White Paper
Think Process Simplification BEFORE Automation

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A challenge faced by organizations is how to surmount the difficult equation of increasing productivity whilst also reducing costs. The mantra of "do more with less" is important whatever the prevailing economic climate. In a good economic climate, looking for these types of efficiencies can help to increase profit and market share. In difficult economic times it can be a question of survival.

An understandable reaction to this challenge can be a focus on automation. By automating (or semi-automating) business processes, the organization is able to reduce the processing cost, speed up processing time whilst also releasing some of its workers to more valuable tasks. Automation often requires a significant lump-sum or on-going investment; in car manufacturing it might involve specifying and installing robots on a production line. In a service industry it is more likely to involve automating the flow and processing of information and data and this often involves investment in information technology.

Automation can drive real benefits for organizations when implemented well. It can provide financial benefits through efficiency and can reduce processing time whilst also increasing consistency. However, it is absolutely essential that organizations analyze and simplify their existing processes before automating them to avoid "baking in" an inefficient process.

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The Importance of Simplification for ROI

The imperative for quickly achieving efficiency savings and ROI can lead to the temptation to rush straight to an automated solution without carrying out analysis on the existing processes. On the face of it, this sounds logical. After all, if the processes currently work in situ, why not just automate them as they are? The reality is that an organization's processes have almost certainly evolved over time, and they might not have evolved in a controlled or optimal way. There might be some parts of the process that really aren't adding value any more, and automating them might just galvanize inefficiency.

One advantage of manual processes is that they can be very adaptable. For example, if you need to make a minor change to the way you manually assemble a car part, you can update the procedure and inform your staff. You can also seek their feedback on how effective the current process is, and get their feedback on the quality of the goods that they are producing. Minor process tweaks can be effectively and economically rolled out by cascading the relevant information to the relevant teams. You also have a built-in feedback mechanism; if the "tweaks" to the process lead to outcomes that aren't desired, it's possible for staff to stop and raise the alarm, providing the opportunity for the process to be adapted or corrected. Depending on the automated solution being considered some areas of flexibility might be reduced. I would imagine that once a robot arm is installed on an assembly line, the size, weight and types of material that can be handled and the opportunity for making quick process "tweaks" would be constrained. Not only that but if you increase volume (and throughput) you might suddenly find yourself swamped with "exceptions" that your staff were currently dealing with in a "below-the-radar" undocumented way. It's therefore important that the end-to-end process is well understood before it is automated.

In order to achieve the best ROI it's important to analyze, simplify and improve the end-to-end process before automating it. There might be activities that can be combined or eliminated in order to simplify the process. In fact, after simplification you might find the need for automation is reduced or alleviated altogether.
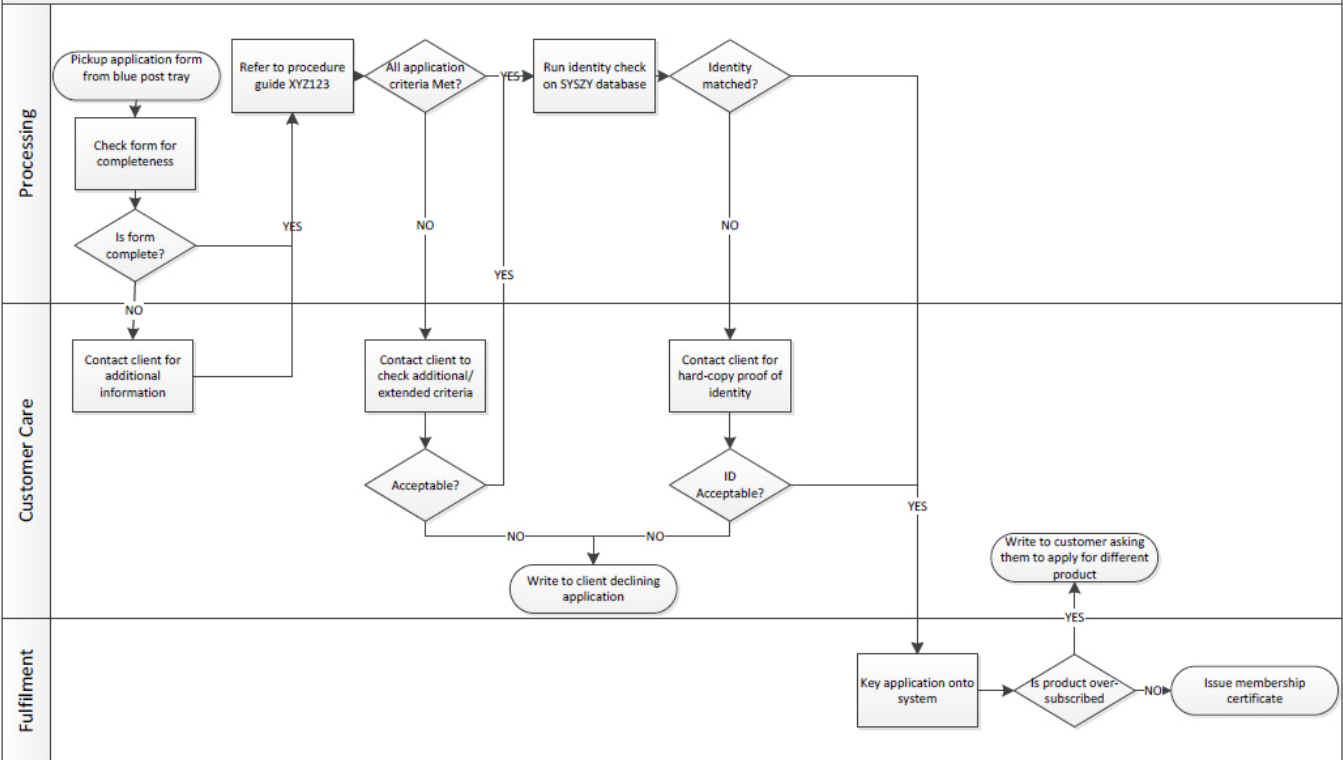
Example of fictional flow-chart received from a business-unit (*Deliberately shown in informal notation)

