

Enhancing Women's Participation in Urban Last-Mile Logistics

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Foreword

India's logistics sector is on the cusp of a revolution, projected to create 10 million new livelihood opportunities by 2027. Yet, women's participation in the urban last-mile logistics sub-sectors remains stuck between 1% and 5%. If we move that needle to just 10%, we have the opportunity to unlock 1 million livelihoods for women over the next two years.

Our latest white paper, "Enhancing Women's Participation in Urban Last-Mile Logistics", co-authored by The Udaiti Foundation, Nikore Associates, and CII CWL, examines the structural barriers keeping this door closed and more importantly, provides the blueprint to open it.



Pooja Sharma Goyal
Founding CEO, The Udaiti Foundation

Why Urban Last-Mile Logistics?

Urban last-mile logistics is one of the most accessible gateways to paid work. Its hyperlocal nature and options to choose flexible schedules are perfectly suited for women provided we address the ecosystem constraints around them.

To achieve India's vision of a 70% female labor force participation rate, we must address the structural barriers in the sector: social norms, asset gaps, and inadequate urban infrastructure.

From Intent to Enablers

This paper moves beyond "why" and focuses on the "how." Our roadmap centers on key levers at three stages of a woman's journey in the workforce:

1. Before she enters the workforce: Building awareness of urban last-mile logistics roles, navigating prevailing social norms, and streamlining regulatory conditions.
2. When she seeks work: Ensuring access to skilling opportunities, digital literacy, and assets.
3. While she is in the workforce: Securing availability and accessibility of public infrastructure and safety systems.

Unlocking this opportunity is not a solo mission; it requires a coordinated 'full-stack' approach from policymakers, platforms, and urban planners. We hope this paper serves as a practical guide to building the conditions needed to provide dignified, sustainable, and scalable livelihoods.

Let's move beyond intent. Let's build the infrastructure for inclusion.

Acknowledgements

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The white paper was prepared under the technical guidance of lead author, Ms. Mitali Nikore, Founder and Chief Economist, Nikore Associates and was co-authored by Mr. Kartick M P (Udaiti Foundation), Ms. Mozaien Tak (Nikore Associates), Mr. Angad Bagai (Udaiti Foundation) and Ms. Mahima Chaki (Udaiti Foundation), who jointly contributed to the research design, analysis and development of the white paper’s framework and recommendations.

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Executive Summary

Urban last-mile logistics has emerged as one of the most accessible and scalable segments of India's urban economy. The broader logistics sector is expanding rapidly and is expected to add over 10 million new livelihood opportunities by 2027.¹ Within this expansion, urban last-mile logistics has emerged as one of the fastest-growing segments, driven by rising consumer demand, widespread adoption of app-based platforms and the expansion of hyperlocal supply networks. The segment spans a range of roles including gig work accessed through digital platforms such as urban last-mile delivery, contractual employment in micro-fulfillment centers and warehouses, and roles within urban logistics operations.

Livelihood opportunities in urban last-mile logistics are characterized by low barriers to entry, flexible work arrangements and opportunities that enable people to work close to home. Many roles require limited formal qualifications and depend on short training periods or on-the-job learning. These features make the sector a viable source of income for first-time workers, individuals with limited formal education and those seeking work that can be combined with caregiving or other responsibilities.

Expanding women's participation in the workforce is critical to India's growth ambitions, with urban last-mile logistics offering significant potential to expand women's livelihoods. As emphasized by Hon'ble Union Finance Minister Smt. Nirmala Sitharaman, the vision of Viksit Bharat by 2047 is anchored in women's economic empowerment, with an ambition to achieve a 70% participation rate for women in economic activities.² Yet women's entry into paid work continues to be shaped by ecosystem constraints. These constraints include social norms about participation in work, limited access to skills and assets and gaps in urban infrastructure and emergency support systems.

The unique characteristics of urban last-mile logistics combined with the growing availability of semi-skilled and entry-level roles, create opportunities for women seeking entry into the workforce.

This potential is reinforced by rising private sector engagement, reflected in targeted recruitment and training initiatives. Examples include driving training programs led by the Azad Foundation and Sakha in partnership with platforms such as Rapido. Similarly, Zomato's Women Riding Centers developed in collaboration with the Brihanmumbai Municipal Corporation (BMC). In this context, the convergence of rapid industry growth, strong supply-side aspiration and rising private sector demand creates an unprecedented opportunity to expand women's livelihoods. Urban last-mile logistics, thus, presents a practical pathway to enhance women's participation in the workforce.



¹Press Information Bureau, Government of India. Logistics: India's Growth Engine. 16 Aug. 2025

²Nirmala Sitharaman. Budget 2025-2026 Speech of Nirmala Sitharaman, Minister of Finance. Ministry of Finance, Government of India, 1 Feb. 2025

Executive Summary (continued)

This white paper examines how urban last-mile logistics can support women's livelihood generation at scale and identifies the ecosystem-level interventions required to unlock this potential. It outlines actionable levers that can facilitate women's entry into and retention within urban last-mile logistics.

The paper adopts a three-stage framework to identify targeted interventions across three stages of a woman's journey as she enters and sustains herself in the workforce. Before women enter the workforce, participation is shaped by awareness of urban last-mile logistics roles, prevailing social norms and regulatory conditions. Interventions at this stage focus on awareness-building, shifting social perceptions around women's work and regulatory alignment.

When women seek work, entry is shaped by access to skilling opportunities, digital literacy and assets required for different urban last-mile logistics roles. Interventions at this stage focus on targeted skilling, digital literacy and training and improved access to assets such as smartphones and two-wheeler vehicles.

Once women are working, continued participation is shaped by the availability and accessibility of public infrastructure such as crèches, public toilets, reliable transportation and safety systems. At this stage, interventions include strengthening public infrastructure and improving emergency and grievance redressal systems.

If implemented effectively, these interventions can reduce ecosystem-level constraints that shape women's entry into and continued participation in urban last-mile logistics. These interventions, grounded in evidence from studies in India and others part of the world, provide a blueprint for central ministries, state governments and urban local bodies. Unlocking women's livelihood opportunities within urban last-mile logistics will depend on effective alignment and sustained coordination between public and private stakeholders.



³“Closing Gender Gaps in Transport.” World Bank, 18 July 2025; “Helping India Build a Skilled, Inclusive Workforce for the Future.” World Bank, 3 Nov. 2023 ; “A.P. Moller – Maersk’s New Warehouse at Dadri, Uttar Pradesh, Becomes the Company’s First Warehouse Run Entirely by Women.” Maersk, 27 Oct. 2022

Introduction

Urban Last-Mile Logistics - A New Opportunity for Women's Livelihood

1.1 Sector growth and scale

The logistics sector has emerged as a cornerstone of India's economic strategy underpinned by major policy initiatives and positioned as foundational to the country's growth objectives. Valued at \$354 billion in 2024, the industry is expected to scale substantially, reaching \$800 billion by 2030.⁴ Government initiatives also demonstrate a prioritization of operational efficiency through digitalization, multi-modal connectivity and infrastructure modernization. The National Logistics Policy (2022) seeks to reduce logistics costs from around 16% of GDP to closer to the global average of 8% by 2030.⁵ India's improvement from 44th position in 2018 to 38th among 139 countries in the World Bank's Logistics Performance Index (2023) reflects progress toward these objectives.⁶ These developments position logistics as a key enabler of India's growth ambitions and a major source of livelihood generation.

Within the broader logistics sector, urban last-mile logistics, encompassing e-commerce, food delivery, quick commerce, and parcel delivery, represents one of the fastest growing and dynamic segments of India's economy. Quick commerce is India's fastest-growing retail segment, with the sector expanding at a CAGR of 70-80% annually in 2025, compared to the broader e-commerce sector's 17-22% growth rate.⁷ This rapid expansion is mirrored across segments of urban last-mile logistics: India's online food delivery market reached USD 55.58 billion in 2025 and is projected to grow to USD 337.15 billion by 2034 at a CAGR of 22.18% from 2026-2034.⁸ Growth in these segments has been driven by evolving consumer demand for convenience, wider internet access and increased smartphone usage.

Opportunities for women in urban last-mile logistics



Food delivery partner



Quick commerce delivery partner



Warehouse worker



Micro-fulfillment centre worker

**Created using AI for illustrative purposes only.*

For instance, there are more than 969.10 million internet subscribers as of 2025, indicating widespread digital adoption.⁹

The expansion of urban last-mile logistics has translated into a wide range of work opportunities. Quick commerce companies operate dense networks of micro-fulfillment centers that create roles for picking and packing of products. The growth of food delivery and other on-demand services has increased opportunities for delivery partners engaged in gig work across cities and towns. Private e-commerce companies have expanded warehouse and regional hub networks into tier 2 and tier 3 cities to support faster deliveries.¹⁰ These developments have supported the emergence of a large, flexible workforce in urban last-mile logistics and point to the potential for expanding livelihood opportunities.

⁴Logistics Industry Overview. "Logistics Sector Skill Council, 2026: IANS. "India's Logistics Sector Set to Soar to \$800 Billion by 2030. "ET Infra, 18 Aug.2025

⁵Jain, Bhakti, and Ishita Dhar. "National Logistics Policy in India. "Invest India, 20 Sept. 2022

⁶India Ranks 38 out of 139 Countries on World Bank's Logistics Performance Index Report 2023; India's Rank Has Improved by Sixteen Places from 54 in 2014. "Press Information Bureau, Ministry of Commerce & Industry, 7 Feb. 2024

⁷E-commerce Industry in India. "India Brand Equity Foundation (IBEF), Aug.2025.

⁸India Online Food Delivery Market Size & Share Report."IMRAC Group, 2025

⁹Telecome Regulatory Authority of India. Indian Telecom Services Performance Indicators 2024-25. TRAI, MAR.2025,p.2.

¹⁰Bakshi Dighe, Arundhati. "India's Warehousing Boom: Tier II-III Cities Drive 100M sq.ft" JLL,13 Feb.2025

1.2 Opportunities for women's livelihood generation

The rapid growth of urban last-mile logistics presents a significant opportunity to expand women's livelihoods. As of 2024, the logistics sector supports approximately 22 million people and is projected to add a further 10 million jobs by 2027. Urban logistics segments account for a substantial share of this expansion, with quick commerce alone expected to contribute 2.4 million new jobs.¹¹ Women's participation in these sub-sectors is still at a nascent stage, currently ranging from 1-5%.¹² As the sector expands, this gap presents a clear opportunity - if women secure even 10% of the upcoming opportunities, it could translate into an additional one million additional livelihoods over the next two years.¹³

A recent report by the Department for Promotion of Industry and Internal Trade (DPIIT), (Ministry of Commerce), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Nikore Associates identifies urban last-mile delivery and roles in warehousing and micro fulfillment centers as high-potential pathways for women's livelihood generation within urban last-mile logistics.¹⁴ These roles provide access to reliable work, opportunities for skill development and flexibility suited to diverse life stages and needs. For instance, gig-based delivery work offers flexible schedules, hyperlocal opportunities and weekly payouts that

often exceed wages available in other low-skill opportunities. Similarly, micro fulfillment centres are typically located in urban areas, enabling individuals to access roles closer to home. Together, these features position urban last-mile logistics as a practical and scalable avenue to strengthen women's participation in the economy.

The advantages of these roles are described in further detail through the case below, comprising facts recently published by Zomato, India's food ordering and delivery platform-owned by Eternal Limited.



