International Labour Organization

Receiving materials

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 Receiving materials is a training for garment manufacturers to improve sewing room operations. Participants will work on material requesting, receiving and storing, as well as record-keeping. This module takes about 2 hours to complete.

Upon completion of the training, participants should have:

- Learnt how to request materials from the storerooms or cutting room using Material Request Notes or Cutting Issue Slips.
- Discussed good practices for receiving and storing materials efficiently and in a way that minimizes damage.
- Learnt how to record received and fed material quantities in a line loading record.

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

Authors: Alix Machiels, Sara Andersson, Charles Bodwell, Jayantha R. de Silva.

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


BUFFER

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 receiving materials with care and in a systemic way 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.

Sopheak is a new sewing manager at the HS garment factory. She notices that the material receiving system is not working well. Sometimes not enough cut parts are available to feed the lines according to plan, which delays production. Cuttings are carried from the cutting room, which makes workers complain about back pain. In the sewing room, materials are stored in a corner, where they quickly get dirty or humid – or lost. As a result, it is hard for workers to identify the right materials to feed to the lines, and mistakes happen. No one keeps records of how many bundles are fed to which line and when, so it is hard to track production and evaluate how much material needs to be requested.

To solve these problems, together with the stores and cutting room managers, Sopheak designs forms that can be used to request and receive bundles and trims in advance. Then, she trains helpers in good receiving and storing practices, and buys trolleys for them to transport materials. Last, she starts recording received quantities daily in a record. This record also states how many bundles are issued to which line, which allows her to know how many garments are left to be sewn to complete an order.

Thanks to this, production can be tracked, and materials can be requested on time for the order to be processed without delay. Much less material is wasted, and sewing helpers are healthier, and happier about the working conditions.

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

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

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JUKI

Session 2

Learning about the topic

Goals

Discussing and understanding the materials receiving process.

Learning to use material request notes or cutting issue slips when requesting materials from other departments.

Discussing and identifying best receiving and storing practices.

Learning how to record information on materials receiving and feeding in a line loading record.

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 aims to help you improve the way your sewing room operates by focusing on materials receiving. Good requesting procedures allow for good coordination with the storerooms and cutting room, whereas good receiving, storing and record-keeping practices minimize damage, waste or loss of materials. Throughout this module, you will work on the three steps below.

Requesting materials

Receiving & storing materials

Recording information

First, you will start by discussing the receiving process in your sewing room, then learn to use material request notes and cutting issue slips to request materials methodically, discuss how to receive and store materials in a more efficient and organized way, then learn how to record receiving and line feeding information in a register.

Activities

Activity
2a

15 minutes

Your receiving process

Materials receiving is the transfer of materials from different departments to the sewing room before they can be fed to the lines. In this activity, you will discuss your receiving process and think about how you can improve it.

Instructions:

1) Together, discuss: What materials do you receive in the sewing room? From which departments? List your answers in table 2.

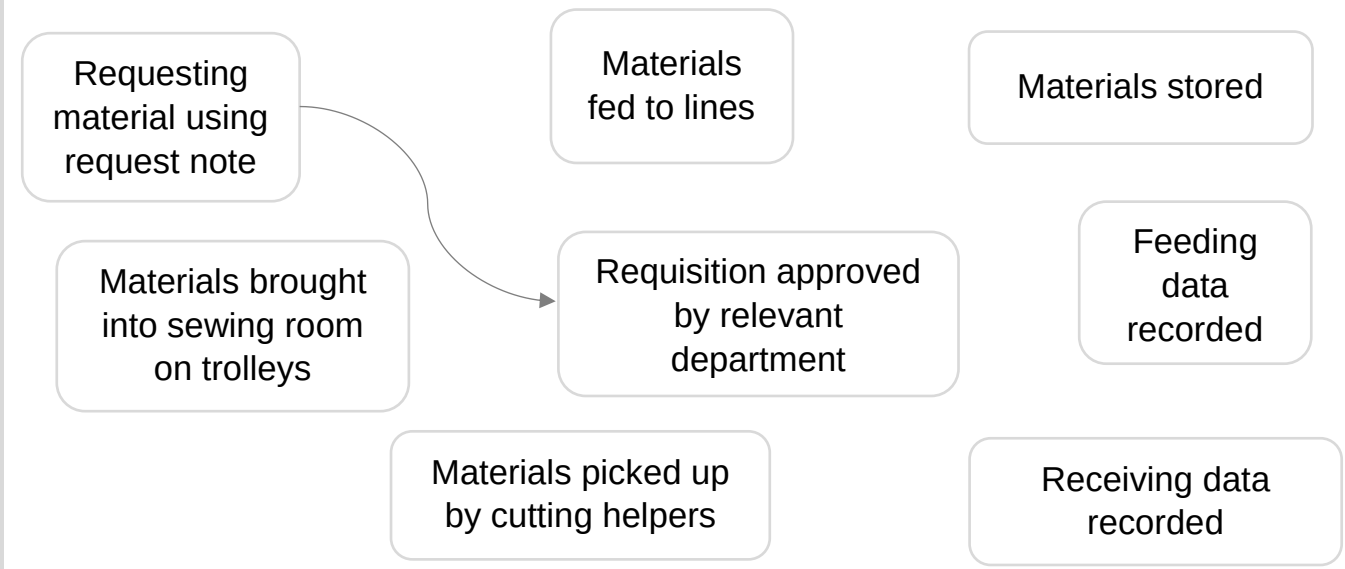
2) Together, look at the steps of the receiving process in table 3, and put them in what you think is the right order using arrows. Solutions are provided at the bottom of the page.

