K-SMART IMPACT REPORT

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LIST OF ABBREVIATIONS

ARC – Administrative Reforms Commission
B&D – Birth & Death (Registration)
CFC – Citizen Facilitation Centre
DWG – Domain Working Group
G.O. – Government Order
HRMS – Human Resource Management System
ICT – Information and Communication Technology
IEC – Information, Education, and Communication (campaign or materials)
IKM – Information Kerala Mission
IT – Information Technology
LB (plural LBs) – Local Body/Bodies
LSGD – Local Self Government Department
MERL – Monitoring, Evaluation, Research, and Learning
NPS – Net Promoter Score
PGR – Public Grievance Redressal
POCSO – Protection of Children from Sexual Offences (Act)
RLB (plural RLBs) – Rural Local Body/Bodies
SLA – Service Level Agreement
SMS – Short Message Service
SOP – Standard Operating Procedure
TA – Technical Assistant
TL – Trade License
ULB (plural ULBs) – Urban Local Body/Bodies
eGov – eGovernments Foundation
eKYC – electronic Know Your Customer
ePOS – electronic Point of Sale
eSign – electronic Signature

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EXECUTIVE SUMMARY

K-SMART has successfully established a functional digital ecosystem that is live in **1100+ Local Bodies(LB),** which has significantly improved service delivery experiences in Kerala.

Parallel paper trail eliminated: All applications are processed end-to-end in K-SMART; no physical registers are maintained.

Staff sentiment is strongly positive. 70% of employees reported **gains in efficiency** and **improved ease of working**. 64% reported improvement in speed. **Confidence** is high for accuracy (88%) and reliability (79%). Employee **Net Promoter Score** is 44, with 61% promoters, 17% detractors and 20% passive.

Training & Support: 88.2% of employees reported that they received training. By design, every LB has an IKM (Information Kerala Mission) Technical Assistant (TA) and access to need-based floor troubleshooting. In practice, employees most often used WhatsApp groups (58.8%) and their IKM TA (41.2%) for quick help.

Access is statewide, not just online. Citizens can file applications, grievances and appeals and download certificates through the **mobile application, web portal, Citizen Facilitation Centre (CFC) counters established in offices and the Akshaya network.**

Digital-by-default is acceptable: 82.1% of citizens are happy to receive digital certificates; among those stating a channel preference, **88.9%** prefer digital channels.

EXECUTIVE SUMMARY

HOW K-SMART SOLVED PARALLEL PAPER TRAIL?

- Statewide order mandating explicit usage of K-SMART
- Assisted digital intake via LB-level Facilitation centres and Akshayas
- Holistic product design | Interoperating modules | Integrations

CHALLENGES?

Low Citizen SLA Awareness

Across citizen respondents 70% were unaware of service-delivery rights/timelines; 20% had only heard of them; 10% were fully aware. Without Service Level Agreement (SLA) literacy, transparency won't translate into accountability.

Akshayas Becoming Power Centres

As volumes shift to assisted channels, queue times are rising, and charges vary because there was no standard fee chart for K-SMART services. The IT Department's notification of fixed rates is a corrective step in this direction.

WAY FORWARD

- **Re-calibrate SLAs:** Use application data to recalibrate and set realistic timelines, adjusting them periodically to match service realities.
- **Standardise Akshaya Experience:** Enforce fixed fees, mandate fee display at counters, and provide regular training to ensure timely, reliable service delivery.
- **Build Citizen Awareness:** Improve SLA literacy via SMS, app nudges, and rights displays in offices and Akshaya centres, and make SLAs visible by default through acknowledgements, in-app countdowns, and escalation options.
- **Strengthen Assisted Channels:** Monitor turnaround times in Akshayas, and incentivise operators for better citizen satisfaction.

BACKGROUND & RATIONALE

Kerala's local self-government system has historically relied on a suite of domain-specific e-governance applications maintained by the Information Kerala Mission (IKM) under the Local Self Government Department (LSGD). Among the most widely used were Sevana for civil registration, Sanchaya for revenue and licensing, and Sulekha for plan formulation and monitoring (LSGD, n.d.). These applications provided important digital access points for citizens and officials alike, but because they were developed in isolation, they often functioned as standalone modules with little interoperability. The Administrative Reforms Commission (ARC) observed that many local governments continued to depend on "obsolete" applications, with integration across departments still limited (Kerala Administrative Reforms Commission, 2021). As a result, parallel paper registers remained in widespread use, undermining efficiency and duplicating effort. Although Citizen Charters formally defined service-level timelines, awareness among citizens was weak, and monitoring within departments was inconsistent. Delays were frequent, especially for services such as trade licenses and building permits, where processes promised within a few days often stretched much longer (Centre for Public Policy Research, 2021).

At the same time, Kerala's long trajectory of decentralisation and strong human development context made it an ideal setting to attempt a deeper transformation. Since the People's Plan Campaign of 1997, the state has been at the forefront of devolving financial and administrative authority to local governments, creating strong institutions with the mandate and capacity to manage service delivery. With literacy rates approaching 94% and the highest Human Development Index among Indian states, Kerala has consistently offered an enabling environment for governance innovation. Kerala has consistently been a high performer in governance indices such as the Good Governance Index, the Public Affairs Index, and most recently the Urban Governance Index, which rank it among the top states for institutional quality and service delivery.

This foundation was complemented by early and pioneering investments in digital governance: the Akshaya project, launched in 2002, made Kerala the first state to achieve statewide e-literacy and established a vast network of ICT (Information and Communication Technology) centres; *Sevana*, *Sulekha*, and *Sanchaya* digitised critical domains of civic administration; and the e-Sevanam portal consolidated multiple services in one platform. Collectively, these initiatives not only demonstrated Kerala's

capacity to adopt technology in governance but also revealed the limitations of siloed approaches. For instance, while *Sulekha* has supported participatory planning and project monitoring for over a decade, its lack of seamless integration with other systems often meant that plan data could not easily inform licensing, taxation, or grievance modules.

It was against this backdrop that the Government of Kerala, in January 2024, launched the K-SMART platform (Kerala Solutions for Managing Administrative Reforms and Transformation) across all 93 Urban Local Bodies (ULBs) (LSGD, n.d.). Unlike its predecessors, K-SMART was designed as a unified, modular stack capable of bringing together core urban services into a single, end-to-end digital process. Citizens could now submit applications online or through facilitation centres, track progress in real time, and receive digitally verifiable certificates and receipts through the portal or mobile app. Subsequently, in 2025, it was expanded across all 1,200+ Rural Local Bodies (RLBs). For the first time, the entirety of Kerala's local self-government system would operate on a common digital backbone.

This confluence of conditions made 2023–2025 an ideal time frame to study the digital governance transformation of the state. On the one side, it captured the state of fragmentation, paper dependence, and opacity in service timelines that had characterised the earlier era. On the other, it marked the beginning of a statewide transition toward a unified, citizen-facing platform with the potential to radically improve timeliness, transparency, and accountability. Studying this juncture, therefore, provides unique insights into how K-SMART addressed long-standing bottlenecks and sets the stage for a deeper examination of its impacts on efficiency, citizen experience, and institutional trust in Kerala's digital governance system.

STATE OF URBAN DIGITAL SERVICE DELIVERY IN 2023: BASELINE STUDY RESULTS

Methodology

The baseline field study was conducted between January and February 2023 in **eight Urban Local Bodies** (ULBs) [6 Municipalities and 2 Municipal Corporations] across Kerala, selected to represent a cross-section of municipal contexts. The focus was on the three modules slated for K-SMART's pilot rollout, Trade License (TL), Birth & Death Registration (B&D), and Public Grievance Redressal (PGR), and was designed to capture both employee and citizen perspectives, with particular attention to ease of working for staff, ease of access for citizens, and the overall citizen awareness on digital public service delivery.

