International Labour Organization

Organizing the sewing room

Sewing room operations

Factory Improvement Toolset

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Factory Improvement Toolset

The Factory Improvement Toolset (FIT) is an innovative self-facilitated, activity-based learning approach designed by the International Labour Organization (ILO) to create more decent and sustainable employment. FIT supports manufacturers in global supply chains to improve productivity, competitiveness and working conditions by upgrading production systems and factory practices.

FIT has been developed to be a sustainable, time- and cost-efficient option for supporting factories to enhance productivity through improved business practices and working conditions. FIT focuses on areas of production improvement and actions to be taken specific to each participating factory. It can be utilized as stand-alone learning tools or to complement other training programmes.

With each module lasting no more than 2.5 hours, FIT enables factories to train personnel, whilst minimizing interference with production realities. The easy-to-use methodology makes it possible to rapidly scale the implementation to reach a large cohort of trainees across multiple production facilities.

Working in small groups, participants review real-life situations and engage in discussions to determine improvements to be made in factory without an external trainer or specialist. This self-facilitated, activity-based and highly participatory learning approach positions participants as both student and teacher and makes the toolset self-tailored to the needs and interests of each group.

About this module

This FIT module on Organizing the sewing room is a training for garment manufacturers to improve sewing room operations. Participants will work on improving the sewing room and lines' layout and workflow, keeping the room tidy, and training workers. This module takes about 2 hours to complete.

Upon completion of the training, participants should have:

- Understood the importance of organizing the sewing room for efficiency, waste reduction and safety.
- Learnt good practices in terms of layout, workflow, colour markings and tidiness.
- Discussed how, when and why to train workers in order for them to understand and maintain the organization system in the sewing room.

The **Factory Improvement Toolset** of the **International Labour Organization (ILO)** are developed and provided by the ILO's **Enterprises Department**.

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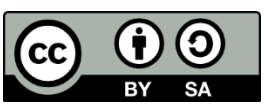


Guidelines for successfully using the training tool

Read out-loud

The FIT tool is designed for participants to take turns reading the instructions in the modules out loud to the group. At least one member of the group should be selected in the beginning of the session to take this responsibility.

Work as a group

Always work in groups of 5-7 during a FIT session. The programme will not be successful if participants work independently or do not collaborate with each other.

Be active

Encourage everyone in the group to actively contribute to the discussion. Ensure that no group member dominates the discussion or does not participate at all.

Monitor the time

Select one member of the group to monitor the time for each activity and remind the group when it is time to move to the next exercise.

Complete the action plan

Complete the action plan at the end of the session. This will help ensure that FIT results in improvements in the factory. Review the plan a while after the session to make sure that actions in the plan has been completed accordingly.

Icons

A set of icons is used throughout the modules to provide easy to recognize reference points for different tasks within each session and activity.

Read out loud

One member of the group should read out loud to the rest of group.

Knowledge link

Knowledge and skills are linked to other FIT learning resources and support.

Time allotted

Indicates how much time each sessions and activity should take.

Supplies needed

Indicates that supplies may be necessary to complete the session.

Begin step-by-step instructions

Indicates that the step-by-step instructions for an activity are beginning.

