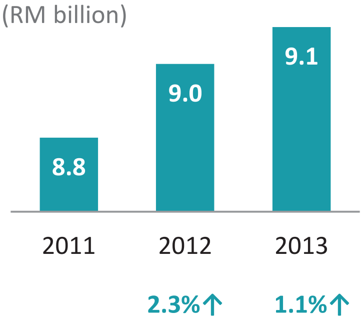
Maxis Bhd

Employees
2,997
2013

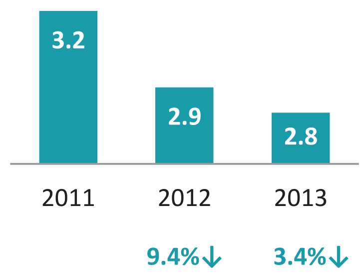
Market Capitalisation
RM54.5 billion
As at 31 December 2013

Share Price
RM7.27/share
As at 31 December 2013

REVENUE
(RM billion)



OPERATING PROFIT
(RM billion)

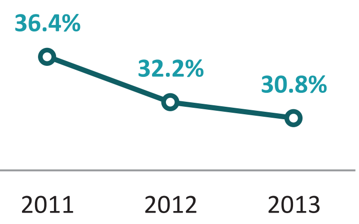


SEGMENTATION
(RM billion)

	2011	2012	2013
Mobile *of which:*	8.43	8.54	8.49
Voice	*4.77*	*4.80*	*4.70*
Mobile Internet/VAS	*2.21*	*1.46*	*2.07*
SMS	*0.96*	*1.74*	*1.20*
Wireless Broadband	*0.50*	*0.54*	*0.52*
Enterprise Fixed	0.18	0.20	0.24
International Gateway	0.16	0.20	0.28
Fixed Voice and Broadband Services	0.02	0.03	0.07

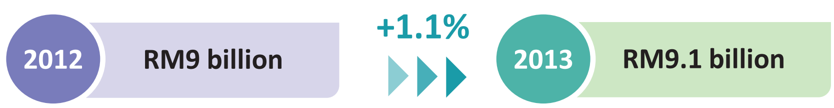
Note: Mobile segment calculated from percentage contribution

OPERATING PROFIT MARGIN



Source: Industry, MCMC

- Maxis revenue increased marginally by 1.1% in 2013, contribution from across all business segments except mobile which was mainly due to lower voice and SMS usage.



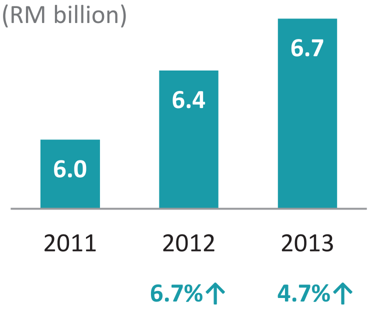
- As at end 2013, Maxis mobile subscriptions showed a decline of 8.5% to 12.9 million from 14.1 million subscriptions in 2012. This was mainly due to a decrease in prepaid subscriptions. As a result, it reduced Maxis market share from 32.4% to 28.2%, affecting its operating profit margin.
- The home services segment which offers fixed broadband to residential customers, showed significant subscription growth of 101.6% to 51,800 subscriptions from 25,700 subscriptions in 2012. This surge was driven by higher fibre Internet service supported by innovative and attractive products and pricing.
- In diversifying its business offering, Maxis provides cloud service. In particular, Maxis offered Infrastructure as a Service (IaaS) with flexible Virtual Machines and database services to business customers. As for the residential consumers, Maxis is providing Software as a Service (SaaS) for secure backup and storage.

Employees
2,236
2013

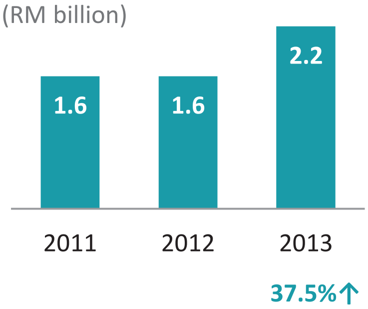
Market Capitalisation
RM38.6 billion
As at 31 December 2013

Share Price
RM4.96/share
As at 31 December 2013

REVENUE
(RM billion)



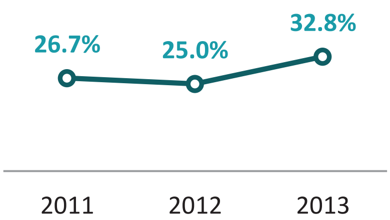
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

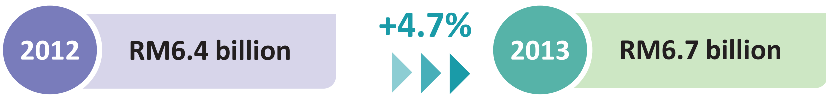
	2011	2012	2013
Voice	4.0	4.1	4.0
Data	0.6	0.8	1.2
SMS	0.8	0.8	0.7
VAS	0.2	0.2	0.2
Others	0.3	0.5	0.6

OPERATING PROFIT MARGIN



Source: Industry, MCMC

- Steady revenue growth of 4.7% in 2013, fuelled by improvements in network quality that led to growth in subscriptions and revenue contribution. This was supported by DiGi's investment of RM741 million in its network.



- In 2013, DiGi recorded 11 million subscriptions, a growth of 4.8%. The subscriptions growth was due to DiGi introducing various affordable plans and device packages which are compelling to the younger generation.

- The DiGi *Postpaid Smart Plans* and *Prepaid Mobile Internet* packages have driven mobile Internet take-up. As a result, as at end 2013, mobile Internet subscriptions amounted to 61% of total subscriptions compared with 55% in 2012.

- The increasing demand for data was also driven by higher adoption of smart devices, eCommerce, social networking and video consumption. As a result, DiGi data revenue stood at RM1.2 billion, a growth of 50% from 2012. However, SMS revenue continued to decline, which is by 12.5% in 2013, due to the changing messaging habits from SMS to OTT apps.

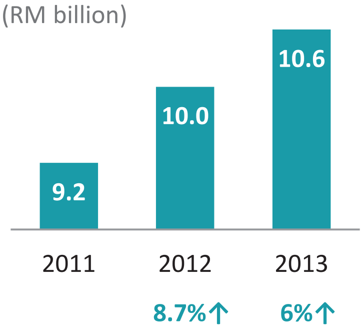
Telekom Malaysia Bhd

Employees
27,830
2013

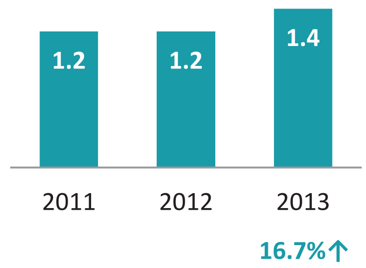
Market Capitalisation
RM19.9 billion
As at 31 December 2013

Share Price
RM5.55/share
As at 31 December 2013

REVENUE
(RM billion)



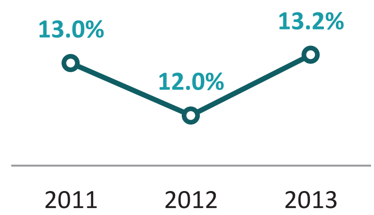
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

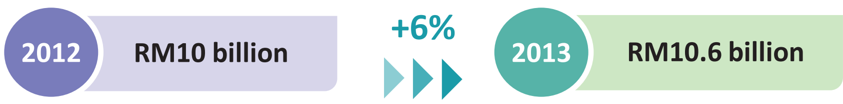
	2011	2012	2013
Voice	3.7	3.7	3.6
Internet	2.0	2.4	2.7
Data	2.0	2.2	2.5
Others	1.4	1.7	1.8

OPERATING PROFIT MARGIN



Source: Industry, MCMC

- TM posted 6% increase in revenue to RM10.6 billion in 2013. This was due to stronger demand for TM broadband and Internet services supported by increasingly popular activities of social networking and entertainment consumption. According to comScore[3], Malaysia Internet users spend 32.3% of their time on social networking and 14.2% on entertainment.



- In 2013, TM total broadband subscriptions base grew to 2.2 million subscriptions. Out of these, 1.6 million are ADSL subscriptions, while 635,000 are for fibre. This was driven especially by higher bandwidth ADSL and fibre offerings, which include IPTV services.

- In continued efforts to expand its fibre broadband coverage, TM is deploying its infrastructure and services to new residential and commercial property developments.

- TM international submarine cable system, *Cahaya Malaysia*, completed its connectivity route to the landing station in Hong Kong in 2013.

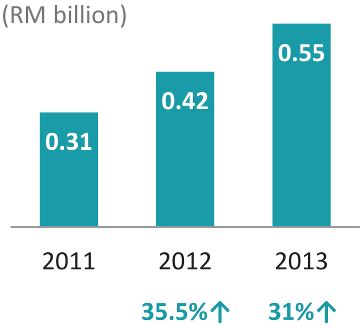
[3] comScore report on Southeast Asia Digital Future in Focus 2013

Employees
804
2013

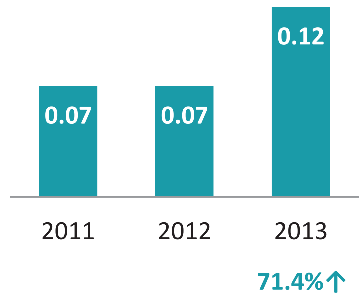
Market Capitalisation
RM2 billion
As at 31 December 2013

Share Price
RM3.55/share
As at 31 December 2013

REVENUE
(RM billion)



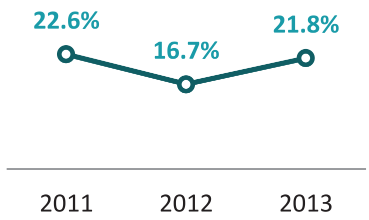
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

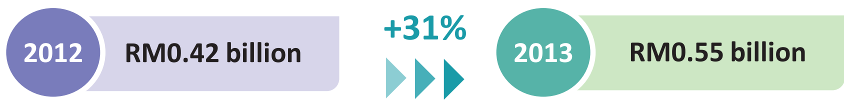
	2011	2012	2013
Voice	0.077	0.078	0.075
Data	0.234	0.306	0.412
Data Centre	n.a.	0.034	0.059
Others	0.003	0.002	0.003

OPERATING PROFIT MARGIN



Source: Industry, MCMC

- In 2013, TIME data service revenue grew 34.6% to RM0.412 billion backed by its wholesale business. This was driven by increasing demand for bandwidth and the need for fibre-based backhaul upon mobile service providers' network expansion and 4G LTE services deployment.



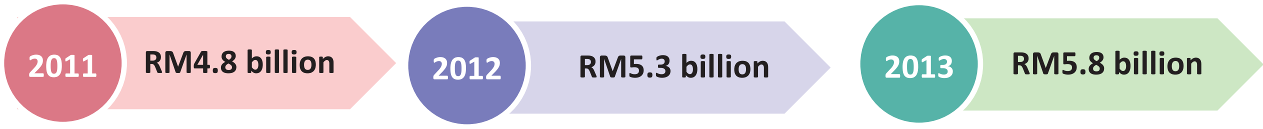
- Strong data demand, attributed to data centre and global bandwidth businesses increased revenue by 31% to RM0.55 billion.

- TIME also offered high speed Internet services via its fibre network with speeds of 100Mbps up to 1Gbps. The availability of such services has enabled IPTV to be delivered via TIME network for residential customers in high rise buildings.

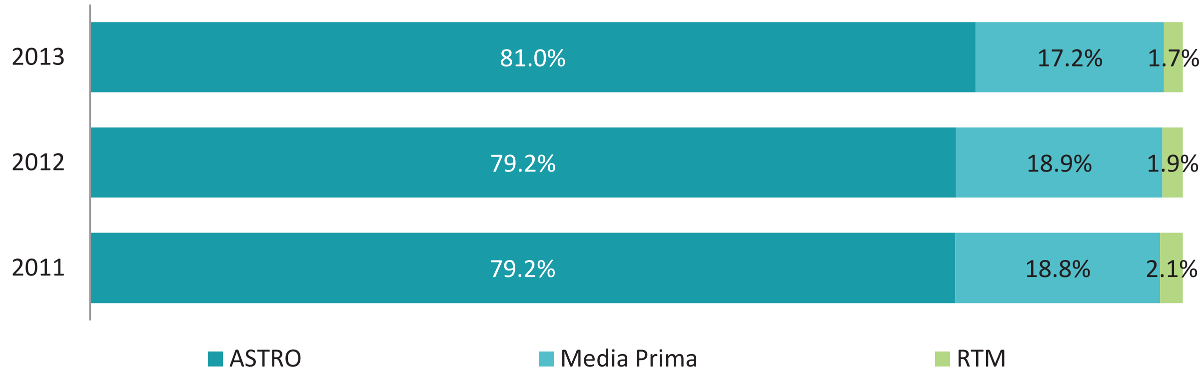
Broadcasting

Broadcasting revenue up 9.4% to RM5.8 billion

Broadcasting Revenue 2011 – 2013



MARKET SHARE



Note: Excludes Media Prima print revenue of an average revenue of RM0.7 billion per year
ASTRO revenue adjusted on a calendar year basis

Source: Industry, MCMC
Figure 1.8 Broadcasting Revenue 2011 – 2013

In 2013, broadcasting sector performed respectably with revenue growth of by 9.4% to RM5.8 billion from RM5.3 billion in 2012. The respective market shares for broadcasting companies were contributed by three service providers, namely, Pay TV by ASTRO, Free-To-Air (FTA) TV by Media Prima and the Government owned RTM.

Broadcasting service providers revenue was driven by:

- Pay TV consumption as more consumers opted for premium content and value added services;
- Product innovation catering to consumer requirements for 'on demand', multiscreen and other TV product combination packages of various price range; and
- Relatively more advertising spending as viewership and subscriber increased on the back of new advertising platforms such as online media and mobile platform.

The rising demand for new content services has encouraged service providers to look into providing content through alternative platforms such as OTT to pursue new revenue stream, increase viewership or subscriber base. In short, the changing consumer viewing behaviour to non-linear TV viewing and preferences for mobility are driving both Pay TV and FTA TV service providers to revise or enhance their business models to stay competitive and profitable.

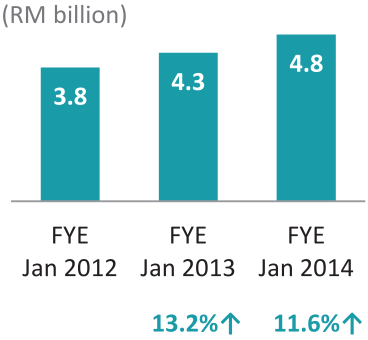
Astro Malaysia Holdings Bhd

Employees
3,446
2013

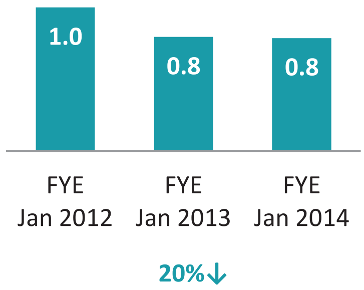
Market Capitalisation
RM15.6 billion
As at 31 December 2013

Share Price
RM3.00/share
As at 31 December 2013

REVENUE
(RM billion)



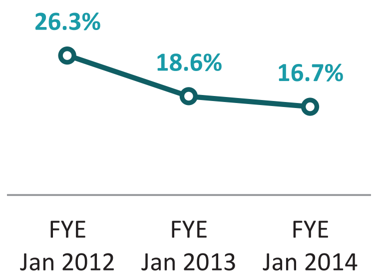
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

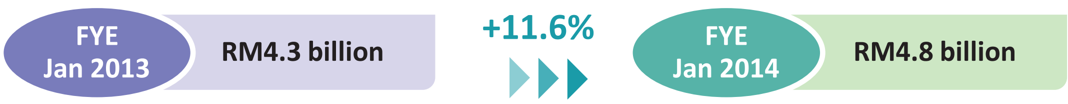
	FYE Jan 2012	FYE Jan 2013	FYE Jan 2014
TV	3.60	4.00	4.53
Subscription	*3.27*	*3.65*	*3.99*
Adex	*0.25*	*0.28*	*0.34*
Others	*0.07*	*0.07*	*0.20*
Radio	0.17	0.21	0.25
Corporate Function	0.01	0.02	0.01
Others	0.06	0.03	-

OPERATING PROFIT MARGIN



Source: Industry, MCMC

- Revenue growth was 11.6%, driven by larger subscriptions base and higher take-up of value added products and services such as high definition (HD) channels, Video on Demand (VOD), Personal Video Recorder (PVR), Multiroom (a service to watch two different channels in different rooms at the same time), and premium packages.



- ASTRO recorded 3.9 million residential customers, including free satellite TV service, *NJOI* with 442,000 subscriptions. This represents 56% of total households in Malaysia.

- ASTRO advertising revenue marked a double digit growth of more than 20% to RM340 million in 2013. Channels focusing on specific programmes offered by ASTRO is becoming a preferred advertising medium as these allow more effective audience targeting.

- ASTRO OTT video service, *ASTRO On-The-Go*, recorded 847,000 downloads of the application as subscribers increasingly watch ASTRO content via multiscreen devices. *ASTRO On-The-Go* provides access to a wide range of local, live and on demand content. This service is available to local subscribers and also internationally such as Malaysians who live abroad.

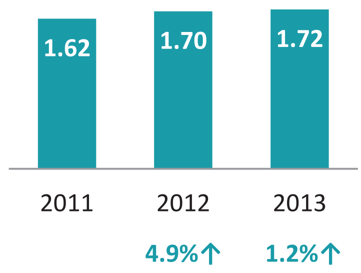
Media Prima Bhd

Employees
4,654
2013

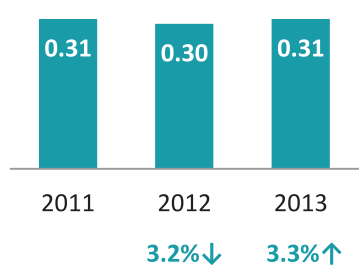
Market Capitalisation
RM2.9 billion
As at 31 December 2013

Share Price
RM2.62/share
As at 31 December 2013

REVENUE
(RM billion)



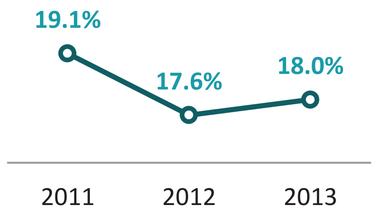
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

	2011	2012	2013
TV Network	0.69	0.71	0.73
Radio Network	0.06	0.06	0.07
Outdoor Media	0.14	0.15	0.16
Print Media	0.70	0.73	0.71
Digital	n.a.	0.02	0.03
Others	0.03	0.02	0.02

OPERATING PROFIT MARGIN



Note: Media Prima revenue includes print segment

Source: Industry, MCMC

- Media Prima revenue was sustained by steady performance of all market segments except print. Overall revenue growth was 1.2% in 2013.

- Notably, there was strong contribution from digital media segment, which recorded revenue increase of 35% to RM30.4 million from RM22.5 million in 2012. This was attributed to higher take-up of online advertising.

- In diversifying its products and services, Media Prima offered online video services via *Tonton* (www.tonton.com.my). This OTT video service delivers free and payable premium content to viewers who demand for time shifted and on the go options. As at end 2013, *Tonton* has over 3.5 million registered users.

ACE Market Overview and Market Performance

As at end 2013, the total number of companies listed on Bursa Malaysia ACE[4] Market was 109. Out of these, 15 companies or 13.8% are holding companies whose subsidiaries are licensees under the CMA. Comparatively, there were 19 companies[5] in 2012. The licensees here are mostly under the category of ASP (C).

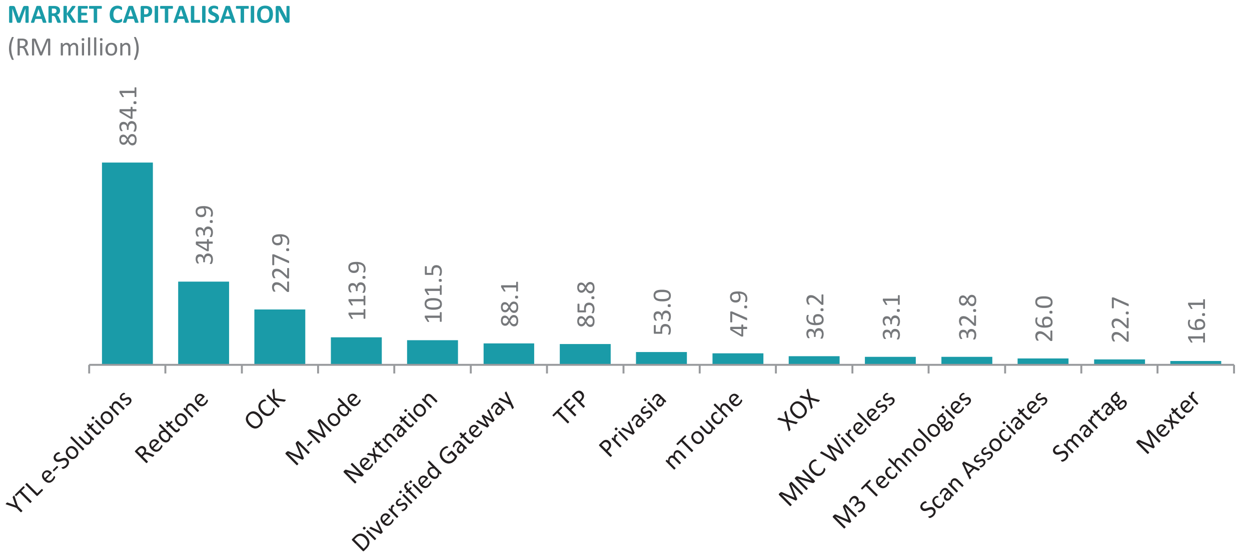
Licensees on ACE Market 2013		
Holding Company (ACE Listed)	**Licensee**	**Type of Licences***
Diversified Gateway Solutions Bhd	Diversified Gateway Bhd	ASP (C)
M3 Technologies (Asia) Bhd	M3 Technologies (Asia) Bhd	ASP (C)
Mexter Technology Bhd	Ezymobile International Sdn Bhd	ASP (C)
	Mexcomm Sdn Bhd	ASP (C)
M-Mode Bhd	M-Mode Mobile Sdn Bhd	ASP (C)
	Mobile Multimedia Sdn Bhd	ASP (C)
MNC Wireless Bhd	MNC Wireless Bhd	ASP (C)
	Moblife.TV Sdn Bhd	ASP (C)
mTouche Technology Bhd	IdotTV Sdn Bhd	ASP (C)
	Mobile Touchetek Sdn Bhd	ASP (C)
Nextnation Communication Bhd	Dubaitech Marketing Sdn Bhd	ASP (C)
	Nextnation Network Sdn Bhd	ASP (C)
OCK Group Bhd	OCK Setia Engineering Sdn Bhd	ASP (C), NFP (I)
Privasia Technology Bhd	IPSAT Sdn Bhd	ASP (C), NFP (I), NSP (I)
	Privanet Sdn Bhd	ASP (C), NFP (I), NSP (I)
REDtone International Bhd	eTV Multimedia Sdn Bhd[6]	CASP (I)
	REDtone Marketing Sdn Bhd	ASP (C), NFP (I), NSP (I)
	REDtone Mobile Sdn Bhd	ASP (C)
	REDtone Mytel Sdn Bhd	ASP (C)
	REDtone Telecommunications Sdn Bhd	ASP (C)
	REDtone-CNX Broadband Sdn Bhd	ASP (C)
SCAN Associates Bhd	SCAN Associates Bhd	ASP (C)
Smartag Solutions Bhd	Smartag Technologies Sdn Bhd	ASP (C)
TFP Solutions Bhd	Comm Zed Sdn Bhd	ASP (C)
XOX Bhd	XOX Com Sdn Bhd	ASP (C), NSP (I)
	XOX Media Sdn Bhd	ASP (C)
	XOX Mobile Sdn Bhd	ASP (C)
YTL e-Solutions Bhd	Y-Max Networks Sdn Bhd	NFP (I), NSP (I)

**ASP – Applications Service Provider; CASP – Content Applications Service Provider; NSP – Network Service Provider; NFP – Network Facilities Provider*
I – Individual; C – Class

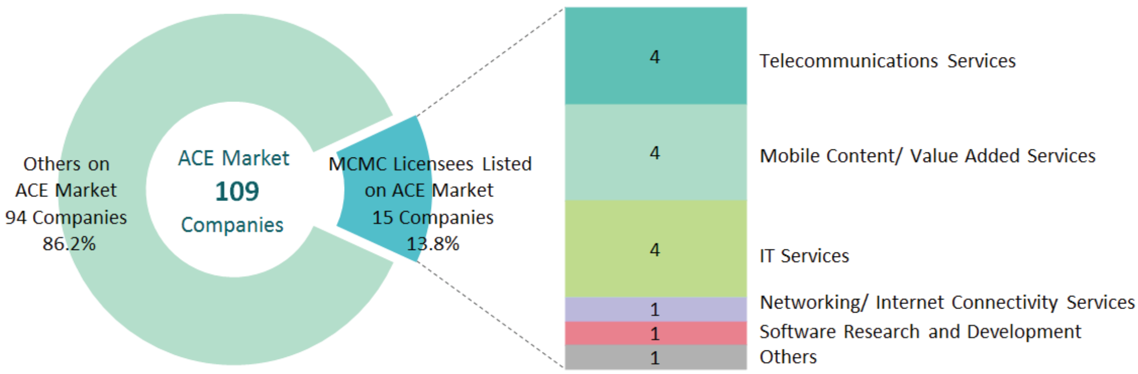
Source: Bursa Malaysia ACE Market, Industry, MCMC
Figure 1.9 Licensees on ACE Market 2013

[4] Bursa Malaysia ACE Market is an alternative market open to companies of all sizes and from all economic sectors.
[5] Asia Media Group Bhd and GD Express Carrier Bhd was transferred to the Main Market from ACE Market in 2013. Furthermore, Instacom Group Bhd is no longer in our ACE list as its subsidiary Izzinet Sdn Bhd is no longer in operation. Also, Extol Ventures Sdn Bhd and N2N Connect Bhd respective licences expired in 2013.
[6] Formerly known as DE Multimedia Sdn Bhd; changed name to eTV Multimedia Sdn Bhd since 2012.

RANKING BY MARKET CAPITALISATION 2013



LICENSEES ON ACE MARKET 2013: SERVICE CATEGORIES



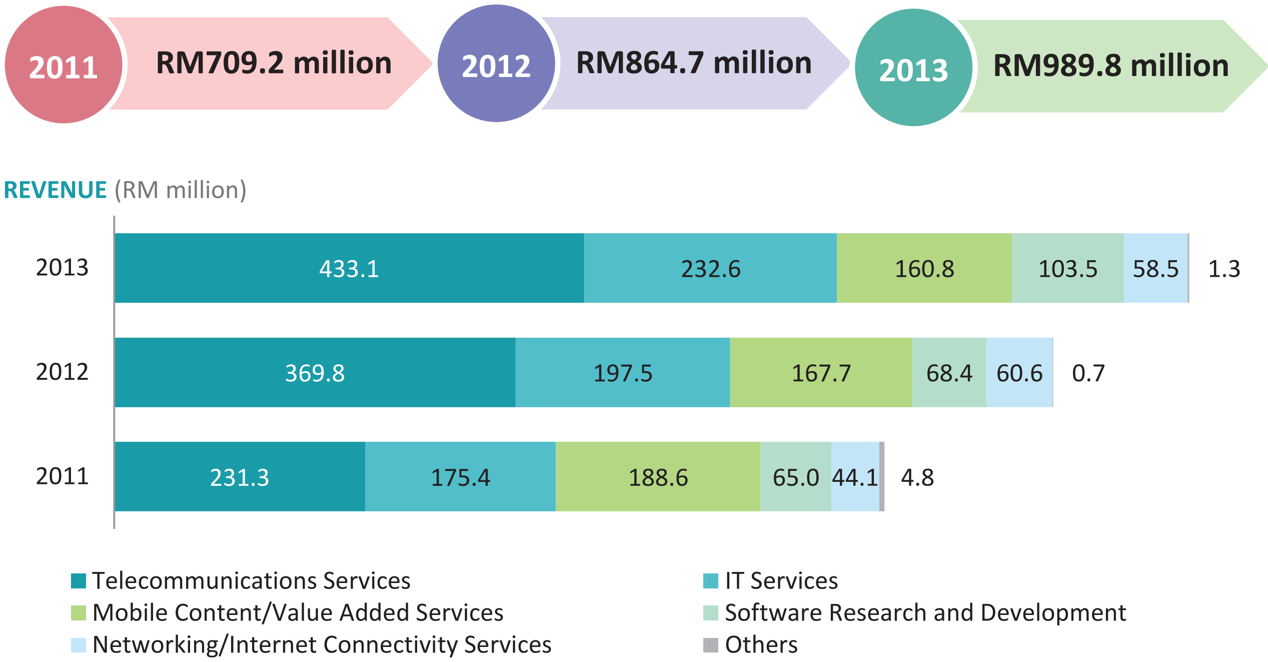
LICENSEES SERVICE CATEGORIES VALUE BY MARKET CAPITALISATION

	2011	2012	2013
Telecommunications Services	1.27	1.33	1.44
IT Services	0.13	0.17	0.23
Mobile Content/Value Added Services	0.19	0.17	0.22
Software Research and Development	0.03	0.06	0.10
Networking/Internet Connectivity Services	0.05	0.04	0.05
Others	0.06	0.04	0.02
ACE Market Licensees Total (RM billion)	**1.73**	**1.81**	**2.06**
Bursa Malaysia (RM billion)	**1,284.54**	**1,465.68**	**1,702.15**
ACE Market Licensees as % of Bursa Malaysia	**0.135%**	**0.123%**	**0.121%**

Source: Industry, MCMC

Figure 1.10 Licensees on ACE Market 2013: Service Categories

Licensees on ACE Market: Performance By Revenue



Note: Annualised estimate for REDtone (Telecom Services) due to 3Q FYE 2014 financial results pending release

Source: Bloomberg, MCMC
Figure 1.11 Licensees on ACE Market: Performance By Revenue

Most of the licensees on the ACE Market are categorised under telecommunications services while others include mobile content and value added services, IT services and software research and development services.

The presence of licensees in ACE Market shows the development of the C&M industry from an emerging and successful products and services development perspective. The ACE market provides an avenue for the relatively smaller but potential growth C&M companies to obtain amongst others benefits such as funding, and thereby further their growth opportunities. A transfer to the Main Market indicates another step forward in terms of financial performance track record and opportunity to attract a wider investor group on Bursa Malaysia.

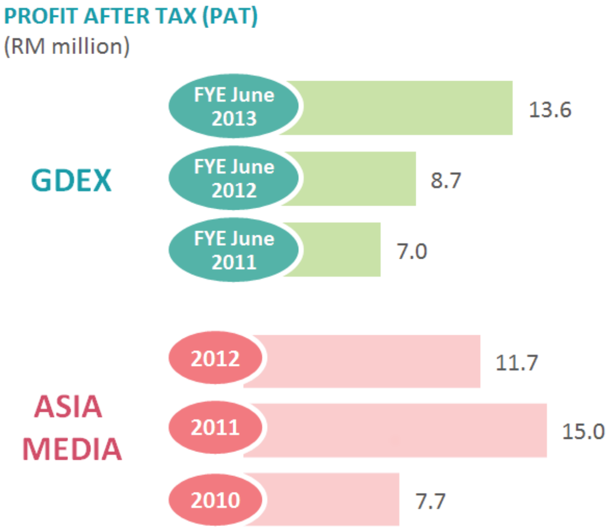
In 2013, Asia Media Group Bhd and GD Express Carrier Bhd transferred their listing from ACE Market to the Main Market. These transfers show the growth of both companies in the form of scale of operations and financial performance meeting the Bursa Malaysia profit track record requirements, which include:

- Uninterrupted aggregated profit after tax (PAT) of at least RM20 million over a period of three to five financial years; and
- PAT of at least RM6 million for the most recent year when the application to transfer is made.

GD Express Carrier Bhd, a courier company was transferred to the Main Market on 5 August 2013. The company was first listed on the ACE Market on 17 May 2005.

On the other hand, Asia Media Group, a digital out of home transit TV company, was listed on the ACE Market of Bursa Malaysia on 11 January 2011. Within two years, the company has successfully transferred its listing to the Main Market of Bursa Malaysia, effective 18 February 2013.

In conclusion, these companies attest to the progress of smaller C&M companies, which are fast growing and as public listed companies they can attract a larger shareholder base and improve operations equivalent to Main Market status.



Source: GD Express, Asia Media

Figure 1.12 GD Express and Asia Media Profit After Tax

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MODULE 2: SERVICES AND CONNECTIVITY

World Broadband and Internet Comparison

Malaysia is World's No.1 in broadband affordability based on A4AI report

Year 2013 witnessed Malaysia in top rank for affordable broadband amongst 46 emerging nations, followed by other countries such as Mauritius, Brazil, Peru and Colombia. This is the first ever report produced by the Alliance for Affordable Internet (A4AI)[7], a global coalition of more than 40 members whose sponsors are Google, Omidyar Network, the UK Department for International Development and United States Agency for International Development (US AID). The report provides a study into the drivers of Internet affordability in 46 developing and emerging countries.

Malaysia has shown how rapid progress can be achieved when innovative technologies are twinned with an enabling, forward-looking policy and regulatory environment which stimulate supply as well as demand.

The main factors of this success are through:

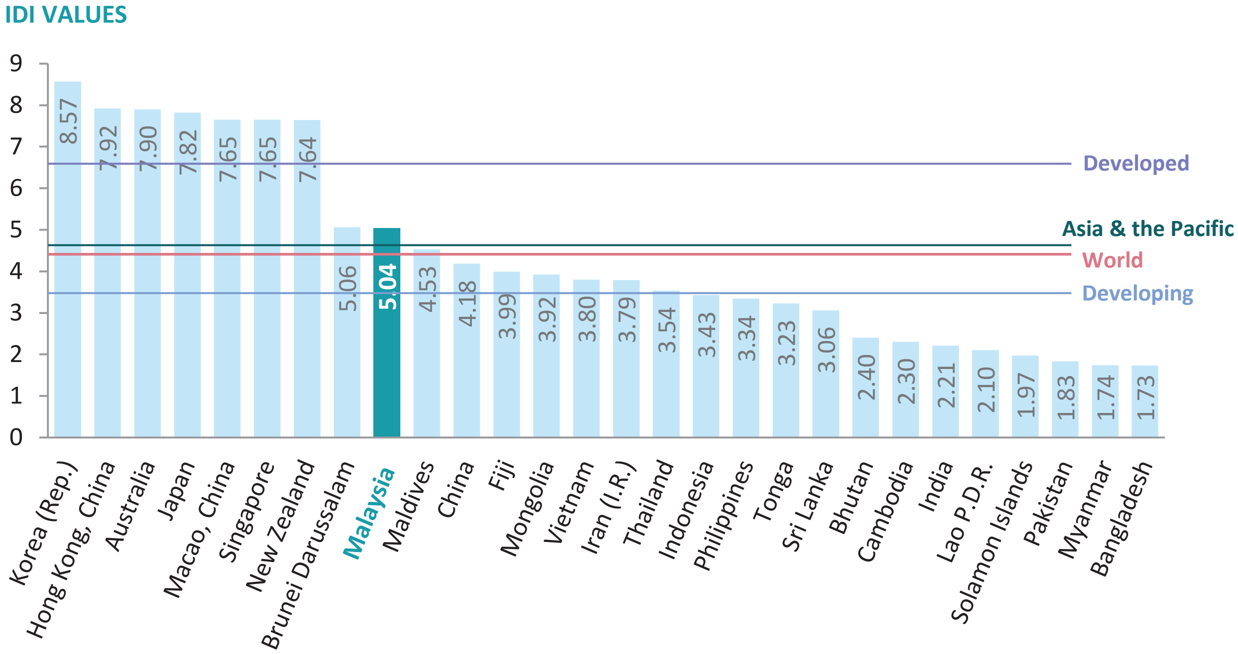
- Public-private partnership formed for deployment and expansion of broadband infrastructure;
- Undertaking innovative ways to reduce the cost of access, such as the small grants given by the Government to Malaysian youths for the purchase of smartphone;
- Enhancing the usefulness of Government web content in areas such as eLearning and eHealth to increase demand from citizens; and
- Raising awareness via broadband events.

ICT Development Index (IDI) value for Malaysia is 5.04, above global average value of 4.35

According to the International Telecommunication Union (ITU) report, Measuring the Information Society (MIS) 2013[8], IDI value for Malaysia is 5.04, above the global average value of 4.35. This index value has also increased as compared with the previous year report with the index value of 4.82. Malaysia has improved its ICT infrastructure and usage in terms of positive growth of broadband subscriptions and total Internet users.

[7] Alliance for Affordable Internet (A4AI) report on The Affordability Report 2013.
[8] International Telecommunication Union (ITU) report on Measuring the Information Society 2013.

IDI Values Compared with the Global, Regional and Developing/Developed Country Averages, Asia and the Pacific 2012



Source: International Telecommunication Union (ITU), Measuring the Information Society 2013

Figure 2.1 IDI Values Compared with the Global, Regional and Developing/Developed Country Averages, Asia and the Pacific 2012

The same report indicated Malaysia stood out as a developing country with one of the highest proportions of digital natives, represented by 13.4% in 2012. Digital natives are defined as youth with at least five years of experience in using the Internet in the report. It is even more encouraging to know that youth Internet user penetration marked a much higher rate at 94.9% compared with overall penetration of 65.8% of Malaysia population. This clearly shows that youth are relatively the most networked group that has higher levels of digital literacy compared with the population as a whole. This will post as a key factor contributing towards a knowledge society in Malaysia.

Akamai 2Q 2013 State of the Internet report[9] ranked Malaysia at 64th globally with an average Internet speed at 3.1Mbps

In Akamai 2Q 2013 State of the Internet report, Malaysia ranks 64th globally in terms of average Internet speed at 3.1Mbps (end 2012: 2.3Mbps – step up in terms of ranking from 70 to 64). The year-on-year change posted a gain of 42% as indicated in Figure 2.2.

[9] Akamai report on Vol. 6 No. 2, The State of the Internet 2nd Quarter, 2013 Report.

Average Connection Speed by Asia Pacific Country/Region 2Q 2013				
Global Rank	**Country**	**2Q 2013 Average Mbps**	**Quarter on Quarter Change (%)**	**Year-on-Year Change (%)**
1	South Korea	13.3	-6.3	-6.4
2	Japan	12.0	6.5	11
3	Hong Kong	10.8	0.8	21
27	Singapore	6.5	-0.7	27
39	Taiwan	5.5	36	46
45	Australia	4.8	13	9.8
49	New Zealand	4.6	7.5	20
51	Thailand	4.5	14	42
64	**Malaysia**	**3.1**	**14**	**42**
71	China	2.8	29	92
108	Indonesia	1.7	13	125
111	Vietnam	1.7	22	4.4
114	Philippines	1.6	12	29
119	India	1.3	6.8	23

Source: Akamai, The State of the Internet 2nd Quarter 2013

Figure 2.2 Average Connection Speed by Asia Pacific Country/Region 2Q 2013

This Akamai study calculates broadband speeds using data collected from more than two million unique IP addresses for Malaysia. The study indicated that 27% of these IP addresses have speeds above 4Mbps. The peak Internet connect speed for Malaysia was 26.6Mbps or 63% faster compared with the previous year.

