

The Future Belongs To Those Who Monetize And Maximize Their Data

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Contributing Research: "Want To Drive Actionable Insights? Refuel Your Data Management Engine Today," Forrester Research, Inc., May 25, 2016

Executive Summary

The flood of digital data is revolutionizing businesses and business decision-making. One thing is for sure: the transformation toward a data-driven world offers business leaders opportunities in nearly every sector. The role of data analytics represents a shift from informed to more reliable insights, and its future is undeniably huge. Data analytics will help organizations better understand their customers, increase sales, make more informed decisions, and improve business processes like never before.

It's no surprise then that 40% of businesses surveyed are already using data analytics across key business functions where current use cases of data analytics have been to improve the customer experience and reduce operational costs. Sixty-nine percent of firms rated analytics as a top strategic priority, and over the next 12 months, businesses will focus on extending data analytics to more innovative and predictive use cases. If they do not, however, they're afraid of being left in the dust (65%).

The survey also revealed that organizations are still getting to grips with their data analytics tools and face constraints limiting their capabilities. Sixty-seven percent of organizations, a vast majority, are still maturing in this space. This begs the question, are analytics really being used or are organizations just using slightly more sophisticated methods of reporting? Understanding insights comes not just from data alone but from across the organization. Unfortunately, the survey revealed a business-IT gap. Organizations must bridge this gap to ensure their data foundation is solid.

In October 2016, Atos commissioned Forrester Consulting to evaluate the data analytics strategy at organizations in Asia Pacific, Europe, and North America. The study was completed in December 2016. To further explore this trend, Forrester developed a hypothesis that tested the assertion that many organizations fail to take advantage of their vast amounts of data. And even though analytics exists in pockets, organizations are not getting a full view of their business.

In conducting an in-depth survey with 583 business and IT professionals, Forrester found that these companies realize the importance of data analytics to uncover critical insights from a growing arsenal of data to better serve customers, which will help them become competitive.

KEY TAKEAWAYS

Forrester's study yielded three key findings:

- › **Organizations must continue prioritizing and investing in data analytics now or perish.** Businesses will double the use of data analytics investments over the next 12 months, and it's important for your organization to do that, too.
- › **Organizations must move from obtaining and collecting data to providing critical insights.** Although the adoption of data analytics is at 40% and set to grow, most organizations continue to struggle with some of the fundamental pieces to move from data to insights. Organizations that quickly build new processes such as embedded deep analytics models can predict outcomes that boost organizational operations. The most effective way to develop a new business process isn't through the data; in fact, it's through identifying how a model can improve performance first.
- › **Technology partners have the experience, expertise, and understanding — work with them.** External partners may not only bring advanced solutions; they can also contribute valuable domain and industry expertise to help their customers be successful more quickly than they would be on their own. When evaluating partners' capabilities, organizations should take a special look at a business-driven analytic mindset, agility, security, and scalability; these are deemed critical components for the future.

Business Success Depends On Leveraging Your Data To Best Effect

With digital transformation analytics concepts now at the heart of business strategies, the ability to make the most of your data will be — and in some industries already is — not just a competitive differentiator but *the* key competitive differentiator. Whether you're selling to consumers or other businesses, your customers are increasingly demanding a complete digital life cycle around the products and services you offer. This includes doing product discovery, making a buying decision to meeting customers' expectations and their desires when using the goods or service, and receiving support if needed.

You may think that the pressure is greatest and most visible in industries where buyers can easily choose between different providers, such as consumer goods or retail. However, our results show it applies equally to makers of heavy machinery or industrial equipment, where customer choice is perhaps minimal or even nonexistent. Leveraging internal as well as external information not only allows such firms to achieve operational efficiencies but also increases customer engagement. It also allows them to potentially generate extra revenue by surrounding their products with data-driven services that would otherwise be provided by third parties.

Our research highlights that business priorities reflect these goals and pressures, with most organizations seeking to improve their ability to innovate, grow revenue, offer both a better customer experience and better products/services, and, of course, ensure regulatory compliance. Hand in hand with these priorities goes the desire to make more effective use of data and analytics technology (see Figure 1).

Around 40% of organizations are already using analytics in key business functions across the enterprise. This is set to double within three years: By 2018, this rate should exceed 70%, and nearly 90% by 2020 (see Figure 3).

FIGURE 1
Business Priorities Reflect Competitive Pressures

“Which of the following initiatives are likely to be your organization’s top business priorities over the next 12 months?” (Top 10 shown)



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

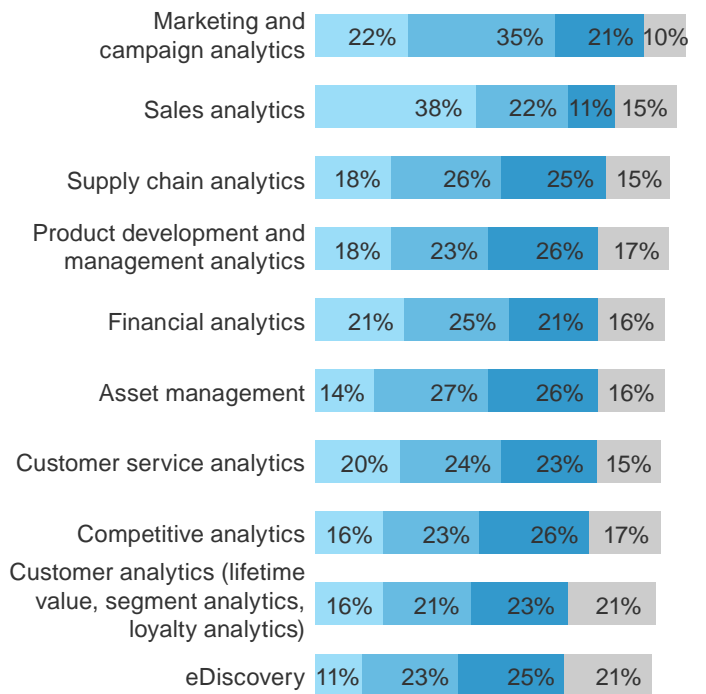
Business and technology decision makers clearly understand the importance of data and the benefits analytics can bring, with the majority of organizations either already using various types of analytics or intending to do so within the next 12 months (see Figures 2 and 3). A majority of survey respondents also indicated that data and analytics is already helping them transform the experience they deliver to their customers as well as improve operational excellence. It is also beginning to support business reinvention (innovation) and trust and compliance. More than 90% have experienced benefits from these data strategies, and 50% have seen significant revenue and bottom-line improvements.¹ Looking at the other side of the coin, 65% of respondents stated that they're at risk of being

left behind if they don't use data and analytics more effectively. In other words, there's a strong realization that digital transformation relies on a firm foundation of data and analytics.

