
TRANSFORMING
HANDLING SITUATIONS
PLANNING
CUSTOMIZED TRAINING
PLANNING TOOL
FOR SAFE MANUAL
HANDLING
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PLANNING TOOL FOR SAFE MANUAL HANDLING

RF-816

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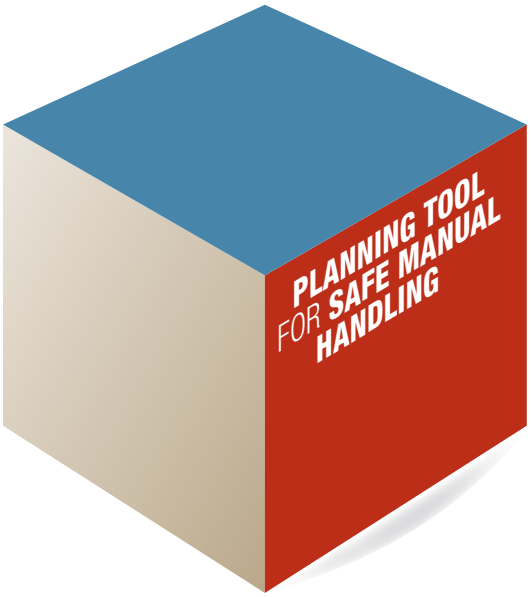

FOREWORD

This tool will help managers and employees gain a better understanding of the nature and complexity of handling situations and identify musculoskeletal disorder risks. It consists of five worksheets that can also help in targeting handling situations that need to be changed and in planning customized training in safe manual handling.

A new approach to training in manual handling was used in developing this tool. Though training remains the key element, working conditions that can foster manual handling risks are also considered. The new approach thus includes considering transformation of certain manual handling situations. You can learn more about this new approach to training by consulting the research report (http://www.irsst.qc.ca/en/-irsst-publication-participatory-training-in-manual-handling-theoretical-foundations-and-proposed-approach-r-784.html) or listening to a conference given by Denys Denis (in French only) (http://www.irsst.qc.ca/-webtv-Developpement-d-un-programme-de-formation-a-la-manutention-manuelle.html).

TO COMPLETE THE WORKSHEETS

Paper version ▶ Print
Electronic version ▶ Use Adobe Reader

Note: *the current version of Adobe Reader does not support interactive forms on all mobile devices.*

INTRODUCTION

THE FIVE WORKSHEETS

- **Worksheets 1 and 2** can be completed by the members of the working committee.
- **Worksheets 3, 4 and 5** may require the help of an outside consultant hired by the organization to further investigate the transformations required and/or to provide training.

BEFORE YOU START ...
Form a working committee

1 Identify

WHERE ARE THERE PROBLEMS OR RISKS?

Identification of handling situations where intervention is possible

2 Set priorities

WHERE SHOULD WE INTERVENE?

Selection of handling situations for intervention

Give priority to no more than 5 situations

3 Understand

WHAT DO WE NEED TO KNOW ABOUT THE SELECTED SITUATIONS?

Understanding the work: characteristics of the selected situations

Complete a worksheet for each situation selected

4 Transform

WHAT CAN WE IMPROVE?

Transformation targets

Complete a worksheet for each situation selected

5 Train

WHAT DO WE NEED TO KNOW TO PLAN TRAINING?

WORKING COMMITTEE

Before you start, it's a good idea to form a working committee. The committee should include members of the health and safety committee, one or two foremen and several handlers (some novice and some experienced).

	NAME	JOB TITLE	CONTACT INFORMATION
1			
2			
3			
4			
5			
6			
7			
8			

1 IDENTIFICATION OF HANDLING SITUATIONS WHERE INTERVENTION IS POSSIBLE

Identify

This worksheet is used to identify problems associated with different handling situations where a transformational and/or training intervention is possible.

Answer yes or no. If you answer yes, please specify the situation, task or job concerned.

THERE ARE HANDLING JOBS, TASKS OR SITUATIONS ...

Problem indicator		NO	YES	WHICH ONE(S)? (maximum 160 characters)	DON'T KNOW
1	... that workers say are more difficult or problematic.	○	○		○
2	... that workers complain about more than others.	○	○		○
3	... for which workers report back problems (e.g., pain, fatigue, discomfort).	○	○		○
4	... for which workers report shoulder problems.	○	○		○
5	... for which workers report problems in the upper or lower limbs (e.g., wrists, elbows, knees).	○	○		○
6	... with a high worker turnover.	○	○		○

WORKSHEET 1 CONTINUED

1 IDENTIFICATION OF HANDLING SITUATIONS WHERE INTERVENTION IS POSSIBLE

Identify

THERE ARE HANDLING JOBS, TASKS OR SITUATIONS ...

