Malaysia’s Experience To Increase Broadband Penetration

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COMECE Meeting
Ankara, Turkey
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MALAYSIA IN BRIEF

- **Capital City**: Kuala Lumpur
- **Total Area**: 330,252 sq km
- **Population**: 31,989,790 million
- **Ethnic Groups**:
  - 50.1% Malay
  - 22.6% Chinese
  - 11.8% Indigenous
  - 6.7% Indian
  - 8.8% other
- **Population Density**:
  - 92 persons per sq km
- **Urban Population**: 62%
- **Households**: 7.412 million
- **Anthem**: Negaraku
MCMC is the industry developer and regulator for the converged communications and multimedia sector which covers telecoms, broadcasters and ISPs, postal and courier services, digital certification authorities.

Administers the following Acts:

- Communications and Multimedia Act 1998 (CMA)
- Postal Services Act 1991
- Digital Signature Act 1997

About MCMC

Power & Functions of the Commission

- A statutory corporation
  - Established under the Malaysian Communications and Multimedia Commission Act 1998
  - effective from 1 November 1998
- Operational autonomy but subject to policy directives from Minister
- Independent from a financial and management standpoint
- Transparent approach – processes stipulated in legislation and subsidiary instruments
CURRENT TELECOMMUNICATION INDICATORS IN MALAYSIA

**COVERAGE AND PENETRATION**

- **95%** Cellular coverage (2G) at populated areas
- **92%** Cellular coverage (3G) at populated areas
- **68%** Cellular coverage (LTE) at populated areas
- **77.9%** Household Broadband penetration

**SUBSCRIPTIONS**

- **43.9 million** Cellular subscriptions
- **28 million** Mobile Broadband subscriptions
- **2.7 million** Fixed Broadband subscriptions
Our Broadband Journey......

Q3 2016
78%
Household
Broadband
Penetration
Malaysia Initiatives
The MSC Vision: From Here to 2020

Phase 1
Create Multimedia Super Corridor (MSC)

Next Leap
Grow MSC into a Global ICT Hub

Phase 3
Transform Malaysia into a Knowledge Society

Leapfrog into Leadership in the Knowledge economy


"Transform Malaysia into a knowledge Society and High Income Nation"
MyICMS 886


- MyICMS 886 is identified 8 key service areas, 8 types of infrastructure and 6 growth areas as focus points for development;

- Aims to create a catalytic cycle enhancing investment in existing services and infrastructure to generate growth areas.

8 SERVICES
Delivery of advanced services, improve the quality of life, boosting nation’s global competitiveness

8 INFRASTRUCTURE
Hard and soft – Support the services and to generate growth areas

6 GROWTH AREAS
Key growth areas for businesses, consumers and society
National Broadband Initiative (NBI) Objectives

- Wider broadband coverage
- Higher broadband speed
- Accessible & Affordable
- Increase broadband penetration
Increase In Broadband Penetration And Quality Of Services Will Support The Vision To Become Country With High Economic Income In 2020

2020
• Target of USD15.1 B (RM50.3 B) GNI + (potential additional USD2.33 B (RM7.5 B) from multiplier effects) in Communications Content and Infrastructure sector (NKEA CCI)

2015
• 75% broadband penetration
• Increase in quality and speed of services

2010
HSBB and BBGP
• Contribution of 1% to GDP
• 135,000 new jobs created

2013

2018
GNI contribution Communications Content and Infrastructure USD billion
USD6.2 B (RM22 B)
CAGR 7.8%
Post, Courier, Broadcast
Regional
Mobile
Fixed

Entry Point Projects (EPP)
USD5.2 B (RM16.6 B)

Business Opportunities (BO)
USD3.7 B (RM11.7 B)

Potential from multiplier effects
USD2.33 B (RM7.5 B)

GNI 2020
Jobs Created 2020

Total EPPs
USD5.2 B (RM16.6 B)
25,899

Total BOs
USD3.7 B (RM11.7 B)
17,263

Total EPPs & BOs
USD 8.9 B (RM28.3 B)
43,162

2020

2015

2010
National Broadband Implementation Strategy

**Supply**

1. **Broadband for General Population (BBGP)**
   - Incentives and facility-based competition based on major technologies (xDSL, WiMAX and 3G/HSDPA)
   - USP programs roll out (collective and individual access)
   - Average speed of 2Mbps
   - Target capitals, industrial areas and development regions
   - Public Private Partnership (PPP) arrangement for infrastructure roll out
   - Speed exceeds 10Mbps