Figure 1

Example

Let's take a fictional example. Imagine we're automating a process which involves a client applying for a particular product, and let's imagine the process is currently mainly manual. We contact the business unit who provide us with a procedure document, and the following informal flow-chart is presented to us. You'll notice that the flow chart is expressed in a semi-formal notation, this is deliberate to simulate the types of flow-charts that we might be presented with (see *Figure 1* above).

If time is of the essence, it might be tempting to automate the process immediately without further analysis. Indeed, it's possible to imagine some potential ways of automating this process without changing it at all. Perhaps some form of electronic scanning and workflow system could be implemented which would reduce the need for physical paperwork to be sent between the three different departments that are represented on the diagram. In addition, perhaps data could be captured electronically earlier in the process so that the business rules (expressed in "guide XYZ123" on the diagram) are run electronically rather than manually. These steps are likely to improve efficiency but it would still be a sub-optimal underlying process. Some of the customers of this process are likely to get extremely frustrated; closer examination shows that it's possible that they get contacted four times during the application process—and they might simply be told that the product is oversubscribed at the very end! It would be much more sensible

to combine and resequence these activities logically to improve the efficiency and the customer experience.

Another important factor to consider is that the diagram above doesn't appear to show an end-to end business process. The start point refers to the application form appearing in the blue post tray. It would be important to know how it gets there, and the significance of the blue post tray; are there other colors? If so, does any kind of automated solution need to cater for these distinctions too?

Also, and very importantly, we'd need to ask what happens before the application form gets there, and we'd need to understand what the real trigger for the end-to-end process is.

The way to uncover these points is by carrying out business process analysis and mapping out the existing end-to-end business process, before abstracting it to a more logical process for further analysis. Before doing this, it's important to agree on a common standard or notation so that it's possible to collaborate with stakeholders and so that everyone is able to "read" the process flows and gain a common understanding.

Additional Considerations

Having obtained a view of the 'as is' process, there are many ways to simplify and improve a process. Three additional themes that warrant specific consideration when automation is being considered are the necessity of each step of the process, the data required at each step and the suitability of any associated business rules.

Necessity:

It can be extremely valuable to critically assess every activity and ask "is this really necessary?" Who is receiving the output of the task, and is it used in its totality? Could several tasks be combined to reduce handovers?

When carrying out this analysis, you might find that tasks themselves can be simplified; perhaps it used to be necessary to get a wet-signature on a particular document but legislation has changed now to eliminate this need altogether. Knowing this might significantly affect the process and the options for automation.

Data

Although beyond the scope of this paper, it would be extremely useful to understand the nature and type of data being collected, processed or generated at each step in the process. We can then ask related questions; for example could data be collected earlier to "weed out" exceptions and deal with them differently? Is any data being collected unnecessarily? (If so, this is an opportunity to change that.) Also, what management information is created by the process itself, and who uses it? As a minimum it is worth considering how the effectiveness and efficiency of the process can be measured and monitored.

Business Rules

As well as the tasks themselves, it is worth asking whether the business rules associated with the process are correct and still necessary. In some cases, process documentation may have been left to collect dust, and perhaps there are specific rules that aren't relevant any more. There is a well-quoted anecdote (which probably contains at least a grain of truth) about a furniture delivery company that imposed a business rule stating they couldn't deliver on a Thursday. Allegedly, when this was challenged, nobody could remember why the rule was in place. A more thorough search led to the finding that the rule had been written over 100 years ago when the deliveries were made by horse (and it was important to have at least one day to rest the horses!) Whether this story is true or not, it's certainly worth critically assessing the business rules associated with the process; is there any "horse resting" embedded?

There are many considerations for process simplification and improvement beside the themes illustrated above; however a key starting point is to understand and ideally visualize the existing end-to-end process. This allows further analysis to take place and allows any anomalies to be highlighted.

Conclusion and Summary

When the pressure is on to improve organizational efficiency, it can be very tempting to focus on process automation. However, to maximize ROI it's important to ensure that processes are understood from end-to-end and simplified and improved before automation is implemented. The act of simplification might even remove the need to automate at all. Simplification and improvement starts with a real understanding of the current state, which is helped by mapping out a view of the end-to-end process. This provides opportunity for collaboration and discussion prior to simplification, improvement and (potentially) automation.

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