Ventana Research

Big Data and Information Management Research in 2017

Setting the annual expertise and topic agenda

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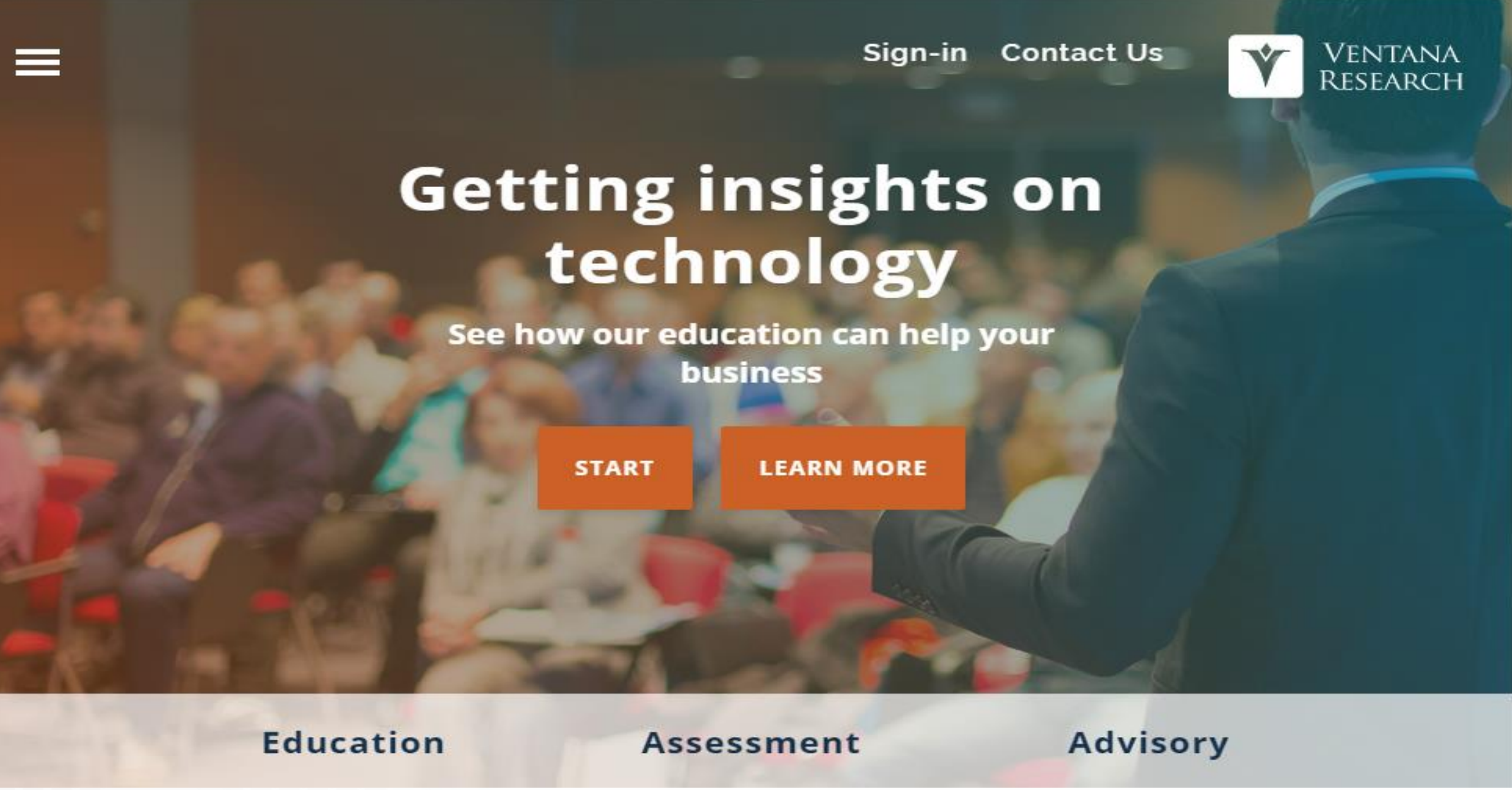

Services for Users and Providers

Technology Users

- Advice and Guidance
- Benchmark Assessment
- Educational Workshops
- Research Reports
- Speaking Services
- Technology Assessments
- Vendor Selection Guidance

Technology Suppliers

- Advice and Guidance
- Benchmark Services
- Content Services
- Education on/to Market
- Speaking Services
- Strategic Consulting
- Technology Insight Services

