International Labour Organization

Implementation of the Factory Improvement Toolset in the Asian garment sector

Final report

Factory Improvement Toolset

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Preface

The ASEAN garment industry has contributed significantly to the region's economic and social development, employing over 60 million people and serving as a global manufacturing hub. As the ILO works to achieve full and productive employment alongside decent work for all, this sector has been a primary area of focus given its integral role in global supply chains, and the productivity and decent work deficits that continue to persist. The ILO's Decent Work in Garment Supply Chains Asia project, funded by the Government of Sweden, aimed to address these challenges and contribute to improved working conditions and rights of workers as well as improved social dialogue, productivity, gender equality and environmental sustainability.

In order to improve productivity and competitiveness while strengthening their mutual link to industry working conditions, workers' rights, gender equality, and environmental-friendly practices, the ILO's DWT for Asia Pacific developed, and pilot tested the Factory Improvement Toolset (FIT). FIT was created as a low-cost and scalable alternative to traditional training programmes, in order to account for enterprise time and resource constraints. Based on an activity-based learning model, FIT utilizes facilitators, rather than costly experts or external trainers, who encourage active participation from the workers and managers themselves to drive real improvements in their respective departments. The approach is grounded in real-life experiences from the factory floor and empowers participants through simple action plans at the end of each module. With over 84 modules available, the Toolset covers a wide range of topics including: garment production, general operations, human resource management, labour practices, and cleaner production.

This Factory Improvement Toolset (FIT) Final Report reviews the results of the pilot implementation of FIT across 27 factories located in Cambodia, Bangladesh, and Pakistan. These factories are all suppliers to global buyers and brands with medium to large-sized operations, each employing hundreds to thousands of workers. Monitoring and evaluation data is included at the overall country and factory level, alongside worker and management feedback, to showcase the benefits gained across a range of critical areas including productivity, workplace relations, resource utilization. The positive results were largely due to the great support received throughout implementation, including from ILO SCORE and Better Work programmes, various external institutions and collaborators, and the workers and managers of the factories themselves.

Contents

List of figures

Acknowledgments

Over the last five years, a broad group of individuals and institutions have contributed to the development, testing, and implementation of the ILO'S Factory Improvement Toolset. Specifically targeting impacts in the Asia-Pacific garment sector, the in-factory pilot interventions took place in Bangladesh, Pakistan and Cambodia.

The support of direct counterparts at the national level was crucial to the project's success. This included: the Bangladesh Employers' Federation (BEF), the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), the Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA), the Leather Goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), the ILO's International Labour and Environmental Standards Application in Pakistan's SMEs Project (ILES), and the Garment Manufacturers Association in Cambodia (GMAC) which supported the Cambodia Garment Training Institute (CGTI). Additionally, the facilitators who embraced FIT'S unique methodology ensured successful implementation within each enterprise. The greatest outcome of the project was the active engagement and commitment of participants (workers and managers) and the verifiable improvements that factories experienced just three months post- intervention.

Invaluable support was provided by Sara Andersson, Alix Machiels and Jayantha de Silva and other international / national experts. This included colleagues from FUNDAMENTALS, ACT/TEMP, ACTRAV, SCORE, Better Work Global and Better Work country teams in Bangladesh, Pakistan, Cambodia, Jordan, Viet Nam and Ethiopia. The Swedish International Development Cooperation Agency (SIDA) provided finance, guidance and encouragement to the Decent Work in Garment Supply Chains Asia project at large.

This facilitated a wide dissemination of the unique activity-based, peer-learning approach across the garment sector in the three countries. The project would like to recognise the enormous contribution provided at the enterprise level, including management, supervisors and workers who actively took part in engaging with the FIT content and worked hard to improve their respective departments.

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Abbreviations

BEF	Bangladesh Employers Federation
BFC	Better Factory Cambodia
BGMEA	Bangladesh Manufacturers and Exporters Association
BKMEA	Bangladesh Knitwear Manufacturers and Exporters Association
BW	Better Work
CGTI	Cambodia Garment Training Institute
DHU	defect per 100 units
DWCP	Decent Work Country Programme
EBMO	Employer and Business Membership Organizations
EFP	Employers Federation of Pakistan
FEFO	first expire first out
FIFO	first in first out
FIP	Factory Improvement Programme
FIT	Factory Improvement Toolkit
GMAC	Garment Manufacturers Association in Cambodia
IE	industrial engineering
ILES	International Labour and Environmental Standards Application
ILO	International Labour Organization
KPI	key performance indicator
LFMEAB	Leathergoods And Footwear Manufacturers & Exporters Association of Bangladesh
M&E	monitoring & evaluation
MSMEs	micro, small and medium-sized enterprises
NPO	National Productivity Organization Pakistan
OSH	occupational safety and health
RBC	Rajesh Bheda Consulting
SCORE	Sustaining Competitive and Responsible Enterprises
SIDA	Swedish International Development Cooperation Agency
SME	small and medium-sized enterprise
SMV	standard minute value
SOP	standard operating procedure
TaF.tc	Textile and Fashion Industry Training Centre
WIP	work in progress

Executive summary

The Factory Improvement Toolset (FIT) was developed by the ILO under the Decent Work in Garment Supply Chains Asia project and funded by the Government of Sweden.[1] The FIT was developed to effectively and affordably improve factories across a range of areas, including productivity, working conditions, working relations and environmental practices. At its core, the FIT promotes decent and sustainable work by helping factories help themselves by upgrading processes and practices. The tools utilize an activity-based, participant-driven methodology, which drives a scalable and sustainable delivery.

Each FIT module revolves around a team working together for approximately 2.5 hours without much interference with production floor realities. This flexible delivery model allows enterprises to tailor the interventions to their unique needs by choosing from a wide variety of topics (currently 74 unique modules are available at the ILO's Learning Hub).[2]

From March 2021 to February 2022 the FIT was implemented in three countries: Bangladesh, Cambodia and Pakistan. Strategic partners were engaged and supported through capacity building Programmes to utilize FIT modules and to implement and monitor the in-factory intervention with the aim of testing the FIT implementation mode, providing insights for maximum impact. This pilot Programme also aimed to identify necessary improvements and edits to ensure the toolset's suitability to the industry and regional context.

In total, 27 enterprises were engaged, covering approximately 450 participants, each using 4-7 of the FIT modules (depending on the available time frame). The in-factory interventions were monitored throughout the Programme by the FIT facilitators and through the utilization of multilingual Qualtrics surveys in accordance with the M&E scheme and based on the module's specific indicators.

The pilot activities were delivered by Rajesh Bheda Consulting (RBC) in Bangladesh, the Cambodia Garment Training Institute (CGTI) in Cambodia, and the ILO project International Labour and Environmental Standards Application Pakistan's SMEs (ILES) in Pakistan.

The ILO-FIT team had a supporting and monitoring role throughout the Programme and worked in collaboration with all of the stakeholders on the next steps post initial interventions. The ILES project, BW and EBMOs teams were involved at different stages and in different capacities during the interventions to provide full visibility of ongoing activities and full access to results. Qualitative and quantitative results showed a variety of key achievements including:

- The FIT methodology was demonstrated to be easily applicable and well received by participants from all department levels. The activity-based, peer-learning approach, involving an ice breaker and contextualized case study, triggered natural interactions:
  - Surveys indicated that participants appreciated the knowledge-sharing opportunities, and both managers and supervisors were surprised by the capacity of workers and their problem-solving abilities. Workers gained confidence to identify workplace challenges more freely.
- The technical content of the modules provided helpful guidance to all participants. Enterprises could improve or introduce systems related to identified problems.
  - The action plans created by participants at the end of each module included small steps that were easily converted to recognisable impacts. The changes were measured in accordance with the indicators provided in each FIT module.

1 Available at: https://www.ilo.org/asia/projects/WCMS_681538/lang--en/index.htm
2 Available at: https://learninghub.ilo.org/home

- The wide selection of module topics allowed the Programme to be highly adaptable to individual factory needs and allowed the intervention to address specific problems. Enterprises could access department-specific modules and/or tailor the selection of single of multiple modules, depending on the identified needs.

- The capacity building of in-factory facilitators and coordinators by the external team was successful as the enterprises are now confident to continue the work independently.
- Survey results demonstrated significant improvements in productivity, factory organization, and production systems (including environmental components and staff management). Average indicators showed:
  - Sewing-room line achievements improved by 9.49 per cent and the work in progress and defect per hundred units of garments both reduced by 22 per cent.
  - The store reorganization results show a six per cent improvement on space utilization and 69 per cent on material retrieval time.
  - Management systems and production system modules had an improvement of 5.9 per cent for on-time delivery and a rate of 7.8 per cent for capacity utilization. The number of pieces per employee improved by 12 per cent, and the order cycle time reduced by 4.9 per cent.
  - Clean production modules led to material waste reduction of 10.59 per cent, reduction of water use per workers by 69 per cent, and reduction of energy use at seven per cent.

The ILO's FIT team had a supporting and monitoring role throughout this Programme and worked in strict collaboration with stakeholders on the next steps to be taken after these initial interventions. Both the ILES project, BW and EBMOs teams were involved at different stages and capacities during the interventions to provide full visibility over the ongoing activities and full access to information in order to support their evaluation of the pilot's results and adoption of FIT tools in the long-term plan.

As a further confirmation of the intervention's success, the ILES in Pakistan will continue to offer FIT and is in the process of starting a second batch of 13 enterprises. The newly established Better Work Programme in Pakistan is also considering offering FIT as an additional service to the garment sector. The Employers Federation in Pakistan will begin the first lot of enterprises through a low-cost, blended delivery model instead of the in-factory intervention model. The inception modules will be delivered to factory representatives who will replicate module delivery in their respective units. The EBMOs in Bangladesh are finalizing the details for the roll out of FIT. The FIT team will assist in the launch of the Programme to further scale the FIT intervention to enterprises. The Better Work Programme is interested in adopting FIT as an additional service to be included in their support Programmes to the garment sector. Country units in Bangladesh, Viet Nam and Cambodia have used FIT tools (in different capacities), and the FIT team is working to formalize this partnership with Better Work for global use.

1 Background

1.1 Decent Work in Garment Supply Chains in Asia project

The Decent Work in Garment Supply Chains in Asia project, funded by the Government of Sweden, provides concrete follow-up to the resolution adopted in 2016 by the International Labour Conference concerning decent work in global supply chains. The project aims to contribute to improved working conditions and rights of women and men workers, as well as improved productivity and environmental sustainability of the garment sector in Asia. To achieve this, the project will deliver focused interventions in two complementary areas of work.

First, by strengthening knowledge of research findings, good practices and tools in four main and inter-connected problem areas:

1. social dialogue and industrial relations systems;
2. advancement of gender equality;
3. enhanced productivity and competitiveness; and
4. reduced environmental impact.

Second, by focusing on strengthening the coordination among the many stakeholders already actively working to ensure decent work in the garment industry in Asia. The project builds on the ongoing work by the ILO and other development partners to further compile, analyse and disseminate knowledge for better knowledge-sharing and to coordinate ongoing efforts. This will result in more impactful, sustainable and scalable solutions that can improve working conditions for women and men workers and enhance the sustainability of the garment industry. This project is timely as there is a significant body of knowledge and evidence, as

well as numerous approaches and initiatives across the region to learn from, which could be considered for adaptation and scaling. At the same time, there are persistent and stubborn gaps that continue to hamper the full achievement of decent work across the sector. Through an inclusive approach, the project strategy will coordinate efforts by governments, national institutions, social partners and other key stakeholders working towards the common goal of decent work and more sustainable garment sectors.

As part of Outcome #3 of the project, focused on building the capacity of EBMOS workers' organizations and other garment industry actors to enhance the productivity and competitiveness of targeted firms, the ILO piloted a new suite of factory tools called the Factory Improvement Toolset (FIT).

1.2 Factory Improvement Toolset (FIT) methodology

FIT is a self-facilitated, activity-based learning approach designed to support garment manufacturers to improve productivity, competitiveness and working conditions by upgrading production systems and factory practices. The toolset can be used strategically by service providers of all capacity levels in a manner that meets the varying needs of garment factories. The toolset is designed to be flexible in terms of the delivery model. For optimal results, the ILO encourages factories to bring workers and management together in an inclusive factory improvement process.

The FIT suite comprises of 70+ open-source modules, available online on the ILO Learning Hub.

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2 Strategy

2.1 FIT approach

FIT's main aim is to support manufacturers to improve productivity, competitiveness and working conditions by upgrading production systems and factory practices. The objective of the pilot interventions was to introduce the FIT model, demonstrate how FIT can be delivered, and document quantifiable results to further inform the business case for the toolset. The initial Programmes in Pakistan, Cambodia, and Bangladesh also aimed to identify necessary improvements to be made to the toolset and ensure suitability to the garment industry.

FIT modules are divided in three sessions: A case study, a learning about the topic, and an action plan. The case studies serve the purpose of contextualising the topic with real-life examples that then trigger problem solving analysis. From workers to managers, participants are able to contribute personal experiences and actively participate. In the learning session, different activities guide participants through identifying relevant problems and developing solutions. Industry best practices are built in along with check lists that align with module-specific indicators for measurement. At the end of each module, participants design an action plan for the chosen solution, allocating responsibilities and defining a timeline for completion.

FIT differs from traditional training modules as it does not require a trainer but a facilitator who supports the activity-based, peer-learning methodology. The facilitator encourages participants to engage in the sessions and helps to create an environment that will allow the knowledge to flow from multiple directions. The facilitator also ensures that activities are carried out within the timeline and that action plans reflect all team member's contributions. This role is vital in enabling enterprises to carry over FIT independently after the initial intervention.

The FIT methodology is predicated on the following principles:

- *Cost-efficient and easy to implement:* Each enterprise was supported in completing a limited number of modules and are now capacitated to utilize FIT independently.
- *Flexible and customizable:* Each enterprise identified their specific area of interest based on department performances and selected modules to address the problematic section.
- *Participant driven:* FIT participants actively participated in the FIT session and shared their experiences and point of view and contributed to the module's activities identifying problems and solutions.
- *Result oriented:* Participants in the FIT session contributed to finalise the action plans and their implementation.

2.2 Country partners

The activities during this initial phase have been carried out by different partners in the different countries. Each partner had the role of selecting enterprises to participate in the FIT pilot for their respective country.

- **Bangladesh:** Although the ILO initially provided capacity building to EMBO representatives (BGMEA, BKMEA, and BEF), the COVID-19 pandemic limited their ability for ground-level support. The ILO then appointed Rajesh Bheda Consulting (RBC) to carry out the pilot with enterprises selected by the EBMOs. RBC is a knowledge organization that partners with leading apparel manufacturers, international brands, and development/UN agencies to improve performance of the garment sector globally. Over 500 apparel manufacturing firms from over 20 countries have been associated with RBC to date.
- **Cambodia:** The Cambodia Garment Training Institute (CGTI), created by the Garment Manufacturers Association in Cambodia (GMAC), was selected to carry out the FIT pilot project with engaged enterprises. This was in conjunction with TaFtc International Pte Ltd, the international arm of the Textile and Fashion Industry Training Centre (TaF.tc), that was established in 1983, to provide both short and long-term trainings tailored to the demands of the garment industry.
- **Pakistan:** The International Labour and Environmental Standards Application in Pakistan's SMEs Project (ILES) provided services to the textile and ready-made garments sectors through the implementation of the ILO's Sustaining Competitive and Responsible Enterprises (SCORE) training program. So far, the ILES project has successfully implemented SCORE in 19 enterprises in Karachi, and the Sindh province of Pakistan and has embraced FIT as an additional resource to offer to the growing industry. The ILES has engaged ten SCORE trainers that were trained as FIT facilitators to support ten enterprises to pilot the tools.

2.3 Factory interventions

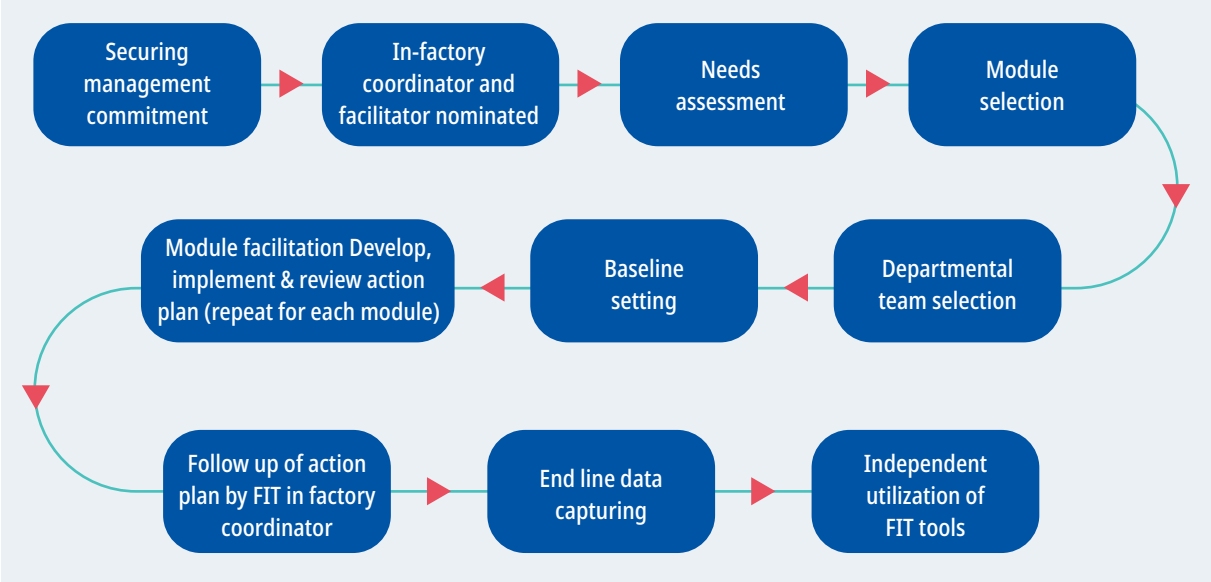
The FIT pilot Programme utilized the in-factory intervention model (one of three possible approaches to utilizing FIT), which engaged service providers to work in coordination with the ILO team to roll out FIT within selected enterprises. Service providers attended orientations and trainings for capacity building and were given relevant documents, including the FIT manuals and guide. Upon completion of initial preparatory activities, the service provider then facilitated the FIT modules in-factory. Each factory created a FIT team of 6-8 people who worked together to carry out each module (2.5-3 hours).

The participants were selected considering the FIT suggested participant list which encourages participation from both lower-level workers and women to guarantee a diverse and inclusive cohort.[3] Each enterprise completed two compulsory modules along with 2-5 additional modules of their choosing. Factory owners were supportive of this model as it reduced time away from the factory floor compared to traditional trainings. For each session, the service provider spent approximately half a day in each factory to deliver sessions and to monitor the results of the previously conducted modules.

3 FIT Guidance: Selecting participants for FIT sessions.

FIT external facilitators encouraged effective communication through discussions and supported the capacity building of the in-factory FIT facilitators and coordinators to enable enterprises to carry over the Programme independently after the completion of the pilots. In light of the COVID-19 pandemic, the service providers were responsible for ensuring safe implementation and abided by social distancing guidelines.

▶ **Figure 1. The FIT process flow: Sequence of activities within each enterprise**



Source: ILO, 2022.

The in-factory intervention allowed for effective monitoring and evaluation of FIT and ensured feedback was collected throughout the intervention. For the roll-out phase, a more scalable, blended approach was considered through which several factories' representatives (two per factory) attended the module in a class (ten factories, 20 people) and then replicated it in their facilities. This allowed a larger dissemination of information that enabled enterprises to run the Programme independently.

2.4 Module selection

Service providers worked in coordination with the ILO team to introduce FIT to the selected enterprises. They then supported the enterprises in selecting 2-5 FIT modules (in addition to the two compulsory modules) based on specific requests or the results of the needs assessment. Although it is recommended that factories utilizing FIT focus on one specific department area at a time (e.g. the store room), some factories chose to combine department specific modules with those focused on overall systems or working conditions (e.g. planning production or OSH).

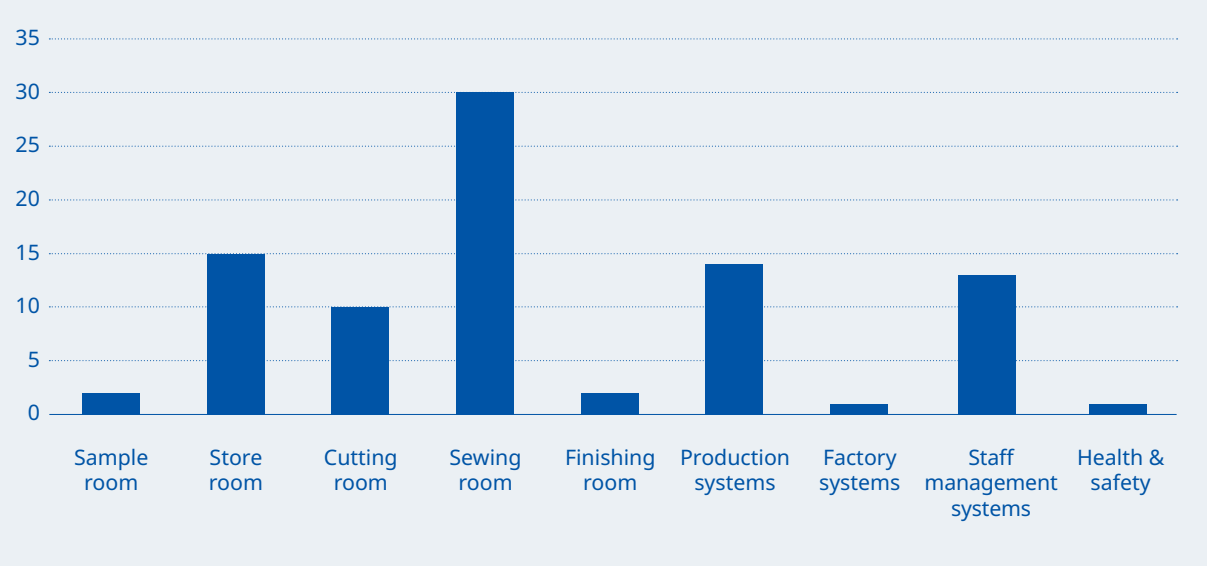
Each enterprise also completed two compulsory modules (I01 - Setting up your factory for FIT and I02 - Solving problems in the factory) to build confidence within the FIT team and to ensure successful implementation via the unique problem-solving approach. The problem-solving module guided participants through identifying, analysing and solving problems, and encouraged participants to voice challenges that may not often be considered relevant by management.

