Case Study - NADRA

Information System Reforms for Improving Governance

Asim Sardar, PMP
Chief Information Officer
Introduction

- The National Database & Registration Authority (NADRA) is functioning under the NADRA Ordinance 2000 ratified by the Parliament.

- NADRA is placed under the Ministry of Interior, but enjoys full autonomy in all aspects of finance & management as given in the NADRA Ordinance.

- It is a self reliant organisation having no government funding.
The National ID Card – Core Project

- Creation of national database of the Citizens.
- The success of all projects like the ID Card, Passports, Immigration Control, Motor Vehicle Registration (VIN), Law & Order enforcement, Credit Ratings, Authentications of all Transactions, Statistical data, Birth/ Marriage/ Death Registration, GIS, e-Governance, Disbursement of Grant, Planning at Federal, Provincial, District, Local Government etc, is based on the authenticity of the database.
- Allhamdulillah, the CNIC project is a success; with more than 86 million citizens registered in the database (includes 30 million children). More than 56 million ID cards issued to citizens over the age of 18.
The Enablers

- People
- Process
- Technology

National Database
Introduction of Information System

- It is probably the largest fully integrated database in the world that is having both an **Automatic Finger Identification System (AFIS)** & a **Facial Recognition System**.

  - **National Data Warehouse**
    - Storage Capacity of 60 Terabytes
    - Processing Speed of 18 Trillion Instructions/Sec
    - Multilingual Support of English/Urdu/Sindhi
    - AFIS with a matching speed of 16 million/sec
    - World largest Facial Library of 47 million images (ICAO)

  - **Network Infrastructure**
    - Highly redundant, scalable and mission critical
    - Connected with more than 8000 computers
    - Equipped **Terrestrial, VSAT, and DVB RCS/2 WAN Links**
<table>
<thead>
<tr>
<th>Name - 1</th>
<th>Name - 2</th>
<th>Photo - 1</th>
<th>Photo - 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afsur Ali Khan</td>
<td>Meer Badshah</td>
<td><img src="Photo-1" alt="Photo 1" /></td>
<td><img src="Photo-2" alt="Photo 2" /></td>
</tr>
<tr>
<td>Aayesha Awan</td>
<td>Robina Arslan</td>
<td><img src="Photo-1" alt="Photo 1" /></td>
<td><img src="Photo-2" alt="Photo 2" /></td>
</tr>
<tr>
<td>Zainab Bibi</td>
<td>Halima</td>
<td><img src="Photo-1" alt="Photo 1" /></td>
<td><img src="Photo-2" alt="Photo 2" /></td>
</tr>
<tr>
<td>Sajad Ullah Butt</td>
<td>Muzafar Hussain</td>
<td><img src="Photo-1" alt="Photo 1" /></td>
<td><img src="Photo-2" alt="Photo 2" /></td>
</tr>
</tbody>
</table>
## Growth Trend in IS Investment

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2004</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Computers</td>
<td>2252</td>
<td>5487</td>
<td>7906</td>
</tr>
<tr>
<td>Number of Servers</td>
<td>85</td>
<td>271</td>
<td>613</td>
</tr>
<tr>
<td>Number of NSRCs</td>
<td>1</td>
<td>216</td>
<td>354</td>
</tr>
<tr>
<td>Total Bandwidth</td>
<td>1.4 Mbps</td>
<td>8.5 Mbps</td>
<td>36 Mbps</td>
</tr>
<tr>
<td>Internet Bandwidth</td>
<td>256 Kbps</td>
<td>1 Mbps</td>
<td>4 Mbps</td>
</tr>
<tr>
<td>Satellite Bandwidth</td>
<td>0</td>
<td>2 MHz</td>
<td>13 MHz</td>
</tr>
<tr>
<td>Mobile Vans</td>
<td>3</td>
<td>18</td>
<td>189</td>
</tr>
</tbody>
</table>
Interactive Operation

354 Data Acquisition Centers

108 Mobile Vans (189 by June)

11,954 Employees
International Recognition

- NADRA ranked among Top 50 Technology Companies of the World for 2 consecutive years (2005 and 2006) as the system Integrator in the field of homeland security and e-Passport solution.

