



An Overview of the E-Government Initiatives in Tunisia

Nizar Ben Neji

Assistant Professor, University of Carthage, Tunisia
Fulbright Visiting Scholar, Computer Engineering, Univ of Massachusetts of Amherst

Political Economy Research Institute of the Univ of Massachusetts of Amherst
Wednesday, April 22, 2015
203 Gordon Hall

Outline

1. Generalities about Tunisia (Government system, economy, geography, ...)
2. E-Government's Situation in Tunisia
 - E-Government Sector
 - Legal Framework
 - Institutional Framework
 - Overview of the E-Government projects
3. Role of the National Digital Certification Agency (NDCA)
 - NDCA's missions
 - PKI-based Electronic Identification System
 - Distribution of the Registration Units
4. TUNEPS (TUNsian E-Procurement System)
 - Main objectives & Project Establishment
 - Components & external links
 - Exploitation & Training sessions
 - First results

Part I

Generalities about Tunisia



Tunisia



- Mediterranean country
- Government system: Republic, President, Prime minister, ...)
- Capital: Tunis
- Languages (Arabic (official) and French)
- Ethnic groups (Arab 98%, European 1% and others 1%)
- Religion (Sunni Muslims 99% and 1% of Christian, Jewish and Shia Muslims)

Tunisia



- Population 10,982,754 (Statistics of 2014)
- Area of 163,610 km²
- Most competitive economy in Africa and the **top industries** are: Tourism, textiles, petroleum, phosphate production, agriculture...
- Important dates
 - 20 March 1956, independance from France
 - 25 July 1957, declaration of the republic
 - 14 January 2011, revolution day

Part II

E-Government Situation in Tunisia



E-Government Sector

- Tunisia... an ongoing democratic transition... revolution was followed by a wave of **public sector reforms**;
- New context, New vision, New E-Government Strategies, Objectives and Challenges...
- First results of the new government efforts are very promising;
- According to the **UN E-Government Survey** of 2014, Africa is led by Tunisia that showed a huge progress since 2012, Tunisia climbed 28 places and it is ranked now 75 globally comparing to 103 in 2012.



Legal Framework

- **Recognition of the legal validity of an electronic document as a conclusive evidence:** Law N°2000-57 of June 13, 2000, amending and supplementing certain articles of the code of obligations and contracts;
- **Reliability of the digital certificates and the electronic documents digitally signed:** Law N°2000-83 of August 9, 2000 on electronic transactions and commerce;
- **Protection of personal data:** Law N°2004-63 of July 27, 2004, related to the protection of personal data;
- **Information security, compulsory periodic security audits and controls for the information systems and networks of public entities:** Law N°2004-5 of February 3, 2004 related to IT Security;
- **Access to the administrative documents of public institutions:** Law N°2011-41 of May 26, 2011.

Institutional Framework

- **E-Government Unit**, established in 2005 and it belongs to the **Presidency of the Government**, its role is to coordinate between the public structures involved in the implementation of the public E-Services;
- A set of **coordinators** are appointed by decrees in each ministry in order to help the E-Government Unit to achieve its missions;
- Set of institutions belonging to the Ministry of Information and Communication Technologies:
 - National Computer Centre (**CNI**), 1975, responsible of hosting, securing and duplicating the E-Government data and services;
 - Tunisian Internet Agency (**ATI**), 1996, responsible of regulating the entire national network;



Institutional Framework

- National Digital Certification Agency (**ANCE**), 2000, root certification authority playing the role of a trust third part in G2G, G2B and G2C services;
- National Agency for Computer Security (ANSI), 2004, in charge of controlling and auditing the E-Government services and executing the national IT security strategies.
- National Authority for the Protection of Personal Data, 2004, Ministry of Justice and Human Rights;
- Computer centres of other ministries (CIME, CIMSP, ...).



E-Government Projects

E-Tasrih

- E-Tasrih (Ministry of Finance) is an online tax filing service allowing companies to pay their taxes online;
- E-Tasrih was established in 2005;
- E-Tasrih uses the NDCA's digital certificates to authenticate server and clients;
- About 3500 companies have to pay their taxes online.

The logo for E-Tasrih, featuring the text "e-t@srih" in a stylized, bold, red font with a slight shadow effect.

