PUTTING CITIZENS FIRST

Designing Tech Systems for Social Protection

DVARA Research

Acknowledgements

Over the last year, we at Dvara Research have been working extensively to understand the design and workings of open digital ecosystems adopted to deliver social protection, or Social Protection Open Digital Ecosystems (SP-ODEs). We are grateful to the Omidyar Network India (ONI) for the grant that allowed us to unpack SP-ODEs and put together a framework that has citizen centricity at its core.

Our research benefits from the insights gained from various stakeholders–government personnel in charge of developing and deploying these systems, technologists and architects of these systems, and customer protection advocates. We thank Samagra Governance, the Consumer Unity and Trust Society (CUTS), and personnel from the governments of Rajasthan, Madhya Pradesh, and Haryana for helping us understand these systems and sharing information on their functioning. Special mention to Dr. Aruna Sharma, one of the chief architects of the Samagra Samajik Suraksha Mission system of Madhya Pradesh, especially for sharing the foundational thinking behind the system. We would also like to thank our advisors, Dr. Dipa Sinha, Mr. A.P. Hota, Mr. Samir Shah, and Ms. Shrayana Bhattacharya, for their generosity of time and engagement with content, and their intellectual challenge. We also thank Mr. Varad Pande, Ms. Kriti Mittal, and Ms. Twinkle Malhan at ONI for their input and time.

We are also grateful for the continuous support we have received from Dvara Research and its different practices, especially the Social Protection Initiative (SPI) and the Future of Finance Initiative (FFI), and the Dvara Trust board members. A special note of thanks to Dr. Indradeep Ghosh (Executive Director, Dvara Research), Ms. Aarushi Gupta (former Senior Research Associate, SPI) and Mr. Nishanth Kumar (former Practice Head of SPI) for their continuous guidance and critical intellectual inputs in the development of this project. Also, we extend our appreciation to Ms. Supriya Saxena, Head of Communications at Dvara Research as well as the team at The Quantum Hub for their support in advocacy.

First published in January 2023

Suggested citation: Narayan, A., Narang, L., Gupta, A., Chugh, B., & Ghosh, I. (2023). Putting Citizens First: Designing Tech Systems For Social Protection. Chennai: Dvara Research Foundation.

Contents

Pg. 02 What are SP-ODEs?

Pg. 04 Understanding the Structure of SP-ODEs

Pg. 06 SP-ODEs: Why Might We Need Them

Pg. 08 Some Caveats

Pg. 10 Addressing Caveats: Defining Citizen Centricity

Pg. 11 Designing Citizen-Centric SP-ODEs: Putting People at the Core

Pg. 14 How to Build Citizen-Centric SP-ODEs?

