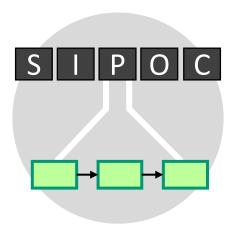
Continuous Improvement Toolkit

SIPOC Analysis

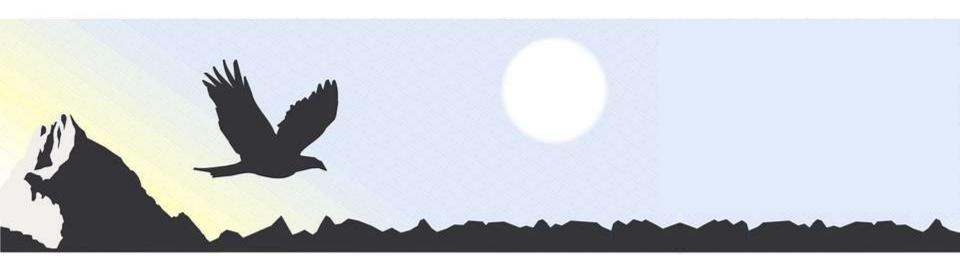


The Continuous Improvement Map

Selecting & Decision Making Managing Planning & Project Management* Risk **PDPC** Importance Urgency Matrix PERT/CPM Break-even Analysis Daily Planning RAID Log* Quality Function Deployment Cost Benefit Analysis **FMEA** MOST RACI Matrix **Activity Networks** Payoff Matrix Delphi Method **TPN Analysis** Risk Analysis* **SWOT Analysis** Stakeholder Analysis Pick Chart Voting Decision Tree Four Field Matrix Fault Tree Analysis **Project Charter** Improvement Roadmaps Force Field Analysis Portfolio Matrix Critical-to X Traffic Light Assessment PDCA Policy Deployment Gantt Charts Kano Decision Balance Sheet Paired Comparison Lean Measures OFF **DMAIC** Kaizen Events Control Planning **Prioritization Matrix Pugh Matrix** Cost of Quality* Standard Work Document control A3 Thinking **Process Yield** Pareto Analysis Matrix Diagram **Project KPIs KPIs Best Practices Implementing Understanding** Capability Indices TPM Automation Solutions*** Chi-Square Nonparametric **Descriptive Statistics** Cause & Effect Gap Analysis* Probability Distributions Hypothesis Mistake Proofing Health & Safety **ANOVA** DOE **Bottleneck Analysis** Multivariate **Histograms** Normal Distribution 5S Multi-vari Studies Simulation Just in Time Reliability MSA Scatter Plots Correlation **Graphical Methods** Quick Changeover Visual Management Regression **Understanding Run Charts** 5 Whys Root Cause Analysis Data Mining Product Family Matrix Flow Pull Performance** SIPOC* Spaghetti** Process Redesign **Control Charts** Fishbone Diagrams Relations Mapping Benchmarking*** Waste Analysis** Value Stream Mapping** How-How Diagram*** Tree Diagram* Data collection planner* Sampling SCAMPER*** Attribute Analysis Value Analysis** **Process Mapping Brainstorming** Check Sheets** Interviews Flow Process Charts** Time Value Map** Affinity Diagrams Morphological Analysis Questionnaires **Focus Groups** Data Mind Mapping* Lateral Thinking Flowcharting IDEF0 Service Blueprints Observations Collection Group Creativity **Designing & Analyzing Processes** Suggestion Systems Five Ws

A **high-level summary** of the process

Allows to provide an overview of a process at a glance



SIPOC analysis **provides a big picture** view of the important elements of the process to better understand the context in which it operates

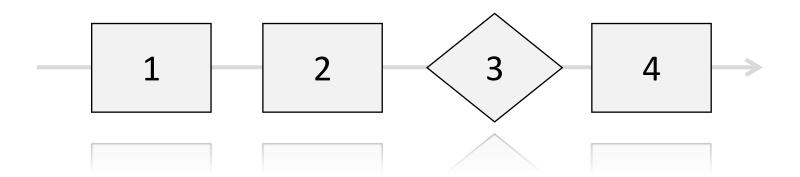


A data collection tool for gathering information related to a process including customers, suppliers, inputs and outputs



