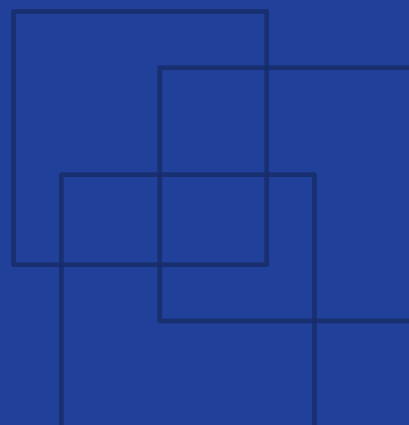




International  
Labour  
Organization

# Receiving fabric

## Cutting room operations



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# Table of Contents

<b>About the FIT module .....</b>	<b>4</b>
<b>Guidelines for successfully using the training tool.....</b>	<b>5</b>
Session 1	
<b>Business case study.....</b>	<b>9</b>
Session 2	
<b>Learning about the topic .....</b>	<b>15</b>
Session 3	
<b>Action items.....</b>	<b>27</b>

# 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 fabric is a training for garment manufacturers to improve cutting room operations. Participants will work on requesting, receiving, storing, and relaxing fabric more systematically and efficiently. This module takes about 2 hours to complete.

## Upon completion of the training, participants should have:

- Learnt how to use Material Request Notes to request fabric from the storerooms.
- Understood good practices for receiving and storing fabric in a way that minimizes damage.
- Learnt more about relaxation methods, times, and procedures.

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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 cutting room series.

<b>Indicator 1</b>	<b>Re-cuts (%)</b>
<b>Definition</b>	The proportion of fabric used for re-cuts for each order (the amount of fabric used for re-cuts compared to the total amount of fabric used for the order).
<b>Purpose</b>	To understand how much of the fabric was used for re-cuts, to better assess quality and begin to identify how to improve quality in the cutting room.
<b>Calculation</b>	$\left( \frac{\text{\# meters of fabric used for re-cuts}}{\text{total \# meters of fabric used for this order including re-cuts}} \right) \times 100\%$ <p>This should also be calculated separately for re-cuts due to cutting defects and re-cuts due to other defects.</p>
<b>Frequency</b>	Calculate for each cut order, then do a monthly average of all cut orders.
<b>Responsible</b>	Cutting room manager / Quality inspector

<b>Indicator 2</b>	<b>Fabric utilization (%)</b>
<b>Definition</b>	The proportion of total spread fabric that is actually used for garments. It is calculated for each cut (for each marker). The higher the most efficient.
<b>Purpose</b>	To understand how efficient your marker planning and cutting operations are, how much fabric gets wasted, and to begin to identify how to improve marker efficiency and reduce fabric waste.
<b>Calculation</b>	$\left( \frac{\text{Marker area used for garments in } sqm}{\text{total fabric area in } sqm} \right) \times 100\%$ <p>Marker area used for garments = Fabric (in sqm) actually used for garments            Total fabric area = The total amount of fabric spread on the cutting table for a cut            = Fabric length (mts) x Fabric width (mts)</p>
<b>Frequency</b>	Calculate for each marker, then do a monthly average of all markers.
<b>Responsible</b>	Cutting room manager / Senior marker maker





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 fabric with care 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 cutting room manager at the HS garment factory. He notices that there is no fabric requisition system. This means that there is sometimes not enough fabric available in the stores, which delays production. Fabric rolls are carried all the way from the stores which makes workers complain about back pain. In the cutting room, fabric rolls are unpacked directly and stored in a corner of the room, where they quickly get dirty or humid. All fabric is relaxed for 6 hours. This is not always enough. It causes the cut panels to shrink, which in turn leads to the finished garments being out of measurement. So, buyers are not always happy with the quality of the finished garments.

To solve these problems, together with the storeroom manager, Ritthy designs a material request note that can be used to request and receive fabric in advance. Then, he trains helpers in good receiving and storing practices, and buys trolleys for them to transport the fabric rolls. Last, he sets up a fabric relaxation area and a set procedure for workers to follow. Rolls will now be relaxed for 12 or 24 hours depending on the fabric type.

Thanks to this, fabric can be requested on time for the order to be cut without delay. Much less fabric is wasted, and cutting helpers are healthier, and happier about the working conditions. Shrinkage is avoided thanks to appropriate relaxation, and buyers are satisfied with the quality of the finished garments.

