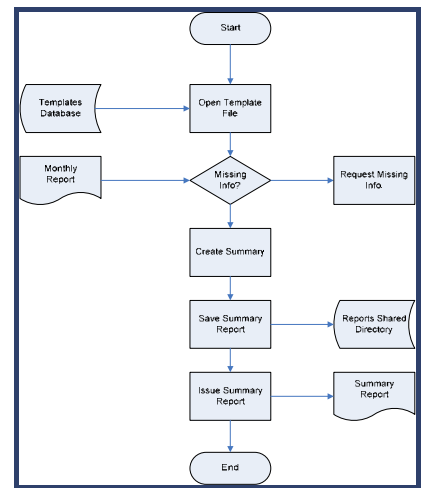


What is the difference?

Lots of people get hung up, or even positively animated, when you get into a discussion about “what exactly is a process map?”. I was recently asked by a client who is working as an internal consultant if I could answer the question “what’s the difference between a process map and a flowchart?”. A number of people he had been working with wanted clarification as he was trying to guide them through an improvement project.

In our work with clients, we tend to use the term “process map” to mean a particular way of capturing and visualising a process. And, it is definitely different to what most people would recognise as a Flowchart.

Before writing this article I thought I’d do a quick bit of research on the web to see if there were any clear definitions that would be useful. My conclusion was that there is such a wide diversity of definitions and understanding that it probably wasn’t very helpful! In fact it added more variations, with different people talking about swim-lane charts, value stream maps, information flow diagrams and workflow diagrams.



So, our advice would be to start with a clear understanding of what you are trying to achieve whenever you want to draw pictures of your processes and then choose the best tool to enable you to do that. Some people might label that tool a flowchart, others might call it a process map. For what it’s worth, here’s our view.

Why map processes?

“Start with the end in mind” should be your guiding thought.

Many of our clients want their people to be able to use a common language to describe their processes, so that they can be managed and improved in a way that key stakeholders can contribute to. That invariably means describing a process from a human perspective, not from a logic, or computer perspective. If that is what is needed, our preferred technique is what we call process mapping.

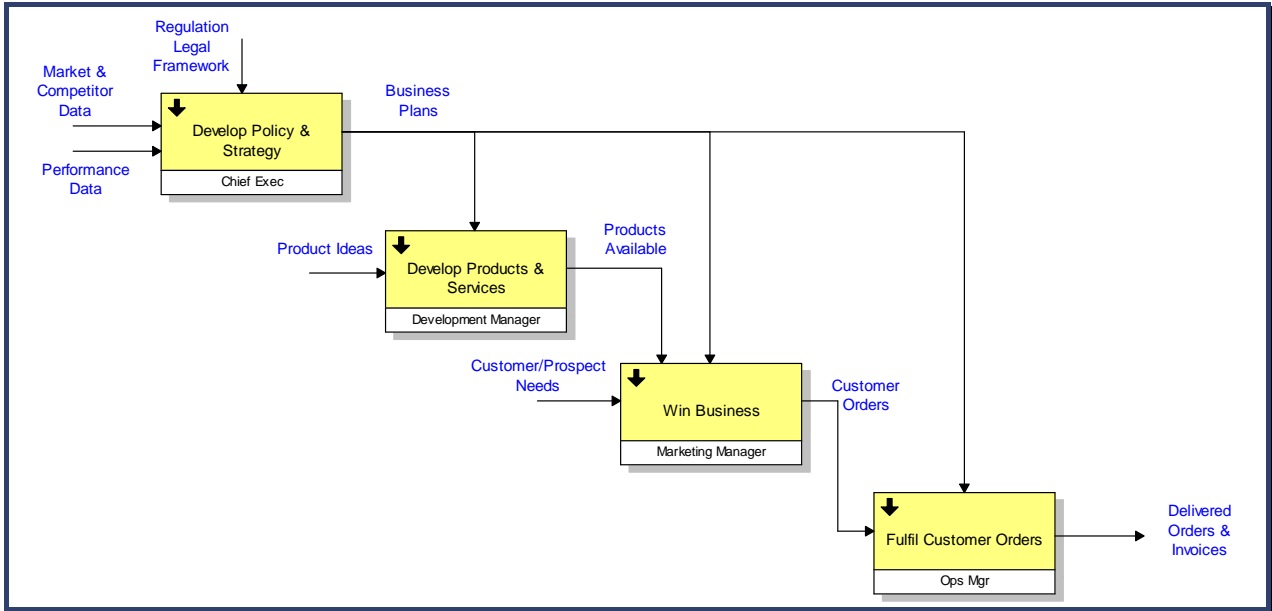
Our principles for mapping are simple, and few:

- process steps describe work activities and are named with a verb + noun combination (e.g. recruit staff)
- process steps are drawn as rectangles
- every step has an input and an output, represented by arrows
- where it adds clarity, arrows may be annotated to state what the input, or out put, is (e.g. Completed Requisition Form)
- maps are drawn hierarchically, with “drill-downs” showing lower levels of detail (you’ll know when you’ve gone down far enough, because you’ll either be able to refer to a “procedure”, or it will be pointless going further - “pick up envelope, insert letter, seal envelope” is almost certainly a level too far!)

