workato

Enterprise Automation

An Imperative for Tomorrow's Digital Businesses

By Bharath Yadla

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About the Author

Bharath Yadla is a serial entrepreneur and seasoned executive with 20+ years of experience in business development, product strategy, disruptive products, and digital solutions. His areas of expertise include RPA, intelligent automation, big data analytics, AI, bots, and integration. Formerly of Cast Iron Systems, HCL, and Aerospike, he now serves as a VP of Workato.

Executive Overview

Historically, automation has always evolved within the context of industrial transformation. Each successive Industrial Revolution has focused on a specific type of automation: the First focused on mechanization, the Second focused on mass production, the Third focused on computers and communications, and now the Fourth on smart machines and humans together.[1]

There are lots of interesting examples of how the current advancements in automation are playing out on the ground. JD.com—a Chinese company with over 300 million customers—processes each order in less than a day with a vast network of highly automated warehouse operations.[2] Similarly, Amazon uses its Kiva robots to leverage smart machines and augmented them with a human workforce.[3] And even in more traditional industries like farming, companies like IronOx are automating farming with high precision.[4]

Today, however, automation goes far beyond traditional heavy industries. The new era of automation is evolving and powering formerly human-driven business processes across industries and departments—be it HR, finance, sales, IT, or marketing. It also goes far beyond simply eradicating manual tasks and inefficiencies. Today, businesses look to automation to power digital transformation and, eventually, to realize new revenue streams.

Regardless of industry or specific application, all automations require data processing, data movement, analytics, and (in some cases) AI- or ML-driven

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1 [What Is Industry 4.0? Here's A Super Easy Explanation For Anyone](#)
2 [JD.com's Fully Operated Shanghai Warehouse](#)
3 [15,000 Amazon Kiva Robots Drive Eighth Generation Fulfillment Center](#)
4 [Watch Robots Grow Food Without Any Farmers](#)

interaction with machines. In short, enterprise automation is driven by a multitude of technologies with the goal of integrating people, processes, and technologies at scale. Here are a few ways automation is driving enterprise transformation in an unprecedented manner.

Customer Experience Automation

The role that a personal assistant or secretary once performed is now being taken over by a combination of apps like Calendly, Xobni, and Mail. This is made possible by the advent of conversational bots and assistants like Siri, Alexa, and Google Home.

Extending these bot-based functions to customer experiences and front-office digitalization can drive operational efficiency. At the same time, they can provide highly innovative and personalized experiences to customers—like how Bank of America's Erica, a smart financial assistant, can complete fairly complex tasks like scheduling payments, tracking your FICO score, and even assessing your monthly spending. In the new era of automation, tools like Erica can be used for virtually any front-office function, regardless of industry.

Employee Experience Automation

Automation is also redefining internal experiences, like employee onboarding. Even for the most agile company, onboarding can be complex and inefficient because it's such a long process; it starts the moment you make a candidate an offer and doesn't end until they're fully ramped up in their new role.

In a world where labor competition is higher than ever,[5] companies have realized the value of automation in creating seamless employee experiences from Day One. A great example is Zappos and their employee onboarding

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5   [U.S. Unemployment Rate Drops To 3.7 Percent, Lowest In Nearly 50 Years](#)

process, which provides a flawless and totally integrated experience through intelligent automation that gets smarter with every employee they onboard.[6]

Back Office Business Automation

Traditionally, back office business processes were driven by manual operations like invoice processing, order processing, and IT service management.. With the advancement of digital native technologies like cloud, mobile, data, and iPaaS, however, these back office processes can be integrated and automated effectively and efficiently.

Take the example of XPO Logistics, which uses automation for inventory tracking and order processing.[7] It's easy to see how a similar Quote-to-Cash automation would be invaluable at other enterprises. A simple order number error in a manual operation can cause bottomline revenue depletion by increasing inventory holding costs. With end-to-end automation, that's less likely.

Front Office Business Automation

This type of automation is focused on enhancing CX but is driven by front office application automation. Consider a traditional bank: all the front office functions drive heavy investments and drive towards a low CI (cost-to-income) ratio. Challenger banks, then, can gain an advantage by driving their CI ratios lower than traditional banks. One way they do this is through automating front office processes like check deposit.

