Malaysia's Experience To Increase Broadband Penetration

Bukhari Yahya

COMEC Meeting

Ankara, Turkey

16 March 2017
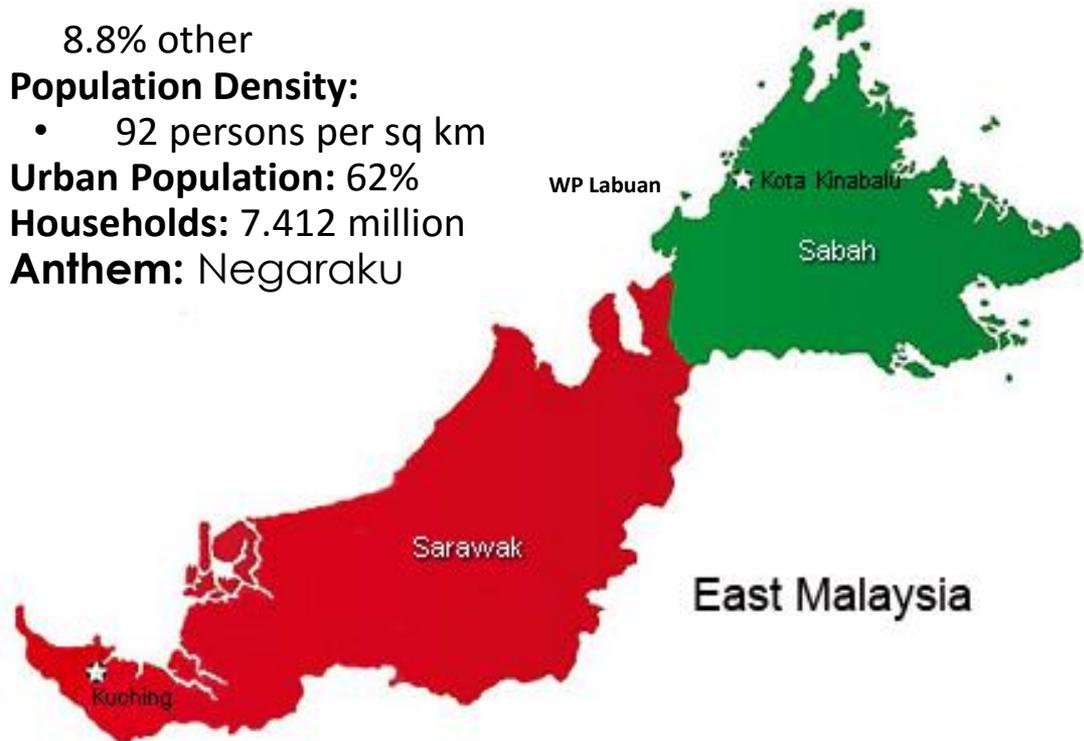
TABLE OF CONTENTS

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

West Malaysia

Perlis
Kangar
Alor Setar
Kedah
George Town
Penang
Kota Bahru
Kelantan
Perak
Terengganu
Ipoh
Kuala Terengganu
Pahang
Kuantan
Selangor
Kuala Lumpur
WP Putrajaya
Negeri Sembilan
Seremban
Melaka
Bandar Melaka
Johor
Johor Bahru

East Malaysia

WP Labuan
Kota Kinabalu
Sabah
Sarawak
Kuching

About MCMC
Power & Functions of the Commission

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

➢ 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
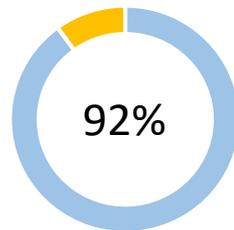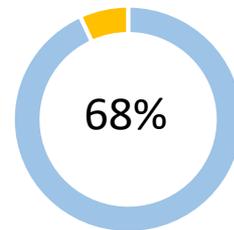
4

CURRENT TELECOMMUNICATION INDICATORS IN MALAYSIA

COVERAGE AND PENETRATION
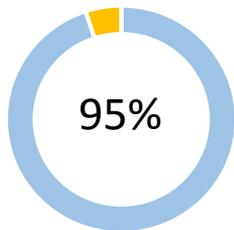
95%
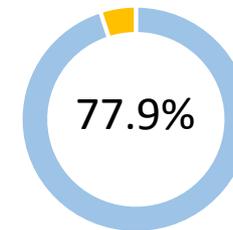Cellular coverage (2G) at populated areas

