# Now Tech: Digital Decisioning Platforms, Q3 2018

Forrester's Overview Of 28 Digital Decisioning Platform Providers

by John R. Rymer and Mike Gualtieri August 2, 2018 | Updated: August 6, 2018

## Why Read This Report

Application development and delivery (AD&D) pros can use digital decisioning platforms to make customer operations quick, smart, and personal. How? By automating decisions that lead to actions to win, serve, and retain customers. To enjoy these benefits, they'll first have to select from a diverse set of vendors and product approaches — vendors that vary by approach, size, functionality, geography, and vertical market focus. This report maps an emerging vendor landscape to aid AD&D pros in platform selection.

## Key Takeaways

# Improve Customer Response Through Digital Decisioning Apps

Digital decisioning apps solve a key challenge in digital business: in the customer's moment of need, deciding what to do — and then doing it. Digital decisioning apps automate actions for individual customers by responding to insights about customers and business operations gained from analytical and machine learning models.

# Select Vendors Based On Size And Functionality

Digital decisioning platforms are an emerging market that vendors approach from four directions: 1) platforms centered on rules processing; 2) platforms that integrate analytics and rules; 3) platforms that add process to integrated analytics and rules; and 4) platforms and solutions for specific industries.

# Favor Vendors That Raise Your Digital Decisioning IQ

In choosing vendors, AD&D teams must select the right platform approach, but most will also employ consulting services, solutions accelerators, packaged data, and other assets that help shorten the path to digital decisioning apps. In this emerging market, solutions expertise is as valuable as products.

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### Digital Decisioning Platforms Automate Insight-To-Action Apps

Digital business promises customers immediate, informed offers, services, or help tailored for their individual situations and needs. Serving each customer right now requires digital decisioning applications to: 1) decide what to do and then 2) act, as humans can't work fast enough to address thousands or millions of individual customers in their moments of need. Thus, digital decisioning applications are vital to the success of digital business and will constitute a growing portion of the software that AD&D teams provide.

Delivering digital decisioning applications is a big AD&D challenge, as these systems integrate traditionally separate analysis; business rules; and process platforms, tools, and expertise. An emerging market of platforms that integrate these functions promises to ease development and delivery of digital decisioning applications. Forrester defines digital decisioning platforms as:

Software that AD&D pros use to automate insight-to-action cycles for individual customers in real time by integrating analytics, machine learning, and decision modeling with operational processes and business-results measurements.

Separate tribes of AD&D pros, such as business intelligence pros, data scientists, and software engineers, typically work in silos to create the assets to automate business operations and customer decisions. Digital decisioning platforms amalgamate analytics, machine learning, business rules, and process technologies to turn insights into effective, individual, and immediate customer actions and measurable business results that:

- Make every customer action count. With so many customer engagements conducted through digital channels, immediacy of messages, offers, services, and other actions is vital but extremely difficult to implement at scale. By automating, as fully as possible, millions of operational decisions and actions every day, firms can deliver the prompt, targeted, consistent actions customers expect and, in critical situations, must have.
- Make every customer action individual and relevant. Actions guided by a few customer segments, each representing millions of customers, aren't good enough anymore; customers expect individual treatment. By capturing and describing each customer's context, including history, mood, immediate circumstances, tendencies, and likely behavior, firms can drive highly personal decisions about how to act or not to act.
- > Make each decision a learning experience to improve the next action. By measuring the effects on key business measures of millions of automated decisions and actions, AD&D pros can use that data to improve their analytics, machine learning, and decision models.

## Select Vendors Based On Size And Functionality

We segmented the vendors in this emerging AD&D platform market into three revenue categories: large vendors (more than \$100 million in annual digital decisioning platform revenue), midsize vendors (\$10 million to \$100 million in revenue), and small vendors (less than \$10 million in revenue) (see Figure 1). We did not include vendors that we estimated to have less than \$1 million in revenue.