Based on the needs assessment, the breakdown of modules was as follows:

- Bangladesh: Four enterprises carried out five section specific modules and six enterprises carried out three section specific modules.
- Cambodia: Two enterprises carried out five section specific modules and five enterprises carried out three factory specific modules.
- Pakistan: Ten enterprises carried out two section specific modules.

The difference in the number of modules utilized relates to the timeframe needed to ensure completion of the Programme (including end line surveys submitted 1-3 months post intervention). Enterprises were also able to customise the Programme in accordance to their specific needs, allowing them to experience immediate added-value in the areas most in need.

▶ **Figure 2. Module selection**



Source: ILO, 2022.

2.5 Monitoring & evaluation

To trace the impact FIT had on the participating factories, the ILO team developed a comprehensive monitoring and evaluation system through the use of the Qualtrics survey platform. Surveys were completed before, during, and after the intervention with the support of the service provider. The results of the in-factory interventions were documented and summarised in a final report once all activities were completed.

Surveys included:

- **Needs assessment** to assist with identifying appropriate modules for each factory.
- **Post module survey** for participants to complete immediately after they finish the FIT module as well as a separate survey for managers.
- **Baseline/end line survey** to measure effectiveness and capture data related to the factory's practices and performance before and after the program. This includes six separate **workers' perception surveys** to be completed before and after taking modules related to 1) Labour relations, 2) Gender equality & non-discrimination, and/or 3) OSH and welfare.
- **Tracer survey** to measure the long-term impacts of the FIT improvement process in the factory (to be completed 12 months post intervention).

FIT stands on the principle "what gets measured gets done" and often enough factories were lacking specific KPIs. The establishment of baseline data supported the enterprises in analysing existing gaps both in terms of measuring techniques and establishing indicators. Each FIT module contains defined indicators, listed in the FIT Indicators Guide which are captured at the baseline stage.[4] These indicators are then reflected in the module specific action plan to ensure improvements will impact the department performance accordingly.

4 FIT Indicators Guide.

© ILO

3

Overview of results

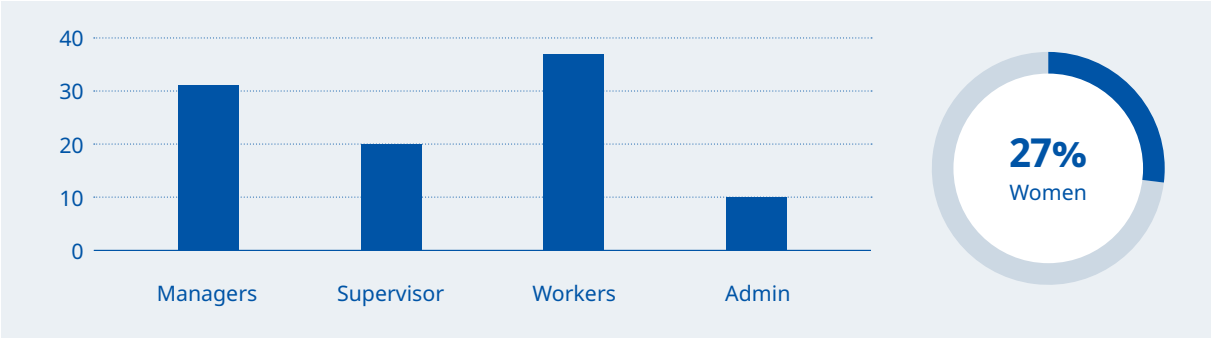
The FIT external facilitators, under the guidance of the ILO team, supported enterprises in capturing both qualitative and quantitative data throughout the entire pilot program. Through effective utilization of Qualtrics, workers completed post-module perception surveys and managers provided feedback on their experiences. Baseline and end line surveys were conducted at the factory level to measure improvements on module-specific indicators.

3.1 Results from participants (perception surveys)

800 post module surveys were completed from over 450 participants across the three countries. Workers of all levels were able to interact in an open, inclusive environment and the results demonstrate a high level of success and positive feedback regardless of age, gender, education level and job title.

- 99 per cent of participants noted that they were highly interested in future FIT trainings.
- 99 per cent of participants believe that they acquired new knowledge and skills.
- 99 per cent of participants were confident they will use the new knowledge/skills in their daily work.
- 98 per cent of participants learned to identify areas for department improvement due to the integration of the FIT best practices checklists.

▶ **Figure 3. Participants breakdown**



Source: ILO, 2022.

Note: Gender participation in FIT implementation is an area that requires further consideration, to ensure balanced representation.

3.2 Feedback from management

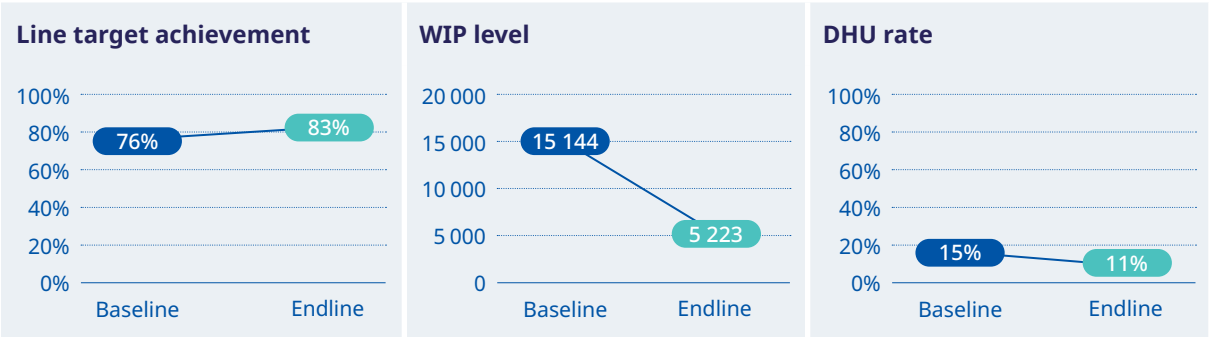
Feedback from manager surveys indicates that FIT had a positive impact on workplace relations and communication. By engaging in the discussion-oriented activities, work culture was positively impacted at different levels of the organization. Managers expressed real appreciation for the workers' and supervisors' contributions and this helped build trust. Gaining the trust of the managers has also led to performance benefits relating to production and improved factory efficiency. In some instances, FIT gave the option for workers to highlight areas of discomfort, and this feedback shows that they believe their working environment has improved.

- 100 per cent of managers noted positive changes in their teams that they attributed to FIT.
- 86 per cent of managers noted improvement in team communication post-FIT sessions.
- 91 per cent of managers noted improved relational dynamics between workers and management.

3.3 Results from the factory floor: Before and after

Each factory selected modules based on their own specific needs and priorities. For the purpose of concise reporting, data has been grouped based on the different topics and represent averages of the factories that utilized modules of the same section. Details on the number of factories represented and which modules were utilized are listed below each chart.

▶ **Figure 4. Sewing room results: Productivity improvements**

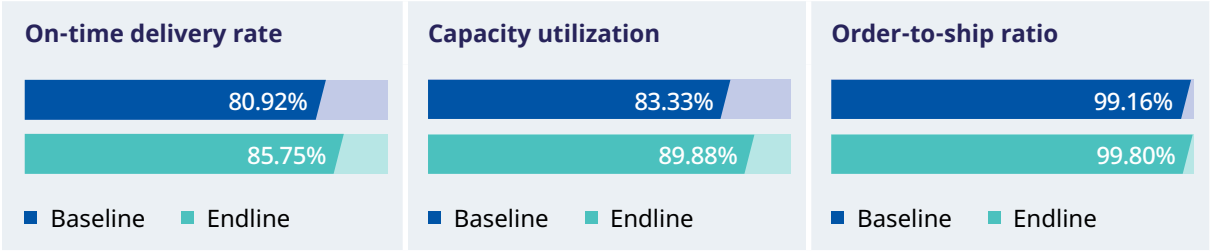


Source: ILO, 2022.

N.B. Data reflects nine factories that utilized: SL1 - Using the bundle system; SL2 - Making an operation bulletin; SL3 - Line planning; SL4 - Setting new lines; SL5 - Receiving materials; SL6 - Stitching garments; SL7 - Tracking production; SL8 - Line balancing; SL9 - Checking garments; and SL10 - Organizing the sewing room.

Many enterprises chose to utilize the sewing line improvement modules and demonstrated the need for established KPIs in this area. Results from the FIT intervention demonstrated evident improvements in line target achievement, work in progress (through the evaluation of SMV detailed calculations), identification of bottle necks, bundle size management and defect rates. WIP reduction averaged at 67 per cent showing the great potential of the FIT Programme in generating short-term improvements with extremely limited capital investment utilizing these tools.

▶ **Figure 5. Production system results**

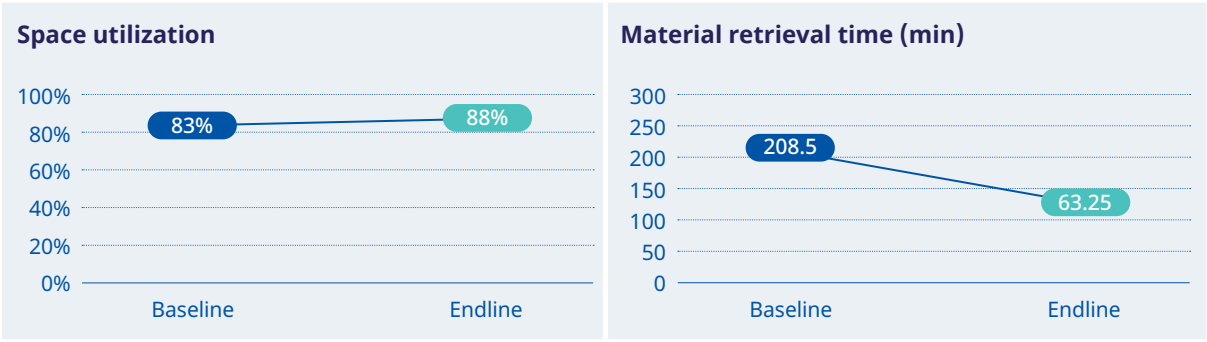


Source: ILO, 2022.

N.B. Data reflects six factories that utilized: PR1 – Planning production; PR2 – Eliminating bottlenecks; PR3 – Measuring productivity; PR4 – Improving processes; and PR5 – Material productivity.

Of the six enterprises piloting production system modules: two produce garments, two produce leather goods, and two produce footwear. Therefore, these results highlight the value that FIT can bring to the garment sector and beyond. Capacity utilization is a key element of productivity as it reduces overtime (a critical aspect of working conditions in the garment industry). Improvements were also demonstrated by a reduction in order-lead time and an increase in on-time delivery rate.

▶ **Figure 6. Store room results**

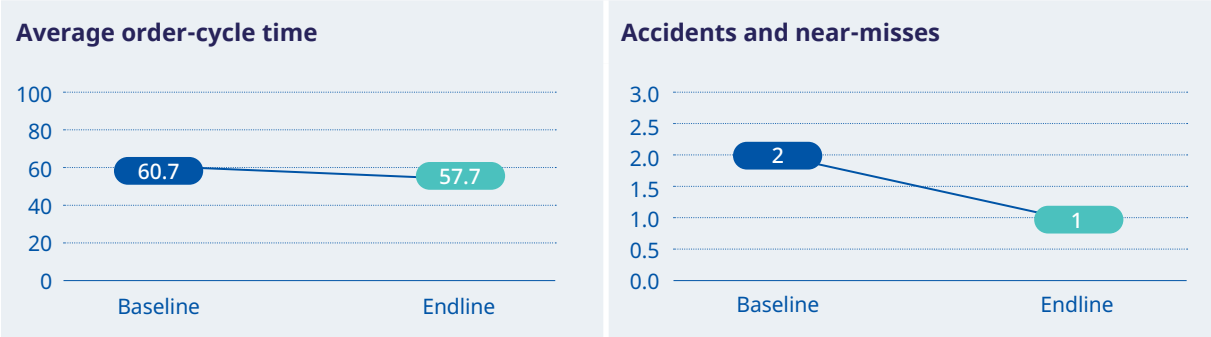


Source: ILO, 2022.

N.B. Data reflects four factories that utilized: ST1 – Receiving material; ST2 – Inspecting materials; ST3 – Storing materials; ST4 – Record keeping; ST5 – Issuing materials; and ST6 – Organizing the storerooms.

Every enterprise that utilized the store room modules experienced a similar impact: Space utilization increased 5-8 per cent and neared 90 per cent by the end line. This was largely due to the relevance of the content in ensuring efficient organization. Participants also recorded improvements due to simple changes, such as adding parking signs in front of the storeroom which cleared entry access. New FIFO/FEFO tagging systems led to a reduction of handling time, unnecessary re-orders, and expiring chemicals. The material retrieval time had an average improvement of 70 per cent which is notable considering the low levels of intervention within the manufacturing unit. These improvements are further confirmation of how FIT methodology promotes continuous improvement through participant collaboration.

▶ **Figure 7. Factory system and working conditions results**



Source: ILO, 2022.

N.B. Data reflects one factory that utilized: FS3 - Managing machinery; and one factory that utilized WC1 – Introduction to OSH.

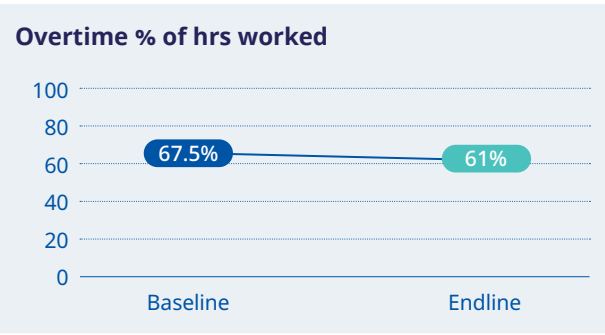
One enterprise utilized the Managing Machinery module and identified excessive breakdowns and a lack of training as problems to address. They then developed two separate action plans. One plan involved starting a Programme for a maintenance team training and the other focused on the reduction of breakdown issues by applying a prevention program. The FIT methodology supported participants in gaining a better understanding of the key elements to be monitored and triggered proactive changes. Improvements in order-cycle time were recorded due to the improved machine maintenance.

One enterprise completed a working conditions module while another did multiple staff management modules. Both of these topics measured overtime as a key indicator for impacts. Overtime is a key aspect of working conditions in the garment industry, so this improvement helps demonstrate the enormous potential for FIT to impact the sector as a whole.

One enterprise chose to utilize a sample room module and all participants were impressed with the level of learning achieved. The factory recorded a four per cent improvement in the sample turn-around time and though the sample hit rate did not change during the recording period (three months), there is expected improvement to occur at order placement time (not all submitted samples had yet reached the final approval stage).

The cutting room also benefited from FIT as a root cause analysis led to a new system of material quality checking that immediately lowered the number of re-cuts. The overall impact was a 1.5 per cent increase in fabric utilization and around three per cent for marker utilization. The average was brought down by one enterprise that did not have correct baseline data.

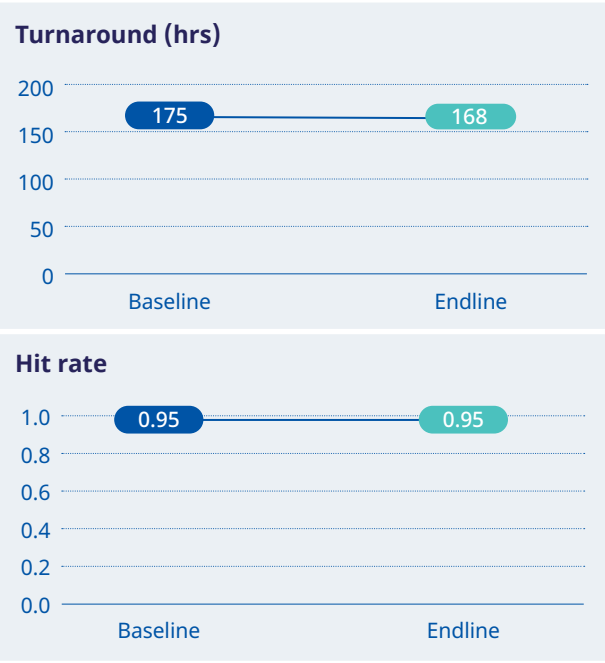
▶ **Figure 8. Overtime results**



Source: ILO, 2022.

N.B. Data reflects two factories that utilized: WC1 – Introduction to OSH; HR5 - Training staff; and HR6 - Reducing turnover.

▶ **Figure 9. FIT sample room results**

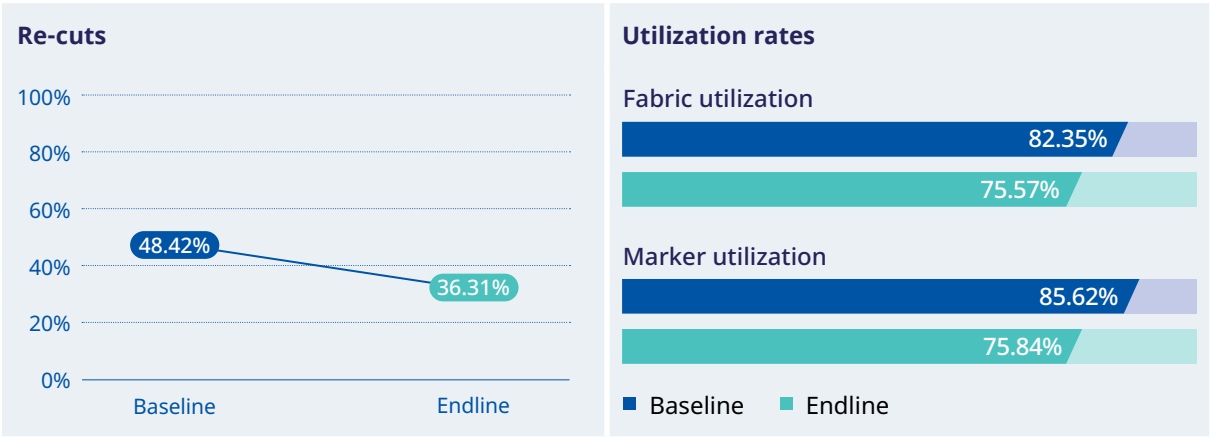


Source: ILO, 2022.

N.B. Data reflects one factory that utilized SR4 - Organizing your sample room.

One of the enterprises, based on root cause analysis made during the FIT module, identified the re-cut problem to be linked with defective fabric. They then introduced a fabric checking table to improve checking system reducing their wastage by 33 per cent.

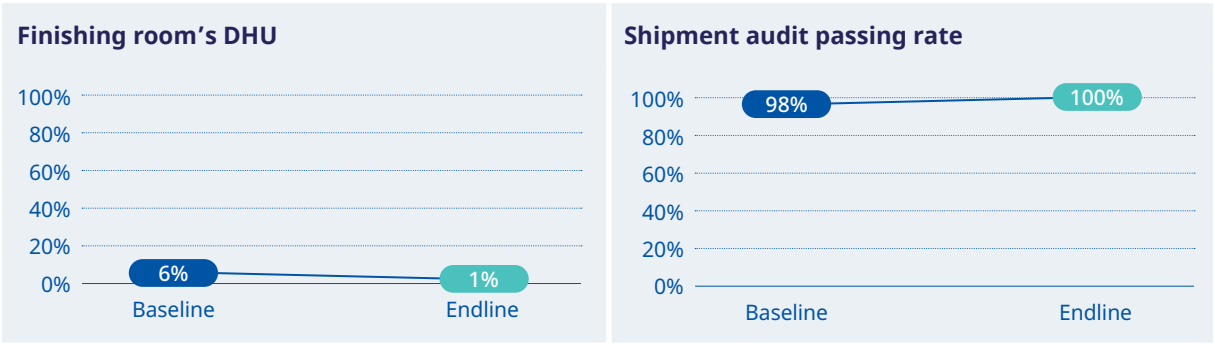
▶ **Figure 10. Cutting room results**



Source: ILO, 2022.

N.B. Data reflects five factories that utilized: CR1 - Planning for cutting; CR2 - Marker planning; CR3 - Ensuring marker efficiency; CR4 - Receiving fabric; CR5 - Spreading fabric; CR6 - Cutting fabric; CR7 - Preparing for sewing; CR8 - Cut inspection; CR9 - Issuing bundles; and CR10 - Organizing the cutting room.

▶ **Figure 11. Finishing room results**

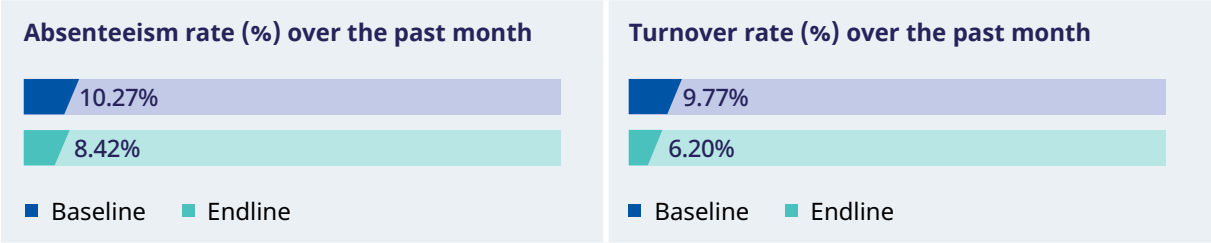


Source: ILO, 2022.

N.B. Data reflects one factory that utilized: FN1 - Washing garments; FN2 - Transferring garments; FN3 - Finishing garments; FN4 - Inspecting garment; FN5 - Packing garments; and FN6 - Dispatching garments.

