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Powering India's Automotive Sector: Unlocking Women's Talent for Industry Growth

Emerging Pathways

Gates Foundation

ACMA

Foreword

When Good Business Lab (GBL) embarked on this ambitious programme to lay the ground for a more gender-diverse workforce in the automotive sector three years ago, we were daunted by the scale of the challenge. We also knew why the effort mattered: women represent a significant, largely untapped source of talent at a moment when India's automotive sector needs to grow its workforce and global competitiveness. Unlocking this potential is therefore not only a diversity imperative, but a workforce imperative. From our experience in workforce development across sectors and countries over the past decade, we understood that the barriers to meaningful change would be many. Established operational precedents, gender norms and biases, labour supply limitations—each, we thought, would represent their own mountains to climb. And yet after hundreds of conversations with workers, managers, leaders, and policy makers, we are more optimistic than ever about the path to progress, for two key reasons.

1. Intent exists, the challenge is implementation

There seems to be little explicit debate over the importance of workforce gender diversity. Nearly every firm we engaged with voiced a genuine interest in building a future with more women in their workforce. Conversations focused less on whether women could do the work and more about all the barriers that prevented these firms from acting on that intent.

We rarely heard comments like "women can't do this work," or "more women in the workforce are bad for business." Instead, we heard:

"Women and their families don't really want to take up auto sector jobs."

"I can't hire enough skilled women, even if I wanted to."

"Women workers are just going to leave after marriage and motherhood."

"It's too hard to invest in the infrastructure required to legally hire women."

These practical—and eminently solvable—concerns gave us our opening, and our guiding question: *how can we target the most critical gaps in the employment journey to prove the feasibility of hiring and retaining more women workers?* Through this work, we have found that listening to workers and managers, testing solutions in real workplaces, and using new information to evolve entrenched policies can produce high potential, practical workarounds to barriers that once seemed difficult to address.

2. Progress is already happening

It's humbling to admit, but very few of our ideas were truly novel—and that is a great thing. Across the sector, our work surfaced pockets of innovation already in place among firms large and small. Some plants have made outsized gains in hiring women. Some leaders are making the case for gender diversity within their organisations. Others are finding practical ways to address barriers around recruitment, transport, accommodation, skills and workplace integration. By partnering with these lighthouse firms we were able to understand what was working, adapt promising concepts and consider what it would take to apply them in other contexts. The challenge now is to move these solutions beyond isolated successes and towards standard practice across the sector.

This report is ultimately a reflection of that journey. It does not offer a single solution to a complex problem. Instead, it points to a set of practical opportunities and to the possibility of progress when workers, firms, industry bodies and other ecosystem players move in the same direction.

The path ahead will not be easy. But our experience over the past three years gives us good reason to believe that change is both possible and within reach.

Sincerely,
Nirmal Deshpande,
Managing Director,
Good Business Lab

Acknowledgements & approach

This report marks the culmination of a multi-year effort to understand and advance women's participation in India's automotive sector. It reflects the contributions of researchers, practitioners, industry leaders, policymakers, and workers who generously shared their time, experiences, and perspectives. Their collaboration made it possible to move beyond identifying challenges toward testing, refining, and documenting practical solutions for the industry.

Acknowledgement of Key Partners

We extend our sincere gratitude to the **Automotive Component Manufacturers Association of India (ACMA)**, whose leadership and partnership have been instrumental throughout this engagement. We are equally grateful to the **Gates Foundation** for its vision, trust, and continued support in enabling this work. Together, these partners have helped create a unique platform for evidence generation, industry dialogue, and collective action to advance gender inclusion in the automotive sector.

This report would not have been possible without the partnership of the companies that collaborated with us through research, pilots, advisory engagements, and knowledge-sharing activities. We are deeply grateful to Abilities India Pistons & Rings, Asahi India Glass, JSW MG Motor India, Mahindra & Mahindra, Sansera Engineering, Subros, Tata AutoComp Systems, and Tata Motors. We also thank the many leaders, managers, supervisors, workers and job seekers who generously shared their experiences and participated in this work. Their willingness to experiment, reflect, and learn has strengthened both the evidence base and the practical recommendations presented here.

Approach to Primary Research and Overall Engagement

Over the course of this engagement, Good Business Lab engaged over 55 unique firms across pilots, roundtables, virtual learning sessions, and advisory consultations, with varying levels of intensity across these workstreams and activities. Together, these firms included more than 15 OEMs and 40 Tier 1 component manufacturers, spanning major automotive manufacturing clusters in the North, South, and Western parts across India, with firms based primarily in Chakan (Pune, Maharashtra), Bidadi (Bengaluru, Karnataka), Halol (Vadodara, Gujarat), Manesar and Greater Noida (within Delhi NCR, in Haryana and Uttar Pradesh respectively). Within this group, a smaller set of 10 firms participated in deeper consultations and implementation testing.

This sample is not intended to be nationally representative of India's automotive manufacturing sector. In particular, firms selected for deeper engagement were skewed toward those already invested in gender inclusion. While firms engaged for deeper consultations and testing were majorly large OEMs and Tier 1 suppliers, the research questions, findings and solutions were intended to find applicability across firms of different sizes, including Tier 2 and 3 MSMEs. The report should be read with this in mind.

More than **400 stakeholders** (firm employees, blue-collar workers, recruitment agencies, third party contractors) contributed to GBL's qualitative research through in-depth qualitative interviews and consultations. Another **1,900 individuals** across the industrial clusters of National Capital Region (NCR), Bengaluru and Pune contributed to the quantitative research through participation in surveys and interviews conducted during scoping activities, recruitment pilots and trials, and process pilots. Their participation helped inform the final research design of the recruitment Randomised Controlled Trial (RCT), a **rigorous** impact evaluation conducted in NCR to identify and estimate the impact of offering valued amenities on women's participation on automotive shop floors. The RCT is currently ongoing and more than **1,200 women** have already participated in this recruitment trial. It is a part of ongoing research led by principal investigators Achyuta Adhvaryu, Anant Nyshadham, Garima Sharma and Riccardo Di Cato. Once concluded, final results and findings from the RCT will be included in their work-in-progress paper.

Use of Artificial Intelligence

Throughout the course of this engagement, artificial intelligence (AI) tools were employed by Good Business Lab's multidisciplinary team of researchers primarily to support the ongoing synthesis of learnings and facilitating the refinement of collaterals developed for a range of stakeholders. With respect to the preparation of this report, the core content, structure, and key insights were derived from analysis and synthesis conducted by the team. AI tools were employed selectively during the writing process primarily to refine language and enhance clarity for the intended audience; however, the report in its entirety was driven by authorship and deep review by senior researchers and the leadership team. This engagement reflects our continued commitment to rigour and quality control.

Interpreting this report

Evidence gaps remain within automotive-specific research on women's participation, and this report draws on both secondary research and Good Business Lab's primary work to help close them. Evidence throughout this report varies in strength from rigorous experimental research to qualitative fieldwork and emerging practice. Sources are specified alongside each finding so firms can draw what is most relevant to their context. Taken together, the evidence points to promising practices and solutions firms can consider as they shape their workforce strategies. While the interventions tested through this particular engagement are still emerging, they sit within a broader, well-established global evidence base for including women in manufacturing roles, and our primary research, though based on a smaller group of firms, broadly supports these findings.

We acknowledge that no single intervention will work for every firm; the right approach depends on a firm's workforce, size, operations, and stage in its gender inclusion journey. This report is therefore intended less as a blueprint than as a framework to help firms identify relevant questions, weigh trade-offs, and make informed decisions. Some findings and solutions are ready for implementation now, while others may require further testing and collaboration.

Finally, we recognise that building gender-inclusive workplaces is a complex and evolving journey. This report does not seek to provide an exhaustive account of every challenge or solution. Instead, it brings together the evidence, insights, and promising practices generated through this engagement, with the hope that they will support continued learning and inspire broader action across the automotive sector. We hope this report serves not only as a reflection on what has been achieved, but also as a foundation for the next phase of progress toward a stronger, more inclusive, and future-ready automotive workforce.

Unless otherwise stated, the findings and recommendations in this report draw on research, pilot implementations, advisory engagements, and stakeholder consultations conducted by Good Business Lab between 2023 and 2026. While the report highlights evidence-backed practices and examples of progress, it is not intended to represent every initiative undertaken across the sector.

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The views and recommendations presented in this report are based on Good Business Lab's research and evidence generated through this engagement. These do not necessarily reflect the official positions of the Gates Foundation and other partner organisations.

Acknowledgement of Contributors

We also thank the researchers, writers, designers, facilitators, and project teams whose expertise and dedication brought this report together. Their efforts in generating rigorous evidence, synthesising insights, designing practical tools, and translating research into actionable recommendations have been central to this engagement.

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Executive Summary



Unlocking women's talent is a critical lever for the larger, stronger automotive workforce India needs to achieve Viksit Bharat.

A decade ago, the Automotive Mission Plan envisioned an industry contributing 12% of India's GDP and creating 65 million additional jobs.¹ While India has emerged as one of the world's largest automotive manufacturing hubs, the sector today contributes ~7% of GDP and employs ~32 million people.²

As Viksit Bharat raises the ambition for manufacturing-led growth by 2047, one question becomes increasingly urgent, amid multiple drivers of growth: **where will the talent come from, and is today's workforce pipeline prepared to supply it?**

This report makes the case that improving women's participation in the Indian automotive sector represents a crucial and **untapped lever** to not only **expand** the talent pool, but **strengthen** it. It also documents promising practices and lessons that firms can learn from and adapt.

Why this report, now?

Gender diversity is often framed as a question of equity rather than an **economic necessity**. As firms invest in workforces to power upcoming growth, emerging evidence suggests that strategies to build the ranks of **women workers can deliver both - improved labour force stability and performance, and new pathways for sustained economic mobility for women workers.**

Under the Viksit Bharat vision, India aims to raise manufacturing's share of GDP from around 16–17% to 25%.³ The automotive sector, which represents nearly half of manufacturing GDP⁴ and one of India's largest industries, is expected to carry much of that growth. Yet India's share of the globally traded auto component market remains only around 3%, roughly \$20 billion of a \$700 billion market.⁴ Closing that gap will require a considerably larger and more capable workforce than the sector has today. Women represent nearly half of India's potential workforce, yet make up only around 20% of India's organised manufacturing workforce,⁵ and less than half of this share on automotive shopfloors specifically. The low representation of women in automotive highlights a significant opportunity to tap into an underutilised pool of women's talent as the sector seeks to grow.

Over the past three years, Good Business Lab (GBL) has worked directly with more than 55 leading automotive firms across India, running diagnostic studies, interviewing workers, managers, and executives, and testing interventions on the shopfloor, to answer one question: **is there a business case for automotive firms to invest more in hiring, retaining, and advancing women workers?**

This report brings together the strongest evidence available today on the practical barriers and pathways to action across four important stages in women's journey: recruitment, workplace integration and retention, skills recognition and portability, and nightshift participation. While some pathways require further testing and evaluation, the evidence points to a significant opportunity to unlock value through a more gender-balanced workforce. However, doing so will require a commitment to challenge entrenched workforce management strategies.



The business case for auto firms

Historically, rigorous empirical evidence into the economic implications for increased women's participation in the automotive sector is limited. This report draws on the best available evidence from manufacturing and adjacent blue collar sectors, combined with GBL's own qualitative and quantitative research to identify pathways through which women's participation can create value for automotive firms. There are chiefly three:



The macro case is sizable. Drawing on more than 30 secondary studies spanning economics, manufacturing, organisation development research, labour markets, transport, and workforce development, this report shows that the broader economic case for mixed workforces is compelling and real. The World Bank estimates that closing India's gender employment gap could raise manufacturing output by around 9%.⁶ Bain & Company estimates that closing India's gender gap in labour force participation could contribute close to 45% (roughly \$14 trillion) of the growth needed to reach India's \$30 trillion GDP ambition by 2047.⁷ While these estimates are not automotive-specific, together they signal that the growth case for women's participation holds across countries and sectors, and within India itself.

Impact compounds at scale. Like all worthwhile investments, making changes to workforce composition will require up-front costs. Two key findings from this work suggest optimism about the long-term returns. First, not all the identified strategies require massive investments. Indeed, many solutions focus on bringing gender-intentionality into existing processes and norms rather than large, new outlays. Second, our recruitment findings suggest a flywheel effect inherent to growing women's participation. Women are more likely to join workplaces where other women are already represented: growing participation rates appear to make both individual firms and the sector as a whole more attractive to women joiners, which should decrease the costs of hiring women workers in the long run. GBL's interactions with auto firms revealed that a growing number of leaders appear to be operating on this assumption, setting explicit participation targets and treating investments in women's workforce participation as longer-term investments that can generate returns over time.

Signals of change across the sector

Women's representation is increasing:

Women's share of the combined automotive workforce (OEM/ component): 5.6% (2023)⁸ → 8.7% (2025).⁹

A growing supply of skilled labour:

Automotive Skills Development Council (ASDC) reports that more than 30,000 women have been trained or upskilled through its programmes over the past two years, creating pathways into the automotive value chain.¹⁰

30,000
women in FY
2024-25

6,500+
women shopfloor
technicians

Light-house examples are increasingly visible:

A handful of firms already run well ahead of the average - Tata Motors (6,500+ women shopfloor technicians, including an all-women line),¹¹ JSW MG Motor India (41% overall workforce and 80% at its Halol battery assembly shop)¹² and Hero MotoCorp (3,500 women on shopfloors, with women-led assembly lines at three plants).¹³

EVs are creating new opportunities for women:

Women make up an estimated 11-15% of today's roughly 11-million-strong EV workforce, with industry projections pointing towards 50% by 2030-33.¹⁴

11M EV workforce

The pathways outlined in this report are designed to integrate into existing shopfloor processes and workflows, with minimal to no redesign of workplaces. This can enable firms to make meaningful progress through solutions that are relatively low-cost compared with more fundamental changes to workplace design and operating models.

Key findings, by chapter

Chapter 2 — Optimising women's recruitment

How can firms better convert women workers who are willing to work but hesitant about working in the automotive sector?

Key Problem: More than 91% of automotive shopfloor roles remain male-held nationally;⁹ hence, job amenities, recruitment outreach, and role design rarely consider what shapes women's decisions to accept a job, or where on the shopfloor they can be placed.

Key Insights:

Women are more likely to join the sector if given the opportunity to work alongside women, and specifically, people they know. GBL's ongoing RCT is showing that amenities like letting women bring a peer to the job or assigning a woman supervisor can lift acceptance of an otherwise-standard auto-job offer by 11 to 13 percentage points* without raising wages, especially during periods of high labour demand. (*Early findings)

Current recruitment strategies often exclude women. When firms ramp up hiring, dependence on informal networks and information asymmetries can limit their access to the available talent pool of women, and lead to low conversion rates and longer hiring timelines. Simultaneously, women are often restricted to a narrow set of roles, placing a ceiling on how many women can be hired at all.

Solutions:

Firms can improve their hiring strategy and optimise women's conversion by instituting low-cost amenities that women value and **operationalising** strategies including **gender-intentional** recruiting outreach, and rubrics to identify and expand the breadth of roles feasible for women. Improved conversion rates in recruitment show a path to reducing cost-to-hire.

Chapter 3 — Building workplaces where women stay and thrive

How can firms sustainably integrate and retain women workers entering workplaces designed for a majority male workforce?

Key Problem: Without gender-intentional integration and retention, firms may risk losing the first cohorts of women they aim to recruit and retain.

Key Insights:

Infrastructure for women is designed for compliance over usability: Gaps persist in infrastructure designed to support women. Most firms assess it primarily through a statutory compliance lens, considering facilities such as creches or women's washrooms. However, women judge the same spaces by whether they are consistently accessible, functional, and reliable during a shift. Compliance alone may not ensure infrastructure effectively supports women.

Lack of growth paths contributes to a leadership gap: Women have fewer opportunities to gain exposure to technical roles, nightshifts, and high-visibility assignments that support promotion. Even with similar qualifications, they are less likely to be recognised or promoted and earn roughly ₹70 for every ₹100 men earn in blue-collar automotive roles.¹⁵

Everyday social friction erodes women's sense of belonging: Small, repeated frictions, such as resistance to women's authority, limited peer networks, and inconsistent grievance handling, can gradually undermine women's experience at work, affecting their sense of belonging and willingness to stay.

Firms assume that women's attrition will be high and therefore under-invest in retention: This is often reinforced by the belief that women will leave around milestones like marriage and motherhood, seen as beyond the firm's control.

Solutions:

To address the above gaps, **GBL has developed practical tools and programmes that can help firms create more inclusive work environments** for existing and incoming cohorts of women. These include infrastructure-readiness checklists and gender-sensitisation programmes tailored to each firm's workplace context.

Chapter 4 — Making women's skills visible and portable

How can firms better recognise and signal women's skills to improve career mobility and access to skilled roles?

Key Problem: Many automotive firms invest heavily in skilling apprentices and contract workers, but these skills often disappear when workers move between employers. This gap is especially significant for women, who have less access to informal networks that help signal their capabilities and remain underrepresented in the sector.

Key Insights:

Worker lens — Skills are hard to demonstrate: Workers often struggle to prove the skills they have built, from machine operation to independent work and quality checks.

Labour market lens — Skills are hard to match: Without a verifiable skills record, employers have limited visibility into workers' capabilities, making it harder to match people to roles that fit their skills, often relying on additional assessments and retraining.

Firm lens — Skills are hard to deploy: Line managers often rely on memory and personal familiarity to understand workers' capabilities, limiting informed deployment and line-balancing decisions.

Solutions:

To address this gap, GBL developed a **skills passport** and piloted it in a large auto firm as a proof of concept, while further refinement for large-scale testing and adoption is pending. For women, it can offer a trusted record of experience, which is especially valuable after a career break or when moving between employers. Its feasibility depends on improved skill tracking within firms. Systematic skill tracking can help firms deploy workers more effectively and reduce retraining, while helping women build a portable record of experience that supports career mobility in an underutilised talent pool.

Chapter 5 — Unlocking nightshift participation (with transport & accommodation)

Why does limited access to nightshifts constrain women's participation at scale?

Women's absence from nightshifts puts a real ceiling on scaling participation past current levels. Production lines built around a uniform three-shift workforce are difficult to sustain when a part of the workforce (i.e. women) works only one shift. Safe, compliant and, well-designed transport can help unlock nightshifts. Accommodation matters specifically for firms recruiting migrant women at scale. GBL sets out pathways to improve transport including shift-based design, enhanced technology integration and pooled transport, especially useful for firms with under utilised transport capacity on one or more routes.

Chapter 6 — From isolated successes to ecosystem adoption

How do we move from isolated successes to sector-wide adoption?

Women's participation in automotive manufacturing has increased by a few percentage points in recent years - an encouraging but still modest shift that demonstrates change is possible. However, progress remains slow and concentrated among a few larger firms, despite many barriers to adoption being practical and surmountable. Scaling what works will require coordinated action across the ecosystem: firms creating proof points, industry bodies spreading proven practices, OEMs and large customers embedding inclusion across supply chains, governments enabling implementation, and philanthropy de-risking innovation and building the evidence for replication.



Emerging business cases and promising practices

Building on the findings above, the table below distils the promising practices and emerging business cases from solutions developed through this engagement, capturing lessons that firms can learn from and adapt to their own contexts. The solutions differ in their stage of piloting and testing. The recruitment intervention of gendered-amenity provision is being tested through a Randomised Controlled Trial (RCT), a rigorous form of impact evaluation, while the other solutions were developed in partnership with a smaller number of firms and, where applicable, taken forward through advisory or pilot work.

The findings provide directional signals on where each solution may be most applicable, the relative effort and cost involved in deployment, and the potential gains for firms. They should not be interpreted as estimates of absolute financial cost, definitive evidence of impact, or established business cases. Many of these recommendations can also benefit the broader workforce, improving working conditions and supporting productivity for both women and men.

For the underlying evidence, context and detailed guidance on deployability and scalability, see the respective chapters and annexures. GBL has also developed templates and readily deployable tools that firms can adapt to their context, often at minimal or no additional cost. To access these resources, contact GBL at info@goodbusinesslab.org.