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

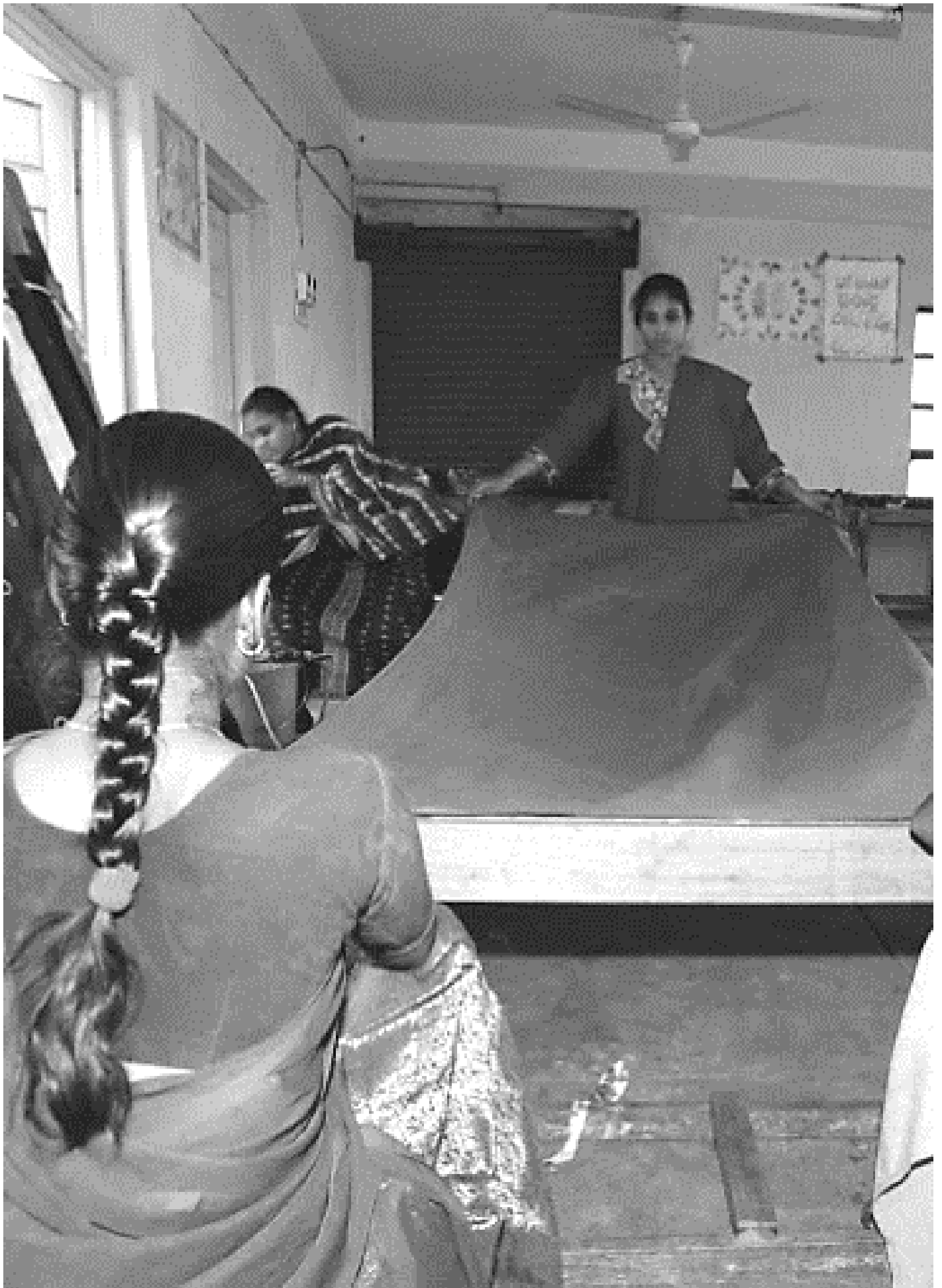
## Table 1. Questions about Ritthy's situation

