

A Custom Technology Adoption Profile Commissioned By Oracle | January 2017

The Big Data Imperative

Compressing The Analysis-To-Action Life Cycle

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The Big Data Imperative

OVERVIEW**SITUATION****APPROACH****OPPORTUNITY****CONCLUSIONS**

Overview

Enterprises are making unprecedented investments in big data and analytics. In order to improve business processes and customer experiences, companies aspire to use big data to build predictive and/or pattern recognition models. However, as data scientists strive to increase their rate of experimentation and get their work applied to real-world scenarios, otherwise referred to as operationalizing big data analytics experiments, they are challenged by the tools and, in particular, the availability of both external data sources and integration with internal application sources. Leading enterprises are continuing to look to increase the rate of data experimentation and streamline the process of using models in production.

In this Oracle-commissioned study, Forrester evaluated data science trends across industries and identified key challenges that stand in the way of operationalizing big data experiments.

**Geography**

159 analytics decision-makers from the US, Canada, the UK, Brazil, and Australia

**Company size**

Enterprises with 1,000-plus employees

**Role**

Manager-level and above IT and business decision-makers with responsibility for analytics

**Industry**

Respondents span a range of industries.

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Companies Value Big Data Insights But Haven't Mastered Big Data Innovation

Enterprises have increased their investments in big data and analytics in order to improve their ability to innovate and make better business decisions. Forrester's Global Business Technographics® Data And Analytics Survey, 2016 found that 63% of companies rated improving their ability to innovate as a high or critical priority, and 56% similarly prioritize leveraging big data and analytics in business decision making.

Most organizations lack maturity in the execution of their big data analytics projects. While 42% listed big data as critical to improving business outcomes, only 34% feel that they have the right people and 29% feel they have the culture and processes to support their big data analytics efforts. Additionally, only 28% strongly agreed that they use big data to experiment or test new ideas.



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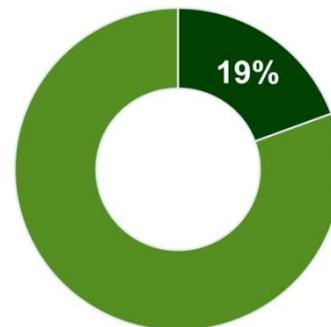
CONCLUSIONS

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Operationalizing Big Data Insights Is A Critical Challenge

Data scientists and analysts struggle to get their insights and models operationalized in production systems. Eighty-three percent of analytics decision-makers in our study agreed or strongly agreed that it is very challenging to move data experiments to production. One of the key contributing challenges is the difficulty in working with siloed data, tools, and systems that limit an organization's ability to integrate data from both internal and external sources. This lack of integration ultimately limits the speed of experimentation.

Only 19% of organizations strongly agreed that they are able to efficiently apply big data insights to operational processes in a timely manner.



To what extent do you agree or disagree with the following statements about your company's use of big data?



Base: 159 analytics decision makers in IT/Business across industries in the US, Canada, UK, Brazil and Australia.
Source: A commissioned study conducted by Forrester Consulting on behalf of Oracle, November 2016

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Challenges For Operationalizing Data Include Disparate Tools, Applications, And Data

Respondents cited a range of challenges for operationalizing data, ranging from technical (including insufficient, blunt tools and a lack of integration) to organizational (including a lack of executive buy-in and a mistrust of analytics and models among business stakeholders).



Tools

- › Large number of independent tools



Applications

- › Challenges embedding analytics in applications



Data

- › Challenges accessing required data
- › Siloed data and/or inconsistent use of data



Business operations

- › Lack of executive sponsorship
- › Lack of confidence in models

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Organizations Actively Seek To Compress Analytics Processes To Increase Rate Of Innovation And Data-Driven Decision Making

Over two-thirds of companies are investing in or planning to invest in platforms to share out data content, data innovation capabilities, and predictive systems. Predictive analytics play a key role — 46% of firms have implemented predictive analytics and another 27% plan to in the next year .



What are your firm's plans for the following data driven initiatives?



Base: 1,553 Analytics decision-makers from enterprises in the US, Canada, UK, Brazil, Australia, and New Zealand

Source: "Forrester's Global Business Technographics Data And Analytics Survey, 2016"

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Conclusion

Big data can be a powerful driver of innovation, but only when an organization has the right systems in place to effectively analyze data and to operationalize big data insights in production systems.

Unfortunately, most companies suffer from disparate tools and data, which act as barriers to their analytics efforts. Decision-makers who are seeking the benefits of big data analytics are investing in integrated analytics platforms and building out processes to facilitate experimentation and sharing.

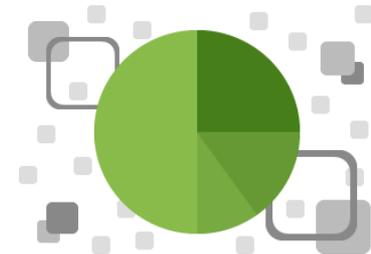
METHODOLOGY

In this study, Forrester conducted a survey of 159 analytics decision-makers from enterprises in the US, Canada, the UK, Brazil, and Australia. They were manager-level or above IT and business decision-makers with responsibility for analytics decision-makers. Respondents were given a small incentive for their time. This study was supplemented by Forrester's Business Technographics Global Data And Analytics Survey, 2016.

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