Operational Task Automation

This type of automation focuses on eliminating or reducing repetitive tasks

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6   The Zappos Family - How They Work

7   XPO Logistics CEO: Innovation in Technology

to drive operational savings. At a call center, for example, there are countless repetitive tasks like scheduling, handling adherence exceptions, and service agent assistance. Robotic process automation (RPA) can streamline these routine tasks, resulting in significant operational savings.
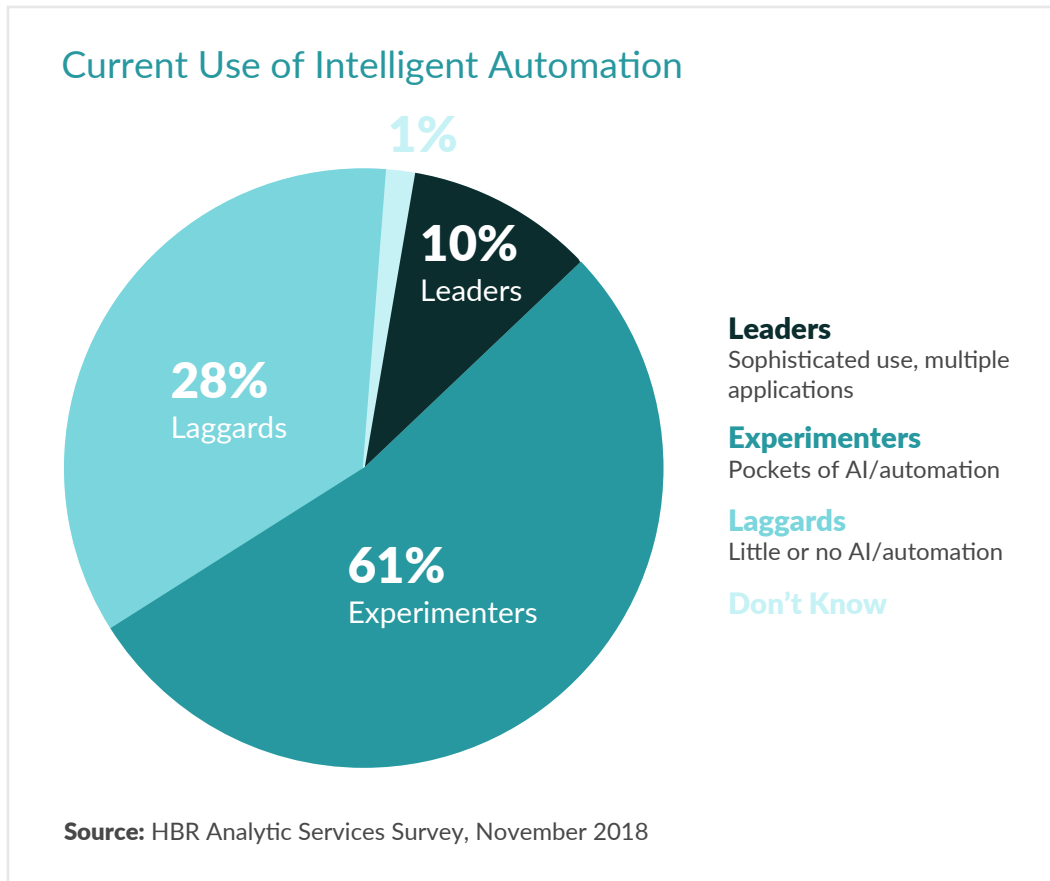
On top of RPA, chatbot and AI technologies can bring additional power to these automations. Tools like Automation Anywhere, UiPath, Jacada, 24x7, Kofax, and BluePrism have established significant dominance in operational task automation.

In order to operationalize all of these applications of automation, however, organizations need a new approach that makes the most of a wide variety of automation technologies—not just RPA or UI-driven automation. Instead of merely being a survival strategy, *enterprise automation* will be the new norm for any digital and cognitive enterprise going forward.

What You'll Find In This Paper

1. The role of automation in driving digital transformation
2. Why enterprises are struggling to scale their automations
3. What an enterprise automation platform looks like
4. A framework for embracing enterprise automation
5. How Workato is powering enterprise automation

Digital Transformation is Driven by Automation

Current Use of Intelligent Automation

1%

10%
Leaders

28%
Laggards

61%
Experimenters

Leaders
Sophisticated use, multiple applications

Experimenters
Pockets of AI/automation

Laggards
Little or no AI/automation

Don't Know

**Source:** HBR Analytic Services Survey, November 2018

Automation saw a great deal of attention in 2018, with Robotic Process Automation (RPA) being one of the hottest topics in enterprise technology and seeing growth of ~100%.[1]

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1   Robotic Process Automation (RPA) Annual Report 2018: Creating Business Value in a Digital-First World

In spite of this, according to Capgemini, just 16% of those organizations experimenting with automation are leveraging it at scale, largely due to a lack of talent skilled in automation technologies (57%), resistance to change driven out of fear of job replacement (42%), and a lack of coordination across business functions and IT (39%).[2]

Another article by Harvard Business Review indicates that only about 10% have embraced intelligent automation, while 61% are experimenting.[3] 80% of the respondents indicated that it is critical for them to survive in business. At the same time, to truly benefit from intelligent automation, it must be adopted as an "**integrated approach**" across the enterprise at scale.

