Electronic Government in Brazil

Paulo Alcântara Saraiva Leão
Brazil

• Continental country: 8.5 millions Km² (47% of Latin America)

• Population: aprox. 180 millions (5th in the world) – 4 times zones

• Low level of education

• Illiteracy: 11.8% (over 15 years of age)

• Basic needs unsatisfied

• Huge digital divide

• High level of automatization in the bank industry
Digital Divide in Brazil

MAPA DA EXCLUSÃO DIGITAL

Proporção
- De 59% a 84% excluídos
- De 84% a 92% excluídos
- De 92% a 97% excluídos
- Acima de 97% excluídos
## ICT Utilization in Brazil

### Computer Density

<table>
<thead>
<tr>
<th>Country</th>
<th>Computers per 1,000 inhab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>416</td>
</tr>
<tr>
<td>USA</td>
<td>370</td>
</tr>
<tr>
<td>Corea</td>
<td>173</td>
</tr>
<tr>
<td>France</td>
<td>152</td>
</tr>
<tr>
<td>Spain</td>
<td>70</td>
</tr>
<tr>
<td>Mexico</td>
<td>52</td>
</tr>
<tr>
<td>Argentina</td>
<td>41</td>
</tr>
<tr>
<td>Brazil</td>
<td>31</td>
</tr>
</tbody>
</table>

*Source: IDC*

- Computer is at 11.7% of the households
- 10% of the households have access to the Internet
Teledensity

ICT Utilization in Brazil

Celular Phones and Internet Conexion
Latin America

Source: Pyramid Research, May 2005
### Benchmarking e-Government: A Global Perspective (169 countries)

<table>
<thead>
<tr>
<th>Region</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>2.60</td>
</tr>
<tr>
<td>Europe</td>
<td>2.01</td>
</tr>
<tr>
<td>South America</td>
<td>1.79</td>
</tr>
<tr>
<td>Middle East</td>
<td>1.76</td>
</tr>
<tr>
<td>Asia</td>
<td>1.38</td>
</tr>
<tr>
<td>Caribbean</td>
<td>1.34</td>
</tr>
<tr>
<td>Central America</td>
<td>1.28</td>
</tr>
<tr>
<td>Africa</td>
<td>0.84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Score</th>
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</thead>
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<td>3.11</td>
</tr>
<tr>
<td>Australia</td>
<td>2</td>
<td>2.60</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3</td>
<td>2.59</td>
</tr>
<tr>
<td>Singapore</td>
<td>4</td>
<td>2.58</td>
</tr>
<tr>
<td>Norway</td>
<td>5</td>
<td>2.55</td>
</tr>
<tr>
<td>Brazil</td>
<td>18</td>
<td>2.24</td>
</tr>
</tbody>
</table>

Note: e-Gov index composed by 3 indicators: level of utilization of Internet by governments, telecommunications infrastructure and human capital.

Source: www.unpan.org
**Electronic Government in Brazil (e-Gov.br)**

### e-Readiness

<table>
<thead>
<tr>
<th>Region</th>
<th>Score (of 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>8,38</td>
</tr>
<tr>
<td>Western Europe</td>
<td>7,87</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>5,60</td>
</tr>
<tr>
<td>Central and eastern Europe</td>
<td>4,85</td>
</tr>
<tr>
<td>Latin America</td>
<td>4,74</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>4,42</td>
</tr>
</tbody>
</table>

Source: Economist Intelligence Unit, 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Score (of 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>1</td>
<td>8,74</td>
</tr>
<tr>
<td>US</td>
<td>2</td>
<td>8,73</td>
</tr>
<tr>
<td>Sweden</td>
<td>3</td>
<td>8,64</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4</td>
<td>8,62</td>
</tr>
<tr>
<td>UK</td>
<td>5</td>
<td>8,54</td>
</tr>
<tr>
<td>Brazil</td>
<td>38</td>
<td>5,07</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Source: Economist Intelligence Unit, 2005
New e-Government National Policy

Two Big Challenges!

