DIGITAL PUNJAB

Presented by:

Jasminder Pal Singh

Senior Consultant (TM)

SeMT Punjab

Digital Punjab – Introduction

Digital Punjab

Digital Infrastructure
- Broadband for all citizens
- Wifi in education
- Access to smart phones
- Aadhar Seeded Bank Accounts

Digital Governance
- Service on demand
- Any-time, Any-where, Any-Device Service
- Service delivery - feedback mechanism
- Promote participation using social media

Digital Empowerment of Citizen
- Digital literacy
- Ease of doing business
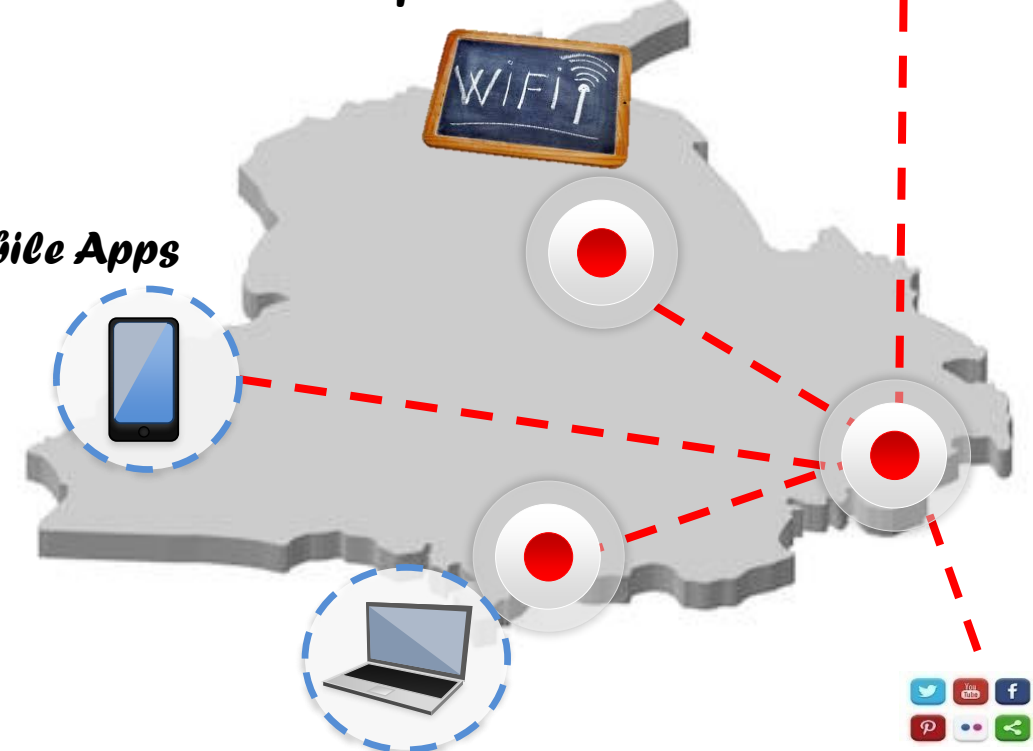- Electronic/ cashless financial transactions

Cloud First Strategy

Wifi in education

Mobile Apps

Last Mile connectivity

Social Media

Digital Punjab : The Vision

ONE Integrated Government
A single access platform to avail all Government services for all – Citizens, Business & Employees

Citizen Services Anytime, Anywhere
Access to digital services from all channels – Mobiles, Internet, Face-Face, Call Centre, Chat Bots
Mobile First Principle

Connected & Coordinated Departments
All department's process, systems and human well connected & coordinated to deliver best in class services

Enhancing Life through Technology Innovation
Trial and adoption of digital technologies that can transform life .

