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**DATA ANALYTICS: BEYOND THE HYPE**  
**A SURVEY OF DATA PROFESSIONALS AND EXECUTIVES**

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September 2016

# DATA ANALYTICS: BEYOND THE HYPE

## A SURVEY OF DATA PROFESSIONALS AND EXECUTIVES



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### Introduction

It is the norm for technology and business publications to discuss the importance of data in today's world. From cutting edge technology services to venerable enterprises that have been in the same industry for generations, businesses are looking to their data to find ways to reduce costs and grow revenues. But while innovative and inspiring stories about use of data to build businesses abound, on the ground the story is often different. What gets lost in the excitement is the reality that it's surprisingly common for analytics projects to fail.

So what is behind that reality? Are business stakeholders happy with the end result of their data investments? How often do projects fail, what causes them to fail, and what opportunities hold promise to change that? Are technology barriers preventing better outcomes to data analytics initiatives?

The following report, sponsored by Snowflake Computing, is based on a survey of 376 individuals with responsibility for data initiatives including 104 executives. The goal of the survey was to understand current experiences, challenges and trends with data analytics initiatives.

### Key Findings

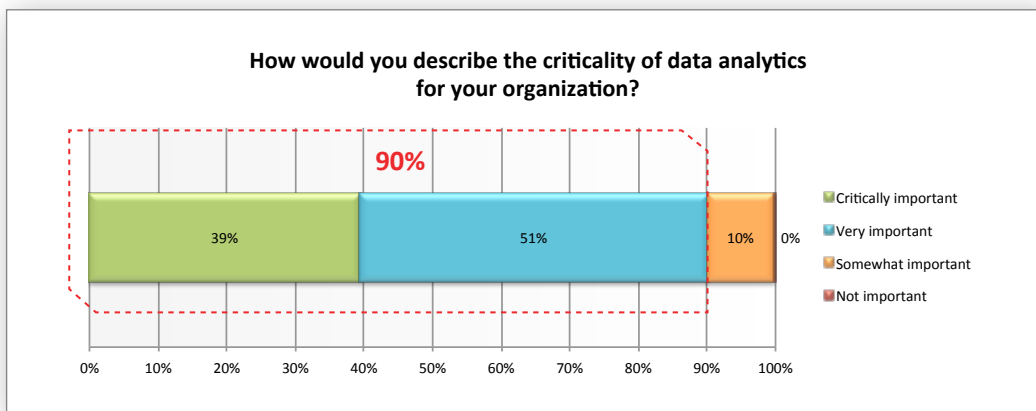
- **Data initiatives are important, but have serious issues**
  - 100% say data analytics is important
  - 48% of executives characterize data analytics as "critically important"
  - 88% have faced "failures" with recent data initiatives
- **Inflexibility of data infrastructure is the underlying cause of many challenges**
  - Data inflexibility tops list of challenges faced by data and analytics teams
  - 59% of executives say their existing analytics infrastructure is too inflexible
  - 75% of executives are prevented from acting on business requests because their data infrastructure is too inflexible
- **Cloud-based analytics could help address barriers to data analytics**
  - 99% find potential benefits of cloud analytics to be compelling
  - 92% would try more things in a pay-as-you-go model licensing model
  - 74% of those that have adopted cloud analytics intend to grow use in the coming year