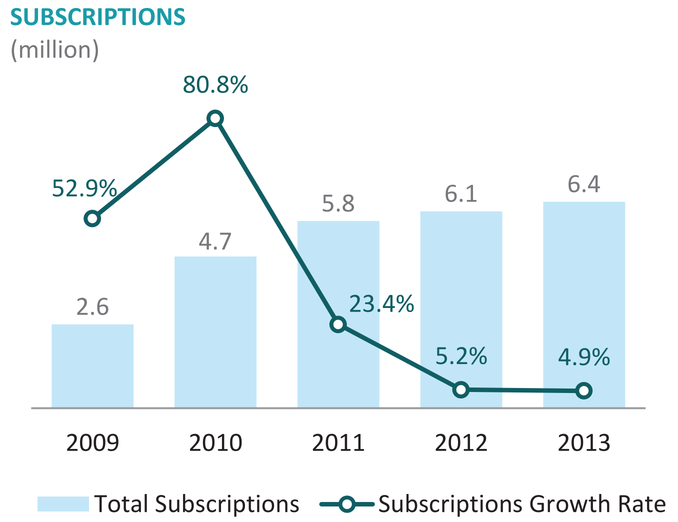
Broadband in Malaysia

Malaysia achieved 67.1% household broadband penetration in 2013

In 2013, Malaysia recorded higher broadband penetration rate at 67.1%, which is well above the target set by Broadband Commission for digital development under the ITU and UNESCO. The target set for the developing countries by 2015 is to achieve 40% household penetration.

The growth of broadband take-up is expected to continue. This is in view of the fact that 84% of the populated areas in Malaysia are within the coverage of broadband services. Malaysia will focus on improving quality of service and strive to achieve broadband penetration of 75% by 2015 through various initiatives. This is as targeted in the 10th Malaysia Plan (2011 – 2015).

Broadband: Subscriptions and Growth Rate



Source: MCMC

Figure 2.3 Broadband: Subscriptions and Growth Rate

Under National Broadband Initiatives (NBI) implemented since 2010, various projects undertaken have resulted in extensive broadband coverage which includes remote areas nationwide.

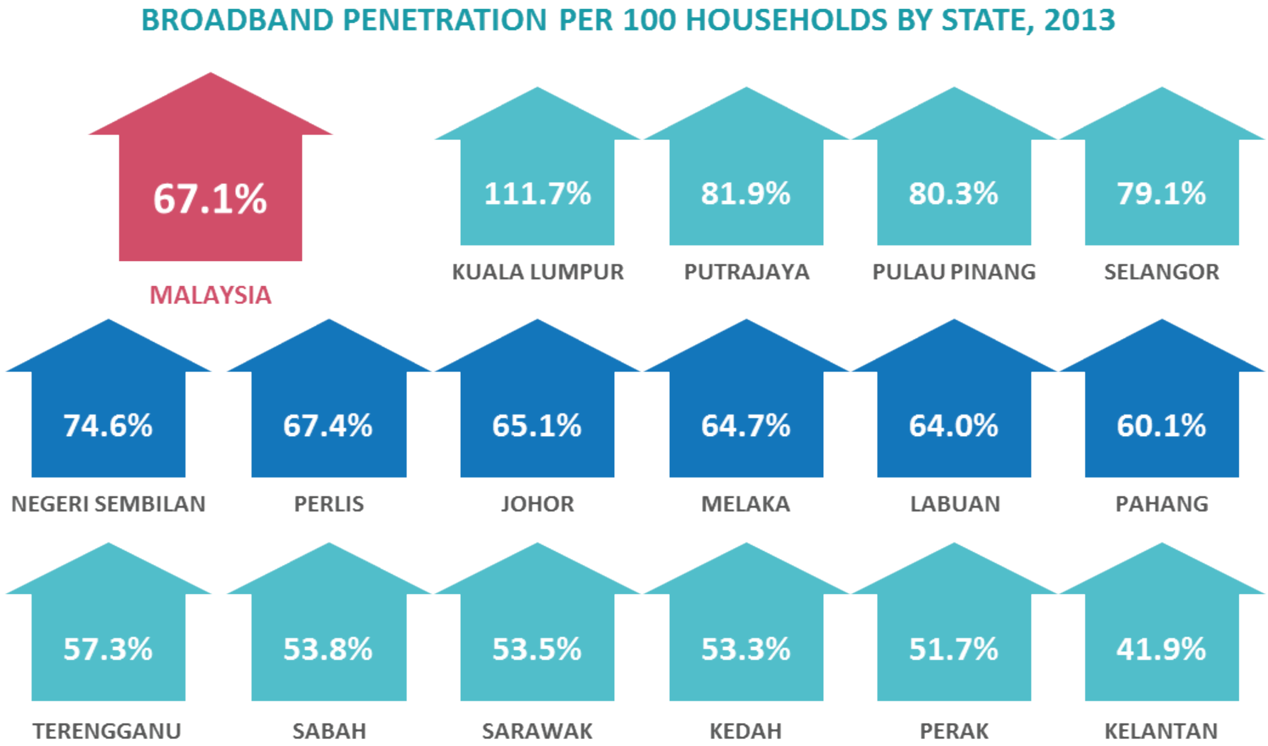
Note that there is improvement in coverage and the speed of the Asymmetric Digital Subscriber Line (ADSL) broadband which has doubled from the previous year. Broadband subscribers now can enjoy speed of up to 8Mbps with an option to subscribe for IPTV services from the same service provider.

As at end 2013, there was a growth of 7% in broadband subscriptions which translates into 4.6 million households. Broadband take-up by state indicates all the states in Malaysia have exceeded the minimum 40% broadband penetration target set by the Broadband Commission for developing countries.

1Malaysia Internet Centre (PI1M)

1Malaysia Internet Centre (PI1M) functions as a knowledge hub offering basic training and access to information on education, employment, agriculture and health, amongst others. Students, who make up the majority of users, have gained valuable computing and IT literacy skills. Access to broadband introduced users in targeted underserved areas and groups to social networking sites, news portals, e-services and other online channels. This improves their access to knowledge and business opportunities.

In year 2013, the PI1M project was extended to the urban low income communities and the first PI1M was launched at Seri Pantai, Kuala Lumpur on 23 March 2013. There are plans to develop 100 PI1Ms for urban low income communities starting 2014. Overall, there are 424 PI1Ms in operation nationwide as at 31 December 2013.



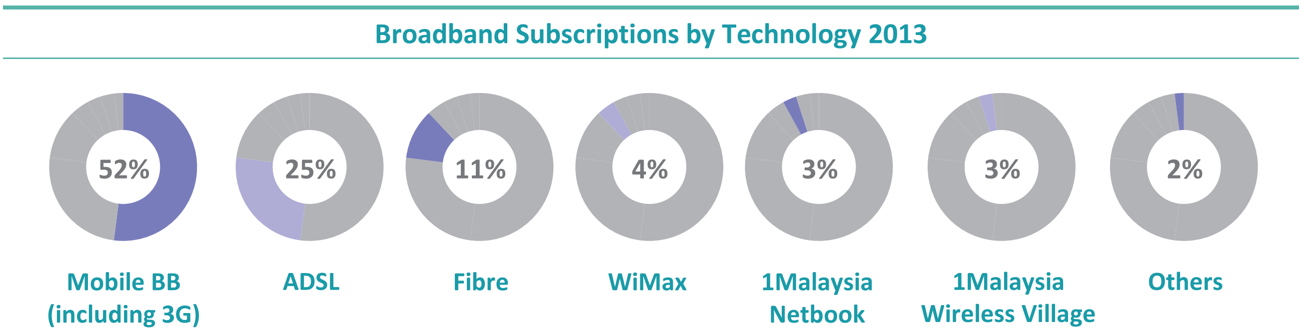
Source: MCMC

Figure 2.4 Broadband Penetration per 100 Households by State

The increasing broadband usage trend continues in 2013, where most of the demand for broadband in Malaysia is from mobile broadband users. The number of wireless broadband subscriptions has increased from 3.6 million households at end of 2012 to 3.8 million households as at end 2013. High speed broadband (HSBB) added 126,000 new subscriptions over the year.

In 2013, mobile broadband (HSPA+ and 3G) continues to be the highest contributor of broadband connection in Malaysia with 3.3 million subscriptions (51.5%) as compared with other broadband access. Take-up for 4G LTE is expected to increase in 2014 due to better quality and speed offered to the users.

Meanwhile, the rest of wireless broadband connections are coming from other technologies such as WiMax and EV-DO. The breakdown of subscriptions by access is shown in Figure 2.5.



Source: MCMC

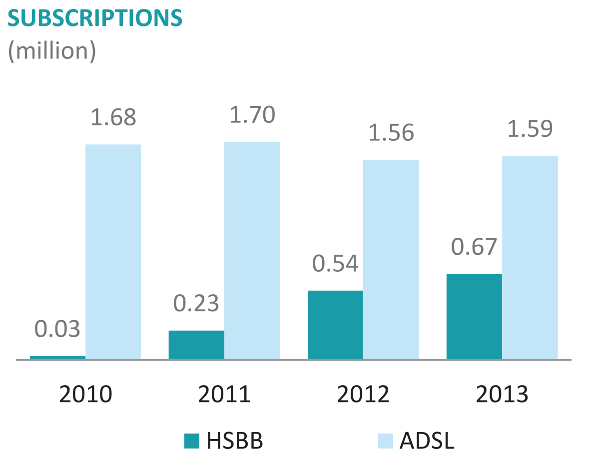
Figure 2.5 Broadband Subscriptions by Technology 2013

Fixed Broadband

There are more than 2 million fixed broadband subscriptions (ADSL and HSBB) in Malaysia

As at end 2013, there were 98 HSBB exchanges nationwide with 1.4 million ports installed. A growth of 23% or 125,880 new subscriptions were recorded to total 668,000 HSBB subscriptions in 2013. Meanwhile, ADSL recorded 1.59 million subscriptions, an increase of 2%.

ADSL and HSBB Subscriptions 2010 – 2013



Source: MCMC

Figure 2.6 ADSL and HSBB Subscriptions 2010 – 2013

The HSBB Project is based on open access concept where other service providers are allowed to use the HSBB infrastructure to deliver their services. As at end 2013, 23 service providers have subscribed to the HSBB Transmission (HSBT) service and four major service providers have signed up for HSBB Access (HSBA) service. This allows consumers to have wider choice in respect of more services provided by multiple service providers over the HSBB network. This is in line with the government aspiration under the Public Private Partnership (PPP) arrangement. Ultimately, this competitive environment serves to generate more revenue for service providers.

Fixed broadband Average Revenue Per User (ARPU) at RM85 for ADSL and RM185 for HSBB

In 2013, TM offered 8Mbps ADSL packaged with voice and IPTV service at RM160 per month. This high bandwidth package is in addition to the lower speed packages. Towards the end of the year, TM enhanced its HSBB content offerings by introducing new packages and a 24-hour home shopping channel. The new packages offered are for *Sports Pack* at increment of RM50 a month for 10Mbps and 20Mbps.

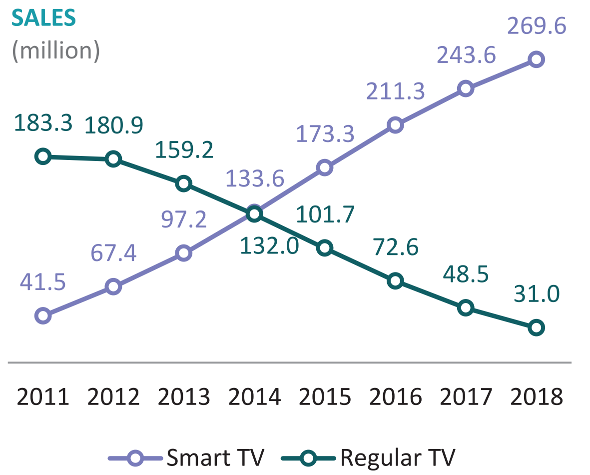
As a result, ARPU for TM ADSL rose to RM85 (4Q 2012: RM81), while ARPU for TM HSBB stood at RM185 (4Q 2012: RM181).

Smart TV supports broadband take-up

The widespread of smart TV take-up also complemented broadband take-up. In 2011, 41.5 million smart TV were sold worldwide and by 2013 the number is expected to increase to 97.2 million. By 2014, total sales volume of smart TV globally is expected to surpass regular TV. For the developing Asia nations, smart TV is expected to surpass regular TV by 2016 in terms of sales volume. The expected sales volume of smart TV until 2018 for both Global and Developing Asia nations is shown in Figures 2.7 and 2.8.

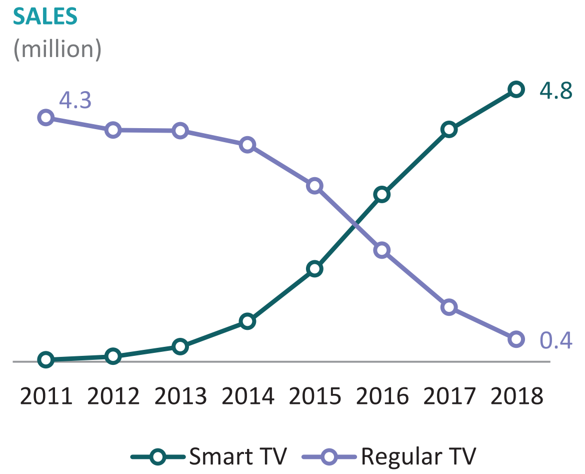
Fixed broadband services take-up is also influenced by increased penetration of smart TV among Malaysians. Consumers demand high bandwidth connections to support connected TV, video viewing and other video based services for their digital lifestyle experience and entertainment.

Global: Sales of TV 2011 – 2018



Source: Informa Telecoms & Media
Figure 2.7 Global: Sales of TV 2011 – 2018

Developing Asia Nations: Sales of TV 2011 – 2018



Source: Informa Telecoms & Media
Figure 2.8 Developing Asia Nations: Sales of TV 2011 – 2018

For example, in order to have optimal viewing experience for a full HD 1080p resolution video on smart TV, a minimum speed of 4.5Mbps is required to ensure streaming is not affected by any network latency. For higher definition video viewing, a higher bandwidth is required for seamless experience. Hence, this has led to the take-up for higher bandwidth packages. The breakdown of video quality by bandwidth is shown in the figure below.

Video Quality by Bandwidth

Speed	Viewing
1.0 – 2.3Mbps	Standard definition (SD) video
2.3 – 4.5Mbps	HD 720p resolution video
4.5 – 9Mbps	Full HD 1080p resolution video and HD audio
Over 9Mbps	3D HD video

Note: p – pixels

Source: Vudu, Netflix
Figure 2.9 Video Quality by Bandwidth

Wireless Broadband

Wireless Fidelity (Wi-Fi) Hotspots in Malaysia

There are more than 30,000 hotspots in Malaysia, with nearly 60% in Kuala Lumpur, Pulau Pinang, Selangor and Johor.

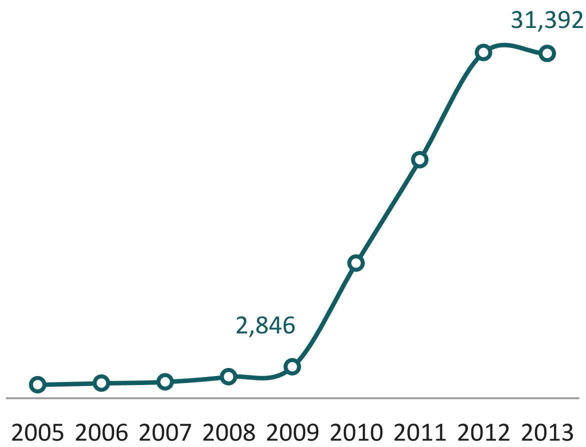
Wireless Local Area Network, commonly referred to as Wi-Fi, is a wireless data Internet technology that lets users connect to the Internet through their personal computing and electronic devices such as smartphones and tablets. Wi-Fi today is widely available in cafés, airports and many other high 'people traffic' public sites to provide free Internet access[10]. Usually, this complementary Internet access service is provided as a business model to encourage patronage of services while allowing customer to use the Internet services[11].

Free Wi-Fi services are expected to offer additional advantages to businesses. For example, Wi-Fi plays a very important role in improving customer experience and retention. This is according to a survey by Wireless Broadband Alliance on 200 executives[12]. One third of these respondents believe that Wi-Fi is very important in generating revenue for hotspot owners and improving Internet coverage.

As at end 2013, Malaysia has 31,392 Wi-Fi hotspot locations with Pulau Pinang having the most sites at 5,283. The number of hotspot locations shows a significant increase since 2009, supported by initiatives such as Wireless@Penang launched in 2009, which has garnered 1,550 hotspot locations so far. This significant increase in Wi-Fi hotspots was also driven by the implementation of Connected@City programme [13] in all the states in Malaysia. The programme was launched in 2Q 2011.

Collectively, 58% of Wi-Fi hotspots in Malaysia is situated in the high density population states of Kuala Lumpur, Pulau Pinang, Selangor and Johor. TM remains as the main provider in Wi-Fi hotspots with 27,830 or 88.7% market share followed by Maxis with 5.6% (1,770).

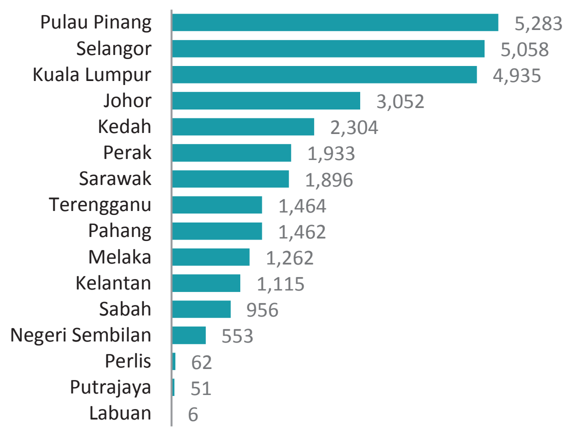
Total Hotspots by Location 2005 – 2013



Source: MCMC

Figure 2.10 Total Hotspots by Location 2005 – 2013

Total Hotspots by State 2013



Source: MCMC

Figure 2.11 Total Hotspots by State 2013

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[10] www.hotspot-locations.com, March 2014.

[11] Michele Marius, 6 ways your business can benefit from offering free Wi-Fi, August 2011.

[12] Wireless Broadband Alliance, Wireless Broadband Alliance Industry Report 2013: Global Trends in Public Wi-Fi, November 2013.

[13] Introduced in NKEA CCI, EPP7, to encourage premise owners to provide the Wi-Fi services in areas such as food and beverage outlets, waiting areas and lobbies, and other places where people congregate.

Furthermore, in encouraging the usage of Wi-Fi services, TM also offered their ADSL and HSBB fixed line subscribers free access to any of their hotspots as an additional service. Total hotspot locations by state is shown in Figure 2.11.

In ensuring all Malaysians have access to Wi-Fi network, the 1Malaysia Wireless Village (KTW1M) programme was initiated in 2011 under the Universal Service Provision (USP) programme. This is to provide collective wireless Internet access to remote village communities. The KTW1M is especially intended for the recipients of netbooks under the 1Malaysia Netbook programme who reside in underserved areas. As at end 2013, there was a total of 4,679 KTW1M nationwide.

The programme is expected to create a knowledge-based village community including enabling small business, entrepreneurs, villagers and tourists to be connected. Such connected development for village communities also assists to boost national economy.

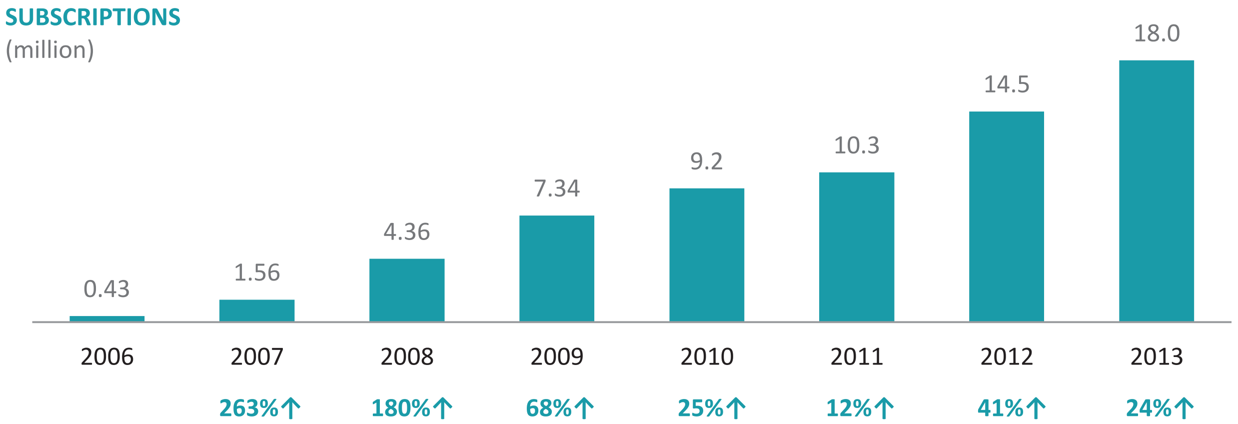
Furthermore, underprivileged students and low income households were provided with netbooks under the 1Malaysia Netbook programme. This programme was designed mainly to boost the adoption of broadband as the netbooks enable users in underserved communities to exploit the connectivity provided under the KTW1M initiative. In addition, it is expected to bring about increased socio-economic development in various employment sectors such as agriculture, education, health and also to encourage, amongst others, the setting up of new businesses. As at end 2013, a total of 1,115,397 netbooks have been distributed since 2010.

3G Services

3G subscriptions recorded a growth of 24% in 2013 to a total of 18 million subscriptions

Since the introduction of 3G services in 2006, significant strides in the development of 3G have been made to address the needs and interests of the users. The market has reacted positively to the adoption of 3G offerings as the development of the devices enabled Internet access. In 2013, 3G subscriptions stood at 18 million, an increase of 24% from 14.5 million subscriptions in 2012.

Total 3G Subscriptions 2006 – 2013

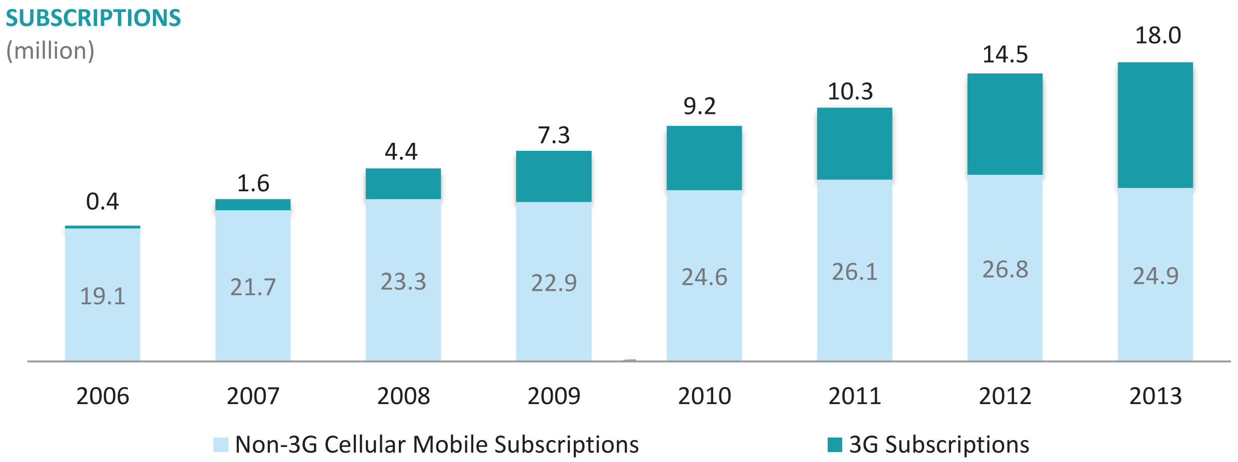


Source: Industry, MCMC

Figure 2.12 Total 3G Subscriptions 2006 – 2013

The overall proportion of 3G subscriptions as part of mobile subscriptions has increased rapidly over the years. The 3G subscriptions constituted 42% of the total 43 million cellular mobile subscriptions in 2013.

3G Proportion in Cellular Mobile Subscriptions 2006 – 2013



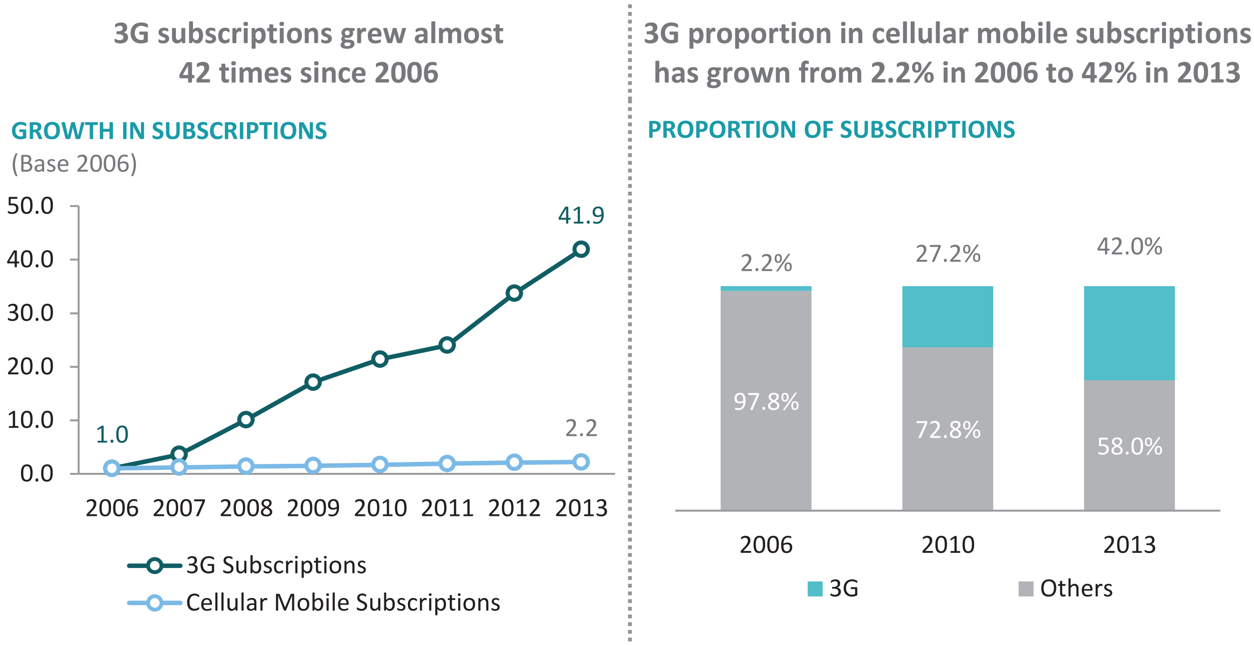
Note: Non-3G cellular mobile subscriptions recorded a decline by almost 2 million possibly due to migration to 3G

Source: Industry, MCMC

Figure 2.13 3G Proportion in Cellular Mobile Subscriptions 2006 – 2013

Over the past eight years, 3G subscriptions have grown over 40 times since its first introduction as compared with the overall growth of 2.2 times for mobile cellular subscriptions. As such, 3G could be seen as driving the mobile broadband subscriptions growth in Malaysia.

Growth in 3G Subscriptions



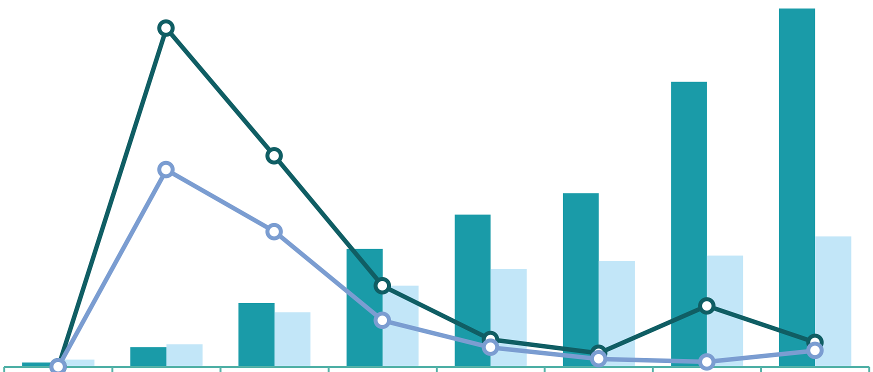
Source: Industry, MCMC
Figure 2.14 Growth in 3G Subscriptions

Prepaid subscriptions provide affordability

The development of technology and evolution of user demand have transformed prepaid subscriptions into affordable services for those who are unable to secure postpaid subscriptions. This is true in the case of mobile 3G subscriptions in Malaysia, with an exception during the first two years of its introduction, whereby 3G postpaid exceeded prepaid by 110,000 and 100,000 subscriptions in 2006 and 2007 respectively.

From 2008 onwards, the prepaid subscriptions have been steadily recording higher number compared with postpaid subscriptions.

3G Prepaid and Postpaid Subscriptions and Growth Rate 2006 – 2013



SUBSCRIPTIONS
(million)

	2006	2007	2008	2009	2010	2011	2012	2013
Prepaid	0.16	0.73	2.35	4.35	5.6	6.4	10.5	13.2
Postpaid	0.27	0.83	2.01	2.99	3.6	3.9	4.1	4.8
Prepaid Growth Rate (%)	0.0	356.3	221.9	85.1	28.7	14.3	64.1	25.7
Postpaid Growth Rate (%)	0.0	207.4	142.2	48.8	20.4	8.3	5.1	17.1

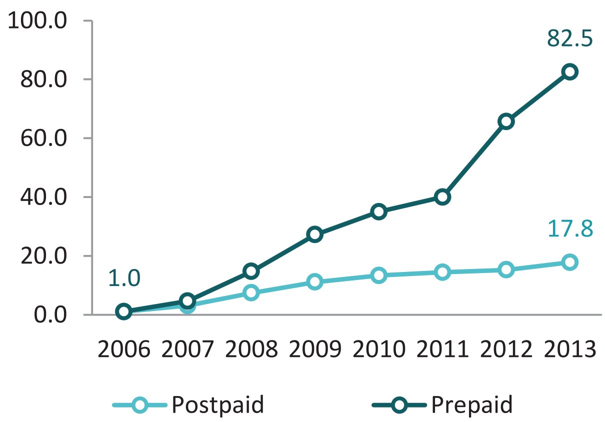
Source: Industry, MCMC
Figure 2.15 3G Prepaid and Postpaid Subscriptions and Growth Rate 2006 – 2013

Over the years, the growth of 3G prepaid subscriptions has been higher than postpaid. In 2013, out of a total 3G subscription of 18 million, prepaid held 73% or 13.2 million with postpaid at 27% or 4.8 million subscriptions. The 3G prepaid and postpaid subscriptions recorded growth of 25.7% and 17.1% from 2012 subscriptions respectively. Today, the ratio of 3G prepaid to postpaid subscriptions stands at 3:1.

Growth in 3G Prepaid Subscriptions

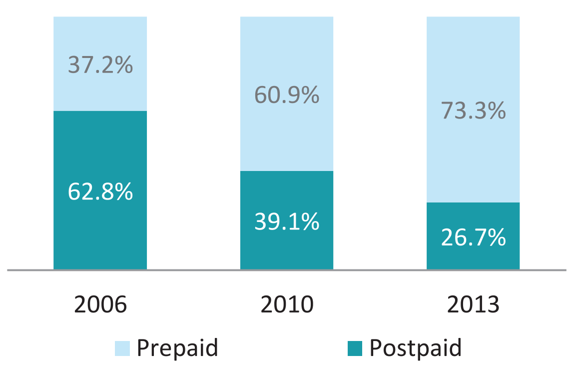
3G prepaid subscriptions have grown 80 times since 2006

GROWTH IN SUBSCRIPTIONS
(Base 2006)



Proportion of 3G prepaid subscriptions increased from 37.2% in 2006 to 73% in 2013

PROPORTION OF SUBSCRIPTIONS



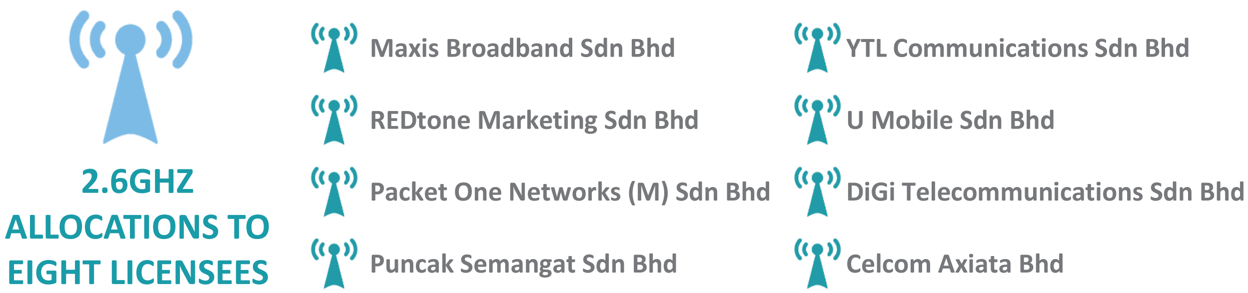
Source: Industry, MCMC
Figure 2.16 Growth in 3G Prepaid Subscriptions

4G Long Term Evolution (LTE) Services

Maxis, Celcom, DiGi and U Mobile rolled out 4G LTE services

In December 2012, eight licensees were allocated 2.6GHz spectrum. The allocation is for licensees to provide wireless mobile broadband access services for a five-year period starting January 2013 until December 2017. Among the criteria for the spectrum awards is for the service provider to ensure minimum population coverage of 10% per year and to reach 50% by 2017.

Below are the eight licensees that have been awarded with 2.6GHz spectrum.



Source: MCMC
Figure 2.17 Eight Telecoms Companies Awarded with 2.6GHz Spectrum

In 2013, four service providers launched their 4G LTE services namely Maxis, Celcom, DiGi and U Mobile. While the rest, Puncak Semangat, YTL, REDtone and Packet One, plan to launch their 4G LTE services in 2014.

In January 2013, Maxis officially launched its 4G LTE services at selected areas in Klang Valley. As at December 2013, MCMC has issued 243 Apparatus Assignment (AA) for 4G LTE sites to Maxis in Kuala Lumpur, Selangor and Negeri Sembilan.

Out of these 243 sites by Maxis, 49% or 120 sites are fully fiberised. Meanwhile, the other 42% or 102 sites using One Hop to Fibre (OHF) optic nodes and remaining 8.6% or 21 sites using two hops to fibre optic nodes.

As at December 2013, Maxis 4G LTE services has 11.2% of population coverage, with 0.3 million subscriptions.

In line with the Government aspirations, Maxis is committed to roll-out several national programmes under their digital lifestyle efforts, namely eKelas, content development and health. eKelas is an online education system, developed in partnership with Ministry of Education (MoE) under the Smart Partnership Programme which focus on science and mathematics. In terms of content development, a training and support programme together with a development centre and content hosting platform have been launched. Furthermore, a mobile health solution was introduced to assist customers to improve the overall healthcare delivery quality, availability, reach and cost for patients and families.

Meanwhile, Celcom commercially launched their 4G LTE services in December 2013 following a soft launch in April 2013. Celcom 4G LTE network is supported by 52 4G LTE sites covering major cities in Selangor, Kuala Lumpur, Penang, Johor, Melaka and Perak. Celcom reported that their roll-out covered 1.79% population coverage. On connectivity, Celcom has fiberised 14 of their 4G LTE sites. As at December 2013, Celcom has approximately 70,000 4G LTE subscriptions.

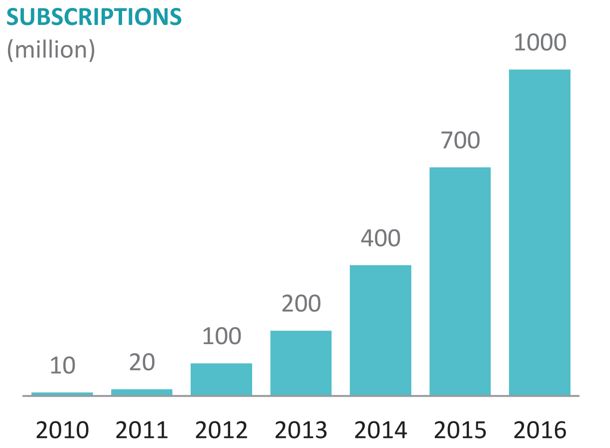
In July 2013, DiGi has commercially launched their 4G LTE services covering specified areas in Klang Valley, Johor and Sabah. As at December 2013, MCMC has issued 171 AA for 4G LTE sites to DiGi. DiGi has population coverage of 2.58% and a total number of 32,000 subscriptions.

In December 2013, U Mobile officially announced the availability of their 4G LTE Internet services. The pilot phase of the roll-out was carried out in Southern and Central regions, covering Subang Jaya, Sunway, Puchong, Berjaya Time Square and Taman Molek, Johor Bahru. U Mobile reported that their 4G LTE has 0.65% population coverage with a total of 50 4G LTE sites. As at 31 December 2013, U Mobile recorded 4,538 4G LTE subscriptions.

As at end 2013, 260 commercial 4G LTE networks were launched globally. The number of global 4G LTE subscriptions reached 200 million in 2013. The strong take-up of 4G LTE is supported by fast increasing varieties of 4G LTE enabled devices.