Another report from HFS indicates the general thrust of enterprise investments in intelligent automation. 30% of enterprises are already investing more than $50 million each in intelligent automation-related transformations, and a significant number of enterprises are investing between $10-50 million each in these automations.[4]
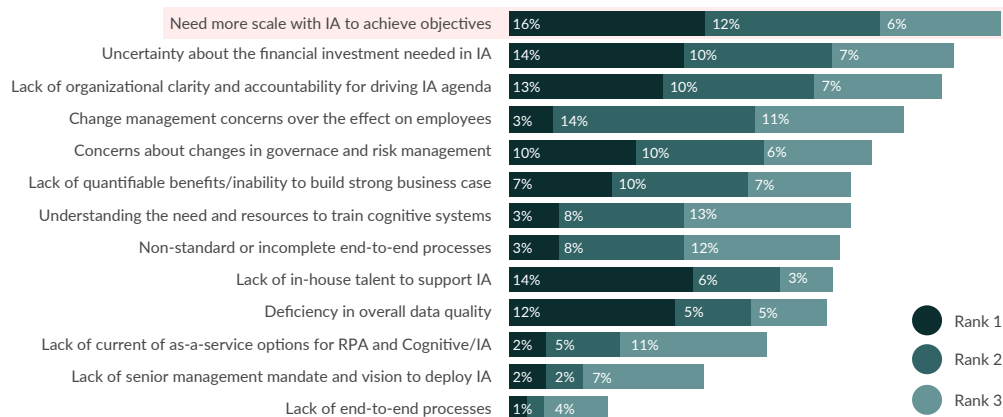

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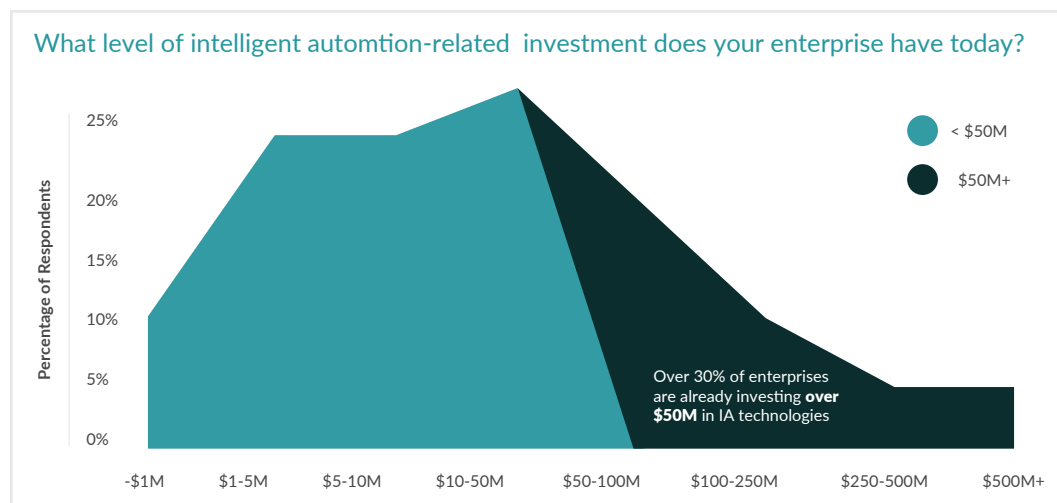
2   Reshaping the Future: Unlocking Automation's Untapped Value
3   The Rise of Intelligent Automation
4   Integrated Automation: Why You've Been Doing It All Wrong

The few organizations that *are* implementing automation at scale are going beyond simple task automation, integrating RPA capabilities and various types of AI into complex business workflows to reduce costs—and to a lesser extent, generate new revenue streams.
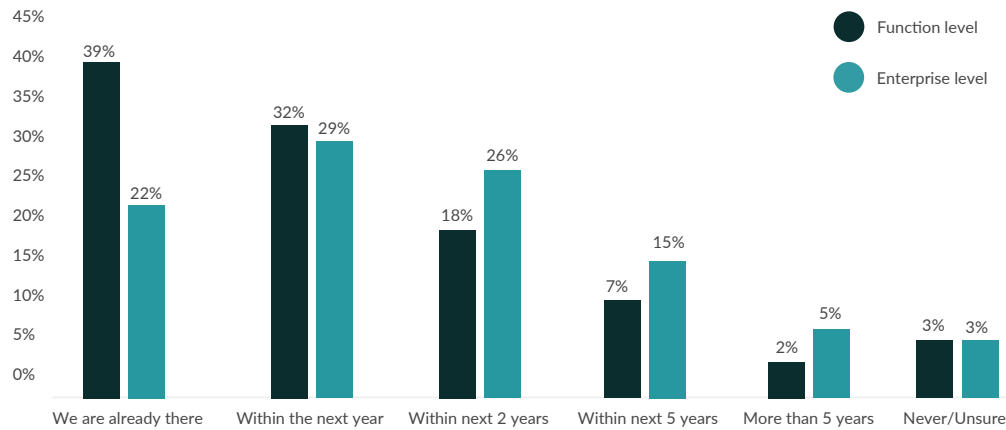
Though 30% of the enterprises are making big bets on intelligent automation, **only 10% are succeeding with intelligent automation at scale**.[5] For these organizations, scaling intelligent automation is a critical component of their strategic goals. They also have aggressive timelines for scaling automations across the enterprise. But according to HFS, 59% of enterprises need 2-5 years to fully scale their use of automation across the entire business.