### Detailed Findings: Data initiatives are important, but face issues

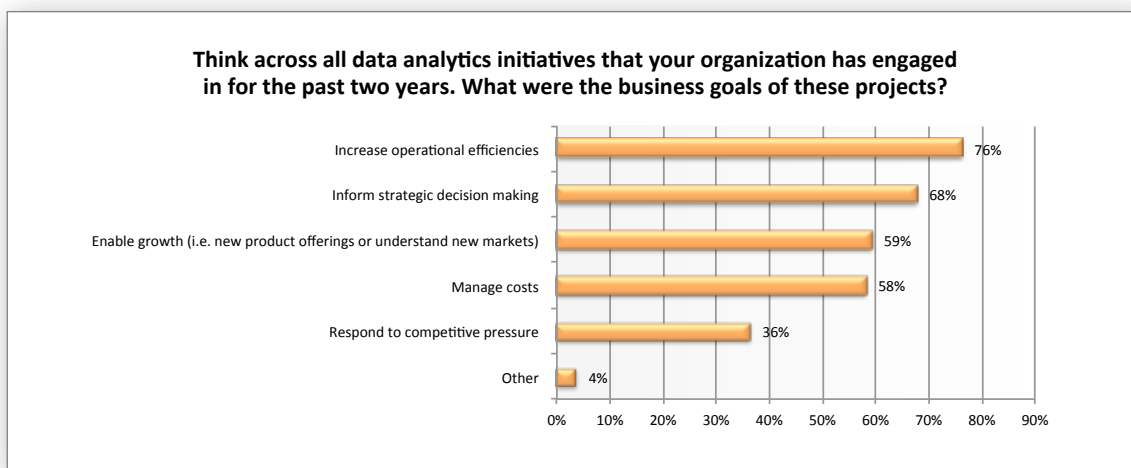
#### Data analytics very important to all

Claims about the importance of data analytics are not simply hyperbole. When asked about the criticality of data analytics, all (100%) technology and analytics stakeholders say that it is indeed important. The vast majority (90%) say that data analytics is very important including almost 4 out of 10 (39%) that say data analytics is critically important to their organization. Among executives this number is even higher with almost half (48%) characterizing data analytics as critically important to their organization.



#### Data analytics investments have wide range of business drivers

The business motivations for investing in data analytics vary tremendously. The business goals behind recent data analytics initiatives range from tactical improvements including finding operational efficiencies (76%) and managing costs (58%), to the strategic including decision making (68%), enabling growth (59%) and responding to competition (36%).

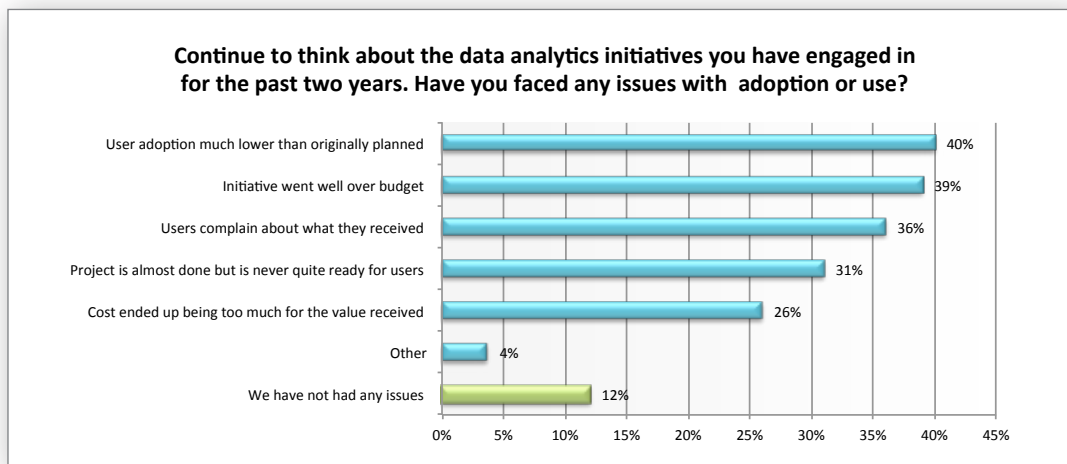




Several participants took the time to write in other business goals in addition to the ones presented. Frequent answers included support for regulatory compliance, managing extreme data growth, and increasing speed of analysis.

### Most have faced “failures” with their data initiatives

However, few organizations have been fully successful rolling out their data analytics initiatives. The vast majority (88%), have had “failed” projects, where they have faced serious issues with adoption or use. These “failures” encompassed several types of issues. Many had dissatisfied users (36%) or users that simply didn’t use the system in the numbers expected (40%). Also common were issues related to costs including initiatives that went over budget (39%) or costs that far exceeded the value received (26%). There were also frequent reports of “zombie projects,” that were almost done but never quite were ready for users (31%).



