

Digital Dividends of Pakistan's ID Ecosystem



Muhammad Tariq Malik
Chairman NADRA

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Introduction



NADRA
PAKISTAN

Registrar
General
of
Pakistan



CEO
NADRA
Technologies
Limited

Chairman
NADRA

NADRA

According to the Rules of Business, 1973 NADRA is not an attached department of Ministry of Interior as its name is not included in the list of attached department [Schedule III U/R 4(4) of Rules of Business, 1973]. According to NADRA Ordinance, 2000 NADRA is body corporate with power to acquire, hold and dispose of property

Chairman

Chairman NADRA is appointed by Federal Government after a competitive process as prescribed under the Rules. Tenure post. Chairman NADRA is also Registrar General of Pakistan and Chairman of NADRA Authority and in absence of the Authority perform the function of the Authority.

NADRA

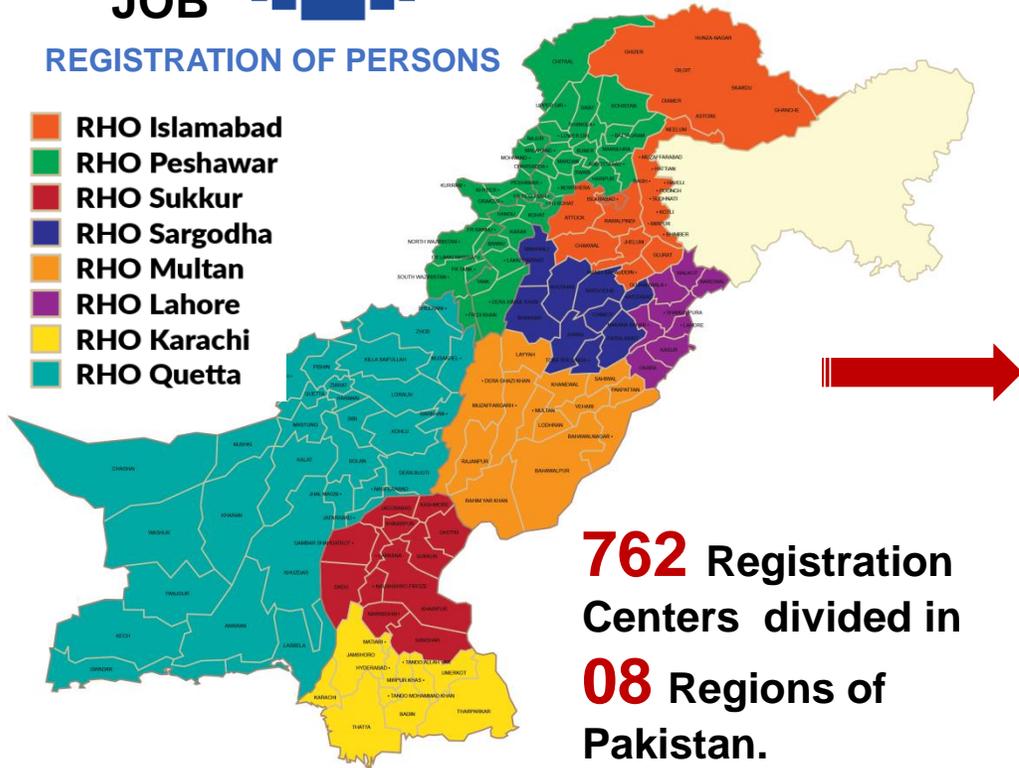
National Database Registration Authority



CORE JOB

REGISTRATION OF PERSONS

- RHO Islamabad
- RHO Peshawar
- RHO Sukkur
- RHO Sargodha
- RHO Multan
- RHO Lahore
- RHO Karachi
- RHO Quetta