FIGURE 3
Organizations Leverage Analytics In Many Different Areas

“What are your firm’s plans to use the following types of analytics?”

- Adopted and among our longest-used analytics types
- Adopted and among our newest analytics types
- Not yet adopted, but planning to within one year
- Not yet adopted, but planning to in more than one year

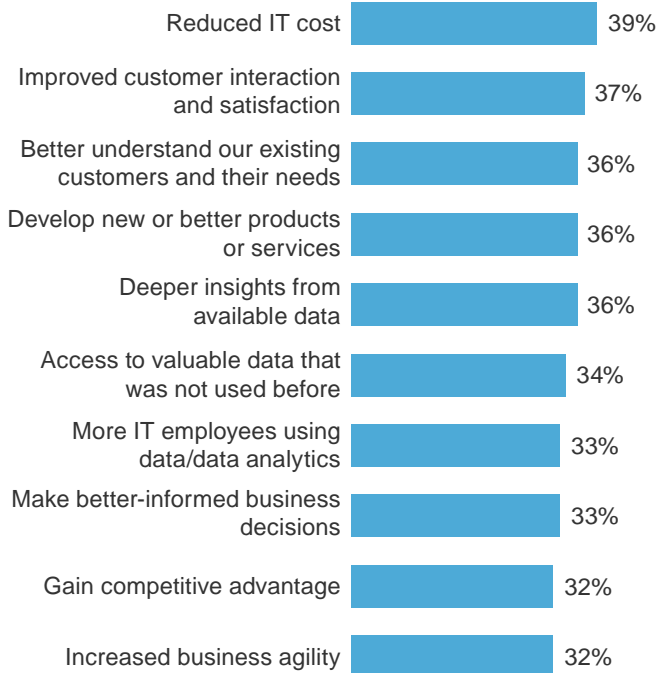


Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

FIGURE 2
Analytics Can Bring A Wide Variety Of Benefits To An Organization

“Which of the following benefits are you experiencing or do you anticipate by using data and analytics to analyze your applications and services?”
(Select all that apply; top 10 shown)



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

Different Sectors Use Data And Analytics In Different Ways

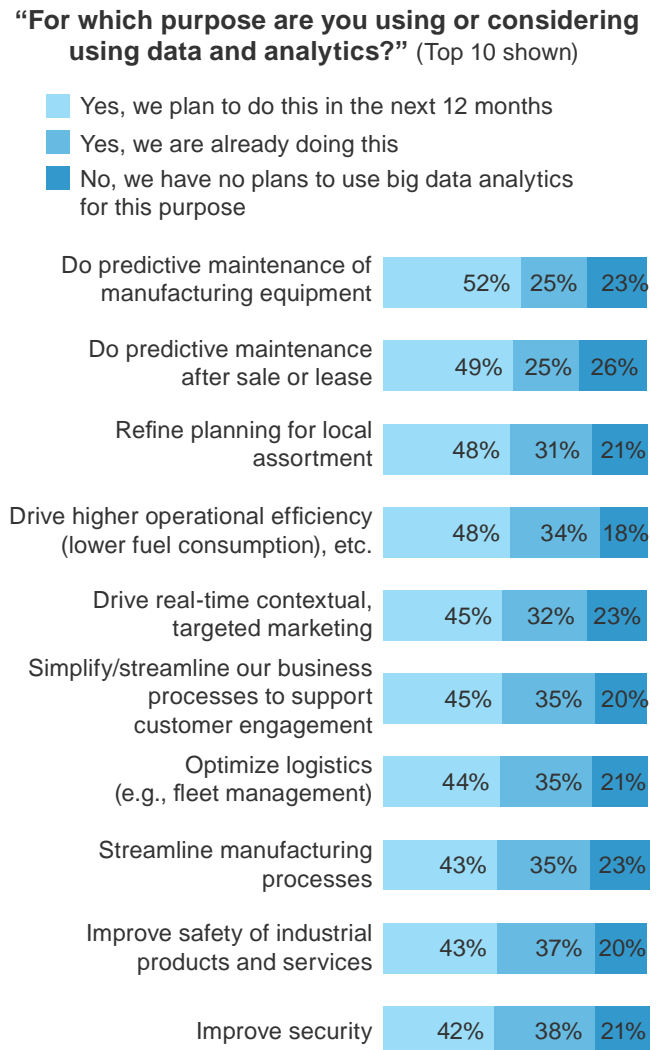
The pressure to become more insight-driven and customer-centric applies to all of the six sectors Forrester surveyed for this report — all leverage data and analytics to varying degrees today. They also all share a general desire to improve their use of data and analytics, drive innovation, and deliver better products and services to customers and citizens. Most sectors already make extensive use of data to analyze market trends; aside from that, how organizations leverage their data is largely determined by immediate business pressures, as we'll show below in the sections on specific verticals. When it comes to plans for the next 12 months, there's a general trend toward becoming more real-time focused and forward-looking; again, we can see variances that reflect how the pressure to become increasingly digital affects the verticals that were surveyed.

MANUFACTURING

Aside from analyzing market trends (61%), manufacturers mainly focus current analytics efforts on safety and security, as well as process optimization.²

A look at manufacturers' plans for data and analytics reveals continued emphasis on these areas, as well as a desire to become more proactive (e.g., through predictive maintenance of manufacturing equipment). The desire to support and provide services after sale or lease of physical goods — whether it's a car to a consumer or a machine tool to a business customer — also points to another trend: the move from selling a product to selling an outcome. Capturing and analyzing machine data allows manufacturers to counter margin pressure by offering a complete solution. In fact, organizations will significantly improve their predictive maintenance capabilities, which are gathered through targeted data for analysis, helping to anticipate potential failures before they occur. Twenty-five percent are currently using data analytics to predict the maintenance of manufacturing equipment. This is set to double over the next 12 months (52%). Businesses are also using data and analytics to predict the maintenance after a sale or lease (25%), and this will also double over the next 12 months (49%). This, in turn, helps manufacturers differentiate and fight back against lower-cost competitors as well as third parties offering maintenance and other services (see Figure 4).

