

# Development of Information Society Dominican Republic - Challenges & Limitations

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## ABSTRACT

Dominican Republic embarked in the enterprise of creating a knowledge and information society. Although with little resources and coordination problems the country's achievements in the last 10 years is outstanding. This paper presents the challenges and limitations of the effort and the research and statistical data that supports this thesis.

## Categories and Subject Descriptors

[Information and Communication Technologies] [IT Governance]: Knowledge & Information Society, Electronic Government.

## General Terms

Research on electronic government implementation.

## Keywords

Information, Technology, Communication, ICT, Information Society, Electronic Government, Knowledge, e-government, Digital Divide.

## 1. INTRODUCTION

The many initiatives introduced by DR government to improve government processes by using ICT's and that was later integrated into an agenda to implement a knowledge and information society, broadening its scope, where hindered by the number of institutions given similar responsibilities that later on created conflicts and double efforts translating later into poor reviews by international organizations indexes and indicators and multiple different policies<sup>1</sup>. Despite this, DR managed to advance in the implementation of a Knowledge and Information society because of the commitment of individual institutions who, faithful to the general consensus of using ICTs to improve processes, ended up implementing truly revolutionary solutions and services such as the Contact Center and the e-government Website.

## 2. APPROACH

The research team compiled its body of data from a survey of 64 government institutions which employees represent 53.50% of Dominican Republic's government workforce<sup>2</sup>. The questionnaire had 102 questions and was filled up by trained personnel visiting those institutions. All other data was obtained from government websites and their transparency pages. Data from the Dominican Institute of Telecommunications (INDOTEL) about computer and mobile phone use is also included in this paper.

## 3. FRAMEWORK

Several Laws, Decrees, Regulations and Norms were issued to support the implementation of different stages of ICT related policies. The process started in 1998 with law 153-98 which created INDOTEL, an institute in charge of regulating the communications sector. Government reform was initiated with the Decree 484-96, which creates the CONARE with the fundamental purpose of the development of measures to be recommended to various branches of government, policy monitoring and NRPs and modernization aimed at improving public institutions, deepen democracy and ensure model development based on equity, justice and well-being of the Dominican people.

### 3.1 Laws

Law No. 41-08 Created the Ministry of Public Administration (MAP) and established its roles to evaluate and propose reforms of the organizational and functional structures of public administration. Review and approve the procedure manuals and organizational charts of the public administration institutions.

Law 153-98 27/05/1998 Telecommunications Law.

Law 126-02 04/09/2002 Electronic Commerce, Documents and Digital Signature.

Law 200-04 28/07/2004 Free Access to Public Information.

Law 5-07 08/01/2007 Public Finance Administration System.

Law 53-07 23/04/2007 Technology Crimes Act.

Law 1-12 25/01/2012 National Development Strategy.

### 3.2 Decrees

335-03 04/2003 Regulations for Electronic Commerce, Documents and Digital Signature Laws. (Law No. 126-02).

1090-04 09/2004 Creates the Presidential Office for Information and Communications Technologies (OPTIC).

130-05 02/2005 Regulation of the Implementation of the General Law on Free Access to Public Information.

101-05 02/2005 Creates the National Commission of Ethics and Anti-Corruption.

178-05 03/2005 Provides that the Audiovisual Institute of Computer Studies is named Center of Information Technologies and Communication (CETIC).

212-05 04/2005 Created the National Commission for Information Society and Knowledge (CNSIC).

310-05 05/2005 Operating Regulations of the Commission of Ethics and Anti-Corruption.

244-06 06/2006 Creates the Committee for the Establishment of a Unified Comprehensive System Business Formation, with a mandate to streamline, integrate and computerize procedures followed by institutions.

229-07 04/2007 Application Instructions on Electronic Government which contains the general guidelines for the development of e-government strategy in the Dominican Republic.

228-07 04/2007 Sets the Government Contact Center \*GOB (\*462), which is the official government voice channel and first point of contact for citizens.