Represents the main components of the process

Widely used in process design and improvement initiatives (such as Six Sigma) to defines the **scope** of a project when it is too early for a detailed process mapping



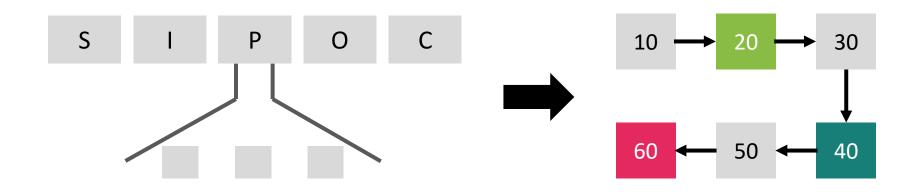
Used to identify important elements of a process before starting a **project**



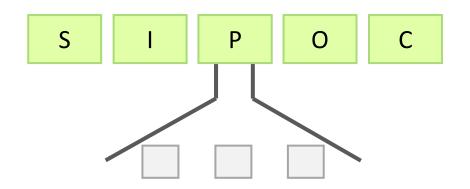
Also used when defining and designing new processes

SIPOC analysis can be used **before drawing a process map or a flowchart** as it helps gather relevant

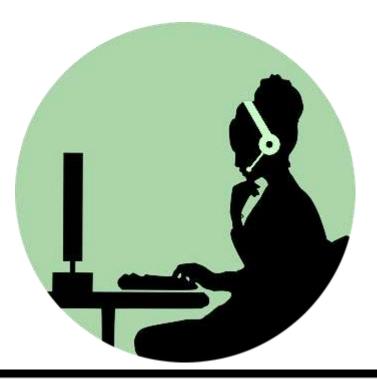
information about the process



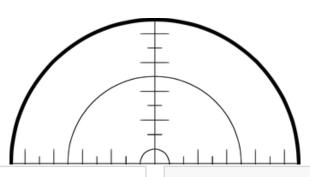
SIPOC analysis can also be used when **investigating a process** to present the collected information on an easy-to-view format



It is a practical way of making sense of the **Voice of the Customer**



Benefits



Help ensure **everyone understands** the core process

Helps define the **scope** of work for a project

Helps understand the **relationships** between the inputs and outputs

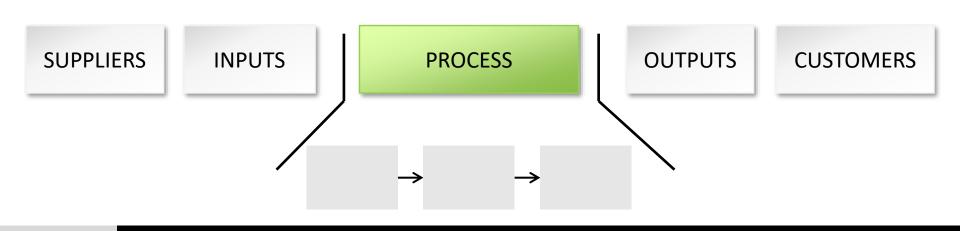
Helps **communicate** information about the process to other stakeholders

Helps identify the areas that are within or beyond the control of the team

Helps to begin thinking in terms of cause and effect

SIPOC Map

Helps specify the main activities of the process and identify the potential suppliers, inputs, outputs, and customers



SUPPLIERS

Any person or company that supplies inputs



INPUTS

The materials, energy, information, people, customer requirement, customer feedback, and financial resources which are needed to execute the process



PROCESS

The collection of activities that together transform inputs into outputs that is of value to the customer



These are just the **major high-level** process activities

OUTPUTS

The tangible product or service that results from the process



Outputs can be goods, services, information, reports, decisions, ...