What are the top three inhibitors that are holding you back from achieving strategic and operational goals?

Inhibitor	Rank 1	Rank 2	Rank 3
Need more scale with IA to achieve objectives	16%	12%	6%
Uncertainty about the financial investment needed in IA	14%	10%	7%
Lack of organizational clarity and accountability for driving IA agenda	13%	10%	7%
Change management concerns over the effect on employees	3%	14%	11%
Concerns about changes in governace and risk management	10%	10%	6%
Lack of quantifiable benefits/inability to build strong business case	7%	10%	7%
Understanding the need and resources to train cognitive systems	3%	8%	13%
Non-standard or incomplete end-to-end processes	3%	8%	12%
Lack of in-house talent to support IA	14%	6%	3%
Deficiency in overall data quality	12%	5%	5%
Lack of current of as-a-service options for RPA and Cognitive/IA	2%	5%	11%
Lack of senior management mandate and vision to deploy IA	2%	2%	7%
Lack of end-to-end processes	1%	4%	

5 [Integrated Automation: Why You've Been Doing It All Wrong](#)

When will your adoption of intelligent automation be scaled up and industrialized?
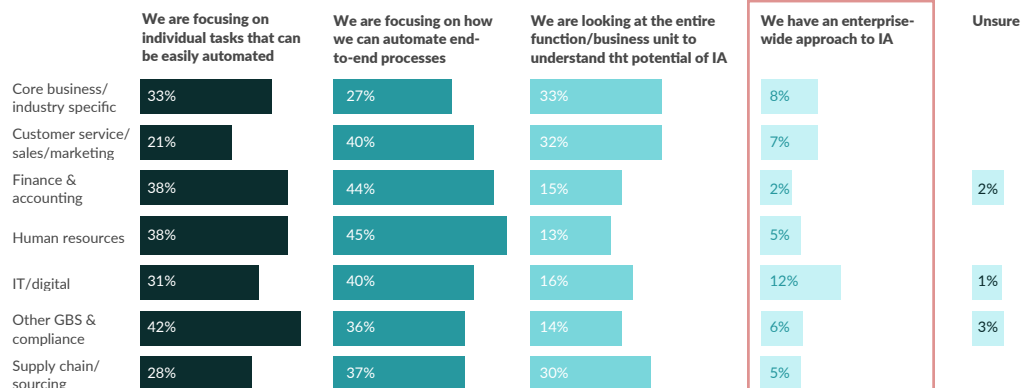

● Function level
● Enterprise level

	We are already there	Within the next year	Within next 2 years	Within next 5 years	More than 5 years	Never/Unsure
Function level	39%	32%	18%	7%	2%	3%
Enterprise level	22%	29%	26%	15%	5%	3%

Note: 590 business leaders including 100 C-level executives
**Source:** HFS Research in conjuction with KPMG International, State of Intelligent Automation, 2019

Successful Automation at Scale: What's Missing?

So why have only 10% of enterprises successfully deployed automation at scale? The answer lies in their approach. Most enterprises are implementing automations as **siloed approach, rather than an integrated approach**. From the HFS research, it's clear that most businesses' automation philosophy focuses heavily on task automation, with RPA as the pointy end. But for automation to be effective at scale, task automation isn't enough.

How would you characterize the current philosophy for automation?

	We are focusing on individual tasks that can be easily automated	We are focusing on how we can automate end-to-end processes	We are looking at the entire function/business unit to understand tht potential of IA	We have an enterprise-wide approach to IA	Unsure
Core business/industry specific	33%	27%	33%	8%	
Customer service/sales/marketing	21%	40%	32%	7%	
Finance & accounting	38%	44%	15%	2%	2%
Human resources	38%	45%	13%	5%	
IT/digital	31%	40%	16%	12%	1%
Other GBS & compliance	42%	36%	14%	6%	3%
Supply chain/sourcing	28%	37%	30%	5%	

<10% respondents have an enterprise-wide approach to IA

Note: 590 business leaders including 100 C-level executives
Source: HFS Research in conjuction with KPMG International, State of Intelligent Automation, 2019

Enterprise Automation: What Does It Take?

Instead, what we fundamentally believe that enterprise automations must be driven by intelligent automations that are not just task-driven but reflect the entire spectrum of scenarios discussed earlier in this whitepaper. In short, there are two critical requirements for the adoption of *e*nterprise automation at scale:

1. The **integration of all automation technologies,** including RPA, cloud, data, AI, APIs, and workflow management tools.
2. A **holistic approach to automation** that combines automation technologies with people and processes across the enterprise.

