

Big Data Executive Survey

Full Questionnaire

*Big Data Executive Survey – Full Questionnaire***Welcome**

The survey has been designed to provide a benchmark for enterprises seeking to understand the state of Big Data initiatives among peer institutions:

- How much are enterprises investing in Big Data initiatives?
- What are the initial applications, kinds of data, and approaches that enterprises are employing for their Big Data initiatives?
- Where do organizations stand in terms of the comparative maturity of their Big Data initiatives and their rate of progress?

The survey should take no more than 30 minutes to complete. Respondents will remain anonymous and responses, either at a responder or company level, will not be shared or identified.

Tips:

- If you need to leave the survey for any reason, simply re-use the link provided and you will return where you left off.
- If, while responding to the survey, you want to review or change your answer to a previous question, use the navigation buttons at the bottom of the page.

1) Your response should reflect your direct domain of knowledge or responsibility within your organization – enterprise-wide, line-of-business, functional area. What part of your company are you representing in this survey?*

- ☐ Whole enterprise
- ☐ Line of Business - which one?: _____
- ☐ Functional area - which one?: _____

2) We recognize that your company is large, complex and has diverse markets. As you respond to this survey, are you principally answering it for your B2C businesses, your B2B (including B2B2C) businesses or both?*

- ☐ Only B2C
- ☐ Mostly B2C
- ☐ Both, about evenly
- ☐ Mostly B2B
- ☐ Only B2B

Current State - Data and Analytics

3) How would you rate the access to relevant, accurate and timely data in your company today?

- ☐ minimal
- ☐ less than adequate
- ☐ adequate
- ☐ more than adequate
- ☐ world class

4) How would you rate the **analytic capabilities in your company today?**

- ☐ minimal
- ☐ less than adequate
- ☐ adequate
- ☐ more than adequate
- ☐ world class

5) How would you rate your company on the **ability, by executives and business leaders, to use data and analytics to improve or transform the business?**

- ☐ minimal
- ☐ less than adequate
- ☐ adequate
- ☐ more than adequate
- ☐ world class

6) What business functions in your company are the most important users of data and analytics? (check all that apply)

- ☐ eCommerce, eBusiness, Digital Operations
- ☐ Direct and Digital Marketing
- ☐ Fraud Management
- ☐ Customer and Market Analysis
- ☐ Customer Service
- ☐ Product Development/Management
- ☐ Information Technology
- ☐ Operations
- ☐ Risk Management
- ☐ Human Resources
- ☐ Other

7) Approximately how many staff in your company are dedicated to analytics, modeling, data mining (not including routine reporting)?

- ☐ 50 or fewer
- ☐ 51-100
- ☐ 101-250
- ☐ 251-500
- ☐ 501-1000
- ☐ 1001-2000
- ☐ More than 2000

8) Of these staff, are most working in or for your consumer facing (B2C) businesses, your commercial or wholesale (B2B) businesses or both?

- ☐ Only B2C
- ☐ Mostly B2C
- ☐ Both, about evenly
- ☐ Mostly B2B
- ☐ Only B2B

What is Big Data

Big Data is a term used to describe data sets so large, so complex or that require such rapid processing (sometimes called the Volume/Variety/Velocity problem), that they become difficult or impossible to work with using standard database management or analytical tools. Manipulating data sets like these often require massively parallel software running on tens, hundreds, or even thousands of servers.

Big Data growth includes the explosion of social media, video, photos, unstructured text in addition to the data gathered by ubiquitous sensing devices including smart phones. Among the many difficulties associated with Big Data are capture, storage, search, sharing, analysis, and data visualization.

9) What is considered Big Data may vary depending on the capabilities of the organization. Are there ways in which your definition of Big Data differs markedly from the one above? If so, in what ways?

10) What do you think is the biggest opportunity for using Big Data in your company?

11) What do you think is the biggest business challenge for using Big Data?