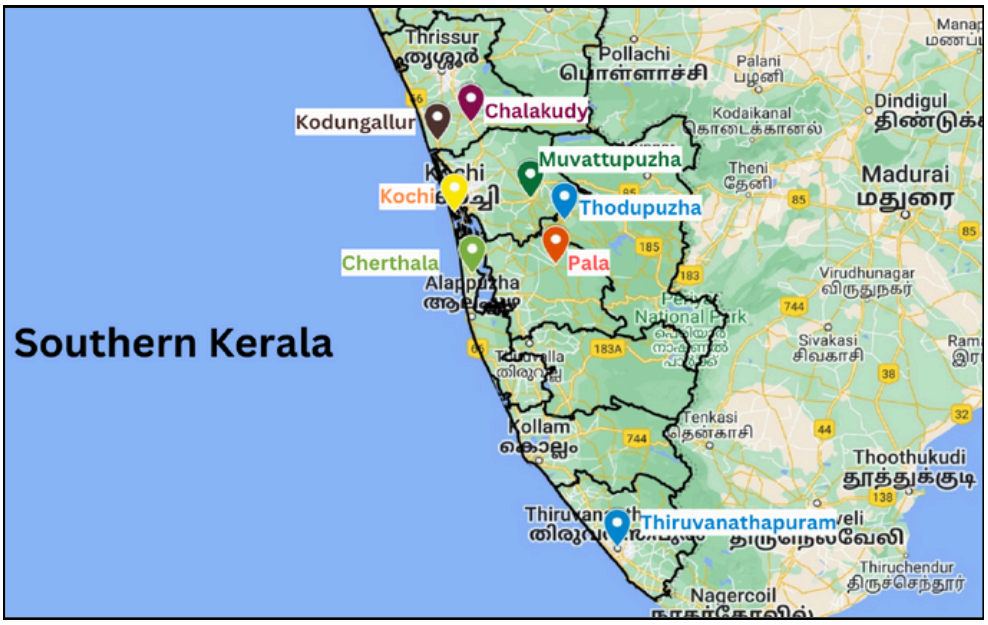


Fig 1: *ULBs covered in the study*

A mixed-methods design was adopted, combining qualitative and observational tools to establish a rich picture of pre-K-SMART realities. Three principal tools were used:

- **Non-participatory observation,** conducted within municipal offices, to document how transactions were handled across both digital and paper systems.
- **Semi-structured interviews** with employees (n=34), covering staff across different functions, to understand the day-to-day challenges of using multiple software systems, maintaining paper registers, and processing citizen requests.
- **Unstructured interviews** with citizens (n=21) who were visiting the ULB office, to assess their awareness of digital channels, SLAs, and entitlements.

Demographic Profile of Emoployees Interviewed

The respondent group displayed a moderately diverse demographic profile. Females formed the majority, with 25 respondents compared to 9 males, indicating a gender composition skewed toward women. Educational qualifications were evenly distributed between undergraduates (14) and postgraduates (14), while a smaller segment (6) had completed 12th standard. This mix suggests a well-educated participant base with substantial exposure to higher education. In terms of digital proficiency, most respondents (25) reported intermediate computer knowledge (comfortable with everyday digital tools such as MS Office or online services), while a few identified as basic users (6) and only three demonstrated advanced skills. Overall, the sample reflects a largely educated and digitally capable cohort, with strong female representation.

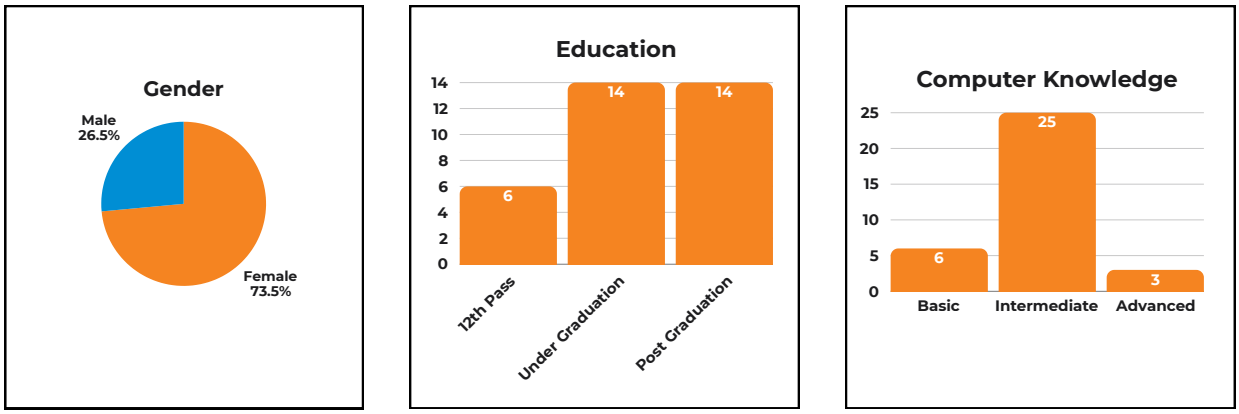


Fig 2: *Demographic Profile of Employees who were interviewed (n=34)*

Findings- Employee Preference of Channel

The majority of respondents (26 out of 34) expressed a clear preference for online service delivery, highlighting growing comfort and trust in digital platforms for routine tasks. Only a small group (8 respondents) preferred a hybrid approach, using both online and offline channels as needed. This pattern suggests that while digital adoption is strong, a subset of users still values assisted or in-person options, likely due to habit, connectivity issues, or the nature of specific services requiring physical verification.

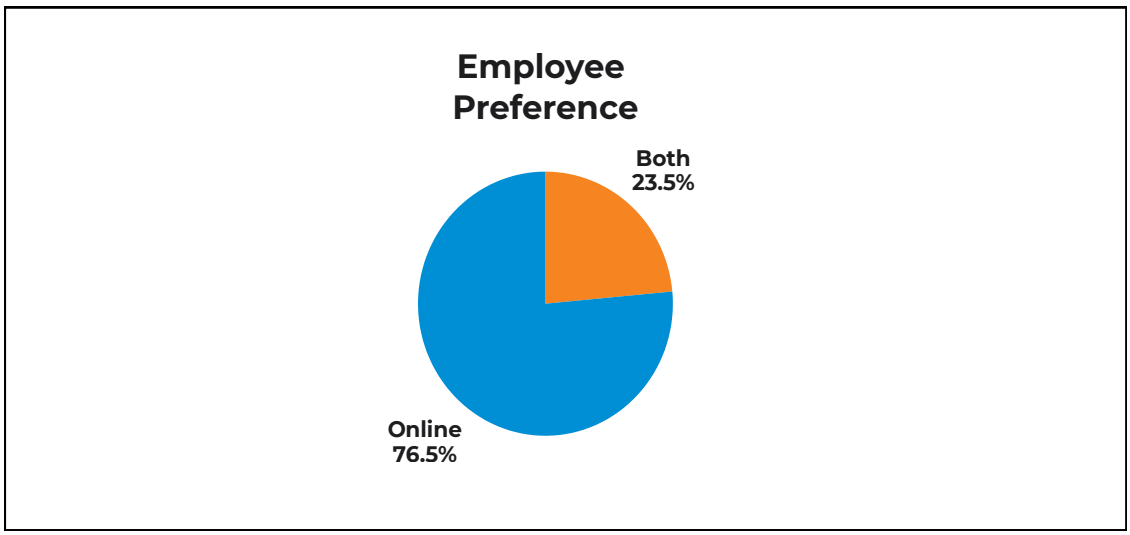
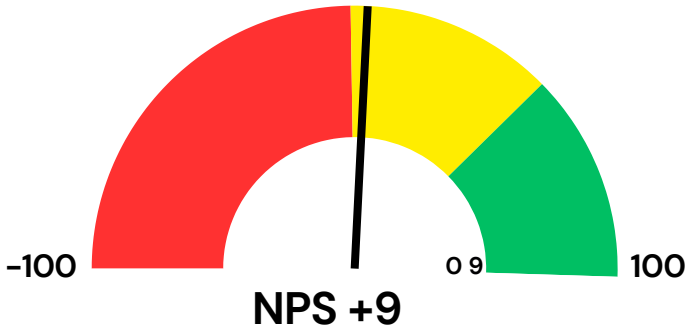


Fig 3: *Employee Preference of Channel*

Findings - Employee NPS

The overall satisfaction pattern shows that a majority of respondents fall within the passive category, with 21 out of 34 (61.8%) giving moderate scores of 7–8. Promoters, those highly satisfied and likely to recommend the service, constituted 23.5% of the group, while detractors, or those expressing dissatisfaction (scores 0-6), accounted for 14.7%. This distribution yields a Net Promoter Score (NPS) of +8.8, indicating a generally positive but cautious sentiment among respondents.



