Successful
Intelligent Automation at Scale

IBM

Driving **transformative change** across the enterprise

To prepare for the **Future of Work**, enterprises need to accelerate and scale to capture the full potential of intelligent automation.

Introduction

Automation combines technologies like Robotic Process Automation (RPA) and Artificial Intelligence (AI)/machine learning to reimagine processes and create intelligent workflows that leverage data to dynamically adapt and improve over time. This frees people to do more interesting and higher value work.

Automation is already moving us from operating models where people run processes supported by technology, to a Future of Work where technology runs processes supported by people. This use of automation is a key enabler for the Cognitive Enterprise and an important part of any digital transformation program.

Automation is evolving at a rapid pace, with a steady stream of new solutions coming to market enabling enterprises to find new opportunities to innovate and grow.

Many companies are reaping the benefits from intelligent automation technologies in both business and IT processes. RPA executes repetitive tasks to improve the efficiency of many manual back-office processes. Technologies like AI and machine learning provide differentiated customer interactions and new insights—connecting them with RPA for flawless execution. We refer to this integration of RPA and AI as 'intelligent automation', and believe it has the potential to shift more complex workloads to technology.

Despite these exciting new capabilities, many organizations are struggling to realize the expected value from automation or achieve enterprise scale.

According to Forrester, 52 percent of organizations say they struggle to achieve automation at scale with less

Future of Work

The business environment that comes to life when business processes are run by technology and supported by people.

than 10 percent of RPA programs operating at the enterprise level. Instead of targeting end-to-end enterprise processes, they narrow their focus to the subprocesses, or individual tasks, within silos of the organization. This approach creates complexity while inhibiting the realization of benefits from automation.

There are multiple reasons why implementing automation at scale is challenging. End-to-end processes require complex stakeholder management across multiple departments to get their Subject Matter Experts (SMEs) to buy-in to the mission. Without this there will be a lack of adoption, and even out right resistance, by the current employees who have doubts and fear how automation is going to affect them.
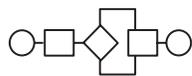
To implement successful intelligent automation at scale, we need to take a fresh look at how work gets done. When considering the Future of Work, IBM takes a holistic view that includes four key dimensions: Talent, Data, Process, and Technology.

Figure 1.
The four key dimensions
of The Future of Work

Talent
Optimizing talent, with human+machine collaboration

Process
Improving workflows to boost efficiency and speed

Technology
Harnessing the power of exponential technologies, such as AI and IoT

Data
Using data to generate better business outcomes

Seven tips for successful intelligent automation at scale

Organizations need to see automation as a transformational lever for reinventing themselves in order to disrupt their industry and competition. Successful companies demonstrate automation at work to their teams– showcasing best practices that combine human and digital labor to transform processes. This creates excitement in the workforce which in turn generates a robust pipeline of quality use cases, supportive stakeholders, and team members ready to adapt to new ways of working. Embracing the Future of Work enables organizations to increase operational agility, while significantly reducing operating costs. This new way of working also frees up human workers to focus on high-value tasks that may create entirely new business models and revenue streams.

Our experience with organizations who have successfully implemented intelligent automation at scale shows they have seven best practices in common.

1. Outcome-based approach:

Successful automation initiatives start with setting up objective and measurable outcomes, whether that is driving cost reduction, improved operational efficiency and productivity, higher quality, increased customer satisfaction, or finding new revenue streams. Also, they focus on measuring, tracking, and reporting the business value and outcomes they generate.

2. Reimagine end-to-end processes:

In the past, a business process was typically defined as a complex series of tasks and steps to be executed in a certain order according to defined business rules and organizational constructs. For most organizations, these processes have become rigid, outdated, and no longer fit for purpose. Changing these kinds of business processes is often time-consuming and very expensive, so the process itself has become a barrier to being able to respond to market competition and changing business needs. Reimagining end-to-end processes as intelligent workflows, run by technology, supported by people, and powered by data provides more agility to change how work gets done, and realize the benefits. In this new model, enterprises can focus on tailored customer and employee experiences, and the workflows that support these experiences can be adapted and configured almost in real time, providing business agility.

