Taking India’s e-governance from vision to implementation
Strong correlation between E-Government capabilities and economic competitiveness

1 Global Competitiveness Index, World Economic Forum 2013, is based on 12 pillars including infrastructure, education, labor market etc.
2 E-Government Development Index based on UN’s E-Government survey 2012 based on services, infrastructure and human capital

SOURCE: World Economic Forum; United Nations; McKinsey Analysis
India’s low rank in UN’s E-Government survey is driven by demand side issues

**India**
E-government development index

<table>
<thead>
<tr>
<th>Country</th>
<th>Index Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>0.88</td>
</tr>
<tr>
<td>United States</td>
<td>0.85</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.81</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.75</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.61</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.55</td>
</tr>
<tr>
<td>Germany</td>
<td>0.54</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.50</td>
</tr>
<tr>
<td>China</td>
<td>0.47</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.46</td>
</tr>
<tr>
<td>Vietnam</td>
<td>0.45</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.43</td>
</tr>
<tr>
<td>India</td>
<td>0.38</td>
</tr>
</tbody>
</table>

**India’s rank among 190 countries**

**Bottom Quartile**

SOURCE: World Bank; Computer Industry Almanac; ITU; Capital IQ; World Economic Forum, Global Competitiveness Report, 2010-11; International Finance Corporation; Speedtest.net; Transparency International; McKinsey analysis
Need to address digital divide to drive higher demand of E-Governance services

### Projected near term internet penetration

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>48</td>
</tr>
<tr>
<td>China</td>
<td>43</td>
</tr>
<tr>
<td>US</td>
<td>86</td>
</tr>
<tr>
<td>India</td>
<td>28</td>
</tr>
<tr>
<td>Japan</td>
<td>84</td>
</tr>
</tbody>
</table>

- **‘Digital Divide’**: Rural penetration likely to remain <10%, compared with ~65% in urban
- India needs >500 million users to reach ~40% penetration, similar to China
- Additional 150 million users over projected ~350 million, will predominantly be semi-urban and rural users

SOURCE: Internet World Stats (2010); BMI, ITU, McKinsey Digital Consumer Research; Public information; Team analysis, Pyramid Research
What would it take for India to move from vision to implementation?

1. Institutional capabilities
   - Effective management structure

2. Milestone driven execution

3. Low cost and reliable access
   - Bridging the digital divide

4. Human capital enablement
   - Driving higher adoption

Clear accountability, ruthless prioritization
### Potential ideas for discussion

<table>
<thead>
<tr>
<th>1</th>
<th>Institutional capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>A bulk of the impact lies in the states - does each state need a CIO?</td>
<td></td>
</tr>
<tr>
<td>How can pilots be scaled up nationwide?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2</th>
<th>Milestone driven execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should progress be put online for public scrutiny?</td>
<td></td>
</tr>
<tr>
<td>How can resistance be overcome?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3</th>
<th>Low cost reliable access</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can the mobile internet opportunity be leveraged to get to 500 million internet users in the next few years?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>Easy user interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does India need a cadre of Para-technicians?</td>
<td></td>
</tr>
<tr>
<td>Can local languages and picture based interfaces be used?</td>
<td></td>
</tr>
</tbody>
</table>
Taking India’s e-governance from vision to implementation
CIO plays a key role in centralized project management – Germany example

Key reasons for schedule overruns at German Federal Employment Agency

1. Frequent changes in scope of the project
2. “Democratic” decision making
3. Lack of accountability and performance management

The CIO played a central role to transform project delivery

- Central coordination and de-bottlenecking
- Faster decision making
- Setting monthly milestones
- Rigorous performance mgmt.

Once under-performing IT function has become one of Europe’s leading public sector IT provider
### Four factors are critical to success of the Country CIO

<table>
<thead>
<tr>
<th>Key position in the administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Seamless access to the budget</td>
</tr>
<tr>
<td>• Hierarchical influence over ministerial CIOs</td>
</tr>
<tr>
<td>• Directly attached to the central executive (prime minister)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Favourable regulatory tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Direct authority in dealing with other administrations (e.g., controls, audits of ministerial projects)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shared objectives &amp; incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clear, quantifiable and auditable objectives, shared with all ministries and key actors</td>
</tr>
<tr>
<td>• Financial incentive through partial investment of savings realized</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adequate resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Adequate budget to fulfill mission</td>
</tr>
<tr>
<td>• Sufficient human resources</td>
</tr>
<tr>
<td>o Expert team as arm’s-length management of IT strategy missions across the scope</td>
</tr>
<tr>
<td>o Identification of ministerial relays for policy implementation</td>
</tr>
</tbody>
</table>
Adopting a milestone based execution approach is key to a CIO’s ability of “getting stuff done” – America example