Pg. 16 Case Studies

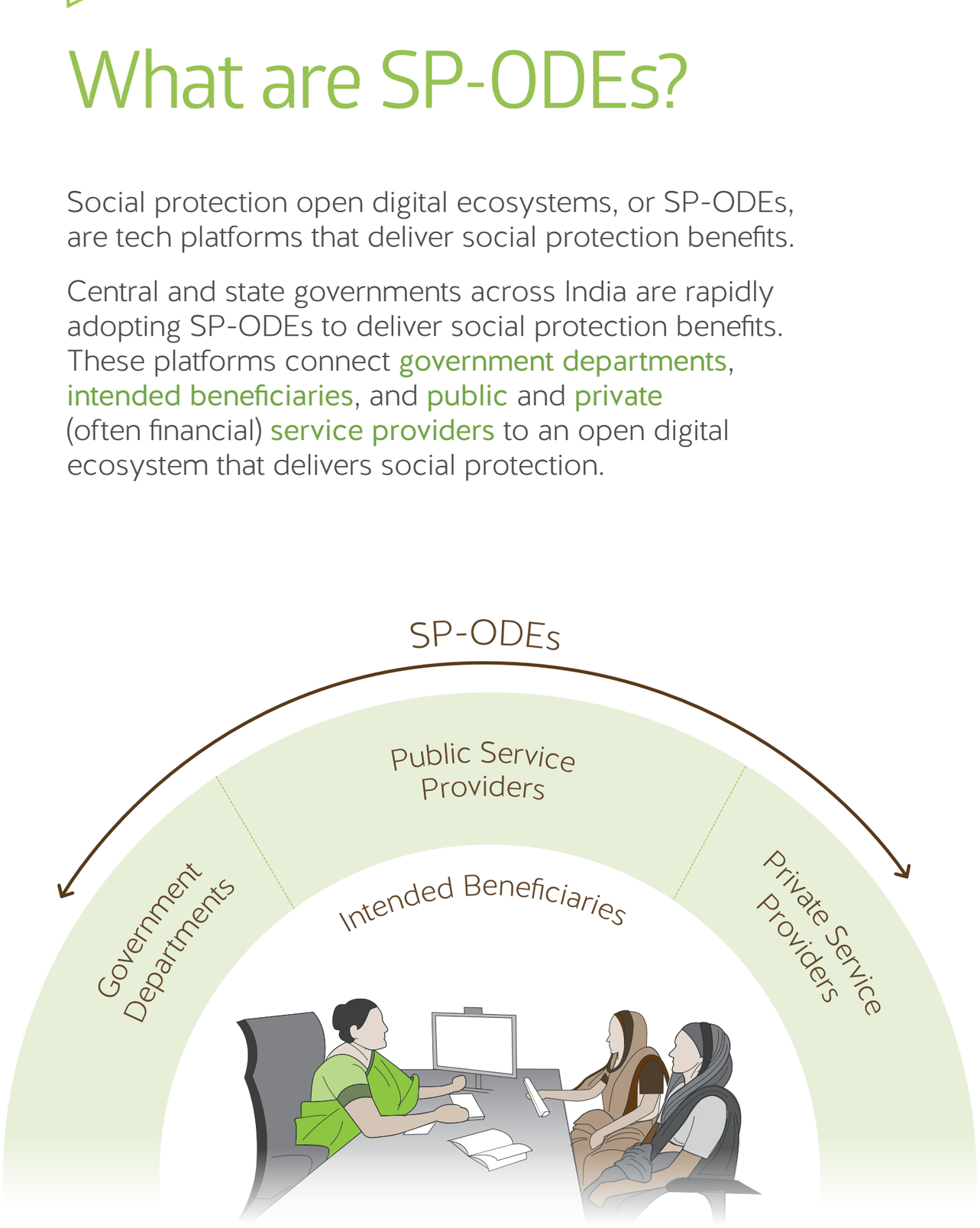
Pg. 20 The State of SP-ODEs in India

Pg. 22 The Next Frontier for Citizen Centricity

What are SP-ODEs?