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……
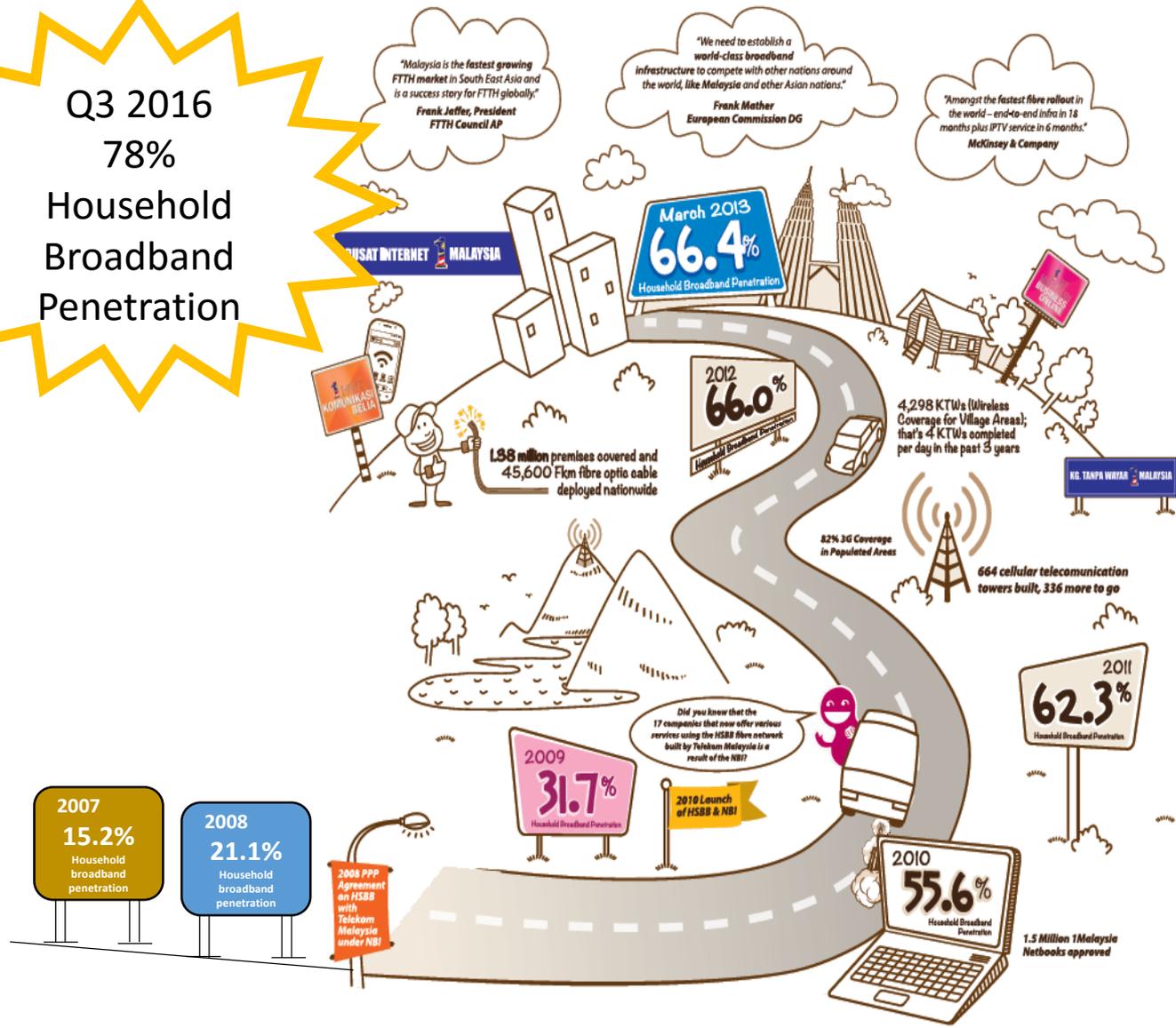
Malaysia Initiatives

ROADMAP OF NATIONAL ICT FRAMEWORKS

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

1996   2004   2005   2010   2013   2020

INISIATIF JALUR LEBAR NEGARA **NBI** NATIONAL BROADBAND INITIATIVE

DIGITAL MALAYSIA
National Digital Economy Initiative

ECONOMIC TRANSFORMATION PROGRAMME

Year 2020
"Transform Malaysia into a knowledge Society and High Income Nation"

MyICMS 886

**Strategy outlined for the development of Information, Communications and Multimedia Services (ICMS) in Malaysia
(2006 – 2010)**

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

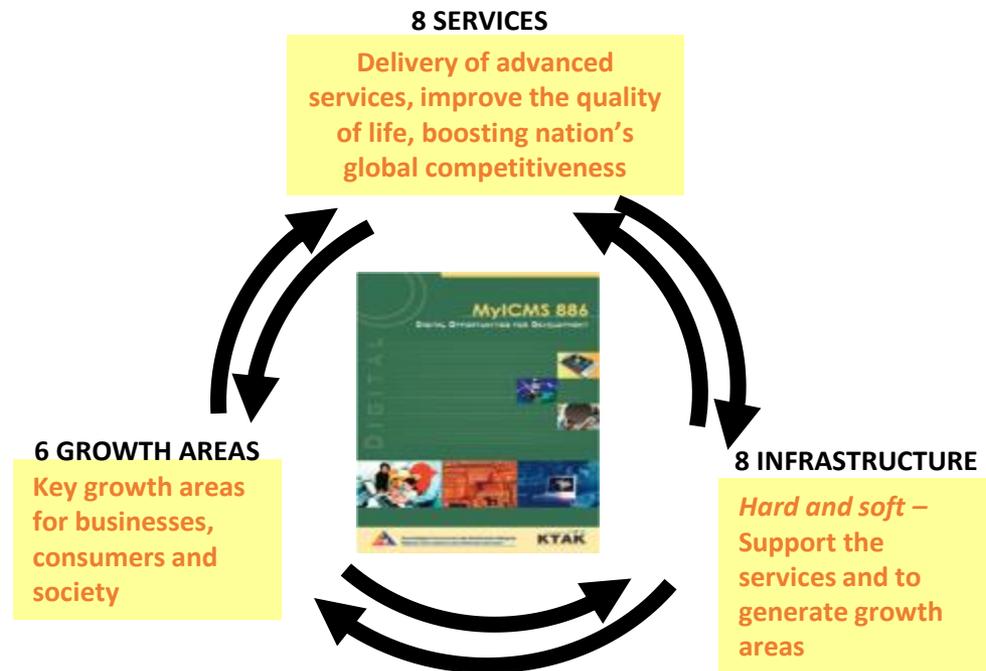- Aims to create a catalystic cycle enhancing investment in existing services and infrastructure to generate growth areas

