

CHALLENGES FACED IN THE INDUSTRY OF MASS PROCESS AUTOMATION

PROCESS AUTOMATION OPPORTUNITIES ARE NOT ALWAYS WHAT THEY SEEM

There has never been a better time for businesses harnessing the power of automation to drive IT. In some regards this period may be regarded as the next generation of automation with Industrie 4.0 and large scale automation initiatives abound. The challenge has been and remains the skill of determining what to automate and how to automate it to produce a pipeline of automations. Today, there is a wide variety of automation types ranging from the low-end screen-scraping and interface automation initiatives right through to the development of Machine Learning and AI.



CHALLENGE #1 – THE PROCESS ITSELF

A very common challenge in the industry is a near-sighted view to automate specific processes that are well defined and well understood. This occurs when people look at specific problems and determine that the problem can be easily automated; this is seemingly a good strategy as it targets well understood processes directly. However, there are a number of potential pitfalls in this. Firstly, the going in assumption is that in automation terms the process itself is correct and the bounds of the automation are correct; this is often incorrect. The reason is that the scope of analysis has not looked at wider optimisation and dematerialisation opportunities beyond the scope of the problem as is understood. You can think of this as automating the plugging a hole in a dam when you're not observing the massive crack down the whole wall.

Small scale automation problems can be further compounded because in reality the seeming 'quick win' costs money and causes inertia in thinking about the broader problem.

CHALLENGE #2 – RECOGNISING THE RIGHT AUTOMATION CHARACTERISTICS

A lot of organisations are undertaking automation initiatives using specific technologies, at the moment aside from BPM (Business Process Management) automation technologies, the most common is probably RPA (Robotic Process Automation). There is in fact a very broad palette of automation technologies in the market and to some extent there are 'horses for courses', meaning some tools are better for some scenarios. However, there is quite a lot of shoehorning of problems into specific technology solutions and the success rate is much lower than it should be because of this. Side-effects can easily occur, such as an automation being designed in a way that causes extra non-automated work elsewhere. Worse still, there is a risk that the automation is not effective because the number of edge cases and complexity in automating those edge cases.

There are also some scenarios where manual activities are still preferable, and there can be propensity to focus on automation rather than improving the process; clearly there are a significant number of processes that deal with direct customer or end-user interaction where some aspects of automation would lead to a perception of a less customer-centric service as well.

CHALLENGE #3 – HAVING THE RIGHT AUTOMATION TOOLS & TECHNOLOGIES

When recognising the right automation characteristics it is important to have the right tools to automate the problems identified. To go with the characteristics of automation there are specific tools and technologies that are best suited to certain types of automation. It is important to have the right tools available to support the different problem characteristics, there is certainly no one-



size fits all. Therefore, when different problem characteristics are recognised, it is important that the right tools for the job are employed to make automation effective.

CHALLENGE #4 – VALUE FOR MONEY AND THE EFFECT OF DIMINISHING RETURNS

The intrinsic benefits of automation are primarily about lower cost for the same outcome, speed, and to some extent the automation providing more surety around delivering said outcome. There can be other benefits specific to the automation, such as assurance of compliance and lower marginal risk plus many others.

However, this is not always modelled in initiatives and seemingly worthwhile automations are sometimes found to not deliver the benefits they are assumed to accrue. The alternative to automation is typically human execution and this has certain characteristics involved in it and a cost involved. In some cases the payback for automation is so long it is unlikely to be worth it, in other cases all automation does not remove roles, just some of the most manually simple tasks and leaves roles intact.

CHALLENGE #5 – AUTOMATION APPROACH

The approach towards automation depends on an organisation's motivation to explore automation opportunities. For some organisations, achieving cost reduction could be the primary motive. For these organisations, automating offshore processes would not yield in higher cost savings, however higher cost savings can be anticipated by automating onshore processes. For some, the main focus could be to improve data quality through automation.

Depending on the automation motive the approach differs. Data quality focused automation would lean towards machine learning and intelligent character recognition. With this type of automation, false positives become a huge problem. Machine learning isn't utopian either, it can only work within fairly simple boundaries – such as “the invoice date will be somewhere at the top of the page”. Automation success rate and automation accuracy are two indirectly proportional factors, trying to achieve more of one would have adverse effect on the other.



RESOLVING THE CHALLENGES WITH A STRUCTURED METHODOLOGY

To be successful at process automation first and foremost a repeatable methodology is required. The characteristics of this are as follows:

Rigour of analysis

The first aspect is the analytical approach has rigour to capture and understand the current problem, or define a target process. Without this, any automation initiative is basically approaching the problem with blinkers.

One aspect of analysis involves some techniques that have long existed in organisations, and it is important that these remain a part of the approach – one example of this might be Lean Six Sigma for instance.

Determination of Opportunities for Optimisation, Improvement, Dematerialisation etc.

Through analysing the problem it is important to determine the opportunities where there are possible significant improvements to be made. As this potentially goes through iterations this can lead to matching the real scenarios to a set of criteria that define the characteristics of the type of potential change - this should cover all aspects of potential change, not just automation.

Modelling the effect of the Change

Before diving into any change the effect of the change, i.e. the change to the way the outcome is delivered should be considered. Typically, there are a number of improvements utilising a number of techniques that might work in tandem to deliver the overall change – this needs to be looked at holistically to understand the impact from different perspectives from the user experience to the business benefit. This is also sometimes where there is a checkpoint as to whether it will deliver a benefit that is worth the effort, time and associated cost.

Realising the Change

If the characteristics are matched to determine the technique, the detail of these can then be used as the pattern of implementation for the change, particularly automation-centric change; if the characteristics relate to specific types of automation, then through the realisation of these characteristics a specific automation approach and tooling is utilised. The realisation also has to strongly consider the best way of implementation, and it is an important technological and cost consideration as to the best way of implementing many automation tools and technologies; this will become more true with the increasing popularity of usage-based licensing and realisation through SaaS (Software as a Service) tooling.



CONCLUSIONS

Automation isn't always what it seems so it is important to consider all areas like the challenges mentioned above without diving straight in. There are many initiatives performing quick wins in the market that in the long run will leave organisations in a worse position, because a quick win turns into a long-term loss. Whilst there are some obvious 'no regrets' automation opportunities out there, to gain the most benefit a rigorous approach needs to be taken. A rigorous approach does not mean an approach that is long-winded or in any way anti-Agile, but an approach that ensures the right way of delivering improvements is chosen using the right technology implemented in the right way. Forced automation – i.e. driving a solution through the capabilities of the automation tooling is a potentially expensive mistake, and even now there are many cases where the fundamentals of change are not entirely automation.

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