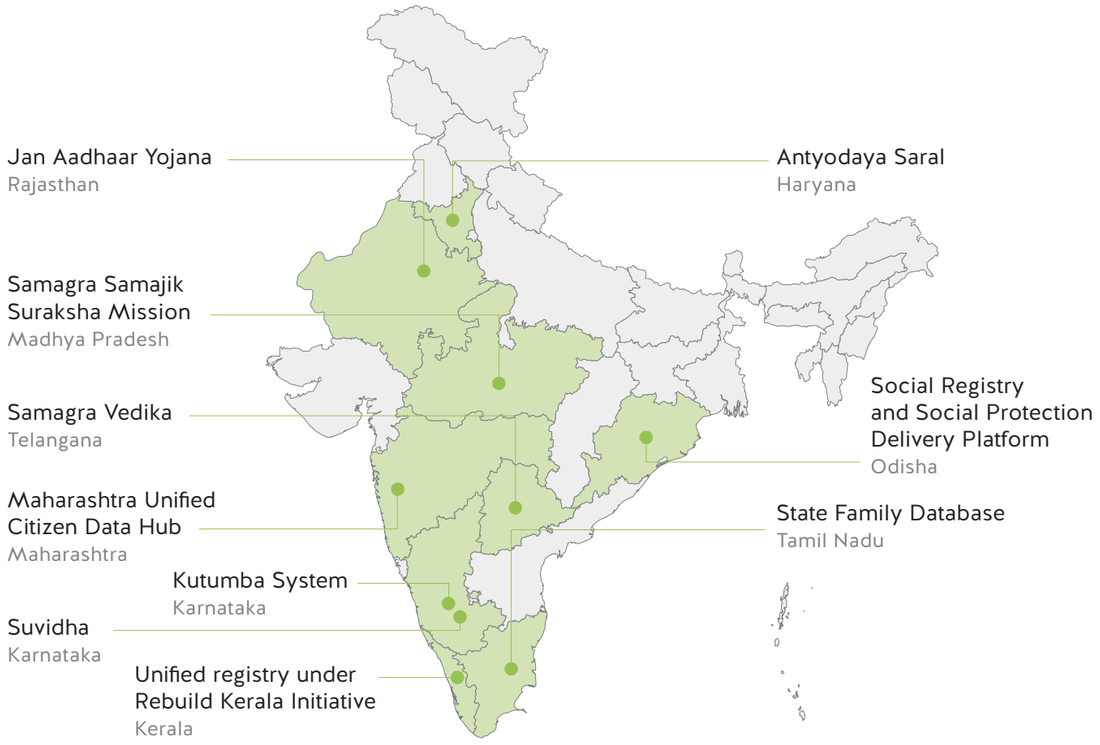
Social protection open digital ecosystems, or SP-ODEs, are tech platforms that deliver social protection benefits.

Central and state governments across India are rapidly adopting SP-ODEs to deliver social protection benefits. These platforms connect government departments, intended beneficiaries, and public and private (often financial) service providers to an open digital ecosystem that delivers social protection.



SP-ODEs are designed to support a complete social protection delivery chain, including identification and targeting of beneficiaries, last-mile delivery of benefits, and grievance redress.

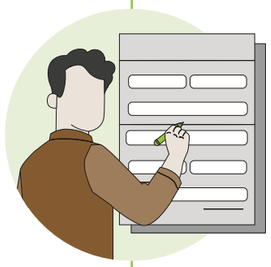
At the front-end, SP-ODEs take the form of digital platforms offering citizens a gamut of social protection benefits and allied services. At the back end, they work as open-source modules that are interoperable with other digital infrastructure, and accessible by multiple stakeholders (private/public). They are also supported by databases of citizen information (or social registries).



At the time of writing this report, SP-ODEs are live and expanding in several states such as Madhya Pradesh, Telangana, Haryana, Rajasthan, and Odisha, among others. These systems are at varying stages of maturity and are constantly in flux.

Understanding the Structure of SP-ODEs

An SP-ODE is designed to support a complete value chain of social protection delivery. Mature SP-ODEs are expected to perform six key processes.



1

Identification & Enrolment

Connect citizens with relevant government departments, enrol them into social protection schemes and verify their identities. This process may also result in creating a social registry to target beneficiaries.

2

Coordination & Orchestration

Enable government officials or administrators of the system to assess citizens' applications at the back end. This typically happens through an administrator interface, providing administrators with functionalities such as identifying eligible beneficiaries or analysing and monitoring scheme performance.

3

Payments

Transfer cash benefits from the government department to citizens' bank accounts. Such a transfer occurs through Direct Benefit Transfer (DBT) or non-DBT routes.

4

Delivery of Cash Benefits & Ancillary Services

Last-mile delivery of cash benefits or ancillary services (caste or EWS certificates etc.) to the citizens. This process is performed by specially appointed last-mile service centres/agents such as the Common Service Centres (CSCs) and Banking Correspondents (BCs).

5

Product Provisioning

This process facilitates the delivery of in-kind benefits (primarily the Public Distribution System). It also supports delivery procedures for benefits mediated through third-party providers such as hospitals (health insurance schemes), financial service providers (crop insurance or loan schemes), or gas agencies (LPG reimbursements).