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3. Factory model with pod delivery:

Many companies leverage a traditional waterfall development model. However, large-scale automation of business and IT processes requires rapid prototyping, development, and testing in an agile manner for failing-fast and being flexible to any changes in circumstance. Scaled automation delivery teams need to embrace a factory model with agile development. Whatever processes you identify to automate, there will be common tasks your Digital Worker will need to perform, recurring issues that developers will encounter, and common tools and methods teams will need to leverage. Therefore, organizations benefit from having a central team responsible for developing intelligent workflows. This delivery model revolves around a concept of a pod, which is a self-contained unit of automation manufacturing. It's a way that we can deliver automation in a very agile, iterative way.

For example, a pod is comprised of both automation experts and process experts with a squad leader who will work on process identification, prioritization, and then build,

Cognitive Enterprise

Companies transforming themselves by leveraging new technologies to reshape their competitive positions and build new business models.

test, and deploy all as a single unit. Also, the centralized factory delivery team builds an asset library of reusable automation components that enables teams to accelerate implementation. To scale up at speed, organizations configure and tailor reusable assets and intelligent workflows into a target process area and develop any new capabilities to cover any gaps in the requirements.

4. Data enables real-time management:

Deployment of automation solutions into production is not the end of the transformational journey. To realize the expected benefits from automation, intelligent workflows need to be managed and maintained in the production environment. Organizations need the ability to see the automation at work through an Automation Control Center (ACC). The ACC provides complete visibility of automated business and IT processes, so that insights and recommendations can be used to reconfigure intelligent workflows and drive further benefits that meet dynamic business demands.

5. Scalable technology platform approach:

Organizations face numerous challenges as they decide to scale their use of automation technologies. They are usually starting from a fragmented technology landscape that requires a flexible and secure hosting platform to integrate with existing siloed applications. The automation assets and workflows that have been built usually have limited reuse potential, have suffered from lengthy discovery phases, and incurred high costs and time to develop and deploy. To address these challenges for achieving scale, organizations need the ability to standardize and integrate these different automation technologies to enable an end-to-end process management system that aligns with the enterprise-wide roadmap. Many organizations debate leveraging a best-in-class automation platform within their eco-system against trying to build their own from scratch. Many existing automation platforms, and those that are built in-house, are IT-focused, but new platforms are emerging that take a more business process-centric approach. IBM's Automation Services Platform (IASP) is a ready-to-go environment that enables fast prototyping, rapid scaling of automation, and management of intelligent workflows across both IT and business processes. Open in nature, the IASP can leverage existing enterprise investments while providing tooling where gaps exist.

6. Strong governance and continuous innovation through Automation Center of Excellence (CoE):

Once an initial set of intelligent workflows has been built and deployed, it is time to scale and optimize across the enterprise leveraging the proven success of the first project. Companies evaluate the success and lessons learned from the automation project so they can prioritize the next opportunity to focus on and implement a continuous

The Automation CoE

This is the engine that not only governs and manages innovation, it also drives the successful adoption of automation by the existing workforce by educating workers on the value of automation.

improvement program that increases the benefits realized from already automated processes. The Automation CoE is the engine governing and managing continuous innovation. It ensures the right operating model, methods, and measurements are in place to identify opportunities to reduce bottlenecks and enhance process KPIs. In addition to strong governance, it will drive the successful adoption of automation by the existing workforce through organizational change management that is focused on enabling workers to understand the value of automation. Through the CoE, companies can demonstrate the benefits of automation as outlined above, and spark employees' enthusiasm to create new champions that identify deeper innovation opportunities with intelligent automation.

