Data First, Automation Second – The New Rules Governing Machine Learning

Why data is gold in intelligent automation – and why data management should be your priority

The Nordics region has an advantage vis-à-vis many others: given its relatively high cost base, enterprises have always been quick to leverage technology platforms in order to optimise their "human" resources.

Organisations in this region don't operate large-scale footprints for their support centres. As a result, the idea of continued automation, via robotics, is one many enterprises are comfortable with.

What limits automation?

As the automation of workflows across the enterprise becomes more ubiquitous, what's fast becoming apparent is an all too real gap when it comes to data. The limitations extend from having the right data segments, to accessing data, to its quality. Every RPA-driven opportunity – starting with cognitive, to machine learning, and, especially, artificial intelligence – is fundamentally driven or enabled by data. Put simply: data fuels automation's capabilities.

As a result, shared services leaders at the forefront of this wave are prioritising data management as a core skill. On a broader level, this means recognising data as the single most important enabler of automated support services in the future, and restructuring "work" around the need to optimise this data.

Data is key

What's required is much more than simple "re-skilling", however, explains Simen Munter, COO of Nordea's Commercial and Business Banking division, who has a history of successfully implementing one of the world's largest and fastest-growing bot implementations, at ANZ bank, behind him.

With technologies able to take on much of the processing work traditionally done by humans, shared services leaders will need to have a firm grasp over how to integrate the necessary data awareness and data skills into their teams.

And, with robotics fast becoming table stakes, organisations will need to position themselves to take full advantage of the continuously evolving continuum of intelligent automation, which includes machine learning and artificial intelligence, by being prepared.

This means that the role of humans will, in future, need to change so that it focuses on creating the valuable data sets that feed automation. A priority – and a challenge – will therefore be to find, sort and structure that data. "In future it's not going to be what you do, but how you do it that counts," explains Simen. "Farsighted leaders are already shifting their staff from doing tasks to collecting and collating required data sets in order for this task to be done, albeit via bots, via APIs or via interfaces. Bots are not only able to do what a human can do, they can also act as a bridge into the wider digital enterprise."

This trend will only escalate as organisations move towards embracing and integrating the cognitive capabilities associated with machine learning and artificial intelligence. For organisations to move up the automation continuum requires not just lots of data sets, but lots and lots of patterns for machines [a.k.a. software] to observe and learn from. These patterns take the form of "when X happens, then Y follows." Given enough data sets, 'learning' machine software can adopt appropriate process steps and operate very efficiently and reliably without human intervention.

While the breadth of data sources is enormous, it makes sense to start small and then scale up. As human capacity is freed up through robotics, says Simen, staff can be redeployed to assemble the data sets that feed these bots. This "data oriented processing" creates an ever-wider circle of influence, pulling more and more activities into scope.

A new way of working

What's driving outcomes today is not work, per se, but data sets, says Simen. "This understanding implies a significant change in operational design. It also means that, in future, we will be able to do things very differently. The most significant result is that we will no longer base our actions or decisions on historical traditions, but instead on real-time data and immediate action."
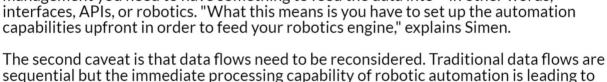
> **Developing a mindset that focuses less on learning how to do the work, and instead on assembling the data required to enable automated execution, is the future of shared services.**
>
> *Simen Munter, COO, Commercial and Business Banking, Nordea*

There are two caveats. The first is that in order to prioritise data collection and management you need to have something to feed the data into – in other words, interfaces, APIs, or robotics. "What this means is you have to set up the automation capabilities upfront in order to feed your robotics engine," explains Simen.

The second caveat is that data flows need to be reconsidered. Traditional data flows are sequential but the immediate processing capability of robotic automation is leading to 'pitstop processing' – as in Formula One – rather than sequential processing. In other words, at any given point, systems can tap into multiple data sources at the same time and effectively attack an issue from all sides simultaneously.

"The opportunity in robotic processing is that all systems can use the same data at the same time to execute appropriate actions," Simen explains. "Traditional workflow tools are very bad this as they tend to share information sequentially. That kind of processing is simply outdated today – it doesn't work anymore."

Although practitioners are obsessing over the potential of AI within service delivery, there is a long way to go before artificial intelligence can effectively replace people in support services. "Capturing things like sentiment is not nearly an easy as many would have us believe," explains Simen. "For now, the realisable wins will accrue to those who recognise the value of rules-based patterns in service delivery and who focus on the data required to feed into this process. Humans will teach machines how to work and will create the patterns that these machines need to internalise those learnings. The result is self-emerging straight through processing: As humans show the way, machines spots patterns in what they do and determine the right execution based on historic data patterns and outcomes."

'Inversion of control' unlocks optimal outcomes

The trend today is shifting towards micro-servicing – breaking processes or activities into small parts or components that are individually solvable, the combined outputs of which lead to smarter solutions.

Tackling micro-parts of a problem and enabling, or simply allowing, the environment to come up with the most appropriate solution leads to optimal outcomes, believes Simen. "We call this the inversion of control – breaking a process down into individual pieces and encouraging collaborative brainstorming to solve the individual segments optimally, and then rolling the individual solutions up for an optimal output." (To break down a process into its individual segments, Nordea's automation team references the APQC's process frameworks as a good example of process analysis on a granular level.)

"Micro" defines new trend

We are already seeing signs of this trend towards "micro" servicing as a means of optimising performance across the People-Process-Technology triumvirate. For "People," we are witnessing a drive towards smaller, self managed teams that take responsibility for their own decisions and outputs; for "Process" there is a shift away from a monolithic approach, and instead towards breaking a process down into pieces with appropriate solutions being sought for individual segments; and for "Technology" we are increasingly seeing solutions characterised by micro-services that provide solutions for parts of a process.

Taken together, these shifts represent a seismic redefining of the enterprise according to piecemeal solutions that promote agility, speed, and nimbleness. These are the characteristics that will drive organisational success in the face of constant shifts in the external environment. These solutions are less about combining pockets of resources around efficiencies, but rather based on driving customer value and optimal outputs. It's an approach that also serves to more easily align stakeholders behind a common goal and strategy.

Summary

The future, believes Simen, belongs to those who drive smarter decisions for their organisation. Given today's fast evolving capacity for data analysis, this means driving optimal solutions, at the micro level, across the organisation.

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