eGOV FOUNDATION

STATE-LED URBAN DIGITAL TRANSFORMATION

Key Lessons from 4 States

eGov Foundation

March, 2026

Title
State-led Urban Digital Transformation

Publisher
eGov Foundation

Author
Mathews P Joseph

Publication Month
March 2026

Place of Publication
Bengaluru, India

Recommended Citation
eGov Foundation. (2026). State-led Urban Digital Transformation: Key Lessons from 4 States. Bengaluru, India: eGov Foundation.

Contact Information
mathews.p@egov.org.in
egov.org.in

State-led Urban Digital Transformation

Key Lessons from 4 States

Acknowledgement

This policy brief was made possible through the collaborative efforts of several individuals and institutions committed to strengthening urban digital governance in India.

We extend our sincere gratitude to our colleagues in the Ministry of Housing & Urban Affairs, Government of India; Housing & Urban Development Department, Government of Odisha; Department of Local Government, Government of Punjab; Municipal Administration and Urban Development Department, Government of Andhra Pradesh; Local Self Government Department, Government of Kerala; Punjab Municipal Infrastructure Development Company (PMIDC); Information Kerala Mission (IKM); and to the dedicated employees of local body offices across Andhra Pradesh, Kerala, Odisha, and Punjab. Their insights, data, and candid reflections on the ground realities of digital service delivery significantly enriched this study.

We are especially thankful to the teams at eGov Foundation, particularly our state engagement colleagues — Krishnakumar Thiagarajan, Harshavardhan Y, Jasminder Pal Singh, and Dr. Subrata Biswal — for their unwavering support in facilitating stakeholder consultations and gathering field-level insights.

Special thanks to the many Frontline Staff, Community-Based Organisation (CBO) Members, and Computer Operators who participated in interviews. Their lived experiences were invaluable in humanising the digital transformation narrative.

Finally, we gratefully acknowledge the editorial guidance and thoughtful contributions of our colleagues at eGov Foundation — Gautham Ravichander, Kriti Mittal, and Prashant C — whose keen insights and careful revisions helped shape this brief into a clearer, more impactful document.

Table of Contents

Executive Summary

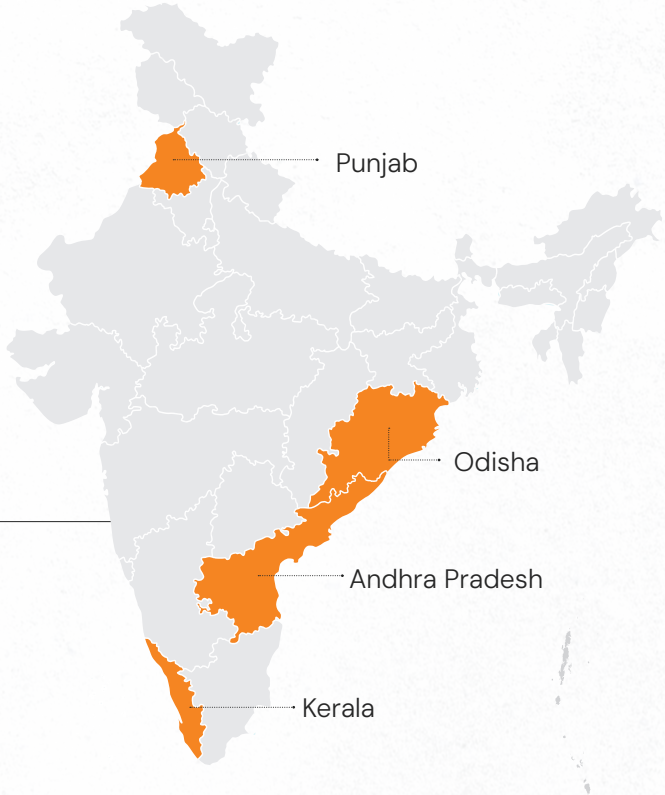
India's urban future is imminent and urgent. By 2050, over half of India's population will live in towns and cities, generating

75%
of the
country's GDP

To achieve the development aspiration of Viksit Bharat 2047, India needs to harness and manage this urban transformation more effectively, especially with digital technologies.

While some pioneering states have launched successful urban digital platforms, many of the Urban Local Bodies (ULBs) still lack the technical capacity, financial resources, or institutional support to develop and sustain digital service delivery platforms. This leads to cumbersome processes, fragmented data, uneven service quality, and systemic inefficiencies across cities. The solution lies in **state-led, unified digital platforms** that ensure scale, equity, and sustainability.

The technical infrastructure for this approach already exists, with open digital stacks like UPYOG and DIGIT providing a modular backbone, and consulting partners with the technical know-how to build and implement across the geography. This policy brief, therefore, focuses not on how to build platforms but on the philosophical and practical underpinnings that make state-led digital reforms scalable, inclusive, and sustainable.



Drawing on four years of field research from **Andhra Pradesh, Kerala, Odisha, and Punjab**, the brief presents a roadmap grounded in five core policy recommendations

Urban Digital Transformation should be state-led

A shared state platform drastically reduces per-capita costs, ensures smaller towns are not left behind, and harmonises service standards. Andhra Pradesh digitised 110 ULBs on one system; Kerala's ₹80 crore K-SMART platform was built at a per capita cost of just ₹23.95, far lower than the ₹66.44/capita cost of Kochi's standalone failed project.

Digital Transformation should facilitate continuity and not disruption

Kerala and Punjab show that digital success doesn't come from disruption, but integration. Citizen Facilitation Centres in Kerala helped digitise walk-in paper applications, eliminating parallel registers and cutting employee time spent on paperwork by up to 70%. Punjab integrated a decade-old grievance phone line with its new platform, ensuring that the large number of citizens who relied on it were not left behind.

Digital platforms should be envisioned as "living systems", that are built incrementally, with room to evolve

States must adopt modular rollout strategy. Kerala expanded K-SMART from 8 ULBs in 2023 to 1100+ Local Bodies by 2025 and layered innovations like Video KYC for marriage registration. Odisha used the SUJOG platform to build targeted solutions incrementally (e.g., for sanitation workers, urban poor livelihoods, and slum upgrading), all aligned with a common digital backbone.

Incorporate a human touch through intermediaries, expanding inclusion

Odisha's model of digitally equipped Jal Sathis and mobile tax collectors enabled even digitally unaware citizens to access online services. Field data showed that less than 15% of citizens were aware of the SUJOG app, yet coverage was near-universal due to assisted delivery. States should leverage SHGs and frontline workers to embed human touchpoints in digital service channels.

Sustainably institutionalise the Digital Transformation within the State administration

Andhra Pradesh's success with Municipal ERP was driven by dedicated Ward Secretariats, officer-level accountability, weekly performance reviews, and eventual government ownership of the platform. Property tax revenues jumped post-digitisation, and digital adoption remained high even after the implementation partner's exit, showing that institutionalisation, not just IT procurement, sustains reform.

This roadmap, grounded in real-world experiences, is backed by tangible benefits such as 50% reductions in per-capita technology costs,

30–70%

employee efficiency gains, increases in municipal revenues, and improved service coverage.

