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The Forrester Wave™: Low-Code Platforms For Business Developers, Q2 2019

The 12 Providers That Matter Most And How They Stack Up

by John R. Rymer
June 20, 2019

Why Read This Report

Our 30-criterion evaluation of low-code platforms for business developers assesses the 12 most significant providers — Airtable, AppSheet, Betty Blocks, Caspio, FileMaker, Kintone, Kissflow, Quick Base, Scopeland Technology, TIBCO Software, TrackVia, and Zudy. This report shows how each vendor and product measures up and helps application development and delivery (AD&D) leaders select the right one to serve their business developers.

Key Takeaways

FileMaker, AppSheet, Caspio, And Quick Base Lead The Pack
Forrester's research uncovered a market in which FileMaker, AppSheet, Caspio, and Quick Base are Leaders; Kintone, Betty Blocks, TrackVia, and Kissflow are Strong Performers; and Zudy, TIBCO Software, Scopeland Technology, and Airtable are Contenders.

Key Distinctions: Database, Process, And Development Process Support
The leading platforms solve the puzzle of how to make database design simple while opening more powerful database tools as business developers learn. Workflow and process designers remain the exception rather than the rule among these vendors. And features to organize and govern development processes are highly variable among the platforms.

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by John R. Rymer
with Christopher Mines, Sara Sjoblom, and Andrew Reese
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Platforms That Invite Business Experts To The Software Strategy

After decades in the shadows, software built by businesspeople is emerging into the light. A small group of AD&D leaders is supporting citizen developers on low-code platforms designed for their needs. Respect/fear have replaced love/hate. That's progress. Why now? Digital businesses' demand for ever more automation, ever more quickly, requires more minds and hands producing applications.[1] AD&D support and governance are also crucial for allowing business developers to contribute meaningfully to their firms' software strategies.[2] Low-code platforms for business developers balance empowerment and governance by allowing:

› **Business experts to reliably develop full applications.** Businesspeople can create full applications with these platforms much more than they're able to with personal productivity applications. How? By using development tools designed for business experts, not AD&D pros — including wizards; drag-and-drop design; Excel-like interfaces; and application templates that define data, forms, integrations, and logic. Behind the scenes, the platforms generate code, metadata, and sometimes forms and data relationships; prevent mistakes; and validate that apps will run.

› **Business developers to self-serve on managed platforms.** Most of the vendors offer easy, inexpensive access to their platforms for tryouts and ongoing work. The leading platforms add guidance, help, and support to the startup experience, often eliminating the need for training. And users build and deploy all apps on managed platforms, opening opportunities for AD&D organizations to influence, support, and even control the efforts of business developers.

› **AD&D pros to safely delegate software work to business pros.** The leading platforms provide a range of tools and controls to help AD&D pros set up identities, roles, and permissions, and they provide guardrails to speed application creation, administer platform operations, and troubleshoot performance and reliability issues.

Evaluation Summary

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. You'll find more information about this market in our research on low-code development and digital process automation platforms.[3]

We intend this evaluation to be a starting point only and encourage clients to view product evaluations and adapt criteria weightings using 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.

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FIGURE 1 Forrester Wave™: Low-Code Platforms For Business Developers, Q2 2019

THE FORRESTER WAVE™

Low-Code Platforms For Business Developers

Q2 2019

*A gray bubble indicates a nonparticipating vendor.