Efficient & Transparent Governance
Use of modern tools and technologies to monitor, govern and take appropriate actions

3

Digital Punjab : The Study

Consultant

- Third party consultant was hired to review the current system and suggest the way forward
- Report suggested implementation of central system / micro services based architecture
- EA came as an option

Estonia Usecase

- A workshop organized with Team from Estonia Dr Taavi Kotka (Ex CIO, Estonia IT Team), Mr Andres Kutt (Ex Advisor Estonia Information Systems Authority) to understand how they implemented various citizen centric services

EA Experts

- Dr Pallab Saha has been consulted and he reviewed the Punjab EA roadmap and plan

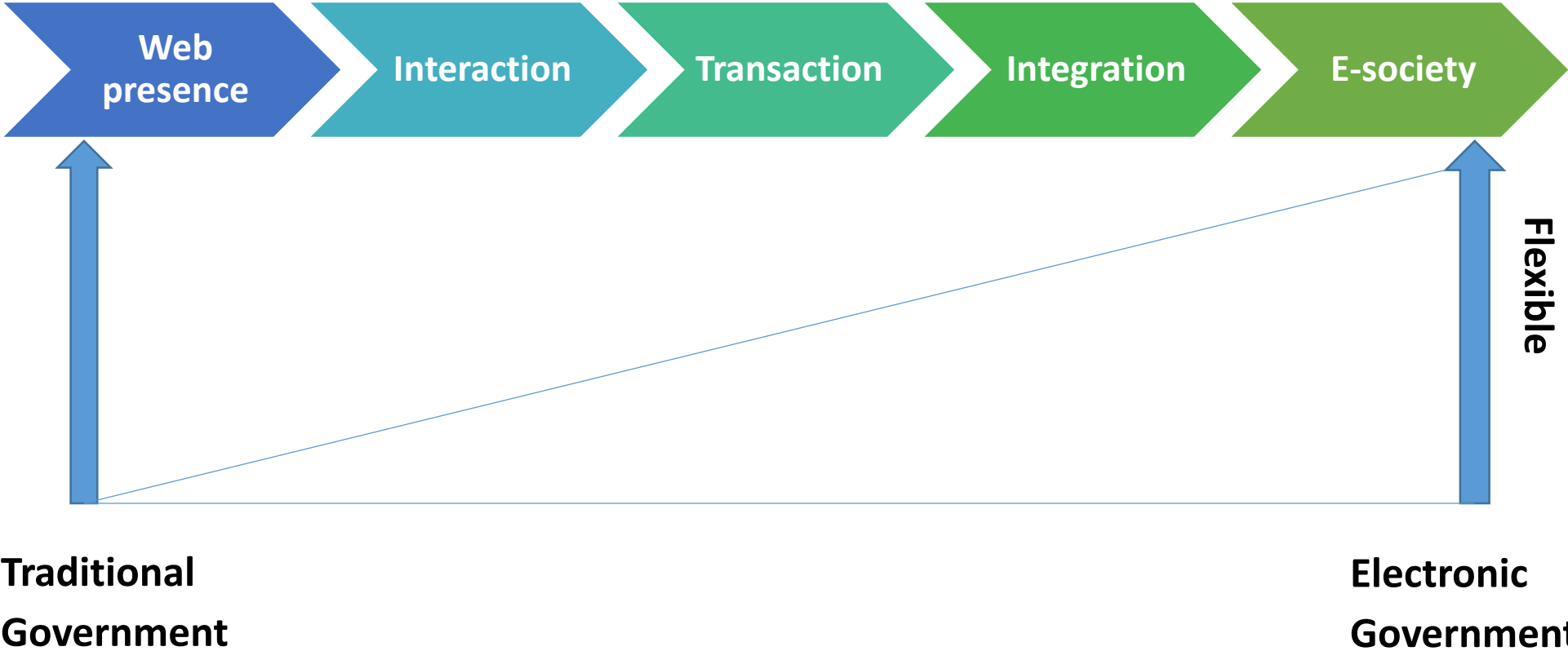# Digital Punjab – Department-centric to citizen-centric

Isolated departments

Integrated service providers

Citizen centric Integrated Govt.