Other issues reported frequently included projects that took far too long to implement, lack of trust in the data, and being too hard for users to figure out.

### Detailed Findings: Inflexibility of data infrastructure causes many issues

#### Complex, inflexible infrastructure tops lists of challenges

To figure out the underlying cause of these “failures”, we asked about the types of challenges that ultimately impede the success of data analytics initiatives. Once again, issues were very common with almost all (92%) reporting facing at least one of these challenges.

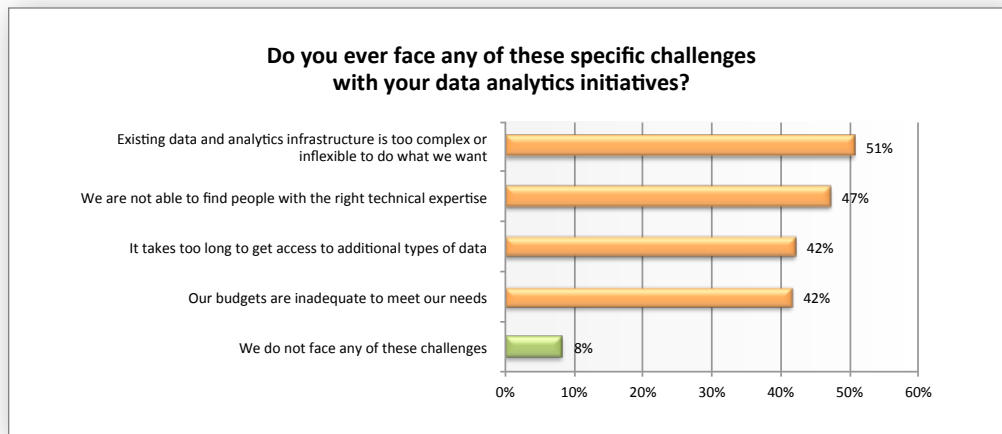
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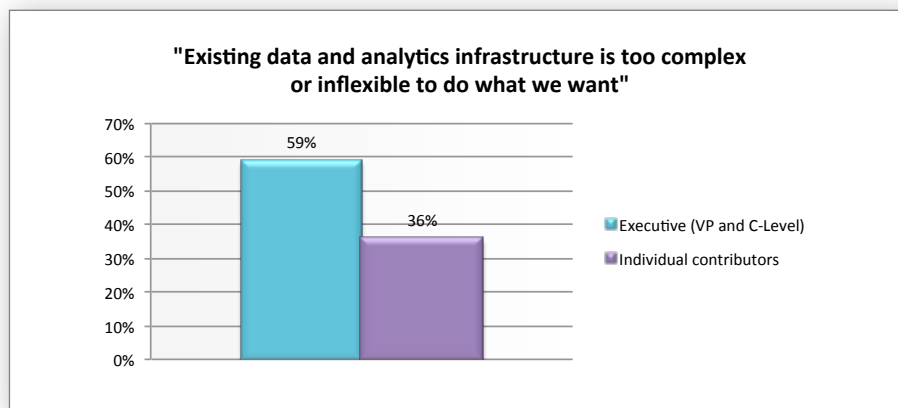


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Topping the list was the inflexibility of existing infrastructure (51%) which prevented these data teams from achieving success with their projects. Also reported frequently were finding expertise (47%), taking too long to access additional data sources (42%), and inadequate budgets (42%).