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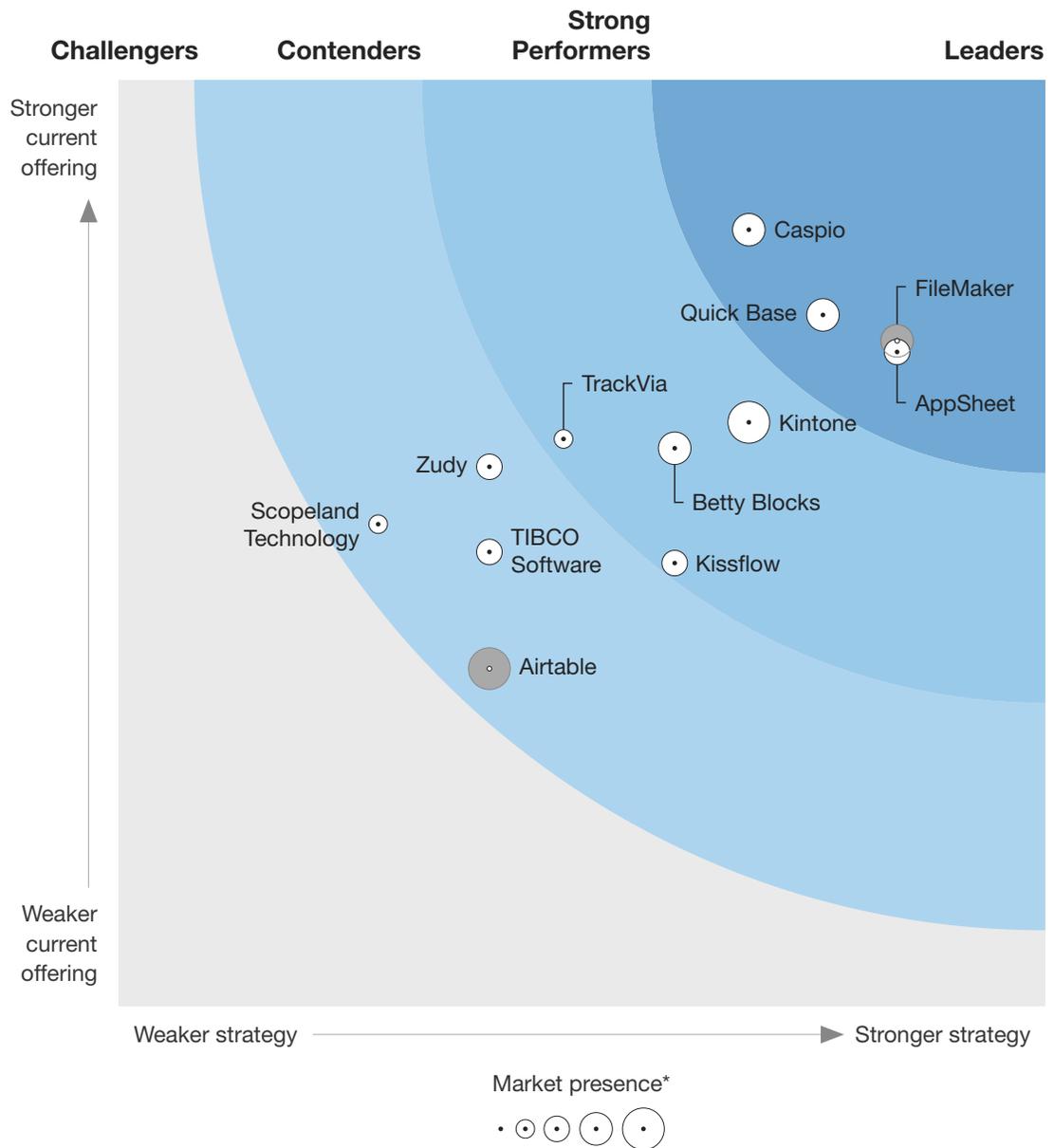The 12 Providers That Matter Most And How They Stack Up

FIGURE 2 Forrester Wave™: Low-Code Platforms For Business Developers Scorecard, Q2 2019

	Forrester's weighting	Airtable*	AppSheet	Betty Blocks	Caspio	FileMaker*	Kintone	Kissflow	Quick Base	Scopeland Technology	TIBCO Software	TrackVia	Zudy
Current offering	50%	1.82	3.53	3.01	4.19	3.59	3.15	2.39	3.73	2.60	2.45	3.06	2.91
Tooling for app development	33%	2.46	3.54	3.52	4.08	3.92	3.54	2.62	4.08	3.36	2.46	3.34	3.54
Tooling for platform and app admin	33%	1.20	3.40	3.00	4.20	3.80	3.40	2.60	3.80	2.00	2.60	2.60	3.00
App deployment/ops tools and features	34%	1.80	3.64	2.52	4.28	3.08	2.52	1.96	3.32	2.44	2.28	3.24	2.20
Strategy	50%	2.00	4.20	3.00	3.40	4.20	3.40	3.00	3.80	1.40	2.00	2.40	2.00
Vision and strategy	20%	1.00	5.00	5.00	5.00	5.00	3.00	3.00	5.00	1.00	3.00	5.00	1.00
Breadth of use cases supported	20%	3.00	3.00	1.00	3.00	3.00	5.00	3.00	3.00	1.00	3.00	3.00	3.00
Training, support, community, and marketplace	20%	3.00	3.00	5.00	3.00	5.00	3.00	3.00	5.00	1.00	3.00	3.00	3.00
Partners	20%	0.00	5.00	1.00	1.00	5.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00
Commercial model	20%	3.00	5.00	3.00	5.00	3.00	3.00	3.00	3.00	1.00	1.00	1.00	3.00
Market presence	0%	4.34	3.01	3.32	3.68	3.68	4.34	2.67	3.34	1.67	2.32	1.66	2.32
Revenue from low-code platform sales	33%	3.00	1.00	3.00	3.00	5.00	3.00	2.00	5.00	1.00	1.00	3.00	3.00
Revenue growth rate	33%	5.00	4.00	5.00	3.00	1.00	5.00	3.00	1.00	2.00	5.00	1.00	3.00
Number of customers	34%	5.00	4.00	2.00	5.00	5.00	5.00	3.00	4.00	2.00	1.00	1.00	1.00

