Timely wages, trusted systems: Smart payments for urban livelihoods

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Introduction

India's ambition to reach a USD 30 trillion economy by 2047 hinges on its current and emerging urban centers, which contribute more than 60% of India's economic output. They drive commerce, innovation, and upward mobility across the country. Yet, the very foundation of this growth, the urban labor force, remains precarious. Urban workers in India are predominantly informal, meaning they face insecure, untimely, and low-wage employment and lack access to social security programs. Many informal workers are migrants, traveling far from home. Consequently, they live on the economic margins and are highly vulnerable to external shocks. This was laid bare during the COVID-19 pandemic, when millions of workers suddenly had little to no work and few means to protect themselves or their families.

Central and state governments have introduced a range of schemes to improve the welfare of informal and low-income workers. The National Urban Livelihoods Mission (NULM), for instance, provides skills training, market linkages, and access to credit for Self-Help Groups (SHGs). During the past 15 years, several states have introduced urban job guarantee schemes to provide access to basic employment. Kerala was the first to do this in 2011 with its *Ayyankali* Urban Employment Guarantee Scheme (AUEGS), followed by Himachal Pradesh, Odisha, Jharkhand, and Rajasthan. Odisha's *Mukhya Mantri Karma Tatpar* (MUKTA), launched in 2020, was another such scheme that provided employment to low-income populations through the creation of community-centric public works. It represented a unique wage employment model due to its emphasis on addressing skill gaps, promoting sustainable projects beyond a fixed number of temporary workdays, and enabling strong local participation through Self-Help Groups (SHGs).

However, these employment schemes often fall short in implementation, particularly in delivering timely wage payments. For example, nearly all worker groups under Kerala's AUEGS had not received wages for at least three months of work performed. Some reported waiting over six months for their wages. In Rajasthan's case, 38% of workers reported delayed wages, per a 2023 study. In Odisha, we found an average wage delay of five months or more under the MUKTA scheme in 2023.

Typically, lengthy and manual approval processes, coupled with inadequate integration between different systems that track program beneficiaries, monitor project completion, and manage funds, lead to delays in payments. Government institutions also tend to lack visibility on the status of payments, which gives undue discretion to lower-level authorities and undermines accountability. These delays compromise the outcomes of social welfare programs.

MSC designed a scalable smart payment solution (SPS) to solve these delays for the MUKTA scheme in Odisha. The subsequent sections of this case study detail the problems that MUKTA faced, the solution we designed, and its impact.

Source: MSC, 2025

The case of MUKTA in Odisha

The COVID-19 pandemic devastated the livelihoods of India's informal workers. Odisha, home to about 2 million (20 lakh) informal workers, and the state government tackled this crisis head-on in April 2020. The state government launched the pioneering MUKTA scheme, which provided urban employment to vulnerable workers. MUKTA operated as a community-driven program, where women SHGs designed and executed climate-resilient, locally responsive public works. By 2023, 750,000 workers and over 5,000 SHGs across Odisha's 115 urban local bodies (ULBs) had initiated about 25,000 projects.

Figure 1: Project design and implementation process under MUKTA

Stage I

Ward-level project list

Ward committees create a list of public works to be created.

Stage II

Annual Action Plan (AAP) and approval of the CM

Projects are consolidated into an AAP and approved by the CM. Funds are credited to ULBs.

Stage III

Estimate preparation and approval

Detailed estimates are prepared for each project. Technical sanction and administrative approval are then provided.

Stage IV

Work order issuance

ULBs process sanctioned estimates. The Executive Officer issues work order and Program Coordinator shares those with SHGs.

Stage V

Muster rolls creation, measurement, billing, approvals, and payment

Work is completed, measurement is done and final bills are created post verification of progress. Payments are then directly credited to the bank accounts of beneficiaries.

Although MUKTA provided a lifeline to workers, it faced serious administrative and financial problems that burdened the scheme and disrupted wage payments for laborers, such as Kamla. Our baseline study in three ULBs, namely *Jatni, Dhenkanal,* and *Khorda*, assessed the process flow from stage III (estimate preparation and approval) onward (See Figure 1). While stage III took place under a week, stage IV (work order issuance) took an average of two months. At stage V, workers faced an average wage delay of 144 days (approximately five months). This exceeded the seven-day payment timeline mandated in the scheme guidelines. Moreover, commissions to SHGs were significantly delayed compared to the required turnaround time (TAT) of 14 days.

