

## 0.07 SIPOC

WHEN YOU NEED TO BE SURE





# SIPOC - VOICE OF THE CUSTOMER

Suppliers

Inputs

Process

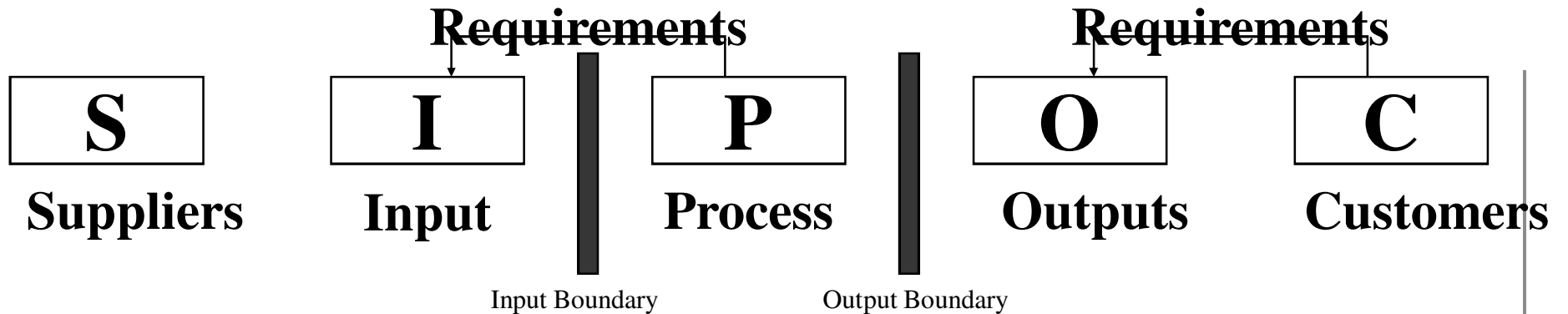
Outputs

Customers

## ■ Topics of Discussion:

- Learn the role of SIPOC in defining the scope of a project
- Identify who plays a role in defining the scope of a project
- Be able to identify gaps surrounding a process

## WHAT IS A SIPOC?



### ■ Suppliers

- Provide the inputs to the process

### ■ Input

- Resources required by the process

### ■ Input Boundary

- Specifies when the process starts

### ■ Input Requirements

- What the process requires of the inputs. Measurable, quantifiable.

### ■ Process

- The activity which transforms inputs to outputs

### ■ Output Boundary

- Specifies when the process ends

### ■ Outputs

- Delivered products or services

### ■ Customers

- Stakeholders who place the requirements on the outputs

### ■ Output Requirements

- What the customer requires of the outputs. Measurable, quantifiable.

## WHAT IS A PROCESS?



Use 7M's:

- Man
- Material
- Method
- Machine
- Measurement
- Mother Nature
- Management

A series of steps or tasks that change or transform the inputs.

Products

Goods

Services

Consequences

A process is a series of activities that transforms a set of inputs into a specific set of outputs.



# THE SIPOC FORM

Process Name:  
Process Owner:

<u>Suppliers</u> Providers of the required resources	<u>Inputs</u> Resources required by the process		<u>Process</u> Top level description of the activity	<u>Outputs</u> Deliverables from the process		<u>Customers</u> (Stakeholders who place the
		<u>Requirements</u>			<u>Requirements</u>	



# SIPOC EXAMPLE

S	I		P	O		C
Suppliers	Inputs		Process	Outputs		Customers
<b>Lüchow Supplying Material Flow</b>	Blank	Requirements According to Specifications	<b>Head of the Channel</b>		Requirements	
	Consumables	According to Specifications				
	Production Schedule	Ring Availability				
<b>Engineering Department</b>	Turning and Rolling Survey	Technical Instructions / Setting procedure / Steering Machine procedure / Routine Inspection	<b>FAR N°1 manufacturing for Outer Ring (including resetting)</b>	<b>Y1 : Rings according to Specifications</b>	Rings According to Specifications (geometry and material)	Heat Treatment and Channel
				<b>Y2 : Output according to Target</b>	Rings manufactured in line with target cost	Factory
<b>Maintenance + Manufacturing</b>	Maintenance + Manufacturing survey	Tools according to Specifications / Machine and handling system available		<b>Y3 : Rings out of Specification</b>	<b>Rings out of tolerance (geometry and material)</b>	<b>No Customer</b>
<b>Metrology</b>	Measuring Equipment	Calibrated and Available		<b>Y4: Production Schedule respected</b>	Rings manufactured in line with Production Schedule	Heat Treatment , Channel + External Customer
<b>Manufacturing</b>	Operators, Setters from Resetting and Maintenance Department	People Trained and Available		<b>Y5 : Product Release (after resetting)</b>	Rings According to Specifications (geometry and material) after resetting	Heat Treatment , Channel + External Customer
<b>Facilities</b>	Hydraulic Cutting Oil Pneumatic Power Supply	No disturbance (Continuous Flow)		<b>Y6 : Chips (turning)</b>	Chips recycled (out- sourced)	Facilities + Environmental Department
				<b>Y7 : Cutting Oil polluted</b>	Cutting Oil recycled (internal)	
				<b>Y8 : Consumables used</b>	Consumables recycled (out- sourced)	
			<b>Go to Heat Treatment</b>			



