Digital Is Driving The
Next Generation Of Data
Marketplaces

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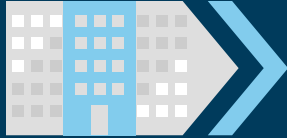**FORRESTER®**

Executive Summary

Digital is disrupting all industries. In fact, 47% of firms believe that digital has already disrupted their industry, and just over half believe they will see more disruption this year. As a result, over half of firms are somewhere along the digital transformation journey, and more will soon be joining.

In September 2017, Pitney Bowes commissioned Forrester Consulting to evaluate and provide thought leadership about the role external customer data plays in digital transformation. To explore this topic, we conducted an online survey with 800 marketing or advertising, data analytics, and IT professionals at insurance, telecommunications, real estate, and financial services companies. Survey respondents had responsibility or influence over data acquisition and analytics decisions. We supplemented the study with four interviews with executives meeting the same criteria.

KEY FINDINGS

Our study yielded the following key findings:

› **Fresh and accurate external data is important to firms' digital plans.** Our study found an important link between data and typical digital strategy objectives, such as improving customer experiences. Our study also concluded that externally sourced, high-quality, fresh customer data is important in this pursuit.

› **Firms are looking to data marketplaces for external data.** Although many firms already source customer data externally, we found that firms' appetites are not satisfied. Over half of respondents said they plan to increase spend in data marketplaces over the next three years, and four in 10 will spend more than $10,000 there.

› **Customer data issues will erode firms' abilities to engage customers.** We found that firms had a high degree of confidence in their data analytics investments to date. When we inquired about customer data specifically, however, we uncovered challenges. We found that firms that do not solve these issues will pay a high price in terms of growth and profitability.

› **Next-generation data marketplaces will help firms take action.** The importance of external customer data opens the door for a new generation of data marketplaces that solve the issues we identified in our study. These will help firms more easily find, license, and confidently use external data. They will also improve integration capabilities that help firms blend enterprise and external data and recognize opportunities as data changes.

› **Firms that exploit next-generation data marketplaces will gain a digital edge.** Firms must catalog their existing external data sets to understand their current state. Next, they should talk with data service vendors about their marketplace plans and kick off pilots to automate turning data to insight and insight to action. Firms that follow these steps will gain a digital edge as they engage customers and drive growth.

Over half plan to increase spend in data marketplaces next year, and four in 10 would make a purchase of more than $10,000 there.

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Data Marketplaces Can Help Firms Meet Their Digital Ambition

The nature and pace of business are undergoing profound changes because of digital business evolution, such as rising customer expectations for information, service, and convenience. In fact, 47% of firms believe that digital has already disrupted their industry, and just over half believe they will see more disruption within the next year. As a result, 56% of firms are undergoing a digital transformation — and approximately two-thirds of these transformations are companywide efforts.[1]

Our study looked deeply at this trend and the role external customer data plays in it. We found that firms want to:

› **Accelerate digital transformation.** Eighty percent of firms said that accelerating their digital business transformation to respond faster to customers and market dynamics was a critical or high priority.

› **Improve the contextual relevance and timeliness of customer experiences.** Eighty-three percent of survey respondents said that providing timelier and contextually relevant customer experiences was a critical or high priority. Often, their strategy to achieve this outcome is, in fact, digital transformation.

› **Data is exceptionally critical for customer activities.** Activities such as customer service, customer experience, and marketing are three of the top five areas where firms rely on data to differentiate themselves (see Figure 1). This came as no surprise given firms' shared desire to improve the contextual relevance and timeliness of customer experiences.

DATA MARKETPLACES ARE HELPING FIRMS QUENCH THEIR DATA THIRST

The executives we surveyed wanted more and better data to aid in their digital quest. Take, for example, the real estate industry, which has until recently been a digital laggard. A VP of marketing at a real estate firm we interviewed reflected a different attitude and a hunger for data:

"Data really is the fuel of business nowadays. Every business relies on data and the accuracy of it, and more and more, they're looking for different resources to get better."

