VENDOR SELECTION MATRIX™
ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS (AIPA)

THE TOP 20 GLOBAL VENDORS 2021

Research In Action

June 2021

RESEARCH IN ACTION
independent research & consulting

VENDOR SELECTION MATRIX™
ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS

STRATEGY LEADER

Artificial Intelligence Predictive Analytics (AIPA) The Top Global Vendors 2021

MARKET LEADER

MICRO FOCUS
SPLUNK
DYNATRACE
MOOGSOFT
BMC
SCIENCELOGIC
BROADCOM
NEW RELIC
STACKSTATE
SERVICENOW
DIGITAL.AI
CISCO
BIG PANDA
AVANTRA
OPSRAMP
RESOLVE
EXTRAHOP
CLOUDFABRIX
ZENOSS
DIGITATE

STRATEGY

CHALLENGER

EXECUTION LEADER

EXECUTION

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		STRATEGY	EXECUTION	TOTAL
1.	MICRO FOCUS	4.71	4.56	9.28
2.	DYNATRACE	4.59	4.65	9.24
3.	SPLUNK	4.70	4.50	9.20
4.	BMC	4.49	4.58	9.06
5.	MOOGSOFT	4.63	4.35	8.98
6.	SCIENCELOGIC	4.41	4.41	8.83
7.	NEW RELIC	4.28	4.35	8.63
8.	BROADCOM	4.36	4.20	8.56
9.	STACKSTATE	4.23	4.21	8.44
10.	SERVICENOW	4.30	4.06	8.36
11.	DIGITAL.AI	4.09	4.15	8.24
12.	BIG PANDA	3.93	4.21	8.14
13.	CISCO	4.00	4.06	8.06
14.	AVANTRA	3.85	4.15	8.00
15.	RESOLVE	3.91	4.05	7.96
16.	OPSRAMP	3.78	3.91	7.69
17.	CLOUDFABRIX	3.73	3.93	7.65
18.	ZENOSS	3.71	3.85	7.56
19.	EXTRAHOP	3.65	3.78	7.43
20.	DIGITATE	3.58	3.64	7.21

Notes:
· Scale Explanation: 1 (Low) To 5 (High).
· Potential numerical deviations due to rounding.

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FOREWORD

Every year, Research In Action surveys 10,000+ enterprise IT and business decision-makers in order to gain insights on strategy, investments, and ongoing challenges of technology innovation in the IT and Marketing Automation realm. These surveys give us access to a wealth of direct and unfiltered feedback from the buyers. It also helps us to understand how buying decisions are made in today's business environment. The Vendor Selection Matrix™ is a primarily survey-based methodology for vendor evaluation where 62.5% of the evaluation is based on a survey of enterprise IT or business decision-makers and 37.5% on the analyst's judgment. The analyst's input is fed by a combination of intensive interviews with software or services vendors and their clients, plus their informed, independent point-of-view as an analyst. All of this combines to make Research in Action Vendor Selection Matrix™ reports so unique. This approach is one of the key differentiators of Research In Action in market research. For this report we interviewed 1,500 enterprise managers with budget responsibility in enterprises globally. We selected those vendors which achieved the best evaluation scores from the buyers but disregarded those with fewer than 15 evaluations.
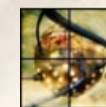
The rapid growth in volumes of data across applications, services, and technology stacks is a huge challenge for IT Enterprise teams to derive meaningful insights no matter if in development or in operations. In an earlier phase, Artificial Intelligence for IT Operations (AIOps) was a way to augment human IT operators who previously had to wade through many screens to pinpoint the problem to take next steps. While the adoption AIOps gained acceptance within the IT operations team, application development and service support functions also saw the benefits of leveraging AI to predict, prevent, or analyze within their context and area of responsibilities. Many skeptics have overcome their hesitation, uncertainty, and doubt about what the usage of artificial intelligence can bring and are applying AI across many different areas within IT functions. The vendor solutions vary greatly in how AI is applied to deliver predictive analytics in the context of the use case. While we previously called this topic area, AIOps we feel that this term no longer matches the reality of the existing solutions as each solution vendor has somewhat of a unique approach but all leverage AI to provide predictive analytics for one or many function within IT enterprises. We are introducing Artificial Intelligence Predictive Analytics (AIPA) as a meta market description which includes AIOps and expands the use cases. Which AIPA vendor is best for your environment depends on your capabilities, technology ecosystem and your existing automation stack.

This report provides you with useful guidance to important market trends within AIPA and names the Top 20 vendors as selected by 1,500 users based upon product, company, and service quality, and will help you make an informed decision for your vendor shortlist. Thank you.
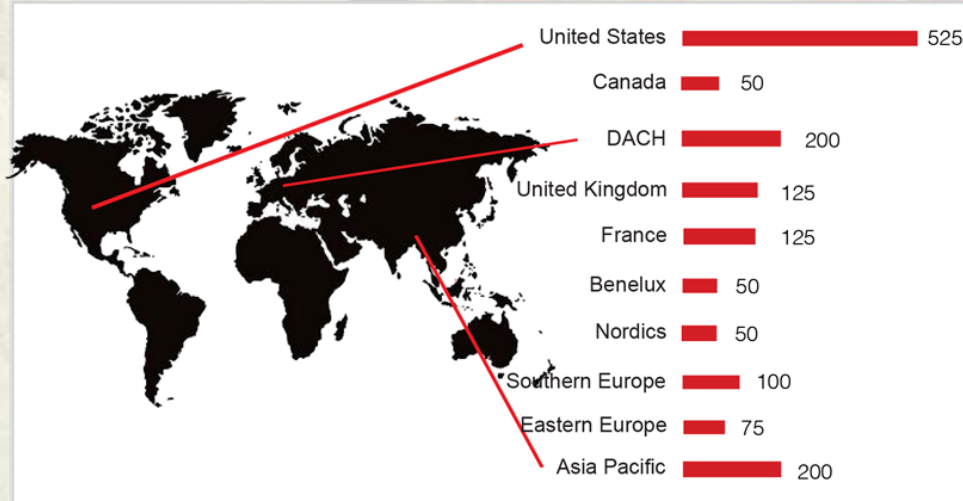
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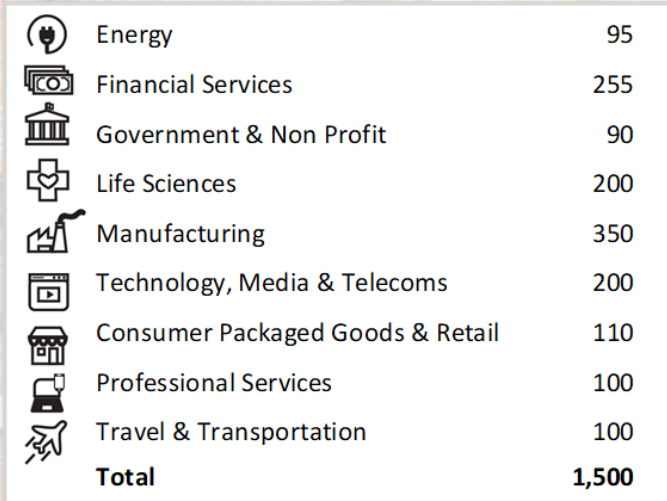+49 151 40158054
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OUR SURVEY DEMOGRAPHICS: IT AUTOMATION

COUNTRY BREAKDOWN

Country	Value
United States	525
Canada	50
DACH	200
United Kingdom	125
France	125
Benelux	50
Nordics	50
Southern Europe	100
Eastern Europe	75
Asia Pacific	200