Digital Punjab – E-government to E-society

Digital Punjab – The Enterprise Solution

WHAT

Is being offered to Citizens

- ✓ **Services**
- ✓ **Schemes**
- ✓ **Subsidies**

WHO

Is responsible for delivery

- ✓ **Departments**
- ✓ **PSUs**
- ✓ **Others**

TO WHOM

Services are being provided

- ✓ **Citizens**
- ✓ **NRIs**
- ✓ **Others**

The Technology Solution designed for Transparency and Accountability Act

- Inter department handshake
- All Departments / Institutions / PSUs in one system
- Transparency, Accountability and monitoring
- Data Driven Decisions: Coordination Between Legislature and Executive
- Program Evaluations linked with Performance Appraisals

DATA = **INFORMATION** = **GOVERNANCE**

Digital Punjab – Principles of EA

01 Technology Independence

02 Integrated Services

03 Sharing & Reusability

04 SDG Linkage

05 Data -Sharing

06 Cloud First

07 Mobile First

08 Federated Orchestration

09 Primacy of Principles

Digital Punjab – Overall System

Presentation Layer

| ONE Integrated Portal | Service Desk Portal | Mobile Apps |

Security Layer

- Authentication
- Authorization
- Policy Mgmt.
- Privilege Mgmt.
- ID Mgmt.
- Media Policy
- Data Encryption
- Monitoring
- 2 Factor Authentication
- Patch Mgmt.

Citizen Services (Micro Services Arch.)

Email Mgmt.	Messaging	Call Mgmt.	Service Charter	Process Modelling
Service Payment	Service Receipt	Service Rules Mgmt.	Document mgmt.	Service Actor Mgmt.
Service Tracking	Service Reporting	Benefit/ Payment Service	DigiLocker	Data Verification

Applications (Micro Services Arch.)

- Core Applications
- Common Applications
- Departmental Applications
- Group Applications

Rest API

Rest API *Rest API*

API Gateway Pattern

| Mediation | Transformation | Monitoring | Virtualization | Analytics | Load Balancing | Quota Mgmt. | Transports | Payment |

Master Data Management

Citizen	Employee	Business	Schemes
GIS	Things	Policy	Rules
Bank Codes	Sector Codes	Revenue Codes	Other Codes

Infrastructure

| Micro Service Toolkit | API Gateway Infra | MDM Infra | IaaS | DRaaS | ALM Toolkit | Service & Support Mgmt. | Virtual & physical SDC Infra |

Digital Punjab – Overall System

Presentation Layer — *Omni-channel presence. Reaching all citizens, anytime.*

Security Layer

All round security with no compromise on performance and at optimized cost

Citizen Services (Micro Services Arch.)

- *Re-usable building blocks to help build any service by simple drag & drops*

Applications (Micro Services Arch.)

- *Built with integration capability in MSA with simple configurable approach.*
- *Flexible to interact with all other systems and data*

Rest API

Rest API

Rest API

API Gateway Pattern

Integration Platform to manage integration with systems & data

Master Data Management

Single source of truth with detailed mapping with specific department data

Infrastructure — *Resilient Infrastructure with flexibility to scale and optimized to lower cost*

Digital Punjab – EA – What's been achieved so far !