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

6 GROWTH AREAS
Key growth areas for businesses, consumers and society

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

National Broadband Initiative (NBI) Objectives
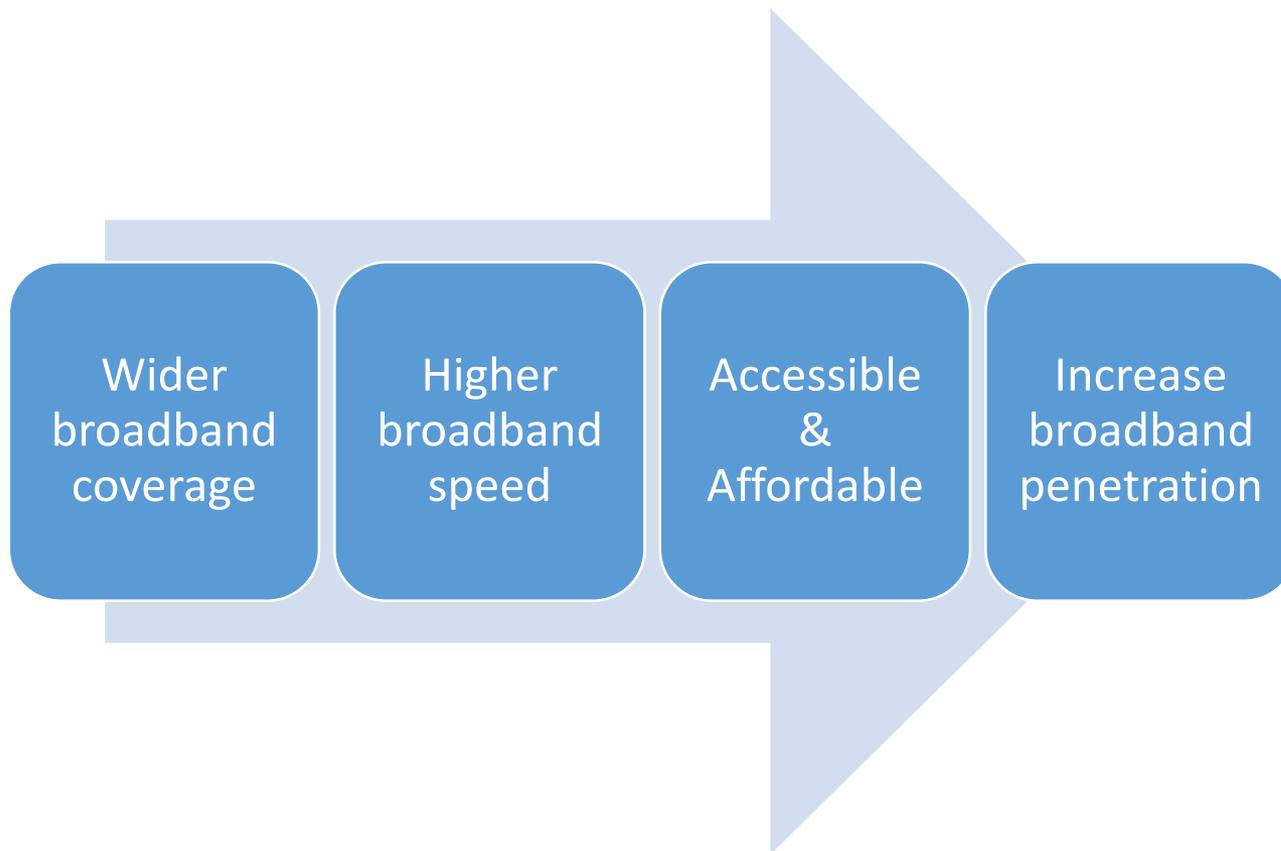
Increase In Broadband Penetration And Quality Of Services Will Support The Vision To Become Country With High Economic Income In 2020
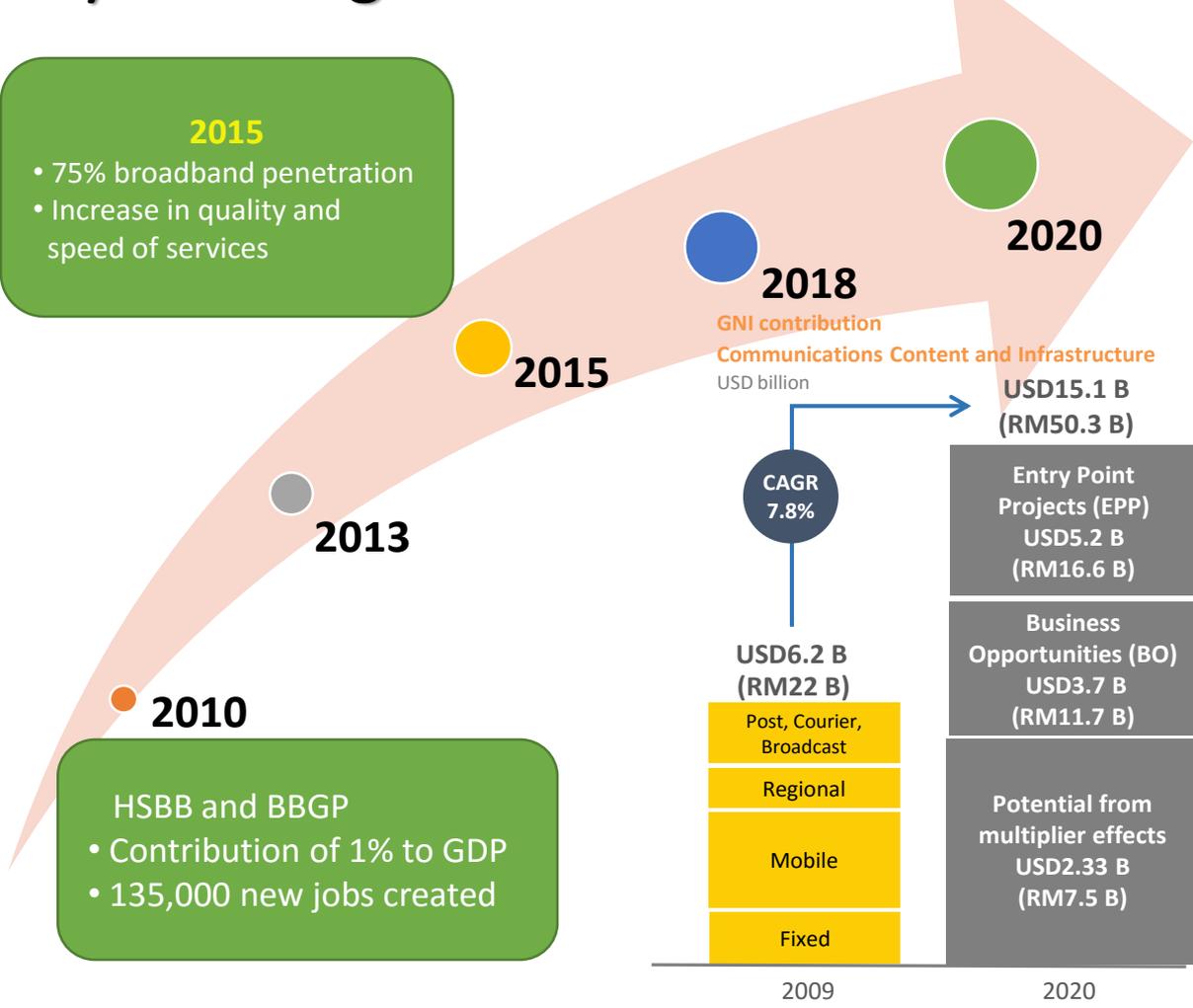
2015
- 75% broadband penetration
- Increase in quality and speed of services