INDUSTRY BREAKDOWN

Industry	Value
Energy	95
Financial Services	255
Government & Non Profit	90
Life Sciences	200
Manufacturing	350
Technology, Media & Telecoms	200
Consumer Packaged Goods & Retail	110
Professional Services	100
Travel & Transportation	100
Total	**1,500**

COMPANY SIZE BREAKDOWN

(Revenue more than € 250 million)

Headcount	Value
<2,500	128
2,500 - 5,000	342
5,000 - 10,000	524
10,000 - 50,000	380
>50,000	126

JOB TITLE BREAKDOWN

Job Title	Value
VP IT Infrastructure	155
IT Manager	150
VP IT	135
Chief Information Officer	125
IT Operations Manager	121
VP Service Desk	107
Chief Digital Officer	85
Chief Technology Officer	66
Project Management Office	64
VP IT Shared Services	62
VP Operations	60
Chief Operations Officer	55
VP Technology	50
Business Executive	40
Sourcing and Vendor Management	37
VP IT Financial Management	35
VP Enterprise Architecture	34
Project Manager	32
VP Application Development	27
VP DevOps	25
Chief Financial Officer	20
Chief Sales Officer	15
Total	**1,500**

100,000+ Data Points

1,500 Enterprise Managers

37.5 % Analyst's Opinion

62.5 % Survey Results
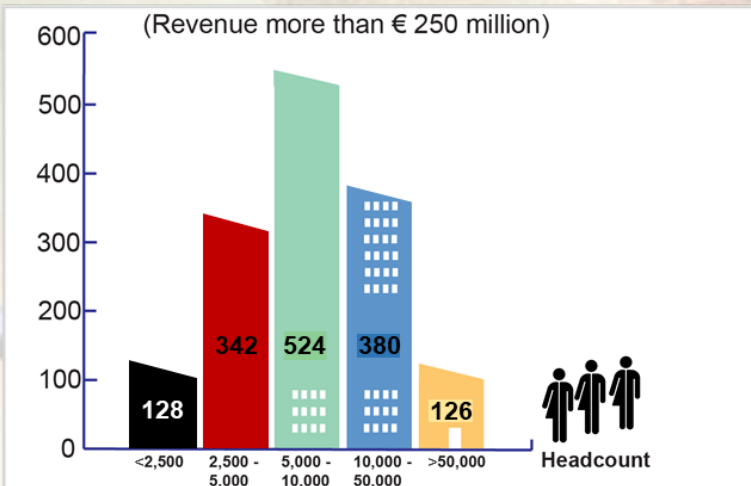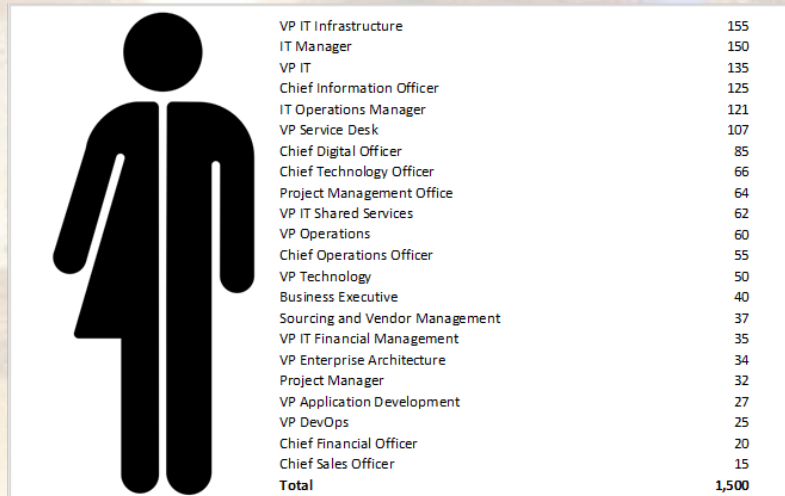
The Vendor Selection Matrix™ Evaluation Methodology:

The basis of our competitive vendor evaluation reports is always an extensive buyer survey.

We then select those vendors which achieved the best evaluations scores from the buyers but disregard those with fewer than 15 evaluations.

The final matrix scores are a combination of the survey results, vendor input and analyst's opinion.

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All Research In Action surveys are gender neutral and 100% confidential.
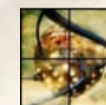
OUR MARKET IMPACT OVER THE LAST 12 MONTHS

Members In
Our Survey Panel

125,000 IT Automation
90,000 Marketing Automation

30 Research
Reports Published

400+ vendors evaluated
14,000 views per report (average)

10,000+ Active Enterprise
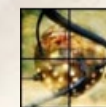**Survey Participants**

all with budget responsibility

15 Press
Releases

2,000 views per press release (average)

Vendor Selection Matrix™: The right mix makes all the difference
62.5% customer evaluations + 37.5% analyst's judgement = 100% success

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WHAT TOOLS DO YOU USE TO CREATE THE VENDOR SHORTLIST?

Tool	Percentage
Vendor comparisons (e.g. Vendor Selection Matrix™)	22.9%
Webinars and (virtual) events	18.7%
Press (online and print)	15.4%
Crowdsourced vendor reviews	11.0%
Peer contacts	9.9%
Social media	8.5%
Vendor information	4.9%
Case studies	3.3%
External consultants	2.5%
Vendor presales	2.1%
Others/Don't know	0.7%

Decision Makers use a mix of traditional and online tools to create the vendor shortlists

N = 3,750 Enterprise, Marketing and Business Managers with budget responsibilities.

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A NEW ERA BEGINS:
GOODBYE ARTIFICIAL INTELLIGENCE FOR IT OPERATIONS (AIOPS)
HELLO ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS (AIPA)

The current vendor landscape within AIOps is bewildering. There are many vendors leveraging AI, all with different roots. While some vendors are using the term AIOps specifically for IT operations, others are using the term for broader use cases and expansion of their APM or ITOM offerings. Also, some vendors have reworked their website, messaging, and packaging of their already existing offering while other vendors have invested significant funds to add capabilities to their existing solutions. And last, acquisitions have allowed some vendors to immediately expand their offerings. These trends will continue in 2021 and beyond.

What this means: Bottom line is that the future lies in leveraging AI's power to predict across application development, IT operations, and service management which is why Research In Action has decided to rename the AIOps research into AI Predictive Analytics.

IT Operations Intelligence (AIOps)

AI Predictive Analytics (AIPA)

Application Development Intelligence (CI/CD…)

Enterprise Service Intelligence (ESM, ITSM)