12) Do you have any Big Data initiatives in progress or in planning?*

- ☐ Yes, initiatives in progress
- ☐ Yes, initiatives in planning
- ☐ No initiatives underway or planned

Initiatives

13) What is the role of Big Data initiatives in your organization? (check one)

- ☐ Planned only
- ☐ Proof-of-Concept for evaluation
- ☐ Sandbox for ad-hoc analytics
- ☐ BI/Analytics platform for production reporting
- ☐ Part of business-critical operational system
- ☐ Automated production system with 24/7 availability
- ☐ Other: _____

14) In 3 years what role will Big Data play in your organization? (check one)

- ☐ Proof-of-Concept for evaluation
- ☐ Sandbox for ad-hoc analytics
- ☐ BI/Analytics platform for production reporting
- ☐ Part of business-critical operational system
- ☐ Automated production system with 24/7 availability
- ☐ Other: _____

15) What is the intended scope of your Big Data initiatives? (check one)

- ☐ Use across many LOBs and functions
- ☐ Use across a few LOBs or functions
- ☐ Use within an LOB or function
- ☐ Pilot sponsored at a corporate level
- ☐ Pilot or skunkworks inside an LOB or function
- ☐ Other: _____

16) What business functions in your company are driving Big Data initiatives? (check all that apply)

- ☐ eCommerce, eBusiness, Online Operations
- ☐ Direct and Online Marketing
- ☐ Fraud Management
- ☐ Customer and Market Analysis
- ☐ Customer Service
- ☐ Product Development/Management
- ☐ Information Technology
- ☐ Operations
- ☐ Risk Management
- ☐ Other

17) Is Big Data associated with another enterprise-wide program? If so, which program(s)?

- ☐ No
- ☐ Yes: _____

18) At what level in the organization does Big Data "thought leadership" reside? (check one)

- ☐ Corporate, C-suite (CEO or 1 level down)
- ☐ LOB or function head (2 to 3 down)
- ☐ Department within LOB or function (4 down)
- ☐ Deeper in organization (5 or more down)
- ☐ Other: _____

19) Does thought leadership on Big Data come from IT or the rest of the business? (check one)

- ☐ Mostly business-driven, with minimal IT support
- ☐ Business/IT collaboration
- ☐ Mostly IT driven, with minimal business involvement
- ☐ No one

20) Specifically, who owns or drives the thought leadership on Big Data? (check one)

- ☐ Chief Financial Officer
- ☐ Head of Risk function
- ☐ Chief Information Officer
- ☐ Chief Data Officer
- ☐ Head of Analytics function
- ☐ Chief Technology Officer or Chief Architect
- ☐ Other: _____

Benefits

21) What tangible benefits do you hope to achieve through your Big Data initiatives? (rank all that apply - most important to least important)

- _____ Improved customer experience
- _____ Increased sales
- _____ Higher quality products and services
- _____ New product innovations
- _____ More efficient operations
- _____ Better, fact-based decisionmaking
- _____ Reduced risk

22) In 3 years, what tangible benefits do you hope to achieve through your Big Data initiatives? (rank all that apply - most important to least important)

- _____ Improved customer experience
- _____ Increased sales
- _____ Higher quality products and services
- _____ New product innovations
- _____ More efficient operations
- _____ Better, fact-based decisionmaking
- _____ Reduced risk

23) Do you have a business case for any Big Data initiatives? (check one)

- ☐ Yes, with a proven ROI
- ☐ Yes, with a projected ROI
- ☐ Yes, with intangible benefits only
- ☐ No business case

24) How do you plan to measure the success of your Big Data initiatives? (check all that apply)

- ☐ With quantitative metrics tied to business performance
- ☐ With qualitative metrics tied to business performance
- ☐ With quantitative metrics tied to IT performance
- ☐ With qualitative metrics tied to IT performance
- ☐ No specific measurement methodology in place
- ☐ Other; if so, how?

25) In any of the areas below, are there significantly greater concerns about Big Data initiatives as compared to any new application or system? (check all that apply)

- ☐ Security
- ☐ Privacy
- ☐ Operational Risk
- ☐ Execution Risk
- ☐ Other; if so, what are they?