Because process maps summarise work activities they don’t use symbols for documents, data-stores, or decisions. By comparison, process flowcharts do use such symbols. A standard set of symbols exists if you want to draw flowcharts (ANSI and ISO standards). But, if you use these symbols, you need to

ensure that those producing and, more importantly, those using the flowcharts understand this particular (foreign) language. Not many people do, apart from those who drew them in the first place. And, just to make it worse, many of these people love to use “helpful” symbols like pictures of filing cabinets, factory buildings and transport vehicles to make their flowcharts “clearer”.

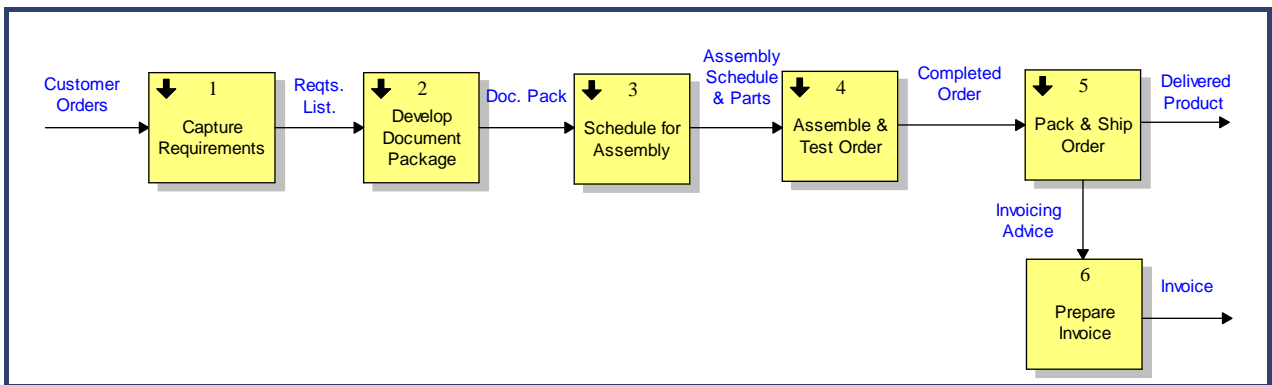
So here’s an example of what we would describe as a process map:



This is obviously a very high-level process map, describing the organisation’s external and customer-facing processes. The discipline of summarising inputs and outputs at the highest level enables you to be more consistent in defining them as you drill down.

The black arrows [↓] are where there are drill-downs to lower-level process maps. People, or roles, responsible for each process are also indicated at the bottom of each process box.

The level below “Fulfil Customer Orders” looks like this:

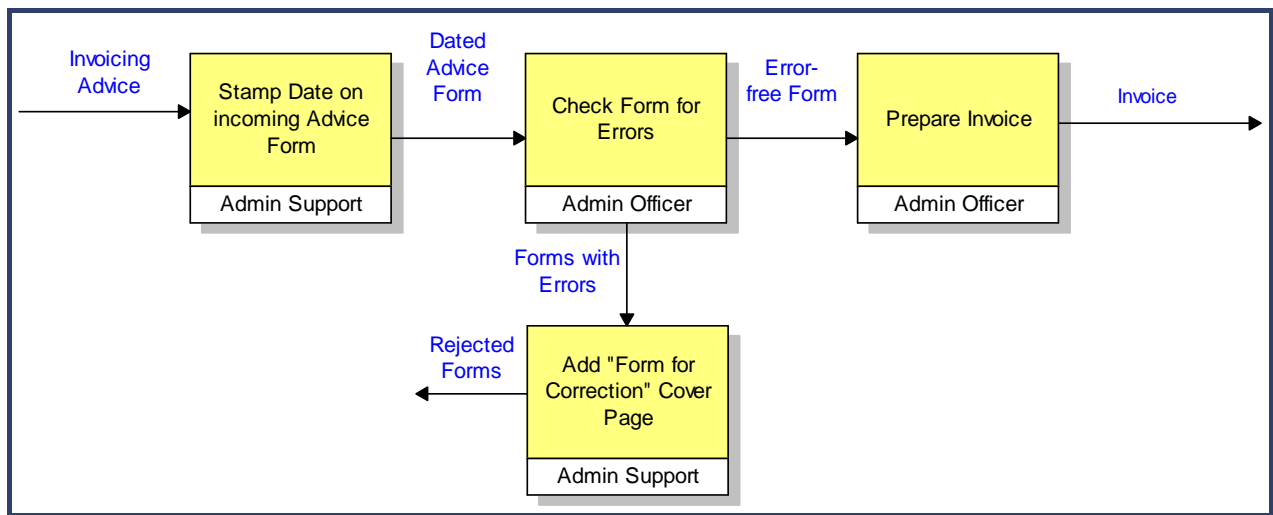


The next obvious question is “how do you deal with decisions in a process map?”. If we remember that process steps are about performing work (i.e. consuming resources), a decision simply results in more than one output option from an activity.

