



Policy and Regulatory Landscape for Accelerating Broadband Access Jakarta, 8-10 September 2015

Promoting Broadband as Enabler for the
Digital Economy and for Digital Inclusion

Policy and Regulatory Consideration

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Brief Facts of Indonesia



Number of Telecomm Provider

- PSTN & FWA : 5 nationwide
- Mobile : 8 nationwide
- Service Provider : 304

Teledensity (end 2013)

- PSTN : 9 million
- Fixed Broadband : 6 millions
- Mobile Cellular :
 - Postpaid: 3.9 millions
 - Prepaid: 302.8 millions

Facts

- ❖ Area : 1,904,569 sq km
- ❖ Archipelago country: 13,466 islands.
- ❖ Population : More than 240 million
- ❖ GDP per capita : USD 3499
- ❖ Currency : Rupiah (Rp)
- ❖ Capital : Jakarta

INDONESIA, CONNECTIVITY AND ICT



Largest archipelago country in the world



Sparsely distributed rural areas



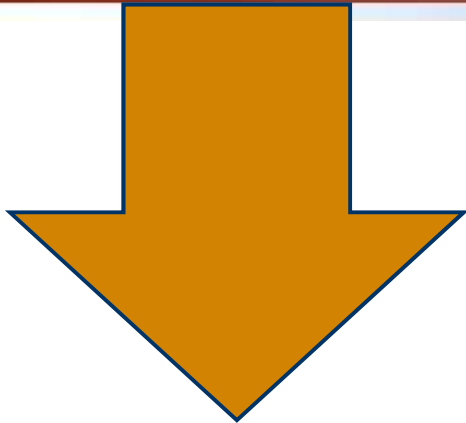
Difficult Landscape

When physical connectivity is difficult to build

ICT become main modes of connectivity



NATIONAL BROADBAND LANDSCAPE



Problems and Challenges

Broadband Penetration is relatively low : 1,1% (*fixed*) and 22,2% (*wireless*) (Source: World Economic Forum, 2012).

Fiber Optic availability is not well-distributed : 135 city of district not yet covered by fiber optic *backbone*.

Affordability of broadband price : broadband price is around 7,4% GDP/capita, while in advanced country is less than 3% (Source : Ministry ICT 2012, Intel Corp 2011).

Strength and Opportunity



ICT sector potential growth is huge: ICT sector contribution in GDP are growth consistently in double digit