CUSTOMERS

The person or company that receives the outputs of the process



Customers have requirements to be fulfilled

CUSTOMERS

There may be many
stakeholders who have
something at stake in the
success of the process.
They don't have to be actual
customers of the process



Obtain input from the primary users/recipients of the process



Suppliers



Inputs



Process



Outputs



Customers

Resource suppliers

The provider of the necessary inputs that directly contribute to creating the outputs Resources needed by the process

Materials, people, information, and other resources required to execute the process

Macro description

The sequenced activities that transform the input into value-added outputs to customers

Process outputs

The product or service results from the process (wanted and unwanted) Process customers

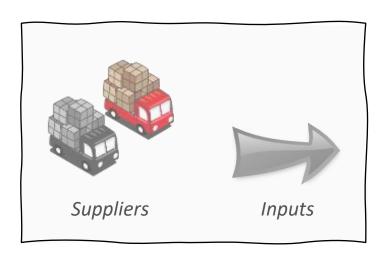
The users / recipients of the outputs

Suppliers and customers may be **external** or **internal** to the organization or department

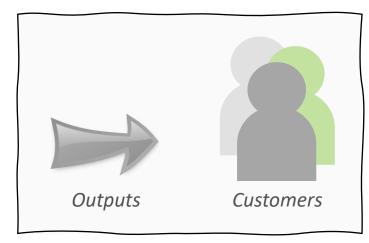


You receive inputs from your **internal suppliers** and send outputs to your **internal customers**

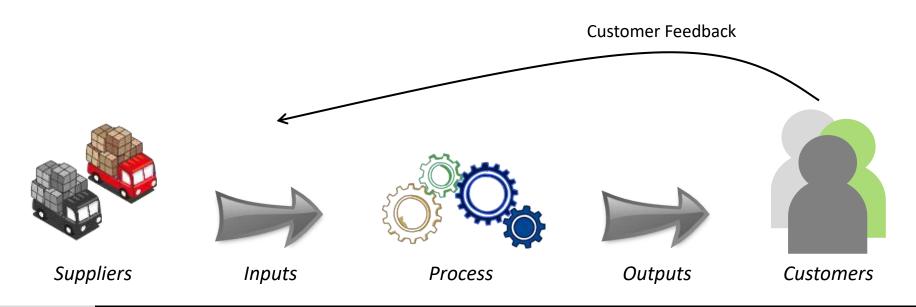
SIPOC doesn't ask to provide **links** between suppliers and inputs, or customers and outputs



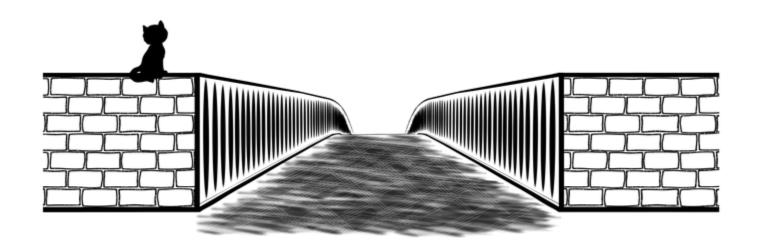




Process inputs can be reviewed based on the **voice of the customer** feedback on whether the outputs met
their requirements



SIPOC analysis helps the team to identify **potential gaps** such as unnecessary inputs, outputs that customers don't want, and process steps that add no value