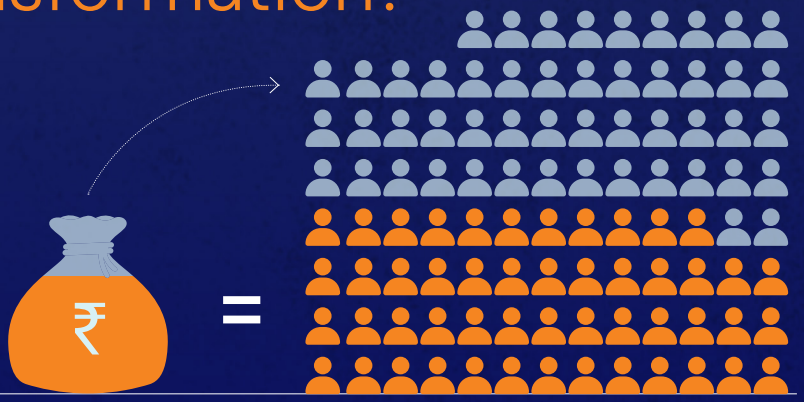
Most crucially, they have also proven to be institutionally sustainable and politically resilient, with in-house ownership and performance legitimacy enabling continuity across successive governments.

This policy brief strongly recommends a state-led urban digital transformation that enables continuity, evolves incrementally, embeds human intermediaries, and is institutionally anchored, as the most viable path to achieving sustainable, inclusive, and resilient urban digital governance across India.

INTRODUCTION

Why States Must Lead the Urban Digital Transformation?

By 2050, more than 50% of India's population will live in cities and towns, and will contribute to 75% of its GDP[1].



Hence, to realise the ambition of becoming a developed country by 2047[2], we need to harness and manage this urban transformation more effectively.

With the pressure from demand (of rising population) and ambition (of powering an ambitious GDP growth) on Indian cities, fragmented paper-based systems of governance and service delivery are inadequate to meet the scale and complexity of urban demands. The digital transformation of urban service delivery is no longer a desire, but inevitable.

The vast majority of India's Urban Local Bodies (ULBs) are small Municipalities and Nagar Panchayats with populations under 500,000 (housing more than 50% of India's urban population[3]), and are constrained by limited technical capacity and budgets.

In Punjab, for example, more than

90%

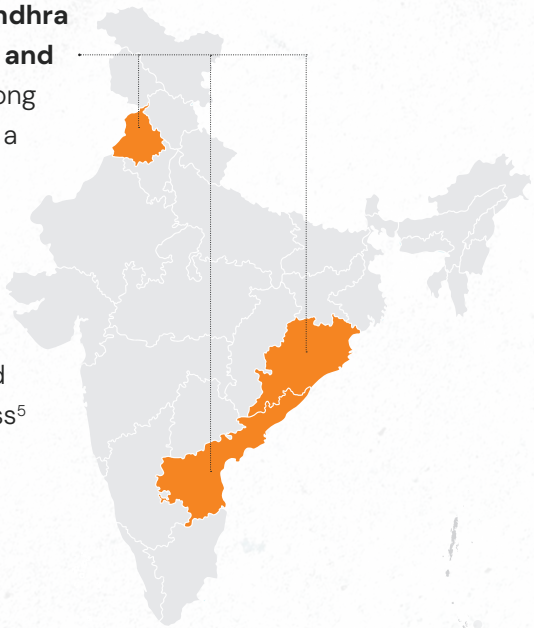
of the 167 ULBs had no dedicated IT teams

Field explorations revealed that, in some smaller Municipal Councils and Nagar Panchayats, a single computer operator handled all digital entries on behalf of the entire office. Expecting each such town to procure, develop, deploy and maintain its own e-governance software is unrealistic.

Additionally, if each city uses a different digital platform for service delivery, it will result in significant data fragmentation. This impedes cross-city comparisons, weakens progress tracking, and limits the ability to generate meaningful insights for statewide or national policymaking. State Urban Departments are therefore uniquely positioned to lead this transformation — equipped with the financial capacity, technical expertise, and ability to ensure data interoperability — making them the ideal catalysts for scalable and sustainable urban digital governance.

This position is not merely a function of hierarchical superiority, but of occupying a strategic middle ground. State governments are close enough to understand the needs of city governments, yet sufficiently empowered to mobilise resources and drive systemic change. The Indian Constitution mandates the state governments to devolve powers to local city governments, and states have arguably done this through State Municipal Acts, each with its own set of provisions and institutional arrangements. Given this diversity, the Union Government is too removed from the specific contexts and legal frameworks of individual states to design a one-size-fits-all national platform for urban governance[4].

State-level digital transformation — building one platform for all cities in a state — is the most viable path to achieve scale, speed, and policy harmonisation. It is no coincidence that states like **Andhra Pradesh, Punjab and Odisha** were among the first to adopt a state-level urban digital platform approach, recognising its scalability, transparency, and cost-effectiveness[5]



The state-level platform also provides an economic advantage, which can be simplified to a mathematics of scale. The per capita cost drops sharply when the development cost (and subsequent upgrades) are shared. For instance, the Kochi Municipal Corporation incurred a loss of ₹4 crore[6] on an unsuccessful digital transformation project, translating to a per capita cost of ₹66.44[7]

In contrast, Kerala's successful implementation of K-SMART, its state-level local governance platform covering 1100+ rural and urban local bodies, cost ₹80 crore[8], at a significantly lower per capita cost of ₹23.95[9].

However, **state-led digitisation** must be designed with care. The goal is not to digitally recentralise control at the state level, but to empower ULBs with better tools, data, and support. For state platforms to truly succeed, they must preserve the constitutional spirit of decentralisation and enhance local agency.

The design of digital platforms should preserve ULBs' autonomy over their data and enable local policy flexibility. ULBs must be able to easily access and analyse their service delivery data, as well as implement localised changes such as modifying tax calculation methods or introducing rebates.

To be effective, **state-led platforms** must act as enablers, not gatekeepers, designed as a shared digital infrastructure that facilitates decentralised decision-making. They must combine the advantages of scale with responsiveness to the diverse realities of India's cities and towns.

This policy brief argues from this vantage point: that successful state-led digital transformation requires blending top-down vision with bottom-up practicality. Drawing from multiple field studies conducted over the last four years along with secondary case study analysis from Kerala, Punjab, Odisha, and Andhra Pradesh, it explores four critical enablers of successful state-led digital transformation:

- Preserving continuity in service delivery
- Enabling iterative improvements
- Incorporating human touchpoints
- Institutionalising reform

It examines how these principles have played out in practice and offers recommendations on how other states can adopt and adapt these lessons.