Know-how to be acquired		NO	YES	WHICH ONE(S)? (maximum 160 characters)	DON'T KNOW
7	... with loads that are more difficult to transfer and whose handling requires know-how or special techniques.	○	○		○
8	... where one must think about how to go about handling the load.	○	○		○
9	... where all types of incidents occur (e.g., loads fall or catch on things).	○	○		○
10	... that require two handlers, so adjustments are required.	○	○		○
11	... where load size varies a great deal.	○	○		○

WORKSHEET 1 CONTINUED

1 IDENTIFICATION OF HANDLING SITUATIONS WHERE INTERVENTION IS POSSIBLE

Identify

THERE ARE HANDLING JOBS, TASKS OR SITUATIONS ...

Knowledge to be transferred (e.g., analysis of the situation, planning)	NO	YES	WHICH ONE(S)? (maximum 160 characters)	DON'T KNOW
12 ... for which experience is really helpful and makes a big difference.	○	○		○
13 ... for which ways of doing things vary a great deal.	○	○		○
14 ... where circumstances change all the time and are never the same.	○	○		○
15 ... for which it takes time before a worker no longer needs help.	○	○		○
16 ... where the work will remain manual.	○	○		○

2 SELECTION OF HANDLING SITUATIONS FOR INTERVENTION

Set priorities

To select handling situations that will be the subject of an intervention, examine each situation mentioned in Worksheet 1 on the basis of the following three criteria:

1. Potential severity of injury in case of an accident.
2. Number of people concerned.
3. Suitability for knowledge transfer (due to complexity or variability) and thus for orientation and training of new workers.

Select five handling jobs, tasks or situations to be given priority for transformation or training. It is suggested that the number of situations to be corrected be limited. A gradual approach is always preferable, and it is good to learn from experience.

	JOB, TASK OR SITUATION SELECTED FOR INTERVENTION	POTENTIAL INJURY SEVERITY	NUMBER OF PEOPLE CONCERNED	SUITABILITY FOR KNOWLEDGE TRANSFER
A		○ MINOR ○ MODERATE ○ SEVERE		○ WEAK ○ MODERATE ○ STRONG
	WORKSHEET 3 A ▶ WORKSHEET 4 A ▶			
B		○ MINOR ○ MODERATE ○ SEVERE		○ WEAK ○ MODERATE ○ STRONG
	WORKSHEET 3 B ▶ WORKSHEET 4 B ▶			
C		○ MINOR ○ MODERATE ○ SEVERE		○ WEAK ○ MODERATE ○ STRONG
	WORKSHEET 3 C ▶ WORKSHEET 4 C ▶			
D		○ MINOR ○ MODERATE ○ SEVERE		○ WEAK ○ MODERATE ○ STRONG
	WORKSHEET 3 D ▶ WORKSHEET 4 D ▶			
E		○ MINOR ○ MODERATE ○ SEVERE		○ WEAK ○ MODERATE ○ STRONG
	WORKSHEET 3 E ▶ WORKSHEET 4 E ▶			

3 A UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

This worksheet will help in understanding the characteristics of each situation selected in Worksheet 2 and in specifying the information needed for a transformational or training intervention.

! Complete one worksheet for each handling situation selected in Worksheet 2.

SELECTED SITUATION A:

Answer yes or no and give details, if necessary.

CHARACTERISTICS OF THE HANDLING SITUATION

Frequency of handling activities

			DETAILS (maximum 160 characters)	
1	Handling is performed ◯ occasionally ◯ on a regular basis			
		NO YES		DON'T KNOW
2	There are significant rushes.	◯ ◯		◯
3	Average daily tonnage handled varies a great deal.	◯ ◯		◯

WORKSHEET 3A CONTINUED

CHARACTERISTICS OF THE HANDLING SITUATION

Variability of loads and handling situations (changes often)

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
4 Loads handled vary considerably with respect to				
▶ weight	○	○		○
▶ shape	○	○		○
▶ size	○	○		○
5 Handling situations vary considerably with respect to				
▶ location of handling	○	○		○
▶ lifting height	○	○		○
▶ deposit height	○	○		○
▶ lifting and deposit distance	○	○		○

WORKSHEET 3A CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Difficulties that must be considered (there are problems)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
6 Difficulties with loads to be handled:				
▶ Weight (e.g., very heavy, off-centre)	○	○		○
▶ Shape	○	○		○
▶ Gripping options	○	○		○
▶ Containers (e.g., too soft)	○	○		○
▶ Contents (e.g., fragile)	○	○		○
7 Space-related difficulties:				
▶ Lifting or deposit height	○	○		○
▶ Space constraints (e.g., small space, obstacles)	○	○		○
▶ Climbing required	○	○		○
8 Difficulties related to travelled path:				
▶ Nature of travelled area (e.g., differences in level, slippery or uneven surfaces, narrow or crowded spaces)	○	○		○
▶ Traffic of other people	○	○		○

WORKSHEET 3A CONTINUED

3 A UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

CHARACTERISTICS OF THE HANDLING SITUATION

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
Team work				
9 Two or more people required to transfer each load	○	○		○
10 Team work poses a problem	○	○		○
11 Interaction with others required (e.g., driver, customers, other workers)	○	○		○
Environment				
12 Environmental conditions that must be considered (e.g., heat, cold)	○	○		○
Equipment				
13 Problems with respect to the handling of equipment	○	○		○
Knowledge and skills				
14 Particular competencies or skills required	○	○		○
15 Planning plays a key role in performing the work (order in which the loads are handled, organization of the work)	○	○		○
16 Certain employees are valued for their know-how and performance	○	○		○

WORKSHEET 4A

3 B UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

This worksheet will help in understanding the characteristics of each situation selected in Worksheet 2 and in specifying the information needed for a transformational or training intervention.