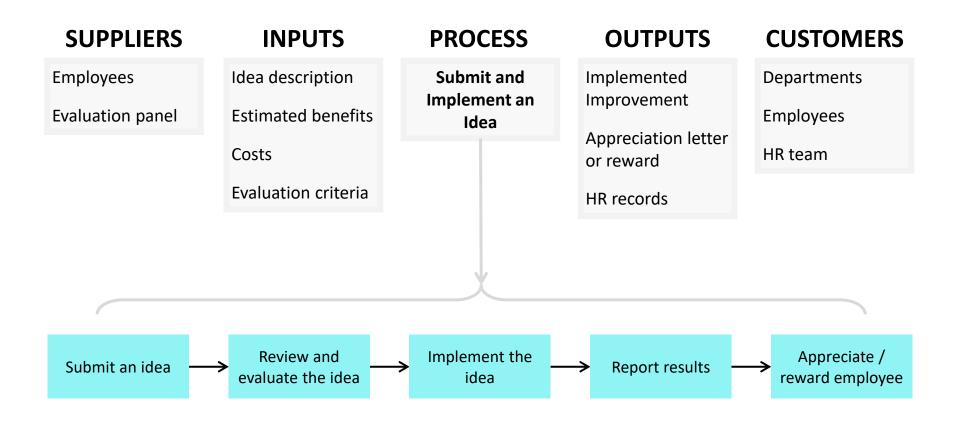


EXAMPLE – Submit and Implement an Idea Process

SUPPLIERS	INPUTS	PROCESS	OUTPUTS	CUSTOMERS
Employees	Idea description	Submit an idea	Implemented	Departments
Evaluation panel	Estimated benefits Costs	Review and evaluate the idea	Improvement Appreciation letter or reward	Employees HR team
	Evaluation criteria	Implement the idea	Records	
		Report results		
		Appreciate / reward employee		

Representing the process and its key elements in a tabular format

EXAMPLE – Submit and Implement an Idea Process



EXAMPLE – Purchase a Car Process

SUPPLIERS

Individuals

Dealers

INPUTS

Models

Specifications

Price

Availability

PROCESS

Determine car

option

Review specifications

Test drive

Negotiate price

Sign paperwork

Collect car

OUTPUTS

Car

Payment

Paperwork

Service contract

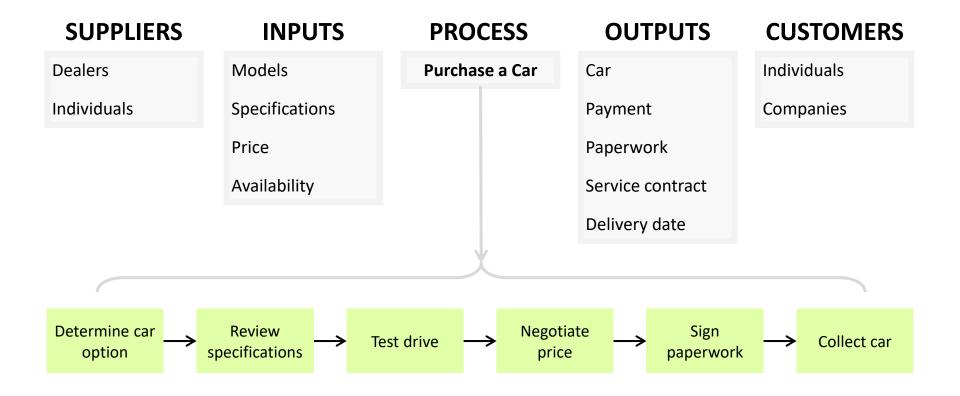
Delivery date

CUSTOMERS

Individuals

Companies

EXAMPLE – Purchase a Car Process



EXAMPLE – Conduct a Job Interview Process

SUPPLIERS

Job agencies

Job applicants

INPUTS

Interview purpose

Applicant profile

Interview place

Time and date

PROCESS

Notify applicant of schedule

Notify interview panel

Prepare questions

Arrange room

Meet applicant

Ask questions

Close interview

OUTPUTS

Interview notes

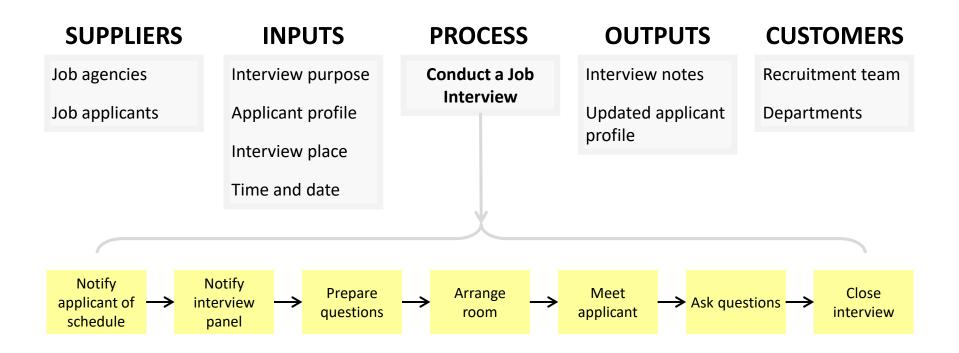
Updated applicant profile

CUSTOMERS

Recruitment team

Departments

EXAMPLE – Conduct a Job Interview Process



If there are more than seven steps, then the process is too detailed!

