The Forrester Wave™: Software For Digital Process Automation For Deep Deployments, Q2 2019

The 10 Providers That Matter Most And How They Stack Up

by Rob Koplowitz June 19, 2019

Why Read This Report

In our 27-criteria evaluation of software for digital process automation for deep (DPA deep) deployments providers, we identified the 10 most significant ones — Appian, AuraPortal, Bizagi, Bonitasoft, Genpact, Hyland Software, IBM, Kofax, OpenText, and Pegasystems (Pega) — and researched, analyzed, and scored them. This report shows how each provider measures up and helps application development and delivery (AD&D) professionals select the right provider for their needs.

Key Takeaways

IBM, Pegasystems, Appian, Bizagi, And OpenText Lead The Pack

Forrester's research uncovered a market in which IBM, Pegasystems, Appian, Bizagi, and OpenText are Leaders; Bonitasoft and Kofax are Strong Performers; and AuraPortal, Genpact, and Hyland Software are Contenders.

The Ability To Address Deep Process And Low-Code Were The Differentiators

As their customers grapple with developing more process-driven applications, vendors address the most complex process requirements while serving a less technically adroit developer audience. And they must do so while facing margin pressure from vendors that have business models tuned for the low-code market.

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by Rob Koplowitz with Christopher Mines, Sara Sjoblom, and Andrew Reese June 19, 2019

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The Forrester Wave™: Digital Process Automation For Wide Deployments, Q1 2019

The Forrester Wave™: Digital Process Automation Service Providers, Q3 2018

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DPA Deep Vendors Must Address Complex Processes And Low-Code

The traditional business process management (BPM) market emerged to tackle companies' most complex process automation and case management scenarios. Those solutions came with a hefty price tag and extensive technical complexity. And those challenges still exist. At the same time, demand is growing for a far greater number of process applications, most of which are far less complex. Process automation has emerged as a critical requirement for many organizations. Indeed, process professionals cite digital transformation as the primary goal of process initiatives within the next two years. DPA deep vendors look to serve two masters: deep, complex, and expensive, as well as wide, simple, and priced for broad deployment.

As a result of these trends, AD&D pros seeking software for DPA for deep deployments should look for providers that offer:

- Comprehensive process and case management capabilities. The potential for process complexity has only increased since the traditional BPM vendors dominated the landscape. For DPA deep workloads, solutions must be able to handle complex, long-running processes across multiple variables like local regulatory requirements and security. The solution may also require high-volume transaction support.
- > Support for emerging technologies. In addition to managing long-running processes, a host of other powerful emerging technologies like decisioning capabilities, robotic process automation (RPA), and artificial intelligence (AI) support requires building, acquiring, or deep partnering on the part of the vendors. Solutions that have the deepest levels of native support and integration for these new capabilities will be the best positioned to address the most complex processes.
- A modern application architecture. Most vendors in this evaluation cut their teeth in the market back when on-premises deployments and monolithic platforms were the norm, but they're aggressively moving to a more modern, cloud-first architecture critical to many customers. Additionally, the applicability of microservices and serverless support are increasingly important to software developers and particularly relevant to the flexibility that process-driven applications require. For those who are also seeking a solution for DPA wide workloads, the solution must offer comprehensive low-code development tools.

Evaluation Summary

Our evaluation highlights a market in transition. Most vendors have dropped the moniker BPM, which was associated with expensive, complex projects that took many months, if not years, to demonstrate value. With that, the market has split into vendors that focus on serving the most complex use cases while still providing low-code tools (DPA for deep processes) and those in our companion DPA wide Forrester Wave that focus on driving up adoption through lower cost and lower complexity. These two



categories overlap significantly, and we recommend evaluating vendors in both to meet all of your organization's process and low-code requirements. We also evaluated DPA deep vendors' dynamic case management (DCM) capabilities.

The Forrester Wave evaluation highlights Leaders, Strong Performers, Contenders, and Challengers. It's an assessment of the top vendors in the market and does not represent the entire vendor landscape. We intend this evaluation of the software for DPA for deep deployments market to be a starting point only and encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Excel-based vendor comparison tool (see Figure 1 and see Figure 2). Click the link at the beginning of this report on Forrester.com to download the tool.