Think about it

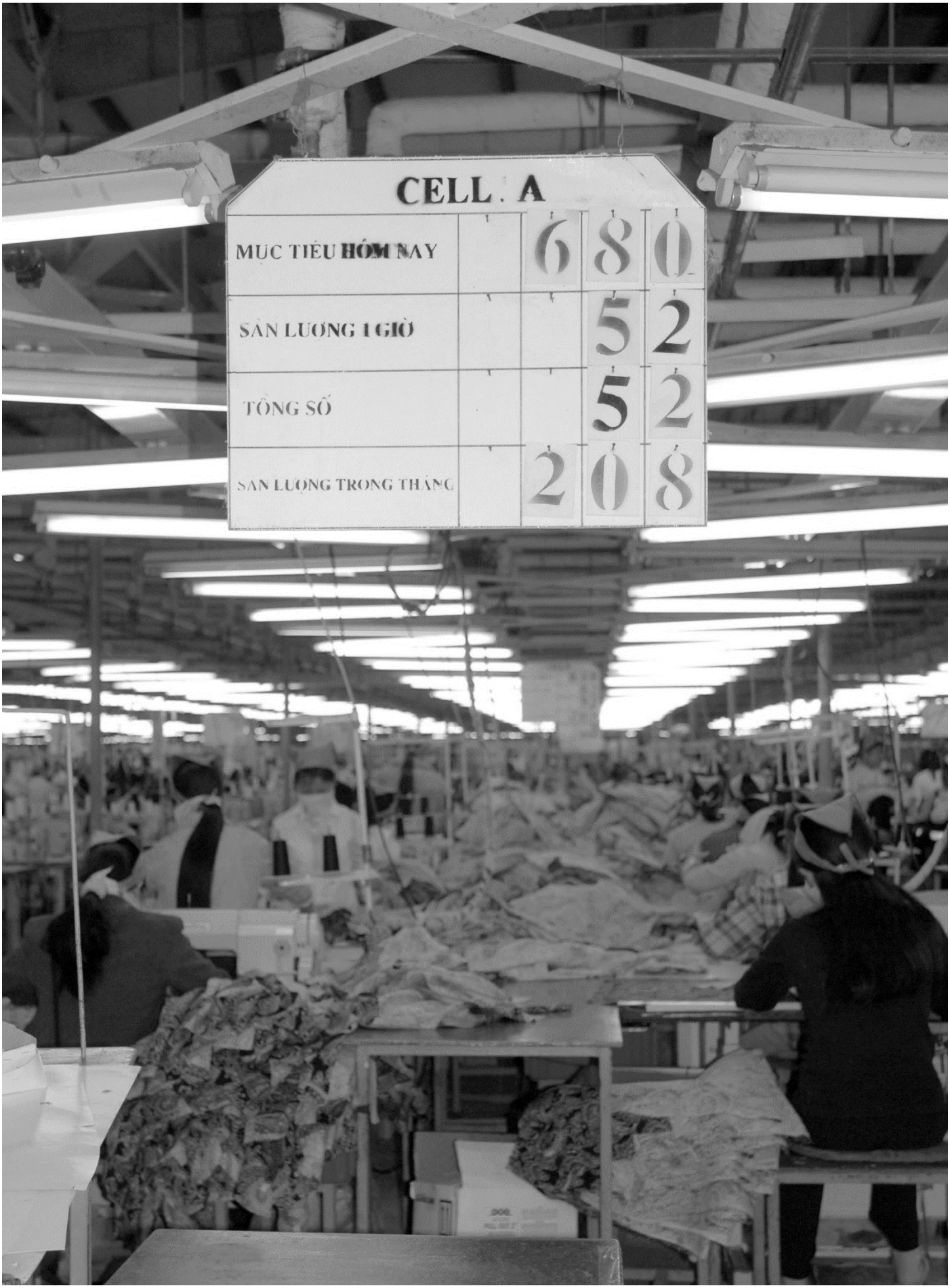
Indicates additional information for the participants to think about.

Measuring your performance

Measuring operational efficiency is a key aspect of running a productive factory. The box(es) below guides you in understanding which measurement indicator(s) can be used to measure and evaluate the performance of your factory in relation to the topics covered by the FIT sewing room series.

Indicator 1	**Target achievement (%)**
Definition	The percentage of the daily production target that was achieved (that was actually sewn in terms of good production). It can be calculated separately for each line, or for all lines together. The closer to 100%, the better.
Purpose	To understand how efficiently each sewing line operates, how realistic production targets are, and begin to identify how to improve efficiency in the sewing room.
Calculation	(# pieces produced today / daily production target) x 100% Notes: The daily target should be based on the SMV, and line efficiency discounted. Target = (working hours x 60 / SMV) x line efficiency %
Frequency	Calculate daily (for each line or all lines), then calculate a monthly average.
Responsible	Sewing room manager, Line supervisors