Data

26) What are the primary data issues driving you to consider Big Data? (rank all that apply – from most important to least important)

- _____ Analyzing data sets < 1TB
- _____ Analyzing data sets 1TB - 100TB
- _____ Analyzing data sets 100TB - 1PB
- _____ Analyzing data sets > 1PB
- _____ Analyzing new data types (text, relationship, time-series)
- _____ Analyzing streaming data
- _____ Analyzing data from diverse sources

27) In 3 years, what primary data issues will be driving you to consider Big Data? (rank all that apply – from most important to least important)

- _____ Analyzing data sets <1TB
- _____ Analyzing data sets 1TB - 100Tb
- _____ Analyzing data sets 100TB - 1PB
- _____ Analyzing data sets >1PB
- _____ Analyzing new data types (text, relationship, time-series)
- _____ Analyzing streaming data
- _____ Analyzing data from diverse sources

28) What types of data are you considering for Big Data technologies? (rank all that apply – from most important to least important)

- _____ Transactions
- _____ Clickstream
- _____ Unstructured content from email, office documents, etc
- _____ Voice / Audio data
- _____ Social media (Facebook, Twitter, etc) data
- _____ Sensor / Machine / Device Data
- _____ Locational / Geospatial Data
- _____ Scientific / Genomic data
- _____ Image (large Video / Photo) Data

29) In 3 years, what types of data will be deployed in Big Data technologies? (rank all that apply – from most important to least important)

- _____ Transactions
- _____ Clickstream
- _____ Unstructured content from email, office documents, etc
- _____ Voice / Audio data
- _____ Social media (Facebook, Twitter, etc) data
- _____ Sensor / Machine / Device Data
- _____ Locational / Geospatial Data
- _____ Scientific / Genomic data
- _____ Image (large Video / Photo) Data

30) What data domains are you most focused on in Big Data initiatives? (check all that apply)

- ☐ Customer/Prospect Data
- ☐ Customer Transactions
- ☐ Channel Data
- ☐ Market and Competitive Data
- ☐ Product Data
- ☐ Service Data
- ☐ Supply Chain Data
- ☐ Fraud Detection
- ☐ Industry Specific Data - please specify

31) What type of data do you think is the best starting point for using Big Data in your company?

32) In 3 years, what data domains will you be most focused on? (check all that apply)

- ☐ Customer/Prospect Data
- ☐ Customer Transactions
- ☐ Channel Data
- ☐ Market and Competitive Data
- ☐ Product Data
- ☐ Service Data
- ☐ Supply Chain Data
- ☐ Fraud Detection
- ☐ Industry Specific Data - please specify

33) What data structures and standards are of particular interest in your Big Data initiatives? (rank all, if any, that apply – from most important to least important)

- _____ Flat-File
- _____ Relational
- _____ Unstructured text
- _____ Time-series
- _____ Graphs
- _____ Semantic Web
- _____ XML
- _____ Multimedia
- _____ Proprietary

34) In 3 years, what data structures and standards will be used? (rank all that apply – from most important to least important)

- _____ Flat-File
- _____ Relational
- _____ Unstructured text
- _____ Time-series
- _____ Graphs
- _____ Semantic Web
- _____ XML
- _____ Multimedia
- _____ Proprietary

35) What data challenges are you addressing with Big Data? (rank all that apply – from most important to least important)

- _____ Integrating a wider variety of data
- _____ Cleansing data
- _____ Using more current data
- _____ Storing more historical data
- _____ Understanding unstructured data
- _____ Using real-time data
- _____ Using more granular data
- _____ Using higher quality data
- _____ Understanding streaming data

36) In 3 years, what data challenges will you be addressing with Big Data? (rank all that apply – from most important to least important)

- _____ Integrating a wider variety of data
- _____ Cleansing data
- _____ Using more current data
- _____ Storing more historical data
- _____ Understanding unstructured data
- _____ Using real-time data
- _____ Using more granular data
- _____ Using higher quality data
- _____ Understanding streaming data

Platforms

Big Data technology platforms have functionality for data management and for analytical processing. The following questions address your priorities for these capabilities.