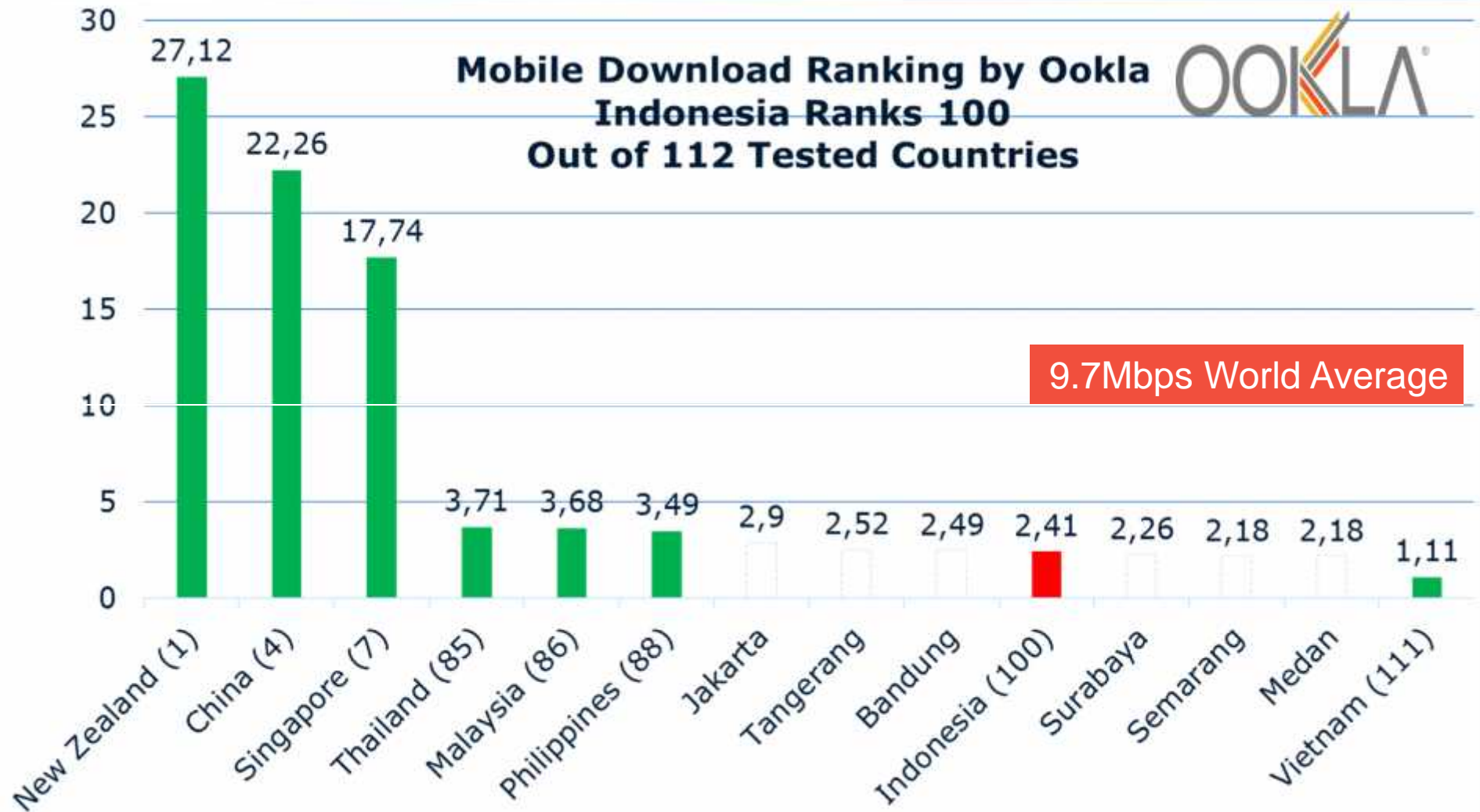
Huge market : 4th largest of world population, economic growth is relatively stabil,

politic and security is good, world largest ICT users, facebook (#4), twitter (#5)