Indicator 2	**Defect per hundred units - DHU (%)**
Definition	The amount of defects found in average per 100 inspected pieces or garments. The lower the DHU, the higher the quality in your factory. It can be calculated separately for each line, or for all lines together.
Purpose	To understand quality in your sewing room, set a quality improvement target, and begin to identify ways to reduce defects and improve sewing quality.
Calculation	(total # defects found / total # of pieces or garments inspected) x 100% Notes: • It is better to calculate this separately for in-line and end-line inspections. • If only the end-line calculation is taken but in-line inspection is also recorded, add defects found in in-line and end-line, however, do not add up garments inspected at in-line (only take the end-line count).
Frequency	Calculate daily (for each line or all lines), then calculate a monthly average.
Responsible	Sewing room manager / Line supervisor / Quality checker


CELL . A
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Session 1

Business case study

Goals

Preparing you for the type of discussions you will have with other group members throughout the learning module and understanding the benefits of being exposed to different perspectives.

Understanding better why keeping the sewing room organized is important in the factory.

Session 1

Overview

One member should read the full session out loud to the rest of group

15 minutes

Learning manual, pens, markers and poster paper

A business case study presents a real-life situation for learners to reflect on and discuss with other group members. By discussing the case, students learn from others' ideas and perspectives, and develop an understanding of the topic at hand within the workplace.

One group member reads the case study out loud

The whole group discusses the case study

Everyone develops a deeper understanding of the topic

Activities

Activity

1

15 minutes

Case study review and respond

The case study below presents a situation that could happen in real life.

Instructions:

1) As a group, listen to one member read the case study below while following along in your learning module.

Ritthy is a new sewing room manager at the HS garment factory. He finds the sewing room very disorganized. Lines don't all follow the same direction. Some end by the cutting room, and feeders need to bring materials all the way to the other side of the line. Some lines lack space, and workers have to sit or store work-in-progress in the aisles. The inspection room is outside the sewing room, and garments need to be carried there then brought back in. The floor is dirty, dusty, with fabric, thread and buttons lying around by the tables. Workers slip on them, injuring themselves.

To solve these problems, Ritthy re-organizes the room so that all lines are parallel and follow the same direction, starting near the cutting room and ending near the finishing room. Workstations are spaced out to give enough space to operators. Ritthy uses yellow paint to mark the aisles, and instructs supervisors to always keep them clear. He also adds a table for inspection to every line, and converts the former inspection room into a machine & tools storage room. A housekeeping checklist is drafted with the line supervisors, and cleaners hired.

Thanks to these changes, the sewing room is much cleaner and tidier than before. The workflow has improved, so processes are much faster. Liberated space allows operators to work more precisely, supervisors to assist them more often, and garments to be transported faster. Accidents also happen less often.

2) Together, discuss Ritthy's situation by answering the three questions in table 1 on the next page.

Table 1. Questions about Ritthy's situation
1. What problems has Ritthy identified? What impact do these problems have on the factory and its workers?
2. What does Ritthy do or change in order to solve these problems?
3. What are the results of Ritthy's solutions for the factory and its workers?

This page has been intentionally left blank and can be used for note taking.

Session 2

Learning about the topic

Goals

Identifying ways to improve the layout and the workflow of your sewing room and your sewing lines.

Learning to use colour markings to clearly separate areas and increase safety.

Identifying specific actions to keep the sewing room tidy and organized on a daily basis.

Discussing how and when to train workers in order to keep the sewing room organized at all times.

Session 2

Overview

One member should read the full session out loud to the rest of group

90 minutes

Learning manual, pens, and markers

This training module will help you improve the organization of your sewing room by running you through three important aspects: (1) layout, (2) tidiness, and (3) training. Organizing your sewing room efficiently will help you increase productivity by making your sewing operations more efficient, saving time, and protect your workers' health and safety. It will also help reduce unnecessary costs by avoiding damage and waste of materials.

