

## CUTTING PROCESS

600 cm<sup>2</sup> per a day

1 cm<sup>2</sup> = 1 EURO



Day	Material used	Waste	Costs
1			
2			
3			
4			
5			
6			
7			
8			
<b>Total cost</b>			



## MILLING PROCESS

2 x 300 cm<sup>2</sup> per a day

1 cm<sup>2</sup> = 2 EURO

1 cm<sup>2</sup> = 4 EURO in additional shift



Day	Milling machine 1 Profile: <b>A</b>		Milling machine 2 Profile: <b>B, C</b>	
	Real machine load	COST First shift Additional shift (if any)	Real machine load	COST First shift Additional shift (if any)
1				
2				
3				
4				
5				
6				
7				
8				
<b>First shift</b>			<b>First shift</b>	
<b>Additional shift</b>			<b>Additional shift</b>	
<b>Total cost</b>				



## LAMINATING PROCESS

2 x 300 cm<sup>2</sup> per a day

1 cm<sup>2</sup> = 3 EURO



Day	Material used	Waste	Costs
1			
2			
3			
4			
5			
6			
7			
8			
<b>Total cost</b>			



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## ORDERS COMPLETIONS AND SHIPMENT

Client number	Work in Process Number of pieces			Total number of days of delay	Cost of delay 1day = 500 Euro
	C	M	L		
C-1					
C-2					
C-3					
C-4					
C-5					
C-6					
C-7					
C-8					
C-9					
C-10					
<b>Sum of work in process</b>	$\Sigma =$	$\Sigma =$	$\Sigma =$	<b>Total cost</b>	
<b>Cost of Work in process (1 piece = 50 Euro)</b>					

## RESULTS TABLE

	Team 1	Team 2	Team 3	Team 4
Cost of waste in cutting process				
Cost of additional shift in milling process				
Cost of waste in laminating process				
Cost of Work in Process				
Cost of delayed deliveries				
Total costs				

**Title: What do you want to write about?**

**An owner of the problem:**

**Date:**

## 1. Problem description

Why do you want to write about this problem?

## 5. Proposed countermeasures

What do you propose to implement to achieve the goal(s)?

How the proposed solutions can influence on the source causes of the problem and can change the current situation to achieve the future state?

## 2. Current situation

What is a current situation?

Use visual tools to present the current situation (schemes, flowcharts, pictures, diagrams, VSM, spaghetti diagram etc.)

## 6. Plan

What we have to do?

What is a deadline?

Who will be responsible for the activities?

How much it will cost?

You can use Gant chart, table or other visual tool.

## 3. Goal(s), indicators

The goal(s) should be SMART (Specific, Measurable, Achievable, Realistic, Time-bound)

Indicators should give the possibility to assess improvements in the future

## 4. Analysis

What are the source causes of the problems?

Use a tool which will help you to find the causes of the problem (5xWhy?, Ishikawa diagram, interrelationship diagram, brainstorming, etc..)

## 7. Further improvement

What kind of problems can appear (risk analysis)?

Use PDCA to plan further improvement.

Assess what was achieved?

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<b>An owner of the problem:</b>	<b>Date:</b>
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**1. Problem description**

**5. Proposed countermeasures**

**2. Current situation**

**6. Plan**

**3. Goal(s), indicators**

**4. Analysis**

**7. Further improvement**

# Milling Machine 1

Profile: **A**



# Milling Machine 2

Profile: **B, C**