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Vendor Offerings

Forrester included 12 vendors in this assessment: Airtable, AppSheet, Betty Blocks, Caspio, FileMaker, Kintone, Kissflow, Quick Base, Scopeland Technology, TIBCO Software, TrackVia, and Zudy (see Figure 3). Airtable and FileMaker declined to participate in our assessment process.

FIGURE 3 Evaluated Vendors And Product Information

Vendor	Product evaluated
Airtable	Airtable Platform
AppSheet	AppSheet Platform
Betty Blocks	Betty Blocks Platform
Caspio	Caspio Bridge
FileMaker	The FileMaker Platform
Kintone	Kintone Platform
Kissflow	Kissflow Platform
Quick Base	Quick Base Platform
Scopeland Technology	SCOPELAND Platform
TIBCO Software	TIBCO Cloud Live Apps
TrackVia	TrackVia Platform
Zudy	Zudy Vinyl

Vendor Profiles

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

Leaders

› **FileMaker, an Apple subsidiary, continues its journey from tool to platform.** FileMaker declined to participate in our assessment but is a Leader in our analysis. The 30-year-old vendor avoids association with *low-code*, positioning itself instead as a "workplace innovation platform." Labels aside, FileMaker provides strong low-code tooling for database development, reporting, application

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change management, security and identity management, and content. The vendor also provides many features to help AD&D pros support and participate in software projects. These strengths reflect a mature product with a massive customer base and an effective strategy.

FileMaker's primary weaknesses: Mobile app development, automated app documentation, independent security certifications, and application life-cycle management features are limited. FileMaker declined to participate in our research. Scores are based on Forrester estimates.

› **AppSheet is for much more than mobile apps now.** AppSheet has the most aggressive strategy and road map for empowering businesspeople as developers. The vendor is dedicated to software creation without any coding, and it shows in a stellar startup experience and strong features for mobile app development, data design, application scaling, and documentation generation, as well as in its commercial model and growth rate. Reference customers were highly satisfied with the product's mobile features and rate of innovation.

AppSheet's few weaknesses reflect its relative youth as a general-purpose development platform. AppSheet's features for workflow and process automation, content management, and development-process support aren't as deep as the other Leaders. Still, this is a vendor with a lot of upside potential for enterprises.

› **Caspio, a pioneer, has quietly built the richest platform for business developers.** Most enterprise AD&D leaders have only recently become aware of Caspio — if they are aware of it at all. Over an 18-year journey that started with data-driven web and departmental apps, Caspio has quietly built a product that provides both deep functionality for enterprise apps and an easy start for business developers. Reference customers laud the product overall, as well as its value for money and database features. Other strengths include UX development, content management, application change management, deployment options, independent security certifications, and its commercial model.

Caspio suffers from no glaring holes in its product. The vendor's few weaknesses include features and characteristics that are just average rather than leading. For example, Caspio's tools for mobile development and digital process automation are limited, and its data-design approach requires knowledge of data structures.

› **Quick Base seeks to revolutionize enterprise development.** Quick Base is well known among enterprise AD&D pros, although they often aren't familiar with the latest releases of the platform. The largest vendor by revenue in this assessment, Quick Base is established for many enterprise use cases, and it's promising big investments after attaining a valuation exceeding $1 billion.[4] Quick Base has an excellent startup experience, as well as strong UI development and database design and development tooling. The vendor's strategy and vision are aggressive and well researched, supported by strong investments in its customer community and learning materials. Reference customers report building apps at scale they can't live without and give Quick Base high marks for database and security features, application management, and UX development.

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Quick Base must devote its newfound resources to filling its primary weaknesses: mobile and digital process automation development.

Strong Performers

› **Kintone offers empowerment, community, and the no-code promise.** Kintone is a Japanese import to the US that is now outgrowing its parent in its home market.[5] Kintone has always been committed to empowering citizen developers, and it shows in many layers of helpful guidance and tooling to get business developers started — including an hour of free consultation. Kintone also has strengths in collaboration, reporting, development-process support, and browser support, and it is competitive in most other criteria in our assessment.