¹¹Quick Commerce Driving Blue-Collar Employment; India to See Demand for 2.4 Million Jobs by 2027." The Time of India, 9 Jan.2025

¹²Department for Promotion of Industry and Internal Trade (DPIIT), Government of India. India Logistics Sector; Policy Measures to Enhance Women's Participation and Sector Growth. DPIIT, Mar.2025

¹³The Udaiti Foundation and the Centre for Economic Data and Analysis (CEDA), Ashoka University. Levelling the playing Field; Delivery's Efforts to Deliver Gender Diversity. Aug. 2024

¹⁴Department for Promotion of Industry and Internal Trade, and GIZ India, Increasing Women's Participation in the Indian Logistics Sector. Prepared by Deepak Baidur, Avni Mehta, and Mitali Nikore, July 2025

Case study: Why urban last-mile food delivery offers women flexible, local and paid work opportunities

Flexible schedules

Delivery partners on food delivery platforms can choose when to log in and log out of the platform. For instance, once a delivery partner books a time-slot on the Zomato Delivery Partner App, the only expectation is to be available for that particular duration. Beyond this, there are no participation requirements. In 2025, a delivery partner on Zomato worked an average of 38 days in the year and 7 hours per working day, reflecting part-time and seasonal participation rather than fixed schedules.¹⁵ Only 2.3% of all active delivery partners worked more than 250 days in the year.¹⁶ The ability to undertake gig work based on time available is particularly advantageous for women who, typically, may bear primary caregiving responsibilities, or who may be balancing part-time work with education and other commitments.

Hyperlocal opportunities

Across many food delivery platforms, delivery partners are not assigned shifts or geographies. Delivery partners can select the areas within a city where they wish to undertake gig work. Such delivery partners also have the freedom to add or remove a desired work area based on their preferences. This facility allows delivery partners to work within their preferred area, offering hyperlocal opportunities compared to factory or other center-based work that may require long-distance commutes.

Higher pay per hour than jobs requiring similar skill levels

Earnings per hour are calculated on total hours logged in, including the time when the delivery partner might be waiting to receive an order. In 2025, average earnings per hour (EPH), excluding tips, for a delivery partner on Zomato were ₹102.¹⁷

As of FY25, Zomato operates across 800+ cities engaging approximately 4.73 lakh delivery partners each month,, thereby offering close-to-home livelihood opportunities at significant scale.¹⁸



¹⁵Deepinder Goyal @deepigoyal:Jan 2nd, 2026: X

¹⁶Deepinder Goyal reveals Zomato delivery partners' average income amid gig economy debate: Here's how much they earn "LiveMint, 2 Jan 2026

¹⁷Zomato Delivery Partner Earnings Rose 10.9% in 2025; Founder Deepinder Goyal BATs for Gig Model Flexibility" The time of India, 3 Jan. 2026

¹⁸Eternal Annula Report 2024-25

The rapid expansion of micro-fulfillment centers, particularly beyond city centers, further strengthens this opportunity for women seeking work closer to home. Currently, one-third of India's micro fulfillment centers are in tier 2 cities and smaller towns, with the total expected to reach 7,500 by 2030.¹⁹ Warehouses, located in peri-urban areas broaden workforce access, enable greater participation of women beyond urban limits.

The availability of low- and semi-skilled roles lowers entry barriers, making urban logistics livelihoods highly accessible. Most roles in urban last-mile urban logistics require minimal education qualifications while offering competitive earnings. For instance, warehouse and micro-fulfillment center roles typically need only a class 10th certificate and basic English skills.²⁰ These roles are also spread across skill levels, from entry level positions such as pickers and packers to supervisory and managerial roles, allowing progression through hands-on learning. This allows women at lower skill levels to enter the sector and progress as they gain experience. Delivery engagements have no minimum education requirement, although they do require delivery partners to own and be aware of how to use a smartphone. The mobile applications are also accessible in vernacular languages, allowing more people the opportunity to work in urban last-mile logistics.

Alongside this growing opportunity, companies across the urban logistics ecosystem are increasingly adopting gender-intentional practices to attract and retain an inclusive workforce. For instance, companies such as Rapido have undertaken collaborative hiring efforts with on-ground organizations like Azad Foundation and Sakha, who provide skill training programs specifically for women interested in logistics roles, including two-wheeler riding certification, driving training and confidence-building workshops. These training programs also link women with private companies such as Rapido, Snap-E-Cabs, and Big Basket to generate livelihoods.²¹ Similarly, companies like Mahindra Logistics have focused on training programs for women in warehousing, including operating machinery like forklifts and warehouse management.²² This shift is driven not only by inclusion goals but also by positive results on overall business growth. Evidence suggests that women's higher productivity as reflected in higher attendance, and higher order accuracy can lower per-worker costs by approximately 12% in micro-fulfillment centres and 3.59% in warehouses. This underscores the growing recognition of women's value and contribution to the sector's workforce.

Analytical Framework: Ecosystem Levers To Enhance Women's Participation in Urban Logistics

India is home to millions of young women who aspire to work. However, these aspirations often do not manifest because women face multiple obstacles. For instance, 22 lakh girls exit formal education at the secondary level (Grades 9 and 10) and do not transition to higher secondary education, leaving them without the minimum qualifications required for a majority of jobs.²⁴ This hinders women's ability to access dignified livelihoods. For many of these women, the urban last-mile logistics industry offers a meaningful livelihood opportunity.

The business case for onboarding women in roles in urban last-mile logistics is stronger than ever as many private companies in India have actively taken steps to onboard them. However, women's participation is shaped by a set of ecosystem-level constraints that emerge at different junctures in their work journey. It is critical that these ecosystem-level constraints are lifted to enable women's participation in urban last-mile logistics. To address these constraints require interventions across three stages: before she enters the workforce, when she seeks work and while she is working.

¹⁹Haidar, Faizan. "India's micro fulfillment centres Boom beyond Metros: One-Third Now in Tier-2, Smaller Towns; Count seen Tripling by 2030." *The Economic Times*, 22 Dec. 2025

²⁰Warehouse Partner. "Blinkit."

²¹Department of Women and Child Development. "Support Training & Employment for Women." Government of NCT of Delhi, 30 Jan. 2026

²²Mahindra Logistics: Logistics in India - on the road to gender diversity

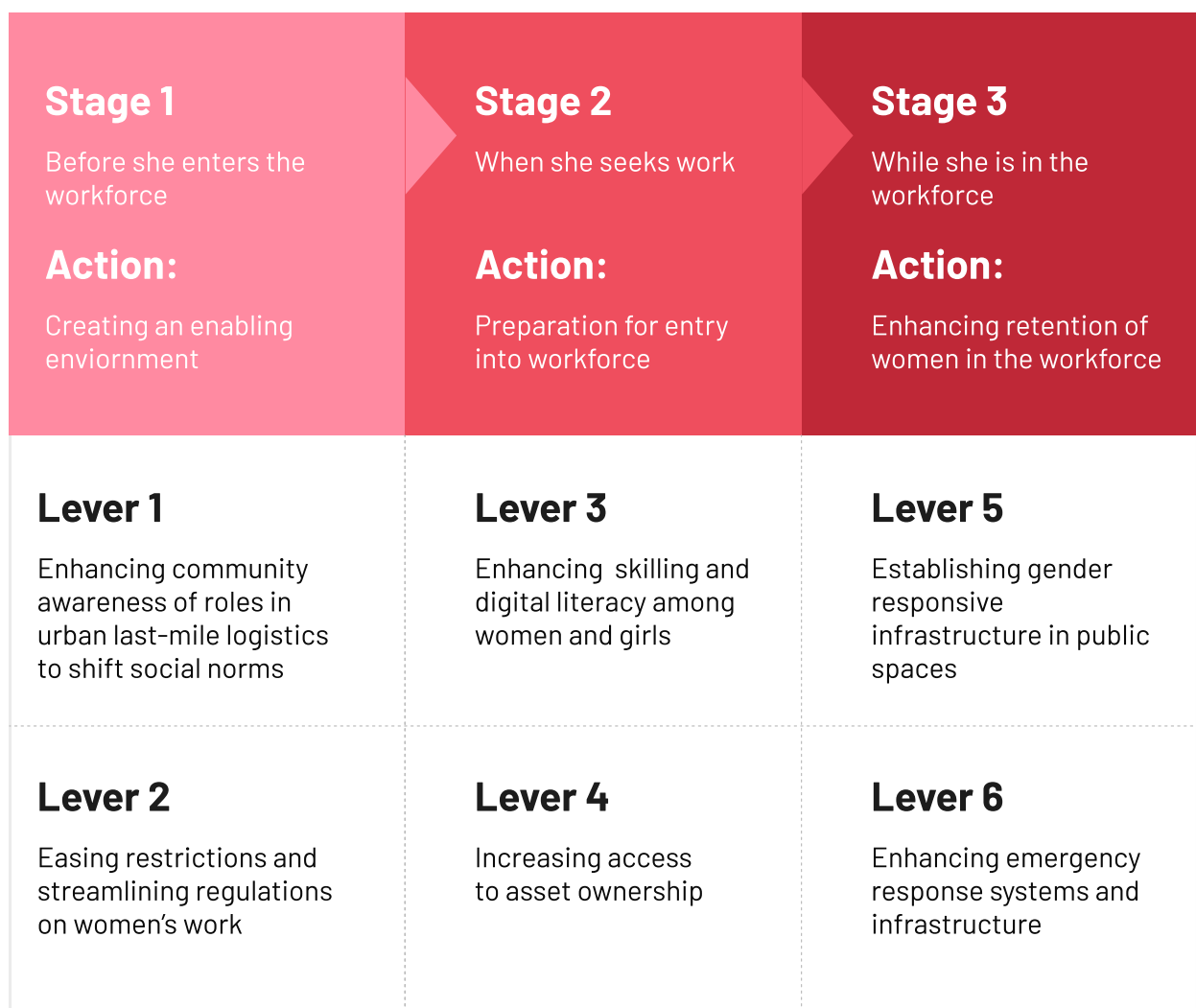
²³Lele, Anuja, Pavithra Renganarayanan, and Vikram Jain. *The ROI of Gender Diversity: Women Driving Business Success in Blue-Collar Roles*.

²⁴Authors' calculations based on: Ministry of Education, Department of School Education & Literacy. *Unified District Information System for Education Plus (UDISE+) 2024-25*. Government of India, August 28, 2025.

The Ecosystem Gap: A Three-Stage Framework for Enabling Women’s Workforce Participation

The analysis adopts a lifecycle framework to organize interventions across three stages. The framework is organized around six core policy levers (two at each stage) to create an enabling environment for women’s participation in the urban logistics sector. At each stage, specific levers address distinct ecosystem-level challenges that promise to unlock both women’s participation and retention in urban last-mile logistics.

Stage 1 addresses early-stage interventions before women enter the workforce, focusing on enhancing community awareness about available livelihood opportunities, dispelling stereotypes and easing regulatory restrictions. Stage 2 targets mid-stage interventions when women seek work, focusing on skilling, digital literacy and access to assets such as smartphones and vehicles like two-wheelers. Stage 3 is concerned with late-stage interventions for women while they are in the workforce, focusing on public infrastructure and emergency response systems. For each lever, this report presents a rationale, draws on national and global best practices and details critical actions that can be taken by central and state governments, urban local bodies and private sector stakeholders for implementation. Taken together, the framework offers a practical way to align policy, industry action and systems to support women’s participation in urban logistics at scale.



