



Intelligent Process Automation: Unlocking True Digital Transformation

Introduction

Bridging the Digital Transformation Chasm

With IDC predicting that by 2020 at least 55% of organizations will be digitally determined, transforming markets and reimagining the future through new business models and digitally enabled products and services, it's clear that they must move beyond investing in individual digital technology pilots and proof-of-concept projects. The time has come to bring new digitally inspired ways of thinking and working right into the heart of business systems — leveraging technology to automate, instrument, coordinate, and optimize activities not only at the "outside edge" of the organization, but also throughout value chains and vital support functions.

However, there's a chasm that needs to be bridged. How can organizations create new operating models that support scaled digital initiatives aiming to deliver always-on, responsive, agile, personalized experiences, when those operating models have to be built from existing processes, systems, and teams that are not set up for new ways of working? For example, how can a new digital insurance proposition, built around always-on mobile servicing really deliver on its promises if existing policy teams are locked into using systems that need to be manually administered?

Freeing up existing teams, processes, and systems to enable them to deliver value in new ways is a critical success factor for digital projects to scale their value and deliver real transformation.

AT A GLANCE

KEY TAKEAWAYS

- » Organizations must bring digital thinking and technologies right into the heart of their operations — it's not enough to just focus on creating a "digital outside."
- » A new wave of automation opportunities is breaking over organizations, focused on bridging gaps between existing operation models and the demands of new digital propositions.
- » Intelligent Process Automation Platforms give organizations the power to look beyond tactical task automation opportunities and build end-to-end automation strategies that embrace and extend the value of people, process, and point technologies.

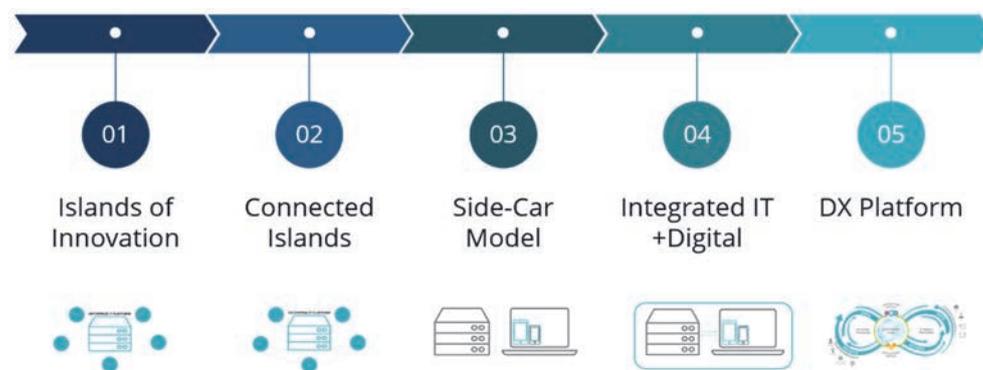
Organizations cannot hope to improve their digital transformation maturity unless they invest in a platform that drives orchestration between systems on the outside edge of the organization and those on the inside, links capabilities that are changing quickly to capabilities that are forced to change more slowly, and enables new initiatives to build on old.

Trends: A New Wave of Insight-Driven Business Automation

Beyond Islands of Innovation

Organizations almost always start digital transformation efforts by seeking to reinvent customer experiences, which makes sense — transformations should be led outside-in, taking the needs of the customer as the starting point. However, focusing only on creating a "digital outside" for a business using new digital projects tends to lead to what IDC calls "islands of innovation" (Figure 1). This can be a great way to start on a digital transformation journey, but it has limited potential to scale.

Figure 1
IDC's Maturity Model for Digital Transformation Platforms



Source: IDC, 2019

Organizations cannot hope to improve their digital transformation maturity beyond a state dominated by islands of innovation unless they invest in a platform that drives orchestration between systems on the outside edge of the organization and those on the inside. These platforms should link capabilities that are changing quickly to capabilities that are forced to change more slowly and enable new initiatives to build on old.

Digital transformation initiatives are driving a new wave of insight-driven business automation — a wave that's focused not only on the digitization of individual tasks, but also on the digitization of work coordination across end-to-end business processes.

RPA and AI are Important Platform Elements — But They're Not Enough

It's against this backdrop that market interest in robotic process automation (RPA) has surged. By promising to free data and functionality locked away in legacy systems and automate routine data entry and administration tasks, RPA technology brings the potential to "upgrade" slow, expensive, error-prone, manually driven operations to make them more fit-for-purpose in the context of a business shift towards always-on, transparent, agile service delivery.