Only one enterprise utilized the finishing room modules, therefore the improvements are based on limited data. Impacts were most notable on the DHU (defect per 100 units) where there was a solid improvement of over 80 per cent. This reiterates that FIT methodology can contribute and add value where existing procedures are in place and ensures a higher commitment of the team members in improving department performance. The final shipment passing rate reflects the improvements on the finishing room. In addition to the captured indictors, these improvements will lead save time and limit re-works.

▶ **Figure 12. Staff management indicators**

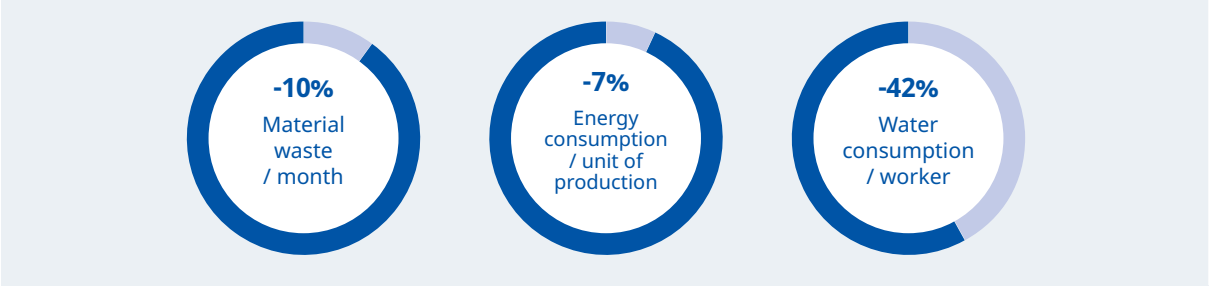


Source: ILO, 2022.

N.B. Data reflects six factories that utilized: HR1 - Improving communication channels; HR2 - Improving communication skills; HR3 - HR management 1; HR4 - HR management 2; HR5 - Training staff; HR6 - Reducing turnover HR9 - Critical thinking & reasoning in factories; and HR14- Teamwork in factories.

Enterprises utilizing staff management modules reported improved communication amongst team members, which in turn contributed to better working environments. Based on the module specific indicators, all enterprises experienced improvements in both turnover and absenteeism. Team member attitudes improved as well. One enterprise noted that thanks to the critical thinking module, the morning meeting format was completely re-designed. This new format was then introduced to other production units.

▶ **Figure 13. Environment results**



Source: ILO, 2022.

N.B. Data reflects 1 factory that utilized: CP1 - Cleaner production 1; Reducing resource use; CP2 - Cleaner production 2; Reducing waste and pollution.

One enterprise utilized CP2: Reducing waste and pollution and participants identified excessive water usage as a challenge to address. They began efforts to raise awareness in each department (awareness posters, preaching in the factory mosque, and purchasing of water sensors) and demonstrated great commitment and enthusiasm. A total of 13 training sessions in different departments were conducted during the FIT process and preaching on water consumption is on-going in the factory mosque. In September 2021, water consumption was 27.9 ltr/mtr and by the February, 2022 it was 25.5 ltr/mtr. Water sensors will also be installed and will surely contribute to monitoring future use.

"We can see continuous improvement in our production floor and in the team members who joined the program. Everyone is working and we can see an extraordinary change in everyone. It seems that the pace of work among them has increased, they have started working according to the target… All that is needed now is to continue the fast change that we are seeing. That's why we need to do regular work according to the action plan, and if we continue to do this, we hope that a big change will come to the factory. One of the advantages of these modules is that it is possible to improve productivity and reduce processes without any change in system and policy. There is no need for extra-ordinary change here, this is the big thing.

▶ **Senior Manager, HR & Administration**

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4

Lessons learnt

Despite ongoing COVID-19 restrictions and global economic uncertainty, the FIT pilot Programme demonstrated enormous success with each participating enterprise experiencing verified improvement across KPIs. The unique approach and innovative methodology were proven to be highly regarded by workers, managers and external facilitators.

Key points from the initial FIT implementations include:

- **The facilitation-based, peer-learning approach** of FIT was well received and embraced by participants and increased collaboration across all factory levels (workers, supervisors and management).
- **The FIT modules require limited time and resource commitment** from the factory teams in comparison to traditional training sessions. This resulted in a higher buy-in from enterprise management during project initiation and implementation.
- **The FIT structure is highly adaptable** to meet factory needs, irrespective of unique products/processes. For factories with only basic systems in place, FIT was conducive to establishing comprehensive systems as content covered all areas of manufacturing operations.
- **Modules have demonstrated efficacy in first-tier factories** and easily allowed for the involvement of lower-level workers.
- **Capacity building of in-factory facilitators /coordinators** built enterprises' confidence in carrying over the Programme independently.
- **FIT methodology promoted soft skills** such as team-building, communication and improved workplace relations as highlighted by management feedback.
- **FIT teams were observed to be responding better and working proactively as the modules progressed** and results were visible on the production floor.

- **The facilitation approach eased the sharing of the participants** irrespective of their designations. This allowed getting perspectives from various levels.
- The action plans at the end of each module included **small but actionable steps** to be implemented by the team members. The changes were measured in terms of the KPI provided in the FIT module.
- **Short and flexible module design helped keep sessions relevant** to factory needs and generated demand for additional modules targeting other sectors, such as leather.
- Certain factories lacked baseline data as sufficient data-capturing mechanisms were not in place before the interventions. This provided an opportunity for FIT to **establish and strengthen management systems and set the stage for long term improvement, even if the short-term indicator results were hard to identify.**
- **The bottom-up approach to change management** provided by FIT helped break resistance to change and increased potential for long term impact.

"Since we have started and are benefiting from the Programme as a leather factory, we request you to kindly develop more leather goods production-oriented modules. This will help leather factories further and make the leather factory more efficient.

▶ **Senior manager, HR & Administration**

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5

Conclusion and recommendations

The FIT pilot Programme has demonstrated the success of the FIT methodology and delivery model to drive enterprise productivity, both with and without external support. FIT allows enterprises to focus on any specific need, gaining both internal improvements and external recognition by being linked to an ILO program. Significant results at the indicator level, as well as positive feedback from workers, managers and HR, demonstrate the high level of demand for this type of innovative Programme and the wide potential for expansion.

FIT lends itself to adoption by a range of public and private industry organizations, including employer and business membership organizations (EBMOs), training institutes, and brands. FIT can be a comprehensive, stand-alone Programme or act as a complement to any existing program. The major advantage of FIT is the low-cost of application for enterprises, the sustainability of impacts driven by the bottom-up approach, and the overall ease of implementation. A number of FIT modules could be made compulsory for all the participating factories to enhance key areas of interests for the industry (e.g. Health and Safety) while the departmental interventions could be based on needs assessment results, providing enterprises the freedom to intervene where necessary. Existing measurables and online platforms to support data collection could be utilized, or a separate M&E structure could be created by service providers to ensure accountability, tracking and participation.

Different implementation models for FIT rollout could result in more agile, sustainable, and low-cost approaches. For example, service providers could support the inception of the Programme (inviting representatives of enterprises to attend introductory modules) then monitor the results of additional factory-run modules without having to be directly involved in expensive and time-consuming training. The key point is that FIT is a toolset of which implementation can be adjusted to best fit the circumstances at the local level.

5.1 Scope for future module development

FIT not only offers great potential for improvement in the garment sector, but the methodology can be easily applied to additional manufacturing sectors. The successful results from the pilot program, alongside increased demand for multi-stakeholder capacity-building efforts, suggest a wide scope for future development of the FIT model.

Some areas of potential are:

- Technical modules on processes;
- Modules of energy saving in specific departments;
- Environment-related modules to promote resource utilization (waste, water, and energy reduction) and to encourage the promotion of the circular economy at the factory level;
- Industry diversification: Shoe, leather and sweater sectors are in need of external support to improve productivity and alongside decent work;
- Modules on advanced manufacturing topics like lean tools, agile techniques, pre-production methodologies, etc.;
- Modules utilizing multimedia; and
- More advanced modules on organizing quality and industrial engineering.

Annex 1. Module selection breakdown

Bangladesh

Factory coding	Modules
CN - Garment	▶ SL1 - Using the bundle system ▶ SL3 - Line planning ▶ SL5 - Receiving materials ▶ SL8 - Line balancing ▶ SL9 - Checking garments
FH - Garment	▶ ST1 - Receiving materials ▶ ST2 - Inspecting materials ▶ ST3 - Storing materials ▶ ST4 - Record keeping ▶ ST5 - Issuing materials
LS - Garment	▶ SL1 - Using the bundle system ▶ SL4 - Setting new lines ▶ SL5 - Receiving materials ▶ SL8 - Line balancing ▶ SL9 - Checking garments
EK - Garment	▶ SL3 - Line planning ▶ SL5 - Receiving materials ▶ SL7 - Tracking production ▶ SL8 - Line balancing ▶ SL10 - Organizing the sewing room
GK - Garment	▶ CR3 - Ensuring marker efficiency ▶ CR5 - Spreading fabric ▶ CR7 - Preparing for sewing
AL - Garment	▶ SL2 - Making an operation bulletin ▶ SL3 - Line planning ▶ SL7 - Tracking production
DG - Garment	▶ ST1 - Receiving materials ▶ ST2 - Inspecting materials ▶ ST3 - Storing materials ▶ ST4 - Record keeping
DG - Garment	▶ CR1 - Planning for cutting ▶ CR2 - Marker planning ▶ CR3 - Ensuring marker efficiency

Factory coding	Modules
PC – Leather	▶ PR2 - Eliminating bottlenecks ▶ PR3 - Measuring productivity ▶ PR4 - Improving processes
AX – Leather	▶ PR2 - Eliminating bottlenecks ▶ PR3 - Measuring productivity ▶ PR4 - Improving processes

Cambodia

Enterprise name	Modules
TX - Shoes	▶ HR1 - Improving communication channels ▶ HR2 - Improving communication skills ▶ HR3 - HR management 1 ▶ HR4 - HR management 2 ▶ HR5 - Training staff ▶ HR6 - Reducing turnover ▶ WC1 - Introduction to OSH
CS - Shoes	▶ HR1 - Improving communication channels ▶ HR2 - Improving communication skills ▶ PR1 - Planning production ▶ PR2 - Eliminating bottlenecks ▶ PR3 - Measuring productivity ▶ PR4 - Improving processes
QA - Garment	▶ SL8 - Line balancing ▶ HR1 - Improving communication channels ▶ PR2 - Eliminating bottlenecks
IA - Garment	▶ SL3 - Line planning ▶ SL4 - Setting new lines ▶ SL6 - Stitching garments
BR - Garment	▶ CR1 - Planning for cutting ▶ CR2 - Marker planning ▶ CR4 - Receiving fabric
AA - Garment	▶ FN5 - Packing garments ▶ FN6 - Dispatching garments ▶ PR1 - Planning production
OV - Garment	▶ SL7 - Tracking production ▶ SL8 - Line balancing ▶ SL9 - Checking garments

Pakistan

Enterprise name	Modules
HT – Textile Mill	▶ ST1 - Receiving materials ▶ ST3 - Storing materials ▶ ST4 - Record keeping ▶ ST5 - Issuing materials ▶ ST6 - Organizing the storerooms
SJ - Textile Mill - Towels	▶ SR4 - Organizing your sample room ▶ PR4 - Improving processes
ICM - Garment	▶ SL3 - Line planning ▶ HR9 - Critical Thinking & reasoning in factories
AS - Garment	▶ HR5 - Training staff ▶ HR6 - Reducing turnover
AM - Garment	▶ SL6 - Stitching garments ▶ SL9 - Checking garments
SP – Garment	▶ ST1 - Receiving materials ▶ ST2 - Inspecting materials
MB – Garment	▶ SL1 - Using the bundle system ▶ SL2 - Making an operation bulletin
AF - Textile Mill	▶ CP2 - Cleaner production 2: Reducing waste & pollution ▶ FS3 - Managing machinery
SW - Garment	▶ CR10 - Organizing the cutting room ▶ HR14 - Teamwork in Factories
TL - Textile Mill - Towels	▶ CR4 - Receiving fabric ▶ CR6 - Cutting fabric

Annex 2. Country and factory level results

The FIT programme results were captured at both the individual factory and overall country level. Specific indicators display the deviation between the baseline and end line, both an average amongst the same modules utilized in different enterprises and in more detail for individual enterprises. Along with numerical data, the new practices or deviations from existing practices linked to FIT implementation have been summarised and accounted for.

Note: Factory names have been coded for confidentiality purposes.

Bangladesh

FIT implementation in Bangladesh has been successful from both a qualitative and quantitative perspective. Overall, participants enthusiastically engaged in the FIT Programme and appreciated the unique methodology. They found the level of guidance in the modules conducive to their skill gaps as it allowed them to engage in knowledge sharing. They finalised action plans to design or improve systems. In the table below, average baselines and end line results are captured from the ten factories, followed by the average variance rates.

■ Positive variance ■ Negative variance

Sewing room averages: Based on data from 4 factories

Modules: SL1 - Using the bundle system SL2 - Making an operation bulletin SL3 - Line planning SL4 - Setting new lines SL5 - Receiving materials SL7 - Tracking production SL8 - Line balancing SL9 - Checking garments SL10 - Organizing the sewing room

	Line target achievement	Sewing room DHU	Average WIP
Baseline	80.00%	13.70%	1500
Endline	85.67%	10.80%	1493.33
%Change:	7.08%	-21.17%	-0.44%

Production system averages: Based on data from 3 factories

Modules: PR1 - Planning production PR2 - Eliminating bottlenecks PR3 - Measuring productivity

	On-time delivery rate (%)	Capacity utilization (%)	Order-to-ship ratio (%)	Pieces / employee	Average order cycle time / order lead time (days)
Baseline	84.26%	67.50%	99.40%	42	100.5
Endline	92.00%	81.50%	100.00%	40	64
%Change:	9.19%	20.74%	0.61%	-4.76%	-36.32%

Storeroom averages: Based on data from 2 factories

Modules: ST1 - Receiving materials ST2 - Inspecting materials ST3 - Storing materials ST4 - Record keeping ST5 - Issuing materials

	Space utilization (%)	Average material retrieval time (min)
Baseline	85.00%	30
Endline	90.00%	7.17
%Change:	5.88%	-76.11%

Cutting room averages: Based on data from 2 factories

Modules: CR1 - Planning for cutting CR2 - Marker planning CR3 - Ensuring marker efficiency CR5 - Spreading fabric CR7 - Preparing for sewing

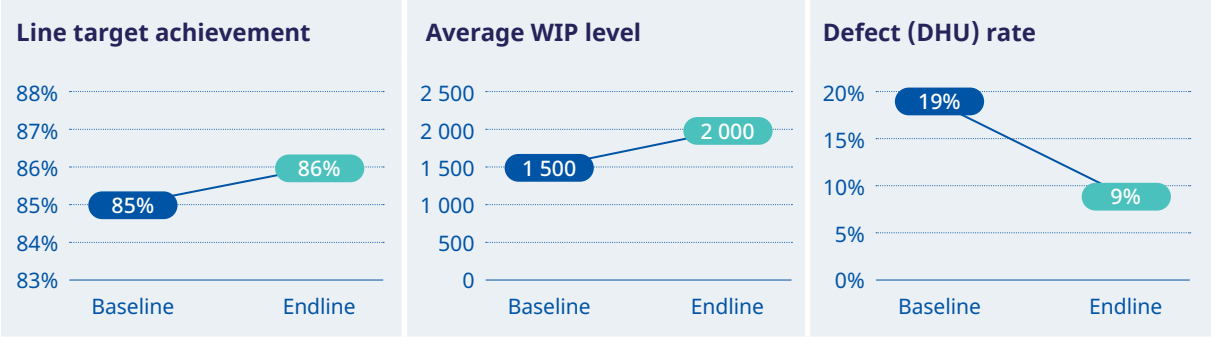
	Fabric utilization (%)	Marker utilization (%)	Number of re-cuts (%)
Baseline	86.25%	86.25%	0.95%
Endline	86.74%	86.74%	0.74%
%Change:	0.56%	0.56%	-22.11%

Factory CN

The team was well-engaged with the Programme and chose the sewing department for the implementation, completing seven modules along with the two compulsory modules. FIT was piloted in one of the sewing lines; among the changes they have made thanks to FIT, there was a number of pieces reduction in the bundles, improvement in the line planning, improvement in the inventory systems, detailed cutting WIP tracking, and thread cutting to maintain quality. The team was highly engaged through strong facilitation by the project coordinator. They have independently rolled out two of the remaining five modules in the sewing department and implemented the new practices included in the chart below.

Modules	New practices implemented
SL1 - Using the bundle system	Workers are consulted to help managers evaluate whether the line layout and material handling system are convenient and reduce material handling time and worker fatigue.
SL3 - Line planning	N/A
SL5 - Receiving materials	Issues helpers are trained in understanding MRN/BRINs and using them for material pick-up and storage. Issues helpers are trained in best receiving and storing practices, including the use of trolleys, and in feeding the lines timely and appropriately.
SL8 - Line balancing	N/A
SL9 - Checking garments	N/A

Following are the KPI changes achieved during the pilot phase of the project.



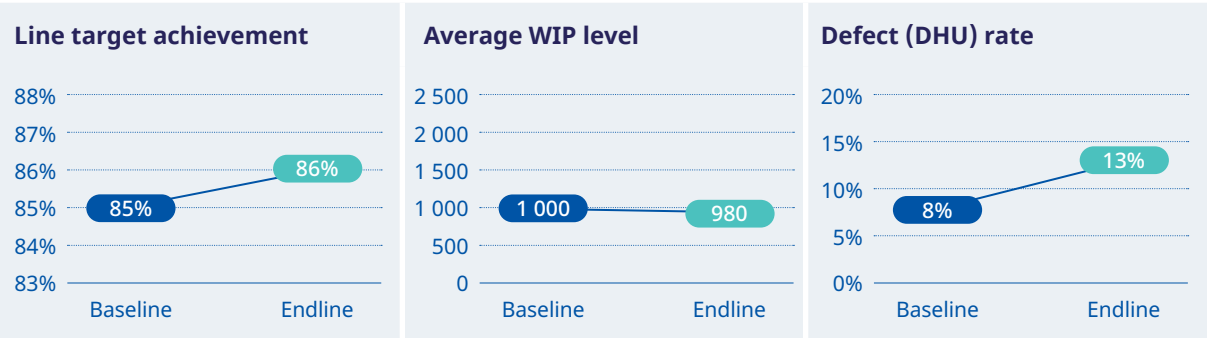
- The line achievement rate increased by 1.2 per cent. This increment was captured at three per cent and then reduced to one per cent due to new product introduction.
- The WIP level increased as the new product had less work content. However, the factory reported better WIP management and improved flow of pieces.
- The defect rate was reduced by 50 per cent by strengthening checking processes, introducing clockwise checking and DHU calculation.

Factory LS

This factory completed sewing Line modules and then completed action points to deliver improvements. A risk analysis of each style was done and the bundle quantity was reduced. The team updated their skills matrix, developed a systematic operation bulletin, and monitored both WIP and DHU. They coordinated similar styles to be done on the same production line.

Modules	New practices implemented
SL1 – Using the bundle system	The line layout suits production needs and factory layout, or is modified as needed if it is not the case. The material handling system suits the bundle system and line layout used in your sewing room, or is modified as needed if it is not the case. The material handling system used in the factory minimizes material transportation / handling time and worker fatigue in the sewing room.
SL4 – Setting new lines	A skills matrix is available and updated regularly to record workers' capacities (skills & performance). Work stations are prepared based on a pre-drawn flow plan, designed based on the operation bulletin. Potential reasons for line-setting delays are identified and eliminated in advance based on a checklist prepared by the line supervisor. Line-setting time is kept to one day maximum.
SL5 - Receiving materials	Issues helpers are trained in understanding MRN/BRINs and using them for material pick-up and storage. Issues helpers are trained in best receiving and storing practices, including the use of trolleys, and in feeding the lines timely and appropriately.
SL8 - Line balancing	Line balancing is done by line supervisors systematically, before production through planning, and during production, daily. Hourly targets and minimum/ maximum WIP levels are set before production starts.
SL9 - Checking garments	Defects and lacks of conformity are carefully identified and recorded for all inspections.

Following are the KPI changes achieved during the pilot phase of the project.



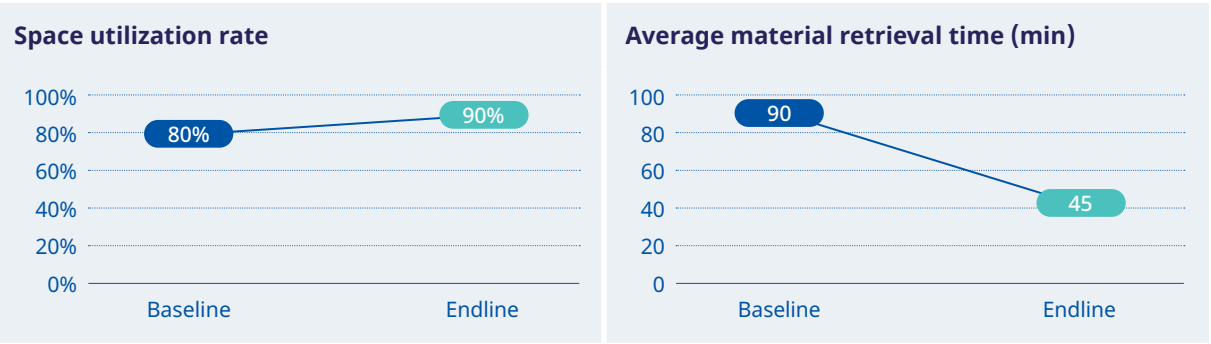
- The target line achievement increased by one per cent and can be attributed to better line balancing and WIP management.
- The initial defect levels were recorded at eight per cent, but further discussion led to the introduction of a new software which strengthened defect capturing. The defect rate reached 13 per cent during the first end line as a consequence of the more stringent capturing system and then reduced to 11 per cent on the final end line showing a continuous positive trend.

