

Ventana Research

Big Data and Information Management Research in 2017

Setting the annual expertise and topic agenda

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Ventana Research

Ventana Research connects users and providers of technology through its research and advisory services, focusing on improving business performance.

Our unique approach is evaluating the people, processes, information and technology components of organizations using applications and tools across business and IT areas.



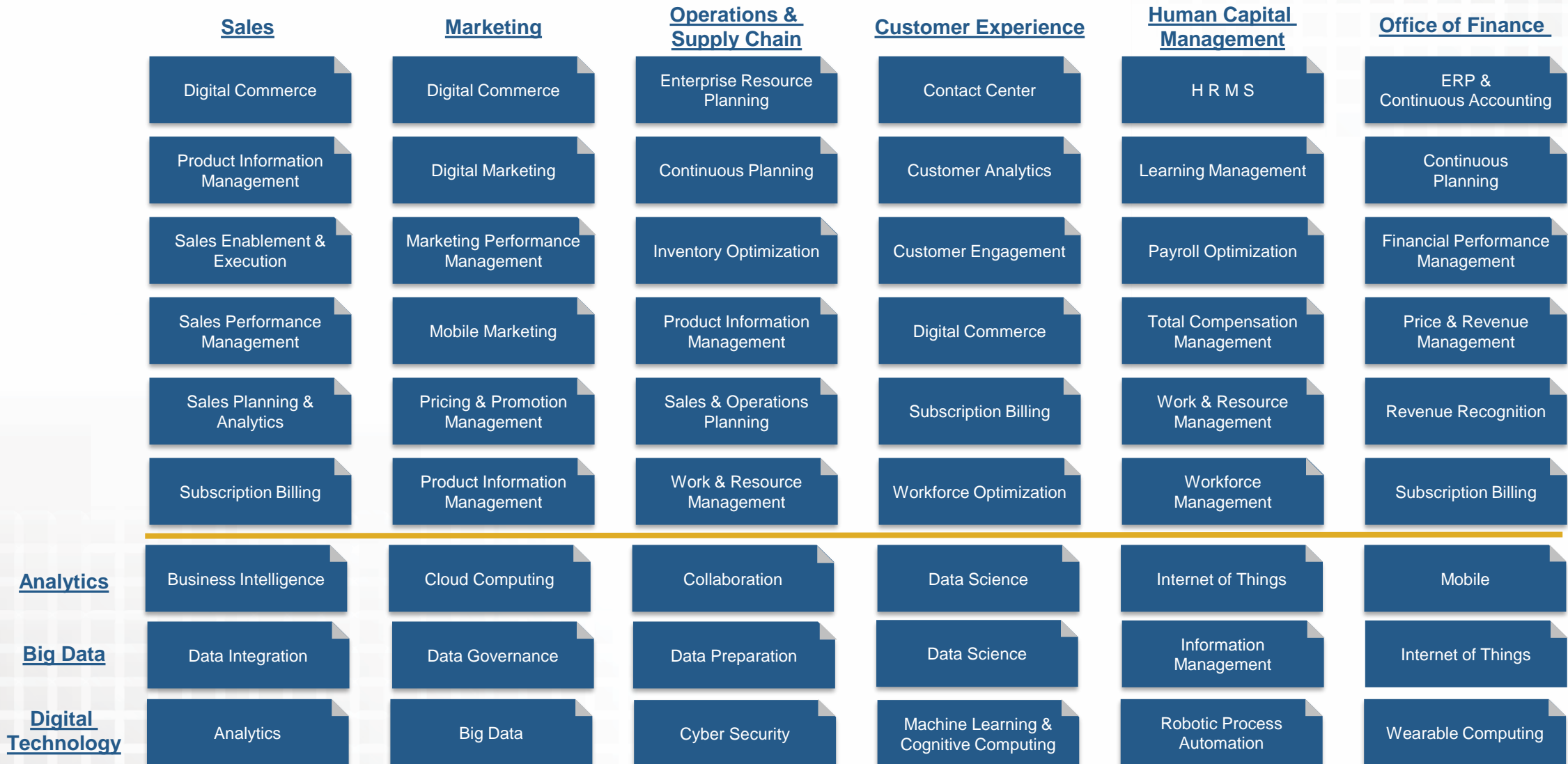
Ventana Research Expertise Agenda

Our Research Agenda and expertise in critical business and technology topics is driven by our analysts' deep understanding of business requirements and our knowledge of technology providers.

Through our primary and secondary market research methods, we are able to provide insights and best practices to line of business and IT, and across vertical industries that will help any organization reach its maximum potential.



Ventana Research Expertise Framework



Expertise is Cross Functional, Not Pigeon-Holed

Background:

Ventana Research analysts work as a team across lines of business, processes, functions and technologies to provide perspectives that analyst firms with narrow, technology defined coverage areas are not able to match.