Stage 1

before she enters
the workforce

Action

creating an enabling environment

Lever 1

Enhancing community awareness of roles in urban last-mile logistics to shift social norms

Lever 2

Easing restrictions and streamlining regulations on women's work



1

Enhancing community awareness of roles in urban last-mile logistics to shift social norms

Rationale

Fostering shifts in social norms within families and communities can help drive women's participation in urban logistics. Limited awareness and community norms are often determinants of whether women can consider opportunities in urban logistics. A study of 6,600 women from urban low-income households in India highlighted that 84% women require their family's permission to work regardless of the nature of work.²⁵ Women's participation in urban last-mile logistics is constrained by both perceived risks and entrenched stereotypes about what constitutes as appropriate work for women. Commonly, livelihood opportunities in urban last-mile logistics are viewed as roles traditionally suitable for men, limiting awareness that women can succeed in them. This creates a self-perpetuating cycle that continues to exclude women from the sector. Lever 1 builds the foundation for social acceptance, enabling subsequent interventions in skilling, asset financing and infrastructure to take hold.

Recommended Actions

1.1. Launch targeted campaigns to drive greater acceptance of women undertaking non-traditional roles

National communication campaigns normalizing women's entry in the workforce can tackle community reluctance rooted in social stigma and limited awareness. The Ministry of Women and Child Development (MWCD), Ministry of Education (MoE) and Ministry of Labour and Employment (MoLE), Ministry of Information and Broadcasting (MIB), and others could build on the success of 'Beti Bachao Beti Padhao' (BBBP), by launching a complementary campaign such as 'Beti ko Sashakt Banao'.²⁶ Visualizing women performing roles not traditionally associated with them especially as leaders in the transport, logistics and manufacturing sectors, can help dispel long-held stereotypes.

Campaign content should showcase real women from local communities working as delivery partners and in warehouses and micro-fulfillment centers. State governments and municipal corporations can reinforce these national campaigns by highlighting success stories of women who earn competitively while balancing household responsibilities in non-traditional roles. Such campaigns that facilitate visibility for women working in non-traditional roles, earning competitively and balancing household responsibilities build acceptance for these women in these roles in local communities and families.

1.2 Launch and integrate career awareness programs related to urban logistics in schools and college curriculum

The Ministry of Education can integrate career awareness modules on urban logistics under the National Education Policy (NEP) 2020. The NEP 2020 requires all students from Grades 6-8 to participate in 10-day periods interning with local vocational experts such as carpenters, gardeners and artists.²⁷ This framework can include women delivery partners and warehouse workers as vocational experts, essentially creating a 'Day in the life of a Delivery Partner' and 'Day in the life of a Warehouse Worker' programs. For instance, students could interview delivery partners about how they use the app to accept orders, select their delivery zones, navigate using GPS, manage digital payments and balance work with family responsibilities.

²⁵Detailed Findings from Our Urban Research." FSG, Nov. 2022

²⁶All the 640 Districts (as per Census 2011) of the Country Covered under Beti Bachao Beti Padhao (BBBP) Scheme." Press information Bureau, Jan.2019.

²⁷Ministry New Initiatives on Vocational Education Including Hub and Spoke Model Introduction under Samagra Shiksha." Press Information Bureau, 21 Dec. 2022

Additionally, they could also visit micro-fulfillment centers/warehouse to observe women pickers using handheld scanners to fulfill orders, packers organizing items for delivery and shift supervisors managing operations. The Department of School Education and Literacy implementing vocational education under Samagra Shiksha, can issue guidelines requiring schools to organize career exposure sessions where high school girls can interact with women working in urban last-mile logistics.²⁸ These sessions may feature women delivery partners and micro-fulfillment center/warehouse workers sharing their typical daily schedule, their background and how they entered this sector. The Logistics Skill Sector Council (LSC) and Retail Associated Sector Skill Council (RASCI) can similarly undertake information sessions and programs at schools and colleges to increase awareness of potential roles in the sector for women.

Spotlight: Private Efforts to Promote Awareness of Non-Traditional Roles for Women

Zomato has launched targeted campaigns on Instagram and Facebook showcasing delivery roles as viable opportunities for women. These campaigns have women-centric messaging and visuals, as well as real-life stories of women delivery partners to build greater awareness of these roles and the benefits these roles can provide. Many of these posts and videos carry clear messages such as “work when you want, rest when you want” and “2,500+ women delivery partners are with you.”



The Ministry of Education, in collaboration with UNICEF India and NCERT (National Council of Educational Research and Training), launched a Career Guidance Book in July 2024, featuring 500 Career Cards designed to help students understand various professions and occupations.²⁹ NCERT can expand its Career Guidance Book by including dedicated cards on women in urban last-mile logistics to make women’s role as delivery partners, warehouse workers, micro-fulfillment center workers and other related roles visible.

By spotlighting women role models and opportunities in the urban last-mile logistics sector, career awareness programs can help young girls and families view these roles as livelihood opportunities that are viable and socially acceptable.

²⁸Several New Initiatives on Vocational Education Including Hub and Spoke Model Introduced under Samagra Shiksha." Press Information Bureau, 21 Dec.2022
²⁹Navigating Life after School." Department of School Education & Literacy, Ministry of Education, Government of India, 29 July 2024

1.3 Leverage SANKALP:HEW to expand women's awareness of livelihood opportunities in urban last-mile logistics

The Ministry of Women and Child Development (MWCD) has district-level platforms called SANKALP (Supportive Action for Nurturing and Knowledge-Based Advancement, Last-Mile Delivery and Potential Realisation of Women) HEW (Hub for Empowerment of Women) that provide women with skilling support, employment counselling, and livelihood linkages.³⁰

Case studies

Critical interventions such as awareness and gender sensitization campaigns that challenge social norms can create enabling conditions for women's workforce participation.

When supported by awareness campaigns, skilling programs can help address social stigma around women working in non-traditional roles. For example, government's NAVYA (Nurturing Aspirations through Vocational Training for Young Adolescent Girls) program that teaches women how to assemble drones is one such example.³¹

As part of its strategy to end violence against women and girls, the Government of the United Kingdom launched courses in schools to educate boys on harmful gendered attitudes like misogyny, thereby using education as a tool to shape gender norms.³⁴

In 2015, the Government of the United Kingdom, as part of its campaign on '100 years of women in transport' (YOWIT) raised awareness on the low representation of women in public transport.³² The campaign celebrated several women who were part of the sector to demonstrate the variety of available career options. They also commemorated '100 years of the Maida Vale tube station' - the first to have an all-women staff.³³

These case studies demonstrate that normalizing women's participation in non-traditional sectors requires multi-layered interventions that address awareness gaps, challenge social stigma and engage key stakeholders beyond the women themselves.



*Created using AI for illustrative purposes only.

³⁰SOP of PM Sankalp Brochure." Savitribai Phule National Institute of Women and Child Development (SPNIWCD), Ministry of Women and Child Department, Government of India.


³¹Empowering Adolescent Girls for a Viksit Bharat." Press Information Bureau, 28 Sept. 2025.


³²Byers, Sonya OBE. "Reflecting on the Evolution and Impact of Women in Transport." *Women in Transport*, 8 Mar. 2025

³³Maida Vae Tube Station Celebrates 100th Anniversary." *Transport for London*, 5 June 2015

³⁴Teachers to be Trained to Spot Early Signs of Misogyny in Boys." *BBC News*, 18 Dec. 2025

Change in Action: She Moves Logistics Program³⁵

 Chennai, Tamil Nadu

 2025 - Present

Project Overview

She Moves Logistics is a pilot initiative led by Udaiti Foundation in partnership with Nikore Associates, Confederation of Indian Industry (CII) and the Logistics Skill Sector Council (LSC), Chennai to develop a scalable model for women's inclusion in the logistics sector through targeted skilling and firm engagement.

Key Features of the Intervention

To begin skilling programs for women in the logistics sector, it was important to first raise awareness and then mobilise women in urban and peri-urban areas across Tamil Nadu. However, it became clear from initial outreach that many women candidates were unable to join such programs until family and community awareness of livelihood opportunities in urban last-mile logistics was increased.

Accordingly, the first stage of the program has focused on:

- Conducting direct outreach and awareness sessions on logistics sector career pathways in colleges, ITIs (Industrial Training Institutes), skilling institutions and NGOs.
- Counselling of families and parents to facilitate acceptance of women's participation in the logistics sector.

Interim Results

- Outreach conducted with more than 150 women across ITIs, schools, colleges and NGOs in Tamil Nadu, guiding women on career pathways and opportunities in logistics.
- Facilitated improved access to work opportunities in logistics for women by creating a community platform connecting LSC to logistics companies across Chennai.

³⁵Nikore, Mitali. "#SheMovesLogistics - new program alert! The valuation of India's sector stands at USD 380 billion, contributing 13-14% to GDP!..." LinkedIn, 1 mo. ago

2

Easing restrictions and streamlining regulations on women's work

Rationale

Streamlined regulations that balance worker safety with operational flexibility can encourage companies to onboard women across urban last-mile logistics operations. Simplifying and aligning regulatory requirements can lower compliance costs for companies and support wider adoption of gender-inclusive onboarding practices. Lever 2 builds on recent labor code reforms by encouraging regulatory flexibility, shared creche and washroom facilities, and expanded access to publicly-financed social security.

Recommended Actions

2.1 Simplify regulations to ensure improved access to gender inclusive infrastructure

Regulatory flexibility could improve access to gender-inclusive infrastructure in urban logistics. For instance, under the maternity benefits section as part of the Code on Social Security, 2020, creche facilities for establishments with 50 or more employees are mandated,³⁶ which can be difficult to implement in warehouses. Accordingly, MWCD, MoLE and the Ministry of Housing and Urban Affairs (MoHUA) could extend day care facilities for warehouse workers, building on initiatives like the Urban Anganwadi Centers.

Additionally, it would be beneficial if micro-fulfillment centers may be permitted to provide access to women's toilets, sanitation and rest facilities through shared infrastructure solutions including tie-ups with connected fuel stations, restaurants or public toilets. State governments and urban local bodies can play a key role in identifying and facilitating these tie-ups.

Further, across states, regulatory uniformity can be introduced to ensure compliance requirements for gender-inclusive infrastructure does not become overly expensive and challenging. Establishing similar regulations on infrastructure requirements for women across micro-fulfillment centers and warehouses can encourage companies to onboard more women. Regulations on infrastructure requirements for women can hence be reviewed to ensure they are streamlined and achievable by a range of urban last-mile logistics businesses that largely operate in public spaces (i.e. roads and city streets) or out of small, leased spaces in crowded urban centers.



**Created using AI for illustrative purposes only.*

³⁶PIB: Code on Social Security, 2020: Towards Universal and Inclusive Social Protection

2.2. Ease regulations on night-time work for women and bring uniformity across states in line with Labour Codes

For women seeking work in micro-fulfillment centers and warehouses, night-time regulatory flexibility is critical. These facilities operate on multiple shift systems, with staffing needs shaped by consumer demand. Enabling access to work across shifts, including at night, provides women greater choice in work timings.

Effective from November 2025, the updated Occupational Safety, Health and Working Conditions Code, 2020, now permits women across the country to opt for night shifts. However, this is operationalized by states through varied implementation requirements. While the reformed Labor Codes provide a strong foundation for women's night-time work in logistics, there remains a need to bring increased regulatory clarity and uniformity across states. For this purpose, MoLE can issue guidelines on night-time work for women in the logistics sector, aligned with the Labor Codes. This will allow states greater clarity when issuing guidelines at state level.

For logistics and platform companies operating across multiple states, simple, uniform regulations and regulatory flexibility can encourage them to onboard more women in urban last-mile logistics.