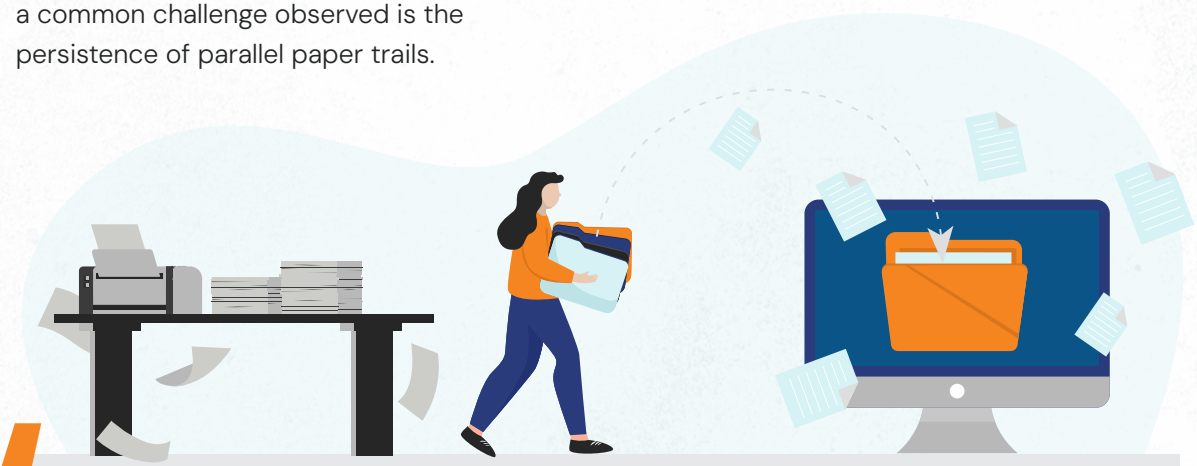
Digital As A Continuum

Integrating Digital Systems with Legacy Processes

States must envision digital transformation as a continuum, not a rupture. Rather than discarding legacy systems and habits overnight, integrate them within the new digital workflows. This approach reduces resistance, ensures continuity, and builds trust over time. The experiences of Kerala and Punjab demonstrate how thoughtful transitions — not abrupt replacements — can accelerate adoption and institutionalise digital reform more sustainably.

In the initial stages of municipal digitisation, a common challenge observed is the persistence of parallel paper trails.

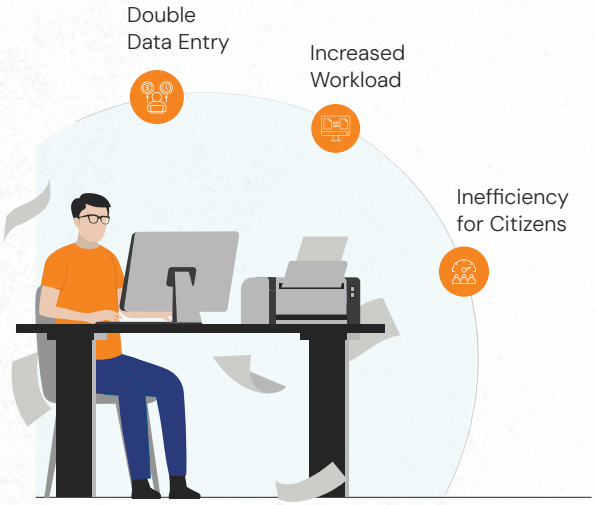
Employees continue to maintain traditional paper registers and files even after a digital system is introduced. Essentially, every application or service request is recorded twice (once on the computer, once on paper). A field study in Kerala prior to the rollout of Kerala's latest public service delivery platform for local bodies (K-SMART) revealed the extent of this redundancy. For every application/transaction in the Municipal Office, a paper-based record was maintained in almost all ULBs.



We maintain a birth register in this ULB, even though we have digital records of the same. So if a citizen applies for a name correction in their birth certificate, supported by the required documentation, we must correct both online and offline databases. The name correction in the online database is easy; just a few clicks and it's done, it hardly takes a minute. The correction in the offline register is a longer process. Once I verify the records, I write a letter to the registrar mentioning the application for name correction and recommending it. The registrar checks this, approves this and sends it back to me. Now I will take the physical registry, correct the name there and attach this letter. This will take at least a couple of hours of my time.

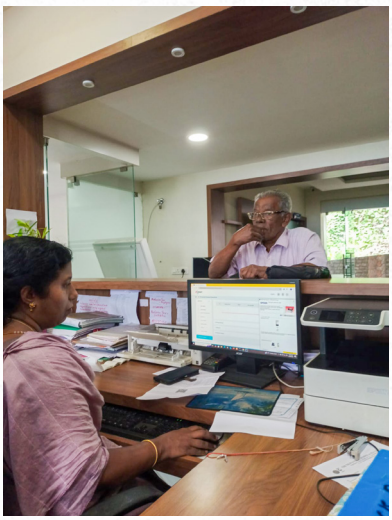
Field Study, Kerala, 2023

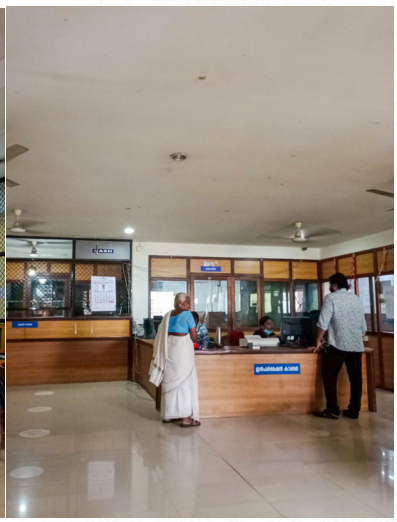
This practice stemmed from a mix of factors such as resistance from citizens, organisational culture, and lack of trust in the digital system. The result, however, was a negation of the efficiency that digitisation promised. Employees, especially those at the frontline, were burdened with double data entry, and citizens often had to chase files through offices.



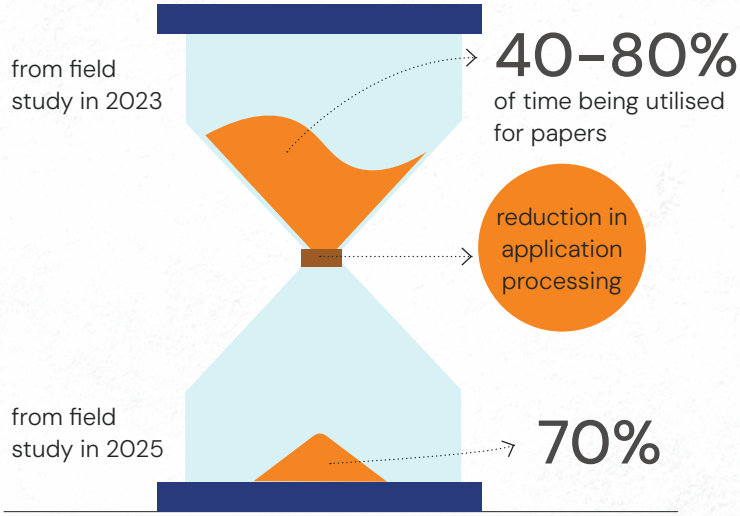
When Kerala implemented K-SMART, its new digital service delivery platform for local bodies, it confronted the parallel paper trail problem head-on. The solution was not to immediately ban everything paper, which could have led to resistance and exclusion, but rather to absorb the paper-based processes into the digital framework in a seamless way.

Kerala did this by establishing Citizen Facilitation Centres at ULB offices as an extension of the front office[10]. A citizen could still walk in with a form or request, where staff or operators help the citizen input the application into the K-SMART system, scan any necessary documents, and generate a digital record and receipt. From the citizen's perspective, they submitted a paper or verbal request, but in reality, the request enters the e-governance workflow without the citizen having to navigate the tech themselves.