We also found that:

› **Firms are getting value from third-party customer data already.** Almost half of firms we surveyed use third-party customer data today, and 85% of these firms report it is valuable or very valuable. Furthermore, for those firms that source this third-party data, it makes up almost 40% of the total customer data their company uses.

› **Firms are increasing spend on data marketplaces.** In the pursuit for more and better data, firms see the potential in online data for fast customer engagement (see Figure 2). Fifty-four percent said they were increasing spending in data marketplaces, and 37% said they would purchase more than $10,000 of data there.

Forty-seven percent of firms believe that digital has already disrupted their industry, and just over half believe they will see more disruption this year.

Firms see the importance of customer data as a digital differentiator.

Ninety-nine percent of firms are open to purchasing data via an online marketplace. And almost 40% would make a purchase of more than $10,000.

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Figure 1

"In which of the following areas do you use data to differentiate your company?" (Select top three)

30% Customer service

30% Strategic decision making

30% Customer experience

28% Productivity

27% Marketing and sales

25% Operational efficiency/cost reduction

25% New products and services development

24% Providing an engine/platform for future technology and innovation

22% Customer engagement

21% Becoming an insight-driven organization

20% Providing an engine/platform for future revenue growth

17% Compliance

Base: 800 global professionals with responsibility or influence over data acquisition and analytics decisions at their companies
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

Bars in green represent customer-facing areas. Of the top five areas that rely on data for differentiation, three are customer-facing areas.

Figure 2

92% agree

"The rise in digital technologies and interactions has increased the need for bringing outside data into the company."

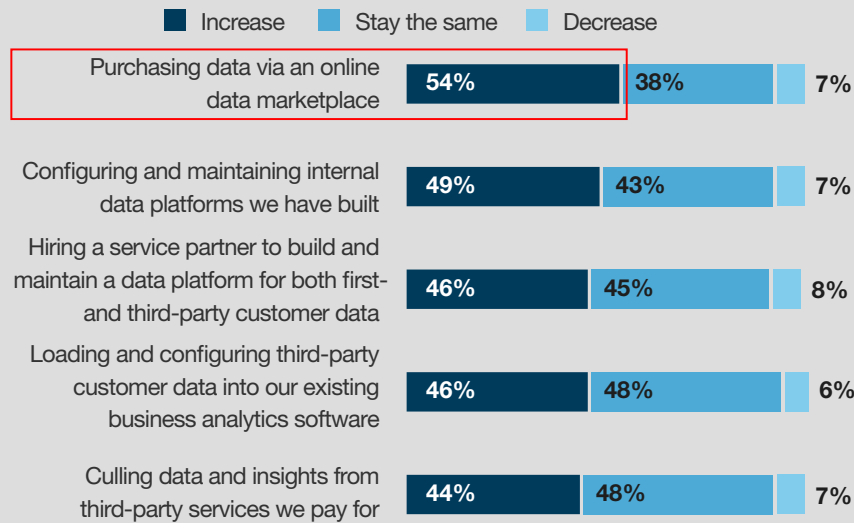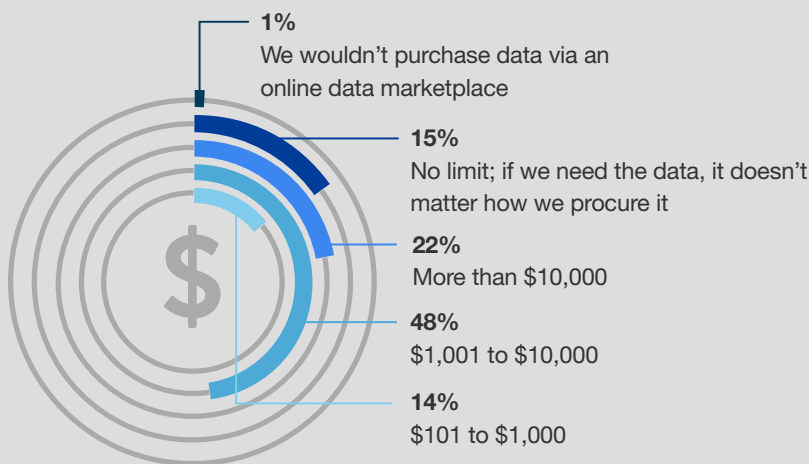**"How do you expect your company's spending on the following types of customer data activities to change over the next three years?"**