Factory FH

Top management in this factory showed a high level of involvement throughout the FIT project. The factory chose to utilize the store room modules initially and then extended the ERP access to all departments. Tagging systems and four-point fabric checking improved the visual layout and finishing room requisition systems improve accessory tracking. A high level of team engagement and enthusiasm was maintained throughout.

Modules	New practices implemented
ST1 - Receiving materials	There is a clear, detailed receiving procedure in place. Storeroom workers know each step of the receiving system and what their responsibilities are. Storeroom workers are trained to unload materials with care and protect them from damage
ST2 - Inspecting materials	There is a clear inspection system in place for fabric and trims. Inspection takes place after tagging, before storing. There is an inspection unit (team of inspectors / checkers) and a marked-out inspection area with signage set up in the storerooms. The 4-point inspection system is used to record fabric defects and to make the reject/accept decision.
ST3 - Storing materials	Materials are stored efficiently, safely, and in an organized way (examples: Specific sections, bin cards, colour codes, alley space, etc.). Shipment date is always considered first when storing new materials. Then, materials are stored by clear categories (colour, size, width, type, etc.). The FIFO storage system is used for standard items, and for fabric and trims after they have been stored by buyer, style and categories. Storeroom workers are trained to store all materials with care, following the agreed system.
ST4 - Record-keeping	There is a clear record-keeping system in place. The storeroom manager and other staff involved understand and respect this system. The information from the record-keeping system is shared with Merchandising for ordering and accounting purposes. Computerized inventory sheets are used to record material movement and balances for all the materials. They are updated every day.
ST5 - Issuing materials	There is a clear material-issuing system in place, handled by the storeroom manager/ clerks, that all departments are aware of and understand. Material requisition notes (MRNs) are used to requisition and issue materials. Workers involved know how to read and use MRNs. Material requisitions and materials pick up take place during specific timeslots in order to help everyone involved work more efficiently.

KPI changes achieved during the pilot phase of the project.



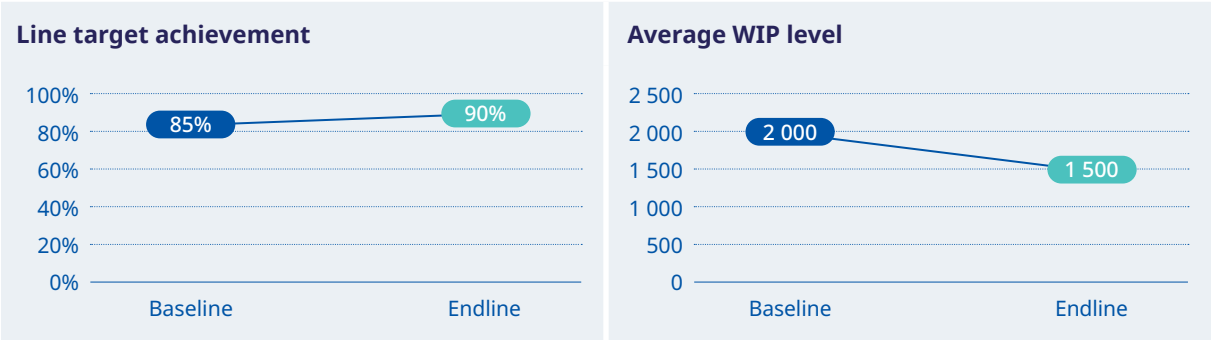
- Space utilization improved 12.5 per cent due to rearrangement and reorganization.
- Material retrieval time improved 66.6 per cent due to store re-organization and monitoring.
- The factory benefitted from implementation of a new four-point, fabric-checking system.

Factory AL

This factory has a small management team, no IE team, and no separate quality management system which meant it had the potential for extensive improvements. FIT was carried out in the sewing section and a new Time Study, SMV and Operation Bulletin was introduced. Bottle-neck capacity and loading-plans were improved along with new monitoring of target achievement, WIP and production. The team engagement improved throughout as progress was made.

Modules	New practices implemented
SL2 - Making an operation bulletin	There is an operation bulletin format that can be filled-in for each new style order for each line-by-line supervisors and/or sewing managers. Operations bulletins contain an operation breakdown, appropriate machine types and amounts, and SMV for each operation. SMV (Standard Minute Value) is calculated through time studies and / or existing measurements. A line sample is made to develop an accurate operation breakdown.
SL3 - Line planning	Required capacity is calculated for each order assigned to each line. Orders are scheduled monthly using line loading plans. Line loading plans are made based on calculated required capacity. Line operations are planned weekly or monthly using daily line plans. Daily line plans are made based on line loading plans. Available production capacity is compared with actual production capacity available, with the aim to improve efficiency.
SL7 – Tracking Production	Realistic, time-specific daily / hourly production targets are set before production starts for each style. Progress boards are used by supervisors and workers to track production throughout the day and ensure that daily targets are met. Progress boards can be seen by everyone in the line, and display style #, hourly / daily targets and progress towards the target. Daily sewing reports are used by the sewing room manager to record daily production for each line. Production reports are used by the sewing room manager to record daily progress and balance to completion for each order. When daily targets are not achieved, causes are identified (bottlenecks or inappropriate targets?) and solutions discussed, agreed and implemented.
SL8 - Line balancing	Line balancing is done by line supervisors systematically, before production through planning, and during production, daily. During production, line balancing is carried out regularly (hourly or bi-hourly). Hourly targets and minimum / maximum WIP levels are set before production starts. Imbalances are identified based on recorded production and WIP levels and their causes analysed to find bottlenecks. Bottlenecks are systematically identified, then solutions selected to best address the causes.

KPI changes achieved during the initial pilot phase of the project.



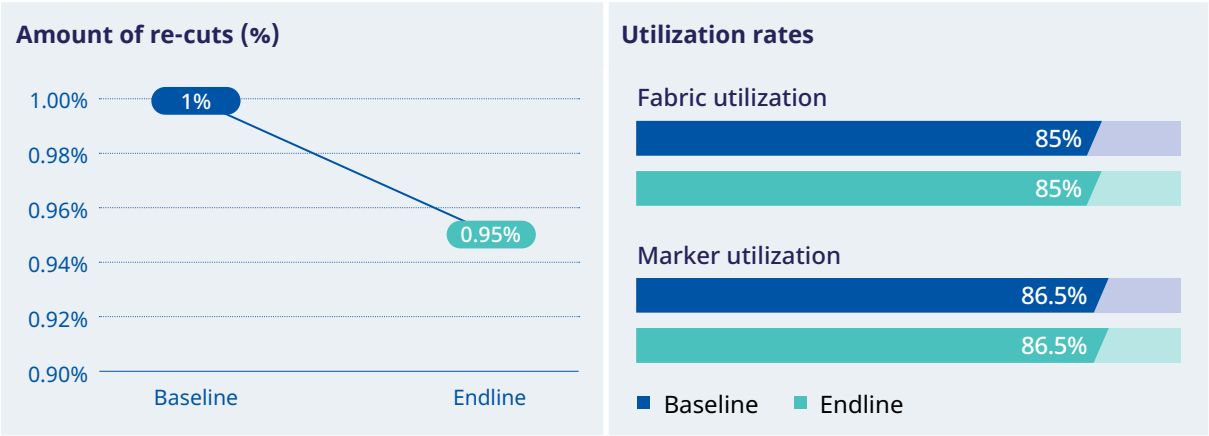
- The line achievement rate increased by five per cent and can be attributed to better line balancing and introduction of IE tools (operation bulletin and capacity-based balancing).
- The WIP level was reduced by 25 per cent due to better bottleneck management.
- The factory did not have the workforce to capture DHU production levels.

Factory GK

This factory team was interested in improving cutting room operations and was engaged throughout the program. Since the factory was vertically integrated, many action points involved the knitting stage. Diameter and GSM of knitted fabric was identified as an area for improvement. Training of laying helpers was addressed to improve bundling quality. 100 per cent cut panel checking was strengthened by setting checking method and training the QC regarding the checking SOP. A written report was introduced to strengthen quality levels from cutting to sewing.

Modules	New practices implemented
CR3 - Ensuring marker efficiency	Marker planners are trained in improving (maximizing) marker efficiency based on calculations.
CR5 - Spreading fabric	The type of spread and spreading mode is determined in advance based on the type of fabric that needs to be spread and cost considerations. Lay sheets are used to evaluate marker efficiency across cut orders and identify potential improvements.
CR7 - Preparing for sewing	Workers are familiar with marking symbols and use them consistently.
CR8 - Cut inspection	100% of cut parts and panels are inspected for cutting defects and fabric defects before numbering and bundling.
CR10 - Organizing the cutting room	The cutting room layout is clearly separated into clearly marked areas corresponding to different cutting room functions/operations.

KPI changes achieved during the pilot phase of the project.



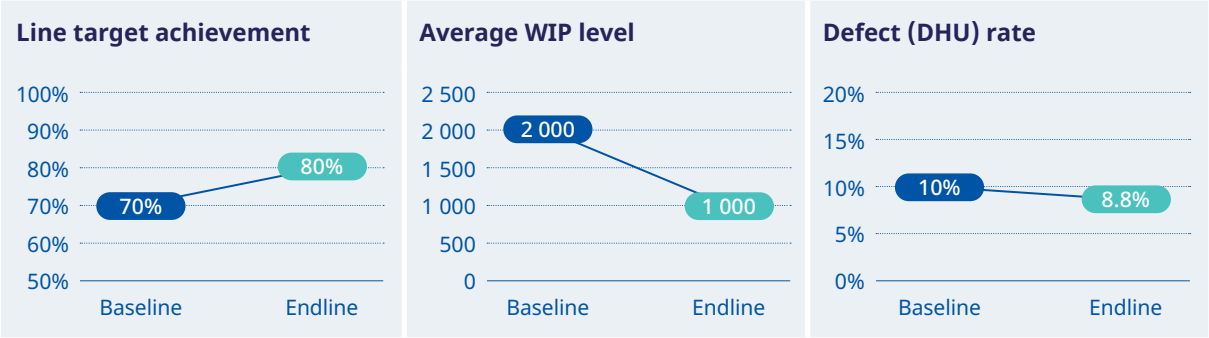
- The marker utilization rate increased 1.5 per cent which can be attributed to the introduction of the manual adjustment of auto makers after generation of markers. This resulted in substantial fabric saving. The factory could not track roll wise/ bale wise fabric utilization and thus, the marker utilization rate was also reported as the fabric utilization rate.
- The re-cutting percentage has decreased due to fabric issues being identified at the knitting stage and checking report was sent from knitting section to cutting. 100 per cent panel checking was strengthened.
- The order tracking was changed, and knitting was included in the same which led to less defects reported by the sewing section.
- This factory was still working on action points at the time of the end line assessment, therefore further improvement is expected.

Factory EK

The factory team did not have an industrial engineering (IE) department but has potential for improvement in both productivity and quality KPIs. The FIT project was piloted in the sewing section. Focused had been given to machine adjustment and preventive machine maintenance and machine storage was re-organized. They have introduced clockwise thread cutting, line balancing, hourly production board, and bundling size was adjusted to 20 pieces. The team engagement was average but improved with the progress of the modules. The team independently rolled out two of the remaining five modules in sewing department

Modules	New practices implemented
SL3 - Line planning	Required capacity is calculated for each order assigned to each line. Line loading plans are made based on calculated required capacity. Available production capacity is compared with actual production capacity available, with the aim to improve efficiency.
SL5 - Receiving materials	There is a clear inspection system in place for fabric and trims. Inspection takes place after tagging, before storing. There is an inspection unit (team of inspectors / checkers) and a marked-out inspection area with signage set up in the storerooms. The 4-point inspection system is used to record fabric defects and to make the reject / accept decision.
SL7 – Tracking production	N/A
SL8 - Line balancing	Imbalances are identified based on recorded production and WIP levels and their causes analysed to find bottlenecks. Bottlenecks are systematically identified, then solutions selected to best address the causes.
SL9 - Checking garments	There is a clear material issuing system in place, handled by the storeroom manager / clerks, that all departments are aware of and understand. Material requisition notes (MRNs) are used to requisition and issue materials. Workers involved know how to read and use MRNs. Material requisitions and materials pick up take place during specific timeslots in order to help everyone involved work more efficiently.
SL10 – Organizing the sewing Room	The sewing room's layout is clearly separated into sewing lines that start near the cutting room and end by the finishing rooms

KPI changes achieved during the pilot phase of the project.



- Line achievement rate increased by approximately 15 per cent and can be attributed to better line balancing and introduction of IE tools like an operation bulletin.
- The WIP level reduced 50 per cent due to better bottleneck management in the line.
- DHU levels were monitored only for the pilot line and came out to a 12 per cent reduction. This was due to a new clockwise checking mechanism. The factory is now working on initiatives for further reduction.

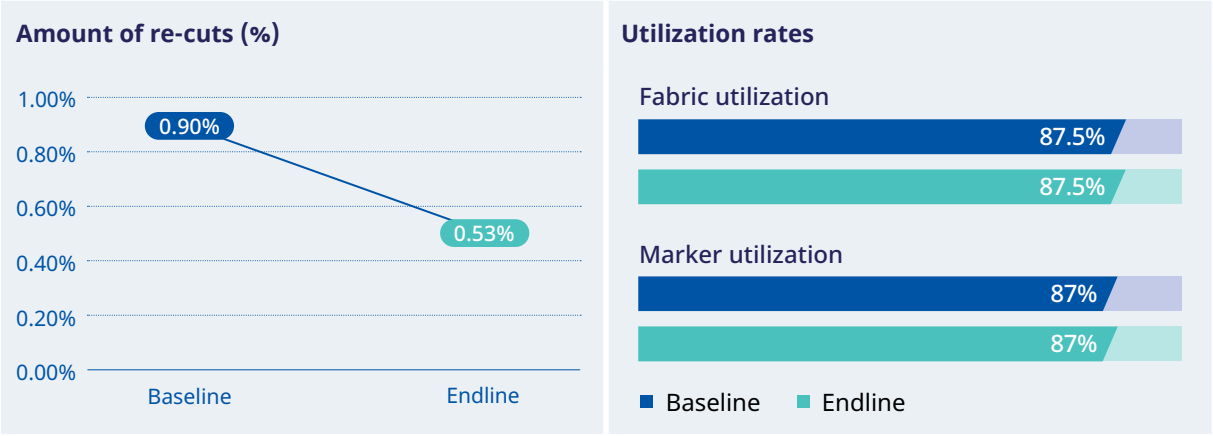
Factory DG

The factory team engaged with the FIT project and wanted to start with cutting room operations. They increased cutting capacity by increasing the number of cutting tables and fusing machines with relaxation racks. Communication with the merchandising team improved and this reflected in on-time approval receipt. Bundle size was reduced.

The team engagement was average. The management was briefed multiple times regarding the project objectives to streamline all stakeholders.

Modules	New practices implemented
CR1 - Planning for cutting	N/A
CR2 - Marker planning	N/A
CR3 - Ensuring marker efficiency	Marker planners are trained in improving (maximizing) marker efficiency based on calculations.
CR7 - Preparing for sewing	N/A
CR8 - Cut inspection	N/A

KPI changes achieved during the pilot phase of the project.



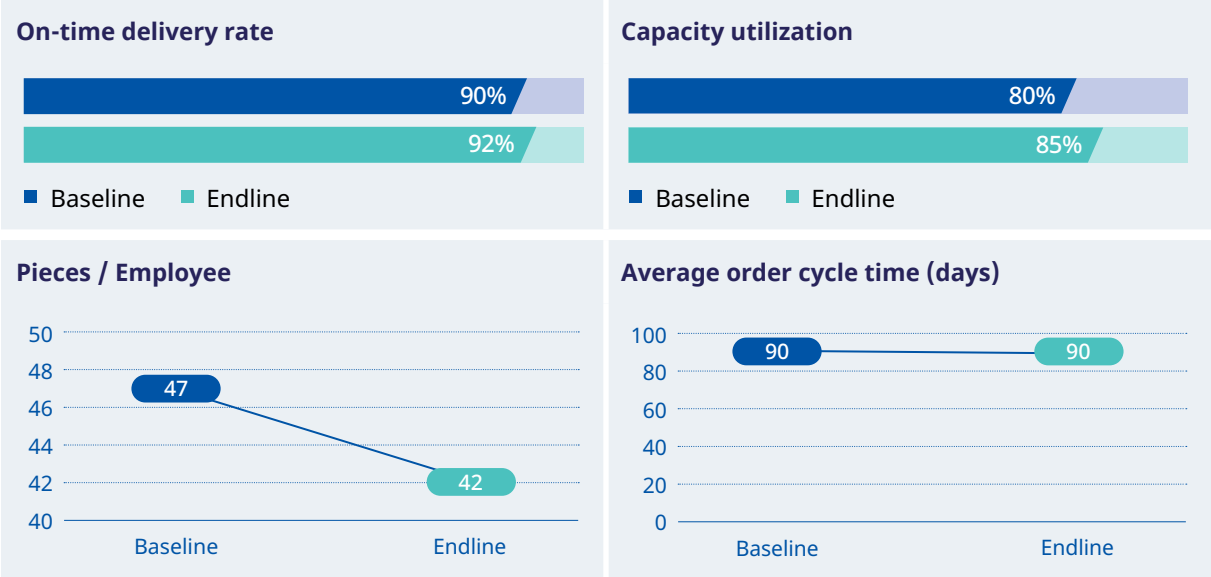
- The marker utilization rate decreased by 0.5 per cent and can be attributed to style variation during the endline data capturing. The factory could not track roll-wise/ bale-wise fabric utilization and thus, marker utilization was reported the same as fabric utilization.
- The re-cutting percentage decreased by more than 40 per cent. This data was not captured by the factory before and was introduced during the FIT project. The checking system was strengthened resulting in better panel-replacement and higher quality inputs to the sewing section.

Factory PC

This factory manufactures high-value leather bags and chose to implement production system modules. They improved priority planning based on targets and noted training needs though methodical assembly. Weekly KPI monitoring meeting were introduced.

Modules	New practices implemented
PR1 - Planning production	N/A
PR2 - Eliminating bottlenecks	Managers pay attention to common symptoms of bottlenecks in their departments, record it in a log sheet and address it as soon as possible.
PR3 - Measuring productivity	Factory management decides who will be responsible for collecting data, measuring indicators and when, and trains them adequately. Department managers review results daily and weekly to take immediate corrective action.
PR4 - Improving processes	The factory identifies which critical processes need to be improved in priority, then prepares an improvement plan with rankings. The factory decides in advance how to collect and track results to determine how efficient changes are, When the factory adopts the new changes, the new process is documented, standardized and communicated.
CP1 - Cleaner production 1: Reducing resources use	N/A

KPI changes achieved during the pilot phase of the project.



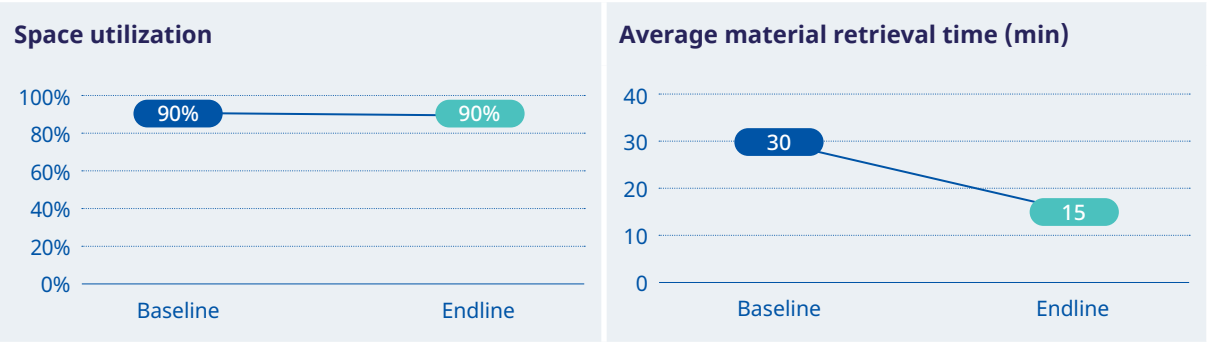
- The initial finishing line (post-assembly) was strengthened, which resulted in decreased audit failures and improved the on-time delivery rate.
- Machinery changes and workforce rebalancing resulted in improved capacity utilization.
- The productivity KPI (pieces/ person) decreased from 47 to 42 pieces/person. This can be attributed to a higher production work-load at the time of the end line.

Factory DA

The factory team had excellent engagement with the FIT project and implemented it within the storeroom. While compiling the final report, it was noted that the factory had already completed all the store room modules. During the pilot, they introduced dashboard-filling and storeroom maintenance. Overall organization was improved as higher-width fabric rolls were moved to the bottom shelves and lower-width rolls were placed on top. Bin cards were updated.

Modules	New practices implemented
SL2 - Making an operation bulletin	There is an operation bulletin format that can be filled-in for each new style order for each line-by-line supervisors and/or sewing managers. Operations bulletins contain an operation breakdown, appropriate machine types and amounts, and SMV for each operation. SMV (Standard Minute Value) is calculated through time studies and/or existing measurements. A line sample is made to develop an accurate operation breakdown.
SL3 - Line planning	Required capacity is calculated for each order assigned to each line. Orders are scheduled monthly using line loading plans. Line loading plans are made based on calculated required capacity. Line operations are planned weekly or monthly using daily line plans. Daily line plans are made based on line loading plans. Available production capacity is compared with actual production capacity available, with the aim to improve efficiency.
SL7 – Tracking production	Realistic, time-specific daily / hourly production targets are set before production starts for each style. Progress boards are used by supervisors and workers to track production throughout the day and ensure that daily targets are met. Progress boards can be seen by everyone in the line, and display style #, hourly/daily targets and progress towards the target. Daily sewing reports are used by the sewing room manager to record daily production for each line. Production reports are used by the sewing room manager to record daily progress and balance to completion for each order. When daily targets are not achieved, causes are identified (bottlenecks or inappropriate targets?) and solutions discussed, agreed and implemented.
SL8 - Line balancing	Line balancing is done by line supervisors systematically, before production through planning, and during production daily. During production, line balancing is carried out regularly (hourly or bi-hourly). Hourly targets and minimum/maximum WIP levels are set before production starts. Imbalances are identified based on recorded production and WIP levels, and their causes analysed to find bottlenecks. Bottlenecks are systematically identified, then solutions are selected to best address the causes.