Based on our diagnostic study, MSC identified the following three interlinked challenges within the scheme.

Delay in payments to beneficiaries: The scheme relied on manual, paper-based processes across each stage of the program's implementation. This included estimate preparation, work orders, worker attendance (muster rolls), and project logs (measurement book). These manual entry systems were prone to errors and difficult to monitor, resulting in delays in project execution.

Administrative burden: A significant administrative burden weighed down the scheme. The process flow required more than 10 different approval steps without a clearly defined TAT. The stage V process, from bill preparation to final payment, averaged 60 days, with high variability, ranging from a rapid four days to a sluggish 10 months. This created uncertainty and inefficiency, while manual compliance checks and entitlement calculations introduced room for error. The administration relied heavily on physical filing. The compilation of bills added to the bureaucratic load.

Suboptimal fund management: Funds for the scheme were managed inefficiently, and financial rules were not fully complied with. During the diagnostic stage, we found that ULBs submitted zero utilization certificates (UC) for the financial year 2022-23. Generally, an implementing agency submits UCs to the state department, which then submits them to the Finance Department to confirm that the funds have been used for their intended purpose. During the same year, nearly USD 36 million (or 57% of the total funds allotted for MUKTA) was left unutilized. This represented 2.3% of the state's total borrowings and highlighted the fiscal inefficiency created by these gaps. In ULBs, such as Khorda, Odisha, only 38% of funds were spent. Due to these constraints, MUKTA was unable to fully achieve its goal of providing a lifeline to informal workers during the pandemic.

Building a Smart Payment Solution (SPS) for MUKTA

In partnership with the Government of Odisha's Housing and Urban Development Department (H&UDD), MSC designed an SPS to address administrative and financial issues associated with MUKTA. Our solution involved two components (See Figure 2).

The first component was a digital program management platform, **MUKTASoft**. It was designed to streamline program management and information flow among stakeholders, such as SHGs, ULBs, H&UDD, and the state's finance department. Designed by MSC and developed by the eGov Foundation, MUKTASoft digitized every stage of scheme implementation using a rule-based smart payment engine. It covered work order creation, worker enrollment, muster rolls, measurement books, bill preparation, compliance and verification, and payment invoice generation. MUKTASoft removed officials' discretion, improved payment TAT, and enhanced overall accountability.

The second part was a **just-in-time (JIT) funding system**, which, integrated with MUKTASoft, enabled instant release of funds once project milestones were achieved. JIT is a financial mechanism that enables transactions to occur in real time. This meant that funds were "pulled" when a request was made and passed directly to the end user's bank account. The JIT system replaced the earlier system of "pushing" funds in advance from the state treasury to a ULB bank account, which remained idle until spent. Figure 2 summarizes this reform.

Figure 2: SPS for MUKTA

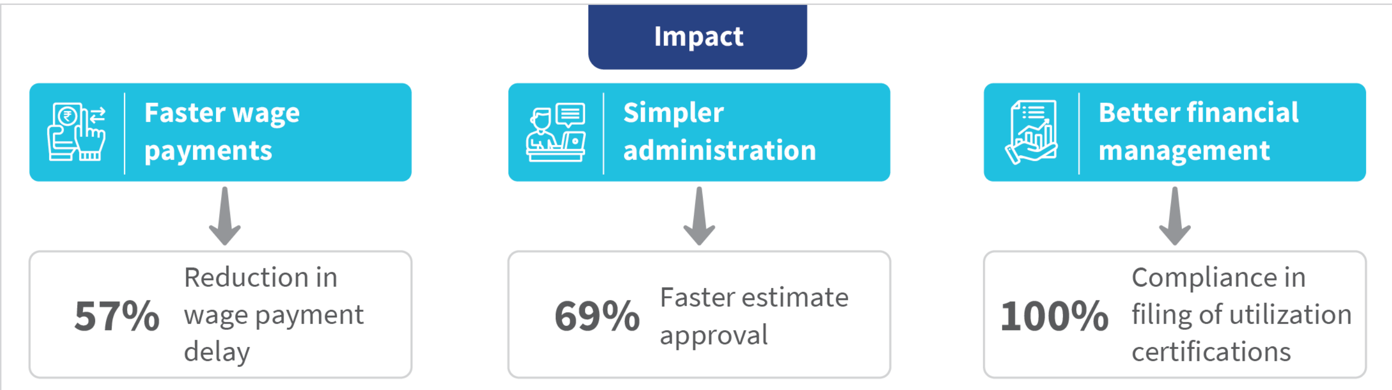
Challenges	Smart payment solution	Outcomes
Manual, paper-based processes	**MUKTASoft:** a digital platform that centralized and streamlined program management for MUKTA	**Faster wage payments**
Administrative burden		**Simpler administration**
Suboptimal fund management	**Just-in-time funding (JiT):** a financial mechanism that instantly pulls funds from the treasury to the recipient	**Better financial management**