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)

2020

2018

GNI contribution
Communications Content and Infrastructure
USD billion

2015

2013

USD15.1 B
(RM50.3 B)

CAGR 7.8%

2010

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

USD6.2 B
(RM22 B)

| 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) |

2009   2020

	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

14

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

2 — **High Speed Broadband (HSBB)**

- Target capitals, industrial areas and development regions
- Public Private Partnership (PPP) arrangement for infrastructure roll out
- Speed exceeds 10Mbps

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)
- 1.3 million ports
  - speed 10Mbps and above
    - Coverage: Inner Klang Valley, Industrial areas and Iskandar Malaysia)

HSBB PROJECT

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
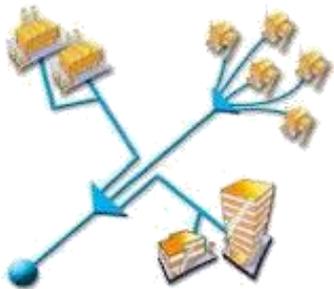- Promotion and awareness program

Overall network topology
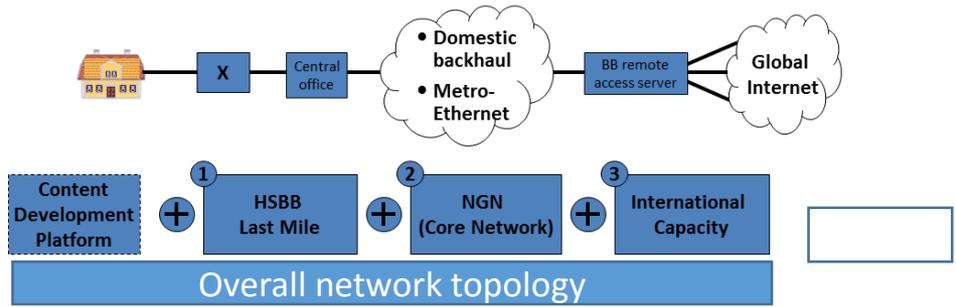
HSBB DEPLOYMENT HAS SHOWN POSITIVE IMPACTS IN VARIOUS ASPECT