7. Human + machine collaboration:

In the Future of Work, the current workforce will engage in new ways of working with intelligent workflows—which will require new skills and job roles. All organizations should identify new value-added jobs and equip their people with the required skills through training, certifications, and new talent/career models. Along with the specialized upskilling required for new jobs with intelligent workflows, organizations must consider the change management aspect; this will ensure a smooth transition to a new way of working with the right mindsets, attitude, value, and working culture. Communicating proactively converts employees' fear and resistance of automation into excitement for the higher value opportunities offered through automation. Many organizations struggle to realize automation's benefits as planned because of gaps between the organization's automation vison and the necessary transformation to reskill employees. Only with the right talent and skills can automation be successfully deployed across an enterprise.

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Partnering across the business to automate at scale

A multinational automotive company produces over 500k vehicles each year for worldwide distribution. They sought to balance an aggressive growth program–doubling their manufacturing capacity–with the need to cut operating costs. Business processes were inefficient and staff were overstretched and weighed down by non-value adding activities and duplication, often as a result of the legacy landscape of business applications.

Automation was identified as a key enabler for transformation, with the proviso that IT partner closely with the business to deliver automation. Business units would be the drivers of change, investing in and benefiting from the automation program. The need for consistent standards, and benefits tracking, was clear, and a CoE would be required to drive that discipline as the program grew.

£2m

annual savings in first year of automation

IBM recommended a three-year, three phased approach to the automation journey

Phase One focused on proving benefits and rapidly building a capability that could be leveraged in subsequent phases. IBM and the client established a hub to incubate an automation capability in the Purchasing function. Relatively simple process automation use cases were prioritized to deliver quick wins.

Following a successful pilot, over 20 bots were delivered within six months, delivering annual savings of over £2m. This first phase of delivery demonstrated the value of automation, winning advocates and sparking the imagination of workers who were able to identify new use cases as a result. Where necessary, roles were adjusted, and reskilling programs executed.

Phase Two is now underway, with the creation of additional hubs in Finance and Engineering. In parallel, a CoE has been established to drive good governance and best practices as the program expands–including the expansion of technical scope to include more advanced automation solutions and more complex workflows. At completion, Phase Two will see an additional 50-100 intelligent automation bots in production through factory model with 'pod' delivery—delivering savings of £5-10m. Again, core to this effort is the constant communication of the impact of automation, to sustain and build on the excitement generated in Phase One. Again, as processes transform, teams and roles are being thoughtfully reshaped to optimize the new ways of working.

During **Phase Three** an additional 150+ bots will be developed to deliver savings of over £15m.

A key feature of this successful program is the relationship between the CoE and the business. The CoE represents a central governance model and acts as a consultant and training resource to the business functions. Business teams have been equipped and supported to run their own automation programs–from opportunity identification to bot monitoring. This scalable model has driven business ownership, which in turn has created huge demand for automation programs, generating a high volume of quality use cases. These factors (i.e. sustainable capability and broad business engagement) have been the key to successfully scaling.

What's next?
Intelligent automation at scale is a key priority for many clients' transformation to a Cognitive Enterprise. We have helped many clients accelerate the design, build, deployment, and operation of automation at scale across their enterprise. Intelligent automation is pervasive in many companies' strategic agenda and it is a key enabler for the Cognitive Enterprise and the Future of Work. To secure its benefits, we must take an enterprise-wide approach as well as human-centric approach. Strong sponsorship from the top to implement the best practices for scaling automation will result in the impactful transformation to processes being run by technology and assisted by humans.

About the author

As the Global Leader of IBM Automation's Build and Manage Offerings, Niki Kim is leading the development of methods/assets/best practice and working with clients on their automation-led transformations to a Cognitive Enterprise. She has 22 years of experience in human capital management, transformation strategy, change management, business process services, and intelligent automation. Ms. Kim leverages industry-leading platforms and delivery models for the design, build, management, and optimization of Automation Transformation Programs at scale.Automation Transformation Programs at scale.

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Resources

[1] The Forrester WaveTM – Robotic Automation Services, Q4, 2019
[2] IDC MartketScape : Worldwide Intelligent Automation Services, 2019