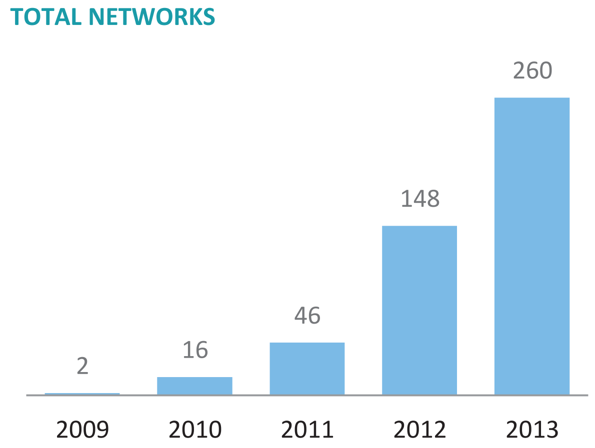
4G LTE HIGHLIGHTS: GLOBAL STATISTICS

NUMBER OF GLOBAL 4G LTE SUBSCRIBERS FORECAST



Source: LTE subscribers will hit 198 million in 2013, IHS iSuppli Research, January 2013
Figure 2.18 Number of Global 4G LTE Subscribers Forecast

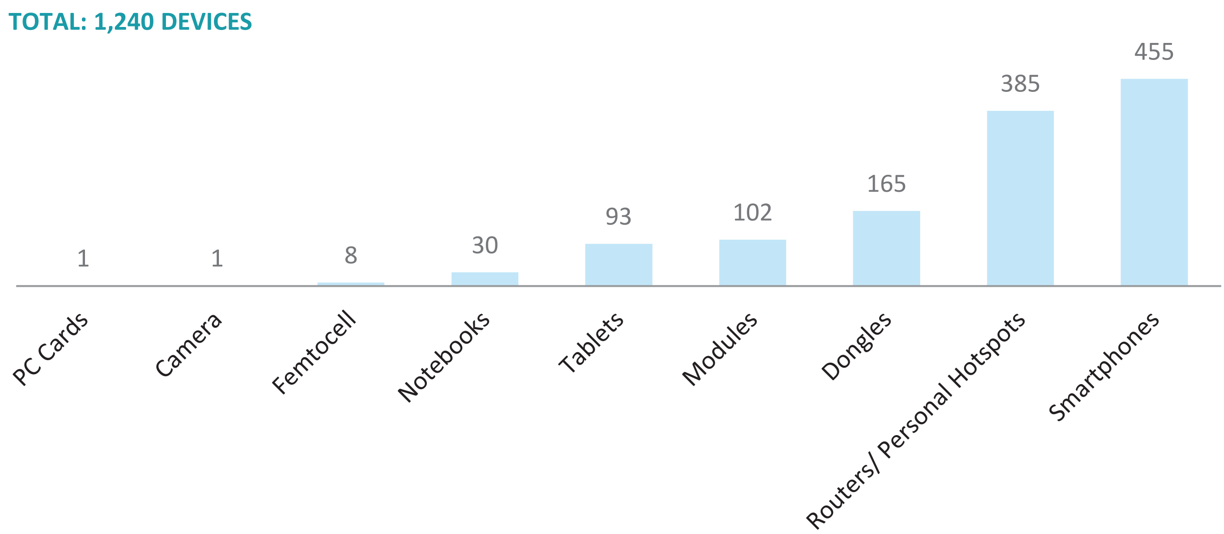
TOTAL COMMERCIAL 4G LTE NETWORKS LAUNCHED 2009 – 2013



Note: MVNOs are excluded

Source: www.gsacom.com
Figure 2.19 Total Commercial 4G LTE Networks Launched 2009 – 2013

GLOBAL 4G LTE USER DEVICES AS AT NOVEMBER 2013



Note: Data as at November 2013

Source: INTERIM Evolution to LTE Report, www.gsacom.com
Figure 2.20 Global 4G LTE User Devices as at November 2013

Fixed Services

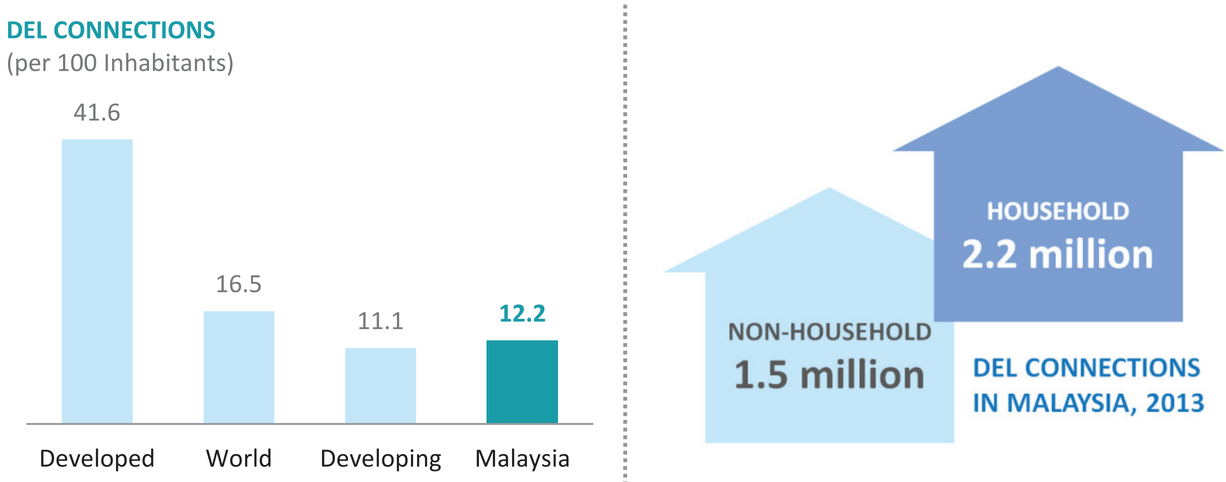
Direct Exchange Line (DEL) Connections in Malaysia

Malaysia DEL connections is at 12.2 per 100 inhabitants or 3.75 million connections in 2013

In 2013, global DEL connections reached 1.12 billion with penetration of 16.5 per 100 inhabitants. However, global DEL subscriptions declined marginally by 1.8% compared with 2012.

In Malaysia, DEL connections stood at 3.75 million with penetration at 12.2 per 100 inhabitants. Malaysia DEL connections also experienced a downward trend, declining by 3.2%. This suggests that users are more likely to switch away from fixed line to another method of communications such as mobile[14]. Users are more likely to go mobile due to lower price of mobile phone[15], attractive packages offered by service providers and changing consumer behaviour[16].

DEL Connections: Worldwide and Malaysia



Note: The developed and developing country classifications are based on UN M49 which is a standard for area codes used by the United Nations for statistical purposes, developed and maintained by the United Nation Statistics Division. For more information see: unstats.un.org

Source: ITU, MCMC

Figure 2.21 DEL Connections: Worldwide and Malaysia

As at end 2013, DEL penetration was 32.4% of Malaysian households or 2.25 million DEL residential connections. This is higher than the 1.5 million for non-residential or business connections.

It is noted that there were a number of states in Malaysia that have above the national level penetration rate, namely, Johor, Melaka, Negeri Sembilan, Perak, Labuan and Pulau Pinang. Pulau Pinang has the highest DEL penetration rate at 50% while the lowest penetration rate was Kuala Lumpur at 15.2%.

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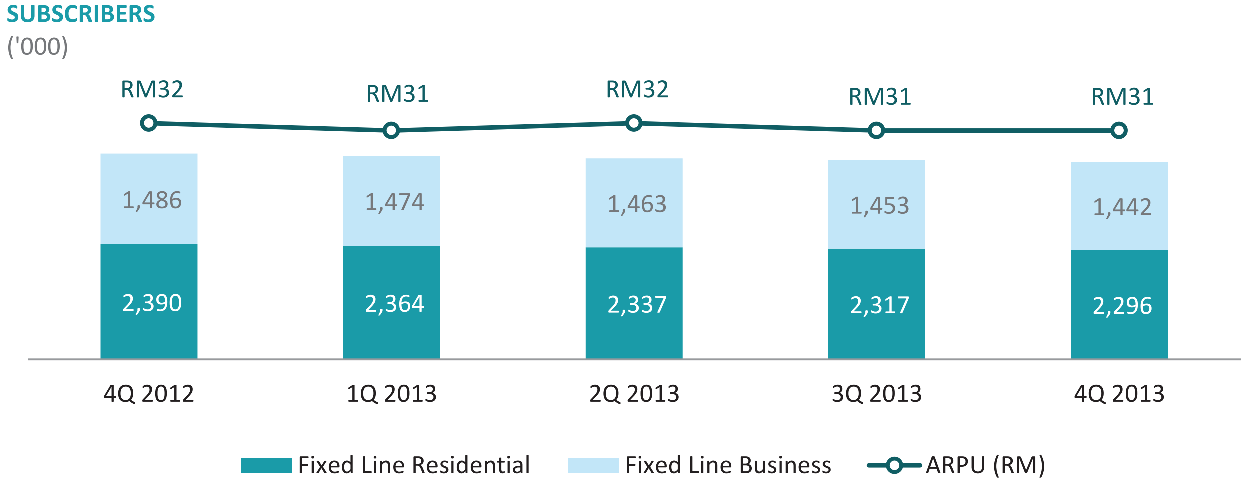
[14] Vogelsang. I., 2009. The relationship between mobile and fixed line communications: A survey.
[15] Smith, J., History of Cellphones: Shrinking Sizes and Prices, 28/12/2011.
[16] MCMC, Statistical Brief Number Fourteen, Hand Phone Users Survey 2012.

TM remains as the main service provider for DEL connections with 97.7% market share followed by TIME, DiGi and Maxis with 1.6%, 0.1% and 0.6% market shares respectively.

On average, each DEL connection or fixed line subscription contributed RM31 to TM revenue (2Q 2012: RM32). As at end 2013, TM fixed line subscriptions was at 3.7 million with 61.4% comprising residential subscriptions. Figure below shows total number of fixed line subscriptions and ARPU for TM.

TM Fixed Line Subscriptions and ARPU



Source: Industry, MCMC

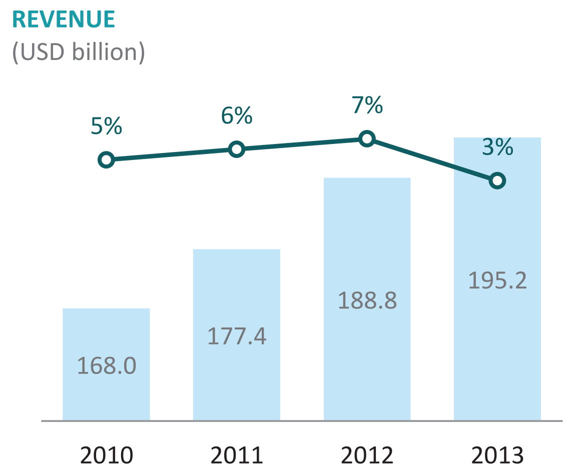
Figure 2.22 TM Fixed Line Subscriptions and ARPU

As opposed to declining numbers of fixed line subscriptions, Malaysian take-up on mobile subscriptions is increasing. The number of mobile subscriptions increased significantly from 27.7 million in 2008 to 43 million in 2013. In contrast, the fixed line subscriptions have declined to 3.7 million in 2013 from 4.3 million in 2008.

Satellite Services

In 2013, the global satellite industry revenue grew by 3.4% to USD195.2 billion (2012: USD188.8 billion)[17]. This revenue is aggregated from four satellite industry segments which include satellite services, satellite manufacturing, launch industry and ground equipment.

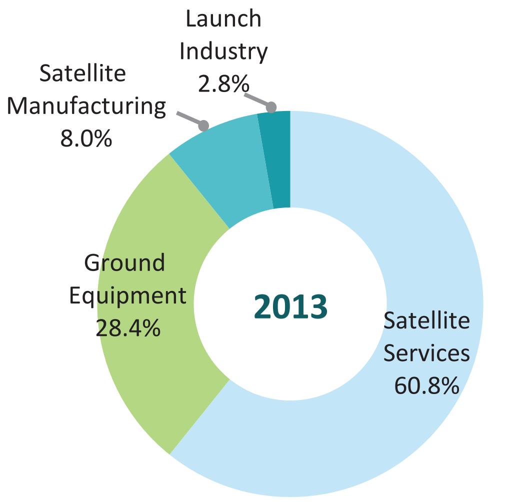
Global Satellite Industry Revenue



Source: State of the Satellite Industry Report, Satellite Industry Association, May 2014

Figure 2.23 Global Satellite Industry Revenue

Global Satellite Revenue Share



Source: State of the Satellite Industry Report, Satellite Industry Association, June 2013

Figure 2.24 Global Satellite Revenue Share

Satellite services segment is the major contributor to the global satellite industry revenue at 61% or a total of USD118.6 billion. This represents an increase of 5% from USD113.5 billion revenue in 2012. The growth is mainly contributed by Direct-Broadcast Satellite/Direct-To-Home (DBS/DTH) services.

In 2013, global DBS/DTH services recorded 4.5% revenue growth to USD92.6 billion in 2013 from USD88.4 billion in 2012. This increase can be attributed to the steady uptrend of High Definition Television (HDTV) channels offered.

Ground equipment is the second largest contributor to global satellite industry revenue. In 2013, ground equipment grew 1% to USD55.5 billion from USD54.9 billion in 2012. The growth is contributed by increased revenue generated from consumer equipment sector with more terminals across all segments (satellite TV, radio, broadband equipment and mobile satellite terminals).

[17] Satellite Industry Association, State of the Satellite Industry Report, May 2014.

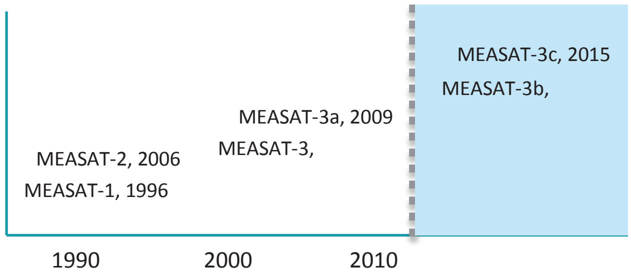
Satellite Services in Malaysia

Malaysia communications satellite service is provided by MEASAT Satellite Systems Sdn Bhd (MEASAT) which owns and operates the Malaysia East Asia Satellite.

The MEASAT satellite fleet consists of geostationary satellites namely MEASAT-1 and MEASAT-2 which were launched in 1996 and MEASAT-3 in 2006. MEASAT-3a was added to its satellite fleet in 2009.

The satellite fleet provides a range of broadcast and telecommunications solutions with services that include 3D, HD and SD video playout, video turnaround, colocation, uplinking, broadband and IP termination services.

Malaysia Commercial Satellite Launch



Note: MEASAT-1 and MEASAT-2 were relocated and renamed AFRICASAT-1 and AFRICASAT-2 in 2008 and 2010, respectively.

Source: MEASAT
Figure 2.25 Malaysia Commercial Satellite Launch

The MEASAT satellite fleet has enabled MEASAT to expand its geographical coverage to over 150 countries representing 80% of the world's population. The extent of the MEASAT satellite fleet geographical coverage is as shown in the figure below.

Geographical Coverage of AFRICASAT and MEASAT-3 Satellites

	Australia	Middle East	Europe	Africa	Asia	South East Asia
AFRICASAT		√	√	√		√
MEASAT-3	√	√	√	√	√	√

Note: AFRICASAT is a satellite system provides high powered satellite capacity across the African continent, with connectivity to Europe, the Middle East and South East Asia by leveraging facilities at MEASAT Teleport and Broadcast Centre

Source: MEASAT
Figure 2.26 Geographical Coverage of AFRICASAT and MEASAT-3 Satellites

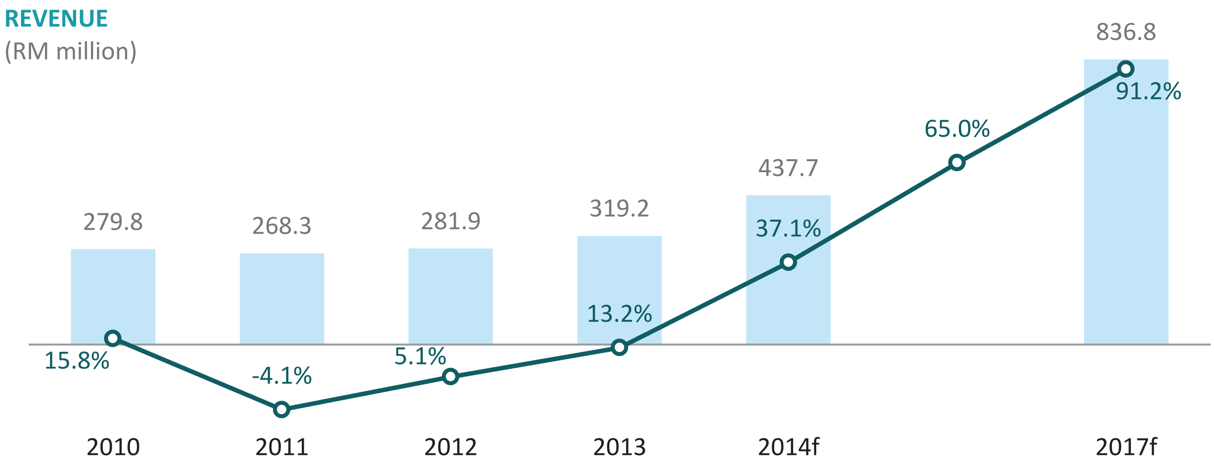
MEASAT revenue grew by 13.2% in 2013, outpacing both global satellite industry growth rate (3.4%) and Malaysia economic growth (4.7%)

The extensive coverage of the MEASAT satellite fleet has enabled MEASAT to capitalise on the demand growth. Consequently, MEASAT revenue recorded an increase of 13.2% to RM319.2 million in 2013 from RM281.9 million in 2012. This double digit growth is the highest since 2011.

As part of MEASAT expansion plan, MEASAT-3b is scheduled to launch in 2014. With this the company expects a revenue boost in 2014 to RM437.7 million (USD136 million). MEASAT-3b launch will expand DTH and Very Small Aperture Terminal (VSAT) services across Malaysia, Indonesia, India and Australia. It will be co-located with MEASAT-3 and MEASAT-3a satellites at orbital location of 91.5°E. The company is targeting a revenue of RM836.8 million (USD260 million) by 2017 with the expected launch of another satellite, MEASAT-3c, in 2016[18].

[18] Article from Bloomberg Businessweek, May 2014

MEASAT Revenue and Growth Rate



Source: Industry, MCMC

Figure 2.27 MEASAT Revenue and Growth Rate

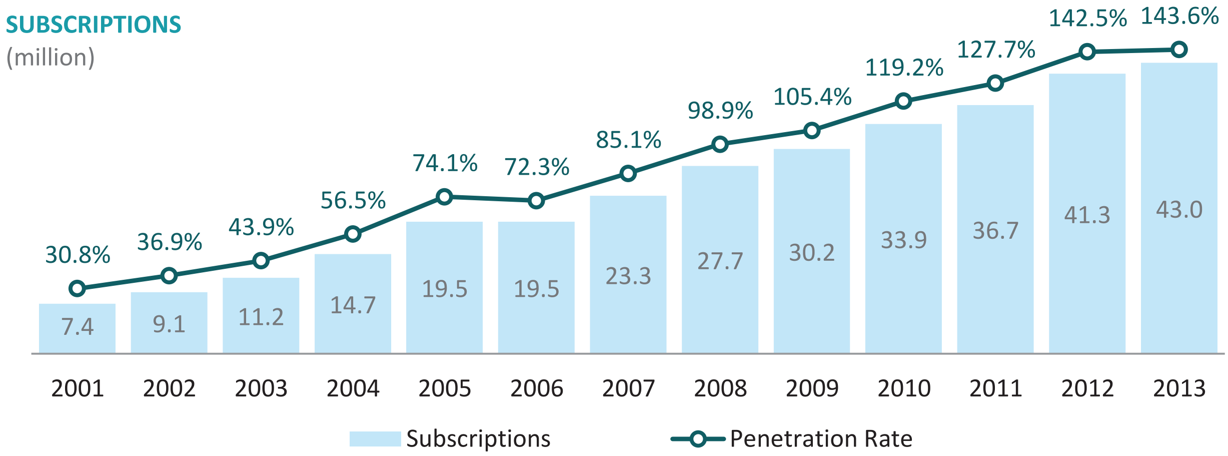
In 2013, MEASAT satellite services recorded a total of 3,800 subscriptions, a reduction of 48% from 7,400 subscriptions in 2012. This reduction in subscriptions was mainly due to termination of service by the subscribers.

Mobile Services

Malaysia has a mobile penetration rate of 143.6%, equivalent to 43 million mobile subscriptions

The total number of mobile subscriptions increased from 30.8% penetration rate at the end of 2001 to 143.6% as at end 2013. The growth of mobile subscription was driven by various factors such as competitive rates, shift in consumer behaviour or attractive offers and promotions by the service providers as technology and devices advanced over time. Furthermore, a continued light handed regulatory approach has encouraged product development and robust applications. The trend of mobile services growth is shown in Figure 2.28.

Penetration Rate and Mobile Subscriptions 2001 – 2013

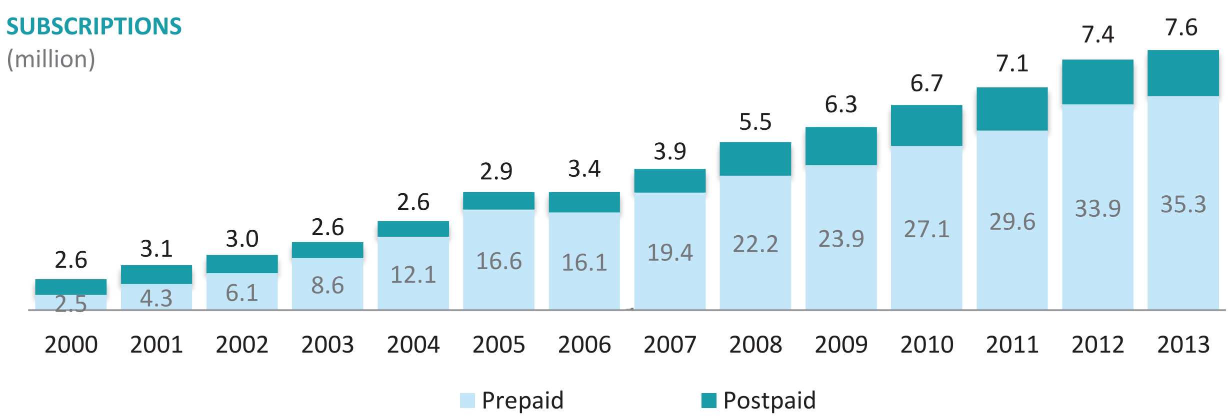


Source: Industry, MCMC

Figure 2.28 Penetration Rate and Mobile Subscriptions 2001 – 2013

As at end 2013, the overall proportion of prepaid to postpaid subscriptions is 5:1, which translates into 35.3 million and 7.6 million prepaid and postpaid subscriptions respectively. Additionally, prepaid and postpaid subscriptions recorded 4.1% and 2.7% growth respectively. One of the reasons for this substantial difference in choice of subscriptions is that prepaid plans offer more flexibility with its Pay-As-You-Use concept relieves prepaid users from being tied to any contract or monthly bill.

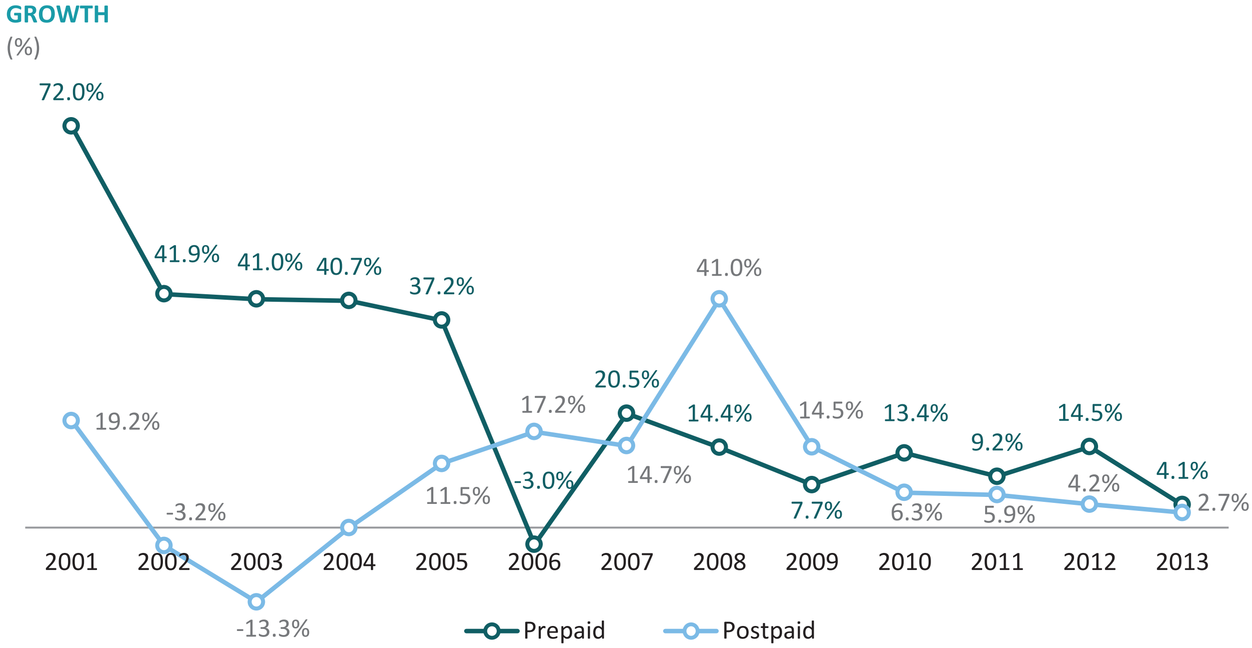
Prepaid and Postpaid Subscriptions of Mobile Services 2000 – 2013



Source: Industry, MCMC

Figure 2.29 Prepaid and Postpaid Subscriptions of Mobile Services 2000 – 2013

Growth of Prepaid and Postpaid Subscriptions Markets 2001 – 2013



Source: Industry, MCMC

Figure 2.30 Growth of Prepaid and Postpaid Subscriptions Markets 2001 – 2013

Economies of scale led to price reduction in various mobile services

The service providers' strategic plans and offerings play a major role in contributing to the overall growth of mobile services subscriptions. Consumer demand for price sensitive options in the mobile services market in Malaysia compel service providers to offer more competitive rates and value for money packages.

Over the years, the service providers have managed scale economies to cater to consumer preferences. While the competitive mobile market also prompted innovative value package plans.

For example, the price for voice call and SMS have significantly decreased over the last decade. In 2000, the price for voice call was at RM0.80 per minute and RM0.70 for SMS. In contrast, in 2013 the price was RM0.15 per minute for voice call and as low as free SMS along with package price. Notably, prepaid packages with starter pack as low as RM5 allowed cheaper entry points for users.

Overall, economies of scale and network efficiency have enabled lower wholesale prices which in turn made lower retail prices possible.

ACCESS PRICING

Mobile Network Origination Service Final Price (sen/minute)			
Voice	**2003**	**2008** *(1 January 2008 to 30 June 2010)*	**2013**
Local	11.26	8.09	4.63
National	14.47	8.90	4.64
National with submarine	22.52	28.09	15.66
Mobile Network Termination Service Final Price (sen/minute)			
Voice	**2003**	**2008** *(1 January 2008 to 30 June 2010)*	**2013**
Local	11.26	8.36	4.55
National	14.47	9.17	4.63
National with submarine	22.52	28.34	15.63

Source: Industry, MCMC

Figure 2.31 Access Pricing

Market Share by Service Providers

In 2013, Celcom mobile subscriptions amounted to 13.1 million or 30% of the market share, followed by Maxis with 12.3 million subscriptions (28.2%), DiGi with 11 million subscriptions (25.2%) and U Mobile held 4.5 million subscriptions (10.3%). The balance is MVNO at 2.7 million subscriptions (6.2%).

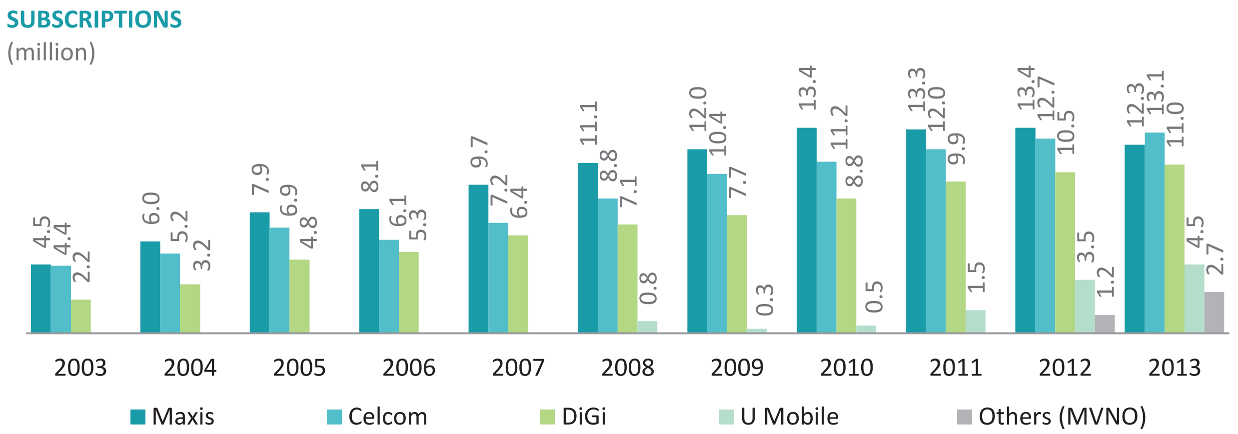
Note that it was for the first time in 2012 that MVNO subscriptions were included in the total mobile subscriptions count. In contrast to MVNO subscriptions in 2012 which was at 1.2 million or 2.9% market share, the 2013 numbers have doubled within a year, albeit from small base.

The mobile scenario in Malaysia for 2013 featured four MNOs with more Mobile Virtual Network Operator (MVNO) companies joining the fray. Mobile phone subscriptions and market share by service provider are shown in Figures 2.32 and 2.33 respectively.

In order to increase geographical coverage of cellular services nationwide, Time 3 project funded by the USP Fund were implemented to expand cellular infrastructure such as towers in extreme rural villages, areas with a low population density or commercially uneconomic areas. These include plantations, *Orang Asli* settlements, new tourist locations and major federal highways.

Time 3 project commenced in 2010 with the objective of increasing the national population coverage to 97% upon completion. To achieve this, a total of 1,000 new towers were planned to be built. In 2013, 35 towers were completed, bringing the total number of towers to 699.

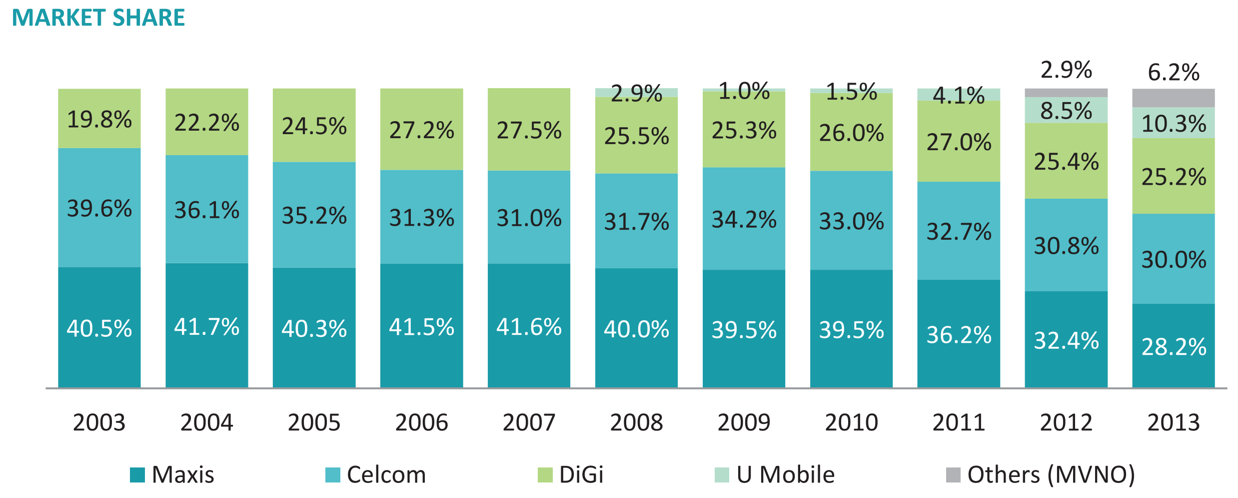
Mobile Phone Subscriptions by Service Providers 2003 – 2013



Source: Industry, MCMC

Figure 2.32 Mobile Phone Subscriptions by Service Providers 2003 – 2013

Service Providers' Mobile Phone Market Share 2003 – 2013

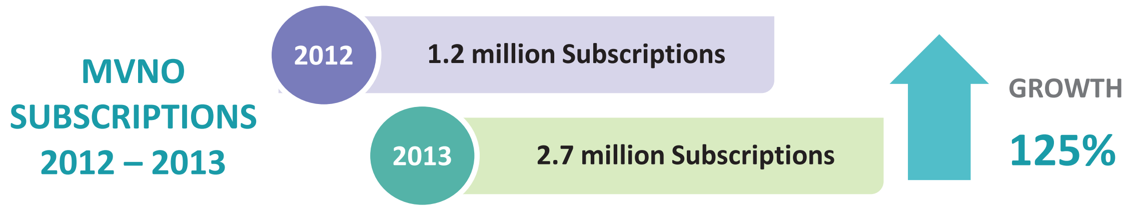


Source: Industry, MCMC

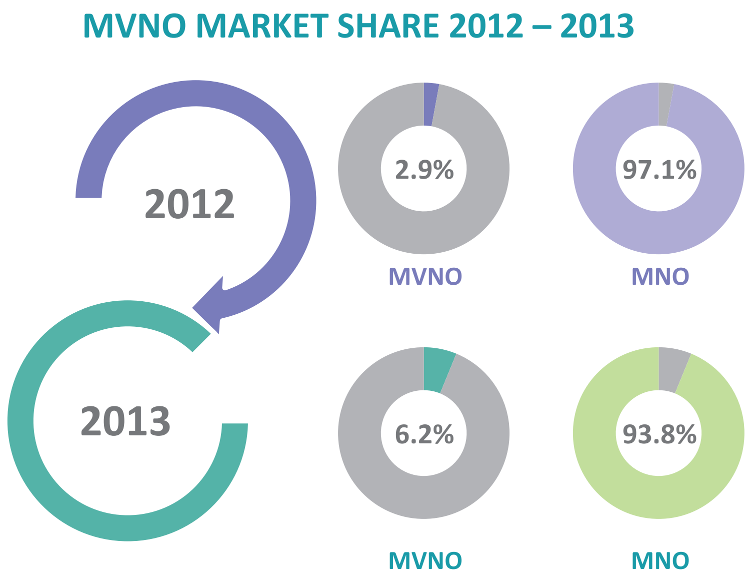
Figure 2.33 Service Providers' Mobile Phone Market Share 2003 – 2013

Mobile Virtual Network Operators (MVNO) Services

In 2013, MVNO subscriptions totalled 2.7 million. As indicated earlier, this is more than double from number of subscriptions in 2012.



Source: Industry, MCMC
Figure 2.34 MVNO Subscriptions 2012 – 2013



Source: Industry, MCMC
Figure 2.35 MVNO Market Share 2012 – 2013

In 2013, there were 13 new entrants into the MVNO market. However, one of the MVNOs, Salamfone, had to terminate their MVNO services due to non-fulfilment of agreement terms with their Mobile Network Operator (MNO). The development for Salamfone is detailed on page 64.

Notably in 2013, there were eight thin and nine thick MVNOs based on their respective business models[19]. The classifications of MVNOs, type of licence and number of licensees are shown in the figure below.

Source: MCMC
Figure 2.36 Number of MVNOs Hosted by MNOs 2013

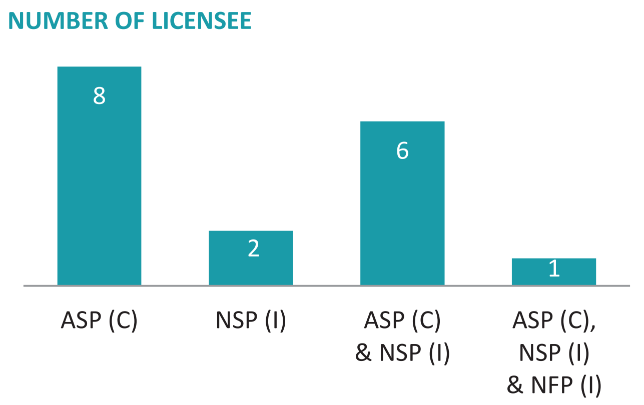
[19] MCMC, Guideline on Regulatory Framework for 3G Mobile Virtual Network Operators, 2005.

List of MVNO Companies 2013		
Company	**Mobile Network Operator (MNO)**	**Classification**
Talk Focus Sdn Bhd	DiGi	Thick
XOX Com Sdn Bhd	Celcom	Thick
Tune Talk Sdn Bhd	Celcom	Thick
Clixster Mobile Sdn Bhd	DiGi	Thick
Baraka Telecom Sdn Bhd	Maxis	Thick
Ceres Telecom Sdn Bhd	U Mobile	Thick
Enabling Asia Tech Sdn Bhd	U Mobile	Thick
Altel Communications Sdn Bhd	Celcom	Thick
Telekomunikasi Indonesia (Malaysia) Sdn Bhd	Maxis	Thick
Merchantrade Asia Sdn Bhd	Celcom	Thin
REDtone Mobile Sdn Bhd	Celcom	Thin
I Tel Mobile Network Sdn Bhd	Maxis	Thin
PLDT Malaysia Sdn Bhd	Celcom	Thin
Pavo Communications Sdn Bhd	DiGi	Thin
Mobile 8 Telco Sdn Bhd	U Mobile	Thin
Prabhu Mobile Sdn Bhd	U Mobile	Thin
Ameen Mobile Sdn Bhd	DiGi	Thin

Source: MCMC
Figure 2.37 List of MVNO Companies 2013

Thick MVNO does not own or provide network facilities but is dependent on the MNOs for network facilities and radio network. However, with NSP (I), NFP (I) and ASP (C) licence, thick MVNO are able to run some of their own network services such as SMS, Multimedia Messaging Service (MMS), voicemail, overseas call routing and Wireless Application Protocol (WAP) gateways with its own branding, pricing, packaging and billing. Thick MVNO are also able to operate and manage its own Home Location Register (HLR) and customer care services.

Type of Licence Held by MVNO



Source: MCMC
Figure 2.38 Type of Licence Held by MVNO

On the other hand, thin MVNO hold ASP (C) licence and does not have the ability to operate its own HLR. Nevertheless, thin MVNO have access to the radio network and network facilities of its MNO and are able to offer packages in its own branding, pricing, packaging and billing together with a customer care services.

Types of MVNO based on Business Model		
	Thick	**Thin**
Billing	√	x
Customer Care Services	√	√
SIM Card Ownership	√	x
Messaging, Value Added Services (VAS)	√	x
Traffic Management	√	x
Branding	√	√
Pricing	√	√
Packaging, Fulfilment, Distribution	√	√
Home Location Register (HLR)	√	x

Source: Athens Information Technology, Centre of Excellence For Research And Graduate Education, Guideline on Regulatory Framework For 3G Mobile Virtual Network Operators, February 2005

Figure 2.39 Types of MVNO based on Business Model

There are several factors contributing to the growing number of MVNO companies in Malaysia. Among them are:

- MNOs seeking to maximise use of their network infrastructure and coverage;
- Extending MNOs reach to their targeted niche market through the capabilities of MVNOs; and
- The high number of prepaid subscribers is encouraging for the MVNO market as most MVNOs offer prepaid services to their customers.

Most MVNO companies have a specific target market in order to better focus their efforts to attain more customer base for higher profitability. Among their target markets are:

- Young and youth market with ages between 15 and 35 years which includes students, graduates and young professionals;
- Tourists and foreign workers; and
- SME/SMI postpaid users and professional postpaid.

MNOs are strategically selecting MVNO partnerships to better position themselves in the competitive market environment to boost their mobile subscriptions. This enables them to capture potential subscriber market share and revenue growth as well as optimise network capacity and increase service provision.

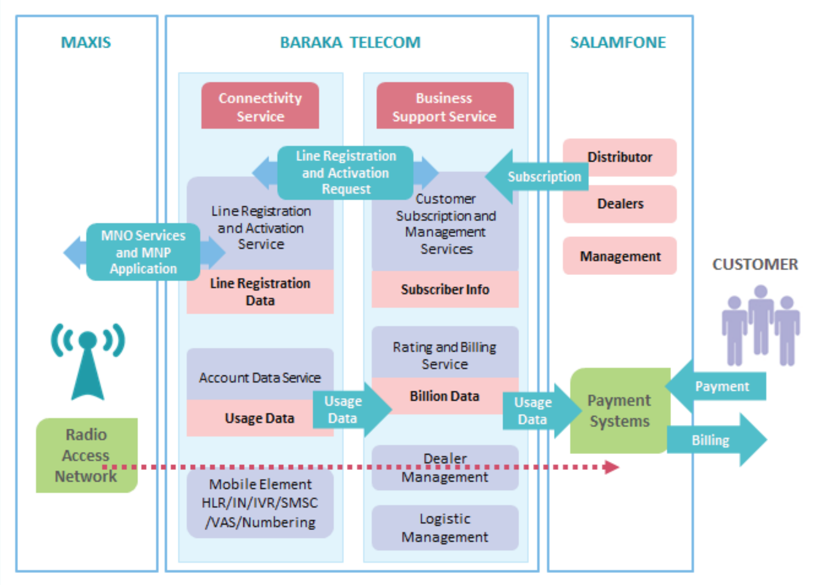
MVNO Case Study □Salamfone

Salamfone case presents an invaluable lesson in improving the development of MVNO landscape in Malaysia. The termination of Salamfone service is unprecedented which alerts the stakeholders that there is still much to learn. This is particularly in terms of risk management and consumer protection.

The MVNO, Salamfone, provided products and services based on the principles of *Syariah*. It was an ASP (C) licence holder. Salamfone entered into an agreement for access to Radio Access Network (RAN) with Maxis Broadband Sdn Bhd for a term of three years and then launched its MVNO services in 2011.