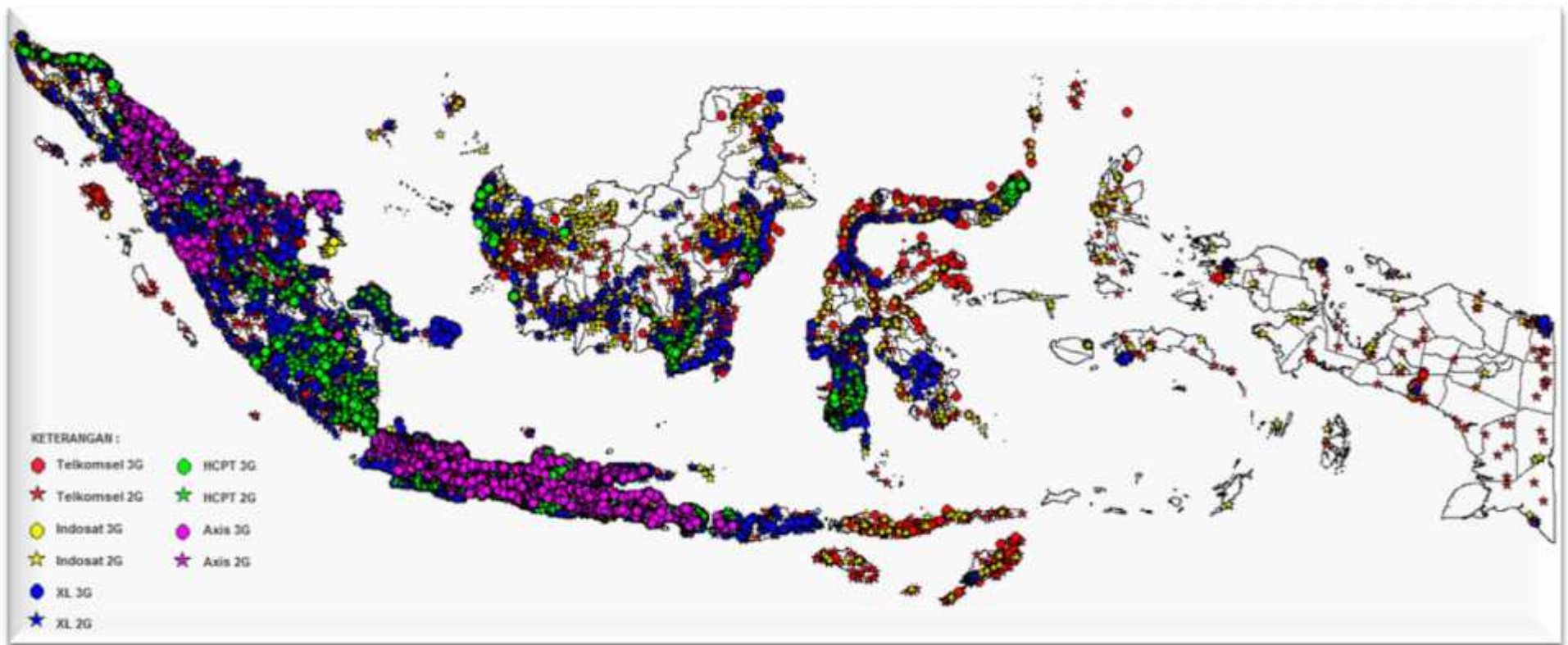
Productive population opportunity: Young generation proportion (age 10-24 years) as technology adaptor is more than 20% of population

Inter island connectivity improvement opportunity: Connectivity for archipelago country in many cases is difficult to implement only through physical infrastructure, however ICT and broadband would facilitate "virtual" connectivity

Benchmarking Mobile Broadband



The Coverage Map of GSM-based Mobile Operators (900,1800,2100 MHz)



Source : Consolidated data from Annual Report of Operators and GIS of mobile operators site

Note: GSM-based operator's coverage, become the basis of Indonesian Mobile Broadband Infrastructure Coverage

Priority Agenda

Quick Wins (2015)

- Declaration *bandwidth* as people's right
- *Bandwidth* for people 100 MB/kapita/monthly
- Establishment of 5 ICT-based industry center in Java-Bali, Sumatera, Sulawesi

Multiyears program (5 years)

- Development highway data communication backbone network
- Security policy and system of subscriber data
- Development of the National *E-government* Architecture
- To implement an integrated *e-government* services for 10% regions/cities with *e-government* indeks 3.4 (of scale 4.0)
- Establishment of National Chief Information Officer
- Development and design of the multipurpose satellite.
- ICT development of housing apartments and porst in Kuala Tanjung and Bitung
- ICT support for fisheries and farmer villages

Trisakti Elaboration in ICT context

Delivers Government that Works



1. **Fulfill citizen rights** to obtain and get benefit of information (Article 28F Constitution 1945)
2. Maintain “**information sovereignty**” particularly in border areas
3. Improvement **government back office pemerintah** to strengthen connectivity among government institutions to support better public services

Reducing *blank spots*

Improving E-Government

Self-sufficient welfare



Development **information super-highway** to support national economy transformation

Broadband Development

Optimization the use of radio spectrum and satellite orbit

Revolution of Mental



ICT productive and wise utilization to support improvement of national competitiveness and quality of live of Indonesian Indonesia