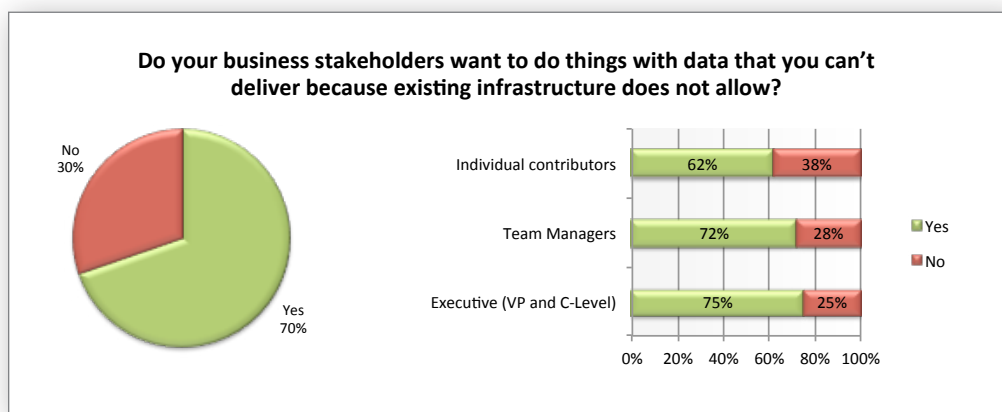
When we compared the responses of senior executives with the frontline staff who do the work, we see an interesting difference emerge. Just over a third (36%) of frontline people who work with the infrastructure on a day-to-day basis reported that inflexible infrastructure was a barrier. At the same time, almost 6 in 10 (59%) of executives saw infrastructure complexity as a challenge. This would appear to indicate that the frontline people are more willing to accept a complex architecture and try to make it work even though it is less than desirable. It's the executives, who are skilled at understanding the big picture impacts, that really grasp the challenges presented by complex and inflexible infrastructure.



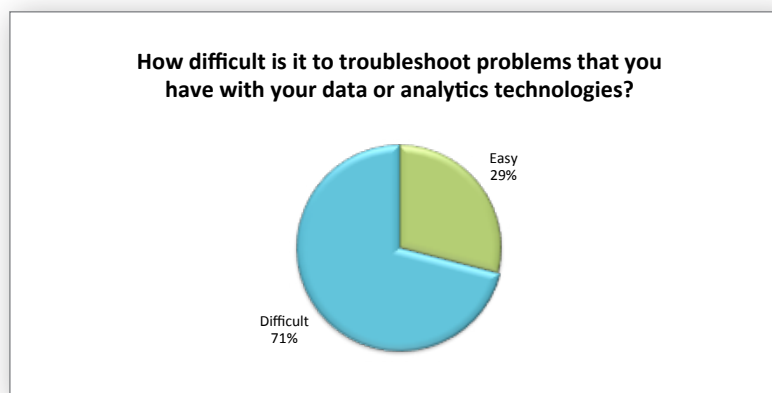


### Infrastructure inflexibility impacts ability to deliver desired analytics

To more fully understand the role of infrastructure inflexibility and the barriers this puts in place for data analytics projects, we asked questions about the impact of existing infrastructure on delivering requests to business stakeholders. The majority of participants reported that this was indeed an issue, with 70% saying that their business stakeholders wanted to do things that existing infrastructure doesn't allow. Again we saw a difference in responses depending on the seniority of participants, with frontline people least likely to report this issue (62%) and senior executives being the most likely (75%).



There are many types of activities that need to be performed to support business stakeholders' analytics needs. One example of inflexible infrastructure causing difficulties is when troubleshooting problems. This is a real challenge, with most participants (71%) saying troubleshooting their data or analytics technologies is difficult.