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

**Discussing and understanding the receiving process.**

**Learning to use material request notes when requesting fabric from the storerooms.**

**Discussing and identifying best fabric receiving and storing practices.**

**Discussing relaxation methods, times, and procedures.**

# Session 2

## Overview



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

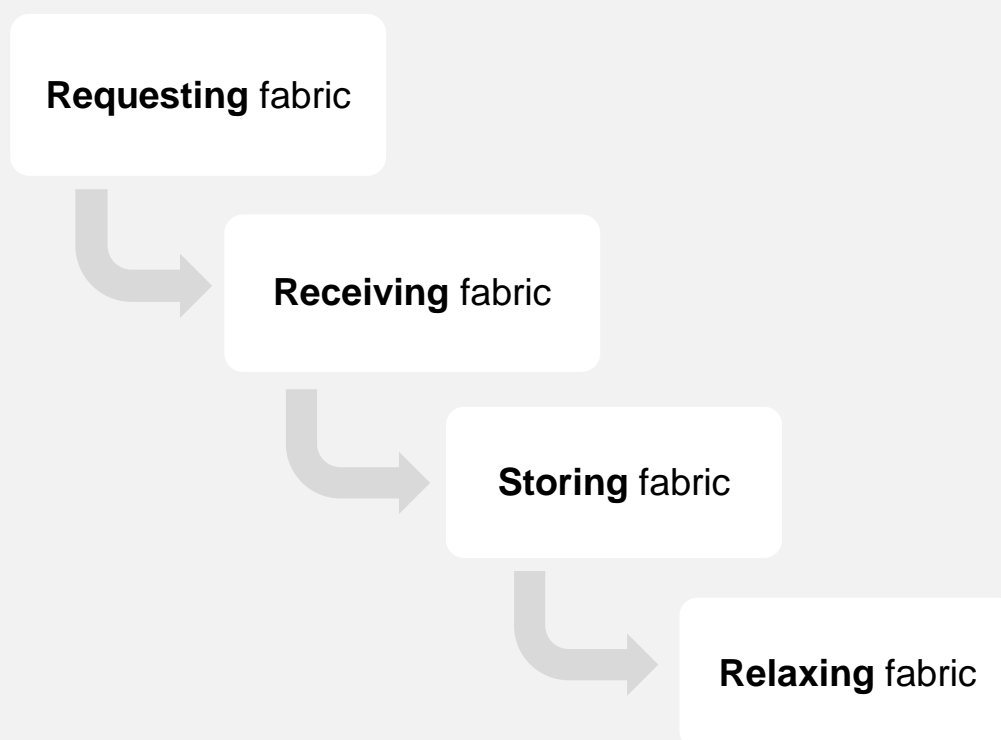


90 minutes



Learning manual, pens, and markers

This training module aims to help you improve the way your cutting room operates by focusing on fabric receiving. Good requesting procedures allow for good coordination with the storerooms, whereas good receiving, storing and relaxing practices minimize fabric damage and waste, and avoid shrinkage and cutting issues further down the line. Throughout this module, you will work on the four steps below.



First, you will start by discussing the receiving process in your cutting room, then learn to use material request notes (MRN) to request fabric methodically, discuss how to receive and store fabric in a more efficient and organized way. Finally, you will learn more about fabric relaxation times and procedures.