ICT literacy improvement

MAIN POLICY OF NATIONAL BROADBAND DEVELOPMENT



Infrastructure:

Accelerating the development of broadband infrastructure and coverage to whole nation as well as ensuring the availability, accessibility, and affordability of the broadband services which are locally integrated and globally connected



Utilization:

Expanding the adoption and improvement of broadband utilization quality either in the government sector, economy, defense and security as well as in social and cultural



Regulatory framework:

Ensuring that ICT regulation and other sector regulation facilitate market development and reducing regulatory cost to enable the ICT industry become the main role in the development of national broadband



Funding:

Government funds might be used for the acceleration, filling in the gap and debottlenecking of broadband development without taking over the role or competing with the ICT industry

MAIN STRATEGY

NATIONAL BROADBAND DEVELOPMENT

1. *Supply Side / Infrastructure :
availability, accessibility, affordability*

- Competition in *wireline broadband*
- **Optimize use of spectrum**
- **Optimize utilization of right of ways**
- **Infrastructure sharing**
- **Neutral Technology**
- **Open access**
- Network and system security

2. *Demand Side / Utilization and Adoption :
awareness and ability*

- Digital literacy (*e-literacy*)
- *Aggregating demand, i.e:*
 - *E-government*
 - *E-education*
 - *E-health*
 - *E-procurement*
 - *E-logistic*
- *Green ICT and Green with ICT*

Support by:

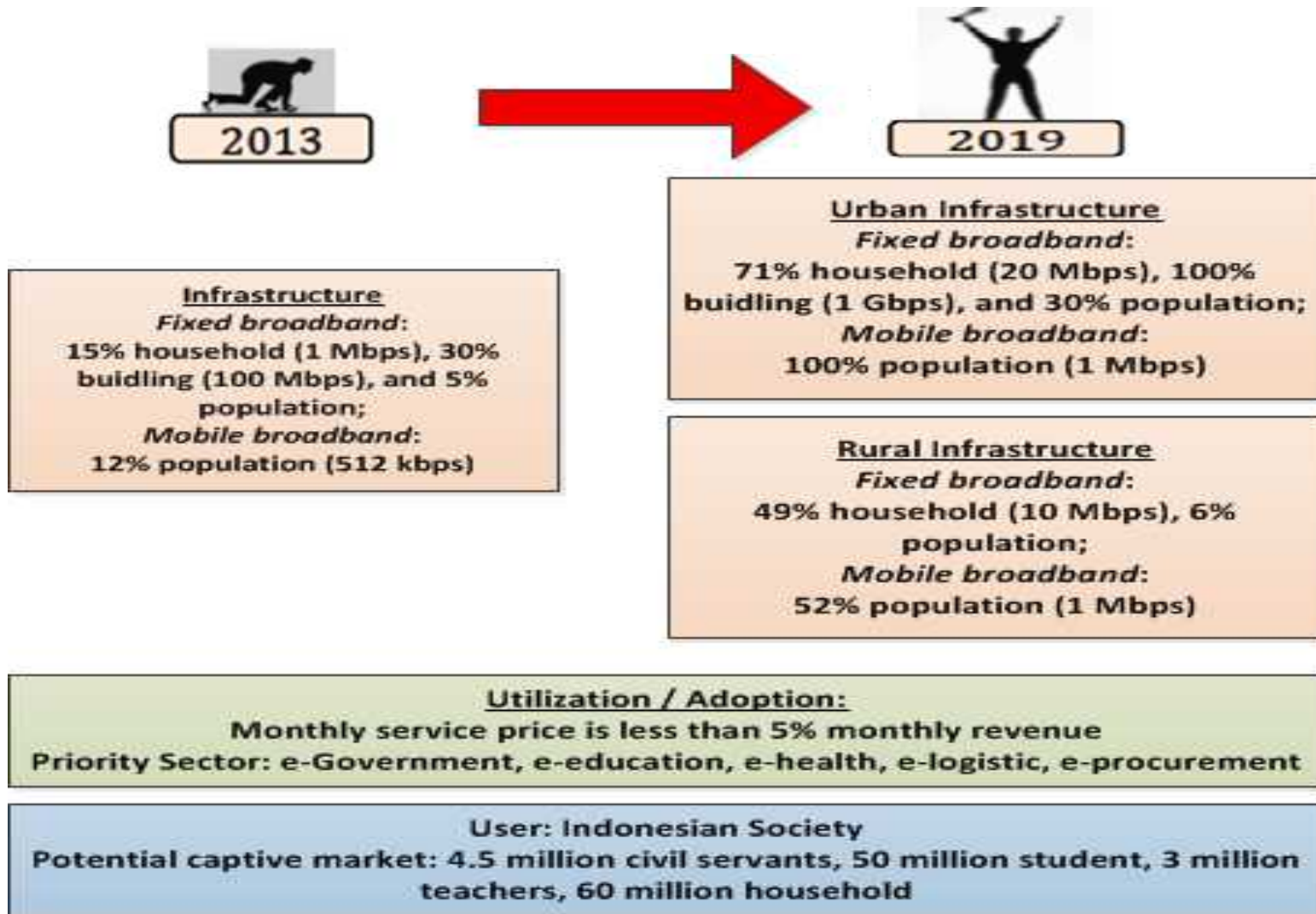
3. Financial Support

- **Optimize the use of USO Fund and ICT non-tax revenue (spectrum license fee)**
 - **Public Private Partnership**