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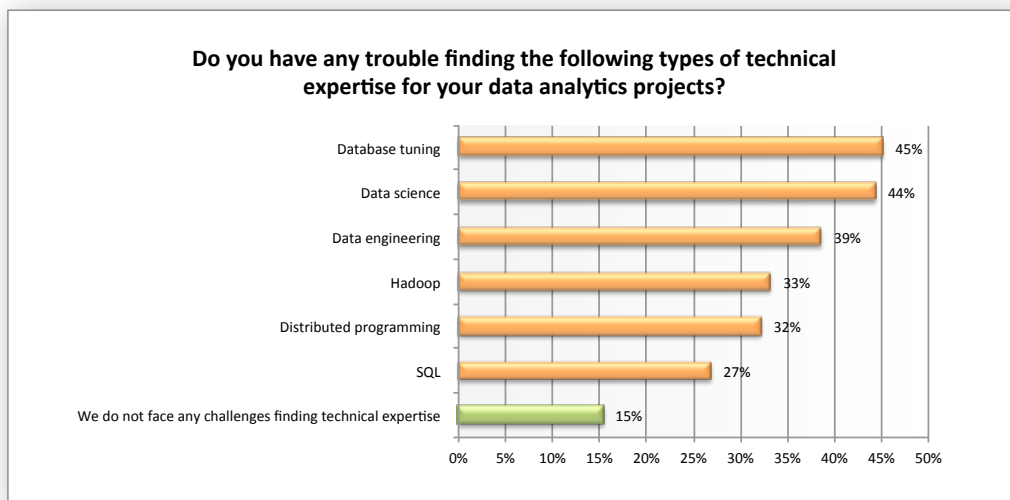
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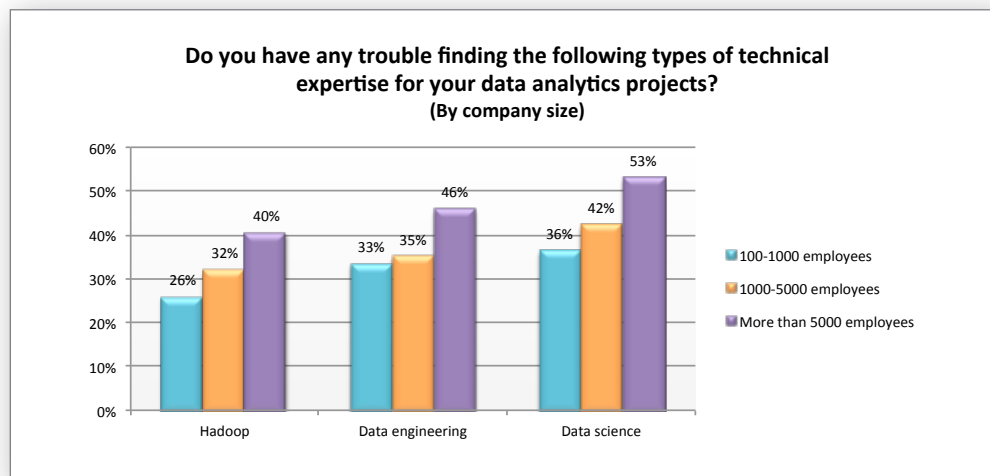
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### Finding skilled people remains a challenge

Even as data initiatives become more critical, finding people with the needed data skills remains a challenge. Most participants (85%) reported that they had difficulties finding technical expertise, particularly in areas like database tuning (45%), data science (44%), and data engineering (39%). The area where the fewest number of participants reported issues with hiring was expertise with SQL (27%).



This resource shortage becomes more pronounced at large companies, particularly in the skills needed for projects requiring Hadoop, data engineering and data science expertise.