TESTED SOLUTION	What is the solution?	When is it most ideally applicable?	What effort / cost is required?	What are the potential gains?
	Gendered-amenity provision: Adjusting job offers to emphasise amenities valued by women – opportunity to bring a peer; work under a woman supervisor	Relevant for all firms hiring women; Particularly useful for those below 5% women's share; Incorporated in women's recruitment collateral	LOW  Requires minimal investment and job redesign; Formalises & encourages existing job search behaviour during hiring; Hiring at correct levels	HIGH  Higher conversion for standard auto jobs*; Improves firm competitiveness during periods of high worker demand *Early evidence from ongoing RCT
PILOTED SOLUTIONS	What is the solution?	When is it most ideally applicable?	What effort / cost is required?	What are the potential gains?
	Station mapping template: identifies and expands production shopfloor roles to women, without significant redesign	Before introducing women on the shopfloor; Also useful when moving women from ancillary to production roles	LOW  Short training for production managers; minimal time and effort	HIGH  Systematic role identification; Expanded range of roles for women; Potential for lower attrition
	Gender-intentional recruitment SOP: Expands women's recruitment pipelines through diverse channels, touch points and targeted outreach	Incorporated into the firm's hiring strategy and deployed during recruitment; Important for firms with informal hiring	MEDIUM  Upfront effort to customise the SOP and align recruitment teams; contains modular elements; flexible deployment within existing recruitment processes	HIGH  Sharper targeting; wider talent pool reach; improved conversion and shorter hiring timelines; clearer expectations and potential for lower attrition

Emerging business cases and promising practices

PILOTED SOLUTIONS

What is the solution?	When is it most ideally applicable?	What effort / cost is required?	What are the potential gains?
Infrastructure readiness checklist: identifies gaps and recommendations in infrastructure and policies affecting women's experience	For assessing pre-onboarding readiness, periodically reviewing women's workplace experience and prioritising immediate vs. longer-term actions	LOW  Limited HR/Facilities time to complete the checklist; investment only for identified, prioritised gaps	HIGH  Documented and defensible basis for infrastructure investment; supports women's integration and retention in the workplace
Sensitisation programme: strengthens gender inclusion by modifying gendered attitudes and behaviours	Applicable across contexts, including introducing women to male-dominated workplaces and reducing bias in everyday workplace decisions	LOW  Implementation requires only facilitator and participant time; more tailored programmes require additional resources for needs assessment and content customisation	MEDIUM  Supports positive shifts in male co-worker attitudes and behaviour, greater belonging and advancement for women, and improves firm reputation as a good place to work for women
Skills Tracking: logs and tracks skills gained by workers during their tenure through a systematic digital system	Most relevant for firms that depend on skilled workforce and see frequent worker movement, high worker turnover, and regular line-balancing needs	LOW  Initial investment is expected to be relatively low, requiring only supervisors' time to track and verify records based on an agreed consistent rubric. Further testing is needed	HIGH  A structured skill record that supports faster worker deployment, and better line-balancing decisions while reducing the dependency on an individual supervisor's memory
Skills Passport: A portable, firm verified record of a worker's skills and proficiency level achieved	Most relevant for firms with specific labour skill requirement, which tracks sufficient skill data of its workforce and sees high turnover	MEDIUM  Generating and distributing skills passport requires skills tracking as a prerequisite, along with a dedicated personnel to ensure timely progress	HIGH  Supports faster hiring, worker to role mapping and access to a larger skilled worker talent pool. Ensures career mobility for skilled women workers
Pooled transport model: Enables firms to pool transport demand across plants or across different firms	Most useful for firms with existing transport operating at $\leq 60\%$ occupancy or for firms attempting to provide transport for the first time. Suitable for: Multi-plant firms or separate firms in the same cluster seeking to optimise transport coverage and costs	LOW TO MEDIUM  For firms with existing transport systems, incremental costs are limited to coordination and adjustments to routes, schedules and capacity; pooling can improve utilisation and enable cost sharing MEDIUM  For firms establishing transport from scratch, joining a pooled model requires a significant investment, but is likely to cost less than establishing an independent system	HIGH  Potential to expand route coverage, and access more talent across shifts; Could enable nightshift deployment of women by helping firms meet regulatory requirements more effectively by sharing cost and operational burdens across firms/plants



CHAPTER 01

Introduction



As automotive firms look to grow, compete, and build a workforce that can adapt to changing demands, women represent a significant untapped source of talent. This chapter examines the business case for increasing women's participation—not only to expand the talent pool, but to build a more reliable, productive, and resilient workforce. It sets the stage for the chapters that follow, which outline how firms can act on this opportunity through emerging solutions and insights tested on the automotive shopfloor.

Over the past three years, Good Business Lab (GBL) has worked directly with over 55 automotive firms across India to enhance women's representation in the sector. The work included running diagnostic studies, interviewing workers and managers, and testing interventions on the shopfloor to answer one question: is there a business case for automotive firms to invest more in hiring, retaining, and developing women workers?

While considerable attention has been devoted to improving women's economic participation through informal livelihood programmes and, separately, through initiatives supporting women's advancement in professional careers, far less is known about what enables women to participate and thrive in formal, salaried blue-collar employment.

Findings from this work inform the central argument of this report: **firms that succeed at attracting, retaining, and developing women are likely to build stronger and more competitive workforces.** The case for greater gender parity is often framed around ethics, equity, or compliance. This work builds on the available evidence to make the economic case by synthesising the most compelling and representative evidence relevant to automotive firms and translating it into practical pathways for action. While the evidence base will continue to evolve, it already points to tangible business opportunities for firms that build more gender-diverse workforces.

“Women bring extraordinary dedication, discipline, and authenticity to the table. For any modern company striving for sustainable excellence, gender diversity isn't optional, it's essential.”

-Tushar Arora, Joint Managing Director & CEO, Abilities India Pistons & Rings

India's manufacturing growth story needs a stronger, larger talent pool

Under the Viksit Bharat vision, India aims to raise manufacturing's contribution to GDP to at least 25%, up from around 16–17% today.³ The automotive sector, one of India's largest manufacturing industries, will be central to this ambition. India is already the world's fourth-largest vehicle producer and Indian auto components account for only around 3% of global trade—roughly \$20 billion of a \$700 billion market. This presents significant scope to expand its scale and enhance global competitiveness.⁴

Realising this potential will require not only greater investment and production capacity, but also a significantly larger and more capable workforce. Women represent a major untapped talent pool presently. **Their overall share in formal manufacturing jobs, and in automotive shopfloor jobs particularly, remains low. Increasing women's participation can therefore help the sector expand its workforce while strengthening the talent base needed to grow and compete globally.**

Harnessing this potential as a sector will require continued policy action and investment, a supportive business environment, and firm-level action to create more opportunities for women and strengthen workforce capabilities.

GDP
25%



The economic case for increasing women in the workforce is clear

A growing body of research points to the economic value of increasing women's participation in workforces across contexts. The International Monetary Fund (IMF) argues that increasing women's participation boosts productivity not only by expanding the workforce, but also because women and men bring complementary skills and perspectives. When economic models treat men and women as substitutes, they can underestimate the benefits of a mixed workforce and attribute some of these gains to technology or other factors instead.¹⁶ Chiplunkar and Goldberg reach a similar conclusion from a different angle. Their analysis shows that barriers to women's participation in work and entrepreneurship lead to a misallocation of talent. This carries a real productivity cost, beyond considerations of fairness or representation.¹⁷

Using panel data from Indian states, Esteve-Volart (2004) found that a higher female-to-male ratio among workers and managers was associated with higher real per-capita GDP as well as higher growth.¹⁸ Bain & Company puts a number on the national stakes: closing India's gender gap in labour force participation could contribute close to **45% (roughly \$14 trillion)** of the growth needed to reach India's \$30 trillion GDP ambition by 2047.⁷

While none of this evidence is automotive-specific, together it signals that the growth case for women's participation holds across countries, sectors, and is true within India itself.

Women make manufacturing talent pools better — not just larger

Over the past two decades, studies have examined the gains from accessing the diverse talent pool available to manufacturing firms. They also explore the long-term outcomes that follow. A 2025 study of manufacturing industries across 65 emerging-market and developing economies found that industries that employ a higher share of women in their workforce grew about **26 percentage points** faster than other industries (over a decade) when located in countries that are more gender equal.¹⁹

The World Bank estimates that closing the gap in women's access to manufacturing jobs, could **raise India's output by around 9%**,⁶ an effect it attributes largely to addressing barriers that currently keep capable workers out of the formal factory workforce. Emerging evidence from adjacent blue-collar sectors in India links a higher share of women to stronger retention and attendance. A Foundation Strategy Group (FSG) analysis of dark stores, warehousing (with shift-based, entry-level roles), and flexi-staffing companies that recruit for blue-collar roles in manufacturing and logistics, showed promising results.²⁰ It found that adding women was linked to **11.8% lower per-worker costs** in dark stores and 3.6% lower costs in warehouses, with gains linked to higher attendance, productivity and order quality, and lower attrition and absenteeism. In flexi-staffing, women increased gross margin per employee by 10.3%, supported by lower attrition and longer tenure.²⁰ While not automotive studies, GBL's qualitative engagements with automotive firms similarly point to a link between women's participation and lower attrition in shift-based, entry-level work.

A 2016 study of Chilean manufacturers found something similar at the firm level: increasing the share of women among low-skill, shopfloor-type ("auxiliary") production workers was associated with meaningfully higher productivity at larger firms, more so than adding women to high-skill roles. Chile's manufacturing industry was heavily male-dominated at the time, resembling the current state of the Indian automotive sector.²¹ While the industries included in the study (such as food processing, metals, plastic and textiles) might differ in specific skills and production processes, the findings suggest potential business value for automotive shopfloors as well. Similar associations have also been observed in other male-dominated manufacturing sectors.

Another study on more than 1,000 manufacturing firms across six Sub-Saharan African countries similarly found a positive association between women's employment and labour productivity in non-traditional manufacturing sectors such as transport machinery, basic metals, fabricated metals, machinery and equipment, electronics, and plastics and rubber.²² While the relationship varied across sectors and levels of gender diversity, the findings provide further evidence that increasing women's participation may generate productivity gains in male-dominated manufacturing contexts closer in profile to automotive.

“ A gender-balanced workforce is a critical pillar of our growth strategy as we build for the future. At Mahindra Auto, we continuously create more opportunities for women across the organisation. This includes hiring women across level, including on the shop floor at both entry-level and supervisory positions, embedding inclusion into design through gender-neutral workstations and initiatives like Employee Resource Groups, among many other such programs. We believe that enabling more women to participate, grow and lead will help build a stronger, more capable and future-ready automotive industry.”

- Meenakshi Priyam, SVP & Head HR – Automotive Sector, Mahindra & Mahindra Ltd



The automotive sector is at an inflection point, showing early but uneven progress

As India's automotive sector pursues ambitious growth amid rapid technological and economic change, industry and firm leaders are recognising that **expanding women's participation is a workforce question, not simply a diversity aspiration**. Growth will require a workforce that is not only larger and more skilled, but also resilient and adaptable.

“ Women's participation is no longer a diversity aspiration for India's automotive industry- it is a workforce imperative. As we scale towards a globally competitive and resilient automotive sector, we must expand our talent pool, create workplaces where women can thrive, and ensure that successful practices move from isolated examples to industry-wide adoption. The future of automotive manufacturing will be stronger when it draws on the full strength of India's talent.”

-President, Automotive Component Manufacturers Association of India (ACMA).

There are early signs of this shift. Women's share of the combined OEM and component manufacturing workforce rose from 5.6%⁸ in 2023 to 8.7%⁹ in 2025. Yet participation remains low and inconsistent across firms. Some continue to employ very few to no women in production roles, while others have demonstrated that substantially higher levels are possible. Several emerging EV manufacturers report high shares of women, while firms such as JSW MG Motor India and Tata Motors have also achieved substantially higher participation. These examples remain exceptional, but demonstrate that higher levels of women's participation are achievable and can be lucrative for firms.

The business case for auto firms

All evidence presented thus far points to three broad pathways through which women's participation can create value for automotive firms. While relatively little research has examined these questions specifically within automotive manufacturing, this report draws on a growing evidence base, including findings from GBL's own qualitative and quantitative research, and more than 30 secondary studies across automotive manufacturing, adjacent blue-collar sectors, and broader organisational development literature.

The business case for auto firms

1. Broaden access to talent. Women remain underrepresented in manufacturing despite representing a substantial share of India's potential workforce. As industry-led skilling initiatives and employer programmes expand the pipeline of women entering technical roles, firms have an opportunity to recruit from a broader and more diverse talent pool to support growth.

2. Build a more productive, reliable workforce. Evidence from adjacent blue-collar sectors links higher women's participation with favourable worker outcomes- stronger attendance, lower absenteeism, better retention, and selected productivity gains. One large-scale study found 8% higher attendance, 26% lower unplanned absenteeism, and lower per-worker costs, while a flexi-staffing analysis found evidence of lower attrition and longer tenure among women blue-collar workers. GBL's qualitative fieldwork suggests similar patterns in automotive.²⁰

3. Create a more resilient workforce. As automation and the EV transition reshape the skills the sector needs, and macro economic volatility continues, a more diverse and stable workforce could reduce a firm's reliance on single, increasingly competitive recruitment pool.

Across firm partnerships, interviews, and implementation work, multiple automotive leaders anecdotally described benefits emerging after sustained investments in recruiting, integrating, and supporting women in the workforce.²³ These included stronger retention, improved workforce reliability, higher engagement, and positive shifts in workplace culture.

With growing recognition of women's potential to strengthen the workforce, **many firms seek answers to key questions before they alter long-standing talent strategies:**

- **Where will the talent come from?** [Can the existing pipeline of skilled women be relied upon?]
- **Which barriers matter most?** [Especially given a firm's specific context and priorities]
- **What investments are required?** [Upfront and over a longer period of time]
- **When and how will these investments create returns?** [Relative to other investments]

These questions deserve rigorous answers, which this report attempts to provide using the best available evidence.

Like all worthwhile investments, making changes to workforce composition will require up-front costs. Two key findings from our work suggest optimism about the long-term returns. First, not all the identified strategies require massive investments. Indeed, **many solutions outlined in the report focus on bringing gender-intentionality into existing processes rather than large, new outlays.** Second, our recruitment findings suggest a flywheel effect inherent to growing women's participation. Women are more likely to join workplaces where other women are already represented: growing participation rates appear to make both individual firms and the sector as a whole more attractive to women joiners, which should decrease the costs of hiring women workers in the long run. **Leaders are increasingly operating under this assumption, setting explicit participation targets and treating the investment the way they would treat any other capital investment: with a delayed, but real, expected return.**

Moving from insights to action

Establishing why women's inclusion is such a critical opportunity is only one part of the question. Turning this opportunity into sustained workforce change is considerably more complex. Across GBL's research, advisory partnerships, and implementation work, firms consistently described a common set of practical considerations that shaped decisions about increasing women's participation.

Key considerations for firms

- **How can firms attract and recruit more women into automotive manufacturing?** Recruitment systems were largely designed around a predominantly male workforce. As firms expand women's hiring, they increasingly need evidence on what shapes women's employment decisions and how recruitment can become more gender-intentional.
- **How can firms create workplaces where women stay and succeed?** Recruiting women is only the first step. Capitalising on the gains of long-term retention depends on the physical, organisational and cultural conditions women experience after joining, and on whether workplaces support career progression through different life stages.
- **How can firms and the industry better recognise and utilise the skills women already build on the shopfloor?** Automotive firms invest heavily in developing skills, yet much of that capability becomes invisible once workers leave or move between roles. Making these skills more visible can improve deployment decisions and help experienced workers access future opportunities.
- **How can firms unlock women's access to nightshifts?** Expanding women's participation across shifts can help firms tap a larger talent pool, ease pressure on production, and build a more flexible, resilient workforce. Doing so will require firms to understand when women are able to work nightshifts and put the right safety, transport and workplace arrangements in place.

The chapters that follow examine each of these implementation challenges and propose pathways for action, based on a combination of secondary research, GBL's fieldwork, and evidence generated from interventions conducted on the shopfloors of our automotive firm partners. No single intervention will work across every automotive firm. Priorities will vary by firm size, workforce composition, operating model, production processes, and stage of the gender inclusion journey.

Accordingly, this report is not intended to provide a single blueprint for action. Instead, it offers an evidence-based framework to help firms identify the questions most relevant to their own context, understand the trade-offs involved, and make more informed decisions about where and how to invest. Some approaches are ready for implementation today; others require further experimentation, collaboration, or evidence before they can be adopted at scale.



CHAPTER 02

Optimising women's recruitment



Women's low representation on the automotive shopfloors is not only a supply problem. Firms may also be losing out on willing women candidates as a result of suboptimal recruitment strategies. Our research finds that simple, low-cost changes to recruitment, such as enabling women to bring a peer or assigning them to work under a woman supervisor, can potentially increase job acceptance by 11 to 13 percentage points*, especially during periods of high worker demand. This chapter explores how firms can redesign women's recruitment and optimise shopfloor placement to expand the universe of roles available for women and convert more candidates into hires.

*Early findings from GBL's ongoing recruitment RCT

Introduction

India's automotive manufacturing sector is a major creator of jobs at a national level, but remains more than 91% male.⁹ Our fieldwork revealed that one prominent reason is that auto sector jobs are often poorly designed for and marketed to women. Women's perceptions of the job roles, workforce composition and perceived lack of amenities could make these roles less attractive to prospective women workers compared to those in the traditional sector, thus hindering their decision to join. Additionally, women continue to face systemic barriers to entry such as restrictive social norms, unequal access to training, scarcity of women role models, and gender stereotyping.²⁴

Despite these obstacles, our fieldwork suggests that automotive firms have the power to influence women's employment decisions by offering amenities that are actually valued by them and also happen to be low-cost for firms. Moreover, some barriers can be at least partially overcome by making the recruitment stage more gender intentional.

Given the male-dominated nature of the industry, recruitment systems were built assuming a male candidate by default. They often fail to consider how women candidates and their families make decisions to join and stay in the job. While jobs



in India continue to be segregated across sectors based on gender,²⁵ as labour demand expands and manufacturing processes become increasingly automated, automotive firms are now slowly beginning to hire more women,²⁶ especially since more roles require technical skills as opposed to physical strength.²⁷ This shift calls for improvements in the status quo hiring processes to cater to women's talent acquisition. **A few automotive manufacturers in India, with a higher share of women in their workforce, have adapted their recruitment systems to incorporate practices that target women and their barriers specifically, showcasing that change is achievable.** However, these changes are yet to proliferate as standard practice.

Moreover, firms with limited presence of women on the shopfloors often lack systematic documentation and tools to identify stations where women can be placed with minimal process and station redesign.²⁸ This lack of systematic role identification either restricts women to shopfloor roles considered more "suitable" (such as in the packing and quality assurance departments)²⁹ or places them in roles that aren't yet feasible for women's deployment in terms of infrastructure and cultural readiness, leading to early attrition.²⁸ Firms have scope to systematise role mapping on the shopfloor, thereby benefitting them through better worker allocation and consequently, improved business outcomes.

Our work showcases that small, meaningful, often low-cost improvements at the recruitment stage, can provide avenues to improve women's participation on the shop floor. This chapter explores early evidence demonstrating the levers firms can use (such as enhanced job design, gender intentional recruitment processes, and optimal shopfloor placement) to strengthen women's hiring in the automotive sector.

What amenities drive women's decisions to say "Yes!" to auto jobs?

A majority of the automotive factories in India today have less than a 20% share of women on the production shopfloor.³⁰ To an average woman job seeker, most automotive factories thus present as male-dominated spaces. Additionally, shopfloor roles require standing on the job for the entirety of the shift, with limited breaks



in between. **Any attempt to increase women's participation in the auto sector must acknowledge these differences from sectors like textiles and food processing that are generally considered accessible for women and cater to what women ideally want in a job.**

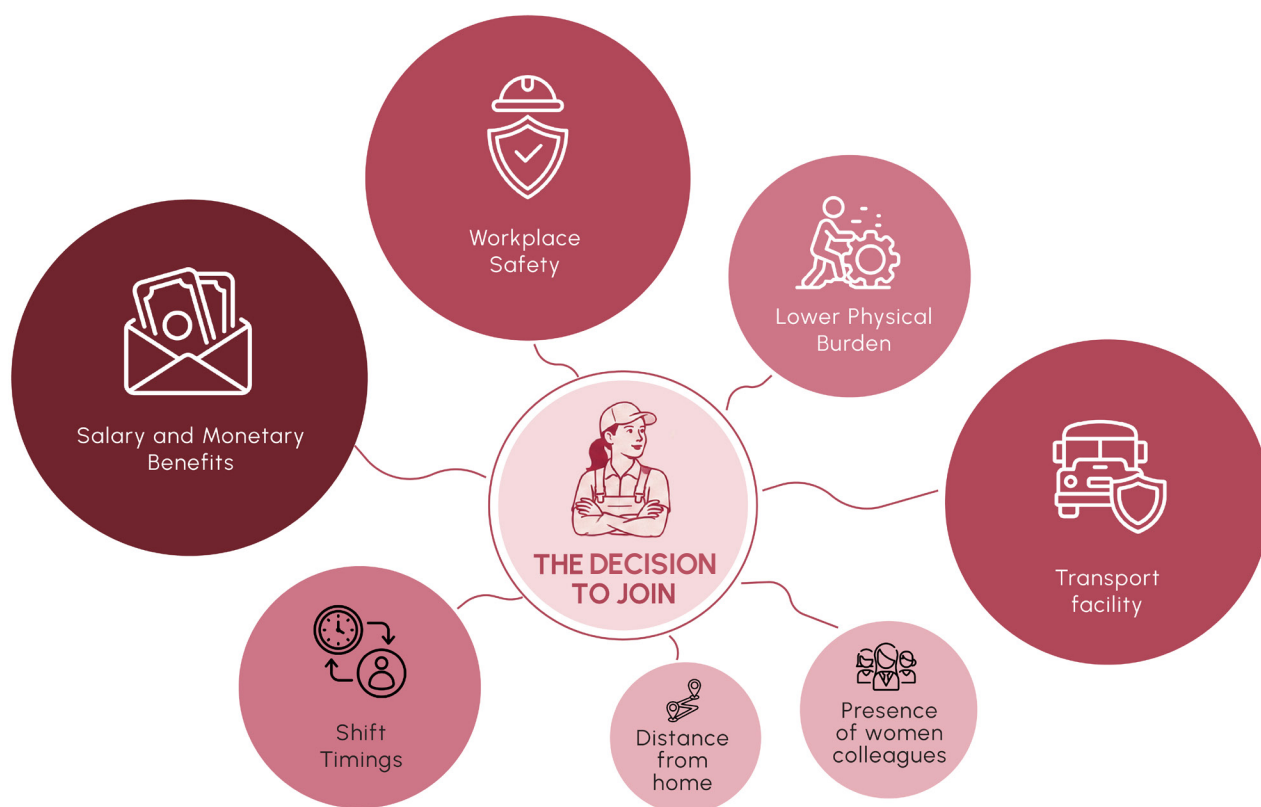
Data from pilots and surveys conducted by GBL in industrial areas of NCR^{31,32} and Bengaluru³² reveal that while majority of the women job seekers unsurprisingly look first at the salary and monetary benefits being offered, they also actively seek out and value job features including:

1. Workplace safety: Approximately 41% of the ~500 women surveyed actively consider safety when deciding whether to apply for a job, with the share jumping to as high as 70% for some areas in Bengaluru.³³
2. Less physical burden: Up to 39% of the women respondents look for jobs with less physical burden.
3. Presence of women co-workers: Up to 16% of the women surveyed in the Noida-Ghaziabad cluster mentioned the presence of women co-workers as a key consideration when evaluating jobs. While we know women tend to be concentrated in traditional industries, data tells us that presence of women workers can be a decisive factor in job choice as well.