Case studies

International evidence demonstrates that easing restrictive regulation can expand women's participation while strengthening worker protections. Research highlights that legal frameworks allowing women to work night shifts on par with men are associated with a 4.1 percentage point increase in the likelihood of having a female top manager, while restrictions on women's ability to work at night and their access to specific jobs limit their employment opportunities.³⁷ A study of Indian firms in specific states (Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Maharashtra, Punjab, and Uttar Pradesh) that had relaxed night-shift laws for working women, found that large firms significantly increased both the share and number of female workers, a relative increase of 11.7% over the average female employment rate.³⁸

Eliminating restrictive regulations while retaining enabling protections represents a simple yet powerful pathway to gender-neutral labor laws that can significantly increase women's participation in urban last-mile logistics.




**Created using AI for illustrative purposes only.*

³⁷Islam et al: "Unequal Laws and the Disempowerment of Women in the Labour Market: Evidence from Firm-Level Data". Journal of Development Studies. 2018

³⁸Gupta et al: From Dusk Till Dawn: The Impact of Lifting Night Shifts Bans on Female Employment. Ashoka University. 2025

Change in Action: Easing gender-specific restrictions on night work³⁹

 Malaysia

 2023

Project Overview

Malaysia's Employment (Amendment) Act 2022, implemented in 2023, removed previous legal prohibitions on employing women in night work and underground work, aligning labor law with gender equality principles and enabling women to participate fully across work shifts.

Key Features of the Intervention

- Removed statutory restrictions that previously prevented employers from requiring women employees to work night shifts (10 pm–5 am) or in underground roles.
- Maintained general labor safeguards including occupational safety standards and rest period requirements applicable to all workers
- Part of broader Employment Act changes that also expanded maternity protections and introduced flexible working provisions

³⁹Hassan and Saripan: Amendments to the Employment Act 1955: An Analysis of the Key Changes with Reference to International Labour Standards - A Positive Improvement for Malaysia's Employment Regime? *International Journal of Academic Research in Business and Social Sciences*. Jan 2023

Stage 2

when she
seeks work

Action

creating an enabling environment

Lever 3

Enhancing skilling and digital literacy
amongst women and girls

Lever 4

Increasing access to asset ownership



3 Enhancing skilling and digital literacy amongst women and girls

Rationale

Targeted investments in technical and foundational skills, such as driving, digital literacy, and confidence-building can unlock entry for women in urban last-mile logistics. Women are more likely to have had limited exposure to two-wheeler riding and to smartphone-based applications such as navigation and digital payments. Across low- and middle-income countries, women are 14% less likely than men to use mobile internet, translating to around 235 million fewer women users than men.⁴⁰ Additionally, available administrative data indicate that only 6.3% of women have a driving licence in India as of March 2020.⁴¹ These gaps underscore the importance of strengthening access to foundational skill training. While women account for around 50% of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) trainees, participation remains concentrated in traditional trades such as apparel, and beauty and wellness.⁴²

Recommended Actions

3.1 Introduce industry-relevant skill training qualification packs for roles in urban last-mile delivery, micro fulfillment centres and warehousing

Skill training can incorporate industry-relevant and role specific training to facilitate women's entry in urban last-mile logistics. The Ministry of Skill Development and Entrepreneurship (MSDE) can collaborate with MoLE and MoE to incorporate sector-specific, contextualized training across ITIs and within PMKVY training programs as foundational training modules, aligned with market needs. These training programs can cover smartphone usage, digital payments, navigation and customer interaction- skills required for roles in urban last-mile logistics. Further, Sector Skill Councils can develop urban logistics-readiness curricula that emphasize industry relevant skills and introduce skill training qualification packs for specific roles such as last-mile delivery partners and micro-fulfillment center workers. To strengthen workforce readiness, functional literacy and basic English can be integrated as short 'micro-skill' modules within this training.



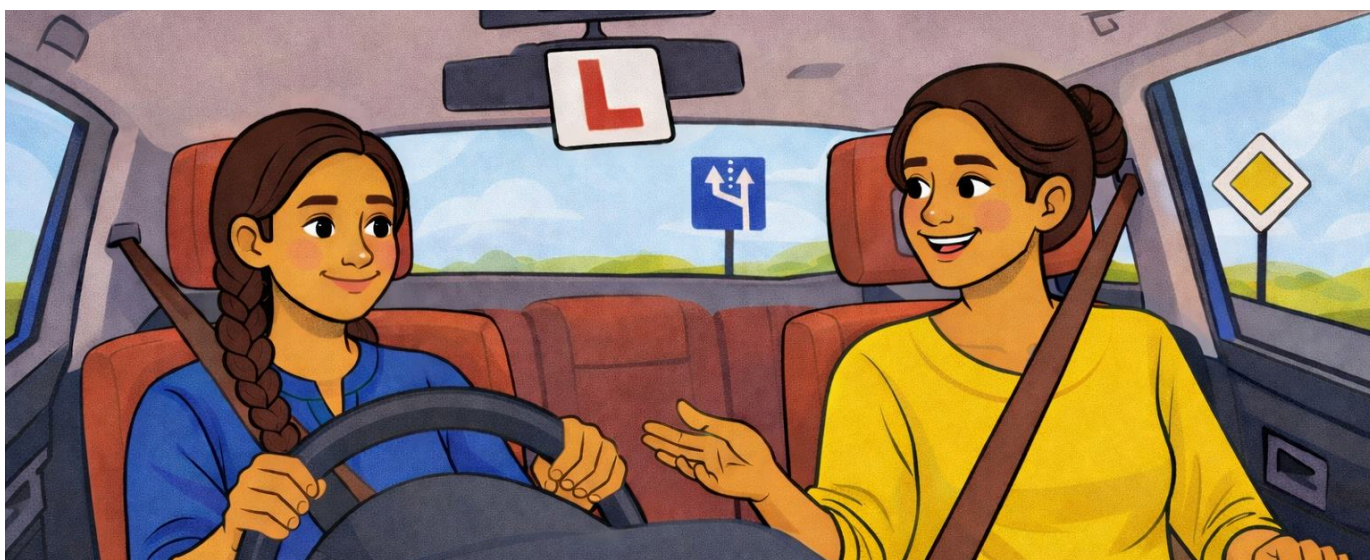
⁴⁰GSMA: *The Mobile Gender Gap Report, 2025*.

⁴¹WE2: *Path Forward to Increase Women's Use and Uptake of Electric Two-Wheelers*

⁴²Kumar, Sunaina. "The Skilling Imperative in India: The Bridge Between Women and Work." *Observer Research Foundation*, 14 Aug. 2023.

3.2 Introduce modules for women's driving training in two-wheelers, four-wheelers, electric vehicles and heavy vehicles under PMKVY

Driving training modules for women can be integrated under PMKVY, covering two-wheelers, four-wheelers, electric vehicles, heavy and commercial vehicles. Riding and driving modules can be delivered through State Transport departments, State Sector Skill Councils and Industrial Training Institutes (ITIs). The Logistics Sector Skills Councils can additionally link training to placement opportunities with the private sector, ensuring women are prepared to enter the urban logistics workforce.



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3.3 Establish confidence-building and soft skills development programs tailored for women entering traditionally male-dominated roles

The incorporation of confidence and soft skill building can drive greater participation of women in urban last-mile logistics. Confidence-building and soft-skills programs, focusing on assertive communication and conflict resolution, can strengthen women's ability to navigate workplace dynamics in traditionally male-dominated sectors. MSDE can integrate these skilling components into PMKVY logistics curricula at the national and state levels and issue a standard soft skills module for urban last-mile delivery and warehousing roles through NSDC and State Skill Missions. State labor departments and urban local bodies can partner with platforms and logistics companies to deliver short, role-linked modules. This can be reinforced through supervisor coaching and periodic refreshers through on-the-job training, especially for warehouse-based roles. The government can also support uptake by co-funding these modules, and by recognizing certified completion as part of formal skilling outcomes.

3.4 Structured partnerships bringing together training providers, platforms, logistics firms, and government to strengthen linkages

Formal pathways through partnerships between training providers, platforms, logistics firms, and public employment services can form a structured pipeline from skilling to livelihood generation. The Central government can mandate placement support within government-funded training programs, alongside certification systems that companies recognise and trust. At the state level, targeted job fairs and recruitment drives can connect women candidates directly with companies, reinforcing the skilling-to-livelihood pipeline and supporting sustained workforce participation for women. Public procurement in municipal delivery and logistics services can also be used to create a demand for women-led and women-inclusive service providers.

Case studies

International and national examples show how targeted training programs can equip women with mobility and digital skills, including driving. DigiKen, a UN-led initiative supported by the Kenyan government aims at developing homegrown digital platforms for women and youth. It provides essential digital skills training for women and girls, focusing on media literacy, critical thinking and safe online navigation.⁴³ Similarly, the SkillsFuture program in Singapore includes 'Essential Skills for Work,' which covered basic English and digital literacy as foundational modules and had over 606,000 Singaporeans tapping into training in 2025.⁴⁴



Across India, driving training initiatives are increasingly supporting women's skill development. The Women's ITI in Guwahati enrolls women in non-traditional courses, including driving and basic mechanical skills. Dedicated training centers, women instructors and a strong emphasis on both foundational and advanced skills have contributed to the ITI having nearly 100% placement outcomes⁴⁵. Further, Zomato launched Women Riding Centers, an initiative that facilitates two-wheeler riding training. One such center was started in Mumbai in 2025 in partnership with the Brihanmumbai Municipal Corporation (BMC), aiming to provide riding skills and a supportive learning environment for women.⁴⁶

⁴³Empowering Women and Girls through DigiKen." UNESCO, 7 Mar. 2025

⁴⁴Skills Development." SkillsFuture Singapore, 27 Jan. 2026, Chan, Gabrielle: Over 1 in 2 S'poreans aged 30 to 75 used SkillsFuture credit, surge driven by year-end-deadline: SSG. The Straits Times. Feb 9th, 2026

⁴⁵EY (Ernst & Young). Gender Study to Identify Constraints on Female Participation in Skills Training and Labor Market in India. Directorate General of Training, Ministry of Skill Development and Entrepreneurship, Feb. 2024

⁴⁶Life & More: Zomato launches women riding centres to impart two-wheeler riding training. 2025

Spotlight: Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)

The PMGDISHA scheme (2017–2024) was a digital literacy scheme by the Ministry of Electronics and Information Technology (MeitY), focused on improving overall digital literacy, targeting six crore people in rural areas, across States/UTs. The scheme aimed to reach around 40% of rural households by covering one member from every eligible household.⁴⁷

The scheme looked to impart skills by training beneficiaries to operate computers or digital access devices (like tablets, smartphones, etc.), send and receive e-mails, browse the Internet, access government services, search for information and undertake digital payments, etc.⁴⁸

As of March 31, 2024, a total of 6.39 crore individuals were trained under PMGDISHA. Out of those trained, 4.78 crore candidates successfully achieved certification after third-party assessment, demonstrating measurable competence in basic digital skills.⁴⁹



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*Created using AI for illustrative purposes only.

Spotlight: Company Efforts in Skilling

Urban Company offers structured training for service partners in categories like beauty, wellness, and AC repairs, starting from onboarding to advanced roles. Top performers advance to Subject Matter Experts, part-time and full-time trainers, building skills in technical expertise, customer service and leadership.⁵⁰


⁴⁷Ministry of Electronics and IT. "PMGDISHA and CSCs have emerged as the enablers for digital literacy, MOS IT Shri Rajeev Chandrasekhar." Press Information Bureau, Government of India, 8 Sept. 2011


⁴⁸PMGDISHA. "Gramin Shiksha.