#### FIGURE 1 Now Tech Market Presence Segments: Digital Decisioning Platforms, Q3 2018

NOW TECH  Digital Decisioning Platforms Q3 2018	LARGE >\$100M annual Equifax* Experian FICO	digital decisioning platform revenue  IBM*  Pegasystems*  Software AG
	MIDSIZE \$10M to \$100  Appian  AuraPortal  Axon Ivy  ClickSoftware  Decisions.com  Edgeverve  Enova Decisions*	InRule Oracle Profitect* Progress Software* Red Hat* Sapiens* SAS Institute
	SMALL <\$10M annual of the control of	digital decisioning platform revenue  Logical Glue SAP* Sparkling Logic* TIBCO*

<sup>\*</sup>Forrester estimate

Within these revenue segments, vendors approach digital decisioning platforms from four points of view and technology bases, which define the functional segments in this market (see Figure 2 and see Figure 3):

- > Rules decisioning captures expert human knowledge. The defining characteristic of rules decisioning platforms is the ability to represent and execute business rules needed to make a decision expressed by human domain experts. The vendor solutions in this segment offer tools to author (define), execute, and manage business decisions. Most of the platforms in this segment also import and use externally created analytical models, but rules can also be used to define analytical models, such as scoring.
- > Integrated rules and analytics decisioning add data-driven models to the mix. The vendor solutions in this segment offer rules decisioning and advanced analytics features such as mathematical optimization tools and machine learning solutions. These platforms allow decision analysts to author complex decisions using one integrated tool set for human-expert rules in combination with data-driven models, such as predictive models created by machine learning algorithms.
- > Integrated rules, analytics, and process decisioning offer the whole enchilada. AD&D pros automate decisions within applications and business processes. Vendor solutions in this segment offer rules and analytics decisioning tools designed to work seamlessly within a business process management tool. Vendor solutions in this segment make sense for enterprises that find value in the vendor's business process management platform.
- Decisioning platforms for specific domains start smart. The vendor solutions in this segment offer decisioning platforms that focus on either horizontal or vertical applications such as retail operations management, lending, underwriting, or customer prospecting. Because these solutions are designed for a specific use case, they include built-in decision models, rules, and analytical models. These solutions provide a degree of configuration to customize the decisions and data used in analytical models but are usually poor choices to custom-develop a variety of use cases.

FIGURE 2 Now Tech Functionality Segments: Digital Decisioning Platforms, Q3 2018, Part 1

	Rules decisioning	Integrated rules and analytics decisioning
Rules authoring development and execution	•••	•••
Business process development and execution		•••
Predictive/machine learning model training tools		•••
Data discovery tools		•••
Data integration tools and adapters		•••
Decision modeling tools	•••	•••
Decision model management	•••	•••
Deployment options (cloud and on-premises)	•••	•••
Team collaboration tools		•••
User experience development tools	•••	•••
Prebuilt decision-solution accelerators		•••
Real-time decisioning capabilities		

■■■ High segment functionality ■■■ Moderate segment functionality ■■■ Low segment functionality

FIGURE 3 Now Tech Functionality Segments: Digital Decisioning Platforms, Q3 2018, Part 2

	Rules, analytics, and process decisioning	Decisioning platforms for specific domains
Rules authoring development and execution		
Business process development and execution	•••	
Predictive/machine learning model training tools	•••	•••
Data discovery tools		•••
Data integration tools and adapters	•••	•••
Decision modeling tools		•••
Decision model management		•••
Deployment options (cloud and on-premises)		•••
Team collaboration tools	***	•••
User experience development tools		•••
Prebuilt decision-solution accelerators		•••
Real-time decisioning capabilities	•••	

■■■ High segment functionality ■■■ Moderate segment functionality ■■■ Low segment functionality

# Align Individual Vendor Solutions To Your Organizational Needs

The following tables provide an overview of vendors with details on functionality category, geography, and vertical market focus (see Figure 4, see Figure 5, and see Figure 6).

FIGURE 4 Now Tech Large Vendors: Digital Decisioning Platforms, Q3 2018

LARGE >\$100M annual digital decisioning platform revenue

	Primary functionality segments	Geographic presence (by revenue %)	Vertical market focus (top three by revenue %)	Sample customers
Equifax	Decisioning platforms for specific domains	NA: 80%; EMEA: 10%; LATAM: 10%	Banking and lending; communications; utilities	Vendor did not disclose
Experian	Integrated rules and analytics decisioning	NA: 20%; EMEA: 55%; AP: 20%; other: 5%	Financial services; telecommunication; retail	Aflac; ANZ; Santander UK; Star One Credit Union; Turkcell
FICO	Integrated rules and analytics decisioning	NA: 50%; EMEA: 25%; AP: 15%; LATAM: 10%	Financial services; insurance; telco	African Bank; Banco Ficohsa; Southwest Airlines; Vantiv/ Worldpay; Yarra Valley Water
IBM	Integrated rules and analytics decisioning	NA: 50%; EMEA: 35%; AP: 5%; LATAM: 10%	Financial services; government/public; communications	Vendor did not disclose
Pegasystems	Rules, analytics, and process decisioning	NA: 55%; EMEA: 39%; AP: 5%; LATAM: 1%	Financial services; communications; media	Commonwealth Bank of Australia; Royal Bank of Scotland; Sprint; Sweet Green; Verizon
Software AG	Rules, analytics, and process decisioning	NA: 30%; EMEA: 50%; AP: 15%; LATAM: 5%	Manufacturing; financial services; transportation and logistics	Citigroup; ING Group; Royal Dirkzwager; Schwering & Hasse Elektrodraht; Standard & Poor's