KPI changes achieved during the pilot phase of the project.



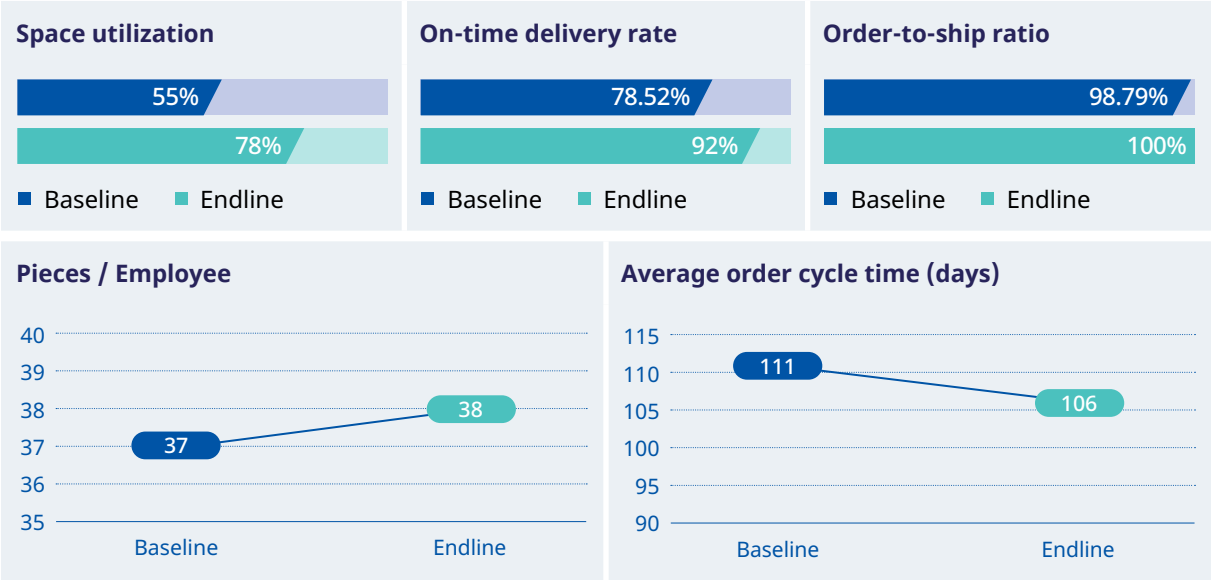
- The factory (based in Dhaka) had limited space and was already at an optimal space utilization.
- The material retrieval time improved by 50 per cent due to monitoring of retrieval time.
- Information flow improved as stores were informed along with cutting. As a result, the materials were ready on time for issuing.

Factory AX

The factory team was highly engaged and implemented production systems modules. This factory was unique from others in that it manufactures leather footwear, not garments. Both the material consumption and the reconciliation system were improved, and excess stock is now officially recorded. Sample hit rate improved and new section records were introduced.

Modules	New practices implemented
PR2 - Eliminating bottlenecks	After selecting solutions, management drafts an action plan listing actions to take, by when, who is responsible and a review date to assess effectiveness.
PR3 - Measuring productivity	N/A
PR4 - Improving processes	N/A
PR5 - Material productivity	N/A

KPI changes achieved during the pilot phase of the project.



- Implementation of new Industrial Engineering (IE) tools focused on method improvement and better line balancing, which resulted in higher capacity utilization.
- Machinery changes and workforce reallocation had an impact on the KPIs, which led to improved productivity.
- Initial post-assembly checking was strengthened, resulting in better audit-pass and on-time delivery rate. This also reduced the overall order lead time by four per cent.
- The order-to-ship ratio improved 1.2 per cent due to higher material utilization across departments.
- The team began monitoring new KPIs like cut-to-ship and material waste.

Cambodia

The table below lists the average baseline and end line results captured from the seven factories in Cambodia as well as the average variance (positive results in green). The tables that follow display each individual factory's module selection and improvements.

Positive variance Negative variance

Sewing room averages: Based on data from 3 factories

Modules include: SL3 - Line planning SL4 - Receiving materials SL6 - Stitching garments SL7 - Tracking production SL8 - Line balancing SL9 - Checking garments

	Line target achievement	Sewing room DHU	Average WIP
Baseline	64%	13%	43 267
Endline	80%	6%	11 483
%Change:	23.83%	-52.13%	-73.46%

Production system averages: Based on data from 3 factories

Modules include: PR1 - Planning production PR2 - Eliminating bottlenecks PR3 - Measuring productivity PR4 - Improving processes PR5 - Material productivity

	Factory's on-time delivery rate for the past month (in %)?	Capacity utilization	Order-to-ship ratio for the past month (in %)?	Average order cycle time / order lead time (days)?
Baseline	95.67%	90.50%	99.00%	32.5
Endline	99.17%	95.50%	99.67%	30
%Change:	3.66%	5.52%	0.67%	-7.69%

Staff management systems averages: Based on data from 3 factories

HR1 - Improving communication channels HR2 - Improving communication skills HR3 - HR management 1 HR4 - HR management 2 HR5 - Training staff HR6 - Reducing turnover

	Turnover rate (%)	Absenteeism rate (%)	Overtime as a % of total hours worked
Baseline	6.62%	9.20%	95%
Endline	4.50%	7.18%	90%
%Change:	-32.02%	-22.02%	-5.26%

Finishing room averages: Based on data from 1 factory

Modules include: FN5 - Packing garments FN6 - Dispatching garments

	Finishing room's DHU	Shipment audit passing rate
Baseline	6.00%	98.00%
Endline	1.00%	100.00%
%Change:	-83.33%	2.04%

Cutting room averages: Based on data from 1 factory

Modules include: CR1 - Planning for cutting CR2 - Marker planning CR4 - Receiving fabric

	Fabric utilization	Marker utilization	Number of re-cuts
Baseline	85.00%	85.00%	1.00%
Endline	88.60%	92.00%	0.50%
%Change:	4.24%	8.24%	-50.00%

Health and safety averages: Based on data from 1 factory

Modules include: WC1 – Introduction to OSH

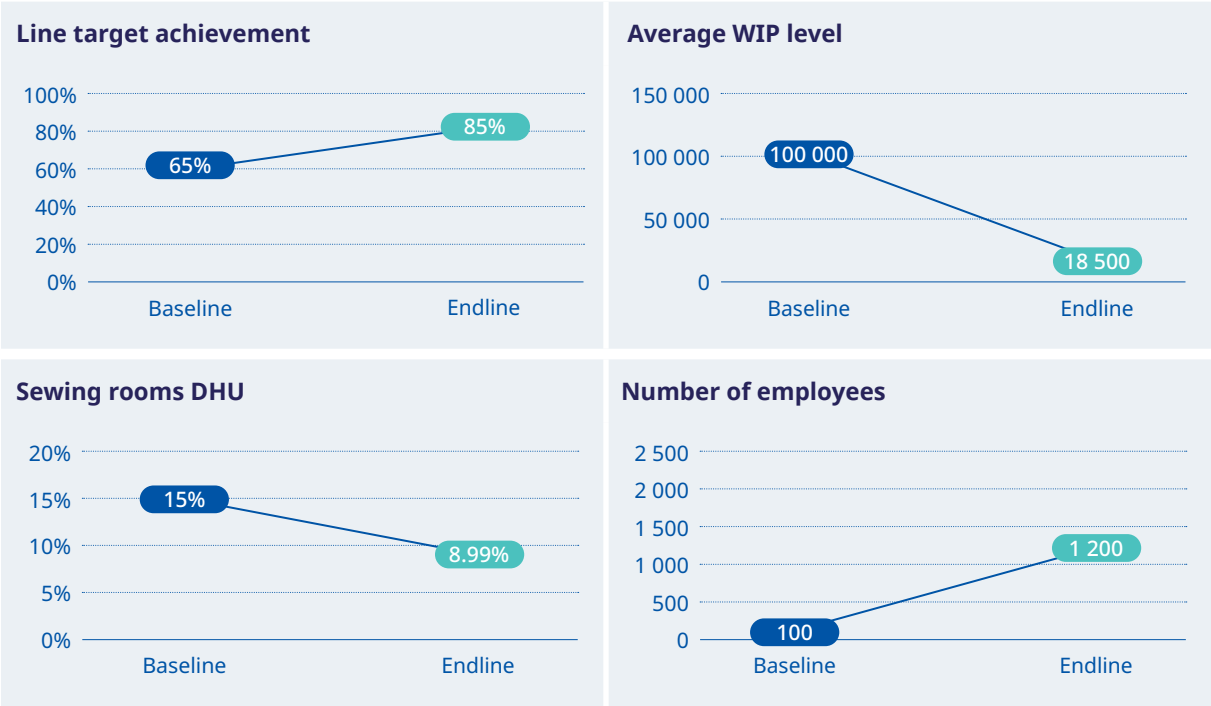
	# of accidents and near misses
Baseline	6.00%
Endline	1.00%
%Change:	-83.33%

Factory IA

The team was actively engaged. The production target greatly benefited from the program. Hourly reports were successfully introduced. The team shared challenges with the IE team which allowed both groups to work together to find solutions and drive improvements in the sewing line.

Modules	New practices implemented
SL3 - Line planning	N/A
SL4 - Setting new lines	A skills matrix is available and updated regularly to record workers' capacities (skills & performance).
SL6 - Stitching garments	N/A

KPI changes achieved during the pilot phase of the project.



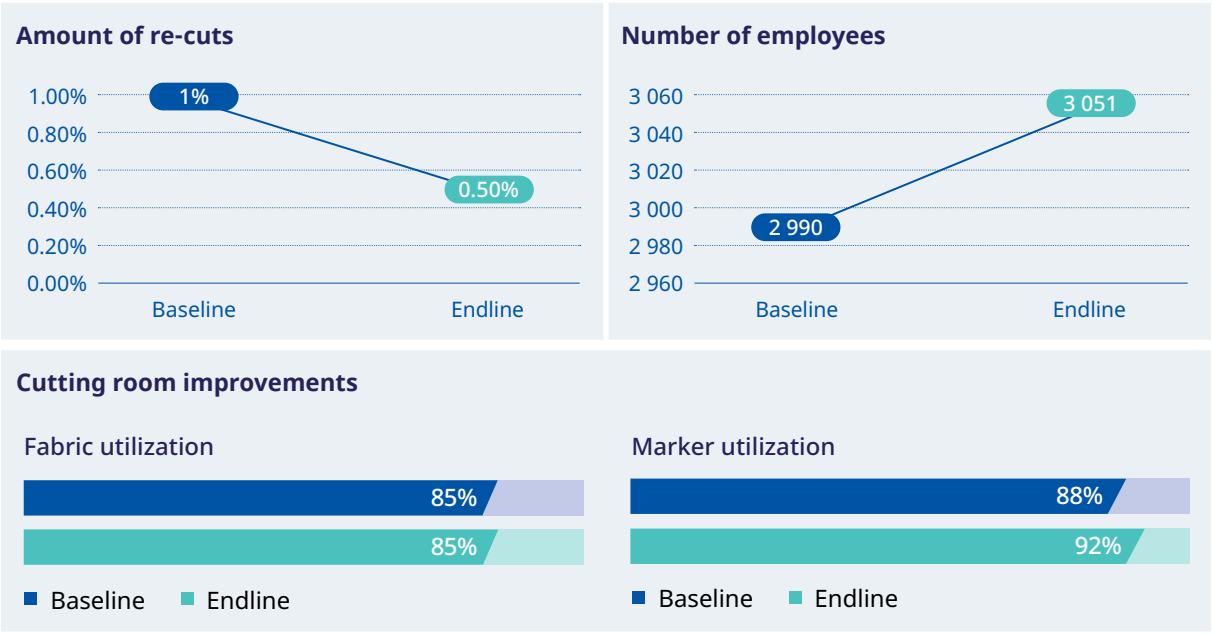
- Target achievement improved due to greater involvement including sharing sewer shipment details.
- More consistent support is now offered to ensure timely issuing of materials.
- Quality improvements have been put in place to avoid defected garments leaving the sewing line and being taken to the finishing room.

Factory BR

This factory made a variety of process improvements throughout the program. Better follow-ups and communication were established between supervisors and marker makers. A more methodical approach has been introduced in the cutting section.

Modules	New practices implemented
CR1 - Planning for cutting	N/A
CR2 - Marker planning	N/A
CR4 - Receiving fabric	N/A

KPI changes achieved during the pilot phase of the project.



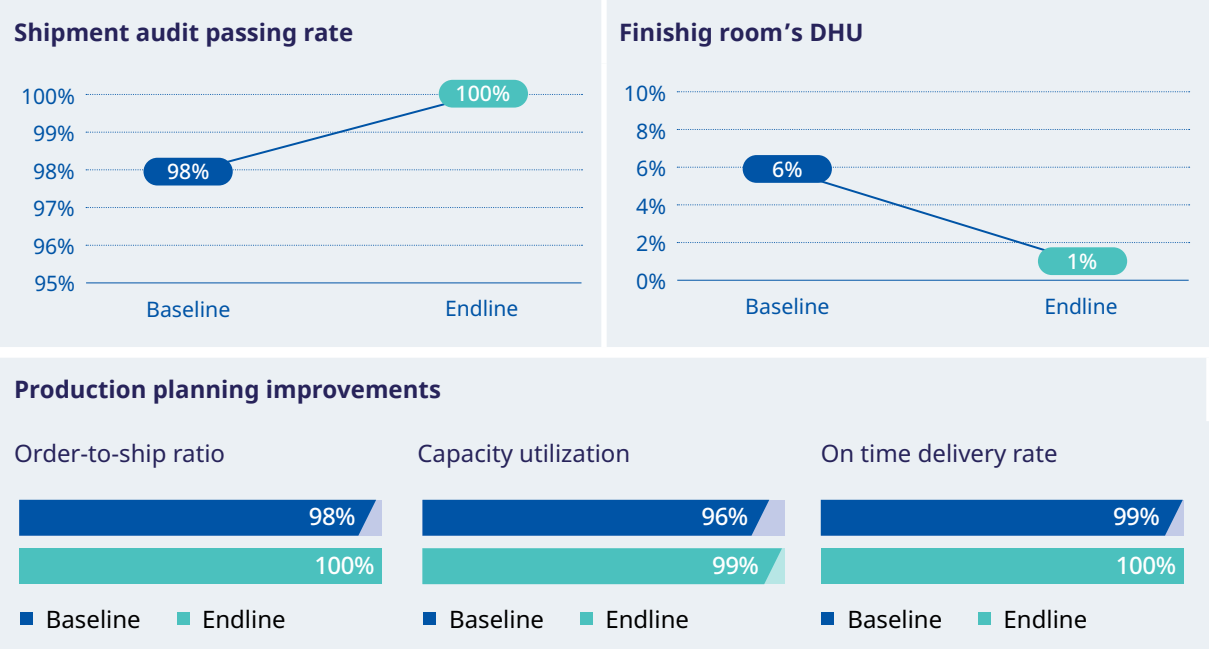
- A specific cutting plan was established with an SOP and improvements in the processes were made based on a gap analysis. This is reflected in both fabric and marker utilization.
- Quality assurance of materials improved which decreased the number of re-cuts.
- The warehouse was re-organized to be more efficient (supply now matches the planning).

Factory AA

The participating teams from different departments actively contributed to the modules and improved their performances in production planning and target achievements. The finishing department improved the DHU rate thanks to the proactive problem-solving approach.

Modules	New practices implemented
FN5 - Packing garments	A presentation check is carried out after packing / cartooning to ensure good presentation.
FN6 - Dispatching garments	N/A
PR1 - Planning production	Planning / merchandising schedules production tasks for each order.

KPI changes achieved during the pilot phase of the project.



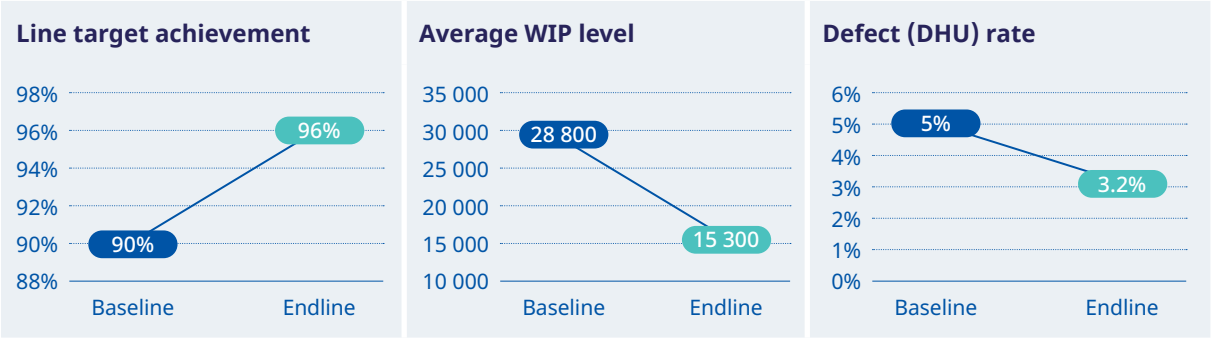
- Garment checking at the cartooning stage in accordance to packing ratio requirements was improved. Training of packing department staff was completed to improve their skills. The packing supervisor ensured the indication on the PO -Lot was implemented and reflected and improvements were recorded in DHU reduction and had an increased passing rate.
- Production planning improved the communication and data monitoring arranging meeting with relevant departments to ensure material availability based on planning. This improved the production performance.

Factory OV

The general operations in the sewing were improved based on streamlining of communication channels. Improvements were recorded while addressing systematically bottlenecks and improving in line quality checking procedures. The team proactively worked in analysing and identifying gaps to introduce additional checking points for critical operations.

Modules completed	New practices implemented
SL7 - Tracking production	Communication between Department have streamlined.
SL8 - Line balancing	Bottlenecks are systematically identified, then solutions selected to best address the causes.
SL9 - Checking garments	Line supervisors re-train operators to correct and prevent defects whenever a method defect is identified.

KPI changes achieved during the pilot phase of the project.



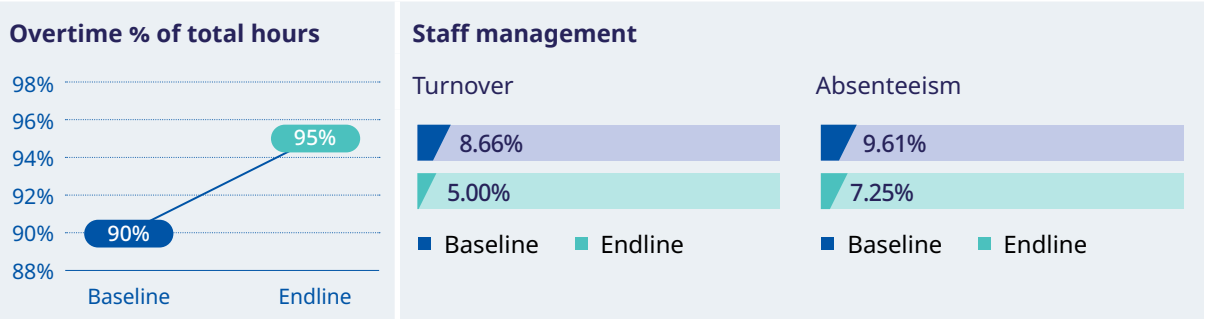
- New improvement initiatives include: Root cause analysis, target setting (based on the skill matrix), hourly follow ups, WIP tracking, production report board and improved training & motivation.
- DHU initiatives included: Root-cause analysis to identify problems involving different departments (ex. mechanics involved with missed stitches caused by a machine setting), training of workers on quality standards, and a group meeting to discuss and analyse repeated problems.

Factory TX

The main focus for this factory was to improve communication between different teams. The compliance manager shared "the Programme started in June 2021 and after the module was done, we could see that the communication gap improved and now employees and management are more open to talking and sharing information with each other."

Modules	New practices implemented
HR1 - Improving communication channels	Managers communicate information with workers and other managers on a regular basis or whenever needed. Managers / workers know what information needs to be shared with whom (workers / managers). Managers / workers use different channels to share information with others, taking into account on what information needs to be shared with whom. Managers / workers communicate information with workers / managers at the right time, and with the right frequency.
HR2 - Improving communication skills	Managers and workers listen to each other actively. Managers / workers communicate messages clearly and precisely, and make sure that workers / managers understand their message clearly. Managers and workers actively try to build trust with each other in the factory.
HR3 - HR management 1	HR staff prepare skills matrixes for each role, and has them filled in by supervisors to evaluate staff performance. HR staff use filled-in skills matrixes to identify how to improve employees' performance in the factory. HR staff use filled-in skills matrixes to select who should be promoted based on skills and performance level.
HR4 - HR management 2	HR uses pay slips to record and calculate wages and overtime. The factory has grievances submission and handling procedures. Grievances are addressed timely and decisions communicated to workers. HR systematically identifies ways to improve the working environment based on employees' suggestions.
HR5 - Training staff	The factory provides technical skills trainings for new hires and for workers who have the potential and want to improve their skills. The factory provides soft skills trainings for all employees in the factory.
HR6 - Reducing turnover	The factory systematically measures turnover and set targets to reduce turnover to an acceptable level. The factory works to identify the causes of turnover in the factory, for instance by performing exit interviews. There is at least one person within the management team responsible for implementing and monitoring solutions for reducing turnover.
WC1 - Introduction to OSH	Workers are consulted to help identify hazards in each area of the factory and give feedback on how effective measures taken are. The factory records the number of accidents and near-misses in the factory to evaluate how effective measures are and what more could be done.

KPI changes achieved during the pilot phase of the project.