An activity called “check form for errors” in the “Prepare Invoice” process would result in two output options:

- an error-free form that can move on to the next activity, or
- a form with errors that will need corrective action, or re-work

We would map this as follows:



An advantage of this approach is that you only describe the work that gets done and you don’t need as many boxes on your diagram; in the example above, you’ve saved having to draw a decision diamond, so your map is less cluttered.

Similarly, by annotating input and output arrows, you don’t have to draw document symbols; it’s clear from the arrow that the output is an “Invoice”. In this example, we’ve also added a role label to each activity, so it’s clear who does it.

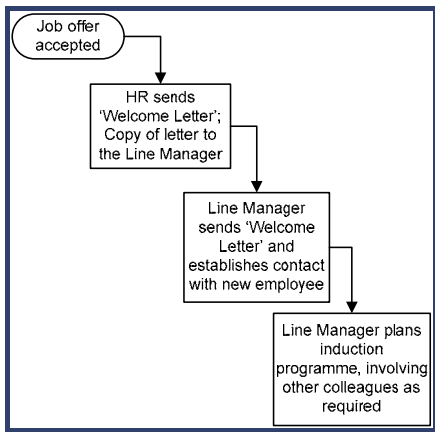
You can therefore prepare pictures of your processes that describe work activities in a way that people (not computers) recognise.

We’d add one more principle that sets apart our approach to process mapping from flowcharting. Process flowcharts often take up pages of paper, either in landscape, or portrait format. They are usually best viewed on paper and as soon as you print them out, you have potentially lost control of the latest version. With, our hierarchical approach to mapping, we encourage people to capture no more than 6 to 10 steps on any page and a page should be what you can sensibly read on a single screen of a PC. That helps to keep maps legible at any level in the hierarchy. It also encourages people to view maps on-screen, not on paper, so that if you are using a repository-based mapping tool, everyone always has access to the most up-to-date version.

I’m sure I read somewhere recently that “if you are not using a repository-based approach to process mapping, you might as well be drawing your maps on paper napkins”. You need a “single source of process truth”.

Do any of the other types of process picture help?

The graphic on page 1 is definitely a Flowchart. It uses some of the available symbols and it certainly describes the flow of activities. But it uses more boxes than we would need on our process map and it assumes you understand what the symbols mean. We also often see Flowcharts with paragraphs of text in each box:

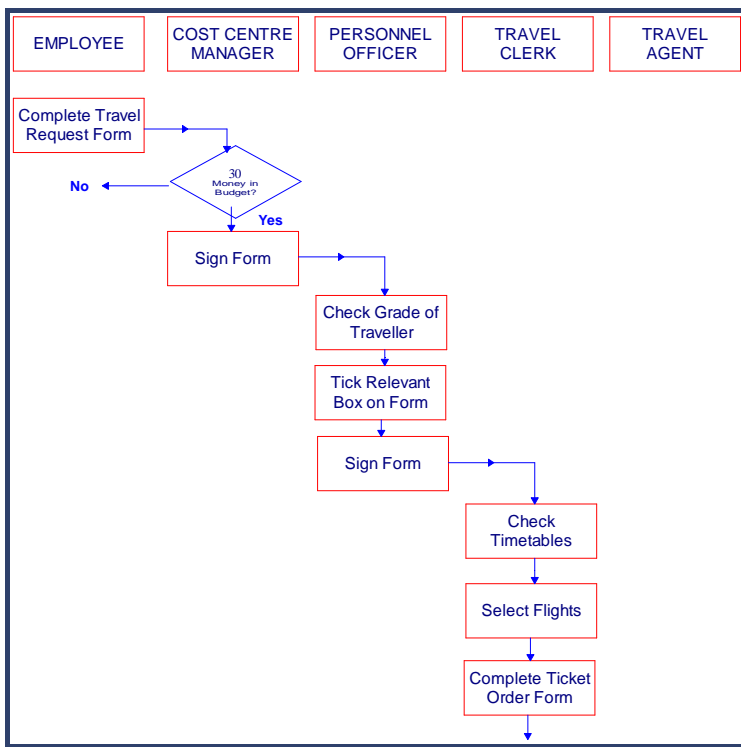


In this example, there are multiple activities in each box, as well as descriptions of who is carrying out the task. It's pretty unclear exactly what is being done, by whom.