Given these preferences, the majority male automotive shopfloors raise safety concerns for women, curtailing their willingness to take up auto jobs. Restrictive social norms further drive this divide. The fact that workers must remain standing for most of the workday signals high physical stress while on the job, making it an unattractive alternative to roles in traditional industries like textiles, which offer sitting positions at similar starting salaries.

Women also consider other factors such as suitable shift timings and distance from their home,³⁴ given their household and care responsibilities. Transport, however, is one amenity that women not only want in a job, but are also willing to forgo up to 10% of their income for its provision.³¹ Many firms provide reliable, safe transport but fail to capitalise on its benefits during recruitment itself.

What do women look for in jobs?



This, coupled with a fundamental awareness gap—many women workers are simply unaware whether automotive jobs are even an option for them³⁵—presents a unique challenge for firms that are looking to scale up hiring for women.

Why is change necessary?

In the absence of evidence on what shifts women's willingness to accept automotive sector jobs, many firms default to male-centric strategies that see low conversion and lead to wasted resources. This furthers the assumption that women's low participation, while structural, can only be addressed through collective action, even though our fieldwork shows that well-designed amenities and recruitment strategies can make a big difference. Continuing as is can thus be costly for automotive firms during hiring.

Recruitment drives for women can suffer from low conversion rates and subsequently, longer hiring timelines, if the strategy does not incorporate information on what women prefer in job design. These costs become even more severe in months when worker demand is high due to high production pressure, but labour is scarce. With longer hiring timelines, firms can lose out on critical production time, affecting final output. Moreover, firms often do provide some amenities that are valued by women (such as transport or presence of other women at the firm) but fail to recognise their importance in attracting women to automotive shopfloor roles.

While changes to workstations (such as height adjustment of workstations or providing ergonomic support through exoskeleton systems) require significant investment from firms, there are certain low-cost interventions that firms can implement in their factories with minimal production process redesign, that not only help improve job design for women but also attract them to the auto sector. Firms can benefit from a more efficient hiring strategy by instituting these low-cost amenities and advertising them during recruitment to attract women to the sector. This holds the potential to make firms stand out and become more competitive, especially during periods of high labour demand.



How can firms leverage valued amenities to improve women's participation in the automotive industry?

GBL conducted a series of pilot surveys and recruitment trials in NCR and Bengaluru to help inform the amenities that women value in auto jobs, escalating in rigour as findings held up at each stage. Surveys conducted as part of household pilots in NCR elicited women's preferences across hypothetical job offers in the automotive sector. These jobs varied only in the amenities that were offered to establish a directional signal on the features women liked and valued. The pilots found a consistent, sizeable jump—ranging from 16 to 28 percentage points (pp)—in women's stated willingness to accept an automotive job offering a higher share of women co-workers on their production lines (50%) compared to the status quo job that offered the industry standard share of 20% women co-workers.³² These preferences held when offered real job offers with the same feature or with the option to bring a peer along for the job.^{36,37}

Based on this evidence, a randomised controlled trial (RCT) evaluated the impact of offering four low-cost, feasible amenities (stated below) on women's take-up of automotive jobs with standard job descriptions and the same monetary benefits.

1. A higher share of women co-workers (**women co-worker amenity**)
2. The opportunity to bring a peer to the job and work alongside them (**peer amenity**)
3. Access to a woman HR manager and an anonymous helpline number to register grievances (**woman HR manager and grievance mechanism amenity**)
4. A woman supervisor (**woman supervisor amenity**)

The RCT, that is currently ongoing, offered jobs sourced through contractors to $\approx 1,200$ women across the industrial clusters in Noida and Manesar till date, and revealed that it is possible for firms to convert more women into trainees/workers by offering them some of the above amenities. In general, automotive jobs that offered women job seekers the opportunity to bring a peer along for the job or provided them with a woman supervisor recorded a higher take up than the status quo job.

However, these amenities become especially salient during periods of high labour demand in manufacturing. Early findings from the RCT³⁸ indicate that women are less willing to take up the status quo automotive job when jobs are readily available in industrial clusters, with acceptance rates falling by ~ 13 pp compared to periods when there are very few jobs in the market. When women have the option to choose from a variety of different jobs in the market that offer similar salaries, they are able to exercise their preferences and are no longer constrained by just monetary considerations. The ongoing RCT provides early evidence that when jobs are abundantly available, offering women an automotive job with the option to bring a peer along can increase the acceptance of a standard automotive job offer by over 11 pp. This also holds when they are offered a job with a woman supervisor instead, leading to an increase in the take-up by approximately 13 pp. Follow-ups with these women revealed that safety at the workplace, comfort of working with known peers and better communication with a same-sex supervisor contributed to these preferences. As more jobs are offered in the RCT, the magnitude of these impact estimates will become even more precise, but the signals are clear: offering these low-cost, easily implementable amenities make firms more competitive and help improve conversion rates for women.

The RCT thus demonstrates how automotive firms can leverage amenities that are low-cost, easy to provide and do not require an overhaul of the production processes, to improve conversion while hiring women.

Offering these gender-intentional amenities can also provide automotive firms with an edge over other manufacturers, especially when competing over the same pool of women candidates. While not tested by the RCT, provision of these amenities together as a standard package could also potentially lead to greater gains and cost savings.

Firms looking to improve their hiring strategy can therefore consider instituting the following amenities in their plants, and embed these features in their recruitment strategy:

The peer amenity i.e. letting potential women candidates bring someone they already know is a sure way to convert more women and is also among the cheapest to implement. It requires no change to workforce composition or new roles. Firms that have just begun hiring women will also be able to use this amenity to attract more women.

The woman supervisor amenity i.e. assigning women candidates to production lines with a woman supervisor can also help improve conversion. This also includes no redesign for the production process but necessitates either hiring women supervisors or revamping career progression tracks to allow existing women workers to progress to the supervisor stage. For instance, the presence of a female supervisor on some production lines at Mahindra & Mahindra plants has helped increase women's comfort on the shopfloor, provided a role model and established precedent for women's progression within the firm.

The other two amenities are reasonable candidates for firms to adopt where feasible, but the evidence for them is weaker and more imprecise. Firms can offer the **women co-worker amenity** i.e. amenity to work in production lines with a higher share of women co-workers. Women hired thus can be placed on fewer production lines to start with, offering a higher share of women on their respective production lines. This is also less costly for firms, as it allows them to convert more women candidates without potentially increasing a large overall share of women workers in the factory.

How can recruitment systems—often tailored for men—be redesigned to be more gender-intentional and conducive to hiring women? And once hired, how do firms determine where women can be deployed?

Status quo

Recruitment systems at the majority of auto firms with a predominantly male workforce are designed to be gender neutral. Even as firms in the sector have begun hiring more women, the hiring strategy remains exclusionary for women as they often fail to address labour market frictions faced by them.

In general, research shows that women often lack access to information about returns to work as well as job opportunities.³⁹ They are also often unaware of where to search for jobs (World Bank, 2024).⁶ This information asymmetry is reflected in women's lack of awareness of jobs in the automotive industry specifically. Scoping surveys conducted by GBL in NCR and Bengaluru reveal that even in industrial areas, where manufacturing roles form the bulk of the jobs available in the market, only 27%-28% of the women surveyed in NCR and 22%-40% in Bengaluru were aware of auto firms offering jobs to women.⁴⁰

Recruitment for women in the sector runs almost entirely through contractors, third party recruitment agencies and informal networks. Even amongst contractors and recruitment agencies, referrals from existing workers, WhatsApp groups (that are already gender segregated to avoid inappropriate mixed-gender interaction), and word of mouth endorsements form the primary channels for hiring unskilled women workers (i.e. those without industry-relevant ITI (Industrial Training Institute) certificates). Those with relevant ITI qualifications are hired primarily through campus placements.²⁸ However, women account for only 6.2% of the candidates enrolled in engineering ITI courses across India in 2025.⁴¹ This necessitates many auto firms to rely on the pool of unskilled women candidates to meet their demand. This network-based informal channel thus forms the primary source of information and job search for most workers, but especially women. Besides restricting vacancy-related information to these networks, this channel also contributes to the spread of misinformation about job attributes such as earning potential and nature of the job, creating inconsistent expectations amongst potential women candidates.^{28,42} Moreover, as explored in the previous section, recruitment messaging often excludes information

on amenities valued by women.

Together, the information asymmetry, dependence on informal networks, and lack of consideration for factors affecting joining and retention decisions of women candidates limit auto firms' access to the available talent pool of women, and lead to low conversion rates and longer hiring timelines. The current recruitment systems also create early attrition risk,⁴³ primarily due to a mismatch between women's expectations and the reality of job roles, once they join.

Moreover, initiatives to expand women's representation on firm shopfloors are often driven by senior leadership, but lack systematic deployment planning at the shopfloor level in the initial stages. Assessments of women's suitability for different shopfloor roles are often guided by established norms and subjective perceptions rather than evidence-based, technical assessment of the skills, capabilities, and requirements associated with those roles.⁴⁴ This either results in:

- a) concentration of the female workforce in a few departments such as packing and quality assurance, traditionally considered suitable for women, or
- b) their placement in stations and departments that are not yet ready for women's absorption due to various factors such as excess physical burden, lack of ergonomic support, or absence of necessary support infrastructure and policies.

While the former reinforces beliefs regarding women's suitability for roles considered "easy" and presents a ceiling to the number of women that can be hired, the latter leads to attrition and harms perceptions regarding women's suitability for work.

Why is change necessary?

Reliance on referrals and existing worker networks concentrates awareness of jobs within a small set of communities and households already connected to the factory through workers. Women's networks are significantly more closed than that of men, limited primarily to co-resident family members and neighbours.⁴⁵ Network-based hiring can hence be disadvantageous for women, given the already limited awareness of automotive job opportunities meant for women. At the same time, even as job opportunities do not reach women through formal channels, the informal networks cap the pool of women a firm can reach through existing strategies by creating a narrow pipeline for entry. This can exclude potentially productive candidates who are willing to work in the firm but lack access to job market information.

Since existing recruitment channels also run the risk of early attrition among women due to inconsistencies in information received,⁴⁶ it is necessary for firms to diversify their recruiting efforts in a way where they can grow beyond the extent allowed by word of mouth, without any additional attrition risks. **Recruitment strategies that actively recruit women with women-specific informational interventions, have the potential to augment women's participation in the firm.** For instance, Jensen (2012) shows how active recruitment of women by the business process outsourcing sector in villages around NCR increased female participation in that sector by 4.6 percentage points.⁴⁷

In order to successfully sustain women's recruitment into the firm, an effective gender-intentional recruitment strategy must be accompanied by strategic placement of women on the shopfloor. Unplanned deployment of women without conducting a systematic assessment of role suitability can be costly for firms, as it often results in low productivity, exits from the firm and reputational consequences among women's networks. It

How can firms enhance their recruitment and placement strategies for women?

It is indeed possible for automotive firms to make their recruitment systems gender-intentional and build a sustainable pipeline to hire women by incorporating interventions that generate job awareness, expand outreach methods, standardise information quality, and improve messaging. In parallel, optimal placement of women on the shopfloor requires a systematic review of all workstations to identify the ones where women can be placed with minimal process redesign. In partnership with an automotive firm, GBL has developed a recruitment package that works on both these fronts, comprising of two distinct elements:

1. Gendered recruitment standard operating procedure (SOP):

The SOP details a collection of practical recommendations that can be implemented to strengthen the existing recruitment systems for women and expand recruitment reach and awareness. Drawing insights from GBL's recruitment RCT, pilots, surveys and diagnostic research, along with academic literature on recruitment and women's labour force participation, the recommendations specifically outline:

1. Adoption of low-cost amenities that increase conversion of women candidates (e.g. the peer amenity, as outlined in the previous section).
2. Information about the workplace and job features that are relevant to women's decision making process. This includes information on the pay structure, working hours, transport and canteen facilities, amenities valued by women, presence of a support system.
3. Gendered messaging to be deployed in recruitment collateral to attract women candidates. This informs the verbiage, information and visuals designed for hiring.
4. Mechanisms to standardise firm specific information disseminated and used by recruitment stakeholders. This is meant to ensure consistency and uniformity in information about the jobs in the market, regardless of the channels used for hiring.
5. Formalisation of existing channels through a milestone-based incentivised referral programme.
6. Pathways to expand recruitment channels physically, through a more deliberate presence in clusters where women reside and move around, and virtually, through use of online job platforms such as APNA, Teamlease and more.

While the recruitment SOP has been developed with one partner automotive firm, it is intended as a generalisable approach to gender-intentional recruitment. The recommendations are transposable across geographies and scale of firms.

2. Structured station mapping template:

Developed through shopfloor observations, workstation walkthroughs and discussions with production heads at partner auto firms, the station mapping template acts as a structured tool that firms can use to assess women's suitability for each workstation on a shopfloor.

For each station, the template accounts for the skills/education level required to complete the task/process, the criticality of the process to production, the time pressure to complete tasks, physical burden the operator will be subjected to, availability of ergonomic support, heat and noise exposure, and risks to workers associated with the process. It also maps the history of women's deployment on the station and production lines to track and identify additional deployment opportunities for women.

The template thus helps assess the suitability of different workstations for women, yet remains flexible and non-prescriptive. This has been done to allow for different manufacturing contexts and processes across firms. It can be adapted by adding aspects relevant to each firm's context.

This systematic mapping through the template allows firms to expand women's participation to shopfloors and departments that were earlier considered off-limits. It also allows firms to follow a phase-in approach, where women can be placed first in departments considered low-risk and then scale up their presence to other departments.

Evidence from development

The recruitment SOP has been developed and delivered to one GBL partner automotive firm, currently awaiting deployment. The station mapping template is currently being piloted at one of the plants to identify roles where women can be placed as the firm scales up women's hiring. For the entire package, enthusiastic responses from firm leadership and sustained engagement in co-developing it suggests real appetite for a more systematic approach to women's sourcing and placement.



CHAPTER 03

Building workplaces where women stay and thrive



Bringing women into the workforce is only the first step; how they experience their first months on the job shapes whether they can integrate, grow, and stay. Our research finds that simply compliance with basic legal and infrastructure requirements does not necessarily translate into a workplace that works well for women: gaps in facilities and transport, everyday social friction and access to career-building opportunities can contribute to early exits. These factors can undermine firms' investment in recruitment and make it harder to build an experienced workforce of women. This chapter examines these gaps and explores how firms can create more gender-intentional workplaces that support women from entry through retention.

Introduction

Successfully recruiting women into the automotive workforce is only the first step. Once hired, a woman's workplace experience—the physical, social, and organisational conditions she encounters day-to-day—determines whether that initial investment in recruitment can actually translate into a sustained career. When firms underestimate the importance of these conditions, the result is often early attrition.

“Our collaboration with the GBL team has helped us gain deeper insights into the experiences, aspirations and challenges of women employees on the shop floor. These insights have enabled us to strengthen our people practices, enhance employee engagement and create a more supportive and inclusive workplace.”

—Madhukar Bhat, CHRO, Sansera Engineering

Many firms in the automotive sector often view early attrition amongst women as an inevitable consequence of personal life milestones such as marriage and motherhood.²⁸ Since these transitions are perceived as largely beyond the organisation's control, firms may prioritise managing around these anticipated exits rather than investing in women's long-term integration. This can be seen in inadequate investment in workplace infrastructure, prohibitions on placing women in demanding or high-visibility roles, or delayed investments in their career development.²⁸ These decisions can become self-reinforcing: when women struggle to form professional networks and receive fewer growth opportunities and support throughout their employment, the likelihood of eventual exit increases, thereby reinforcing the original assumption. The challenge, therefore, is not whether marriage and motherhood influence women's employment decisions, but whether firms address unrelated and too often ignored drivers of attrition.

Notably, these assumptions about the cause for women's early attrition are rarely validated by firms through systematic evidence. Formal exit interviews are uncommon among blue-collar workers, with departures often communicated informally through supervisors or contractors.²⁸ Even in white-collar settings, where exit interviews are more routinely conducted, the data gathered does not always translate into meaningful insights and organisational action.⁴⁸ Thus, firms may have limited visibility into the workplace experiences that shape women's decisions to stay or leave, reinforcing assumptions about the inevitability of attrition.

Many firms assess physical infrastructure through the lens of statutory compliance, such as the number of washroom cubicles or the installation of sanitary napkin dispensers. Women workers, on the other hand, evaluate the same spaces through a more practical lens: whether these facilities are consistently accessible, functional, and reliable during a shift. Compliance alone does not ensure that a workplace effectively supports women. Inadequate facilities can create daily discomfort, limit women's ability to perform their roles effectively, and increase the risk of early attrition. Similar dynamics can emerge through unequal career opportunities or exclusionary workplace interactions, where seemingly routine organisational decisions accumulate over time to influence whether women remain with the organisation.

This chapter examines **how basic job infrastructure affects women's current workplace experience in the automotive sector**, with an emphasis on the factors that contribute to women's attrition before major life transitions such as marriage and motherhood. It also explores what workplace integration and retention might look like when workplaces are designed around women's needs, rather than assumptions about them.

From workplaces that partially meet women's needs to workplaces that enable participation and sustained careers.



PARTIALLY MET NEEDS



ACTIVE ENABLEMENT

INFRASTRUCTURE · EQUITABLE OPPORTUNITY · INCLUSION

Snapshot: Women's workplace experience today in the automotive sector is shaped

1. Physical facilities that typically are present but fall short of women's day-to-day needs and well-being. Addressing these will support women to perform their roles more effectively and encourage them to stay longer.

- 1.1. Washrooms and menstrual products
- 1.2. Medical facilities
- 1.3. PPE and storage
- 1.4. Shop floor ergonomic design
- 1.5. Safety needs
- 1.6. New mothers' reintegration
- 1.7. Transport

2. Career growth opportunities—which are typically limited for women

- 2.1. Career-building experiences
- 2.2. Recognition, pay, and appraisals

3. Sense of belonging, which is often undermined by the work environment

- 3.1. Daily discomfort
- 3.2. Challenges to authority
- 3.3. Peer networks
- 3.4. Grievance redressal

1. Existing physical facilities often fall short of women's day-to-day needs and well-being

The foundational infrastructure of many manufacturing units we visited was established during an era when shop floors were almost entirely occupied by men. Consequently, firms had little impetus to evaluate how the specific design, placement, and accessibility of these facilities might be experienced by women. As organisations pivot toward greater gender integration, there is a clear opening to examine whether systems built primarily for men can genuinely sustain women's day-to-day requirements.

“Assimilation is a continuous process and we at Tata Motors feel that it is more sustainable when it is anchored in business outcomes. For example, can we address menstrual health from the lens of reducing absenteeism? Can we position Equity as a catalyst for Belonging and therefore lowered attrition?”