2. **High Speed Broadband (HSBB)**

**Demand**

1. **Awareness**
   - Continuous government and private sector awareness initiatives

2. **Attractiveness**
   - Enhance and promote e-government, e-education and e-commerce initiatives
   - Improve and align online content strategies and activities
   - Leverage on development of traditional information resources

3. **Affordability**
   - Develop initiatives to reduce/improve broadband access costs (PC, subscription etc)
   - Widen community access facilities and deployment

High Speed Broadband (HSBB) Project

**Project Funding**
- Private-Public-Partnership
- Government
- Service Provider

**Project Scope**
- end-to-end (access, core and international)
  - speed 10Mbps and above
  - Coverage: Inner Klang Valley, Industrial areas and Iskandar Malaysia)

**Regulatory Framework**
- Services to be provided is based on fair and equitable access
- Open access whereby other service providers can use the network

**TM Undertakings**
- High speed connectivity to Government Offices and IPTA/IPTS
- Affordable broadband package
- Telecenters for specific group
- Development of content platform
- Promotion and awareness program

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**Overall network topology**

1. Content Development Platform
2. HSBB Last Mile
3. NGN (Core Network)
4. International Capacity

[Diagram of network topology]
HSBB DEPLOYMENT HAS SHOWN POSITIVE IMPACTS IN VARIOUS ASPECT

**Improved Broadband Access**
- High speed broadband access
- Open access network to other operator

**Support High Bandwidth Application**
- HD Video
- Advanced Education
- Multimedia post production
- E-Health
- IPTV

**Improved Government Services**
- High broadband connectivity to the identified government offices
- Improve e-government services efficiency

**Improved QoS and User Experiences**
- High speed broadband for business and consumer used

- Animation post production (20Mbps): 333 minutes
- DVD quality movie (20Mbps): 15 minutes
- Music MP3 (20Mbps): 0.03 minutes
FIBER OPTIC BACKHAUL PROJECT

LEGEND

- HSBB Area
- Existing Fiber (CTS & TM)
- Greenfield (BBGP RMK-10)
- Brownfield (BBGP RMK-10)
- Score Growth Nodes

**Score Growth Nodes**
- SOUTH CHINA PLACE – KK
- INTEGRATED CEMENT PLANT – KK
- RURAL GROWTH CENTRE – KUDAT
- SME INDUSTRIAL PARK – BATU SAPI
- SANDAKAN INTEGRATED EXCHANGE TERMINAL – BATU SAPI
- KINARUT SOUTH SATELITE TOWN – PAPAR
- LAHAD DATU WATERFRONT HOTEL

**HSBB Area**
- Exisiting Fiber (CTS & TM)
- Greenfield (BBGP RMK-10)
- Brownfield (BBGP RMK-10)

**Existing Fiber (CTS & TM)**

**Greenfield (BBGP RMK-10)**

**Brownfield (BBGP RMK-10)**
FIBER OPTIC BACKHAUL PROJECT

LEGEND

- **HSBB Area**
- **Existing Fiber**
- **Greenfield** (BBGP RMK-10)
- **Brownfield** (BBGP RMK-10)
- **SCORE GROWTH NODES**

**HSBB Area**

- **SAMALAJU - HEAVY INDUSTRY CENTRE**

- **BARAM - TOURISM AND RESOURCE BASED INDUSTRIES.**

- **TANJUNG MANIS - INDUSTRIAL PORT CITY AND HALAL HUB**

- **TUNOH - TOURISM AND RESOURCE BASED INDUSTRIES.**
LANGKAWI ISLAND TOWER FIBERIZATION PROJECT
DEVELOPMENT OF INTERNATIONAL NETWORK UNDER HSBB PROJECT FOR BETTER CONNECTIVITY

Legend:
- Cable Station

APCN - Asia Pasific Cable Network
SMW - South East Asia-Middle East-Western Europe
AAG - Asia America Gateway

Increased International Submarine Capacity to 1.6 Tbps
MOBILE BROADBAND COVERAGE EXPANSION

- Improve cellular signal in weak areas and no signal service
- Erect and equip communications tower with 2G and 3G service
- Implementing RAN sharing for the communications tower

1425 New towers completed
COMMUNITY BROADBAND CENTRE

This initiative is to help increase the socio economic of the underserved group/area by providing access in underserved group/area.
• Netbooks distributed to students to increase computer literacy in rural community.