192-07 04/2007 Creates Regulatory Improvement Program coordinated by the National Competitiveness Council (CNC).

191-07 04/2007 Expands the scope of the Committee on the implementation of a unified Comprehensive System for Enterprise Creation.

615-07 10/2007 Instructs OPTIC to coordinate the procedure for the preparation of inventories regarding applications incorporated into computers and their licensing information.

709-07 12/2007 Instructs Dominican Republic's government's institutions to comply with the rules and technological standards published by OPTIC

175-08 03/2008 Instruct the public institutions to use GOB.DO and GOV.DO in their domains.

694-09 09/2009 Sets the 311 Citizen Service System as the primary means for receiving and channeling complaints, denunciations and claims.

#### **4. INSTITUTIONS & ROLES**

The sheer number of institutions involved in the coordination or leadership roles of implementing electronic government can be identified as a weakness. We believe this was created because of a misunderstanding of the overlapping responsibilities between the terms Knowledge and Information Society, electronic government and open government initiatives. All of them share in some way the responsibility to disseminate and implement the use of ICT's to develop a country society both economically and technologically.

If we accept as a logical roadmap to implementation the Knowledge and Information Society (SIC) the three main phases of STATE REFORM (to improve processes using ICT's, ELECTRONIC GOVERNMENT) to improve government services for citizens) and OPEN GOVERNMENT (to improve access to information, government transparency and accountability), then the mayor players are:

CONARE was a commission for Civil Service Reform, initially created and later absorbed by the Ministry of Public Administration (MAP) under the law 41-08. Its fundamental purpose was the development of measures to be recommended to various branches of the government, policy monitoring and NRPs and modernization aimed at improving public institutions, deepen democracy and ensure model development based on equity, justice and well-being of the Dominican people. (Decree 484-96, Article 1).

The Ministry of Public Administration - MAP's role is to evaluate and propose reforms of the organizational and functional structures of public administration. Review and approve the

procedure manuals and organizational charts of the public administration institutions. (Law No. 41-08).

Advice, strategic planning, develop, manage, implement and evaluate Information Technology and Communication (ICT) projects for various government's institutions. Encourage and support creation of cooperation networks between public sector, private and civil society to facilitate and optimize management of government agencies and government contracting.

Assist centralized, autonomous and decentralized government institutions, in identifying opportunities for implementation of ICTs, for the improvement and efficiency of civil service and the design of projects, taking into account that the initiative must correspond to each institution, seeking to promote the adoption and use of ICTs in public institutions, for a better relationship with citizens.

Develop, coordinate and promote the National E-Government Strategy.

Monitor, measure and disseminate the development of the E-Government Agenda.

Government Ethics and Integrity Dept. - DIGEIG is the governing body on ethics, transparency,

Open government, anti-corruption, conflict of interest and free access to information on government administrative level.

Decree No. 486-12 Art. 1

DIGEIG acts as coordinating and responsive institution to the tasks undertaken by the Dominican government on ethics and transparency in national and international scenarios, on Open Government, Participative Anti-Corruption Initiative, access to information, conflicts of interests, among others.

Decree No. 486-12 Art. 6.13

#### **4.1 CNSIC**

National Commission for Information and communication Society -CNSIC (Decree 212-04) is a commission which comprises the following players:

INDOTEL/UTEA, OPTIC, ONE, DPD, PRODETEL, INTEC, UASD, TELEFÓNICAS, Consejo Consultivo Para La Sociedad Civil, NAP Del Caribe, MMUJER, MSP, MESCYT, FEDOMU, MEPyD, Alianza ONG, Liga Municipal, Camara TIC.

Its main role is to create, promote and coordinate the Dominican Republic's strategy for the implementation of an Information and Communication Society.

#### **4.2 INDOTEL<sup>3</sup>**

4.2.1 Promote the development of telecommunications, implementing the principle of universal service defined by the General Telecommunications Law 153-98.

4.2.2 Ensure the existence of sustainable fair and effective competition, in providing public telecommunications services.

