PROCESS MAPPING

Improvement Cymru Academy

What is a Process?

Every system contains many processes. A process is a set of activities that occur in a coordinated manner to achieve a common goal. Effectively managing these processes within a system is key to the success of any organisation.

It takes one or more inputs to create an output that is of value, e.g. if the output is a cup of coffee, the inputs would be the ingredients, time, measures, cost. Using this analogy, making the cup of coffee is the process.

What is a Process map?

Process maps serve as means to document and communicate business processes, which are often found in training, maintenance, technical and quality manuals. A process map is an important tool in improvement and it is a tool that visually describes the system you are looking at; the flow of work, exposing any areas of waste (TIM WOODS). They are used to find ways to simplify, streamline, or redesign processes, by understanding and controlling the inputs, it is possible to reduce variation within the process which will lead to continuous process improvement. Process maps show a series of events that produce an end result.

There are several different types of process maps:

- Process flow maps
- Swim lane diagrams
- Value stream mapping
- SIPOC (Supplier Inputs Processes Outputs Customer)
- Spaghetti Diagram.

Process maps will show who and what is involved in a process, by involving a range of people from across the process/pathway mapping. Everyone can discuss the actual steps taken through the pathway from their own perspective and take the time to consider what works well or less well from a user's perspective, thus increasing communication and providing a process documentation.

Every system is made up of processes – we need to understand what, when, where, who and how things happen to be able to make significant changes.

Process mapping will identify the bottlenecks, repetition(s) and delays. They help to define process boundaries, process ownership, process responsibilities and effectiveness measures. It can reveal areas where a process should be improved.

For the purpose of your improvement project, a process flow map will give you enough detail of the system.

When to use it

Using process mapping before making any improvement helps you gain a better understanding of how a whole system works. If changes are made without understanding the current system, the unintended consequences may be creating problems at another point in the journey may result.

"If you can't describe your work as a process, you don't know what you are doing"

W. Edwards Deming

How to use it

- Ensure that before you start the session, everyone attending has had time prior to prepare, e.g. read any related documentation

- Gather the team and make sure that everyone is clear on what process is going to be mapped

- Involve operators, supervisors, process experts, engineers, and quality personnel. You may also call in particular situations, external customers and/or suppliers

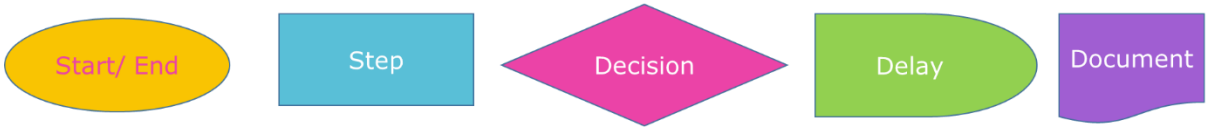
- Ask people to introduce themselves (name, role, etc.)

- Agree the ground rules for the session. These might include openness, constructive challenge, listening, confidentiality, respect and others that the group decides
- Agree on the level of detail to be displayed

- Map the system, looking at what really happens, not what should happen, making sure you capture what happens most of the time, not the one-offs

- Identify the system boundaries by outlining the start and finish points

- Map each step of the system within a symbol



- Let your process map cross functional boundaries: you want to see the whole, end to end process, not just the piece of the process inside your department

- Remember that improving one department or section does not always improve a service that flows through several departments. It is just as important to manage the interactions between departments as it is to manage the actions inside each department

- Once the system is mapped, it is worth analysing it to search for opportunities for improvement

- Notice how the system is actually performed and specify whether activities are value-adding or non-value-adding

- Identify all the areas that hinder the process or add little or no value.

- It is often helpful to ask questions such as:
  - Are all activities necessary?
  - What is the value of the activity relative to its cost?
  - Are there rework loops where activities are repeated?
  - Could these rework loops be eliminated?
  - What is the cost of the rework in terms of lost time and resources?
  - Are there times when waiting is involved?
  - How can it be reduced?

Look at possible improvement ideas to reduce the variation and waste.

Equipment for process mapping

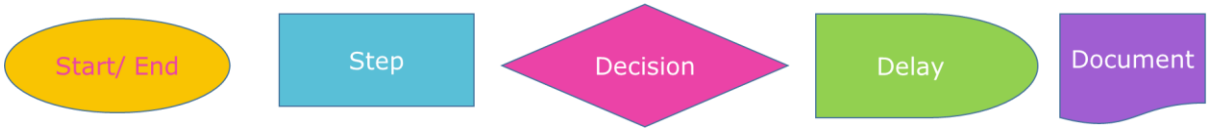
- Mapping paper (lining wallpaper works well)
- Good quality sticky notes
- Marker pens
- Blu Tack
- Scissors
- Sellotape
- Flip charts (for ideas and niggles)
- Refreshments.