Salamfone has an Mobile Virtual Network Enabler (MVNE) for services such as provisioning administration and billing which is Baraka Telecom Sdn Bhd. Both Salamfone and Baraka are under the same parent company, Reach Sdn Bhd.

On 27 July 2013, Salamfone services were terminated by Maxis Broadband when Salamfone failed to comply with the terms of agreement signed which included meeting sales targets and payment to Maxis for usage of service.



Note: IVR – Interactive voice response, SMSC – Short message service centre

Source: Adapted by MCMC
Figure 2.40 Salamfone Stakeholders

Consequently, about 45,000 Salamfone subscribers experienced service disruption including difficulties in making and receiving calls, SMS texting and accessing Internet services. As an option for resolution to these subscribers, Salamfone issued a statement advising them to migrate to other service providers via Mobile Number Portability (MNP) or getting a new SIM card. Salamfone also advised subscribers to send to the company their claim on unutilised credit for compensation. In addition, Maxis offered to make available free prepaid packs to assist the affected Salamfone subscribers.

Arising from this situation, there were many customer complaints concerning failure to port from the network and subscribers being saddled with unutilised credit. This unexpected turn of events was not accounted for under the terms and conditions of the agreement between the MVNO (Salamfone) and MNO (Maxis). This includes a clear migration plan for subscribers prior to any termination or suspension of services. MCMC views this seriously and has intervened in various ways to mitigate the problem such as instructing all the Salamfone distributors to stop selling SIM cards and reloads.

MODULE 3: CONTENT SERVICES

Malaysia TV Landscape

Malaysian TV broadcasting started in 1963 with TV1 being the first TV channel transmitted through FTA under the Government owned Radio Televisyen Malaysia (RTM). Today, the forthcoming implementation of the Digital Terrestrial Television Broadcasting (DTTB) will further enhance the FTA TV market. This development can spur further competition through more efficient use of spectrum.

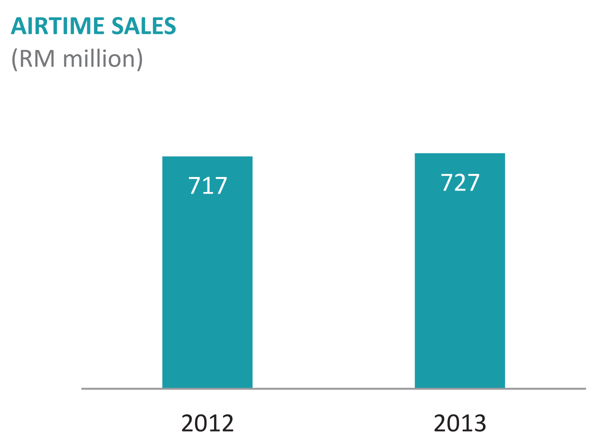
The introduction of converged licensing framework under the CMA has enabled TV content today to be delivered over various platforms such as cable, satellite and Internet. Thus, telecommunications service providers such as Telekom Malaysia (TM) can also offer IPTV services. Similarly, traditional broadcasters are delivering TV and video content over the Internet. This development has expanded content offerings in terms of a cumulative total of more than 200 TV channels available in the Malaysian broadcasting market today.

FTA TV

The FTA TV broadcasters comprise Sistem Televisyen Malaysia Bhd or popularly known as TV3, NatSeven TV Sdn Bhd (ntv7), Metropolitan TV Sdn Bhd (8TV) and Ch-9 Media Sdn Bhd (TV9), all of which are under Media Prima Bhd (Media Prima). The others are Government owned stations namely, Radio Televisyen Malaysia (RTM) and AlHijrah Media Corporation (TV AlHijrah).

Media Prima Bhd

Media Prima TV Networks Airtime Sales 2012 – 2013



Source: Media Prima

Figure 3.1 Media Prima TV Networks Airtime Sales 2012 – 2013

Media Prima continues to be the major commercial FTA broadcaster with four channels. As an integrated media group, they also offer various platforms such as radio, print, billboard and online which allows them to cross sell their products and services. For example, the TV medium highlighting newspaper headline and TV audience also watching TV programmes on the *Tonton* portal.

Figure 3.1 shows the traditional advertising revenue comprising airtime sales across Media Prima TV networks. In 2013, the total airtime sales stood at RM727 million, a slight growth of 1.4% from RM717 million in 2012.

Media Prima plans to introduce HD simulcast

Media Prima is poised for the DTTB switch over and plans to introduce HD simulcast once the DTTB service rolls out. The HD signal enhances picture clarity with sharper images and audio. This highly specialised programme offering is able to create more opportunities for advertisers to incorporate their brand with enhanced content viewing.

Media Prima HD Investment 2013	
Package	**HD Investment (%)**
Outside Broadcast and Multiple Camera Production	48%
Continuity Suite and Master Control Room	34%
Studios	7%
Single Camera Production	5%
Post Production	5%
Link & Satellite News Gathering	1%

Source: Media Prima
Figure 3.2 Media Prima HD Investment 2013

Media Prima is expected to continue investing in quality content to sustain viewership and brand loyalty. To further strengthen its content and programming, Media Prima plans to collaborate with international partners such as MediaCorp (Singapore) for drama series and Fuji TV (Japan) for documentaries in 2014.

AlHijrah Media Corporation

AlHijrah Media Corporation is a CASP (I) licensee offering FTA TV (TV AlHijrah) and is administered by Jabatan Kemajuan Islam Malaysia (JAKIM) to promote Islamic content. It broadcasts for 18 hours daily from 6 am until 12 midnight. The target market is the general public and specifically, adults aged 40 years and below.

TV AlHijrah uses 10 analogue TV transmitters nationwide to provide FTA coverage. TV AlHijrah can also be viewed through ASTRO and is available over the Internet. In 2013, it recorded an average viewership of 30,000 per minute[20].

[20] Nielsen Television Audience Measurement, 2013.

Pay TV

Overall, worldwide Pay TV market nearly reached one billion subscribers in 2013. That is, having surpassed 900 million subscribers, the Pay TV market in 2013 has generated service revenue of almost USD250 billion[21].

The dynamics in the Pay TV market today feature increasing competition among Pay TV service providers putting pressure on service prices. For instance, broadband service provider offering IPTV and voice compelling cable and satellite services to counter offer with lower entry point packages[22]. Price competition for one assists to attract or retain subscribers.

In Malaysia, the Pay TV market is expanding in terms of diversifying TV packages and programme offerings as well as more options for add on TV content with new alliances. For example, the broadcasters and telecommunications service providers are working together to diversify broadband and offering TV content with phone packages. These service providers are providing avenue for increasingly rich entertainment environment, taking advantage of digitisation and the online medium. Figure 3.3 below shows major Pay TV offerings in the market.

<table>
<tr><th colspan="12">Major Pay TV Offerings</th></tr>
<tr><th colspan="2" rowspan="2">Service</th><th rowspan="2">Platform</th><th colspan="3">Service Offered</th><th rowspan="2">Platform Ownership</th><th rowspan="2">TV Business Model (Subscription)</th><th rowspan="2">Data (Mbps)</th><th rowspan="2">Internet cost (RM/ month)</th><th rowspan="2">Total Number of Channels</th></tr>
<tr><th>Content</th><th>Broadband</th><th>Voice</th></tr>
<tr><td rowspan="3">CABLE TV</td><td rowspan="3">ABNxcess</td><td rowspan="3">Hybrid Fibre Coaxial</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">×</td><td rowspan="3">Own</td><td rowspan="3">✓</td><td>10</td><td>129</td><td rowspan="3">121 channels</td></tr>
<tr><td>30</td><td>219</td></tr>
<tr><td>50</td><td>369</td></tr>
<tr><td>SATELLITE TV</td><td>ASTRO</td><td>DTH Satellite</td><td>✓</td><td>×</td><td>×</td><td>Own</td><td rowspan="7">✓</td><td>n.a.</td><td>n.a.</td><td rowspan="7">171 including 68 ASTRO branded channels</td></tr>
<tr><td rowspan="10">IPTV</td><td rowspan="3">ASTRO Maxis IPTV</td><td rowspan="3">Fibre</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">TM HSBB</td><td>10</td><td>148</td></tr>
<tr><td>20</td><td>198</td></tr>
<tr><td>30</td><td>248</td></tr>
<tr><td rowspan="3">ASTRO TIME IPTV</td><td rowspan="3">Fibre</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">TIME high speed Internet</td><td>6</td><td>148</td></tr>
<tr><td>12</td><td>198</td></tr>
<tr><td>24</td><td>298</td></tr>
<tr><td rowspan="4">TM IPTV HyppTV</td><td rowspan="3">Fibre</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">✓</td><td rowspan="3">Own (TM HSBB)</td><td rowspan="4">Free access to selected channels upon subscription to broadband service</td><td>5</td><td>149</td><td rowspan="4">113 channels</td></tr>
<tr><td>10</td><td>199</td></tr>
<tr><td>20</td><td>249</td></tr>
<tr><td>ADSL</td><td>✓</td><td>✓</td><td>✓</td><td>Own</td><td>8</td><td>160</td></tr>
</table>

Note: Internet cost applies to residential subscriptions only and may vary according to TV packages
Data (Mbps) reported for selected bandwidth only

Source: Industry, MCMC
Figure 3.3 Major Pay TV Offerings

[21] ABI Research article on Global Pay TV Market Surpassed 900 Million Subscribers in 2013, April 2014.
[22] Informa Telecoms & Media report on Global pay TV revenue forecasts, 2005-2017, May 2013

ASTRO

MEASAT Broadcast Network Systems Sdn Bhd or more commonly known as ASTRO, is a wholly-owned subsidiary of Astro Malaysia Holdings Bhd. ASTRO is the satellite Direct-To-Home (DTH) service provider in Malaysia. As at January 2014, ASTRO has a household penetration rate of 56% or 3,884,000 residential Pay TV subscriptions. This includes 442,000 non-subscription or free satellite TV customers. In terms of service provision, ASTRO also has established coverage for non-residential areas, albeit a total of 23,000 such subscriptions in 2013.

ASTRO Subscriptions as at 31 January 2014			
			Total
Residential			
▪ Subscriptions			3,442,000
▪ Non-subscription (NJOI)			442,000
Non-residential			
▪ Hospitals ▪ Commercial Schools	▪ Hotels ▪ Financial Institutions	▪ Government ▪ Restaurants	23,000

Source: ASTRO

Figure 3.4 ASTRO Subscriptions as at 31 January 2014

Note that the service type and delivery platforms for ASTRO service are comparable to those of international service providers in the US and UK as shown below.

ASTRO Service vis-à-vis International Service Providers							
Service	**Sky UK**	**DirecTV US**	**ASTRO**	**Service**	**Sky UK**	**DirecTV US**	**ASTRO**
▪ Subscription-based TV	✓	✓	✓	▪ Cinema release movie	✓	✓	✓
▪ Subscription-free satellite TV	✓		✓	▪ Over-the-Top (OTT)	✓	✓	✓
▪ Multiroom viewing	✓	✓	✓	▪ Prepaid channel		✓	✓
▪ High definition (HD)	✓	✓	✓	▪ Broadband/IPTV	✓		✓
▪ Personal Video Recording (PVR)	✓	✓	✓	▪ 3D channels	✓	✓	✓
▪ Video on Demand (VOD)	✓	✓	✓				

Source: ASTRO; Company websites

Figure 3.5 ASTRO Service vis-à-vis International Service Providers

ASTRO went into a partnership with TIME dotCom Bhd (TIME) in 2010 to deliver TV and broadband services. Two years later, ASTRO entered into agreement with Maxis and launched IPTV service in 2013. The IPTV tie-up is contributing positively to ASTRO's earnings in view of increased penetration rate. As at FYE January 2014, this partnership has recorded more than 20,000 subscriptions.

Content sharing generated win-win situation

ASTRO further monetised their programme rights by sharing the Barclays Premier League (BPL) content with TM in August 2013. The commercial agreement generated win-win situation for both service providers such that ASTRO acquired new revenue stream and enhanced branding while TM subscribers enjoy two *ASTRO Supersport* channels.

Effectively, service providers are improving customer loyalty and offering new services to attract more potential subscriptions. As competitive forces increase, service providers are mutually leveraging on each other's strengths and are self-managing issues. They are moving away from the previous single delivery approach towards a converging proposition where content is delivered over multiple IP-based platforms.

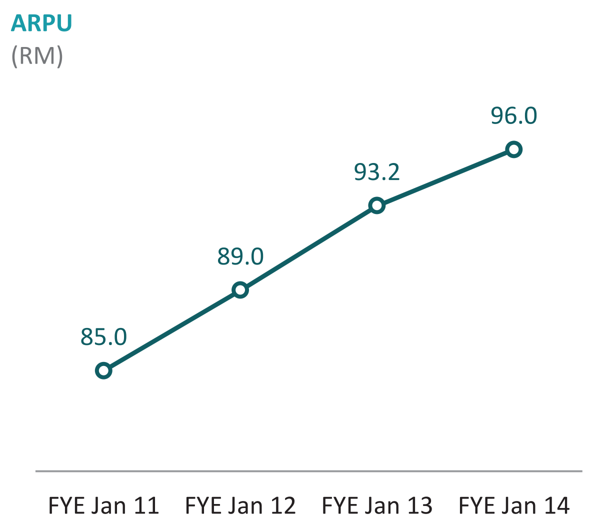
Subscription pack price increase boosted ASTRO ARPU

ASTRO ARPU increased to RM96 from RM85 since three years ago or FYE January 2011. Despite this price increase, ASTRO churn rate appears to be maintained below 10%.

It is interesting to note that ASTRO churn rate in Figure 3.7 was an inverse after the price increase for its premium content by RM1 to RM15 in July 2011. This could be attributed to ASTRO launch of its *SuperPack* packages in the same year which included HD and PVR services. In 2011, ASTRO also launched *ASTRO First*, a movie on-demand service allowing subscribers to watch the latest cinema titles within two weeks after the cinema release.

In November 2013, there was another price increase and this was for *ASTRO Family Pack* monthly subscription rate raised by RM2 to RM39.95. At the same time, the *Sports Pack* was raised by RM6 per month. ASTRO also offered subscribers an exclusive preview of 12 HD and two SD channels plus access to *ASTRO On-The-Go* at no additional cost from 1 November 2013 to 15 February 2014. The free option appears to be a strategy to slow down churn rate.

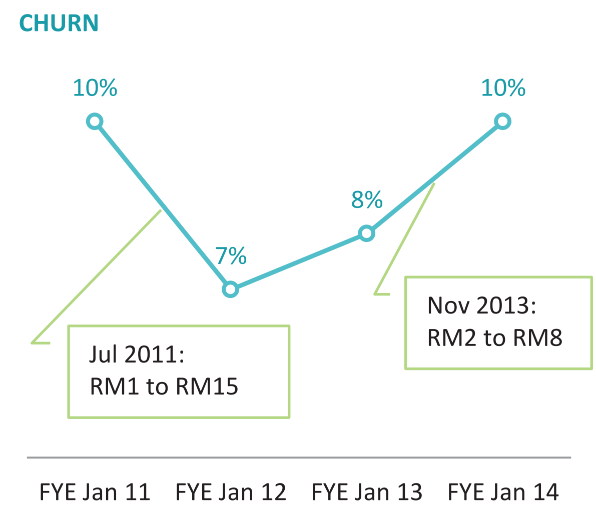
ASTRO Pay TV Residential ARPU



Source: ASTRO

Figure 3.6 ASTRO Pay TV Residential ARPU

ASTRO Churn (%) and Price Increase FYE Jan 2011 to FYE Jan 2014



Source: ASTRO

Figure 3.7 ASTRO Churn (%) and Price Increase FYE Jan 2011 to FYE Jan 2014

ARPU is reinforced by premium package

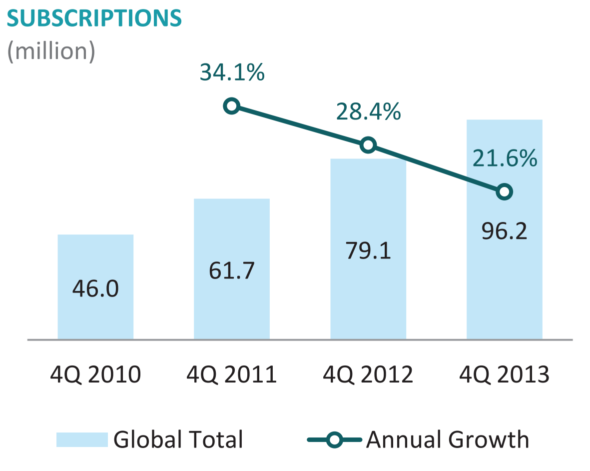
The base for ASTRO ARPU is effectively made up of its basic package namely, *Family Pack*. ARPU is also reinforced by premium package such as *SuperPack* and add on packages as depicted diagrammatically below.

Source: ASTRO, MCMC
Figure 3.8 ASTRO Basic, Premium and Add on Packages

TM IPTV Service: *HyppTV*

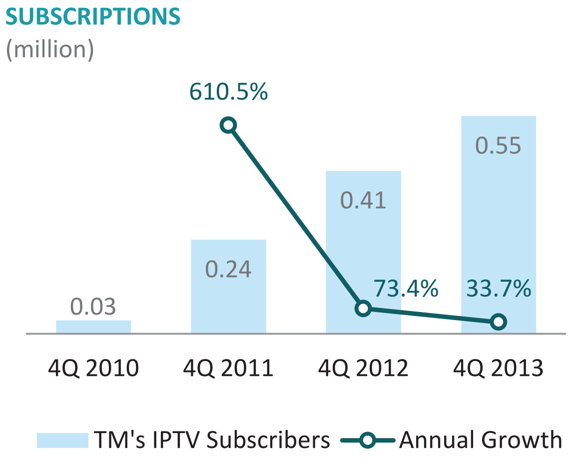
The global IPTV subscription growth is double digit ranging between 22% and 34% in the period from 2011 to 2013. Meanwhile, TM's IPTV growth after three years since its introduction in 2010 has also posted double digit growth of 34% in 2013. Hence, one could say our IPTV growth is in tandem with the global growth record.

Global IPTV Subscriptions and Growth 4Q 2010 to 4Q 2013



Source: point-topic.com
Figure 3.9 Global IPTV Subscriptions and Growth 4Q 2010 to 4Q 2013

TM IPTV Subscriptions and Growth 4Q 2010 to 4Q 2013



Source: Telekom Malaysia
Figure 3.10 TM IPTV Subscriptions and Growth 4Q 2010 to 4Q 2013

Specifically, TM *HyppTV* Everywhere launched in August 2013 is a multiscreen offering which enables HSBB and ADSL subscribers to watch *HyppTV* anywhere and anytime on their various devices. This offering is in line with TM aspiration of delivering entertainment content over multiple platforms nationwide in line with more integrated digital lifestyle approach in Malaysia.

TM IPTV TV Package		
Package	**Price/Month (RM)**	**Description**
Platinum Pack	30	33 entertainment and lifestyle channel from around the world
Ruby Pack	30	TV entertainment from Hong Kong, Taiwan, China, Japan and Korea from 10 dedicated TV channels and one VOD channel
Mega Pack	50	Platinum Pack + Ruby Pack + other channels such as sports and HD channels

Source: Telekom Malaysia
Figure 3.11 TM IPTV TV Package

TM indicated that their bestselling TV packages are *HyppTV Mega Pack* and *Platinum Pack*, while *Hypp Flicks* is the bestselling VOD channel consisting of blockbuster movies from Hollywood. The service costs RM15 per month. These packages and services have contributed positively to TM earnings.

ABNxcess

Asian Broadcasting Network Sdn Bhd offers Malaysia's first digital cable TV network using brand name ABNxcess which provides TV entertainment and high speed Internet services. The company started offering services in 2012 in Sri Damansara and launched its service a year later. As at end 2013, the company expanded its coverage more widely within the Klang Valley and to Johor.

The ABNxcess Pay TV service is provided using a TV Set Top Box that supports MPEG2 and MPEG4 video compression, feature rich applications and graphics including 3D features.

TV Viewership and Development

FTA TV broadcasters capture the top six positions in terms of viewer reach

In 2013, a study on TV Audience Share by Nielsen saw TV3 at the top TV channel with the highest viewership locally. The FTA TV channels captured the top six positions in terms of audience reach with the balance attributed to Pay TV channels.

The main reason for higher popularity of FTA TV is that the channels can be accessed by almost all households in Malaysia. In addition, the popularity of the TV programmes also drew wide audience reach. For example, TV3 is popular for its local content and in 2013 garnered an average of 672,000 viewers per minute.

Note that different business models explain the reason for the size of audience reach for the FTA compared with the more targeted audience reach for Pay TV business.

Top 10 TV Audience Share 2013			
TV Channel	**Rating ('000)**	**Share (%)**	
TV3	672	21.9	**FTA TV** ▪ TV3, ntv7, 8TV and TV9 are commercial TV stations under Media Prima TV Network ▪ TV1 and TV2 are operated by RTM
TV9	220	7.2	
TV2	175	5.7	
8TV	156	5.1	
ntv7	139	4.5	
TV1	134	4.4	
Sun-TV	100	3.2	**Pay TV** ▪ These four channels are available via satellite TV, ASTRO
Ria	90	2.9	
Prima	85	2.8	
Ceria	70	2.3	

Note: Rating refers to average minutes rating and ('000) refers to 'thousands' of average number of individuals.
Share (%) refers to proportion of individuals viewing a specific programme compared with the total number of individuals watching TV during the same time interval.

Source: Nielsen
Figure 3.12 Top 10 TV Audience Share 2013

Broadcasters focus on developing local content to suit the domestic market

Compelling content is extremely important to attract audience and encourage viewers' loyalty. Aside from regional and international content acquired for local audience, the broadcasters also produce a broad range of local content that appeals to the nation's broad and diverse demographics. Furthermore, localised content such as content from abroad with subtitles and dubbing to local languages is essential to maintain local audience diverse needs and wide choice of content. In particular, localised content creates audience 'stickiness' and reduce customer churn for the Pay TV service providers.

In addition to creating content rights, local content assists to enrich the ecosystem of content creation value chain including local talent pool and drives progressive talent and skills of local production houses. Broadcasters also groom and develop local in-house talent, which authenticates the cultural quality in content produced.

Content Production Highlights: ASTRO and Media Prima

ASTRO

- Invested RM1.2 billion in 50,000 hours of self-produced content since the company's inception in 1996.
- Localised international content where approximately 28,000 hours of programming were dubbed and subtitled to enhance customers' experience in 2013.
- Produced 10,000 hours of local content in 2013.

MEDIA PRIMA

- Primeworks Studios, the content creation subsidiary of Media Prima produced more than 5,000 hours of dramas, documentaries and shows a year. In 2013, more than 1,900 hours of local content was produced for TV3 channel alone.
- Spend approximately RM200 million a year on local content for the nation's broad and diverse demographics.
- A number of novel-adapted TV dramas such as 'Teduhan Kasih' and 'Love You Mr Arrogant' gained popular response in 2013 with 11 million viewers over the primetime Akasia segment via TV3 channel.

Source: Industry, MCMC

Figure 3.13 Content Production Highlights: ASTRO and Media Prima

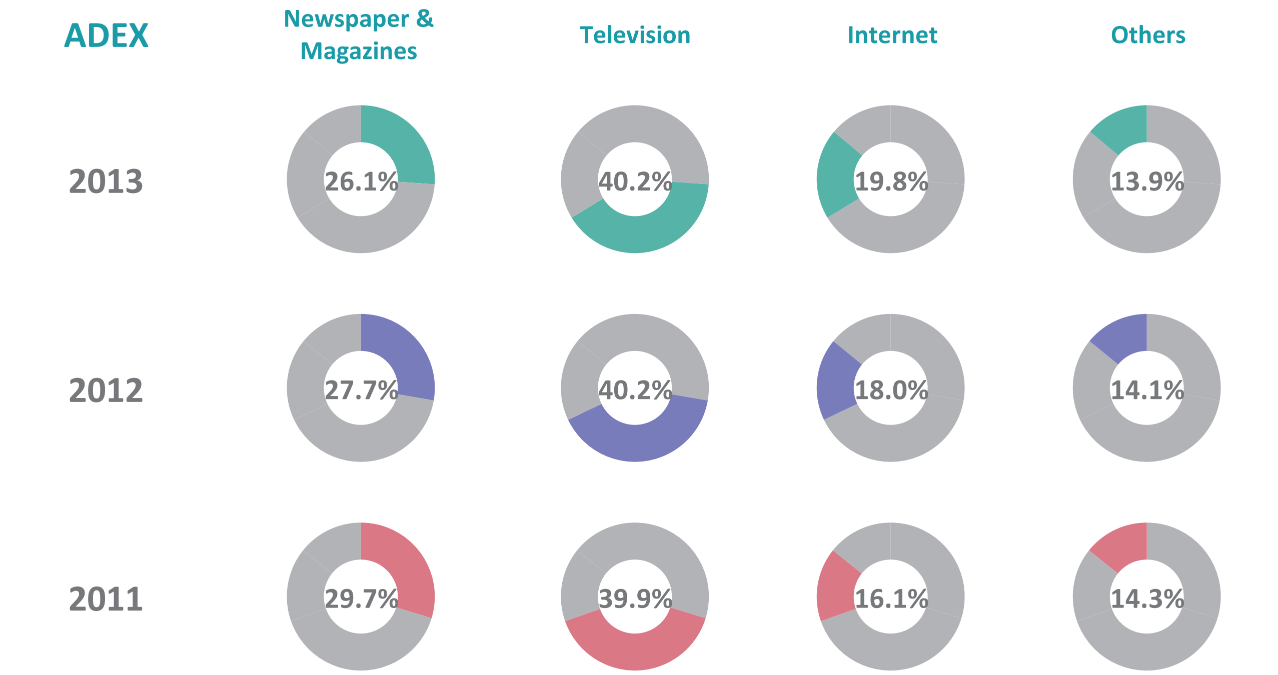
Advertising Expenditure (Adex)

Global Adex

Global Adex recorded an increase of 3.6% to USD517.6 billion in 2013. North America, Western Europe and Asia/Pacific are the biggest contributors with USD177.9 billion, USD107.1 billion and USD147.9 billion respectively. Globally, by medium, TV remained as the most preferred medium for advertisers with 40.1% market share. This is relatively the same over the last three years.

Notably, worldwide advertisers are supplementing conventional advertising with online platform or Internet advertising. Internet advertising has increased about 4% since 2011 to 19.8% advertising market share in 2013. The growth is attributable to the increasing Internet users and diversity of Internet advertising solutions becoming available and adopted among advertisers.

Adex Medium Comparison 2011 – 2013



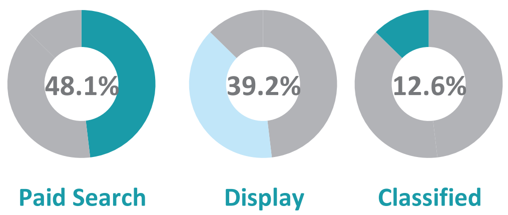
Note: Others include radio, cinema and outdoor

Source: ZenithOptimedia
Figure 3.14 Adex Medium Comparison 2011 – 2013

In 2013, global Internet Adex was valued at USD101.5 billion. This is an increase of 12.7% from 2012. The breakdown of Internet Adex by different categories of Paid Search, Display Advertising and Classified shows their market shares at 48.1%, 39.2% and 12.6% respectively.

As a matter of reference, Paid Search is a method of advertising whereby website owners pay an advertising fee, usually based on click-through or when the website appears in top placement on search engine result pages. Click-through is the process of a visitor clicking on a web advertisement and going to the advertiser's website.

Internet Advertising by Type 2013



Source: ZenithOptimedia

Figure 3.15 Internet Advertising by Type 2013

Meanwhile, Display Advertising, often referred to as banner advertising, is graphical advertising that appears in content on the web.

Online Classified is a form of online advertising which may be sold to advertisers or circulated free of charge. This advertisement is typically short and normally charged for according to length.

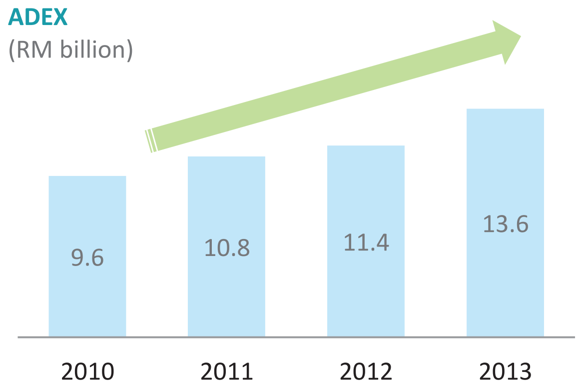
Malaysia Adex

Similar to Global Adex, TV presents an established medium reaching millions of audience in Malaysia. In 2013, 6.6 million households or 97.7% of total national households have access to free or sponsored TV programmes. To advertisers, this medium is capable of delivering powerful branding or advertising messages.

Overall, Malaysia media Adex rose 15.95% to RM13.56 billion in 2013 from RM11.40 billion in 2012. According to Nielsen, advertisers spent RM8.09 billion on TV advertising in 2013, compared with RM6.15 billion in 2012.

In terms of market share, the combination of Pay TV and FTA TV recorded the highest share with 59.62% (2012: 53.94%). By breakdown, Adex in FTA TV stood about the same, that is, at RM3.18 billion compared with RM3.17 billion in 2012. In contrast, Pay TV commanded RM4.91 billion in Adex, which is about one and a half times higher than the RM2.98 billion captured in 2012.

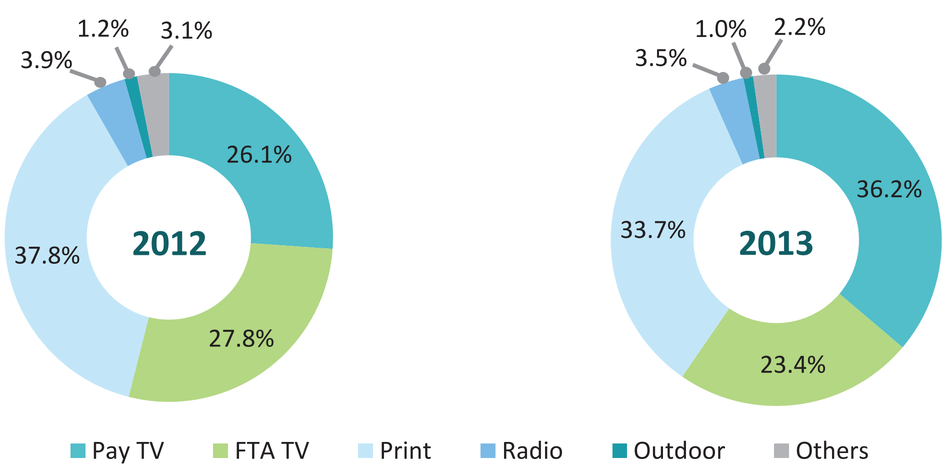
Adex in Malaysia



Source: Nielsen

Figure 3.16 Adex in Malaysia

Adex in Malaysia by Medium



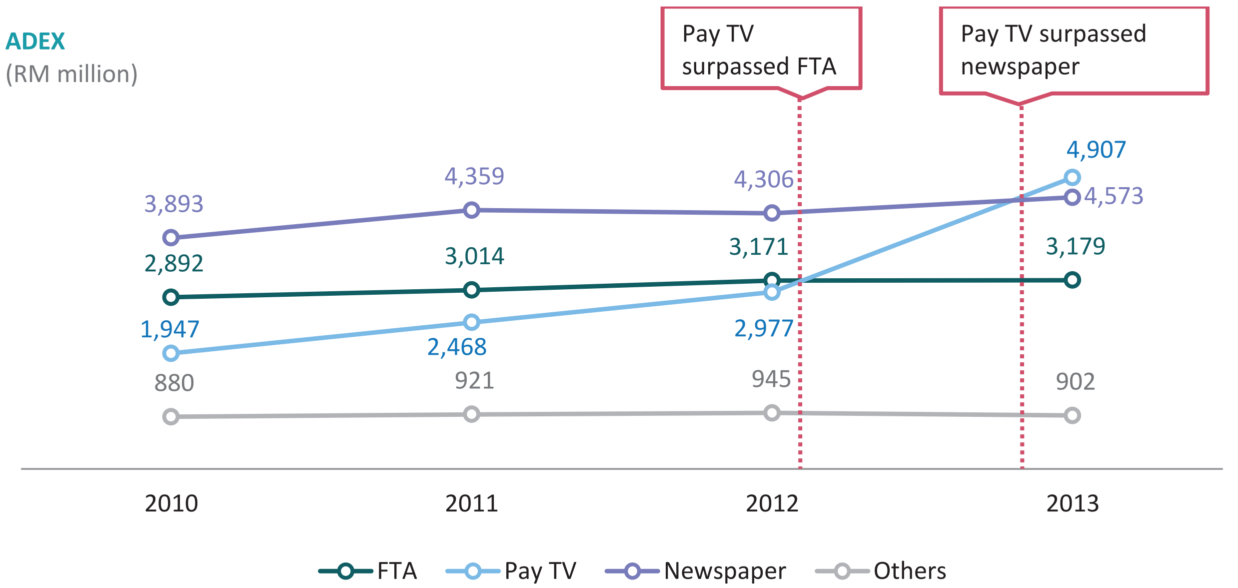
Source: Nielsen

Figure 3.17 Adex in Malaysia by Medium

Alternatively, it can be viewed that Pay TV Adex in 2013 took an additional 10% market share to 36.2% from 26.1% in 2012. Meanwhile, FTA TV market share has declined to 23.4% in 2013 from 27.8% in 2012.

Based on Nielsen's capture of Malaysia Adex, the Adex growth patterns for Pay TV, FTA TV and newspaper can be seen in Figure 3.18. This figure depicts the Pay TV Adex surpassing FTA TV Adex. Pay TV subsequently also surpassed print Adex.

Malaysia Adex 2010 – 2013



Note: In 2012, six FTA TV channels were featured (TV9, 8TV, ntv7, TV3, TV1 and TV2) in our monitor list. Effective 16 July 2013, TV AlHijrah was included to a total of seven FTA TV channels. Pay TV channels were added in batches: 11 channels in 2010, 1 in 2011, 10 in 2012 and 2 in 2013. As at 31 December 2013, there was a total of 27 Pay TV channels

Source: Nielsen

Figure 3.18 Malaysia Adex 2010 – 2013

It is noted that on average basis, Adex per Pay TV channel is RM182 million in 2013. In contrast, the average Adex per FTA TV channel is RM454 million which is 2.5 times that for Pay TV. A total of seven channels was considered for FTA TV and 27 channels for Pay TV. Over the years 2012 and 2013, 12 Pay TV channels were added.

Such scenario shows different approaches taken vis-à-vis the two business models. Wherein the increasing channels for Pay TV increases Adex, FTA TV still remains a strong revenue source. Overall, the Adex pie in Malaysia posted double digit growth in view of the relatively strong growth of Pay TV channels.

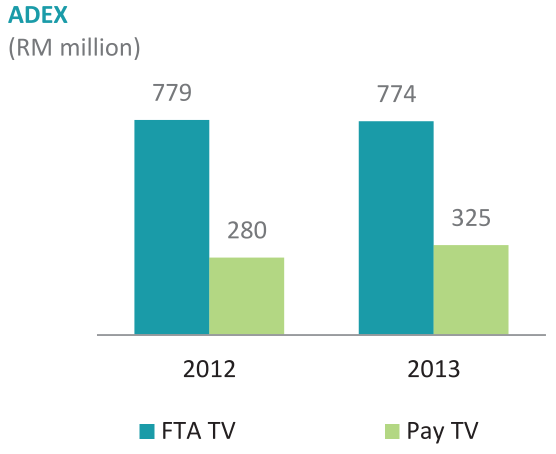
Data from the broadcasters themselves shows what is common is the significant Pay TV Adex growth.

Figure 3.19 shows FTA TV posted Adex consistently above Pay TV for the last two years in 2012 and 2013.

Although the Adex for FTA TV declined by 0.6% to RM774 million in 2013, the Pay TV Adex recorded a double digit growth of 16% to RM325 million in 2013.

Pay TV has advantage over FTA TV as they have the capacity to offer thematic channels that allows more targeted viewers.

FTA TV vis-à-vis Pay TV Adex 2012 – 2013



Note[1]: Adex is reported from Media Prima, RTM and ASTRO
Note[2]: ASTRO FYE January 2014

Source: Industry
Figure 3.19 FTA TV vis-à-vis Pay TV Adex 2012 - 2013

Local government institutions spent nearly RM1 billion for advertisements

As at the end 2013, Nielsen Information Services reported that the local government institution is the top client for Adex. These institutions spent nearly RM1 billion for advertisement on various platforms.

Meanwhile, mobile line services spent RM309 million with RM233 million spent for Adex for phone and accessories categories. Maxis emerged as the highest advertisers among C&M service providers with total Adex worth RM183.49 million.

Moving into 2014, overall Adex for Malaysia is expected to increase due to major events such as FIFA World Cup that will commence in June 2014 and Visit Malaysia Year 2014. In addition, Carat Media forecasts the overall Adex for Malaysia is to grow around 12% in 2014[23].

[23] Article from The Star, Positive Outlook for Adex in 2014 as World Cup Kicks In, November 2013.

Radio Broadcasters

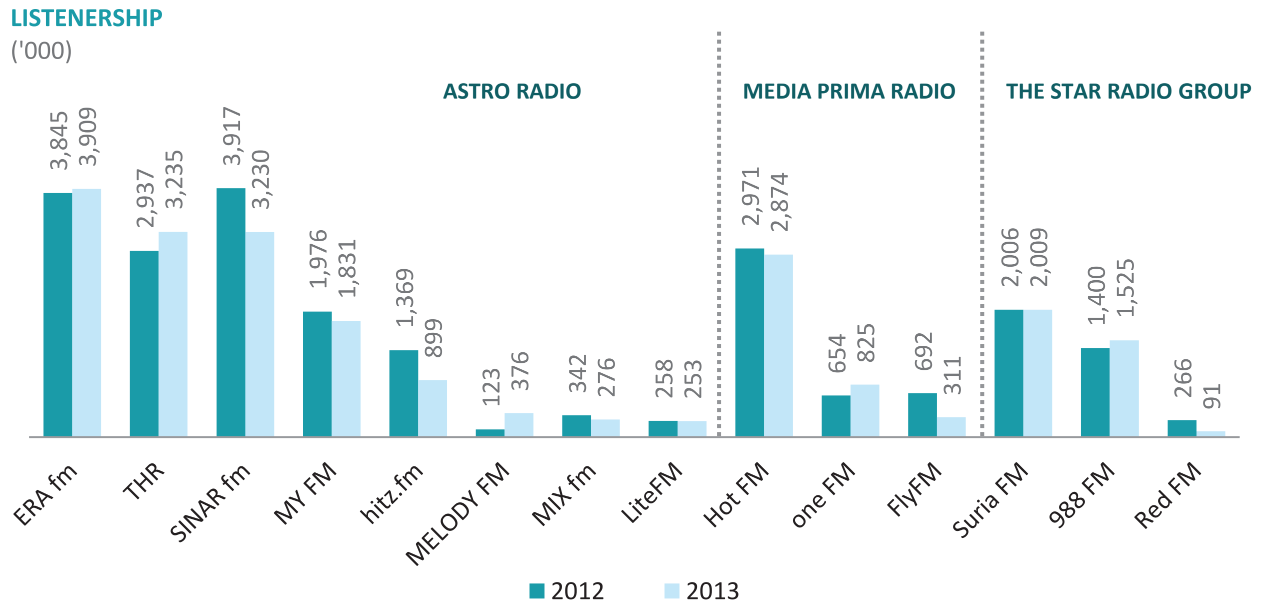
There are more than 20 commercial radio stations operating in Malaysia, with three main radio groups capturing the largest share of listenership namely ASTRO Radio, Media Prima Radio Networks and The Star Radio Group. Notably in 2013, another two radio stations were launched namely, Pi Mai FM and Ultra FM under Copyright Laureate Sdn Bhd. One radio station namely 1M4U fm under Genmedia Sdn Bhd has also started their trial transmission in Klang Valley and it is expected to be launched in 2014.