# SIPOC TRANSACTIONAL EXAMPLE

Supplier	Input	Requirements	Process	Outputs	Requirements	Customer
Customer	Order Quantity	By Part Number		Production Schedule	Within Capacity >Lead Time	Manufacturing Centre
Customer	Request Date	Specific Date		Confirmed Customer Orders	Order Quantity Requested Date	Customer
Manufacturing Centre	Lead Time	PN Specific Order prior to LT		Safety Stock	30-60DOS	Management
Business Unit	Price	Accurate/Correct		Fill Rate	> 95%	Management Customers
Sales Department	Customer Priority	Tier 1 Tier 2 Tier 3		Inventory Status	10+ Turns	Management



## SIPOC BENEFITS

- The SIPOC will:
  - Help identify and balance competing requirements
  - Identify gaps in requirements
  - Identify suppliers and customers
  - Verify the resource requirements
  - Establish the scope of the project, and satisfy stakeholders that the problem area is captured in the process
    - It builds team consensus
    - It resolves conflicts
  - Target the right metrics for verifying customer requirements
  - Establishes who should participate on the project team

A Thorough SIPOC is an indicator of a Well Defined Project

- Team Effort:
  - Project Sponsor
  - Process Owner
  - Team Leader
  - Green Belt
  - Black Belt



- Inputs to preparing the SIPOC:
  - Financial goals for the company and for the project
  - Defect data and quality goals for the project
  - Voice of Customer



# SIPOC STEPS

Process Name:  
Process Owner:

<b>Suppliers</b> Providers of the required resources	<b>Inputs</b> Resources required by the process	<b>Process</b> Top level description of the activity	<b>Outputs</b> Deliverables from the process	<b>Customers</b> (Stakeholders who place the requirements on the		
<p style="text-align: center;"><b>6</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     Who supplies each input?                 </div>	<p style="text-align: center;"><b>5</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     What inputs are required to enable this process?                 </div>	<p style="text-align: center;"><u>Requirements</u></p> <p style="text-align: center;"><b>7</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     What does the process expect of each input?                 </div>	<p style="text-align: center;"><b>1</b></p> <div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 80px; margin: 0 auto;">                         When does the process start?                     </div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="border: 1px solid black; padding: 5px; width: 80px; margin: 0 auto;">                         What is the process?                     </div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 80px; margin: 0 auto;">                         When does the process end?                     </div> </div>	<p style="text-align: center;"><b>2</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     What are the outputs?                 </div>	<p style="text-align: center;"><u>Requirements</u></p> <p style="text-align: center;"><b>4</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     What does each customer expect from each output?                 </div>	<p style="text-align: center;"><b>3</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">                     Who is the customer of each output?                 </div>

- 1** Identify the process and its boundaries
- 2** Identify the outputs
- 3** Identify the customers for each output
- 4** List the requirements for each output
- 5** Identify the inputs
- 6** Identify the supplier for each input
- 7** List the requirements for each input

- With your SIPOC complete, you can now use the information to:
  - Verify a link between the "outputs" and customer requirements.
  - Insure that the team problem statement matches at least one of the customer requirements and/or process input requirements.
  - Identify links between input requirements and the gaps in the customer requirements. Insure your team has access to suppliers, process experts and customers necessary to close any identified gaps.



## ADVICE FOR CREATING YOUR SIPOC

- When first scoping the project, take a short time to develop the initial draft of the SIPOC.
- After the first pass, talk to customers and suppliers and get their input.
- When the boundaries are better defined, get the team together and revisit the SIPOC in more detail.

- Develop a draft of the SIPOC for your project
  - Verify the top level process
  - Verify the links between customer requirements and process outputs
  - Verify the links between process requirements and inputs
  - Compare the team problem statement to the gaps in requirements
  - Define the data collection requirements
  - Verify that the appropriate team members are included
  - Identify process experts, suppliers and customers that will be needed
- List what you know and what you don't know about your SIPOC
- What questions will you ask to finish the SIPOC?
- Develop a strategy for evaluating SIPOCs. What questions will you ask about SIPOCs you encounter?

- The SIPOC is a form that documents a process from suppliers to the customers
- The SIPOC helps define the project scope
  - It builds team consensus
  - It resolves conflicts
- It includes information necessary to:
  - Balance competing customer requirements
  - Identify gaps
  - Verify team and information resource requirements
- SIPOC helps process owners with metrics:
  - Use the right metrics
  - Verify them continuously