⁴⁹Ministry of Women and Child Development, Government of India. "Ministry of Women and Child Development Organises Post-Budget Webinar Today." Press Information Bureau, 26 Jul. 2024.

⁵⁰"Setting Up Service Partners for Success: Upskilling at Urban Company." Urban Company, 15 Oct, 2023.

Change in Action: Training women drivers for AMA Bus and AMA E-Ride46⁵¹

 Bhubaneswar, Odisha

 2022 - Present

Project Overview

Bhubaneswar's Capital Region Urban Transport (CRUT) introduced electric buses and e-rickshaw feeder services to promote emission-free mobility and ensure equitable transport access. To support this initiative, focused training programs were launched to recruit and upskill women, transgender persons and other marginalized groups as drivers (Sarathis) to operate the fleet. The program was implemented in partnership with ARUNA, a local non-governmental organization and the German Development Cooperation through GIZ.

Key Features of the Intervention

- A two-month, practical and theory-based driver training program covering driving skills, traffic rules, emergency handling, customer service and gender sensitivity
- Support to obtain driving licenses, with integrated smart-fleet management (GPS, fare collection) for operational support
- As of January 2026, 20 women candidates will undergo specialized e-bus driving training in Pune with recruitment planned in Odisha afterwards

Interim Results

- Previously, almost no women worked in the region's transport operations. Post training and operation, 40% of all the conductors on the bus service were women.
- Women, along with transgender and HIV-affected individuals were trained as operators of e-rickshaws and buses. More than 120 people were trained as e-rickshaw drivers. As a consequence, CRUT reported more women riders who claimed feeling safer and more comfortable while using the transport.
- With this spotlight on rider experience, gender equity, and electrification, CRUT succeeded in increasing ridership of its services by almost 200% in under five years, with 57% of passengers reportedly shifting from private transport modes.

⁵¹Ride with Pride: Inclusive E-Mobility Revolution in Bhubaneswar." Deutsche Gesellschaft Fur Internationalable Zusammenarbeit (GIZ), 24 Nov. 2023, How This Indian City is Empowering Women and Improving Transport Connectivity." Institute for Transportation and Development Policy (ITDP), 5 Oct. 2023. "Women to now drive AMA buses, undergo special training in Pune." The New Indian Express. Jan 21, 2026

4 Increasing access to asset ownership

Rationale

Enabling access to assets including vehicles and smartphones is crucial for women to translate skills into livelihood opportunities in urban last-mile logistics. For instance, urban last-mile delivery roles typically require a two-wheeler and a smartphone, creating upfront costs that shape livelihood decisions even when women have the skills and willingness to work. 56.6% of women own a smartphone compared to 73.7% of men, affecting access to app-based work systems used in delivery and logistics.⁵²

Recommended Actions

4.1 Introduce credit guarantee schemes for smartphones and two-wheelers for women

Government-backed credit guarantee schemes can improve women's access to essential work assets by reducing lender risk and incentivizing financial institutions to extend credit to women. Building on government schemes such as PM-SVANidhi, which provides collateral-free loans of up to ₹50,000⁵³, and the forthcoming microcredit program for platform workers in 2026 offering collateral-free loans of up to ₹10,000 annually⁵⁴, can help improve women's access to essential work assets. Integration with financial inclusion platforms like Pradhan Mantri Jan Dhan Yojana can expand reach, while smartphone financing could be offered as bundled packages including connectivity and device insurance.

Dedicated credit guarantee support for women entering logistics can be established through existing institutions such as the National Credit Guarantee Trustee Company, SIDBI (Small Industries Development Bank of India), or state-level guarantee bodies. Blended finance models combining government guarantees with concessional finance can help keep borrowing costs affordable.

Spotlight: Rang De - a Peer to Peer Social Investment Platform

Rang De works on a peer-to-peer lending model, which enables small-scale farmers and entrepreneurs by making decentralized renewable energy (DRE) solutions accessible through low-cost credit. The model empowers those without credit access, helping them to build their credit score, which in turn helps them unlock access to more lenders and larger pools of capital from financial institutions. Regulated by the RBI in 2019, the Rang De model has supported 17,150 women investees and 12,831 first-time investees.⁵⁵

⁵¹Digital Dreams, Gendered Realities: Women in Digital India." Centre for Economic Data and Analysis (CEDA), Ashoka University, 16 Sept. 2025.

⁵²WE2: Path Forward to Increase Women's Use and Update of Electric Two-Wheelers

⁵³Government of India. "PM-SVANidhi: Pradhan Mantri Street Vendor's AtmaNirbhar Nidhi Scheme," Press Information Bureau, 26 Oct. 2023.

⁵⁴Microcredit Scheme for Gig, Platform Workers in Works," The Economic Times, 16 Jan. 2026

⁵⁵Rang De, Dsouza, Krystelle: How a Bankless Loan Model Is Giving Indian Farmers Low-Cost Access to Climate-Smart Solutions. The Better India. August, 2025

4.2 Innovative Asset Financing Models

Strengthening innovative financing models respond effectively to the needs of platform-based gig workers. Several models demonstrate particular promise:

Rent-to-own arrangements can allow women to access assets such as vehicles, without upfront capital while building toward ownership through regular payments. The asset acts as collateral during repayment, which reduces risk and allows immediate use for work. Such models can make asset access more achievable for women with limited upfront capital and are especially suited to workers who rely on frequent cash earnings rather than monthly incomes. Similar approaches have been implemented by Ampersand in Rwanda to support two-wheeler access through structured, time-bound repayment plans, with the aim of encouraging riders to switch to EVs.⁵⁶

Pay-as-you-go financing can align repayment schedules with the variable earnings common in delivery and platform work. Weekly or bi-weekly payments reduce repayment stress compared to fixed monthly instalments and can lower default risk. Integration with digital payment systems

further improves ease of repayment and reduces transaction costs. This is demonstrated by Watu's African model, where one can purchase a phone with a small down payment and pay the rest over time at their own pace.⁵⁷

Even so, access to credit for urban last-mile delivery partners, particularly women, remains constrained due to the absence of formal credit histories and other structural barriers. NBFCs and alternative lending organizations could explore lending models that rely on non-traditional indicators of creditworthiness, such as sustained earnings or continuity of work. Where appropriate, and in line with data protection and privacy guidelines, lenders may seek limited, consent-based information on delivery partners' work activity from platforms to support credit assessment. Together, these approaches can expand access to affordable loans and services such as vehicle financing or battery solutions for urban last-mile workers.

Spotlight: Non Banking Financial Institutions offering affordable two-wheeler loans

Hero Fincorp offers a two-wheeler loan with up to 90% financing. This is particularly targeted towards delivery partners, who can avail loans with no advance EMI, PF and processing fee. Moreover, they offer personal loans of up to ₹5 lakhs to gig workers meeting a minimum monthly income requirement of ₹15,000.⁵⁸



**Created using AI for illustrative purpose*

⁵⁶South Pole Carbon Asset Management LTd. *Scoping Carbon Market Instruments to Unlock Carbon Finance for Sustainable Mobility in Sub-Saharan Africa*. Prepared for Shell Foundation, 20 Oct. 2021

⁵⁷Watu Simu." Watu Africa, Accessed 28 Jan. 2026.

⁵⁸Welcome to the Future on Your Own Bike with Hero Fincorp's Two-Wheeler Loan Offering." Facebook, posted by Hero Fincorp Official, 16 Aug. 2024., "Personal Loan for Gig Economy." Hero Fincorp, 28 Sept. 2025

Case studies

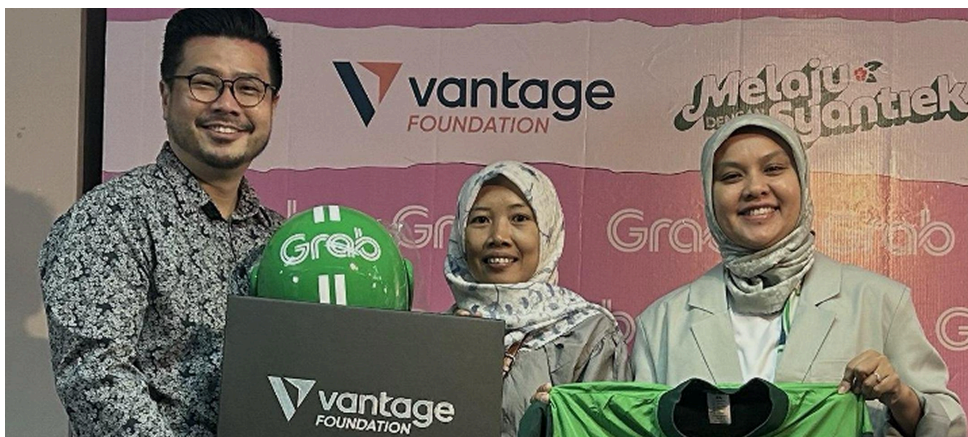
Programs that enable women to purchase assets such as two-wheelers and smartphones can address entry barriers in urban last-mile logistics work. The Tamil Nadu Amma Two Wheeler Scheme (2018-2021) empowers working women by providing a financial subsidy for purchasing gearless two-wheelers. The scheme offered up to 50% of the cost or a flat ₹25,000, whichever is lower, to eligible women. It targeted working women in both urban and rural areas of Tamil Nadu and aims to improve mobility, reduce transportation barriers, and facilitate access to livelihood opportunities.⁵⁹ Rajasthan's Indira Gandhi Smartphone Scheme (Mukhyamantri Digital Seva Yojana), launched in 2023, provided free smartphones with around three years of internet/data support to eligible women, including girls and women in

beneficiary households.⁶⁰ A joint study by UNDP and ICRIER shows that access to a mobile phone, even when shared, increases the likelihood that rural women join the labor force by 4% and urban women by 3%. The effect is even greater for gig opportunities.⁶¹

International examples also demonstrate effective solutions for the provision of assets to women in urban logistics. In Nigeria, the 10,000 Women in Mobility Program, launched by the Federal Government via Nigerian Consumer Credit Corporation (CREDICORP) and Ministry of Women Affairs, also provides vehicle loans in all states for vehicles, tricycles (Keke) and motorcycles.

Spotlight: Company Efforts in Skilling and Asset Acquisition

In Indonesia, Grab has introduced women-focused initiatives to improve access for women in the ride-hailing and logistics ecosystem. The company launched Wiramudi Grab program in April 2024 to overcome barriers such as access to capital and equipment across 18 cities. Through partnerships with the likes of Vantage Foundation, the program has empowered over 3,400 women, including onboarding more than 1,400 new women drivers and reactivating 2,000 dormant drivers, by providing driver kits, startup capital and financial incentives.⁶² Grab's broader efforts also include app features like the Women Passengers Preferred toggle and women-specific onboarding sessions to improve participation. Additionally, the company also partnered with United Nations Fund for Population Activities (UNFPA) and the Ministry of Women Empowerment and Child Protection to deliver mandatory driving safety training and service excellence workshops to Grab driver-partners across Jakarta, Bandung, Surabaya, Medan and Bali⁶³.



Women: Empowering Women with Grab Indonesia

⁵⁹ATWSFWW."my Scheme, National Platform for Government Schemes. Accessed 28 Jan. 2026

⁶⁰Rajasthan Indira Gandhi Smartphone Scheme." GovtSchemes.in. Accessed 28 Jan. 2026


⁶¹Fernandez, Cledwyn, Havishaye Puri, and Shravani Prakesh. Digital Technology as an Instrument to Bridge the Gender Gaps in Access to Labour Markets. UDNP-ICRIER Policy Brief 31, United Nations Development Programme & Indian Council for Research on International Economic Relations, Dec. 2024


⁶²Supporting Grab Indonesia's Women Driver Programme." HR Asia, 24 Apr. 2025

⁶³UNFPA and Grab Train Thousands of Grab Driver-Partners in 5 Cities on Safety Driving and Sexual Violence Prevention." United Nations Population Fund (UNFPA) Indonesia, 28 Jul. 2023.