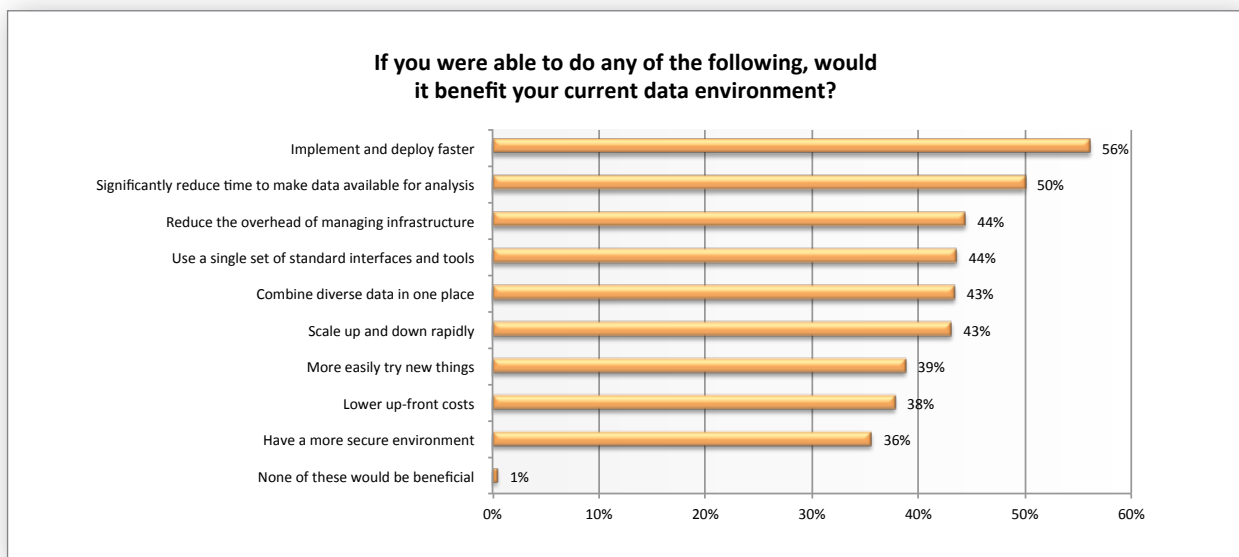




### Detailed Findings: Cloud provides opportunities for better analytics

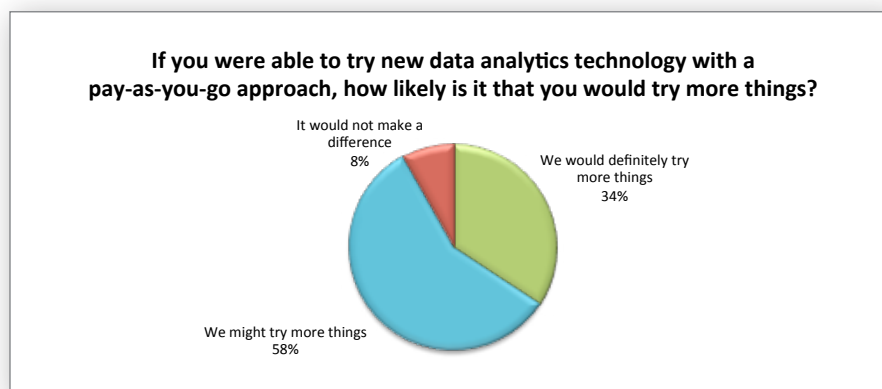
#### Almost all find the potential benefits of cloud analytics compelling

There are many changes that would help current data environments including the ability to implement and deploy faster (56%), reduce time to make data available (50%), simplify tool sets (44%) or reduce the overhead of managing infrastructure (44%). What all of these have in common is that cloud analytics has the potential to deliver these benefits since the types of infrastructure inflexibility issues that can cause data projects to fail are handled by experts that focus only on these issues.



#### “Pay-as-you-go” is compelling for more reasons than cost

One of the most compelling advantages of a cloud approach is flexibility of licensing. It is easy to pay for just what you need while you ramp up on a technology rather than making an up-front investment. In general, our participants were positive about pay-as-you-go licensing, but interestingly this was not just about saving money. The vast majority (92%) said pay-as-you-go would enable them to try more things with their analytics.