37) What data management functions / features are you most important to you? (check all that apply)

- ☐ High-capacity, inexpensive storage
- ☐ High-performance, inexpensive processing power
- ☐ High-velocity data stream processing
- ☐ Data integration and quality capabilities
- ☐ Relational database acceleration / scale
- ☐ Unstructured text management and search
- ☐ Other

38) Do you run or plan to run your Big Data applications on premises or in the cloud? (check one)

- ☐ On-premises
- ☐ Hosted/private cloud
- ☐ Public cloud
- ☐ Don't know

39) What data management approaches are you considering? (check all that apply)

- ☐ Distributed File (e.g., Hadoop, Grid); if so, which one?
- ☐ Specialized Relational (e.g., Appliances, Columnar, In-Memory); if so, which one?
- ☐ Traditional Relational; if so, which one?
- ☐ Other; if so, which one?

Analytics**40) What analytic benefits are driving the use of Big Data? (rank all that apply - from most to least important)**

- _____ Significantly faster analytics
- _____ More accurate models and insights
- _____ New discoveries and insights

41) In 3 years, what analytic benefits will drive the use of Big Data? (rank all that apply - from most to least important)

- _____ Significantly faster analytics
- _____ More accurate models and insights
- _____ New discoveries and insights

42) For what types of analyses do you want to use Big Data? (check all that apply)

- ☐ Real time analytics and alerts
- ☐ Ability to analyze text
- ☐ Ability to analyze relationships
- ☐ Ability to analyze very large data sets
- ☐ Ability to analyze disparate data sets
- ☐ Ability to analyze external data sets
- ☐ Ability to evaluate new analytic algorithms
- ☐ Other

43) In 3 years, what types of analyses on Big Data will be used? (check all that apply)

- ☐ Real time analytics and alerts
- ☐ Ability to analyze text
- ☐ Ability to analyze relationships
- ☐ Ability to analyze very large data sets
- ☐ Ability to analyze disparate data sets
- ☐ Ability to analyze external data sets
- ☐ Ability to evaluate new analytic algorithms
- ☐ Other

44) What types of Analytics products are you using or considering? (check all that apply)

- ☐ Statistical or Mathematical packages (e.g., SAS, R, Matlab); if so, which one?
- ☐ Data visualization products (e.g., Tableau, Spotfire); if so, which one?
- ☐ Streaming analytics; if so, which one?
- ☐ Custom analytics; if so, describe?
- ☐ Other; if so, describe?

45) What analytic functions/features are most important to you? (check all that apply)

- ☐ Advanced analytics algorithms
- ☐ Data visualization
- ☐ Machine learning
- ☐ Executing existing algorithms faster
- ☐ Text analytics
- ☐ Social network analytics
- ☐ Executing existing algorithms on much larger data sets
- ☐ Other; if so, what features?

46) Do you plan to use 3rd party applications or develop your own? (check all that apply)

- ☐ 3rd Party Applications
- ☐ Custom developed in-house
- ☐ Custom developed through partner
- ☐ Other

47) What programming languages/tools will you use for development? (check all that apply)

- ☐ Traditional languages (e.g., Java, C, C++)
- ☐ SQL
- ☐ Scripting Languages (e.g., Python, Perl)
- ☐ Open-source Libraries
- ☐ Product-specific Languages / Libraries
- ☐ Proprietary Language / Libraries
- ☐ Other; if so, which one?

People**48) How challenging is it to source analytical skills in general?**

- ☐ no issues in finding skilled resources
- ☐ somewhat challenging
- ☐ challenging
- ☐ very difficult to find or hire
- ☐ impossible to find or hire sufficient resources

49) Data science is a discipline, still somewhat loosely defined, that incorporates applying varying degrees of statistics, data visualizations, computer programming, data mining, machine learning, and database engineering to solve complex data problems. Are you hiring or planning to hire Data Scientists?