⁶⁴Image from the Vantage Foundation - Empowering Women with Grab Indonesia

Change in Action: GSMA connected women initiative

 Global (Initiated with commitments across Africa, Asia, Latin America)

 2016

Project Overview

The GSMA Connected Women initiative works with mobile operators across African countries to reduce the gender gap in mobile internet and mobile money through women-focused products such as handset financing, micro-loans, female agent networks and digital literacy support.

Key Features of the Intervention

- Formal commitments by operators to increase the proportion of female customers and mobile internet users
- Early focus on data safety, female agent recruitment, literacy support and inclusive product design

Interim Results

- Initial outreach: More than 50 mobile operators made commitments to reduce the gender gap in mobile ownership.
- Early scale: By 2018, the mobile operators had already reached 12 million women through this commitment.⁶⁴
- Mid-Term Progress: By 2020, 38 mobile operators made 53 formal commitments to reduce the gender gap in their mobile internet and/or mobile money customer base by 2020, reaching over 35 million new women so far with these services.⁶⁵
- Current Status: More than 70 million women reached by late-2024. By early 2025, combined operator efforts had collectively reached over 80 million additional women with mobile internet or mobile money services.⁶⁶

⁶⁴Connected Women Commitment Partners Reach over 12 Million New Women with Mobile Internet and Mobile Money Services." GSMA, 16 Nov. 2020.

⁶⁵10 Years since the Launch of the GSMA Connected Women Programme: Reflections on Progress." GSMA, 13 Mar. 2025.

⁶⁶#AccelerateAction: Our Latest Data Shows Progress in Closing the Mobile Internet Gender Gap Has Stalled." GSMA, 8 Mar. 2025

Stage 3

after she enters in
the workforce

Action

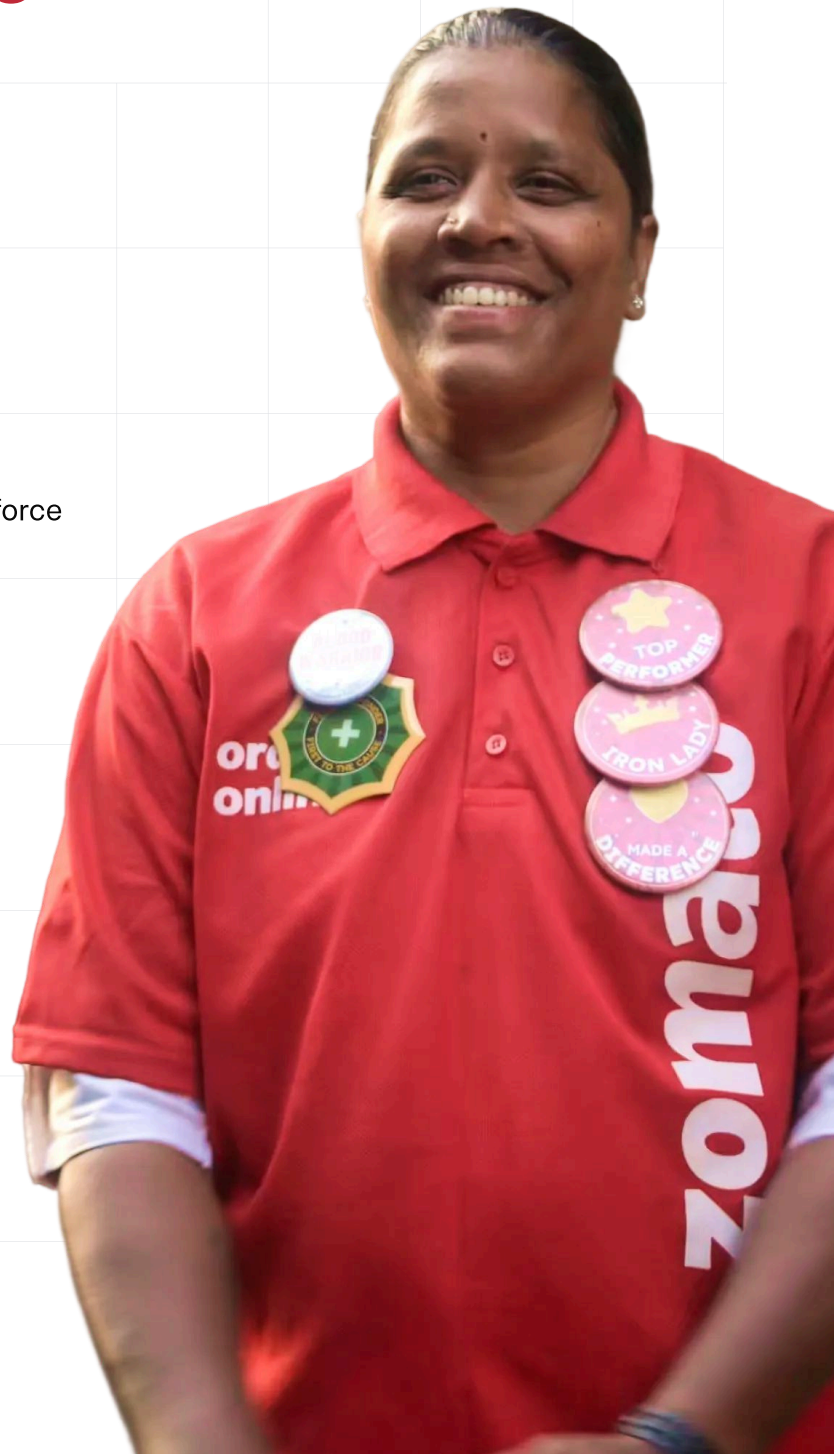
enhancing retention of women in the workforce

Lever 5

Establishing gender responsive
infrastructure in public spaces

Lever 6

Enhancing emergency response
systems and infrastructure



5 Establishing gender responsive infrastructure in public spaces

Rationale

Women's retention in urban last-mile logistics is constrained by inadequate gender-responsive infrastructure in public spaces. Studies by ITDP, GIZ, and ActionAid show that limited access to clean, safe and well-located public toilets restricts where and how long women can remain in public spaces, shaping work participation, directly affecting their ability to sustain work in delivery and logistics roles.⁶⁷ Additionally, warehouses are often located in peripheral zones with limited public transport during off-peak hours, making it difficult for women to safely commute for shift-based work. Logistics shift patterns, aligned with the absence of accessible childcare facilities further compound retention challenges; in fact, global evidence finds that childcare interventions that improve access to childcare result in increased women's labor force participation (In five studies, provision of childcare programs increased women's employment, ranging from a 5 to 47 % increase).⁶⁸ Without addressing these infrastructure gaps, women who enter the workforce often face practical barriers that push them out, undermining efforts to improve gender diversity in the sector.

Recommended Actions

5.1 Establish Rest Areas across Cities with Gender-Responsive Infrastructure for Gig Workers

National guidelines for rest facilities can be developed and implemented through partnerships with community organizations and private sector CSR initiatives. These rest areas refer to designated spaces where delivery and logistics workers can pause during their shifts and are typically equipped with seating, clean drinking water, toilets and mobile charging points. In India, Zomato pioneered rest facilities for delivery partners as part of their Shelter Project, launched in 2023.⁶⁹

The establishment and expansion of rest areas can be facilitated by central government ministries. MoHUA, MWCD and MoLE can develop guidelines for rest facilities catering to delivery partners, with particular attention to women's requirements. MOHUA's existing frameworks for urban infrastructure development under schemes such as the Smart Cities Mission and AMRUT⁷⁰ provide institutional channels for integrating these standards into city-level planning.

State level departments of Urban Development can incorporate rest area development into urban master plans and ensure that town planning regulations mandate space allocation for such facilities in commercial and industrial zones. By partnering with community-based organizations (CBOs) for ongoing operations and maintenance, state governments and urban local bodies can ensure that facilities remain clean, functional and accessible to women workers. Financing can be structured through convergence with CSR and private sector contributions through MoUs.

5.2 Establish Rest Areas across Cities with Gender-Responsive Infrastructure for Gig Workers

Strengthening and expanding washroom infrastructure under Swachh Bharat Mission (SBM) Urban 2.0 can provide safe and reliable access to sanitation for women working in urban logistics. The Swachh Bharat

⁶⁷ActionAid Association. *Public Toilets for Young Urban Women: A Report on Gender Responsive Public Services in Six Cities of India*. ActionAid Association, 2019.

⁶⁸Gulesci et al: *Access to childcare to improve women's economic empowerment*. Jpal. 2023

⁶⁹Zomato Annual Report: FY 2023-24

⁷⁰AMRUT Scheme." Press Information Bureau, Ministry of Housing & Urban Affairs, 22 Dec. 2022.

Mission (Urban), which has constructed over 6.36 lakh public and community toilets, provides a strong foundation that can be leveraged through logistics facility mapping and partnerships along delivery corridors. MoHUA has previously established guidelines for public and community toilets under SBM Urban 2.0, including the establishment of Pink Toilets, which are women-focused public spaces designed to provide safe and hygienic spaces with features such as sanitary napkin dispensers and women attendants. MoHUA should ensure all SBM public toilets, especially Pink Toilets, are accurately mapped on Map mobile applications with verified location pins, operating hours and amenities listed (women's facility, attendant availability, cleanliness rating). This would enable delivery partners using Maps for navigation, which most platforms already integrate for routing, to easily locate nearby toilets during their gigs without requiring separate apps or additional training.

State governments can partner with private firms to map logistics facilities and plan the placement of women's washrooms near industrial zones and peri-urban warehouses. Implementation and coverage can be facilitated by using low cost, innovative methods, through partnerships with community based organizations and engagement with private actors. The Sthree Toilet at the Karnataka State Road Transport Corporation (KSRTC) Majestic bus terminal in Bengaluru illustrates such an approach, where a retired bus was repurposed into a women's toilet facility through collaborative public-private efforts.⁷¹ Additionally, state governments and urban local bodies can strengthen awareness and use of the SBM Toilet Locator tool to improve access and utilization.

5.3 Increase Investment in Gender Responsive Public Transport Systems and Public Spaces

Issuing and implementing national guidelines on multimodal, gender-responsive transit can improve transport access and urban last-mile connectivity for women in urban logistics. Evidence from a study by Udaiti Foundation and Nikore associated across Indian cities highlights that gaps in feeder service and off-peak connectivity increase travel time, reduce mobility and limit the effective job radius available to women, particularly for roles with non-standard shifts.⁷² MoHUA can develop and disseminate guidelines to states on multi-modal integration that specifically address women's mobility requirements, including extending transportation to off-peak hours. Improved connectivity and gender responsive transit facilities would support mobility for women working in warehouses and micro-fulfillment centers, where shifts often span early mornings or late evenings.

For women working in warehouses and micro- fulfillment centers, state transport departments can ensure the integration of urban last-mile connectivity solutions, including feeder buses and shared mobility options connecting major transit nodes to warehouses and micro-fulfillment centers, especially during off peak hours to accommodate for early morning and late night shifts. For delivery partners, state governments and municipal bodies can establish designated pick-up and drop-off zones for two-wheelers, cycles and electric vehicles at major commercial hubs, linked to transit, sanitation and rest.



*Created using AI for illustrative purposes only.