How to Construct a SIPOC Map

Clearly explain the **purpose** for creating the SIPOC map

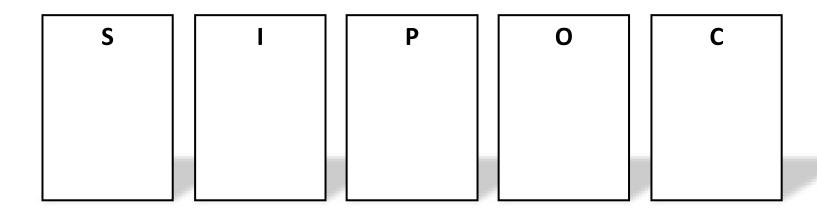
Emphasize that the map must represent the situation as it exist, now how it should be



How to Construct a SIPOC Map

Hang out five flip-charts representing the five SIPOC categories

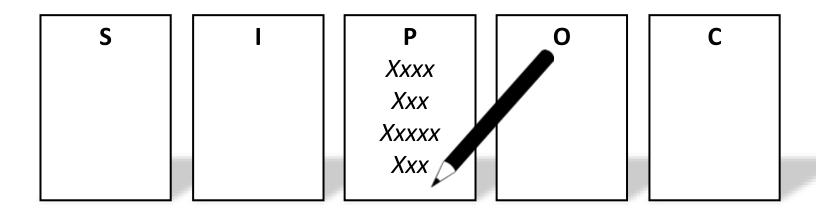
Allow the team to provide inputs on each of the five elements



How to Construct a SIPOC Map

Begin with the process by listing the key highest-level steps

Start with verbs whenever possible

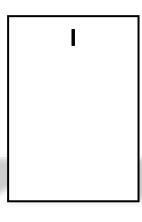


How to Construct a SIPOC Map

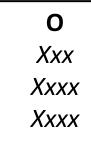
Identify the primary outputs of the process

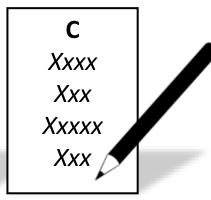
Identify customers who will receive outputs

S





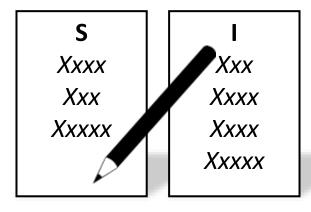


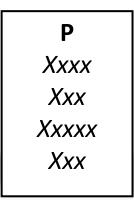


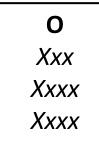
How to Construct a SIPOC Map

Identify the **inputs** required for the process to function properly

Identify the **suppliers** of those inputs





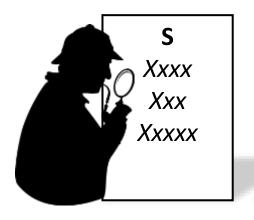


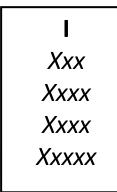


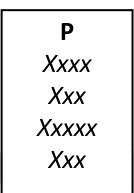
How to Construct a SIPOC Map

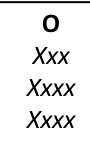
Take time to **ensure** the appropriateness and completeness of the recorded information

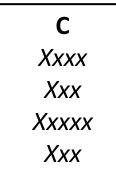
Discuss the SIPOC map with key stakeholders to verify accuracy











How to Construct a SIPOC Map

Identify **KPIs** to ensure the capability of the process to deliver an output that meets customer requirements