6

Grievance Redressal

Crowding in and resolving grievances from citizens and other stakeholders. Grievance redressal is the bedrock of a citizen-centric SP-ODE, and its influence pervades all other processes. Citizens should be allowed to raise grievances at any stage of the delivery chain, and against any actor in the ecosystem.

In our conceptualisation, these are the typical functions of mature SP-ODEs, even when configured differently. Some SP-ODEs may develop a single platform to perform these processes. In contrast, others may rely on a battery of existing independent but interoperable modules.

For example, in Haryana, the Antyodaya Saral platform performs most of these processes. However, the Jan Aadhaar Yojana of Rajasthan is fashioned differently, wherein the Jan Aadhaar platform enables identification and enrolment, the Rajasthan Payments Platform handles the payments process, and the Rajasthan Sampark platform allows citizens to raise grievances.

SP-ODEs: Why Might We Need Them

Features of SP-ODEs

1

Unified front-end

Enables citizens to avail multiple social protection schemes through a single sign on.

2

Integrated back-end

Allows various government departments to simultaneously offer social protection schemes using shared digital infrastructure, social registries (citizen databases), and processes.

3

Hosting private service providers

Allows the use of the underlying digital infrastructure to provide value-added services to citizens at the last mile.

Better Outcomes for Stakeholders

Reducing procedural burden on citizens

Citizens need to sign up only at the time of creation or updation of the underlying social registry. They do not need to enrol into each scheme individually, as government departments use the registry to assess the eligibility of beneficiaries across various schemes. Thus, benefits could be delivered proactively to eligible beneficiaries, even when they have not applied for them.

Reducing administrative duplication

Social registries present economies of scale for the government and reduce costs of operation. Individual departments will not have to reach out to register or onboard citizens.

Encouraging innovation

SP-ODEs also derive value from their ‘openness’ to participation by non-state actors and through open-source software. Openness of this nature encourages innovations in service delivery and replicability of delivery solutions at scale.

Some Caveats

SP-ODEs are inherently digital systems. While the benefits are plenty, they could also introduce unintended risks for citizens.

1

Administrative priorities are privileged over citizens' needs.

Digitisation can make it more difficult to balance the costs of wrongful inclusion against the costs of wrongful exclusion, and usually, government administrators default to caring more about the former costs.

2

High and persistent digital divide limits the reach of digital channels of social protection delivery.

A lack of accessible human touchpoints often causes exclusion.

3

Digital systems can disempower citizens.

Research[1] suggests that social protection beneficiaries, who are most likely to be digital immigrants, find it hard to manoeuvre digital ecosystems and hold them accountable.

4

Misuse of citizens' personal data and the inability to safeguard it can cause exclusion.

A breach of citizens' personal data violates their Right to Privacy and risks their social protection benefits. Exclusion can also occur when the data of the underlying social registry is of poor quality.

[1] Citizens who lose their Aadhaar find it difficult to retrieve it and risk losing social protection benefits **(Anil & Dreze, 2021).**

Addressing Caveats: Defining Citizen Centricity

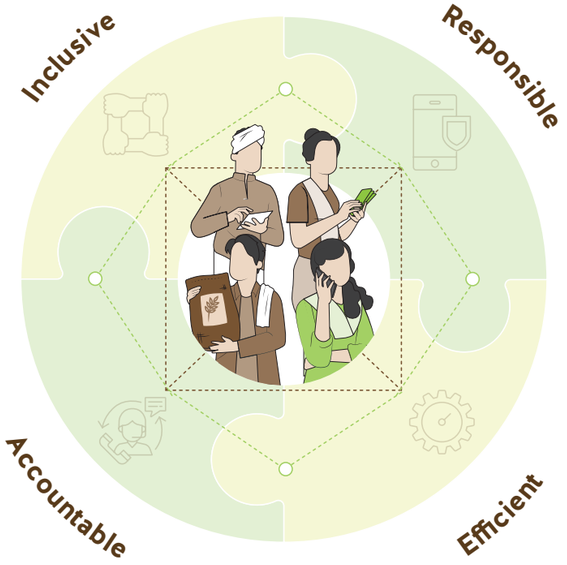
These sources of exclusion have adverse and outsized impacts on the most marginalised citizens, who are also most likely to use these systems frequently. To minimise the exclusion of vulnerable, eligible beneficiaries, we propose that an SP-ODE should, by default, be designed for the most marginalised citizens.

