ICT & e-Government in Laos

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Outline

• ICT Development
• Constrain and Barrier for Development
• Policy and Regulation
• Activities to Support Policy Implementation
• E-Government Master Plan
• E-Government Center
## Infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FSC</strong> Place</td>
<td>Place</td>
<td>95</td>
<td>255</td>
<td>259</td>
<td>182</td>
</tr>
<tr>
<td><strong>MSC</strong> Place</td>
<td>Place</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>BSC</strong> Place</td>
<td>Place</td>
<td>32</td>
<td>38</td>
<td>44</td>
<td>40</td>
</tr>
<tr>
<td><strong>BTS</strong> Site</td>
<td>Site</td>
<td>7,154</td>
<td>6,527</td>
<td>6,776</td>
<td>6,776</td>
</tr>
<tr>
<td><strong>OFC</strong> KM</td>
<td>KM</td>
<td>51,106</td>
<td>60,813</td>
<td>67,351</td>
<td>70,948</td>
</tr>
<tr>
<td>Internet bandwidth</td>
<td>Mbps</td>
<td>1,550</td>
<td>2,800</td>
<td>37,690</td>
<td>62,608</td>
</tr>
<tr>
<td>Coverage (10,473)</td>
<td>Village</td>
<td>6,749</td>
<td>7,559</td>
<td>7,663</td>
<td>7,766</td>
</tr>
<tr>
<td></td>
<td>2G</td>
<td>90,1%</td>
<td>61,2%</td>
<td>1,5%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>3G</td>
<td>91%</td>
<td>65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4G</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Utilization

<table>
<thead>
<tr>
<th>User</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fix line Users</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• PSTN</td>
<td>721,318</td>
<td>920,756</td>
<td>962,497</td>
<td>1,268,597</td>
<td>15%</td>
</tr>
<tr>
<td>• CDMA</td>
<td>64,426</td>
<td>60,457</td>
<td>902,040</td>
<td>57,167</td>
<td></td>
</tr>
<tr>
<td>Mobile Users</td>
<td>4,481,395</td>
<td>4,336,184</td>
<td>3,704,769</td>
<td>3,958,510</td>
<td>57%</td>
</tr>
<tr>
<td>Internet User</td>
<td>1,907,593</td>
<td>2,036,471</td>
<td>2,642,693</td>
<td>2,628,400</td>
<td>41%</td>
</tr>
<tr>
<td>Fixe line ADSL</td>
<td>13,231</td>
<td>16,891</td>
<td>24,551</td>
<td>28,414</td>
<td>1%</td>
</tr>
<tr>
<td>Dial Up Lease line</td>
<td>12,022</td>
<td>15,923</td>
<td>14,285</td>
<td>11,721</td>
<td></td>
</tr>
<tr>
<td>FTTH</td>
<td>110</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1099</td>
<td>881</td>
<td>1,441</td>
<td>1324</td>
<td></td>
</tr>
<tr>
<td>Mobile Wireless</td>
<td>1,894,362</td>
<td>2,018,803</td>
<td>2,618,142</td>
<td>2,599,986</td>
<td>40%</td>
</tr>
<tr>
<td>Wimax</td>
<td>-</td>
<td>1,582</td>
<td>1,973</td>
<td>2,352</td>
<td></td>
</tr>
<tr>
<td>HSPA</td>
<td>1,868,382</td>
<td>1,198,461</td>
<td>680,835</td>
<td>1,256,691</td>
<td></td>
</tr>
<tr>
<td>3G</td>
<td>1,768,980</td>
<td>1,897,375</td>
<td>1,936,876</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Industry

<table>
<thead>
<tr>
<th>Company</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecom Operator</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ISP</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Internet Café</td>
<td>421</td>
<td>454</td>
</tr>
<tr>
<td>ICT Company</td>
<td>398</td>
<td>398</td>
</tr>
<tr>
<td>Digital Content</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>ICT Consulting</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>ICT Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ICT security</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ICT factory</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Software development</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>ICT reseller shop</td>
<td>234</td>
<td>170</td>
</tr>
<tr>
<td>ICT Installation</td>
<td>99</td>
<td>391</td>
</tr>
</tbody>
</table>
ICT Development Index

2010:  
IDI Value : 1,92  
IDI Rank: 135

2015:  
IDI Value : 2.45  
IDI Rank : 144

2016:  
IDI Value: 2.45  
IDI Rank : 144

Laos did a good job  
but other country did it better.
Affordability Barrier

• High Price:
  – International bandwidth: 100 USD/Mbps
  – Fix line Internet= 30 USD/Mb/Month
  – Mobile Internet: 0.04USD per 1 MB.
  – 0.10 USD/minute for prepaid
  – 0.04 USD/minute of post paid.
  – 30% tax on ICT equipment

• People Expense
  – 27% of average households income
  – Low people purchase power (11% of total householders)
Consumer Barrier

- Literacy: 73%
- ICT literacy: 20%
- English literacy: 30%
Local Content

- **Website:**
  - Website in Lao Language: 1,000
  - Only 20% of government office have website
  - 30 e-Content provider (newspaper and magazine)

- **Barrier:**
  - Lack of Lao language support in most of ICT system
  - Lack of content creator
Policy and Regulation

• Draft of National ICT Policy 2015-2025
• Draft of National Broadband Plan 2012-2020
• Draft e-Government Master Plan 2013-2020
• MPT Vision 2030, Strategy 2025 and Development Plan 2020
• E-Transaction Law (2012)
• Telecommunication Law (2011)
• Decree on Online Information Management (2014)
• Law on Prevention and Combating Cyber Crime (2016)
E-Government Development Plan

2013-2020
1. Presence Stage 2013-2015

- Focus on G2G applications (maintain and rebuild these applications, which was established under the e-Government project phase I: 2006-2012, mainly in some government offices in Vientiane and provincial governors. Some district and village administration offices will be setting up and distribute IT equipments in phase II.

2. Interaction Stage 2016-2018

- Integrate the government data into one single service.
- Initiate G2B service applications.

3. Transaction Stage 2019-2020

- Fully computerize the administration system and e-Service especially e-Commerce by government officers.
- Initiate G2C service applications.
## E-Government Development Plan 2013-2020


<table>
<thead>
<tr>
<th>Components</th>
<th>End-User</th>
<th>Regulation</th>
<th>Data</th>
<th>Application</th>
<th>Teleconference</th>
<th>Security and Sever System</th>
<th>E-Government Service Center</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End-User</strong></td>
<td>Central Government Officer (2000 users)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Central Government intranet (100 Ministry offices in VTE and provincial governor offices 32)</td>
</tr>
<tr>
<td><strong>Regulation</strong></td>
<td></td>
<td>G2G regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Provincial Government intranet (700 Dept and 141 district offices)</td>
</tr>
<tr>
<td><strong>Data</strong></td>
<td></td>
<td></td>
<td>Integration government data (metadata, text, graphic, multimedia &amp; statistic database of non-spatial data)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nationwide Government intranet (2000 village offices)</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td></td>
<td></td>
<td></td>
<td>G2B: online registration services, customs declaration &amp; quarantines, Online Market &amp; online procurement</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Teleconference</strong></td>
<td>Central Government Teleconference (Hardware based 60)</td>
<td>Provincial Government Teleconference (Software based 158)</td>
<td></td>
<td></td>
<td>Nationwide Government Teleconference (Internet Telephone conference 2000)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Security and Sever system</strong></td>
<td>Initial Data Center (Network &amp; Computer security and stand alone sever farm)</td>
<td>Advance Data Center (User and data security and virtualized &amp; integration server farm)</td>
<td></td>
<td></td>
<td>Modern Data center (PKI security and government cloud computing)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>E-Government Service Center</strong></td>
<td>Initial e-Government service Center</td>
<td>Extension Provincial e-Government service Center (16)</td>
<td></td>
<td></td>
<td>Expansion e-Government service Center (Kios 141)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Timeframe:

1. **Presence Stage** 2013 – 2015
2. **Interaction Stage** 2016 – 2018
3. **Transaction Stage** 2019 – 2020
4. Beyond 2020
Main Roles and Services of E-Government Center
Main Roles of E-Government Center

I. The centralization of the government computer service
- Government computer network
- Hardware and software services of government organizations
- Government security management and maintenance
- Government video conference management and service

II. Manage and develop the administration and service software
- Centralization: the document management system, employment management system, e-library, inventory system, workflow management system.
- Specific: cooperate with related sectors such as finance, auction.

III. Build, manage and provide the service on the centralization of government information
- Promote the government data through the national e-Portal.
- Build the government database and information integration such as: Meta data, Data mining, Mess storage data...
- Build the statistic database such as: GIS, RS, GPS, ...

IV. Build and provide the services to access the information of government, business sectors and citizen
- such as: Community Tele-center, Kios,

V. Training and Promotion of E-Government
Activities under e-Government Center

I. The implementation, maintenance, problem solving, research & service, promotion and training of e-Government system under the project phase I and II.

II. The e-Government system integration with other systems such as: e-Health (Ministry of Public Health), Lao Decide Info (Ministry of Planning and Cooperation), e-Revenue (Ministry of Finance), e-Education (Ministry of Education and Sport), with the technical consultation from E-Government Center (information infrastructure and Data Center).

III. The International cooperation and other countries for the development and integration of e-Government system of Lao PDR (strategic planning, standard, system integration and information exchange).

IV. Cooperation with business sectors in the research, development and find out the appropriate IT equipments and software for the government such as: provide the cheaper price of hardware and software.

V. Cooperation with mass organizations to promote the ICT and e-Government in the research & development of Lao PDR widely such as: the rural telecenters.
Server room: 17m x 13m = 221 m² (up to 34 Racks)

- Web hosting for government
- Develop website (Static and dynamic webpage)
- E-mail for government (such as: name@mpt.gov.la)
- Server hosting.
- IT engineers support for maintaining programs and integration.
- 24 hours power supply and cooling conditioning.
Service of e-Government Center

- E-Portal
- E-Applications (e-document, e-Archive, e-Registration, e-Staff)
- Domain Name (gov.la)
- Computer network
- Video Conference
- E-Mail
- Web Hosting
- E-Service
- Consultant, assistant
- Trend of E-Government Development
- Cloud computing
- Multimedia
Q & A
THANK YOU