• Selected villages and tourist spots equipped with Wi-Fi services at concentrated areas.
DEMAND STIMULATION PROGRAMS

Awareness & Promotion
- Broadband Carnival
- Broadband & ICT Training (Basic computer, content development, hardware & software maintenance & troubleshooting
- Promotion through mass media

Affordability
- 1Malaysia Netbook Distribution
- Introduction of affordable broadband packages
- NKEA CCI EPP Smart Network

Attractiveness
- Initiative under Economic Transformation Programme (NKEA) Communications Content & Infrastructure : e-Gov, e-learning, e-health, Track and Trace and connecting 1MY
- Portal My1Content to encourage content development and commercialization
- Creative content development by MDeC /FINAS
ROADSHOW

TARGETS AUDIENCES

- STUDENTS
- PARENTS
- YOUTH
KJL1M LANGKAWI
2014
MINDA SARAWAK
BROADBAND USAGE SUPPORT PROGRAMME

GET MALAYSIAN BUSINESS ONLINE PROGRAMME (GMBO)

Introduction & Objective

To assist entrepreneurs to increase online sales

- To get more Malaysians businesses especially women online

Contribution towards economic development

- RM50 million from SKMM’s fund to benefit 50,000 entrepreneurs with RM1,000 grant each
- Total disbursement: RM4.5 million (sept 2013)

Grant Pre requisite

Malaysian especially women, between 18-65 years old

- Business license / Registered business or company;
- Registered domain name (.com.my/.my/.edu.my/.net.my/.org.my) with an active website;
- Has a local bank account under the entrepreneur/business/company name; and
- Micro entrepreneur – less than 10 full-time employees OR annual income of less than RM200,000

Use telecommunication services to promote business

- Subscribes to telephone /cellular AND broadband services under the entrepreneur/business/company name; OR
- Member of 1Malaysia Internet Center (PI1M)
Youth Communication Package is a scheme under the Malaysian National Broadband Initiative that grants youth aged 21 to 30 with income below RM3,000 to get RM200 rebate off selected 3G smartphones from telco nominated registered dealers in 2013;

This initiative, coordinated by the Malaysian Communications and Multimedia Commission (MCMC), was announced by the Prime Minister as part of Budget 2013.

**Eligibility:**
- Malaysians aged 21 – 30 years
- Monthly income lower than RM3,000
- New or existing user subscribing
- Smartphone rebate will be given only once to eligible participants

Website: [http://komunikasibelia.skmm.gov.my/](http://komunikasibelia.skmm.gov.my/)
SMART DEVICES WITH INTERNET PACKAGE

Total Activation  
1,679,493  
units

• An initiative introduced in 2014 to lower prices of smart devices for the masses
• To enable users to enjoy services and applications offered online
1MALAYSIA NETBOOK

- Enhance learning process
- Improving their ICT knowledge

Total Distributed
1,668,772 units
More than RM300 million earmarked for content development:

In the form of Grants, tax incentives to encourage content developers to set up business in Malaysia.
- Content Industry Development Grant
- MCMC Grant for Innovative & Creative Contents & Applications (MaGICCA).
- Integrated Content Development Program (ICON)
- Grant for CGI

Creative Competitions to develop young talent, SME’s, and Contentpreneur to nurture interest and creativity in Content Development.

To educate young minds on the basic skills of content productions.

To create excitement among young Malaysians on the potential and opportunities in content industry.
OTHER GOVERNMENT INCENTIVES

1. Broadband subscription tax rebate
2. Special scheme for purchase laptop
3. Allowance for last mile broadband providers
COLLECTIVE ACCESS FOR UNDERSERVED AREAS

**TELEPHONY**
Provides access to basic telephone service in underserved communities around the country.

- **District involved**: 89
- **Centres completed**: 784

**COMMUNITY BROADBAND LIBRARY**
Furnishing rural community libraries with internet connection.

- **Community libraries have internet connection**: 99
- **Locations**: 4,177

**1MALAYSIA INTERNET CENTRE**
To provide basic Internet access in rural and remote areas where there are no Internet facilities.