! Complete one worksheet for each handling situation selected in Worksheet 2.

SELECTED SITUATION B:

Answer yes or no and give details, if necessary.

CHARACTERISTICS OF THE HANDLING SITUATION

Frequency of handling activities

			DETAILS (maximum 160 characters)	
1	Handling is performed ◯ occasionally ◯ on a regular basis			
		NO YES		DON'T KNOW
2	There are significant rushes.	◯ ◯		◯
3	Average daily tonnage handled varies a great deal.	◯ ◯		◯

WORKSHEET 3B CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Variability of loads and handling situations (changes often)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
4 Loads handled vary considerably with respect to				
▶ weight	○	○		○
▶ shape	○	○		○
▶ size	○	○		○
5 Handling situations vary considerably with respect to				
▶ location of handling	○	○		○
▶ lifting height	○	○		○
▶ deposit height	○	○		○
▶ lifting and deposit distance	○	○		○

WORKSHEET 3B CONTINUED

CHARACTERISTICS OF THE HANDLING SITUATION

Difficulties that must be considered (there are problems)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
6 Difficulties with loads to be handled:				
▶ Weight (e.g., very heavy, off-centre)	○	○		○
▶ Shape	○	○		○
▶ Gripping options	○	○		○
▶ Containers (e.g., too soft)	○	○		○
▶ Contents (e.g., fragile)	○	○		○
7 Space-related difficulties:				
▶ Lifting or deposit height	○	○		○
▶ Space constraints (e.g., small space, obstacles)	○	○		○
▶ Climbing required	○	○		○
8 Difficulties related to travelled path:				
▶ Nature of travelled area (e.g., differences in level, slippery or uneven surfaces, narrow or crowded spaces)	○	○		○
▶ Traffic of other people	○	○		○

WORKSHEET 3B CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
Team work				
9 Two or more people required to transfer each load	○	○		○
10 Team work poses a problem	○	○		○
11 Interaction with others required (e.g., driver, customers, other workers)	○	○		○
Environment				
12 Environmental conditions that must be considered (e.g., heat, cold)	○	○		○
Equipment				
13 Problems with respect to the handling of equipment	○	○		○
Knowledge and skills				
14 Particular competencies or skills required	○	○		○
15 Planning plays a key role in performing the work (order in which the loads are handled, organization of the work)	○	○		○
16 Certain employees are valued for their know-how and performance	○	○		○

WORKSHEET 4B

3C UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

This worksheet will help in understanding the characteristics of each situation selected in Worksheet 2 and in specifying the information needed for a transformational or training intervention.

! Complete one worksheet for each handling situation selected in Worksheet 2.

SELECTED SITUATION C:

Answer yes or no and give details, if necessary.

CHARACTERISTICS OF THE HANDLING SITUATION

Frequency of handling activities

			DETAILS (maximum 160 characters)	
1	Handling is performed ○ occasionally ○ on a regular basis			
		NO YES		DON'T KNOW
2	There are significant rushes.	○ ○		○
3	Average daily tonnage handled varies a great deal.	○ ○		○

WORKSHEET 3C CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Variability of loads and handling situations (changes often)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
4 Loads handled vary considerably with respect to				
▶ weight	○	○		○
▶ shape	○	○		○
▶ size	○	○		○
5 Handling situations vary considerably with respect to				
▶ location of handling	○	○		○
▶ lifting height	○	○		○
▶ deposit height	○	○		○
▶ lifting and deposit distance	○	○		○

WORKSHEET 3C CONTINUED

CHARACTERISTICS OF THE HANDLING SITUATION

Difficulties that must be considered (there are problems)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
6 Difficulties with loads to be handled:				
▶ Weight (e.g., very heavy, off-centre)	○	○		○
▶ Shape	○	○		○
▶ Gripping options	○	○		○
▶ Containers (e.g., too soft)	○	○		○
▶ Contents (e.g., fragile)	○	○		○
7 Space-related difficulties:				
▶ Lifting or deposit height	○	○		○
▶ Space constraints (e.g., small space, obstacles)	○	○		○
▶ Climbing required	○	○		○
8 Difficulties related to travelled path:				
▶ Nature of travelled area (e.g., differences in level, slippery or uneven surfaces, narrow or crowded spaces)	○	○		○
▶ Traffic of other people	○	○		○

WORKSHEET 3C CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
Team work				
9 Two or more people required to transfer each load	○	○		○
10 Team work poses a problem	○	○		○
11 Interaction with others required (e.g., driver, customers, other workers)	○	○		○
Environment				
12 Environmental conditions that must be considered (e.g., heat, cold)	○	○		○
Equipment				
13 Problems with respect to the handling of equipment	○	○		○
Knowledge and skills				
14 Particular competencies or skills required	○	○		○
15 Planning plays a key role in performing the work (order in which the loads are handled, organization of the work)	○	○		○
16 Certain employees are valued for their know-how and performance	○	○		○

WORKSHEET 4C

3 D UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

This worksheet will help in understanding the characteristics of each situation selected in Worksheet 2 and in specifying the information needed for a transformational or training intervention.