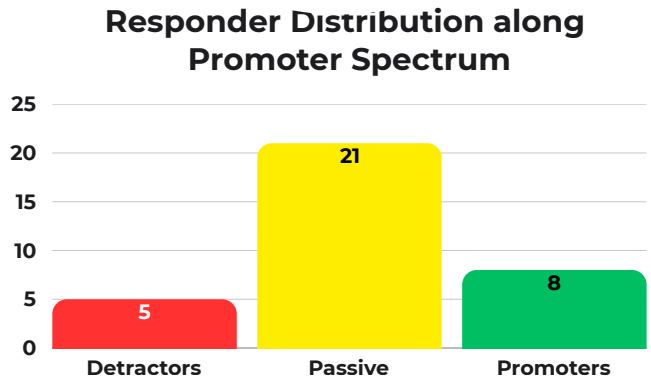


Fig 4: *Net Promoter Score as reported by employees (n=34)*

Other Thematic Findings from Qulaitative Responses

One of the most prominent findings was the **lack of standardisation in data entry and storage**. Data on revenue, service volumes, and compliance with service-level agreements (SLAs) were not easily retrievable. In some ULBs, a grievance record could be located within minutes if entered in a consistent format, but in most cases, retrieval took hours. The absence of common formats and reliance on multiple siloed software systems created inconsistent, unreliable, unintegratable and unusable data.

Further, employees repeatedly pointed to the **confusion created by using multiple software applications simultaneously**. Each program had its own login credentials, data fields, and workflows. *"I have written all my usernames and passwords in this diary,"* acknowledged one staff member, "I cannot remember this much information."

It also posed security risks, since passwords were often recorded manually and could easily be misplaced or misused. Rather than simplifying work processes, technology often became an added burden for employees.

The persistence of **parallel paper trails** emerged as the most time-consuming practice. For every application recorded online, a physical register was also maintained. All employees interviewed reported spending between 40 to 80 % of their working hours maintaining these duplicate paper records. In one ULB, even the complaints that were received through online channels were invariably printed out and processed on paper. A clerk in the Birth and Death section described the situation vividly:

> *"We maintain a birth registry 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 record, correct the name there and attach this letter. This will take at least a couple of hours of my time." (Interview, ULB Employee in Kerala, Jan 2023)*

This duplication was not simply an administrative quirk; it reflected deep-seated distrust of digital systems. Many employees feared the consequences of computer failure: "What will happen if something happens to the computer?" one asked. Citizens, too, showed limited confidence. Business owners often lobbied councillors to demand physical certificates, even when digital licenses were issued. In sensitive contexts, such as court cases under the Protection of Children from Sexual Offences (POCSO) Act, judges insisted on inspecting physical birth registers rather than accepting digital certificates. Even banks and other institutions were reluctant to recognise digital documents, leaving staff with little choice but to maintain paper records alongside electronic ones.

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The study also found that citizen awareness was strikingly low. Few of the citizens interviewed had ever heard of SLAs or the Right to Service Act (Kerala State Right to Services Act 2012), and even fewer were aware that services could be accessed online. In fact, only one ULB had displayed a poster with information about digital service delivery. Because most citizens continued to come physically to the

municipal office, the digital channels that did exist were underused. Nevertheless, this sample may have been skewed, as citizens who know about online options are less likely to visit offices, but the low visibility of information boards and the weak communication around digital channels clearly limited uptake.

Taken together, these findings depict a system in which digital reforms had not yet displaced entrenched paper-based routines. Staff lacked confidence in digital systems, citizens distrusted or were unaware of digital services, and the broader politico-legal ecosystem, from courts to banks, remained anchored in physical documentation. In this environment, digital tools did not yet replace old practices; instead, they added a new layer of work on top of them. The baseline study thus captured a critical "before" moment. One where Kerala's ULBs were burdened by inefficiencies and duplication, yet poised for transformation through the promise of a unified urban digital governance platform capable of driving systemic reform by standardising data, integrating workflows, embedding accountability, simplifying operations, enhancing transparency, and rebuilding citizen trust.

STATE OF URBAN DIGITAL SERVICE DELIVERY IN 2025: MIDLINE STUDY RESULTS

Methodology

The midline field study, conducted in June 2025, revisited the same eight Urban Local Bodies (ULBs) that were covered in the baseline to ensure comparability of findings. In addition, three Panchayats were included to provide an initial view of how the K-SMART platform is being extended into rural contexts. For consistency and comparability, the assessment retained its focus on the three core modules that were covered in the baseline: Trade License (TL), Birth & Death Registration (B&D), and Public Grievance Redressal (PGR).

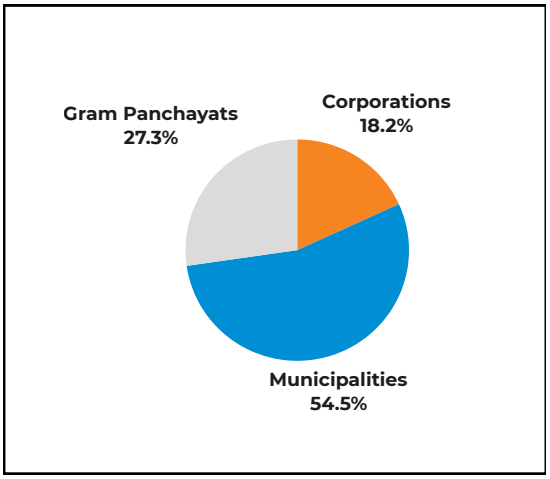


Fig 5: *Type of LBs covered in the Study*

The midline study employed a mix of qualitative and quantitative tools to capture both employee and citizen perspectives. **Semi-structured interviews with employees** (n=34) explored their experiences with K-SMART, focusing on efficiency, ease of working, trust in digital systems, and residual challenges. **Semi-structured interviews with citizens** (n=15) provided insights into awareness of digital channels,

use of Citizen Facilitation Centres, and perceptions of timeliness. To broaden citizen coverage, an online survey (n=17) was administered, generating comparable indicators on awareness and satisfaction in a more structured format. Finally, non-participant observations in municipal and panchayat offices were carried out to directly trace workflows, verify the discontinuation of paper trails, and assess how digital and assisted channels functioned in practice.

Findings- Employees

The employee respondents represented a balanced demographic profile. **Gender** distribution was nearly equal, with 52.9% female and 47.1% male staff. In terms of **education**, the majority held an undergraduate degree (19 respondents), followed by 12th pass (6) and post-graduation (4), with smaller numbers reporting diploma, M.Phil., or no response. **Computer literacy** clustered strongly at the intermediate level (29 respondents), which means they have proficiency in using applications such as MS Office Suite. Only a few reported basic (3) or advanced (1) skills.