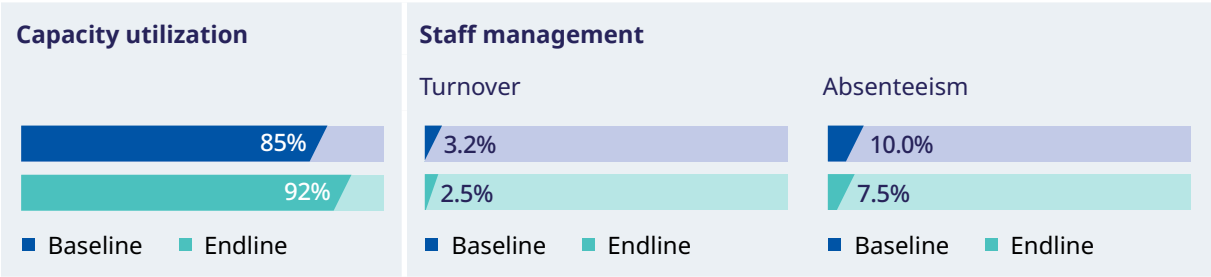
- HR modules improved communication by highlighting the benefit of lower absenteeism with workers.
- A board is now utilized to update workers on on-going procedures as well to provide transparency and updates to grievances.

Factory CS

Communication and production systems were the chosen area of intervention for this factory. Participants showed high interest in the Programme and achieved improvements in a short period of time. The factory director found FIT to be great at improving productivity by reducing unnecessary processes. He appreciated how it did not require major changes to existing systems and policies.

Modules	New practices implemented
HR1 - Improving communication channels	Managers / workers know what information needs to be shared with whom (workers / managers). Managers / workers use different channels to share information with others, taking into account on what information needs to be shared with whom. Managers / workers communicate information with workers / managers at the right time, and with the right frequency.
HR2 - Improving communication skills	Managers and the factory encourage workers to communicate with them – formally and informally. Managers / workers communicate messages clearly and precisely, and make sure that workers / managers understand their message clearly. Managers and workers actively try to build trust with each other in the factory.
PR1 - Planning production	Planning / Merchandising uses a time & action calendar to schedule production for each order and identify areas for improvement. Factory Management makes a daily production report for each order every day.
PR2 - Eliminating bottlenecks	After selecting solutions, management drafts an action plan listing actions to take, by when, who is responsible and a review date to assess effectiveness.
PR3 - Measuring productivity	Factory management decides which indicator will be measured how, and prepares forms to collect information for each indicator.
PR4 - Improving processes	The factory decides in advance how to collect and track results to determine how efficient changes are.

KPI changes achieved during the pilot phase of the project.

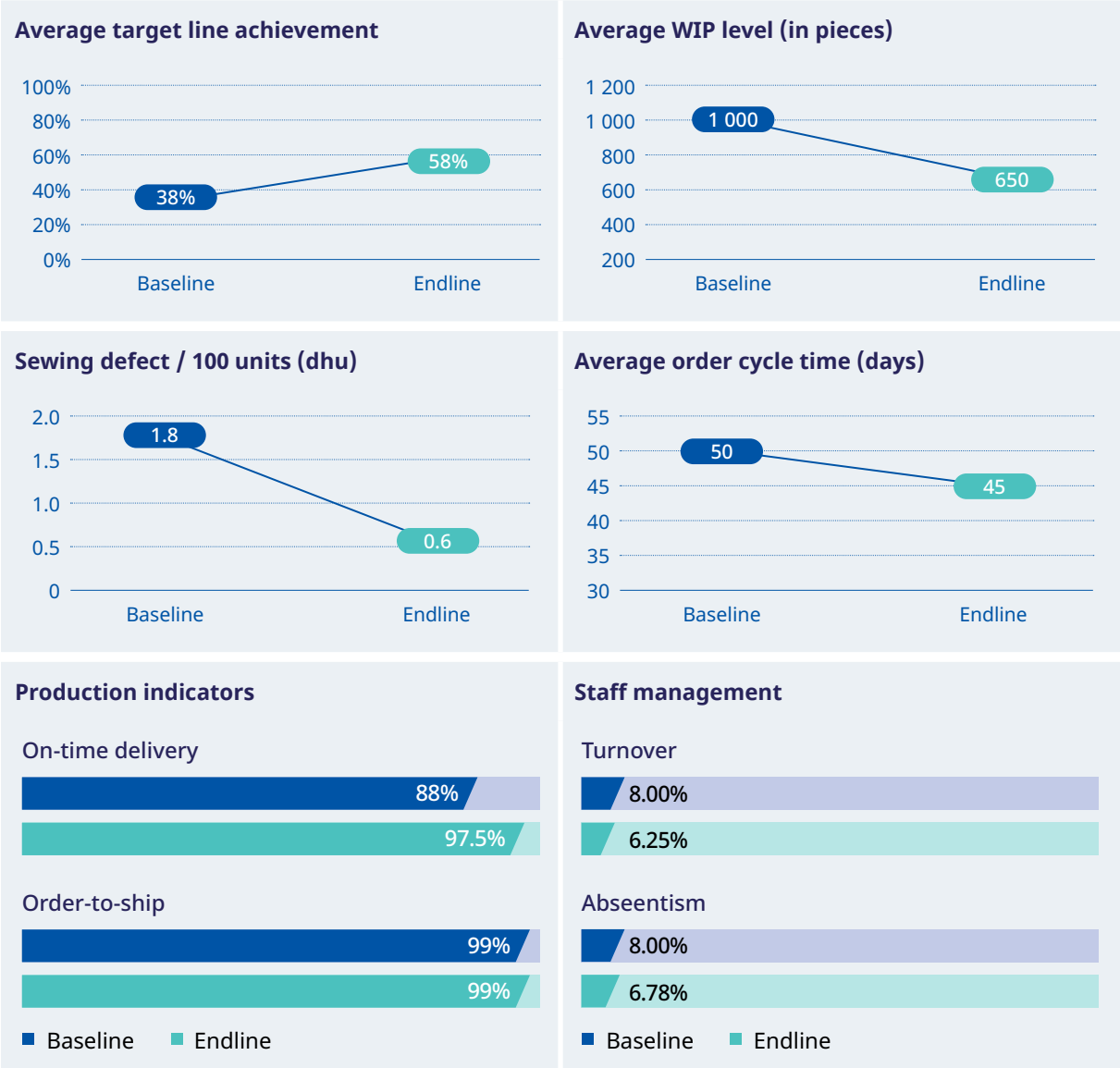


- A new meeting was initiated to share achievements and challenges which contributed to the increase in capacity utilization.
- Hourly data entry, consistent follow up and teamwork helped ensure equipment and materials met requirements and equipment was ready for use.
- Skills assessments and regular trainings were identified as areas for improvement in the production department.

Factory Q&A

Modules	New practices implemented
SL8 - Line balancing	N/A
HR1 - Improving communication channels	N/A
PR2 - Eliminating bottlenecks	N/A

KPI changes achieved during the pilot phase of the project.



- Hourly output reports led to increased control on target achievement as well as an improvement in on-time delivery and reduced order-cycle time.
- WIP and line balancing were kept under control.
- DHU reduced due to activities focused on improving machine maintenance.
- Worker absenteeism and turnover benefited from improved communication. Managers made a conscious effort to motivate workers and clearly explain the consequences absences have on the production line.

Pakistan

The table below lists the average baseline and end line results captured from the ten factories in Pakistan as well as the average variance (positive results in green). The tables that follow display each individual factory's module selection and improvements.

Positive variance Negative variance

Store room averages: Based on data from 2 factories

ST1 - Receiving materials ST2 - Inspecting materials ST3 - Storing materials ST4 - Record keeping ST5 - Issuing materials ST6 - Organizing the storerooms

	Space utilization	Material retrieval time (min)
Baseline	81%	357.00
Endline	85%	104.00
%Change:	5.59%	-70.87%

Sewing room averages: Based on data from 3 factories

Modules include: SL1 – Using the bundle system SL2 – Making an operation bulletin, SL3 – Line planning, SL6 – Stitching garments, SL9 – Checking garments

	WIP Level	Defect (DHU) rate	Line target achievement
Baseline	5048	21%	81%
Endline	3933	16.83%	84%
%Change:	-22.09%	-18.58%	3.79%

Factory system averages: Based on data from 1 factory

Modules include: FS3 – Managing machinery

	Order cycle time / order lead time (days)
Baseline	37.5
Endline	32.5
%Change:	-13.33%

Sample room averages: Based on data from 1 factory

Modules include: SR4 - Organizing your sample room

	Sample turnaround time (hrs)	Sample hit rate (%)
Baseline	175	0.95
Endline	168	0.95
%Change:	-4.00%	0.00%

Cutting room averages: Based on data from 1 factory

Modules include: - Receiving fabric CR6 - Cutting fabric CR10 - Organizing the cutting room

	Fabric utilization (%)	Marker utilization (%)	Number of re-cuts (%)
Baseline	0.94	0.85	0.07
Endline	0.95	0.87	0.02
%Change:	1.06%	2.35%	-71.43%
	Average on-time delivery rate for the past month (%)	**Average capacity utilization for the past month (%)**	**Average pieces / employee**
Baseline	30.00%	85.00%	50 000
Endline	33.00%	86.30%	50 042
%Change:	10.00%	1.53%	0.08%

Environmental averages: Based on data from 1 factory

Modules include: CP2 - Cleaner production 2: Reducing waste and pollution

	Average material waste (Kg)	Average water consumption / worker (litres)	Average energy consumption / unit of production (kWh)
Baseline	91 057.66	1 681.77	2 050 521.5
Endline	81 419	976.5	1 901 721
%Change:	-10.59%	-41.94%	-7.26%

Staff management averages: Based on data from 3 factories

Modules include: HR5 - Training staff HR6 - Reducing turnover HR9-Critical Thinking & reasoning in factories HR10-Your Team's Purpose HR14- Teamwork in factories

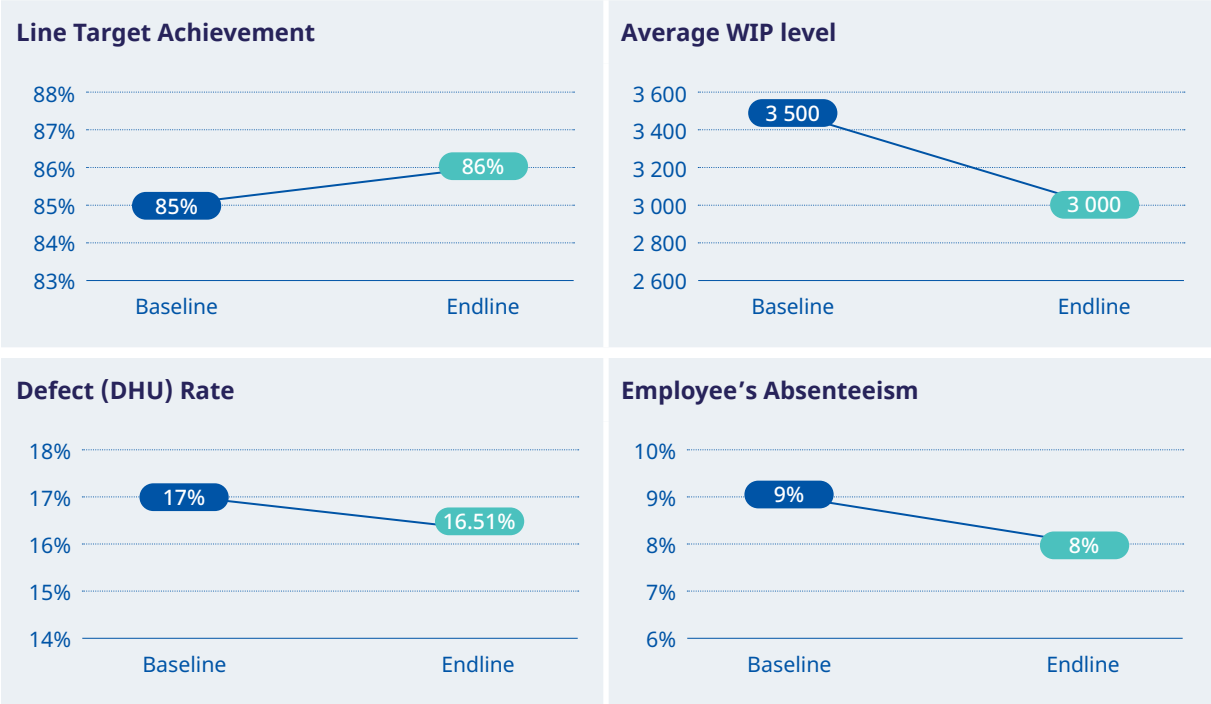
	Turnover	Absenteeism	Overtime as a % of total hours worked
Baseline	14.50%	11.33%	40.00%
Endline	15.23%	9.67%	32.00%
%Change:	5.06%	-14.71%	-20.00%

Factory ICM

The management took a very positive approach to FIT implementation and encouraged active participation.

Modules	New practices implemented
HR9-Critical thinking & reasoning in factories	Managers / workers know what information needs to be shared with whom (workers / managers). Managers / workers use different channels to share information with others, taking into account on what information needs to be shared with whom. Managers / workers communicate information with workers / managers at the right time, and with the right frequency.
SL3 - Line planning	The factory promotes for employees to evaluate the pros and cons to alternative solutions before taking decisions. The factory promotes for employees to evaluate whether their decision worked or not and adapt their decision if necessary.

KPI changes achieved during the pilot phase of the project.



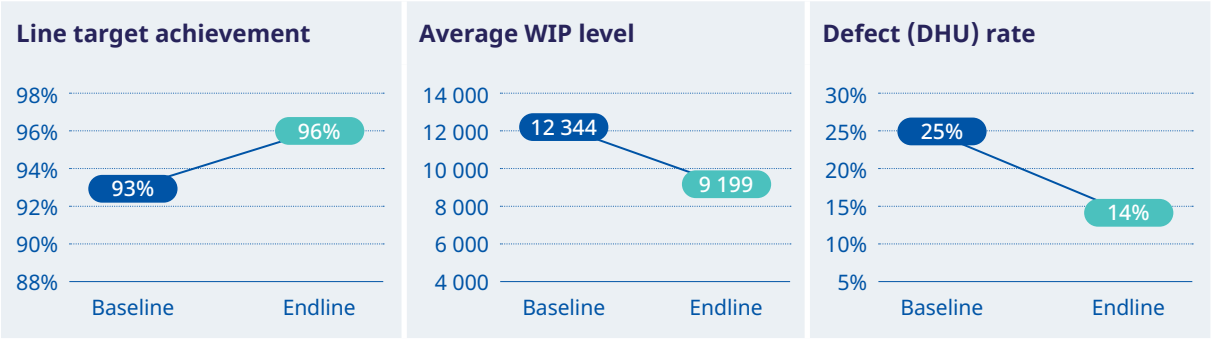
- Line target achievement and WIP improved based on introduction of checklists and a more methodical approach to style change-overs.
- Increased awareness of defects led to a slight reduction. DHU is now regularly discussed in the daily meeting.
- The HR9- critical thinking module improved the mechanics meeting which was then shared with other units. They are further planning to introduce statistical analysis of targets that will be presented on a biweekly basis during the daily meeting.
- The end line was captured only a month after the last module was conducted and therefore further improvements are still expected.

Factory AM

Overall implementation of the project was positive with key changes taking place in the stitching room. More stringent quality assurance practices were introduced and now third-party contractual workers are not necessary for re-working.

Modules	New practices implemented
SL1 - Using the bundle system	Seams, stitches, machines, work aids and needle size are selected based on the operations to perform, taking into account fabric type and thickness. Operators are trained in understanding markings properly and using them to carry out their operation. Operators are consistently trained in good and safe sewing practices. Potential sewing quality issues are identified for each style and precautions taken to avoid them.
SL2 - Making an operation bulletin	In-line and end-of-line inspections are carried out by checkers in each line. Defects and lacks of conformity are carefully identified and recorded for all inspections. Line supervisors work together with checkers to identify defects, their causes, and how to reduce them to improve quality. Line supervisors re-train operators to correct and prevent defects whenever a method defect is identified.

KPI changes achieved during the pilot phase of the project.



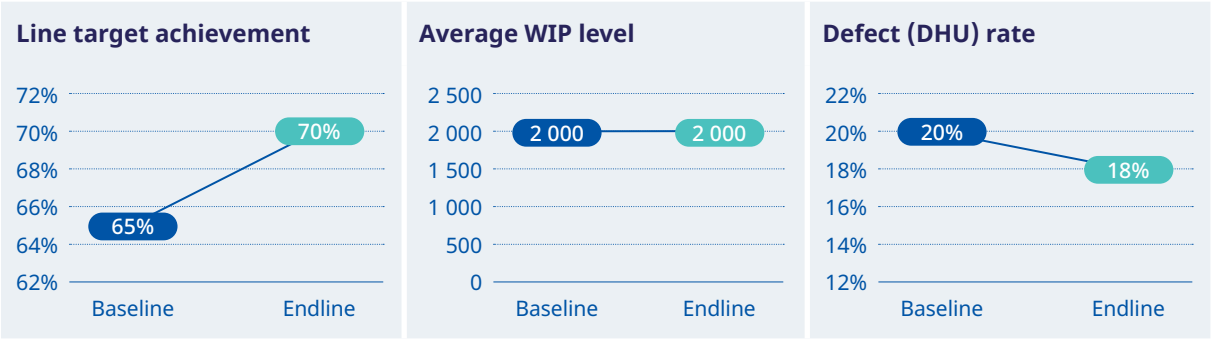
- Target achievements increased from 93 per cent to 96 per cent, Work in Process (WIP) reduced from 12,344 units to 9,199 units, and defects per hundred units (DHU) was reduced 44 per cent.
- Product and operational analysis supported a more effective line target achievement rate and reduction of WIP.
- The defect rate reduced due to changes in the monitoring system.

Factory MB

This factory selected the Bundle System & Making an Operation Bulletin where improvements were identified, bundle size was adjusted and methodical monitoring of SMV calculation and bulletin preparation were integrated through active team member participation.

Modules	New practices implemented
SL1 - Using the bundle system	The line layout suits production needs and factory layout, or is modified as needed if it is not the case. The material handling system suits the bundle system and line layout used in your sewing room, or is modified as needed if it is not the case. The material handling system used in the factory minimizes material transportation / handling time and worker fatigue in the sewing room. Workers are consulted to help managers evaluate whether the line layout and material handling system are convenient and reduce material handling time and worker fatigue.
SL2 - Making an operation bulletin	There is an operation bulletin format that can be filled-in for each new style order for each line-by-line supervisors and/or sewing managers. SMV is re-calculated at a target efficiency based on line efficiency estimations. A line sample is made to develop an accurate operation breakdown.

KPI changes achieved during the pilot phase of the project.



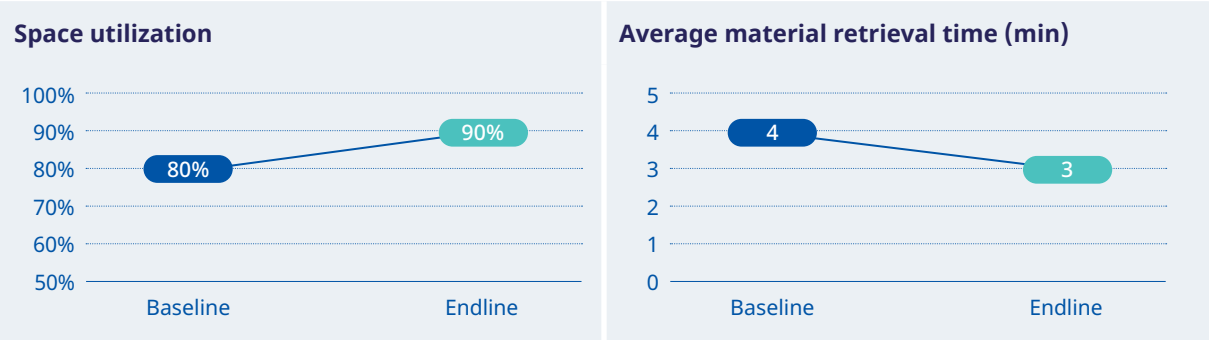
- Line target achievement increased along with improved SMV control improvements and bulletin monitoring.
- The defect rate was reduced due to new practices such as identifying shade-variations.

Factory SP

Workplace relations in this factory benefited from the FIT program. Workers felt more confident after being engaged in the activities and were able to effectively contribute to improvements related to reducing costs, saving time and enhancing productivity.

Modules	New practices implemented
ST1 - Receiving materials	N/A
ST2 - Inspecting materials	Fabric tests conducted to verify fabric quality and whether it is up to standards.

KPI changes achieved during the pilot phase of the project.



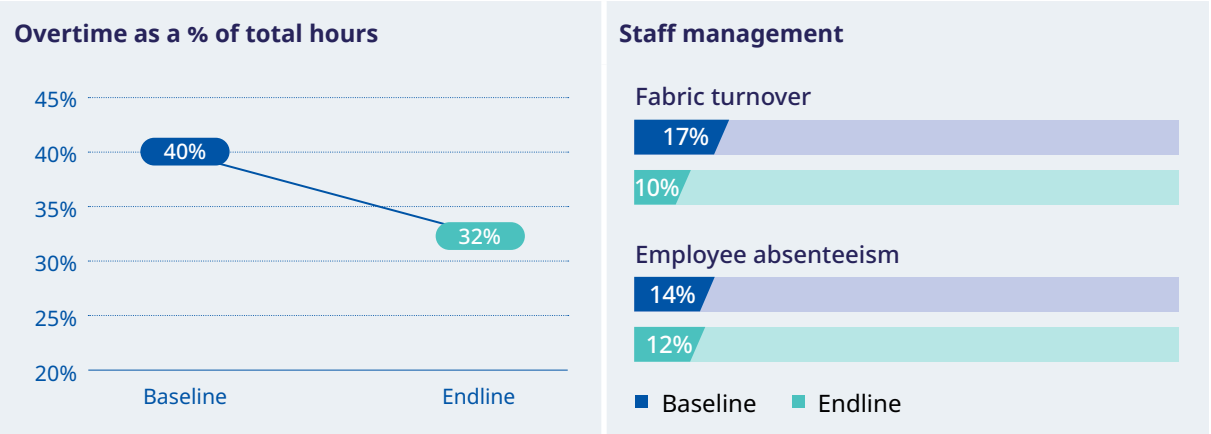
- Material storage was reorganized with the integration of proper tagging. This improved overall quality checks for incoming material.
- Time for issuing materials was reduced which increased department efficiency.