S Xxxx Xxx Xxxxx I Xxx Xxxx Xxxx Xxxx P
Xxxx
Xxx
Xxxx
Xxxxx

O Xxx Xxxx Xxxx Xxxx Xxx Xxxxx Xxxxx

How to Construct a SIPOC Map

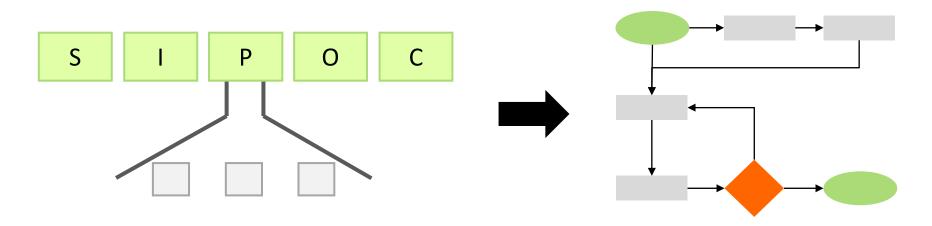
S	UPPLIERS	INPUTS	PROCESS	OUTPUTS	CUSTOMERS
	5 ho supplies ach input?	What inputs are needed by the process to meet the customers' expectations?	Where does the process start? 1 What is the process? Where does it process finish?	What are the process outputs?	Who are the customers of each output?

Useful Questions

SUPPLIERS	INPUTS	PROCESS	OUTPUTS	CUSTOMERS
Where does the inputs of the process come from?	Identify what is needed for the process?	What are you producing with the process?	What product does the process make?	Who are the customers of these outputs?
* How do you communicate requirements to the suppliers?	 What effect do the inputs have on the process and on the outputs? How do they affect the process flow? What are the requirements for each input? 	 At what points does the process start and finish? How can you summarize the process in few steps (seven steps or less)? Does the process feed into another process? 	❖ What other outputs does the process make?	 Are they individuals, departments, other processes? What are the customers needs & requirements? What do the customers expect from each output?

Further Information

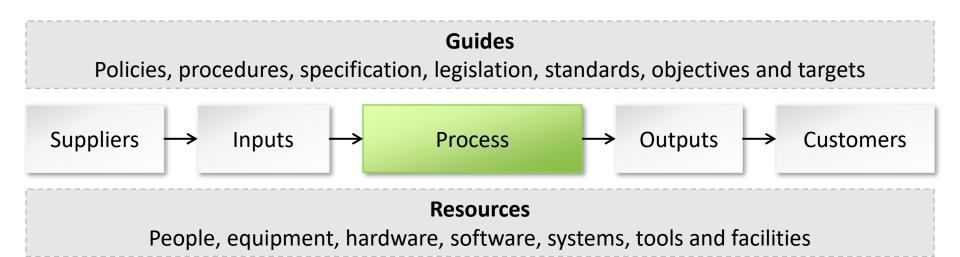
In your SIPOC analysis, you have created a top-level process map showing the basic steps of the process



You may add the details to the process map that you will draw later

Further Information

Sometimes it is useful to display on the SIPOC map **guides** to describe the process, and the **resources** that are required to transform the inputs into outputs

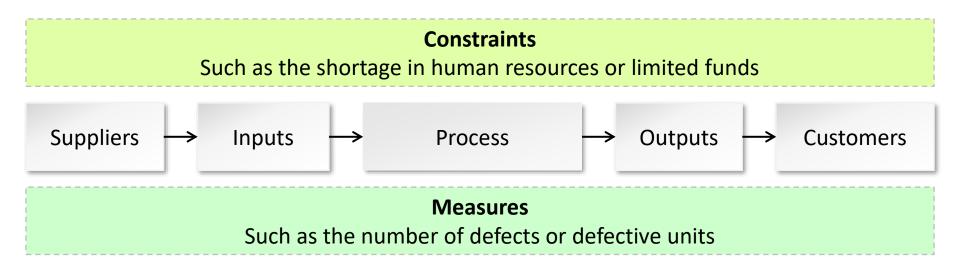


Further Information

Another SIPOC model is the SIPOC+CM

C stands for the constraints facing the process

M stands for the measures being used



Further Information

The **IPO** is a simpler model that represents a simpler structure for describing a process (widely used in the IT industry)