FIGURE 1 Forrester Wave™: Software For Digital Process Automation For Deep Deployments, Q2 2019

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Software For Digital Process Automation For Deep Deployments Q2 2019



The 10 Providers That Matter Most And How They Stack Up

FIGURE 2 Forrester Wave™: Software For Digital Process Automation For Deep Deployments Scorecard, Q2 2019

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	forwesters	io Apri	ian nur	Rortal Bits	di gori	Gen'	, Pact	nd Software I BM	40%	at ope	ntert Pedasi
Current offering	50%	4.82	3.44		3.33	3.00	2.61	4.75	3.24		4.82
Functional and app dev capabilities	33%	4.44	2.60	3.76	3.00	3.08	2.58	4.24	3.12	3.52	4.44
Tooling for platform and app admin	33%	5.00	3.80	4.46	4.20	3.54	2.34	5.00	3.80	4.46	5.00
App deploy and ops tools and features	34%	5.00	3.90	3.90	2.80	2.40	2.90	5.00	2.80	4.10	5.00
Strategy	50%	4.40	1.50	4.40	3.50	1.90	2.10	4.60	2.70	4.10	4.40
Vision and strategy	20%	5.00	1.00	5.00	3.00	3.00	1.00	3.00	1.00	3.00	5.00
Training, community, and marketplace	25%	5.00	1.00	5.00	3.00	3.00	3.00	5.00	3.00	5.00	5.00
Partners	30%	3.00	1.00	3.00	3.00	1.00	3.00	5.00	5.00	5.00	3.00
Commercial model	25%	5.00	3.00	5.00	5.00	1.00	1.00	5.00	1.00	3.00	5.00
Market presence	0%	3.33	2.00	2.67	2.67	3.33	3.34	3.68	2.35	2.67	4.34
Revenue generated by DPA platform sales	33%	3.00	1.00	2.00	2.00	4.00	3.00	5.00	2.00	2.00	5.00
Revenue growth rate	33%	4.00	3.00	3.00	3.00	3.00	3.00	1.00	1.00	3.00	3.00
Number of enterprise customers	34%	3.00	2.00	3.00	3.00	3.00	4.00	5.00	4.00	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Vendor Offerings

Forrester included 10 vendors in this assessment: Appian, AuraPortal, Bizagi, Bonitasoft, Genpact, Hyland, IBM, Kofax, OpenText, and Pegasystems (see Figure 3).

The 10 Providers That Matter Most And How They Stack Up

FIGURE 3 Evaluated Vendors And Offerings

Vendor	Product evaluated			
Appian	Appian 19.2			
AuraPortal	AuraPortal Neon			
Bizagi	Bizagi Intelligent Process Automation Platform			
Bonitasoft	Bonita			
Genpact	Genpact Cora			
Hyland Software	Hyland OnBase			
IBM	IBM Digital Business Automation Enterprise; IBM Digital Business Automation on Cloud; IBM Digital Business Automation for Multicloud			
Kofax	Kofax Intelligent Automation Platform			
OpenText	OpenText AppWorks			
Pegasystems	Pega Infinity			

Vendor Profiles

Our analysis uncovered the following strengths and weaknesses of individual vendors.

Leaders

> IBM has consolidated a once-confusing portfolio into a powerful platform. IBM customers have suffered from a portfolio of overlapping — sometimes even competing — products without a common vision and strategy. No more: IBM has consolidated its content management, decision management, and process automation offerings under a single executive and engineering team with a unified go-to-market execution. At the same time, it has done some of the most pragmatic integration of IBM's Watson AI capabilities to drive very process-specific business value. The result is a highly integrated solution well-tuned for handling deep processes. IBM has augmented its native capabilities through deep partnerships, most notably with Automation Anywhere and UiPath for RPA support.

IBM has a strategy to extend its process and case management platform to enable more of the generalized low-code development that more extensive DPA often requires. IBM has a cloud pricing model based on capacity and usage levels rather than the more common per-user pricing

model. While this may make predicting costs a little more ambiguous, it is intriguing in highly scaled environments: Applications with lower complexity tend to use fewer resources and capacity, so the model automatically adjusts from a cost perspective.