The Four Pillars of Enterprise Automation
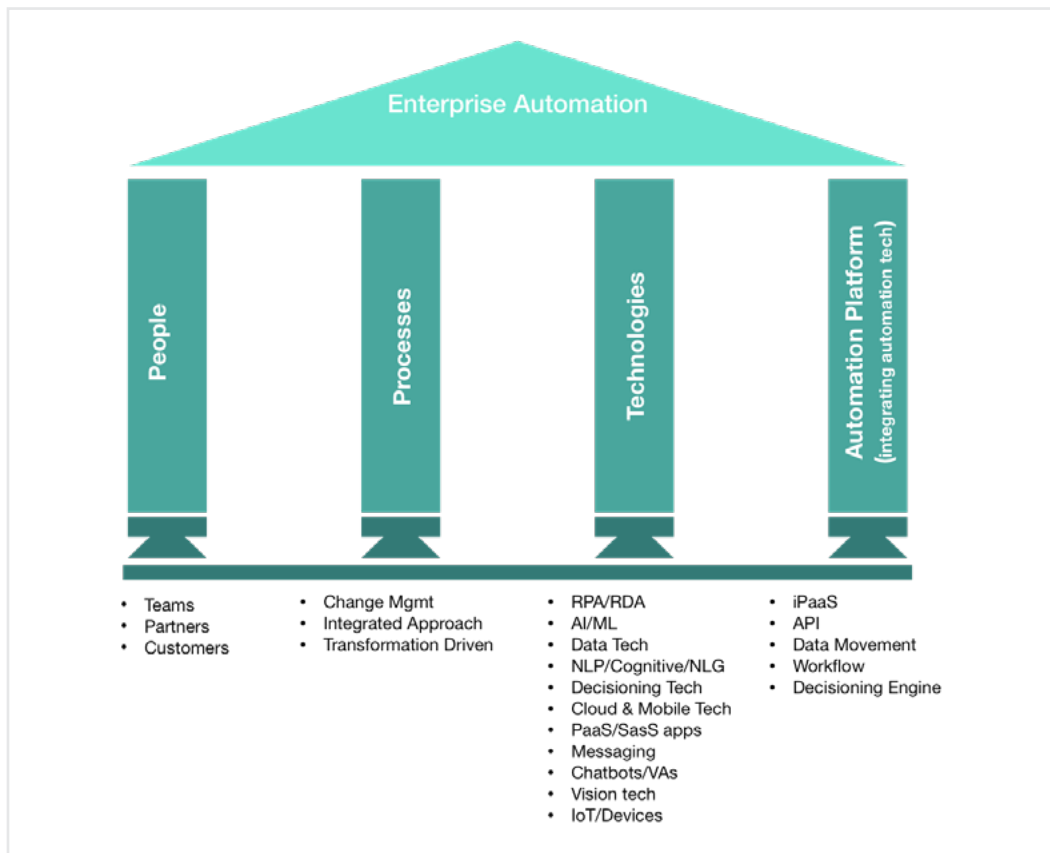
Undergirding the two requirements discussed above, there are four pillars supporting enterprise automation.

1) People

Ultimately, enterprise automation is transformative, rather than a simple replacement of manual tasks. To that end, people—like executive stakeholders, employees, customers, and partners—are fundamental to . successfully adopting, implementing, and scaling automation across the enterprise.

2) Processes

The next pillar is processes. Automation itself must involve a wholesale reimagining of processes across the enterprise. It's not enough to simply eliminate manual tasks; the focus should be on re-engineering existing processes to fully leverage automation.

Then there are the processes that enable the transformation effectively— including change management processes, governance processes, security reviews, and so on. Making sure that these processes are functional and efficient is integral to scaling automation.

3) Technology

The third pillar comprises the wealth of technologies at play in enterprise automation. These technologies range from RPA/UI-driven automation to more resource-demanding tech like AI/ML and decisioning engines. Unlike the siloed approach to automation, enterprise automation requires a range of interdependent technologies—not just RPA.

4) Platform

The fourth pillar is the proverbial glue that holds everything together: the automation platform. In the new era of automation, such a platform integrates all the enterprise's technologies, provides frictionless experiences to employees, and ensures that processes are adhered to. In more granular terms, a truly usable enterprise automation platform must be able to:

- Automate tasks, workflows, and business processes across the back office, front office, and experiences
- Integrate various systems, data sources/stores, and applications in a frictionless manner
- Integrate with internal and external ecosystems through APIs
- Integrate RPA/RDA, UI-driven automation systems, and legacy automations

- Integrate AI/ML technologies and augmented intelligence technologies for business decisioning automation

- Provide an integrated approach for users to seamlessly experience integration of people, processes, and technology

- Seamlessly scale and operate through a low-code, platform-as-a-service model

- Be simple to use yet offer enterprise-grade security, audit, governance, and compliance features that are easily accessible to business users

