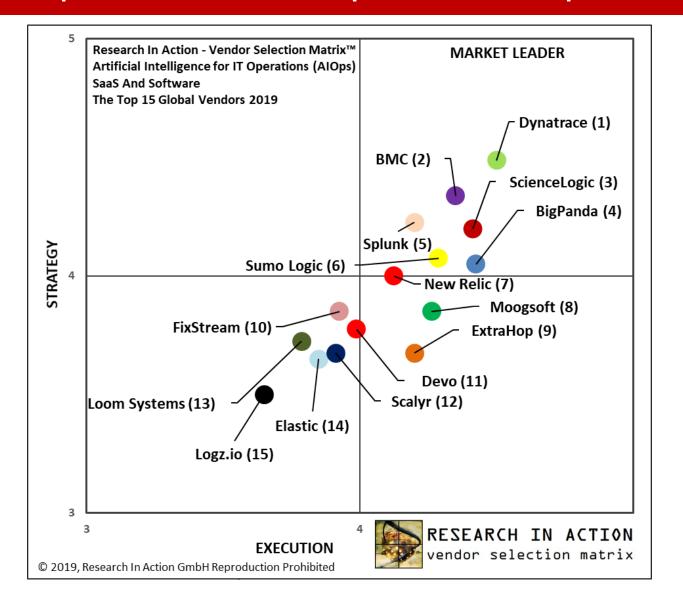
Vendor Selection Matrix™ – Artificial Intelligence for IT Operations (AlOps) SaaS And Software: The Top 15 Global Vendors 2019

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Vendor Selection Matrix[™] – Artificial Intelligence for IT Operations (AIOps): The Top 15 Global Vendors



	Strategy	Execution	Total
1 Dynatrace	4,49	4,50	8,99
2 BMC	4,34	4,35	8,69
3 ScienceLogic	4,20	4,41	8,61
4 BigPanda	4,05	4,43	8,48
5 Splunk	4,23	4,20	8,43
6 Sumo Logic	4,08	4,29	8,36
7 New Relic	4,00	4,13	8,13
8 Moogsoft	3,85	4,26	8,11
9 ExtraHop	3,68	4,20	7,88
10 FixStream	3,85	3,93	7,78
11 Devo	3,78	3,99	7,76
12 Scalyr	3,68	3,91	7,59
13 Loom Systems	3,73	3,79	7,51
14 Elastic	3,65	3,85	7,50
15 Logz.io	3,50	3,65	7,15



The Research In Action GmbH – Vendor Selection Matrix™ Methodology

Data Summary:

- Unique, primarily survey-based methodology for comparative vendor evaluation.
- > At a minimum, 60% of the evaluation results are based on enterprise buyers' survey results.
- Analyst's opinion accounts for a maximum of 40% of the evaluation results (not close to 100% as in most other vendor evaluations).
- ➤ More than 45,000 data points were collected.
- ➤ Data was collected in Q4 of 2018 and Q1 of 2019, covering 1.500 enterprise IT managers (with budget responsibilities) in a combined telephone and online survey.
- The Top 15 vendors of Artificial Intelligence for IT Operations (AIOps) SaaS and Software solutions (selected by the survey respondents) were evaluated.
- The evaluation results and forecasts are based on customer and vendor feedback, publicly available information, triangulation, as well as the analyst's opinion.

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Survey Instrument:

Country breakdown		Job title breakdown	
DACH	200	VP IT	139
United Kingdom	150	CIO	134
France	150	IT Manager	128
Benelux	50	IT Operations Manager	124
Europe (Rest)	150	VP Operations	119
North America	500	VP Infrastructure	109
The Americas (Rest)	50	IT Service Manager	105
Australia and New Zealand	30	Project Manager	103
Asia Pacific (Rest)	220	Manager DevOps	99
Total	1.500	IT Supply Manager	92
		VP DevOps	89
Company size breakdown (Revenue	more than € 250 million)	Change Manager	61
Headcount below 2.500:	128	Test Manager	56
Headcount 2.500 to 5.000:	262	Capacity Manager	53
Headcount 5.000 to 10.000:	543	Manager Testing	42
Headcount 10.000 to 50.000:	441	General Manager	17
Headcount over 50.000:	126	CFO	12
Total	1.500	Others	18
		Total	1.500