FIGURE 4
Manufacturing Data And Analytics Use Cases



Base: 172 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

ENERGY AND UTILITIES

The new world of energy provisioning has come a long way from the old integrated model of power generation, transmission, distribution, and retailing. In many countries, regulatory changes have already led to a split of the formerly unified supply chain into power generation, transmission and distribution, and retailing. This requires not only bi-directional information flows in a wider ecosystem, but also a different approach to dealing with customers, as there's now competition where there used to be none.

Additional pressures like moving toward renewable energy sources, allowing customers to feed surplus electricity into the grid, and introducing smart meters all have implications for companies' ability to make more of the data they have access to, whether it's within their own systems or from external sources.

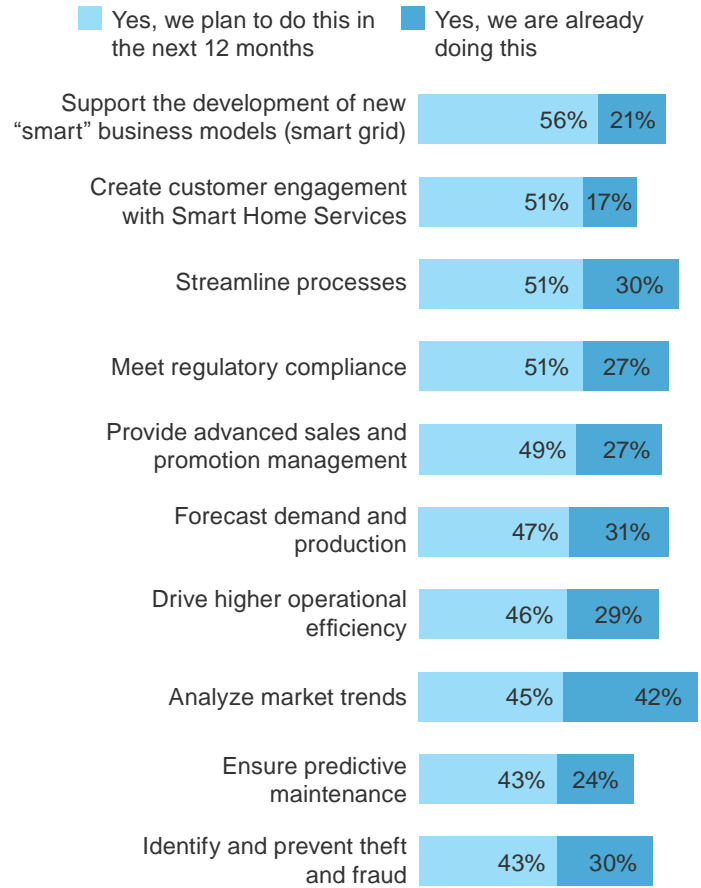
All of these trends are reflected in how energy and utilities firms are leveraging data. Existing data and analytics deployments are in the areas of optimization, supply and distribution chains (51%) and logistics like fleet management (40%).

In the next 12 months, energy and utilities firms are planning to use data analytics to move into new areas such as "smart" business models. Fifty-six percent of energy and utilities firms are planning to use data analytics to move into new areas such as "smart" business models, compared with only 21% that are doing it today. Energy and utility firms are also looking to increase customer engagement with Smart Home Services, tripling their efforts over the next 12 months (51%) versus today (17%). They also plan to improve the way their businesses are run (e.g., streamlining processes and doing demand forecasting) and ensure regulatory compliance (see Figure 5).

FIGURE 5

Energy And Utilities Data And Analytics Use Cases

"For which purpose are you using or considering using data and analytics?" (Top 10 shown)



Base: 89 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

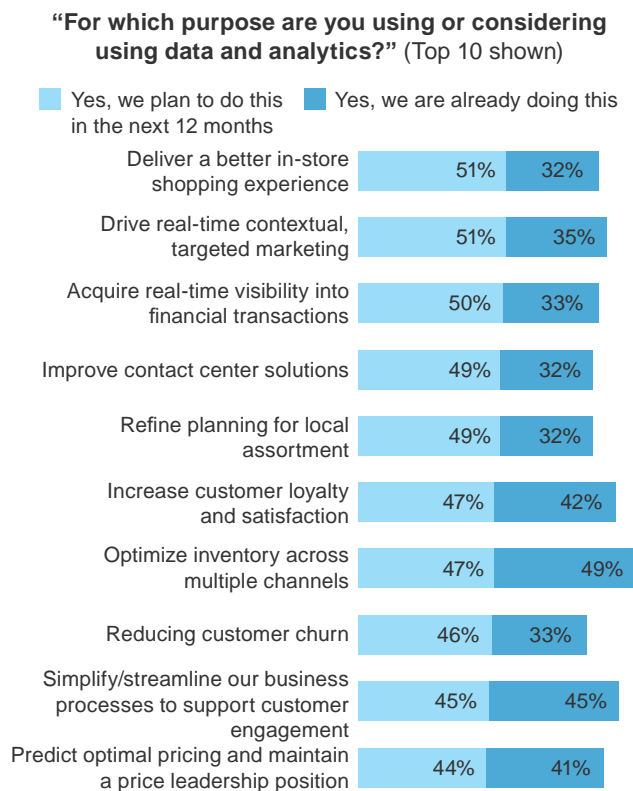
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

RETAIL

The majority of retailers are already using analytics to understand market trends and improve sales and promotion management. Around half are also already leveraging analytics to optimize inventory across channels, deliver a better online shopping experience, and simplify processes to support customer engagement as well as prevent fraud.³

Investment in all of these areas continues. But as one would expect in the cutthroat world of retail, where the customer has many choices, retailers' focus for data and analytics in the next 12 months is very much on delivering a better customer experience in the store, moving towards more targeted marketing, and gaining real-time visibility into how the business is doing (see Figure 6). In fact, more than half of businesses are planning to deliver better in-store shopping experiences.