➢ **Consolidation of data center and Storage at state data center**

➢ **Establishment of software development cell in DGR**

➢ **Solutions delivered over EA**

    ➢ **Grievance Portal**
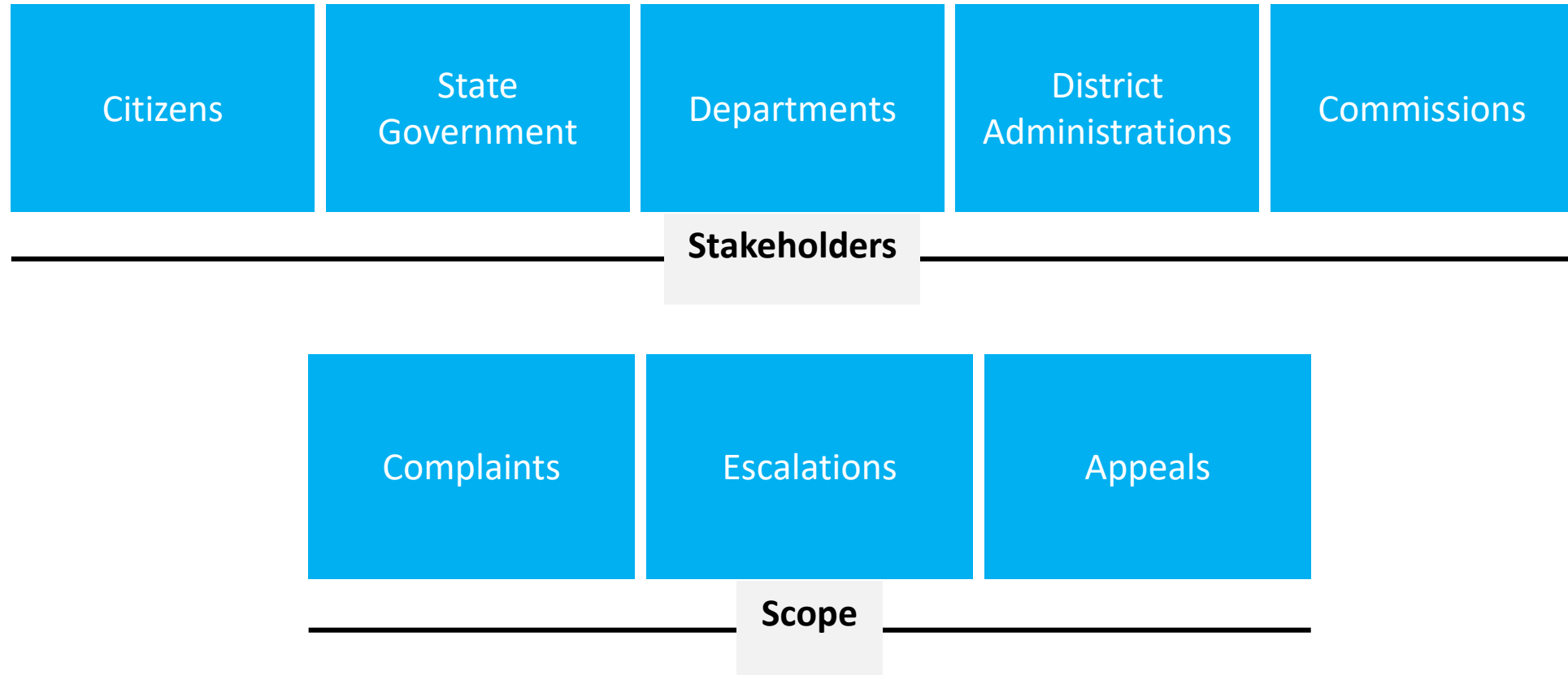
    ➢ **eSewa Portal**