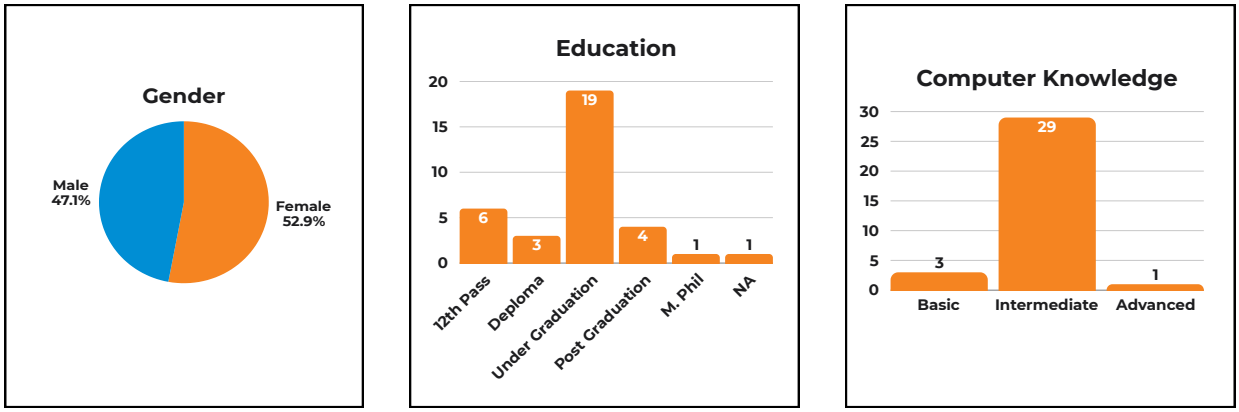


Fig 6: *Demographic Profile of Employees who were interviewed (n=34)*

When asked specifically about **application processing time**, only 11 employees felt confident enough to give a precise answer. Among this group, the reported **reductions** were substantial: an average reduction of 37.7%, with individual responses ranging from no change to as high as 75% faster processing. The distribution shows that 6 employees clustered around ~50% reduction, 2 at ~20%, 1 at ~75%, and 2 reported no reduction at all. While not universal across all staff, this subset illustrates that where employees closely track workflows, the impact of K-SMART is already visible in measurable cycle-time gains.

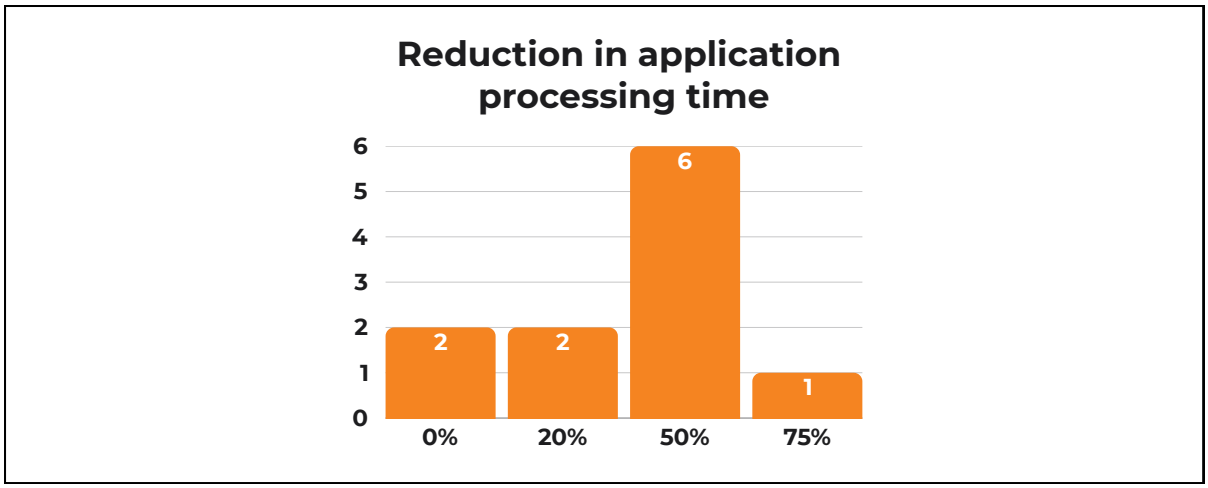
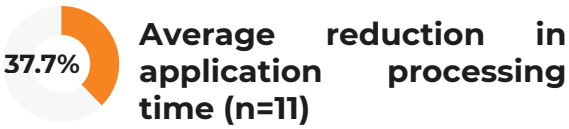


Fig 7: *Reduction in Application Processing time as reported by employees (n=11)*



On day-to-day experience, responses tilt decisively positive. For **efficiency**, 24 employees said it improved, 6 said it remained the same, and 4 said it decreased. **Ease of working** mirrors this pattern (24 / 6 / 4), suggesting the new workflows reduce the friction of routine tasks rather than merely speeding up isolated steps. Perceived **speed** also improved for a clear majority (22 improved / 6 same / 6 decreased). Taken together, these results indicate that employees experience benefits both as cycle-time gains and as cognitive/operational simplicity, the combination that has the potential to lock in behaviour change.

Fig 8: *Ease of Working, Efficiency and Speed as reported by employees (n=34)*

Trust in the digital system has risen markedly. For **confidence in accuracy**, 9 respondents reported being very confident and 21 reported being confident (with only 2 neutral and 2 not confident). **Confidence in reliability** shows a similar profile (10 very confident / 17 confident / 5 neutral / 2 not confident). This trust profile matters: when frontline staff believe records are accurate and the system will "hold" under load, they stop maintaining parallel paper trails as their own safety nets and start relying on the platform as the source of truth.

Fig 9: *Trust in the system as reported by employees (n=34)*

Satisfaction and peer advocacy echo the same story. The employee **Net Promoter Score** is +44, based on 21 promoters, 7 passives, and 6 detractors out of 34 respondents. In service organisations, NPS in the +40 range typically signals a self-reinforcing dynamic: satisfied staff onboard peers faster, resist reversion to old workarounds, and escalate issues through formal channels rather than bypassing the system (Reichheld, 2003; Satmetrix Systems, 2018).