We recommend that the design of SP-ODEs be anchored in the concept of '**citizen centricity**'.

Definition of a citizen-centric SP-ODE

'A set of entities and processes (both tech and non-tech) for delivering social protection that will be inclusive, responsible, and efficient, while being supported by accountability mechanisms.'

We characterise citizen-centric SP-ODEs as systems that are

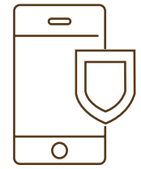


Designing Citizen-Centric SP-ODEs: Putting People at the Core

For SP-ODEs to be citizen-centric, their design needs to be anchored in four attributes. We define these in the context of SP-ODEs:

Inclusive

Inclusive SP-ODEs strive to eliminate all forms of exclusion across the social protection delivery chain, and offer a re-entry loop for those excluded.



Responsible

Responsible SP-ODEs safeguard citizens' personal data and uphold their privacy, while preserving their autonomy and trust in the use of their data.

Efficient

Efficient SP-ODEs minimise beneficiaries' search costs and eliminate process inefficiencies to ensure better delivery.

Accountable

Accountable SP-ODEs are answerable to the beneficiaries, who are its primary stakeholders, and to the taxpayers, who pay for it.

Inclusive SP-ODEs

Data mismatches, transaction failures, and the inability to access last-mile delivery points are some of the reasons for the exclusion of eligible beneficiaries. In addition to these procedural hurdles, the disposition with which a beneficiary is addressed during their interactions with the SP-ODE could also cause exclusion.

When a citizen is treated dismissively or disrespectfully, it reduces their likelihood of interacting with the SP-ODE in the future, complicating access and entrenching exclusion.

Responsible SP-ODEs

Digitisation of social protection delivery creates and uses citizens' personal information extensively. A lapse in protecting citizens' personal data could manifest two kinds of harm.

The first kind of harm relates to incursions on their privacy which is a fundamental right recognised by the Supreme Court of India[2].

The second kind of harm relates to the adversities that citizens face when their personal data is misused, such as losing their entitlements on account of identity theft.

A responsible SP-ODE, therefore, (i) safeguards citizens' privacy, (ii) protects their personal data, and (iii) maintains their autonomy where algorithms are used.

[2] Right to Privacy as recognised in the K.S. Puttaswamy and Anr. vs. Union of India ((2017) 10 SCC 1) judgement.

Efficient SP-ODEs

In our experience, digitisation often focuses disproportionately on creating efficiencies for administrators while overlooking efficiencies for citizens. Our priority is for the SP-ODEs to create efficiencies for the citizens.

Digitisation should make it easier for the citizens to access social protection by simplifying the process of claiming their entitlements and interfacing with the system. It should identify the economies of time, scope, and scale for them.

Our conceptualisation of efficiency also accounts for system-level efficiencies (informed by a systematic review of grievances), efficiencies of cost and procedures for administrators and efficiencies spurred by innovations in service delivery, typically realised through the participation of private players.

Accountable SP-ODEs

An SP-ODE should contain mechanisms that will help beneficiaries hold it and the last-mile delivery agents accountable. Further, citizens, who may not be beneficiaries of social protection programmes, typically have no means to assess the performance of SP-ODEs, even when they pay for the functioning of these systems through their taxes.

We emphasise a two-fold structure of accountability that encompasses an SP-ODE's answerability to the beneficiaries it intends to serve and the taxpayers who pay for it.