Step descriptions with words like "as required" leave the whole process open to variation and errors. We actually need to get clarity from drawing a process map.

But, if a Flowchart works for you, good luck.

Another regularly used technique is that of Swim-lane flowcharts. Here different roles (or people) are identified at the end of a swim-lane and all the activities for which they are responsible are mapped in that swim-lane. Here's an example:



The great value of capturing a process in this way is that it is very clear who is responsible for each activity. All the hand-offs, and inevitable delay points, are very obvious.

You could use our mapping principles and avoid using flowcharting symbols (the decision diamond shown here).

Swim-lane flowcharts usually work well if you can get the whole picture onto one page. This is often difficult if you follow our 6-10 steps on a page guidance and want to ensure the map is legible on-screen.

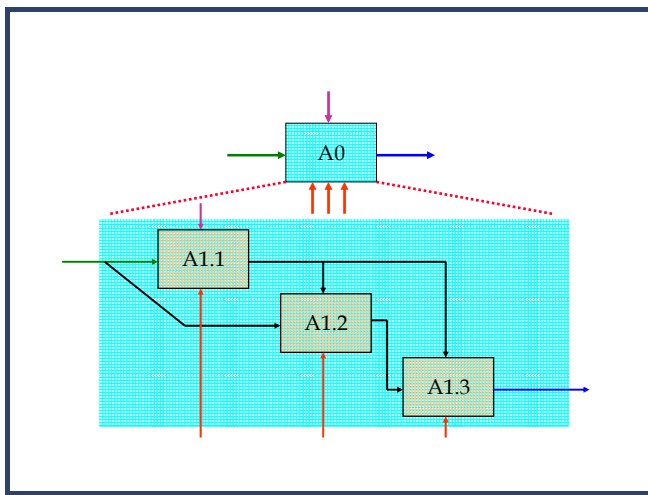
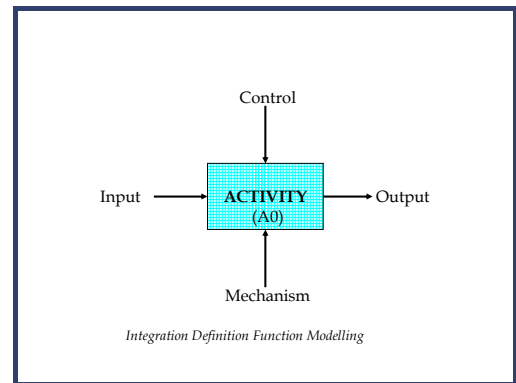
Working hierarchically is also difficult with a swim-lane flow-chart because it is unusual for lower levels to fit naturally into a single swim-lane. They often cross swim-lanes, and involve multiple roles.

There are other specific types of process diagram which clearly do have a defined purpose and are understood by those who create and use them. I would include "Value Stream Maps", used in Lean process improvement, and "Information (Data) Flow Diagrams" as two specific examples. Their use is well documented and I won't repeat it here.

Finally, I will mention diagrams produced to the IDEF0 standard. The Integration Definition Function Modelling technique is also well document and is one of the most rigorous approaches to capturing pictures of processes. Because of the rigour required to draw them, you do need to understand the conventions.

IDEFO, is a hierarchical mapping method, which requires you to define not only the inputs and outputs, but also mechanisms used by the process. Controls are things like rules, policies, budgets. Mechanisms are the resources, facilities or equipment used.

This approach makes a very clear distinction between inputs which are converted by the process into outputs, and other "inputs" that are actually controls or mechanisms which are not converted into outputs.



The hierarchical approach maintains the discipline of decomposing high level inputs, outputs, controls and mechanisms into lower-level diagrams.

So, an IDEF0 diagram is internally consistent as you drill down through the hierarchy. This is exactly the same discipline that we try to bring to our process maps (described earlier).

However, we are sometimes a bit less rigorous, in order to make our maps more easily understood by the people operating the process.

An IDEF0 diagram can quickly become a very messy tangle of boxes and arrows!

Conclusions:

Overall, our advice would be to use whatever technique best meets the needs of your target audience and what you are trying to achieve. Remember, if you want to improve the performance of your processes, you will have to get the active involvement of the people who operate those processes. It is highly unlikely that the majority of these people will be familiar with specialised process standards like IDEF0, and they may not even be educated in the language of process flowcharting symbols.

So, keep it simple:

- Activities are described as Verbs plus Nouns
- Activities are drawn as rectangular boxes
- Inputs and Outputs are described by arrows
- Work hierarchically
- Keep the number of boxes on a page to what can be read on a PC screen

Further Information:

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