FIGURE 6
Retail Data And Analytics Use Cases



Base: 78 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

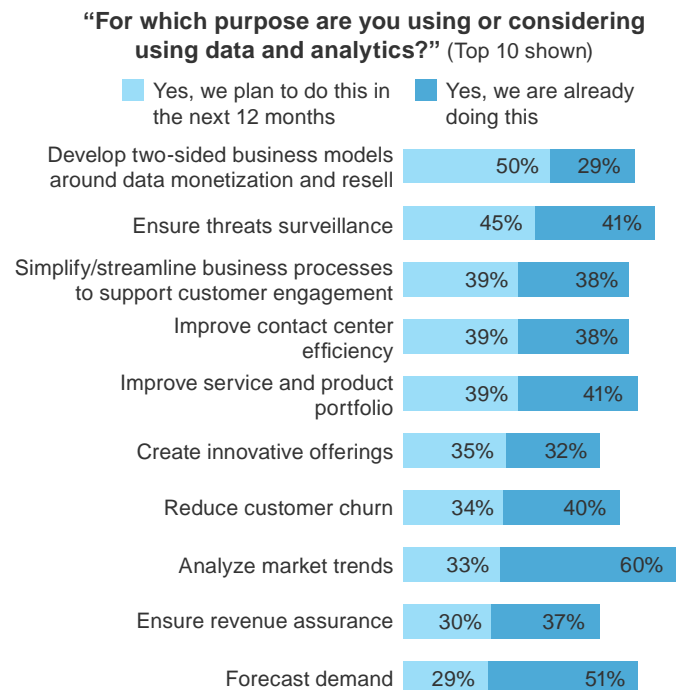
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December, 2016

TELCO

Telecom providers' existing efforts are very much focused on understanding what's going on around them through analyzing market trends (60%) and social media (55%); just under half are also leveraging data and analytics to ensure regulatory compliance.

Future plans reflect the pressure for telco providers to retain customers and differentiate themselves from the competition in a sector that can experience high churn and low customer satisfaction. They plan to focus more on innovation (e.g., new business models), further efficiency improvements and the streamlining of processes, as well as threat surveillance. Investments in improving their product and service portfolio and reducing customer churn continue, as does investment in predictive network maintenance (see Figure 7).

FIGURE 7
Telco Data And Analytics Use Cases



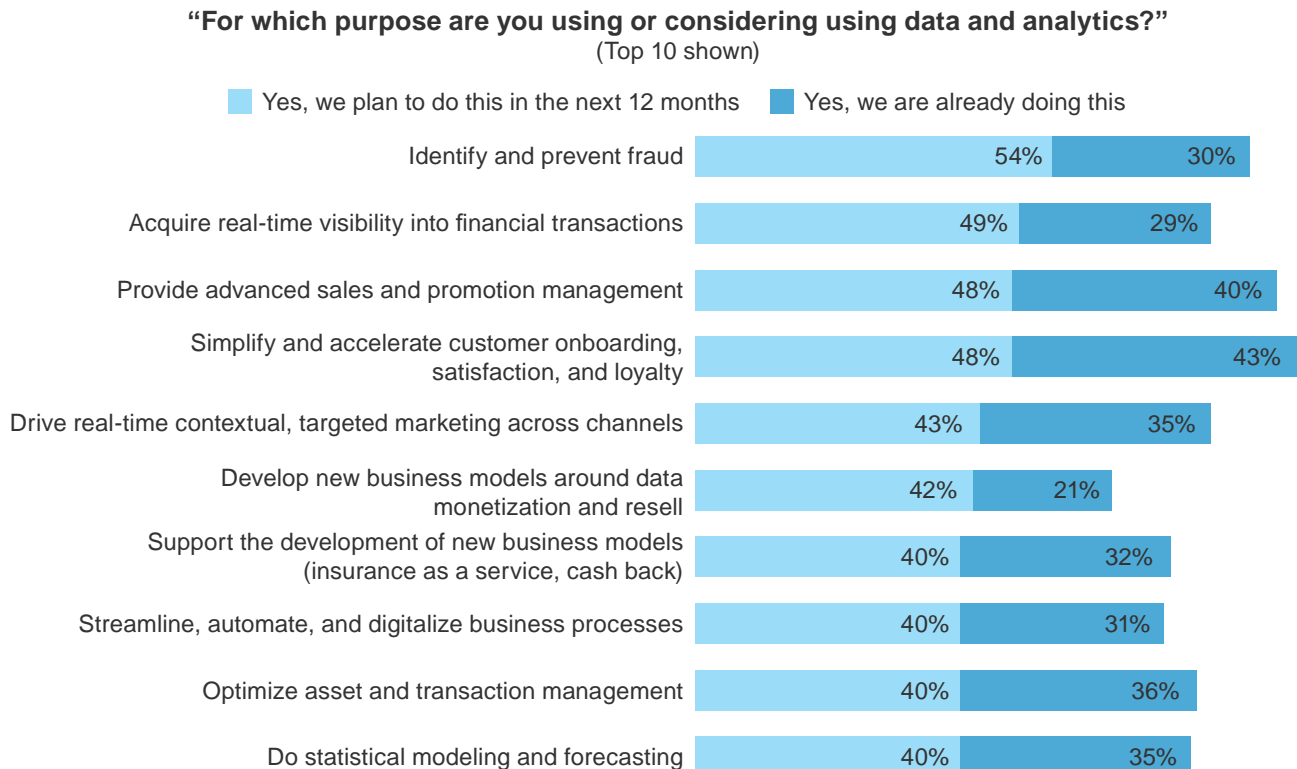
Base: 82 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

FINANCE

Financial services' existing data and analytics efforts have predominantly been in the areas of understanding market trends (70%), forecasting demand (55%), and increasing portfolio performance (49%), followed by a variety of initiatives aimed at improving the customer experience and, of course, regulatory compliance.⁴ Intentions for the next 12 months reflect the increasing threats to financial institutions from criminals on one hand and challenges from financial technology (fintech) startups as well as major players from outside the banking industry on the other. Investments in all of the areas mentioned above are continuing, but fraud detection and prevention top the list for over half of respondents, and just under half want to move to a more real-time way of doing business (see Figure 8). Few financial services firms are currently leveraging data and analytics to automate digital interactions with chatbots (15%), for example, but 38% have expressed their intention of doing so in the next 12 months.

