**IBM Global Business Services**
**Business Analytics and Optimization**
Executive Summary

In collaboration with *Saïd Business School at the University of Oxford*

**Saïd Business School**
UNIVERSITY OF OXFORD

IBM Institute for Business Value

# Analytics: The real-world use of big data

*How innovative enterprises extract value from uncertain data*

## Overview

"Big data" – which admittedly means many things to many people – is no longer confined to the realm of technology. Today it is a business imperative. In addition to providing solutions to long-standing business challenges, big data inspires new ways to transform processes, organizations, entire industries and even society itself. Yet extensive media coverage makes it hard to distinguish hype from reality – what is really happening? Our newest research finds that organizations are using big data to target customer-centric outcomes, tap into internal data and build a better information ecosystem.

In industries throughout the world, executives are recognizing the opportunities associated with big data. But despite what seems like unrelenting media attention, it can be hard to find in-depth information on what organizations are really doing. So, we sought to better understand how organizations view big data – and to what extent they are currently using it to benefit their businesses. The IBM Institute for Business Value partnered with the Saïd Business School at the University of Oxford to conduct the 2012 Big Data @ Work Study, surveying 1144 business and IT professionals in 95 countries, and interviewing more than two dozen academics, subject matter experts and business/IT executives.

Two important trends make this era of big data quite different: The digitization of virtually "everything" now creates new types of real-time data across a broad range of industries. In addition, today's advanced analytics technologies and techniques enable organizations to extract insights from data with previously unachievable levels of sophistication, speed and accuracy.

Across all industries and geographies, our study found that organizations are taking a business-driven and pragmatic approach to big data. The most effective big data solutions identify business requirements first, and then tailor the infrastructure, data sources and analytics to support the business opportunity. These organizations extract new insights from existing and newly available internal sources of information, define a big data technology strategy and then incrementally extend the sources of data and infrastructures over time.
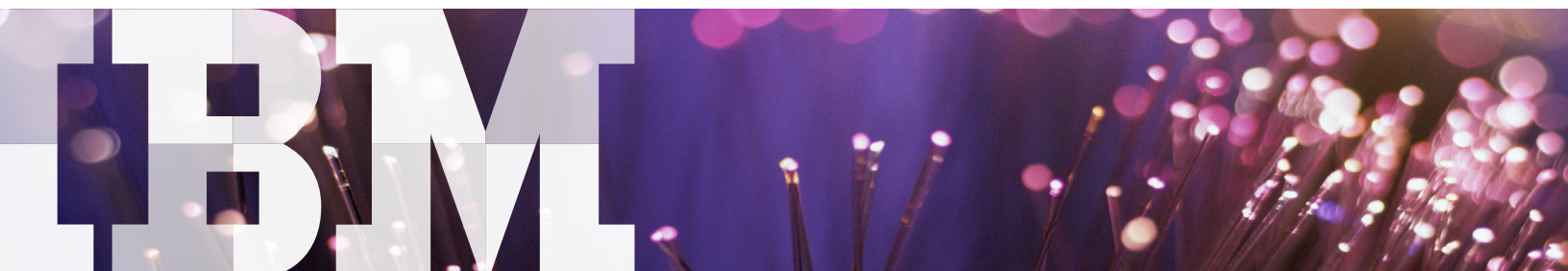
Our Big Data @ Work survey confirms that most organizations are currently in the early stages of big data planning and development efforts, with the majority focused either on understanding the concepts (24 percent) or defining a roadmap related to big data (47 percent). However, 28 percent of respondents are in leading-edge organizations who are implementing big data pilots, proofs of concepts (POCs) or have already implemented big data solutions at scale (see Figure 1).
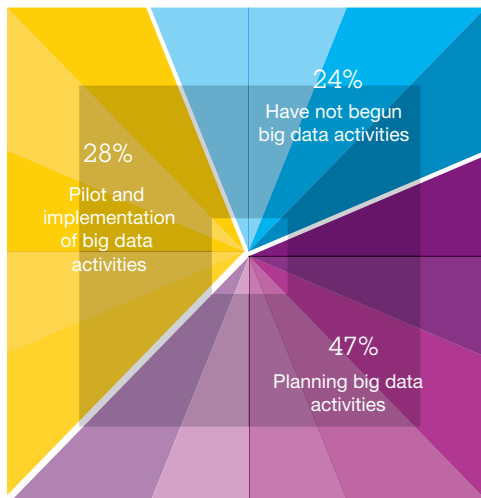
By analyzing survey responses, we identified five key study findings that depict some common and interesting trends and insights:

- Across industries, the business case for big data is strongly focused on addressing customer-centric objectives
- A scalable and extensible information management foundation is a prerequisite for big data advancement
- Organizations are beginning their pilots and implementations by using existing internal sources of data
- Advanced analytic capabilities are required, yet often lacking, for organizations to get the most value from big data
- As organizations' awareness and involvement in big data grows, we see a consistent pattern of big data adoption emerging.

## Kick off your big data evolution

Our study findings lead to five key recommendations for organizations to progress their big data efforts and seek the greatest business value from big data:

- Commit initial efforts to high value business-driven outcomes
- Develop an enterprise-wide big data blueprint and roadmap
- Start with existing data to achieve near-term results
- Build broad-based analytics capabilities based on business priorities
- Create a business case based on measurable outcomes.

An important principle underlies each of these recommendations: business and IT professionals must work together throughout the big data journey. The most effective big data solutions identify the business requirements first, and then tailor the infrastructure, data sources, processes and skills to support that business opportunity.

To compete in a consumer-empowered economy, it is increasingly clear that today's organizations must leverage their information assets to gain a comprehensive understanding of markets, customers, products, regulations, competitors, suppliers, employees and more.

Organizations will realize value by effectively managing and analyzing the rapidly increasing volume, velocity and variety of new and existing data, and putting the right skills and tools in place to better understand their operations, customers and the marketplace as a whole. Whatever the starting point, organizations around the world will continue to expand the use of big data to gain business value and competitive advantage in today's globally integrated economy.

*Big data activity*



Respondents were asked to identify the current state of big data activities within their organizations. Percentage does not equal 100% due to rounding. Total respondents=1061

*Figure 1:* **Most organizations are in early stages of big data development efforts.**

## Why IBM?

IBM is uniquely positioned to deliver big data solutions. We are the only firm that brings together the products and services required to deliver on the promise of big data. IBM's purpose-built analytics solutions can handle the volume, velocity and variety of big data to assist your organization to find new insights that create a competitive advantage. Our pre-integrated big data platform reduces the complexity and increases the success rate of big data implementations while enabling enterprise-class scalability and reliability. This pre-built approach also reduces development and integration costs.

IBM also understands information management – it is a core competency. So for big data and other emerging business intelligence technologies, we have the expertise required to help develop an organization's big data business case and blueprint to make the most of previous technology investments and provide a pragmatic roadmap that will guide your short-term and longer-term big data strategy while delivering real, measurable business value along the way. IBM looks forward to working with your organization to explore how you can gain competitive advantage through your big data.

## Why Saïd Business School

At Saïd Business School, at the University of Oxford, we believe it is business that can solve the most difficult problems of the 21st century. We recognise that big data is a business priority, no longer confined to the technologists - it has the ability to profoundly affect commerce in the globally integrated economy. In addition to providing solutions to long-standing business challenges in marketing and operations, big data inspires new ways to transform processes, organisations, entire industries and even society itself.

Faculty at Saïd Business School have been effectively using big data in their research across different academic areas. Being deeply embedded in the University of Oxford, we are also able to tap into other research activities that already address issues concerning the societal and ethical use of big data. In that way, Saïd Business School is building greater insight into how big data is, and can be, used by business not only to create competitive advantage, but also to address the most challenging global problems.

**IBM.**