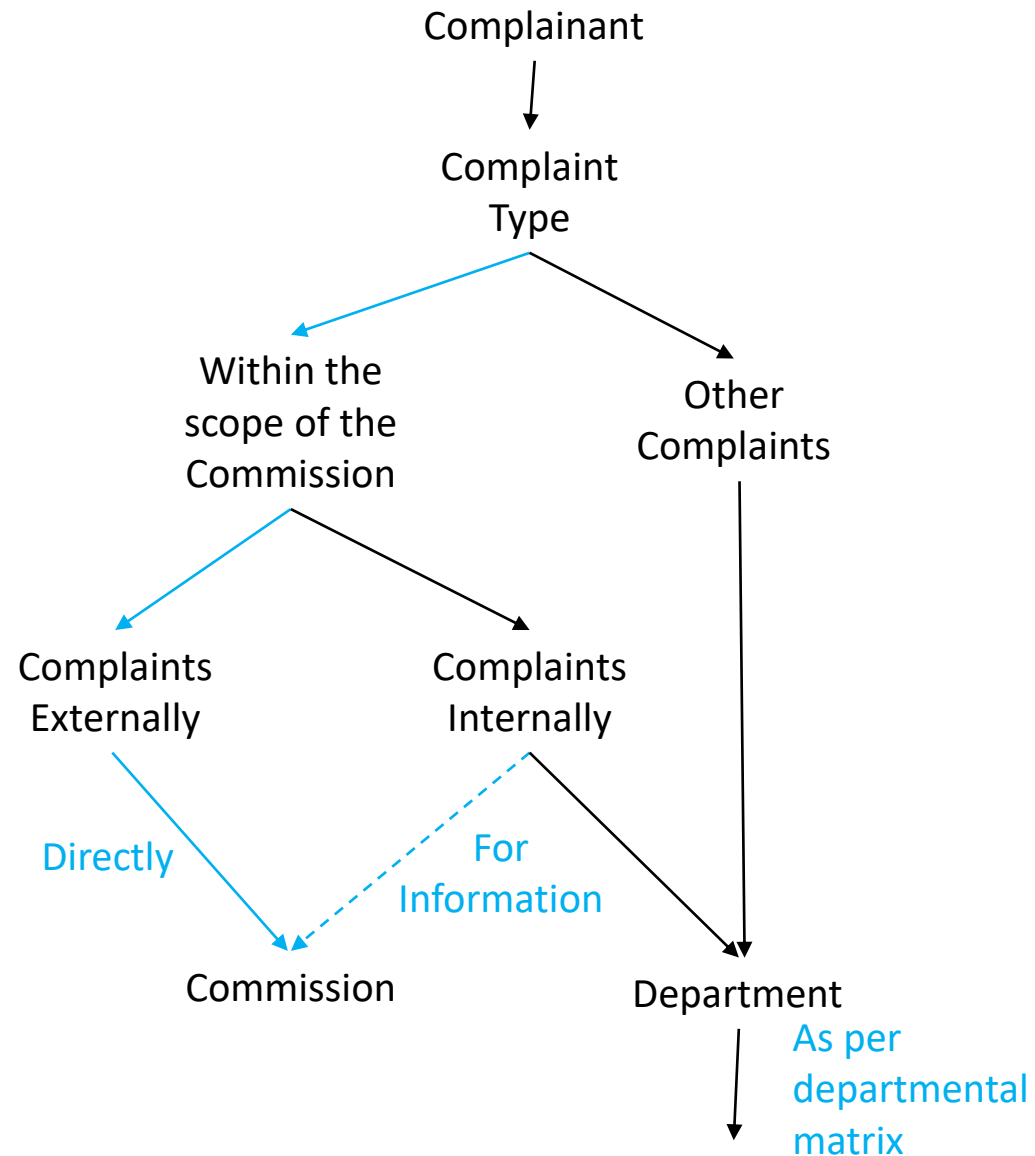| Micro-services	Data Standards	Cross-platform Independence	Sharing & Reusability	Centralized but Independent