Improving your **layout & workflow**

Keeping the room **tidy**

Training workers

Throughout the activities, you will work on this topic by learning how to: (1) improve your sewing room and lines' layout and workflow, (2) keep your sewing room clean, tidy and organized, and (3) make sure your sewing room workers understand and maintain the room's organization.

What you will learn today is part of the **5S** model, a globally-recognized method to improve house-keeping leading to improved productivity in factories. The 5S are:

- **Sort**: Reduce waste, dispose of unnecessary items
- **Straighten**: Organise your locations, keep tools and facilities in order
- **Shine**: Clean and improve the look of the factory
- **Standardize**: Document and record work processes
- **Sustain**: Train workers to follow good 5S practices

Activities

Activity
2a

25 minutes

Improving your layout

In your factory, everything should have its own place. A well-organized **sewing room layout** will make your sewing operations more efficient and faster, while helping you keep workers safe and improve quality. In this activity, you will practice improving sewing room / lines layouts.

Instructions:

1) Have a participant read aloud the six tips for organizing the sewing room in table 2. Then, together, look at the bad layout (next page), and discuss how it could be improved based on the tips.

2) Have a participant read aloud the six tips for organizing the sewing lines in table 3. Then, together, look at the bad sewing line layout, and discuss how it could be improved based on the tips.

3) In pairs, draw the layout of your sewing room and of one line in table 4, then discuss what could be improved based on the tips.

Table 2. Tips for organizing the sewing room
1. The start of the lines and the feeding stations should be by the entrance of the room (where it connects with the cutting room).
2. The end of the lines and the storage area for garments to be issued is by the exit of the room (where it connects with finishing / packing / finished goods storage rooms).
3. Make sure that the lines do not block circulation in the room, and that there is enough space in between lines for people and trolleys to move through.
4. Have a separate office area where the paperwork is done and records and computer kept tidily, with tables and chairs for administration staff and the manager.
5. Do not store machines, tools, work aids and spare parts in the sewing room. They should be stored in a separate area that only mechanics have access to.
6. Make sure that there is enough lighting for all workstations. Natural light is better. Having windows on both sides will help you save energy.