FIGURE 5 Now Tech Midsize Vendors: Digital Decisioning Platforms, Q3 2018

# MIDSIZE >\$10M to \$100M annual digital decisioning platform revenue

	Primary functionality segments	Geographic presence (by revenue %)	Vertical market focus (top three by revenue %)	Sample customers
Appian	Rules, analytics, and process decisioning	NA: 40%; EMEA: 35%; AP: 10%; other: 15%*	Financial services and insurance; government; healthcare and life sciences	Aviva; psHealth; Sprint; University of South Florida; US Airforce
AuraPortal	Rules, analytics, and process decisioning	NA: 21%; EMEA: 42%; AP: 7%; LATAM: 30%	Financial and insurance; public sector; manufacturing	CAF; EPM Group; KPN; Ministry of the Interior of Colombia; Toyota
Axon Ivy	Rules, analytics, and process decisioning	EMEA: 80%; NA: 10%; AP: 10%*	Financial services; utilities	Airbus; Credit Suisse; E.ON; ERGO Group; Swiss Re
ClickSoftware	Decisioning platforms for specific domains	NA: 40%; EMEA: 44%; AP: 11%; LATAM: 5%	Utilities; communications; manufacturing	Ameren; Grupo Sura; Lowe's; Orsted; Xerox
Decisions.com	Rules decisioning	NA: 75%; EMEA: 20%; AP: 5%	Financial services; healthcare; fast-moving consumer goods	Aria Systems; Kansas State University; MidFirst Bank; Pantheon; Prime Lending
Edgeverve	Integrated rules and analytics decisioning	NA: 50%; EMEA: 30%; AP: 20%	Banking, financial services and insurance; consumer packaged goods; retail trade	Vendor did not disclose
Enova Decisions	Rules decisioning	NA: 100%	Financial services; healthcare; higher education	Robert Morris University Illinois; Tempoe; Western Dental Services

<sup>\*</sup> The vendor did not provide information for this cell; this is Forrester's estimate.

FIGURE 5 Now Tech Midsize Vendors: Digital Decisioning Platforms, Q3 2018 (Cont.)

# MIDSIZE >\$10M to \$100M annual digital decisioning platform revenue

	Primary functionality segments	Geographic presence (by revenue %)	Vertical market focus (top three by revenue %)	Sample customers
InRule	Rules decisioning	NA: 70%; EMEA: 20%; AP: 7%; LATAM: 3%	Financial services and insurance; government; healthcare	Abbott; Allstate; Bupa; State of California; Thomson Reuters
Oracle	Integrated rules and analytics decisioning	NA: 40%; EMEA: 35%; AP: 10%; other: 15%*	Public sector; financial services; communications	Vendor did not disclose
Profitect	Decisioning platforms for specific domains	NA: 80%; EMEA: 20%	Retail; pharmacy; consumer packaged goods	Ahold-Delhaize; Ascena Retail Group; Lowe's Home Improvement; Ulta Beauty; Walgreens
Progress Software	Rules decisioning; decisioning platforms for specific domains	NA: 80%; other: 20%*	Industrial internet of things; healthcare; finance	Adobe; Boston Heart Diagnostics; Cigna; eBay; Unum
Red Hat	Rules decisioning	NA: 40%; EMEA: 30%; AP: 20%; other: 10%*	Financial services and insurance; government; healthcare	Asahi Tekko; Healthesystems; Logisticare; Railinc Corporation
Sapiens	Rules decisioning	NA: 80%; EMEA: 20%	Mortgage banking; institutional and retail banking; insurance	Freddie Mac; JPMorgan Chase; Principal Financial; Serco; US Bank
SAS Institute	Integrated rules and analytics decisioning	NA: 18%; EMEA: 50%; AP: 22%; LATAM: 10%	Financial services (banking and insurance); retail; government	Cisco; Direct Pay; HSBC; ING Group; Rogers Communications

<sup>\*</sup> The vendor did not provide information for this cell; this is Forrester's estimate.