Ultimately, there is no one-size-fits-all approach to automation. Enterprise automation is a wide spectrum that ranges from simple task automation to automating entire business processes end-to-end. Each of these types of automations are powered by a technology or set of technologies. A usable enterprise automation platform must address all of these types of automations with an integrated approach.
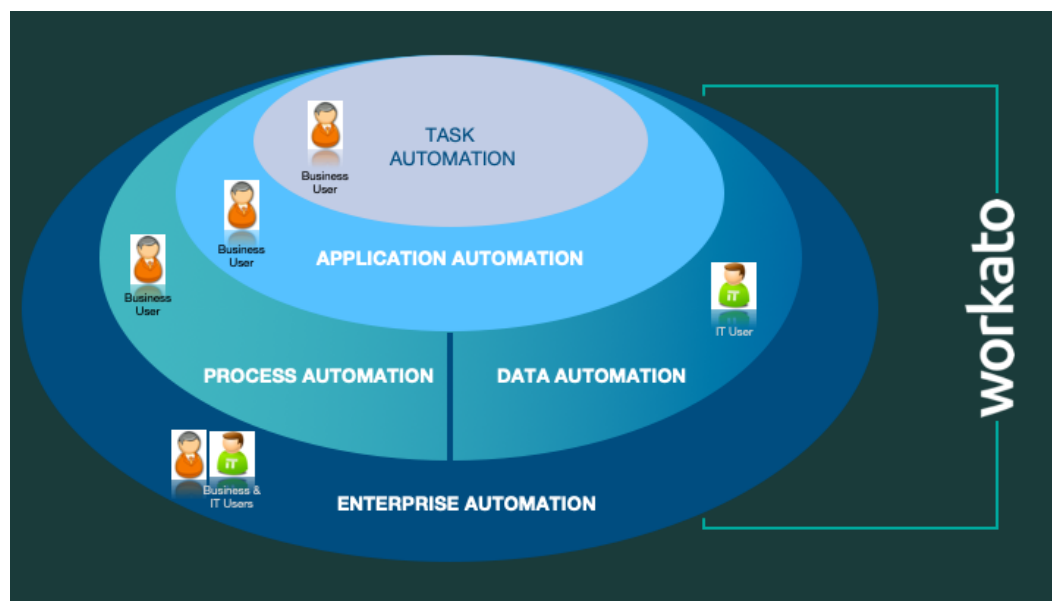
Generally speaking, enterprise automation comprises four sub-types of automation:

1. **Task automation.** These are automations of specific steps of a larger business process like employee on-boarding or quote-to-cash. These could be built with tools like Zapier or IFTTT or they could attended macros in an RPA tool that automates data entry from a form into a legacy app via a UI script.

2. **Application automation**. These are workflow capabilities built into modern app platforms like Salesforce Process Builder, Workday Journeys, ServiceNow Flow, or Slack Workflow Builder. They enable their customers to create extend pre-built workflows natively in their apps and be able to put/get data from external data sources.

3. **Data and IT automation**. These automations are built to move data between IT systems. These are mostly done with iPaaS products that zoom out a bit and help you orchestrate data across multiple applications, integrate various data stores for a more unified view of customers, employees, products and other business information. These automations are primarily owned and driven by IT organization.

4. **Process & Business Automation**: These automations are built for business users to easily and productively run their business functions. These include UI-oriented automation tools like RPA tools for automating interactions with legacy systems, API oriented automation tools like iSaas (integration Software-as-a-Service) for automating cloud applications, cognitive bots for better experiences, and innovative business models. These automations are primarily driven by individual business functions, sometimes in conjunction with IT.

By combining these four subtypes, enterprise automations:

*   Support app, data, API, or UI automations integrating with cloud or on-prem systems and data sources.

*   Are usable by business users across sales, marketing, HR, and finance while having the power, security, and governance that IT needs.

- Drive significant operational excellence, provide great interactive experiences, and enable innovative business models.
- Are owned by both business and IT and are driven by the entire organizational transformation.

The "Why" of Automation

In addition to finding a platform that enables all the above, enterprise automation is an organizational transformation exercise that entails significant change. Organizations need to start with the *why* of automation so that they can align on a singular goal—whether it's digital transformation, operational excellence, cost savings, or something else. Evangelizing the "why" of automation internally will enable enterprises to clearly converge on the type of automations, technologies, and processes they need to embrace.

To sum up, successful enterprise automation projects have several key characteristics in common:

- They envision automation as transformational, not just as an operational productivity-enhancing or task-elimination exercise
- They combine multiple types of automation. Focusing heavily on only one (and ignoring others) harms the ability to scale automations effectively.
- They address challenges posed by or silos created by existing automation technologies.
- They emphasize collaboration between business and IT. Companies must understand how individual automation technologies are business user-centric or IT user-centric. True enterprise automation demands a technology that can bridge the gap between business and IT.
- They are an organization-wide transformation activity that employ a cohesive approach uniting people, processes, technologies, and an automation platform

How Are Digital Leaders Embracing Enterprise Automation?