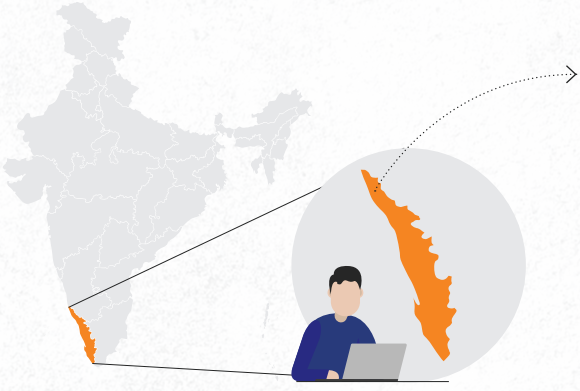




This arrangement, along with an official government order mandating digital resolution of applications, effectively eliminated the need for parallel paper trails. The facilitation centre acted as a bridge, converting old habits into new digital entries in real time. This has resulted in a significant reduction in the time taken by employees in completing applications, where some employees have even reported a 70% reduction in time as they no longer maintain a parallel paper trail.



A conservative Back-of-the-envelope calculations suggest that deploying CFCs can yield significant operational value. Assuming 5 employees per Local Body (n=1100) are engaged in paperwork-heavy service workflows, with an average annual salary of ₹5 lakh, the total salary outlay is approximately ₹275 crore. If CFCs reduce manual paperwork by even 50%, a very conservative average based on field interviews, the value of time saved is ₹137.5 crore per year. In comparison, the cost of staffing two-member CFC teams in each local body would amount to around ₹110 crore annually. This results in a net value of ₹27.5 crore per year through staff time reallocation alone, even before accounting for the cost of technology failures avoided, or improvements in citizen satisfaction and service turnaround time.



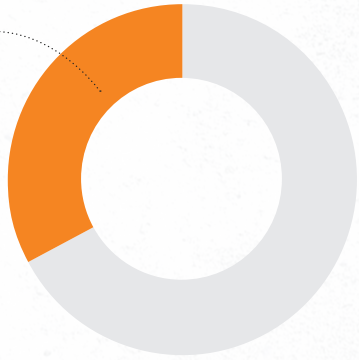
Kerala's approach highlights that digital reform can begin by absorbing and upgrading the legacy processes, and does not require a rupture from existing processes. This principle of envisioning the digital as a continuum, where digital workflows evolve from existing administrative habits, is not only more inclusive but also more sustainable.

A similar case comes from Jalandhar, Punjab, where a legacy service channel was dovetailed into the new digital platform to preserve continuity and trust. Back in 2007, Jalandhar's municipal corporation had launched a phone-based grievance helpline to log citizen complaints. The city ran extensive IEC campaigns (Information, Education, and Communication campaigns) at the time so that the public memorised this hotline and used it to report issues. Over more than a decade, the helpline became a trusted recourse for Jalandhar's residents and accumulated a large user base.

When Punjab implemented the mSeva digital platform (2018 onwards), which included a Public Grievance Redressal (PGR) module, with a web-based and mobile app-based channel, one option could have been to scrap the old phone line and push everyone to the new app or web portal. Instead, Jalandhar smartly integrated it into mSeva. The same phone number continued to work, but now when a citizen called and lodged a grievance, it was pushed into the central mSeva database alongside those coming from the web or mobile channels.

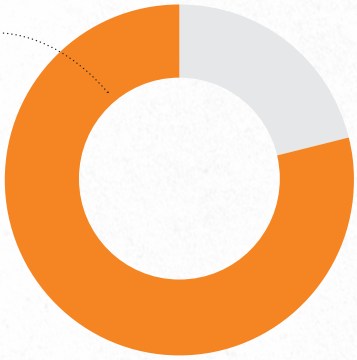
This integration yielded remarkable results. Jalandhar accounts for a significant share of Punjab's total digital grievances. Between 2021 and 2024, Jalandhar's call centres accounted for 33% of all PGR applications filed across the state, and 79% of those in Jalandhar.

33%
of all PGR Applications from Punjab were through the call centre in Jalandhar



PGR Applications through mSeva in Punjab [2020-24]

79%
of all PGR Applications from Jalandhar were through the call centre.



PGR Applications through mSeva in Jalandhar [2020-24]

From the citizen's perspective, nothing "new" had to be learned; they continued using a channel they trusted, which greatly eased the transition. From the administration's perspective, they achieved a single source of truth for grievances (instead of running two parallel complaint systems) and brought an existing high-volume channel under the ambit of the new accountability mechanisms.

In essence, the government digitised the back-end while keeping the front-end experience continuous. This principle can extend to other domains: for example, if a city already has a popular citizen service centre or a WhatsApp inquiry line, those should be tied into the new system rather than discarded on Day 1 of a digital rollout.

The Kerala and Punjab cases highlight a critical insight. Digital transformation need not equate to the abrupt replacement of all old processes. In fact, blending the new with the familiar can accelerate adoption. By accommodating front-line realities, these states avoided alienating the very people the reforms were meant to serve. Continuation strategies like facilitation centres and legacy channel integration act as bridges that carry the whole ecosystem – employees and citizens – over to the digital era. They also address the psychological aspect of change: trust is built gradually. Each time a citizen uses an assisted service centre and walks away with an e-receipt, or calls the old hotline and gets a prompt SMS with a complaint number from the new system, their confidence in digital governance grows.

A 'Living' Digital PLATFORM

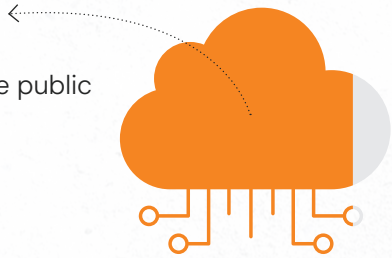
Creating a Flexible Platform that Facilitates Innovation

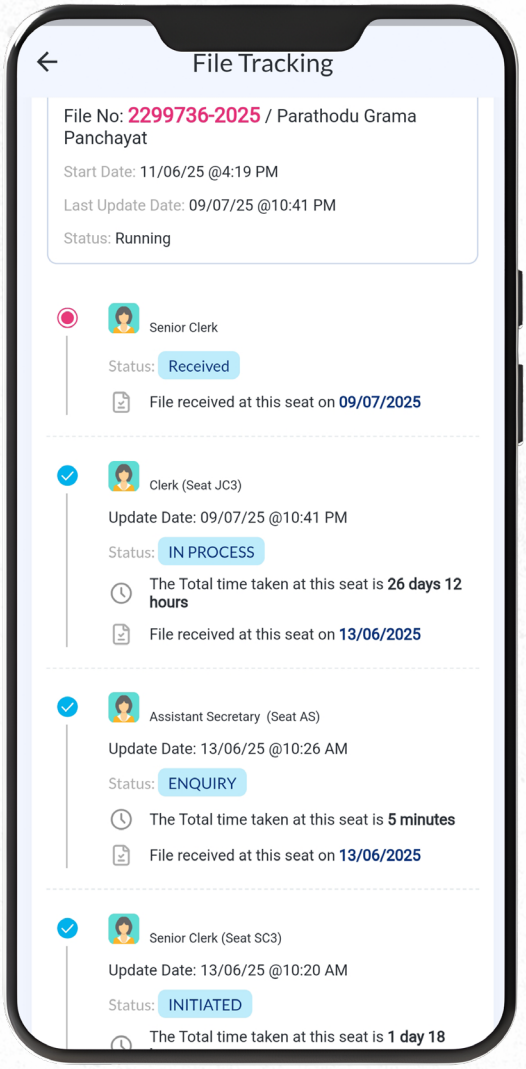
States implementing municipal digital governance should treat their platforms as living systems, capable of continuous improvement, modular upgrades, and contextual innovation. Rather than aiming for a one-time, all-encompassing launch, they should build digital infrastructure that evolves through field feedback, user needs, and changing urban realities.