Examples:

- Analytics with Finance, Marketing and Sales in Data Science.
- Analytics with Customer Experience, Sales and Marketing in Mobile.
- Analytics with Customer Experience, Marketing and Sales in Collaboration.



Services for Users and Providers

Technology Users

- Advisory and Research Services
- Benchmark Assessment
- Educational Workshops
- Market Consultation Service
- Research Reports
- Technology Assessments
- Vendor Selection Guidance

Technology Providers

- Advisory and Research Service
- Benchmark Research Services
- Digital Content Services
- Market Consultation Service
- Research Reports
- Speaking Services
- Strategic Consulting

Market Consultation Service

Overview:

Ventana Research analysts provide insight and guidance on the market through their expertise using our research. The service consists of a two hour consultation, presentation and unique set of recommendations.

Value:

- Smartest path to understanding the state of the technology market to adjust your business efforts.
- Improve technology strategies to better optimize your productivity and performance of business processes.
- Optimize business efforts by overcoming challenges with your people and processes through using technology.



Research



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Big Data & Information Management Overview

Expertise Overview

- Ventana Research offers guidance on big data and information management to help you expand competencies that will enhance the value of information, through smarter storage, compute, integration, virtualization, governance and preparation to uncover and use new methods for using information effectively.

Focus Areas

Data
Integration

Data
Governance

Data
Preparation

Data
Science

Information
Management

Internet
of Things



Agenda for Big Data & Information Management

Data Integration

- Data sources are diverse and more distributed driven by cloud, IoT and unstructured data.
- Data lakes and data virtualization provide access to these diverse data sources.
- Utilize data lakes for comprehensive data sets to support analytics and machine learning.

Data Governance

- New data types and sources have been adopted without requisite data governance in place.
- Big data technologies are adding governance and ISVs are bringing new governance tools.
- Develop and implement a data governance strategy for all types of data.

Data Preparation

- End users expect to access data sources directly without requiring support from IT.
- Data preparation make data more accessible and info. lifecycle value to business and IT.
- Establish data preparation for information responsiveness.

Agenda for Big Data & Information Management

Data Science

- Analytics and data science continue to rise in importance with big data.
- Machine learning optimizes actions, decisions and processes with fewer resources.
- Exploit machine learning on big data for business and continuous optimization.

Information Management

- IoT and data science drive demands for large volumes of structured and unstructured data.
- Big data technologies continue to proliferate for streaming, at-rest and in-memory data.
- Utilize big data technologies and storage methods to embrace all types of data.

Internet of Things

- An increasing number of devices are instrumented and connected.
- Big data and streaming tech. combined with data science to enable continuous analytics.
- Utilize machine data and IoT data to enable operational intelligence.

Data Integration

Overview

- Data Integration helps organizations access and utilize data assets efficiently and effectively to support operational and analytical processes.

Agenda

- Data sources are diverse and more distributed driven by cloud, IoT and unstructured data.
- Data lakes and data virtualization provide access to these diverse data sources.
- Utilize data lakes for comprehensive data sets to support analytics and machine learning.

Insights - Examples

- Key Insight: “Two thirds of users spend more time preparing data than actually analyzing it.”
- Best Practices: “Anticipate software moving to the cloud, and find a platform now that allows for better integration before software is finalized.”

Market Research

- Benchmark: Big Data Integration, Data and Analytics in the Cloud and Data Preparation (2017)
- Dynamic Insights: Data Lakes (Q3)
- Value Index: Data Preparation (Q2)

Data Governance

Overview

- Data Governance ensures that an organization's data can be cataloged, trusted and protected.

Agenda

- New data types and sources have been adopted without requisite data governance in place.
- Big data technologies are adding governance and ISVs are bringing new governance tools.
- Develop and implement a data governance strategy for all types of data.

Insights - Examples

- Key Insight: "45% of organizations spend most time they devote to analytics on reviewing data."
- Best Practices: "Look for tools to enable collaborative work among the data governance team."

Market Research

- Benchmark: Data Preparation (Q2), Big Data for Business (Q3)
- Dynamic Insights: Data Lakes (Q3)
- Value Index: Data Preparation (Q2)

Data Preparation

Data Preparation

Overview

- Data Preparation enables organizations to convert data and information into usable formats to maximize the value of analyses and operational use of the data.

Agenda

- End users expect to access data sources directly without requiring support from IT.
- Data preparation make data more accessible and info. lifecycle value to business and IT.
- Establish data preparation for information responsiveness.

Insights - Examples

- Key Insight: “Only 1/4 of organizations said they are very confident that they have the people and resources needed to improve availability of information.”
- Best Practices: “In order to improve results, be sure to first profile your data sets, find patterns in data, and explore new methods to manipulate data for preparation.”