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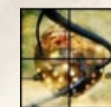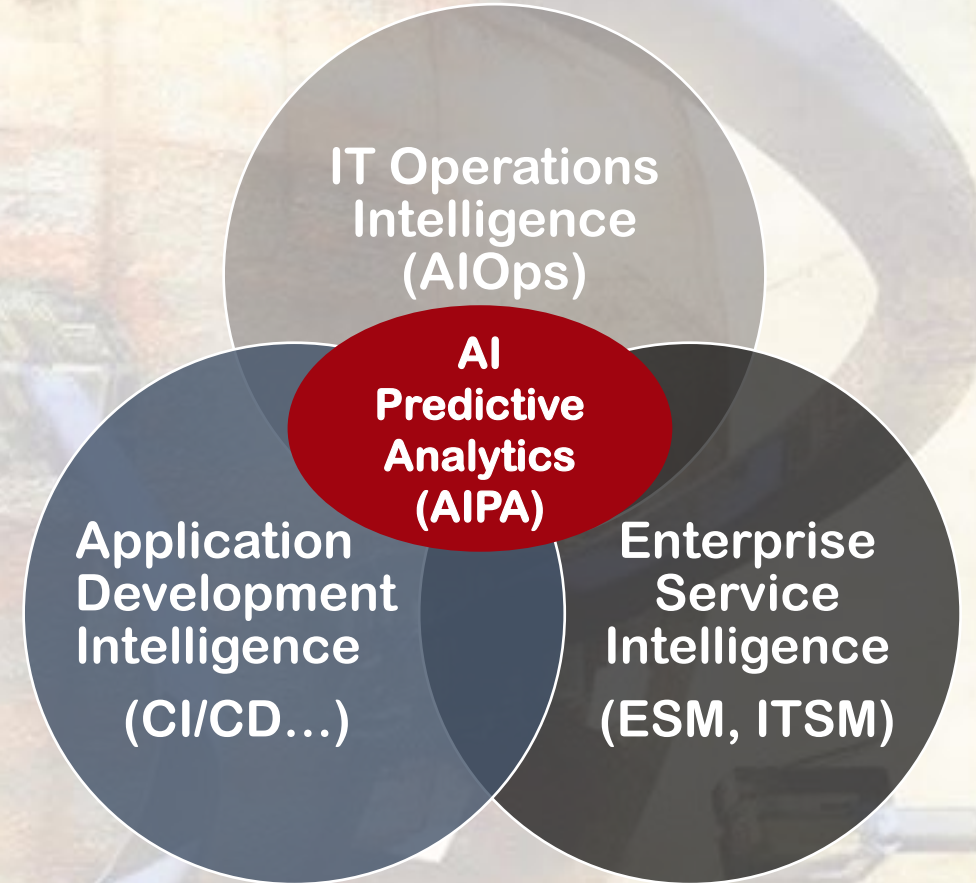
RESEARCH: THE AIOPS USE CASES STILL GRAVITATE TOWARDS OPS BUT THE OPPORTUNITY IS BIGGER THAN AIOPS

Use Case	Percentage
IT Operations/Continous Operations	27.2%
IT Service Management	26.3%
Customer Experience and Application Owners	22.2%
Continous Deployment	13.2%
Security Operations	6.1%
Continous Integration and Delivery	3.0%
Application Development and Design	1.4%
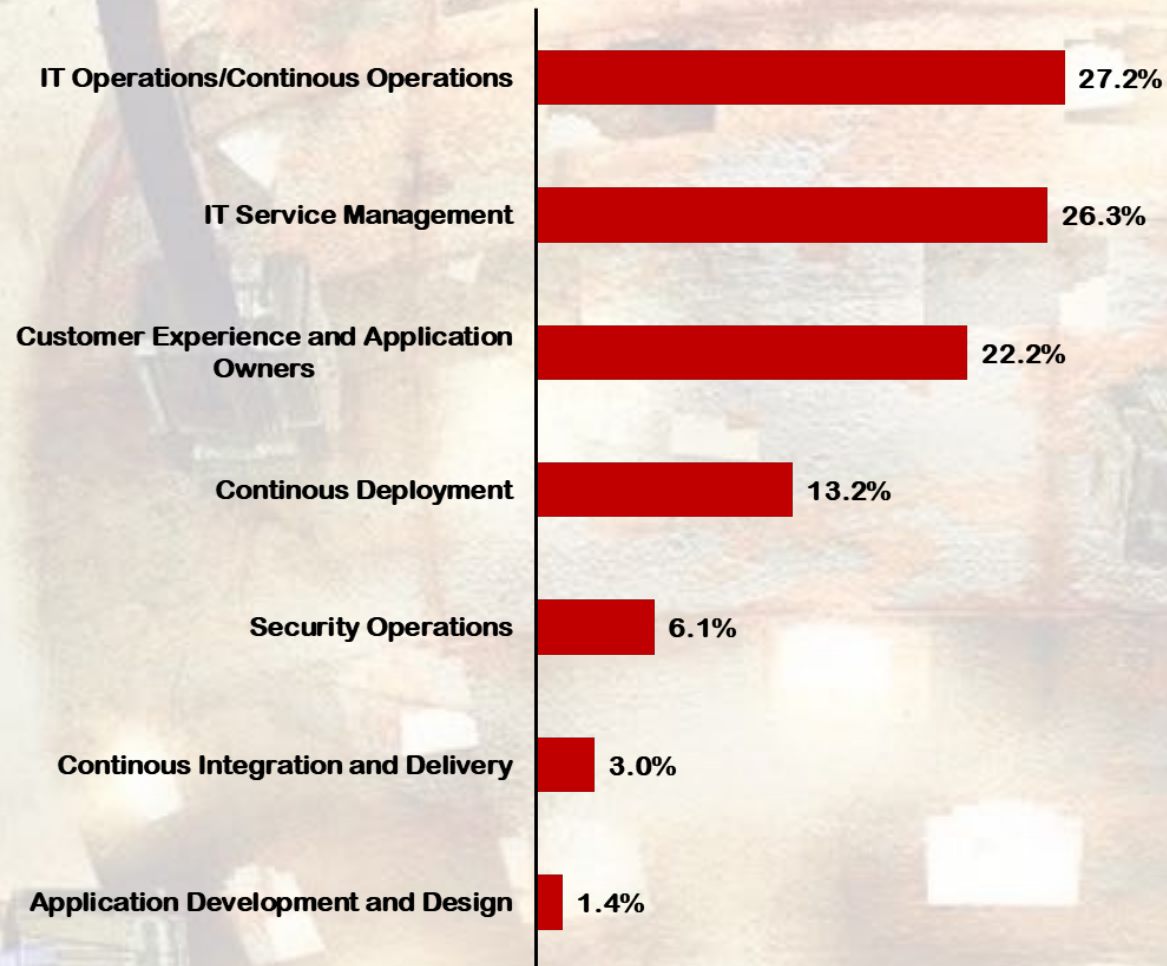
Key uses cases are across IT Operations, IT Service Management and Customer Experience Management.

While AIPA extends machine learning and automation abilities to IT operations, the overall goal of ensuring excellent customer experience and supporting application owners with details for decision making around mission critical applications are the third most applied use cases for AIPA.

AIOps solutions aim to detect vulnerabilities and issues to resolve them, determine operational trends, and simplify the remediation of the problems that affect their applications' performance and availability.

N = 1,500 Enterprise IT Managers makers with budget responsibilities. Respondents could select three benefits.