Big bang IT implementations have a high failure rate, as the World Bank noted, a striking

87%

failure in large public ICT projects[11]



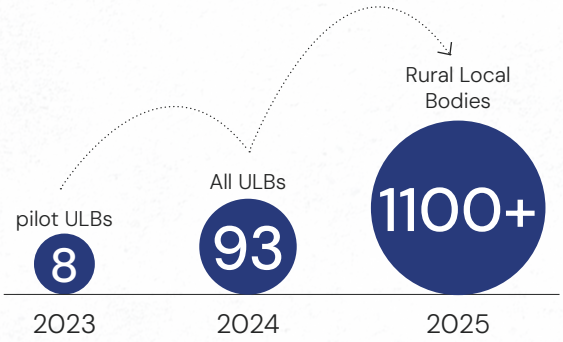


The reasons include overcomplex design, inadequate testing, and user resistance when too many changes are made overnight. Public systems must also keep pace with changing citizen expectations and administrative needs, which cannot always be anticipated at the outset.

India now has the technical foundations to support this model, particularly through National Urban Digital Mission's UPYOG stack, which enables platform modularity and ease of integration. What remains critical is a mindset shift: to treat digitisation not as a one-off reform, but as a sustained journey. Kerala, Punjab, and Odisha offer compelling models of how this philosophy can be translated into action.

Kerala's K-SMART began in 2023 with just three modules (Trade Licence, Birth & Death registration, and Grievance Redressal) rolled out in 8 pilot ULBs. This pilot-first strategy provided a controlled environment to identify

gaps and gather user feedback. After initial success and tweaks, the platform was later scaled to 93 ULBs in 2024, and to 1100+ Rural Local Bodies in 2025, with additional services like building permits and marriage registration being introduced.



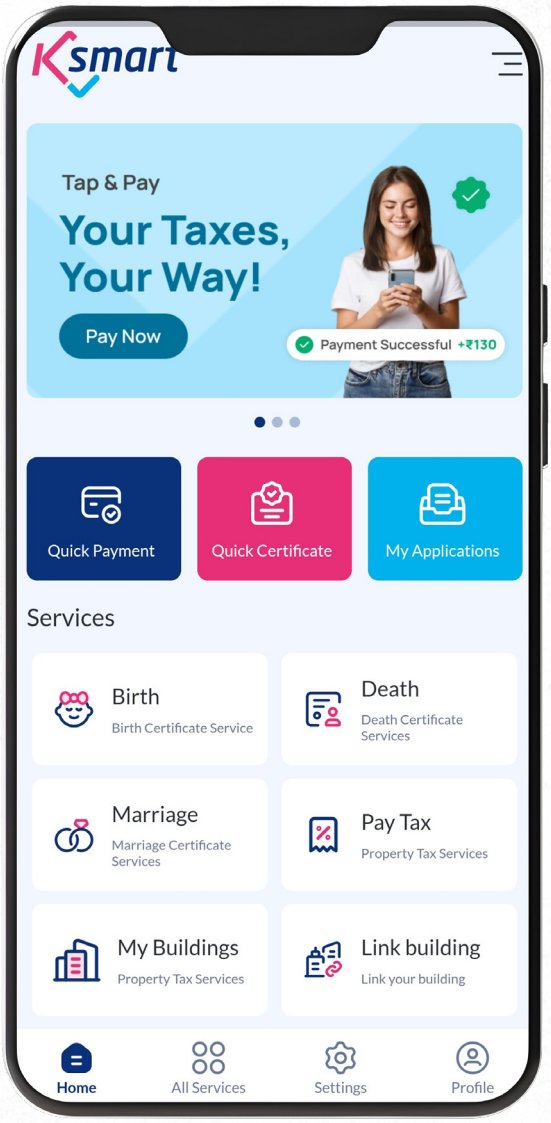
Punjab's mSeva similarly didn't launch with all possible services at once. From 2018 to 2023, it gradually expanded to 5 key modules across 150+ ULBs, allowing each phase to stabilise before adding the next. This incremental expansion kept the system manageable and afforded flexibility to incorporate improvements at each step.

Further, building on its incremental platform, Kerala introduced a highly contextual innovation in 2024: Video KYC for marriage registration. Marriage registration in India traditionally requires the bride, groom, and witnesses to physically appear before the registrar. Kerala, however, saw a need for an alternative. The state has a very large Non-Resident Indian (NRI) community, an estimated

2.2 million

Keralites live overseas as of 2023, one of the highest numbers for any Indian state[12].