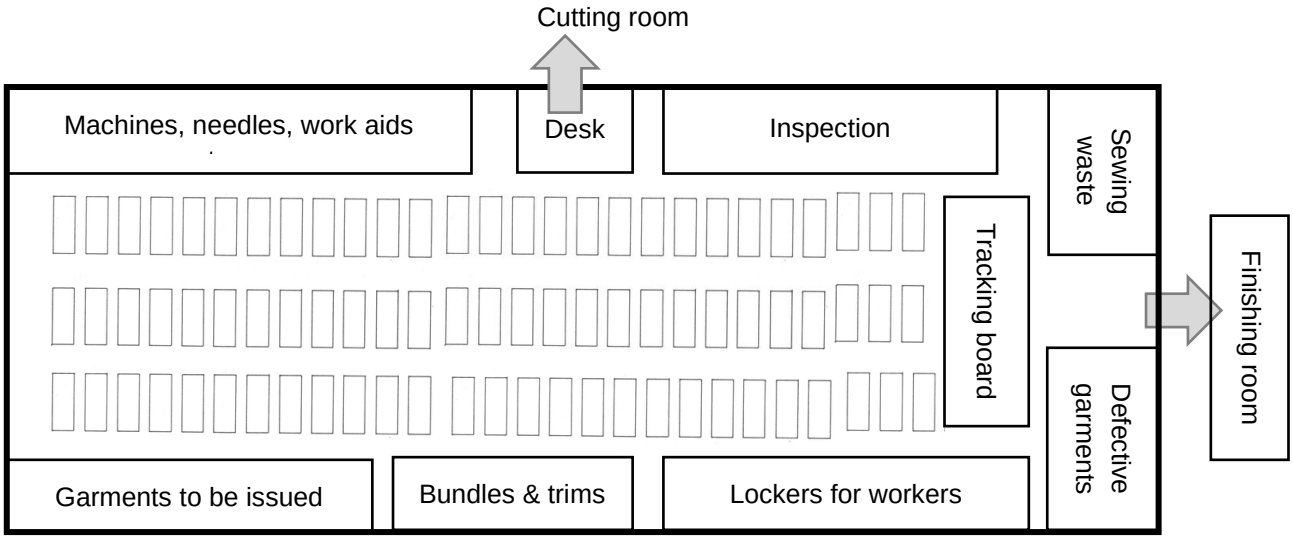


Table 3. Tips for organizing the sewing lines

1. Make sure there is enough space in between and around workstations within a line for material flow and for workers to perform their operation with precision.
2. By each workstation, clearly indicate where the station, input, output and waste bin should be placed using yellow or white markings on the floor.
3. Stations in the line should follow one same direction, following the sequential order of operations, for example: feeding station → marking → sewing → inspection.
4. Each sewing workstation is labelled to indicate operation #, name, and operator name as according to the operation bulletin.
5. Each line should display a line sample and a production tracking board, placed at the start of the line (or above) also indicating line # and style #.
6. Reserve demarcated storage space for feeding (bundles) at the start of the line, and for sewn garments and defective garments at the end of the line.

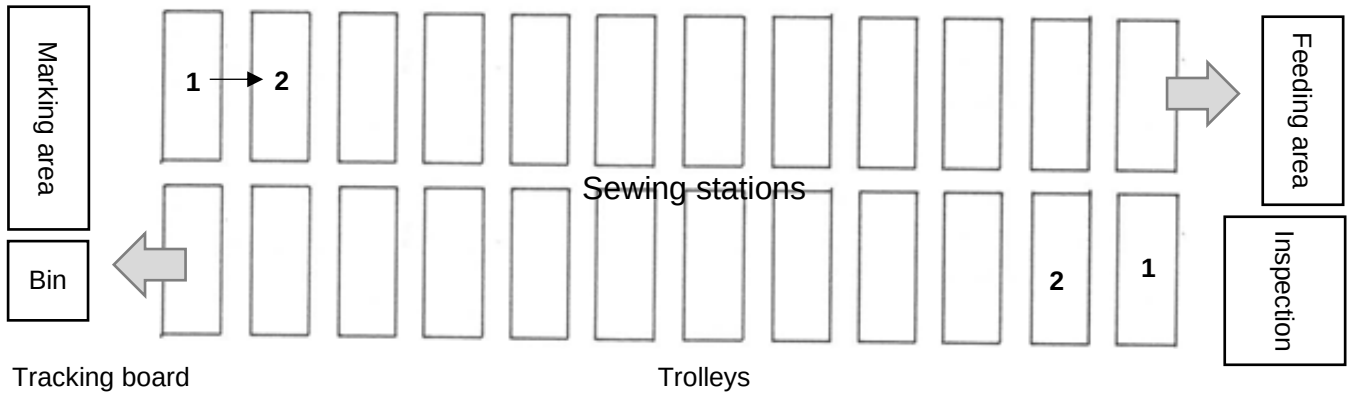


Table 4. Improving your layouts
Draw your sewing room layout below.
Draw your sewing lines layout below.

To learn more about line layouts (specific arrangement of a line's work stations), ask for the "Production systems and line layouts" module.

Activity

2b

30 minutes

Improving the workflow

A **workflow** is a series of steps in a work process. A logical workflow helps workers move materials between areas quickly and safely. In this activity, you will think about the workflow of your sewing room / lines.

Instructions:

1) Together, look at the workflows illustrated with arrows on the layout plans in table 5. Then, discuss the following questions:

- Are these workflows simple and logical?
- Are these workflows safe, easy to understand for workers?

2) Together, list or draw each step of your sewing room process from start to end in table 6. Then, have a participant read aloud the text box below.