762 Registration Centers divided in **08** Regions of Pakistan.

CITIZEN DATABASE

TECHNOLOGY SOLUTIONS

REGISTRATION INFRASTRUCTURE



ENTERPRISE IT SOLUTIONS
NATIONAL AND INTERNATIONAL CLIENTS

Through the Lens of Numbers



NADRA
PAKISTAN



21,034
EMPLOYEES



222
MOBILE VANS,



762
REGISTRATION
CENTERS,
13 OVERSEAS



3
DATA CENTERS



11
MEGA CENTERS



1,000 +
SERVERS



DVB/RCS Satellite Network

100%
COVERAGE

99.99%
AVAILABILITY AT CORE SITES

NADRA Registration Achievements



137 Million
National ID Cards Issued



191 Million
Identities Issued



96% of Adult Population



132 Million
Facial Images

40 Million Matches per second

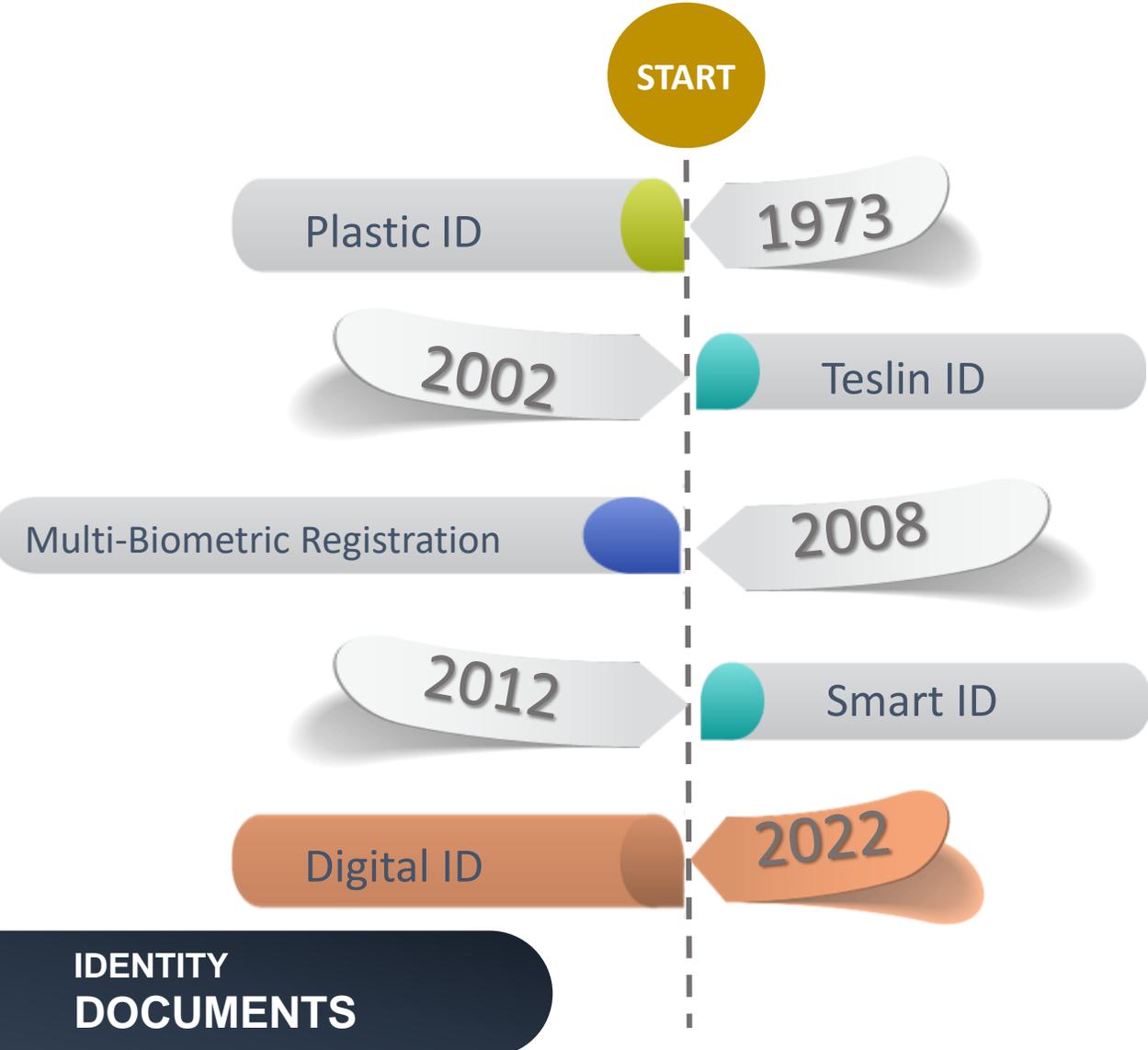