	•
Energ	ЗУ
Finan	icial Services
Gove	rnment & Non Profit

Industry breakdown

Healthcare & Chemicals

Manufacturing 333
Media & Telecoms 128
Retail 121
Technology & Professional Services 166
Travel & Transportation 104

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195

Travel & Transportation 104

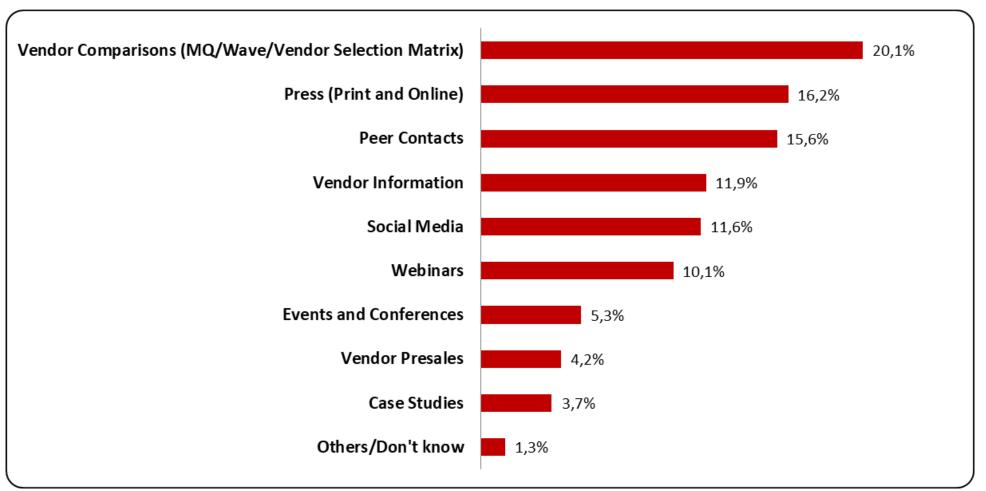
Total 1.500



What Tools Do You Use To Create The Vendor Longlist?

MQ/VSM Press Peers Vendors Social Media

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



N = 3.000 Business and IT Managers with budget responsibilities

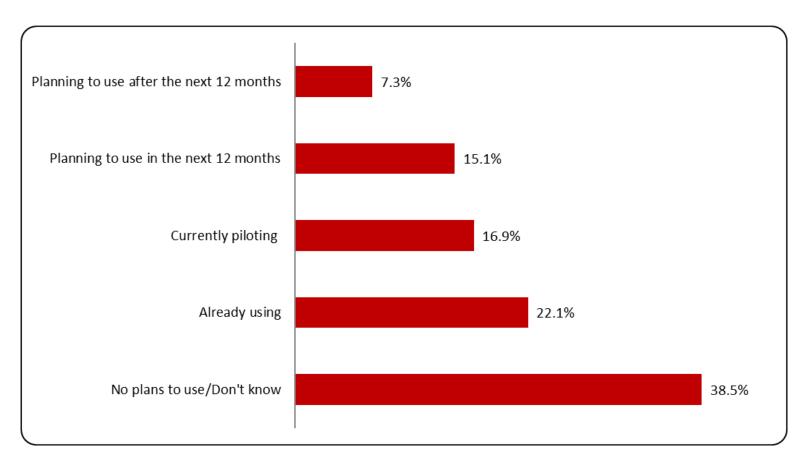


Market Overview: Artificial Intelligence for IT Operations (AlOps) Market Definition

- ➤ AlOps solutions equip IT Ops and other 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 or alert on issues, and leverage the knowledge for automation or decision making.
- > The AIOps solutions should have the following functionality:
 - Ability to ingest data from a fast set of sources and of many types
 - > Ability to analyze data in real-time and at any point thereafter (historical data)
 - > Enable the storing of data for access at any time
 - > Enable secure and role based access to data at any time
 - ➤ Leverage machine learning to analyze data generated by machines and humans and use it learn from it and provide analysis
 - Leverage the analysis for proactive automation and action
 - > Presentation of analysis in context to person or functional team.
- > Research In Action is evaluating AIOps solutions based on customer needs and requirements and their mentioning of the top 15 vendors and solutions globally during our survey.



Are you planning to use AlOps as an extension to your current Application Performance Management practice?