3) Together, draw your own receiving process in table 3, then discuss: Does your receiving process involve the same steps as in the previous exercise? Do you think it should? Why or why not?

Table 2. The sewing room

Materials	Departments
Example: buttons.	Example: Storerooms

Table 3. The receiving process



Draw your own receiving process below:

Solutions: Requesting → Requisition approved → Material picked up → Materials brought into the sewing room → Materials stored → Receiving data recorded → Materials fed to lines → Feeding data recorded

Activity

2b

20 minutes

Bundle requisition

The sewing lines **request** bundles from the cutting room based on the line plan made by the sewing manager which indicates the quantity to be sewn daily. Bundles are requested using "Bundle Requisition and Issue Notes (BRIN)". In this activity, you will learn how to use BRINs.

Instructions:

1) Together, look at the example of a cutting issue slip with explanations in table 4, and make sure everyone understands.

2) Have a participant read aloud the scenario in table 5, then, together fill in the BRIN in table 4 (shaded cells). The first example has been filled in to guide you.

3) Together, read through the steps for using BRINs in table 6, and put them in the right order by writing a number from 1 to 9 in the right column. Solutions are provided at the bottom of the page.

Table 4. BRIN

BRINs go through 2 different departments, who each fill in different parts:

- **Sewing line** → Serial No., Date, Order#, Line#, Style#, Size, Colour, Quantity required in pieces, "Requested by", "Authorized by", "Received by".
- **Cutting room** → Quantity issued (pieces and bundles), Cut components, Bundle tag #, "Prepared by", "Approved by", "Issued by".

BRIN

Serial No.: 8392	**Date:** February 9, 2019	**Order #:** 5467	**Line#:** 2

Style#	**Size**	**Colour**	**Cut component(s)**	**Quantity Required** (pieces)	**Quantity issued**		**Bundle tag #**
					Pieces	Bundles	
F8821	S	White		103	103	11	11~21
			Total				

Requested by: *Line supervisor*	**Prepared by:** *Cutting room helper*	**Issued by:** *Cutting clerk*
Authorized by: *Sewing manager*	**Approved by:** *Cutting manager*	**Received by:** *Line helper*

Table 5. Scenario

Scenario:
On February 9, the line supervisor Sophorn fills in BRIN #8392 for order #5467, to request the following quantities (pieces) for sewing line 2:

- 103 pieces for style F8821, colour White, size S. *[Example]*
- 200 pieces for style F8821, colour White, size M.
- 106 pieces for style F8821, colour White, size L.
- 102 pieces for style F8821, colour Red, size XS.
- 205 pieces for style F8821, colour Red, size S.

Table 6. Processing requisitions

Steps	#
The line supervisor fills in a BRIN (original) to request a certain amount of pieces as per line plan and sends it to the cutting room.	
The cutting clerk fills in the relevant rows in the original BRIN.	
A designated sewing line helper picks up (receives) the bundles using the carbonized copy, and delivers them to the right sewing line.	
A cutting room Clerk records the quantities issued in the Cutting Issue Register using the original note.	
Designated cutting room helpers prepare the bundles for issuing using the original note.	
The sewing manager authorizes the requisition based on the sewing plan.	
If quantities are available, the cutting manager signs the note and authorizes issuing.	
The carbonized copy is sent to the requesting sewing line for bundle pickup and record-keeping.	
The cutting room receives filled-in bundle requisition and issue note (both the original and carbon paper).	