How to Build Citizen-Centric SP-ODEs?

We bring to bear our understanding of citizen centricity to create a framework that allows a critical appreciation of the level of citizen centricity embedded in the design of a wide variety of SP-ODEs. This framework comprises two sections.

1 Framework for building an overview of an SP-ODE

The first section helps build an overview of the SP-ODE. The questions in this section shines light on the intended objectives, the governance structure of the SP-ODE and its compatibility with existing Digital Public Infrastructure (DPI), among other aspects. Select questions from this section of the framework include:

- Who is responsible for the governance of the SP-ODE?
- What are the various kinds of Digital Public Infrastructure that support the SP-ODE?
- What are the various types of benefits delivered through the SP-ODE?
- Is the SP-ODE supported by a registry/database of citizens?
- Is the SP-ODE linked to the Direct Benefit Transfer architecture?

2 Framework for guiding the discussion on an SP-ODE

The second section sets out questions that enable a detailed description of citizen centricity of the SP-ODE, as it manifests in its design. It translates the attributes of inclusivity, responsibility, efficiency, and accountability into design features needed for each process performed by the SP-ODE. This list of questions can be used ex-ante, i.e., before an SP-ODE is designed as a ready reckoning of design features needed to make it citizen-centric or it can be used ex-post, as a tool to critically appraise the citizen centricity of existing SP-ODEs.

In all, **our framework incorporates ~65 design features,** spread across the six processes that can enhance citizen centricity of an SP-ODE. A snapshot of select questions from this section is presented on page 15. More involved readers are directed to Chapter 3 of **the complete report** which discusses this framework and to Appendix II, which presents the framework in its entirety.

A Snapshot of the Case Study Framework

Identification & Enrolment

- Is an offline mode provided to the citizens to access enrolment functionalities?
- Are there interoperability guidelines for sharing data between government databases?
- Are there provisions for automated decision-making systems (ADMS) to determine the eligibility of citizens?
- Are there provisions for the performance reports regarding the functioning of the platform to be made publicly available?

Coordination & Orchestration

- Can government functionaries at the last mile view individual citizens' case statuses in real time?
- Which functionalities are available to administrators?
- Do the services under SP-ODE fall under the ambit of the Right to Public Service Act or any other legislation that guarantees time-bound delivery of such services?

Payments

- What are the various modes in which payments under social protection schemes can be made to citizens?
- What is the mode used to update the citizens on the payment status?
- Are there provisions for the reasons for transaction failures under SP-ODE to be made publicly available?

Grievance Redressal

- Are there mandates for the SP-ODE to facilitate a feedback mechanism?
- Are there provisions to analyse grievance and feedback data to identify system-level weaknesses?
- Are there provisions for the grievance caseload management data to be made publicly available?

Product Provisioning

- Is there a provision to define/actively manage the number of such providers servicing a designated area?
- Is there a mandate for the administrators of the SP-ODE to audit the services provided by providers involved in benefit delivery?

Delivery of Cash & Ancillary Benefits

- What type of last-mile agents are part of the SP-ODE delivery chain?
- Are there conduct obligations specified for last-mile agents that participate in benefit delivery?

Inclusive · Responsible · Efficient · Accountable

Case Studies

In this section, we provide a glimpse of three state-level SP-ODEs: the Antyodaya Saral of Haryana, the Jan Aadhaar Yojana of Rajasthan, and the Samagra Samajik Suraksha Mission of Madhya Pradesh[3]. These SP-ODEs are first among equals in terms of their maturity, functionality, and scale, which makes them appealing candidates for our analysis.

The involved reader may access the framework created to describe the citizen centricity of an SP-ODE in our full report. In the report, we use the framework to critically analyse these SP-ODEs, highlight their strengths, and provide recommendations on how these SP-ODEs can improve their citizen centricity. However, in the following section, we only call out the most important design features that reflect well on the citizen centricity of these SP-ODEs.