Digital leaders include those 16% of automation adopters who have successfully scaled their automation efforts beyond the pilot stage and who are using automation across business teams for multiple use cases. They are able to do this by adopting a three-phase approach:

Phase 1:

Demonstrate success in a single function.

Driven by a passionate technical champion looking to solve a specific business challenge, successful automation scalers start by demonstrating success by connecting a few key apps in a single function. Often it begins with IT (e.g. IT helpdesk automation between ServiceNow, Slack, and Jira), but due to the nature of intelligent automation, visionary business process leaders have often introduced intelligent automation first in HR (e.g., employee onboarding with Workday, Servicenow, and Slack) and sales (e.g. Order-to-Cash with Salesforce and NetSuite).

Phase 2:

Expand to a second function and more complex use-cases.

Stories of quick deployment times, immediate efficiency gains, and the ease of using intelligent automation tools find their way to change agents in other functions. Internal experts from Phase 1 act as consultants to the businesses, helping them map out workflows between a new set of apps. Emboldened by the successes of Phase 1, change agents in the first function start dreaming up more complex use cases that weave in AI, RPA orchestration, IoT Automation, and bots into automated workflows.

Phase 3:

Enterprise-wide automation enablement.

As senior and executive leadership continue to see outstanding return from the low investment needed to get up and running with intelligent automation, they support programs that drive accessibility and encourage innovation across the enterprise. There is also increased interest in applying intelligent automation to front-office business processes and product/service development and refinement. At this stage, the digital innovation potential of an organization starts being realized.

Workato: Powering Enterprise Automation

2018 was an explosive year for the intelligent enterprise automation space. As a player that cuts across both integration and automation, Workato has ridden the tailwinds of their convergence and the high growth in adoption of automation, which became a priority for executives last year.

In 2018, we helped new and existing customers realize their integration and automation aspirations, and made significant changes to our platform, both of which led to us being recognized as market leaders in the integration space by Forrester and Gartner, and honored by Diginomica and Constellation, which awarded us the 'Best Enterprise Software Startup' title in January 2019. Here's how several cutting-edge Workato customers are using our platform to realize the power of enterprise automation.

How Is Workato Powering Enterprise Automation for Customers?

Solutions Architect Dan scales automation across a global energy enterprise

Our oil & gas customer had embarked on a 5-year app rationalization effort to reduce the number of external and custom apps from ~1,500 to less than 600. It realized that the data in apps slated for removal were still being used by a host of other systems. A large quantity of data first needed to be moved into a secure and accessible data hub, before they could complete the transition.

How Digital Leaders scale automation programs
Global energy enterprise example
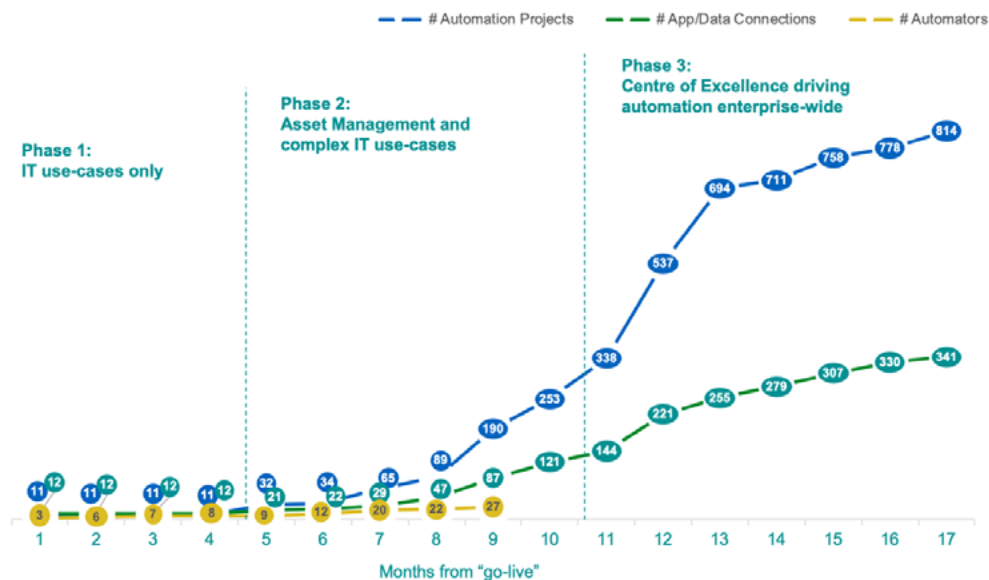
Tech-savvy change agent Dan and his visionary business process counterpart Martin first used Workato in HR, where they began by

transferring data from legacy apps into a data hub and connecting SAP, Workday, payroll, and other systems to continuously keep the data fresh. They then used the Workato platform as a "smart skin" around the data hub, which not only ensured secure access to data but also confirmed that what goes in is clean—and that what comes out is accurate.