— Amrita Ganguly, Chief Diversity Officer, Tata Motors

Status quo (facilities)

1.1. Barriers to accessing washrooms and menstrual products:

The accessibility of these washrooms and menstrual products may serve as a litmus test for whether a workplace has truly adapted to having women in its workforce or if they are simply expected to adjust to a male-centric environment. Stakeholder interviews across the automotive sector highlight a persistent friction in this area. For instance, workers in an auto-component manufacturer in Haryana said, **"It takes around 5-7 minutes to reach the washroom.. and is not as easily accessible,"**²⁸ a problem which is often due to lengthy queues. In high-pressure environments where break relief is not built into staffing plans, this time away is often penalised, forcing women to choose between basic needs and production targets. Occupational health research underscores the risk here: when facilities are distant and windows are short, workers often delay urination or limit fluid intake, which directly erodes concentration and productivity while increasing injury risks.⁴⁹

Physical location and the surrounding environment further complicate access. Some workers we interacted with noted a lack of visual privacy near men's facilities that they must pass: *"The urinals are all open and visible."*²⁸ Others reported avoiding toilets in isolated, low-footfall areas where men gather to smoke, creating a sense of discomfort that renders otherwise functional amenities unusable. Secondary evidence corroborates these challenges, with women reporting that toilets remain unsuitable for managing menstruation.⁵⁰ For instance, in one study, toilet infrastructure improvements across four workplaces in Kenya and Nepal addressing conditions as stark as shared toilets with no soap, locks, or disposal bins and insufficient toilets were implemented alongside product provision and education interventions. Following these combined interventions, statistically significant reductions in menstruation-related absenteeism were recorded, with mean days missed falling from 0.36 to 0.12 and 0.48 to 0.02 at two of the four workplaces, and the proportion of women always feeling comfortable managing their periods at work increasing by between 32 and 50 percentage points across all sites.⁵¹

Furthermore, the health implications are significant. Unhygienic conditions and unreliable access to products can contribute to reproductive morbidity and heightened anxiety.⁵² Another behavioural barrier is the need to consistently request permission to access provisions like menstrual products, which restricts women's independence. Effective menstrual hygiene management requires a "full-loop" environment: clean sanitation, disposal systems, and an atmosphere free from stigma and hurdles.⁵³ Leading firms are beginning to recognise this value; Maruti Suzuki, for example, conducted a needs assessment to revamp restrooms and changing areas for women.⁵⁴ Similarly, Shahi Exports, a leading garment manufacturer in India, has installed biometric vending machines in washrooms to provide workers with private and autonomous access to subsidised products. This was accompanied by a training campaign targeted at immediate supervisors and production staff to support a work environment conducive to worker health.⁵⁵

1.2. Gender-responsive access to medical facilities:

Preventive on-site care is a strategic investment that reduces absenteeism and off-site treatment.⁵⁶ When functioning well, these clinics serve as a source of safety; as one worker from an auto-component manufacturer in Karnataka noted, **"If we are unwell, we can go to the medical here..it is safe."**²⁸ However, for women, the utility of a clinic depends heavily on the presence of women practitioners and guaranteed confidentiality. While supervisors may view existing clinics as "adequate for injuries,"²⁸ women often hesitate to discuss health concerns with male doctors,⁵⁷ and are inclined to prefer women physicians to men physicians (by 51.8 percentage points).⁵⁸ Initiatives such as the provision of women attendants in medical facilities by Tata Motors or Flex India offering on-site counsellors demonstrate that the firms' focused measures designed to support women workers' needs could close this gap directly.^{59,60}

1.3. Poor Personal Protective Equipment (PPE) fit and storage provisions:

Ill-fitting PPE and inadequate storage provisions undermine both worker safety and on-the-job performance. These gaps are particularly significant for women, as protective equipment only functions if it fits and most industrial inventories are still based on male dimensions, leading to a literal "one size fits all" approach that fails in practice. Research indicates that respirators, gloves, and boots lose their protective efficacy when ill-fitted, causing fatigue and restricted movement.^{61,62} In male-dominated sectors, over 94% of women report challenges finding suitable PPE.⁶³ **GBL's fieldwork shows that women often receive "resized" male gloves that do not account for grip or heavy boots that cause pain for months.**

The persistence of workplace injuries also underscores the importance of effective protective measures: among 58 automobile and auto-component companies, 30 reported injuries among workers that resulted in time away from work, compared with 12 that reported such injuries among employees.⁶⁴ While many firms treat procurement of PPEs as a compliance exercise, proper fit is a prerequisite for reducing safety risks and preventing workplace injuries. Verallia, a global glass-packaging manufacturer, identifies appropriate PPE as a core component of its workplace health and safety strategy, showing that protection can be enhanced without compromising standards.⁶⁵

Storage is another neglected area; without secure lockers or changing rooms, women are often forced to use areas near washroom sinks to change their clothes.²⁸

1.4. Gaps in shop floor ergonomic design:

As mentioned in Chapter 2, many firms have traditionally allocated roles based on assumptions about physical strength. Modern automation now allows firms to hire based on skill rather than physical profile. Industry leaders note that technological advancement has been a major enabler of women's participation by lowering physical barriers.⁶⁶ However, ergonomics remains critical; fixed workstation heights and lack of suitable work chairs play a role in musculoskeletal strain.⁶⁷ A study of 3,479 factory workers across production sectors in Shenzhen, China, found that nearly half experienced musculoskeletal problems, with women facing 58% higher odds than men.⁶⁸ GBL's fieldwork found that while some firms modified machinery heights to accommodate women, others still rely on fixed height and strength requirements for role allocation that are based on male references.²⁸ Transitioning to adjustable workstations and robotics, as seen at Tata Motors, can expand the talent pool while reducing absenteeism—an effect that compounds as teams become more gender-diverse.^{69,70}

1.5. Unmet safety needs:

Many firms treat safety as a fixed feature of the site and provide CCTV coverage, biometric entry, and, in some cases, security patrols. These measures create a basic layer of protection, but women's safety depends on their full journey through work: travelling to the plant, entering the site, moving through low-footfall areas, working across shifts, and returning home. A 2025 industry survey found that 22% of women felt unsafe at work. This figure rose to roughly one in three where basic measures such as CCTV, lighting, and helplines were absent, with manufacturing and field-based roles facing the sharpest gaps.⁷¹ Firms must therefore move beyond general surveillance to ensure the specific routes women use to reach toilets or transport are safe and well-lit.

Because manufacturing plants often sit on the outskirts of towns and cities, away from populated residential areas, women and their families assess the safety of the commute alongside conditions inside the plant.

Family confidence can shape whether a woman accepts a role, works a later shift, or remains employed. For firms, these gaps create an operational constraint. As the number of women workers grows, firms will need to

deploy them beyond the morning shift. When women or their families do not consider later travel safe, firms may struggle to balance production lines, staff evening or night operations, and fully use their recruitment and training investments. One worker from an OEM in Tamil Nadu noted that she would likely stop working if required to take a late-night shift due to family safety concerns: *"My mother won't accept. If the second shift comes, mostly I will stop."*²⁸ Safety, therefore, affects how effectively firms can deploy women across the production schedule. Leading manufacturers like RPG Group and Tata Motors have revamped civil infrastructure with women's security measures across shifts.⁷²

1.6 WORKPLACE EXPERIENCE > 1. PHYSICAL FACILITIES > 1.6 NEW MOTHERS' REINTEGRATION

1.6. Inadequate infrastructure to support new mothers' reintegration after a career break:

While maternity leave is legally mandated and therefore broadly granted by firms, limited attention is given to women's experience utilising and returning from leave. The spillover effects can be profound. A recent study on India's Maternity Benefit (Amendment) Act of 2017, which expanded paid maternity leave from 12 to 26 weeks, used a novel linked dataset of social security records, LinkedIn profiles, and firm-level leave data and found that the policy reduced women's employment without affecting women's wages. The policy also raised men's wages and increased men's likelihood of promotion into managerial roles, while remaining overall cost-benefit neutral.⁷³ Some women perceive that it even negatively affects their potential for growth in the company. In the words of a woman worker from an OEM in Tamil Nadu, ***"People think maternity leave is some holiday; during that time you get a mandated rating of [average]. Instead, why can't they rate for the 6 months of work that was done before the leave? Why give this default rating?"***

Moreover, in many firms, maternity leave is managed through a largely administrative process where only statutory maternity leave is implemented, with limited structured support for reintegration after leave. This gap puts the burden of reintegration entirely on the returning parent to renegotiate their position. **Nationally, childbirth remains a significant drop-off point for women's employment, with 73% of Indian women reported to leave their jobs after childbirth and struggle to return to work.**⁷⁴ Therefore, the absence of reintegration support is not neutral; it actively affects the career progression of women. For firms, this represents a substantial loss of trained and experienced workers and the institutional knowledge they carry, while potentially resulting in recurring recruitment and training costs. Recognising this, several major Indian automotive companies have return-to-work programmes for women after a career break including Mahindra & Mahindra's "SOAR: Seamless Opportunity for Amazing Returnships,"⁷⁵ and JSW MG Motor India's "Drive Her Back"⁷⁶ initiatives. In fact, an analysis of FY 2022–23 annual reports of NSE-listed automotive companies shows that 94% of women return to work after parental leave, with 94% of those returning remaining employed for at least 12 months, pointing to comparatively stronger reintegration and retention outcomes among listed automotive firms.⁷⁷ This suggests that firms may see retention of women during key life transitions as within their control to a reasonable extent. Organisations in other industries that have implemented structured reintegration measures, such as staying in touch with the employee during leave, manager sensitisation, peer support ("buddy") systems for new mothers, increased flexibility, and phased reintegration processes, have reported return-to-work rates as high as 98%.⁷⁸

Recognising these challenges for new parents reintegrating into the workforce, some large OEMs have expanded their statutory maternity leave to include benefits to support the new parents, with the introduction of paternity leave and flexible working hours for new mothers.

Tata Motors' "Wheels of Love" programme features up to 182 days of paid maternity leave, 10 paid paternity leave, on-site creche facilities, and flexible hybrid working arrangements for new mothers.⁷⁹

Women also highlight the absence of on-site childcare and the difficulty of balancing caregiving responsibilities with work schedules after returning from leave.²⁸ Compliance with statutory mandates alone rarely suffices: building a creche, for instance, is very different from maintaining it, ensuring all facilities are operational, and ensuring access for people who want to use it. Evidence suggests that more active support can make a measurable difference: employer-sponsored childcare has been associated with an increase of 6.56 months in average employee tenure in India.⁸⁰ At Martur, an automotive-components manufacturer in Turkey, average monthly turnover among workers declined 70% (from 4.4% to 1.2%) following the introduction of childcare support and other retention measures.⁸¹

1.7. Limited access to safe and reliable transport:

Safe and reliable transport is crucial for women's participation in the automotive sector due to remote plant locations and shift work. Long commutes to isolated factories worsen the double burden of domestic work and paid employment uniquely felt by working women.⁸² Since 84% of women's work trips in India rely on public, intermediate public, or non-motorised transport, transport safety and reliability directly determine their ability to enter or remain in manufacturing roles.⁸³

Many firms have addressed this challenge by providing company transport, and GBL's fieldwork shows women feel safer at common pickup points travelling together. While informal bus norms exist, like women sitting upfront, gaps in last-mile connectivity and policy consistency persist. For instance, security guards are often only present if they happen to live along the bus route, but otherwise aren't formally guaranteed. Similarly, late-shift transport support is not always guaranteed, with some workers facing HR resistance when requesting it.²⁸

These gaps are particularly important for women commuting at certain times of day. Under the Occupational Safety, Health and Working Conditions (OSH) Code, 2020⁸⁴ and state rules such as Maharashtra's Factories Rules,⁸⁵ safeguards may apply to women travelling before 6:00 a.m. or after 7:00 p.m., regardless of how their shift is labelled. Aligning transport arrangements with these requirements, including secure transportation, CCTV and adequate lighting, can help organisations proactively strengthen women's safety and meet applicable standards. Furthermore, a lack of firm-provided transport and public alternatives around early hours of the day forces some women to accept unsafe alternatives, such as rides from strangers, to reach shifts that are labelled as day shifts but fall within the legally regulated night window.²⁸

Notably, existing firm-provided transport systems are largely designed around a young, unmarried, migrant woman worker. Transport routes are typically planned around hostels or nearby rental housing rather than more dispersed family residences, reflecting the needs of only the first generation of women entering these roles.

Some firms have already moved to close these gaps directly. Continental provides safe and well-lit waiting areas across 16 company transport routes at its operations in Thailand.⁸⁶ In India, Tata Motors provides transport to and from work, including door-to-door drop facilities.⁸⁷ Saint-Gobain combines dedicated shift transport with security escorts for women.⁸⁸ Technology can further strengthen these systems through GPS tracking, CCTV cameras, panic buttons, and background checks for drivers.⁸⁹ As firms seek to recruit and retain a more diverse workforce, these arrangements may need to evolve to support women at different life stages and with different family responsibilities.



Why is change necessary?

The degree to which women's everyday needs are considered in designing basic workplace infrastructure sets the tone for her experience, her sense of belonging, and the feasibility of staying in her job. As previously mentioned, manufacturing facilities were originally established for a predominantly male demographic; decisions concerning sanitation, medical care, protective equipment, transport, or childcare seldom integrated women's perspectives. Hence, with rising women's workforce participation, deploying women into workplaces not designed for them is no longer sustainable.

Women have proven to be more reliable than men in some contexts. An examination of flexi-staffing data across firms from automobile manufacturing, logistics, and retail sectors reveals that women exhibit exceptionally low attrition, with only 0.75% leaving their positions within the first 30 days compared to 4.61% of men.²⁰ While this trend is not limited to the automotive industry, it indicates a broader tendency for women to demonstrate higher initial retention rates within blue-collar positions. To enable women's integration and performance in the workplace, firms must move beyond minimum requirements. For instance, speaking on enhanced women's participation on the shop floor, Mr. Hisashi Takeuchi, Managing Director & CEO, Maruti Suzuki India Limited, said, *"(...)Real integration happens on the shop floor when [women] work on building high-quality vehicles with precision and care... We have carefully created an ecosystem that supports women on the shop floor. A detailed study was undertaken to understand the requirements, and specific infrastructure changes were made on the shop floor to ensure their convenience and security. Infrastructure such as adequate restrooms, a changing area, a creche, and safety support in the form of guards on duty and patrolling during the evening shift were introduced."*⁹⁰

With over 190 women employed on its shop floor in a year, Maruti Suzuki's total women's workforce across all functions now exceeds 1,300. Infrastructure is in many ways the practical 'face' of an enterprise; when well-maintained and functional, it builds trust and supports a more reliable workforce, and firms that have invested in women's infrastructure have increased the number of women on the shop floor.⁹¹

How can firms drive change?

Create and administer infrastructure readiness checklists

To achieve lasting inclusion as workforce demographics change, firms should periodically assess infrastructure readiness for women before they are hired or onboarded. For this purpose, GBL developed a readiness checklist through this engagement, built on a robust evidence base. The checklist evaluates physical infrastructure (washrooms, rest spaces, PPE, safety) and organisational systems (grievances, welfare) across four dimensions:

1. Is the amenity present?
2. Are women workers aware of it?
3. Is it accessible to women in its current form?
4. Is it used in practice?

This infrastructure readiness checklist allows manufacturing and blue-collar-intensive companies to assess workplace readiness, uncover gaps, and enhance shop floor conditions. GBL used this tool to identify readiness gaps on the shop floor of an auto component plant. Following this and using insights from interviews with workers, evidence-based recommendations were tailored to factor in the needs of women workers and the feasibility of implementing them. Specifically, high-priority areas were identified based on their impact on well-being, productivity, and ease of implementation. Firms can apply similar frameworks to assess gaps in usage or accessibility and prioritise areas for action. Tools such as these, combined with the knowledge of how each infrastructural amenity or policy impacts women's experience (covered across this chapter), help firms to make investments that can improve retention and the overall returns on women hired.

GBL's readiness checklist may require customisation based on each firm's context. The detailed checklist is available at the end of this chapter.

Case study 1

Leading Auto-Component Manufacturer – Infrastructure Readiness Mapping

A market leader in automotive glass manufacturing partnered with GBL to advance gender diversity through targeted improvements to workplace infrastructure and organisational systems. Drawing on a literature review, best practices other manufacturers have adopted, shop floor observations, and stakeholder interactions, GBL developed an infrastructure checklist as the solution, dividing recommendations into "must-have" and "nice-to-have" items. This checklist was administered to help the firm prioritise where to invest first. Their leadership team appreciated the tool's output, noting, *"We have already started acting on the high-priority recommendations and intend to work on the remaining over time."*

– Representative from the auto-component manufacturer in Haryana.

2. There are limited opportunities for women's career growth

Apart from infrastructure, opportunities for career progression also play a key role in shaping whether women stay or leave. In the automotive sector, this holds true across both blue-collar and white-collar roles. However, women face barriers at multiple stages of the career ladder, from limited access to the growth experiences to unequal recognition and promotions to unclear pathways into leadership. Left unaddressed, these barriers can weaken retention and limit firms' ability to build a strong pipeline of women for future supervisory and management roles.

2.1 WORKPLACE EXPERIENCE > 2. CAREER GROWTH OPPORTUNITIES > 2.1 CAREER-BUILDING EXPERIENCES

Status quo (systems)

2.1. Restricted access to career-building experiences:

Until the OSH Code, 2020, came into force in late 2025, firms operated under the Factories Act, 1948.⁹² Under the Act and state-specific rules, some restrictions limited women's access to processes central to automotive manufacturing, including electroplating, battery assembly, welding in confined spaces, and work involving industrial solvents, which were classified as "hazardous."⁹³ In 22 states, prescribed limits also applied to the loads women could lift. The OSH Code, 2020 has since changed this framework, creating greater scope for women to participate across these roles, subject to applicable safety requirements.⁹⁴ Moreover, despite women's interest in working at night, restrictions on nightshifts for blue-collar women in many states and organisational policies limiting extended work hours for women in white-collar roles continue to constrain their work opportunities. These restrictions have reduced access to supervisory roles and responsibilities, high-visibility tasks, and other experiences that typically support promotion.²⁸

While these regulations and policies were intended to protect women's health and safety, they may also have reinforced gendered perceptions about the types of work women are suited for. Over time, limited exposure to technical and higher-responsibility roles can create a cycle in which women have fewer opportunities to build the experience needed for advancement.

Alongside these structural barriers, organisational practices often created an additional set of constraints. Women have been routinely channelled into roles perceived as more "suitable" for their gender, such as quality, administrative, and support functions, limiting opportunities to rotate across automotive departments or to take on technically demanding assignments. As mentioned earlier, women are also frequently hired with the assumption that they will soon exit. Many firms expect that women will relocate after marriage, take on greater

household responsibilities, or face family pressure to leave paid employment. This exit anticipation shapes talent management decisions well before any resignation actually occurs. Some supervisors and HR personnel describe married women as less likely to be considered for promotions or long-term development, on the assumption that pregnancy or family responsibilities will soon lead them to leave. In some cases, as one senior manager at an OEM put it, women are “given lighter jobs” specifically because firms expect them to leave within a few years due to marriage.²⁸ In effect, women are denied both the breadth of experience and the investment needed to compete for more technical and senior roles, limiting career progression well before any decision to leave is made.

Together, legal restrictions and organisational practices have limited women’s access to the experiences that underpin career progression in the automotive sector. While the OSH Code, 2020, has since removed many of the legal barriers,^{84,95} the challenge for firms now is to ensure that assumptions about women’s roles and career continuity do not continue to shape talent decisions.

2.2 WORKPLACE EXPERIENCE > 2. CAREER GROWTH OPPORTUNITIES > 2.2 UNEQUAL RECOGNITION, PAY, AND APPRAISALS

2.2. Unequal recognition, pay, and appraisals:

Most firms have formal systems for performance appraisal, salary revisions, and promotions. Within this context, some firms appear to place greater weight on workers’ ability to work flexible hours or gendered assumptions around competence as compared to qualifications or performance alone. Across shop floor and corporate roles, women describe receiving lower salary increases and fewer promotions than male colleagues in similar roles, even where qualifications and experience are comparable—**one manager in a leading auto-component manufacturer put it plainly: given a man and a woman with equal qualifications, “you can rest assured the man would be placed in a higher position.”**²⁸ Moreover, a large wage gap exists in this sector. In the blue-collar context, in 2022, an average woman worker earned only ~70 rupees for every 100 rupees made by an average male worker.¹⁵ This pattern is not confined to the shop floor or middle management: women CXOs at India’s top automobile companies earn 11% less than their male counterparts,⁹⁶ suggesting that similar barriers exist even at the very top of the sector’s own leadership. Firms may also be overlooking how gender stereotypes influence day-to-day talent management. Some supervisors avoid giving women direct corrective feedback out of concern that it may be perceived as too harsh or may affect morale.²⁸ While often well-intended, this can leave women with less access to the constructive feedback that typically supports advancement. Moreover, recognition, when it does come, carries its own social cost—women who are rated highly report that co-workers attribute their success to favouritism or handicaps rather than merit.²⁸

PAY GAP

For every ₹100 earned by an average male blue-collar worker, a woman earned approximately ₹70.

AVERAGE MALE WORKER

₹100

AVERAGE WOMAN WORKER

₹70

₹30 GAP

2022 - Average blue-collar worker earnings

Why is change necessary?