- **3,614 sites**

**EXTENDING REACH OF CELLULAR COVERAGE**
Rolling out 1,000 communication towers for improved cellular coverage in rural and remote areas nationwide.

Source: MCMC
Moving Forward
HIGH SPEED BROADBAND 2 (HSBB2)

- Utilises FTTH, ETTH and VDSL2.
- To provide additional 390,000 ports for state capitals, major town and high impact areas around the country.
- Able to deliver bandwidth of up to 100Mbps.
- The project timeline will be over a 10 year period and commencement began in 2015.
- At the end of 2016, the project has delivered approximately delivered 290,000 ports.

Focus
- Urban setting

Bandwidth
- Up to 100Mbps
SUBURBAN BROADBAND (SUBB)

- SUBB is an infrastructure project to provide high speed broadband for areas outside of HSBB and HSBB2 coverage.
- The network will utilise existing copper lines to deliver broadband at speeds of up to 20Mbps.
- SUBB will provide 420,000 ports by 2019.

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<tr>
<th>Focus</th>
<th>Bandwidth</th>
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<tbody>
<tr>
<td>Suburban setting</td>
<td>Up to 20Mbps</td>
</tr>
</tbody>
</table>
RURAL BROADBAND (RBB)

• Effort to boost penetration rate in Malaysia

• Provide infrastructure with capability to provide up to 20Mbps

• As at 31 December 2015, a total of 6,700 ports created

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<tr>
<th>Focus</th>
<th>Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural setting</td>
<td>Up to 4Mbps</td>
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</table>
MOBILE BROADBAND COVERAGE EXPANSION

- Improve cellular signal weak areas and no signal service
- Erect and equip communications tower with 2G and 3G service
- Implementing RAN sharing for the communications tower

800
New towers

1,500 towers
Service upgrade to 4G or LTE
IMPROVEMENT OF DOMESTIC SUBMARINE CABLE SYSTEM

Total Length 3,800 km
FIBRE OPTIC NETWORK EXPANSION

- To accommodate the demand for high speed broadband on cellular network
- To fiberise communications tower around the country
- Enable 3G and 4G services

3 new domestic submarine cable and 154Km fiber backhaul in progress
## 2017 ROADSHOW PLAN

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<th>No</th>
<th>State</th>
<th>Location</th>
<th>Proposed Date (2017)</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>PAHANG</td>
<td>PEKAN</td>
<td>24-26 FEBRUARY</td>
</tr>
<tr>
<td>2</td>
<td>PERAK</td>
<td>BAGAN DATUK</td>
<td>21-23 APRIL</td>
</tr>
<tr>
<td>3</td>
<td>TERENGGANU</td>
<td>KUALA BERANG, HULU TERENGGANU</td>
<td>28-30 JULY</td>
</tr>
<tr>
<td>4</td>
<td>SABAH</td>
<td>PADANG PEKAN PAPAR</td>
<td>27-29 OCTOBER</td>
</tr>
<tr>
<td>5</td>
<td>KELANTAN</td>
<td>DATARAN GUA MUSANG</td>
<td>24-26 NOVEMBER</td>
</tr>
<tr>
<td>6</td>
<td>KEDAH</td>
<td>PERKARANGAN STADIUM DARUL IMAN ALOR SETAR</td>
<td>15-17 DECEMBER</td>
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Target Broadband Coverage and Penetration (2016 – 2020)

% of populated areas with broadband coverage

<table>
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<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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</thead>
<tbody>
<tr>
<td>% of populated areas with broadband coverage</td>
<td>91.5</td>
<td>93.0</td>
<td>93.5</td>
<td>94.0</td>
<td>95.0</td>
</tr>
<tr>
<td>Household broadband penetration (%)</td>
<td>78.5</td>
<td>85.0</td>
<td>87.0</td>
<td>88.0</td>
<td>90.0</td>
</tr>
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THANK YOU

Head Office Address

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