! Complete one worksheet for each handling situation selected in Worksheet 2.

SELECTED SITUATION D:

Answer yes or no and give details, if necessary.

CHARACTERISTICS OF THE HANDLING SITUATION

Frequency of handling activities

			DETAILS (maximum 160 characters)	
1	Handling is performed ◯ occasionally ◯ on a regular basis			
		NO YES		DON'T KNOW
2	There are significant rushes.	◯ ◯		◯
3	Average daily tonnage handled varies a great deal.	◯ ◯		◯

WORKSHEET 3D CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Variability of loads and handling situations (changes often)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
4 Loads handled vary considerably with respect to				
▶ weight	○	○		○
▶ shape	○	○		○
▶ size	○	○		○
5 Handling situations vary considerably with respect to				
▶ location of handling	○	○		○
▶ lifting height	○	○		○
▶ deposit height	○	○		○
▶ lifting and deposit distance	○	○		○

WORKSHEET 3D CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Difficulties that must be considered (there are problems)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
6 Difficulties with loads to be handled:				
▶ Weight (e.g., very heavy, off-centre)	○	○		○
▶ Shape	○	○		○
▶ Gripping options	○	○		○
▶ Containers (e.g., too soft)	○	○		○
▶ Contents (e.g., fragile)	○	○		○
7 Space-related difficulties:				
▶ Lifting or deposit height	○	○		○
▶ Space constraints (e.g., small space, obstacles)	○	○		○
▶ Climbing required	○	○		○
8 Difficulties related to travelled path:				
▶ Nature of travelled area (e.g., differences in level, slippery or uneven surfaces, narrow or crowded spaces)	○	○		○
▶ Traffic of other people	○	○		○

WORKSHEET 3D CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
Team work				
9 Two or more people required to transfer each load	○	○		○
10 Team work poses a problem	○	○		○
11 Interaction with others required (e.g., driver, customers, other workers)	○	○		○
Environment				
12 Environmental conditions that must be considered (e.g., heat, cold)	○	○		○
Equipment				
13 Problems with respect to the handling of equipment	○	○		○
Knowledge and skills				
14 Particular competencies or skills required	○	○		○
15 Planning plays a key role in performing the work (order in which the loads are handled, organization of the work)	○	○		○
16 Certain employees are valued for their know-how and performance	○	○		○

WORKSHEET 4D

3 E UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

This worksheet will help in understanding the characteristics of each situation selected in Worksheet 2 and in specifying the information needed for a transformational or training intervention.

! Complete one worksheet for each handling situation selected in Worksheet 2.

SELECTED SITUATION E:

Answer yes or no and give details, if necessary.

CHARACTERISTICS OF THE HANDLING SITUATION

Frequency of handling activities

			DETAILS (maximum 160 characters)	
1	Handling is performed ◯ occasionally ◯ on a regular basis			
		NO YES		DON'T KNOW
2	There are significant rushes.	◯ ◯		◯
3	Average daily tonnage handled varies a great deal.	◯ ◯		◯

WORKSHEET 3E CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Variability of loads and handling situations (changes often)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
4 Loads handled vary considerably with respect to				
▶ weight	○	○		○
▶ shape	○	○		○
▶ size	○	○		○
5 Handling situations vary considerably with respect to				
▶ location of handling	○	○		○
▶ lifting height	○	○		○
▶ deposit height	○	○		○
▶ lifting and deposit distance	○	○		○

WORKSHEET 3E CONTINUED

UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

CHARACTERISTICS OF THE HANDLING SITUATION

Difficulties that must be considered (there are problems)	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
6 Difficulties with loads to be handled:				
▶ Weight (e.g., very heavy, off-centre)	○	○		○
▶ Shape	○	○		○
▶ Gripping options	○	○		○
▶ Containers (e.g., too soft)	○	○		○
▶ Contents (e.g., fragile)	○	○		○
7 Space-related difficulties:				
▶ Lifting or deposit height	○	○		○
▶ Space constraints (e.g., small space, obstacles)	○	○		○
▶ Climbing required	○	○		○
8 Difficulties related to travelled path:				
▶ Nature of travelled area (e.g., differences in level, slippery or uneven surfaces, narrow or crowded spaces)	○	○		○
▶ Traffic of other people	○	○		○

WORKSHEET 3E CONTINUED

3 E UNDERSTANDING THE WORK: CHARACTERISTICS OF THE SELECTED SITUATIONS

Understand

CHARACTERISTICS OF THE HANDLING SITUATION

	NO	YES	DETAILS (maximum 160 characters)	DON'T KNOW
Team work				
9 Two or more people required to transfer each load	○	○		○
10 Team work poses a problem	○	○		○
11 Interaction with others required (e.g., driver, customers, other workers)	○	○		○
Environment				
12 Environmental conditions that must be considered (e.g., heat, cold)	○	○		○
Equipment				
13 Problems with respect to the handling of equipment	○	○		○
Knowledge and skills				
14 Particular competencies or skills required	○	○		○
15 Planning plays a key role in performing the work (order in which the loads are handled, organization of the work)	○	○		○
16 Certain employees are valued for their know-how and performance	○	○		○

WORKSHEET 4E

4A TRANSFORMATION TARGETS

Transform

This worksheet is used to identify what can be improved in each handling situation.