Factory AS

The team was engaged and actively participated, especially during the problem-solving module. Skills monitoring and lack of training were identified as challenges to address. The enterprise focused on the Training Staff and Reducing Turnover modules which led to a discussion on wages, transportation availability for employees, and allowances.

Modules	New practices implemented
HR5 - Training staff	The factory organizes induction trainings and factory tours for all new hires. The factory provides technical skills trainings for new hires and for workers who have the potential and want to improve their skills. The factory provides soft skills trainings for all employees in the factory. The factory uses different training methods, and selects the best method for each training, taking into account training content and trainees' level. The factory sets up a training plan listing who will be trained in what, using what method and by whom, as well as training time and location.
HR6 - Reducing turnover	The factory systematically measures turnover and set targets to reduce turnover to an acceptable level. The factory works to identify the causes of turnover in the factory, for instance by performing exit interviews. The factory strives to identify solutions to the different causes of turnover. The factory sets up an action plan to monitor and reduce turnover in the factory. There is at least one person within the management team responsible for implementing and monitoring solutions for reducing turnover.

KPI changes achieved during the pilot phase of the project.



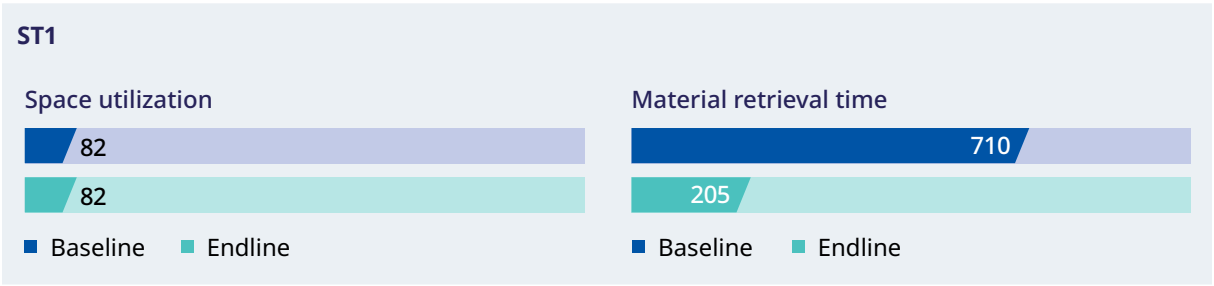
- Improvement of trainings and exit interviews supported the reduction of turnover.
- Hours of overtime decreased in line with turnover and absenteeism with a noted higher motivation of workforce.

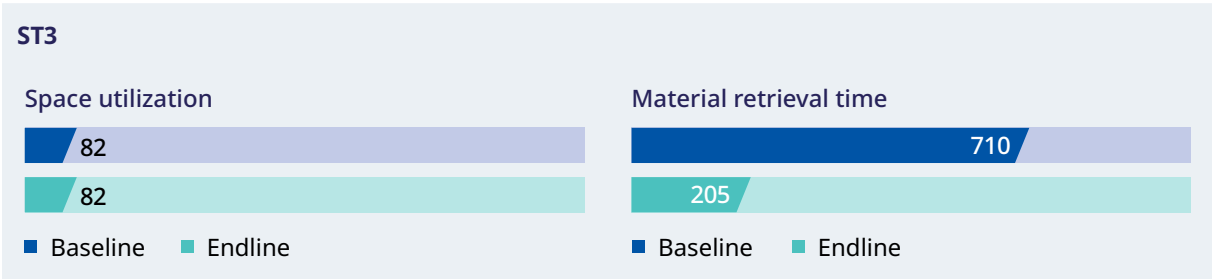
Factory HT

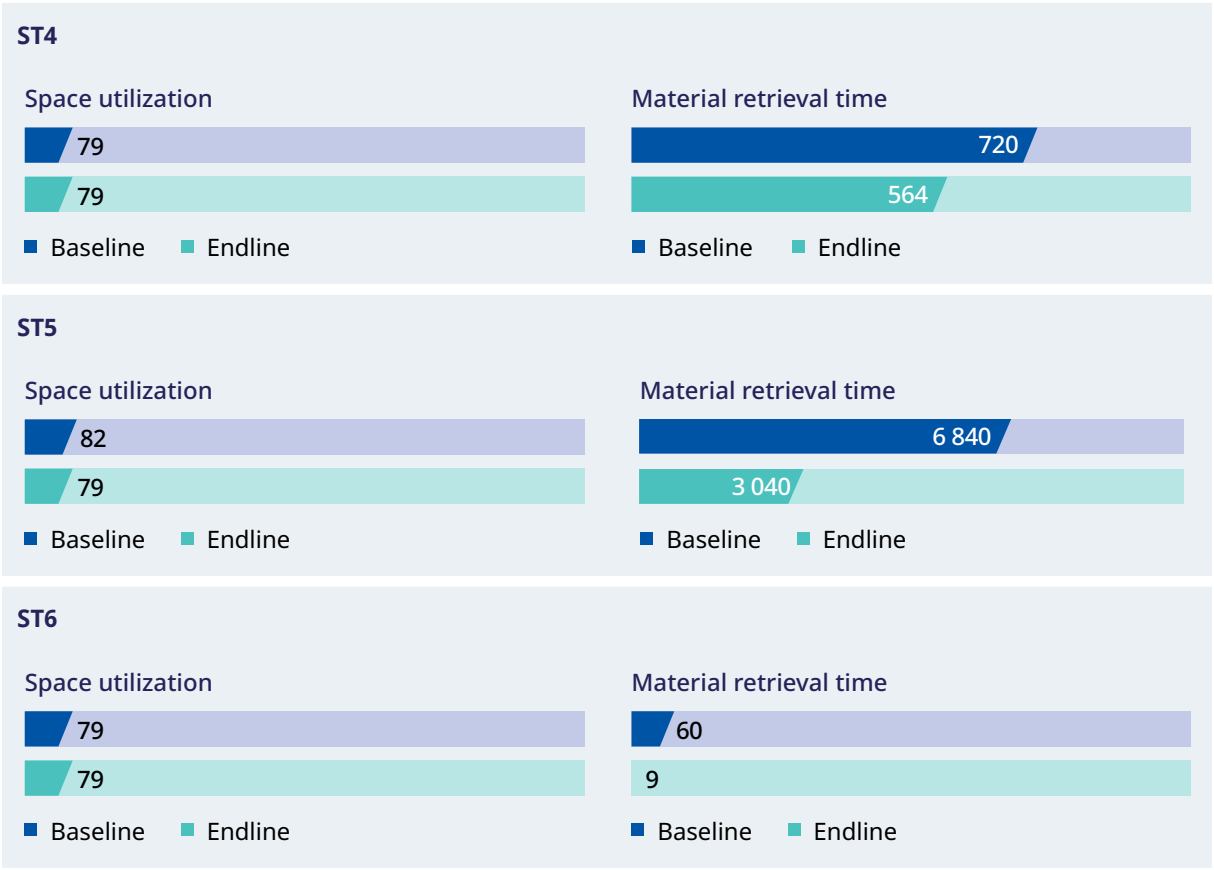
The enthusiastic and proactive participants in this factory completed four modules during the span of six months, actioning 25 initiatives for department improvements. In one month, the time in operational activities was reduced by 3,288 minutes (eight days). Fuel consumption was reduced by more than 35 per cent in the transportation of chemicals while excessive ordering was avoided, leading to three per cent additional space availability (40 sq. ft). The overall workplace was improved through new safety practices such as: Chemical containment, provision of trolleys for heavy drums, fire hazard risk mitigation, and PPE.

Modules	New practices implemented
ST1 - Receiving materials	Managers / workers know what information needs to be shared with whom (workers / managers). Managers / workers use different channels to share information with others, taking into account on what information needs to be shared with whom. Managers / workers communicate information with workers / managers at the right time, and with the right frequency.
ST3 - Storing materials	Managers and the factory encourage workers to communicate with them – formally and informally, Managers / workers communicate messages clearly and precisely, and make sure that workers / managers understand their message clearly. Managers and workers actively try to build trust with each other in the factory.
ST4 – Organizing your sample room	Tags are used to trace and identify materials through inspection, storing, record-keeping and issuing.
ST5 - Issuing materials	Planning / Merchandising uses a Time & Action calendar to schedule production for each order and identify areas for improvement. Factory Management makes a daily production report for each order every day.
ST6 - Organizing the storerooms	After selecting solutions, management drafts an action plan listing actions to take, by when, who is responsible and a review date to assess effectiveness.

KPI changes achieved during the pilot phase of the project.







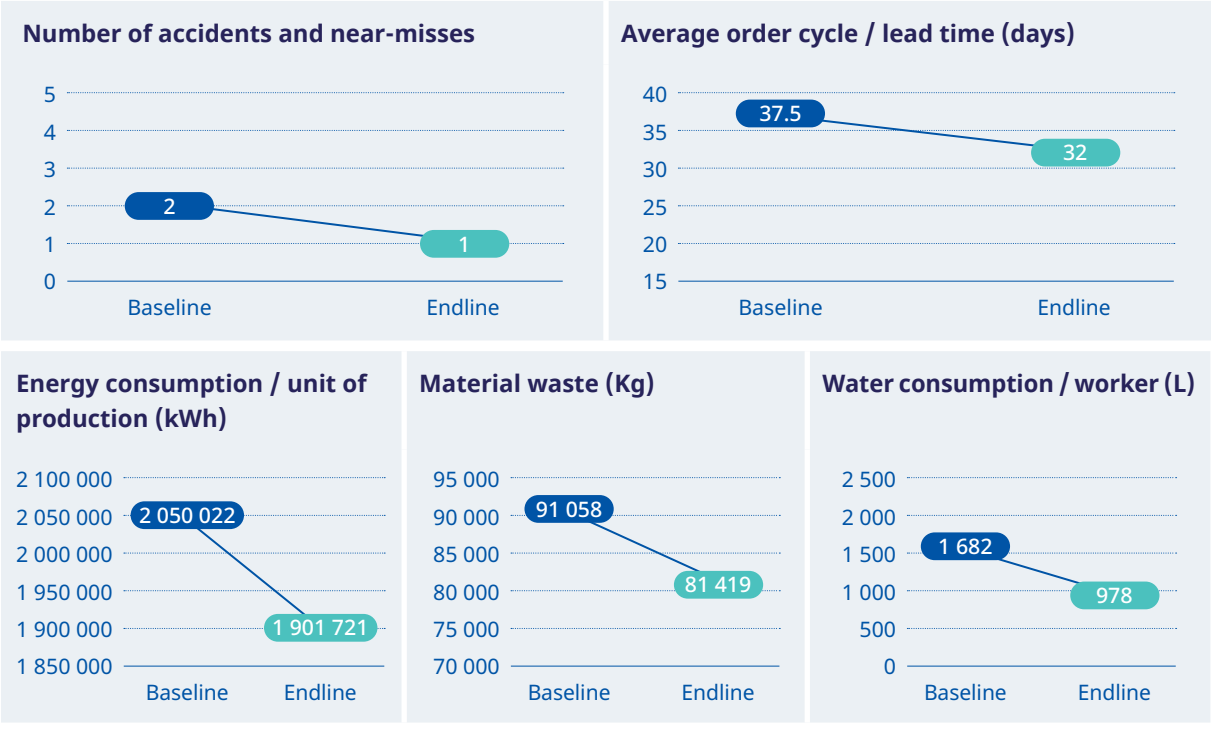
- FIFO and FEFO were introduced to better utilize stored material.
- Safety improvements made in chemical management, storing, and transportation.

Factory AF

This factory team has been highly involved in the FIT activities. The Problem-Solving module generated a number of initiatives covering diverse departments and issues such as: housekeeping, drinking water, lacking of trainings, PPE utilization, and machinery maintenance. The selected modules focused on managing machinery, water usage, and pollution.

Modules	New practices implemented
CP2 - Cleaner production 2: Reducing waste and pollution	Factory management systematically identifies the root causes of each source of waste / pollution prior to selecting solutions. Factory management selects and implements cleaner production solutions with time lines to address the root causes of pollution and waste.
FS3 - Managing machinery	The number of breakdowns and machine-related accidents and defects are recorded and measured regularly to assess machinery management. The factory aims to carry out zero breakdown maintenance by prioritizing preventive maintenance and scheduling it into the manufacturing day. Mechanics keep and update maintenance records and history cards for each machine. The card is attached to the machine. Managers, supervisors and workers work together to identify health & safety hazards for all machines and measures to address these hazards. All machines are equipped with appropriate guards of good quality. If guards are not enough, workers wear protective equipment.

KPI changes achieved during the pilot phase of the project.



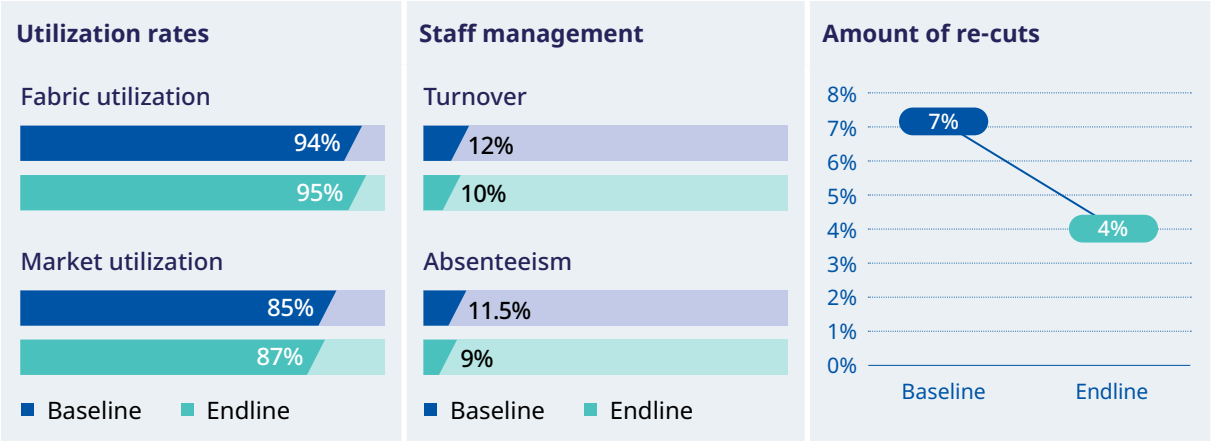
- Lack of awareness due to the unavailability of a training plan for maintenance people/staff has been addressed, reducing the accidents and near miss accidents.
- Machine maintenance was addressed with the creating of systematic checking activities and preventive control which supported the order execution and reduction of order cycle time.
- Material wastage have been addressed and awareness initiatives and measuring water utilization and material wastage lead to relevant improvements on both indicators.

Factory SW

The team identified cutting room shortfalls and teamwork challenges as the target areas to address. The cutting area was extremely disorganized with workflow being disrupted by both incoming and outgoing storage. Communication gaps and lack of teamwork were noted as contributing to workplace challenges.

Modules	New practices implemented
CR10 - Organizing the cutting room	N/A
HR14-Teamwork in Factories	The factory encourages to reflect on the role they take in their teams and the role taken by their colleagues. The factory encourages employees to reflect on the complementarity of team member. The factory encourages employees to actively work on becoming better team members.

KPI changes achieved during the pilot phase of the project.



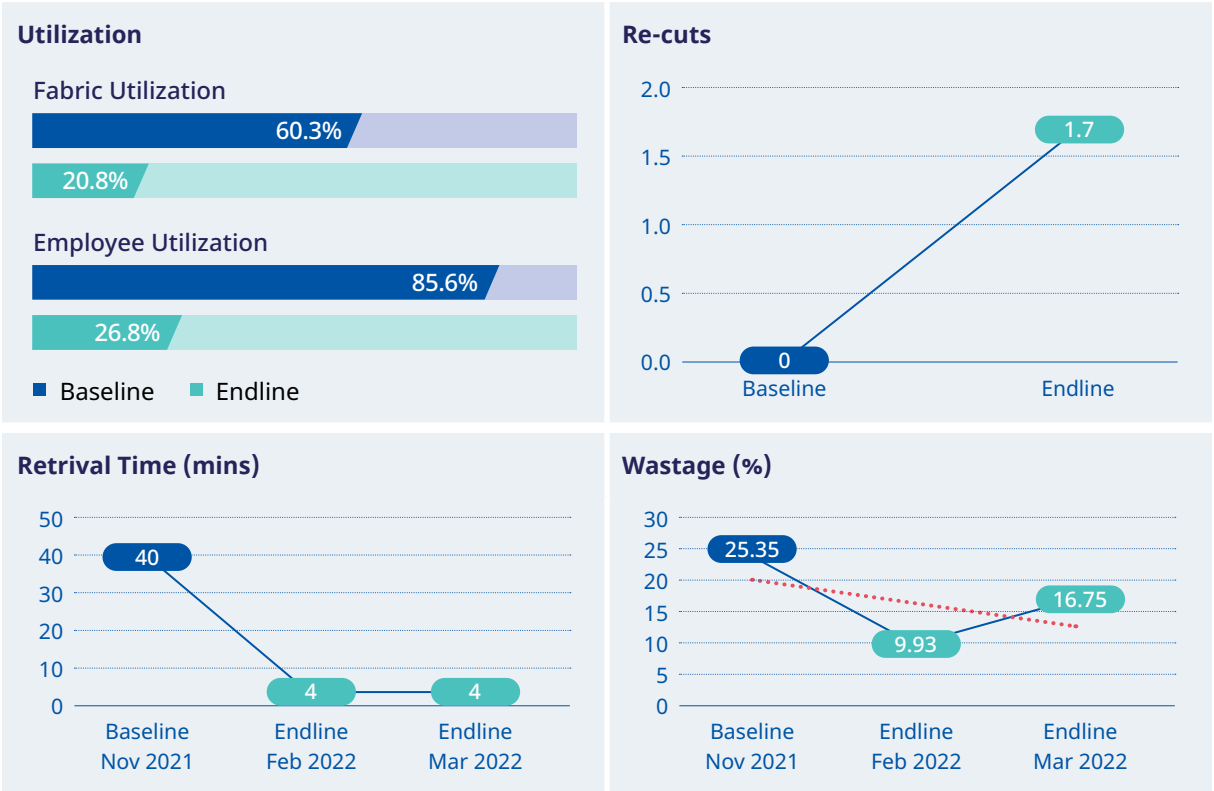
- The cutting room layout was reorganized and 5S was implemented to sustain the improvements. New areas included space for: Incoming fabric, cutting inspections, ready-to-inline, rejections, equipment and pattern hanging.
- Team members increased awareness of individual roles and responsibilities.
- Team members understood the relevance of support and positive interactions to improve performance.

Factory TL

In addition to the impressive decreases in waste and retrieval time, this factory developed a strong FIT team that has the capacity to run sessions independently moving forward. Moreover, the Programme encouraged workers and supervisors to review their everyday operations and identify bottlenecks and solutions. This was demonstrated by them contemplating the design of the fabric-checking table and resulted in them changing the layout of the cutting room to reduce time lost during loading. Although the team did not record recuts, their perception on classification of defects changes as they initially focused more on end-line defects instead of in-line defects.

Modules	New practices implemented
CR4 - Receiving fabric	Fabric is requested and picked up using Material Request Notes (MRN – Fabric). Cutting helpers are trained in understanding and using MRNs for fabric pick-up. Cutting helpers are trained in and in best receiving practices (including the use of trolleys) and in safe and efficient storing practices.
CR6 - Cutting fabric	Workers are trained in efficient cutting practices and on safety rules and procedures to protect them from harm. There are safety rules in place in the cutting room, first aid kits, and procedures for dealing with accidents. All accidents are recorded. Daily cutting reports are filled in every day to keep track of cutting room production and ensure daily targets are met. Cutting balance sheets are filled in every day to keep track of style-wise cut quantities and ensure targets are met and orders are completed.

KPI changes achieved during the pilot phase of the project.



- Both fabric and marker utilization declined due to less orders in the reporting months.
- Data on recuts was not recorded when the Programme started but a systematic process was developed based on FIT and data collection started in February.
- Waste decreased from 3.8 per cent at the beginning of February to 1.7 per cent in March.
- Additional improvements recorded by the external facilitator.
  - Reduced retrieval and loading time as tables were moved closer to input racks.

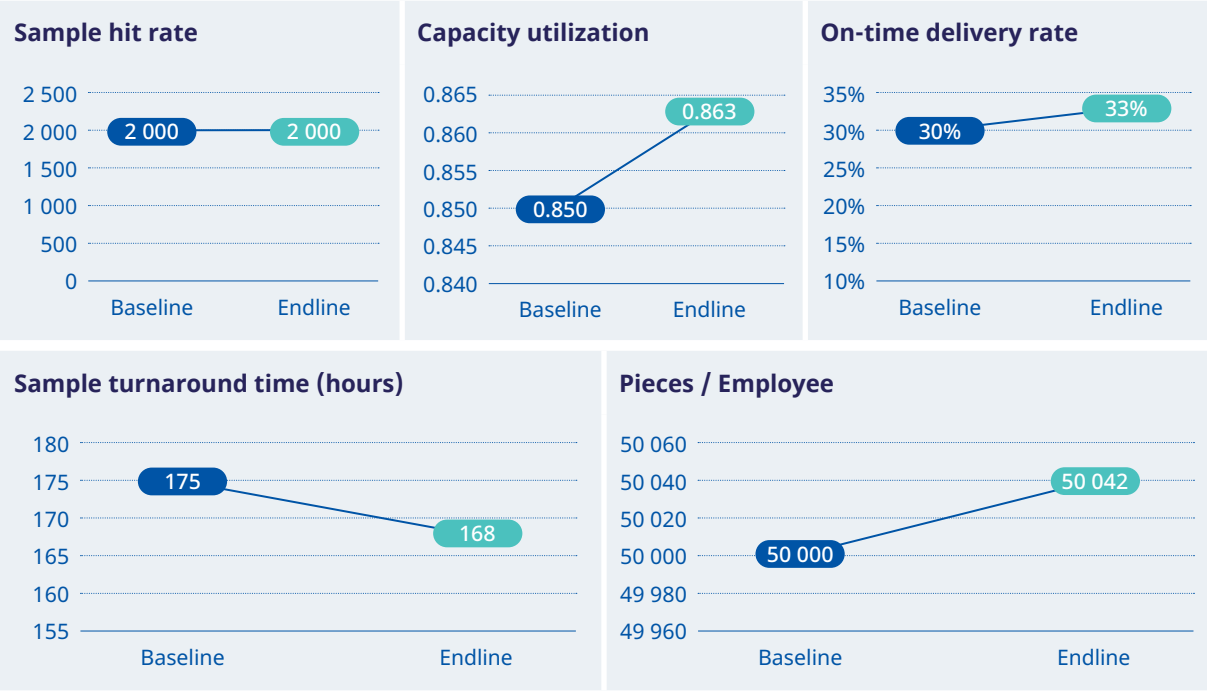
- Waste significantly declined due to additional quality checks.