- **ICT planning and funding in State Budget toward more efficient and effective**

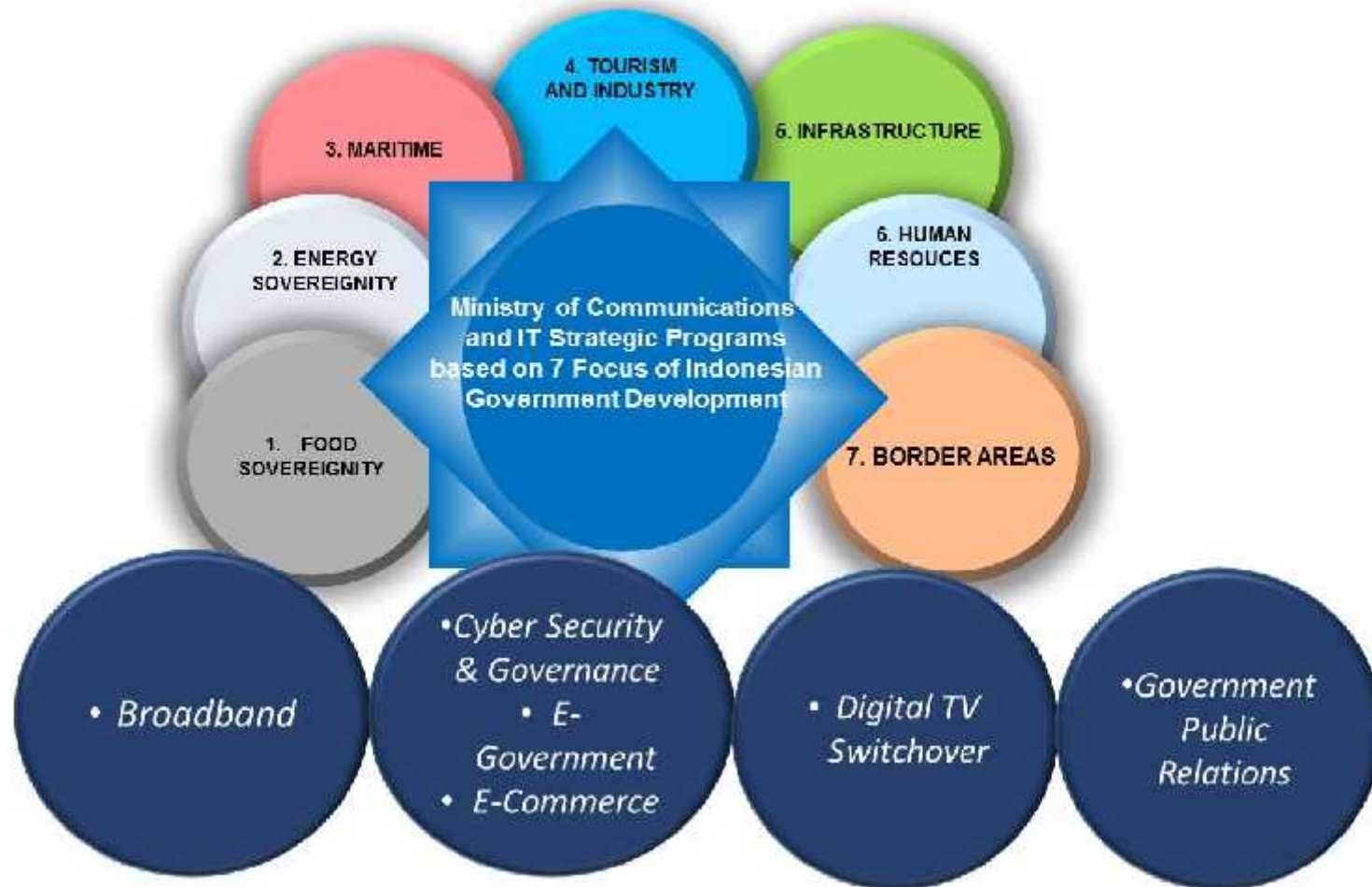
4. Regulation and Institutional Framework