Market Research

- Benchmark: Data Preparation (Q2)
- Value Index: Data Preparation (Q2)

Data Science

Data Science

Overview

- Data Science applies advanced analytical techniques, including statistics, predictive analytics and machine learning to extract insights from large volumes of data.

Agenda

- Analytics and data science continue to rise in importance with big data.
- Machine learning optimizes actions, decisions and processes with fewer resources.
- Exploit machine learning on big data for business and continuous optimization.

Insights - Examples

- Key Insight: “Over half (52%) of organizations lack resources to implement changes to predictive analytics.”
- Best Practices: “Include training in plans for adopting predictive analytics tools.”

Market Research

- Benchmark: Next Generation Predictive Analytics and Data preparation (2017)
- Dynamic Insights: Machine Learning (Q2)
- Value Index: Business Analytics (Q2)



Information Management

Overview

- Information Management empowers organizations to manage increasing volumes of data and assemble information for business use

Agenda

- IoT and data science drive demands for large volumes of structured and unstructured data.
- Big data technologies continue to proliferate for streaming, at-rest and in-memory data.
- Utilize big data technologies and storage methods to embrace all types of data.

Insights - Examples

- Key Insight: “Two third of organizations manage information assets using a custom internal process; such processes often are rigidly built and hard to adapt to changing needs.”
- Best Practices: “Maximizing your information optimization requires involving all stakeholders, such as the end-user and management, in order to ensure all requirements are met.”

Market Research

- Benchmark: Big Data Integration, Big Data for Business (Q3)
- Dynamic Insights: Streaming Data (Q3)

Internet of Things

Internet of Things

Overview

- The Internet of Things (IoT) extends digital connectivity to devices and sensors in homes, businesses, vehicles and potentially anywhere enabling devices to transmit data, to which analytics can be applied facilitating monitoring and a range of operational functions.

Agenda

- An increasing number of devices are instrumented and connected.
- Big data and streaming tech. combined with data science to enable continuous analytics.
- Utilize machine data and IoT data to enable operational intelligence.

Insights - Examples

- Key Insight: “Organizations (43%) uses BI tools rather than specialized IoT tools.”
- Best Practices: “Organizations using advanced tools reported satisfaction more often than did users of more traditional tools.”

Market Research

- Benchmark: IoT and Operational Intelligence, Next Generation Predictive Analytics
- Dynamic Insights: Streaming Data (Q3), Machine Learning (Q2)



Big Data for LOB

Big Data for Customer Experience

- Use of Internet of Things is generating volumes of data that can provide new insights.
- Applying streaming analytics can generate real time processing for operational intelligence.
- Determine how use of digital technology can increase the customer experience.

Big Data for Finance

- Use of in-memory computing has increased the computing potential of finance.
- Advancements in data preparation have assisted the analytics process for finance.
- Finance should examine the role of big data to optimize the close process.

Big Data for Human Capital Management

- Applying data science to HCM helps provide actionable insights to engage and retain workers.
- Using data governance can assist in the process of ensuring quality employee information.
- Apply data integration and cloud computing to facilitate employee master data management.

Big Data for LOB

Big Data for Marketing

- Use of data science on marketing data enables optimization of operations.
- Applying machine learning to predict to guide actions to maximize marketing performance.
- Prioritize the use of big data to increase the conversion of customer interactions.

Big Data for Operations and Supply Chain

- Advancing information management for products increase value of supply chain processes.
- Use of data governance for demand and supply chain processes increase efficiency.
- Determine where to apply big data processes for gaining value from information assets.

Big Data for Sales

- Use of analytics on sales data can increase the potential sales outcomes.
- Applying machine learning and predictive analytics can generate most effective insights.
- Assess the effectiveness of big data to help lead the actions needed to optimize sales.

Technology Areas for Big Data & Information Mgt

Big Data Technologies

- Appliances
- DBMS
- Hadoop
- In-memory computing
- NoSQL
- Spark

Integration

- Application
- Data and events
- Enterprise and department
- Cloud and IaaS

Master Data Management

- Enterprise
- Customer
- Product
- Employee

Analytics

- Advanced and predictive analytics
- Discovery and exploratory
- Location and geospatial
- Machine data

Content and Text

- Extraction and integration
- Analytics and discovery
- Presentation and consumption

Event and Stream Computing

- Complex Event Processing (CEP)
- Analytics
- Integration
- Notification and alerts
- Visualization

Research for Big Data & Information Management

Benchmark Research

- Data Preparation (2017)
- Big Data for Business (2017)
- Business Analytics (2017)
- Internet of Things
- Data and Analytics in Cloud
- Next Gen. Predictive Analytic

Dynamic Insights Research

- Machine Learning (2017)
- Streaming Data (2017)
- Data Lakes (2017)

Value Index Research

- Data Preparation (2017)
- Analytics and BI (2017)



Questions?



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