FIGURE 8
Finance Data And Analytics Use Cases

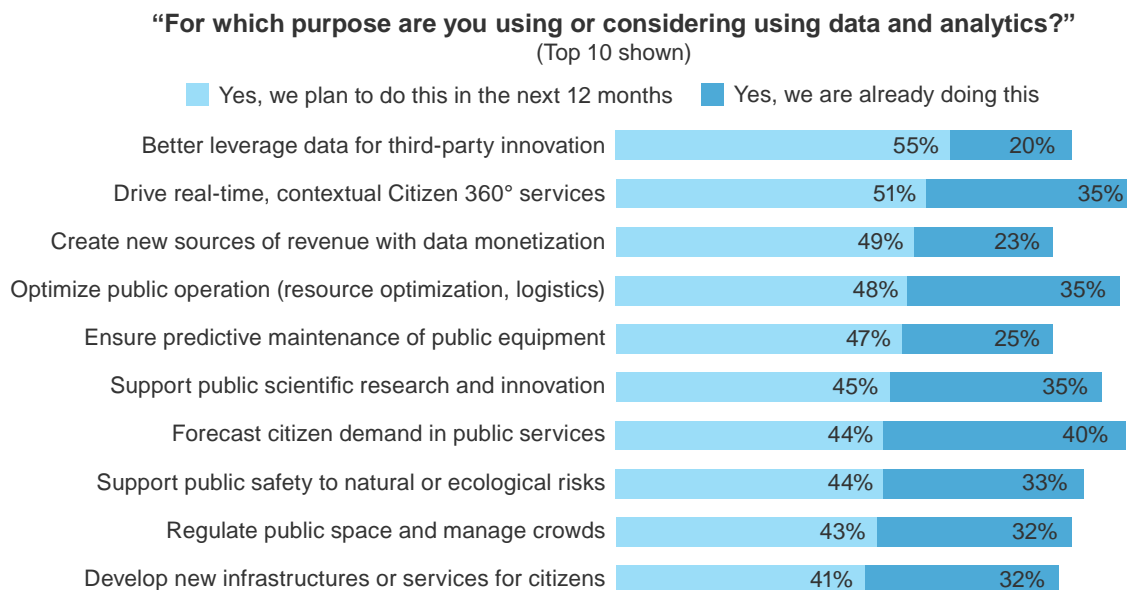


Base: 84 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

GOVERNMENT

Technology-enabled offerings from banks, retailers, phone companies, and so on have raised citizens' expectations when it comes to government services — these too should be available anywhere and at any time. Governments are clearly trying to understand their citizens better. The current predominant applications in government for data and analytics are around forecasting citizen demand (40%), fraud detection and prevention (35%) and optimizing operations/logistics (35%). This is changing, though, and governments are clearly trying to understand their citizens better. Over the next 12 months, 55% of key decision makers will better use data analytics for third-party innovation, which is more than double the percentage who do this today (20%). The number of decision makers creating new sources of revenue with data monetization is also poised to double (49% compared with just 23% today). The emphasis for using data and analytics is firmly on optimizing existing operations, but it is also and most importantly on leveraging data to better effect and provides better contextual, 360-degree services for citizens and new sources of revenue via direct or third-party innovation. This is the result of the need to maximize the use of scarce resources and derive new forms of funding (see Figure 9).

FIGURE 9
Government Data And Analytics Use Cases



Base: 78 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

Where There's Opportunity, There Are Challenges

Approximately 90% of the world's data was created in the past two years, and it's clear that we have access to more data than ever. We store more, process more, and have access to an increasing variety of internal and external data sources. Equally, nobody needs reminding that the variety of data types has also multiplied. Where organizations would in the past only use well-structured data from a data warehouse for their analytics, they're now faced with all kinds of formats, including video and text. Hence, it's not surprising that this is the single most frequently cited challenge to organizations' efforts at translating their data and analytics strategy into reality (see Figure 10).

Other challenges range across a wide spectrum of technology, organizational, and people issues, including:

- › **Data silos.** There are two aspects to this: 1) challenges with data silos created by technology implementation (36%) and 2) data silo challenges resulting from organizational structure (29%). The only surprise in these survey responses is that these percentages are not higher: anecdotal evidence suggests that data silos are an issue in the majority of organizations, hindering their efforts at getting a complete view of their customers or their business, let alone in real time.
- › **Security, privacy, and compliance.** With cyberattacks and data breaches becoming an all too frequent occurrence, it's important that organizations put in place strong defenses. And, of course, there's the need to comply with regulations as well. Unfortunately, the mechanisms put in place to handle data in a secure and compliant manner can get in the way of an organization's analytics ambitions, and it can be difficult to reconcile the wants and needs of business analysts and decision makers with the restriction placed on accessing and using data.
- › **Data quality, data standards, and master data.** Twenty-nine percent of respondents see poor data quality as one of their biggest obstacles. Concerns about lack of data standards, master data, and not having a single view of the customer register lower on the scale, but taken together point to continuing difficulties with putting in place the solid data foundation that's needed to support analytics and deliver valuable insights to decision makers.

- › **Skills, organization, and culture.** None of the following stumbling blocks were chosen by more than a quarter of survey respondents: lack of skills; adequate end user training and self-service capabilities; not enough access to data; insufficient executive support and change management programs; organizational challenges around data stewardship; and cultural issues. Both individually and in combination, these issues can easily derail analytics projects.

FIGURE 10
Organizations Face A Wide Variety Of Challenges On Their Data And Analytics Journey

“What are the biggest challenges when orchestrating or executing your vision for data and analytics?”
(Select all that apply; top 10 shown)



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

BUSINESS AND IT NEED TO FIND NEW WAYS OF WORKING TOGETHER

There's one more key obstacle standing in the way of organizations' ability to leverage data for gaining — or retaining — competitive advantage: the way in which IT and other business areas work together. Thirty-four percent of survey respondents cited “lack of alignment between IT and business” as a key challenge to achieving their data and analytics vision, and 71% rated “improve IT's relationship with the business” as either a critical or high priority.