- ☐ Yes
- ☐ No

50) How challenging is it to source Data Scientists?

- ☐ no issues in finding skilled resources
- ☐ somewhat challenging
- ☐ challenging
- ☐ very difficult to find or hire
- ☐ impossible to find or hire sufficient resources

51) How are you getting Data Scientist skills into your organization? (check all that apply)

- ☐ Training existing analytics professionals
- ☐ Hiring new people
- ☐ Hiring professional services firm with Big Data analytic expertise
- ☐ Using product vendors professional services team

52) Where are you looking and finding Data Scientists to hire? (check all that apply)

- ☐ Other companies within your industry
- ☐ Silicon Valley, e.g., Facebook, Google
- ☐ Wall Street quant groups
- ☐ Recent PhDs in Math, Sciences or Engineering
- ☐ Recent graduates (BS or MS level) in Math, Sciences or Engineering
- ☐ Other

53) How challenging is it to source IT Data management skills in general, and Big Data skills in particular?

- ☐ no issues in finding skilled resources
- ☐ somewhat challenging
- ☐ challenging
- ☐ very difficult to find or hire
- ☐ impossible to find or hire sufficient resources

54) How are you getting Big Data IT skills into your organization? (check all that apply)

- ☐ Training existing IT professionals
- ☐ Hiring new people
- ☐ Hiring professional services firm with Big Data expertise
- ☐ Using product vendors professional services team

55) How challenging is it to find business managers and executives who can identify and leverage the business opportunities in Big Data?

- ☐ no issues in finding skilled resources
- ☐ somewhat challenging
- ☐ challenging
- ☐ very difficult to find or hire
- ☐ impossible to find or hire sufficient resources

Execution**56) How are your Big Data initiatives staffed and managed? (check one)**

- ☐ All internal
- ☐ Mostly internal, with some help from third parties
- ☐ Mostly third parties under our direction and supervision
- ☐ All third parties with minimal supervision
- ☐ Don't know
- ☐ Other: _____

57) Do you manage your Big Data initiatives using the same Project Management and Development Lifecycle standards as other application development or system integration projects?

- ☐ Yes, the same
- ☐ No, different
- ☐ Don't know

58) How are you thinking about Big Data capabilities with respect to **Advanced Analytics (data mining, predictive modeling, etc.) initiatives? (check one)**

- ☐ Big Data is a part of the Advanced Analytics toolbox
- ☐ Big Data and Advanced Analytics are separate things
- ☐ Big Data is unproven while Advanced Analytics is a part of core business operations
- ☐ Don't know
- ☐ Other: _____

59) How are you thinking about Big Data with respect to overall **Data Management activities? (check one)**

- ☐ Big Data is an integral part of overall Data Management
- ☐ Big Data and Data Management activities are separate but somewhat coordinated
- ☐ Big Data and our Data Management practices are separate.
- ☐ Don't know
- ☐ Other: _____

60) Do your Big Data applications stand on their own or are they tightly integrated or embedded with any major systems? (check one)

- ☐ Enterprise applications (ERP, CRM)
- ☐ Business processes (BPM)
- ☐ Business rules (BRE)
- ☐ No other system
- ☐ Other major system: _____
- ☐ Don't know

Investment

61) Approximately what is the total budget for Big Data initiatives? (check one)

- ☐ < \$100,000
- ☐ \$100,000 - \$1 Million
- ☐ \$1 Million - \$10 Million
- ☐ >\$10 Million

62) Is this incremental new spending or reallocation?

- ☐ Incremental
- ☐ Reallocation

64) In 3 years what is likely to be the total budget for Big Data initiatives? (check one)

- ☐ < \$100,000
- ☐ \$100,000 - \$1 Million
- ☐ \$1 Million - \$10 Million
- ☐ >\$10 Million

65) In 3 years, will this be incremental new spending or reallocation?

- ☐ Incremental
- ☐ Reallocation

Thank You!

The NewVantage Team