Today, radio reach and presence in Malaysia is considered wide with many niche markets catering to a diverse range of listeners. To Malaysians, radio is a popular medium for news, entertainment and a means to share experiences and knowledge.

This figure below shows the number of listenership by commercial radio groups in 2012 and 2013. ERA fm under ASTRO Radio is the most popular channel by listenership and has gained almost four million listeners in 2013. Previously in 2012, SINAR fm was the most popular channel under the same radio group.

Commercial radio stations today are focused to increase listenership through programmes or content that appeal to their targeted listeners. The stations also place importance on radio personalities in view of their role to attract large number of listeners.

Listenership by Radio Groups 2012 – 2013



Note: Nielsen does not monitor the listenership for Capital FM (under Star Radio Group)

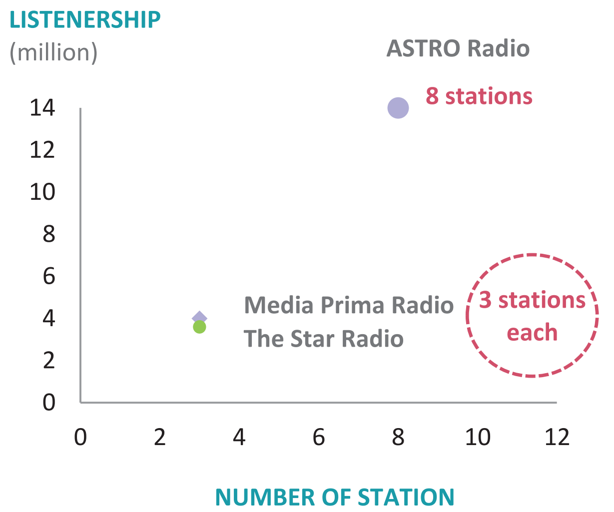
Source: Nielsen

Figure 3.20 Listenership by Radio Groups 2012 – 2013

Among these three radio groups, ASTRO Radio with eight stations recorded 14 million listenership, while Media Prima Radio and The Star Radio recorded four million and 3.6 million listenership respectively.

Figure 3.21 shows the three commercial radio groups respective listenership and the number of stations in each group.

Radio Market: Three Commercial Radio Groups and Listenership 2013

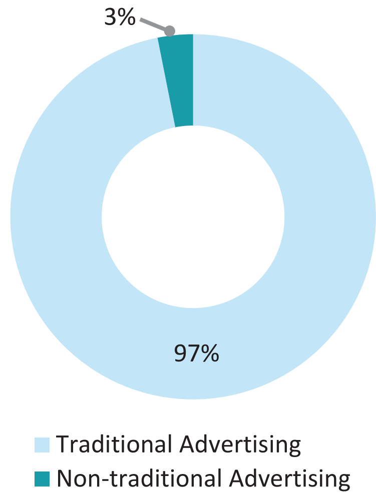


Note: Capital FM under Star Radio Group not available

Source: MCMC, Nielsen

Figure 3.21 Radio Market: Three Commercial Radio Groups and Listenership 2013

Traditional and Non-traditional Radio Adex 2013



Source: Industry, MCMC

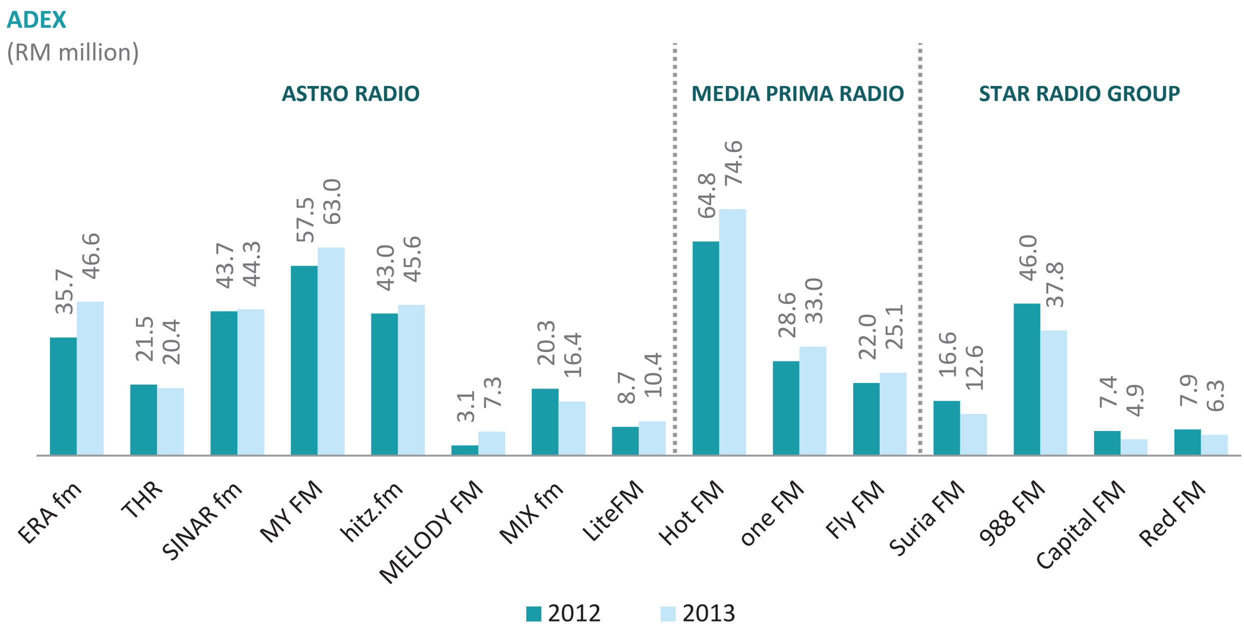
Figure 3.22 Traditional and Non-traditional Radio Adex 2013

From Adex perspective, the three commercial radio groups collectively recorded Adex of almost RM450 million as at 31 December 2013. With the growing Internet services and advancement in digital advertising technology, radio broadcasters are looking for interactive and non-traditional mediums through portal or social channel to boost their avenues for advertising effectiveness.

In 2013, non-traditional advertising across the three radio groups contributed 3% or RM14 million to the total radio Adex. Traditional advertising comprises airtime sales while text link and banner advertising via Internet are some of the sources of non-traditional advertising.

Based on a study by Nielsen, ASTRO Radio captured Adex of RM254 million in 2013, increased by 9% as compared with 2012 and Media Prima Radio recorded Adex RM132.7 million (2012: RM115.4 million). However, Star Radio Group declined by 20% to RM61.6 million (2012: RM77.4 million). The Adex breakdown by radio station is shown in figure below.

Radio Adex 2012 – 2013



Source: Nielsen

Figure 3.23 Radio Adex 2012 – 2013

Radio Development in Malaysia

Feedback obtained from a total of nine radio groups and service providers indicated the following perspectives of radio development in Malaysia.

Business challenges

Radio has been broadcasting audio programmes to the public, being a medium for one way entertainment and news for many decades. However, the advancement of technology has changed the overall consumer landscape and is pushing traditional radio broadcasting to evolve and meet a more demanding and technology savvy public.

Such changes are challenging the radio broadcaster to develop new strategic model to sustain their business, such as moving towards online platform. Several business challenges identified by the radio broadcasters are shown below.

Business Challenges for Radio Broadcasters
Demand for Content and Changes in Customer Expectation Radio broadcasters are facing challenges to produce creative programmes that meet the listeners' expectation. Listeners today are seeking more engagement, rational discussions, debate, analysis, current affairs and economic news.
New Advertising Platform Advertiser messages are reaching a wider market and there is a trend moving towards digital media platform. This scenario has urged radio broadcasters to provide online radio and monetise the new platform.
Changing Behaviour Listeners are progressively replacing radio listening with their own personalised playlists created on their computers and mobile phones. By doing so, listeners can select music of their preference and many have wider collections of music than those offered by a radio station. The presence of online radio is also creating more competition for terrestrial radio.

Source: Industry, MCMC

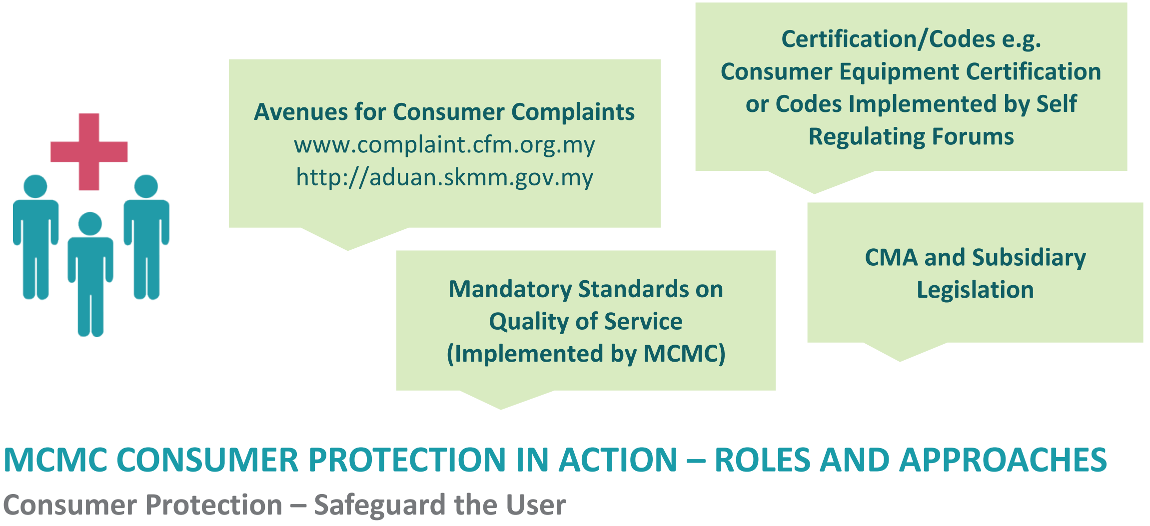
Figure 3.24 Business Challenges for Radio Broadcasters

MODULE 4: QUALITY ASSURANCE AND CONSUMER PROTECTION

Service Quality Assurance

Malaysian consumers are protected by the Mandatory Standards. These were brought into force by MCMC vis-à-vis the CMA to monitor and regulate the performance of all relevant service providers.

MCMC Consumer Protection in Action – Roles and Approaches



Source: MCMC

Figure 4.1 MCMC Consumer Protection in Action – Roles and Approaches

The Mandatory Standards are created to:

- Protect the rights of the consumer;
- Provide the consumer with clear and specific criteria such that the quality of service (QoS) offered can be measured; and
- Enhance competition in the market by concentrating on QoS.

Through Mandatory Standards for Quality of Service, service providers have to ensure the requisite level of quality in their services offered to the customers.

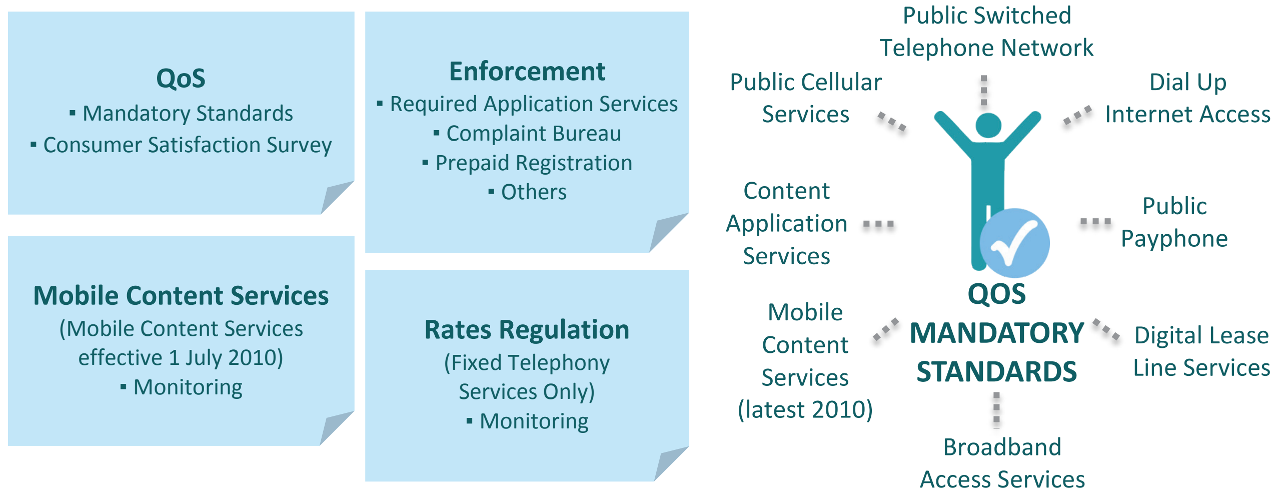
For example, to comply with certain standards, service providers should not exceed the maximum number of complaints as per set in the Mandatory Standards. Non-compliance to the Mandatory Standards for Quality of Service is an offence under Section 105(3) of the CMA. If convicted, offenders are liable to a fine not exceeding RM100,000 or imprisonment not exceeding two years, or both.

There are seven Mandatory Standards for Quality of Service registered between 2003 and 2011, namely:

- Public Switched Telephone Network Service (PSTN)
- Public Cellular Service (PCS)
- Dial Up Internet Access Service (DIAS)
- Content Applications Service (CAS)
- Public Payphone Service (PPS)
- Digital Leased Line Service (DLL)
- Broadband Access Service (BAS)

REGULATORY MECHANISM IN CONSUMER PROTECTION

CMA Promote and Protect Consumer Interest in Use of C&M Services



Source: MCMC

Figure 4.2 MCMC on Consumer Protection – Regulatory Approaches and Beyond

Service providers are required to submit half-yearly reports demonstrating their compliance with the service standard set under Mandatory Standards for Quality of Service. MCMC conducts a random audit on the reports submitted by the service providers to ensure the validity and reliability of the service offered.

As at end 2012, a total of 57 reports were submitted to MCMC. Out of this, six licensees were found as non-compliant. These licensees failed to comply with the following standards:

a) Public Switched Telephone Network Service;
b) Digital Leased Line Service; and
c) Broadband Access Service

As a matter of due process, after further assessment were made of all non-compliances, Investigation Papers (IP) were opened on the six licensees for investigation and action under Section 105 (3) of CMA and Standards Licence Condition Section 5.2.

Consumer Protection

MCMC Complaints Handling Process

It is pertinent to highlight that any complaint against a service provider should be referred to the respective service provider first. This accords the service provider the first opportunity to resolve the complaint. However, should the complaint not be resolved or resolution is unsatisfactory, the complainant may lodge the complaint to the relevant Industry Forum. The Industry Forums comprise the Communications and Multimedia Consumer Forum of Malaysia (CFM) and the Communications and Multimedia Content Forum of Malaysia (CMCF).

In situations where resolution of the complaint is still not satisfactory, then the complainant can lodge a complaint to MCMC. A Guideline for MCMC Complaint Handling is available at www.mcmc.gov.my.

MCMC Complaint Handling Process

STEP 1 — **Consumer Problem/ Complaint Issue**

Contact the Service Provider for Solution
Problems related to telecommunications, postal, Internet and radio services

No solution/ Feedback

STEP 2 — **CFM or CMCF**

Complaints related to Services

Communications and Multimedia Consumer Forum of Malaysia (CFM)
Hotline: 1800 182 222
E-mail: aduan@cfm.org.my
Portal: www.cfm.org.my

Complaints related to Content through electronic medium

Communications and Multimedia Content Forum of Malaysia (CMCF)
Hotline: 1800 882 623
E-mail: secretariat@cmcf.my
Portal: www.cmcf.my

Not Satisfied

STEP 3 — **Complaints to MCMC**

Complaints to MCMC
Hotline: 1800 888 030
E-mail: aduanskmm@cmc.gov.my
Portal: aduan.skmm.gov.my

Source: MCMC
Figure 4.3 MCMC Complaint Handling Process

Industry Forums and Self-Regulation through CFM and CMCF

Role and responsibility of CFM

The CFM works on the basis of self-regulation with participation and representatives from consumer associations, service providers and other interested parties. The joint representation of both parties from the demand and supply sides serve to ensure holistic assessment and dealing of complaints, thereby protecting the rights of consumer.

As at end 2013, CFM has a total of 41 members, with representatives from 19 service providers and 22 consumer associations.

The CFM is a designated Industry Forum in line with the requirements of the CMA. Since 2001, the CFM provides platform for resolution of complaints, disputes and grievances in relation to consumers' C&M matters. Such mitigating process ensures that all C&M service providers are required to deal with their consumer complaints in a reasonable manner and address these complaints for resolution.

The year 2013 marked a milestone for CFM with the official launching of their CONSUMERinfo.my portal (www.consumerinfo.my). This portal is part of the CFM initiatives to reach out to consumers through new media platforms. Aside from this, CFM is also promoting their awareness campaign on Facebook and Twitter.

As at end 2013, the CONSUMERinfo.my portal attracted more than 122,000 hits while CFM homepage attracted 26,378 visitors. On social media platforms, Facebook attracted nearly 2,000 like on CFM page and Twitter with 245 followers.

CFM CONSUMER ENGAGEMENT AND AWARENESS EVENT 2013

Type of Activity	Involvement
Seminars/Workshop	5
Exhibitions/Booth	20
Speaking Engagement	8

Source: MCMC

Figure 4.4 CFM Consumer Engagement and Awareness Event 2013

In effort to create greater visibility to all Malaysians, CFM has actively participated in various consumer engagement and awareness events. Some of these events include *Karnival Jalur Lebar 1Malaysia* and MCMC *Klik Dengan Bijak™.*

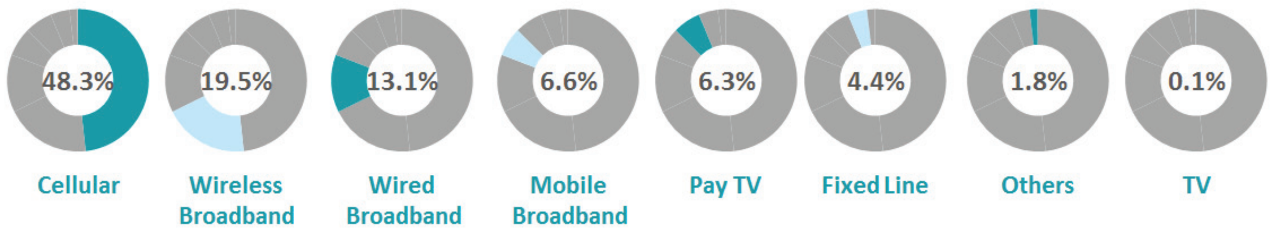
CFM publications such as consumer handbook and other consumer awareness collaterals were distributed during these various events to encourage empowerment of consumers with knowledge of their C&M rights. This way, consumers can understand and know how to manage and address grievances through the correct complaint channels for speedy resolution.

In 2013, the CFM published a consumer handbook entitled 'Deciding what's good for you', which is available in English and Malay. A quarterly newsletter branded as *Shout* was also published for the purpose of consumer education and awareness about Malaysian Digital Lifestyle. It contains tips and guides on the latest mobile and Internet technology.

With these proactive consumer contact points and engagement events, CFM seeks to reach out to create C&M awareness over a larger consumer base.

As at end 2013, a total of 6,257 complaints were received in which 4,857 complaints or 77.6% were resolved. An analysis based on complaint categories found billing and charging, poor service and poor coverage issues constituted more than 70% of total complaints lodged with the CFM. Figure 4.5 below shows the complaints by type of service.

Complaints by Type of Service 2013



Source: MCMC

Figure 4.5 Complaints by Type of Service 2013

Furthermore, CFM also investigated 103 cases on non-compliance to the General Consumer Code (GCC) in 2013. These cases were mainly related to Credit Tip Off Service (CTOS) fee, false registration and unauthorised credit card transaction.

CMCF role in content

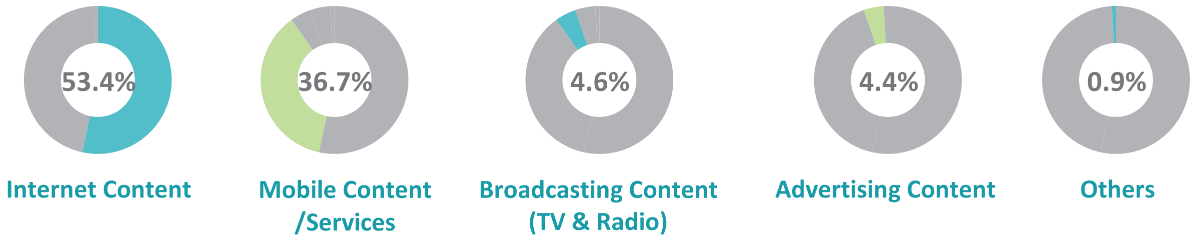
The Communications and Multimedia Content Forum of Malaysia (CMCF), as with other Industry Forums empowered by the MCMC through CMA, is a designated industry body which facilitates and enhances industry self-regulation. The CMCF is guided by the Content Code, which was developed by CMCF together with the industry and MCMC.

The CMCF was established in 2001 with the aim to govern content and address content related issues disseminated by way of electronic networked medium. The monitoring elements include electronic content originating in Malaysia that is transmitted over the Internet, radio, TV and mobile devices.

The CMCF also has a Complaints Bureau and a Content Advisory Centre to address grievances from consumers and industry members on matters related to content over the electronic networked medium.

As at end 2013, CMCF received 431 complaints and six advisory cases. Out of the 431 complaints received, 389 complaints were made by the public and 42 complaints were from other agencies/authorities (MCMC, KKMM and others). There was also one complaint from the CMCF industry member. Complaints received were on content related to advertising, Internet, mobile content/services, broadcasting and others. The categories and number of complaints in 2013 is shown in Figure 4.6.

CMCF Complaints Received by Category 2013

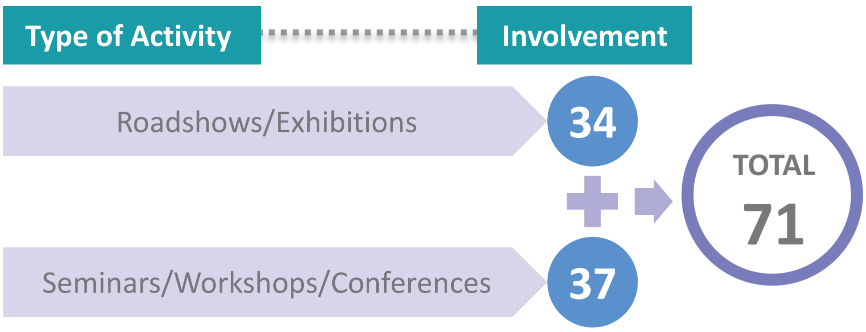


Source: CMCF

Figure 4.6 CMCF Complaints Received by Category 2013

In continuing efforts to reach out to the grassroots, CMCF organises and participates in workshops, talks and exhibitions including making presentations in seminars. Through these activities, CMCF continues to drive awareness; promote and educate the public on proper use and access to content delivered over the electronic medium. Their involvement in various events is shown in figure below.

CMCF ACTIVITY 2013



Source: MCMC

Figure 4.7 CMCF Activity 2013

Consumer Complaints Received by MCMC

Over the years, users of communications services have become more aware of their rights as a consumer. It is observed that more complaints have been lodged to the right channels, that is, first through the service providers, and then to the self-regulating forums and the MCMC. Consumer complaints collectively represent a feedback mechanism as to whether service providers are up to mark on their services provision. Such feedback provides the industry with knowledge of areas for improvement and enhancement. This way, the consumers at their individual levels compel the service providers to provide competitive services.

As a case in point, in light of the numerous complaints and reports received from the public, non-governmental organisations and media regarding dropped calls in early 2013, MCMC conducted an Extensive End-Point Service Availability Testing (EESAT) between July and September 2013 nationwide to check on the matter. This involved a total of 120 compliance measurements conducted in various locations throughout Malaysia. As a result, actions have been taken by various service providers to ensure quality of the calls.

Dropped Call Complaints and Compound 2013

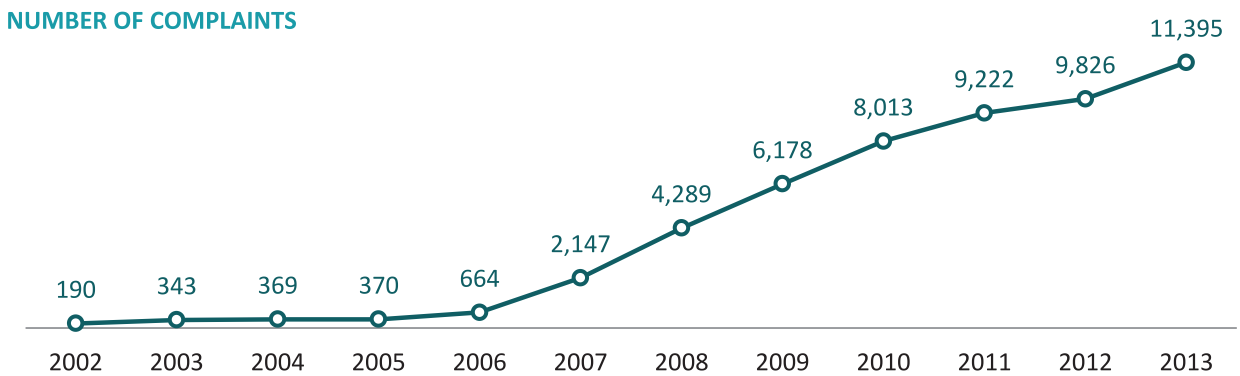
2013	CELCOM		DIGI		MAXIS		U MOBILE	
	Complaint	Compound	Complaint	Compound	Complaint	Compound	Complaint	Compound
July	2	3	3	5	3	5	0	0
August	1	3	5	4	1	3	0	0
September	6	1	1	2	1	1	1	1
Total	**9**	**7**	**9**	**11**	**5**	**9**	**1**	**1**
Compound (RM terms)	**RM310,000**		**RM480,000**		**RM360,000**		**RM50,000**	

Note: Total Complaints: 24
Total Compounds: 28

Source: MCMC
Figure 4.8 Dropped Call Complaints and Compound 2013

The graph below records a total of 11,395 complaints received in 2013. This is an increase of 15.9% compared with 9,826 complaints received in 2012.

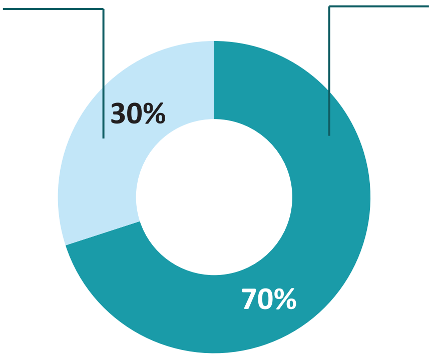
Trend of Consumer Complaints 2002 – 2013



Source: MCMC
Figure 4.9 Trend of Consumer Complaints 2002 – 2013

The type of complaints received ranged from those concerning telecommunications services to broadcasting, postal/courier service and Internet/new media related content. From these complaints, 70% were against service providers and the remaining 30% were related to the provisions under the CMA and investigated by the MCMC. These centred on issues shown in Figure 4.10.

Category of Complaint Received 2013



Complaints related to the provisions of the CMA and investigated by MCMC	**Complaints lodged against service providers**
Content (new media, SMS/MMS, TV and radio)	Postal and courier service
Cybercrimes such as phishing	Billing and charging such as dispute of data/broadband charges
Spectrum interference	SMS service particularly on mobile content services
Telecommunication structure and radiation	Dispute on terms and condition relating to Fair Usage Policy
Illegal installation of TV parabolic/ nonstandard equipment	Unavailability or poor service coverage mostly on cellular and broadband service
Incentive provided by MCMC i.e. 1Malaysia Netbook, Pakej Komunikasi Belia (PKB) and Get Malaysian Business Online (GMBO) and other miscellaneous complaints	Poor service delivery or performance mainly on service disruption and quality of Internet connection
	Services provided under USP programme such as 1Malaysia Wireless Village (KTW1M), 1Malaysia Internet Centre (PI1M) and Community Broadband Library
	Other complaints i.e. Misrepresentation of service, false/fraud registration, unfair practices

Source: MCMC

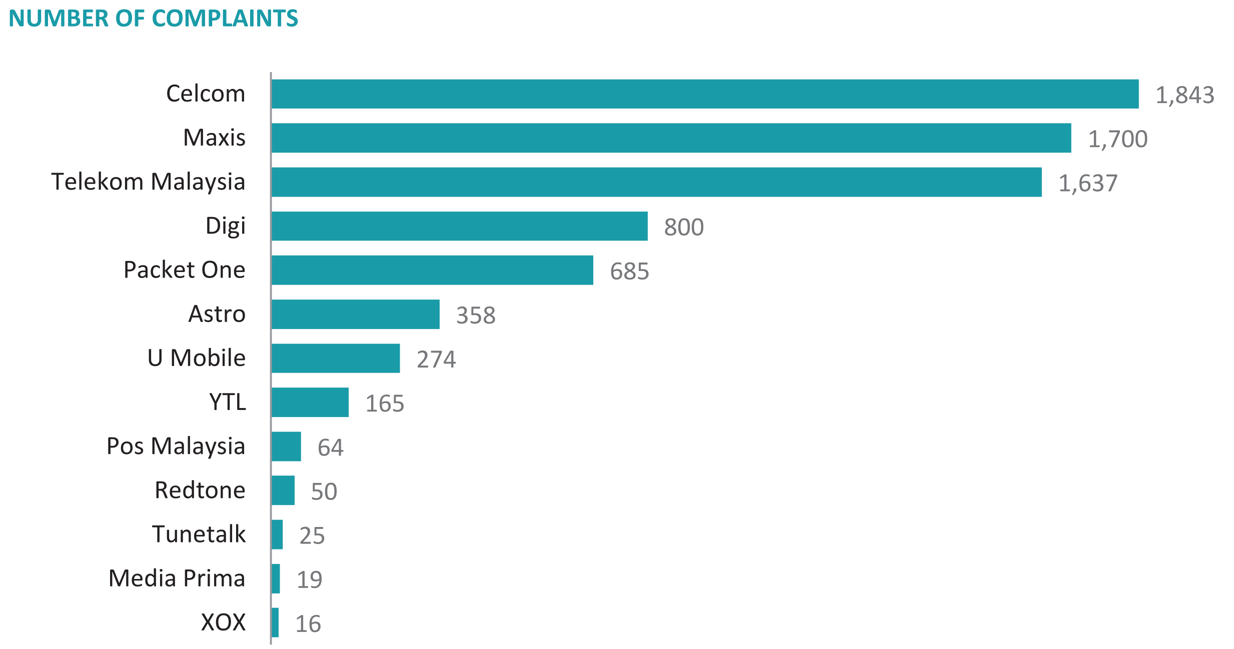
Figure 4.10 Category of Complaint Received 2013

In the case of complaints on phishing, the MCMC took action on joint basis. MCMC together with Polis Diraja Malaysia (PDRM) and Bank Negara Malaysia has taken down a total of 652 phishing sites in Malaysia from January to May 2013. This is less than the 835 sites taken down throughout the same period in 2012. This indicates among others increasing public awareness when banking or shopping online.

There were also complaints received that were not under MCMC jurisdiction. They were related to investment or quick cash scheme, non-delivery of online purchased items and copyright issues and were referred to the relevant authorities for resolution.

As at 31 December 2013, 85% of the complaints received have been resolved or noted. On average, 22.9% were resolved within 72 working hours.

Complaint Received by MCMC against Service Providers



Source: MCMC

Figure 4.11 Complaint Received by MCMC against Service Providers

Taking a look at the complaints received by service providers themselves, note that the most difficult complaints for the service providers to resolve in 2013 were on billing and charging, network coverage and quality of service issues. Difficulties in resolution were due to involvement of third parties such as vendor arrangements or authorities' approval for remedial work.

In such cases, the advice to service providers is to apprise the consumers of the issues–faced in resolution of their complaints. This is so that if time for resolution is unusually long, consumers have the recourse to complain to the Industry Forums or MCMC directly.

The Most Difficult Complaints to Resolve by Service Providers

CELCOM

- Dispute on recurring and non-recurring charges where customer demands for full rebates and discounted device price;
- Bill shock – distress from unexpected charges due to massive voice and/or data consumption while roaming; and
- Network related problems in relation to connectivity failure.

MAXIS

- Fibre Internet Network – involves external dependencies and vendors;
- Fault Network/Coverage – involves geographical terrain and aesthetics; and
- Data Usage/User awareness – understanding of the plans and Fair Usage Policy.

TELEKOM MALAYSIA

- Coverage/Infrastructure availability issues;
- Dispute on Charging/Billing – replacement of customer premises equipment (CPE) which has exceeded the warranty period, one time charges and fraud cases/denial subscription; and
- Service Experience/QoS – understanding of the terms and conditions of provision/packages including speed.

Source: Industry

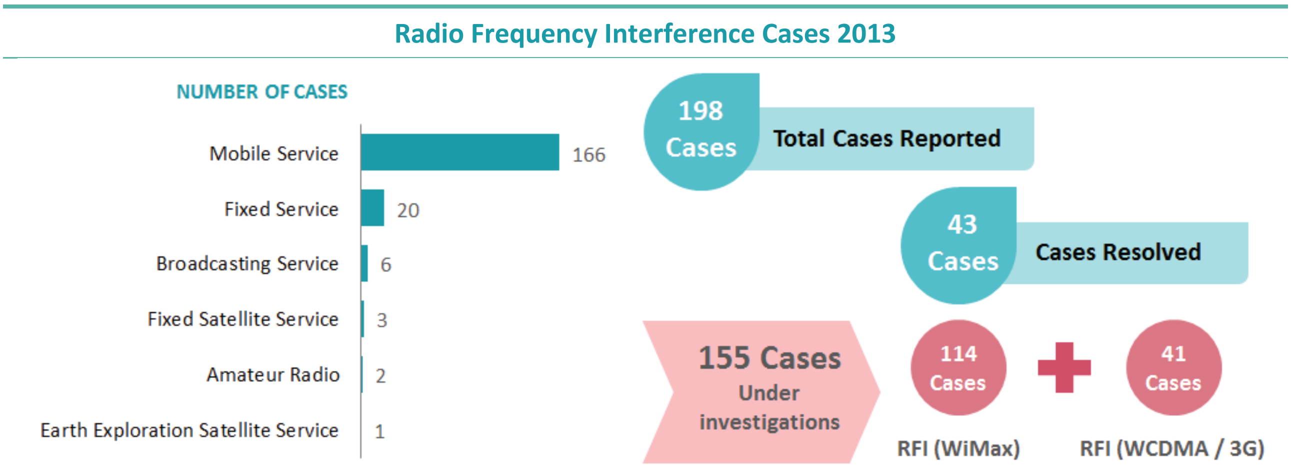
Figure 4.12 The Most Difficult Complaints to Resolve by Service Providers

Spectrum Monitoring and Interference Investigation

As wireless service expands and demand increases, radio interference becomes more prevalent in the wireless network. As a result, the task of managing radio waves is becoming much more complex and challenging.

One major cause of interference is the introduction of new wireless or electronic devices available today that can easily be purchased online or brought into the country bypassing customs inspection or screening. Thus, the main hurdle for the telecommunications industry today and in the future, is to manage the co-existence of legitimate devices while providing an acceptable service level.

In 2013, the MCMC received a total of 198 Radio Frequency Interference (RFI) cases. MCMC resolved 43 cases of which 17 cases of these involved U Mobile and Maxis. The balance 155 cases currently under investigation are about two thirds involving WiMax service provider, Packet One Network (P1). Most of the latter cases are located in the Central Region. The other 41 RFIs pending investigations are on cellular service.



Source: MCMC

Figure 4.13 Radio Frequency Interference Cases 2013

It is noted that P1 cases are the most time consuming to resolve as they require onsite spectrum scanning to pinpoint the exact location of interference. This is also due to the use of non-standard equipment. Further, many of these cases involved sites with multiple interference sources. Of late, MCMC's monitoring data shows that these interferences towards P1 WiMax network are spreading to other states. Among the reasons for these interference cases are faulty repeater/booster, non-standard Radio Frequency Identification (RFID) reader, faulty walkie-talkie transceiver and non-standard Digital Enhanced Cordless Technology (DECT) phones.

The most challenging events in managing interferences are those that are held live and hosted internationally by Malaysia. These events include the Formula 1 races as well as the Motorcycle Grand Prix. Every year, these events becomes more difficult to manage due to the increasing number of teams participating as well as the introduction to new mobile services made available in the country. There is not much choice but to shut down implicating services in ensuring the success of hosting such events.

Auditing the Cellular Networks via EESAT for Dropped and Blocked Calls

Cellular network quality in Malaysia is measured using EESAT (Extensive End-Point Service Availability Testing) for benchmarking. In principle, EESAT involves a sequence of test calls, defined by two methods of testing, which are:

- Drive test
- Static test

The MCMC conducts monthly Drive Test measurements on major cellular service providers to ensure that their services are up to mark and aligned with the licence conditions.

The pre-defined Protocol Routes are shown below.

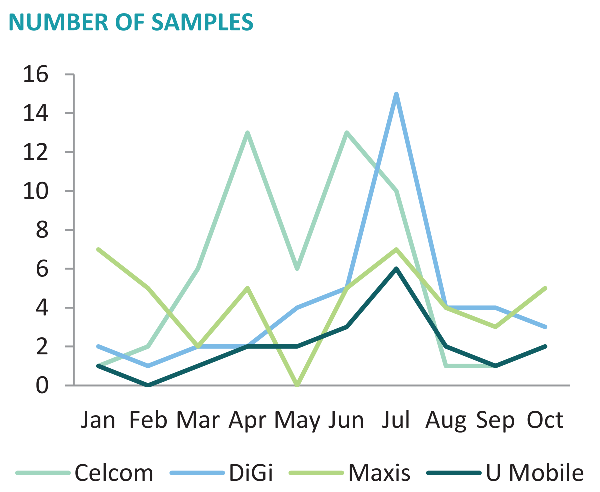
Area	Distance (km)
Cyberjaya	30
Putrajaya	55
Maju Expressway (both ways)	50
KLIA to Subang Airport via ELITE and NKVE	123
Total	**258**

Source: MCMC

Figure 4.14 Area Tested Under Protocol Route

The results of the Drive Test done in 2013 is summarised in the Figures 4.15 and 4.16.

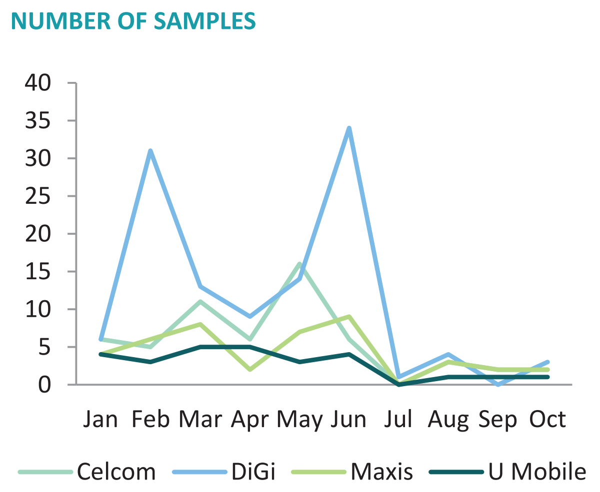
Total Dropped Call (by Service Provider)



Source: MCMC

Figure 4.15 Total Dropped Call (by Service Provider)

Total Blocked Call (by Service Provider)



Source: MCMC

Figure 4.16 Total Blocked Call (by Service Provider)

Benchmarking the cellular network service quality or network performance analysis is done using the ActixOne analysis system. This system was first introduced in July 2012 as a neutral benchmarking platform as it is able to perform a single multi-vendor drive test survey data analysis. The software system helps to eliminate any differences or disputes between the cellular service providers and the tested results.