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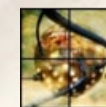vendor selection matrix®
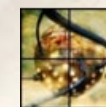
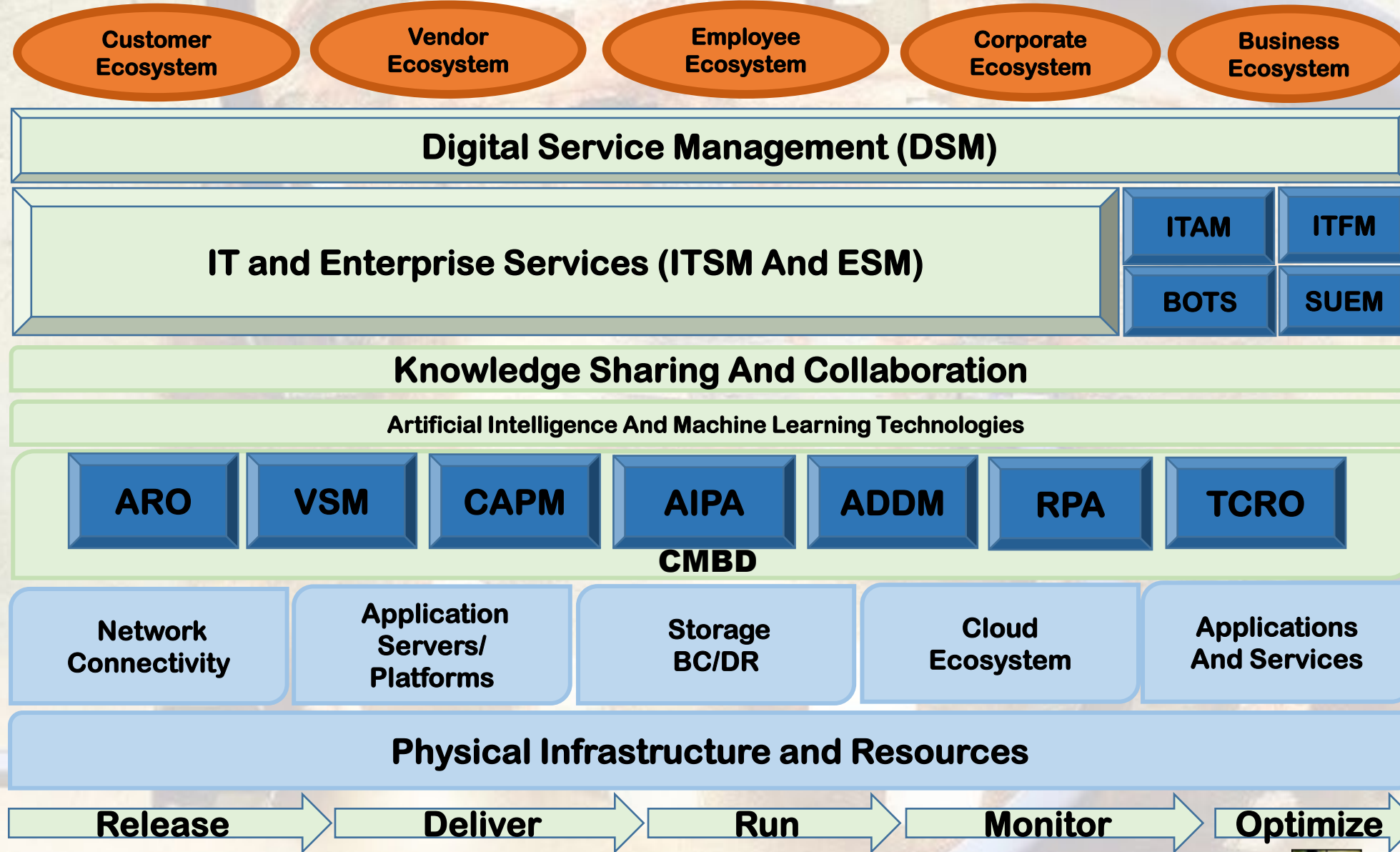# VENDOR SELECTION MATRIX™: DEFINITION ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS

Artificial Intelligence Predictive Analytics (AIPA) solutions equip different IT teams with improved analysis of volumes and categories of data to improve key processes, tasks, and decision making. The adoption of these tools automates the ingestion of fast volumes of data, leverage machine learning to analyze the data, present findings to either predict, alert or advise on issues, and aid its user with proactive decision making. The solutions should support a broad set of stakeholders to observe, analyze, act, and predict upon a fast amount of data available.

- The solution should include but is not limited to:

  ➢ Access and ingest data from multiple sources such as existing tools within development and IT operations teams. AIOps is a subset of AIPA.

  ➢ Include real-time and historical data analysis capabilities using machine learning algorithms.

  ➢ Enable the storing of relevant data (including access for further analysis or deep dives).

  ➢ Input for action and additional insights with prescriptive responses to the analysis of observed and ingested data.

  ➢ Action suggestions then can be integrated with automatic remediation or fulfillment solutions.

  ➢ Role-based dashboards for overview and insights (result of analysis).
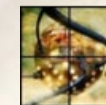
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THE IT AUTOMATION MARKETEXTURE

Customer Ecosystem

Vendor Ecosystem

Employee Ecosystem

Corporate Ecosystem

Business Ecosystem

Digital Service Management (DSM)

IT and Enterprise Services (ITSM And ESM)

| ITAM | ITFM |
| BOTS | SUEM |

Knowledge Sharing And Collaboration

Artificial Intelligence And Machine Learning Technologies

| ARO | VSM | CAPM | AIPA | ADDM | RPA | TCRO |

CMBD

| Network Connectivity | Application Servers/ Platforms | Storage BC/DR | Cloud Ecosystem | Applications And Services |

Physical Infrastructure and Resources

Release → Deliver → Run → Monitor → Optimize

IT Automation solutions are necessary for a modern digital operating model.

IT Automation solutions are foundational for any transformation to reduces toil and decrease manual errors.

IT Automation solutions can enforce good practices to optimize digital service quality and speed of service delivery.
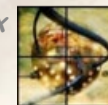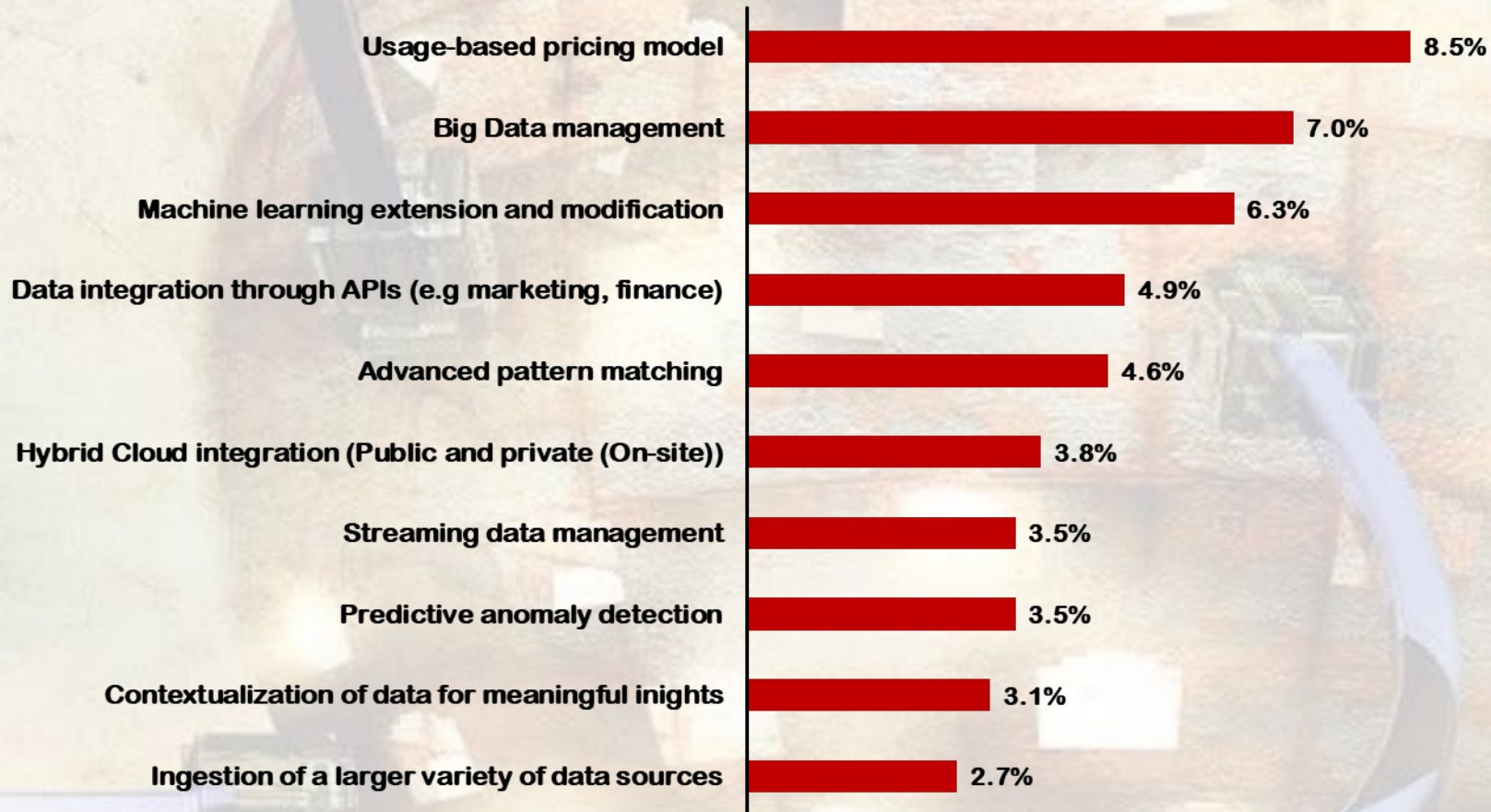
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CONTINUOUS MANAGEMENT (CM)