! Complete a worksheet for each handling situation identified in Worksheet 2.

SELECTED SITUATION A:

For each aspect mentioned in the column on the left, indicate if transformation is required. Describe the problem if necessary.

ASPECT TO BE TRANSFORMED		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Load, container					
1	Weight (e.g., reduce heaviest weights)	○	○	○ LOW ○ MEDIUM ○ HIGH	
2	Solidity of packaging	○	○	○ LOW ○ MEDIUM ○ HIGH	
3	Size (e.g., too big)	○	○	○ LOW ○ MEDIUM ○ HIGH	
4	Grip (e.g., inadequate, too small, uncomfortable)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4A CONTINUED

ASPECT TO BE TRANSFORMED

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Equipment					
5	Trolley (e.g., find a model better suited to the task)	○	○	○ LOW ○ MEDIUM ○ HIGH	
6	Wheels	○	○	○ LOW ○ MEDIUM ○ HIGH	
7	Availability	○	○	○ LOW ○ MEDIUM ○ HIGH	
8	Repair and maintenance	○	○	○ LOW ○ MEDIUM ○ HIGH	
9	Distribution	○	○	○ LOW ○ MEDIUM ○ HIGH	
Space arrangements					
10	Travelled path (e.g., wider, less encumbered, fewer turns)	○	○	○ LOW ○ MEDIUM ○ HIGH	
11	Pallet, shelf or rack height (e.g., too high, too low)	○	○	○ LOW ○ MEDIUM ○ HIGH	
12	Distances (load too far from handler when picking or depositing)	○	○	○ LOW ○ MEDIUM ○ HIGH	
13	Handling space	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4A CONTINUED

ASPECT TO BE TRANSFORMED	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Surface, ground				
14 Surface of travelled path (e.g., uneven, risk of tripping or of getting caught on something)	○	○	○ LOW ○ MEDIUM ○ HIGH	
15 Slipping risk (e.g., water, oil)	○	○	○ LOW ○ MEDIUM ○ HIGH	
Team work				
16 Stability of teams	○	○	○ LOW ○ MEDIUM ○ HIGH	
17 Pairing of workers (e.g., height, pace, experience, left-handed, right-handed)	○	○	○ LOW ○ MEDIUM ○ HIGH	
18 Stability of assignments	○	○	○ LOW ○ MEDIUM ○ HIGH	
Work organization				
19 Distribution of handling work over time	○	○	○ LOW ○ MEDIUM ○ HIGH	
20 Distribution among teams or workers (e.g., take workers' characteristics and difficulties into account to prevent overloading certain workers)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4A CONTINUED

ASPECT TO BE TRANSFORMED

Inventory and shipment management

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
21	Placement of containers	○	○	○ LOW ○ MEDIUM ○ HIGH	
22	Arrangement of loads (e.g., take load characteristics into account)	○	○	○ LOW ○ MEDIUM ○ HIGH	
23	Amount of re-handling required (e.g., need to deposit load one or more times before final deposit)	○	○	○ LOW ○ MEDIUM ○ HIGH	

4 B TRANSFORMATION TARGETS

Transform

This worksheet is used to identify what can be improved in each handling situation.

! Complete a worksheet for each handling situation identified in Worksheet 2.

SELECTED SITUATION B:

For each aspect mentioned in the column on the left, indicate if transformation is required. Describe the problem if necessary.

ASPECT TO BE TRANSFORMED — Load, container		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
1	Weight (e.g., reduce heaviest weights)	○	○	○ LOW ○ MEDIUM ○ HIGH	
2	Solidity of packaging	○	○	○ LOW ○ MEDIUM ○ HIGH	
3	Size (e.g., too big)	○	○	○ LOW ○ MEDIUM ○ HIGH	
4	Grip (e.g., inadequate, too small, uncomfortable)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4B CONTINUED

ASPECT TO BE TRANSFORMED

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Equipment					
5	Trolley (e.g., find a model better suited to the task)	○	○	○ LOW ○ MEDIUM ○ HIGH	
6	Wheels	○	○	○ LOW ○ MEDIUM ○ HIGH	
7	Availability	○	○	○ LOW ○ MEDIUM ○ HIGH	
8	Repair and maintenance	○	○	○ LOW ○ MEDIUM ○ HIGH	
9	Distribution	○	○	○ LOW ○ MEDIUM ○ HIGH	
Space arrangements					
10	Travelled path (e.g., wider, less encumbered, fewer turns)	○	○	○ LOW ○ MEDIUM ○ HIGH	
11	Pallet, shelf or rack height (e.g., too high, too low)	○	○	○ LOW ○ MEDIUM ○ HIGH	
12	Distances (load too far from handler when picking or depositing)	○	○	○ LOW ○ MEDIUM ○ HIGH	
13	Handling space	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4B CONTINUED