- This was announced by one of the leading magazines ‘ID World.’
Business Intelligence (BI)

- Converting data into meaningful information for better and timely decision.
Earthquake GIS Portal

Affected Areas

Earthquake Reconstruction and Rehabilitation Authority

Can you help me?
In order to improve civil registration system, CRMS was introduced by NADRA at Union Council Level.

Under this system event of *Birth, Marriage, Divorce and Death* are captured, which very vital in nature.

The pilot project was launched in 100 UCs of Lahore and till today more than 4,192 UCs are onboard.

NADRA has provided software, certificate paper and also imparting training to UCs Secretaries.

The project is up-and-running for last 3 years.
Livelihood support cash grant project:
- List of 259,053 eligible families were generated by NADRA.
- Disbursement of RS. 4.2 billion was made to the accounts of beneficiaries.

Housing project:
- RS. 32 billion have been granted to 514,175 victims for the reconstruction of the houses demolished in the earthquake.

NADRA has developed Data Acquisition, MIS and Cash Disbursement application for ERRA and The World Bank.
Child Support Program

- Increase the number of children in primary education.
- Support to larger and poor families with children.
- Each beneficiary family is entitled to receive RS. 200 pm for one child and RS. 350 pm if they have two or more children of school going age who are enrolled and going to school.
- NADRA is providing technical and implementation support.
Government of Punjab has awarded a Pilot Project to conduct census of 40,000 to 60,000 employees of Faisalabad District.

Under this agreement NADRA is providing services of Software Development, Data Acquisition, LAN and WAN implementation, MIS reporting, and 2 Yrs maintenance and backstopping support.

After the successful completion and implementation of pilot project; the same will be replicated at provincial level in 35 districts of Punjab; to conduct census of more than 1 million employees geographically located at distinct places.

System would help generate statistical analyses and reports for better management and planning of retirement benefits, transfers, promotions, leave records, training and other administrative affairs.
480 computer touch screen kiosks have been installed all over Pakistan to facilitate the citizens providing them with following offerings:

- Utility bills payment
- Cell phone scratch cards
- CNIC verifications
Kiosk Sites

DELHI GATE MULTAN

UC 77, LAHORE
Kiosk Sites

Kiosk Sites

NSRC F-8 ISLAMABAD

ABUZAR KARACHI
To reduce vehicle related crimes, and establish authentic database of vehicles, NADRA has developed a software of Vehicle Identification and Monitoring Systems (VIMS) by using RFID tags.

- Vehicle Identification Number (VIN)
- Vehicle Monitoring at Police Check Posts
  - Entry & Exit of Cities
- Police Control Room

Concept can be extended to implement
- Electronic Toll Collection
RFID-based Driver’s License

- Aims to minimize the chances of counterfeit.

- **Electronic tickets** are issued and data is written on the **RFID chip** directly using handheld.

- **Points based ticketing system** can be implemented using this technology.

- Payment of fines will be made through **Kiosk**.
- The VeriSys provides identity verification services.

- Online Verisys system communicates with NADRA’s National Data Warehouse in real-time and identify the individual in no time.

- The Verisys system also has the capacity to be effectively utilized on mobile platforms.
NADRA Welfare Computer Literacy Program

- NADRA has launched a country-wide “Welfare Computer Literacy Program” for intelligent but poor students who could not afford to study further.

- Under the project the authority has arranged four-week Data Entry Operator Course across the country for both male and female students.

- 1st phase Rawalpindi, Islamabad, Lahore and Karachi. [75 Candidates are trained. Income group is less than RS. 3000.]

- 2nd phase will cover AJK, Sargodha, Sukkur, Multan, Peshawar and Quetta

- These students when passed-out will be able to earn between RS. 4,500 to RS. 6,500.
The mobilization of information system (IS) is deemed crucial in fostering national competitiveness in the context of a rapidly changing global economy.

Strong IS capacity is perceived to make a difference not only in the marketplace but also in the field of governance.

It is evident that IS promotes good governance in three basic ways:

1. By increasing transparency, information, and accountability
2. By facilitating accurate decision-making and public participation
3. By enhancing the efficient delivery of public goods and services
Improving Governance

Thank You