MATURITY S-CURVE 2021

Maturity Of Continuous Management

Chaotic
6%* (5%/7%)

Reactive
14% (13%/16%)

Stable
42% (44%/41%)

Proactive
25% (24%/25%)

Predictive
13% (14%/11%)

Ping

Network, Logfiles, & DB Monitoring

Infrastructure Monitoring

Application Code Monitoring

Event Correlation

Availability Management

ADDM

ITOM

APM

EUEM

AIOps

AIPA

DXM

Observability

IoT

CM
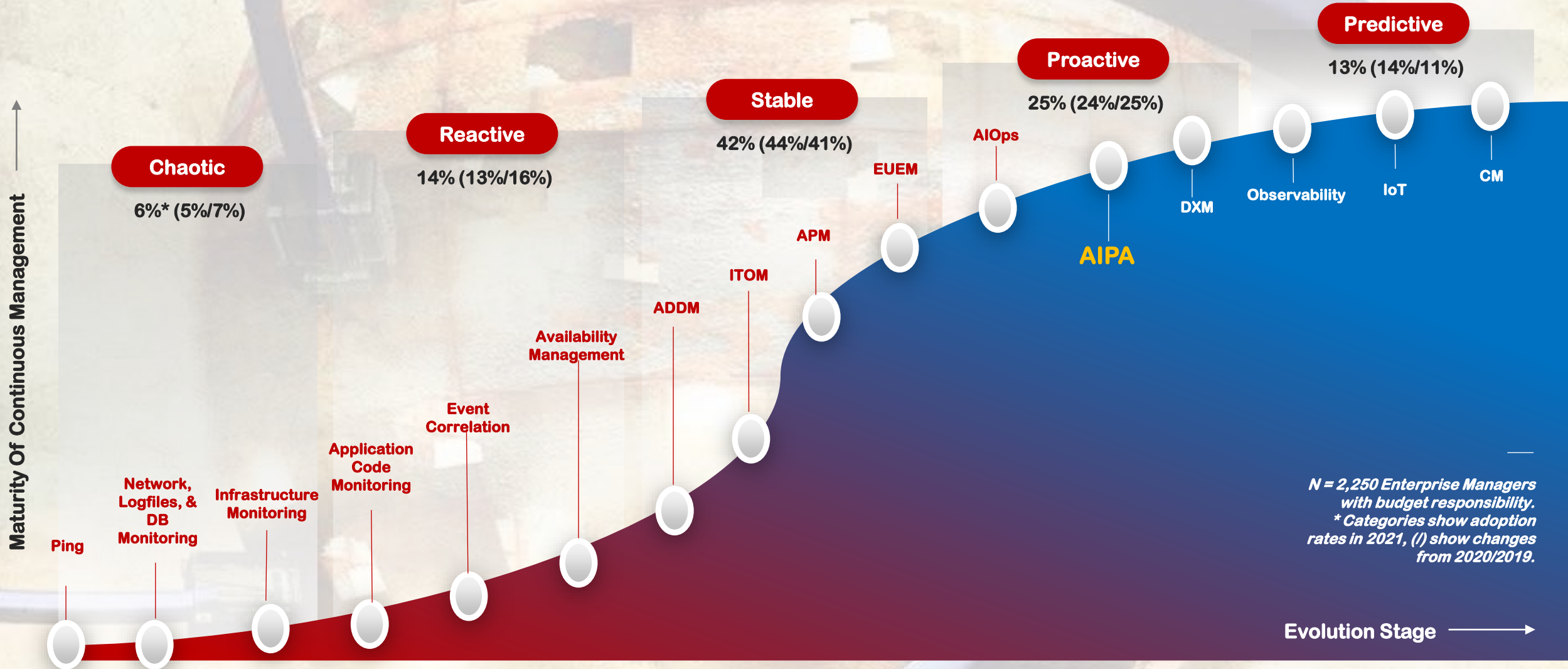
*N = 2,250 Enterprise Managers with budget responsibility. * Categories show adoption rates in 2021, (/) show changes from 2020/2019.*

Evolution Stage

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RESEARCH: TOP 10 INVESTMENT CATEGORIES WITHIN AIPA FOR 2021

Category	Percentage
Usage-based pricing model	8.5%
Big Data management	7.0%
Machine learning extension and modification	6.3%
Data integration through APIs (e.g marketing, finance)	4.9%
Advanced pattern matching	4.6%
Hybrid Cloud integration (Public and private (On-site))	3.8%
Streaming data management	3.5%
Predictive anomaly detection	3.5%
Contextualization of data for meaningful inights	3.1%
Ingestion of a larger variety of data sources	2.7%

There is agreement around the "How" and the "What":

When asked „"What is your number one investment area in the AI Predictive Analytics space for 2021?" the responses all center around:

1) A usage-based pricing model allows for a start at a low price and over time attracting new users adding new value.
2) The complexity of the environment continues to drive the amount of data produced by application stacks and existing monitoring devices and requires a big data management approach.
3) Extending the machine learning and pattern matching algorithms with company specific details will add additional use cases for IT and business owners.

N = 1,500 Enterprise IT Managers with budget responsibilities.

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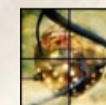
RESEARCH: THE TOP SIX BENEFITS ACHIEVED, OR PLANNED, BY USING AIPA SOLUTIONS

Improved service intelligence — 30.4%

Improved employee satisfaction — 23.8%

Improved cost model (OpEx) — 19.1%

Improved customer satisfaction — 14.7%

Improved business team satisfaction — 8.0%

Improved engineering productivity — 2.9%

We have not seen improvements yet — 0.3%

Top six benefits named by Enterprise IT managers:

Improved service intelligence dictate the decision to invest in AIPA. Enterprise IT managers strive to continuously improve their insights on the services they deliver. The pressure to meet Service Level Agreements accentuates the need to shift into a proactive mode while reducing incidents and reducing service delivery costs.

Improvements around employee, customer and business experience are additional motivations as AIPA shifts development and IT operations towards a proactive way of working reducing bottlenecks and issues before they can impact employees, customers or business operations.

N = 1,500 Enterprise IT Managers makers with budget responsibilities. Respondents could select three benefits.

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INSIGHTS: TOP MARKET TRENDS 2020 - 2021

AIPA will continue to expand as organizations continue to adopt modern operating models such as DevOps, SRE and VSM. DevOps and other methodologies and practices such as Site Reliability Engineering (SRE) and Value Stream Management (VSM) keep growing in adoption across IT organizations. According to the DevOps Institute, SRE adoption lies at 22% in 2020 and VSM at 14%. These modern ways to plan, deploy, release, operate and monitor applications and services require proactive, predictive, and holistic management philosophies. While AIOps started to gain some attention within IT operations, Artificial Intelligence Predictive Analysis is the next iteration. If AI is applied across the different steps within the life cycle of an application or service and its dependencies, it will aid these teams with different lenses to explore, understand and take actions within their responsibilities to ultimately improve flow, quality, and velocity but all in the context of the value stream or product they are working on.