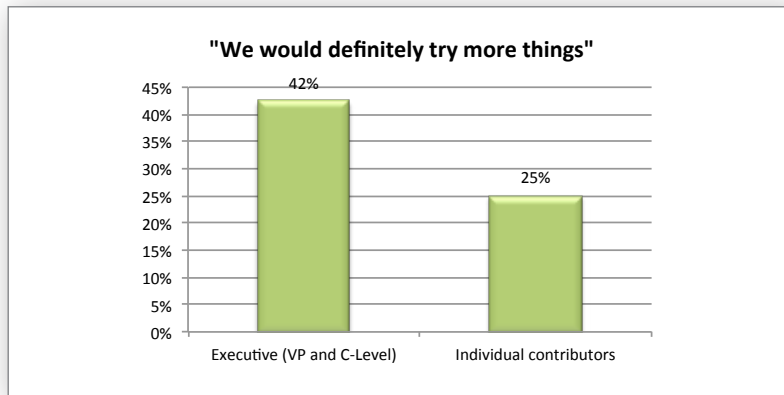
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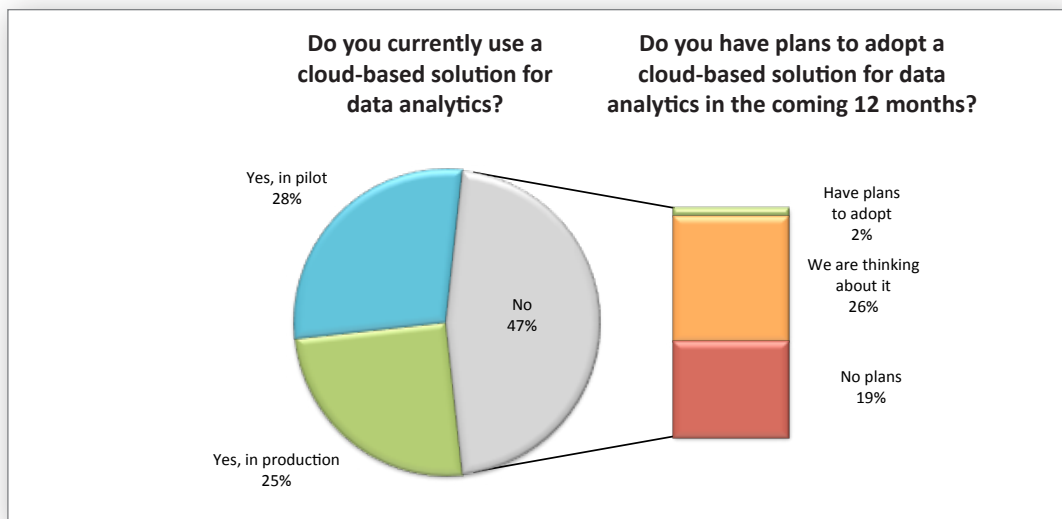
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Again, we saw an interesting difference between senior executives and frontline professionals. Executives were much more likely to say they would definitely try more things with a pay-as-you-go licensing model (42%) compared to only a quarter (25%) of individual contributors.



### More than half have adopted cloud analytics

Considering the criticality of data initiatives, the challenges faced with infrastructure, and the potential for cloud analytics to address these, it is unsurprising that many have adopted cloud and more have plans to do so. Already more than half have adopted cloud analytics (53%) with a quarter (25%) of those in production. Of the remaining companies that haven't yet made an investment in cloud analytics, some do have plans to adopt (2%) and a quarter (26%) are evaluating their options. Fewer than 1 in 5 companies have no plans at all to adopt cloud analytics (19%).