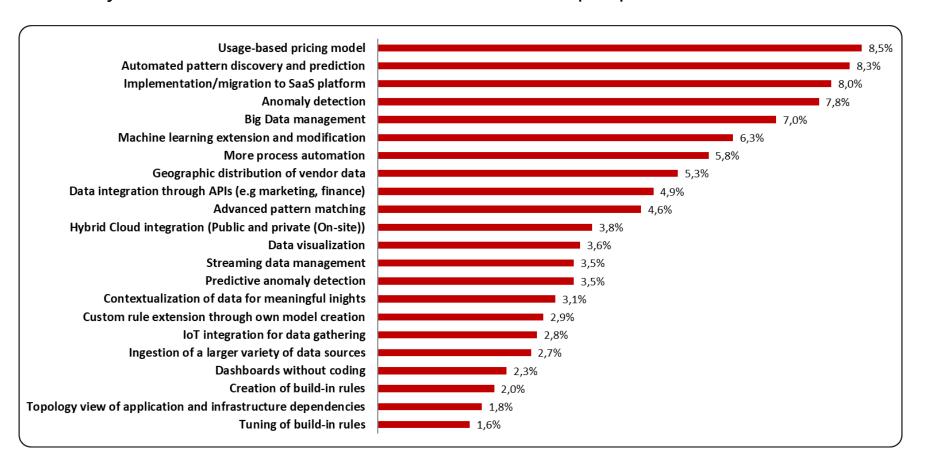


- The AlOps market has gained momentum with 22.3% already using machine learning and data sciences as part of their work.
- 2. The AlOps market has shifted from a science project to the pilot and experimental stage (16.9% currently piloting).
- 3. A large segment of IT operations are still doubting operational benefits of AlOps tools stating no plans or don't know about leveraging it (38.5% no plans/don't know).

N = 1.500 Enterprise IT Managers with budget responsibilities



What is your number one investment area in the AIOps space for 2019?



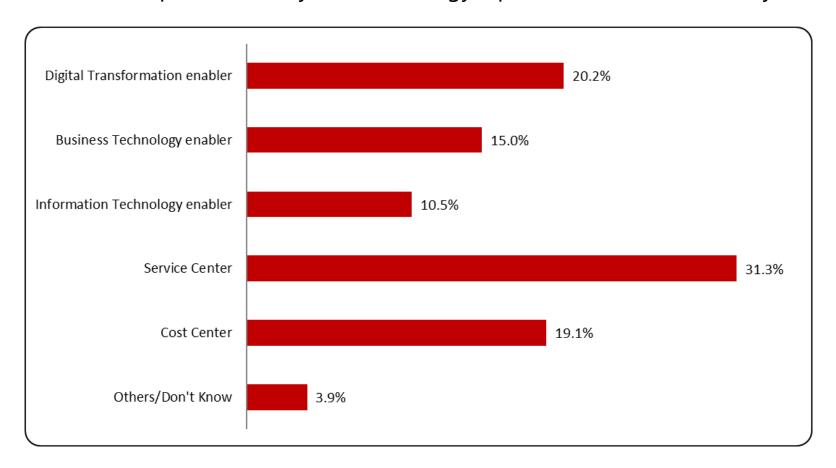
- 1. Usage based pricing
- 2. Automated pattern discovery and prediction
- 3. Anomaly detection
- 4. Big Data management
- ML extensions and modifications

N = 927 Enterprise IT Managers with budget responsibilities



Market Overview: Today's Requirements For Artificial Intelligence for IT Operations (AIOps)

Which descriptions fits to your Technology Operations team best today?



- 1. The primary IT operations archetype today is that of a **Service Center** (31.3%).
- 2. The drive towards a digital business has motivated IT operations to describe themselves as **Digital Transformation enablers** (20.2%).

Bottom Line:

Still too many IT operations teams are self-identifying themselves as **Costs Centers.**

N = 1.500 IT Managers in Enterprises



- ➤ **Digital transformations are forcing a new IT operations archetype.** Digital transformation must focus on customer experiences, service ecosystems, and resource integration as part of value cocreation. To support these transformations, IT operations must help their organizations meet evolving market demands of digital transformations through implementations of new technologies, development of new applications and migrations to the Cloud. To cocreate value with different actors in the service ecosystem, IT operations teams are shifting towards a service center archetype delivering digital infrastructure and services.
- Service Center archetype requires a new way of working. The delivery of digital infrastructure and services causes a myriad of complex environments all producing huge volumes of data and a exponential growth in event noise. To sustain as a successful service center, IT operations must ensure ongoing service availability and completely eliminate IT outages.
- ➤ IT operations must shift away from mean-time-to-resolution (MTTR). Digital business thrives on positive customer experience which is dependent on the health of the digital infrastructure and ecosystem. Today's IT operations traditional metrics of mean-time-to-resolution reflect old methods of restoring but ignore the impact on customers which is most important to the service ecosystem and its partners. IT operations teams must strive towards time-to-business-impact (TTBI) to reflect the digital economy thinking towards customer impact.