What this means: The past use cases of AIOps have expanded into using the power of artificial intelligence across other functions within IT enterprise teams. The current vendor solutions, while some are still labeled AIOps, vary greatly in terms of what lens they provide. While some are focused solely on the operate and monitor aspects, others provide capabilities around the planning of risks and changes aiding application release and deployment teams. For IT enterprises, understanding their immediate and future needs will be essential to pick a vendor solution. Also evaluate your existing IT Automation investments as that vendor might have a great addition with ITPA ready for implementation.

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INSIGHTS: TOP MARKET TRENDS 2020 - 2021

The AIPA promise to provide end-to-end visibility is attractive. Today's ecosystem consists of complex interdependent application stacks. Business services are supported through multiple application layers atop of a broad and diverse infrastructure. Atop of this diverse infrastructure and application technologies, innovations such as serverless architectures and hybrid cloud ecosystems cause additional challenges to ensure available services and a proactive way of operating or working. Existing monitoring tools might already be in place for the different layers of technologies but are not able to provide end-to-end visibility nor provide proactive insights in real-time and for drill downs.

What this means: To avoid impact on business performance and customer experience, the move towards AIPA leveraging all metrics and details for a holistic perspective of health and performance requires both the integration across essential existing data sources and inclusion of Artificial Intelligence and Machine Learning towards that integrated data set. The capability of AIPA platforms helps to identify patterns in the collected data and allows aggregation of raw data, logs, and other details from various monitoring tools and data sources. If this is then projected onto a single dashboard allowing for additional analytics, IT operation, application development, and service support teams gain end-to-end visibility, ability to drill down and are able to proactively understand the challenges relative to their domain or context.

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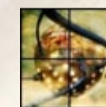
INSIGHTS: TOP MARKET TRENDS 2020 - 2021

AIPA enables a big data analytics approach for IT operations and beyond. The adoption of AIPA enables IT and business operations with a more proactive way of working by predicting and remediating performance, bottlenecks or other challenges across applications and deployments before they might negatively impact business and customers. Critical business services which are automated through key applications must be monitored through data that is produced during key tasks within these business services. This data must be brought together to understand different patterns within applications and their dependencies so that business and IT can understand anomalies and act upon them.

What this means: Applying big data analytics to transaction and customer data makes it easier to monitor how changes within the environment affect the business operations. Discussions and plans around application modifications, upgrades, or technology changes will be more effective and efficient as the impact will be known before choosing the path forward.

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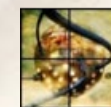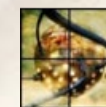
INSIGHTS: TOP MARKET TRENDS 2020 - 2021

AIPA includes AIOps and aims at bringing existing silos together. Best practice operating models such as SRE or DevOps have been adopted to reduce the silos among enterprise IT teams. While the adoption of DevOps at the enterprise level lies around 27% globally, SRE has recently become a popular operating model with 22% adoption globally. These models require different monitoring capabilities. Specific ways to apply AIOps, now in its six-year since introduction, is still in growth mode. APM solutions which are in place already, enable IT professionals with context and details related to their areas of responsibility but do not make it easy to provide vulnerability and issues in the complex web of data, interrelations and dependencies. APM partnered with AI capabilities drives broader and deeper insights to fix problems before they can negatively impact customers, brands or employees.

What this means: Applying the solutions offerings of AIPA and AIOps which are excellent at data analytics can deal with complex broad data and artifacts across the different data silos. This extensive way of analyzing existing data and detecting patterns, enables an improved problem detection difficult to spot with a siloed APM approach. Available insights across a specific technology or application stack bring together silos into a multidisciplinary team.

Source: Upskilling 2021: The Enterprise DevOps Skills Report

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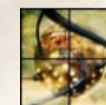
INSIGHTS: TOP VENDOR TRENDS 2020 - 2021

- **Domain-agnostic vs. domain-specific… who cares.** The conversation on domain-agnostic versus domain-specific does not really matter. In the past, the domain-agnostic AIOps tools heavily rely on integrations with many different sources to collect data. Domain-centric AIOps tools typically collect most of the required data themselves and sometimes can be more specific to special domains, such as log management or specific application topics such as ERP. Our belief is that Artificial Intelligence will be used across many domains and the current task for IT enterprises is to determine where they want to focus leveraging AI capabilities to gain insights and reduce waste and toil. While some vendors tout their AI capabilities specifically for IT operations, others have and are adding additional data analytics and intelligent integrations to support evolving operating models.

- **All vendors still talk too much inside-out metrics.** A majority of the vendors struggle to differentiate themselves. Tending to debate about their own competing technologies, they do not help IT enterprise teams to understand what is being offered. The challenges are around ensuring that value is delivered to an organization's customers and employees. That outside-in perspective of understanding how that value is measured should guide the appropriate metrics for improvements. Reduction of waste, improvement of flow, and optimization of processes to increase customers and employee experience, and deliver what they need should be the most important metrics and aligned with their roadmap.

- **Reflect on your today and future needs to assure a solid functionality mix.** Reflecting on your needs around your existing applications, services, and technology stacks within your company today and in the future will guide your evaluation of the functionality mix offered by each vendor and may help buyers to fit the most suitable vendors to their AIPA project. Your existing IT automation vendors might have expanded their offering which allows you to tap into that solution for improved monitoring – so check them out first.

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VENDOR SELECTION MATRIX™: ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS: TOP VENDORS 2021

VENDOR NAME	PRODUCT(S)
AVANTRA	Avantra
BIG PANDA	Big Panda
BMC	BMC Helix
BROADCOM	DX Operational Intelligence
CISCO (APPDYNAMICS)	AppDynamics
CLOUDFABRIX	CloudFabrix AIOps Platform
DIGITAL.AI	Digital.ai Change Risk Prediction & Digital.ai Service Management Process Optimization
DIGITATE	ignio AIOps
DYNATRACE	Dynatrace
EXTRAHOP	Extrahop Reveal (X)
MICRO FOCUS	Operations Bridge with the embedded OPTIC platform
MOOGSOFT	Moogsoft Cloud
NEW RELIC	New Relic One
OPSRAMP	Opsramp OpsQ
RESOLVE	Resolve Insights
SCIENCELOGIC	ScienceLogic SL1
SERVICENOW	ServiceNow IT Operations Management
SPLUNK	Splunk IT Service Intelligence
STACKSTATE	StackState
ZENOSS	Zenoss Cloud

This listing is alphabetical and includes the Top 20 vendors which achieved the best evaluation scores from the buyers, having disregarded those with too few evaluations.

Other Vendors mentioned outside of the Top 20 or with too few evaluations:
• ALGOMOX
• ANODOT
• HARNESS
• IBM
• OVEROPS
• VIRTANA
• VU NET SYSTEMS

NOTE: If a vendor does not respond, Research in Action will complete its scoring assessment based on analyst experience and desk research. The vendor's products and quick facts will be documented in the report, though a vendor scorecard will not be written.