[3] The information collected for these case studies has been verified at the time of writing, being December 2021.

CASE STUDY

Antyodaya Saral

The Antyodaya Saral of Haryana is an SP-ODE with an integrated digital platform, which performs most of the processes in the social protection delivery chain. It is integrated with the Parivar Pehchan Patra ID and the Family Information Data Repository, which is a family-level database of resident families in Haryana. Antyodaya Saral is supported by a network of physical touchpoints in the form of Atal/Antyodaya Sewa Kendras.

Citizen centricity enhancing features

Inclusive

- Allows for online and offline enrolment of citizens for social protection schemes and in the registry.
- A comprehensive network of last-mile delivery agents (Atal & Saral Kendras).

Responsible

- Presence of a data policy for the registry that adheres to select data protection, privacy-by-design, and security-by-design principles.

Efficient

- Citizens are informed about the status of their applications through multiple modes.
- Administrators have access to interactive dashboards and can generate relevant performance data.

Accountable

- Presence of a Right to Service (RTS) Act to establish timelines for service delivery.
- Provision to hold government departments accountable by ranking them based on the RTS score[4].
- In the event of a delay in service delivery, the Auto Appeals System[5] raises a grievance on behalf of the citizen.

[4] The RTS or Antyodaya Saral Score ranks government departments and districts in Haryana based on their performance at processing applications for service delivery within the timeline given under the Right to Service Act.

[5] The Auto Appeal System is a solution developed by the Haryana Right to Service Commission to automatically file appeals on behalf of citizens.

CASE STUDY

Jan Aadhaar Yojana

The Jan Aadhaar Yojana (JAY) of Rajasthan, formerly known as the Bhamashah Yojana, was launched in 2019 as a digital social protection delivery system. JAY comprises distinct and interoperable digital platforms which perform specific functions within the social protection delivery chain.

The Jan Aadhaar Platform, the Jan Aadhaar ID, and the Jan Aadhaar Data Repository help identify and enrol citizens, the Rajasthan Payments Platform (RPP) processes payments, e-Mitra facilitates delivery of benefits and ancillary services at the last mile, and Rajasthan Sampark provides grievance redressal service. JAY is governed under the Rajasthan Jan Aadhaar Authority Act, 2020.

Citizen centricity enhancing features

Inclusive

- An extensive network of last-mile delivery agents (for example, e-Mitra and e-Mitra Plus) who provide a comprehensive list of services such as enrolment and cash-out services.
- Citizens can raise grievances through offline and online modes.

Responsible

- The presence of a consent mechanism before authenticating citizens' data from the registry is a good practice.
- The presence of provisions that adhere to security-by-design principles in the registry is in the service of responsibility.

Efficient

- Citizens can be auto-enrolled into social protection schemes.
- Citizen support service is available 24x7.

Accountable

- The governing body of JAY i.e., the Jan Aadhaar Authority draws its powers from the Jan Aadhaar Authority Act, 2020.
- Presence of a Right to Guaranteed Delivery of Public Service to establish timelines for service delivery.

CASE STUDY

Samagra Samajik Suraksha Mission

The Samagra Samajik Suraksha Mission (SSSM) of Madhya Pradesh is predicated on the Samagra Platform and a comprehensive database known as the Samagra Population Registry (SPR). The SPR uses a state-wide universal identifier known as the Samagra ID. SSSM is a network of last-mile, agent-based physical touchpoints, the state's Public Service Guarantee Act, and the grievance redressal infrastructure provided by the Chief Minister's Helpline.

Citizen centricity enhancing features

Inclusive

- Multiple modes to keep the Samagra Population Registry up to date.
- Government officials at the last mile are equipped to edit citizens' details in the registry, thus instituting offline architecture to complement digital modes.

Responsible

- The interoperability across databases is secured through security-by-design principles and interoperability guidelines.

Efficient

- Considerable focus on lowering the burden on citizens through auto-enrolment into schemes.