Pega is successfully transforming to a modern architecture and business model. Pega is making a number of very difficult pivots — and doing so successfully. Over the past few years, it has moved from a traditional on-premises-first customer base to a modern cloud architecture, while bringing most of its customers to a subscription-based licensing model. At the same time, it has taken a platform designed for technical developers to address the most complex processes and extended it to embrace wide deployment of low-code applications. And the vendor has introduced a tiered pricing model that largely takes licensing costs off the table, removing a concern for driving wide Pega deployments. In doing so, Pega has created a powerful platform for driving digital transformation across a wide array of use cases, from complex to relatively simple. Pega reference customers reported deploying more than the average number of applications. Pega also offers fully integrated RPA through Pega Robotics.

While Pega has made strides in terms of addressing cost and complexity concerns, the full value of the platform (which is substantial) comes with a significant commitment in terms of skills and architectural standardization. Customers that have embraced Pega for critical workloads like customer relationship management and contact center automation should consider making full use of the platform for broader DPA.

Appian is a low-code vendor that thrives in complex process environments. While Appian goes to market as a low-code vendor, it wins when process and case management are critical. While it has embraced the "low-code" moniker, Appian is also still very competitive in the sorts of very complex, process-driven deals that were the hallmark of the traditional BPM market. Appian's low-code strategy focuses on the professional developer experience with tools that allow pros to develop more software faster. This strategy allows it to cover the waterfront from complex process applications to a low-code development environment that competes with vendors like Mendix, OutSystems, and ServiceNow, all on a single platform. Appian bundles Blue Prism and partners with UiPath and Automation Anywhere for deeply integrated RPA support.

Appian's strategy is to first provide prebuilt application value to a broad base of users, then expand the relationship by demonstrating that custom application development is faster and easier on its low-code platform. It backs that by guaranteeing that users can build applications in eight weeks for \$150,000. That strategy is designed to demonstrate a low total cost of ownership and high value, compensating for a high price point for platform user licenses.

> Bizagi balances deep DPA functionality with a platform designed to go wide. Forrester divides the DPA landscape into deep and wide solutions.³ Bizagi falls somewhere between the wide and deep process automation models, and it likes to describe itself as "the widest of the deep." It offers the extremely popular Bizagi Modeler for process modeling and documentation at no charge. It has always focused on low-code development for nonprofessional developers and has always thrived

in environments that require a long tail of process-driven applications, with reference customers deploying in excess of 1,000 applications. While coming from a DPA wide perspective in which low-code and scale are critical, Bizagi is continuing to move upstream and become increasingly capable of handling very deep workloads. The vendor is adding RPA support with Automation Anywhere, Blue Prism, and UiPath. It has also recently introduced an Excel Connector, a clever approach to bringing traditionally offline Excel processes into an online process flow. It's also on track for FedRAMP certification in summer 2019, a significant move that will make it credible for US government customers.

Bizagi has always focused on low-code and wide application deployments. It continues to work upstream into more complex process and case management scenarios, while balancing the design goal of simplicity in development.

> OpenText is comprehensive for content-centric automation and case management. OpenText has made good progress in rationalizing an acquisition spree for process automation vendors, landing on the Cordys platform as the process engine for its AppWorks offering. As part of this effort to modernize its platform, OpenText has focused on low-code development and cloud deployment on the OpenText Cloud. The offering excels in case management and is best when paired with OpenText's Content Server and Extended ECM offering. This creates an integration bridge to leading business applications, most notably SAP. OpenText also augments AppWorks with analytics and AI capabilities from its Magellan offering. The result is a very comprehensive solution, though it lacks native or preintegrated support for RPA.

OpenText's solution shines within OpenText's broader portfolio, which is preintegrated and designed to address specific use cases. With this in mind, OpenText's process automation and case management solutions tend to be deployed in "OpenText shops" and are less suited for plugging into a heterogenous application architecture.

Strong Performers

> Bonitasoft offers comprehensive capabilities in an open source model. The Bonita platform is a leading open source offering for process automation. Bonita benefits from its open source approach in a number of ways, most notably the long tail of application connectors contributed by the community. The solution also offers preintegrated support for UiPath RPA. While the Bonita platform offers strong support for low-code application development, it also supports the needs of the professional developer with capabilities like a dedicated development environment for UI design. It also offers strong DevOps support, which enforces its continuous delivery methodology. The result is a platform that is simple to build and deploy on one level but also offers the granular control that appeals to IT and software development professionals on another.

