Selecting the right platform for IT automation

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Selecting a platform to support automation has significant repercussions that business leaders often miss.

From help-desk chatbots to the autonomous processing of complex security incidents, the application of intelligent process automation (IPA) is becoming more mainstream in enterprise IT organizations. Indeed, most IT transformations today include some form of IPA.

McKinsey estimates that companies across all industries are already automating 50 to 70 percent of tasks, driving both operational and cost efficiencies. No wonder. IPA promises to reduce complexity, replace manual processes, and improve both organizational performance and end-user experience. Companies that lag may soon find

themselves in catch-up mode and at an increasing (and perhaps enduring) competitive disadvantage.

Once a company has evaluated where to start, one of the most far-reaching decisions is which platform to choose. The IPA system has an impact on speed of implementation, scope of capabilities, future ambitions, and ability to meet customer expectations, and CIOs with an incomplete understanding of the implications of each choice may inadvertently create significant issues further down the road. For example, while a ready-to-use preconfigured system is the fastest way to start the IPA journey, it may lack critical functionality for

particular IT functions, such as end-user support. Companies with a universal IPA platform already working well on the business-process side, on the other hand, may find themselves locked into a specific set of bot capabilities that limit future IPA expansion.

There are three main types of IPA platforms: integrated, self-designed, and end-user focused. Each has its pros and cons, and selecting the right one for the IT organization is crucial to ensuring that the intelligent automation effort for the entire company is set up for success.

1. Integrated platforms

As the name suggests, integrated platforms provide IT organizations with predesigned capabilities for integrating with critical IT systems. They also typically come with a library of prepackaged bots that target the most important sources of work in IT, including operations management, security, end-user support, cloud operations, and asset management. Intelligent automation engines such as Ayehu's eyeShare and IPsoft's IPcenter can accomplish a variety of IT tasks. Their extensive stores of predesigned bots, capable of handling everything from simple end-user support to machine-learning-enabled incident resolution, and their wide range of application programing interfaces (APIs) prove valuable to many IT organizations.

An integrated platform can be a good fit for CIOs with ambitious strategies for IT automation, such as going beyond simple task automation to incorporating significant cognitive capabilities. IPsoft, for example, has a vision for autonomous computing that includes a self-healing IT environment capable of resolving incidents, performing planned activities, and learning new capabilities over time.

Pros:

- Extensive bot libraries

- Machine-learning-enabled incident resolution

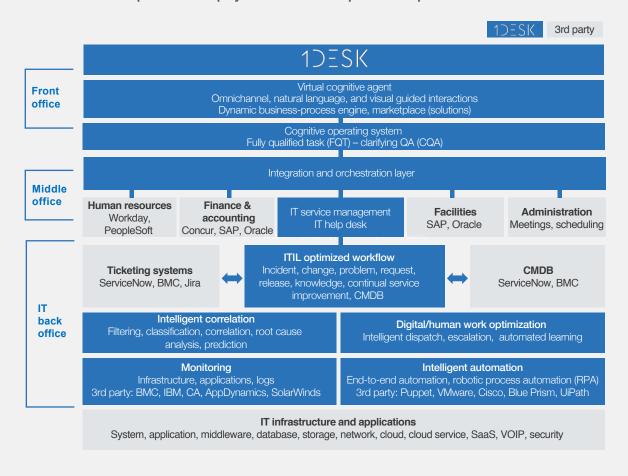- Wide range of APIs to connect to IT management and monitoring systems

Cons:

- High degree of platform commitment

- Extensive implementation effort required for more advanced functions

However, IT organizations that pursue this option should be prepared to commit to the platform long-term and understand that more-advanced machine-learning capabilities will require a significant integration effort. Running machine-learning algorithms, for example, requires reliable access to rich data sets of information about IT incidents, alerts, and the tasks performed to resolve them. This thirst for data is difficult to quench just by linking to data from other systems. Instead, integrated platforms such as IPsoft's must re-create within their own platform key data from the existing IT management system—such as internal ticketing, data sets on incident resolution, internal monitoring, direct network alerts, and an internal configuration management database (CMDB) to record previously unknown IT assets discovered during problem resolution. Exhibit 1 shows an architectural diagram of IPsoft solution 1Desk, which features many of these internal IT management systems.