Materials should be **requisitioned** according to the production schedule prepared by the sewing manager, to avoid materials being received too late and delaying production, or materials being received too early and getting lost or damaged in storage.

Solutions: 1, 6, 8, 9, 4, 2, 5, 7, 3.

Activity

2c

15 minutes

Trims requisitions

The sewing lines request materials based on Merchandising (or the Sample room)'s estimation of needed trims and thread quantities. Trims are requested using **Material Request Notes (MRN),** which are processed similarly to cutting issue slips (see previous activity). In this activity, you will learn how to fill in a MRN.

Instructions:

1) Together, look at the example of a filled-in MRN for requesting trims with explanations in table 7, and make sure everyone understands.

2) Have a participant read aloud the scenario in table 8, then, together fill in the MRN below (shaded cells) using the information form the scenario. The first example has been filled in to guide you.

Table 7. Material requisition notes (MRN)

Requisition notes go through 2 different departments, who each fill in different parts:

- **Sewing line** → No., Date, Job No., Line #, Item code, Description, Width, Colour, Unit, Quantity required, description, symbol, "Received by".
- **Stores department** → Quantity issued, Remarks, "Authorised by", Issued by, Storekeeper's signature.

Material Requisition Note - Trims

No.:		Requesting department:	Sewing room, Line 3
Date:		Job No.:	

Item code	Description	Size	Colour	Unit	Quantity required	Quantity issued	Remarks
T8821	Plastic button	1cm	Red	20 / box	2		

Authorized by:		Received by:	
Issued by:		Storekeeper's signature:	

Table 8. Scenario

Scenario:
On February 9, the line supervisor for Line 3 fills in fabric requisition slip number 8392, to be charged against job 938-95, to request the following quantities:

- 2 boxes of small red plastic buttons, size 1cm, code T8821 *[Example]*
- 15 cones of red cotton sewing thread, size 20m, code T5837
- 20 boxes of 30 black synthetic shoulder pads, size medium, code T7492
- 8 boxes of 20 black metal zippers, size medium (40cm), code T3362

The requisition is approved by storeroom office clerk T.B., signed by storekeeper U.C. Fabric is then prepared for issue by storeroom worker J.S. and received by helper R.B.

Activity

2d

15 minutes

Receiving & storing materials

After a request has been approved, bundles or trims are prepared for issuing, picked up by sewing room helpers, then **received and stored** in the sewing room. In this activity, you will discuss good practices in receiving and storing materials.

Instructions:

1) Together, discuss: How and where do you usually store bundles and trims in your sewing room?

2) As a group, read through the list of good practices in table 9, and put a ✓ in the column on the right if you do it in your factory.

Table 9. Receiving and storing

Good practices	✓
1. Materials cannot be picked up without the MRN / BRIN being approved first.	
2. Issues helpers are trained in reading MRNs / BRIN and using them to pick up materials.	
3. Issues helpers check the information on the MRN / BRIN before transferring the prepared materials to the sewing room.	
4. There is a specific area in the sewing room to receive materials, and a specific area to store materials, clearly indicated.	
5. Materials are picked up using trolleys to avoid injury to workers and damage to the materials.	
6. Materials are always led to the sewing room via the same specific path, highlighted with yellow colour markings.	
7. Materials are picked up on the day before sewing to avoid delays.	
8. Materials are stored at the start of the line to which they will be fed.	
9. Materials are stored in bins, baskets, or on racks, shelves or trolleys to avoid them getting damaged – never on the floor.	

10. Materials are clearly separated from work-in-progress and defective garments to avoid confusion.	
11. Materials are never stored in the alleys or paths in between sewing lines or tables to avoid any obstruction.	
12. Only material to be used for production can be stored in the sewing room. Leftover / excess material must be moved to the stores using a Return Note.	
13. Avoid exposing materials to direct sunlight and maintain appropriate temperature and humidity levels to avoid damage (discoloration, mould, etc.).	
14. Keep the sewing room clean and tidy, and have measures to avoid rodents and pests from entering it.	