The restricted access to career-building and unequal recognition compound into a single, visible outcome: women remain scarce at the top of the sector. Globally, women hold only 14% of key management positions and 18% of board positions at automotive companies.⁷⁷ In India, women hold fewer than 3% of CXO positions at top automotive firms.⁹⁶ The same pattern holds closer to the shop floor, in blue-collar settings, where women supervisors are rare and, where present, are concentrated in HR rather than in production or operations.²⁸

This under-representation compounds. With few women in leadership, junior women have fewer role models and mentors to demonstrate that advancement is achievable.²⁸ A lack of access to mentors can also leave women feeling excluded from key communication and promotion opportunities.⁹⁷ Since women are more often placed in lower-visibility roles, they also have fewer chances to build relationships with senior decision-makers⁹⁸—relationships that typically carry the strategic contacts, recommendations, and goodwill that promotion decisions depend on.⁹⁹ Indeed, research has associated women's access to mentors in male-dominated automotive workplaces with expanded knowledge and skill sets, stronger career confidence, and increased resilience against gender bias and social exclusion.¹⁰⁰

Ultimately, these barriers also affect whether women stay in the organisation. One in five women in the blue-grey-collar workforce cite career growth as a considerable challenge.⁷¹ Among white-collar women in the automotive sector, lack of promotion opportunities is the leading reason for considering leaving the industry, with 57% reporting that they do not see a path to reach the level that meets their aspirations.¹⁰¹ Perceived pay inequity further compounds this risk, as blue-collar women in manufacturing are significantly more likely to leave when they believe men receive comparable pay for comparable work.¹⁰² Increasing women's representation through hiring alone is therefore unlikely to translate into sustained retention or greater representation in leadership without parallel efforts to support women's progression throughout their careers.

How can firms drive change?

There are several actions firms can take to ensure sustained access to career-building experiences and equal recognition. In the blue-collar context, this can look like reviewing shift allocation and work policies so women can fully benefit from the expanded legal provisions under the OSH Code. Research has shown relaxing restrictions on women's night work in factories is associated with an 11.7% increase, relative to the mean, in women's employment at large firms,¹⁰³ indicating that removing these barriers can meaningfully grow automotive firms' access to women talent. To address unequal recognition directly, firms can introduce clearer, criteria-based promotion processes and greater transparency around how pay and advancement decisions are made. Indeed, some automotive firms in India, such as TVS Motor Company Limited, conduct annual gender pay parity assessments to ensure fair compensation practices and proactively address any disparities.¹⁰⁴ This may reduce the room for the kind of perceived inequity that research associates with women's intent to leave. Furthermore, for both white-collar and blue-collar women, closing the leadership under-representation gap requires one main intervention: structured mentorship, which helps women overcome the barriers they may face in accessing leadership roles and strengthen their skills.²⁴ For example, Tata Motors Passenger Vehicles Limited (formerly Tata Motors Limited) has launched a capability development programme for women called 'empowHER', which is designed to support the professional growth of women employees through experiential learning, mentorship and peer networking.¹⁰⁵ Defining clear growth pathways alongside these relationships can help ensure that visibility translates into actual promotion decisions. Addressing these gaps is, therefore, not just about improving women's representation today but about strengthening tomorrow's leadership pipeline in the automotive sector.



3. Current work environments may undermine women's sense of belonging

Recruiting women into automotive workplaces does not, on its own, guarantee that they feel they belong there. Belonging is shaped by several factors, including everyday interpersonal experiences, the ease with which women can settle in, the peer support available to them, and whether the concerns they raise are actually heard and acted on. Yet, firms tend to treat these factors as disparate features and address them either informally or not at all. As the evidence below shows, addressing each of these issues separately likely understates both the scale of the problem and its retention cost.

3.1 WORKPLACE EXPERIENCE > 3. SENSE OF BELONGING > 3.1 EVERYDAY EXPERIENCES OF DISCOMFORT

Status quo (environments)

3.1. Everyday experiences of discomfort:

When firms introduce women into previously all-male shop floor environments, an initial adjustment period is common. Supervisors and managers often take immediate steps to monitor behaviour more closely, encourage more professional communication, and intervene promptly when concerns are raised, using a reactive, ad hoc approach.²⁸

Despite these efforts, women on the shop floor and in management positions describe persistent discomfort arising from everyday behaviours rather than any single serious incident. Reported concerns include continuous staring, comments with hostile undertones, exclusionary humour, rude behaviour, and inadequate respect for personal space, especially when women are still becoming familiar with the environment.²⁸ This isn't surprising; studies have found that only 37.8% of women in the formal sector in India reported 'never' feeling uncomfortable due to a coworker's behaviour. Specific to manufacturing, 68.2% of women of colour and 62.6% of white women in the US reported experiencing some form of harassment at their workplace.^{102,106}

At the same time, many men also report becoming more conscious of their language and interactions. While firms generally view this as a positive shift toward greater professionalism, some men respond by becoming overly cautious: avoiding informal conversations, hesitating to assign tasks or offer assistance, or feeling uncertain about appropriate communication.²⁸

When onboarding relies primarily on an informal, supervisor-mediated approach, early social frictions are often addressed inconsistently rather than through a structured workplace integration effort. As a result, women's concerns may be handled differently across teams, while men receive inconsistent guidance around appropriate workplace behaviour. This is especially concerning because everyday discomfort and exclusion exist on the same continuum as more serious forms of harassment, which are consistently associated with higher attrition across industries.^{107,108,109}

Organisations conduct POSH (Prevention of Sexual Harassment) training and awareness sessions, as mandated by law, to take a more structured approach to establishing appropriate workplace behaviour norms. However, these sessions may be delivered inconsistently: in some firms, POSH sessions are conducted primarily for women during their onboarding, leaving men without the same grounding in what's expected of them; in others, both men and women remain unclear on the policy.²⁸ These variations suggest that a compliance-led approach alone may not be sufficient. As with physical infrastructure, firms often approach sexual harassment training primarily as a compliance requirement, typically delivered as a one-time information session. However, such a session is less effective than training that also incorporates demonstration and practice. Its narrow scope also means it may do little to shift the everyday behaviours described earlier, which sit outside strict harassment prevention.¹¹⁰ Therefore, the challenges women face in their early days may be better addressed by sensitisation programmes for managers, male co-workers, and others with a broader scope of gender inclusion than compliance-focused sexual harassment training alone provides at present.

3.2. Challenges to women's authority:

As firms increase women's participation in supervisory and managerial roles, they often expect that formal reporting structures and role clarity will be sufficient to help establish authority. Moreover, any friction when a new manager takes over a team is expected and is left to resolve itself as the manager builds a track record, without additional support.

In practice, however, many women leaders encounter considerable resistance during the initial period of taking charge. They describe resistance shaped specifically by gender, not simply by unfamiliarity with a new manager. This includes male subordinates being less responsive to instructions, attempting to negotiate or delay assigned tasks, bypassing them, and escalating directly to senior male managers, or excluding them from informal workplace discussions where operational decisions are often made. Some teams go further by actively testing a new woman manager's competence.²⁸ These experiences can undermine both the effectiveness and confidence of women leaders, particularly when they are among the first women to hold such positions within a department.

Resistance to a new woman manager does not appear to be simply an adjustment friction; it reflects a documented pattern of bias in which women's competence is presumed absent until repeatedly proven: 83% of women report believing they must be more exceptional than men to succeed, compared with 28% of men.¹¹¹ This is compounded by how few women hold visible leadership roles to begin with, which makes each new woman's path to authority harder to establish than it would be if that path were already familiar.

3.3. Lack of peer network:

Women describe the absence of a peer network as a significant gap in their day-to-day work experience. With few women in the workplace, opportunities for informal conversation, mutual support, and shared problem-solving are limited.²⁸ Women are also less likely to have access to women supervisors or designated women points of contact (SPOCs) whom they can approach comfortably for guidance. This gap becomes particularly important when women need support related to health concerns or experience general discomfort with male colleagues or supervisors, even where those colleagues are otherwise respectful.²⁸ The lack of peer networks can therefore leave women feeling isolated, especially during the early months of employment. Firms often focus on ensuring that workplaces that integrate women have approachable supervisors and basic onboarding processes, rather than deliberately facilitating the development of peer networks for women. Overall, these factors can undermine women's sense of belonging at work.

3.4. Poor grievance redressal:

Firms typically rely on supervisors as the first point of contact for workplace concerns with the expectation that most issues can be resolved informally. Formal escalation is reserved for only the most serious of issues. This provides workers with an accessible, low-friction way to raise a concern without the delay or formality of a structured process. In practice, however, this channel has drawbacks.

Several women reported that concerns related to peer behaviour, such as staring, intrusive behaviour, rude comments, or feeling unsafe in certain areas, were sometimes minimised or treated as part of the normal adjustment process in a newly mixed-gender workplace. Even when complaints were acknowledged, the response was often limited to verbal assurances that the issue would be looked into, without a clear timeline, documented follow-up, or communication on what action had been taken. Women also reported that some concerns were reframed as misunderstandings or attributed to their being new to the workplace, which could

reduce confidence in the fairness of the process and make them feel invalidated.²⁸

The effect compounds each time a concern is dismissed or left unresolved. When a woman worker's concern is met with responses such as, *"You're still new—you'll get used to it,"* or acknowledged without any visible follow-up, it signals that speaking up is unlikely to lead to meaningful action. Over time, women may stop reporting concerns, not because the problems disappear, but because they lose confidence in the process. For firms, this means complaint volume can become a misleading indicator: a relatively quiet grievance channel may reflect either a genuinely positive workplace or one in which employees no longer believe that speaking up will make a difference.

The cost of poor grievance handling is also measurable. **Introducing a formal employee voice channel, including a mechanism for collecting, prioritising, and acting on concerns, has been associated with roughly a 20% reduction in the probability of an employee exiting.**¹¹² Yet, as the discussion above suggests, voice alone is not enough. Employees need confidence that concerns will lead to action. Research on worker-voice platforms highlights the importance of follow-through: worker satisfaction, retention, and productivity improve the most when reporting channels are paired with incentives for HR teams to actually resolve concerns, not just record them.¹¹³ In many firms, grievance mechanisms already exist, but employees may not know how to access them or may perceive them as difficult to use.²⁸ This highlights the need for visible, accessible grievance redressal mechanisms that also ensure accountability in resolving concerns and communicating outcomes.

Why is change necessary?

Taken individually, each of these patterns may look like manageable or one-off issues such as early discomfort as a new team adjusts, initial resistance to a new manager, a peer network that has not caught up yet with hiring, or a grievance process that leans informal. Taken together, they reflect one underlying gap: firms have limited visibility into how included and supported women actually feel in their day-to-day work environment.

In summary, inconsistent and informal approaches to support the integration of women workers can contribute to a gradual erosion of their belonging, confidence, and willingness to remain with the organisation. This becomes increasingly important as firms scale women's participation across shifts, departments, and locations. Informal, supervisor-led solutions may work for a small number of employees, but they are unlikely to provide consistent support, accountability, or visibility into emerging workplace risks. Research shows that Indian women who perceive their workplace as supportive report an 11% higher sense of belonging, which is associated with higher retention.¹¹⁴ What connects all of these gaps is that they are shaped less by individual incidents than by the absence of any structured, sustained effort to build a genuinely inclusive workplace culture, which points to where firms can act with the most leverage.

How can firms drive change?

Deploy gender sensitisation programmes around real workplace problems

A gender sensitisation programme (GSP) in the workplace is a structured training intervention designed to help employees recognise and address gender-related biases, stereotypes, and behaviours that may affect workplace interactions and opportunities. GBL developed a programme aimed at building awareness of how everyday actions, language, and assumptions can influence colleagues' sense of safety, respect, and inclusion. This training typically covers topics such as unconscious bias, respectful communication, equal opportunity, prevention of harassment and discrimination, and the organisation's policies and reporting mechanisms.

Designing a GSP requires grounding the training in the organisation's specific workplace context and the experiences of its employees. The process should begin with a needs assessment using interviews, focus groups, surveys, or workplace observations to identify common gender-related challenges, knowledge gaps, and behavioural patterns. Based on these findings, the programme should define clear learning objectives, such as improving awareness of gender bias, strengthening respectful communication, preventing inappropriate behaviour, and increasing understanding of organisational policies and reporting mechanisms. To ensure the programme's rigour, it can also draw on established frameworks and approaches, such as the COM-B model,¹¹⁵ to design interventions that target the actual mechanism blocking behaviour change, rather than only providing

information. Furthermore, the content should be practical and interactive, using real workplace scenarios, case discussions, role plays, and reflection exercises rather than relying solely on lectures.¹¹⁰ The design should also consider the target audience, language, literacy levels, group composition, and the training's duration to ensure accessibility and engagement. Finally, a GSP should include mechanisms to assess learning and behaviour change, such as feedback surveys, pre- and post-training assessments, and follow-up reinforcement activities, so that the programme can be refined and sustained over time.

Case study 2

Leading Auto-Component Manufacturer – *"Working Together with Respect"*

For many years, the firm's shop floor was exclusively male. As the firm began recruiting and integrating more women into shop floor roles, this created a need to prepare an existing, long-tenured male workforce for a more gender-diverse environment. In response, GBL developed "Working Together with Respect," a gender inclusion training programme for male shop floor workers, shaped by extensive in-person fieldwork—shop floor observations and interviews with male and women trainees, supervisors, and staff. The programme complemented existing compliance-based initiatives such as POSH training, extending beyond legal awareness to address the everyday interpersonal behaviours and social norms that shape women's day-to-day workplace experience. Delivered over approximately 3 hours, the programme aimed to reduce retention risk before it surfaced as disengagement or workforce exit.

The curriculum moved from understanding to action: participants examined how gender norms shape workplace interactions, explored everyday behaviours affecting inclusion, and identified concrete steps to foster a more respectful environment. Reflection, discussion, and interactive activities encouraged participants to recognise behaviours that may unintentionally create an unwelcoming environment. The firm has committed to piloting the programme as a single-gender training, with the intention of scaling it across multiple manufacturing plants if successful.

Case study 3

Leading OEM – *"Diversity, Equity & Inclusion (DEI) Training Programme"*

As part of the firm's efforts to increase women's participation, advancement, and retention in the Indian automotive industry, the firm aimed to identify opportunities to strengthen gender inclusion across the organisation. GBL conducted a comprehensive needs assessment through interviews with men and women in entry-level, mid-level, and senior-level roles. The findings were analysed by mapping employees' experiences across their journey within the organisation, from attraction and recruitment to career growth and retention, to identify barriers and enablers at different stages of employment. A key finding was that many employees, particularly men, perceived diversity, equity, and inclusion (DEI) primarily as an HR initiative or a recruitment effort, rather than a broader organisational commitment to creating an inclusive workplace for everyone. In response, GBL developed a DEI training programme for the firm's HR professionals and managers, grounded in these findings and focused on helping participants recognise conscious and unconscious biases, understand how these biases shape workplace interactions and decisions, and apply practical strategies for a more inclusive and equitable work environment.

Delivered over approximately 90 minutes, the programme aimed to shift DEI from a policy commitment into everyday practice among the people who make day-to-day people decisions. GBL delivered the training to the firm's entire HR team, and the firm has since committed to scaling the programme across the organisation.

Lessons that firms can take away from our approach

- Start with a needs assessment. Base the training on the workplace challenges employees actually experience, rather than on assumed issues.
- Train the right audience. Prioritise the groups whose day-to-day interactions have the greatest influence on the workplace experience you want to improve.
- Position the training beyond compliance. Frame it as a shared responsibility for building an inclusive workplace, rather than a legal requirement or an HR initiative alone.
- Move from awareness to action. Ensure participants leave with clear, practical behaviours they can apply in their day-to-day work, not just a better understanding of the issue.
- Use workplace-specific examples. Build discussions around scenarios from the firm's own environment rather than generic examples. Tailoring just a few examples can make the training more relevant and increase employee buy-in.
- Create a non-judgemental learning environment. Encourage reflection rather than assigning blame by acknowledging every participant's views. Sharing how rigid gender norms affect both men and women can also help reduce defensiveness and improve engagement.



Infrastructure Checklist: Onboarding and accommodating women workers

This checklist is a practical reference for firms assessing how ready their shop-floor infrastructure and organisational practices are to support the integration and retention of women workers, based on GBL's primary research. It helps firms identify specific gaps, decide what to fix immediately versus over time, and build a documented, defensible basis for infrastructure investment. It covers both physical infrastructure and organisational policies. Within each category, **items marked "Must-Have" are the high-urgency, high-impact actions that are generally straightforward to implement, while those marked "Nice-to-Have" add real value but carry lower urgency and can be phased in over time.** The list is not exhaustive: it reflects common infrastructural barriers across manufacturing and shop-floor settings, **but the strongest version of this checklist is one adapted to a firm's own facilities, workforce, and local context.**

Example format:

Priority/Area	Physical Infrastructure	Organisational Policies
Must-Have	Washrooms separated by gender, private, within reasonable distance of the work area, adequately lit and ventilated, with functioning locks, running water, and safe disposal for menstrual waste. Rest or break areas with seating, distinct from smoking areas, accessible without requiring special permission. Adequate lighting across the facility, including walkways, entrances and exits, and any pickup or drop-off points for transport. Clean, accessible drinking water on the shop floor. Marked, unobstructed emergency exits and evacuation routes, with visible fire extinguishers. Machine guarding mechanisms and emergency stop mechanisms on all equipment workers interact with directly. A stocked, staffed first-aid point with clearly displayed location and emergency contacts. PPE sized and designed for a range of body types, not scaled-down men's equipment. Secure, accessible storage or lockers for personal items and PPE.	A grievance redressal mechanism with clear reporting channels, anonymity protections, and defined escalation timelines. A sexual harassment prevention policy, with training for all employees and supervisors, and consequences displayed prominently. A designated support role or liaison for women workers on the shop floor. An onboarding orientation covering all facilities and policies relevant to women workers, not left to word of mouth. Training on safe lifting and task-specific ergonomics. Emergency response training covering all shifts. A written policy on flexible or accommodated work arrangements for pregnancy, nursing, or health needs.

Infrastructure Checklist: Onboarding and accommodating women workers

Example format:

Priority/Area	Physical Infrastructure	Organisational Policies
Must-Have	Workstations with adjustable height or reach to accommodate different body sizes. Materials handling aids, such as trolleys, hoists, or lift-assist devices, to reduce manual lifting strain. Labelled, ventilated storage for hazardous substances, kept away from general work and rest areas. Routine housekeeping to keep walkways and work areas clear of clutter, debris, and spill hazards. On-site or nearby childcare facilities.	
Nice-to-Have	An on-site medical or first-aid point staffed by, or with regular access to, a female healthcare provider. Hostel or vetted temporary accommodation options near the facility. CCTV coverage extended to transport vehicles, parking areas, and building perimeters. Noise control measures, such as acoustic barriers or hearing protection stations, in high-noise zones. Ventilation or cooling adjustments for comfort during extreme heat. Designated hydration points during high-heat periods.	A mentorship programme pairing new women employees with experienced peers. Structured, recurring feedback channels (canteen committees, safety committees) with visible follow-through on concerns raised. Gender-sensitisation training for male employees and supervisors. A recurring forum for women workers to raise concerns directly with leadership. A formal, named break policy for menstrual or health needs.



CHAPTER 04

Making women's skills visible and portable



Recruitment and retention measures can bring women into automotive, but career mobility also depends on whether the skills they build are recognised and portable. Today, much of the capability workers develop on the job is lost from view when their tenure ends, making it hard for employers to hire and match people to roles. For women who typically have less access to informal networks that signal capability, accessing skilled opportunities becomes even harder. This chapter explores how credible, portable skills records can help firms make better use of trained talent while enabling women to carry their skills forward across roles and employers.

Introduction

For women entering automotive manufacturing, building skills on the shopfloor can be an important pathway to better jobs and longer-term career mobility. Yet the sector has limited systems to recognise and carry those skills forward. Each year, Indian automotive firms invest heavily in training large numbers of apprentices, permanent and contract workers, building skills that are valuable to both workers and employers. The industry's skill council reports that it has brought in 1,079,816 apprentices into automotive roles since 2018-19.¹¹⁶ However, these on-the-job skills are not systematically documented in a way that workers can carry across jobs or firms. As a result, women can accumulate valuable experience without having a credible way to demonstrate it in their next job, while employers must rely on interviews, assessments and informal references to determine whether candidates have the skills they need.²⁸



1,079,816
apprentices

Women may be particularly affected by this gap because they are more likely to rely on on-the-job training rather than formal technical education pathways, and may have less access to the informal networks that often help workers find their next opportunity.²⁸ When these networks fade, after a career break for instance, a credible record of skills can provide an alternative way to signal experience. This is especially important given the scale of worker movement in the sector: contract workers constitute 42% of all workers in the manufacturing industry across registered factories,¹¹⁷ while contract terms and apprenticeships typically carry no obligation for firms to retain workers once their term ends.¹¹⁸ A large and growing share of experienced workers therefore moves between employers each year, often without a portable record of what they have learned. Without such a record, women risk being overlooked during hiring, treated as freshers, or placed in roles below their capabilities. This can make it harder to build on experience and sustain mobility in a sector where women remain underrepresented.

The gap also has consequences for firms. Employers increasingly need to identify workers by the specific skills they can perform, but lack a systematic record required to do so. As one auto sector recruiter put it, *"candidates can name processes but not describe the part they play in the process."*²⁸ Recruiters and hiring managers have no verified record of specific skills they can trust, such as whether a worker can *"independently run vacuum testing on rear oil seals."* This adds friction to hiring processes that are already oriented towards volume rather than detailed screening. Firms may therefore retrain workers who already possess relevant skills, overlook experienced women workers when hiring, or lose the value of training investments when workers leave.