5. Creation of government strategies to **utilize ICT to promote** a democratic modernization **process** of the public administration

7. **Combine** the availability of technology, resources and qualified people with the **enormous social disparity**
... and 4 Main Priorities

4. First implement the services according to user’s needs (not to government’s or the easiest to implement)

6. Integration of the federal government with state and local levels

8. Encourage the development of Brazilian solutions

10. Optimize the utilization of the available ICT infrastructure to lower the transaction costs
Directives

• Promotion of the citizenship

• Digital Inclusion and e-Gov are inseparable

• Use of Free Software as a strategic resource

• Knowledge Management as a strategic instrument of management of public policies

• Rationalization of resources

• Utilization of policies, regulations and standards

• Integration to the other levels of government (state and local) and with the other powers (legislative and judiciary)
**Strategic components**

- Electronic Government National Program (e-services)
  - National Electronic Government Diagnostic
    - Relationship and interactions between the citizens, enterprises and the governments
- Brazilian Program for Digital Inclusion
- e-PING – Interoperability Standards for Electronic Government
e- Government committees (federal government)

- Free software implementation
- Digital inclusion
- Systems integration
- Legacy systems and license
- Sites and online services management
- Network infrastructure
- G2G
- Strategic information and knowledge management
Present Situation

• Duplication of expenditures and lack of coordination among government levels

• e-Gov is mostly in the interactive and transactional stages

• Lack of a strong political support

• Reduce diversity in the ICT infrastructure inside governments

• Judiciary power and local governments needs to advance

• National Awards related to e-Gov
  • e-Gov Excel Award (ABEP), Public Administration Excel Award (CONIP), etc
Difficulties to implement e-Gov in Brazil

• Huge digital divide … due to the huge social exclusion!
• Difficult to have the CEO as a sponsor of ICT initiatives
• Legislation and regulatory issues not adequate
• Lack of feasibility studies to show cost-benefits and ROI of e-Gov
• Information systems and network integration
• Heterogeneous governmental ICT infrastructure
• Low educational level of the population
• Low computer utilization rate
Opportunities for Brazil

- Repressed demand unattended
- Help decrease the elevated cost of doing business in Brasil
- Increase competitiveness
- Reduce costs of the government and the costs of interacting with it
- Reduce bureaucracy (152 days to open a firm X 28 in Chile and 4 in USA!)
- Help accelerate justice processes
- Reduction of the opportunities for corruption (e- procurement, transparency, etc)
- ICT for the socio-economic development
- Interaction between government and society is intense
Main Issues and Concerns

• Priority to implement the duties and not the rights (citizens and enterprises)
• Reduce the digital divide (public policy)
• Align ICT with government strategy
• Free Software Policy (opportunity to create national knowledge)
• Cost evaluation and e-Gov to reduce administrative costs
• e-Services evaluation
  • Which services the population really needs? Are they effective?
• Increase e-Gov penetration in the municipalities
• Systems and government integration
• Consensus formation on the importance of ICT to promote development
Main Issues and Concerns

• Life- events oriented e- services rendering
• Transference of investments to the private sector (Public Private Partnerships)
• Concern about IT training to the public servants (G2E)
• Governments request information that it already has!
• Guide to best practices on e- Gov in Brazil
• National e- Gov rankings
• Increase of the social control over public management
• Digital certification
• e- Governance
• Digital TV (more TV sets than refrigerators!)
In itiatives

e- Government Standards for Interoperability (e- PNG)

• Architecture which defines a minimal set of premises, policies and technical specifications that regulate the utilization of ICT in the federal government.

• Fields:

  • Interconnection
  • Security
  • Access media
  • Organization and exchange of information
  • Integration areas for electronic government

• Condition to the creation and rendering of e- services of high quality and low cost

• Basic structure to the e- Gov strategy
Initiatives

• **Annual Income Tax Declaration submission**
  
  • Over 96% sent by Internet
  
  • More than 60 types of documents
  
  • Total receiving time from days to 2.4 sec!

• **Electronic Vote**
  
  • Since 1988
  
  • Used by more than 100 millions of voters (all 27 states)
  
  • Very fast vote counting process
Initiatives

• Comprasnet

• Federal Government e-Procurement Portal

• Transparency: Information of all biddings and contracts done by the public sector

• Obligatory use for the acquisition of ordinary goods and services

• First system of its kind to be accepted by the World Bank and IADB
Initiatives

- **Rede Governo (Federal Government Electronic Services Portal)**
  
  - 1,700 services, 22 thousands of information sources
  
  - 36 millions of visits per month
Electronic Government in Brazil (e-Gov.br)

Initiatives

• e-MAG
  • Accessibility Model for e-Gov
    • Promotes digital inclusion
    • Democracy in the content rendering