⁷¹Kaggre, Niranjan. "KSRTC Opens 'Sthree Toilet' at Kempegowda Bus Station." Deccan Herald, 27 Aug.2020.

⁷²Nikore, Mitali, and Kanika Singhal, Bridging Gendered Gaps in First and last-mile Connectivity Across Indian Cities. The Udaiti Foundation & Nikore Associates, Aug. 2025.

5.4 Expand Availability of Childcare Infrastructure and Services

Expanding access and coverage of affordable crèche facilities through the existing Palna Scheme can reduce childcare related constraints and improve women's workforce retention. The MWCD Palna scheme provides quality creche facilities for children aged six months to six years, with services including daycare, early stimulation, preschool education, nutritional meals, growth monitoring and immunization.⁷³ As of March 2025, 11,395 Anganwadi-cum-creches across 34 States and Union Territories have been approved.⁷⁴ The scheme can be expanded to ensure 100% coverage in municipal schools across urban areas, with state governments and urban local bodies coordinating roll-out in the proximity of warehouses.⁷⁵

Expanding public creche facilities at municipal schools can improve utilization by placing childcare within familiar neighborhood spaces. For delivery partners, this is beneficial, as they do not have fixed work locations and require reliable

childcare near their home. For micro-fulfillment workers, who typically work within residential neighborhoods and may prefer to work near home, creche facilities in municipal schools can enable regular attendance at work. In peri-urban areas, warehousing clusters offer opportunities to aggregate childcare demand, making it viable to establish creches near industrial zones and logistics parks.

Local women's organizations and self-help groups can be engaged to staff and manage creche facilities, ensuring community oversight and regular operations. Public-private partnerships and private-sector CSR funding can be used to upgrade infrastructure, extend operating hours, and equip creches to support shift-based work. For instance, in Delhi, Mobile Creches, an NGO, has supported government programs by piloting Anganwadi-cum-crèche models and training front-line childcare staff.



⁷³Ministry of Women and Child Development, Government of India. "Palna Scheme under Mission Shakti." Press Information Bureau, 9 Apr. 2025

⁷⁴Ministry of Women and Child Development, Government of India. "Palna Scheme under Mission Shakti: A Journey of Women Empowerment and Child Care." Press Information Bureau, 7 Apr. 2025.

⁷⁵Over 1,700 Anganwadi-cum-crèche Operational Under Palana Scheme." NewsOnAir, 7 Apr.2025

5.5 Create Public Lactation Rooms and Breastfeeding Areas

Integrating lactation facilities in public infrastructure and transport hubs can support the retention of women working in warehouses. MOHUA can issue guidelines to states requiring inclusion of lactation rooms and breastfeeding areas as essential infrastructure in urban public facilities, transport terminals and high-density commercial zones, so that women working in warehouses nearby are able to access them. State Departments of Urban Development can also issue directives requiring urban local bodies to treat lactation facilities as essential infrastructure alongside washrooms and drinking water points.

Urban local bodies can support rollout by mapping high-footfall areas and commissioning facilities, either standalone or integrated with washroom complexes, with designs that reflect actual usage patterns including time of day and duration of use. In Surat, the SHE Block: Breastfeeding Centers for Mothers on the Move were created in partnership with the Surat Municipal Corporation to provide dedicated areas for nursing and care, demonstrating how local governments can support lactation needs for women in transit and work settings.

Case studies

Examples from India show that targeted, service-linked gender responsive infrastructure can support women's participation in gig, delivery and logistics work. In Chennai, the Greater Chennai Corporation has launched a mobile lounge for gig workers in 2025, that provides seating, drinking water, charging points and sanitation facilities.⁷⁶ Similarly, the Indian Customs (CBIC) and the Land Ports Authority of India (LPAI) have committed to gender-responsiveness at logistics facilities.⁷⁷ LPAI implemented the SOP on Gender Mainstreaming at Land Ports for on-site childcare, baby-changing tables and lactation rooms/crèches.

International evidence demonstrates how gender responsive design can be applied in the logistics sector to build rest areas for delivery patterns and improve transportation connectivity for warehouses. In Bangladesh, investments under the Greater Dhaka Sustainable Urban Transport Project, improved public transport connectivity and pedestrian infrastructure, with specific attention to women's accessibility.⁷⁸ These measures helped make daily commuting safer and more affordable for women workers traveling between residential areas and workplaces, including in the garment sector. In Brazil, a joint initiative between the Brasília Government and iFood in 2023 created a public support point for delivery partners.⁷⁹ These public-private collaborations demonstrate how city authorities and platforms can work together to create practical support infrastructure for delivery partners.


⁷⁶In a First for TN, GCC Unveils AC Mobile Lounge for Gig Workers." *The Times of India*, 12 June 2025.


⁷⁷Press Information Bureau. "PM GatiShakti National Master Plan Evaluates 293 Infrastructure Projects Worth ₹13.59 Lakh Crore." Ministry of Commerce & Industry, Government of India, 21 Jan. 2025

⁷⁸World Bank. *Toolkit for Enabling Gender Responsive Urban Mobility and Public Spaces: Volume I - The "What-To-Do" Note for Policymakers*. The World Bank, 2022.

⁷⁹iFood Inaugura Primeiro Ponto de Apoio em Parceria com o Governo de Brasília." *iFood Institucional*, 23 Mar. 2024

Change in Action: Ministry of Women and Child Development's (MWCD) Palna scheme

 India (across states)

 2022-present

Project Overview

The Palna Scheme is a centrally sponsored programme under the Samarthya sub-scheme of Mission Shakti, restructured from the erstwhile National Creche Scheme. It provides quality childcare and day-care crèche facilities for children aged six months to six years in a safe, secure environment to support early development and enable mothers, especially working mothers, to pursue gainful employment.

Key Features of the Intervention

- Comprehensive Child Development Services such as early stimulation, pre-school education, supplementary nutrition, growth monitoring, health check-ups and immunization (in convergence with Mission Poshan 2.0).
- Two delivery models: Standalone creches and Anganwadi-cum-creches (AWCCs) leveraging existing Anganwadi infrastructure for expanded reach.

- Flexible operation (26 days/month; ~7.5 hours/day) tailored to working mothers' schedules.
- In Delhi, the scheme is facilitated through Municipal Corporation of Delhi schools.

Interim Results

- Nearly 14,599 Anganwadi-cum-creches (AWCCs) approved across States/UTs as part of the push to establish around 17,000 AWCCs by FY 2025-26.
- As of February 2025, 1,761 AWCCs are operational with 28,783 current beneficiaries. Besides this, 1,284 Standalone creches are also operational across the country with 23,368 current beneficiaries.
- By institutionalizing childcare, the scheme can potentially reduce specific barriers to women's workforce participation, enabling mothers to seek or continue gainful employment.

6 Enhancing emergency response systems and infrastructure

Rationale

Reliable and visible emergency response infrastructure can strengthen women's confidence to work as delivery partners navigating city streets, as micro fulfillment centre workers commuting during early morning or late-night shifts, and as warehouse workers in peri-urban industrial areas. Women's willingness to work is shaped not only by personal experience but by trust in the availability and reliability of emergency response systems. For example, evidence from India shows that improving the visibility of women-focused policing can increase trust and reporting. A study on women's police stations found a 22% rise in reported crimes against women, driven by higher reporting rather than increased incidence.⁸⁰ Strengthening emergency response infrastructure through visible women police officers, pink booths and vans, reduced dark zones and standard response procedures can support safer mobility and retention of women working in urban logistics.

Recommended Actions

6.1 Increase presence of women police officers and establish clear recruitment standards

The establishment of a national 'Women Police Officers Fund' with dedicated allocation through the Ministry of Home Affairs can support states in increasing women police representation. Studies find that increasing the number of female police officers can result in freer movement of women, as well as a reduction in incidences of gender-based-violence (GBV).⁸¹ Further evidence highlights that this reduction in the incidence of GBV, and women feeling safer, can lead to increased economic participation.⁸² The Ministry of Home Affairs (MHA) has issued guidelines directing states to increase the share of women in police forces to 33%, with women accounting for 12% of police personnel nationally as of 2020.⁸³ A dedicated central fund can support the implementation of these guidelines, by providing financial resources for women's police recruitment drives and the establishment of women-only training batches.

National guidelines on women's representation in police can be strengthened by setting quantitative recruitment targets for women. State governments can set benchmarks for recruitment, such as a 25% minimum target for women police officer representation at police stations.⁸⁴ This can also be done by establishing minimum operational coverage standards, such as at least one woman police officer per defined delivery hotspot or logistics corridor to ensure visibility. Additionally, state governments could also publish annual gender-disaggregated data on women police recruitment, retention and role distribution to enable state-level accountability and develop state-specific solutions to challenges faced in recruitment and retention.

6.2 Increase number of "pink" police booths and patrol vans with clear service standards

Strengthening national guidelines and their enforcement can improve the efficacy and capacity of pink police booths and vans. Guidelines can mandate an increase in the number of police booths and vans in logistics-

⁸⁰Amaral, Sofia, Sonia Bhalotra, and Nishith Prakash. "Gender, Crime and Punishment: Evidence from Women Police Stations in India." 13th Annual Conference on Economic Growth and Development (ACEGD 2017), 3 Dec. 2017, ISID - Institute for Studies in Industrial Development, New Delhi.

⁸¹Amaral et al: Street Police Patrolling Effects To Reduce Crime Against Women in Public Spaces in India. JPal.

⁸²UN Women: How can gender equality reduce poverty?.

⁸³Ministry of Home Affairs, Government of India, "Women Representation in Police Forces." Press Information Bureau, 13 Dec. 2023, Radhakrishnan, Vignesh. "Data | Women Make Up Only 12% of India's Police Force." The Hindu, 27 Nov.2021.

⁸⁴India, Ministry of Home Affairs. "Recruitment of Women in Police." Press Information Bureau, 6 Aug.2024

dense areas such as warehouse zones, and delivery hotspots. MHA can also provide guidelines on the coverage radius per pink booth, minimum staffing and equipment standards and expected response times to distress calls. Targeted coordination and data sharing can improve the reach and responsiveness of pink patrol vans for women workers in urban logistics. State police departments, in coordination with urban local bodies and municipal corporations, can improve awareness of pink booth and patrol van contact details among delivery partners and micro fulfillment centre workers, enabling quicker responses to harassment complaints. In addition, partnerships with platform-based companies, supported by formal data-sharing and communication protocols, can strengthen emergency response and grievance redressal systems, help identify harassment hotspots, and enable adjustments to routes, timings or escort arrangements to improve worker safety.