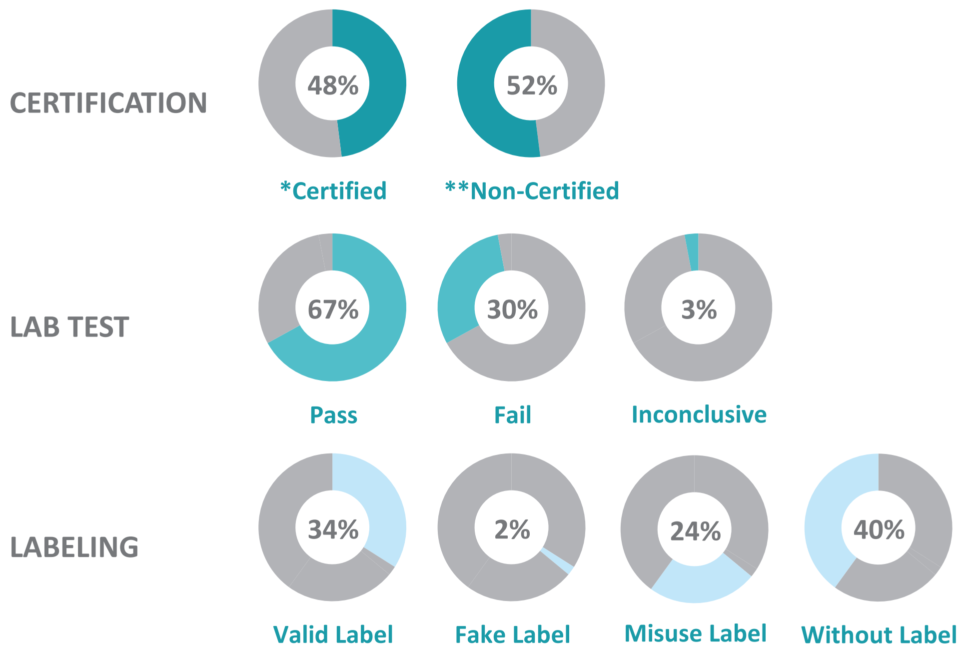
Equipment Surveillance, Device Certification and Enforcement

MCMC monitors compliance of communications equipment and devices certification

MCMC conducted annual market surveillance programme for communications equipment and devices supplied in Malaysia. This is done in collaboration with MCMC appointed certifying agency, SIRIM QAS International Sdn Bhd. The programme aims to monitor and promote compliance requirements for communications equipment so that they always adhere to the technical standard, particularly those related to security and interoperability. This programme is necessary to protect the rights of consumers as well as increasing the confidence of retailers, investors and the consumer.

A total of 108 communications equipment models covering 18 product categories such as hand phones, single-line phones, tablet computers, Wi-Fi products, walkie-talkies, GSM alarm system, wireless microphones, smart TVs and wireless media players were tested. All samples were obtained through direct purchases from retail outlets across the country and also through online purchases.

All the samples were re-tested in the laboratory to verify its compliance with the technical standard as well as whether these had valid, false or incorrect labels or certification.



**Sample model listed in the SIRIM database of certified models*
***Sample model not listed in the SIRIM database of certified models*

Source: MCMC
Figure 4.17 Market Surveillance Results

The findings from the market surveillance programme could result in enforcement actions, as well as providing an indicator of equipment compliance status in the market. This information is important to further improving the certification and importation processes.

In 2013, enforcement action was taken on 18 cases of unlawful use, possession or supply of non-standard equipment under Section 239 of the CMA. Other enforcement actions taken by MCMC under the various Sections of the CMA are shown in Figure 4.18.

Cases	Number of Complaints
CATEGORY: Section 233 CMA Offensive, Obscene, Indecent, Menacing or False Communications	
SMS/MMS/Crank Call	165
E-mail	22
Blog	22
Website	10
Social Media	68
Portal	3
CATEGORY: Others	
Section 242 CMA Breach of conditions of licence, assignment, instruments and others	115
Section 239 CMA Unlawful use, possession or supply of non-standard equipment	18
Section 205 CMA Provision of content applications service without a valid licence	2
Section 206 CMA Non-compliance with content applications service licence conditions	6
Section 11 Postal Services Act 2012 Providing postal services without a valid licence	2
Section 64 Postal Services Act 2012 Unlawful acts on postal article	1
Section 65 Postal Services Act 2012 Possession and sale of fictitious and counterfeit postal stamp	1
Regulation 16 CM (Technical Standards) Regulations 2000 Sales and other activities involving non-standard, modified and uncertified communications equipment	83
Total	**518**

Source: MCMC

Figure 4.18 Enforcement Actions Taken

Content Monitoring

MCMC undertakes the function of monitoring and compliance assessment of Content Application Service Provider (Individual) Licensees or CASP (I) with regard to the Licence Conditions and provisions of social regulation under the CMA and the Special Licence Conditions (SLC).

Under the CMA, all private broadcasters require CASP (I) licence to operate in Malaysia and it requires the licensee to comply with the licence conditions stipulated in the CASP (I) licence.

In terms of complaints on broadcast content, the MCMC received a total of 62 complaints in 2013. Out of these, there were 44 complaints on programme content, 17 complaints on commercial advertisement, and one complaint on copyright. Based on broadcast medium, there were 22 complaints on terrestrial radio, 21 complaints related to subscription TV and 17 complaints about terrestrial FTA TV. Figure 4.19 shows the overview of categories of complaints received in year 2013.

Complaints Received 2013				
Category of Complaints	**Subscription TV**	**Terrestrial FTA TV**	**Terrestrial Radio**	**Others**
Commercial Advertisement	1	10	6	-
Programme Content (Offensive, menacing, false, violent, indecent and obscene)	20	7	16	1
Others (Copyright)	-	-	-	1
Subtotal	**21**	**17**	**22**	**2**
Total	**62**			

Note: Subscription TV – ASTRO, HyppTV, ABNxcess
Terrestrial FTA TV – TV3, TV9, ntv7, 8TV & TV AlHijrah
Others – General or all TV

Source: MCMC
Figure 4.19 Complaints Received 2013

The broadcast complaints received were related to programme content that was offensive, menacing, false, violent, horror or indecent. There was content concerning cultural sensitivities and racial sentiments. Notably, more than half of the complaints on commercial advertisement were related to unacceptable product and services such as betting and gambling, slimming products and false or unsubstantiated claims.

Of the nine complaints found in breach of the CMA, enforcement actions were taken vis-à-vis warning/advisory letters issued to licensees. Meanwhile, the remaining 38 complaints or 61.3% out of 62 complaints received by MCMC were not in breach of the CMA.

Action Taken in 2013 for Complaint Received				
	FIR	**Warning Letter**	**No Breach**	**Forwarded to CMCF**
Subscription TV	4	3	13	0
Terrestrial FTA TV	3	1	13	0
Terrestrial Radio	2	3	10	7
Others	0	0	2	0
Total	**9**	**7**	**38**	**7**

Note: Subscription TV – ASTRO, HyppTV, ABNxcess
Terrestrial FTA TV – TV3, TV9, ntv7, 8TV & TV AlHijrah
Others – General or all TV

Source: MCMC
Figure 4.20 Action Taken in 2013 for Complaint Received

In accordance with the SLC, MCMC is responsible to ensure that the CASP (I) licensees carry public announcements for the purposes of Government or public or national interest. MCMC has been the reference point to facilitate Public Service Announcement matters since 2012.

In 2013, MCMC received and assisted distribution of a total of 117 Public Service Announcement requests from various Ministries and other agencies. Most of the CASP (I) licensees have complied with this SLC.

Economic Regulation: Accounting Separation in Malaysia

2013 marks the implementation of accounting separation for telecommunication service providers in Malaysia

When MCMC developed the accounting separation framework in 2012, it was stipulated that service providers with revenue and total assets at or above RM3 billion are required to produce regulatory accounts. These are at the service level, detailing out the costs, revenues, assets and liabilities for the identified services at the wholesale and retail business units. Those with revenue and/or total assets below RM3 billion are only required to produce regulatory accounts showing revenue and net assets at the wholesale and retail levels.

In order to guide the industry towards the preparation of the regulatory financial statements (RFS), MCMC in 2013 conducted a series of training sessions for all service providers who are subject to accounting separation. The sessions focused on the overall framework of accounting separation. The main item areas include revenue attribution, cost allocation, transfer charges, mean capital employed and reconciliation. There was also an overview of current cost accounting.

MCMC also guided the service providers on how to prepare documentation on revenue, network cost drivers and non-network cost drivers. There were also one to one sessions with service providers to address specific issues faced by the respective service providers.

MCMC has taken a phased approach in implementing accounting separation. For the first milestone, service providers were required to submit their first half year 2013 revenue reports together with revenue documentation. Second phase include the submission of documentation on network cost drivers. MCMC has reviewed those reports with the service providers. For the third milestone, the service providers prepared the documentation on non-network cost drivers.

For 2013 financial accounts, service providers were required to submit draft RFS by June 2014 followed by the audited version by September 2014 for those with financial year ending 31 December 2013. For the first two years 2013 and 2014, the submission will be based on historic cost, followed by current cost accounting thereafter for operators that fall above the threshold level.

To ensure holistic industry understanding of audit issues pertaining to accounting separation, MCMC worked with the Malaysian Institute of Accountants (MIA) and organised training for MIA and the auditors to ensure both the auditors and service providers are on the same platform on this matter.

Among the challenges raised by the service providers were complying with MCMC audit requirements in the first year of implementation, which involved the "properly prepared in accordance with" audit opinion. MCMC has taken this into considerations and revised the audit requirement to a readiness review for Year 1.

MODULE 5: SECURITY AND TRUST

Security Breaches and Cybercrimes

Cybercrime is bringing damage not only to company's performance, but also to national economies as it affects trade, competitiveness, innovation and global economic growth. Hackers and other cyber criminals are responsible for the loss of USD375 to USD575 billion each year globally. This according to McAfee[24] covers losses on intellectual property and confidential information, service disruptions, network security and insurance costs, recovery from cyber attacks, loss of consumer trust and other reputational damage to companies. On individual victims, more than 800 million people worldwide have had their private information stolen at an estimated loss of USD160 billion annually.

McAfee also indicated that cybercrime is costing Malaysia an equivalent of 0.18% of its Gross Domestic Product (GDP), at approximately RM1.8 billion (GDP 2013: RM986.7 billion).

Therefore, it is important to be aware of the risks of online security breaches and the need to take necessary precautions for protection. One of the security measures is digital signature that can be used to authenticate and build trust for online transaction. The nurture of the Public Key Infrastructure (PKI) industry in Malaysia has bearing to this effect. It is towards ensuring security online that MCMC in 2012 started a campaign to bring about public awareness on Internet safety. *Klik Dengan Bijak™* serves to educate on safe and positive use of the Internet and to remind the public to be aware and wary of cybercrimes.

Digital Signature

A digital signature enables recipients to verify and authenticate the integrity of an electronic document to ensure the document is safe and its content can be trusted or is authentic. "Authentic" means the assurance that content exchanged electronically is not altered and the sender is verified as legitimate. Digital signature comprises the element of Privacy, Authentication, Integrity and Non-repudiation (PAIN).

Digital signatures rely on certain types of encryption to ensure authentication. Encryption is the process of taking all the data that one computer is sending and encoding it into a form that only the receiving computer will be able to decode. Authentication is the process of verifying that information is coming from a trusted source. These two processes work hand in hand for digital signatures[25].

Overall, digital signature serves to secure connection between two transactional parties. Security and commitment are key issues for online transactions. With digital signature, the problems such as online identity, legal commitment, third party interference and manipulation of information virtually transmitted are mitigated. The Certification Authority (CA) is the party responsible to issue digital certificates for such purposes.

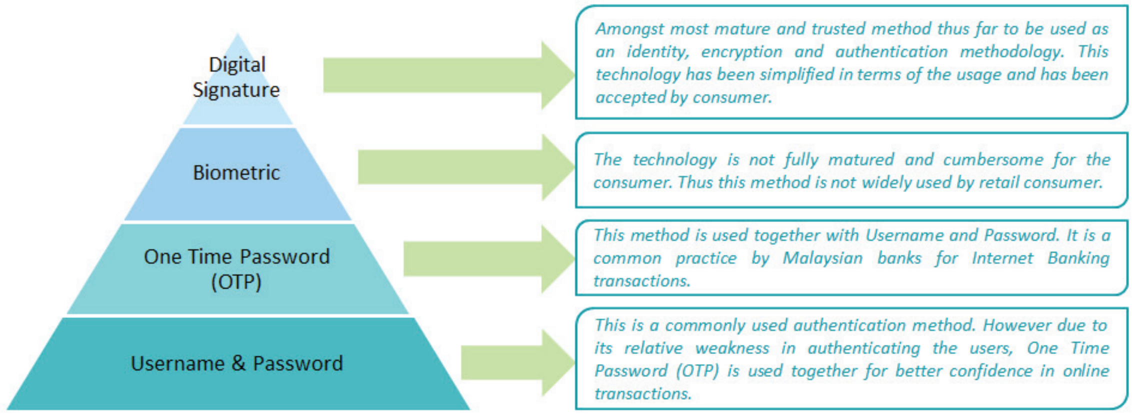
MCMC is the regulatory body supervising three Licensed CA namely, Digicert Sdn Bhd (Digicert), MSC Trustgate Sdn Bhd (Trustgate) and Telekom Applied Business Sdn Bhd (TAB). This is a purview of the MCMC under the Digital Signature Act 1997 (DSA).

[24] McAfee Centre for Strategic and International Studies, Net Losses: Estimating the Global Cost of Cybercrime, Economic Impact of Cybercrime II, June 2014.
[25] How Stuff Works, What is Digital Signature?

To ensure the effectiveness in issuing digital certificates, the CA have to comply with the prerequisites set out in the DSA. This involves the use of a trustworthy system and stringent requirements to ensure that integrity of the CAs in Malaysia are at the highest level. To date, MCMC has yet to receive any report pertaining to breach or compromise of digital certificate issued by CA.

Digital signature is subject to the prescribed procedure and has the effect of non-repudiation. Therefore, the digital signature is deemed as among a mature and trusted authentication method vis-à-vis other options of electronic signatures such as PIN number or Username or Password.

Hierarchy of Authentication Used Securing Electronic Applications in The Market



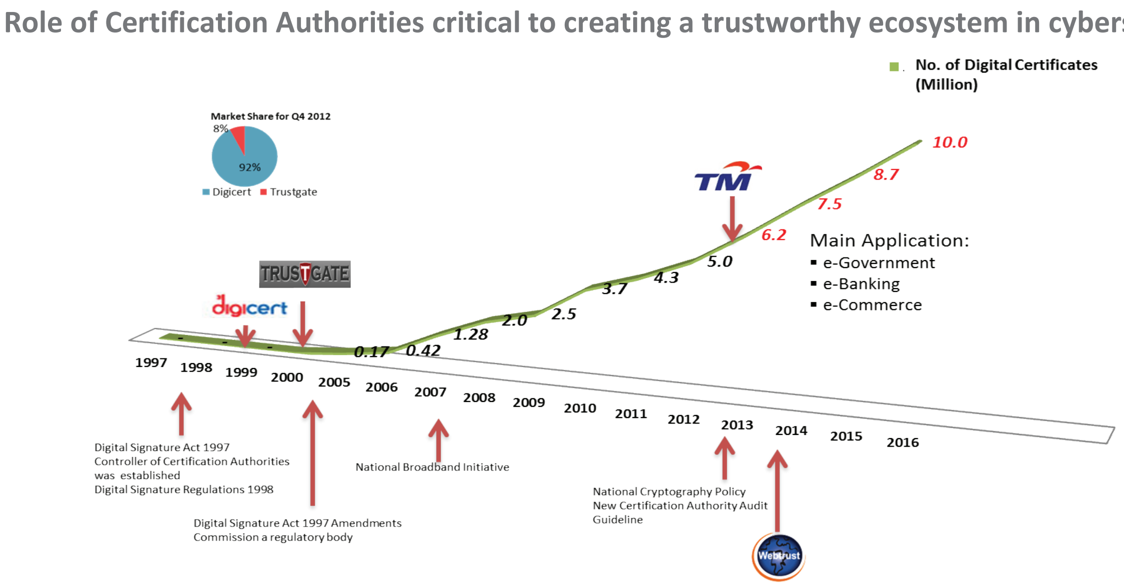
Source: MCMC

Figure 5.1 Hierarchy of Authentication Used Securing Electronic Applications in the Market

Public Key Infrastructure (PKI) Development in Malaysia

The MCMC plays an important role in promoting the use of digital certificates in both public and private sectors. Figure 5.2 shows the growth of PKI industry in Malaysia.

The Growth of PKI Industry in Malaysia



Source: MCMC

Figure 5.2 The Growth of PKI Industry in Malaysia

The PKI in Malaysia is developing from various perspectives, such as application by private and government agencies in projects including the Malaysian ePassport, Malaysia eCourt for Peninsular and others.

In ensuring compliance with the annual audit requirement, the CAs are required to undertake performance audit each year by qualified auditors who have expertise in the field of computer security as recognised by MCMC. In raising the bar to international standard, MCMC introduced a compliance audit of WebTrust Principles for Certification Authority (WebTrust Principle). WebTrust Principle is developed by the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA).

The WebTrust Principle is adopted by most global CAs in other countries. This is an accreditation through WebTrust seal which enables the CAs to apply and register their root certificates on websites such as Mozilla browser, Internet Explorer, Safari and others. In November 2013, Trustgate has obtained the WebTrust certification.

Business Continuity Management

The MCMC introduced a Guidelines for Business Continuity Management in 2013 to ensure the continuity of CA services should disaster or any catastrophe disrupt the CA operations. The Business Continuity Management involves planning and organising of resources and procedures that would enable the CAs to continuously deliver service to customers without interruption during any disaster. The continuous availability of critical services and essential services is a must for CAs to ensure reliability of their services, regulatory compliance and building customer confidence, aside from upholding its reputation.

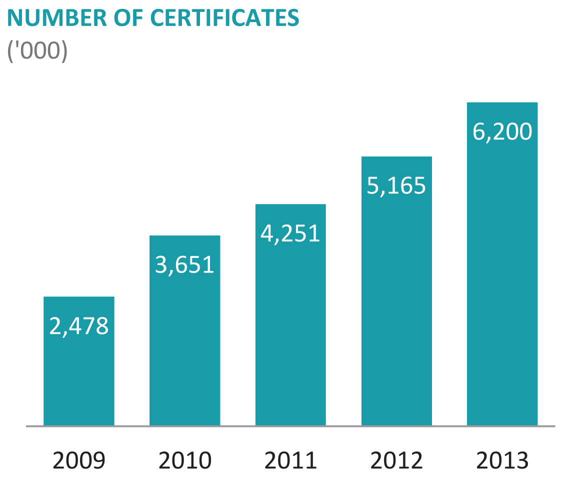
Digital Certificate Market

As at end 2013, Digicert and Trustgate collectively have issued nearly 6.2 million certificates, a 20% growth from 5.1 million certificates issued in 2012.

Digicert captured 92% of the market while the balance of certificates is issued by Trustgate. Note that TAB which was granted licence in 2013 has yet to market its products.

From the user perspective, the Government sector takes 96% of total certificates issued. This is required as per eFiling application of Inland Revenue Board and Government PKI application under the purview of MAMPU. The balance 4% is private sector use such as by the financial institutions, pharmaceutical companies and individuals as shown in Figure 5.4.

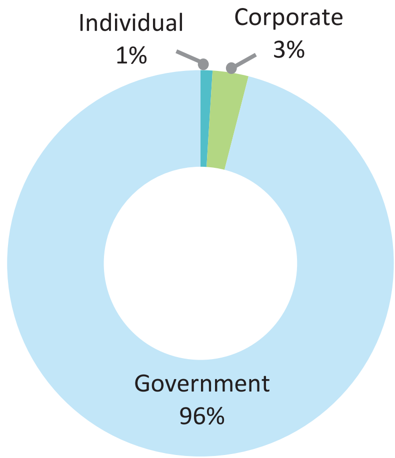
Digital Certificates Issuance 2009 – 2013



Source: Industry

Figure 5.3 Digital Certificates Issuance 2009 – 2013

Types of Digital Certificate Issuance in Malaysia



Source: Industry

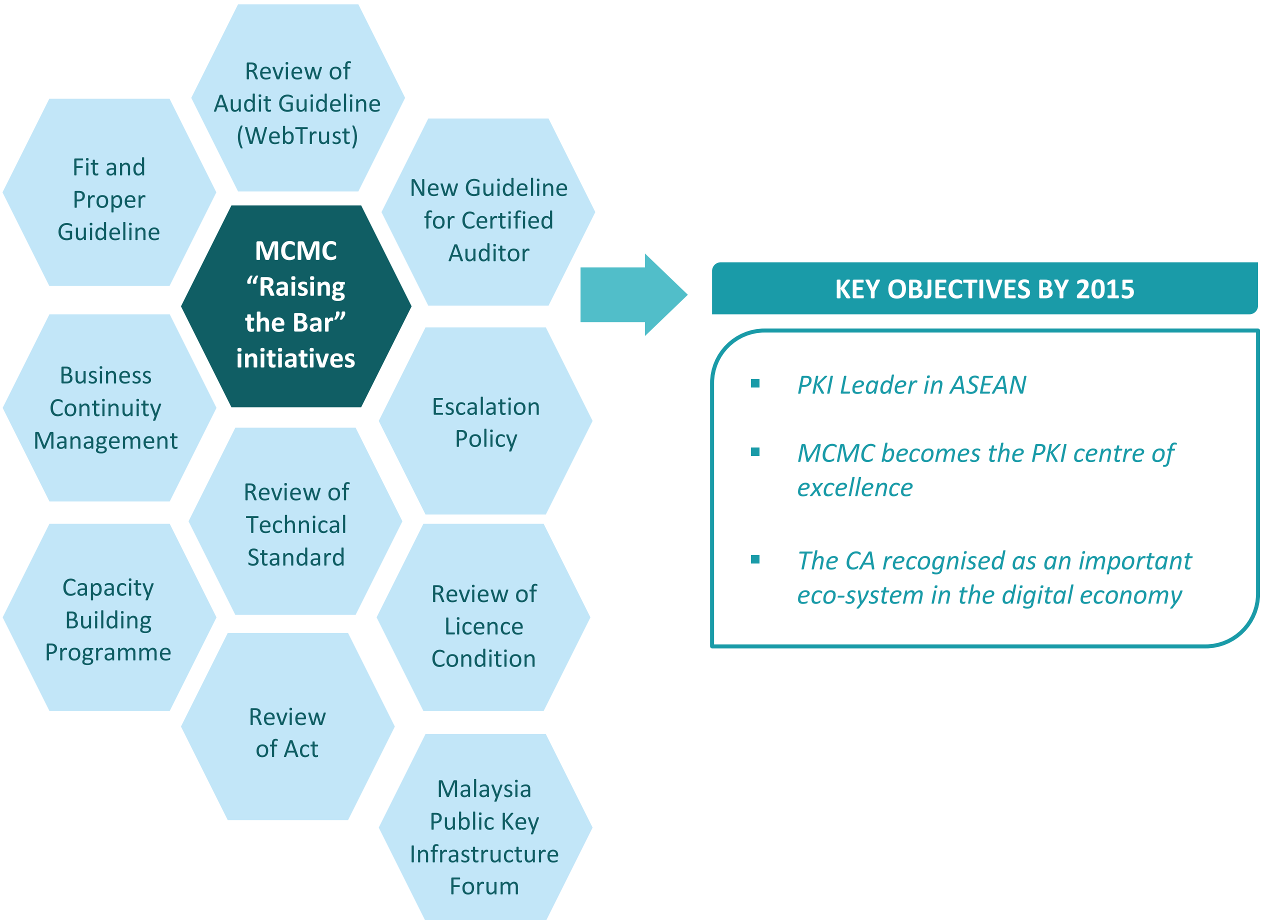
Figure 5.4 Types of Digital Certificate Issuance in Malaysia

As technology evolves, mobile devices are now playing a more important role in the wireless network environment. This is especially so in the provision of different services over the Internet. Nevertheless, business transactions over wireless electronic devices are not secure and hence the messages risk interception and modification by an intruder. Hence, devices supporting wireless Internet should be made secure and the level of security should be the same as a wired network.

However, traditional PKI used in the wired environment is not suitable for wireless use due to the nature of mobile devices with less powerful processor and memory factors. Thus, the development of a Wireless Public Key Infrastructure (WPKI) to ensure security levels equivalent to wired environment.

MCMC Key Initiatives

MCMC has fostered a four year planning initiative between 2012 and 2015 to bring the National PKI to be at par with international standard. The MCMC initiatives in encouraging the use of digital signature certificates in Malaysia and key objectives by 2015 are as shown in Figure 5.5.



Source: MCMC

Figure 5.5 Fostering Higher Standard PKI to Support Digital Malaysia Initiatives

Notably, in 2013, the introduction of new audit framework, Business Continuity Management guideline and capacity building for CA industry has strengthened CAs in Malaysia. WebTrust certification creates new platform for CAs to venture into global market as this certification is internationally recognised in which CAs would be able to register their root CA at international web browsers.

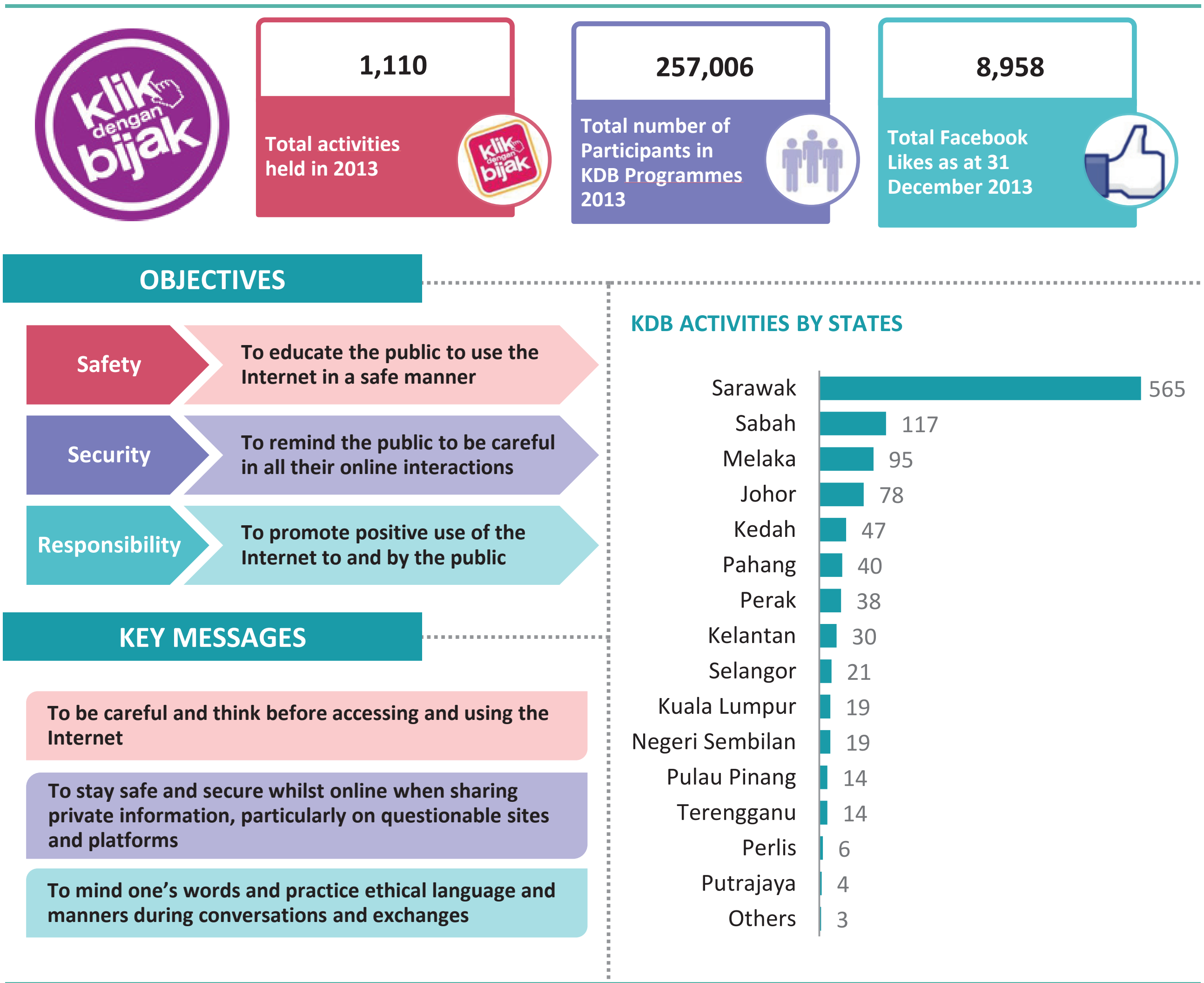
Klik Dengan Bijak™ Campaign

In July 2012, MCMC initiated a public awareness programme on Internet safety branded as *Klik Dengan Bijak™* (KDB) or 'Click Wisely'. KDB serves to educate and raise awareness about safe and positive use of the Internet and to remind the public to be wary of cybercrimes. The educational content of the programme imparts knowledge on safety measures and serves as a tool to alert online users from becoming victims of cybercrime and online abuse.

The primary target audience for KDB activities and engagement in 2013 was the youth segment, in particular those aged 18-24 years old. The key messages delivered at these activities were:

- Think Before You Post; and
- Ensuring your privacy/personal information is protected.

The three main thrusts of KDB programme namely safety, security and responsibility, from the foundation for education and awareness materials to this target group. In 2013, a total of 1,110 KDB activities were held, reaching the public totalling 257,006 participants through activities such as educational games and presentations at seminars, workshops and conferences.



Source: MCMC

Figure 5.6 Klik Dengan Bijak™ Programme 2013

In 2013, nearly 90% KDB activities focused on strong educational elements. More than half of these events and activities organised took place in Sarawak. Activities held include training of trainer sessions to educators such as 1Malaysia Internet Centre (PI1M) management, *Program Latihan Khidmat Negara* (PLKN) trainers and talks, lectures or training programmes conducted by MCMC to targeted audience.

Riding on the popularity of social media, KDB has also established presence in these platforms to reach social media users. Contents in the form of short posters, picture messages, tips and guidelines on Internet safety were shared on Facebook, Instagram and Youtube. As at end 2013, there were a total of 8,958 Facebook likers with majority comprising KDB target audience, youth aged below 24 years.

As holistic approach for wider outreach, MCMC engaged with multi-stakeholders from various ministries and agencies in KDB activities. As at end 2013, MCMC has collaborated with six strategic partners for the KDB programme namely, KKMM, Ministry of Women, Family and Community Development (KPWKM), CMCF, PLKN, PDRM and Scouts Association of Malaysia.

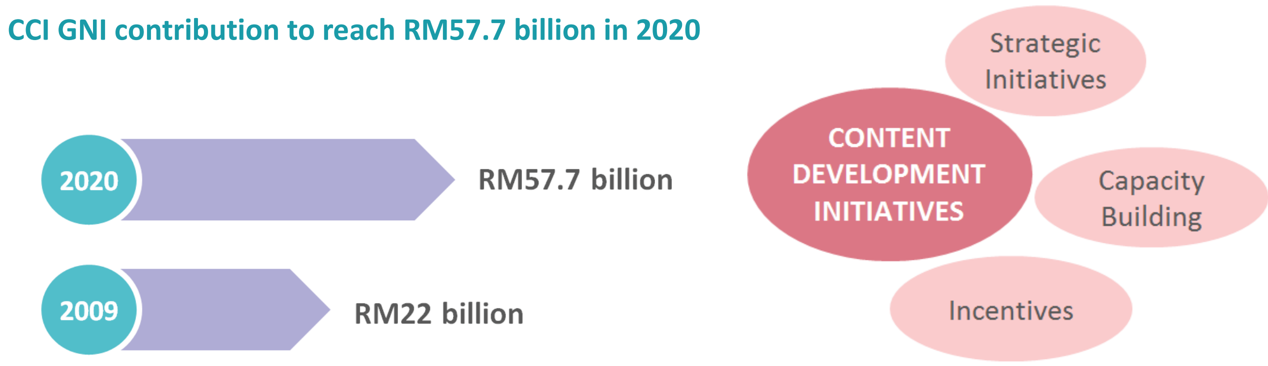
MODULE 6: CONTENT DEVELOPMENT AND APPS

Content Development

MCMC involvement in content development is in line with National Key Economic Area Communications, Content and Infrastructure (NKEA CCI) which is to raise the CCI sector's GNI contribution threefold from RM22 billion in 2009 to RM57.7 billion in 2020. In order to achieve this, one of the projects is to increase efforts to nurture the domestic creative content creation.

Towards this end, the MCMC content development initiatives are as follows:

- Incentives
- Capacity Building
- Strategic Initiatives



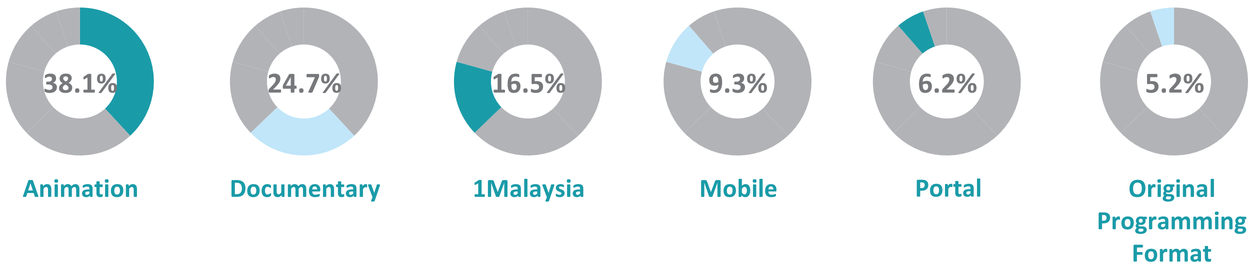
Source: MCMC
Figure 6.1 Content Development Initiatives

As for incentives, MCMC has allocated RM100 million for the Creative Industry Development Fund (CIDF-MCMC) for a three year period (2011 – 2013) to focus on the development of content for TV, mobile and the Internet. This is to spur the development of local creative content industry and further enhance competitiveness of the national content industry as an economic growth area.

From January 2011 to 31 December 2013, a total of RM50.5 million from the CIDF-MCMC was approved for the development of 111 projects inclusive of eight projects to agencies under the Ministry of Communication and Multimedia (KKMM) namely, RTM, FINAS and National Visual Arts Development Board.

The focus areas for these projects are centred at 38% for animation, 25% documentaries, 17% 1Malaysia Programme, 9% mobile, and 6% Internet projects while the remaining 5% is in the category of original programming.

Approved Projects by Focus Area

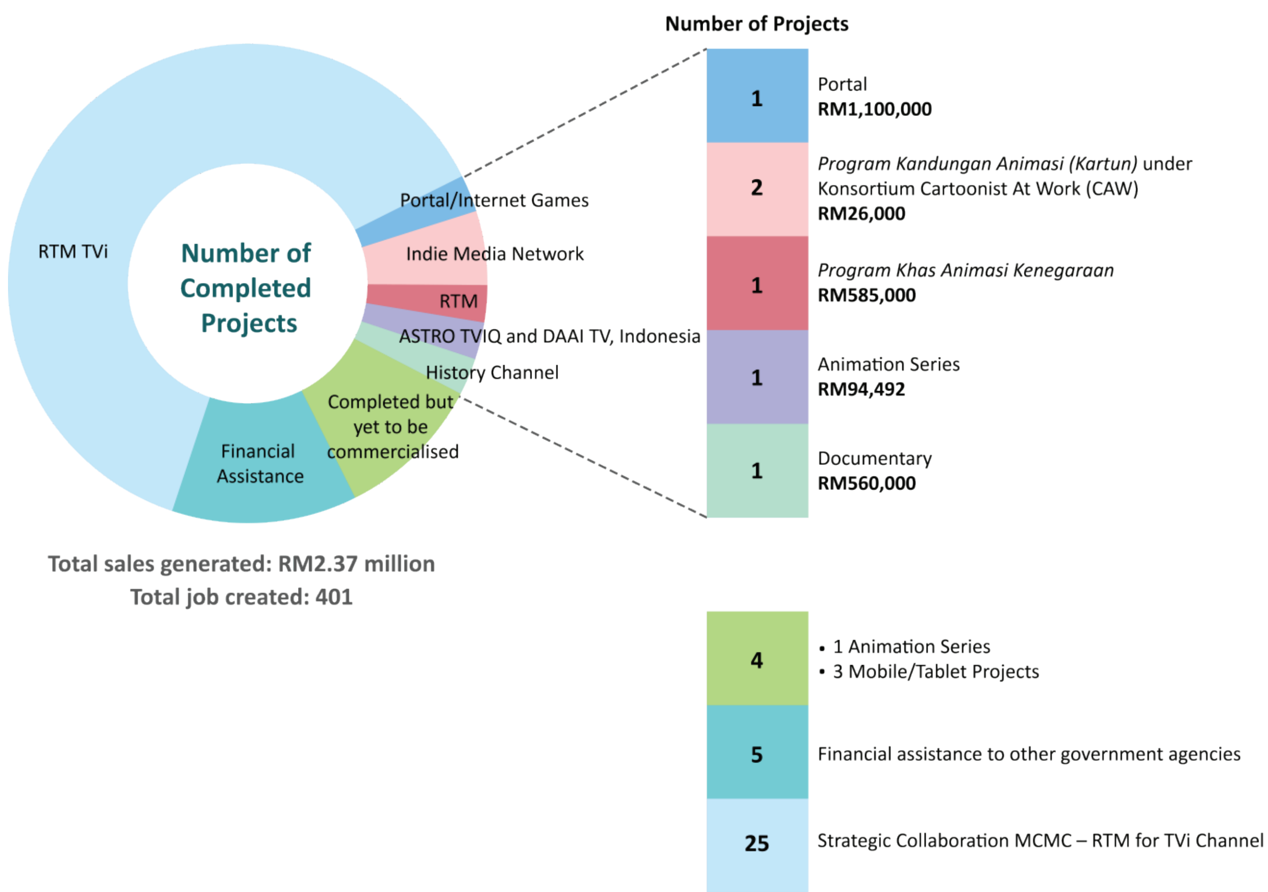


Source: Industry, MCMC
Figure 6.2 Approved Projects by Focus Area

As at 31 December 2013, RM27.4 million was disbursed to CIDF-MCMC grantees based on the agreed target milestones. So far, 40 projects have been completed.

Figure 6.3 below provides details on the projects by genre and the revenue generated.

Projects by Genre and Revenue



Source: Industry, MCMC
Figure 6.3 Projects by Genre and Revenue

On capacity building, MCMC initiatives to develop the content industry are as follows:

- **League of Creative Teens 2013**
  A competition aimed at spurring the creation of local content to expose students at secondary level to opportunities on content development in Malaysia.

- **Malaysia Developers' Day**
  This programme aims to provide participants with resources and networking opportunities towards producing quality applications in less time and at lower cost.

- **International Creative Content Conference (IC3)**
  The conference is an effort to encourage and increase the involvement of artists in content production that is competitive and marketable at home and abroad.

- Various programmes in cooperation with other agencies such as MACRI (Malaysian Association of Creativity and Innovation).