The vendor's weaknesses include limited options for application deployment and limited independent security certifications. Kintone also has yet to employ AI-assisted development techniques in its platform. Last, although Kintone has a robust partner network in Japan, its US partner roster is smaller — albeit growing.

› **Betty Blocks has an audacious goal: No code for enterprise apps or bust.** If AppSheet has the most aggressive strategy and road map, Netherlands-based Betty Blocks is just behind it. In its six-year history, Betty Blocks has built high awareness and shown it can compete with a wide range of vendors. The platform gives business developers easy access to powerful development features, with an excellent startup experience and approach to data design. Mobile app development and integration are other strengths, and Betty Blocks has strong community and learning resources, especially for such a young company. Reference customers give the vendor high marks for these features, as well as its value for the money.

Betty Blocks' weaknesses — in security certifications, service-level-agreement sophistication, and monitoring and management — stem from its immaturity. Betty Blocks also has many average features. Last, Betty Blocks must increase its investment in assisted development if it hopes to keep pace with the Leaders or leapfrog them.

› **TrackVia backs low-code with an enterprise business model — to a fault.** TrackVia benefits from strong awareness among enterprise AD&D pros, as well as an outstanding balance of simple data design and deeper database development features that support forms, web apps, and basic reporting. Reference customers liked the overall package of features and TrackVia's value for money. TrackVia is one of the few vendors to add workflow features, which is a strength. Unfortunately, its reference customers are underwhelmed with those features.

TrackVia's weaknesses arise from its controlling approach to business developers. First, the vendor does not offer a free, self-service version of its product. The startup experience, as a result, is subpar. Second, TrackVia itself manages scaling and most other operational aspects

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of applications. It also provides minimal tooling for AD&D pros to support business developers. TrackVia is growing despite these gaps, but we believe these areas should dominate the vendor's product road map as it expands into larger enterprises.

› **Kissflow provides the most innovative approach to apps mixing data and process.** Kissflow's developer experience is highly innovative, weaving data, process, and logic design into a simple-but-powerful approach. Its approaches to data design, tools for digital process automation, and startup experience are all top of the market. Customers expressed high satisfaction with Kissflow's value for money, as well as its process automation, reporting, and security features.

Unique among evaluated vendors, Kissflow is a completely digital business. The vendor has amassed more than 1,000 accounts without any direct sales, relying instead on its freemium self-service experience and word of mouth. Now that the product is established, Kissflow needs to add enterprise sales and support to its business model, along with the integration, database development, monitoring and management features, security certifications, and partners that enterprises require for broad adoption.

Contenders

› **Zudy seeks to bring SQL and database power to the masses.** This vendor owns that logo you may have seen at major sporting events and wondered, "What does Zudy do?" Zudy's platform supports database applications very well and seeks to empower business developers to create them without support from developers. Zudy's database and forms development features, reporting, and integration capabilities are very strong. Reference customers gave the vendor high marks.

Compared with the other vendors, Zudy isn't as clever at hiding the power of its platform behind abstract interfaces for businesspeople. Business developers who know SQL will have success with Zudy; for those who don't know SQL, Zudy will be difficult to learn. (Zudy has a Q&A interface to speed development but appears to be deemphasizing it.) Zudy is also just beginning its pivot from on-premises data centers to cloud and lacks security certifications and a self-service startup experience for customers.

› **TIBCO Software provides a portfolio approach.** TIBCO Cloud Live Apps is one service of several in the TIBCO Cloud. Developers can use Live Apps alone to deliver applications, but the environment provides a lot more power when developers access other TIBCO cloud services from Live Apps to build their applications.[6] Reference customers reported building apps of modest scale today but have plans to expand to enterprise apps. Customers were most satisfied with the product's process automation and integration features, its greatest strengths.

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TIBCO Live Apps' weaknesses reflect its relative youth, delegation of some features to its other cloud services, and deliberate strategies to limit customization. Chief among these are its simple reporting features. Customers can use TIBCO's Spotfire service for much more extensive analysis and reporting, but that requires an additional subscription. UI development, including for mobile apps, is limited by design to simplify development.

› **Scopeland, a mature database power tool, is itching to go worldwide.** Scopeland is a pioneer of platforms for business developers, familiar mostly to German enterprises. The vendor's deep data-design and database-development features are impressive. The platform handles maps and geolocation information in apps very well, and it has strong reporting features. Scopeland also generates full documentation for applications. Reference customer feedback was good, but not enthusiastic.