E-Government Projects

E-CNSS & E-CNRPS

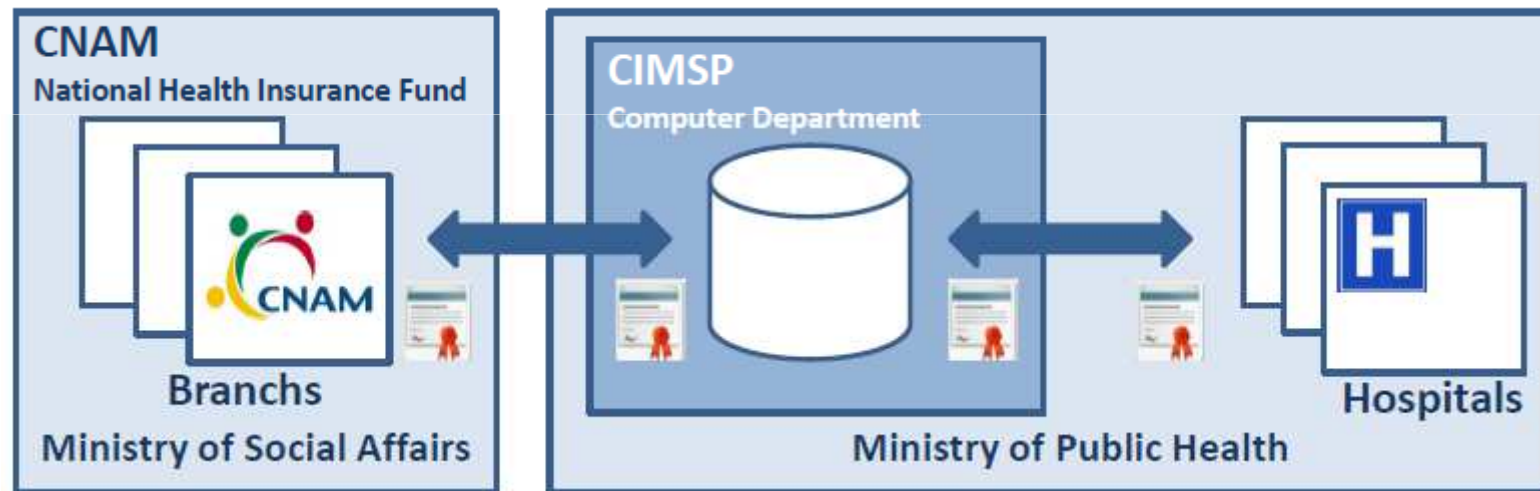
- **E-CNSS** (2005) of the Tunisian National Security Fund and **E-CNRPS** (2012) of the Tunisian National Pension and Social Providence Fund (Ministry of Social Affairs) allow online payment of **payroll taxes**;
- **E-CNSS** and **E-CNRPS** use the NDCA's digital certificates and the NDCA's time stamping service to secure the online transactions and to guarantee a long time proof of the electronic operations.



E-Government Projects

CNAM & Public Health Institutions

- Exchange of the electronic invoices digitally signed between **CNAM** (National Health Insurance Fund) and **public health institutions** (EPS);



- to be extended in the near future to cover the private health sector (Private hospitals, Pharmacies, etc...)

E-Government Projects

TUNEPS

- A single window for the public procurements, a 24/7 online bidding system allowing to achieve maximum transparency, to reduce operational costs and to eliminate cumbersome paper work.

The intervening parts are:



| | |
|--|-------------------|
| ONMP: National Observatory of Public Markets | Coordinator |
| CNI: National Computer Center | Hosting Company |
| NDCA: National Digital Certification Agency | PKI Provider |
| KOICA: Korean International Cooperation Agency | Sponsor |
| Samsung SDS | Solution provider |



Part III

Role of the National Digital Certification Agency (NDCA)



Legal Framework & Missions

- **National Electronic ID provider** and the root certification authority in Tunisia;
- **NDCA** was created by the law N°2000-83 of **August 9, 2000** that emphasizes on the reliability of the electronic identities and the electronic documents digitally signed;
- NDCA's Missions:
 - Issuing and delivering the digital identities directly or via other **public electronic ID providers**;
 - **Granting licenses** for the activity of certification service providers;
 - Defining the technical requirements and specifications of the tools to be used to create and to verify the **digital signatures**;
 - Establishing cross-certification and mutual recognition with foreign certification authorities and electronic ID provider entities;
 - Participating in the activities of **research** and **training** in order to develop the electronic ID based security solutions and raise the awareness of the stakeholders and the end users.

