Ministry of Communication and Information Technoloogy

INDONESIAN BROADBAND DEVELOPMENT

LESSON LEARN IN USO PROGRAMME

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ICT Policy Overview

- Telephony access in all Villages
- Internet access in all Sub Districts
- e-Government Master Plan
- ICT Security Master Plan
- Development of Human Resources
- Growing ICT literacy

Bridging digital divide

- Fiber optic links to all Districts capital
- Broadband access to all Districts and Cities
- Electronic Systems implementation on major public services

Acceleration of infrastructure development

- Progressive improvement of Broadband access capacity
- Empowering national competitiveness through ICT

Transformation into Information Society

- Electronic systems for major public services in all Districts
- ICT based nation

Building knowledge based economy

USF Background

- Law of the Republic Indonesia No. 36 of 1999 regarding telecommunications leaving monopoly to full competition,
- With the agreement of all Network Operators in 2005, All Operators will contribute 1.25% of their gross revenue for implementing the USO program. This was endorsed by Government Regulation no 7 year 2009, and Government take responsibility in implementing the USO programmers.
- The Government established Public Service Agency (BLU) -BPPPTI under the Ministry of MCIT and report to both Minister of MCIT and MoF,
- BPPPTI tasks is not only building ICT in villages, but also other ICT facilities to provide cheaper cost of Internet and broadband. Further, BPPPTI play a role to set up the eco-system and build up broadband in the country.

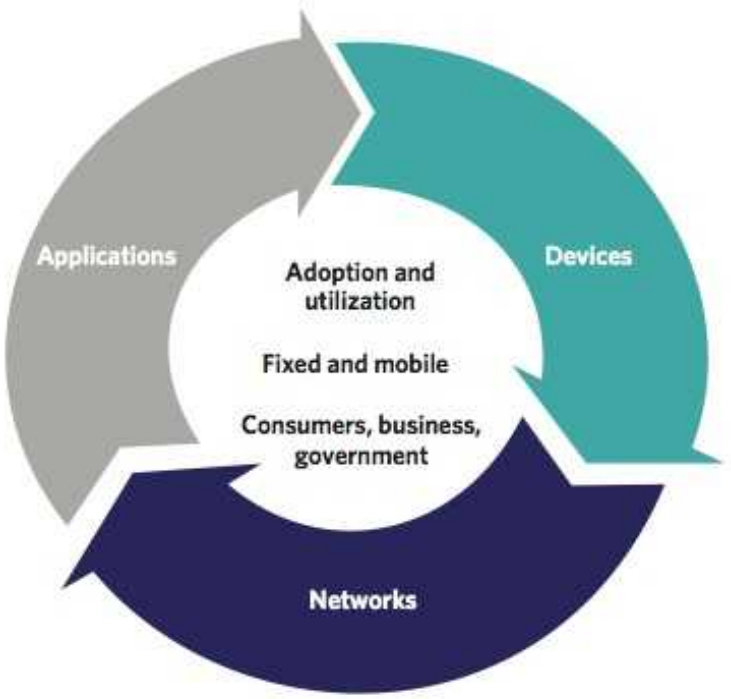
EVALUATION USO EXISTING

a. USO program as an entry point to introduce ICT service (internet, broadband) to the community.
b. Internet infrastructure optimization has an important role to look at the need of community to broadband service.
c. Empowerment become a key point on the readiness of society to accept and use broadband service.

USO IN THE FUTURE

USO CHARACTERISTIC IN THE FUTURE

- Comprehensive : not only infrastructure but also ecosystem of infrastructure
- *Bottom-up: aspiration, and involvement local government, telco operator and society.*
- Cluster: pilot project
- Sinergy: multi stakeholder



ECOSYSTEM

SCOPE OF FUTURE USO PROGRAM

DIGITAL DIVIDE

a. Extending coverage (access) telecommunications services and information to reduce the digital gap between regions in indonesia
b. Clustering according to the conditions and regional needs .
c. Survey to determine the level of digital gap of each region.
d. Working with the local government , operators , and stakeholder that support by USO Fund in sharing programme.