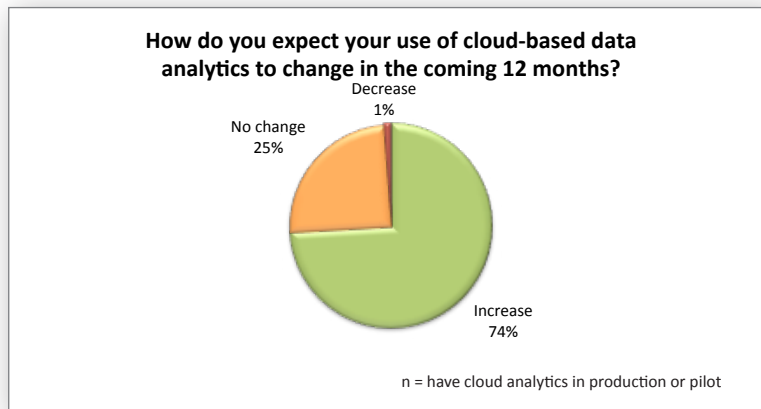
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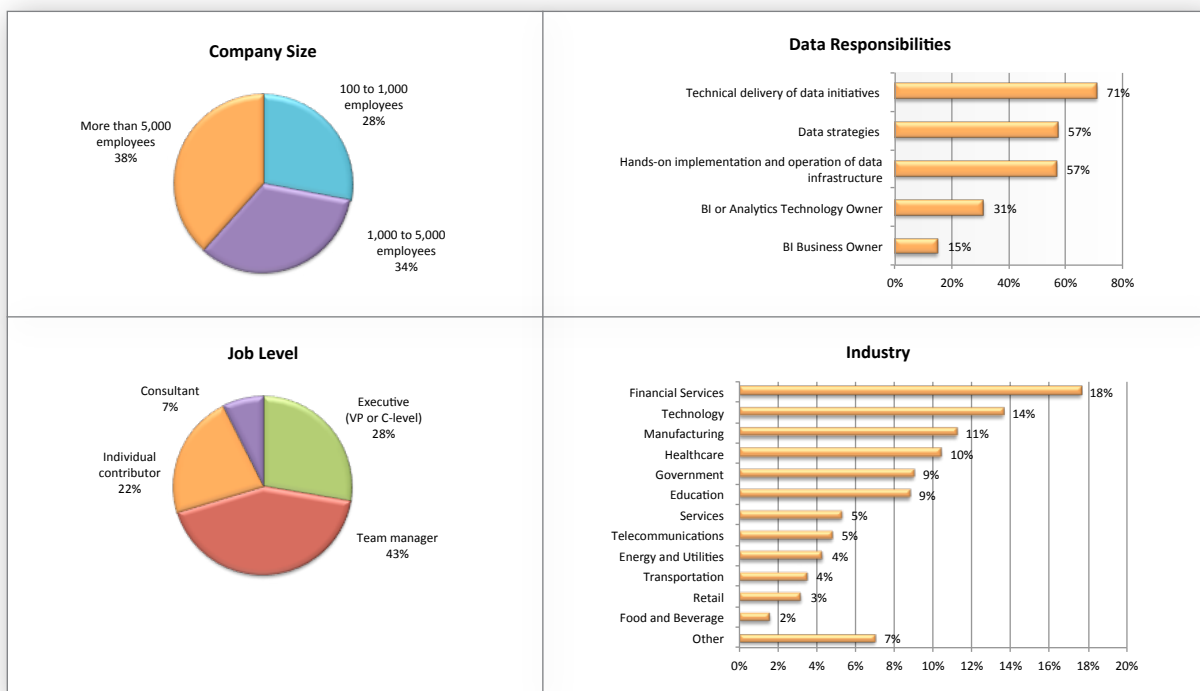
Those that have adopted cloud analytics appear to have been successful, since the majority of those (74%) have plans to increase their use of cloud analytics in the coming year.



## Survey Methodology and Participant Demographics

In the summer of 2016, technology and analytics stakeholders with responsibility for corporate data initiatives were invited to participate in an online survey on the topic of data analytics. Participants were asked a series of questions about their role in data initiatives as well as specific questions on experiences, challenges, and trends with their data analytics initiatives.

A total of 376 individuals completed the survey including 104 VP or C-level executives. All participants had professional responsibility for data initiatives. Participants represented a wide range of geographies, company sizes, role, and vertical industries. All participants worked at companies that used advanced data technologies including data warehousing, Hadoop or other noSQL technologies, and BI applications.



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### About Dimensional Research

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### About Snowflake Computing

Snowflake Computing, the cloud data warehousing company, provides a data warehouse built for the cloud and for today's data and analytics needs. The Snowflake Elastic Data Warehouse is built from the cloud up with a patent-pending new architecture that is up to 200x faster and 1/10th the cost of solutions not built for the cloud. Snowflake can be found online at [snowflake.net](http://snowflake.net).