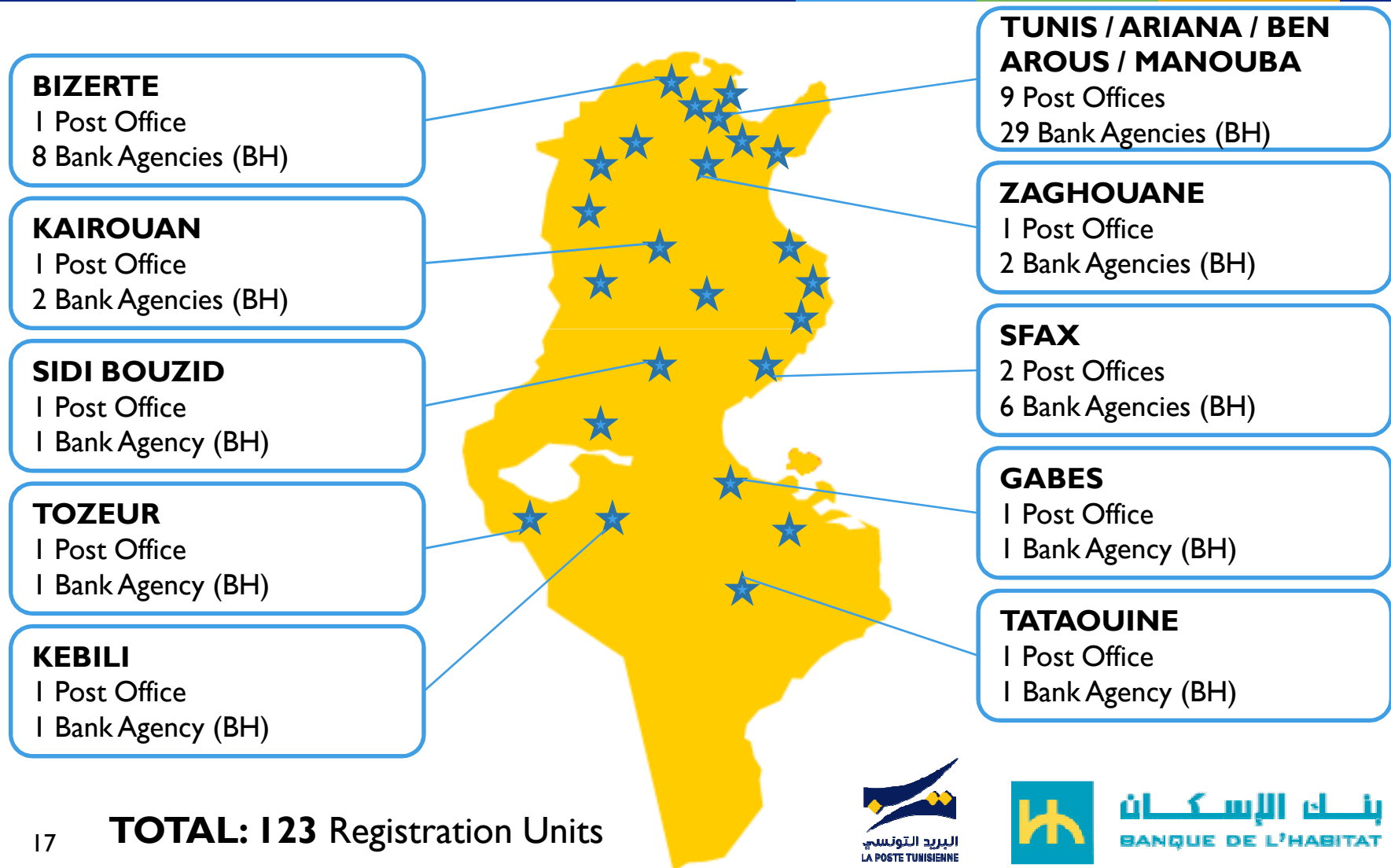
PKI-based Electronic Identification System

- NDCA provides a cryptographic key pair (public key and private key) and an X.509 certificate stored in crypto USB token or a smartcard;



- Obtaining an electronic ID requires physical presence and a face to face recognition.

Geographic Distribution of the Registrations Units



Part IV

Tunisian E-Procurement System (TUNEPS)



Introduction

- In December 2011, the Tunisian **Prime ministry** in cooperation with the **Ministry of information and communication technologies** have launched **TUNEPS**: a project to implement a national E-procurement system for public tendering.