- Policy and Regulation Framework towards better environment and investment activities in ICT sector
 - Entities to monitor and implement *Indonesia Broadband Plan*

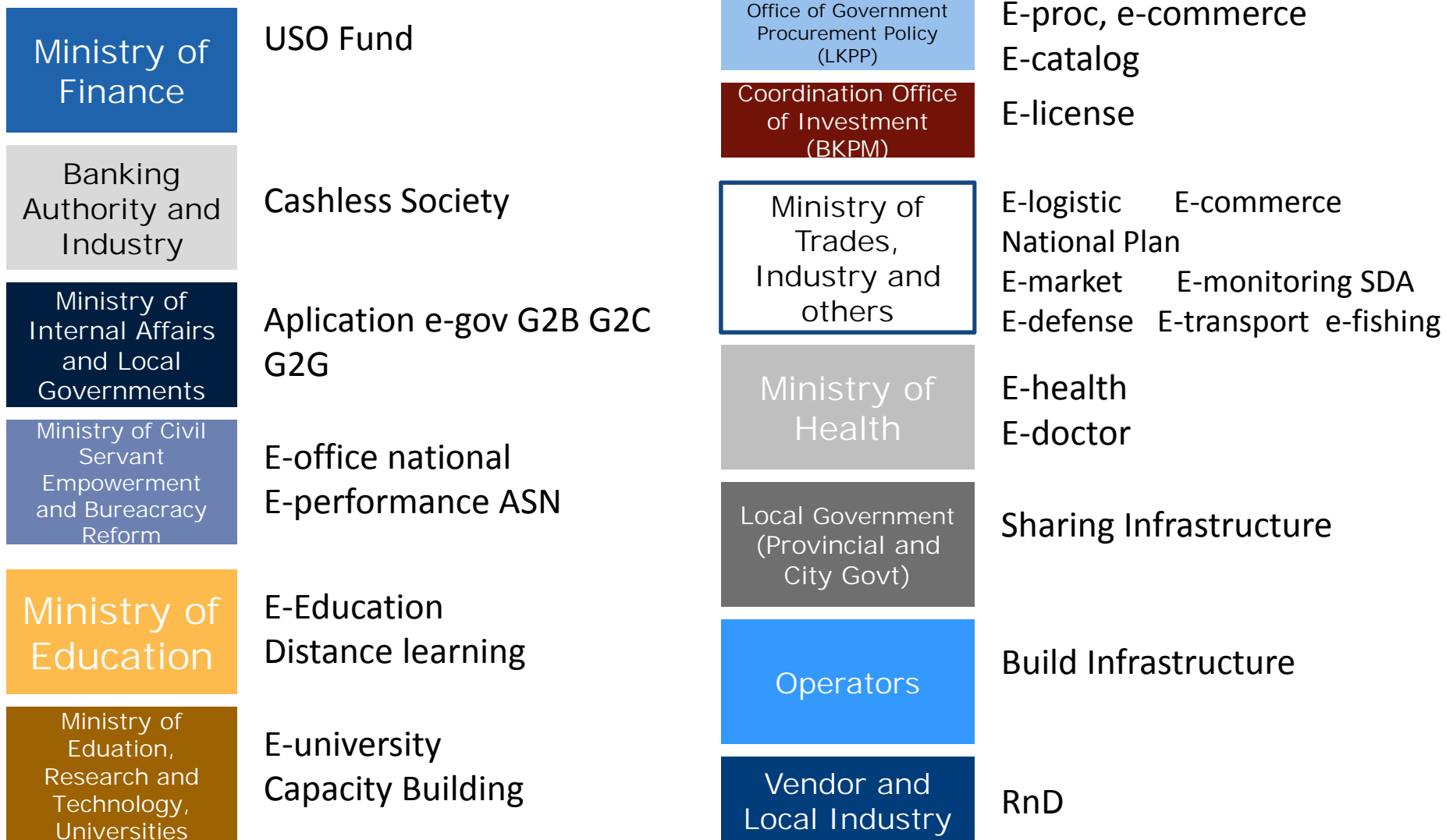
TARGET YEAR 2013 - 2019



DIRECTION AND FOCUS OF THE INDONESIAN GOVERNMENT DEVELOPMENT AGENDA



Acceleration Implementation of Broadband need strong cooperation among Various Parties



Broadband to solve problems

Kios Pelayanan Publik

Surabaya Single Window

Sistem terpadu yang melayani penyaluran pelayanan Izonasi maupun perizinan Perairan di UPISA

E-Health

Aplikasi pendaftaran online yang mempermudah warga Surabaya untuk mendapatkan layanan kesehatan

E-Lampid

Aplikasi pendaftaran online untuk pendaftaran kelahiran, kematian, serta Pendaftaran Perkawinan

Pendaftran Naser Online

Dengan 3 Bahasa : Indonesia, Jawa, dan Madura
ssw.surabaya.go.id/anjungan



Building apps for public service

HiBandung GDS Indonesia	Rute Angkot Bandung GDS Indonesia	Hi Bandung Tollfree 102	Radio Bandung Radio App	bandung247 Hotline 102	Discover Bandung IT Inisiatif Inovasi Info
★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE
PERSIB BANDUNG Bisnis Informatika	30 Persib Bandung Aneka.com	Tarif JNE Bandung GDS Indonesia	Baju Online Bandung Toko Online	HotSpot Bandung Pusat Hotspot Aplikasi IPTV Air	Hotels In Bandung Mahasiswa Global PT
★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE	★★★★★ FREE



LAW AND REGULATION RELATED TO ICT IN INDONESIA

1. Telecommunication Act No 36 year 1999 regarding Telecommunications and the Implementing Regulations
2. Broadcasting Act No 32 year 2002 regarding Broadcasting and the Implementing Regulations
3. Law No.11 year 2008 regarding Electronic Information and Transaction
4. Law No.2008 year 2008 regarding Local Governments (Provincial and City/District) and implementing Regulation, regional autonomy, relation between central government and local governments. → Permit of right of ways, towers, ducting, etc.
5. Law No.8 year 1999 regarding Consumer Protection
6. Law No.5 year 1999 regarding Anti Monopoly and Unfair Competition.
7. Presidential Decree No.96 year 2014 regarding Indonesia Broadband Plan
8. Regulation related to Foreign Investment, Negative List of Investment
9. Regulation related to Copy Right Protection and Patent
10. Regulation related to Government Procurement Procedure
11. Others