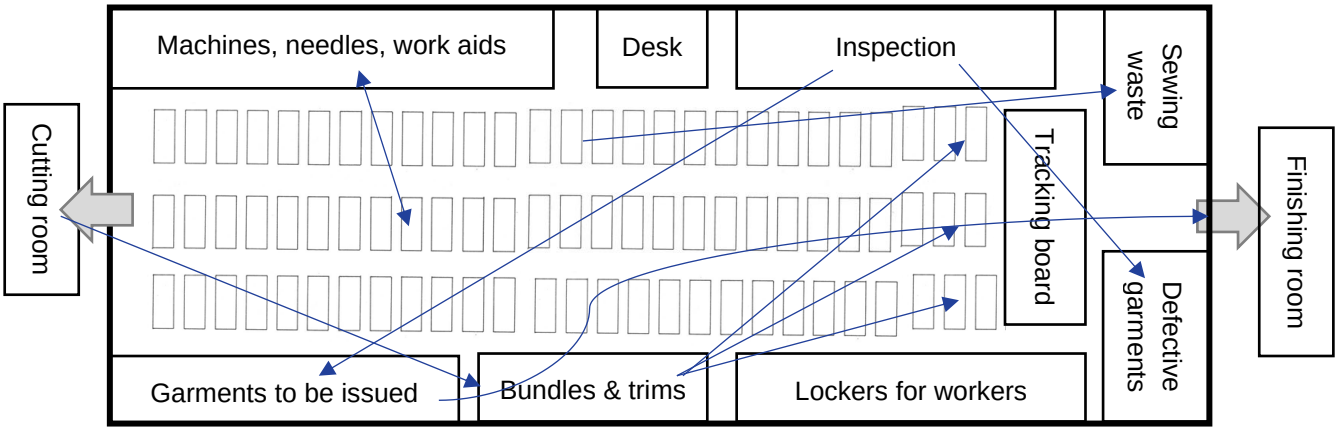
3) In pairs, come back to your drawings of your sewing room / lines layout in table 4, and add arrows to indicate the workflows. Then, discuss: Is it quick, safe, and logical? Should you change anything to the layouts in order to improve the workflow?

4) Have a participant read aloud the explanations on colour marking in table 7. Then, together, look at the list of objects/areas in table 7, and discuss for each: Which colour would you use to mark them?

A good workflow is **unidirectional**. All sewing room operations follow one continuous direction, from entrance to exit and through the lines. This saves times, avoids damage to material, and is safer and easier for workers. Usually, a good layout ensures a good workflow.

Table 5. Understanding workflows

Sewing room workflow:



Sewing line workflow:

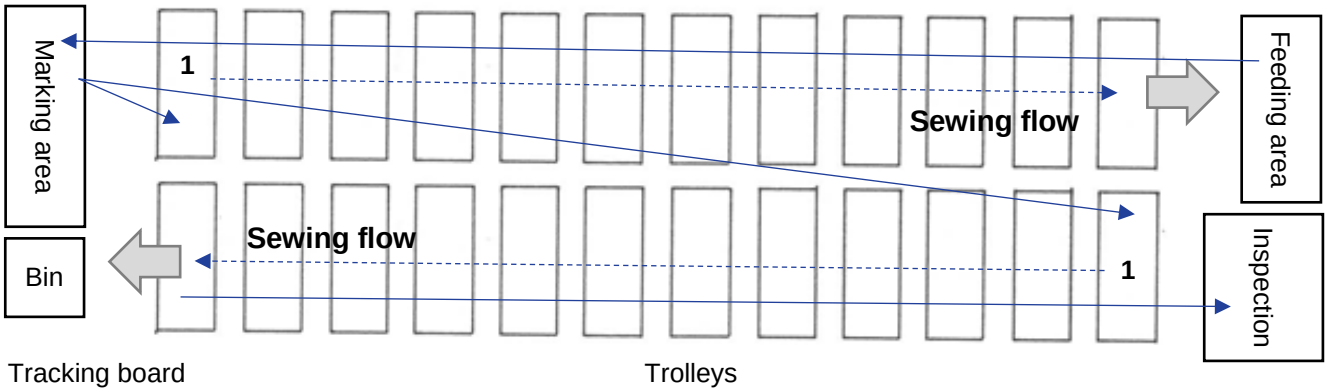


Table 6. Your sewing process

List or draw all steps of your sewing room process below.