In a similar way, artificial intelligence (AI) technologies have become the focus of huge interest as a complement to RPA, to enable software robots to automate more aspects of business operations (such as analyzing, classifying, and verifying documents like invoices, contracts, and emails).

Both RPA and AI (when used to complement RPA) have drawbacks that spring from one key fact: by themselves, they only make an impact at the level of individual work tasks.

A truly strategic approach to automation — one that reflects the true needs of digital transformation initiatives — needs more, and that's where intelligent process automation comes in.

Both RPA and AI have crucial roles to play in bridging the digital transformation chasm, because they both enable organizations to digitize behind-the-scenes tasks that typically remain stubbornly "analog" even as new digital projects create customer-focused innovations. IDC survey data shows that around 25% of organizations are already either investigating or deploying these technologies together.

However, despite the significant improvements they can create, both RPA and AI (when used to complement RPA) have drawbacks that spring from one key fact: by themselves, they only make an impact at the level of individual work tasks.

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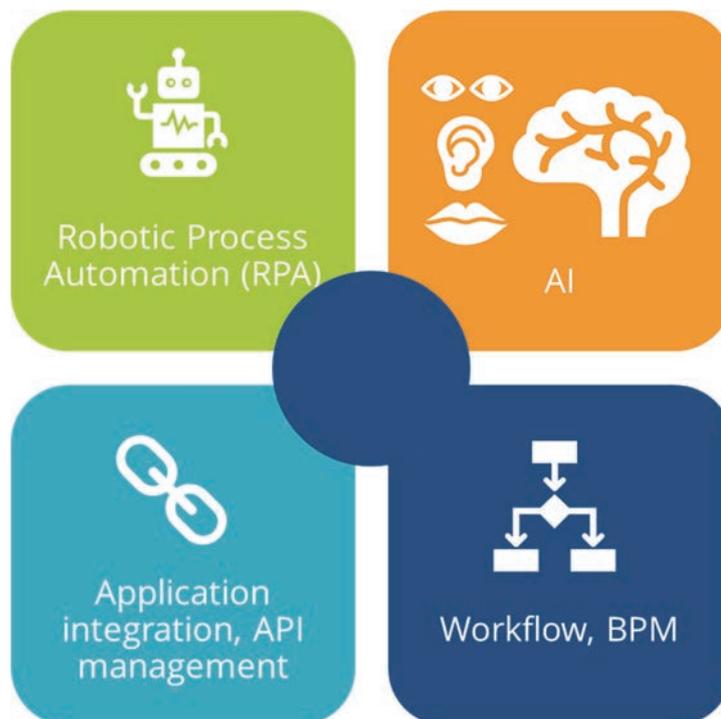
Definition: Intelligent Process Automation Platforms

Intelligent process automation (IPA) refers to the group of software technologies that individually or collectively manage, automate, and integrate business processes in an organization. The main categories of technology that contribute to IPA today are AI, RPA, workflow/BPM, and application integration/API management.

IPA platforms unite these technologies with integrated solution design, delivery, and management approaches — with process management technology forming an "orchestration backbone" that coordinates activities across the platform (see Figure 2).

Figure 2

The Four Main Elements of Intelligent Process Automation



Source: IDC, 2019

Benefits: Overcoming the Limitations of Task-Based Approaches

There are four specific ways in which intelligent process automation platforms, and their ability to digitally orchestrate the coordination of work, add value to task-focused automations. We look at each in the sections that follow.

Coordinating the Work of People and Bots

The scope of a strategic approach to digital transformation has to be much broader than individual, highly structured, and repeatable administrative tasks (or even collections of such tasks). The customer journey improvement initiatives that so often form the catalyst for digital transformations don't only depend on the streamlining of simple record-keeping work; they also depend on the orchestration of less structured, formalized activities that require creativity, deep domain expertise, validated certification, or vetting — activities that have to be carried out by people.

In short, bridging the digital transformation chasm can only come through an approach that effectively and efficiently coordinates work — not only between automated bots, but across and between teams of people *as well as* automated systems. IPA platforms make this happen.