ICT Policy and Regulation Reality

- ❖ Policy and Regulatory was developed in a slower pace than technology development or market and service potential
- ❖ Regulation is often the limiting factor constraining growth
- ❖ In reality, ICT industry need to face different government bodies and regulators, sometimes with conflicting goals and interests
- ❖ ICT Policy and Regulation need to be improved, coordinated and synchronized to attract investment, foster applications of new technologies and development of new services

Spectrum Crunch

- ❖ Exponential growth of data traffic
 - Smartphone, Tablet, M2M, dsb
- ❖ Spectrum demand of mobile broadband:
 - ITU-R Report M.2078, need additional tambahan 1280 – 1700 MHz bandwidth by the year of 2020
 - FCC-US and OFCOM-UK : need additional 500 MHz by the year 2020
 - Australia: need additional 150 MHz in year 2015, more additional 150 MHz in year 2020. Currently 800 MHz
 - Indonesia: currently is only around 415 MHz bandwidth efektif.
- ❖ It is predicted that in year 2020, Indonesia need 500 MHz additional bandwidth for Mobile Broadband.
 - Band < 1 GHz (including Digital Dividend 700 MHz most optimum option of capacity and coverage)
 - Band > 1 GHz (in major market areas), including WiFi class-licensed for off-loading

Opportunity and Challenges

- ❖ Developing the regulations to provide legal certainty concerned with efficiency of infrastructure and spectrum: MVNO, spectrum sharing, infrastructure sharing, etc.
- ❖ Encourage Network Sharing to improve the efficiency infrastructure, reduce investment cost (capex and opex), and consistent to keep the market competition.
- ❖ Encourage Network and Spectrum consolidation for Cellular Operators, FWA and BWA to Encourage Mobile Broadband Coverage.
- ❖ Plan and execute migration of the non-contiguous frequency allocations to be contiguous in order to support Mobile Broadband (HSPA + and LTE).

Opportunity and Challenges

- ❖ Release more spectrum for Mobile Broadband, particularly below 1 GHz (Digital Dividend) for accelerating broadband penetration.
- ❖ Co-ordinate with other sectors on right of ways and civil works
 - Bappenas, Ministry of Finance, Ministry of Public Works and Housing, Ministry of Transportation, Ministry of Energy, Electricity and Mineral Resources, Local Government, etc. (co-ordinating the efficient common utility infrastructure)
 - Ministry of Education, Finance, Healthcare, Agriculture, Maritime and Fisheries, SME, Local Government, etc (promote productive utilization to support public services)
 - Related industries.
- ❖ Need to improve policy and regulation

Conclusions

- ❖ The Ministry of Communications and IT of Indonesia has established four main strategies: Broadband, cyber security, e-gov and e-commerce, Digital TV Switchover and Government Public Relations, to support and facilitate the focus of Indonesian Government Development.
- ❖ Main Policy of Broadband Development
 - Accelerating the development of broadband infrastructure and coverage to whole nation as well as ensuring the availability, accessibility, and affordability of the broadband services
 - Expanding the adoption and improvement of broadband utilization quality
 - Ensuring that ICT regulation and other sector regulation facilitate market development
- ❖ Broadband and ICT Policy and Regulation need to be improved, coordinated and synchronized to attract investment, foster applications of new technologies and development of new services.
- ❖ Collaboration with other stakeholders and industry is very important. Sharing experiences and knowledge with other countries is beneficial.



Terima Kasih

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