- ➤ Time-to-business-impact needs insights and automation. Simply renaming a metric is not enough and must be supported with analytics and automation to determine if and when a customer might be impacted. This way of working requires understanding dependencies, reducing root cause analysis, improved data accuracy to reduce the signal from the noise, proactive alerts and much more. Modern IT organizations must leverage time-to-business-impact (TTBI) as a predictive metric towards customer impact to inform stakeholders of potential issues.
- ➤ IT operations is at an inflection point towards becoming proactive. Large volumes of data are draining the traditional CAPM and ITSM/ESM (ITESM) tools and make it impossible for IT operations to become proactive. The demands of the digital business require a modern way of managing incidents and service health in a automated way leveraging artificial intelligence and machine learning to improve decision making and automation. Observational and engagement data must be analyzed to react and remediate in real-time. Combined with automation either during or after analysis will enable continuous ongoing improvement and shift IT operations to working in a proactive and predictive way.
- ▶ **Big Data platforms are fundamental towards streamlined interactions.** The goal towards eliminating issues which could impact the end customer negatively requires the presentation of relevant data and perspectives to functional groups so that they can work together preventing or solving issues across the ecosystem. This requires Big Data platforms which federate and synchronize data in a smart way with the goal to eliminate impact to the customer. Correlation, pattern matching, and other algorithms are applied to provide insight for further automated actions by either humans or digital agents.

- Investment trends for 2019. Spending trends for 2019 are reflecting these changes in the market and in customer requirements. The key investment areas for 2019 are:
 - 1. **Usage based pricing.** A pricing model in which the amount that a customer pays is affected by how much or how many of something a customer uses. In this model, processing one "transaction" in the system equates to some measurable value for the customer. This pricing model is used for enabling technologies such as AlOps; the customers mind-set is shifted from ownership to access; in challenging economic times customers can avoid up-front payments.
 - 2. Automated pattern discovery and prediction. Discovering patterns related to sequences of data or events can lead proactive insights, as these patterns may have occurred before an event of significance. Leveraging pattern discovery enables to proactively track patterns and take appropriate action in a timely manner.
 - **3. Anomaly detection.** Anomaly detection is one application of machine learning; it detects data points in data that does not fit well with the rest of the data. It has a wide range of applications such as fraud detection, surveillance, diagnosis, data cleanup, and predictive maintenance. In AlOps anomaly detection plays a key role in use cases such as monitoring and predictive maintenance.
 - **4. Big Data management.** This refers to the management of operationalizing and extracting value from data lakes or Big Data which is a collection of very large data sets coming from federated data lakes across the business technology ecosystem (applications, hybrid infrastructures, etc.). These data sets are too large and complex that it is difficult to process using traditional applications/tools and AlOps tools leverage big data stack's operation metrics for recommendations and automatic actions.
 - **5. Machine learning extensions and modifications**. Interest exists on advancing existing machine learning model towards its performance in scale or in depth. These modifications require modifications of algorithms and the expertise of big data folks and most likely are needed by the more advanced IT Operation teams.



Vendor Selection Matrix™ – Artificial Intelligence for IT Operations (AlOps) SaaS And Software: Evaluation Criteria

Strategy		
Vision & Go-To-Market		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 markets and customers?
Innovation & Partner Ecosystem	20%	How innovative is the company?
		How is the partner ecosystem organized and how effective is the partner management?
Company Viability & Execution Capabilities	15%	How likely in the long-term survival of the company?
		Does the company have the necessary resources to execute the strategy?
Differentiation & USP	35%	Does the solution have a Unique Selling Proposition (USP) and clear differentiators?
Execution		
Breadth & Depth Of Solution Offering	30%	Does the solution cover all necessary capabilities expected by the customers?
Market Share & Growth	15%	How big is the market share and is it growing above market rate?
Customer Satisfaction	25%	How satisfied are customers with the solution and the vendor?
Price Versus Value	30%	How do customers rate the relationship between the price and perceived value of the solution?