Accountable

- Mechanisms to hold last-mile agents accountable.
- Presence of a robust Public Service Guarantee Act.

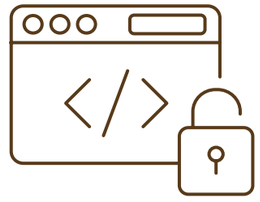
The State of SP-ODEs in India

An offline infrastructure, in the form of last-mile service centres and agents, is integral to the design of all systems.

The JAY uses e-Mitras, the AS deploys Atal/ Antyodaya Saral Kendras, and the SSSM works synchronously with the state's financial inclusion initiative–the Samruddhi Program. These last-mile touch points double-up as enrolment centres and touchpoints for the delivery of cash benefits.

These systems are designed to be interoperable with other existing digital infrastructure at the state and national levels.

The AS system is reportedly built atop the Government of India's Service Plus Platform, an open-source, low-code/no-code architecture, making it reusable in different contexts.



IVRS-based grievance redress channels are a shared feature across all systems.

The JAY stands out as the first among equals for providing a 24x7 helpline. This makes grievance redressal accessible and easier for beneficiaries as it does not require them to invest their working days or hours.

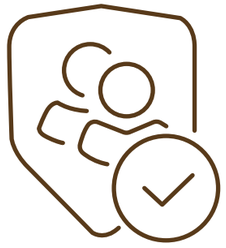
The systems also have ambitions to adopt entitlement-based models of benefit delivery. This would enable SP-ODEs to identify eligible beneficiaries automatically and deliver benefits proactively, without a need to apply for individual schemes.

The SSSM exhibited these capabilities when it graduated about 5 lakh citizens to higher-paying pension schemes. Similarly, JAY has begun automatically issuing caste certificates to new-borns, based on the castes of their parents, without requiring parents to file new applications for the same.

Closing the Citizen Centricity Gap

1

Creating a robust data protection framework, backed by legislation



Most systems appear to lack data protection frameworks, potentially risking citizens' privacy, and the security of their personal data. While the JAY has provisions for obtaining citizens' consent before collecting their personal data and strives to conform to security-by-design principles, much is left to be desired.

Collecting personal data in the absence of a law or mishandling such data weakens citizens' fundamental Right to Privacy and exposes them to new types of harm. Further, using algorithms in the absence of frameworks that ensure they are fit for purpose could exacerbate exclusion.

2

Adopting a mobile-first design

A lack of a mobile-first design implies that citizens must rely on last-mile touchpoints such as the CSCs to interact with the system and navigate social protection delivery. Given the deep penetration of feature phones in the country, especially among low-income users, these systems can significantly shore up inclusivity by becoming accessible over feature phones.

3

Becoming accessible for people with disabilities

Currently, most of the systems studied are not designed to serve persons with disabilities, with JAY emerging as an exception, given its website is reportedly designed to be accessible to persons with visual impairment.

4

Codifying citizen service standards

A law-backed commitment to serving citizens promptly and respectfully can improve citizen outcomes. The AS platform is supported by Haryana's Right to Service Act of 2014. It maintains a dashboard to view staff compliance with timelines notified under the Act.

5

Enabling citizens to rate the performance of last-mile delivery agents

Mechanisms such as rating delivery agents and providing them performance reviews through feedback would help discipline them and improve citizen outcomes.

We note that most SP-ODEs in the Indian context are systems in flux and continue to evolve based on learnings that come with implementation. We intend for some of the learnings from these case studies and the accompanying framework to help inform this evolution in a manner that makes SP-ODEs increasingly citizen centric.

Finally, we note that our work is limited to studying the design of these SP-ODEs. An analysis of the lived experiences of citizens interfacing with these systems is needed to fully appraise these systems but such an analysis remains outside the scope of this work.

Head Office:

10th Floor-Phase 1
IIT-Madras Research Park
Kanagam Village, Taramani
Chennai 600113
India

/Design at AICL (hello@aicl.in)