4.2.3 Defend and enforce the rights of customers, users and providers of telecommunications services, issuing the relevant regulations, enforcing the obligations of the parties and, where appropriate, punishing those who do not comply, in accordance with the provisions contained in the Law and its regulations.

4.2.4 In addition, it also has as objective the ensuring efficient use of radio spectrum in the public domain in the Dominican Republic.

## 4.3 OPTIC<sup>4</sup>

4.3.1 Advice, strategic planning, develop, manage, implement and evaluate Information Technology and Communication (ICT) projects for various government's institutions. Encourage and support creation of cooperation networks between public sector, private and civil society to facilitate and optimize management of government agencies and government contracting.

4.3.2 Assist centralized, autonomous and decentralized government institutions, in identifying opportunities for implementation of ICTs, for the improvement and efficiency of civil service and the design of projects, taking into account that the initiative must correspond to each institution, seeking to promote the adoption and use of ICTs in public institutions, for a better relationship with citizens.

4.3.3 Develop, coordinate and promote the National E-Government Strategy.

4.3.4 Monitor, measure and disseminate the development of the E-Government Agenda.

## 4.4 ONE<sup>5</sup>

Collect, review, develop and publish national statistics in relation to economic, agricultural, commercial, industrial, financial, social, conditions of the population. Conduct national censuses and coordinate statistical services of the Dominican Republic.

## 5. POLICIES

### 5.1 Visions and Strategies

The vision for the use of ICTs in the Dominican Republic, is the following: To achieve the FINAL GOAL of a Knowledge and Information Society (SIC) by implementing these vital phases: State Reform (using process re-engineering and ICTs), Electronic Government (by offering Citizen Services, ICT development), Open Government (with OAI, Transparency, Open Data).

### 5.2 Strategic Framework

The strategic framework used to implement initiatives for electronic government were included in various documents: The National Development Strategy (END)<sup>6</sup>, Digital Agenda<sup>7</sup> and e-Dominicana<sup>7</sup>. Basically it promotes the use of ICTs for all government processes and the creation of electronic available citizen's services. All aimed at reducing processing time and bureaucracy.

### 5.3 E-government Plan

The country plan is to encourage and facilitate the transformation of the processes of public and private sectors using ICT's as an inclusive tool of production and democracy, allowing the transformation of the production structure and economic model of the Dominican Republic, towards a model based on knowledge and digital economy.

For the implementation and development of e-Government, OPTIC, coordinated with government institutions to establish the following areas of action:

- Democratic participation of citizens
- Citizen engagement through affordable services
- Good government (technology for government processes & management)
- Transparent services.

## 6. INITIATIVES/PROJECTS & ACHIEVEMENTS

Of the 4 defined e-government levels of implementations (Emerging, Enhanced, and Transactional and connected) Dominican Republic have completely achieved the 2<sup>nd</sup> level: Regularly updated contents and information. Some transactional level achievement have been reported as some on-line government services have been implemented.

### 6.1 Projects/Services

Using the overall framework defined by UN (a tool that guides the development of strategies that countries undertake in the field of e-Government, based on different stages that benchmark the advance of implementation of online services that Governments offers to citizens. **Emerging:** Basic information online, **Advanced:** More sources, e-tools, e-information services, **Transactional:** two way Interactive applications, financial and non-financial transactions, **Connected:** Full interoperability, integrated Government, G2G, G2C, C2G.

Dominican Republic, is in the intermediate stages, between transactional and advanced phases, due to the increase of electronic services that have been in operation in the different public entities through which citizens and businesses interact with government. Services that have made significant impacts/Contributions are:

- 6.1.1 G2C Government to Citizen (front office) output to civil society in the form of e-services
  - Integrated government Services for citizen (PuntoGov, CCG, GOB.do)
- 6.1.2 C2G Citizen to Government (front office) input from civil society (empowerment)
  - 311 hotline
  - hotline for reporting abuse against children and teenagers
  - hotline for reporting human traffic
- 6.1.3 G2B Government to Business (front office) output to business in market in the form of e-services
  - Electronic Public Procurement
  - Digital Signatures
  - Integrated Services Windows
  - Create Business Online
  - Electronic tax reporting
- 6.1.4 B2G Business to Government (front office) input from business in market (empowerment)
  - 311 hotline
- 6.1.5 G2G Government to Government (back office) internal business processing
  - Service Integration (eGovernment visiting center, Web, Call center/hotline)
  - Normative (Web Portals, Interoperability, etc.)
  - Central processing (back-up, redundancies, continuity)
- 6.1.6 G2E Government to Employee
  - PAD (Digital Alphabetization Program)
  - ICT Training
  - E-learning

## 7. FIGURES/CAPTIONS

In the year 2010 only 6.29% of telephone accounts (landline and cellphone) had internet data included. By 2012 that percentage had increased to 20.61%. (Fig. 1)<sup>8</sup>

In the year 2010 69.10% of central government institutions had a working web portal, somehow that number diminished to 61% in 2012. However by August 2013 that percentage rose to 70.66%, the highest in Dominican Republic's history. (Fig. 2).

Municipal government has seen an increase in their web presence too. Web presence has gone from 31% in 2011 to 63% in 2013 on province capitals and from 15% in 2011 to 32% in 2013 when we take all the municipalities into account. In both cases municipal web presence has more than doubled (Fig. 3).

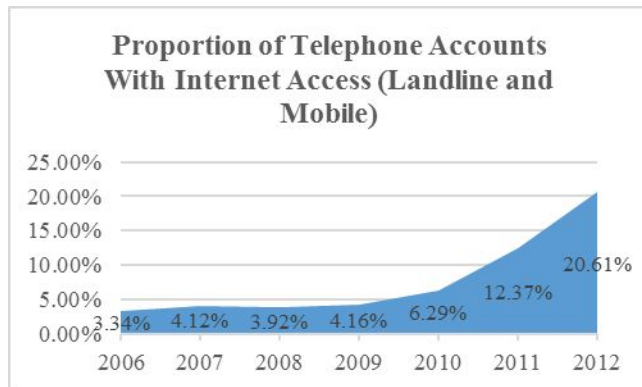


Fig. 1. The proportion of Internet accounts per Telephone accounts has increased at a very fast pace since 2010

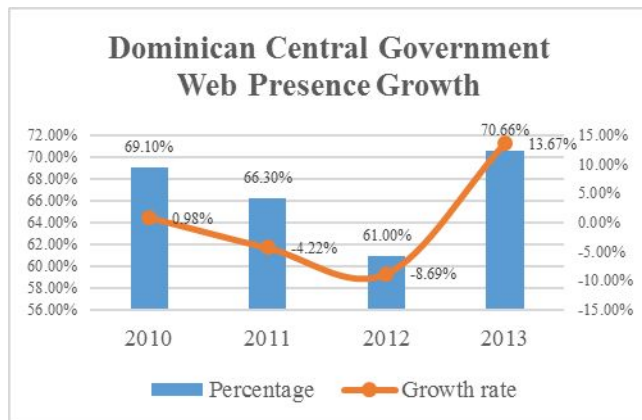


Fig. 2. As of August 2013, 70.66% of government institutions had web presence.<sup>9</sup>