EXHIBIT 1 **Different architectures are required for each platform.**

Broad horizontal expertise for employee service and deep vertical expertise in IT automation

| | 1DESK | 3rd party |

1DESK

Front office

Virtual cognitive agent
Omnichannel, natural language, and visual guided interactions
Dynamic business-process engine, marketplace (solutions)

Cognitive operating system
Fully qualified task (FQT) – clarifying QA (CQA)

Middle office

Integration and orchestration layer

| **Human resources** Workday, PeopleSoft | **Finance & accounting** Concur, SAP, Oracle | IT service management IT help desk | **Facilities** SAP, Oracle | **Administration** Meetings, scheduling |

IT back office

| **Ticketing systems** ServiceNow, BMC, Jira | ⟷ | **ITIL optimized workflow** Incident, change, problem, request, release, knowledge, continual service improvement, CMDB | ⟷ | **CMDB** ServiceNow, BMC |

Intelligent correlation
Filtering, classification, correlation, root cause analysis, prediction

Digital/human work optimization
Intelligent dispatch, escalation, automated learning

Monitoring
Infrastructure, applications, logs
3rd party: BMC, IBM, CA, AppDynamics, SolarWinds

Intelligent automation
End-to-end automation, robotic process automation (RPA)
3rd party: Puppet, VMware, Cisco, Blue Prism, UiPath

IT infrastructure and applications
System, application, middleware, database, storage, network, cloud, cloud service, SaaS, VOIP, security

Source: IPsoft, Inc.

2. Self-designed platforms

These universal platforms enable IT organizations to build custom bots for specific IT processes and offer a wide array of capabilities aimed at supporting their design. The key benefits are flexibility and versatility. These platform providers target a wide range of industries and IT processes. By and large, the platforms tend to be more mature and have substantial customer bases; however, they have mostly been used in end-to-end business-process automation. Blue Prism, for example, has positioned itself as the "operating system for the digital workforce."

Self-designed platforms do offer comprehensive bot management and orchestration capabilities, which become more important as IT organizations scale their IPA efforts. They also enable businesses

Pros:

- Mature platforms with large customer bases

- Customizability and flexibility

- Comprehensive bot management and orchestration capabilities

- Single technology and skill set across business-process and IT automation

Cons:

- Limited bot libraries for IT

- Extensive custom-development and implementation effort required

to apply the same technology and skill sets across both business processes and IT. This can be extremely valuable in contending with IPA talent shortages, because the same center of excellence (CoE), development principles, change-management approaches, and bot orchestration can be reused throughout the organization.

However, these platforms require the organization to design its own bots for each function. Although several have begun creating libraries of preprogrammed bots, such as Automation Anywhere's Bot Store, most are focused on business-process automation and offer limited options for IT. What's more, some custom programming is always involved—for example, building APIs to connect to other IT management systems or customizing bots that connect to IT delivery processes. Not surprisingly, most of this customization relies on partnerships along with consulting and system integration.

Because they are designed to offer maximum customizability across use cases in IT and beyond, self-designed platforms provide the most flexibility when integrating with existing systems. IT organizations can use existing APIs, command prompts of remote systems, or even work with existing graphical user interfaces. The companies that offer self-designed platforms have built extensive partnerships with third parties that want to integrate their tools into diverse operating environments.

3. End-user-focused platforms

These platforms are integrated suites of capabilities designed for supporting IT users on issues such as ticket status and resolution, software licensing and updates, password and login, and equipment and network-connectivity requests. These suites also can improve the customer experience by learning from customer inputs on how to support automated interactions both more "humanly" and more accurately. Their key features are natural-language processing (NLP) capabilities, human-dialogue functionality, and analysis of user intent. These platforms, such as Verint/Next IT's Alme Suite and

Pros:

- Quickest path to end-user support automation

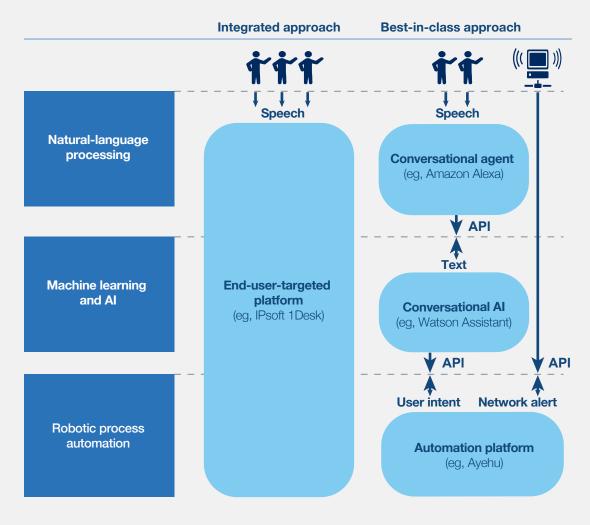- Proven advanced capabilities, such as natural-language processing

Cons:

- Focuses on simpler IT tasks and more limited problem-resolution capabilities

- High degree of platform commitment required

IBM's Watson Assistant usually feature powerful conversational-AI capabilities and can automate up to 70 percent of help-desk work. IPsoft says its Amelia platform resolves half of help-desk calls with no human intervention.