Improved Broadband Access

- High speed broadband access
- Open access network to other operator

Improved Government Services

- High broadband connectivity to the identified government offices
- improve e-government services efficiency

Support High Bandwidth Application

HD Video

Advanced Education

Multimedia post production

E-Health

IPTV

Improved QoS and User Experiences

- High speed broadband for business and consumer used

Minutes

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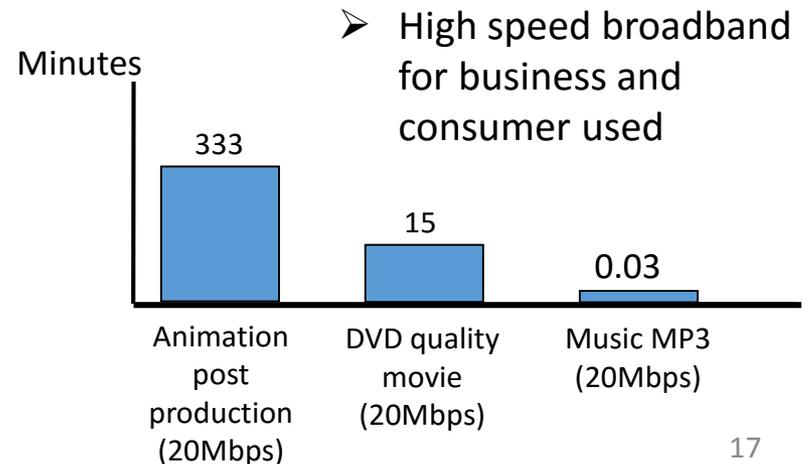
FIBER OPTIC BACKHAUL PROJECT

LEGEND

HSBB — HSBB Area

Existing Fiber (CTS & TM)

Greenfield (BBGP RMK-10)

Brownfield (BBGP RMK-10)

★ Score Growth Nodes

- RURAL GROWTH CENTRE - KUDAT
- SOUTH CHINA PLACE – KK
- INTEGRATED CEMENT PLANT - KK
- KINARUT SOUTH SATELITE TOWN - PAPAR
- SME INDUSTRIAL PARK – BATU SAPI
- SANDAKAN INTEGRATED EXCHANGE TERMINAL – BATU SAPI
- LAHAD DATU WATERFRONT HOTEL
- WATERFRONT DEV – SEMPORNA
- MARINE INDUSTRIES – BUM-BUM ISLAND
- RESORT & MARINE DEV – BUM-BUM ISLAND
- APAS INDUSTRIAL ESTATE – TAWAU
- KUHARA POINT DEVELOPMENT – TAWAU
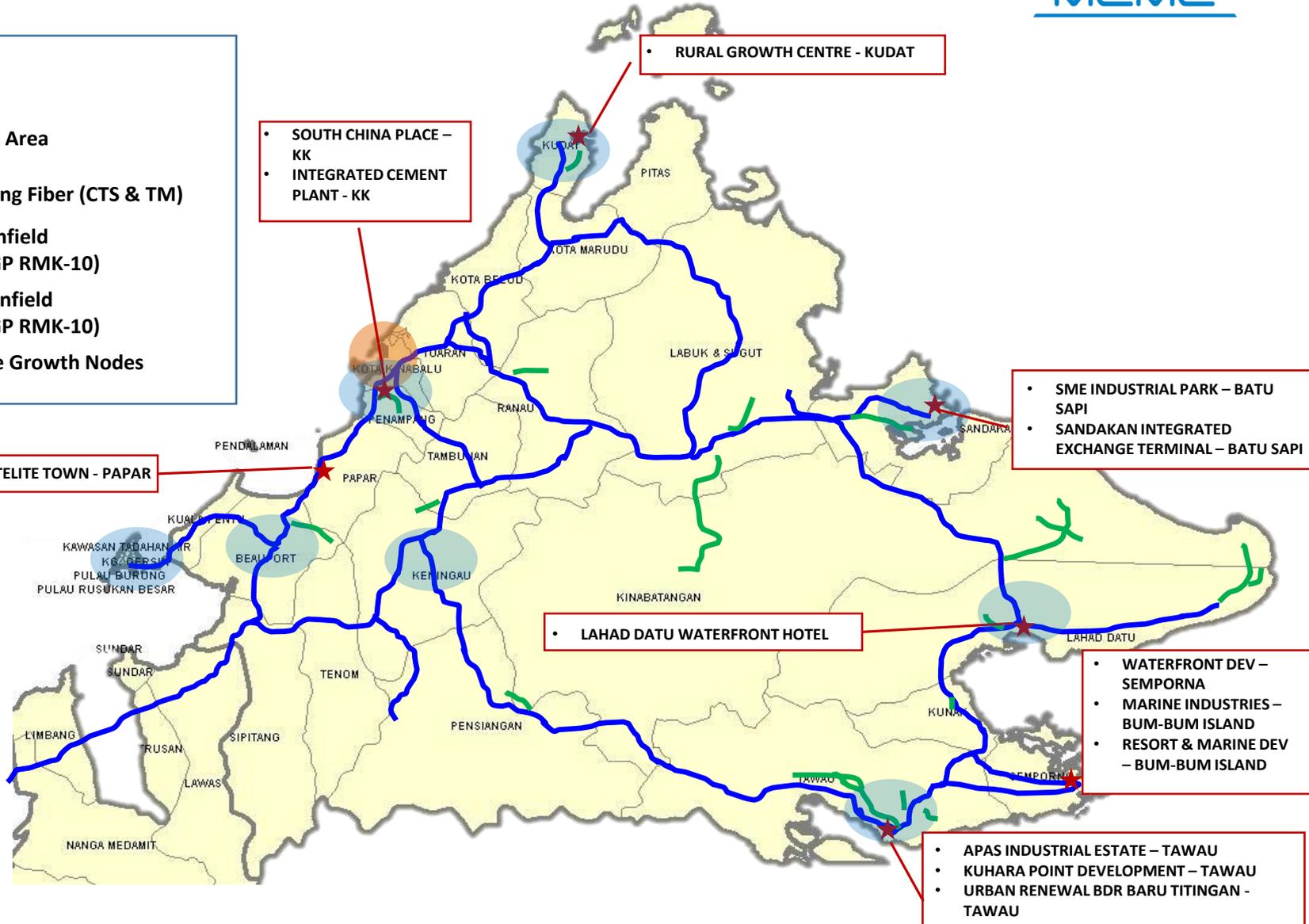- URBAN RENEWAL BDR BARU TITINGAN - TAWAU