Prepare the room

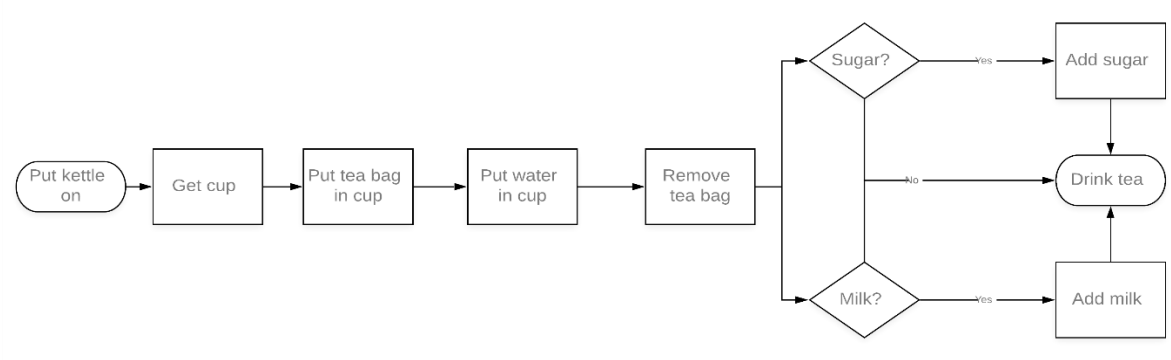
- Stick the mapping paper onto the wall
- Prepare flip charts – one to capture ideas and the other to capture niggles
- Make sure the room layout is conducive to what you are trying to achieve. This is not a meeting. At the start of the session, restate the objective and give people the opportunity to introduce themselves by name, role etc.
- Write the name of the pathway/process that you are mapping at the top of the paper
- Check the room layout is helpful – move the furniture if necessary.

How to draw a Process map

These are some of the symbols used in a process map.



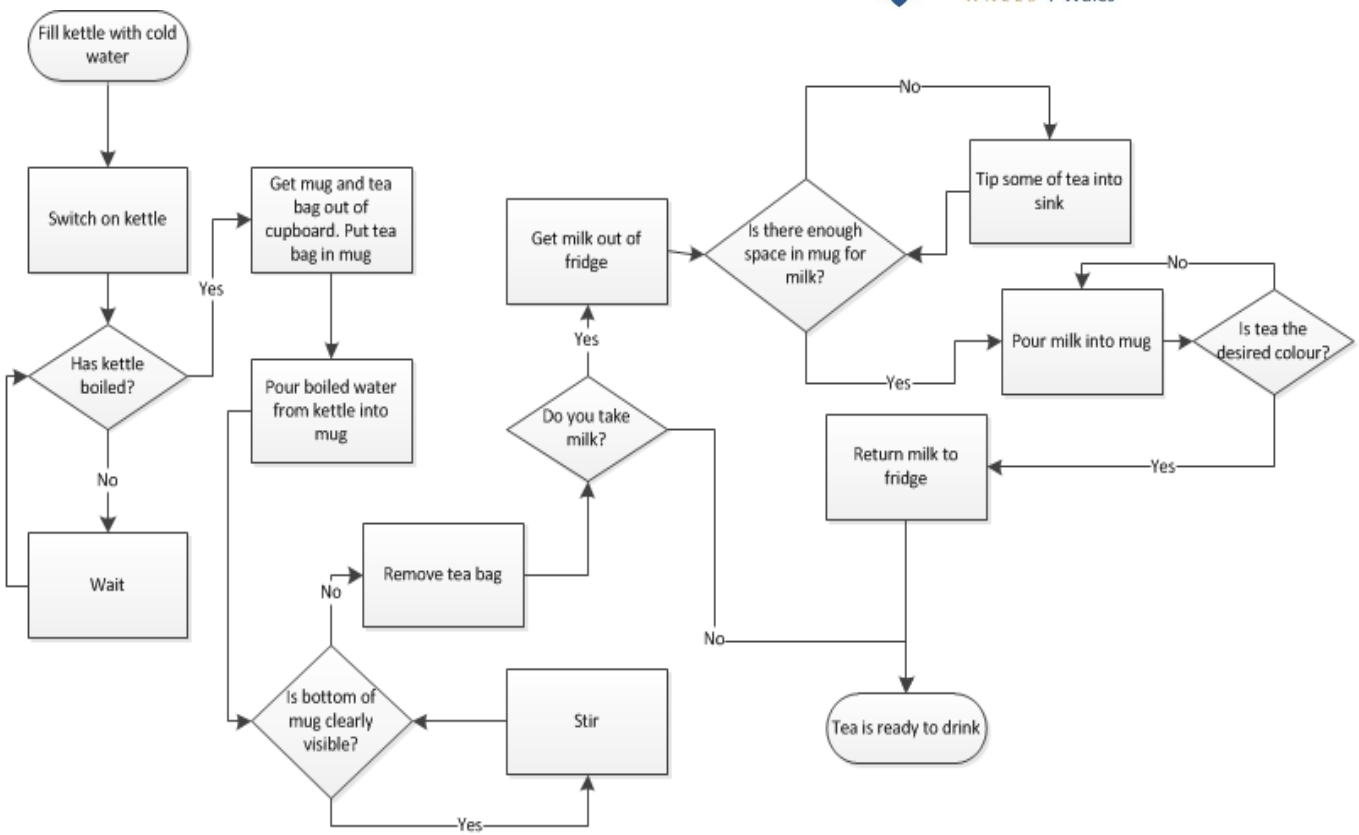
High level map - making a cup of tea



This is called a high level map because:

- It shows six to 12 steps
- It gives a panoramic view of a process
- It shows clearly the major blocks of activity, or the major system components.

Detailed map - making a cup of tea



A **detailed process** map is:

- A close-up of the process
- Showing dozens of steps
- Making it easier to identify rework loops and complexity in a process
- You can add in time to each step and the time between each step.

Referencing

Citoolkit.com (2019). *Process-mapping*. [Online] Available at: https://citoolkit.com/articles/process-mapping/ [Accessed 7. Oct. 2019]

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Simpleimprovement.co.uk (2019). Process mapping. [Online] Available at: http://www.simpleimprovement.co.uk/Process%20Mapping.pdf [Accessed 7. Oct. 2019]