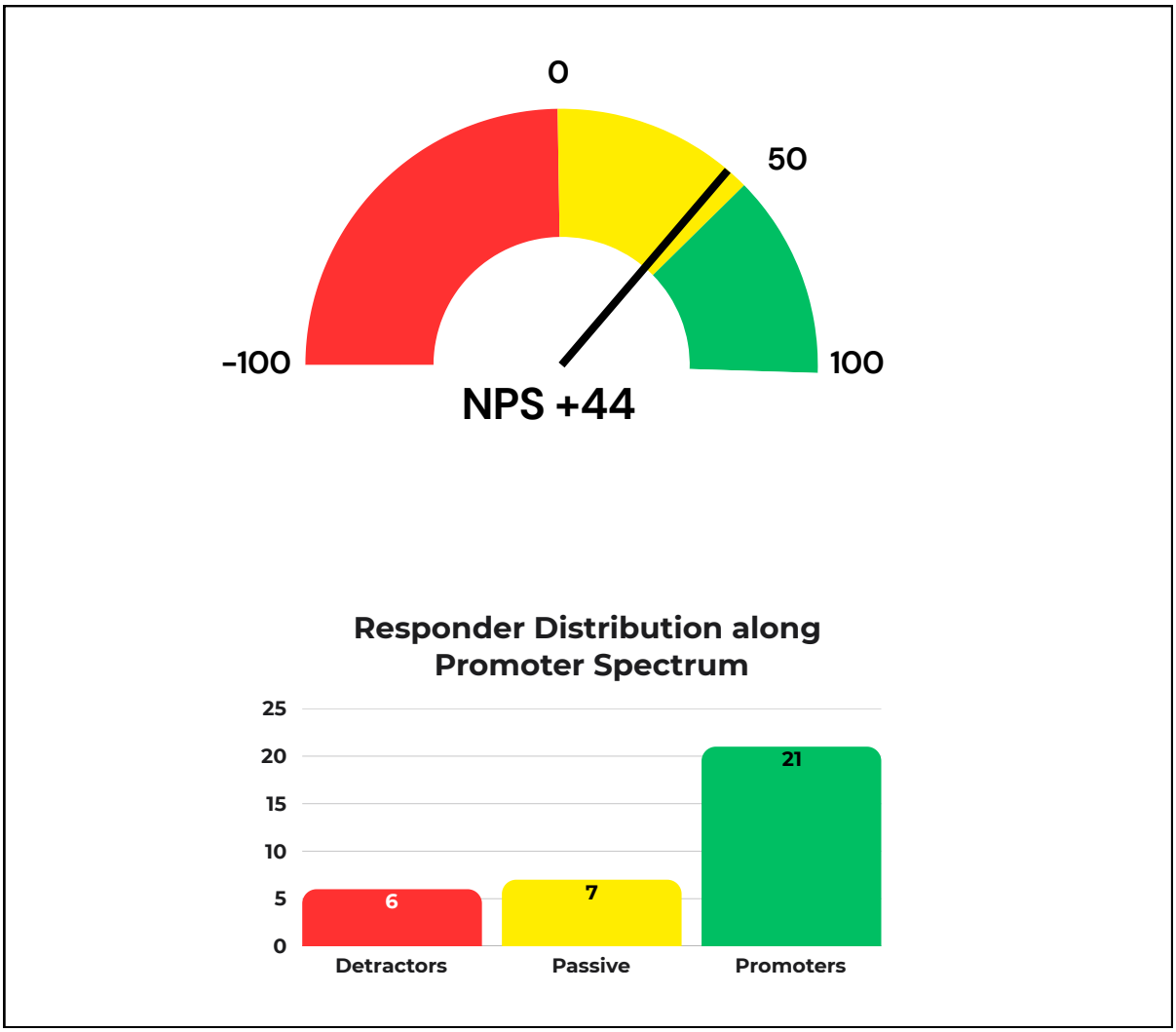


Fig 10: *Net Promoter Score as reported by employees (n=34)*

At a primary glance, what seems to power these shifts is the **capacity building** and **support** around the rollout. 88.2% of employees reported receiving training; delivery modes were hands-on (13), in-person (10), and online (7). This mix meets the workforce where most respondents self-identify as intermediate computer users, so tactile, on-floor practice is more valuable than a lecture format. Beyond training, employees highlight readily available help: an IKM Technical Assistant in every LB, and active WhatsApp groups for quick troubleshooting and peer learning.

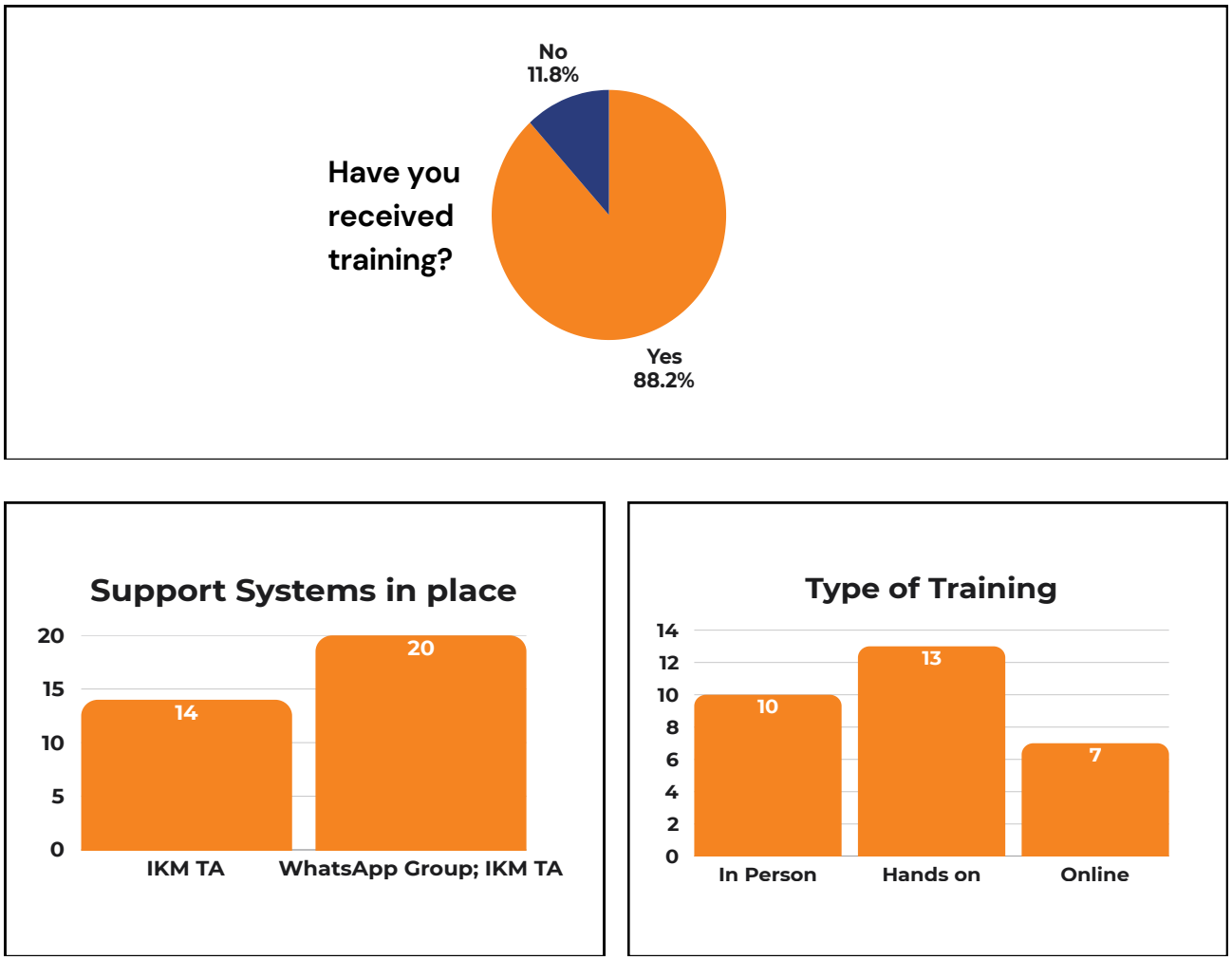


Fig 11: *Training and Support received by employees (n=34)*

In sum, the employee interviews depict a workforce that is experiencing real performance gains, trusting the system to do the right thing, and willing to advocate for it. With average processing times down ~38%, mostly-positive shifts in efficiency, ease, and speed, high confidence in accuracy and reliability, and an NPS of 44, the midline signals not just adoption but behavioural consolidation, a stage where digital use has moved beyond compliance to habit, with staff instinctively relying on the system, trusting its outputs, and promoting it among peers as part of everyday work culture.