The current lack of alignment is also reflected in the fact that many business areas bypass their colleagues in IT when it comes to addressing their data and analytics needs. Less than a third work with their technology management colleagues from the beginning and work closely with them, while a quarter try and solve things entirely for themselves before going to IT. And just over a fifth go straight to an external services provider.

There are other indications that something needs to change if companies want to achieve their ambitions — or even just survive — in the digital economy. For example, just under a third of survey respondents are “very satisfied” with data and analytics in their company.

Last, but by no means least, leadership teams need to do more to enable IT to operate at the speed of business, because at the moment, it doesn't. Whether it's an account representative, a factory floor manager, or an executive in a board meeting, decision makers increasingly need to understand what's going on in real time or near real time in order to take the most appropriate action. More than that, their information needs often change rapidly.

And yet, in the majority of organizations, it still takes IT too long to respond to analytics requests. For example, just over a third of IT departments can turn around a request for a new report from existing data sources within days rather than weeks or even months, and a third of survey respondents reported that it still takes them over a year to support new BI or advanced analytics technologies (see Figure 11).

There are many reasons for this disconnect between the business and IT, and not all of them can be solved by IT alone. To be successful, business and technology leaders must be at the same table and focused on the same business goals.

Other best practices Forrester has identified for the successful delivery of analytics capabilities include:

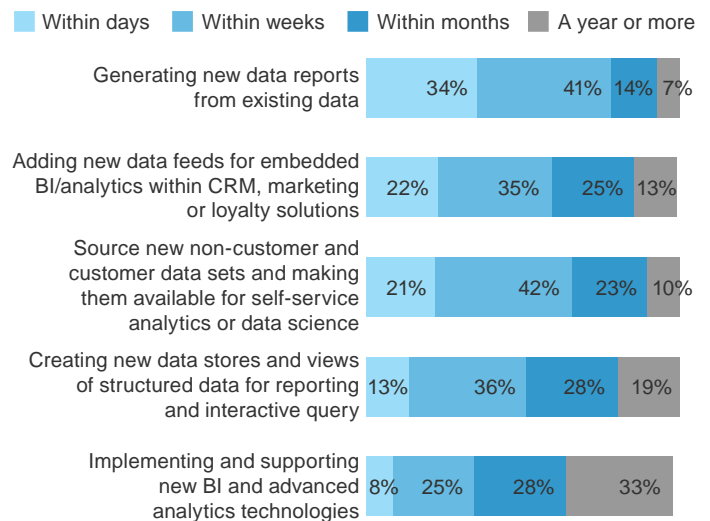
- › Introducing new ways of working, centered on agility, collaboration, and short time-to-value.
- › Establishing a solid, secure foundation for your data and analytics. Consider appointing a chief data officer.
- › Selecting the most appropriate tool set, taking into account current and future requirements.
- › Leveraging external partners to make sure you have access to the widest possible set of capabilities.

Decision makers are flying blind a lot of the time, given that the average time taken for IT to respond to business requests around analytics is still measured in weeks and months rather than days (or even less) and weeks (see Figure 11).

FIGURE 11

Most IT Departments Aren't Moving At Business Speed

“In general, when business users are looking for help with analytics, how quickly does IT turn around the following requests?”



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

(not all responses shown)

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

Becoming Insight-Driven Calls For A New Approach

For many organizations, it's early days when it comes to delivering on their data and analytics strategy. While fewer than one in 10 firms are still in the process of trying to formulate a data and analytics strategy, over half of survey respondents stated that they have a strategy and have made some progress against it.

Looking at IT organizations' priorities for the next 12 months, our survey reflects a clear recognition that something needs to be done about IT's relationship with the business, and that IT may need to be reorganized to achieve better alignment. This is a critical component to increasing the linkage between IT and the business if adoption of new technologies is going to succeed and not go to waste. Other priorities for the IT organization include greater use of innovative technologies, improvement of a number of processes, and a general increase in the role of the business when it comes to decisions around technology choices and investments (see Figure 12, below).

Our survey also shows that many organizations are following best practices in the actions they're planning to take in order to become more insight-driven. These include:

- › **Creating a business-led data governance or stewardship program.** Only the business can decide what data is needed to support decisions, both at a strategic and tactical level. And while it's IT's responsibility to capture, store, and appropriately prepare the data for use in analytical applications, it's for the business to decide on the rules that apply to that data. Too many business leaders still expect IT to take sole responsibility for everything to do with data. For the 43% of respondents who stated that they were putting in place a business-led program for data stewardship or governance, this very much represents a step in the right direction.
- › **Focusing on innovation, culture, and organization.** While an essential element, technology alone can't bridge the gap between data, insight, and action. Whether it's putting in place an innovation capability to inject fresh thinking and new approaches, changing management culture to become more data-driven, or adapting processes to promote data sharing — organizations are taking steps to address all of the elements that need to come together in an insight-driven business.

- › **Investing in skills.** Data engineering in an environment that requires dealing with a greater amount of more diverse data and often faster data speeds requires advanced analytical skills that many organizations don't have in-house, or not in sufficient quantity. That's why there's a lot of focus on recruiting more people with the needed expertise; however, it's equally important to develop the skills of existing staff. Firstly, there isn't enough talent around; secondly, external recruits — even from the same industry — won't have the same level of domain expertise of the people already working in your organization (see Figure 12).