FIGURE 6 Now Tech Small Vendors: Digital Decisioning Platforms, Q3 2018

SMALL <\$10M annual digital decisioning platform revenue

	Primary functionality segments	Geographic presence (by revenue %)	Vertical market focus (top three by revenue %)	Sample customers
09 Solutions	Decisioning platforms for specific domains	NA: 100%	Manufacturing; retail	Ainsworth Pet Nutrition; Bridgestone; Interstate Batteries; Premier Nutrition; Restoration Hardware
Arago	Rules decisioning	EMEA: 75%; US: 10%; AP: 15%*	Financial services; aviation	Continental; Lufthansa Technik; T-Systems
Cybage Software	Rules decisioning	NA: 80%; EMEA: 9%; AP: 11%	Capital markets; sports and retail	Kings XI Punjab (IPL Team); State Bank of India
Element Data	Decisioning platforms for specific domains	NA: 100%	Travel; issue advocacy; eCommerce	Vendor did not disclose
Logical Glue	Integrated rules and analytics decisioning	EMEA: 100%*	Financial services; insurance; asset management	Vendor did not disclose
SAP	Integrated rules and analytics decisioning	NA: 40%; EMEA: 44%; AP: 16%	Financial services; healthcare; manufacturing*	ARI; ConvergentIS; Hagleitner; Ohtake; Quanto
Sparkling Logic	Integrated rules and analytics decisioning	NA: 40%; EMEA: 25%; AP: 30%; other: 5%	Financial services; healthcare; IoT	Equifax; LTCG; Willis Towers Watson
ТІВСО	Integrated rules and analytics decisioning	NA: 52%: EMEA: 33%: LATAM: 10%; other: 5%	Financial services; telecommunication; energy	AA Ireland; Aeroporti di Roma; JetBlue; KB Kookmin Card; T-Mobile

 $<sup>^{\</sup>star}$  The vendor did not provide information for this cell; this is Forrester's estimate.

#### Recommendations

## Favor Vendors That Raise Your Digital Decisioning IQ

Digital decisioning is a vital set of digital business use cases, but the market is still emerging. In approaching your choice of vendors to partner with for digital decisioning platforms and technology, match the choices to your organization's AD&D tribal skills, organizational structures, designs, and delivery processes. Seek vendors that will fill gaps in your expertise with their experienced pros. Lean on these experts to deliver the first use case and raise the smarts of your developers. In addition, anticipate major changes in each of those four dimensions as your journey progresses.

As you evaluate platforms for your digital decisioning projects:

- > Favor vendor solutions that place decisions not data, not process at the center. As a design center for software, digital decisions help developers, business intelligence pros, business analysts, and data scientists focus on the most valuable elements of the customer journey, business processes, and operations. Favor vendors with strong decision-modeling tools and orientations for their platforms. For example, decisioning as an add-on to process modeling will be suboptimal.
- > Seek platforms that support collaborative Agile methods and principles. Developers with expertise in analytic modeling, decision modeling and development, and business process development don't exist. Thus, teaming is the only practical option for building digital decisioning applications. Seek vendor solutions that gracefully support multidisciplinary teams, including data scientists working on incremental projects and experiments founded in empirical data.
- Prioritize solutions that excel at automating the learning loop. The most powerful decisioning applications correlate directly to simple business outcomes customer growth, rising sales, margins, and the like. Platforms that make these measurements straightforward provide the best support for digital decisioning initiatives, as they ensure clear visibility of both software investments and returns.
- > Buy when you don't need to build. AD&D shops with limited or no experience in digital decisioning applications, especially in particular domains, will be best served by brokering solutions rather than committing to custom development. Packaged solutions can also fill urgent gaps in digital decisioning portfolios as AD&D groups expand their capabilities.



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## Supplemental Material

#### **Market Presence Methodology**

We defined market presence in Figure 1 based on annual revenue from digital decisioning platforms.

To complete our review, Forrester requested information from vendors. If vendors did not share this information with us, we made estimates based on available secondary information. We've marked companies with an asterisk if we estimated revenues or information related to geography or industries. Forrester fact-checked this report with vendors before publishing.

### **Endnotes**

<sup>1</sup> See the Forrester report "Now Tech: Predictive Analytics And Machine Learning Solutions, Q2 2018."





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