Vendor Selection Matrix™ – Artificial Intelligence for IT Operations (AlOps): The Top 15 Global Vendors

Evaluated Vendors and Solutions:

Alphabetical order:

BMC Software TrueSight Operations

BigPanda BigPanda

Devo Data Operations Platform

Dynatrace Dynatrace

Elastic Elastic Stack

ExtraHop ExtraHop FixStream

Logz.io Logz.io

Loom Systems Loom Systems

Moogsoft Moogsoft AlOps

New Relic The New Relic Platform

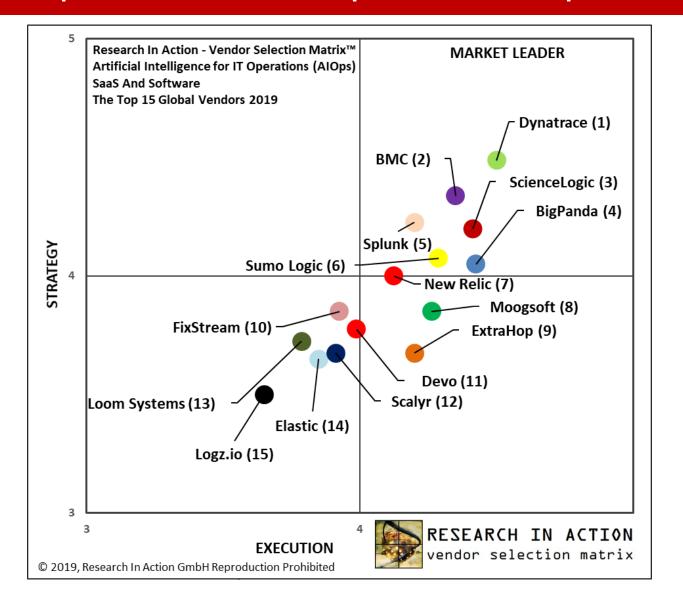
Scalyr Scalyr

ScienceLogic SL1

Splunk Splunk IT Service Intelligence

Sumo Logic Sumo Logic

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Vendor Selection Matrix[™] – Artificial Intelligence for IT Operations (AlOps): BMC Software No. 2

BMC Software offers AIOps as part of its end-to-end operations platform

- Page 2 Software has stepped up its game with BMC TrueSight Operations Management which is the anchor offering in their AlOps solution. As a veteran in aiding IT operations with automation, TrueSight Capacity Optimization/TrueSight Cloud Cost and TrueSight Orchestration are all parts of BMC's AlOps solution. The solution does more than just model and forecast time series data. It uses machine learning for understanding usage patterns for rightsizing recommendations for both compute and storage, as well as for detecting and auto rightsizing unused or idle VMs. Its analytics are based on a variety of mathematical time series models and additional algorithms. Leveraging machine learning throughout monitoring, event management, probable cause and log analytics coupled with analytics to model and forecast time series data to optimize capacity and the ability to predict what one spends on cloud computing are a major differentiators within this market. In future releases the company plans to extend machine learning towards vulnerability management, configuration compliance and patch management targeting the security operations staff.
- Strategy: The capabilities of BMC TrueSight Operations Management (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).
- **Execution:** Enterprise customers such as TransAmerica and Ensono have been able to proactively remediate issues before they could impact customers leveraging BMC's anomaly detection and probable cause analysis within BMC TrueSight Operations Management.
- Customer Quote: "We like the fact that we can get all our ITOps software needs from one software vendor BMC. This works very well for us." IT Manager European financial services company.
- **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 Software's TrueSight solution offers this as a single solution.



Vendor Selection Matrix™ – Artificial Intelligence for IT Operations (AlOps): BMC Software No. 2

	Detailed Results		
	Weighting	Score	Results
Vision & GTM	30%	4.25	1.28
Innovation Partner & Ecosystem	20%	4.50	0.90
Company Viability & Execution Capabilities	15%	4.50	0.68
Differentiation & USP	35%	4.25	1.49
Strategy	100%		4.34
Breadth & Depth Of Solution Offering	30%	4.50	1.35
Market Share & Growth	15%	3.50	0.53
Customer Satisfaction	25%	4.50	1.13
Price/Value Ratio	30%	4.50	1.35
Execution	100%	Scale Explanation 1 (Low) to 5 (High)	4.35

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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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