ASPECT TO BE TRANSFORMED	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Surface, ground				
14 Surface of travelled path (e.g., uneven, risk of tripping or of getting caught on something)	○	○	○ LOW ○ MEDIUM ○ HIGH	
15 Slipping risk (e.g., water, oil)	○	○	○ LOW ○ MEDIUM ○ HIGH	
Team work				
16 Stability of teams	○	○	○ LOW ○ MEDIUM ○ HIGH	
17 Pairing of workers (e.g., height, pace, experience, left-handed, right-handed)	○	○	○ LOW ○ MEDIUM ○ HIGH	
18 Stability of assignments	○	○	○ LOW ○ MEDIUM ○ HIGH	
Work organization				
19 Distribution of handling work over time	○	○	○ LOW ○ MEDIUM ○ HIGH	
20 Distribution among teams or workers (e.g., take workers' characteristics and difficulties into account to prevent overloading certain workers)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4B CONTINUED

ASPECT TO BE TRANSFORMED

Inventory and shipment management

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
21	Placement of containers	○	○	○ LOW ○ MEDIUM ○ HIGH	
22	Arrangement of loads (e.g., take load characteristics into account)	○	○	○ LOW ○ MEDIUM ○ HIGH	
23	Amount of re-handling required (e.g., need to deposit load one or more times before final deposit)	○	○	○ LOW ○ MEDIUM ○ HIGH	

4C TRANSFORMATION TARGETS

Transform

This worksheet is used to identify what can be improved in each handling situation.

! Complete a worksheet for each handling situation identified in Worksheet 2.

SELECTED SITUATION C:

For each aspect mentioned in the column on the left, indicate if transformation is required. Describe the problem if necessary.

ASPECT TO BE TRANSFORMED — Load, container		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
1	Weight (e.g., reduce heaviest weights)	○	○	○ LOW ○ MEDIUM ○ HIGH	
2	Solidity of packaging	○	○	○ LOW ○ MEDIUM ○ HIGH	
3	Size (e.g., too big)	○	○	○ LOW ○ MEDIUM ○ HIGH	
4	Grip (e.g., inadequate, too small, uncomfortable)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4C CONTINUED

ASPECT TO BE TRANSFORMED

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Equipment					
5	Trolley (e.g., find a model better suited to the task)	○	○	○ LOW ○ MEDIUM ○ HIGH	
6	Wheels	○	○	○ LOW ○ MEDIUM ○ HIGH	
7	Availability	○	○	○ LOW ○ MEDIUM ○ HIGH	
8	Repair and maintenance	○	○	○ LOW ○ MEDIUM ○ HIGH	
9	Distribution	○	○	○ LOW ○ MEDIUM ○ HIGH	
Space arrangements					
10	Travelled path (e.g., wider, less encumbered, fewer turns)	○	○	○ LOW ○ MEDIUM ○ HIGH	
11	Pallet, shelf or rack height (e.g., too high, too low)	○	○	○ LOW ○ MEDIUM ○ HIGH	
12	Distances (load too far from handler when picking or depositing)	○	○	○ LOW ○ MEDIUM ○ HIGH	
13	Handling space	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4C CONTINUED

ASPECT TO BE TRANSFORMED

	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Surface, ground				
14 Surface of travelled path (e.g., uneven, risk of tripping or of getting caught on something)	○	○	○ LOW ○ MEDIUM ○ HIGH	
15 Slipping risk (e.g., water, oil)	○	○	○ LOW ○ MEDIUM ○ HIGH	
Team work				
16 Stability of teams	○	○	○ LOW ○ MEDIUM ○ HIGH	
17 Pairing of workers (e.g., height, pace, experience, left-handed, right-handed)	○	○	○ LOW ○ MEDIUM ○ HIGH	
18 Stability of assignments	○	○	○ LOW ○ MEDIUM ○ HIGH	
Work organization				
19 Distribution of handling work over time	○	○	○ LOW ○ MEDIUM ○ HIGH	
20 Distribution among teams or workers (e.g., take workers' characteristics and difficulties into account to prevent overloading certain workers)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4C CONTINUED

ASPECT TO BE TRANSFORMED

Inventory and shipment management

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
21	Placement of containers	○	○	○ LOW ○ MEDIUM ○ HIGH	
22	Arrangement of loads (e.g., take load characteristics into account)	○	○	○ LOW ○ MEDIUM ○ HIGH	
23	Amount of re-handling required (e.g., need to deposit load one or more times before final deposit)	○	○	○ LOW ○ MEDIUM ○ HIGH	

4 D TRANSFORMATION TARGETS

Transform

This worksheet is used to identify what can be improved in each handling situation.