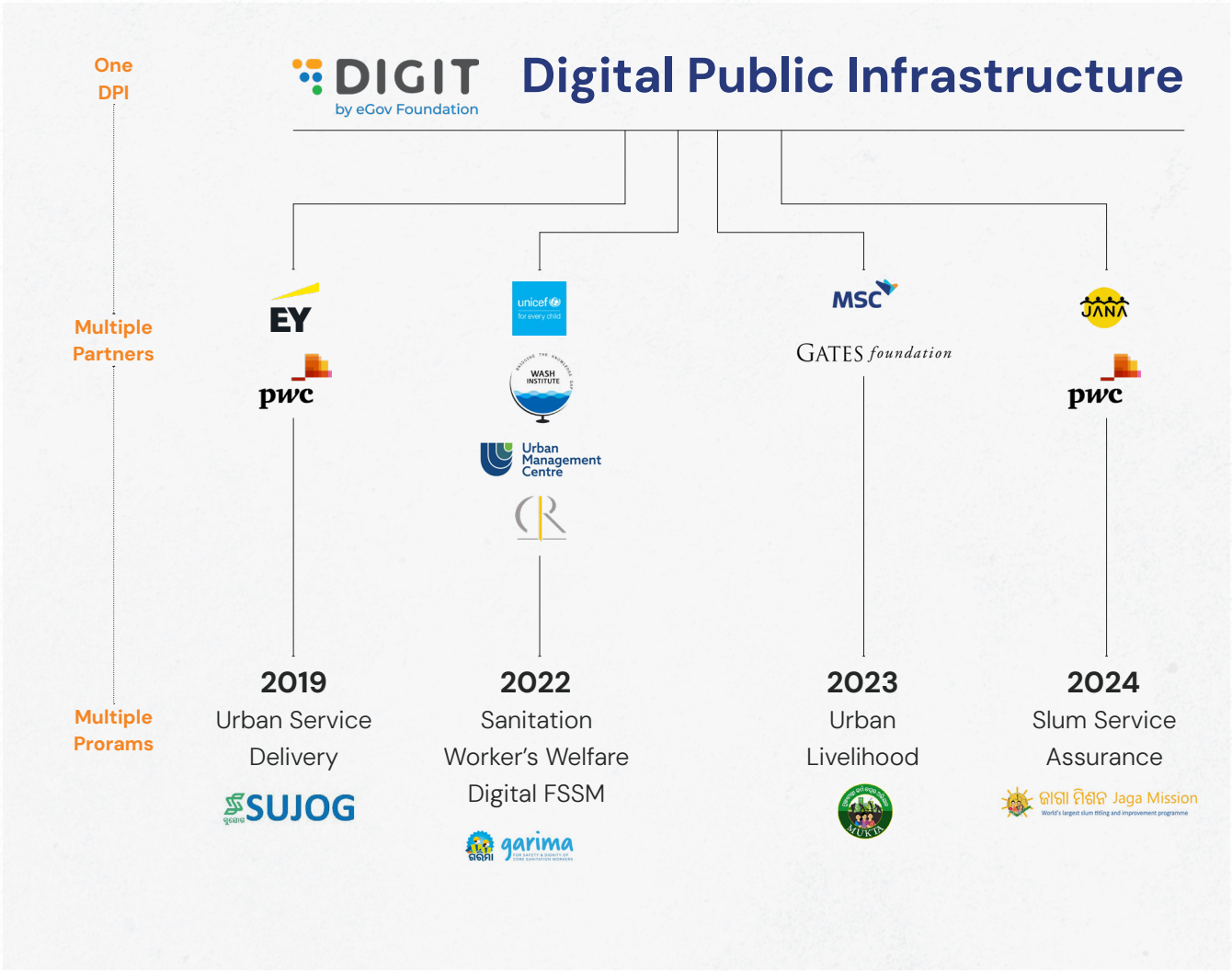
Many NRIs face difficulty in completing marriage formalities due to being abroad. Instead of forcing this population into resource-intensive, cumbersome processes or non-compliance, Information Kerala Mission (IKM), in 2024, developed a Video KYC module that allows the couple to verify their identity and complete the registration via a video call on the K-SMART app. This innovation is equally relevant for any couple unable or unwilling to visit the registrar's office, including those with mobility constraints, inter-state couples, or individuals in remote areas.



In April 2025, the first marriage was successfully registered with both bride and groom in different locations entirely online, in a process taking just 10 minutes[13]. The platform uses secure video conferencing and electronic document verification (Aadhaar eKYC, etc.) to satisfy legal requirements, and issues the digital marriage certificate without any in-person appearance. This innovation was layered on top of the existing K-SMART system, meaning the core platform was flexible enough to incorporate new functionality relatively quickly, without breaking existing services.

Odisha had been employing the power of incremental building over the last 6 years. Drawing on the success of its municipal service delivery platform, SUJOG, the state has incrementally utilised the digital public infrastructure on which SUJOG was built to address a wider range of urban challenges. Targeted solutions were rolled out for sanitation workers' welfare (the GARIMA scheme's SHWAS platform for registering workers and tracking benefits), for city-wide faecal sludge management (the SUJOG-FSSM digital system), for urban poor livelihoods (the MUKTA wage-employment programme, which leverages SUJOG for timely payments), and for slum upgrading and service monitoring under the Jaga Mission (including a state-wide SDA training app, web dashboard, and Adarsh Colony portal). Each innovation emerged gradually to address a specific need, yet all were designed to plug into the common architecture and have since been aligned with SUJOG's core platform for seamless citizen services.

This sustained, incremental approach was enabled by institutional collaboration and adaptive problem-solving. Odisha's Housing & Urban Development Department co-created solutions with cities, communities, and a coalition of development partners. Technical support and domain expertise were marshalled from organisations like eGov Foundation (providing the DIGIT platform), consulting firms (PwC, EY), and social partners (Gates, UNICEF, Janaagraha and others). Such broad collaboration ensured that each new digital module addressed on-the-ground challenges while remaining accessible via the SUJOG platform as the single interface for citizen interaction. The result is an ecosystem of modular but connected platforms that can evolve continuously rather than a one-time overhaul.



These state experiences illustrate that a successful digital platform is not a finished product, but an evolving system shaped by field realities. What enabled Kerala, Punjab, and Odisha to sustain momentum was a shared commitment to modular design, phased implementation, and a willingness to adapt based on feedback. Open-source platforms like UPYOG and DIGIT provided the technical backbone, but it was the institutional mindset, one that empowered in-house teams, welcomed course correction, and engaged a wide ecosystem of partners, that made the difference. When states treat digital governance as a continuous journey rather than a single event, they create systems that are not only resilient and responsive but also capable of innovating for the future.

Humanising THE DIGITAL

Creating an Infrastructure of Intermediaries to Improve Inclusion and Trust

States implementing digital governance should not aim to eliminate the human layer, but rather redesign it to complement and strengthen digital systems. This means embedding intermediaries such as frontline workers, SHG members, or municipal agents who can bridge the gap between citizens and the digital state. By combining the efficiency of technology with the familiarity of human interaction, states can ensure that their platforms remain truly citizen-centric. **Experiences from Odisha show that the inclusion of human intermediaries and support systems can help "humanise" digital platforms, making them more accessible, trustworthy, and effective.**

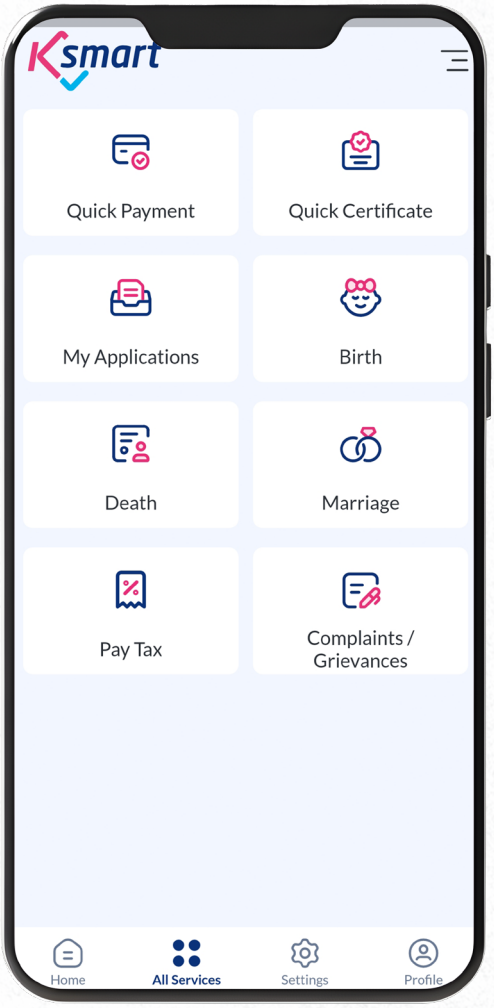
As part of urban digital transformation through the SUJOG platform, the state deployed a large cadre of intermediaries across its ULBs, notably Jal Saathis for water services and Tax Collectors for property tax and other collections.