1.2 Billion
Fingerprints

55 Million Matches per second

PAK-IDENTITY
2.7 Million Applications
195/197 Countries

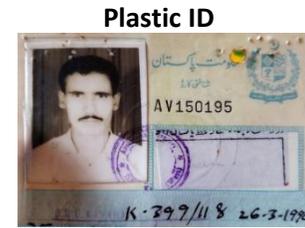
Transforming National ID of Pakistan



IDENTITY DOCUMENTS

IDENTITY

Products



Plastic ID



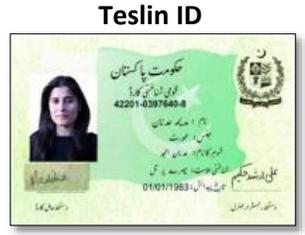
Death Certificate

878,031



CRC

53 Million



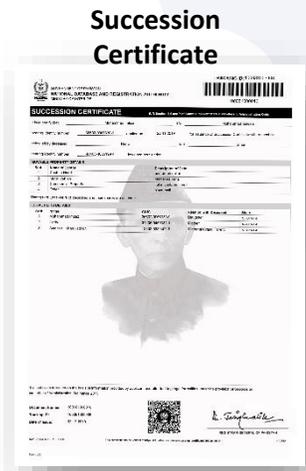
Teslin ID

91 Million



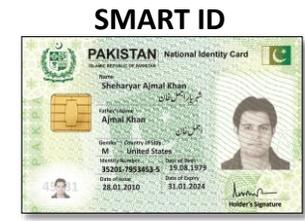
FRC

4.3 Million



Succession Certificate

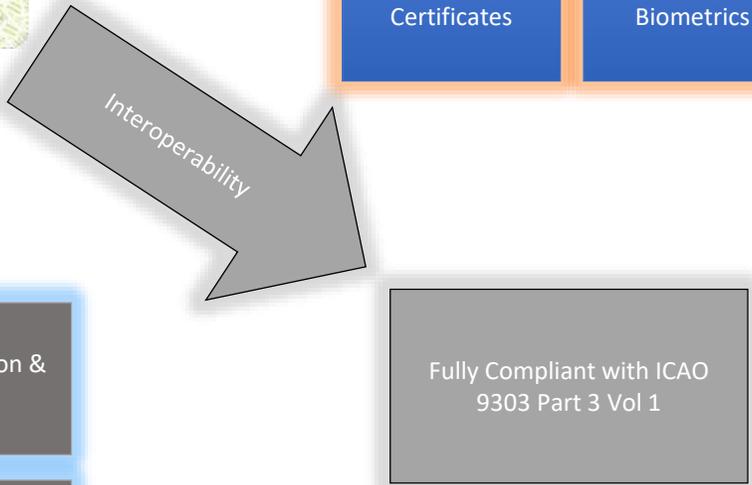
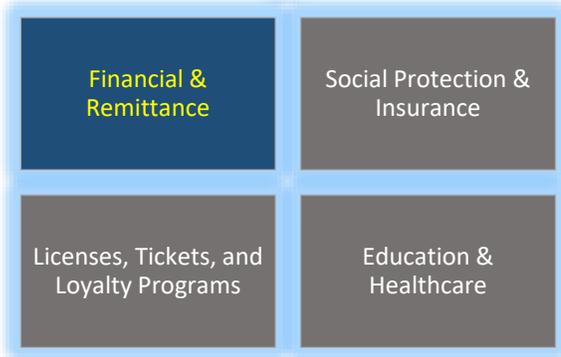
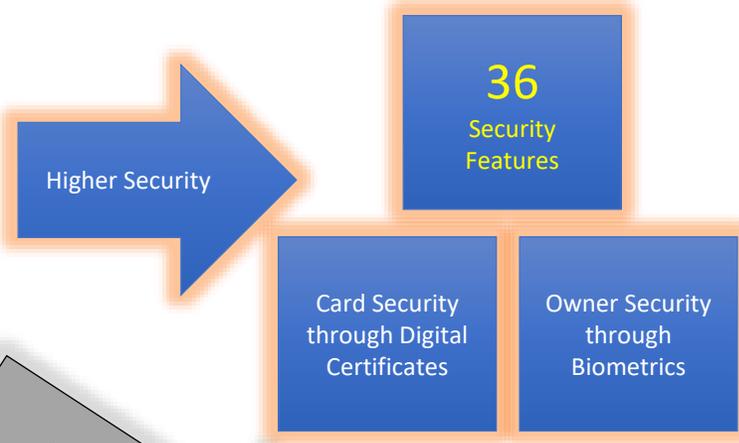
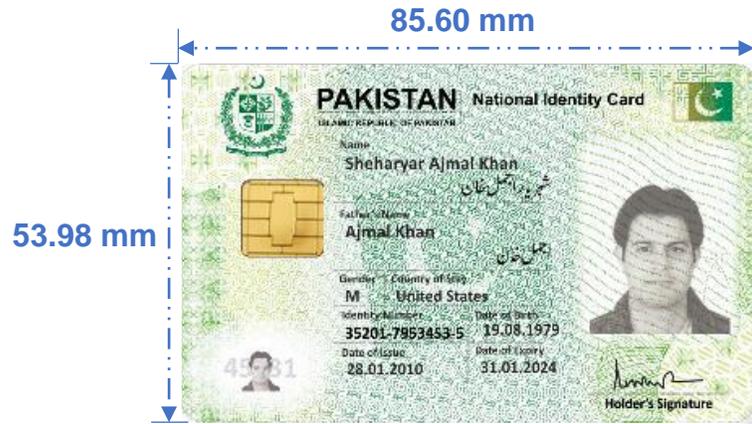
15,225