Activity

2e

25 minutes

Recording information

After requests have been approved and bundles / trims picked up, they can be fed to the lines according to the line plan. All received as well as fed quantities should be **recorded** with precision. In this activity, you will discuss why and how this information should be recorded.

Instructions:

1) Together, discuss: Why is it important to record received and fed quantities? Then, have a participant read aloud the text box below.

2) Together, look at the scenario in table 10. Then, fill in the line loading record (shaded cells) in table 11. The first row is filled in to help you.

3) Together, discuss the four questions in table 12. Solutions are provided at the bottom of the page.

A **line loading record** is a logbook which helps you track when each cut piece is received, for each style, colour, and size. Each line should have its own record. Use a separate page for each style order, and update records daily. Lines are fed according to the line plan. To learn more about line plans, ask your facilitator for the "Line planning" module.

Table 10. Scenario

Scenario: Line supervisor Em fills in the record for line 2 for style #78954 in colour White, order #5467 for buyer QAL Co. Order quantity is 4000 garments.

- On April 9, 700 bundles are received: 200S, 300M, 200L; 500 bundles are fed to the line: 200S, 300M. *[Example]*
- On April 10, 800 bundles are received: 400XS, 400XL. The cumulative total is 700 + 800 = 1500 bundles received. Then, 600 bundles are fed to the line: 200L, 400XL.
- On April 11, 600 bundles are received (200S, 200M, 200L); 800 bundles are fed to the line: 400XS, 200S, 200M.
- On April 12, the following bundles are received: 250S, 400M, 200L. The following bundles are fed to the line: 400M, 400L.
- On April 13, the following bundles are received: 400S, 300M, 400L. The following bundles are fed to the line: 650S.
- On April 14, the following bundles are fed to the line: 300M, 400L.

Table 11. Line loading record

Order#	5467	**Buyer**	QAL Co.	**Order quantity**	4000
Style#	78954	**Colour**	White	**Sizes**	XS, S, M, L, XL

CUT PARTS RECEIVED:

Date	Issue slip#	Sizes						Total	Cumulative total
		XS	S	M	L	XL	2XL		
09/04	8392	/	200	300	200	/	/	700	700
10/04	8394							800	1500
11/04	8395								
12/04	8399								
13/04	8401								
Total									

CUT PARTS FED:

Date	Line	Sizes						Total	Cumulative total
		XS	S	M	L	XL	2XL		
09/04	2	/	200	300	/	/	/	500	500
10/04	2								
11/04	2								
12/04	2								
13/04	2								
14/04	2								
Total									

Table 12. Recording information
1. What is the cumulative total received on April 11? On April 12?
2. How many pieces were fed to the line on April 11? On April 12?
3. What is the total quantity (cumulative) received after February 13? Order quantity was 4000 pieces. Was there extra cut (so, extra received) for this order? If so, how many pieces extra?
4. What is the total received / fed quantity for size S? For size M?

Solutions: **1.** April1l: 2100; April2: 2950; **2.** April1l: 800; April2: 800; **3.** 4050, extra cut of 50; **4.** S: 1050; M: 1200.

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 request, receive and store materials, and then record information more systematically, efficiently, and safely.

Requesting materials

Receiving & storing materials

Recording information

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

A line loading report template is available online for you to print out and use in your own factory. To obtain it, contact your factory's FIT coordinator!

Activities

Activity

3a

5 minutes

Best practices checklist

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

Instructions:

1) Together, look at the list of best practices in table 13, and put a ✓ in the column on the right if you use these practices in your factory.

Table 13. Receiving materials

Best practices	✓
1. Materials are requested and picked up using Material Request Notes (for trims) or Bundle Requesting and Issuing Notes (for bundles).	
2. Issues helpers are trained in understanding MRN/BRINs and using them for material pick-up and storage.	
3. Issues helpers are trained in best receiving and storing practices, including the use of trolleys, and in feeding the lines timely and appropriately.	
4. Received and fed cutting quantities are recorded style-wise for each line in a line loading record daily by the corresponding line supervisor.	

Activity

3b

15 minutes

Your action plan

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

Instructions:

1) Together, fill in the action plan (table 14) 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 14. Receiving materials – Action Plan

Problem identified				
Solutions identified	**Action(s) to be taken**	**Person responsible**	**By when?**	**How will improvements be measured?**

Receiving materials

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