# Activities

Activity

## 2a



10 minutes

### Your receiving process

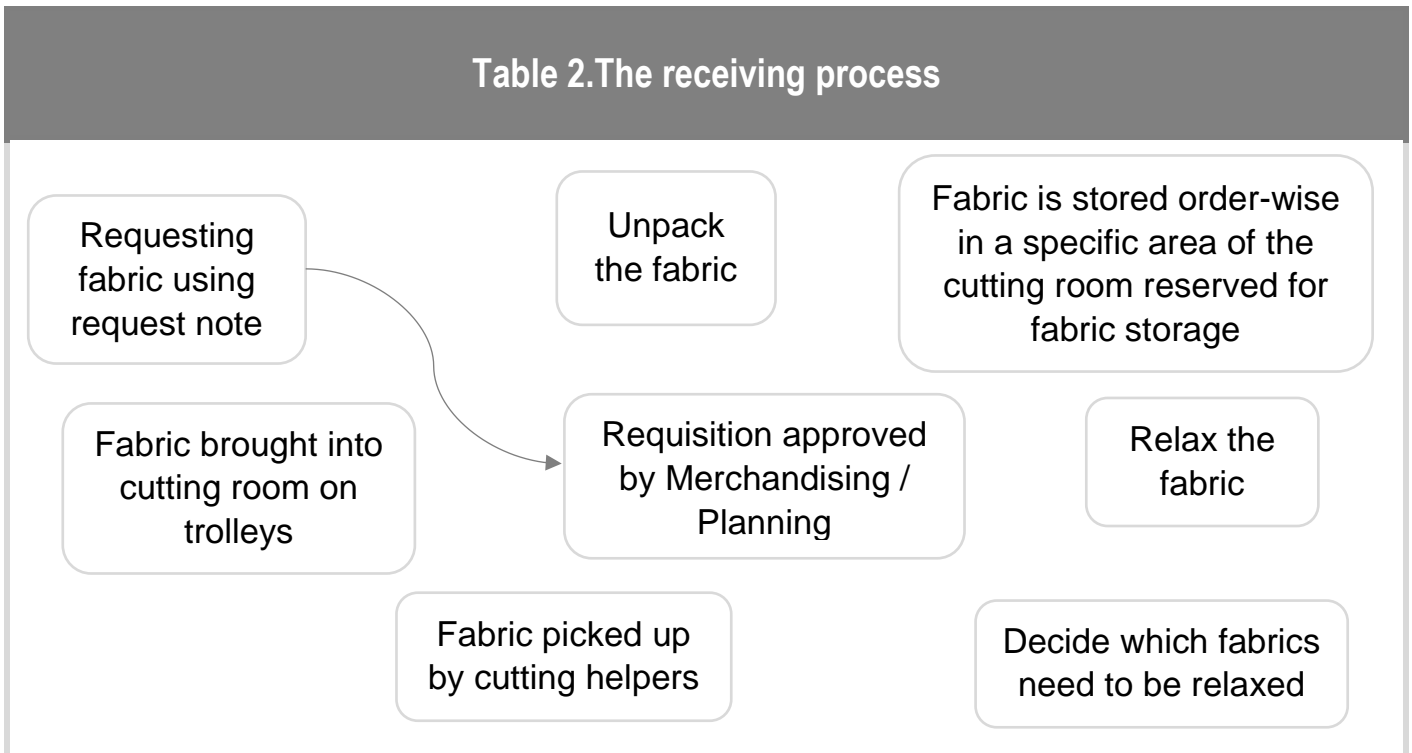
**Fabric receiving** is the transfer of fabric from the storerooms to the cutting room. In this activity, you will discuss your receiving process and think about how you can improve it.



#### Instructions:

- 1) Together, look at the steps of the receiving process in table 2, and put them in what you think is the right order using arrows. Solutions are provided at the bottom of the page.
- 2) Together, discuss: Does your receiving process involve the same steps as in table 2? Do you think it should? Why or why not?

Table 2. The receiving process



Fabric receiving necessitates good coordination with the storerooms. To improve your storeroom operations, ask your facilitator for FIT series on storeroom operations!

Solutions: Requesting fabric → Requisition approved → Fabric picked up → Fabric brought into the cutting room → Fabric is stored → Decide → Unpack → Relax

Activity

2b



20 minutes

## Fabric requisition

The cutting room requests fabric from the storerooms based on the cutting work order issued by the merchandising or planning department which states the quantity to be cut and an estimate of the needed fabric quantity. Fabric is requested using **Material Request Notes (MRN)**. In this activity, you will learn how to use and fill in MRN for fabric.



### Instructions:

- 1) Together, read through the steps for submitting an MRN – Fabric in table 3, and put them in the right order by putting a number from 1 to 7 in the right column. Solutions are at the bottom of the page.
- 2) Together, look at the example of a filled-in MRN (Fabric) in table 4 and the explanations above it, and make sure everyone understands.
- 3) Have a participant read aloud the scenario in table 5. Then, together fill in the missing information in the MRN in table 4 (shaded cells). The first example has been filled in to guide you.

Table 3. Processing MRNs

Steps	#
Copy A is sent to requesting department for material pickup.	
Storeroom manager records the quantities issued in bin cards and inventory sheets using Copy B.	
Requesting department picks up materials using Copy A.	
Storeroom workers prepare materials for issuing using requisition note.	
Storeroom approves the requisition, signs note and authorizes issuing.	
Storeroom receives filled-in material requisition note.	
Storeroom makes two copies (A, B) of approved & signed requisition note.	