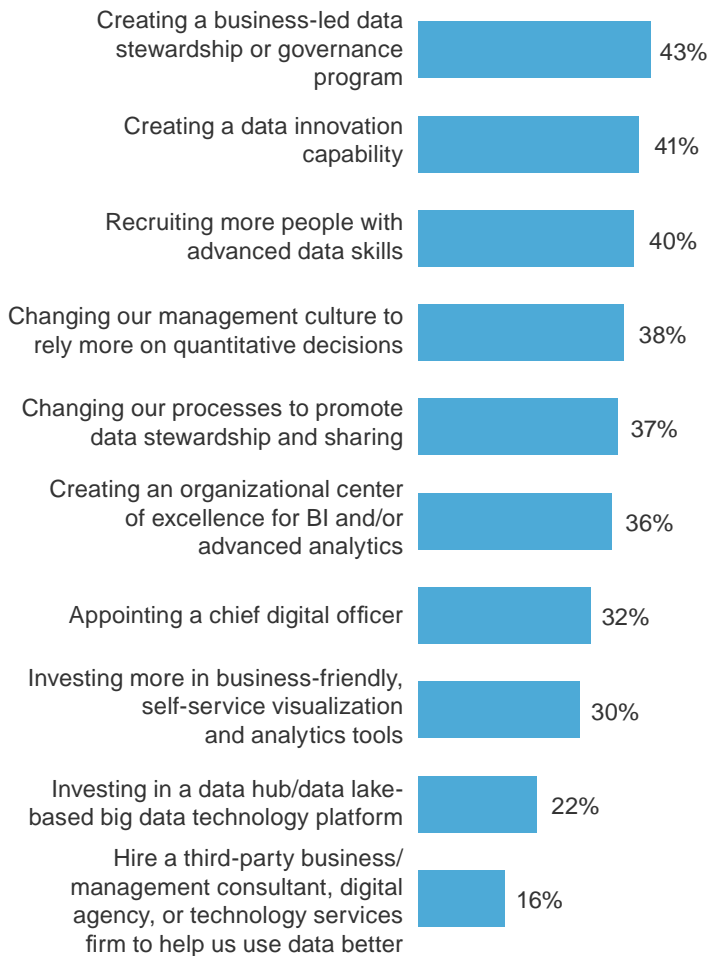
Sixty-three percent of respondents declared that their firm is just maturing in its data and analytics strategy execution. This shows a strong need for improvement for firms to succeed. Sixty-nine percent rated it as a top business priority to improve the use of data and analytics technology in the next 12 months.

FIGURE 12

Organizations Plan To Take A Variety Of Actions To Improve Data-Driven Decision-Making

“What actions is your firm currently taking or planning to take to improve the use of data and analytics to support business decision making?”

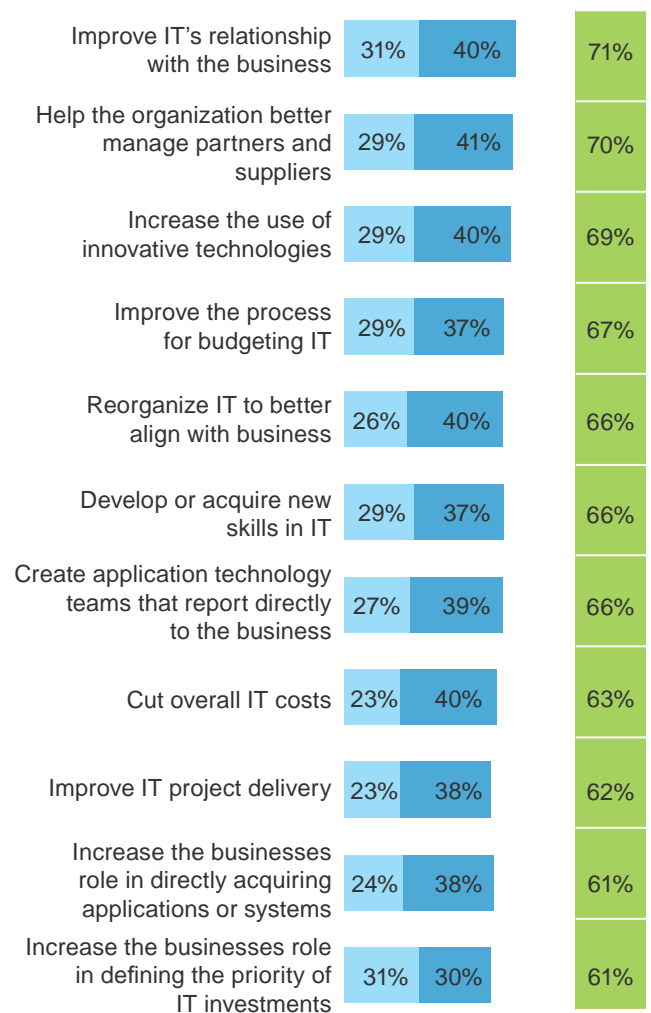
(Select all that apply)



“Which of the following initiatives is your IT organization prioritizing over the next 12 months?”

■ Critical priority ■ High priority

Critical and high priority



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

Key Recommendations

Whatever your business, this is the time to accelerate investment in analytics if you don't want to be left behind. Your competitors plan to double their use of analytics by 2020. Businesses that aren't making the most of the data they have access to sooner or later won't be able to compete. If you don't have the data you need in order to make better decisions, improve the way in which you develop and sell products or services, provide a good customer experience, and stay compliant and secure while keeping costs under control, then you must move fast to figure out how to obtain it. Internal data is not the only key to success — external data, which is found in a variety of sources outside of the organization, presents a real opportunity for organizations in every sector to help boost new opportunities and achieve improvements in the loss ratio. Be prepared to make required changes to your organization, processes, and technology; otherwise, you'll most likely put your business at risk sooner or later. Aim to:

- › **Start with clear business goals and objectives.** Just like the best car in the world won't get you to your destination if you don't know where you want to go, you won't be able to get the most out of your data without business context and a strong focus on what the organization is trying to achieve. Whether it's a strategic goal like "increase margins" or a tactical objective like shortening the time it takes for a customer to make a purchase, start with what you're trying to achieve and work backwards from that. Not having this focus is a key cause of analytics project failures.
- › **Break down internal silos, and adopt Agile and collaborative processes.** Decision makers need access to the right data at the right time, regardless of where in the organization it resides. Equally important is a new approach to the relationship between business and IT, centered on working toward common objectives and putting in place processes that support getting there as fast as possible. Replace traditional rigid approaches to collecting requirements as much as possible, with an Agile approach that supports colleagues from the business and IT — and in manufacturing, also from operational technology (OT) — working together, often literally side by side. DataLabs are one of the ways to implement this.
- › **Get ready now for the data deluge and security challenges of tomorrow.** The move toward keeping more and more diverse data brings with it the need for new approaches to the all-important area of secure data governance and high-performance data management. In a nutshell: make sure your data foundation is solid. Neglecting this area will not only increase the risk of making wrong decisions or creating other exposures in the current environment. It will also make it impossible to create meaningful predictive models, let alone leverage emerging technologies like artificial intelligence that are increasingly becoming part of everyday environments.
- › **Deliver insight to the point of decision, and review in a continuous cycle.** The best data and analytics don't matter if nobody acts on the insight. This isn't about giving everybody access to analytics tools — it's about embedding insight into all systems and processes and surfacing them at the moment a decision is made. Equally important is a continuous review cycle: Unless you analyze the results of decisions, you won't be able to refine them; this applies equally to decisions made by humans and actions initiated by automated processes.
- › **Work with technology partners.** Most organizations have neither the time nor the expertise and resources to put in place all the systems that are needed to really make their data work for them. And it's not just about buying rather than building software, or leveraging cloud deployments rather than running everything in-house. External partners may not only bring advanced solutions, but they may also contribute valuable domain and industry expertise to help their customers be successful more quickly than they would be on their own. When evaluating partners' capabilities, take a special look at business-driven analytic mindset, agility, security, and scalability. This will be key for the future.