SMART ID

49.2 Million

Smart Card Features



General Features



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Applet

- In house custom designed highly secured Identity Applet
- EMV compatible

Personal Information

- Encrypted personal data is stored in chip

Cryptographic Keys

- Every citizen has his own set of keys for personalization, read, update

Licenses (can be personalized for)

- Driving License, Arms License, Educational Certificates

Services (can be personalized for)

- Financial, Educational, Healthcare, Retail industry
- Social Welfare, Tickets and Loyalty Programs



Communication interface

⑩ ISO Compliance

- ISO/IEC 7816-3
- ISO/IEC 14443 - 3, 4

⑩ T=0 & T=1 supported

⑩ Communication speed up to **230 KBauds**

⑩ Support of **Extended Length APDU**

Technical Specifications

⑩ **NXP JCOP P71D31** Contact chip from Infineon

⑩ **High frequency** clock and **VHBR (option)**

⑩ 16-bit CPU with “Integrity Guard”[©]

⑩ SOLID FLASH™ 90nm technology

⑩ Minimum **500,000** write/erase cycles

⑩ Data retention for minimum **25** years

⑩ Common Criteria **EAL6+** certified

Chip Security



Physical Security (Hardware & Software)

Side channel attacks (SPA, DPA, Timing attacks)

Invasive attacks

DFA and Advanced fault attacks



Physical Characteristics and Test Methods

ISO/IEC 7810 (Identification cards – Physical characteristics)

ISO/IEC 10373 (Identification cards – Test methods) Parts: 1/3/6

ISO/IEC 7816 (Identification cards – Integrated circuit cards)
Parts: 3/4/5/6/8/9/11/15



Cryptographic features

3DES (ECB, CBC)

RSA up to 4096 bits

AES (128, 192, 256), ECC up to P521 bits

SHA1 & SHA2 (224, 256, 384, 512)