Under Strategic Initiatives, MCMC has worked with other Government agencies such as FINAS, MDeC and local companies to expand the local content through global market exploration. The collaborative effort involves bringing local content to the international markets such as:

- Marché International des Programmes de Télévision (MIPTV)
- MIPCOM
- Asia Television Forum (ATF)

Besides that, the joint effort between MCMC and Creative Content Association of Malaysia (CCAM) has brought local content to the MyContent in Dubai. This becomes an avenue to venture into the Middle East and North African market.

Overall, the international market exploration initiatives for local content has garnered total sales value of RM138.72 million, with the MIPCOM expedition contributing the highest sales value at RM108 million.

International Expedition Sales Transactions for Local Content 2013		
Content Market	**Location**	**Sales Value (RM million)**
MIPCOM	France	108.00
MIPTV	France	25.10
ATF	Singapore	2.12
MyContent Dubai	Dubai	3.50
Total		**138.72**

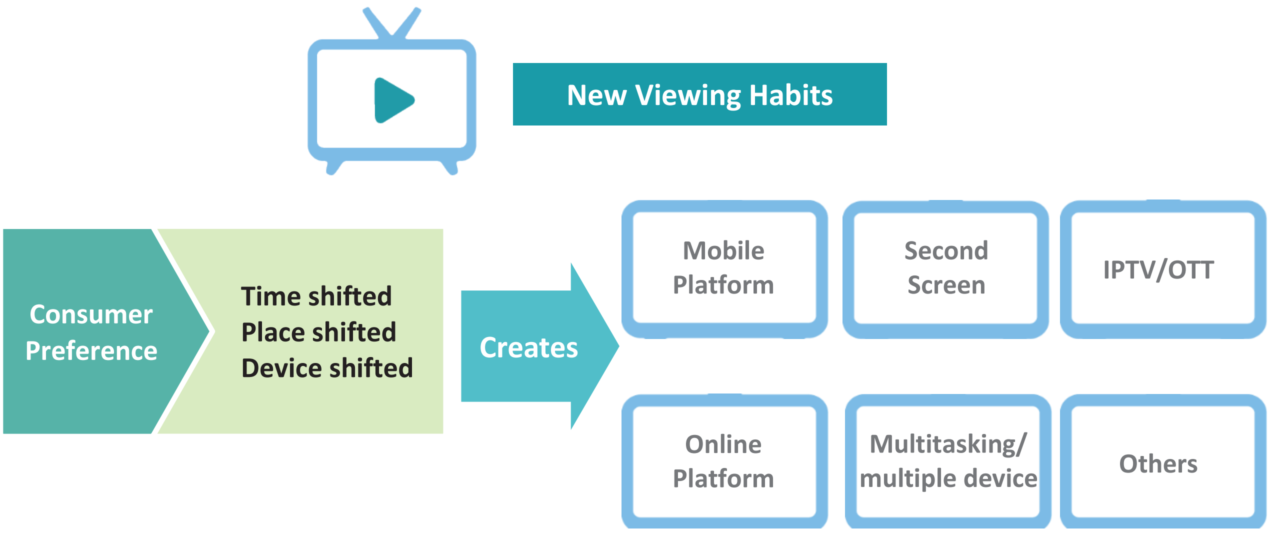
Source: FINAS & CCAM

Figure 6.4 International Expedition Sales Transactions for Local Content 2013

Apps and Services for Digital Lifestyle

Changes in Viewing Habits Drive Content Apps

Consumer habits of viewing TV and video content is changing, moving away from traditional TV sets to online media. Consumers want to watch programmes on their own schedule, use second screens such as smartphones while watching TV or simply engage in multitasking, using multiple devices as they watch TV. Non-linear TV available today are offering greater choices that cater to this changing viewing habits whereby consumers opt for time, place and device shifted content delivery. Such options of use are not available from traditional linear TV. This growing demand for digital lifestyle services in entertainment are pressurising service providers to create new ways to meet consumer wants.



Source: MCMC
Figure 6.5 Content Delivery

Non-linear digital video is emerging over next generation video platform such as OTT TV services. These services deliver, monetise and optimise TV experience on any screen, independent of delivery or device technology.

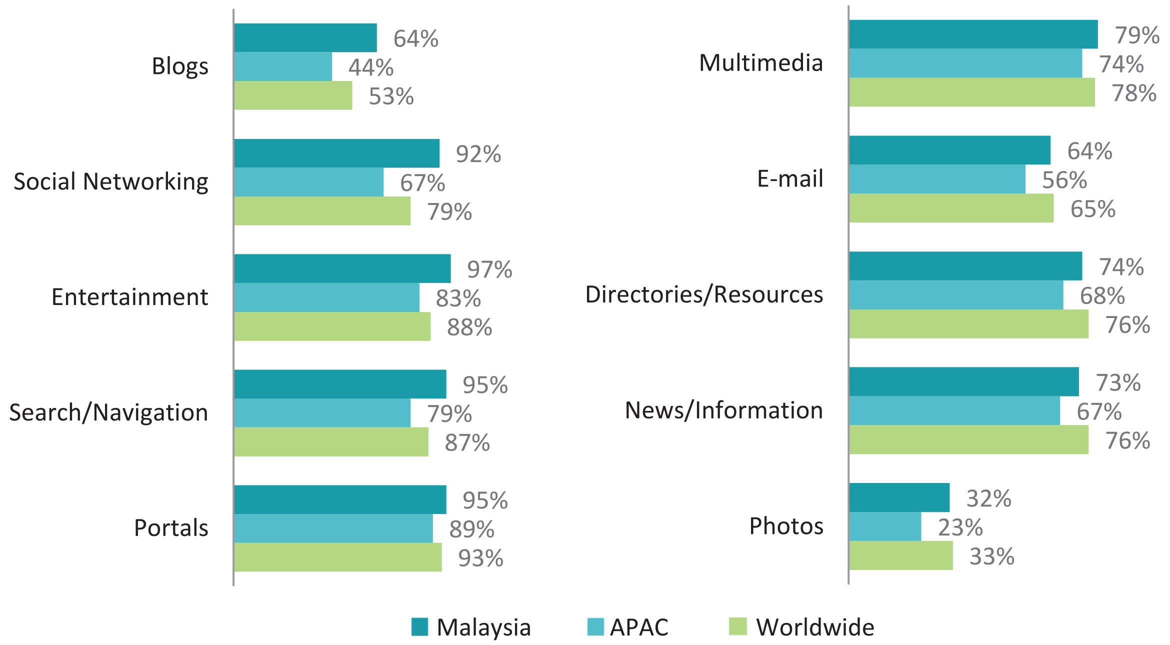
In Malaysia, the movement to non-linear is made possible by high speed Internet availability. Malaysia Internet users are well known for social networking and 'YouTubing' – spending time on YouTube and other non-linear TV viewing. As reported by Alexa[26], the YouTube website is among the top sites visited by Malaysians.

The following figure from comScore study[27] shows online users in Malaysia are more active compared with Asia Pacific and Worldwide averages.

[26] Alexa, a subsidiary company of Amazon.com providing analytical insights to benchmark websites
[27] comScore Media Metrix, March 2013

Highest-Indexing Categories by Reach, Compared to Asia Pacific and Worldwide Averages

Malaysian Web Users More Likely to Visit Blog Sites, Social Networks and Entertainment Sites



Source: comScore Media Metrix, March 2013

Figure 6.6 Highest-Indexing Categories by Reach, Compared to Asia Pacific and Worldwide Averages

Capturing Opportunities from OTT Apps

Media Prima offers OTT content via *Tonton*

Media Prima Digital, a subsidiary of Media Prima Bhd, owns *Tonton* video portal (www.tonton.com.my or mobile web version at m.tonton.com.my). *Tonton* carries VOD owned by the respective Media Prima TV networks and has 3.5 million registered users in 2013 (2012: 2.6 million).

MEDIA PRIMA TONTON CHANNEL IN 2013

Linear TV

- TV3
- TV9
- NTV7
- 8TV
- RT Channel
- World Fashion Channel*

Catch Up TV

- TV3
- TV9
- NTV7
- 8TV
- Tonton Original Series*
- Tonton Comedy*
- Tonton Variety*
- Tonton Korean
- Tonton Chinese
- Tonton Movies
- Tonton Filipino
- Tonton Bollywood
- Bananana
- Tonton Anime
- Tonton Learn
- Tonton Music
- Tonton Sports
- Gua.com.my
- Kru
- Tonton Premiere*
- Tonton Raudhah*
- Sea Games 2013*
- Radio (Hot Fm, Fly Fm, One Fm)

**New channels in 2013*

Source: Media Prima

Figure 6.7 Media Prima Tonton Channel in 2013

Notably in 2013, *Tonton TV* application was introduced for download from the Samsung Smart TV app store, which enables users to access *Tonton* library of movies and TV programmes. This development is said to be Malaysia's first entertainment streaming application on smart TV platform.

Note that online platform enables the company to capture advertising opportunities on top of a FTA broadcast audience reach. The advertising packages via *Tonton* are charged between RM40 and RM65 for pre-roll and mid-roll advertisement in 2013. 'Pre-roll' and 'mid-roll' are online video advertisements that appear respectively at the beginning and during an online video.

Other TV and Radio OTT Apps

Broadcast Mobile App in Malaysia		
Industry	**Language**	**App Name**
TV	Mix	Astro On-The-Go
		Astro AWANI
		HyppTV Everywhere
		RTM Mobile
		1Malaysia TV
Radio	English	hitz.fm
		LiteFM
		MIX fm
		FlyFM
		Hot FM
		Capital FM
		BFM 89.9
	Bahasa Malaysia	ERA fm
		SINAR fm
		Suria FM
	Chinese	MY FM
		MELODY FM
		one FM
		988 FM
	Tamil	THR Raaga

Source: Various sources

Figure 6.8 Broadcast Mobile App in Malaysia

Content from traditional broadcasters and radio is fast expanding to be delivered over the mobile platform. Consumers can have the option of watching content or listening to radio by downloading their favourite mobile apps from the companies' website or app store.

Connected Healthcare - Remote Patient Monitoring Pilot

Connected healthcare was identified as one of the focus development areas in Digital Lifestyle Malaysia project. Home healthcare service delivered through an array of eHealth app can increase quality of life and savings in healthcare expenditure whilst stimulating broadband usage.

A pilot project was conducted to determine the feasibility of the eHealth business model as a value added service provided by healthcare providers to demonstrate and validate the

conditions to be fulfilled for subsequent deployment. This project was carried out by a steering committee made up of representatives from MCMC, Mahkota Medical Centre, Ministry of Health (Tele-Health division), Melaka General Hospital and Melaka State Health Department.
A total of five types of remote monitoring devices were included in the pilot project as shown in figure below.

Types of Remote Monitoring Devices
Wrist Clinic
Wireless BP Meter 102
Wireless Glucometer
Weight Scale WS210
Watch me RF

Source: MCMC
Figure 6.9 Types of Remote Monitoring Devices

These devices monitor various patients' parameters from home environment through a USB device. The 40 patients and volunteers who participated in the project were required to monitor their conditions by using the devices to track various parameters at fixed intervals as advised by the doctor. The data connected can be remotely monitored by healthcare provider and the doctor. The pilot run conveyed the findings to further improve the process or manage usage of the apps.

Monitoring patients for chronic diseases and post-acute care management from home rather than in the hospitals could bring huge savings potential for the healthcare system and individuals concerned. Hence, exploration of remote patient monitoring mechanism in light of broadband availability and usage is indeed a timely move. It capitalises on the development of digital technologies to improve the delivery of healthcare services.

Mobile App as an Extension of Content Delivery

Other than new viewing habits, consumer behaviour in accessing information is also changing. Consumers want immediate access to information these days and they get that from their mobile phones. In turn, the demand for mobile content is driving mobile apps development. Mobile apps allow consumers to interact swiftly and directly with the merchants from their mobile device. Mobile apps have become an ideal method to drive content and services to consumers. This approach appears to have infinite uses from entertainment content to productivity services.

Local brands are also riding on this wave of content development by launching their mobile apps for consumers. Businesses from different industry verticals including banking and financial institutions, airlines companies, cinemas and taxi services have offered some of the more popular mobile apps to consumers.

For example, major banks are offering mobile banking servicesto their customers through mobile apps. Mobile apps by Malaysian banks are basically for account balance inquiry and checking history of transactions as well as performing certain transactions. These are offered through services such as Maybank2U, CIMB Clicks, Hong Leong Connect, Breeze Malaysia and Bank Islam.

Meanwhile, in the airlines industry, there are MH Mobile, AirAsia and FireFly Mobile apps which feature flight search, flight status, deals and other offers, and mobile check-in. In the entertainment industry, the most popular mobile apps are GSC Mobile and TGV Cinemas that enable users to view showtimes and purchase movie ticket by obtaining QR code for direct access to the hall.

Another interesting local mobile app is MyTeksi app that was introduced in 2012 allowing users to book a taxi in the Klang Valley. The service since then has expanded to other areas in Malaysia such as Johor Bahru, Melaka, Putrajaya and Seremban. The app has also entered the Singapore market as GrabTaxi app in 2013.

An app to assist the disabled to connect in times of need is the SaveMe 999. Launched in 2013, SaveMe 999 app assists individuals with hearing and speech impairment in emergency situations. When a registered individual calls for assistance, SaveMe 999 will track the caller location through Geographical Positioning System (GPS) and transmit this call to MERS 999 Response Centre. The Centre works to despatch the distress call to a relevant emergency agency such as PDRM, Fire and Rescue Department, Ministry of Health, Civil Defence Department and Malaysian Maritime Enforcement Agency.

Generally, mobile apps are made available at apps stores for downloads and these can be used on different platforms and devices. The convenience of app stores has its dynamic and progressive appeal. The use of mobile apps is further fuelled by proliferating smart devices and their rapid adoption as in the case of new smartphones, phablets and tablets. Noteworthy is that by 2013, mobile app store worldwide are made available by a whole host of heavyweight companies such as those shown in the figure below.

Mobile App Store Available Worldwide				
Google Play	**iPhone App Store**	**Ovi Store**	**BlackBerry App World**	**Windows Phone Marketplace**
An open content distribution system that assist end users to find, purchase, download and install various types of content on their Android powered devices.	An online marketplace for the iPhone, iPod Touch and iPad. Users candownload any apps directly from iTunes or their mobile devices.	Users can download mobile games, apps, videos, images and ringtones to their Nokia devices. Payable apps are paid by credit card or through selected operator billing.	An application distribution service from Research In Motion (RIM) for most BlackBerry devices. It enables users to browse, download and update third party apps.	A service from Microsoft for its Windows Phone 7 platform that allows users to browse and download apps developed by third parties.

Source: Various sources

Figure 6.10 Mobile App Store Available Worldwide

Better technology and tools are contributing to the rapid growth in the mobile industry. The C&M industry players are also in this pursuit of offering mobile apps in content and services for greater monetisation benefits in terms of profitability and branding. Creative ideas for content development such as mobile apps is rewarding as global mobile app revenue exploded to USD38 billion in 2013 from merely USD6 billion in 2010. This includes mobile advertising which contributed 32% from the total revenue indicated[28].

[28] Kleiner Perkins Caufield & Byers (KPCB), Internet Trends 2014, May 2014.

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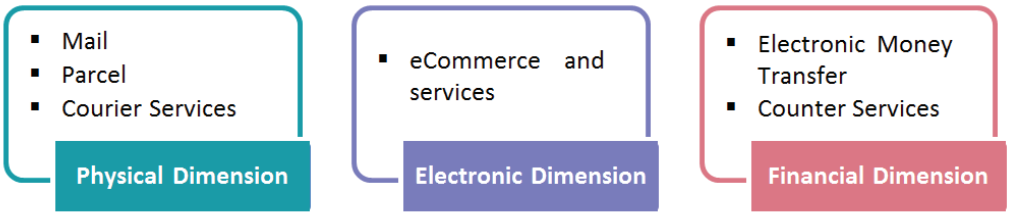
MODULE 7: POSTAL AND COURIER

Postal Service

National Postal Strategy

An effective postal and courier service is essential to the growth of Malaysian economy especially as an eCommerce enabler. However, the changing landscape of the economy requires new strategies to be adopted to meet the coming challenges. The National Postal Strategy (NPS) 2010-2014 sets out a roadmap for the Malaysian postal and courier sector to continue contributing progressively in the overall development of Malaysia.

The NPS strategically is based on three dimensions of the sector namely, physical, electronic and financial service dimensions. These are the important pillars and growth areas for the sector in the future. These dimensions aim to guide and nurture the development of the sector products and services as continued diversification and innovation are key strategies to succeed in a changing landscape.



There are five thrusts under the NPS, namely universal postal service, quality of service, productivity improvement, industry growth and international development.

Year 2013 marked the fourth year of NPS implementation. The initiatives and achievement so far as follows:

- Postal Services Act 2012 was *Gazetted* on 1 April 2013 to create a modern regulatory framework in order to fast track the development of the national postal and courier industry.

- Postal Rate Rules 2010 under the Postal Services Act 1991 was amended and *Gazetted* on 31 March 2013.

- The Government contributed RM8.64 million through MCMC to continue the implementation of Sabah and Sarawak Postal Transformation Plan Phase 2 or *Pelan Transformasi Postal Sabah dan Sarawak Fasa 2.*

- Domestic mail service performance in terms of national average speed standards improved to 89.5% for 2012 from 87.8% in 2011.

- A total of 93 courier service companies were successfully migrated to the new courier licence scheme in March 2013.

Postal Services Act 2012

Postal Services Act 2012 (PSA) was passed by the Parliament in December 2011 and was *Gazetted* on 1 April 2013 repealing the Postal Services Act 1991 [Act 465]. This is based on the *Gazette* P.U. (B) 94/2013. The PSA consists of new provisions to effectively regulate the postal service industry, encourage a planned industry development and protect universal postal service.

The PSA also provides additional regulatory provisions to ensure postal service is adequately available and offer service with quality in order to ensure a steady growth of the postal industry. Therefore, the PSA covers two main conditions, which is the licencing regulations and universal service regulations.

Licencing regulations outline the provisions of new licence framework into universal service licence and non-universal service licence. The universal service regulations were developed to ensure the sustainability and quality standard of universal service such as the development of postal system in each state and to promote postal service industry growth.

Other regulations under the PSA are also being developed, including four regulatory categories namely, economic regulation, technical regulation, social and consumer protection. The regulations also include management of the Postal Service Money Order Group and improvement of postcode system and addressing in Malaysia.

New International Postage Rates

The amendment to the international tariff was inevitable due to the global economic changes including inflation, rising fuel costs, higher transportation costs and most importantly the rising delivery costs charged by postal operators worldwide. All these factors contributed to the increasing operational costs of international mail and parcel delivery. Along with the price restructuring, the customer's experience and value will be enhanced by Pos Malaysia.

Postage Rate Rules 2010 under the Postal Services Act 1991 was amended and *Gazetted* on 31 March 2013, setting new international postal rates. The rates were implemented by Pos Malaysia on 15 May 2013.

International Mail Tariff						
Zone	AIR POSTAGE RATE			SURFACE POSTAGE RATE		
	Estimated Delivery (Working days) Effective 1 January 2014	First 20g* (RM)	For Add 10g* (RM)	Estimated Delivery (Working days) Effective 1 January 2014	First 50g* (RM)	For Add 50g* (RM)
1	4 – 10	1.20	0.40	4 – 10 weeks	1.80	1.40
2	5 – 11	1.40	0.60	6 – 10 weeks	1.90	1.60
3	6 – 11	2.00	0.80	8 – 16 weeks	2.20	2.00

Notes:
**grams*
Zone 1 : ASEAN countries: Brunei Darussalam, Philippines, Indonesia, Cambodia, Laos, Myanmar, Singapore, Thailand and Vietnam
Zone 2 : Countries in Asia Pacific
Zone 3 : Other countries

Source: Pos Malaysia
Figure 7.1 International Mail Tariff

Sabah and Sarawak Postal Transformation Plan

The Sabah and Sarawak Postal Transformation Plan Phase 2 is a continuation from the phase one project which, was between 2010 and 2012. This public-private cooperation initiative between MCMC and Pos Malaysia aims to improve home mail delivery coverage in rural areas and increase the basic postal service access to the rural community in Sabah and Sarawak.

The implementation of this transformation plan aims to achieve 95% home mail delivery and reduce postal access ratio from 22,400 in 2010 to 15,000 persons per postal outlet in 2014. This is as stated in the NPS.

Overall, almost one million residents in remote Sabah and Sarawak have directly benefited from this project. Another six new units of mobile post office will be deployed under this transformation plan and these are expected to be operational by stages in 2014.

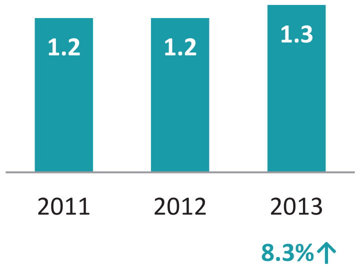
Pos Malaysia Bhd

Employees
17,072
2013

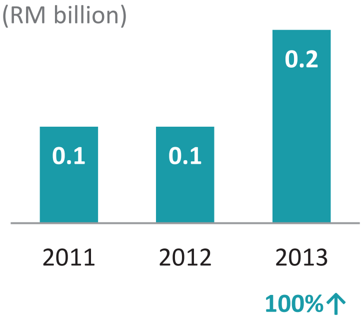
Market Capitalisation
RM2.9 billion
As at 31 December 2013

Share Price
RM5.48/share
As at 31 December 2013

REVENUE
(RM billion)



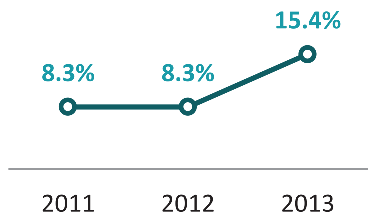
OPERATING PROFIT
(RM billion)



SEGMENTATION
(RM billion)

	2011	2012	2013
Mail	0.73	0.71	0.73
Courier	0.24	0.30	0.34
Retail	0.16	0.17	0.17
Others	0.04	0.05	0.06

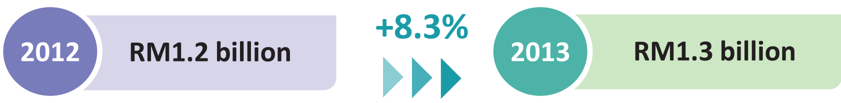
OPERATING PROFIT MARGIN



Note: Pos Malaysia figures annualised and adjusted on a calendar year basis

Source: Industry, MCMC

- Pos Malaysia achieved revenue growth of 8.3% in 2013, supported by higher revenue contributed by both mail and courier segments and the implementation of new international postal tariffs effective May 2013.



- In 2013, the mail segment remained as the largest revenue contributor, accounting for 56.1% of total revenue. Revenue from this segment recorded an increase of 2.8% to RM0.73 billion compared with 2012, attributed to higher revenue generated from prepaid, registered, direct mail, corporate and international mail segments.

- Another growth factor was contributed by Pos Malaysia courier segment, spurred by increased online business transactions which included services to deliver merchandise purchased online. In 2013, this segment revenue posted 13.3% increase to RM0.34 billion from RM0.3 billion in 2012.

Pos Malaysia has been strategically diversifying its products and services to become a preferred one stop provider for communications, financial services and supply chain solutions. This move caters to the needs and increasing demand of their existing and potential individual and business customers.

In ensuring sustainable business, Pos Malaysia initiated a five year strategic plan to transform, innovate and improve their business model and roadmap. By the end of the five year plan started in 2011, Pos Malaysia is expected to emerge as a one stop solutions centre in both physical and digital platforms. The tactical plan is divided into three waves as shown in table below.

Five Years Transformation Plan	
Timeline	**Focus**
Wave 1 (2011 – 2013)	Focus on core business, aligning and fixing current fundamentals and operations in current business before the next leap
Wave 2 (2013 – 2017)	New business quantum leap phase, expanding into digital platforms and various channels to provide innovative solutions and services beyond postal
Wave 3 (beyond 2017)	Build regional platforms, extending reach and presence on a regional scale via wider partnership

Source: Pos Malaysia

Figure 7.2 Five Years Transformation Plan

Furthermore, in tandem with market advancement, Pos Malaysia is developing an Integrated Parcel Centre (IPC) at the National Mail Centre, Shah Alam. The IPC is expected to be operational in the second half of 2015. IPC serves to introduce automation of the sorting process which is expected to improve Pos Malaysia item handling via machine automation compared to current manual handling. Through this project, Pos Malaysia is expected to shift from manual parcel sorting to automation sorting process.

Pos Malaysia is also developing a single Postal Integrated Track and Trace System (1PITTIS) which is an enhancement of existing postal tracking systems that serves to increase the delivery efficiency of track and trace for premium item. The 1PITTIS is expected to be rolled out countrywide or go live by mid 2015.

Postal Access

There is encouraging annual growth of access to postal outlets in Malaysia. Pos Malaysia provides convenience to the public through its retail service counters. Services offered over these counters include *Amanah Saham Bumiputera* and *Amanah Saham Nasional* funds transactions, driving licence and vehicle road tax renewal, utilities bill payment, motor vehicle insurance and Islamic micro financing.

Total Number of Post Offices 2000 – 2013

Note: Including pos mini

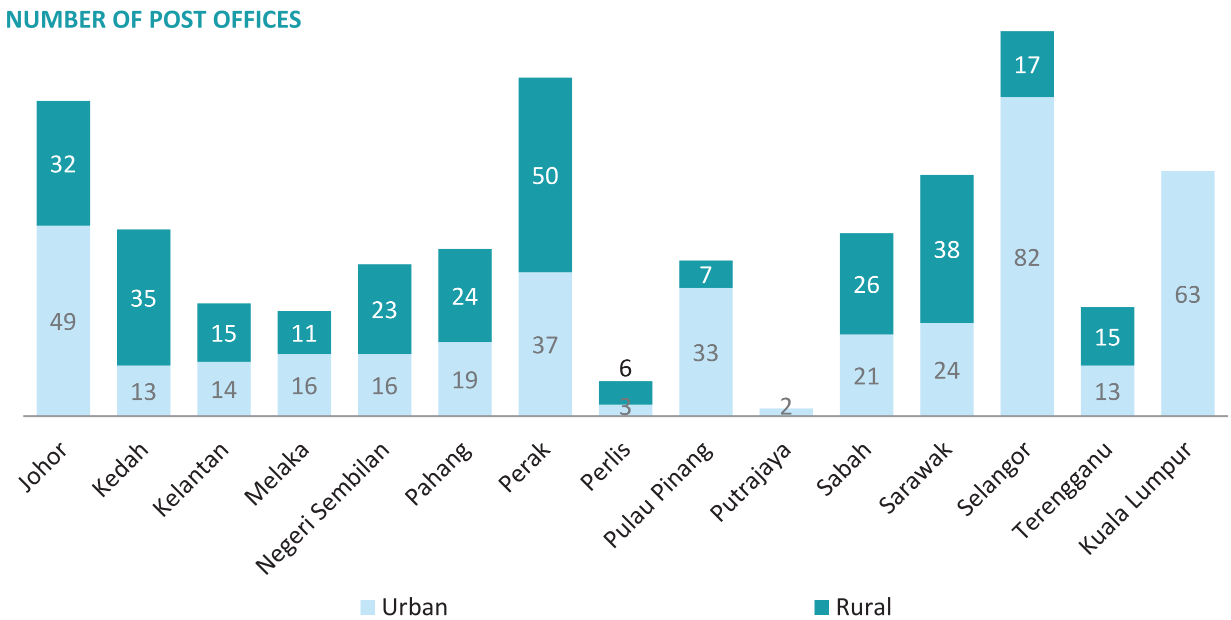
Source: MCMC

Figure 7.3 Total Number of Post Offices 2000 – 2013

There are a total of 704 post offices in Malaysia and approximately 57% are located within urban areas. By 2013, there are also a total of 265 *pos mini* (a single counter post office run by third party appointed by Pos Malaysia) extending the postal outlets access to a larger population. Pos Malaysia also operates drive-through counters at seven states, namely Perak, Kuala Lumpur, Selangor, Negeri Sembilan, Johor, Penang and Perlis.

To bring postal access in remote areas, Pos Malaysia operates 24 mobile post offices nationwide equipped with VSAT to allow online transactions to be performed. The mobile post offices are operated in almost all states in Malaysia with 10 mobile post offices in Sabah and Sarawak. Figure 7.4 below shows the number of post offices according to states.

Post Offices by State 2013



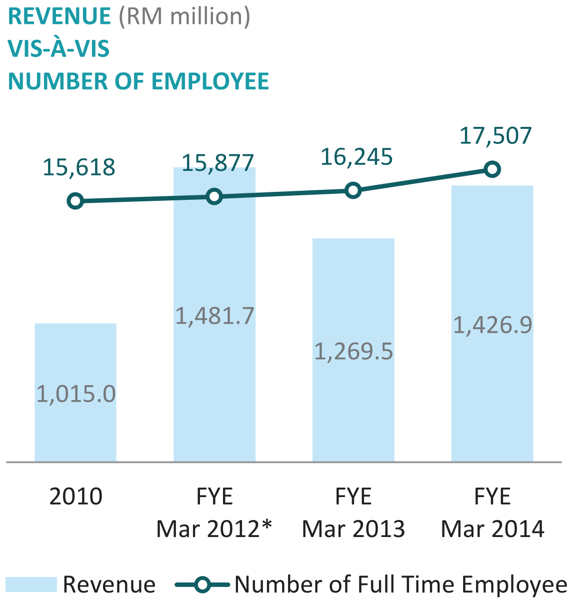
Source: MCMC

Figure 7.4 Post Offices by State 2013

Postal services are a labour intensive sector which focuses on delivery and counter service to their customers. Hence, this sector presents a wide employment opportunity and as shown in Figure 7.5, the number of full time employees has increased through the years from 15,618 in 2010 to 17,507 as at FYE March 2014.

Nevertheless, the productivity for Pos Malaysia improved over the years and it can be seen from Figure 7.6, whereby the revenue per employee has been increasing since 2010. For FYE March 2014, the revenue per employee recorded an increment of 4.2% to RM81,500 from RM 78,100 in FYE March 2013.

Comparison between Revenue with Number of Full Time Employee

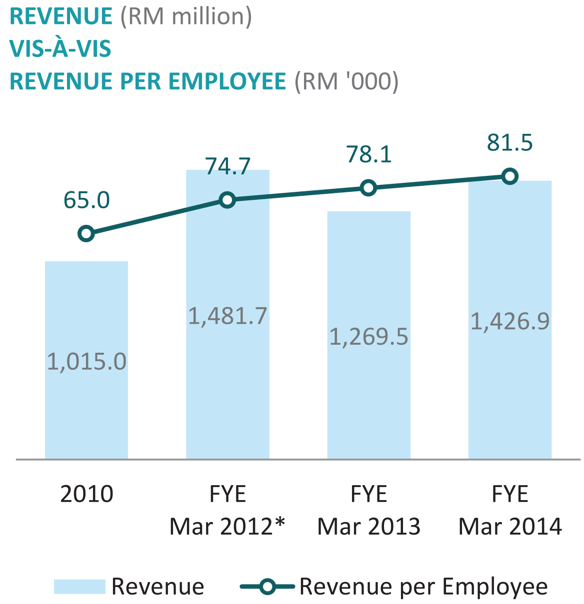


**Revenue reported is for 15-month performance*

Source: Pos Malaysia

Figure 7.5 Comparison between Revenue with Number of Full Time Employee

Revenue per Employee



**Revenue reported is for 15-month performance; Revenue per Employee figure annualised*

Source: Pos Malaysia

Figure 7.6 Revenue per Employee

In addition, online services such as utilities and phone bill payment over the Internet offered through PosOnline is transforming Pos Malaysia into a convenient and efficient one stop service centre for the public nationwide. Meanwhile, stamp collectors are encouraged to join Standing Order Deposit Account (SODA) at PosOnline and top up their SODA account in exchange for receiving their philatelic items on the day of issue without having to go to the post office.

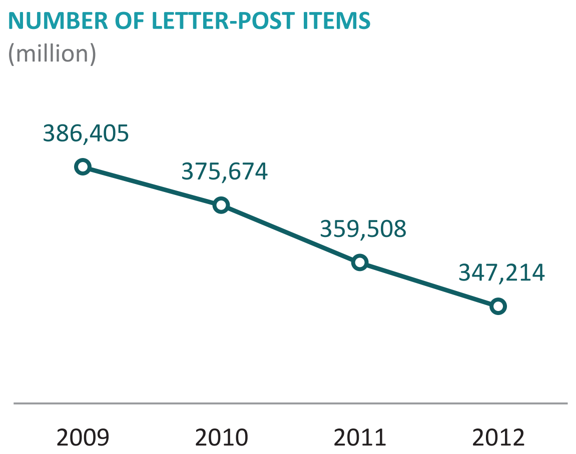
In summary, the combination of expansion in physical delivery and online services, including readiness for automation services under the new postal strategies is expected to overall sustain economic contribution by the postal sector.

Postal Traffic

The common issue faced by worldwide postal service operators is the declining volume of standard mail over the years. The changing lifestyle trend and business operations due to the advancement of digital technologies and introduction of communication apps such as e-mail and OTT messaging have significantly reduced the volume of standard mail.

Figures 7.7 and 7.8 below show the declining trend on the world estimate for the number of Letter-Post Items from 2009 to 2012. There was a decline between 3% and 7% on the number of Letter-Post Items for both domestic and international service over these years.

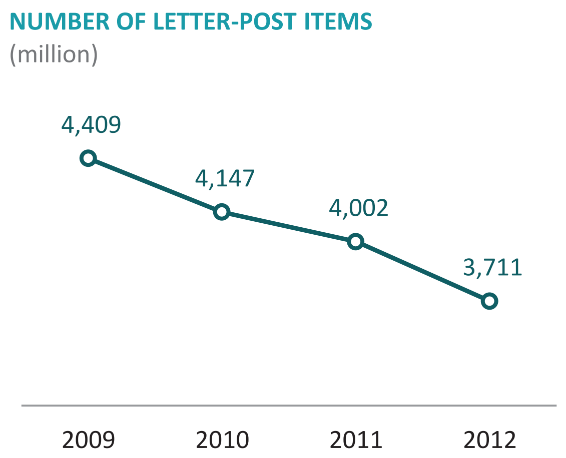
World Estimate: Number of Letter-Post Items, Domestic Service



Source: Universal Postal Union

Figure 7.7 World Estimate: Number of Letter-Post Items, Domestic Service

World Estimate: Number of Letter-Post Items, International Service – Despatch



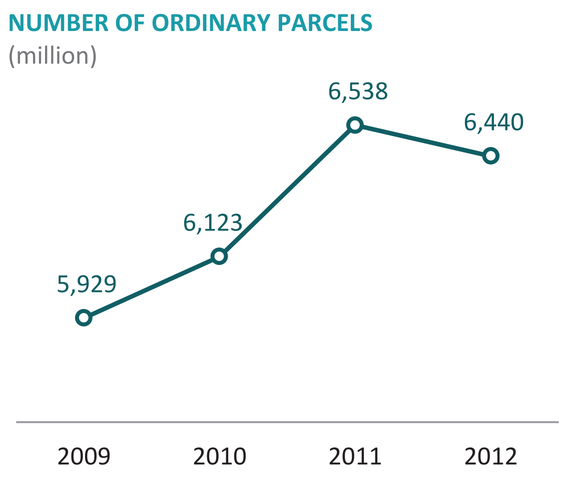
Source: Universal Postal Union

Figure 7.8 World Estimate: Number of Letter-Post Items, International Service – Despatch

Although there is significant impact on traditional mail volume, registered mail continues its long standing function to deliver official records for legal documents while physically mailed greeting cards serves to preserve the personal touch to recipients.

Despite the declining business in standard mail, global parcel business has shown steep volume growth from 2009 and 2012 as shown in Figures 7.9 and 7.10. This is due to increasing eCommerce transactions, as parcel and courier services are the enablers of eCommerce in delivering the physical products.

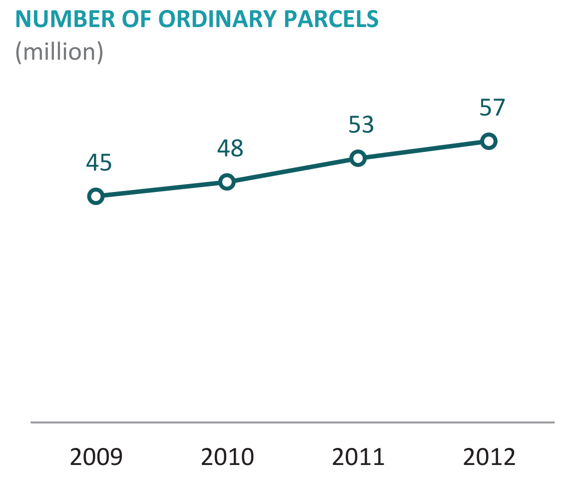
World Estimate: Number of Ordinary Parcel, Domestic Service



Source: Universal Postal Union

Figure 7.9 World Estimate: Number of Ordinary Parcel, Domestic Service

World Estimate: Number of Ordinary Parcel, International Service – Despatch

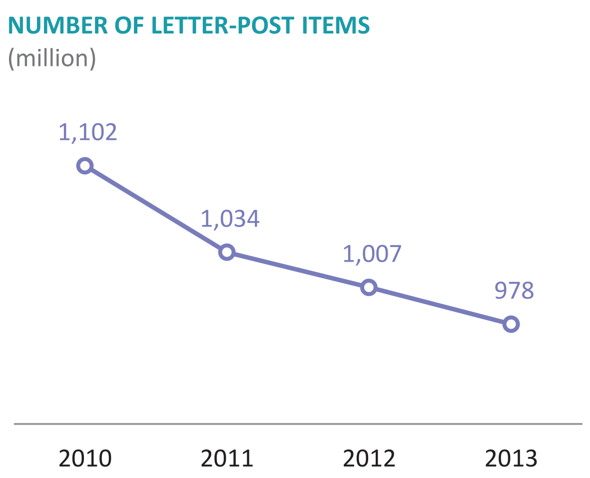


Source: Universal Postal Union

Figure 7.10 World Estimate: Number of Ordinary Parcel, International Service – Despatch

Pos Malaysia also faces similar declining trend in global mail volume for its domestic mail letter business. The international service for incoming and outgoing mail letter shows the same trend with some growth recorded in 2011, but declined in the next two years in 2012 and 2013.

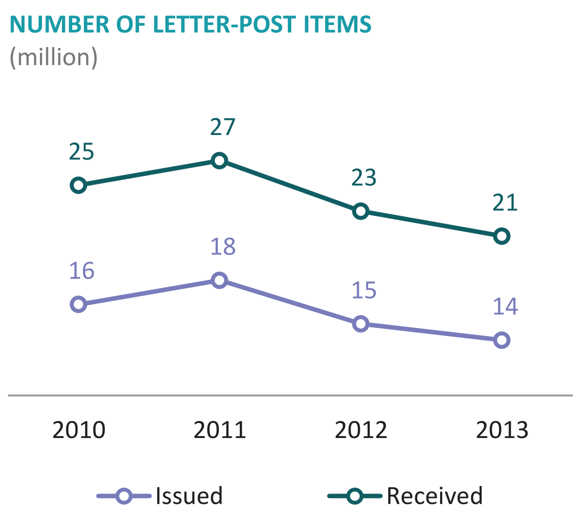
Pos Malaysia: Number of Letter-Post Item, Domestic Service



Source: Pos Malaysia, MCMC

Figure 7.11 Pos Malaysia: Number of Letter-Post Item, Domestic Service

Pos Malaysia: Number of Letter-Post Item, International Service



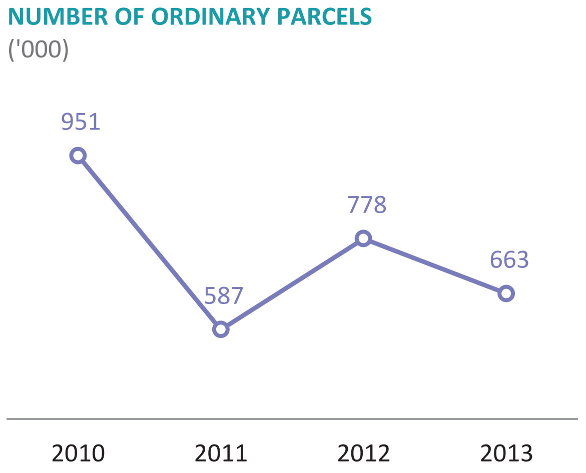
Source: Pos Malaysia, MCMC

Figure 7.12 Pos Malaysia: Number of Letter-Post Item, International Service

Pos Malaysia parcel business volume fluctuated between 580,000 and 951,000 from 2010 to 2013.