Providing End-to-End Visibility of Process and Customer Journey Effectiveness

Systems that focus purely on task-level automation can only provide performance visibility and insights at the level of those tasks. IPA platforms play a process-level orchestration and automation role, coordinating interactions between people, bots, and other automated systems. But because these platforms are digital in nature, they also instrument those orchestrated tasks and processes, and can provide vital visibility into end-to-end process and task health and performance. This is particularly important in the context of a digital transformation effort, because customer journey improvement can only be understood and plotted in the context of understanding the end-to-end organizational processes that underpin different stages of that journey. If you can only understand the performance of individual tasks in isolation, it's extraordinarily difficult to understand the root causes of problems, or to prioritize transformation efforts.

Enabling More Ways for AI to Add Value to Customers and to Processes

The task-focused RPA vendor community has been actively exploring ways that AI technology (most specifically, technology that assists with natural language processing, document classification, language translation, and computer vision) can add value to the work of automated bots, and some really valuable outcomes are possible. For example, in the context of automated invoice processing, AI-powered services can be trained to identify invoices within huge unlabeled collections of electronic documents; identify key data items within invoices, even when there are hundreds or thousands of invoice formats in use; and automate invoice matching and checking.

However, the potential applications for AI in the context of end-to-end automation are much broader than this; and correspondingly, with a broader context AI technology can deliver value in more ways. For example, a modern IPA platform

can leverage machine learning algorithms to make recommendations to human task workers that help them make decisions (such as whether a customer should be eligible for a promotion or fast-tracking through a process). Similarly, AI services can be used to build conversational digital customer-support channels that are seamlessly integrated into automated workflows that also enlist human experts, so customer queries that can't be handled automatically can be addressed by humans — with the resolved queries being automatically fed back to drive further training of the conversational AI.

Handling Operational Failures in Automated Tasks

Although RPA technology is improving all the time, and AI can also help, automated tasks often fail to complete — sometimes because the target system has been changed without the people running automation services knowing, sometimes because access to the target system is slowed or impeded (as can happen if RPA bots are executing remotely from target systems), and sometimes because automations haven't been tested well enough. When automated tasks fail, humans need to pick up the pieces. Orchestration technology provides an elegant way for bot failures to be caught and dealt with by teams of specialists. What's more, where RPA and AI are used together, an IPA platform can be used to drive incremental training into machine-learning algorithms being used, so the AI becomes more accurate and resilient over time.

Vendor Profile: Bizagi

Bizagi is a specialist intelligent process automation platform provider with its roots in business process management (BPM). Headquartered in the UK, the company now has over 500 employees located in offices across North America, Europe, APAC, and Latin America.

Bizagi's 2008 launch of a free process modeling tool, Modeler, gave the company a vehicle that it has used to create a community of over a million users. In recent years, the company has introduced a range of products and services that provide routes this community can take to drive strategic automation and transformation projects. Bizagi currently has over 1,000 paying customers of its wider platform offering, with concentrations in the financial services, healthcare, manufacturing, and retail industries.

Bizagi's platform offering is one of many in the intelligent process automation platform market, but it positions itself strongly as enabling rich collaboration between business and technology professionals — something that IDC's research shows is more important than ever, as project backlogs increase and technology skills shortages continue to bite. It's also distinguished by the fact that all the elements of the platform have been built by Bizagi from the ground up (rather than being procured by corporate acquisition).

The Bizagi platform comprises the following principal elements, each of which can be acquired separately:

- **Bizagi Modeler.** This is a business process modeling tool available as a standalone free product as well as being part of the wider Bizagi platform. It implements the BPMN 2.0 business process modeling and notation standard faithfully. It's aimed at business analysts rather than developers.
 - **Bizagi Modeler Services.** This offering provides facilities to help individual Modeler users, or groups of users, to manage their process models more effectively. A Personal service tier provides for cloud-based model storage. Workgroup and Enterprise service tiers allow teams to collaborate on process model design.
- **Bizagi Studio.** This is a richly featured business process application development environment designed to foster business-IT collaboration. It extends the modeling functionality available in Modeler to also enable developers to specify complete business process applications based on information models, organizational models, forms and other UI elements, external systems integration definitions, and more. Deep integration with SAP, Microsoft, and Salesforce applications is also provided via dedicated connectors. Recent Studio releases have added native integration with RPA products from the three market leaders — UiPath, Automation Anywhere, and Blue Prism — meaning that Bizagi process applications can seamlessly orchestrate the activities of RPA bots across all three of these RPA platforms, as well as orchestrating human-led tasks and automated tasks carried out by other systems.