Chip Data



Data on Chip

Unique Numbers

- Citizen Number
- Card ID

Name

- Citizen Name
- Father Name
- Guardian Name
- Spouse Name
- Mother Name

Date of Birth

Gender

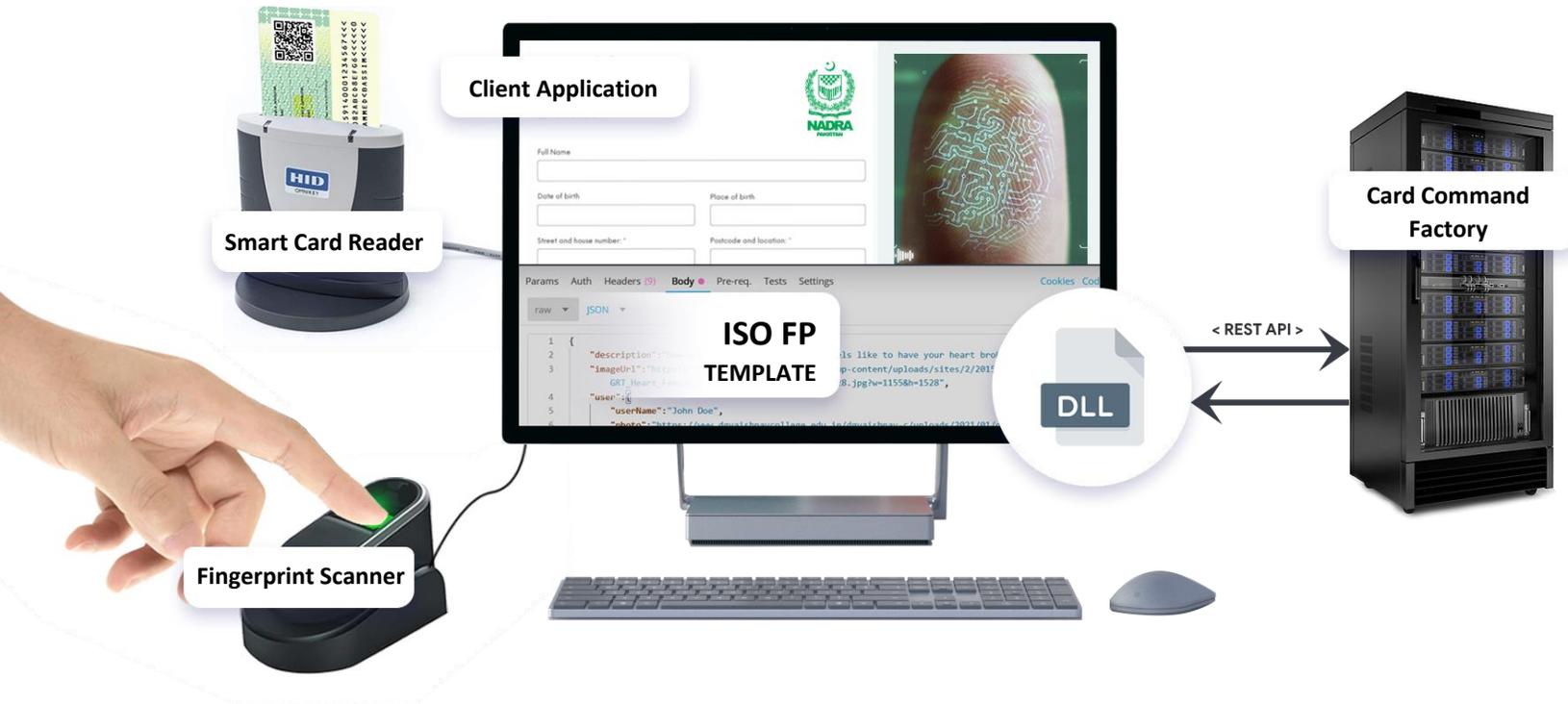
Card Issue and Expiry date

Address

Photo

Fingerprints

PIN



KPT for "verification"
EOBI for "pensioners' proof of life"