Bonita's support for professional developers can be a double-edged sword. Assess your firm's DPA requirements with an eye toward whether you can meet your needs with Bonita's out-of-the-box tools — and whether you have access to professional developers to fill in the gaps if you can't. Customer references rate the Bonita solution highly, but they did report that development was primarily done by professionally trained software developers.

A Kofax excels in document automation but isn't yet a general low-code platform. Kofax has a deep history of successfully addressing document-centric process automation, with experience in document capture, ingestion, and classification. In addition to these capabilities, Kofax offers native RPA to augment human-centric tasks and drive more complete end-to-end automation. In fact, customer references reported they'd deployed RPA as the primary part of the Kofax solution, wrapping it with content capture and process orchestration. With a focus on customer onboarding in complex and regulated environments like financial services, mortgage generation, and insurance, Kofax offers a comprehensive solution.

Kofax's alignment for specific complex use cases doesn't yet translate to a platform for generalized process automation, which broad digital transformation requires. None of Kofax's references reported using the platform for wide-scale application development, though Kofax has announced a new product strategy to address that. The new strategy emphasizes building the capabilities and broad-based industry partnerships it takes to create a general platform that can easily address a wider array of process use cases in a heterogenous technology landscape. The strategy, based on Kofax's existing feature set, was announced in June of 2019; if successful, it could raise Kofax's strategy score in future assessments.

Contenders

on any Microsoft technologies, AuraPortal leverages a deep partnership with Microsoft to augment its technical capabilities and go-to-market strategy. It provides native integration with SharePoint Online for content support, leverages Azure SQL, has an array of Microsoft Cognitive Services, and monitors performance with Azure Dashboard. The solution is very appealing to Microsoft Azure and Microsoft 365 shops. AuraPortal thrives in complex, process-driven application environments, particularly where the application demands extensive control over UX. References reported using the full breadth of AuraPortal features to address complex process and case management challenges. AuraPortal is most prevalent in Europe and South America, depending upon an extensive and engaged partner network, but it plans to expand its North American presence significantly in 2019 and 2020.

AuraPortal's alignment with Microsoft means that it runs best in that environment. For Microsoft shops, it will integrate well with existing software investments and align with skills users already have. It's also best suited to complex process applications, as it doesn't offer as much support for DCM scenarios as other offerings in this evaluation. AuraPortal also trails other vendors in support for emerging Al workloads.

be Genpact takes on complex automation with a combination of platform and services. Genpact takes a different approach to DPA than the more traditional vendors in this evaluation. The core process automation and orchestration capabilities came from Genpact's 2016 acquisition of PNMsoft, which it has integrated into its broader Cora platform. Cora offers a broad set of modular capabilities that wrap process automation with Al capabilities like machine learning, deep learning, computer vision, and conversational capabilities, along with extensive analytics. Notably, Cora supports process automation with customer-journey-mapping tools, aligning very effectively with customer-driven digital transformation.

Genpact's background is in professional services, and it has a reputation for taking on extremely large and complex projects. As such, Cora is positioned to address large, complex projects, and it offers a significant professional services component. To that end, Genpact is better positioned to address very deep process workloads, and it isn't the best fit for handling the long tail of process automation, increasingly the domain of lower-cost, more-business-friendly, low-code-focused providers.

Hyland excels at DCM but is less suited for low-code process development. Hyland has leveraged its background in content and document management into a long-standing position of strength in DCM, where it scores very high. Of course, the offering is supported by Hyland's content management capabilities, augmented by strong features like prebuilt applications, rules, structures, and frameworks to drive rapid value. Along with a rich partner ecosystem, these drive down the costs and risk associated with complex case management projects. Hyland also offers a comprehensive set of integration connectors that are most relevant to case management workloads. It is best suited for organizations that have content and case management at the core of their DPA initiatives.

While Hyland has invested in low-code development tools to help drive down development cost and complexity, they're best suited to prototyping and rapid development of applications that revolve around Hyland's content and case management capabilities. Hyland's product fares poorly in omnichannel development, a critical functional area for general application development. Organizations that require a modern application development platform designed around low-code capabilities for a wide array of process-driven applications will probably need to augment Hyland with a solution better tuned to those needs. Hyland's customer references reported a lower number of applications deployed but characterized those applications as complex and mission-critical.

Evaluation Overview

The Forrester Wave follows a publicly available methodology that involves screening vendors, detailed questionnaires, and customer reference checks. Find more information about the methodology in the Supplemental Material section of this report.