With this, MUKTA shifted from a paper-driven, inefficient delivery model into a responsive, transparent, and financially disciplined program.

The impact of JIT funding system and MUKTASoft

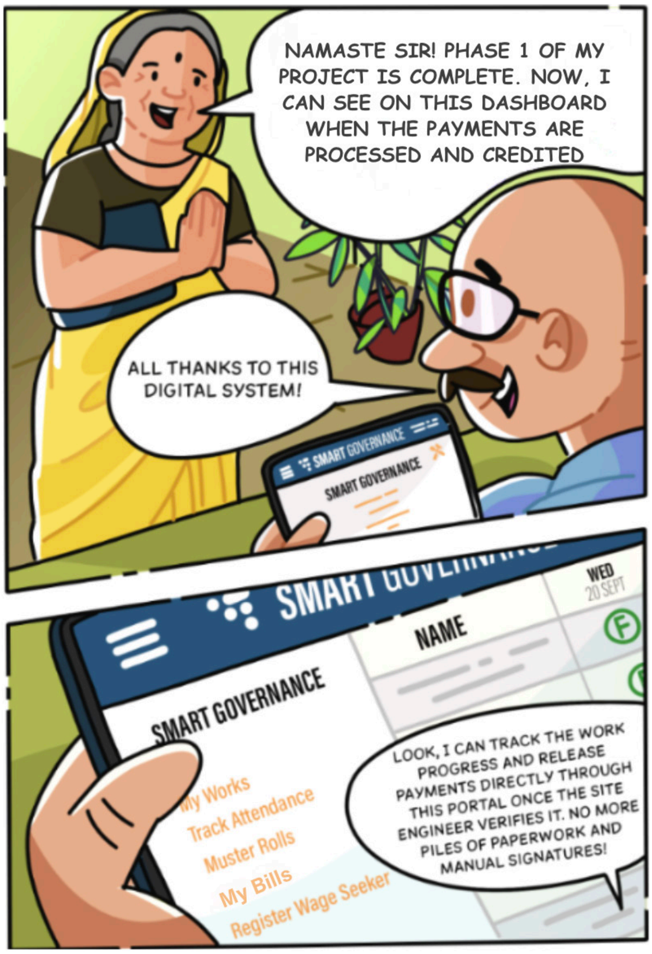
The JIT payment system and MUKTASoft platform were piloted in 25 of Odisha's 115 ULBs in 2023. We evaluated the impacts of these reforms among pilot ULBs through a combination of quantitative and qualitative data. Overall, they significantly reduced payment delays, lowered administrative overheads, and optimized fund utilization.

Figure 3: Impact of SPS on MUKTA



Together, the JIT funding system and MUKTASoft reduced payment delays by 57%, resulting in workers like Kamla receiving their wages much faster. In many cases, payments were delivered within one to two days after approval. The reforms also decreased the average number of days taken between bill preparation and final payment to wage seekers from 60 days to less than 30 days. Furthermore, over half of these payments were processed within 10 days or less.