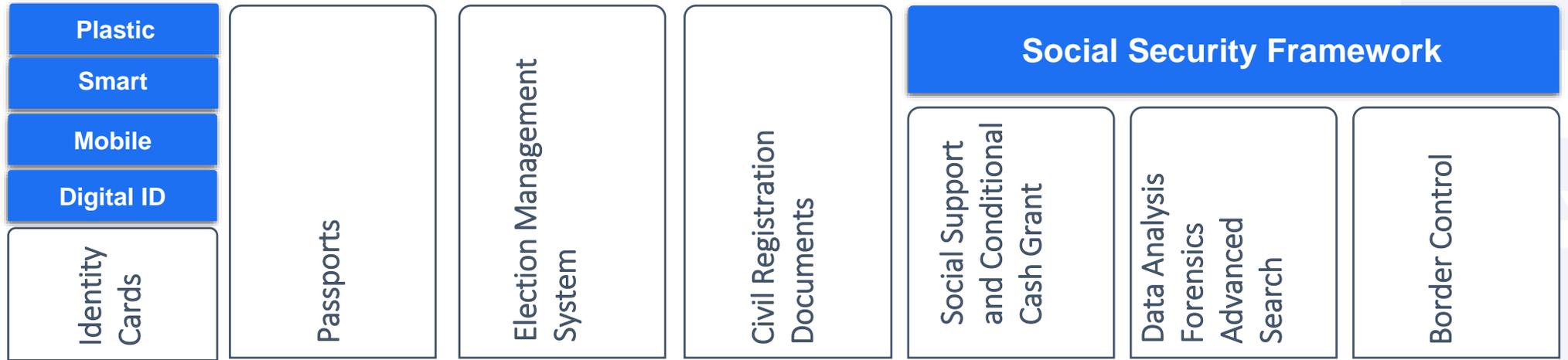
Smart ID Card

ID Management Strategy

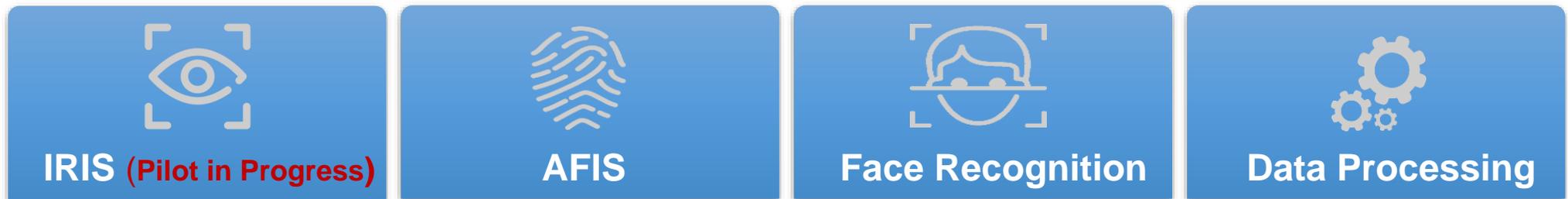
Entire Framework and Ecosystem for a Secure Identity



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NADRA'S IDENTITY MANAGEMENT SYSTEM





Pakistan Passport and Visa



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Passports Issued:

54 Million



Visas Issued:

Approx. **456,332**

- First Multi-biometric Machine Readable Passport project
- Complete end-to-end software development
- Integration with ID Verification Service
- Implementation of Automated Fingerprint System
- Implementation of Facial Recognition System
- Operational since 2004
- ICAO Compliant MRP

e-Passport Platform Ready

Launching Soon.....

Online Passport

(<http://onlinemrp.nadra.gov.pk>)



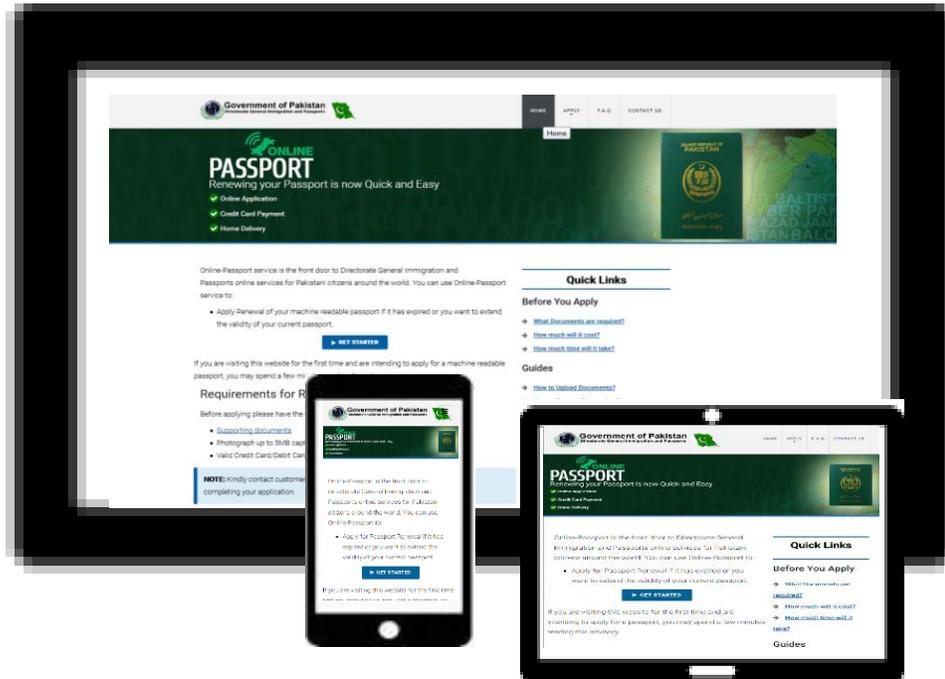
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Launched on 13th Oct, 2016