Table 7. Colour markings

To help workers understand your workflow and respect it during their daily work, you can use **colour markings** on the floor. Floor colour markings can also help you make the room more organized and safer by indicating important areas and paths.

Yellow: To indicate paths and areas (aisles, traffic lanes and work cells.

Orange: Materials or products that need to be inspected.

Blue / Green: Materials: Blue for work-in-progress, Green for finished goods.

Red: To indicate storage areas for scrap, defective materials.

Area / path	Colour
1. Path for walking in between the sewing lines	
2. Bins for operators to dispose of waste	
3. Feeding tables for bundles	
4. Sewing room waste	
5. Defective garments	
6. Fire extinguisher	
7. Inspected, sewn garments waiting to be issued	
8. Transportation trolleys for pick-up and issuing	

Here are a few tips for using colour markings:

- Use as few colours as possible so it is easier to remember
- Train all workers on the meaning of colours
- If applicable, use the same colour codes in all factory departments

Activity

2c

20 minutes

Keeping the sewing room tidy

Keeping the sewing room **tidy and orderly** is important to (1) avoid damage to materials, and (2) protect your workers' health and safety. In this activity, you will discuss how to keep the sewing room tidy.

Instructions:

1) Together, discuss: Would you say your sewing room is tidy and orderly? Why or why not?

2) Together, read through the list of actions to keep the sewing room tidy and orderly in table 8, and put a ✓ in the column on the right if you do these things in your factory.

3) Together, look at the 4 pictures in table 9, then discuss: What is right or wrong in each of them? Tip: use the good practices from table 8 to guide you!

4) Together, discuss the following questions:

- How can keeping the sewing room tidy help avoid waste of materials, or damage to materials?
- How can keeping the sewing room tidy help you protect your workers' health and safety?

Table 8. Keeping the sewing room tidy	
Actions	✓
1. Do not allow workers to store personal belongings or bring food and drinks into the sewing room. Provide lockers for them outside.	
2. Store bundles and garments on trolleys, racks, or in bins (never on the floor or close to it) to avoid it getting dirty or damaged.	
3. Set up a housekeeping system and housekeeping checklists to ensure cleaning is done where needed on a regular basis.	
4. Place a bin by each station. Operators should push / throw any waste (such as excess thread) directly into the bin.	
5. Do not store anything else other than work-in-progress under / around the workstations to avoid trips and falls or confusion.	
6. Keep the sewing room clean and check regularly for pests, insects, water leaks and mould.	
7. Draw specific paths on the floor (using yellow lines) and train workers in using them to go from one area to the other.	
8. Always keep alleys/paths clear of any object (trolley, bins, seats, etc.) to avoid blockages and accidents (such as trips and falls).	
9. Keep workstations clear of any unnecessary items, such as excess materials, scissors and thread cones or personal objects such as facial masks or hat.	
10. Do not keep unused or broken tools / spare parts lying around. They should be moved back to a specific, separate storage area.	
11. Any broken needle or sharp tool (scissors, blades, etc.) (all broken parts) should be brought to the storage area to be exchanged for a new one.	
12. If broken parts are missing, they should be located with a metal detector to ensure safety. A new needle cannot be issued if parts have not been found.	
13. Keep paper documents on shelves, in a separate area (office), to avoid damage or misplacement, and classify them clearly (e.g. by type and by date).	

Table 9. Good or bad practices?

Image A:

Image B:

Image C:

Image D:

Activity

2d

15 minutes

Training workers

To make sure that the sewing room remains tidy and organized, it is important to involve your staff in the process, and **train workers** in understanding and maintaining the organization of the sewing room. In this activity, you will discuss how to train workers in this.

Instructions:

1) Together, discuss the five questions in table 10.

2) Together, read through the list of things you can do to train workers, in table 11, and put a ✓ in the column on the right if you do these things in your factory.

Table 10. Training workers

What?	What should workers be trained in (think about activities 2a~2d)?
Who?	Who should be trained? Everyone? Only some workers?
When?	When should training take place? When starting the job? Continuously? Periodically?
How?	Which training method do you usually use? Are there other suitable methods?
Why?	Why is it important to train workers in organizing and tidying practices?