Appendix A: Methodology

In this study, Forrester conducted an online survey of 583 business and IT leaders from enterprises in North America, Europe, and Asia Pacific to evaluate their organizations' strategy and management of data analytics. Eleven industries were covered, including energy and utilities, financial services and insurance, telco, retail, government, and manufacturing. The manufacturing sector included high-tech and engineering, automotive, consumer products manufacturing, pharmaceuticals, chemicals and metals, and process. Survey participants included director, VP, and C-level decision makers. Respondents were offered a small incentive as a thank you for time spent on the survey. The study began in October 2016 and was completed in December 2016.

Appendix B: Supplemental Material

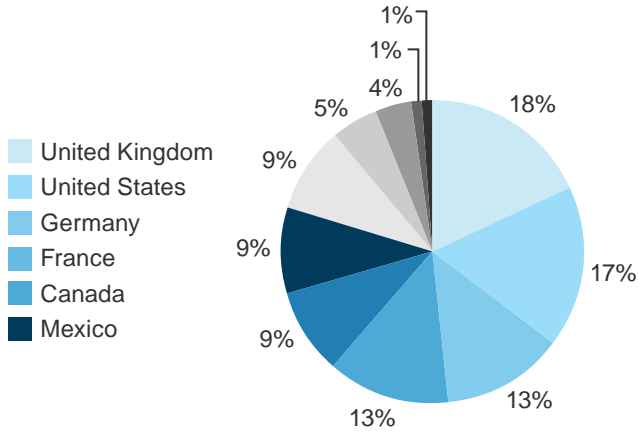
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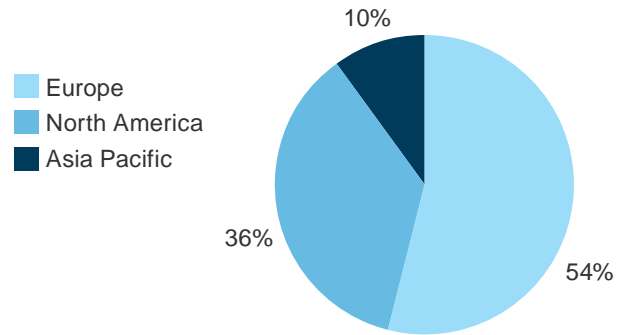
Appendix C: Demographics/Data

FIGURE 13
Survey Demographics

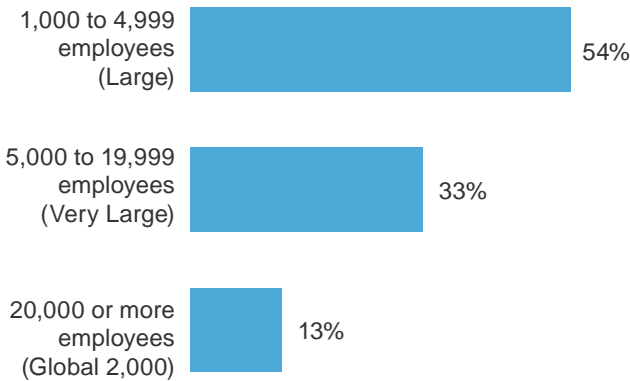
“In which country are you located in?”



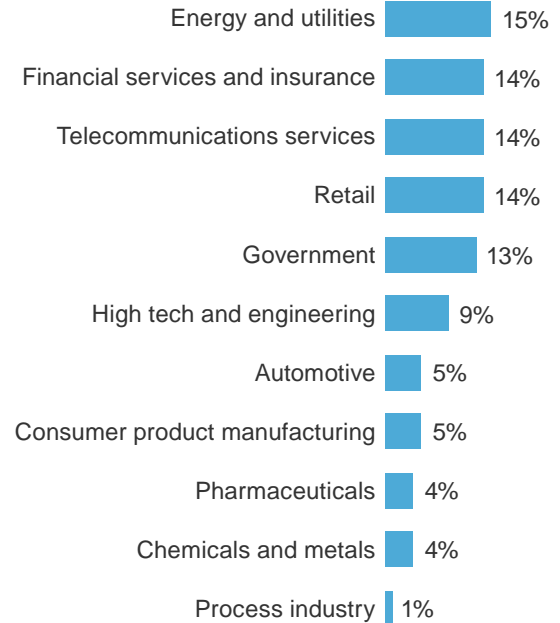
“In which region are you located?”



“Using your best estimate, how many employees work for your firm/organization worldwide?”



“Which of the following best describes the industry to which your company belongs?”



Base: 583 business and IT decision makers with involvement in management of BI, data analytics, and data management in EU, NA, and Asia Pacific (percentages may not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos, December 2016

Appendix D: Endnotes

¹ Seventy-two percent of survey respondents either agree or somewhat agree with the statement that “data and analytics is reinventing the overall experience.” Sixty-seven percent of survey respondents either agree or somewhat agree with the statement that “we are using data and analytics to reinvent what our company does.”

² Seventy-nine percent of survey respondents plan to improve security, and 76% plan to optimize supply chains.

³ Eighty-seven percent of survey respondents plan to identify and prevent fraud.

⁴ Eighty-percent of survey respondents plan to improve regulatory compliance.