Findings- Citizens

Drawing together the two citizen instruments, in-person field interviews (n=15) and the online survey (n=17), gives a combined picture across 32 respondents. **Awareness** of online municipal services is at 56.3% (18/32), with the remaining 43.8% (14/32) unaware. Awareness of K-SMART specifically is similar at 53.1% (17/32) aware and 46.9% (15/32) unaware. In short, **just over half of citizens in the combined sample recognise that services are available digitally and can name the platform.**

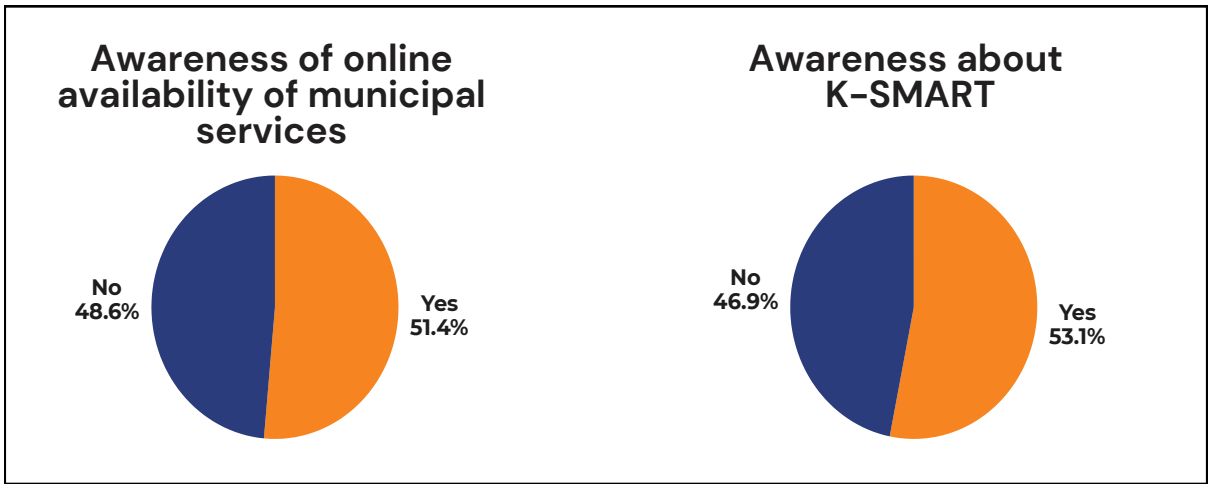


Fig 12: *Citizen Awareness about Digital Public Service Delivery (n=32)*

Of the 10 citizens who had used K-SMART at least once (47.6% of respondents), 1 found it "very easy," 3 "easy," 4 "neutral," and 2 "hard". That is, 40% easy/very easy, 40% neutral, and 20% hard.

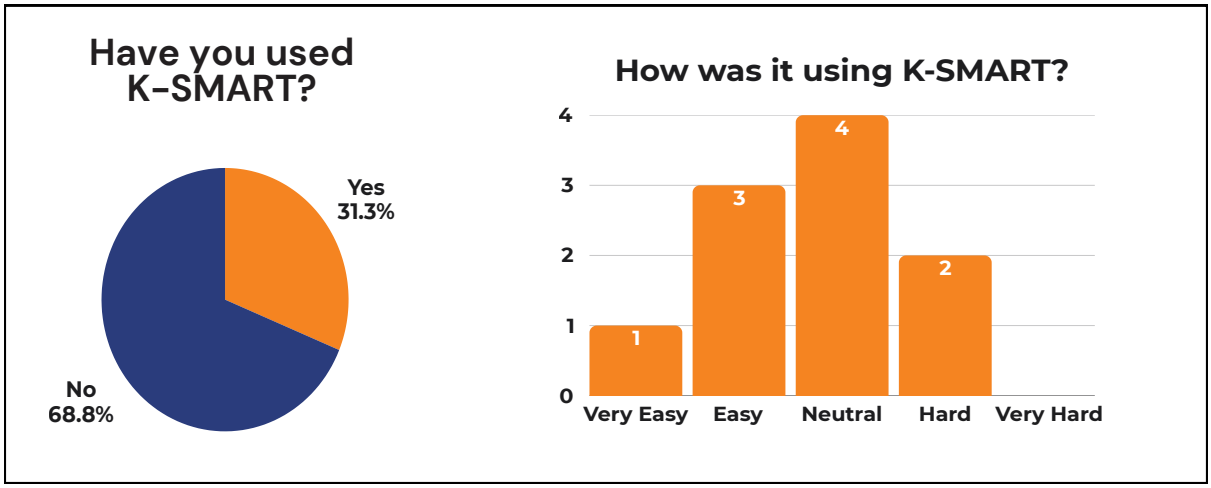


Fig 13: *Citizen Adoption and User Experience (n=32)*

Service Level Agreement (SLA) literacy is the sharpest citizen-side gap. Responses from those who answered the item (n=30), 70.0% (21/30) were unaware of service-delivery rights and timelines, 20.0% (6/30) had heard of them but without detail, and only 10.0% (3/30) reported being fully aware of their rights and entitlements. This means transparency features and faster processing won't automatically translate into citizen-held accountability unless SLA awareness is actively built.

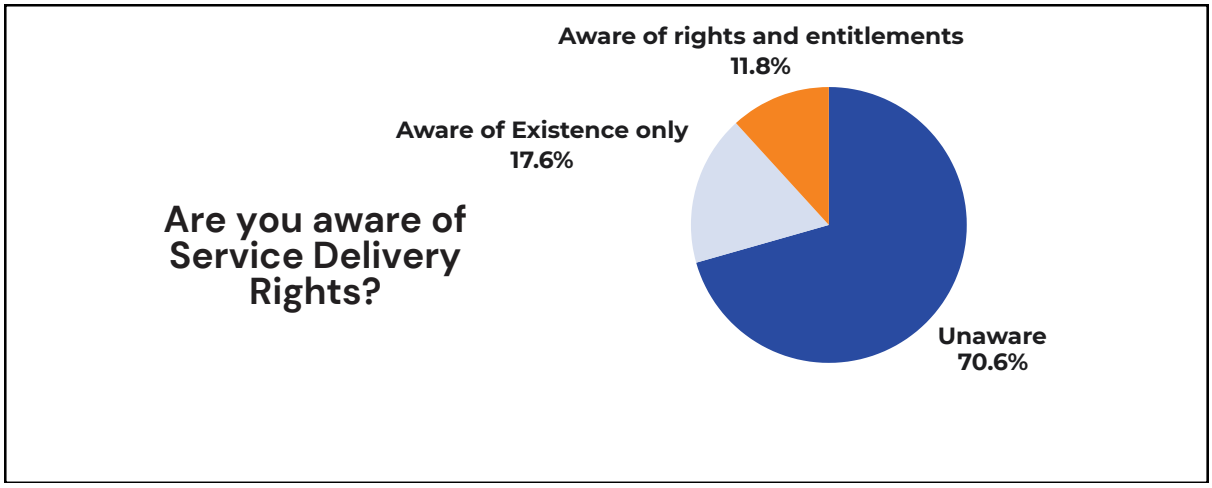


Fig 14: *Citizen Awareness about SLAs (n=30)*

Most citizens are open to digital outputs. Among the 28 respondents who answered the question on certificate format, 23 (82.1%) were happy to receive certificates digitally, whereas 5 (17.9%) preferred a non-digital format. Preference for service channels shows a similar pattern among field-interviewees; of the nine who stated a preference, eight (88.9%) preferred digital channels and one (11.1%) preferred a non-digital option. Taken together, these results suggest that the long-standing barrier to going fully paperless has largely receded and that with basic awareness and light support, most citizens are comfortable transacting digitally.