We evaluated vendors against 27 criteria, which we grouped into three high-level buckets:

- ➤ Current offering. Each vendor's position on the vertical axis of the Forrester WaveTM graphic indicates the strength of its current offering. Key criteria for these solutions include user experience and mobile design capabilities; process and flow design; and support for advanced process capabilities like case management, digital decisioning, and RPA.
- > Strategy. Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated criteria like the vendor's vision and strategy, commercial model, partnering model, and community support.
- > Market presence. Represented by the size of the markers on the graphic, our market presence scores reflect each vendor's revenue specific to DPA for deep deployments, revenue growth, and number of enterprise customers.

Vendor Inclusion Criteria

Forrester included 10 vendors in the assessment: Appian, AuraPortal, Bizagi, Bonitasoft, Genpact, Hyland, IBM, Kofax, OpenText, and Pegasystems. Each of these vendors has:

- **The ability to handle complex, long-running processes.** This includes the ability for processes to run across upgrades, high scalability, high process complexity and variability, etc.
- > **Dynamic case management.** This includes the ability to handle complex ad hoc environments, including the ability to handle known scenarios like incident management, investigations, service requests, and more.
- > Low-code and business developer friendliness. Included vendors have an offering that is business-developer-friendly and supports low-code features that can be used to create digital process applications.
- Support for adjacent capabilities. Selected vendors must have support for non-core capabilities like robotic process automation, rules/decision modeling, content management, integration connector support, etc.
- > Proven capacity for many apps at scale. Each vendor must have a proven track record of deploying large numbers of apps at scale with its clients.



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Supplemental Material

Online Resource

We publish all of our scores and weightings in an Excel file that provides detailed product evaluations and customizable rankings; download this tool by clicking the link the beginning of this report on Forrester.com. We intend these scores and default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs.

The Forrester Wave Methodology

A Forrester Wave is a guide for buyers considering their purchasing options in a technology marketplace. To offer an equitable process for all participants, Forrester follows The Forrester Wave™ Methodology Guide to evaluate participating vendors.

In our review, we conduct primary research to develop a list of vendors to consider for the evaluation. From that initial pool of vendors, we narrow our final list based on the inclusion criteria. We then gather details of product and strategy through a detailed questionnaire, demos/briefings, and customer reference surveys/interviews. We use those inputs, along with the analyst's experience and expertise in the marketplace, to score vendors using a relative rating system that compares each vendor against the others in the evaluation.

We include the Forrester Wave publishing date (quarter and year) clearly in the title of each Forrester Wave report. We evaluated the vendors participating in this Forrester Wave using materials they provided to us by March 2019 and did not allow additional information after that point. We encourage readers to consider how the market and vendor offerings change over time.

In accordance with The Forrester Wave[™] Vendor Review Policy, Forrester asks vendors to review our findings prior to publishing to check for accuracy. Vendors marked as nonparticipating vendors in the Forrester Wave graphic met our defined inclusion criteria but declined to participate in or contributed only partially to the evaluation. We score these vendors in accordance with The Forrester Wave[™] And The Forrester New Wave[™] Nonparticipating And Incomplete Participation Vendor Policy and publish their positioning along with those of the participating vendors.

Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with the Integrity Policy posted on our website.

Endnotes

- ¹ Among global developers whose firms have plans to adopt low-code development platforms, 34% responded that they primarily built business process and workflow applications with low-code tools the second-highest response, after complete customer-facing applications (mobile and/or web) at 36%. Source: Forrester Analytics Global Business Technographics® Developer Survey, 2019.
- ² In Forrester's Q1 2018 Digital Process Automation Survey, 49% of respondents answered that the primary goal for process initiatives will be digital transformation within two years. This is a stark contrast from two years prior when cost reduction was the primary driver, at 32%, and digital transformation was just 8%. Source: Forrester's Q1 2018 Digital Process Automation Survey.
- ³ Forrester characterizes DPA deep solutions as those suited to the most complex process applications. Deep solutions tend to have extensive capabilities to handle complex, long-running processes with extensive process routing. Functionally, they tend to have extensive connector support to access line-of-business system data, content repositories, and complementary technology like RPA and decisioning. DPA wide solutions tend to meet the requirements of process applications that are less complex but numerous and place a priority on ease of onboarding, development, and application deployment, as well as a cost model acceptable for very broad deployments.





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