! Complete a worksheet for each handling situation identified in Worksheet 2.

SELECTED SITUATION D:

For each aspect mentioned in the column on the left, indicate if transformation is required. Describe the problem if necessary.

ASPECT TO BE TRANSFORMED		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Load, container					
1	Weight (e.g., reduce heaviest weights)	○	○	○ LOW ○ MEDIUM ○ HIGH	
2	Solidity of packaging	○	○	○ LOW ○ MEDIUM ○ HIGH	
3	Size (e.g., too big)	○	○	○ LOW ○ MEDIUM ○ HIGH	
4	Grip (e.g., inadequate, too small, uncomfortable)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4D CONTINUED

ASPECT TO BE TRANSFORMED

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Equipment					
5	Trolley (e.g., find a model better suited to the task)	○	○	○ LOW ○ MEDIUM ○ HIGH	
6	Wheels	○	○	○ LOW ○ MEDIUM ○ HIGH	
7	Availability	○	○	○ LOW ○ MEDIUM ○ HIGH	
8	Repair and maintenance	○	○	○ LOW ○ MEDIUM ○ HIGH	
9	Distribution	○	○	○ LOW ○ MEDIUM ○ HIGH	
Space arrangements					
10	Travelled path (e.g., wider, less encumbered, fewer turns)	○	○	○ LOW ○ MEDIUM ○ HIGH	
11	Pallet, shelf or rack height (e.g., too high, too low)	○	○	○ LOW ○ MEDIUM ○ HIGH	
12	Distances (load too far from handler when picking or depositing)	○	○	○ LOW ○ MEDIUM ○ HIGH	
13	Handling space	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4D CONTINUED

ASPECT TO BE TRANSFORMED

	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Surface, ground				
14 Surface of travelled path (e.g., uneven, risk of tripping or of getting caught on something)	○	○	○ LOW ○ MEDIUM ○ HIGH	
15 Slipping risk (e.g., water, oil)	○	○	○ LOW ○ MEDIUM ○ HIGH	
Team work				
16 Stability of teams	○	○	○ LOW ○ MEDIUM ○ HIGH	
17 Pairing of workers (e.g., height, pace, experience, left-handed, right-handed)	○	○	○ LOW ○ MEDIUM ○ HIGH	
18 Stability of assignments	○	○	○ LOW ○ MEDIUM ○ HIGH	
Work organization				
19 Distribution of handling work over time	○	○	○ LOW ○ MEDIUM ○ HIGH	
20 Distribution among teams or workers (e.g., take workers' characteristics and difficulties into account to prevent overloading certain workers)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4D CONTINUED

ASPECT TO BE TRANSFORMED

Inventory and shipment management	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
21 Placement of containers	○	○	○ LOW ○ MEDIUM ○ HIGH	
22 Arrangement of loads (e.g., take load characteristics into account)	○	○	○ LOW ○ MEDIUM ○ HIGH	
23 Amount of re-handling required (e.g., need to deposit load one or more times before final deposit)	○	○	○ LOW ○ MEDIUM ○ HIGH	

4E TRANSFORMATION TARGETS

Transform

This worksheet is used to identify what can be improved in each handling situation.

! Complete a worksheet for each handling situation identified in Worksheet 2.

SELECTED SITUATION E:

For each aspect mentioned in the column on the left, indicate if transformation is required. Describe the problem if necessary.

ASPECT TO BE TRANSFORMED — Load, container		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
1	Weight (e.g., reduce heaviest weights)	○	○	○ LOW ○ MEDIUM ○ HIGH	
2	Solidity of packaging	○	○	○ LOW ○ MEDIUM ○ HIGH	
3	Size (e.g., too big)	○	○	○ LOW ○ MEDIUM ○ HIGH	
4	Grip (e.g., inadequate, too small, uncomfortable)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4E CONTINUED

ASPECT TO BE TRANSFORMED

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Equipment					
5	Trolley (e.g., find a model better suited to the task)	○	○	○ LOW ○ MEDIUM ○ HIGH	
6	Wheels	○	○	○ LOW ○ MEDIUM ○ HIGH	
7	Availability	○	○	○ LOW ○ MEDIUM ○ HIGH	
8	Repair and maintenance	○	○	○ LOW ○ MEDIUM ○ HIGH	
9	Distribution	○	○	○ LOW ○ MEDIUM ○ HIGH	
Space arrangements					
10	Travelled path (e.g., wider, less encumbered, fewer turns)	○	○	○ LOW ○ MEDIUM ○ HIGH	
11	Pallet, shelf or rack height (e.g., too high, too low)	○	○	○ LOW ○ MEDIUM ○ HIGH	
12	Distances (load too far from handler when picking or depositing)	○	○	○ LOW ○ MEDIUM ○ HIGH	
13	Handling space	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4E CONTINUED