Now they're using Workato to build out a similar data management capability for asset management across the company's core business operations. One of the greatest challenges for a distributed organization with a large physical infrastructure footprint is the ability to track and manage their field equipment and Industrial IoT devices. With intelligent automation, however, asset registries are more accurate, maintenance schedules are continuously updated, and alerts are automated to fix devices and identify security threats—before they become problems

Dan, Martin, and their senior sponsors Twong and Robert were recognized as innovation leaders by their CEO in a company-wide memo. This not only gave credit to a team that truly deserved it, but it also inspired others within the company to follow suit in their enterprise automation efforts. The company built a Center of Excellence to train citizen integrators and hosted "Work-Jams" where employees could bring their innovation ideas and build the automations in real time!

Monica, Head of Application Engineering, transforms core business processes with intelligent automation at rapidly-growing tech company

Monica was new in her role at a top collaboration software company and was on the hunt for an integration and automation platform that would serve the business's needs faster. She started by creating an automated Deal Desk for the sales team. Managers can now view and approve deals right from Slack!

Next she built a Marketing Cloud workflow that analyzed all user behavior and identified candidates for upsell/cross-sell based on usage patterns. To do this, ~10 million records pass through Workato for analysis. As the company has a usage-centric business model, this project enabled them to execute strategic and business imperatives faster—and at a significantly lower cost.

After demonstrating success with these use cases, Monica was ready to tackle a core business process. She automated the Order-to-Cash process, connecting Salesforce CPQ with the company's financial systems to automate over 80% of billing. Today, every single dollar the company makes runs through the platform, and Monica is established as the integration and automation leader of the company.

Paul, VP of Support, evolves his function from reactive problem-solver to proactive supporter of regional locations

Paul, the VP of Support for a leading cafe chain in the US, was tired of always being on the back foot when it came to technical issues in the company's tech-savvy restaurants. He was also frustrated by the company's internal integration team, which never got around to executing on what Paul needed them to do to improve his function.

He started by tackling his immediate need to drive consistency and efficiency across service providers. He used Workato to integrate support tickets from a diverse set of third party systems into ServiceNow. This allows him to centrally manage tickets, ensuring nothing falls through the cracks. It also allows him to perform cost analysis on service providers and to identify those that were operating inefficiently.

Once his team gained confidence in building automations, Paul lead them in solving a bigger problem: proactively supporting individual cafe locations. He set up automated tickets within the stores which identified issues and created alerts in Splunk to be resolved—often before the restaurant even realized there was an issue. Restaurants can now also send in photos that are routed accurately through ServiceNow; they can also request services like new WiFi passwords. Workato analyzes these requests and executes a workflow to provision the password through the WiFi system.

On a short timeline, Paul has effectively transformed how his function operates and is perceived within the company. Once seen as reactive and slow, the support function is now a proactive and well-respected partner to the cafes. Today, Paul heads up all automation projects at the company and is working on new ways to improve the entire business.

Sebastian, Chief Information Security Officer of a high-Tech company, reduced errors and improved security posture by automating security checks and reminders through Slack

Sebastian's virtualization software organization was growing quickly, and his team could not keep up with the backlog of automation projects needed to drive productivity. The real problem was finding enough skilled developers to build complex automations with the tools they were using. They were also running out of capacity in their data centers and were aggressively moving to the cloud.

Sebastian first automated the IT service helpdesk, allowing employees to raise ServiceNow tickets in Slack. He then pulled in tickets from Jira, which the engineers were fond of using, despite these requests frequently falling through the cracks when they copied across manually. Managing everything centrally allowed him to drive efficiencies and reduce errors.

He then moved on to something closer to home: the security posture of employee devices and security culture of the organization. He built integrations that allowed employees to check their security posture themselves through Slack and proactively schedule necessary updates. This made them feel a greater sense of responsibility for security and empowered them to keep their data secure.

Next, Sebastian tackled a core business process by automating the provisioning of infrastructure stacks, allowing developers to request dev environments from Slack. This would raise a request in ServiceNow and into their in-house infrastructure systems to provision a stack. This reduced the time for provisioning from a week to a few hours, driving incredible business value from agility and speed.

Enterprise Automation: The Way Forward

As automation continues to be a linchpin of digital transformation, it's crucial that organizations make intelligent choices about how to scale their automations. In 2019, task- or UI-driven automation alone is not sufficient; companies should avoid pigeonholing themselves by investing in purpose-specific tools. Instead, they need to evaluate automation platforms based on their ability to tie together a wide rage of technologies and execute a wide spectrum of automations across departments and teams, while remaining accessible to lines-of-business users who are often at the forefront of scaling automation across the company.

workato

Integrate. Automate. Innovate