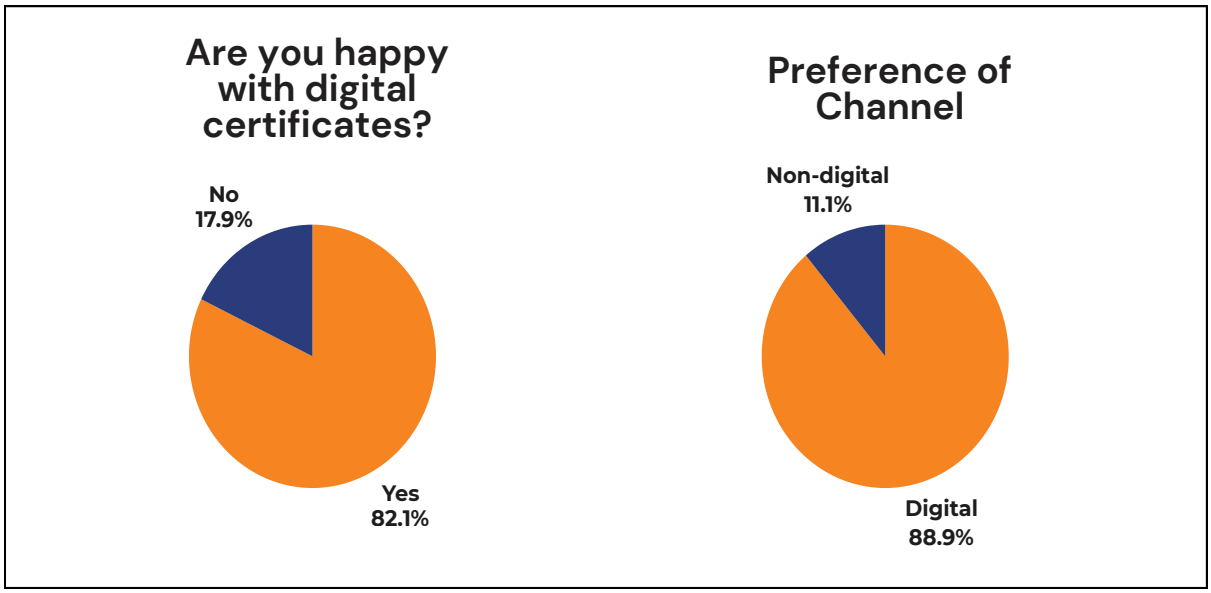


Fig 15: *Citizen preferences of Digital Service Delivery*

Citizens are more than halfway aware of online services and the K-SMART brand, a substantial minority have already transacted, and most are comfortable with digital outputs, all encouraging signs towards consolidation at scale. The binding constraint is low SLA literacy. Until citizens know what timelines they are owed and how to assert those rights, platform transparency may not fully convert into accountability pressure.

ANALYSIS
WHAT CHANGED FROM BASELINE TO MIDLINE

From Parallel Systems to Platform Dependence

The baseline study revealed deep inefficiencies and distrust, where every transaction was mirrored in both software and paper registers, consuming up to 80% of staff time in duplication. Fear of data loss, institutional inertia (e.g., court and bank requirements for paper records), and weak confidence in digital reliability had prevented full transition.

By midline, this parallel paper trail had been decisively eliminated. The state's G.O. 66/2025 made K-SMART the only lawful pathway for services, and the rollout of Citizen Facilitation Centres (CFCs) and the Akshaya network ensured that even digitally excluded citizens could transact through assisted digital intake. These measures removed the option, reason, and friction for paper use. Every application was now routed, approved, and issued solely within K-SMART, establishing it as a single system of record.

Efficiency, Ease, and Trust

At baseline, employees described technology as "an added burden", citing multiple logins, inconsistent data formats, and redundant paperwork.
By 2025, this narrative had flipped:

- Efficiency improved for 24 employees, remained constant for 6, and decreased for only 4.
- Ease of working followed the same pattern (24 / 6 / 4).
- Perceived speed improved for 22 employees.
- For the subset who could quantify cycle time, average reduction was 37.7%, with some reporting up to 75% faster processing.

Most strikingly, trust indicators rose sharply; over 88% expressed confidence in both the accuracy and reliability of the system. This behavioural shift, away from paper backups toward full reliance on K-SMART, signals behavioural consolidation, where digital use has become habitual and self-reinforcing.

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Employee Satisfaction and Advocacy

The employee Net Promoter Score (NPS) improved from a cautious +8.8 at baseline to a robust +44 at endline. This leap indicates that employees not only find the system usable but are now actively promoting it to peers.

Such a change is sustained by structured training coverage (88.2%) and proximal support: every ULB has an IKM Technical Assistant and active WhatsApp troubleshooting groups, ensuring friction is quickly resolved

DEEP DIVE
HOW K-SMART SOLVED THE PARALLEL PAPER TRAIL PROBLEM?

The baseline study showed that, as of February 2023, every transaction left two footprints, one in software and another in a physical register. Staff double-entered data, managers lacked a single source of truth, and citizens still walked away with paper to satisfy banks, courts, or simply their own confidence. The midline shows that K-SMART broke this lock-in by removing the option, the reason, and the friction for paper, through three mutually reinforcing moves [a programmatic mandate, assisted access channels, and an end-to-end product], that together ensured universal access with digital trust.

LSGD-GO-66/2025

First, **legal exclusivity**: Government Order LSGD-G.O. 66/2025 (Appendix II) made K-SMART the only lawful pathway for urban services and approvals. All applications had to be routed through the platform, with no parallel physical processing or paper registers, so that once an approval or issuance was valid only if logged in K-SMART, **the legal record and the operational record became identical**.

Second, **access was universalised,** so "paper for the digitally excluded" stopped being a justification. The state mandated **Citizen Facilitation Centres** (CFCs) in every ULB to serve people with low digital literacy or access. These staffed counters help citizens log requests; submit applications, grievances, and appeals; and download certificates, with no extra service charges.

Crucially, K-SMART also plugged into Kerala's existing Akshaya network, a very clear case of Southern E-Governance Consolidation (Joseph, 2023), and what Aapti Institute's *Last Mile Access* study describes as "architectures of intermediation" (Aapti, 2022). Citizens were explicitly encouraged to file applications through Akshaya Centres, leveraging their statewide footprint, long-standing public familiarity, and extended service hours. Akshaya thus functioned as a parallel assisted-digital channel at scale, absorbing a large share of intake and easing pressure on ULB counters, while still keeping every case inside the K-SMART database. Together, CFCs + Akshaya removed the most common frontline excuse for keeping side registers by solving for it.

Third, the product made paper operationally unnecessary. K-SMART is not a single form; it is an interoperating stack with multiple modules, such as File Management, Finance, Building Permits, Trade License, Project Management, Grievance, Property Tax, Civil Registration, HRMS, so a case does not fall off the digital edge when it crosses departments. A role-based digital workflow pushes each application through an auditable sequence [Operator → Verifier → Enquiry Officer → Approver → Authorizer] with every action time-stamped. That traceability replaces the "confidence paper" once provided: if it isn't in the log, it didn't happen. The platform also rounds the corners where paper used to creep back in: scanned attachments replace physical jackets; certificate preview cuts rework; Aadhaar/eKYC/eSign give outputs digital legitimacy; and online + ePOS payments keep revenue events inside the case file. Because the system "extends over space and time" (anytime, anywhere access via web/app), work no longer depends on counter hours, further reducing the impulse to "just write it down for now."

K-SMART's rollout exemplified **policy**, **program**, and **platform** working in sync to ensure that Kerala hasn't just digitised paper; it has replaced it with one system of record.. The policy arm, through Government Order LSGD-G.O. 66/2025, removed the option to run parallel paper processes by making K-SMART the only lawful pathway for all urban services and approvals. The programmatic arm, through a statewide network of Citizen Facilitation Centres (CFCs) and integration with the Akshaya Centres, removed the reason for bypassing the portal by guaranteeing assisted access for every citizen, with no extra service charges. Finally, the platform itself removed the friction: by unifying applications, approvals, and issuances within a single digital ledger, it ensured that the legal and operational records were one and the same.

DEEP DIVE
HOW K-SMART HARNESSED EMPLOYEE TRUST?

During baseline, as of February 2023, staff hedged their bets: they entered data in software but kept parallel registers "just in case." The midline shows that trust in the digital system has been rebuilt not by exhortation but by the way K-SMART was implemented, with clarity of rules, proximity of support, and a product that behaves reliably end-to-end.

As discussed in the previous section, the Government Order 66/2025 removed ambiguity by requiring all services to run through K-SMART with no parallel physical processing. That single rule ended the habit of keeping a paper "backup," forcing day-to-day work to live inside the system. Once people used the platform for everything, they experienced its benefits repeatedly and predictablyan essential precursor to trust.