System Features

- New Online Passport System
- Renewal of Passport
- Online Payment Management
- Home Delivery

Total Applications Processed :
908,599



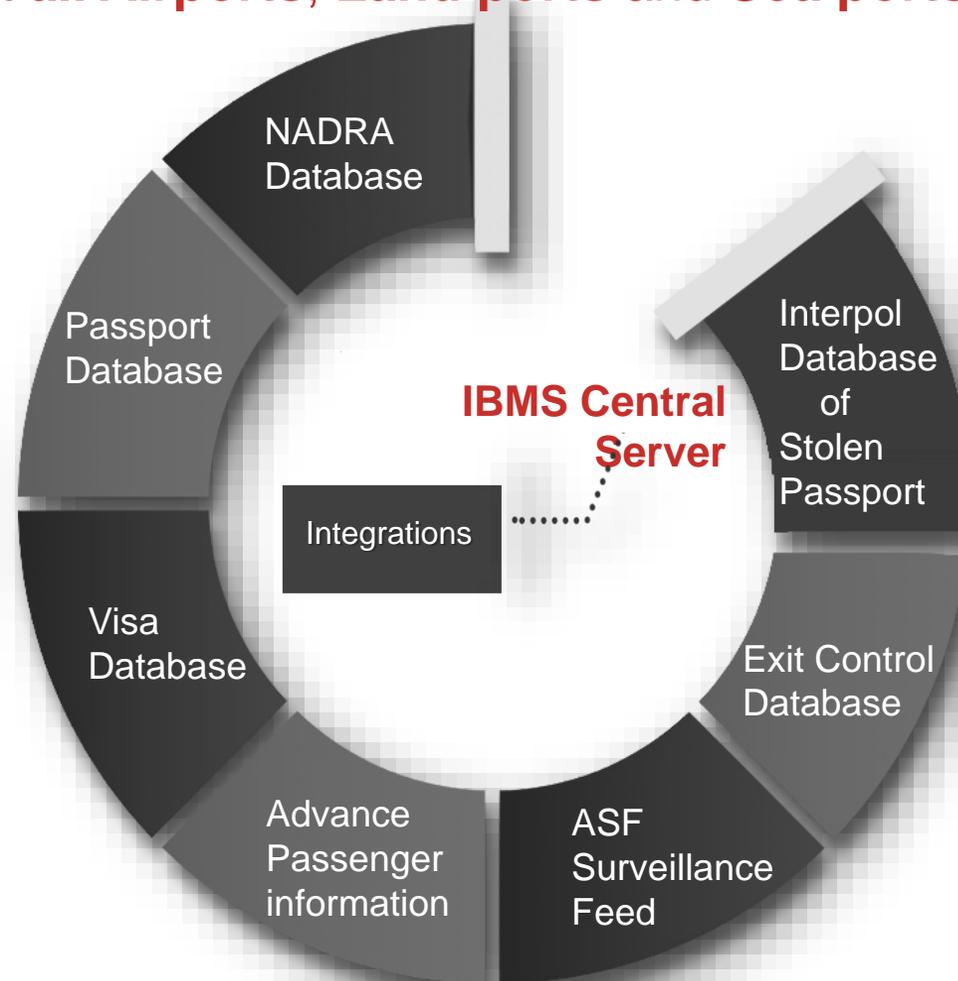
Integrated Border Management System (IBMS)