The reforms reduced the estimated approval time by two-thirds, from 16 days to five days. They also eliminated idle funds and UC pendency percentage dropped to zero, which indicated the effectiveness of the reforms. Government officials enjoyed greater oversight over MUKTA. They could now track project performance in real time through digitally tracked processes. The digitization and automation of project workflows also streamlined the program.



Source: MSC, 2025

Women in SHGs reported increased efficiency and income due to the reforms. They received their commissions faster and spent less time on manual follow-ups and errors, which freed time to run small businesses on the side for extra income. "I have become financially independent, and people in my locality now appreciate me for the development work I have undertaken," claimed an SHG member. Further, they gained self-confidence through the experience of adopting new skills and businesses. An SHG president stated, "We became more confident that, being a lady, we could carry out and complete the technical tasks using the app."

Digital innovation rooted in global public finance principles

We designed the SPS based on global principles of public financial management (PFM) that promote efficiency and accountability. Each principle was integrated into the solution to address a specific structural bottleneck, which resulted in a solution that was functionally effective and institutionally scalable. The four principles are:

1. **Establish a single source of data to eliminate fragmentation:** A unified database enables stakeholders to act in real time. In the context of MUKTA, this meant they needed to resolve the fragmentation caused by manual record-keeping. Manual process affected multiple stages of work and payments, including estimate preparation, work order generation, worker attendance, bill filing, and compliance and approval. MUKTASoft consolidated all scheme data and collected information at the source of the activity.

2. **Embed observability and telemetry to track every action:** A digitally robust system must execute transactions reliably and reveal what is happening inside its workflows in real time. This capability, known as observability, enables administrators to track where delays occur, identify pending steps, and understand how different actors interact with the system. MUKTASoft's digital system allowed officials to identify and respond to emerging risks early.

3. **Introduce JIT funding to align money with verified progress:** The JIT funding system transformed a "push-based" funding approach to "pull-based". The funds were released from the treasury and directly sent to the beneficiary instantly, based on a virtual spending limit. JIT funding and MUKTASoft worked together seamlessly, such that MUKTASoft gave instructions to Odisha's financial management system to release funds when needed.

4. **De-monopolize access to public services through reduced discretion.** A critical barrier to timely implementation was the excessive reliance on discretionary, manual approvals, which could span 10 or more steps. Each step was managed by a designated official. Depending on their responsiveness, approvals could sit pending for lengthy periods. MUKTA "de-monopolized" this process to reduce dependence on individual authority through rule-based automation.

Based on these principles, the SPS significantly improved the management and impact of MUKTA.

Conclusion: The scalability of smart payments

The success of the pilot under the MUKTA scheme resulted in the adoption of SPS across all 115 ULBs in Odisha, to directly address specific challenges affecting MUKTA. Solutions like MUKTASoft and JIT funding have wide implications across all schemes that contain payments to beneficiaries as a major component. The most prominent example of this implication is the ongoing repurposing of SPS in the new *Mukhyamantri Sahari Bikash Yojana* (MSBY) of Odisha. MSBY is a large infrastructure development scheme in Odisha that incorporates wage payment to laborers as a major component to improve urban livelihood and infrastructure in Odisha. The adoption of SPS under MSBY will ensure timely wage payments to more than 500,000 skilled and unskilled laborers, estimated to be covered by the scheme.

Other governments and departments can also readily adopt SPS based on their requirements across livelihoods, infrastructure, and subsidy programs to overcome the constraints that undermined MUKTA and enhance both fiscal efficiency and the impact of service delivery across government programs. For example, the *Pradhan Mantri Gram Sadak Yojana* (PMGSY) has significantly expanded the rural road network. However, it has consistently faced challenges such as construction delays, cost overruns, and underutilization of funds stemming from burdensome, manual processes. MSC designed an SPS to address these issues that would streamline program management and funding.

Similarly, the Public Distribution System (PDS), which distributes food to millions of people in India, has faced difficulties with reimbursing states for the cost of implementing the program. MSC supported the Department of Food and Public Distribution in developing a new standard operating procedure and digital program management system, based on PFM principles described above, to overcome this challenge.

Collectively, these examples illustrate that smart payments provide a scalable way to modernize public expenditure and improve lives. By embedding rule-based automation and instant payments, governments can ensure timely and transparent payments reach people exactly when needed.