Business Growth Hub

14 Factsheet

Process Mapping

You would use this approach to gain better understanding of any process you are trying to improve, or where you are trying to solve a problem. It is also a great way to generate common understanding among a team of a given process and the opportunities for improvement.

Projected performance gains

Identify

- The root cause of issues or opportunities

Improved

- Able to reach a Reach a consensus on understanding the problem or opportunity
- More likely that changes will be sustained

What investment is needed to understand the concept?

DIFFICULTY

Low to Medium

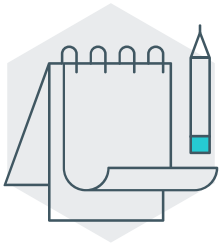
Process mapping can be carried out at a number of different levels. It's best to start simply.

ACTIVITY

Individual or Team

Can be an individual activity, but really comes into its own when a team is involved.

EQUIPMENT



Stationery

Big sheet or roll of paper, post-its and pens.

Explanation of the concept

There are many forms of process mapping.

This factsheet describes 3 basic types:

- Process Flow Mapping.
- "Swim lane" Mapping.
- "Spaghetti" Mapping.

1. Process Flow Mapping

- List each step, identifying it as a process, inspection, move/transport, store/inventory or delay.
- Record information regarding quantities involved, time taken or distance travelled.
- This data can be collected either in a list form (easy to do on a clipboard in the workplace), or by a team putting it together using different colour post-its to represent the different steps as seen in the process flow mapping example.
- As you map the activity, the team will quickly discuss agreement or disagreement about what is really happening and almost always start to talk about issues and opportunities for improvement.

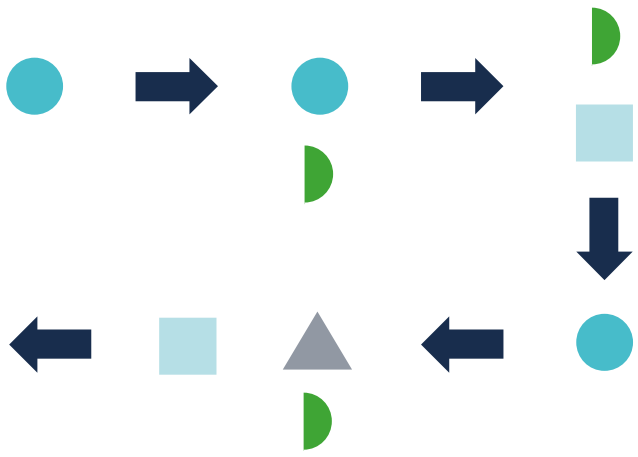
Process flow analysis - A template of this table is available for you to use at the end of this Factsheet.

Line / Product						Sheet of			
PROCESS	CHECK	STORAGE	DELAY	TRANSPORT	DESCRIPTION OF ACTIVITY FLOW	QTY	DIST	TIME	OBSERVATIONS

Process flow mapping - Example map

Key:

- Process
- Check
- Storage
- Delay
- Transport



Explanation of the concept

2. "Swim Lane" mapping

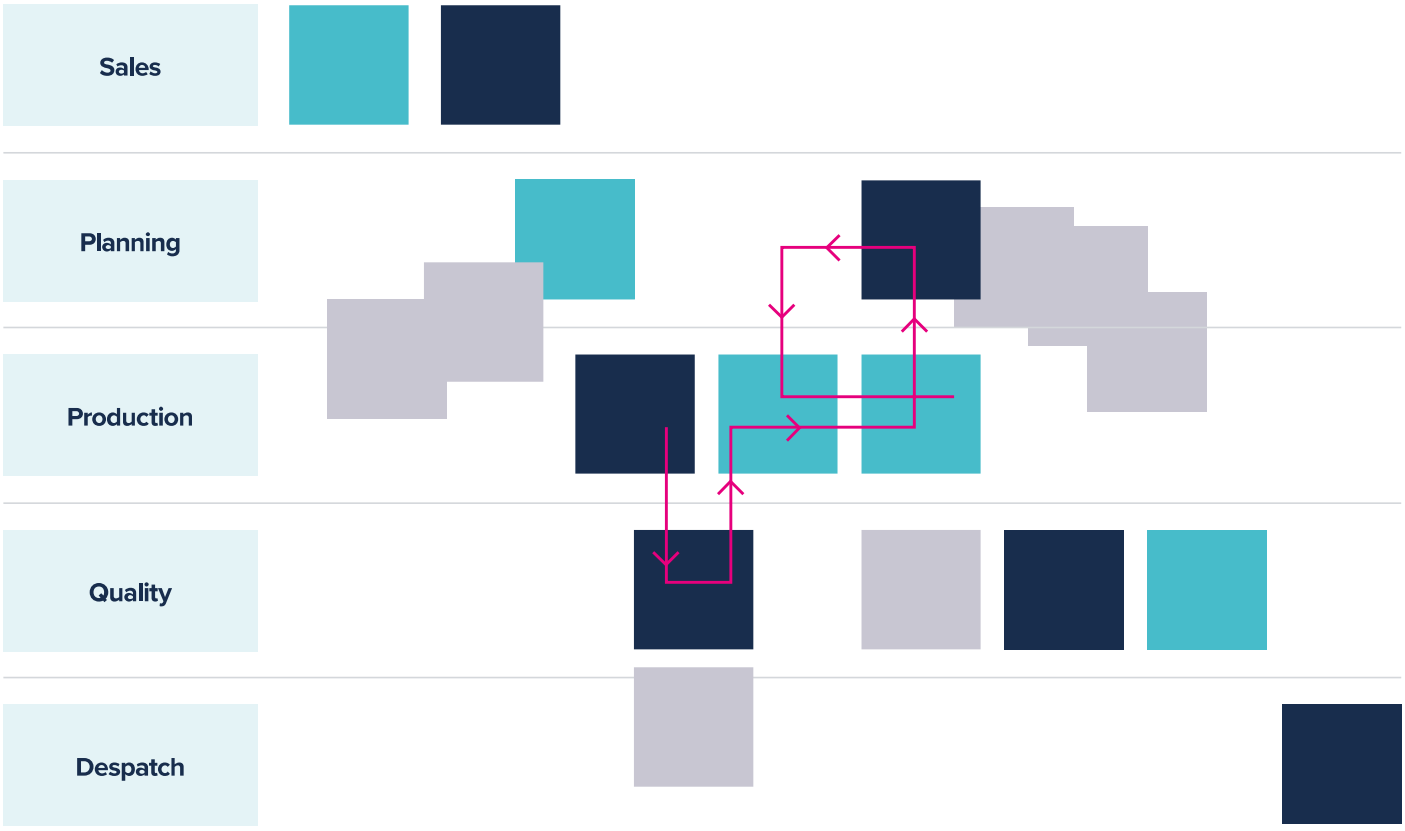
- This approach is a simple way to map out a process which involves a number of different departments, e.g. the process from taking an order through production and to despatch will involve several different business areas or personnel
- It is called a "swim lane" map because it is laid out like a series of lanes in a swimming pool

- Each lane represents a different team or function

- The chronological time line reads from left to right

- Talk through the process with the teams involved, identifying the process steps and handoffs between teams at each point in the time line
- As you do this, the team will almost always start to develop ideas about problems, issues and opportunities for improvement.

Information flow map (swim lanes)