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Deployed at **all Airports, Land ports and Sea ports of Pakistan**



218,563,460

Travelers processed through
IBMS

01

SUPPORT

- MRP Supported

02

VERIFICATIONS

- Biometric verification
- Stop List Verification
- Pakistan Passport Verification

03

DOCUMENT VERIFICATIONS

- Document Authentication
- Ultra Violet Image Support

04

MANAGEMENT SUPPORT

- Travel History
- Management Reporting
- Dynamic Reporting

05

SEARCHING

- Phonetic stop list Search

Achievements-International Projects



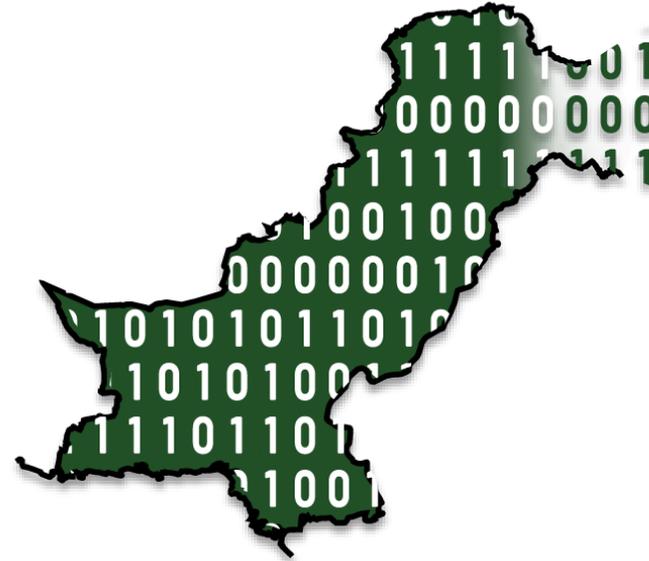
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 <p>Government of Kenya</p> 	 <p>Government of Bangladesh</p> 	 <p>Government of Sudan</p> 	 <p>Government of Nigeria</p> 
<p>MACHINE READABLE PASSPORT & E-PASSPORT SYSTEM</p>	<p>DRIVER'S LICENSE</p>	<p>CIVIL REGISTRATION SYSTEM</p>	<p>NATIONAL IDENTITY MANAGEMENT SYSTEM (NIMS)</p>
 <p>European Union</p> 	 <p>Fiji Election Office</p> 	 <p>Government of Somalia</p> 	
<p>READMISSIONS CASE MANAGEMENT</p>	<p>ELECTIONS MANAGEMENT SYSTEM</p>	<p>NATIONAL IDENTIFICATION SYSTEM</p>	

National Projects

-  Arms License (Punjab, Sindh, Federal)
-  National Action Plan
-  National Alien Registration System
-  MOI, Safe City Islamabad
-  FIA, Integrated Border Management System
-  INGO Registration

-  Online Identification System
-  NADRA Complaint Management System
-  National Identification System
-  Civil Registration & Vital Statistics
-  Biometric Verification System
-  Kiosk and e-Sahulat
-  SMS Services (7000, 8400, 8300,8500)



-  Power of Attorney
-  Succession Certificate (Federal, Punjab, Sindh, KPK, Baluchistan)
-  Pakistan Online Visa System
-  National Immunization Management System
-  iVoting
-  Pakistan Online Passport



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-  Ehsaas Roshan Program
-  Benazir Income Support Program
-  Prime Minister Health Program
-  Watan Card, Phase 1 & II
-  ECP, Data Entry and Production of Electoral Rolls
-  Pension and Zakat Disbursement
-  Tax Payers ID

-  Temporary Displaced Person (FATA)
-  UNCHR, Afghan National Registration
-  Vehicle Registration Card (ETO - Islamabad)
-  ERRA, Livelihood Project, Housing project
-  E-Toll Collection System
-  Punjab Kissan and Imdadi Package(KPIP)
-  Pakistan card
-  Sind Azadi card
-  Karachi Port Trust



Thank You



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