FIBER OPTIC BACKHAUL PROJECT

LEGEND

HSBB — HSBB Area

Existing Fiber

Greenfield (BBGP RMK-10)

Brownfield (BBGP RMK-10)

★ SCORE GROWTH NODES

SAMALAJU - HEAVY INDUSTRY CENTRE

MUKAH- SMART CITY

BARAM - TOURISM AND RESOURCE BASED INDUSTRIES.

TANJUNG MANIS - INDUSTRIAL PORT CITY AND HALAL HUB

TUNOH - TOURISM AND RESOURCE BASED INDUSTRIES.
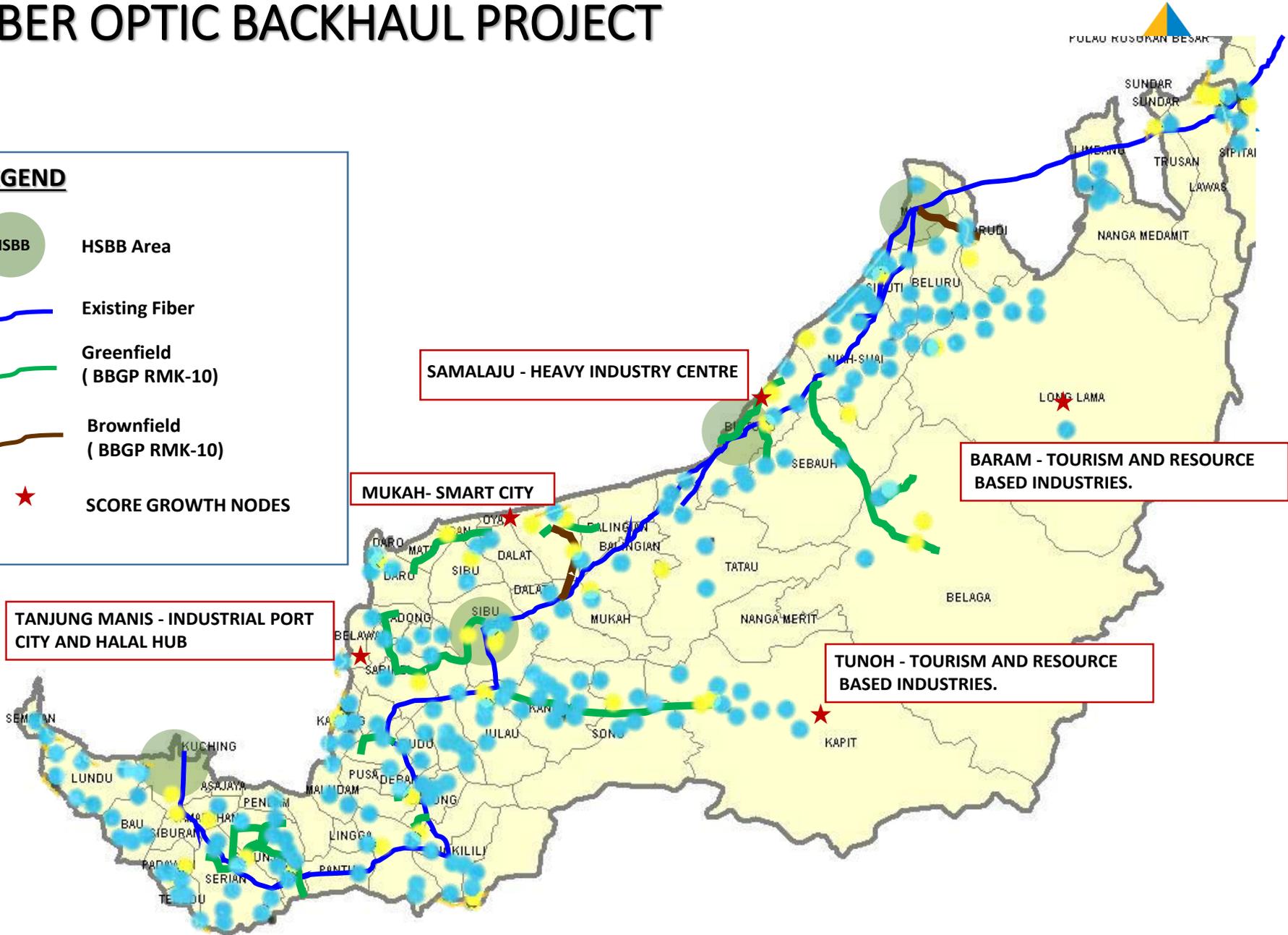
LANGKAWI ISLAND TOWER FIBERIZATION PROJECT