• Digital Certification (ICP-Brasil)
  • National infra-structure of digital certification
  • Federal regulation to electronic signature and digital information transfers
Initiatives

• GESAC

• Promote the “digital inclusion” in poor communities

• Satellite connection

• Over 3,200 localities (over 22 mil computers connected)

• Expected to attend 6.4 millions of brazilians

• Priority to the communities with the lowest HDI (Human Development Index)

• Free software based

• Complete service: Web access + Web pages hosting + e-mail + Training + Support
Citizen Integrated Attendance Centers

• Public services rendering (One-stop shop)

• Integrates different levels of governments in the same place

• Exists in every states and some municipalities - Network

• Only physically integrated … not rendering integrated services

• … towards electronic centers
Public Internet Access Points (TELECENTROS)

• Federal, State and Local level

• Main public instrument to help reduce the digital divide
**Electronic Government in Brazil (e-Gov.br)**

**e-Government Laboratories**

- Partnership between governments and academic and R & D organizations
- Joint project with European institutions and Peru (e-GOIA Project)
Thank You!

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Phone: + 55 85 3101-3865
• National Context

• ICT utilization in Brazil

• Electronic Government in Brazil (e-Gov.br)

• ABEP – Brazilian Association of ICT State Agencies
What’s ABEP:

• Non-profitable organization
• Gathers all 26 state ICT agencies of Brazil
• Varied legal administrative structures (public companies, state secretariats, departments, etc)
• Most of the associates created in the 60’s and 70’s
• Initially based on a centralized model for public ICT
Highlights:

- Cooperating Development of solutions to the public sector
- Brazilian Public Software
- Aims to reduce the duplication of efforts and financial resources in the development of ICT solutions in the public organizations
- Reference entity in the design of public IT standards, legislation and norms
- Fostering of meetings in three sectoral forums
- Annual National Public IT Seminar (SECOP) and e-Gov Excel Award
ASSOCIAÇÃO BRASILEIRA DE ENTIDADES ESTADUAIS
DE TECNOLOGIA DA INFORMAÇÃO E COMUNICAÇÃO

abep
Objectives:

- Promote the strengthening of and cooperation among its associate members
- Foster public IT as a tool to increase state productivity
- Integrating and sharing ICT efforts and resources among the states, as well as between them and local/federal governments
- Promote the dissemination of ICT solutions
- Exchange with similar national and international associations
- Cooperate with the agencies in change of devising IT policies, regulations and standards
Events:

- Fostering of meetings in three sectoral forums:
  - Businesses and Technical Directors Forums
    - Associates Council
    - Administrative- Finance Directors Forum
  - Annual organization of the National Public IT Seminar (SECOP)
  - e-Gov Excel Award
## ICT Utilization in Brazil

### Internet (Brazil)

#### Internet Users

<table>
<thead>
<tr>
<th>Year</th>
<th>% of pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>0.01</td>
</tr>
<tr>
<td>2002</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Source: UN and CGI Brazil

Note: 15% of the population using the WWW (June/2005)
E- Gov: Element of Social Transformation

4. Promotion of the *citizenship* and the development

6. Instrument of *transformation* of the public organizations

8. Promote the process of *dissemination* of the ICT’s to contribute to the development of the country

10. Promotion, use and dissemination of best practices of *knowledge management* in the public administration
Electronic Government in Brazil (e-Gov.br)

... and drives Brazil towards the Information Society

- The universalization of the access to the digital economy
- Administrative transparency
- Network integration
- Scientific and technological development
- High performance of the information systems
- Increase of the competitiveness of Brazil
## ICT Utilization in Brazil

### Internet (Brazil)

#### Internet Users

<table>
<thead>
<tr>
<th>Class</th>
<th>% of population</th>
<th>% of users</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>B</td>
<td>19</td>
<td>49</td>
</tr>
<tr>
<td>C, D, E</td>
<td>73</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: IDC

### 2004:

Internet Users: 20,5 milhões (11,5% of population)

Source: e-commerce.org.br, january/ 2004
## ICT Utilization in Brazil

### Internet (Brazil)

#### Machines under .br Domain

<table>
<thead>
<tr>
<th>Year</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>117,000</td>
</tr>
<tr>
<td>2004</td>
<td>3.9 million</td>
</tr>
</tbody>
</table>

Source: CGI Brazil

Note: 768,000 domains under .br (9th in the world - 2004)

#### Time spent on the WWW

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brazil</td>
<td>15h14'</td>
</tr>
<tr>
<td>2</td>
<td>Japan</td>
<td>14h20'</td>
</tr>
</tbody>
</table>

Source: Ibope/Netratings, April, 2005
Expenditures and Computer Price (Brazil – Private Sector)

Recent years:

- More than 40% of the investments of the companies are in IT
- USA: 50% Europe: 45%

Source: Gartner and FGV

- In 2004: Total selling of computers = 5 millions of units (9% annual increase)
- PC’s price has been decreasing 15% per year (average)
- Standard PC’s cost: US$ 400 (2004). It was US$ 5,000 in 1988!