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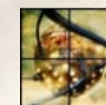
VENDOR SELECTION MATRIX™: ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS: VENDOR QUICK FACTS

VENDOR NAME	Market Presence	Growth Rate	Customer Traction	GOOD TO KNOW
AVANTRA	Medium	Very High	Strong	Avantra provides focus, intelligence and innovation for SAP landscapes accelerating digital transformations.
BIG PANDA	Medium	Medium	Good	Big Panda reduces IT noise, provides insights and automates manual tasks.
BMC	Big	Medium	Strong	BMC accelerates its AI path with BMC Helix and becoming firmly established as a leader focusing on AIOps.
BROADCOM	Big	Medium	Good	Broadcom connects business and operations through AIOps capabilities.
CISCO (APPDYNAMICS)	Big	Medium	Medium	AppDynamics accelerates Digital Transformation with critical application insights.
CLOUDFABRIX	Medium	High	Medium	Accelerates to shift towards a AI and ML driven IT operations.
DIGITAL.AI	Big	High	Medium	Digital.ai leverages AI to bridge existing silos towards convergence and collaboration around value streams.
DIGITATE	Small	Medium	Medium	Digitate leverages artificial intelligence to enable smarter and faster decision-making for IT operations.
DYNATRACE	Very Big	Very High	Strong	Dynatrace provides software intelligence to simplify cloud complexity and accelerate digital transformation.
EXTRAHOP	Medium	Medium	Medium	The ExtraHop platform gives you access to valuable insights which was previously untapped.
MICRO FOCUS	Very Big	Very High	Strong	Micro Focus makes big time AI move with Operation Bridge and embedded OPTIC platform.
MOOGSOFT	Medium	Very High	Strong	Moogsoft redefines itself towards observability.
NEW RELIC	Medium	Medium	Strong	New Relic continues to accelerate its vision.
OPSRAMP	Small	Very High	Good	The ExtraHop provides access to real-time IT and business insights to previously untapped data.
RESOLVE	Small	Medium	Good	Opsramp provides the service centric perspective for fast root cause and resolution.
SCIENCE LOGIC	Medium	Very High	Strong	ScienceLogic is leveraging AI to new heights.
SERVICENOW	Very Big	Very High	Good	ServiceNow's ITOM Predictive AIOps predicts issues before they become problems & helps to automate resolutio
SPLUNK	Very Big	Very High	Strong	Splunk delights its customers with AI insights to shift toward a proactive IT operating mode.
STACKSTATE	Small	Medium	Good	StackState's ability to reduce noise and protect previous investments achieves solid scores.
ZENOSS	Medium	Medium	Good	Zenoss combines full stack monitoring with AI analytics for fast root cause detection.

NOTES:
- Market Presence combines the market share and perceived Mindshare (or Share of Mind).
- Growth Rate is the anticipated growth rate for this year where Medium is the average growth for this market.
- Customer Traction combines the vendor's customer retention rate and the Research In Action Recommendation Index (RI). The RI is collected and calculated by asking the survey participants: "Would you recommend this vendor in this market to your peers - Yes or No?".

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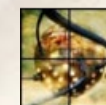
VENDOR SELECTION MATRIX™: EVALUATION CRITERIA

STRATEGY

Vision And Go-To-Market	30%	Does the company have a coherent vision in line with the most probable future market scenarios?
		Does the go-to-market and sales strategy fit the target market and customers?
Innovation And Differentiation	30%	How innovative is the company in this market?
		Does the solution have a unique selling proposition and clear market differentiators?
Viability And Execution Capabilities	15%	How likely is the long-term survival of the company in this market?
		Does the company have the necessary resources to execute the strategy?
Recommendation Index	25%	Would customers recommend this vendor in this market to their peers?

EXECUTION

Breadth And Depth Of Solution Offering	30%	Does the solution cover all necessary capabilities expected by customers?
Market Share And Growth	15%	How big is the company's market share and is it growing above the market rate?
Customer Satisfaction	25%	How satisfied are customers with the solution and the vendor today?
Price Versus Value Ratio	30%	How do customers rate the relationship between the price and perceived value of the solution?

NOTES:
62.5% of the evaluation is based on the survey results, 37.5% is based on the analysts' assessment.
• 40% of the evaluation is based on the survey results: (1) Recommendation Index, (2) Customer Satisfaction, (3) Price Versus Value.
• 15% of the evaluation is based on the analysts' assessment: (1) Viability And Execution Capabilities, (2) Market Share And Growth.
• 45% of the evaluation is based on a combination of survey results and analysts' assessment: (1) Vision And Go-To-Market (2) Innovation And Differentiation (3) Breadth And Depth Of Solution Offering.
The Research In Action Recommendation Index (RI) is collected and calculated by asking the survey participants (see page four)
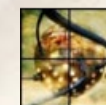"Would you recommend this vendor in this market to your peers - Yes or No?".

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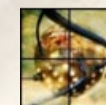
VENDOR SELECTION MATRIX™
ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS

	STRATEGY	EXECUTION	TOTAL
1. MICRO FOCUS	4.71	4.56	9.28
2. DYNATRACE	4.59	4.65	9.24
3. SPLUNK	4.70	4.50	9.20
4. BMC	4.49	4.58	9.06
5. MOOGSOFT	4.63	4.35	8.98
6. SCIENCELOGIC	4.41	4.41	8.83
7. NEW RELIC	4.28	4.35	8.63
8. BROADCOM	4.36	4.20	8.56
9. STACKSTATE	4.23	4.21	8.44
10. SERVICENOW	4.30	4.06	8.36
11. DIGITAL.AI	4.09	4.15	8.24
12. BIG PANDA	3.93	4.21	8.14
13. CISCO	4.00	4.06	8.06
14. AVANTRA	3.85	4.15	8.00
15. RESOLVE	3.91	4.05	7.96
16. OPSRAMP	3.78	3.91	7.69
17. CLOUDFABRIX	3.73	3.93	7.65
18. ZENOSS	3.71	3.85	7.56
19. EXTRAHOP	3.65	3.78	7.43
20. DIGITATE	3.58	3.64	7.21

Notes:
- Scale Explanation: 1 (Low) To 5 (High).
- Potential numerical deviations due to rounding.

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VENDOR SELECTION MATRIX™
ARTIFICIAL INTELLIGENCE PREDICTIVE ANALYTICS

BMC accelerates its AI path with BMC Helix and becoming firmly established as a leader focusing on AIOps

STRATEGY	RESULT
Vision And Go-To-Market	4.50
Innovation And Differentiation	4.00
Viability And Execution Capabilities	5.00
Recommendation Index	4.75
	4.49

EXECUTION	RESULT
Breadth And Depth Of Solution Offering	4.75
Market Share And Growth	4.00
Customer Satisfaction	4.50
Price Versus Value Ratio	4.75
	4.58

GENERAL:

BMC is a Market Leader in this Vendor Selection Matrix™. BMC continues to execute on its vision and strategy of helping customers along their journey to become Autonomous Digital Enterprises and to achieve excellence in Operations through the adoption of innovative IT solutions. BMC has continued to adapt its solutions to support modern IT operations to achieve operations excellence. The Helix platform is a key part of its aim to enable the Autonomous Digital Enterprise. As a veteran in aiding IT operations with automation, Open AIOps is part of BMC´s Helix platform and functions as the foundation for its AIOps solution. It uses AI-driven capabilities including advanced anomaly detection, event noise reduction as well as topology-aware probable cause analysis for improved root cause detection. BMC Helix is positioned as a unified platform to automate engagement across the business and IT, intelligently automate and remediate, and leverages data sources from BMC or third-party tools covering IT environments from modern cloud and containerized workloads to mainframe.

STRATEGY:

The capabilities of BMC AIOps (and the rest of BMCs solutions) is being supported by BMC's large ecosystem of partners (over 50 system integrators, more than 600 ISVs, 350 plus Value Added Retailers and Solution Providers, and more than 40 Service Providers worldwide). The company continues to expand its use cases leveraging AI and automation to optimize, prevent and allow for ongoing scalability within modern IT operation teams.