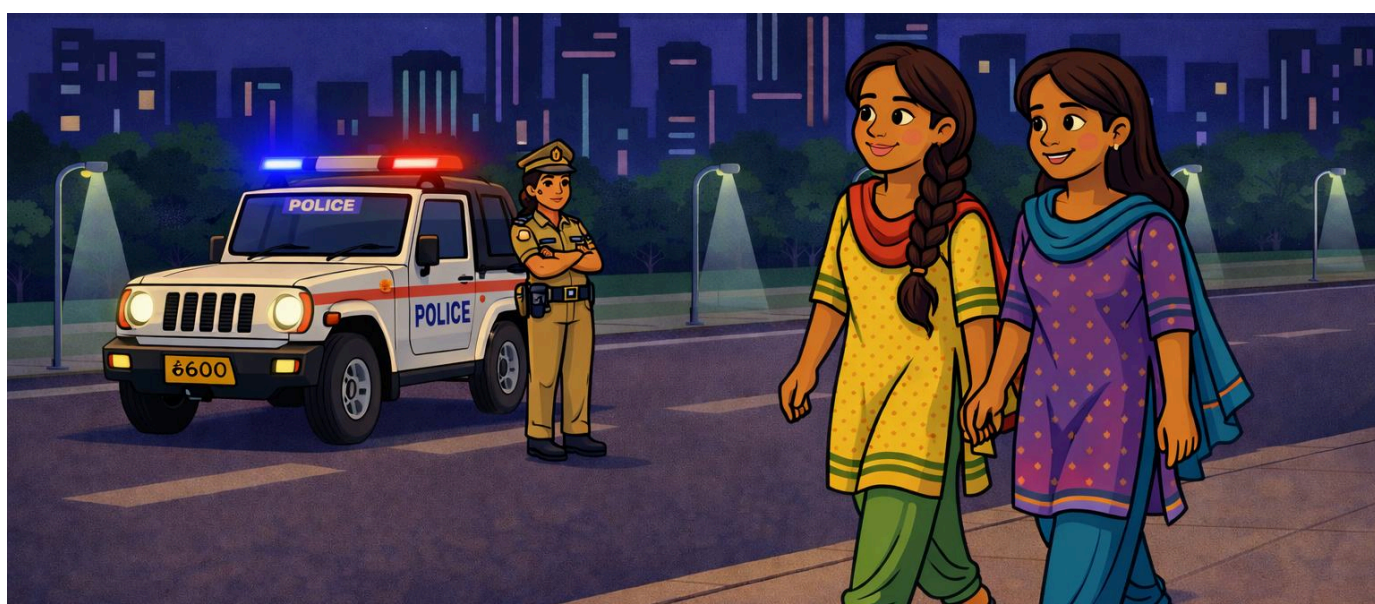
6.3 Eliminate dark zones through street lighting, CCTV, and digital connectivity improvements

Establishing standard guidelines, allocating budgets and enabling monitoring arrangements for lighting, surveillance and connectivity can help reduce physical and digital dark zones. MoHUA can establish street lighting and CCTV guidelines, including minimum lighting levels in high-activity delivery corridors, supported by dedicated funding for dark zone remediation. MoHUA can direct the State governments and urban local to bodies can operationalize these standards by earmarking budgets for lighting and CCTV upgrades, and prioritizing routes with high night-time logistics activity.

For digital dark zones, coordination led by the MeitY with telecom regulators and service providers can help close gaps in mobile network coverage, ensuring reliable connectivity across

public transport hubs, warehouse clusters, and micro fulfillment centre locations. Ward-level monitoring and public dashboards can support timely maintenance and enable residents and delivery partners to flag physical and digital dark zones, strengthening day-to-day infrastructure.

Tech and telecom companies can facilitate reporting of digital dark zones by integrating darkzone reporting features into their existing apps or partnering with government platforms to create public dashboards where citizens and delivery partners can flag areas with poor network coverage. Aggregated data on reported dark zones can inform infrastructure investment decisions, directing network expansion to areas where women workers face the highest connectivity risks.



*Created using AI for illustrative purposes only.

6.4 Establish standard operating procedures (SOPs) and raise awareness for responding to women in distress

Accessibility of the 181 helpline can be strengthened by establishing SOPs for the helpline and launching helpline operation centers. Guidelines from MWCD can specify SOPs for routing cases to police, counseling, or shelter services, and conducting follow-ups within a defined timeframe. By recognizing 181 as a unified helpline, State WCDs can improve coordination and

reduce fragmentation across departments such as police, health, and transport while responding to distress calls. State governments can further operationalize SOPs by establishing helpline operation centers and maintaining service directories linking callers to local support providers.

Spotlight: Efforts by Platform Based Companies

Swiggy allows its delivery partners to decline orders to locations they deem unsafe, without any questions or penalties.⁸⁵ Zomato has also established live order support to enable real-time problem resolution for delivery partners. It has introduced a customer rating system and ensures customer address visibility for women delivery partners during night shifts, enabling them to decline orders in areas they perceive as unsafe.

6.5 Mandate and implement gender sensitisation and unconscious bias training for police personnel, labour inspectors and managers at private companies

Gender sensitization training can be mandated for police personnel, labor inspectors and managers at private companies by issuing and implementing national guidelines. MHA can issue these guidelines to standardize training curricula, including modules on handling complaints from women workers in public spaces and addressing unconscious bias in law enforcement. MoLE and MWCD can issue parallel guidelines for labor inspectors and the private sector, focusing on recognising workplace harassment in male-dominated sectors, strengthening enforcement of the Sexual Harassment of Women at Workplace Act, 2013, conducting gender-sensitive workplace inspections and supporting women workers' grievance redressal mechanisms. For private companies, these guidelines can require periodic

gender sensitization and manager-level training as part of onboarding and compliance processes, reinforcing inclusive workplace practices and effective grievance redressal.

Standardized curriculum can be developed in partnership with National Commission for Women, National Institute of Public Cooperation and Child Development (NIPCCD), with central ministries allocating dedicated budgets for gender sensitization training. State police academies and labor departments can operationalize these guidelines through mandatory training for serving personnel, regular refresher courses and certification requirements.

6.6 Create/popularize a safe-city index and issue public rankings on how safe various Indian cities are for women

The National Institute of Urban Affairs' (NIUA) existing Urban Outcomes Framework 2022 can be expanded to incorporate a national safe city index. The framework already provides a database of cross-city outcomes across 14 sectors, including Safety and Security. Building on this foundation, NIUA, in collaboration with

⁸⁵Tyagi, Monika. "A Brief Note on Our Commitment to Increase Women Delivery Partners in Our Fleet." Swiggy Blog, 20 Oct. 2021.

MoHUA, can develop a dedicated Women's Safety Index within the existing framework. This expansion can include the development of gender-disaggregated indicators specific to women's safety experiences, along with the issuance of women-specific safety parameters. MoHUA and NIUA in partnership with NITI Aayog can administer this index annually and publish city-wise rankings to ensure transparency and credibility. By identifying city- and sector-specific gaps, state governments can allocate resources more effectively toward priority areas such as policing, transport safety and urban infrastructure.

Case studies

Several Indian cities have demonstrated how enhancing emergency response systems with a special emphasis on women's safety can strengthen women's mobility in public spaces. Telangana's SHE Teams program is focused on preventive patrolling of identified harassment hotspots and responding to complaints received through helplines and digital platforms, including WhatsApp. As part of the program, 331 SHE Teams operate across the city and 88.9% of police stations are equipped with CCTV systems and women's help desks.⁸⁶ Similarly, Kochi's Pink Patrol vehicles, launched by the Kerala Police in 2016, are operated by women and dedicated to women's safety. All-female crews respond to distress calls via 1515 helpline, equipped with GPS, cameras and emergency tools.⁸⁷

Chennai's transportation system also integrates women safety via 181 helpline. The Kaaval Uthavi (Kaaval Udhavi) app complements it with GPS panic button, live location sharing with police and direct 181/100 dialing, enabling rapid response for gig workers and urban women facing harassment during night shifts or deliveries.⁸⁸

Dark-spot reduction initiatives in India illustrate how private-public partnerships can enhance gender-responsive infrastructure. Safetipin's safety audits in Delhi used mobile apps to crowdsource women's safety data across public spaces. In 2015, My Safetipin and Nite apps conducted more than 50,000 audits evaluating nine parameters including lighting, visibility and security presence to construct a yearly city safety score.⁸⁹



Website: Women's Safety Police by Government of Telangana*

⁸⁶SHE Teams. "Women Safety Wing, Telangana State Police

⁸⁷Express News Service. "Girls, the Pink Patrol's Here." *The New Indian Express*, 17 Aug. 2016.


⁸⁸Kaaval Uthavi Mobile App. "Tamil Nadu Police e-Services, Government of Tamil Nadu.

⁸⁹"The Safetipin Impact on Delhi." Safetipin.

*Image from the women's safety wing website by the Government of Telangana

Change in Action: Safetipin's Safety Audits in Delhi

 Delhi

 2015-2019

Project Overview

Safetipin, a social enterprise, partnered with the Delhi government and Cities Alliance to conduct city-wide safety audits using mobile technology. The initiative assessed public spaces on nine parameters: lighting, openness, visibility, crowd density, security presence, walkpath condition, public transport availability, gender diversity and subjective feeling to generate actionable data for urban infrastructure improvements.

Key Features of the Intervention

- Deployed two mobile applications: My Safetipin for crowdsourced audits and Safetipin Nite for large-scale systematic mapping to generate over 50,000 audit points across Delhi in 2015.
- Identified 7,500 dark spots across the city through night-time audits in 2015, providing precise GPS-tagged locations to enable targeted infrastructure interventions.
- Engaged community participation through Mahila Panchayats and local residents trained by Delhi Commission for Women to conduct neighborhood-level safety audits.

Interim Results

- Achieved a 63% reduction in dark spots, from 7,500 in 2015 to 2,700 in 2018, following coordinated streetlight repairs and new installations across the city.⁹⁰
- Audit data directly informed the Mukhyamantri Street Light Yojana (Chief Minister's Street Lights Scheme), guiding prioritization of locations for new LED streetlight installations.
- Delhi Police reformulated PCR van patrolling routes based on safety audit findings, targeting high-risk corridors identified through the data.

⁹⁰"The Safetipin Impact on Delhi," Safetipin.

Conclusion

India's logistics sector stands at the intersection of economic and social transformation, presenting an unprecedented opportunity to expand women's economic participation. With a rapidly growing market size, the sector is a strategic lever for national growth. Quick commerce and urban last-mile delivery exemplify this momentum, reshaping consumer behavior and generating millions of livelihood opportunities across urban India.

The sector's defining characteristics including geographic flexibility, accessible entry points, immediate income and rapid growth, align precisely with the circumstances of young women seeking livelihood pathways beyond traditional occupations. Realizing this potential requires addressing key ecosystem level constraints that limit women's participation in urban last-mile logistics.

To address ecosystem-level constraints and expand women's participation in urban logistics, a practical roadmap can be organized across three stages. Before women enter the workforce, interventions can focus on shifting household and community perceptions through communication campaigns, and regulatory alignment that lowers barriers to inclusion. As women seek work, investments in skilling, supported by asset financing mechanisms, can build the skills and resources required for women to enter the workforce. Once women are working, sustained participation can be supported by gender-responsive public infrastructure and responsive emergency systems that enable safe, accessible and reliable mobility.

Translating these recommendations into outcomes requires alignment and coordination among stakeholders whose roles are distinct but interdependent. Central ministries can establish national standards, funding mechanisms, and accountability frameworks. State governments can adapt these to local contexts and drive implementation through transport, labor and women's development departments. Urban local bodies can ensure delivery of lighting, washrooms, rest facilities that directly shapes women's daily work experience. Private platforms and logistics firms can contribute through data sharing, CSR initiatives and collaborative efforts that complement public investments.

The path forward is clear: the next stage of logistics sector growth offers an opportunity to catalyze economic expansion, by activating levers that advance women's workforce participation. As India advances toward long-term economic transformation, expanding women's participation in the logistics sector aligns closely with the vision of Viksit Bharat 2047 and the Finance Ministry's emphasis on women-led development as a foundation of a USD 30 trillion economy.⁹¹ Women's participation in urban last-mile logistics could unlock household income gains, reduce attrition, and improve service quality. Realizing these gains will depend on sustained coordination across policy, infrastructure and industry practices to translate opportunity into outcomes at scale.



⁹¹Nirmala Sitharaman. Budget 2025-2026 Speech of Nirmala Sitharaman, Ministry of Finance. Ministry of Finance, Government of India, 1 Feb.2025.