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

**Table 4. Material requisition notes (MRN)**

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

- **Cutting department** → No., Date, Job No., 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 - Fabric**

No.:		Requesting department:			Cutting room		
Date:		Job No.:					
Item code	Description	Width	Colour	Unit	Quantity required	Quantity issued	Remarks
F8821	Mesh fabric	80cm	White	Roll	2		
Authorized by:				Received by:			
Issued by:				Storekeeper’s signature:			

**Table 5. Scenario**

**Scenario:**

On February 9, the cutting room fills in fabric requisition slip number 8392, to be charged against job 938-95, to request the following quantities:

- 2 rolls of white mesh fabric, width 80cm, code F8821 (see slip below)
- 10 rolls of black silk fabric, width 78cm, code F9375
- 5 rolls of yellow cotton fabric, width 65cm, code F7492
- 14 rolls of green mixed cotton fabric, width 81cm, code F2271

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

2c



10 minutes

## Receiving fabric

After a fabric request has been approved, fabric rolls are prepared by storeroom workers, and picked up by cutting helpers. In this activity, you will discuss good practices in **receiving** fabric.



### Instructions:

- 1) Together, read through the list of good receiving practices in table 6, and put a ✓ in the column on the right if you do it in your factory. Then, think of other good practices, and add them to the table.

Table 6. Receiving fabric

Good practices	✓
1. Fabric cannot be picked up without the MRN being approved first.	
2. Only storeroom workers can extract materials from storage areas and prepare them for pick-up.	
3. Helpers are trained in reading MRNs and using them to pick up the fabric.	
4. Fabric is picked up by cutting helpers on presentation of the approved MRN.	
5. Cutting helpers check the information on the MRN - Fabric before transferring the prepared fabric to the cutting room.	
6. The pick-up always takes place in a specific area to avoid issued fabric getting mixed up with other materials.	
7. Fabric is picked up using trolleys to avoid injury to workers and damage to the fabric rolls.	
8. Fabric is always led to the cutting room via the same specific path, highlighted with yellow colour markings.	
9. Fabric is picked up on the day before it will be cut to avoid delays or other issues, and to allow time for relaxation if it is needed.	

Activity

2d



20 minutes

## Storing fabric

There are several things you can do to **store fabric** in the cutting room in a more organized and convenient way and ensure that the fabric does not get damaged. In this activity, you will compare different practices and identify the best ones.



### Instructions:

- 1) Have a participant read through the eight storing tips in table 7.
- 2) Together, discuss:
  - Do you agree with the 8 tips?
  - Do you follow these tips in your factory? Why or why not?
- 3) Together, read through table 8, and for each pair (line), tick the option which you think is right (or the best one). Solutions are provided at the bottom of the page.

Table 7. Tips for storing fabric

- |  |
|--|
| 1. Store fabric in a specific storage area in the cutting room to avoid the fabric getting dirty and damaged.  |
| 2. The storage area should be close to the cutting tables so that fabric can easily be fed to the tables.  |
| 3. Store fabric on transportation trolleys or racks to avoid it getting dirty or damaged.  |
| 4. Keep fabric rolls packaged or covered until they are relaxed or spread.   |
| 5. Use yellow colour markings on the floor to demarcate where fabric should be stored.   |
| 6. Only fabric to be used for cutting should be stored in the cutting room. Leftovers or excess fabric should be moved to the storeroom at once using a Return Note. |
| 7. Avoid exposing the fabric to natural light, and maintain appropriate temperatures and humidity levels to avoid getting the fabric damaged.                        |
| 8. Keep the cutting room clean and tidy, and have measures to prevent pests and rodents from entering it to avoid damaging the fabric.                               |

Table 8. Storing efficiently and safely

1.	<input type="checkbox"/> Store fabric rolls anywhere	<input type="checkbox"/> Store fabric in a specific storage area
2.	<input type="checkbox"/> Storage area should be by the door	<input type="checkbox"/> Storage area should be located in front of the tables
3.	<input type="checkbox"/> Store only the fabric to be cut	<input type="checkbox"/> Store fabric to be cut and excess fabric in the same area
4.	<input type="checkbox"/> Store fabric rolls on trolleys or racks	<input type="checkbox"/> Store fabric rolls on the floor
5.	<input type="checkbox"/> Store fabric rolls under the cutting tables	<input type="checkbox"/> Store fabric rolls at the start/ends of the tables
6.	<input type="checkbox"/> Unpack fabric rolls when they are received	<input type="checkbox"/> Keep rolls packaged until they are spread / relaxed
7.	<input type="checkbox"/> Store the fabric that will be cut next the closest to the table	<input type="checkbox"/> Store the fabric that will be cut next directly on the table
8.	<input type="checkbox"/> Use colour markings to indicate storing areas	<input type="checkbox"/> Store fabric rolls wherever there is space by the tables
9.	<input type="checkbox"/> Store fabric in the natural light to see the colour clearly	<input type="checkbox"/> Store fabric away from natural light to avoid discoloration
10.	<input type="checkbox"/> Keep the cutting room cool and dry	<input type="checkbox"/> Keep the room hot and humid