To learn more about how to organize trainings for workers, ask for the “Training workers” module.

Table 11. Training workers	
Actions	✓
1. Train workers in understanding the layout, workflow, colour codes, and tidying practices when they start the job. Re-train them whenever changes are made.	
2. Keep simple boards on the wall to remind workers about important information such as the meaning of colour codes, with simple pictures and little text (in the common understood languages).	
3. Encourage workers to tell their supervisor whenever they see something that is not consistent with the organization system, or untidy.	
4. Train workers to always place or keep tools, trolleys, bins and others where they belong so as to maintain the organization system.	
5. Forbid smoking and eating, allocate a specific area for drinking water, and explain to the workers why you are doing so.	
6. Have workers place their belongings in lockers outside the sewing room, and explain to them why you are doing so.	
7. Encourage line supervisors to train (on-the-job) and pay attention to newer workers and make sure they respect the organization system.	
8. Put up posters on the wall to remind workers about safety guidelines (for example keeping the needle guard on, etc.).	
9. Give line supervisors the responsibility of ensuring that their own line respects and maintain the organization system and is kept tidy.	
10. Ensure line supervisors are accountable by carrying out inspections, and giving rewards / incentives for the best organized / tidiest lines.	
11. Conduct a weekly inspection of the sewing room to make sure everything is organized and tidy as according to the system.	
12. Put up pictures of a tidy, orderly sewing room on the allocated board, so that this can serve as a reference for the minimum standard to be maintained.	

Session 3

Action items

Goals

Summarizing and revising the new knowledge gained.

Identifying concrete applications of the new knowledge that benefit your factory.

Session 3

Overview

One member should read the full session out loud to the rest of group

20 minutes

Learning manual, pens, and markers

Throughout this module, you gained new knowledge on how to organize your sewing room and lines by improving their layout and workflow, keeping the room tidy, and training workers to respect and implement the system.

Improving your **layout & workflow**

Keeping the room **tidy**

Training workers

In this session, you will think of ways to apply your new knowledge to improve the organization of your sewing room by reviewing best practices and drafting your own action plan.

Activities

Activity
3a

5 minutes

Best practices checklist

In this activity, you will review best sewing room organization practices as a next step for evaluating your own and implementing improvements.

Instructions:

1) Together, look at the list of best practices in table 12, and put a ✓ in the column on the right if you use these practices in your factory.

Table 12. Organizing the sewing room

Best practices	✓
1. The sewing room's layout is clearly separated into sewing lines that start near the cutting room and end by the finishing rooms.	
2. The sewing lines' layout logically follows the sewing room operation workflow.	
3. Everything in the sewing room and in the sewing lines (stations, bins, chairs etc.) has its own place and is kept accordingly.	
4. Coloured markings are used to delineate specific working areas and pathways, and to keep workers safe by indicating dangers.	
5. The sewing room is kept tidy and orderly at all times and inspections are carried out regularly to ensure that the system is maintained.	
6. Workers are trained to understand and maintain the organization of the sewing room.	

Activity

3b

15 minutes

Your action plan

In this activity, you will think of ways to apply your new knowledge to improve organization in your sewing room by drafting your own action plan.

Instructions:

1) Together, fill in the action plan (table 13) on the next page. Identify a key problem that you want to solve and write down the solutions you identified while working on this module.

Table 13. Organizing the sewing room – Action Plan				
Problem identified				
Solutions identified	**Action(s) to be taken**	**Person responsible**	**By when?**	**How will improvements be measured?**

Organizing the sewing room

The Factory Improvement Toolset (FIT) is an innovative self-facilitated, activity-based learning approach designed by the International Labour Organization (ILO) to create more decent and sustainable employment. FIT supports manufacturers in global supply chains to improve productivity, competitiveness and working conditions by upgrading production systems and factory practices.

FIT is being piloted in Asia under the regional Decent Work in the Garment Sector Supply Chains in Asia project funded by the Government of Sweden.

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