SUPPORTING INDUSTRY

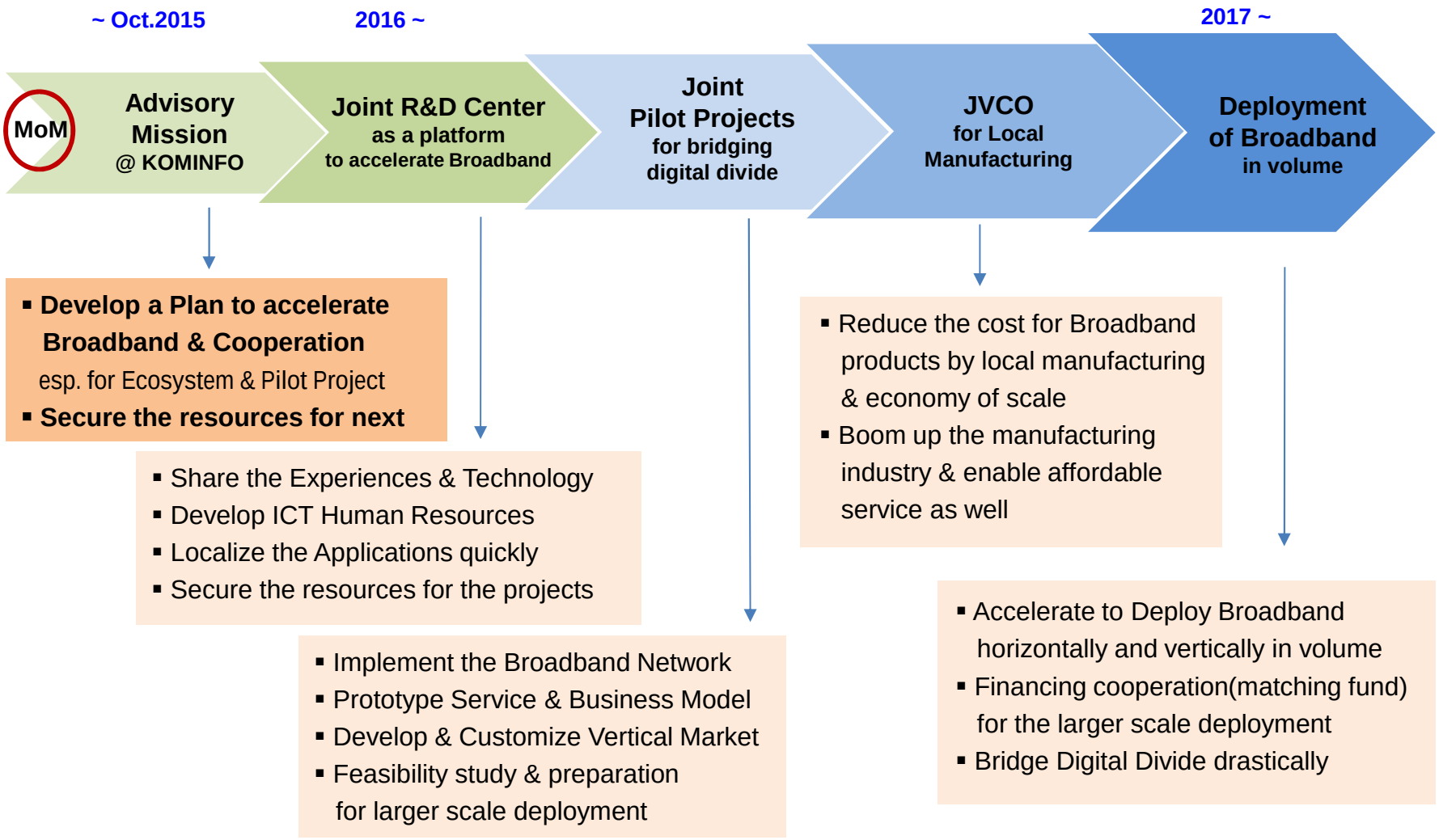
a. Provide a common infrastructure facilities for the industry to boost efficiency and industry.
b. Creating demand
c. Measuring readiness and support stakeholders
d. Extending the use of information and endurance communities.

USO FUND UTILIZATION

2003 - 2004	2009 –2014	2015 -2019	2019 beyond
Provision of USO facilities in 5,354 villages.	USO Projects: . - telecommunication access service in 33,184 villages, - Internet kiosk in 5,748 districts. - Internet kiosk in 1235 SME - internet kiosk in 197 vehicles - Wifi acces in 745 districts - 2G BTS in 286 villages in border area. - NIX (data center) in 33 Provinces.	ICT Fund for : • Palapa ring : broadband roll-out in 51 regencies/cities • 3G BTS in very remote and border area; • Broadband access for education, agriculture, & health services • Broadband ecosystem (apps, ICT incubator, etc) • Tablets for communities • Enhancing NIX data center utilization. • Passive infrastructure.	Broadband-oriented USO programs

BROADBAND DEVELOPMENT IN FUTURE

BROADBAND INFRASTRUCTURE IN FUTURE



- **<u>Joint initiative</u> is a key to trigger the chain reactions for Broadband Big Bang**
  - ✓ Make it happened very small and focused at the beginning, but great for the benefits for all eventually

Benefits from the Cooperation to accelerate Broadband

- **Address the Challenges for bridging digital divide more effectively, than doing alone**

Challenges

- Lack of coordinated ICT effort and decentralised budgets
- Lack of connectivity
- Lack of human resources with ICT skills
- Lack of readily available applications
- Geographical difficulties for infrastructure roll-out

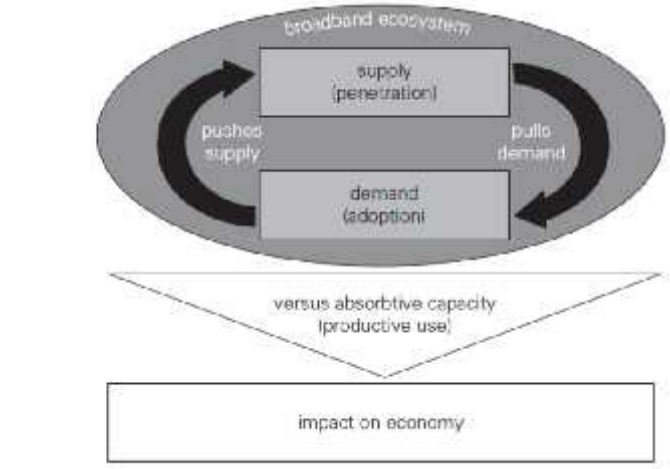
- **Minimize the trials and errors by utilizing experiences other countries**
- **Deploy Broadband in larger scale through the financing cooperation**

Synergy
for the better Performance x3(times) or more
& sustainable growth together

- **Joint R&D Center as a sustainable Cooperation Platform, expandable to many**
- **Develop human resources for ICT skills, including the trainings in abroad**
- **Develop a Pilot Project for Bridging Digital Divide esp. in suburban/rural areas**
- **Boom up the local industry by ICT from international partners and local production**
- **Accelerate to deploy Broadband horizontally and vertically in volume at lower cost**

Plan to accelerate Broadband

Item	Shared Model	Competitive Model
Pros	Minimum investment	Faster deployment
Cons	Slower deployment	Redundant investment
Implementation	Better in early stage	Better in growing stage
Examples	Passive infrastructure, Backbone network	Active infrastructure, Access network



Source: World Bank

- **Key Factors to accelerate Broadband**
  - ✓ Ecosystem for Supply and Demand
  - ✓ PPP (Public Private Partnership)
  - ✓ Affordable Service
  - ✓ Enabling Technologies and Products
  - ✓ Services and Applications
  - ✓ Financing Programs

Case Study

- **Lessons Learned in developing country to accelerate Broadband**

Category	Execution
Government Policy	● **Laws & regulations for effective competition** ● **Initial investment led by Government recognizing ICT as a new growth engine** ▪ ICT promotion fund used effectively
Supply Side	● **Broadband for government by PPP** (Public Private Partnership) **and burden sharing** ▪ Research network, School internet, Broadband for Rural, Public WiFi ● **Broadband market triggered by 2nd LEC, leading to Economy of Scale** ▪ Started from apartment complex densely populated in the cities ▪ Followed by KT and other carriers ● **Local production contributed to reduce CAPEX and to promote the industry** ▪ Especially for Broadband access products; For example, CPE's in volume
Demand Side	● **e-Government Services on Broadband** ● **Network Service Quality Evaluation** ● **Cyber-building Certification Program** ● **Wide spread deployment of Internet Café, due to popular on-line game etc.**

Executive Summary

- **Make and Execute a Plan to accelerate Broadband and Cooperation**
  - ✓ Make it happened very small and focused at the beginning, but great eventually

Items	Current Model	New Model	Implications
Partnership	PPP only	PPP + G2G + B2B * Better utilization of the resources	☜ Extended partnership for the better performance
R&D center		Joint R&D center * Cooperation with schools	☜ Shared model to save the investment
Pilot Project	Broadband mostly in remote rural * Geography based	Broadband in rural/suburban close to the cities, for easier access * Demography based, as well	☜ Competitive model to accelerate Broadband Development and to achieve Economy of Scale
Broadband access products	Mostly imported	Local mass production by JVCO * Significant for TKDN	
Deployment	Limited	Scalable for the larger scale	
Financing	Limited budget to cover enough	Can meet or exceed the IBP target	☜ Cooperative model for the larger scale deployment
Impact	Meaningful for Rural Broadband in Border	Accelerated Multiplier effect for Economy of Scale	☜ Complementary to the current model

➢ **Synergy for better performance x3(times) or more and sustainable growth can be realized**

Towards Indonesian Information Society

MCIT