Solutions: 1. In front of the tables – 2. To be cut only – 3. On trolleys or racks – 4. At the start/ends – 5. Keep packaged – 6. By cut order – 7. Closest to the table – 8. Colour markings – 9. Away from light – 10. Cool & dry

## Activity

# 2e



30 minutes

## Relaxing fabric

Fabric can get stretched or distorted when it is rolled. So, it is sometimes necessary to **relax the fabric** to prevent shrinking of the garment or cutting errors. In this activity, you will discuss relaxation times and procedures.






### Instructions:

- 1) Together, discuss:
  - Do you relax all types of fabric in your factory? If not, which ones do you relax?
  - For how long do you relax fabric in your factory? Which relaxation method(s) do you use?
- 2) There are different relaxation methods. Together, look at table 9 showing three different ways to relax fabric, then discuss:
  - Which method seems the fastest? The cheapest?
  - How would you choose which method to use?
- 3) The ideal relaxation time depends on the fabric type. Together, read through the list of fabric relaxation times in table 10, and discuss: Do these times correspond to those in use in your factory?
- 4) Together, discuss the following questions:
  - Which fabrics do not need to be relaxed? Which fabrics need to be relaxed for the longest time?
  - Which fabrics shrink the most and should be relaxed for longer – knit fabrics or woven fabrics?
- 5) Together, look at the fabric relaxation slip in table 11, then discuss: Do you use a similar document in your factory? What information is recorded on it and who is responsible for filling it in?



In some cases, the buyer will specify relaxation times. In this case, buyer specifications should be followed!

**Table 9. Relaxation methods**

		
<b>(Mechanical)</b>	<b>(Manual)</b>	<b>(Manual)</b>
<p>The machine simultaneously unwinds and rewinds the fabric roll, letting it sag and loosen before it gets rerolled.</p>	<p>Unwinding the rolls in a zig zag fashion on to a clean sheet of polythene on the floor or on a table.</p>	<p>Unwinding the roll and letting it relax at the end of the cutting table beyond the marker area. This makes it easy to spread it on the next day.</p>

**Table 10. Fabric relaxation times (in general)**

Fabric types	None	8 hours	12 hours	24 hours	48 hours
Normal woven fabric	X				
Woven with spandex				X	
All knit fabrics in roll form			Minimum	Maximum	
Knit fabrics in bale or folded form		Minimum	Maximum		
Single jersey (roll form)			X		
Single jersey with spandex (roll)				X	
Fleece with spandex					X
Spandex with other fabrics				X	
Viscose			Minimum		
Polyester	X				



**Table 11. Fabric relaxation form**

Table 11. Fabric relaxation form				
Date	Feb 9, 2019		Filled in by:	R. P.
Fabric roll ID	Relaxation time	Relaxation starts	Relaxation ends	Table #
A93250	12 hours	Feb 9, 2.34pm	Feb 10, 2.34am (→8am)	4
B43988	24 hours	Feb 9, 11.45am	Feb 10, 11.45am (→noon)	6



## 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, store, and relax fabric more systematically, efficiently, and safely.

**Requesting** fabric

**Receiving** fabric

**Storing** fabric

**Relaxing** fabric

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



A fabric relaxation form 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 fabric 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 12, and put a ✓ in the column on the right if you use these practices in your factory.

Table 12. Receiving fabric

Best practices	✓
1. Fabric is requested and picked up using Material Request Notes (MRN – Fabric).	
2. Cutting helpers are trained in understanding and using MRNs for fabric pick-up.	
3. Cutting helpers are trained in and in best receiving practices (including the use of trolleys) and in safe and efficient storing practices.	
4. Fabric relaxation time and relaxation method are determined according to the type of fabric and its construction.	

Activity

# 3b



15 minutes

## Your action plan

In this activity, you will think of ways to apply your new knowledge to improve fabric receiving in your factory 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. Receiving fabric – Action Plan**

<b>Problem identified</b>				
<b>Solutions identified</b>	<b>Action(s) to be taken</b>	<b>Person responsible</b>	<b>By when?</b>	<b>How will improvements be measured?</b>

# Receiving fabric

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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