Fiber optic link

DEVELOPMENT OF INTERNATIONAL NETWORK UNDER HSBB PROJECT FOR BETTER CONNECTIVITY

SEA-ME-WE3:
To India, Timur Tengah, Eropah & Singapura

Kuala Muda CS

APCN 2:
To H.Kong, Filipina ,Taiwan, China, Korea, Singapura & Jepun

Cahaya Malaysia :
H.Kong & Jepun (New)

AAG :
Singapura, Thailand, Brunei, Vietnam, Hong Kong, Filipina, Guam, Hawaii & Tanah Besar Amerika (New)

Cherating CS

APCN:
To Thailand, H.Kong Philippines,Taiwan, Korea & Japan (Upgrade)

SEA-ME-WE 3:
To Brunei, Filipina, Vietnam, H.Kong, China, Korea & Jepun

Mersing CS

SEA-ME-WE4:
To India, Timur Tengah, Eropah & Singapura (Upgrade)

Melaka CS

SEA-ME-WE 3:
Singapura, Indonesia, Australia

APCN:
To Singapore, Indonesia & Australia (Upgrade)

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 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.

1MALAYSIA NETBOOK & WIFI KOMMUNITI (WK)

- Netbooks distributed to students to increase computer literacy in rural community.

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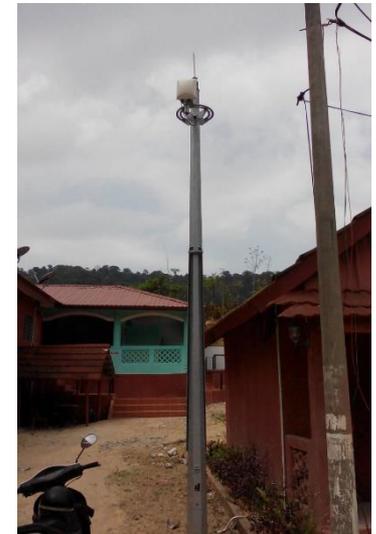
DEMAND STIMULATION PROGRAMS

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

25

ROADSHOW

TARGETS AUDIENCES

- **STUDENTS**

- **PARENTS**

- **YOUTH**

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

RM200 REBATE ➡ **To 1.5 million eligible youth**

- 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/

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

NATIONAL CREATIVE INDUSTRY POLICY
Local Content and Application to boost the 'Attractiveness' of broadband

MaGICCA

LIGA REMAJA KREATIF
LEAGUE OF CREATIVE TEENS

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

- 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

  nurture interest **and creativity in**

  Content Development

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

89
District involved

784
Centres completed

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

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

3,614 sites

COMMUNITY BROADBAND LIBRARY
Furnishing rural community libraries with internet connection

99
Community libraries have internet connection

4,177 locations

1MALAYSIA WIRELESS VILLAGE
Provision of free Wireless Internet (WiFi) service to selected remote villages particularly where the 1Malaysia Netbooks have been distributed

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.
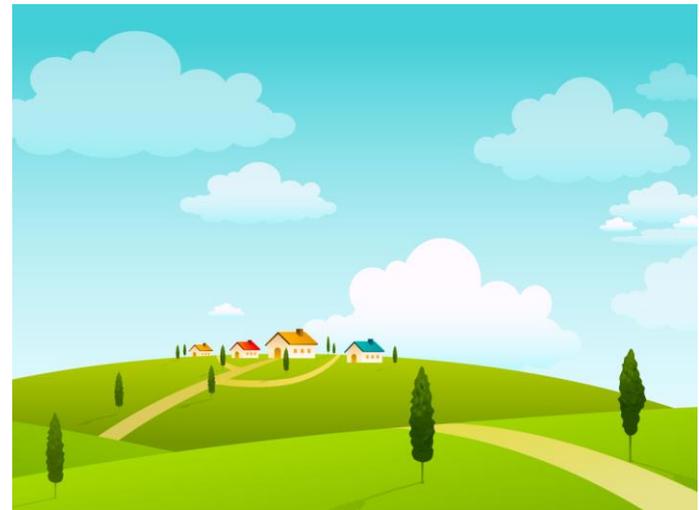
- SUBB will provide 420,000 ports by 2019.