EXECUTION:

Today's enterprises require the ongoing optimization of their modern cloud platforms and applications. BMC Helix AIOps ability to provide integrated dynamic service models allows for a holistic approach towards management and optimization. The BMC Helix product team plans to expand its use cases further towards intelligent recommendations and actions and additional collaborative team views.

BOTTOM LINE:

For organizations who want to manage end-to-end performance, predictive alerting, capacity, and cost management leveraging Artificial Intelligence and Machine Learning Algorithms, BMC Helix solution offers this as a single solution for both distributed and mainframe environments.

The company has achieved the second-highest Recommendation Index of 98% and a solid score in price versus value ratio.

Notes:
- Scale Explanation: 1 (Low) To 5 (High).
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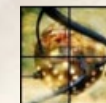
THE RESEARCH IN ACTION GMBH VENDOR SELECTION MATRIX™ METHODOLOGY

Vendor Selection Matrix™ Disclaimer:

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About:

Research In Action GmbH is a leading independent information and communications technology research and consulting company. The company provides both forward-looking as well as practical advice to enterprise as well as vendor clients.
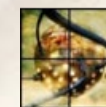
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APPENDIX: IT AUTOMATION MARKETEXTURE DEFINITIONS

- **Application Discovery and Dependency Mapping (ADDM)** solutions automatically discover various applications running on server and network devices within the business hybrid infrastructure and maps the dependencies between them providing a holistic view of all the resources running and the relationships between them.

- **Application Performance Management (APM)** solutions manage the performance and health of applications within a IT enterprise.

- **AI Powered Chatbot Platforms** which are used to build applications that answer questions, provide advice and/or recommendations using natural language processing and other dialog related technologies.

- **Artificial Intelligence and Machine Learning (AI/ML)** are both technologies and are leveraged in automation solutions. Artificial intelligence (AI) is the ability of a computer program or machine to think and learn (AI can mimic human cognition). Within IT Automation AI is used to correctly interpret a variety of data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation. Machine learning enables computers with the ability to learn without being programmed (explicit algorithms). It explores the study and construction of algorithms which can learn and make predictions on data. The algorithms follow programmed instructions or can make predictions or decisions based on the data. Machine learning is used when explicit algorithms cannot be done (e.g., computer vision, search engines, optical character recognition).

- **Artificial Intelligence for Operations (AIOps)** solutions equip IT enterprise teams with analysis of volumes and categories of data to improve key processes, tasks and decision making. The adoption of these tools automates the ingestion of fast volumes of data; leverage machine learning to analyze the data, present findings to either predict or alert on issues, and leverage the knowledge for automation or decision making.

- **Artificial Intelligence Predictive Analytics (AIPA)** solutions apply Artificial Intelligence across development, IT operations, service management and other functional areas to gain intelligent insights for proactive work, elimination of issues and ongoing improvements in context of the owner and function.

- **Application Release Orchestration (ARO)** solutions equip IT enterprise organizations and their teams with the automation of the software deployment cycle across hybrid technology environments.

- **Configuration Management Database (CMDB)** is a database which captures IT components referred to as configuration items (CIs), which can be software, hardware, a document, article, or any such item that is part of the information system of the organization.

- **Continuous Application Performance Management (CAPM)** software solutions continuously identify issues around performance and availability of software applications, IT and enterprise services. The solutions strive to proactively detect and diagnose application performance problems and health and enable a situational awareness of application related issues.

- **Continuous Management (CM)** solutions that empower, automate and continuously manage the ongoing demands of all digital functions within an enterprise no matter if they are within IT or business teams.

- **Enterprise Service Management (ESM)** is a category of business management software - typically a suite of integrated applications that a service organization uses to capture, manage, save and analyze data critical to their service business performance. It automates service offerings across internal functional areas such as (1) Human resources, (2) Vendor management, (3) Technical services, (4) Field services, (5) Financial management and (6) Shared services organizations.

- **Digital Service Management (DSM)** solutions enable the management of resources and services which support multiple digital services leveraged by external customers. The purpose is to break down operating silos, ensure compliance and governance while enabling the business to continuously innovate new and existing digital services.

- **Digital Experience Management (DEM)** solutions manage the digital interaction of customers (end-users) with that of an enterprise.

- **End User Experience Management (EUEM)** solutions monitor and manage the impact of application and device performance from the end user's point of view and ensure quality of service as seen and experienced by the end user.

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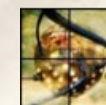
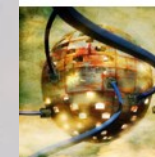# APPENDIX: IT AUTOMATION MARKETEXTURE DEFINITIONS

- **IT Asset Management (ITAM)** software manages the full lifecycle of IT assets which typically includes all software, hardware, networking, cloud services, and client devices. In some cases, it may also include non-IT assets such as buildings or information where these have a financial value and are required to deliver an IT service. IT asset management can include operational technology (OT), including devices that are part of the Internet of Things. These are typically devices that were not traditionally thought of as IT assets, but that now include embedded computing capability and network connectivity.

- **IT Financial Management (ITFM)** software enables the accurate and cost-effective management of IT assets and resources with the aim to plan, control, recover (or overall manage) costs which are occurring while providing IT and Enterprise Services to the organization.

- **The IT Infrastructure Library (ITIL)** is the de facto standard for IT Service Management process definitions today.

- **Internet of Things Management (IoT)** solutions vary depending on the use case but typically manage a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are equipped with unique identifiers which transfer data over a network without requiring human-to-human or human-to-computer interaction.

- **IT Operations Management (ITOM)** solutions monitor and control IT services and infrastructure and enable IT to execute routine tasks necessary to support the operation of applications, services and hardware components within an organization; typically included are the provisioning of IT infrastructure, capacity management, cost-control activities, performance and security management and availability management for all IT infrastructure and assets.

- **IT Service Management (ITSM)** refers to the entirety of activities – directed by policies, organized and structured in processes and supporting procedures – that are performed by an organization to plan, design, deliver, operate and control Information Technology (IT) services offered to internal customers. It is thus concerned with the implementation of IT services that meet customers' needs, and it is performed by the IT service provider through an appropriate mix of people, process and information technology.

- **Robotic Process Automation (RPA)** solutions enable the automation of tasks, processes and procedures which are normally conducted by a human. RPA solutions create software robots that mimic human actions. Typically, these are tasks that a human would do. (Ro)Bots and Virtual Agents are part of RPA solutions.

- **Observability** solutions enable the aggregating, correlating and analyzing of steady streams of performance data from distributed applications and the hybrid infrastructure which support the applications.

- **Secure Unified Endpoint Management (SUEM)** software enables the management and securing of mobile applications, content, collaboration and provides for the management of all endpoints like smartphones, tablets, laptops, printers, ruggedized devices, Internet of Things (IoT) and wearables.

- **Technology Cost and Resource Optimization (TCRO)** software enables the planning, management and visibility of the supporting and required business and IT technology resources from a cost and capacity perspective by visualizing, planning, prioritizing and optimizing the usage and demands of technology resources (people, processes and technologies) for the enterprise.

- **Value Stream Management (VSM)** software solutions capture, visualize, and analyze the flow of work across the entire Agile software delivery project. The capabilities include end-to-end visibility, traceability and governance over the entire process and help to plan, track, and steer work at the team, program, portfolio, and enterprise levels. It includes the people working on a project, the systems which are operated and leveraged, and the flow of information and materials between teams. It enables the measurement of speed and quality for digital transformations.

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REAL ROI
Costs: € 431k
Benefits: € 606k
ROI: 41%
Payback: 8 months
EXAMPLE

$/€

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