A screenshot of the TUNEPS website's 'Supplier Registration Form'. The header includes the Tunisian flag, 'REPUBLIQUE TUNISIENNE', and navigation links like 'Invitation to Bid', 'Supplier Reg', 'Demand Inst. Reg', 'Shopping Mall', and 'Catalog'. The left sidebar shows a menu with 'Supplier Reg' selected. The main form area is titled 'Supplier Registration Form' and includes a breadcrumb trail 'Supplier Reg > Supplier Reg > Supplier Reg apply'. It contains fields for 'Document Number' and 'Creation Date' (2014/10/08). The 'Basic Information' section has radio buttons for 'Corporations', 'Craftsmen, statuettes contractor', 'Craft group', 'Natural person', and 'Individual entrepreneur'. It also includes fields for 'Business Registration Number' (with a 'Check' button), 'Business Registration Date', 'Tax ID' (with a 'Verify' button), 'CNSS ID' (with a 'Verify' button), 'Supplier Name', 'Commercial Name', 'Country' (set to Tunisia, with a 'Find' button), and 'Establishment Date'. At the bottom, there are checkboxes for 'Classification of Business' categories: 'Construction work', 'Goods & Equipments', 'Services', and 'Study'.

Advantages

- The main advantages of this 24/7 online bidding system are:
 - Achieving maximum transparency as every details are made accessible to the public;
 - Reducing operational costs;
 - Eliminating the bureaucracy delays;
 - Eliminating completely the cumbersome paper work;
 - Increasing the competitiveness between suppliers;
 - Ensuring equity.

Components

- The new digitized system will cover the entire procurement process from **purchase requests** to **payments**. It includes the following modules:
 - Registration of the public procurers and vendors;
 - Online submission of tenders (technical and financial offers);
 - Digital signature, time-stamping and encryption of the submitted documents;
 - E-contract system: Co-signature of electronic contracts between public entities and selected vendors;
 - Electronic archiving of tenders for long term duration in compliance with the local regulation and the international standards;
 - E-catalog information system;
 - Online shopping mall;
 - E-payment.

Stakeholders

- Management unit of the High Authority for Public Procurement (HAICOP) is responsible of administrating, maintaining and exploiting the online platform;
- National Computing Center (CNI) is responsable of hosting, securing and maintaining the equipments;
- National Digital Certification Agency (ANCE) is the electronic identity provider: PKI based system including also OCSP service, LDAP Repository, and Time Stamping;
- Computer Centre of the Ministry of Finance (CIMF);
- Tunisian National Pension and Social Providence Fund (CNSS);
- Banks (STB, BH, Attijari Bank, Amen Bank, BIAT, ...).



Project's Establishment (1/2)

- A feasibility study was undertaken from 2008 to 2010;
- Project's establishment officially started in December 2011;
- Partially sponsored by KOICA (Korean International Cooperation Agency), grant of 5.7 million dollars;
- SAMSUNG SDS as solution provider;



- A **national steering committee** (March 2012) and several work groups were formed to set up the TUNEPS components (Law Revision, User Management Portal, E-Shopping mall, E-Catalogue, External links, E-Contract system,...);

Project's Establishment (2/2)

- **Revision of law and regulations** in order to enable the procurement's operations to be performed **online** and to provide a **legal binding effect** for the whole **e-tendering** process: Decree N°2014-1039 of **March 13, 2014**, organizing the public e-procurement.
- Elaboration of the manual and procedures;
- Test and validation phase was in December 2012;
- Setting up a dedicated call center to respond to the user's requests;
- **Official opening** and the **pilot phase** of the platform started in January 2013 (training sessions for suppliers and public procurers);
- Real **exploitation phase** of the platform started in **January 2014**.

Training Sessions

- During the pilot phase (January to December 2013) several **training sessions, workshops, conference and also test operations** were organized for suppliers and public procurers to make the intervening parts familiar and comfortable with the new platform (27 training sessions for about ~800 trainees).



Official Exploitation of TUNEPS

- TUNEPS's exploitation started in **January 2014** in 10 governmental institutions such as the **Presidency of the Government**, the **Ministry of Equipment**, the **Ministry of Education**, the **Ministry of Information and Communication Technologies**, the **Tunisian Post**, the **Tunisian Company of Electricity and Gas (STEG)**, **National Society of Operation and Water Distribution (SONEDE)** and other government entities;
- Actually both systems coexist, and the **generalization** phase will be next year and will cover all public sector and this means that in the near future all public institutions are eventually required to transact their procurement needs (goods and services) through TUNEPS.

First Results

- 20 RFPs (Request for Proposals) are published in TUNEPS since the official start of the project;
 - 03 results are published online in www.tuneps.tn
 - 04 already opened tenders
 - 13 in progress
- The first e-contract signed online between a public procurer and the selected supplier was in October 2nd, 2014.



Video about TUNEPS



<http://www.youtube.com/watch?v=BfumSeKvvsU>

THANK YOU FOR YOUR ATTENTION



Nizar Ben Neji
Assistant Professor at the University of Carthage
nizar.benneji@fsb.rnu.tn
+216 99 207 377