Focus
Suburban setting

Bandwidth
Up to **20Mbps**

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

Focus
Rural setting

Bandwidth
Up to **4Mbps**

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
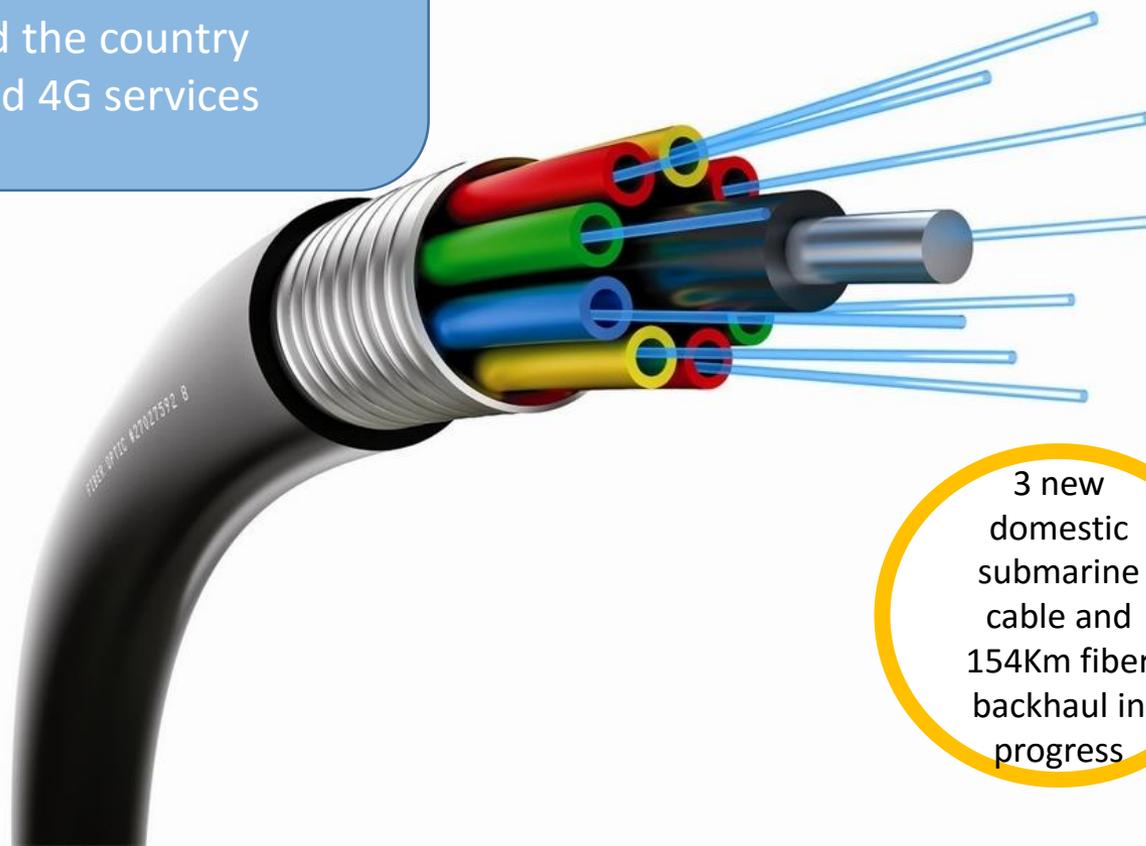Service upgrade to 4G or LTE

41

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

NO	STATE	LOCATION	PROPOSED DATE (2017)
MALAYSIA INKLUSIF NEGARA DIGITAL (MINDA)			
1	PAHANG	PEKAN	24-26 FEBUARY
2	PERAK	BAGAN DATUK	21-23 APRIL
3	TERENGGANU	KUALA BERANG, HULU TERENGGANU	28-30 JULY
4	SABAH	PADANG PEKAN PAPAR	27-29 OCTOBER
5	KELANTAN	DATARAN GUA MUSANG	24-26 NOVEMBER
6	KEDAH	PERKARANGAN STADIUM DARUL IMAN ALOR SETAR	15-17 DECEMBER

Target Broadband Coverage and Penetration (2016 – 2020)

% of populated areas with broadband coverage

91.5	93.0	93.5	94.0	95.0
2016	2017	2018	2019	2020
78.5	85.0	87.0	88.0	90.0

Household broadband penetration (%)

THANK YOU

Head Office Address

Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission

Off Persiaran Multimedia
63000 Cyberjaya
Selangor Darul Ehsan
Malaysia

Tel: +60 3 8688 8000
Fax: +60 3 8688 1000
Email : ccd@cmc.gov.my
Website : www.skmm.gov.my

SCAN ME