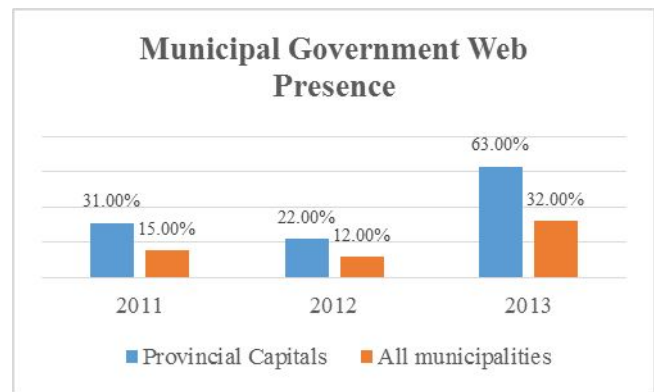


Fig. 3. Since 2011 municipal web presence has doubled.<sup>9</sup>

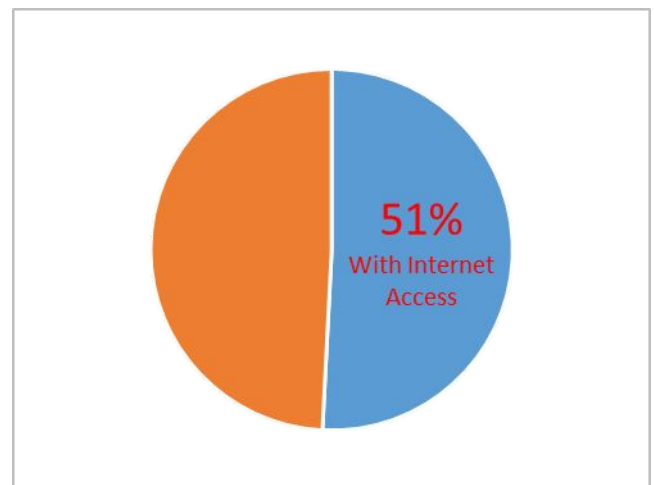


Fig. 4. More than half of Dominican citizens have some sort of Internet access<sup>10,11</sup>

## 8. CHALLENGES & LIMITATIONS

The need to design and implement a sustainable model for ICT and electronic government projects, plus the changes being implemented today in the public administration processes, include the following:

- There is a lack of a proper ICT sustainable model. International cooperation can be of great help in assisting and promoting such model to government. The goal is to design and implement a sustainable model for ICT and electronic government projects for the Dominican Republic.
- Consolidation of internal administrative procedures and establishment of common basis.
- Expansion of integrated civil services.

Challenges to be overcome and/or recommendations to be taken are:

### 1) Lack of Strong Government Leadership

- ICT agenda not a priority of the government
- Lack of a long term strategic and sustainable plan
- Nationwide change management program design for processes and not for ICTs
- Aligned e-Government projects with Performance Evaluation

## 2) Customer Oriented e-Government Services

- Continuous Administrative Reform: Removal of overlapping functions and processes of informatization, Streamlining of inconvenient Civil Services (bureaucracy) and Reduction of corruption.
- e-Government initiatives with the most potential to impact everyday lives of citizens such as resident registration, vehicle, customs clearance, employment, statistics management, etc... were given first priority, which became the foundation for e-Government.

## 3) Sustained Investment in e-Government Budget

- Yearly investment in e-Government implementation (1% of the national budget) \*
- Created and utilized the Information and Telecommunication Promotion Fund to build early e-Government
- Appropriated 10% of the informatization budget for e-Government support projects by OPTIC or similar institution, in order to effectively implement multi-ministry horizontal projects

## 9. CONCLUSION

The Internet is a social phenomenon therefore social conditions of access are important. Among them, the most important is the ability to use technology by regular citizens of a country, what is called digital literacy and digital fluency, which are cutting edges of the second digital divide. Social media sites have also been playing an important role in advancing the digital fluency of regular citizens. Dominican Republic has increased the use of such networks to outstanding levels in the last two years.

Although there have been a lack of government interest in ICTs and e-government topics. There has been a steady improvement in the implementation of such innovations in government institutions and the private sector. Access has increased (Fig. 4). The speeds of Internet connections have improved and the number of households with computers and Internet access, social media accounts and web presence has also increased<sup>9</sup>. All indicators of a healthy improvement of ICT used by general population.

Most government institutions have implemented an ICT infrastructure to enable better citizen services and information.

Nonetheless the need of the establishment of one organization as the promoter and coordinator of e-government implementation might be the needed push that promotes the Dominican Republic to the new stage of ICT use, government modernization and lastly overall competitiveness of its economy.

## 10. ACKNOWLEDGMENTS

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