Security

Digital Punjab – Grievance Redressal Module

Citizens	State Government	Departments	District Administrations	Commissions

Stakeholders

Complaints	Escalations	Appeals

Scope

Digital Punjab – Complaint Routing

Complainant

Complaint Type

Within the scope of the Commission

Other Complaints

Complaints Externally

Complaints Internally

Directly

For Information

Commission

Department

As per departmental matrix
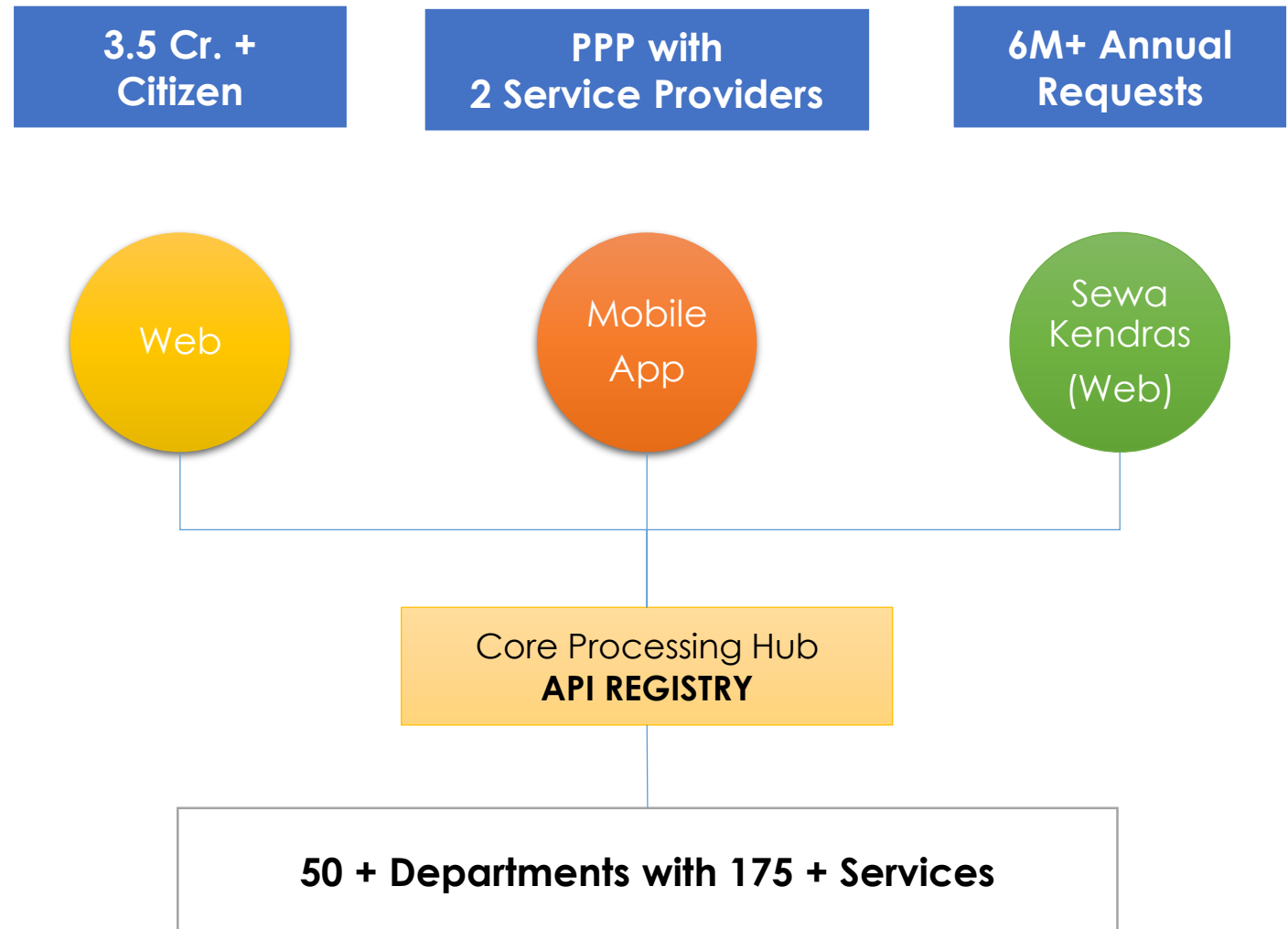
Digital Punjab – eSewa/mSewa

- ✓ **State level central system for service delivery**

- ✓ **127 Offline Services (Live) & 50+ Online Services (Under Development)**

- ✓ **Service delivery system with configurable workflow and assembled building blocks**

- ✓ **Single system for all (Sewa Kendra + Citizen)**

- ✓ **Services can be availed from all 3 platforms**
  - ▪ **Web**
  - ▪ **Mobile App**
  - ▪ **515 Sewa Kendra**

3.5 Cr. + Citizen	PPP with 2 Service Providers	6M+ Annual Requests

Web

Mobile App

Sewa Kendras (Web)

Core Processing Hub
API REGISTRY

50 + Departments with 175 + Services

Digital Punjab – EA Roadmap Programs

| Seamless access to e-Gov. services, Cost saving, effective resource (IT) utilization | Integrated ecosystem of applications, with ease of sharing information from various sources | Secured, Compatible, seamless data exchange service platform | Faster deployment, cost savings and highly resilient application deployment option | Decision making capability, effective data management and standardized data design | Secured and resilient State Data Centre for efficient management of IT applications |

Several other initiatives – part of strategic roadmap
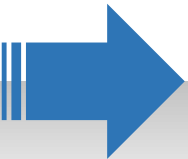
| ONE Integrated Government Portal | Micro Service application platform implementation | API Gateway for seamless internal and external integration | Infrastructure as-a Service (IaaS), Platform as-a service (PaaS) implementation | Data Warehouse, Master Data Management, Data Standardization | Data Centre Security, Monitoring tool implementation |

Thank You

Jasminder Pal Singh
+91 9216380384