The Jal Sathi programme, launched in December 2019, was conceived in partnership with the Women's Self-Help Groups (SHGs) under Mission Shakti. Over

900

women are engaged as Jal Saathis to work in their local communities.

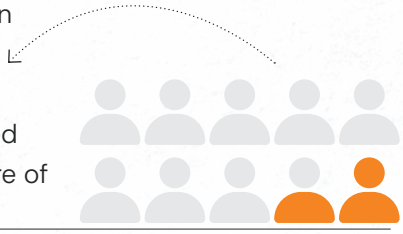
Each Jal Sathi is trained and equipped with a smartphone or a mobile Point-of-Sale (mPoS) machine that connects to the SUJOG digital platform in real time. Their job is to visit households with an mPoS, distribute water bills, collect water fees at the doorstep, issue instant digital receipts, and even help households register service requests or complaints. Similarly, dedicated tax collectors perform rounds in neighbourhoods for tax collection, using the mPoS devices connected to the SUJOG system.



The impact of these intermediaries has been profound. They essentially extended the digital platform's reach into every lane and home, even where internet access or awareness is low. A 2024 field study in Odisha by eGov Foundation highlighted that citizen awareness of SUJOG remains limited, with less than

15%

of interviewed citizens aware of the platform.



Despite that, services were still getting delivered digitally because "most citizens engage with municipal services indirectly through intermediaries such as Jal Sathis, Tax Collectors, and Citizen Service Centres"[14], ensuring continued access despite low direct adoption. In other words, even if a resident doesn't know how to use SUJOG online, they can pay their bills or lodge grievances via the Jal Sathi who visits them.

While Odisha utilised Mission Shakti, a 25-year-old women's empowerment programme, other states can replicate this through the Self-Help Groups under the National Urban Livelihoods Mission (NULM). With the right training and platform access, these SHGs can serve as a community-based, digitally enabled fourth layer of urban governance. Embedded within neighbourhoods, these local agents can bridge the digital divide, expand inclusion, and restore a sense of trust and human touch in digital service delivery.

Sustaining The TRANSFORMATION

Institutionalising Digital Reforms for the Long Haul

States undertaking digital transformation must go beyond implementation and design for institutional sustainability over the long term. Digital transformation initiatives that begin with enthusiasm often perform suboptimally due to weak institutional anchoring, shifting government priorities, or a lack of continued support. Andhra Pradesh's approach with the Municipal ERP is a great exemplar to look at in this backdrop, on how digital governance can be sustained and institutionalised, turning pilots into long-term transformation.

Andhra Pradesh's municipal service delivery has undergone a significant digital transformation since the deployment of Municipal ERP in 2015. A wide range of municipal services were brought onto unified online platforms, and multiple service delivery channels were introduced to ensure citizens could access services "**anywhere, anytime, 24x7**" in a contactless, cashless, and paperless manner.

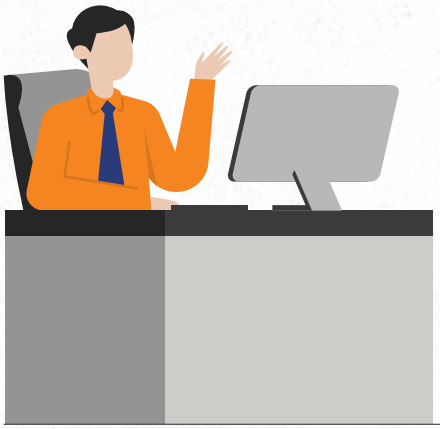
Rather than treating platform adoption as a short-term implementation challenge, the state approached it as a long-term governance strategy anchored in institutional commitment, continuous capacity building, and adaptive management.

Another key to institutionalisation was assigning clear ownership and accountability for the digital systems within the bureaucracy. Andhra Pradesh's Municipal Administration department designated Nodal Officers for each major module of the e-governance system. Each Nodal Officer not only led the rollout of their module statewide but was also given charge of a specific district to monitor usage and performance. These officers conducted regular field visits to ULBs, reviewed how well local staff were adopting the digital platform, and directly drove on-ground adoption. Such an arrangement ensured that the new digital processes were not confined to a central IT team, but became part of the daily administrative routine across the state. It created a layer of institutional champions within the government who are accountable for sustaining the reforms.

Further, strong programme governance routines were established to institutionalise continuous oversight. The Director of Municipal Administration (DMA) held weekly review meetings (often 3 to 4 hours every Monday) with all stakeholders, such as Nodal Officers, the e-governance technical team, and the system integrator team. This high-frequency cadence was maintained for about 18 months until the new application stabilised and satisfactory adoption levels were reached. Regional Directors were also instructed to hold regular reviews in their jurisdictions. Such rigorous review mechanisms embedded a culture of problem-solving and adaptation, making the digital reform effort a sustained administrative priority rather than a one-time rollout.

Another important step in the implementation journey was the establishment of Ward Secretaries, a new local governance mechanism created in 2019 to deliver services at citizens' doorsteps. Each urban ward secretariat employs about ten Ward Secretaries, massively augmenting administrative capacity for service delivery. This network of 134,694 new secretaries (covering both urban and rural areas) now serves as a one-stop shop for government services and welfare schemes across

35 departments



All 26 core municipal services were seamlessly integrated into the Ward Secretariat channel, effectively replacing the old in-office counters with a decentralised, community-based channel. By formally constituting a dedicated Department (Grama Sachivalayams Ward Sachivalayams Department) to supervise the secretariats, the government ensured these reforms are anchored in a permanent institutional setup rather than a transient programme.

Monitoring adoption metrics and addressing barriers was institutionalised within the programme governance. The department closely tracked how many citizens were using each channel and service. For instance, download statistics for the mobile app were monitored ULB-wise, with biweekly reports sent to all stakeholders so that low-adoption areas could be prodded to improve. This persistent tracking over months (the app usage was monitored for over a year post-launch) ensured that the initial enthusiasm translated into sustained usage.

After the contract with the implementation partner was concluded, the state took full ownership of the platform in March 2021. A dedicated cell was created within the department to monitor the post-rollout phases, and even the Chief Minister's Office conducted fortnightly reviews to track progress. By internalising the platform's management and oversight, the state reduced dependency on external partners and solidified the reforms as a permanent function within its governance toolkit.
To further safeguard against political ebb and flow, municipal reforms were often linked with national or state-level missions (AMRUT, Swachh Bharat, EoDB rankings, etc.), which provided continuity and funding beyond the

state's electoral cycle. This also provided recognition and external validation to the state, making it politically advantageous for successive governments to continue on the digital path.

Moreover, the digital transformation project demonstrated tangible improvements. Property tax collections rose markedly from just a few hundred crores to over ₹1,400 crore annually after the digital system was adopted, and similar jumps were seen in water bill collections. These outcomes speak a language that any political leadership values: improved fiscal sustainability and effectiveness in service delivery. Showcasing these wins through open dashboards and reports made the case that rolling back the reforms would be unpopular and counterproductive. In essence, performance legitimacy – proving that the digital approach delivers results – has been a key strategy to ensure that no matter who is in power, the incentives favour continuity.