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- **Bizagi Studio Services.** As with Modeler Services, the Studio Services offering provides facilities to help teams of Studio users manage the lifecycles of their application designs collaboratively.
- **Bizagi Automation.** This provides the execution environment for business process application definitions with the option to run natively in the Microsoft Azure cloud or on premises. Unusually in the process application platform technology marketplace, it's available in both Java and .NET versions. Customers can build and train predictive machine learning (ML) models based on Bizagi process application data, enabling predictions to be used to guide human workers, or even to proactively take particular courses of action based on context (for example, connectors for Tableau and Microsoft Power BI enable customers to use those tools to visualize and analyze end-to-end process health and performance, as well as explore business outcomes from processes (for example, tracking the aggregate value of invoices processed over time, or the average contact center call-handling time segmented by customer tier).

Challenges

As business automation becomes an increasingly visible business concern at the highest levels, so the pace of change in the marketplace for intelligent process automation technologies has accelerated. Established vendors with decades-long experience and heritage are competing against very well capitalized startups and scaleups, and because of the nature of the customer need, these vendors are having to cooperate and partner at the same time as competing for wallet- and mindshare. What's more, some elements of the intelligent process automation technology landscape (particularly those relating to AI for automation) are increasingly powered by readily available open source technologies, meaning the barriers to entry for new competitors are quite low, and some enterprises are content to try to build these platforms themselves.

What's vital for Bizagi, in this context, is to focus on technology, product, and service packaging — delivering a platform that's clearly focused on the needs of very specific personas. It must be easy to use, enable customers to manage automation system lifecycles effectively and at scale, and attractive to systems integrator partners. Bizagi is clearly making the right moves here. In addition, good partnerships with systems integrators are key, and it's challenging to develop and maintain partnerships with a good mix of providers that really deliver value over the long term.

Conclusion

To overcome the challenges that so many organizations experience with digital transformation, a chasm needs to be bridged. To truly scale results from digital initiatives, organizations must create new operating models that enable always-on, responsive, agile, personalized experiences — but they have to accept that those operating models have to leverage existing processes, systems, and teams that are not often set up for new ways of working.

Both RPA and AI have grabbed huge amounts of industry attention in this context. They have crucial roles to play in bridging the digital transformation chasm, because they enable organizations to digitize behind-the-scenes tasks that typically remain stubbornly "analog" even as new digital projects create customer-focused innovations. However, in this context RPA and AI only make an impact at the level of individual work tasks.

Organizations seeking to develop automation approaches that *truly* support digital transformation goals should:

- Look beyond a task-based approach to automation, to explore how end-to-end processes can be orchestrated using an intelligent process automation platform.
- Analyze the ways that an IPA platform can add value to automation initiatives. Look beyond the immediate value associated with orchestrating the activities of people and automated bots, and also explore how an IPA platform can improve end-to-end business process visibility and drive performance and improvement insights; mitigate the risks and manage the errors that can occur with task-level automations; and open up more opportunities to apply AI technologies to improve decision-making accuracy and consistency in processes.
- Find an IPA platform vendor that offers tools that foster collaborative, iterative working between technology and business teams. With so much demand for automation and so much of a challenge to find highly skilled technologists, select tools that enable blended teams to share the workload of designing, delivering, and managing automations.

About the Analyst



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Neil Ward-Dutton is recognized as one of Europe's most experienced and high-profile technology industry analysts, and has regularly appeared on TV and in print media over his 20-year industry analyst career as well as authoring over 10 books on IT and business strategy. Neil started his career as a software engineer and holds a BSc in computer software technology from the University of Bath. He is also a Fellow of the RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce).

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MESSAGE FROM THE SPONSOR

We are entering a new age of intelligent automation. With customers expecting instantaneous service, organizations must find new ways to orchestrate people, applications, robots and information. However, today's companies often find the path to efficient digital operations blocked by rigid legacy systems and ineffective collaboration between business and technical teams. It is not an option to remove legacy systems, yet they are too slow and costly to customize. The only way to create agility in your business is to add a new process layer that allows you to leverage the systems you already have, integrating and orchestrating advanced new technologies such as RPA and AI with ease.

We encourage you to explore Bizagi and learn how a flexible platform for intelligent process automation can solve the fundamental challenges of digital transformation and drive real change across your organization.

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