ASPECT TO BE TRANSFORMED

	NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
Surface, ground				
14 Surface of travelled path (e.g., uneven, risk of tripping or of getting caught on something)	○	○	○ LOW ○ MEDIUM ○ HIGH	
15 Slipping risk (e.g., water, oil)	○	○	○ LOW ○ MEDIUM ○ HIGH	
Team work				
16 Stability of teams	○	○	○ LOW ○ MEDIUM ○ HIGH	
17 Pairing of workers (e.g., height, pace, experience, left-handed, right-handed)	○	○	○ LOW ○ MEDIUM ○ HIGH	
18 Stability of assignments	○	○	○ LOW ○ MEDIUM ○ HIGH	
Work organization				
19 Distribution of handling work over time	○	○	○ LOW ○ MEDIUM ○ HIGH	
20 Distribution among teams or workers (e.g., take workers' characteristics and difficulties into account to prevent overloading certain workers)	○	○	○ LOW ○ MEDIUM ○ HIGH	

WORKSHEET 4E CONTINUED

ASPECT TO BE TRANSFORMED

Inventory and shipment management

		NO	YES	IMPACT	DESCRIBE THE PROBLEM (maximum 160 characters)
21	Placement of containers	○	○	○ LOW ○ MEDIUM ○ HIGH	
22	Arrangement of loads (e.g., take load characteristics into account)	○	○	○ LOW ○ MEDIUM ○ HIGH	
23	Amount of re-handling required (e.g., need to deposit load one or more times before final deposit)	○	○	○ LOW ○ MEDIUM ○ HIGH	

5 TRAINING

Train

This worksheet is used to collect information to be considered and conveyed to the trainer for planning and following up on training.

The organization

1	Size of the organization	
2	Short description of area of activity	
3	Do you have an active health and safety committee?	○ YES ○ NO
	▶ Who sits on the committee?	
	▶ Is the committee aware of the handling problems?	○ YES ○ NO
	▶ What would be the committee's role with respect to training?	
	▶ How often does the committee meet?	
4	Are company employees unionized?	○ YES ○ NO
	▶ Is the union aware of what is being done?	○ YES ○ NO
	▶ Will the union be involved? If so, at what stage?	
	▶ What are the expectations of the union?	

WORKSHEET 5 CONTINUED

The organization [CONTINUED]

5 What data do you have concerning accidents in the targeted situations?	
6 Would it be worthwhile to meet with or involve other committees in your organization (e.g., ergonomics committee, training committee)?	
7 Have there been modifications to or interventions respecting the targeted jobs, tasks or situations in the past? If so, what were they?	
8 Are there projects planned with respect to handling?	

WORKSHEET 5 CONTINUED

Current handling training

9 Are there any existing recurrent or regular training activities? ◯ YES ◯ NO

- Who organizes them?
- Who provides the training?
- What are these training activities?

10 And in the past, what type of handling training was given?

- Duration and number of training sessions?
- Content of the training?
- Did the training include simulation exercises? ◯ YES ◯ NO
- Who gave the training?
  - ☐ AN EXPERIENCED HANDLER
  - ☐ AN OUTSIDE SAFETY PRACTITIONER
  - ☐ AN INTERNAL SAFETY PRACTITIONER
  - ☐ OTHER
- How was/were this trainer/these trainers selected?
- Who received the training?

WORKSHEET 5 CONTINUED

5 TRAINING

Train

Planning and follow-up on training

11 What are your goals and expectations?

12 Will all employees receive the training planned? ◯ YES ◯ NO

If not, what groups will receive the training?

Why have these groups been targeted?

13 Dominant gender ◯ MEN ◯ WOMEN ◯ BOTH

14 Dominant language at work ◯ ENGLISH ◯ FRENCH ◯ OTHER

15 Language(s) of training ◯ ENGLISH ◯ FRENCH

16 Worker seniority (give estimates)

- Average seniority
- Workers with less than one year of seniority
- Workers with 15 or more years of seniority

17 Age (give estimates)

- Average
- Less than 25 years of age
- Over 45 years of age

WORKSHEET 5 CONTINUED

Planning and follow-up on training [CONTINUED]

18 Tasks performed regularly	
19 Occasional tasks to be considered, and why?	
20 Handling equipment used	
21 What is the best week or time of year to give the training (with respect to production)?	
22 What rooms or spaces are available for the training?	
23 What follow-up is planned after the training?	

24 Are you planning any refresher sessions after the training? ◯ YES ◯ NO

▶ How often?	
▶ How long will the sessions last?	
▶ Given by whom?	

NOTES

APPENDIX 1

For more information

Les associations sectorielles paritaires (ASP)
http://www.preventionenligne.com/

Les mutuelles de prévention
http://www.csst.qc.ca/asp/ListeDesMutuelles/Mutuelle.asp

Les intervenants du Réseau de santé publique en santé au travail
http://www.santeautravail.qc.ca/

Association of Canadian Ergonomists
http://www.ace-ergocanada.ca/

La Commission de la santé et de la sécurité du travail
http://www.csst.qc.ca/prevention/theme/manutention/Pages/manutention_manuelle.aspx

L'Institut de recherche Robert-Sauvé en santé et en sécurité du travail
http://www.irsst.qc.ca/manutention/

www.irsst.qc.ca
Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST)