ICT Initiatives in Ethiopia

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Outline

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2. Major ICT Initiatives
3. Ethiopia in International ICT Measures
4. IT-Park
5. Challenges & Opportunities
6. Conclusion
Introduction

Ethiopia

24-Jul-12 ICT Initiatives in Ethiopia
Federal Democratic Republic Of Ethiopia (FDRE)

Location: East, Horn of Africa

9 National Regional States and 2 city admin, divided into zones, & Woredas (districts with a average population of 100,000)

66+ Zones and about 600+ Woredas

Land Area: 1.14mil Sq.kms (1.07 million Km² land, seven thousands Km² water)

Population: Total: 83 million; Rural: 83%; Urban: 17%; Density: 59.4/Km²; Population Growth rate is 2.72%

Agricultural Country (coffee, Gold, flower, livestock, etc)

According to Economy Watch, Ethiopia is one of the 10 fastest growing economy (GDP) in the world (after Ghana, Qatar, Turkmenistan, China, Liberia, India, Angola, & Iraq)

Introduction
Introduction

- Ethiopian Government has recognized the power of ICT in national development plan, this is indicated by:-
  - Ratification of the National ICT Policy
  - New Intuitional setup, Ministry level, MCIT from the previous EICTDA and ETA to lead the sector
  - Organizational structure at Regional Level, Agencies and offices in regions
  - Allocating of sufficient resources for ICT development
Major ICT Initiatives
The major initiatives can be divided into four major categories:

- **Infrastructure**, backbone of ICT activities, connectivity, networking, etc.
- **Applications**, automation, online informational and transactional services, common application like IFMIS, HRMIS, Portals, etc.
- **Standards & Guidelines**, policies, strategies, guidelines, etc.
- **HRD**, ICT skill in specialized and general level
## Facts on Infrastructure

<table>
<thead>
<tr>
<th>Services</th>
<th>Number of Users (Current)</th>
<th>Capacity in 5 years</th>
<th>Users per 100 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landline Telephone (Fixed line)</td>
<td>836,543</td>
<td>3.05 Million</td>
<td>4</td>
</tr>
<tr>
<td>Mobile Telephone</td>
<td>17 Million (20/100 inhabitants)</td>
<td>40/50 Million</td>
<td>50</td>
</tr>
<tr>
<td>Internet &amp; Data Users</td>
<td>177,000</td>
<td>3.69 Million</td>
<td>4.6</td>
</tr>
<tr>
<td>Rural Connectivity (in 5KM radius in %)</td>
<td>49.3%</td>
<td>90%</td>
<td>-</td>
</tr>
<tr>
<td>Wireless coverage of the country</td>
<td>&lt;50%</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>International Link Gb/s</td>
<td>3.2</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Source: GTP Plan of Ethiopia

24-Jul-12 ICT Initiatives in Ethiopia
WoredaNet

- 630+ Woredas Connected
- Objective is to provide ICT services such as video conferencing, directory, messaging, and VoIP and Internet at the federal, regional and lowest level of government throughout the country.
- To build a transparent & accountable government system
- Increase citizen participation in the government.

* Woreda:-districts with a average population of ~100,000; Technology in Government in Africa (TIGA)
**SchoolNet** (in collaboration with MoEd)

- High Schools, 574+, Preparatory Schools, 191+ (total 756+)
- Integrate ICTs into Ethiopia’s educational system
- Provide quality education for all the Ethiopian school
- Support the teaching and learning process,
- Give similar content to all schools (rural and urban)
- Give internet and digital content online to connected schools
Ministry Network Master Plan Implementation (phase 1 & 2)

- Phase I, 13 ministries and 19 agencies/offices are to be connected to the WoredaNet
- Connection to the national data center and can be used for video conferencing, hosting application (e-services), directory service, email, voice over IP, internet service, etc.
- Part II, to connect all the remaining Ministry and agencies/offices in progress
Government Call Center

Objective:-
  • Provide up-to-date and accurate information on government services through voice.
  • To save customers time and money spent for searching information.

Current Status:-
  • Customers can call up to the toll free number, 888
  • Accessible both from landlines and cell phones

Registered Government Institutions:-


2.4 Oromia Regional Offices (Oromia Supreme Court, Oromia Justice Bureau, Oromia Industry and Urban Development Bureau, Oromia Investment Commission)
Applications (Electronic Services)

- Applications are done mainly to automate the back-office activities (most are web-based)
- Prioritized electronic services for Ministries and Agencies based on the studied in the E-Government Strategy
- A total of 210 E-services are identified in the 2011-2015
- 6-7 Common Applications to be hosted at the National Data Center.
E-Services (Transactional & Informational)

- Development of 28 different eServices for 4 Ministries (Ministry of Agriculture, Ministry of Health, Ministry of Foreign Affair, Ministry of Urban construction)
- Development of 12 e-Services for Ministry of Labor and Social Affair eService
- 31 transactional services for different Ministries and Agencies
- 44 informational service using 5 Ministries/Agencies portals

Objective:
- Provide up-to-date and accurate information on government services, web-based.
- To save customers time and money spent for searching information.
- Access through Single Window

Current Status:
- www.ethiopia.gov.et is hosted at the National Data Center
- Accessible through web any time anywhere

Government Institutions included in the 1st Phase:
- Ministry of Education,
- Ministry of Finance and Economic Development,
- Ministry of Foreign Affairs,
- Ministry of Health,
- Ministry of Trade and Industry,
- Social Security Agency
M-Government using SMS

Objective

- To give SMS based G2C services

Three institutions are selected based on the following criteria:

- priority government sectors
- institutions that affect or are involved with the largest number of citizens

The 3 organization and services are:-

1. EEPCo: Electricity Bill Information
2. NBE: Exchange Rates Information
3. National Exam: Student Result Information (10 & 12 grade)
Major ICT Initiatives …..

- **Unified Billing System (Objectives)**
  - To provide unified single payment window to customer
  - To manage the billing cycle and service center operation electronically
  - To provide payment collection for customers convenience (any place, unified)
  - To provide an electronic services to citizens/customers

- **Based on Public Private Partnership (PPP)**
  - It is on Build-Operate-Transfer (BOT) model
  - Total cost to build the system will be covered by private
  - Payment per transaction will be paid by the Government (utility organization) for specific operation period
  - At the end of the operation time the whole UBS system will be transferred to Government

- **Phase I:** Addis Ababa; **Phase II:** four regions (Adama, Bahir Dar, Mekele, Hawasa)
• Multi Purpose Community Centers
  ◦ They are like Akshaya Centers in Kerala, Eseva in Andhra Pradesh, etc.
  ◦ Established to serve the community,
  ◦ Run by the community, an access point to the electronic services
  ◦ More than 85 community centers,

• Multi Purpose Community Radio
  ◦ 9 community radio all over the country
  ◦ 2 in in the process of establishment (Humera and Kebri-Dehar)
Ethiopia in International Measures
Status of Ethiopia in International Measures

- Ethiopia is part of the biannual E-Readiness assessment by the UN
- The evaluation is in the area of Infrastructure, Human Capital, Web Measure and E-Participation
- Ethiopia has scored relatively better starting from 2003 until 2012
- The improvement in 2012 is better than the previous years
UN E-Government Survey (2010 & 2012)

<table>
<thead>
<tr>
<th>Index</th>
<th>2010</th>
<th>2012</th>
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<tbody>
<tr>
<td>Web Measure index/online service</td>
<td>0.2000</td>
<td>0.4706</td>
</tr>
<tr>
<td>E-Participation</td>
<td>0.0429</td>
<td>0.3421</td>
</tr>
<tr>
<td>Infrastructure index</td>
<td>0.0073</td>
<td>0.0093</td>
</tr>
<tr>
<td>Human Capital Index</td>
<td>0.4027</td>
<td>0.2119</td>
</tr>
<tr>
<td>Total</td>
<td>0.2033</td>
<td>0.2306</td>
</tr>
</tbody>
</table>
IT Park

- Ethiopia has advantage because of the time difference, language barrier is less, working trained high, etc.
- Will be constructed on a 200-Hectare plot of land in the Capital
- High level design project is completed, civil work (power, road, sewerage, office buildings, data centers, etc.) has started, office & incubation buildings are in construction, etc.
- Expected to create around 300,000 jobs for Ethiopians
- The objective is to use ICT as one secure foreign direct investment
Challenges & Opportunities
4.1 Opportunities

• Reduces Cost,
• Improves Quality of Service Delivery to Citizens
• Increases Transparence
• Increases Accountability
• Increases Citizen’s Participation in Decision Making Process,

Next is details with one examples
Example of cost reduction: Case Ethiopia

- By using the Video Conference for meeting, training, consultation, etc.; Call Centers to inquire information
  - Between July 2011 to March 2012, 527 hrs usage of multisession VC is conducted, 241,949 people participated
  - In toll-free Gov Call Center, 888, between July 2011 - March 2012, 184,716 different calls to request services
- This reduce the cost of transportation to centers (Ethiopia one of the 10 largest country in Africa and long distance travel in the country is common),
- People can attend the training/meeting around there working places, the same information/content to all places,
- Same information to all attendees
4.2 Challenges

- Infrastructure
- Qualified Human Resource
- Lack of Standards, Guidelines, Policies and Legal issues
- Low level working culture,
- High Resistance,
- Weak Private Sector,
- Low level collaboration/partnership between private and public sector

Next is details with one examples
Challenges

Infrastructure

- One of the major challenges in ICT/e-Government implementation
- Connectivity, bandwidth, computer penetration, inadequate mobile/landline, computer literacy etc are linked to infrastructure
- High cost, limited resource/finance in developing nations
- The digital divide between developed & developing countries and even between rural & urban internally is high
- Developing countries have another priorities than ICT, poverty, food security, political/democracy, internal conflict,
- Even if the infrastructure exist, under utilized, because of skill, commitment, etc problems
Qualified Human Resource

- Limited (lack of) qualified professionals to install, commission, run, maintain the infrastructure and application
- Limited (lack) of ICT skills in the public sector to use the infrastructure and application
- Lack of hybrid human capacities: technological, commercial and management, etc which is mandatory requirement to be successful in ICT initiatives
- Getting qualified human resource is not possible in short period of time (is a process)
- Inadequate HR training centers and Institutions
- Brain-drain of the qualified professionals, abroad or even from public to private, affects ICT implementations
- Public awareness is also part to make ICT initiatives a success
Conclusion
Conclusion

- We have a plan of improving the UN-Index by 25 in the first evaluation and 15 by the second evaluation
- Better benchmarks and best practices in e-government implantation to be utilized (Korean, Indian, Mauritius, etc.)
- Go from simple to complex in implementation, pilot in small scope, test and go for larger scale (start on informational services and go to transactional service delivery)
Conclusion

- Start with prioritized service delivery to citizens with available channels in service delivery like voice, mobile, etc instead of broadband, PDA, PC, etc.

- Establish ownership, secure sustainability in ICT implementation (involve owners, end-users, stakeholders, etc.)

- Invest in HR capacity building and public awareness in all levels to minimize failures and to maximize the opportunities
I Thank You!