Ventana Research Expertise Framework

	Sales	Marketing	Operations & Supply Chain	Customer Experience	Human Capital Management	Office of Finance
	Digital Commerce	Digital Commerce	Enterprise Resource Planning	Contact Center	H R M S	ERP & Continuous Accounting
	Product Information Management	Digital Marketing	Continuous Planning	Customer Analytics	Learning Management	Continuous Planning
	Sales Enablement & Execution	Marketing Performance Management	Inventory Optimization	Customer Engagement	Payroll Optimization	Financial Performance Management
	Sales Performance Management	Mobile Marketing	Product Information Management	Digital Commerce	Total Compensation Management	Price & Revenue Management
	Sales Planning & Analytics	Pricing & Promotion Management	Sales & Operations Planning	Subscription Billing	Work & Resource Management	Revenue Recognition
	Subscription Billing	Product Information Management	Work & Resource Management	Workforce Optimization	Workforce Management	Subscription Billing
Analytics	Business Intelligence	Cloud Computing	Collaboration	Data Science	Internet of Things	Mobile
Big Data	Data Integration	Data Governance	Data Preparation	Data Science	Information Management	Internet of Things
Digital Technology	Analytics	Big Data	Cyber Security	Machine Learning & Cognitive Computing	Robotic Process Automation	Wearable Computing

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:

- Big Data with Sales and Marketing in Data Preparation.
- Big Data with Customer Experience and Sales in Internet of Things.
- Big Data with Finance and Operations and Supply Chain in Data Integration.

David Menninger
SVP & Research Director

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David is responsible for the overall research direction of data, information and analytics technologies at Ventana Research covering major areas including Analytics, Big Data, Business Intelligence and Information Management along with the additional specific research categories including Information Applications, IT Performance Management, Location Intelligence, Operational Intelligence and IoT, and Data Science. David is also responsible for examining the role of cloud computing, collaboration and mobile technologies as they affect these areas. David brings to Ventana Research over twenty-five years of experience, through which he has marketed and brought to market some of the leading edge technologies for helping organizations analyze data to support a range of action-taking and decision-making processes. Prior to joining Ventana Research, David was the Head of Business Development & Strategy at Pivotal a division of EMC, VP of Marketing and Product Management at Vertica Systems, Oracle, Applix, InforSense and IRI Software. David earned his MS in Business from Bentley University and a BS in Economics from University of Pennsylvania.

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.

Research 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 brining 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.

Research 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 Research

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: 2/3 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 (2017)
- Value Index: Data Preparation (2017)

Data Governance Research

Data Governance

Overview

- Data Governance ensures than 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 brining 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 (2017), Big Data for Business (2017)
- Dynamic Insights: Data Lakes (2017)
- Value Index: Data Preparation (2017)

Data Preparation Research

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 (2017)
- Value Index: Data Preparation (2017)

Data Science Research

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: 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 (2017)
- Value Index: Business Analytics (2017)

Information Management Research

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: 2/3 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 (2017)
- Dynamic Insights: Streaming Data (2017)

Internet of Things Research

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 (2017), Machine Learning (2017)

Big Data for LOB

Big Data for Sales Expertise

- Centralizing data for sales to use across applications and analytics will improve efficiency.
- Simpler big data technologies operating in the cloud make it easier for sales to operate.
- Determine the data related efficiency in sales and make a plan for improvement.

Big Data for Customer Experience

- Big data allows the processing of large volumes of all forms of customer data.
- Big data techniques allows all users to share information based on the same data.
- Use to big data to process structured and unstructured data, and unify for single view.

Big Data for Human Capital Management

- Centralizing data about employees and work can support wide range of analytics.
- Simplification of big data technologies has created the ability to unify data and processes.
- Use big data to optimize data and integration strategies across HCM.

Big Data for LOB

Big Data for Marketing Expertise

- Centralizing data for sales to use across applications and analytics will improve efficiency.
- Simpler big data technologies operating in the cloud make it easier for sales to operate.
- Determine the data related efficiency in sales and make a plan for improvement.

Big Data for Finance

- Utilizing large volumes of transactions data well adds competitive capabilities.
- Predictive analytics, PRO, deeper visibility all enable differentiated strategy and operations.
- Companies must develop internal expertise to utilize big data analytical capabilities.

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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