However, end-user-generated incidents and requests are inherently simpler than tasks such as network alerts. Therefore, these platforms offer only limited problem-resolution capabilities. Also,

many integrated-platform vendors are building partnerships with companies that specialize in natural-language processes in order to offer best-in-class approaches to end-user queries. For example, Ayehu recently announced a partnership with IBM Watson to create end-user chatbots by integrating Ayehu's problem-resolution platform on the back end with Watson Assistant's NLP front end. Exhibit 2 compares a hypothetical "best-in-class" solution for end-user requests with an integrated

EXHIBIT 2   **A best-in-class approach offers better resolution to end-user requests.**

Source: McKinsey's Digital 20/20

end-user-targeted platform. End-user-targeted platforms include predesigned integration with existing systems and libraries of IT bots that can be configured by end users for ease of use. Some vendors say they can offer user-friendly implementation within a matter of days.
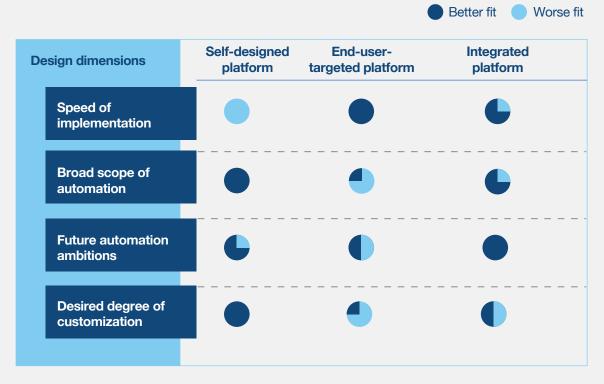
Selecting the right platform

In this rapidly evolving space, making the appropriate decision about which IPA platform is the best fit for your IT organization is critical. The choice will not only affect the likelihood of initial success; it can also significantly expand or limit your IPA ambitions. The most important considerations are the organization's desired speed of implementation, the scope of its automation plans, its customization requirements, and its future automation goals (Exhibit 3).

If speed of implementation is the primary concern, a ready-to-use platform with an extensive library of predesigned, customizable bots and preconfigured APIs to link them to existing IT management and monitoring tools is likely the best choice. For example, Ayehu claims its 30 different predesigned APIs enable organizations to deploy some tactical bots within hours, while IPsoft says its library of 1,000 "virtual engineers" is available to quickly take on tasks across most aspects of IT.

Organizations primarily concerned with automating a particular function, such as end-user support, may want platforms with deep capabilities for determining end-user intent. Next IT, for example, says its platform has already successfully addressed more than 20 million real-world user questions.

EXHIBIT 3

Which platform to choose should be based on an organization's IPA goals.

● Better fit   ● Worse fit

Design dimensions	Self-designed platform	End-user-targeted platform	Integrated platform
Speed of implementation	Worse fit	Better fit	Mostly better fit
Broad scope of automation	Better fit	Mostly worse fit	Mostly better fit
Future automation ambitions	Mostly better fit	Half/half	Better fit
Desired degree of customization	Better fit	Mostly worse fit	Half/half

Source: McKinsey's Digital 20/20

However, an emphasis on end-user support alone leaves significant IT tasks out of such a platform's scope—for example, non-user-generated alerts, security incidents, and batch processes. IT leaders with larger automation ambitions, such as reengineering IT self-management or proactive machine-learning-enabled identification of the root causes of incidents, would do better seeking out platforms with broader capabilities. IPsoft's IPcenter solution, with autonomic IT management capabilities, or Ayehu's AI partnership with research center SRI International may have more appeal in those cases.

If there are significant requirements for flexibility and customization, universal IPA platforms designed to take on both business and IT processes may be a better fit. Vendors such as Blue Prism, Automation Anywhere, UiPath, and WorkFusion provide maximum flexibility in bot programming and ongoing management. Many businesses have already adopted these platforms for IPA outside of IT and may have amassed related skills. Companies that have embarked on the IPA transformation of business processes often choose this path to leverage their existing talent and management support.

Taking the time to assess the IT organization's specific needs can enable CIOs to make an informed platform decision that is more likely to deliver early benefits and pave the way for a fruitful automation journey in the years ahead. ◆

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