Source: FGV, 2005
### Top in e-Gov (Americas)

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1</td>
</tr>
<tr>
<td>USA</td>
<td>3</td>
</tr>
<tr>
<td>Mexico</td>
<td>19</td>
</tr>
<tr>
<td>Brazil</td>
<td>21</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>


*Note: ... Still a long way to maturity!*
Brazilian Electronic Government Policy

Action Lines

• Interaction with the population (Information and services portals)

• Improvement of the internal management (information systems – Intranet)

• Integration with other partners and stakeholders
## ICT Utilization in Brazil

### PC’s in Brazil

<table>
<thead>
<tr>
<th>Segment</th>
<th>Qty.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprises</td>
<td>12,900,000</td>
<td>52,02</td>
</tr>
<tr>
<td>Home</td>
<td>6,400,000</td>
<td>25,81</td>
</tr>
<tr>
<td>Government / Education</td>
<td>3,800,000</td>
<td>15,32</td>
</tr>
<tr>
<td>Other</td>
<td>1,700,000</td>
<td>6,85</td>
</tr>
<tr>
<td>Total</td>
<td>24,800,000</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Source: Industrial Technology Secretary – MDIC, 2004

*Obs: Expected 10% increase for 2005*
Benchmarking e-Government: A Global Perspective (169 countries)

South America E-Gov Index

Source: www.unpan.org
### Electronic Government in Brazil (e-Gov.br)

#### e- Readiness (Latin America)

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>Score (of 10)</th>
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<tbody>
<tr>
<td>Chile</td>
<td>1</td>
<td>5,97</td>
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<tr>
<td>Mexico</td>
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<td>5,21</td>
</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td>5,07</td>
</tr>
<tr>
<td>Argentina</td>
<td>4</td>
<td>5,05</td>
</tr>
<tr>
<td>Venezuela</td>
<td>5</td>
<td>4,53</td>
</tr>
</tbody>
</table>

Source: Economist Intelligence Unit, 2005
Principles

• Digital inclusion and universalization of the rendering of public services, privacy protection, to reduce the social and regional disparities

• Strengthen the democratization of the access to information

• Use ICT to improve the life conditions of the citizens

• Incorporate ICT in the public administrative processes

• Strengthen the formulation and implementation of public policies

• Implement a integrated, transparent and result oriented, public administration

• Electronic control of the public budget
Principles

• e- Education, ICT training and setting of virtual libraries

• Implement e- procurement systems

• Facilitate the infra-structure of support to e- business, mainly for small enterprises

• Build e- commerce services to the payment of taxes

• Promote the convergency of different systems, networks and data bases to improve decision making process

• Set up an advanced communications infra-structure and efficient e- services
Initiatives

• Connected Citizen – Computers for All
  
  • Low Cost Computer Program
  
  • Part of the Digital Inclusion Program of the Federal Government
  
  • Includes technical support
  
  • Free software based
  
  • Aprox. US$ 550
National Context

Brazil

- Poverty
- Basic needs unsatisfied
- Low level of education (specially basic education)
- Lack of enough jobs to let people come out of the poverty
- Low computer utilization rate
- Huge digital divide
- Low income distribution (the worst of the continents!)
- High level of automatization in the bank industry
Origin (Year 2000)

• Started with the administrative reform of the Brazilian State (mid 90’s) aiming at efficiency and transparency in the utilization of the public resources

• The Work Group in Information Technologies was constituted and defined the directives and goals of the Brazilian Electronic Government Program (Apr/ 2000)

• Publishing of the “Green Book” (Information Society in Brazil) (May/ 2000)

• Public Information Security Policy of the Federal Government (Jun/ 2000)

• Brazil’s Electronic Government Policy (Sep/ 2000)

• Creation of the Executive Committee of Electronic Government (Oct/ 2000)