“At Tata AutoComp, a mixed workforce is helping us build stronger, more capable teams. As we create more opportunities for women and invest in their technical upskilling, we are seeing a positive impact on quality and operational excellence while building a skilled, EV-ready workforce for the future.”

- Sudipta Marjit, Group CHRO, Tata AutoComp Systems

The value of better skill documentation therefore lies in **two linked areas**. First, it can improve **matching in the labour market** by giving employers credible information about what skills workers actually possess. Workers who leave with a record of specific tasks and proficiency are easier to match to roles that require those skills, rather than being assessed primarily on education qualifications, job titles, departments or years of experience. This is particularly important for women, for whom a portable record can provide a more reliable way to signal accumulated experience beyond formal technical training.

Second, it can improve **talent allocation within firms**. Today, supervisors may rely on memory and familiarity with workers when assigning people to production lines, but this knowledge does not travel easily across teams or tenure periods. The absence of a systematic record can make it harder to identify workers with the right skills for deployment, and to rehire apprentices or contract workers after their employment term based on the skills they have already developed. A firm-level record can therefore help employers make better use of skills they have already invested in building.



Women workers build real, transferable skills on the shop floor but leave with an experience certificate that confirms mere attendance, not proficiency. Meanwhile, in the absence of credible documentation, the labour market that seeks these details loses valuable time sifting through the candidate pool and matching them to the right workstations. This matters more to firms now than it once did, as automotive manufacturing automates operations and expands into electric vehicles, and hiring demands shift from simple headcount to skill profiles.

This chapter examines the absence of systematic skill documentation and its impact, both within firms during a worker's tenure and on skills portability after the tenure ends, and recommends two solutions. These draw on the perspectives of managers, supervisors, recruiters, and the ex-workers, most affected by the gap. Closing this gap requires simple, yet targeted improvements in the information management systems to generate benefits at the industry level.

How each side experiences the skill documentation gap

Through semi-structured qualitative interviews on automotive shop floors across the Chakan industrial zone, GBL uncovered how the gap in skill tracking and the lack of portability of documented skills in the job market are experienced differently by various stakeholders.

Line managers in firms often rely heavily on memory and personal familiarity with workers' skills to make day-to-day decisions about line balancing, deployment, and covering absenteeism or attrition. Workers' initial placement is based on post-training assessment scores, but subsequent deployment depends largely on managerial discretion. Within a production line, this generally works because supervisors and managers know workers' capabilities, reducing the need for formal records. However, the system breaks down when workers move across lines or departments. Existing skill records are maintained mainly for compliance and depend on individual line managers' judgement. They rarely ever follow the worker to their next job.²⁸

As a result, managers spend valuable time coordinating deployments, sometimes affecting production while departments identify workers with the required skills.

A supervisor at a leading automotive manufacturing firm explains assessments themselves are also inconsistent: "a combination of observation, oral evaluation, and instinct... but there is no standardised moment, no standard prompt, and no guarantee that two supervisors assessing the same trainee would produce the same rating."²⁸

Recruiters face the same gap from the hiring side. Firms increasingly brief them on skill-specific labour requirements, rather than the headcount-only briefs that were once standard. Candidates, though, can only describe their work in general terms: a department, a duration, a process code, not the details that prove the skill levels employers look for. A staffing-agency owner said *"candidates lack the confidence to describe what they've done."*²⁸ A survey with a small cohort of workers who recently left the same automotive manufacturing firm pointed in the same direction. Of the fourteen respondents who had searched for a job after completing their tenure, nine reported being asked about their previous work experience during interviews. Eight described it verbally, while three presented the experience letter issued by their previous company. None described having a record that documented what they could actually perform at their stations.¹⁹ This is consistent with the finding that recruiters must continue to rely on interviews and, in several cases, conduct physical skill tests before finalising deployment, let alone the eventual skill-to-role matching. A verified skill record would provide a more reliable basis for matching workers to roles.

A staffing-agency owner said
"candidates lack the confidence to describe what they've done."

-A staffing-agency owner

Workers say they want a portable record of their skills because they believe it would improve their access to better opportunities, particularly within the automotive sector. With firms often relying on education qualifications to gauge skills, jobs are often closed off to a large segment of women candidates, despite acquiring the requisite experience. To them, a better record would show the tasks performed, the skills demonstrated, and the level of competency behind them, not the bare summary a current experience certificate offers.²⁸ One woman worker who has worked across five specialised stations on a single production line saw the value in that specificity and said, *"in a field like repairs, [having documentation could help] you get work in a specific station."*²⁸ Still, some experienced workers indicated that while a skills passport would be a valuable record, hiring norms would also need to evolve for employers to trust and value the recorded skills. For apprentices, the experience letter has largely become a document that confirms apprenticeship completion, with little influence on hiring decisions, role progression, or pay in the next job. One ex-worker, who moved through four automotive firms after completing his apprenticeship, claims he was hired as a "fresher" at each new job, and concluded that *"no company sees experience and gives better position/pay."*²⁸ Machines and processes vary across factories, so a record built on one line's equipment may not read as relevant on another's. These concerns are valid, but also strengthen the need for both more specific documentation aligned to what the market values, and a skill taxonomy to improve transferability and credibility.

While this particular study was conducted in a single cluster, many of the automotive firms engaged by GBL across the country also did not specifically track skills systematically, and rely on similar informal tracking, labour supply and recruitment processes where the base dynamics we describe appear similar. This suggests that there is both an important gap and opportunity to improve skill documentation across the sector.

Two linked solutions

Because the barrier surfaces as two problems, the chapter describes two linked recommendations.

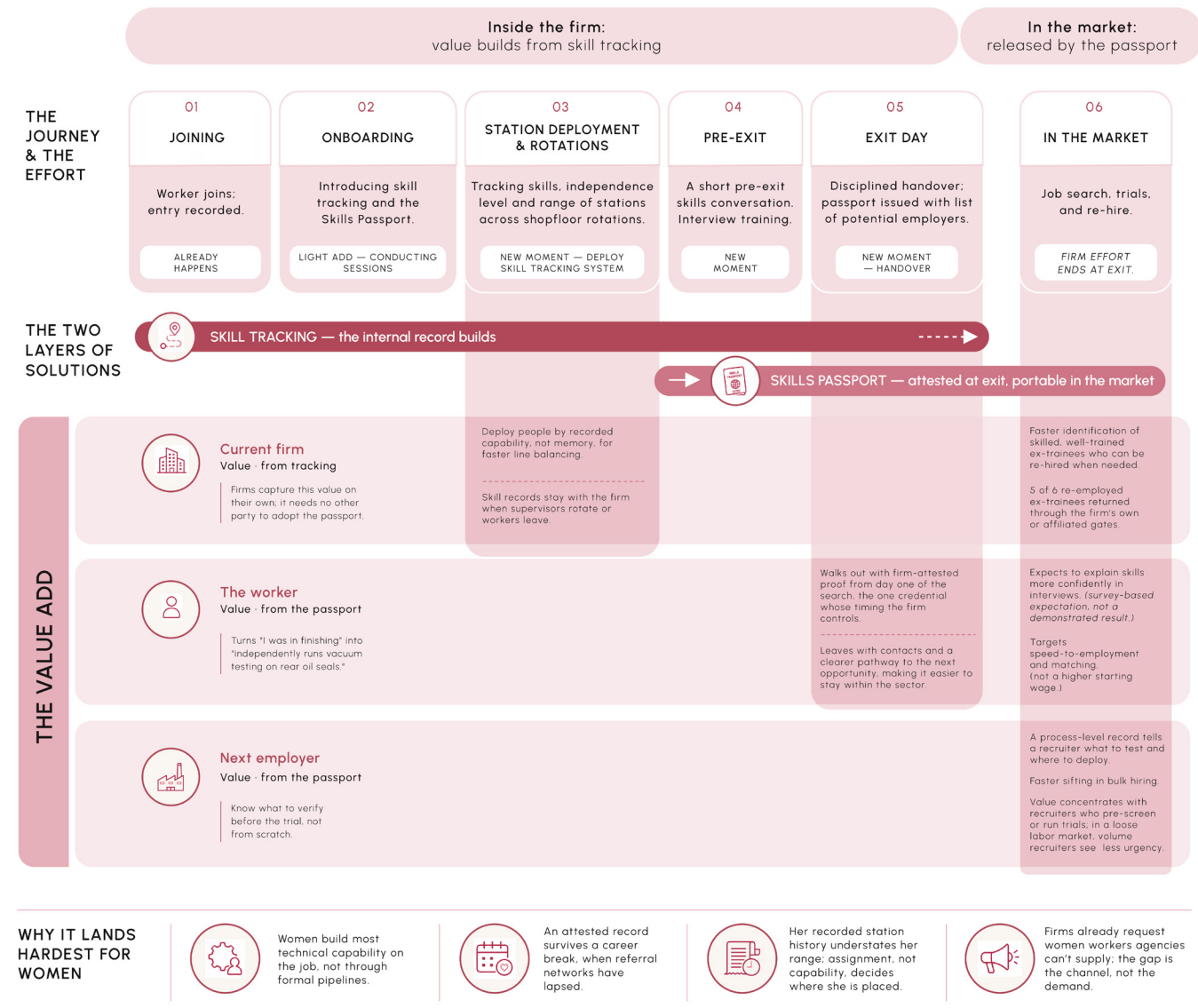
- **Skill Tracking:** a systematic, internal, digital skill tracking system that records the skills and proficiency workers build over time. By capturing this, firms gain visibility into workers' capabilities, enabling informed day-to-day deployment and line balancing decisions.
- **Skills Passport:** a portable, firm-attested version of the record built from the internal skill data. It allows workers to carry credible evidence of their skills across jobs, while also helping firms identify, recruit, or rehire workers whose capabilities have already been assessed and developed, saving valuable time and enabling more informed decisions.

Over time, this creates a visible pool of skilled talent that the sector can draw upon with greater confidence, particularly by making experienced women workers more visible. The credibility of the skills passport is dependent on the tracking that feeds into it. So the two solutions go hand in hand and can be implemented by firms in sequence, starting with tracking skills for the internal record, then making it portable.

GBL is working closely with Mahindra & Mahindra to refine the skill tracking and skills passport solutions on its shopfloors, with a particular focus on closing the skilling gap among women workers.

SKILLS PASSPORT

A worker's capability record, from joining to re-hire



The passport is only as strong as the record beneath it; and a shared digital layer is the natural Phase 2.

Figure 1. Skill signalling - Adoption Journey Map. The worker's life cycle runs left to right, with the two solution layers beneath it: skill tracking builds the internal record through the tenure, and the skills passport attests that record at exit and carries it into the market. Each phase is marked by the effort it asks of the firm; what already happens, what is a light addition, and what is a genuinely new moment. Every benefit is pinned to the phase that generates it and coloured by who gains: the current firm, the worker, or the next employer. The lower panel sets out why the same gap lands hardest on women.

How can firms identify skilled women workers more efficiently and lower the cost of doing so?

Status quo & why change is necessary

Hiring, especially for shopfloor roles, is typically done based on documents that record details such as educational qualifications and experience certificates, but not what particular skills they have or how proficient they are. Across our interviews with five recruiters spanning the hiring chain (staffing agencies, a skills university, and an HR head), we found the assessment toolkit was consistent. It includes, **a**) a CV, often absent and

rebuilt from a generic template on the spot, **b)** a verbal conversation, **c)** legal document verification, and **d)** for experienced candidates, a 10–20 minute shop floor trial.²⁸ The Plant HR head could not recall a certificate ever changing a hiring decision. Experience letters in the current system are merely produced as administrative documents upon exit.²⁸ The result is that every hire is a long, time-consuming process of verification from scratch. Following this practice each time is costly for both the recruiter and the candidate.

Prospective employers ask about detailed skill levels, but the workers have no document that answers this question. Across our interviews, recruiters consistently stated that a worker can name his/her department, duration worked, sometimes a process code, but rarely what they were truly accountable for within it.²⁸ Workers can readily describe where they worked, for example, "I was in finishing," but a department or function is not a skill signal. Employers need more specific evidence to decide where a worker can be deployed: what operation they can perform, how independently they can perform it, and whether a previous employer can attest to that capability.

- **The operation, not function.** "Finishing" is a department; however, "independently runs vacuum testing on rear oil seals" is a skill. The first tells a recruiter almost nothing about where to place someone, whereas the latter tells them what to verify, where to deploy, and what not to re-train.
- **Depth and independence, not just exposure.** Having some experience at a station and being able to run it unsupervised or train others are different signals. It is the latter signal that influences a placement decision. Supervisors confirmed they would act on an incoming record only if it named the operation and the independence level at it.²⁸
- **Attested quality, not self-report.** A firm vouching for a worker's skills is far more reliable than a worker self-reporting them. Without such a record, recruiters often resort to 10–20-minute shopfloor trials or skills tests. These assess performance in a single, controlled moment, but cannot capture how a worker performs consistently over time or under the pressures of a real shopfloor.

However, not every firm provides skill-specific requirements to recruiters even though they may need them. Fieldwork showed that while some departments raise skill-specific labour requirements, by the time demand reaches external hiring channels it might collapse into a mere headcount number, stripped of the skills needed. Contractors then depend on education qualifications as an indicator of skills in the initial screenings. With fewer women trained in technical courses than men, women are automatically excluded. The contractor then supplies a candidate pool, and the plant does the matching manually.²⁸ Therefore, where hiring runs on headcount alone, not only does the talent pipeline naturally leave out experienced women but the employer must assume the burden of skill-matching. This is a cost currently absorbed rather than counted, and an opportunity to close by specifying the skill-specific requirement upfront. It gives recruiters a more precise match and workers with real experience, but especially women, a fairer shot at roles that fit what they can perform.

Even within the same organisation, similar skill-specific labour requirements arise every day on the shop floor and are resolved in the same informal way. The knowledge of who can do what and how well lives in supervisors' memories rather than in any digital system. The existing firm-specific internal rating systems, commonly referred to as skill matrices, are insufficient as they often record where a worker was placed, not what they mastered. Supervisors admit they sometimes give a top rating simply because a critical station needs covering, not because the worker has actually demonstrated full proficiency. However, women are often precluded from placement in these critical roles due to general preconceptions about their ability to deliver and perform.²⁸ The cost of this shows up over time, especially when workers rotate between departments, but their capability records do not travel with them. The receiving department starts training from scratch. When they exit, a new worker takes roughly two to three weeks to reach proficiency at most stations, longer at critical ones.²⁸ The cost of repeated re-training, allocation of capacity based on informal and unreliable memory, is simply absorbed without ever being measured. The costs can also manifest in women's restriction to a few roles, making it difficult for managers to balance line requirements. This practice continues to persist because the benefit of systematic documentation accrues to the organisation over the long term, while the effort falls on supervisors whose incentives are tied to daily production, quality, and safety targets. They view record-keeping as an additional administrative task along with business-as-usual operations.²⁸ Therefore, without an intervention and firm leadership directive, the system naturally underinvests in documentation.

Better skill visibility is valuable not just as a training cost reduction tool, but as a matching mechanism. **One unrecorded skill creates two consequences: an internal management problem (line balancing left to memory)**

and an external one (invisibility to the next employer), from a single root cause. Better skill visibility ensures optimum efficiency, which is critical for firms to scale up their production.

Women workers hold deep, specific capabilities they often cannot articulate. In interviews with ex-trainees from an apprenticeship programme at a plant in the Chakan cluster, the depth of skill was striking. Individuals had run several stations on their lines, trained new joiners, and held buy-off quality positions. Yet when asked to describe their experience, they led with department, duration, and shift pattern.²⁸ There is a missed potential in securing better roles and pay when workers, especially women, are unable to articulate their rich knowledge that a well-designed document could address.

Solution: Skill Tracking

Skill tracking is a systematic, internal, digital record of what a worker can actually perform, captured as they build skills. A structured skill tracking capability replaces memory and unreliable rating with a record built as a skill is earned, where each entry names the operation performed and the independence level reached. Its value is firm-facing and accrues during tenure - faster and more informed deployment decisions, memory that survives supervisor rotation, and cheaper identification of skilled workers already on the floor. This data serves as the foundation for the skills passport solution, which makes skills portable for ex-workers.

The systematic version of this approach is akin to an enterprise resource planning (ERP) system that creates and maintains a digital record of workers' skills, connecting skill data to the plant's existing systems so capability is visible across departments and batches. While setting up such a system requires an up front investment of time to capture and maintain skill data, we hypothesise that, like ERP systems, it would generate economies of scale by reducing the time and cost spent on recruitment, deployment, workforce planning, and retraining over the long run. GBL's pilot was designed as a low-cost proof of concept using a spreadsheet, supported by standard operating procedures for manually recording skills. It is presented here as an initial demonstration and would require further development and testing before deployment at scale.

Where was this tested and its reception

GBL conducted qualitative interviews and quantitative surveys among various relevant stakeholders, including ex-workers of auto manufacturing firms and recruiters, to learn the effectiveness of the proposed recommendation to track skills of workers during their tenure.

Consistent rubrics are essential. Without a shared rubric, ratings can come down to opinion. Two supervisors watching the same worker may score them differently, simply because neither is measuring against the same yardstick. While some subjectivity is unavoidable, having a clear guide for what to look for can help keep judgments more consistent, so two workers with similar ability are more likely to be rated the same way.

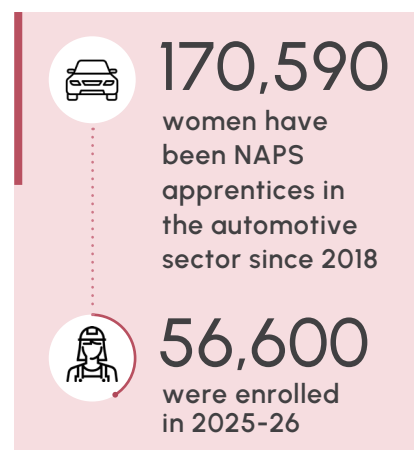
The issuing firm is the first beneficiary. Firms often rehire the same workers after a short gap, as per their labour requirements. Our interviews back this up, as five of eight respondents had been rehired by the firm where they did their apprenticeship. That means the firm benefits from its own skill-tracking directly: faster re-onboarding, easier redeployment, and a clearer picture of who can perform what functions for line balancing. Even without the ecosystem adoption, the firm gets the payoff on its own workers, right away.

Incentives must exist to ensure tracking actually happens. Given the status quo, where managers document only the bare essentials, incentives are a crucial adoption mechanism to ensure quality and completeness of records. GBL's past research into the deployment of manufacturing workforce management technologies has validated that even nonfinancial incentives are highly effective at driving managerial utilisation of tools that benefit workers.¹²⁰

How can transferable, on-the-job skills be made visible so that experienced women workers reap the benefits of what they have already built?

Status quo & why change is necessary

The absence of any mechanism to document on-the-job skills is a barrier that falls hardest on women. The formal skilling pipeline delivers few women into technical trades to begin with: women accounted for roughly 17% of enrolment in Industrial Training Institutes between 2014 and 2019, and just 4.3% of enrolment in engineering trades—against 54.7% in non-engineering crafts.¹²¹ Between 2019 and 2025, this share rose to 6.2% in engineering trades.⁴¹ The on-the-job route, meanwhile, is where women's participation is growing at scale. Between 2018 and 2025, roughly 790,000 women were trained as apprentices under the National Apprenticeship Promotion Scheme (NAPS) across all sectors.¹²² **More specifically, government data tells us that around 170,590 women have been NAPS apprentices in the automotive sector since 2018, out of which 56,600 were enrolled in 2025-26.¹¹⁶ The women building technical capability in manufacturing are therefore building most of it on the job.**



Women's experience is the least visible of all. A woman's recorded station history compounds the problem: assignments tended to cluster on a similar set of stations, frequently the less critical and less manually demanding ones, so the record reflects where she was placed rather than the full range she could handle.²⁸ Competitiveness on work experience becomes increasingly important for women navigating the job market. This is because, apart from having less visible skills as this chapter shows, women are already having to navigate a smaller universe of jobs in the automotive sector and reach them through a narrower channel that depends on their informal networks. This was described in the recruitment chapter and supported by a job search study that covered 103 ex-workers of a partner firm. It found that an overwhelming majority of the sample (75%) found their job through informal networks of family or friends as opposed to the formal channel of contractors, which only reached ~6% of the sample.¹²³

The job market treats unverified and generic experience as fresher-equivalent. Workers, especially women, increasingly have to become more competitive to secure a job as the market begins to demand specific skills.

Our survey responses from the ex-worker cohort suggest the consequence of invisibility. Approximately 78% of all those who attended hiring interviews said interviewers asked about their work experience or skills learnt at the previous firm, and yet prior experience did not secure a better starting position. Roughly half the sample was employed at the time of the survey, earning approximately Rs. 18,000 against expected earnings of roughly Rs. 23,700, resulting in a wage gap of nearly Rs 6000.¹²³ While these are single-site findings, they illustrate a pattern seen across the qualitative sample as well. In the absence of a credible skill record, women are either less likely to be considered for jobs as they are perceived to be unskilled, or placed at the bottom of the salary ladder, and not valuing her valid experience. We hypothesise that possessing a verified, skill-specific experience document can make her competitive among the large talent pool.