Compared to the other vendors, Scopeland has many weaknesses — primarily because its platform isn't yet a cloud option. Customers can host their Scopeland licenses in cloud data centers, but the company doesn't yet provide its own platform service. Also, Scopeland operates mostly in the German-speaking world, whereas the other vendors operate in more markets. Scopeland's future depends on it making two pivots: to the cloud and to a bigger set of geographies.

› **Airtable supports personal apps and small business today — enterprise tomorrow?** Airtable seeks to redefine relational database development with a simplified design approach and prebuilt views that support apps to collect data, manage projects, track and report on data, and automate scheduling. The vendor targets individuals as well as enterprise users, and it has some 80,000 customers and a reported $1 billion-plus valuation. The vendor's features for data design are outstanding, but the platform is mostly on par with the other vendors.

Airtable also has yet to address enterprise governance concerns with independent security certifications, as well as operational tools for AD&D support of business-developer activities. Airtable declined to participate in our research. Scores are based on Forrester estimates.

Evaluation Overview

We evaluated vendors against 30 criteria, grouped into three categories:

› **Current offering.** These 22 criteria allow us to assess the breadth and depth of each product's declarative development tools, including each platform's support for modern application development processes, as well as tools for application management. Business developers often need help from pro developers, and so we assessed each vendor's capability for such support. Lastly, one criterion measures use of AI and other techniques to assist business developers in creating applications.

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> › **Strategy.** These criteria allow us to judge the vendor's strategy and assess its roster of partners to service enterprises; its commercial model; and its training, community, and materials programs to empower customers to help themselves with the platform.

> › **Market presence.** Three factors indicate each vendor's market presence: the raw number of paying customer accounts, product revenue, and growth rates. Revenue and growth rates are Forrester estimates.

Vendor Inclusion Criteria

Forrester included 12 vendors in the assessment: Airtable, AppSheet, Betty Blocks, Caspio, FileMaker, Kintone, Kissflow, Quick Base, Scopeland, TIBCO, TrackVia, and Zudy. Each of these vendors has:

> › **Development experiences designed for businesspeople.** We call businesspeople who deliver applications "business developers." They're not trained as professional developers, but given the right tools, they can create business applications in whole or in part. Business developers generally fail when presented with tools designed for pro developers.

> › **Comprehensive tooling capable of delivering a variety of business use cases.** Tools to build apps for data gathering and tracking are table stakes in this market. Also of interest are various ways of automating business processes, reporting and analytics, and apps for both internal and external audiences.

> › **A free or low-cost license and a "pay as you grow" business model.** Low initial costs encourage experimentation and learning by business developers. Pay as you grow helps enterprises calibrate their spending to value created.

> › **Its sights set primarily on large enterprises.** Several of the products included explicitly target mission-critical application use cases typical of large enterprises. Others are more attuned to smaller use cases. All provide features for identity management and governance essential to enterprise success.

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Online Resource

We publish all our Forrester Wave scores and weightings in an Excel file that provides detailed product evaluations and customizable rankings; download this tool by clicking the link at 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

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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 evaluate 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] See the Forrester report "Refocus Process Automation To Rescue Your Digital Transformation."

[2] See the Forrester report "How To Harness Citizen Developers To Expand Your AD&D Capacity."

[3] The general-purpose low-code development platforms we assess in this Forrester Wave are part of a larger market for rapid application development products that also includes platforms for process automation and platforms for businesspeople to deliver applications. The Forrester blog "The Four Faces Of Rapid Development" explains the relationship between low-code platforms and digital process automation platforms. Source: Rob Koplowitz and John Rymer, "The Four Faces Of Rapid Development," Forrester Blogs, February 28, 2019 (https://go.forrester.com/blogs/the-four-faces-of-rapid-development/).

Another report analyzes the markets for low-code platforms for AD&D pros (pro developers), low-code platforms for business developers (businesspeople), and digital process automation platforms for wide deployment. See the Forrester report "Now Tech: Rapid App Delivery, Q1 2019."

[4] Source: Kori Hale, "Vista Equity Bets On Coding With $1 Billion Stake In Quick Base," Forbes, January 22, 2019 (https://www.forbes.com/sites/korihale/2019/01/22/vista-equity-bets-on-coding-with-1-billion-stake-in-quick-base/#5d1f41535fb5).

[5] Kintone is owned by Cybozu, a publicly traded software house in Japan. The firm brought its Kintone platform to the US in 2014.

[6] TIBCO Cloud Integration and TIBCO's application templates (called Cloud Starters) are available with Live Apps subscriptions. Other services, including Spotfire, require additional subscriptions.

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