On the other hand, incoming international parcels show increasing trend consistently between 2010 and 2013. However, the volume for outgoing international parcels declined in 2012 and 2013. Figures below show the number of ordinary parcel for both domestic and international service for Malaysia.

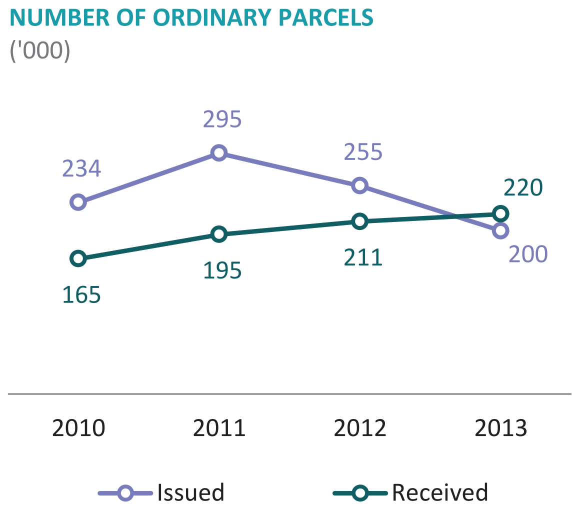
Pos Malaysia: Number of Ordinary Parcel, Domestic Service



Source: Pos Malaysia, MCMC

Figure 7.13 Pos Malaysia: Number of Ordinary Parcel, Domestic Service

Pos Malaysia: Number of Ordinary Parcel, International Service



Source: Pos Malaysia, MCMC

Figure 7.14 Pos Malaysia: Number of Ordinary Parcel, International Service

Philately

Philately is described as collecting postal material such as postage stamps, letters, stamp envelops, postcards and other related materials. The postage stamps commemorate events and topics of national significance such as national events, traditions, accomplishments and nature heritage. In 2013, 15 stamp themes were issued, ranging from commemorating endangered animal species in Malaysia to celebrating Malaysia Day.

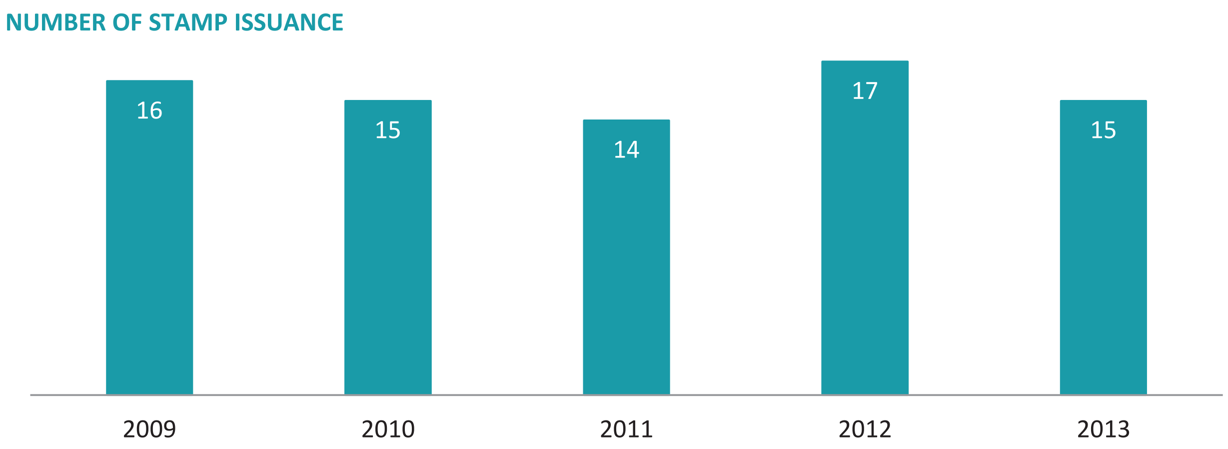
Stamp Themes 2013

Theme	Date of Issue
Woodpecker	13 January 2013
Exotic Pets	5 February 2013
National Unity	26 March 2013
Lighthouses in Malaysia Series II	30 April 2013
Wonders of Malaysian Forest	13 May 2013
Living Corals in Malaysia	28 June 2013
Malaysian Salad	25 July 2013
Tri-Nation Stamps	23 August 2013
Museums and Artefacts	2 September 2013
50 Years Malaysia	16 September 2013
UNICEF Children Stamps	22 October 2013
Rare Fruits Series IV	28 October 2013
100 Years of Banking Excellence	23 November 2013
Baba and Nyonya Heritage	29 November 2013
Endangered Wild Cats of Malaysia	23 December 2013

Source: Pos Malaysia

Figure 7.15 Stamp Themes 2013

Total Number of Stamp Themes 2009 – 2013



Source: Pos Malaysia

Figure 7.16 Total Number of Stamp Themes 2009 – 2013

Philately: Sample of Stamp Themes 2013

Source: Pos Malaysia

Figure 7.17 Philately: Sample of Stamp Themes 2013

First Humanitarian Stamp

Pos Malaysia issued its first humanitarian stamp for the recent typhoon in Haiyan, Philippines on 14 November 2013. The stamp, which is from the *Setemku* range, was sold at RM10 per sheet with RM6 allocated to the disaster fund. As at December 2013, sale of Haiyan typhoon stamps is at 30% out of the 3,900 pieces printed.

Source: Pos Malaysia

Figure 7.18 Haiyan Disaster Relief Fund Stamp

The Royal Kedah Philatelic Show

In conjunction with 100 years of Kedah stamps, the MCMC, Philately Society of Malaysia, and Pos Malaysia with the assistance of the Kedah State Government, held the Royal Kedah Philatelic Show at Menara Alor Setar on 20 – 22 March 2013.

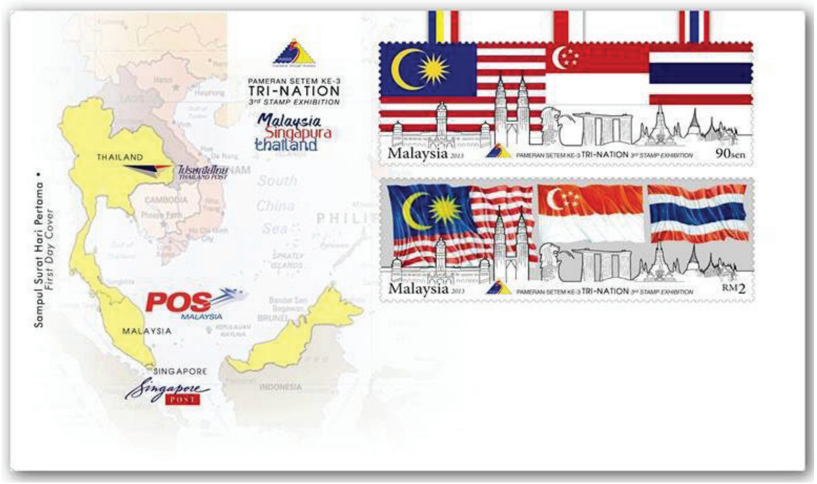
In this show, a presentation pertinent to Kedah was featured by four international philatelists, including:

- Mr. Michael Sefi, The Keeper of Queen Elizabeth's Collections;
- Dr. Prakob Chirakiti, President of Philately Society of Thailand;
- YBhg. Dato' Anuar Bashah, President of Philately Society of Malaysia; and
- Mr. Vincent Ong, representative from the Philately Society of Singapore.

This show featured Queen Elizabeth stamp collections which are rarely exhibited to the public. Also featured were the Royal Stamp Collection of Kedah and Britain. The history of postal services in Kedah was another notable feature of the show.

The Tri-Nation Stamp Exhibition

The Tri-Nation Stamp Exhibition was held from 23 – 25 August 2013 in conjunction with the Independence Day and 50th Anniversary of Malaysia. It was held at Pos Malaysia Headquarters, Kuala Lumpur. Three countries, namely Malaysia, Singapore and Thailand participated in the exhibition.



Source: Pos Malaysia

Figure 7.19 First Day Cover For Tri-Nation Stamp Exhibition 2013

Courier Industry Licensing and Revenue Performance

New Courier Service Licensing Framework

The courier service is a competitive industry with nearly 100 service providers. Due to the expanding market, the national service providers have established global network alliances. The courier service providers have also commenced strategies for offering convenient and innovative ways to deliver shipment worldwide. These include value added services such as warehouse services that include storage, temperature controlled packaging for temperature sensitive shipments, handling, packing and inventory management.

In line with the Government policy to liberalise courier service sector, the Courier Industry Development Plan 2012 – 2014 was prepared by the MCMC together with industry to drive the growth and modernisation of the national courier service. Three main thrusts of the plan are:

i. to establish a conducive regulatory framework and operation;

ii. to enhance the development of human capacity and institution; and

iii. to drive the adoption of technology and best practices.

Among the key initiatives in the Courier Industry Development Plan is the establishment of a new courier licensing framework aims to improve the quality and performance of the courier industry. This initiative requires courier companies to further improve their competitiveness, providing a more modern infrastructure while increasing their capacity in line with the Government initiatives to transform Malaysia into a high income nation by 2020.

Courier service providers in Malaysia are made up of small niche set up business to complex business model at international level. To efficiently regulate this sector, MCMC classified three types of licence class under the new licensing framework. In March 2013, courier service providers were issued with the new licences based on their business model as in Figure 7.20.

Courier Service Licence: Special Conditions
Class A
▪ Licensee may perform services as follows: i) international courier services; and ii) domestic courier services nationwide ▪ Provide track & trace system within a year ▪ Provide at least five outlets locally within a period of two years ▪ Provide customer service appropriate to the courier business
Class B
▪ Licensee may perform service as follows: i) international inbound service only; and ii) domestic courier services nationwide ▪ Provide track & trace system within a year ▪ Provide at least five outlets locally within a period of two years ▪ Provide customer service appropriate to the courier business
Class C
▪ Licensee services area limited within one state as preferred by the licensee to operate ▪ Due to geographical reasons, these areas are considered as one: i) Selangor, Kuala Lumpur and Putrajaya ii) Sabah and Labuan

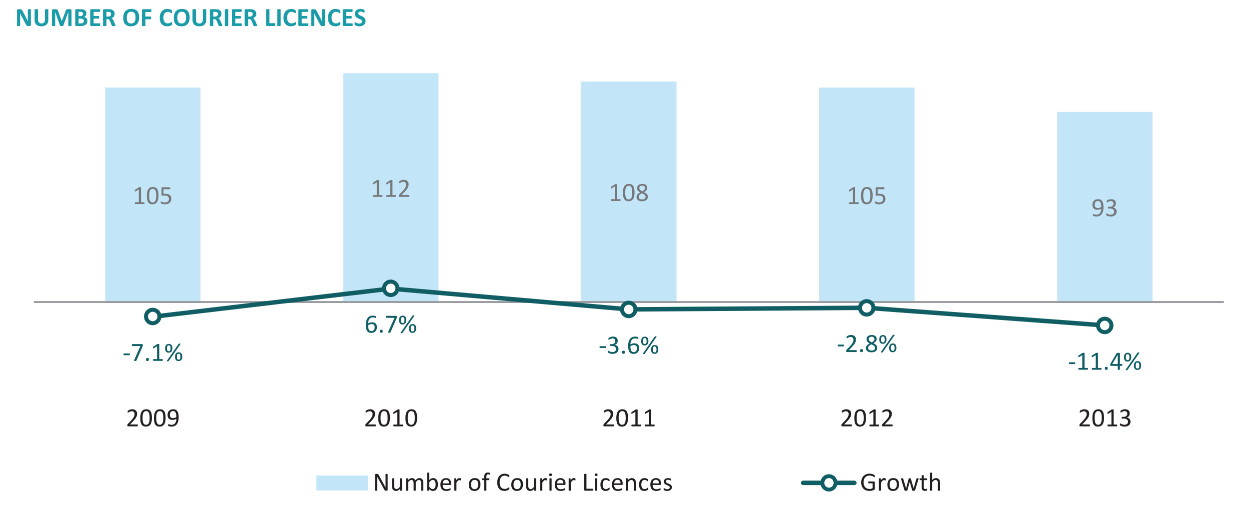
Source: MCMC

Figure 7.20 Courier Service Licence: Special Conditions

Courier service licences totalled 93 companies in 2013

The courier service industry consists of local players and multinational foreign companies. As at end 2013, there were 93 courier licensees, a decline of 11.4% compared with 2012.

Number of Courier Licence Issued



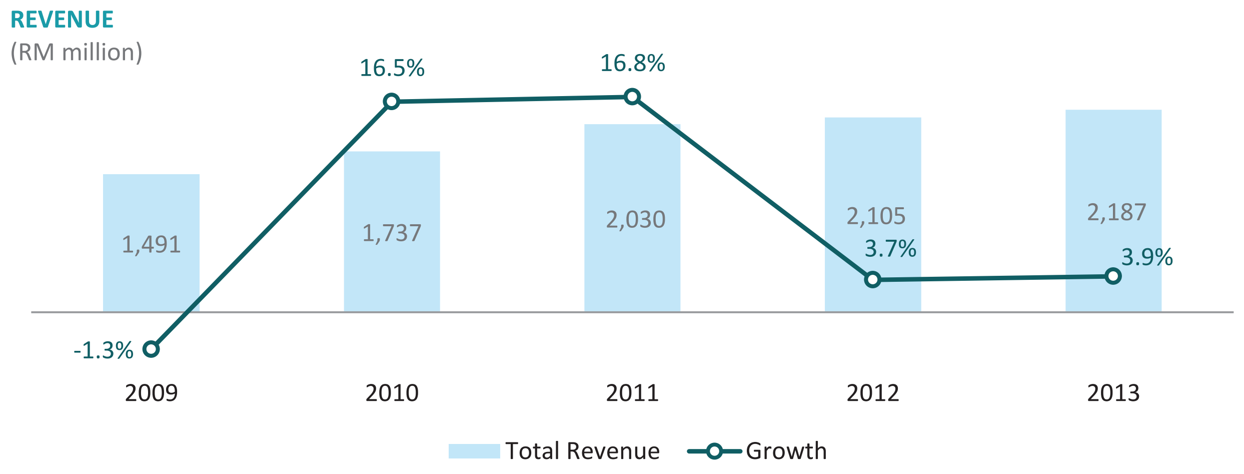
Source: MCMC

Figure 7.21 Number of Courier Licence Issued

Total Revenue of Top 10 Courier Providers

Courier service is an enabler, a critical service in the eCommerce value chain. The evolution of online shopping has fuelled the dependency and need of reliable courier services. The combination of communications technology, a trustworthy physical delivery service and the digital lifestyle of online citizens is spurring pertinent growth of eCommerce. This is evidenced from the growing trends of the courier service providers' revenue for the last four years.

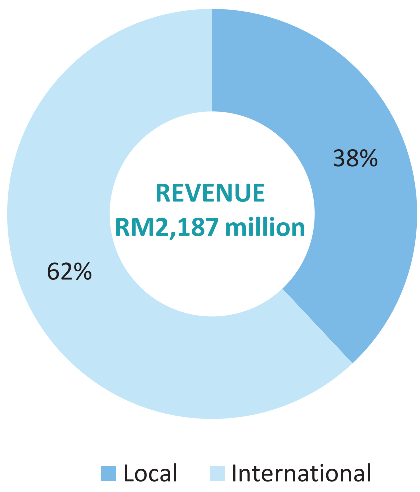
Total Revenue of Top 10 Courier Providers 2009 – 2013



Source: Industry, MCMC

Figure 7.22 Total Revenue of Top 10 Courier Providers 2009 – 2013

Courier Service Providers Revenue Market Share 2013



List of Top 10 Largest Service Providers by Revenue

Company	Service Provider	
	Local	International
ABX Express (M) Sdn Bhd	✓	
City-Link Express (M) Sdn Bhd	✓	
DHL Express (M) Sdn Bhd		✓
Federal Express Services (M) Sdn Bhd		✓
GD Express Sdn Bhd	✓	
Nationwide Express Courier Services Bhd	✓	
PosLaju (Pos Malaysia Bhd)	✓	
Skynet Worldwide (M) Sdn Bhd	✓	
TNT Express Worldwide (M) Sdn Bhd		✓
United Parcel Service (M) Sdn Bhd		✓
Total	**6**	**4**

Source: Industry, MCMC
Figure 7.23 Courier Service Providers Revenue Market Share 2013

The figure above shows the revenue market share for local and international service providers in 2013. Six local courier companies were in the top 10 courier providers with market share of 38%, whereas 62% belongs to four international service providers. The market share was consistent over the past several years.

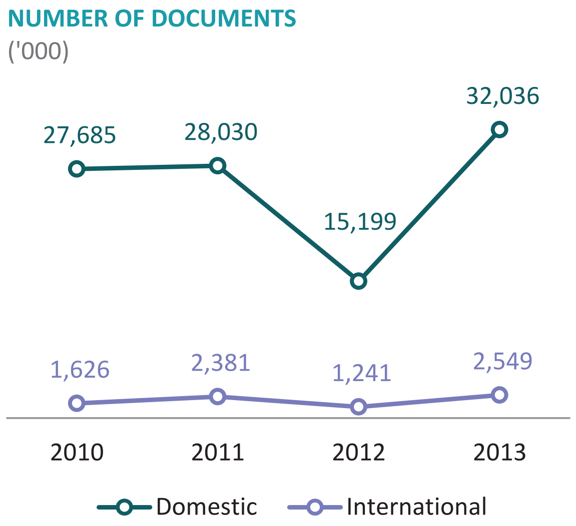
It is worth mentioning that although the four international courier companies captured larger revenue market share compared with the six local service providers, these international service providers handled about seven million packages whereas the six local service providers handled more than 45 million packages in 2013. This is partially attributed to the market concentration whereby the international service providers concentrate mainly on the international express service or packages for export which require higher shipping rate compared with domestic shipping rate. As for the local service providers, their market focus on domestic delivery with a small portion for international shipment of less than 5%.

For the record, the average revenue per document is RM6 for domestic delivery and RM75 for international shipment in 2013. The United States, Japan and Singapore are amongst the top destination countries for international shipment.

Courier Traffic

Courier traffic for both document and parcel more than doubled between 2012 and 2013 for domestic and international outbound. Courier traffic can be an indicator of merchandise sale transactions conducted via eCommerce portals. Hence, courier service can be considered as the backbone of the eCommerce ecosystem.

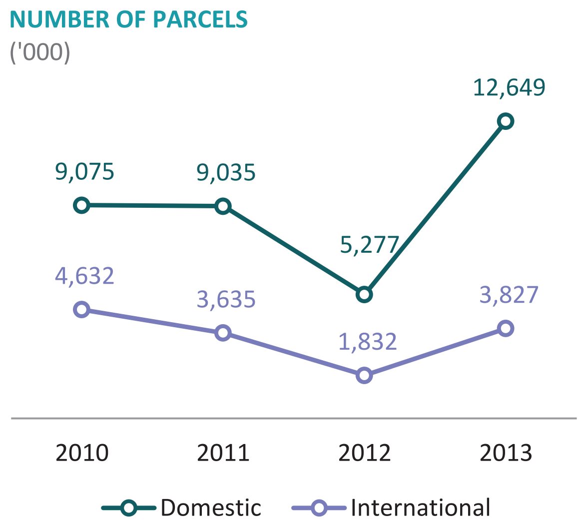
Number of Documents



Source: Industry, MCMC

Figure 7.24 Number of Documents

Number of Parcels



Source: Industry, MCMC

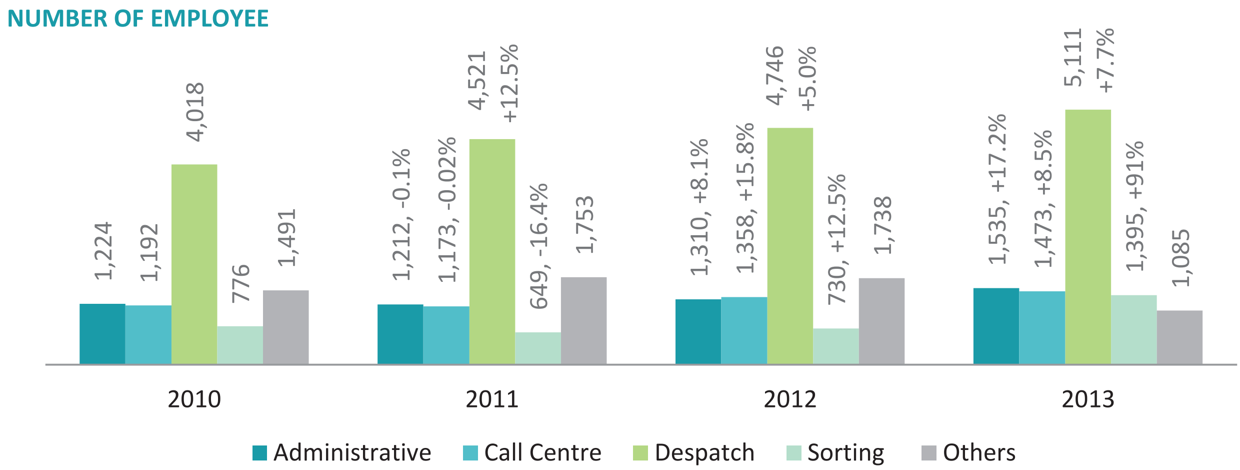
Figure 7.25 Number of Parcels

Employment in courier service

Based on feedback obtained from major courier service providers, there are four major groups of job classification in courier service namely, administration, call centre, despatch and sorting.

Figure 7.26 shows that almost half of the total employees in courier service industry are from the despatch group. This shows the labour intensive factor of physical delivery in despatch. Notably, sorting has increased 91% in 2013 to 1,395 employees from 730 employees in 2012. This appears to reflect the importance of these two categories of employees upon growth of eCommerce. Nevertheless, the development of every entity in the courier services value chain is important to ensure holistic efficiency and smooth services operations.

Employee in Courier Industry According to Job Function



Source: Industry, MCMC

Figure 7.26 Employee in Courier Industry According to Job Function

Uses of Technological Solutions for Courier Business Efficiency

In ensuring greater efficiency in the courier business, courier service providers are tapping on new technologies such as real-time tracking systems for shipments, which are supported by computer and telecommunications networks.

The use of such technology enables the best quality of services to customers. Courier service providers can determine the status of their packages at all possible locations along the delivery route in real-time. Customers can also track their packages through company's portal, mobile apps or alerts through e-mails.

To date, all major courier service providers provide tracking facilities to their customers. The tracking facilities not only help customer to identify when their package shall arrive but also ease courier service providers to perform operational task. For example, the tracking information can be consolidated to generate delivery report to monitor operational efficiency while a lost package can be tracked from its last location for investigation purposes.

Postal and Courier Consumer Complaints Handling

Despite the generally lower usage of ordinary mail services, consumers still have high expectation towards postal and courier services. Usually, customers will not tolerate with inefficiency in delivery and poor value for money of such services. Hence, in keeping themselves in the lead, service providers are required to continue improving their business operations including customer service and to constantly meet customer expectations.

With greater awareness of their rights, consumers can lodge complaints through designated channels if the postal and courier services engaged is not satisfactory. Such complaints received contribute to a feedback mechanism in check-and-balance of the quality of service of service providers and for further improvement of services.

As at end 2013, MCMC received a total of 103 complaints pertaining to postal and courier services compared with 66 complaints in 2012. The complaints were lodged by consumers, consumer organisations and those channeled from Public Complaint Bureau, Prime Minister's Office of Malaysia.

Late delivery issues recorded the highest number of complaints received between 2011 and 2013. To resolve issues, the companies' customer service would personally contact the customer and make an apology, while at the same time ensure the items are successfully delivered to the intended recipients as soon as possible.

Complaints Received 2011 – 2013

Category	Number of Complaints		
	2011	**2012**	**2013**
Late delivery	19	30	40
Unsatisfactory services	13	10	26
Lost items	9	16	16
Delivery personnel attitudes	8	2	4
Unsatisfactory charges	1	-	4
Unsatisfactory customer service	3	4	6
Others	4	4	7
Total	**57**	**66**	**103**

Source: MCMC

Figure 7.27 Complaints Received 2011 – 2013

Consumers are often advised to read the terms and conditions before engaging the services of any postal or courier service provider. For instance, compensation and insurance coverage are usually just for a limited amount instead of full compensation.

Based on information obtained from the service providers, some of the customer complaints that are difficult to handle are listed in Figure 7.28.

Type of Customer Complaints	
Complaint Category	**Descriptions**
Shipment damaged/lost	▪ Difficult to determine or track lost shipment when business is involved in third party arrangements and while the tracking status is unrecorded. The tracking status is important to identify the cause of the incident and improve operational efficiency; and ▪ Customers disagree with maximum compensation of RM200 as per terms and conditions, when the value of damaged/lost items is greater than compensation value.
Shipping problems and delays	▪ One of the reasons for delay is the difficulty to meet customs regulation and requirement. For example, complex custom clearance procedure has resulted in shipment taking a longer period of time than usual and affects the delivery commitment to the customers.
Tracking system not updated	▪ Delayed system update on the status of the shipment causing difficulty. Customers are not satisfied with out of date status and courier companies may need to check manually with respective branches to track such shipments and satisfy their customers.
Unsatisfactory service such as delivery/pick up failure and continuous/repetitive delay	▪ Difficult to handle uncertainty such as natural disaster, geographical, weather, manpower and time constraint especially during peak season; ▪ Customers do not tolerate repetitive shipment delivery delay. They expect higher quality of service from the courier companies than ordinary mail service; and ▪ There are also cases where the courier personnel did not wait for customers to complete the documents during pick up, which caused dissatisfaction to the customers.

Source: Industry, MCMC

Figure 7.28 Type of Customer Complaints

Business Challenges

The courier industry grows rapidly in the past few years. Similar to any other business, the courier service providers face different challenges along the way, particularly dealing with delayed, lost and damaged items which lead to losses to the companies. Some of the business challenges identified by the courier service providers in 2013 and the details are shown below.

Business Challenges in Courier Industry

Pressure on Margin

- High cost of operations involving staff related cost, transportation and utilities creates a challenging environment for the courier service providers;
- Competitive pricing between companies is also putting pressure on revenue; and
- The implementation of minimum wages affects costing across the board. This policy affects the reinvestment for capacity building.

Employee: Recruitment and Retention

- Courier service providers are having difficulty in staff retention, especially the generation X and Y tends to move from one job to another job for higher paying salary. This situation creates high turnover of staff and the companies need to recruit and train new staff; and
- These companies also faced difficulties in recruiting staff for certain job functions such as commercial vehicle drivers and sorters that required special skills.

Technology Change

Existing technology and system in the courier companies need to be upgraded to meet consumer demand. This kind of investment involved software solutions that meet company requirements and capable of taking advantages of communications technology today such as the Internet and mobile platform. For example, customers want to track their shipment via mobile device.

Changes in Customer Expectation

More customers are demanding for excellent and reliable services at much lower costs.

Source: Industry, MCMC
Figure 7.29 Business Challenges in Courier Industry

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MODULE 8: OUTLOOK 2014

C&M Industry Infrastructure and Access

Improving Infrastructure Reach

The Government implements a balanced approach in improving broadband infrastructure and providing access to various communities, in both urban and rural areas. Under the Malaysia Budget 2014, the HSBB network is to be expanded to suburban areas with Internet access speed upgraded to between 4Mbps and 10Mbps, which will benefit two million consumers at a cost of RM1.6 billion.

In order to increase broadband coverage in rural areas, 1,000 telecommunication transmission towers will be built over the next three years, with an investment of RM1.5 billion. Meanwhile, to increase Internet access in Sabah and Sarawak, new underwater cables will be laid within three years, at a cost of RM850 million.

The Government will implement the second phase of HSBB project in collaboration with the private sector to expand coverage in major towns and this project involves an investment of RM1.8 billion. The initiative is expected to provide additional coverage and facilities mainly in urban areas, benefiting 2.8 million households nationwide. Such plans underway for implementation ensure access to broadband services for all.

Opportunities and Challenges for Service Providers

Data services growth potential

Data services revenue is growing and to some extent at the expense of traditional voice and SMS revenue. Such development and shift from traditional voice revenue poses a new set of challenges for service providers in their efforts to maximise profits.

As reported by telecommunications equipment firm Ericsson[29], all mobile data volumes is expected to rise by a compound annual growth rate (CAGR) of around 45% between 2013 and 2019 globally. Mobile data volumes are majority consumed by video traffic due to the growing availability of video content that can be streamed to mobile devices. In fact, mobile video traffic is expected to grow by 13 times between 2013 and 2019. Hence, the emphasis on higher speed and better quality of service to ensure network capacity and capability, push and pull new and innovative services to reap their economic and social benefits.

It is pertinent to add here that in Malaysia, the spill over effect from high connectivity and Internet usage is the requirement to ensure greater awareness of Internet abuse and their prevention. Towards this end, MCMC is championing the KDB initiative nationwide.

4G LTE roll-out

The roll-out of 4G LTE networks is true to the goal of providing greater capacity for the rapidly growing demand for data services. With the targeted 4G LTE population coverage up to 50% by 2017, year 2014 will continue to be another deployment year for service providers in setting up their 4G LTE platform. In 2013, Celcom reported a spending of around RM420 million in capital expenditure (Capex) to enhance their network for the deployment of 4G LTE

[29] Ericsson, Ericsson Mobility Report, On the Pulse of the Networked Society, June 2014.

networks, and DiGi has allocated 80% of its RM750 million Capex to upgrade their sites. On the other hand, Maxis has reported to have spent RM407 million in the first half of 2013 in rolling out their 4G LTE network.

In 2014, service providers are to expand their 4G LTE network coverage to 20% of the population in Malaysia. However, as at end 2013, only Maxis managed to cover more than 10% population as committed. Thus, to speed up the roll-out and coverage of 4G LTE, service providers may well take innovative measures by entering into various partnerships such as infrastructure sharing, network sharing and other forms of collaborative measures to save costs and ensure timely delivery of services.

Sharing for future growth

Mobile connections need to become more cost efficient for service providers as consumers are demanding for 4G LTE services to be available over greater geographical area and at higher speeds. Thus, service providers may opt to redesign their ways of working and start to enter into negotiation with other parties such as infrastructure sharing partnership for faster roll-out of these services.

With that, each service providers may be able to reduce Capex on commonly required towers and backhaul networks. This would also result in higher and more efficient throughputs in a shorter time, thus, creating avenue for offering more value added services to the benefit of consumers and adding to enhance profitability for service providers.

DTTB

Year 2014 will mark a new milestone for the broadcasting sector in Malaysia. The development of DTTB infrastructure will enable FTA broadcasters to migrate to digital platform. This development includes a digital multimedia hub and a network of high, medium and low powered digital TV transmitters nationwide that has the technical capability to carry up to 45 SD or 15 HD digital TV channels. After the completion of this migration, the existing 700Mhz band will be considered for various uses by telecommunications after refarming of the spectrum.

Age of multiplatform and multiple devices

Innovations in various smart and handheld communications devices are enhancing the lifestyle of people as cost of living increase and time savings matter in a more competitive pace of market economies in the country. Consumers are opting away from the traditional ways of voice communications to cheaper data options that also provide other online conveniences such as online banking and bill payments. Consumers are also supplementing linear TV viewing with non-linear or time shifted content delivery to suit their changing viewing habits. This also opens up new ways of how business is done.

For example, for broadcasting advertisers, they are customising their advertisement to display seamlessly on different mobile devices or smartphones of various operating systems, models and screen sizes. Thus, their advertisement methods are also capitalising other platforms apart from the traditional broadcasting platform. That is, the TV advertisements also are targeting mobile users and other content delivery platforms.

Role of MCMC as Promoter of Digital Lifestyle Malaysia

The MCMC is guided by the national policy objectives, one of which is establishing Malaysia as a global centre for C&M information and content services. The Digital Malaysia project is one case in point towards creating value to accelerate development and adoption of new applications and content services for growth by using various ICT tools at home, work and community levels. A growing number of apps have been developed and adopted including in eCommerce solutions provision.

The postal and courier services feature as a key enabler in the context of development of online retail business. The physical delivery of goods is as important as the virtual transactions which then allow a holistic end to end business environment for enhanced profitability. In view of this, the aspects of QoS, reliability and security for both the telecommunications, postal and courier services are essential.

All these are poised to deliver economic and social development such as increase Gross National Income (GNI) contribution and infusion of ICT tools to further uplift the quality of life in Malaysia. As it is, the C&M industry is one of the key enablers to support and promote economic growth and contribute to transformations in markets and businesses. This key role needs to be nurtured or developed not only in terms of infrastructure, equipment and devices but also need acceleration in the shaping of skills. Only then can the industry capitalise on sustained economic growth.

Conclusion

Malaysia continues to ride on the telecommunications infrastructure built over the last 10 years. This is with firm grounding in high speed broadband in the last few years. New beginnings in services are emerging which augurs well for Malaysia in ICT trends including maximising mobility for greater monetisation of new business models. The efforts of not only by the Government but also the participation from the private sector in the transformation and development of the country’s telecommunications infrastructure continues to ensure the development of progressive information infrastructure.

Converging communication platforms provide more avenue for diverse range of products and service offerings which are easily available and becoming more affordable as a result of digitisation. Applications and services such as unified communications, data centre services, authentication services, eCommerce, payment services and billing are increasingly conducted today. The local C&M service providers in a changing C&M industry landscape, while managing accompanying challenges, have much promise of growth to reap going forward.

ACRONYM

1PITTIS	Postal Integrated Track and Trace System
3D	Three-dimensional
3G	3rd Generation
4G	4th Generation
A	
A4AI	Alliance for Affordable Internet
ACE	"Access", "Certainty", "Efficiency"
Adex	Advertising Expenditure
ADSL	Asymmetric Digital Subscriber Line
AICPA	American Institute of Certified Public Accountants
ARPU	Average Revenue Per User
ASP (C)	Applications Service Provider (Class)
ATF	Asia Television Forum
B	
BAS	Broadband Access Service
C	
CA	Certifying Agency
CAGR	Compound Annual Growth Rate
Capex	Capital Investment
CAS	Content Application Service
CASP (I)	Content Applications Service Provider (Individual)
CCAM	Creative Content Association of Malaysia
C&M	Communications and Multimedia
CFM	Communications and Multimedia Consumer Forum of Malaysia
CICA	Canadian Institute of Chartered Accountants
CIDF	Creative Industry Development Fund
CMA	Communications and Multimedia Act 1998
CMCF	Communications and Multimedia Content Forum of Malaysia
CPE	Customer Premises Equipment
CTOS	Credit Tip Off Service
D	
DBS	Direct Broadcast Satellite
DECT	Digital Enhanced Cordless Technology
DEL	Direct Exchange Line
DIAS	Dial Up Internet Access Service
DLL	Digital Leased Line Service
DSA	Digital Signature Act 1997
DTH	Direct-To-Home
DTTB	Digital Terrestrial Television Broadcasting
E	
EESAT	Extensive End-Point Service Availability Testing
ELITE	North-South Expressway Central Link
EPP7	Entry Point Project 7
ETP	Economic Transformation Programme
EV-DO	Enhanced Voice-Data Optimised
F	
FINAS	National Film Development Corporation Malaysia
FTA TV	Free-To-Air Television
FUP	Fair Usage Policy
FYE	Financial Year Ended

	G
Gbps	Gigabyte per second
GCC	General Consumer Code
GDP	Gross National Income
GHz	Gigahertz
GLC	Government-linked Company
GMBO	Get Malaysian Business Online
GSM	Global System for Mobile Communications
	H
HD	High Definition
HDTV	High Definition Television
HLR	Home Location Register
HSBA	High Speed Broadband Access
HSBB	High Speed Broadband
HSBT	High Speed Broadband Transmission
HSPA+	Evolved High Speed Packet Access
	I
IaaS	Infrastructure as a Service
IC3	International Creative Content Conference
ICT	Information and Communications Technology
IDI	ICT Development Index
IDR	Indonesian Rupiah Rate
IoT	Internet of Things
IP	Internet Protocol
IPC	Integrated Parcel Centre
IPTV	Internet Protocol Television
IT	Information Technology
ITU	International Telecommunication Union
ITU-IMPACT	International Telecommunications Union-International Multilateral Partnership against Cyber Threats
	K
KDB	*Klik Dengan Bijak*™ or Click Wisely
KLIA	Kuala Lumpur International Airport
KTW1M	*Kampung Tanpa Wayar 1Malaysia* or 1Malaysia Wireless Village
	L
LTE	Long Term Evolution
	M
M2M	Machine to Machine
MACRI	Malaysian Association of Creativity and Innovation
Mbps	Megabits Per Second
MDeC	Multimedia Development Corporation
MEASAT	Malaysia East-Asian Satellite
MIA	Malaysian Institute of Accountants
MIPCOM	Marché International des Contenus Audiovisuels
MIPTV	Marché International des Programmes de Télévision
MIS	Measuring the Information Society
MMS	Multimedia Messaging Service
MNO	Mobile Network Operator
MNP	Mobile Number Portability
MoE	Ministry of Education Malaysia
MVNE	Mobile Virtual Network Enabler
MVNO	Mobile Virtual Network Operator
	N
NBI	National Broadband Initiatives
NFP (I)	Network Facilities Provider (Individual)
NKEA CCI	National Key Economic Area Communications Content and Infrastructure
NKVE	New Klang Valley Expressway
NPS	National Postal Strategy
NSP (I)	Network Service Provider (Individual)

	O
OHF	One-Hop-to-Fibre
OSS	Operating Support System
OTP	One Time Password
OTT	Over-the-Top
	P
PAIN	Privacy, Authentication, Integrity and Non repudiation
PAT	Profit After Tax
PCS	Public Cellular Services
PDRM	*Polis Diraja Malaysia* or Royal Malaysia Police
PI1M	*Pusat Internet 1Malaysia* or 1Malaysia Internet Centre
PKB	Pakej Komunikasi Belia
PKI	Public Key Infrastructure
PLKN	*Program Latihan Khidmat Awam* or National Service Training Programme
PPS	Public Payphone Service
PSA	Postal Services Act 2012
PSTN	Public Switched Telephone Network Service
PTPSS	*Pelan Transformasi Postal Sabah dan Sarawak*
PVR	Personal Video Recorder
	Q
QoS	Quality of Service
	R
RAN	Radio Access Network
RF	Radio Frequency
RFI	Radio Frequency Interference
RFID	Radio Frequency Identification
RFS	Regulatory Financial Statements
RTM	Radio Televisyen Malaysia
	S
SD	Standard Definition
SIM	Subscriber Identity Module
SIRIM	Standards and Industrial Research Institute of Malaysia
SLC	Special Licence Conditions
SME/SMI	Small and Medium Enterprise/Small and Medium Industry
SMS	Short Message Service
SODA	Standing Order Deposit Account
	U
UNESCO	United Nations Organization for Education, Science and Culture
US AID	United States Agency for International Development
USD	United States Dollar
USP	Universal Service Provision
	V
VAS	Value Added Services
VOD	Video on Demand
VSAT	Very Small Aperture Terminal
	W
WAP	Wireless Application Protocol
WEF	World Economic Forum
Wi-Fi	Wireless Fidelity
WiMax	Worldwide Interoperability for Microwave Access
WPKI	Wireless Public Key Infrastructure

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