Solution: The Skills Passport

The skills passport is a portable, firm-attested record of the skills a worker builds during their tenure. The outward-facing half of the approach is built on the skill-tracking layer described earlier. In one document, it brings together what the current exit paperwork leaves out: the specific operations a worker performed and at what level of independence, a record of safety conduct and attendance, the training completed, and an attestation from the issuing firm validating everything mentioned on the document. The worker carries the passport out of their job, to the next one where they can keep building on it.

The central design principle for the skills passport and its unique proposition is its specificity. It captures the tasks performed, roles held, and competencies presented. This is what sets it apart from a mere experience letter. A second principle is that the passport must integrate with existing workflows and add minimal overhead. The metrics it needs should already exist, even if informally on every line.



Figure 2. Skills passport: Front (left): the issuing firm's foreword to recruiters, the training credential, month of issue, and the signature of a firm representative; establishing who is vouching for the record and when. Reverse (right): the workers' record; specific operations grouped by process family, plant and tenure dates, vehicle models, stations covered, independence level and training responsibility, with a safety record and attendance band as conduct indicators.

Why this matters more for women. The skills passport's greatest value add for women is providing those returning after a career break with a dated, verifiable, institutionally attested record of work experience. The tool serves as a proof of what she knew before the career pause, in a format that is legible to a recruiter who may not have any connection to her network. Furthermore, when structured reintegration measures are implemented, other industries have seen women achieve return-to-work rates as high as 98 percent.⁷⁸ Correspondingly, skills passport may enable recruiters to verify the prior experience and skills of returning women, and minimise the potential time and resources spent on screening new applicants and retraining them. Additionally, for women without the requisite technical qualifications but months or even years of specific on-the-job training, the Skill Passport can act as a validated record for the necessary skills required for technical production roles.

Where was this tested and how it was received

The skills passport was designed and piloted at two plants in the Chakan cluster, with the first batch issued to apprenticeship trainees under NAPS, completing tenure in June 2026. An endline follow-up survey was conducted with the first cohort of the pilot, which provided insights on the process and perceived utility.

Workers value the record. Ex-trainees surveyed rated the passport concept highly. The Skills Certificate recorded a high average utility rating of 3.99 on a scale of 1 to 5 amongst the respondents, with ~40% of the sample expecting a skills certificate to help them find work faster, and ~37% reporting that the passport would likely help them explain their skills better in interviews.¹²³ During another set of interviews with existing workers,

every woman who reflected on the concept called it useful, provided it would name specific tasks, stages, and conduct rather than the department alone.²⁸ The clearest measurable value the passport targets is speed-to-employment and matching, which would reduce the number of weeks a worker spends at zero income between jobs, and land them at the right station faster.

Recruiter reception varied based on employer demand. While no recruiter proactively requested such a document, when presented with the concept, they opined on its utility. Recruiters who pre-screen candidates, run trials, or have reputational stakes in placement quality with employers, saw clear value in the Skills Passport. They saw how it may lead to faster sifting in bulk hiring, a way to know what to test before a candidate walks in, and evidence on what a worker can carry into the screening process. On the other hand, volume-focused recruiters, who receive demand for headcount rather than skills quality, saw little immediate need.²⁸ The adoption path suggests starting with the recruiters already set up to act on skill information, and let visible results build demand.

Timing gives the passport a role no other document can fill. A trainee's job search begins within days of tenure ending, but the certificates that would vouch for that tenure often haven't arrived yet. The NAPS apprenticeship certificate runs on a central exam-and-processing schedule the firm does not control. In the pilot's ex-trainee sample, even ordinary experience letters arrived late or, for several, never at all.¹²³ A firm-issued passport is the one credential whose timing the firm fully controls. When handed over in person on the last day, it puts a dependable, attested record in the worker's hand from day one of the search.

A structured handover of the physical copy of the skills passport is critical for success. The pilot tested the digital mode of delivery. Passports reached trainees primarily as digital files over SMS or WhatsApp platforms. It excluded in-person last-day handover, designated owners for handover, and detailed introductions to what the document's purpose was. The pilot revealed important drawbacks of the digital mode and emphasised the need for physical copy handovers and detailed inductions to achieve success. This was apparent in the follow-ups conducted, where only half showing awareness of the initiative and less than half of the recipients recalled receiving the document, with some reporting technical issues of links being missing.

The delayed timing, digital mode, and limited sample size contributed to inconclusive results of success in a subsequent job search, which needs to be further researched. The majority of recipients agreed that having access to a hard copy of the document could have helped them use it more effectively during a job search.¹¹⁹ Given that a skills passport is also a new addition, it is extremely important that in the initial process, workers are onboarded well about its utility and how it could be leveraged. The pilot was useful to highlight implementation considerations that, if addressed, could improve outcomes. The pilot identified three conditions for successful adoption: a clear handover point, a designated owner responsible for maintaining the record, and workers knowing that the record existed and how to access it.

What remains untested

The passport's effects on job search and hiring outcomes remain unmeasured, for two stated reasons: **(a)** the sample size in the pilot programme was too small for outcome measurement, and **(b)** the issuance conditions the design requires for success were not yet in place when the first batch of passports went out. However, it does establish that workers value the recognition received from a Skills Passport, especially for women, provided that the skills are specific, and that it is possible to capture skill data in a manner compatible with existing workflows.

Before the passport can be scaled across the sector, several design and adoption considerations will need to be tested. Firstly, **standardisation**: this requires a commonly agreed and used skill taxonomy across the auto industry, without giving away proprietary information. Secondly, **verification**: there is a need for a digital standard and scalable mechanism for wider adoption of skills passport and verify firm attestations at scale. Currently the verification relies solely on an HR representative from the issuing firm, which works one call at a time. Thirdly, **worker consent, data privacy and confidentiality**: the broader design of the system integrates data from attendance record, incentive, and department specific supervisory records, so a firm has to decide who holds the record, who can modify the record, and what exits the plant. **These decisions should be transparent to workers, with clear rules on how their data is used and shared with appropriate mechanisms for their consent in place . Finally, alignment with existing skilling and apprenticeship systems, including ASDC and NAPS, will need to be considered as the model develops, to avoid creating parallel systems and support interoperability where relevant.** Together, these questions point to the need for a shared approach to skill definitions, verification, and data governance before the passport can be adopted at scale.



CHAPTER 05

Unlocking nightshift participation - with transport and accommodation



Women's participation in automotive can hit a ceiling if they cannot work across all three shifts. Our research found that many firms with a higher share of women in their workforce have begun **enabling women to work in the nightshift**. Our fieldwork suggests two levers that firms can utilise: compliant transport, which is emerging as a critical enabler for women's nightshift deployment, and accommodation, which becomes particularly important where firms depend on migrant women. This chapter explores how firms can make nightshift participation operationally feasible and scalable through better-designed transport, technology, pooling models and accommodation.

Introduction

Women's improving participation rate in the automotive industry over the past few years represents progress resulting from continued investments of industry bodies, firms, and skilling institutions in building the future talent pipeline. While most firms are still at an early stage of this journey, a handful of firms have shown exceptional progress. For example, JSW MG Motor India reports that women comprise 41% of its overall workforce, while its Halol battery assembly shop operates across three shifts with an 80% women workforce.¹²

JSW MG Motor India reports that women comprise 41% of its overall workforce, while its Halol battery assembly shop operates across three shifts with an 80% women workforce.¹²

We explored what enables firms to move from incremental to step-change growth in women's workforce participation, and found that deploying women in the nightshift was a critical turning point for these firms. However, despite recognising the importance of nightshift deployment, very few firms have been able to make the shift. This was the case across clusters and manufacturer types throughout the supply chain. This chapter examines the operational barriers to enabling nightshift deployment and explores two key levers that can help firms overcome them. It focuses on barriers that are distinct from those related to workforce-entry which are covered in earlier chapters of this report.

It is standard practice in the auto sector for factories to run three shifts - two during the day, alongside a general shift for white-collar workers, and one at night, though exact hours vary by production schedule. With the exception of a few larger firms, most firms in our fieldwork did not deploy women in the nightshift.²⁸ As regulations have evolved to enable women to work nightshifts in many states, firms now have an opportunity to expand women's participation beyond day shifts and tap into a wider pool of talent across all shifts.^{124,125,126}

The majority of firms said that women's restriction to a single shift limits workforce flexibility and line-balancing, putting a ceiling on how many women they could hire. Despite many firms having explicit mandates to improve diversity, the inability to place women in the nightshifts was cited as one of the biggest obstacles to scaling women's presence on the shopfloors.²⁸

13% 
increase in women's
employment

An Indian study examining the impact of relaxing restrictions on women's night work in factories found a 13% increase in women's employment in factories located in states with relaxed restrictions, suggesting that enabling women to work across all shifts can materially expand firms' ability to employ them.^{103,127}

A deeper exploration into why enabling nightshifts is tough for firms uncovered two main challenges. The first is the difficulty of providing efficient and compliant transport. The second is the need for accommodation, especially where scaling depends on a migrant workforce. Both of these can raise compliance costs, operational complexity and liability, while also creating reputational concerns.

Across our fieldwork, firms that had successfully scaled women's workforce participation shared a common pattern: they had deployed, or were preparing to deploy, women in the nightshift in at least one unit, supported by investments in compliant nightshift transport, accommodation, or both.²⁸ This suggests transport and accommodation could function as complementary or alternative strategies depending on labour needs, geography, and operating context. One firm transitioned from compliant nightshift transport to employer-provided accommodation after finding transport costs difficult to sustain at scale, while some others made the opposite choice.²⁸ Additional barriers to nightshift participation, such as role availability or broader perceptions about women working nights, may exist beyond what this study specifically examined, and remain an open area for further research.

Driving a transformation in women's share in the workforce thus depends on several factors working together: the unit economics must work, the firm needs enough growth to absorb more women, a stable talent pipeline must exist, and infrastructure needs to operate efficiently at scale, among other things.

Other manufacturing sectors have also demonstrated that women's participation can extend successfully into the nightshift. In Punjab's textile sector, Vardhman pioneered women's nightshift deployment by combining on-site accommodation, dedicated security, and other enabling measures, resulting in more than 13% of its women workers participating in nightshifts by 2022.¹²⁸ While the automotive sector faces different operational challenges, this example illustrates that well-designed support systems can enable women to work safely across shifts at scale.

Nightshift and transport

How can transport systems evolve to help firms unlock nightshift deployment and sustain women's participation as they rapidly scale?

Status quo

Beyond the challenge of staffing across shifts, firms also need to ensure that production lines remain economically and operationally viable. Some firms responded to the constraints of women's day-shift-only deployment by creating all-women production lines, but these were often difficult to sustain. Running a line for only part of the 24 hours led to losses due to underutilisation of expensive machinery, while rotating men onto the line during other shifts disrupted line balancing and, in some cases, led to employee grievances.²⁸ Women's restriction to the day shifts only thus reduces flexible deployment, ultimately limiting how many women can be absorbed into the workforce.



If the case for deploying women across all three shifts appears to be so compelling, why do so few firms do it in practice? Our fieldwork suggests that the answer lies in the additional compliance costs, and logistical complexity associated with nightshift deployment. State-level regulations require women's consent and prescribe a range of safety and welfare measures for night-shift employment, including transport, security and workplace safeguards. Requirements vary by state and can include door-to-door transport, female security personnel, CCTV surveillance and enhanced lighting.^{129,130,131,132} While these safeguards are essential for women's safety, the associated compliance and operational requirements can make firms more hesitant to initiate nightshift deployment.

In a 2024 GBL survey of 45 ACMA and SIAM member firms, roughly 60% of the auto-component firms and 86% of OEMs provide gender-agnostic transport, with an additional 3% and 14% respectively providing transport exclusively for women.¹³³ However, transport provision alone has not translated into widespread deployment of women in the night shift. Most firms remain hesitant, driven by the perception that compliant night-shift transport would be too difficult, expensive, or risky to implement, particularly given concerns around liability, reputation, and day-to-day operational priorities.

Transport systems need to be designed differently for commutes during the day and night. The Occupational Safety, Health and Working Conditions (OSH) Code, 2020, one of India's four Labour Codes, removes the long-standing legal restriction on women working before 6:00 a.m. or after 7:00 p.m., allowing them to do so with their consent and subject to safety and welfare safeguards. Implementation requirements, however, continue to vary by state. For day shifts beginning at 6:00 a.m., firm-provided transport services can begin as early as 4:30 a.m., bringing these early-morning commutes within the hours covered by such requirements. This increases the compliance requirements for transport facilities supporting day shifts as well, which existing transport systems may not fully meet. This is one reason why designing transport systems for compliance and scalability matters well before firms formally introduce women into the night shift.²⁸ States may also impose additional requirements, such as Maharashtra's rule requiring employer-arranged transport during these hours.^{84,85}

Our fieldwork also examined how technology is used to manage transport operations. While many automotive firms had already adopted digital transport management tools, adoption varied considerably in maturity. Most firms used technologies such as GPS tracking or basic vehicle monitoring primarily for compliance and tracking. More advanced capabilities including route optimisation, digital rostering, reporting dashboards, and analytics remained underutilised. Many transport teams also reported uncertainty about identifying solutions best suited to their operational needs and expressed a need for greater guidance on technology selection and implementation.



Nightshift deployment is a critical requirement for scaling women's participation on the shop-floor. Employer-provided transport facilities are already widely provisioned, yet technology remains underutilised. Regulation compliant solutions are now increasingly available and achievable in practice.

Could the barriers to investing in compliant nightshift transport be overstated—and the business opportunity understated?

Why change is needed

Leaving transport systems unchanged creates two problems: **(a)** women already working day shifts may face gaps in last-mile connectivity and limited journey visibility, creating concerns for their families even during the day shift; and **(b)** firms remain unable to deploy women into the night shifts. Addressing these gaps can therefore both improve the experience and safety of women already in the workforce and enable firms to expand women's participation across shifts.

Firms typically optimise transport facilities for reliability over efficiency, tolerating lower occupancy far more readily than a late shift start, since even a short delay can set back production. This presents an opportunity for more efficient models, addressed in detail below. Firms that have scaled women's workforce participation beyond the industry average combine efficient transport systems with compliant nightshift provision. One large OEM, for example, reports roughly 90% utilisation and on-time performance for its transport system.²⁸

Firms that enabled nightshift entry for women told us there is an initial increase in cost per worker to achieve compliance that is offset by expected gains over time as they reach scale. In the immediate-term, these firms reported being able to expand their women workforce and enjoy greater flexibility in deploying men and women across the three shifts.²⁸ A transport industry expert that GBL partnered with advised that many of the operational challenges firms associate with nightshift transport compliance can, in practice, be addressed through relatively low-cost technology, strengthened processes and targeted capacity-building. Internal capacity can be built through officers trained in roster management, monitoring, and incident escalation, without firms needing to expand headcount.¹³⁴

Further, the uneven use of technology in transport management highlighted above presents an opportunity to improve existing systems without fundamentally changing them. Better use of available technology can strengthen compliance, improve route utilisation, expand service coverage, and reduce the operational complexity associated with deploying women across shifts. Rather than investing anew, firms could capture these gains by maximising utilisation of technologies they already have or by selecting solutions better suited to their operations. Building the capability of transport teams to evaluate and implement these systems effectively could therefore deliver meaningful improvements in both efficiency and worker safety and enable night shifts for women.

The firms that invested in these systems and deployed women on the night shift demonstrate that the underlying challenges are real, but not insurmountable.



Recommended pathways to action

01

Transport improvements applicable across all shifts:

Firms are recommended to align transport modes with the requirements of different shifts and safety needs. Nodal-point transport models that have shared pickup points work well for most day shifts where workers can safely complete their journey during daylight, as well as for men's night shifts. However, where women are expected to complete the final leg of their journey after dark or early morning, firms can consider providing demand-based last-mile support such as shuttle connections, shared transport from nodal points to their homes, or links to public transport hubs to enable them to complete their journey safely. Door-to-door transport remains necessary for women's night shifts to ensure compliance in some states. Multiple firms engaged in our fieldwork follow these practices to meet compliance requirements but also to foster a greater sense of safety and convenience for women, enabling them to remain in the workforce longer and perform at their best.¹³⁴

02

Improved technology deployment to enhance transport efficiency and compliance:

Firms are recommended to ensure that their transport systems meet applicable technological compliance requirements, including the use of AIS-140-compliant vehicle-location tracking devices and emergency buttons where mandated under Rule 125H of the Central Motor Vehicles Rules, 1989.^{135,134} Visible compliance with these requirements often forms the foundation of trust for workers and their families. Beyond this baseline, firms should consider adopting transport management technologies—such as GPS tracking, panic buttons, digital rostering, route optimisation, and reporting dashboards—to improve safety, operational efficiency, and scalability. These solutions are widely available off the shelf and, even at the most mature level, are estimated to account for not more than 5–7% of overall transport costs.¹³⁴ The per-worker cost is expected to be minimal relative to the gains in reliability and efficiency accompanying the expanded access to a wider talent pool. These systems are also more successful when the transport teams are trained to select, implement, and fully utilise these systems. Together, these investments can improve route efficiency, strengthen compliance monitoring, expand service coverage, and support the deployment of more women workers.¹³⁴

03

Explore pooled transport models to improve efficiency and reduce the cost of compliant transport:

Pooling refers to sharing of fleet, routes and other resources across firms, or across plants (of the same firm). This holds the potential to widen reach, improve utilisation and compliance, and lower costs. Firms can explore pooled transport models where route utilisation is low, particularly when occupancy falls below around 60% or where neighbouring firms operate similar routes and shifts. By consolidating demand across plants, shifts, or firms within the same industrial cluster, pooled transport can maintain the reliability and security requirements of dedicated services while reducing the cost per worker through higher seat utilisation. The resulting efficiencies allow investment in higher-quality transport services with improved technology, greater fleet resilience, and additional capacity to respond to production schedule changes or vehicle breakdowns, while distributing these costs across multiple participating firms. Such pooled models may also help firms overcome one of the principal night shift barriers by allowing sharing of the additional costs associated with compliant night transport across firms.

A study by Gupta et al. on India's nightshift reforms, found that smaller manufacturing firms are less able to absorb the fixed costs of employee welfare infrastructure than large firms.¹⁰³ **Pooling could potentially make compliant night transport for women feasible for small and medium players with fewer women workers, who may not be able to justify individual transport services, to deploy nightshift compliant transportation for women.**

Our consultations with more than 20 automotive firms suggest cautious but positive interest in this approach, with firms viewing pooling primarily as an operational efficiency and cost-reduction opportunity. Once operational, usage-based cost allocation using attendance or GPS data is likely to provide the fairest mechanism for sharing costs, with simpler per-worker arrangements serving as an interim option. While this approach requires piloting to quantify its benefits, we recommend firms consider pooled transport where operational conditions make it feasible.

GBL has developed a practical implementation framework for pooled transport, informed by consultations with more than 20 automotive firms, which will be published separately in the forthcoming Transport Playbook.