By planning for longevity beyond individual champions, projects, or vendors, Andhra Pradesh managed to sustain its municipal digital transformation through multiple phases of change.

From Exemplars TO ALL

Key Learnings for State-led Digital Transformation

Drawing on the success stories of Andhra Pradesh, Kerala, Odisha, and Punjab, other states can adopt the following key recommendations, for a scalable, inclusive and sustainable urban digital transformation:

Plan and design

- Develop a unified digital platform for all Urban Local Bodies (ULBs) in the state. Instead of each city procuring its own software, build one scalable platform to reduce per-capita costs, eliminate redundant efforts, ensure data interoperability, and provide uniform service quality across cities.
- Use modular, open-source frameworks to enable flexibility and expansion. Adopt an open digital infrastructure (such as UPYOG or DIGIT) that supports easy integration of new features and services without rebuilding core systems.
- Design with continuity in mind by integrating existing channels into the digital workflow. Do not abruptly eliminate legacy processes; instead, allow them to feed into the digital system to ease transition.
- Co-create digital solutions with implementation partners and ecosystem actors. Involve domain experts, development organisations, and civil society in designing user-centric services and iterating improvements.
- Plan early for institutional ownership. Ensure that digital platforms are designed to be managed by in-house teams after the vendor phase (if there is).

Pilot and roll out

- Start with a small pilot, test intensively, and scale gradually. Launch with a limited number of services and ULBs, incorporate feedback, and expand iteratively to build momentum while managing risk.
- Conduct regular performance reviews to track progress and solve issues. Hold high-frequency, high-ownership review meetings to drive improvements, troubleshoot technical issues, and ensure uptake.
- Facilitate human intermediaries to support citizens during the digital transition. Leverage Self-Help Groups (SHGs), particularly those under NULM, as digitally enabled agents embedded in neighbourhoods.

Drive adoption and institutionalise

- Develop innovative delivery channels such as ward secretariats or service centres to embed digital access into daily governance routines.
- Assign clear ownership and accountability within the bureaucracy. Designate senior officers as nodal leads for service modules and assign them district-level responsibilities to monitor platform use and support ULBs.
- Track usage metrics continuously and address adoption gaps in real time. Monitor digital adoption through dashboards and field reports to identify underperforming areas and direct targeted training or support.

Ensure sustainability and political continuity

- Align digital reforms with larger policy mandates and national priorities. Link the platform to relevant national missions to attract funding, reinforce legitimacy, and reduce political reversal risk.
- Demonstrate measurable improvements in service delivery and revenue. Showcase tangible outcomes such as higher tax collection, reduced service delays, or increased citizen satisfaction to validate reforms. Make results visible to both citizens and political leadership to build trust and secure long-term commitment across administrations.

By following these recommendations – scalable state platforms, inclusive integration of legacy processes, iterative development, human-assisted outreach, and strong institutional ownership – other states in India (and beyond) can replicate the trailblazing successes of the pioneer states.

Notes

1. Press Information Bureau. (2024, February 29). Cities are going to be central in achieving global goals related to sustainability and climate resilience: Minister Hardeep S Puri. Press Information Bureau, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2010349#:~:text=more%20than%2050%25%20of%20India%E2%80%99s%20population%2C%20or%20877%20million%20people%2C%20will%20live%20in%20our%20-cities%20and%20towns%20by%202050%2C%20according%20to%20the%20UN.%20By%20that%20time%2C%20he%20said%2C%20Indian%20cities%20will%20contribute%20to%20more%20than%2075%25%20of%20our%20GDP%20and%20also%20about%2060%25%20of%20our%20GHG%20emissions.

2. Virmani, A. (2024, July 19). Viksit Bharat: Unshackling Job Creators and Empowering Growth Drivers (Working Paper). NITI Aayog, Government of India. Retrieved April 16, 2025, from https://www.niti.gov.in/sites/default/files/2024-07/WP_Viksit_Bharat_2024-July-19.pdf

3. Penn Today. (2023, February 10). Understanding India's urban future. University of Pennsylvania.https://penntoday.upenn.edu/news/understanding-indias-urban-future?utm_source=chatgpt.com#:~:text=Over%20half%20of%20India%E2%80%99s%20urban%20population%20lives%20in%20towns%20with%20less%20than%20500%2C000%20people.

4. This is why the Union Ministry of Housing and Urban Affairs developed UPYOG as a reference Digital Public Infrastructure, to guide and support state-led urban platforms, rather than prescribing a one-size-fits-all National Urban Governance Platform.

5. See:

- Anand, S., & Nambiar, M. (2025, February 10). From Global Trends to Local Transformation: The Evolution of Digital Governance in Urban India. National Institute of Urban Affairs. Retrieved from https://niua.in/global-trends-local-transformation-evolution-digital-governance-urban-india
- World Bank. (2020, December 15). Cities in India bet on digitization for better services. World Bank. https://www.worldbank.org/en/results/2020/12/15/cities-in-india-bet-on-digitization-for-better-services

6. Neethu Joseph. (2019, March 22). Delayed, then scrapped: Kochi corporation blames TCS for e-governance failure. The News Minute. https://www.thenewsminute.com/kerala/delayed-then-scrapped-kochi-corporation-blames-tcs-e-governance-failure-98739#:~:text=The%20e%2Dgovernance%20project%20was%20initiated%20in%202011%20at%20a%20total%20cost%20of%20about%20Rs%209%20crore.

7. Total expenditure(4,00,00,000) / population of Kochi as per census 2011 (6,02,046) = 66.44

8. Market intelligence through key informant interviews.

9. Total expenditure(80,00,00,000) / population of Kerala as per census 2011 (3,34,06,061) = 23.95. Here it should be noted that the K-SMART platform is rolled out for all the local bodies in kerala, effectively covering its entire population.

10. Government of Kerala, Local Self Government Department. (2025, April 10). Approval and deployment of K-SMART application in local self-government institutions (G.O. (Rt) No. 66/2025/LSGD). Government of Kerala. https://go.lsgkerala.gov.in/files/go20250410_38926.pdf

11. World Bank. (2016). World Development Report 2016: Digital Dividends. Washington, DC: World Bank. https://documents1.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf

12. Indian Express. (2024, June 15). The Kerala migration story: Decline in migration to Gulf, over 40 % emigrants are Muslim. Indian Express Explained. Retrieved from https://indianexpress.com/article/explained/kerala-mirgation-survey-findings-gulf-9398005/

13. Mathrubhumi English. (2025, April 11). With K-Smart, Malayalis can now register their marriage from anywhere in the world in just 10 mins!. Mathrubhumi English. Retrieved from https://english.mathrubhumi.com/news/kerala/malayalis-can-now-register-their-marriage-from-anywhere-in-the-world-in-just-10-mins-3741d743

14. eGov Foundation. (2025). State of Urban Digital Governance in Odisha: Field Study Report, April 2025. Bengaluru, India: eGov Foundation. https://egov.org.in/whitepaper/state-of-urban-digital-governance-in-odisha/