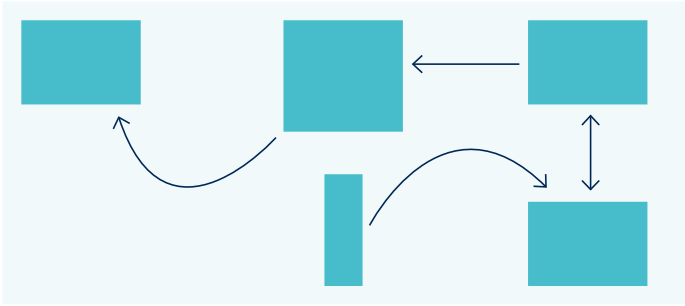
Explanation of the concept

3. "Spaghetti" mapping

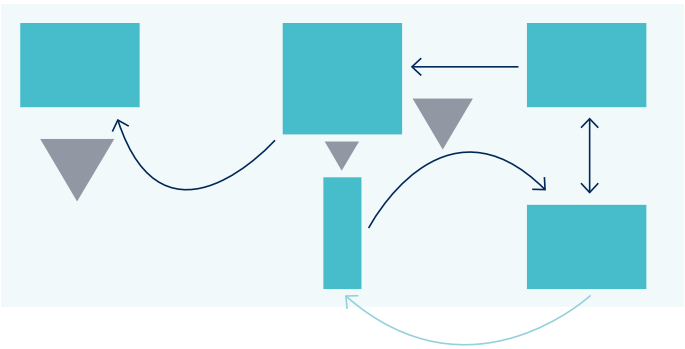
- This is a really intuitive and simple way to map the transport and motion involved in processes
- Start with a layout plan of the area you are interested in
- Take a pen and track the movement of people or equipment through the area, without removing the pen from the paper
- This will often generate very interesting results, which always help a team to quickly identify wastes of transport and motion, and think about how to eliminate them

Creating a Spaghetti diagram

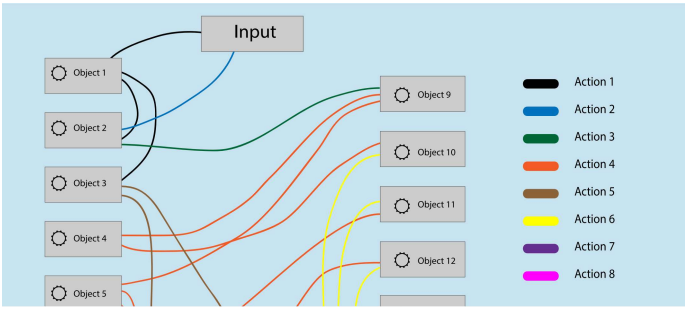
1. Start with layout plans (ideally to scale



2. Take information gathered from the Process flow, draw on movements



3. Indicate storage areas, rework loops, and high dependency areas (map sub assemblies etc in different colours if needs be)



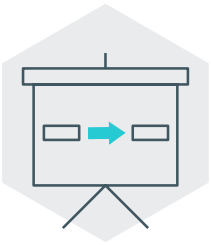
Example of a Spaghetti diagram

What action should I take?

1.

Use process mapping to help a team focus on process improvement

2.

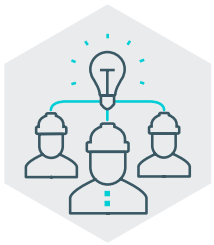


Select the most appropriate mapping approach for the chosen activity

3.

Walk the process before mapping

4.



Map it with the team

5.

Walk the process again if there are questions (don't assume there aren't any)

6.

Use the mapping activity to generate improvement ideas, and follow through on these.

Some things to be aware of during Process Mapping

- A common challenge of mapping is to work out at what level of detail to map,

- If it's too detailed, you'll never finish;

- If it's too high level, you will not generate ideas for improvement,

- A good idea can be to start by trying to map "the whole process in no more than 10 steps", in order to get an idea of how big the map might become, you can then select the areas that might require more detail.

- Remember, you'll know if you have enough detail, because you are generating improvement ideas

Recommended resources

Rother, M. & Harris, R. (2001). Creating Continuous Flow. The Lean Enterprise Institute.
ISBN: 0-9667843-3-2

Bicheno, J. (2004). The New Lean Toolbox. Picsie Books.
ISBN: 0 9541 2441 3

GC Business Growth Hub Factsheet 07: Value Add and the 8 Wastes

Glossary

Process Flow Mapping: A form of mapping focused on a sequence of steps or activities

Swim Lane Mapping: A form of mapping useful where there are handoffs between teams / departments

Spaghetti Mapping: A form of mapping which is great for looking simply at transport and motion of people or equipment.

Transport, motion or movement: Two of the eight wastes.

					DESCRIPTION OF ACTIVITY FLOW	QTY	DIST	TIME	OBSERVATIONS