Implementation invested heavily in competence-building: 88.2% of employees report receiving training, with many exposed to more than one mode. Hands-on and on-floor sessions matched a workforce that is largely at intermediate computer literacy, turning abstract features into practised routines (e.g., scanning attachments, previewing certificates, routing cases). Training was not a one-off; it was paired with proximity support. One IKM Technical Assistant in every LB and active WhatsApp groups (widely used, as noted by 58% respondents), so problems were solved in hours, if not in minutes. This combination reduced anxiety, created a norm of asking for help, and kept users inside the system when they hit friction.

As use became routine, perceptions shifted across all the sentiments that matter for daily work. Over 70% of staff reported greater efficiency and ease of working, while 64% observed a clear increase in task speed, translating digital adoption into measurable productivity gains. More importantly, trust in the system ran high: 88% of employees trusted its accuracy, and 79% trusted its reliability. This confidence was mirrored in advocacy, with **an employee NPS of +44, up from 8.8 at baseline**, a level that typically signals strong peer-to-peer diffusion and declining reversion to legacy routines.

DEEP DIVE

HOW PRACTITIONERS SHAPED K-SMART: THE DOMAIN WORKING GROUP MODEL

Kerala set up K-SMART's **Domain Working Group** as a formal, standing mechanism to make product decisions with the people who actually run municipal work every day (employees who were working at the Local government offices) rather than around them. The Government Order that created the project implementation structure explicitly provides for a Permanent Domain Team drawn from serving local government officials. It also authorises working arrangement appointments so practitioners can contribute to the program while retaining their home roles. This governance scaffolding is what we refer to as the domain working group.

In practice, this arrangement solved two chronic problems: first, the gap between policy intent and ground reality; second, the hand-off gap between IT teams and frontline users. By seating serving secretaries, department heads, clerks and other front-line staff alongside the tech team, every decision passed through people who could say, *'that's not how it actually flows in my office'* and show the fix. Because members were appointed in an official capacity, **their feedback wasn't "advisory"; rather, it was part of the program's decision-making protocol.**

The group worked as a continuous co-design loop rather than a one-time consultation. Domain representatives designed the product specifications, surfaced edge cases, validated whether proposed workflows matched statutory steps, and flagged where legacy paper artefacts could slip back in. They further converted these into release notes, SOP updates, and on-floor coaching.

In sum, the working-arrangement provision meant the very people accountable for service delivery were also accountable for system design. That alignment produced a "wholesome" system in two ways. For employees, screens and role routes reflected the actual order of work (Operator → Verifier → Enquiry Officer → Approver → Authorizer), with the right documents and checkpoints showing up where staff expect them, reducing cognitive load and, ultimately, the impulse to keep side registers. For citizens, the same design translated into fewer back-and-forths, clearer acknowledgements, and digital outputs that institutions would accept.

DEEP DIVE
SOME CRITICAL GAPS THAT NEED ATTENTION

- **Akshaya as a new bottleneck:** While CFCs and Akshaya Centres have been instrumental in widening access, field feedback indicates that Akshaya is emerging as a new bottleneck. Queues are forming, turnaround times are lengthening, and service charges remain inconsistent because there was no standard fee chart for K-SMART services. The IT Department's notification of fixed rates is a much-needed corrective step, but rates must be fixed with consultation with Akshaya operators and other stakeholders to ensure financial sustainability. As The Hindu reported, "Akshaya entrepreneurs in Ernakulam suspended K-SMART services over low service charges" (The Hindu, 2025), highlighting the risk of alienating the very intermediaries who make assisted access viable. Rates must therefore balance affordability for citizens with viability for operators, while complementary measures, such as mandatory e-receipts, visible fee boards, and telemetry on intake and queue times, can further enhance transparency and service quality.

- **SLA literacy is the binding constraint on citizen accountability:** Across instruments, nearly 70% of citizens were unaware of their service-delivery rights and timelines, around 20% had only heard of them, and barely 10% reported full awareness. While awareness of online services (56%) and K-SMART (53%) has crossed the halfway mark, and 82% of respondents were satisfied with digital certificates, citizens still lack the literacy needed to translate transparency into performance pressure.

  The first step is to recalibrate SLAs using actual application data to set realistic, evidence-based timelines and revise them periodically to reflect service realities. Accountability must be built on credible expectations; if people, processes, and finances are not ready for the load, the system risks premature strain.

  The second step is to prioritise a rights-first IEC: display the due date and statutory SLA in every acknowledgement, SMS, and e-mail; show a countdown badge in the tracker; place SLA boards and rights cards at counters, CFCs, and Akshaya Centres; script staff to explain SLAs at intake; and include a one-tap "escalate if overdue" feature in the portal or app.

- **Uneven performance across employees:** Among the 11 employees who could confidently quantify processing-time changes, the average improvement was 37.7% (with tails up to -75%), yet two employees reported no change and a small minority noted declines in efficiency or ease. This pattern points less to a platform deficit than to local process drag, which can be configuration gaps, partially digitised edge workflows, or habits that survived cut-over. Treat these as surgical fix-lists: run a two-week micro-diagnostic to identify such around the zero-gain employees/teams, issue targeted on-floor coaching.

- **Aiming for Institutional acceptance beyond citizens**: Citizens overwhelmingly accept digital outputs, but external verifiers (banks, courts, select agencies) can still default to paper. That institutional lag is a classic reversion risk.
  Push QR-based verification as the primary check, issue departmental circulars/MoUs on digital-document acceptance, and maintain a public verifier portal with audit logs. Route refusals into a meta-grievance tagged "external acceptance," so friction is measurable and negotiated at the right table, not at the counter.

- **People Systems: Onboarding, Turnover, and Refresh:** Trust grew because people got hands-on help. 88% of staff were trained, and support was always close by through IKM's in-house Technical Assistants at each Local Body and WhatsApp groups. But keeping that confidence takes rhythm. Every new joiner should automatically get bite-sized modules matched to their role, with quick refreshers every quarter for parts of the system that change often. A simple "what's new this month" one-pager can keep everyone in sync. Confidence doesn't collapse overnight; it fades when turnover runs faster than training.

REFERENCES

Aapti Institute. (2022). Last Mile Access to Urban Governance: Understanding the Role of Intermediaries in Digital Service Delivery. Bengaluru: Aapti Institute.

Centre for Public Policy Research. (2021, September 24). Kerala needs to raise its own bar of transparency in service delivery. CPPR. https://www.cppr.in/articles/kerala-transparency-in-service-delivery

Joseph, M. P. (2023). Consolidation: From Southern Urbanism to Southern e-Governance. In Proceedings of the 16th International Conference on Theory and Practice of Electronic Governance (ICEGOV '23) (pp. 214–220). Association for Computing Machinery, New York, NY, USA. https://doi.org/10.1145/3614321.3614351

Kerala Administrative Reforms Commission. (2021). 11th Report – e-Governance, Part 1 & 2. https://arc.kerala.gov.in/sites/default/files/inline-files/11th%20Report%20-e-Governance-Part%201%262-For%20printing.pdf

Local Self Government Department, Government of Kerala. (n.d.). Digital Governance. https://lsgd.kerala.gov.in/en/digital-governance/

Satmetrix Systems. (2018). Employee Net Promoter System: Turning Feedback into Engagement.

The Hindu. (2025, October 9). Akshaya entrepreneurs in Ernakulam suspend K-SMART services over low service charges. The Hindu. https://www.thehindu.com/news/national/kerala/akshaya-entrepreneurs-in-ernakulam-suspend-k-smart-services-over-low-service-charges/article69909687.ece

Reichheld, F. F. (2003). The One Number You Need to Grow. Harvard Business Review, 81(12), 46–54.

About eGov

eGov Foundation is a nonprofit that helps governments deliver better public services through digital tools, making them more accessible and responsive to citizens. Its open-source platform, DIGIT, is supporting public service delivery in urban governance, health, sanitation, water, and finance. Over the past two decades, eGov has partnered with governments, civil society, and businesses, reaching more than 2.2 billion people.

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