Promising transport practices that can enable women's nightshift deployment

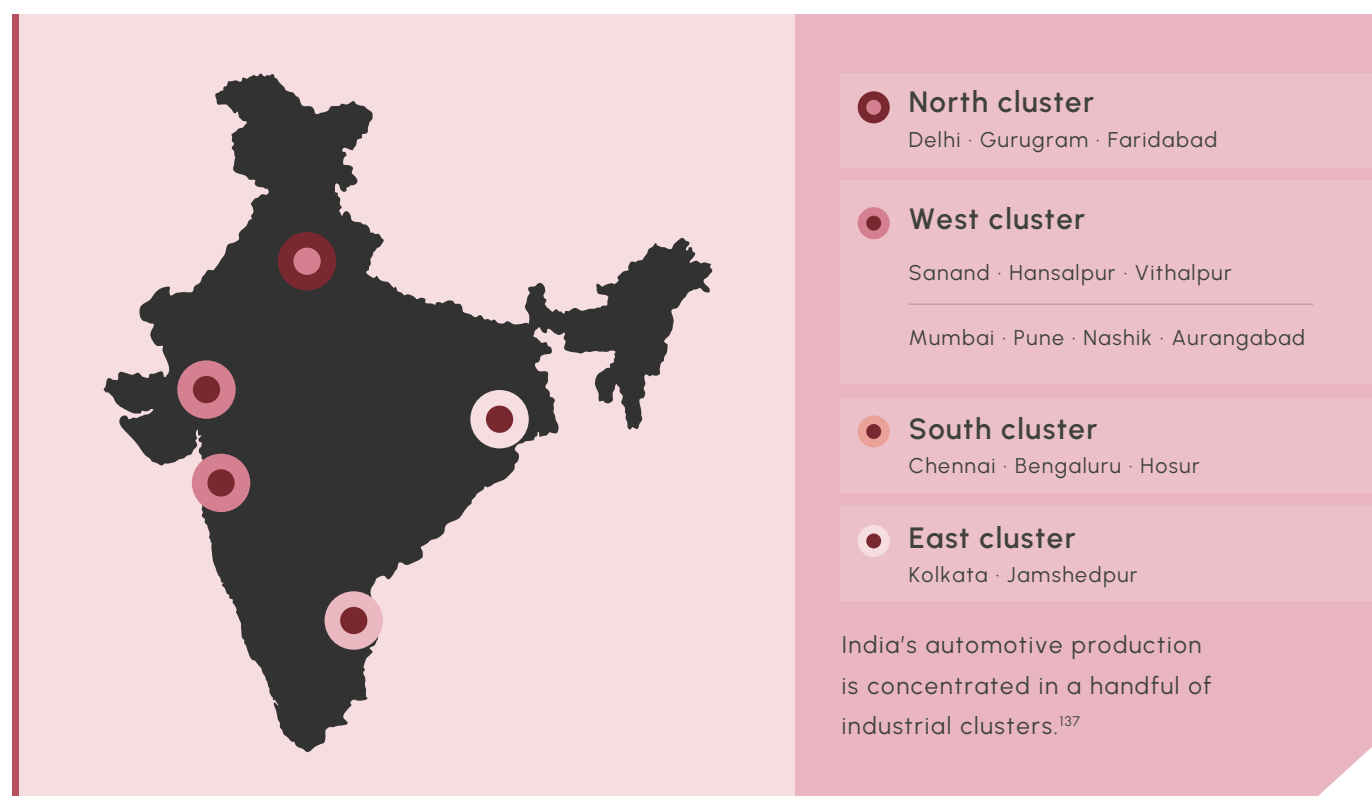
Dedicated, compliant transport can enable nightshift deployment

A large OEM we engaged with recently introduced women's nightshift transport on three dedicated routes, supported by GPS tracking, security guards, and standby vehicles, reporting roughly 90% occupancy. Its transport team described compliant transport, enabled by technology, as a core component of its strategy to increase women's workforce participation. The expected workforce and operational benefits outweighed the additional costs.²⁸

Pooling transport across plants can improve efficiency and enable scale

Anand Group, which manufactures automotive components through its group companies such as Gabriel, Dana, and Mahle, pools demand for its general-shift white-collar transport from across Pune. Sigma Engineered Solutions has similarly consolidated transport across multiple plants in Chakan. While these examples are within a single corporate group rather than across independent firms, they demonstrate that pooling transport across nearby plants with similar routes and shift timings is already an emerging operational practice. This suggests that extending the model across firms within industrial clusters, and using this model to enable nightshift for women merits further exploration and piloting.²⁸

Nightshift and accommodation



Accommodation is often acknowledged in literature for its role in enabling women's entry into the workforce,¹³⁶ but little is known about its role in enabling scale-up. **Apart from provision of nightshift compliant transport, accommodation is another lever that automotive firms can possibly utilise to achieve rapid workforce transformation.** This section examines accommodation's potential to support expansion of women's share in the automotive industry specifically and how it can possibly help unlock nightshift deployment.

India's automotive production is concentrated in a handful of industrial clusters including Mumbai–Pune–Nashik–Aurangabad, Chennai–Bengaluru–Hosur, Delhi–Gurgaon–Faridabad, Kolkata–Jamshedpur, and Sanand–Hansalpur–Vithalpur.¹³⁷ While some clusters have access to local workers in the labour markets, many depend on migrants as well to fulfil their worker requirements. Many of these clusters are located in industrial or peri-urban areas where safe, affordable accommodation is scarce. This presents a market failure that leaves many workers living far from the workplace or in housing that is unaffordable or perceived as unsafe. Since women face greater mobility challenges than men, and safety considerations often drive their employment and migration decisions, this makes it harder for firms to recruit women, particularly at scale. It affects a firm's ability to place women in the nightshift, particularly in the absence of robust transport systems, and can undermine productivity and worker retention.²⁸

How does accommodation impact women's decisions?

Studies suggest that workers place considerable value on living close to their workplace, sometimes even above affordability or housing quality. For instance, Chadchan et al. find that many workers are willing to trade off housing quality to reduce commuting time.¹³⁸ This issue is particularly relevant for women due to the gendered nature of mobility. Research shows that women in urban India generally travel shorter distances for work and have lower levels of independent mobility than men.^{139,140} Long and unreliable commutes therefore affect not only worker welfare but also women's ability to participate in the labour market. Employer-provided accommodation facilities near the factories help eliminate the barrier imposed on women's entry due to limited mobility.

Moreover, evidence from China's private rental market shows that women pay a rent premium of nearly 10 percent to secure safer, less crowded housing, suggesting that lack of adequately safe accommodation facilities can further pinch women's monthly pay.¹⁴¹ Since women evaluate job offers based on monetary considerations, firms can lose access to this talent base in the absence of safe accommodation facilities.

Given the clustering of firms in the regions mentioned above, women often migrate from different states like Bihar, Rajasthan, Jharkhand and Odisha, among others, in search of jobs. They often try to secure accommodation before seeking employment—the reverse of the pattern commonly observed among men.²⁸ However, women and their families are often unwilling to relocate to an industrial cluster in the absence of safe, trusted accommodation facilities.¹⁴² Employer-provided accommodation is generally preferred, particularly for first generation women entering formal manufacturing employment,²⁸ owing to its perceived advantages in safety, affordability, and proximity to work. Additionally, women often depend on male family members to migrate, and end up settling for informal or unauthorized housing near industrial clusters. Credible, employer-linked accommodation can substitute for this dependency by providing the safety assurance on site.¹⁴³

Why should provision of accommodation matter for firms?

For firms, the impact of accommodation availability and quality on their business outcomes can be three-fold.

Productivity and retention: NITI Aayog's S.A.F.E. accommodation report shows that substandard housing and long commutes are linked to worker fatigue, lower productivity, absenteeism, and turnover.^{136,144} These costs are well documented, though not always causally proven. A few automotive firms outside India, including General Motors and Delphi Automotive, have implemented worker-housing programs in order to reduce employee turnover and associated training costs arising due to a transient workforce.¹⁴⁵

Access to a wider talent

pool: When firms depend on a migrant workforce to meet their labour demands, insufficient accommodation facilities in the cluster can deter women from migrating. This can prevent firms from accessing the pool of willing and potentially productive women workers beyond the factory's locale.

Enabling women to work across shifts: For firms looking to scale up women's participation on their shopfloors, enabling the nightshift for women is a critical operational requirement. Evidence from women's hostels also shows that safe accommodation expands the range of jobs women can realistically consider—particularly shift-based roles that would otherwise be impractical without secure, reliable housing near the workplace.¹⁴⁶ Availability of safe, proximate and reliable accommodation facilities thus becomes critical not just for enabling women's participation in the automotive workforce but for engaging them across shifts as well. Provision of accommodation facilities within or near the factory premises can help unlock this barrier and achieve step-change growth.

The emerging argument is that a firm located in a cluster without sufficient accommodation is unlikely to scale its women's workforce. It may struggle to access migrant workers meaningfully, and could potentially lose access to the local women's workforce over time as commuting costs rise. Finally, it might not be able to deploy women in nightshifts. One large OEM told us: "We can reach 20–30% women without providing accommodation at our Chakan plant. But beyond that we will need it for sure."²⁸ This becomes especially relevant when firms want to scale women's participation on their shopfloors but lack the complete transport systems required to enable last-mile connectivity during nightshifts. For three of the firms we interacted with, the underlying motivation to provide accommodation appeared to be a clear workforce need i.e. dependence on a migrant female workforce. Out of these three, one had specifically leveraged accommodation to increase women's participation.²⁸

Accommodation may play a broader role than is often assumed: beyond supporting workforce entry, it can help firms recruit migrant women, enable nightshift deployment, and sustain workforce growth where local labour supply is insufficient.

Successful examples of accommodation provision

Employer-provided accommodation remains relatively rare across sectors. High upfront investment, an uncertain business case, and broader structural barriers continue to limit adoption, even though the economics may work in some contexts.²⁸ However, there are a few firms in India that have not only managed to create quality accommodation for women, but have also reported benefits through improved access to women's labour supply and operational efficiencies.

SUCCESS STORY - I

JSW MG Motor

JSW MG Motor India's Halol plant offers hostel facilities to all its women workers, ensuring safety and security for its expanding female workforce. After choosing to hire women for shopfloor roles starting in 2019, the company transitioned from providing door-to-door transport to providing hostel services near the plant as its female workforce grew, and shifts extended into the night. Additionally, by inviting families to see the facility's safety infrastructure firsthand, the firm helped ease familial resistance to women relocating for work.¹⁴⁷ It is important to note that providing these hostel facilities allowed the plant to maintain nightshifts for women and expand their women workforce..

"With the world facing an unprecedented crisis, it becomes imperative for employers to ensure that their employees are healthy, safe, and secure. Our new 100-member hostel will provide safe, sanitised, and comfortable living spaces to our female associates. It will also bolster our diversity ratio and further strengthen our ecosystem for female employees." — Rajeev Chaba, Then President and Managing Director, MG Motor India, quoted in Hindustan Times (2020)¹⁴⁸

SUCCESS STORY - II

Vardhman Textiles, Punjab

Nightshifts have historically been inaccessible to women workers in Indian manufacturing, largely due to safety concerns around late-night commutes, absence of secure housing near factories, and limited institutional support for non-standard hours. This has meant that a significant share of production capacity – and the higher earnings often associated with night work – remained effectively closed off to women.

Vardhman Textiles addressed these barriers through a combination of infrastructure and policy measures. On-site accommodation meant women did not need to travel to and from the facility during night hours, removing the commute-related safety risk entirely. Dedicated security arrangements specific to women on nightshifts reinforced protection during hours when factory floors are typically less supervised. Alongside these, other enabling measures supported the transition to night work, reflecting a broader, systems-level approach rather than a single fix.

The combined effect of these measures was that over 13% of Vardhman's female workforce took up nightshift roles by 2022.¹²⁸ This case demonstrates that participation gaps in specific shift categories are often structural rather than a reflection of women's preferences or capacity. It also offers a practical, replicable template for implementation of accommodation, security and other supporting measures for other manufacturers seeking to close similar gaps.

Other examples of successful implementation can be found across different contexts: in China, accommodation is built into the standard employment contract for assembly-line work, where women make up roughly 80% of the workforce.¹⁴⁹ While we cannot conclusively say that employer-provided accommodation *alone* enables women's nightshift participation specifically, at least one firm has opted to provide accommodation instead of transport to scale up women's participation through nightshift deployment, because of increasing per head transport and compliance costs.²⁸ This suggests that in some cases, employer-provided accommodations could play an important role in ramping up women's share in the workforce.

The current working hypothesis is that compliant transport has the potential to unlock initial participation from women in the nightshift. As these cohorts of women workers grow, accommodation can be a valuable complement to further reduce long commutes, sustain worker safety and reduce per-head costs. What remains under-researched are the business benefits of providing it, the optimal conditions for provision, more exhaustive sizing of the current prevalence of hostels for women workers in the sector, and which models are best suited to the workforce needs of the auto sector specifically.



CHAPTER 06

From isolated successes to ecosystem adoption



The solutions explored across this report demonstrate that change is emerging and possible. The next challenge is learning from these proof points and accelerating their adoption across the sector. This chapter considers what it will take to turn emerging practice into broader industry norms.

“Inclusion is a business imperative for those who understand the long-term realities. While encouraging work has happened across sectors towards gender representation, we still have a long way to go in terms of assimilation. Systemic, psychological and procedural barriers get enhanced in the case of under-represented categories, like women, as the ecosystem as we know it today was not designed for them at all. Addressing these barriers requires us to look beyond individual interventions and understand the ecosystem in which women operate and that's where this study was a welcome collaboration.”

- Amrita Ganguly, Chief Diversity Officer, Tata Motors

Women's participation in automotive manufacturing has increased from 5.6% in 2023 to 8.7% in 2025, demonstrating that change is possible. However, advancements in gender inclusion are isolated to some of the larger firms and without concerted efforts, growth will remain slow. This presents an opportunity before the sector to accelerate progress even further. The report finds that many of the barriers to faster adoption are practical and surmountable. Realising that opportunity will require coordinated action across the ecosystem: firms creating visible proof points, industry associations and skill councils spreading proven practices, OEMs and large customers supporting suppliers to build capability and progressively adopt workforce inclusion expectations across supply chains, governments enabling practical implementation, and philanthropy de-risking innovation in workforce management for the sector and strengthening the evidence base for replication.

This report has shown that practical solutions already exist. Firms across the automotive value chain have demonstrated that women can be successfully recruited, integrated into production roles, recognised for their skills and supported to participate across a wider range of operations. Many of these changes are operationally straightforward and relatively inexpensive to implement, while others require greater coordination but remain achievable. The challenge is no longer discovering what works. It is ensuring that what works spreads quickly enough to become standard practice across the sector.

Progress on gender inclusion will not accelerate through firm-by-firm change alone. It requires moving from isolated proof points to ecosystem-wide adoption.

Why do successful practices spread so slowly?

The relatively slow pace of change does not necessarily reflect a lack of commitment from firms. Rather, many of the barriers to adoption are common across the sector and reinforce one another.

First, **many firms lack visibility into what works.** Companies considering gender-inclusive hiring frequently assume that successful practices are only feasible for large manufacturers with greater resources, or that their own operating context is fundamentally different. This can be particularly true for smaller suppliers, which may face greater resource and capability constraints in adopting new workforce practices. As a result, practical solutions deployed by early adopters remain isolated rather than becoming common industry knowledge. One objective of this report has been to reduce that uncertainty by documenting implementation experiences across firms of different sizes, locations and supply chain tiers.

Second, **the benefits of change are often realised over time, while the effort of implementation is immediate.** Although many recommendations described in this report involve modest operational adjustments, others such as strengthening transport, accommodation or enabling safe nightshift participation require greater coordination and upfront investment. Without visible evidence that these investments are practical and worthwhile, firms may overestimate both their cost and complexity.

Finally, **labour markets themselves have not yet adapted to women's growing participation in automotive.** Recruitment surveys conducted as part of this research found that only around 20 - 40% of women in surveyed industrial clusters were aware that automotive firms hired women at all.⁴⁰ Many women therefore never consider the sector as a potential employer, while firms may interpret the resulting applicant pool as evidence of limited interest. The result is a self-reinforcing cycle in which both employers and prospective workers underestimate the opportunity available to them.

These are not barriers that any single firm can solve alone. Accelerating adoption requires coordinated action across the broader ecosystem, with different actors reducing different sources of friction. Industry bodies like Automotive Component Manufacturers Association of India (ACMA) and Society of Indian Automobile Manufacturers (SIAM) can shrink the visibility gap by pooling implementation experience into shared, sector-wide knowledge. Sector skills councils such as Automotive Skills Development Council (ASDC) can build the visible training and apprenticeship pipelines that counter the perception (among both women and firms) that the sector is closed to women workers. The government has already lowered one of the highest-cost frictions: The revised Labour Codes have lifted a long-standing legal restriction on women's nightshift participation, allowing for women to work nightshifts with their consent and subject to safety and welfare safeguards. Global buyers, through supplier codes of conduct and gender-responsive due diligence, can help communicate expectations and practical guidance on inclusive practices across supply chains, while supporting suppliers to build the capability to adopt them. Progress depends less on any one of these actors than on them moving in the same direction at once.

| What will accelerate ecosystem-wide adoption?

Firms: Generate proof points

Individual firms remain the primary drivers of change. Every successful recruitment effort, redesigned production line, improved onboarding process or expanded nightshift demonstrates that gender inclusion is operationally feasible. Each of these initiatives represents an innovation in workforce management in its own right. These proof points are valuable not only because they benefit the firms implementing them, but because they reduce uncertainty for every firm that follows.

Making these experiences visible is therefore as important as generating them. Openly sharing implementation approaches, lessons learned and practical challenges allows successful practices to move beyond individual organisations and become recognised industry norms.

Industry bodies and skill councils: Codify and share promising practices

While firms generate innovation, ecosystem institutions help them spread.

Industry associations and skill councils are well positioned to translate successful experiments into practical guidance for the wider sector. By documenting implementation playbooks, convening peer learning, strengthening talent pipelines and developing common benchmarks, they enable firms to adopt proven approaches without having to reinvent them independently. Their role is not to create new solutions, but to ensure existing ones diffuse more rapidly across the industry.

Large and global buyers: Support diffusion through capability-building

OEMs and large brands can also help accelerate the spread of effective practices by using existing supplier engagement and responsible sourcing processes to signal the importance of workforce inclusion, share practical guidance and build supplier capability. Rather than introducing additional compliance requirements, buyers can take a phased approach: starting with clear expectations and practical resources, supporting suppliers to understand and adopt relevant practices, and progressively embedding proven approaches as supplier capability grows. This is particularly important for MSMEs, which may face greater resource and implementation constraints. Responsible sourcing standards, supplier codes of conduct and due diligence frameworks can provide a useful channel for communicating these expectations, sharing tools and encouraging adoption, while allowing implementation to be proportionate to supplier size and readiness.

Other sectors provide useful illustrations of this approach, where workforce expectations are increasingly embedded within responsible sourcing and supplier engagement practices. While automotive operates under different production realities, the broader lesson remains relevant: when workforce inclusion is supported through shared supply chain expectations, practical guidance and capability-building, rather than left solely to individual firms, adoption can accelerate more rapidly across an entire ecosystem.

Government: Strengthen the enabling environment for implementation

Governments play an important role in addressing barriers that individual firms cannot easily overcome. Strengthening the enabling conditions for women's employment and helping firms, particularly smaller suppliers, understand and implement new requirements and opportunities in practice is important. Potential options to explore could include investing in shared infrastructure such as worker accommodation and childcare, continuing to improve programme design and implementation guidance, and supporting better evidence on what works. For example, incentives from programmes such as the National Apprenticeship Promotion Scheme (NAPS) have successfully increased women's participation in training programs. The next opportunity lies in strengthening data on placement, retention and career progression to track post-enrolment outcomes, which are critical yardsticks for evaluating the success of such flagship skilling programmes.

Similarly, as the Labour Codes are rolled out, governments can support women's nightshift participation by providing clearer guidance on how to implement safety provisions in practice and sharing effective compliance approaches across states. This can help firms navigate requirements such as transport, security and grievance redressal without lowering existing safety standards. More broadly, government recognition of women's participation as an industrial priority can help mobilise collective action and increase the visibility of the sector's ambitions.

Philanthropy: Build the evidence that reduces uncertainty

Philanthropy is well placed to accelerate adoption by supporting activities that generate public knowledge that can move beyond private advantage. This includes funding pilots, evaluating interventions, documenting implementation experiences and building the evidence base around approaches that can be replicated across the sector.

Its greatest contribution is reducing the uncertainty associated with early adoption. By generating credible evidence and demonstrating what works, philanthropy can help firms, governments and industry bodies act with greater confidence.

From proof points to industry norms

This report has laid out several solutions that have been piloted with a few firms. However, reaching higher levels of women's participation will not be achieved through one more successful pilot or one more leading company. It will require coordinated efforts across the ecosystem of firms, industry bodies, policy advisors and governments for isolated successes to translate into widespread change.



Conclusion and the way forward

When this programme was commissioned in 2023, women represented 5.6% of the Indian automotive workforce. By 2025, this had increased to 8.7%, demonstrating that progress is possible. The next challenge is to accelerate that progress and ensure that more women can enter, contribute and build long-term careers in the sector.

This report represents a starting point to guide that mission by identifying challenges that face the industry and outlining recommendations and solutions that can help bring about change. Still, several important questions remain.

- How can identified solutions proliferate beyond large, well-resourced firms, to the Tier 2 and 3 firms that comprise the majority of the auto sector workforce?
- What big bets - like expanding women's nightshift participation - might represent an oversized opportunity to make step-change progress in overall participation rates?
- How can more rigorous evidence on not just recruitment but also retention and productivity, strengthen the business case for investing in women's participation?
- What could meaningful industry-wide collaboration, especially across firms unlock in terms of pooled approaches to skilling, transport, and worker accommodation?

The automotive sector does not face a shortage of ideas or intention to achieve a gender-diverse workforce. This report has shown that practical solutions across recruitment, workplace integration, skills recognition and operational deployment exist and can be tested.

As the sector continues to evolve and adapt, we hope to see more of what worked best over the past three years:

1. The willingness to experiment with new, high-potential workforce management strategies
2. The patience to pivot rather than retreat in the face of slow progress
3. The passion to share what works and proliferate best practices

Ultimately, increasing women's participation is not a single initiative, but an ongoing process of strengthening the conditions that enable more people to enter, contribute, and build long-term careers in the automotive sector. Firms will start from different places and move at different speeds. What matters is continuing to test promising approaches, learn from one another and build on what works as the sector evolves. It will require firms to generate proof points, industry bodies to spread them, global buyers to reinforce them, governments to strengthen the enabling environment and philanthropy to continue building the evidence base where it is most needed. The opportunity now is to make it easier for the next firm to act, the next woman to enter, and the next successful practice to spread. This is essential to building the workforce that Viksit Bharat's manufacturing ambitions require: one that draws on the full potential of India's workforce, including the women who remain underrepresented on automotive shopfloors.

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Annexures





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