CIO would be responsible for ensuring that we are using the spirit of American innovation and power of technology to improve performance and lower the cost of government operations

– US President, March 2009

Milestone based execution – Key initiatives taken by American CIO

1. **Transparency:** Cost and schedule information put online
2. **Clear deadlines:** With well-defined accountabilities
3. **Co-creation:** Combination of top-down and bottom up development
4. **Sustained focus:** Dashboard used in every CIO council meeting
Milestones can span across multiple years for core initiatives, sustained focus is the key: South Korea example

Overview of government’s milestone driven broadband plan

**Phase I: Building the backbone**
- 1995-1997
  - High speed/capacity backbone inking 80 major areas
  - 45 Mbps services for 14,830 institutions
  - Support for KT and Dacom investment
    - KT: 11,667 Km cable
    - Dacom: 6,823 Km cable

**Phase II: Completing the connection**
- 1998-2000
  - High speed/capacity backbone in the whole country (144 areas)
  - 155 Mbps services for 28,000 institutions
  - ADSL/cable services for general public
  - Facilitation of effective competition between players (i.e., KT, Hanaro, Thrunet)

**Phase III: Paving the way for e-governance**
- 2001-2005
  - Speed/capacity upgrade for nation wide backbone
  - 622 Mbps services for 32,000 institutions
  - Establishing e-Government
  - Facilitation of open competition for cheaper service

- Sustained focus on basic infra-structure
- Facilitate open/ effective competition for last miles

SOURCE: MIC; team analysis
E-governance is a strong demand driver for telecom infrastructure investment: South Korea example

Key considerations in selecting solution
- Speed of rollout was needed
- Quality of service offered was important
- Reducing the price of access was a key priority

Supply side
- Government developed a three-phase broadband plan with clear milestones for network roll-out
- Government provided US$700mn in low interest loans to drive broadband roll-out between 1998 and 2005
- Financing was made available to all operators in the market
- Most households are connected through VDSL, although players are now moving towards FTTH

Government created 6 demand-side initiatives to drive telecom infrastructure investment of which e-government was a central theme

Demand side initiatives
- E-government: 90% of all public administration done online
- Integrated e-government platforms for citizens with numerous services, e.g., home taxes, housing registration, official claims
- Integrated social insurance information system
- E-procurement system to manage all public tenders

OECD 5th in e-governance readiness ranking
## Tamil Nadu Health Management Information System

### Enabling better governance through ICT enablement

- Aspiration of 222 SHCs and achieved 41 with >12.6 Mn patients registered
- 2000+ users trained including more than 400 doctors and 600 nurses

### Context

- Manual processes
- Duplicity of patient data
- Inefficiency in governance of hospitals due to lack of state level monitoring of performance
- Inefficient operations due to manual drug stock indentry, equipment monitoring and drug expiry tracking, etc

### Key Interventions

- Strong ownership and support from Hospital administration
- Government policy for adoption of online system
- IT Infrastructure established with state investment
- Regular stakeholder meetings and periodic monitoring by World bank
- Training of end users

### Impact

- Interconnected system linking patient in to central EMR
- Patient identification number (PIN) linked to UID
- Real time data available for various levels of healthcare admin
- Accountability in maintenance of inventory, monitoring equipment downtime, drug stock availability, tracking drug expiration
## Gujrat’s eGRAM- Vishwagram

### Expanding reach of e-governance to all
- Providing e-governance services to all citizens including all rural citizens through a structured approach solving for infrastructure and economic challenges

### Objective
- Provide e-services to rural citizens
- G2C
  - Basic Certificate
  - Land records
  - Utility bills
  - eRation card
- B2C services
  - e-Ticketing
  - Utility Bill payments
  - Insurance selling
  - Telemedicine
  - Market linkages for Agri Commodities
- eGram Mail

### Implementation
- 100% Gram Panchayat Building creation
- Electrification (24*7) through JyotiGram
- Computerization of Gram Panchayat
- e-connectivity of gram panchayats through VSAT network
- Services rolled out from eGRAM

### Outcomes
- Income generated by e-gram in 4 years
  - Utility bill collection- INR 13.6 Cr
  - Delivery of land records- INR 16.1 Cr
  - E-ration cards- INR 36.88 Cr
- Today Gujrat has 700 e-transactions per 1000 population per month, 3 times the closet next city i.e. Chandigarh
Taking India’s e-governance from vision to implementation