Factory SJ

A team of about 18 people were trained in this factory for continuous improvement. Two small but important initiatives were successfully implemented after the Problem-Solving module. The first being that new shelves were provided for storing spare parts in the maintenance departments, which helped create space for the trolleys to move in front of the cargo lift. Secondly, calculation work in the Sample Room module impressed both the departmental heads and workers and is now being utilized more often.

Modules	New practices implemented
SR4 - Organizing your sample room	The sample room's layout is clearly separated into clearly marked areas corresponding to different sample room functions. The sample room's layout logically follows the sample room operation workflow. Everything in the sample room (materials, etc.) has its own place and is stored accordingly. Coloured markings are used to delineate specific sample room areas and pathways, and to keep workers safe by indicating dangers. The sample room is kept tidy and orderly at all times. Inspections are carried out regularly to ensure that the system is maintained.
PR4 - Improving processes	N/A

KPI changes achieved during the pilot phase of the project.



- The store room was reorganized with placement of items in designated places.
- Results will continue to be monitored in the longer-term as some are strictly correlated with customer responses and linked to their buying calendars.
- Staff was trained on SMV calculations, data collection and monitoring. Positive results were observed on both on-time delivery and the number of pieces increment.

Annex 3. Qualtrics dashboards (survey results)

Factory improvement toolset (FIT) programme: Trainee surveys

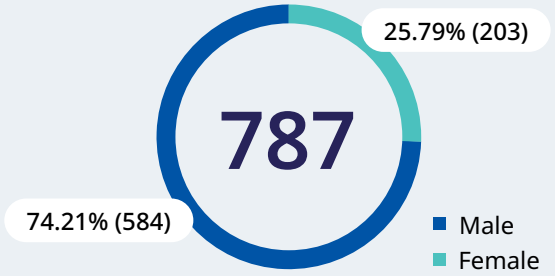
The following dashboard displays key results of surveys conducted with trainees as part of the FIT training programme conducted as part of the Decent Work in the garment supply chains in Asia project with pilot factories in Bangladesh, Cambodia, and Jordan.

This dashboard analyzes results from the Post-Module train survey.

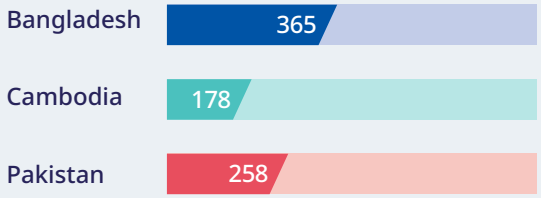
Number of survey responses (include repeats)

801

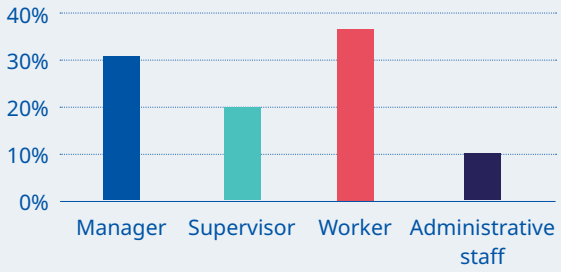
Gender breakdown of participants



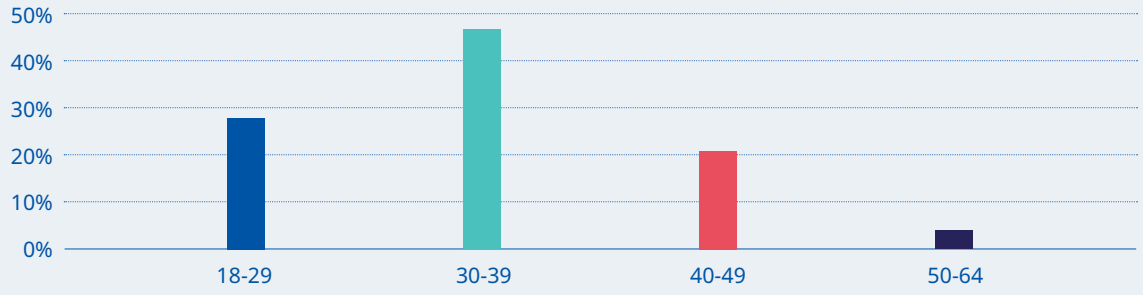
Country breakdown (801)



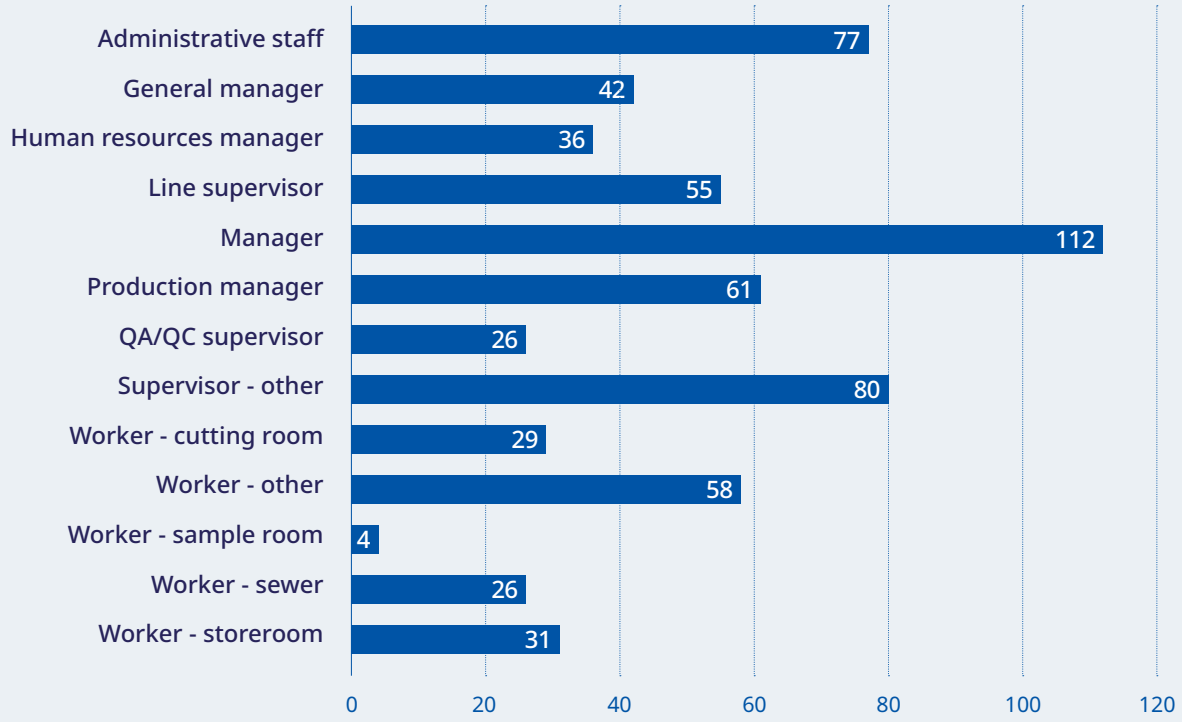
Job title of participants (797)



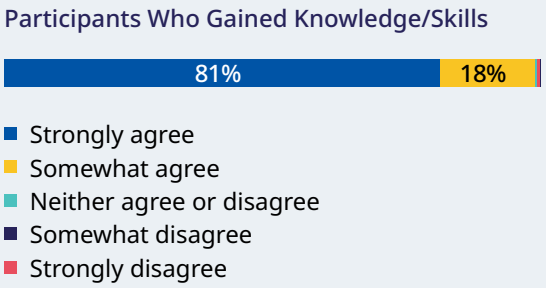
Age of participants (800)



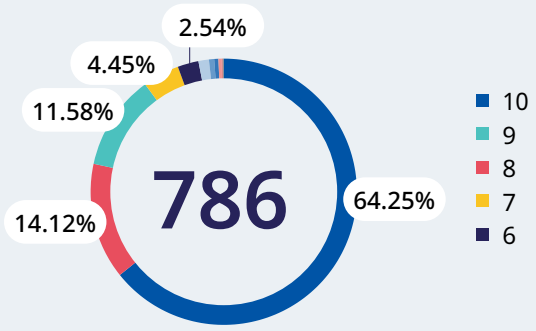
Job breakdown (797)



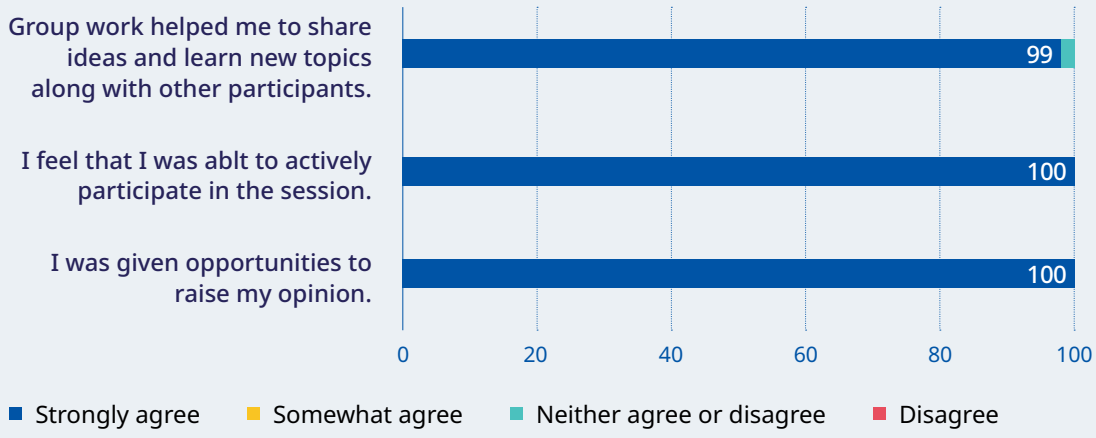
Trainees that gained knowledge/skills (780)



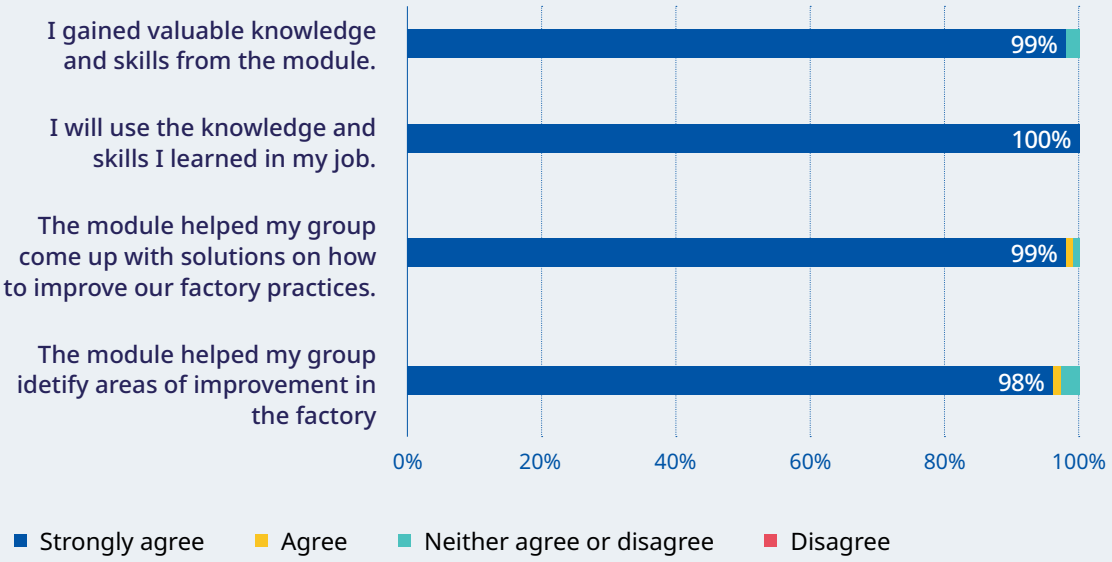
On a scale of 1-10, how likely are you to recommend FIT?



Workers agree... (780)



Workers agree... (780)

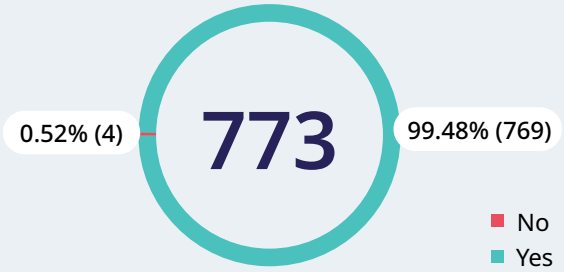


Overall rating of training session (779)

9.24

★★★★★★★★★½

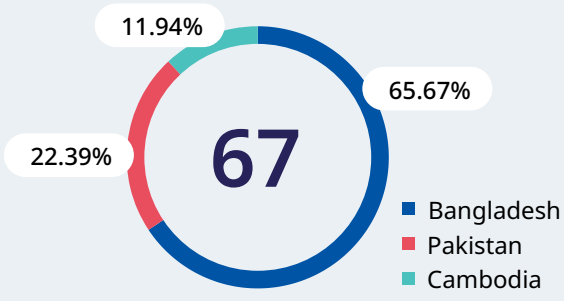
Future interest in FIT training (773)



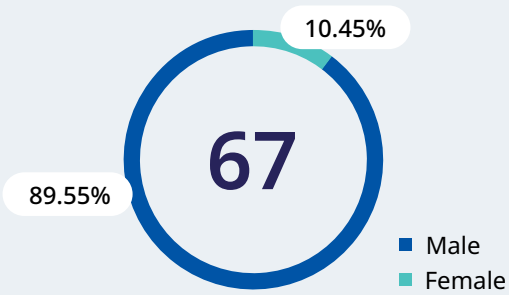
FIT manager

Count

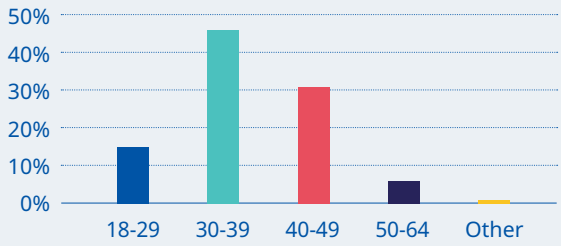
Country (67)



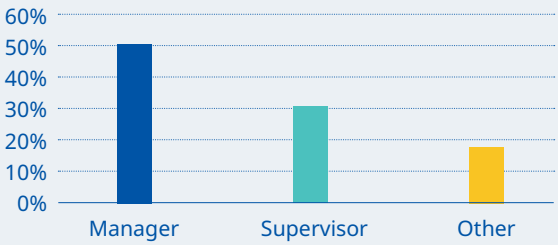
Gender (67)



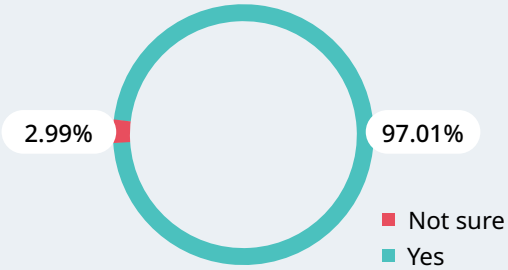
Age (67)



Job title (67)



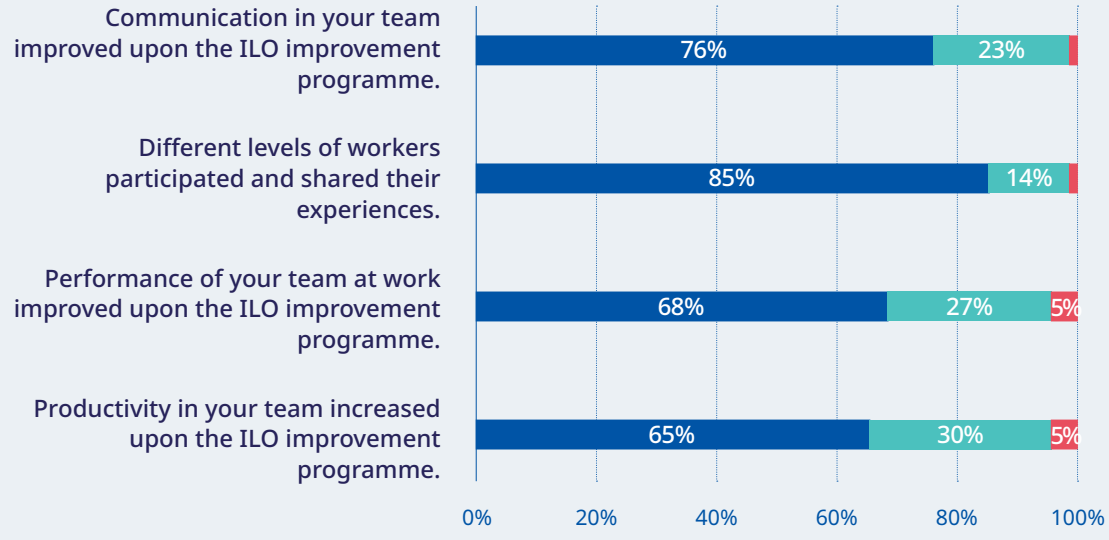
Have you noticed positive changes in your team that you contribute to FIT?



Satisfaction level

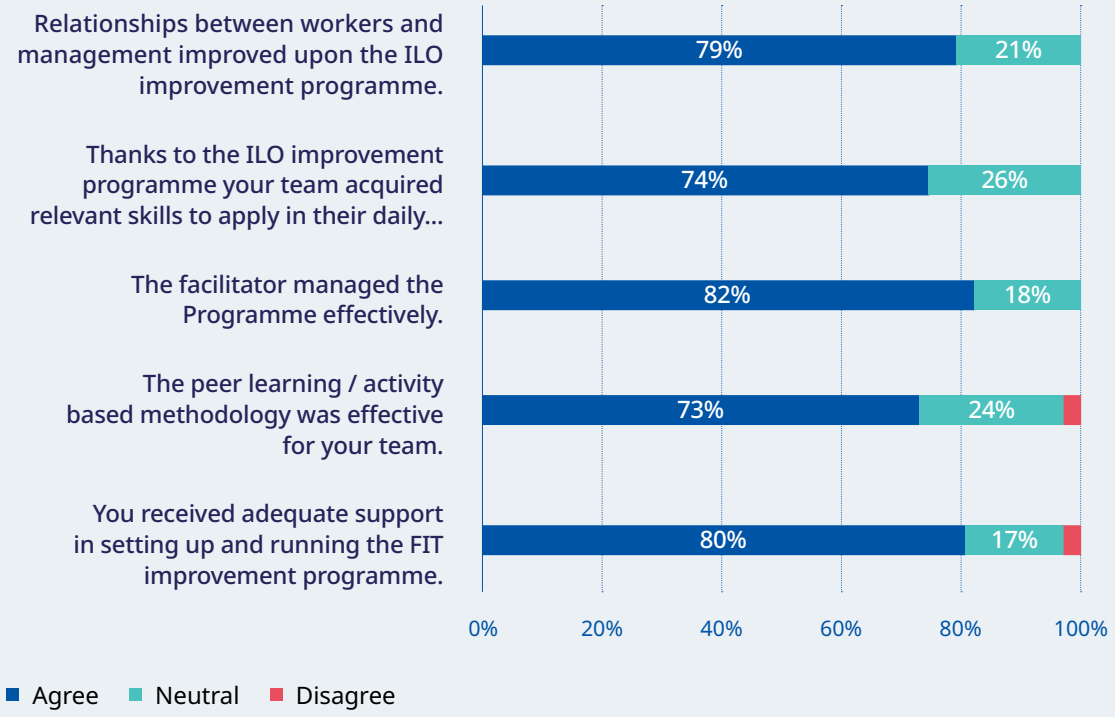
10 9 8 7 5 4

Agree/Disagree



Agree Neutral Disagree

Agree/Disagree



Implementation of the Factory Improvement Toolset in the Asian garment sector: Final report

The Factory Improvement Toolset (FIT) was developed by the ILO under the Sweden-funded Decent Work in Garment Supply Chains Asia project.

Through an activity based, participant-driven methodology that is both scalable and cost-effective, the FIT helps factories advance decent work and sustainability by upgrading processes in a variety of areas, including productivity, working conditions, and environmental practices.

From March 2021 to February 2022, FIT was piloted in Bangladesh, Cambodia and Pakistan, with the support of business associations and other industry partners. Results were monitored and analyzed across 27 enterprises with approximately 450 participants.

The pilot programme revealed FIT's methodology to be useful and easily applicable, with many participants praising its activity-based, peer-learning approach in fostering natural interactions and building confidence to tackle workplace challenges in a step-by-step manner. The wide module variety makes the toolset highly adaptable to factory needs, while coaching of in-factory facilitators and coordinators during the pilot stage helped build overall factory capacity to apply the tools independently of outside support.

Survey results demonstrated significant improvements in productivity, factory organization, and production systems (including environmental components and staff management). The ILO project team played a supporting and monitoring role throughout the pilot, whilst also working closely with aforementioned industry partners to design and deploy full post-pilot rollout plans at country level.

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Sverige

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