■ Increase ■ Stay the same ■ Decrease

	Increase	Stay the same	Decrease
Purchasing data via an online data marketplace	54%	38%	7%
Configuring and maintaining internal data platforms we have built	49%	43%	7%
Hiring a service partner to build and maintain a data platform for both first- and third-party customer data	46%	45%	8%
Loading and configuring third-party customer data into our existing business analytics software	46%	48%	6%
Culling data and insights from third-party services we pay for	44%	48%	7%

"What level of data purchase do you believe your company would make via an online data marketplace?"

1%
We wouldn't purchase data via an online data marketplace

15%
No limit; if we need the data, it doesn't matter how we procure it

22%
More than $10,000

48%
$1,001 to $10,000

14%
$101 to $1,000

Demand for third-party data is increasing: 92% agree that they need to increase the use of outside data.

The biggest spending increase over the next three years will be purchasing data via online marketplaces.

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Customer Data Challenges Erode Firms' Digital Confidence

Firms generally have a high degree of confidence in their data investments to date. For example, 80% of executives felt they are being successful at maintaining and improving the quality of data as it changes. We also found that 81% access customer data systematically through APIs — a sophisticated endeavor that indicates firms have invested to mature their data capabilities (see Figure 3).

CUSTOMER DATA IS STILL CHALLENGING

Despite firms' overall confidence, our study uncovered a critical risk: customer data. Even though 93% of firms felt confident that their first-party customer data was up-to-date, the drive to become more digital and engage customers in a more relevant and timely way is elevating firms' needs. Customer data issues will exact a heavy toll if unaddressed. One VP of customer engagement marketing at a financial service firms told us:

"It can be a big Achilles' heel if the accuracy of customer data is not great, or the accessibility of the data is not great. Accuracy and accessibility are critical."

⚠️ **Ninety-nine percent of firms face issues with customer data.**

Specifically, our study found:

› **Firms struggle to acquire and use customer data.** The reality is that 99% experience challenges with customer data. Since firms generally expressed confidence in their data analytics efforts, we were surprised at the extent of customer data issues they still face. Top difficulties included improving the accuracy and quality of customer data, maintaining it through change, and detecting data changes so they can act on insight (see Figure 4).

› **Advanced users demand higher-quality and more timely customer data.** Advanced analytics like data science and machine learning are exposing more customer data issues, especially when it is externally sourced. For example, a data scientist at a telecommunications firm told us how he spends time hedging model risk because the third-party customer data his firm acquires is not fresh.

› **Customer data issues exact a heavy toll on firms.** Ninety-six percent of firms indicated that timeliness and accuracy issues with customer data acquisition are big problems today. If not addressed, these issues will likely start to erode firms' data analytics confidence. It is only a matter of time. One interviewee told us:

"The implications of using inaccurate data can be lost revenue, lost customers. For example, retention modeling is a big (performance) driver for us. If we can't predict our customers, we're going to lose them."

Figure 3

"How does your company primarily consume customer data provided by external suppliers today?"

81% Access systematically or in real-time through an API

77% Through a self-service interface that allows for discovery and analysis

73% Buy raw data directly via download or file transfer

69% Through an app that enables lines of business users too see trends and insights

Base: 658 global professionals with responsibility or influence over data acquisition and analytics decisions whose companies use second-party, third-party, or open source data
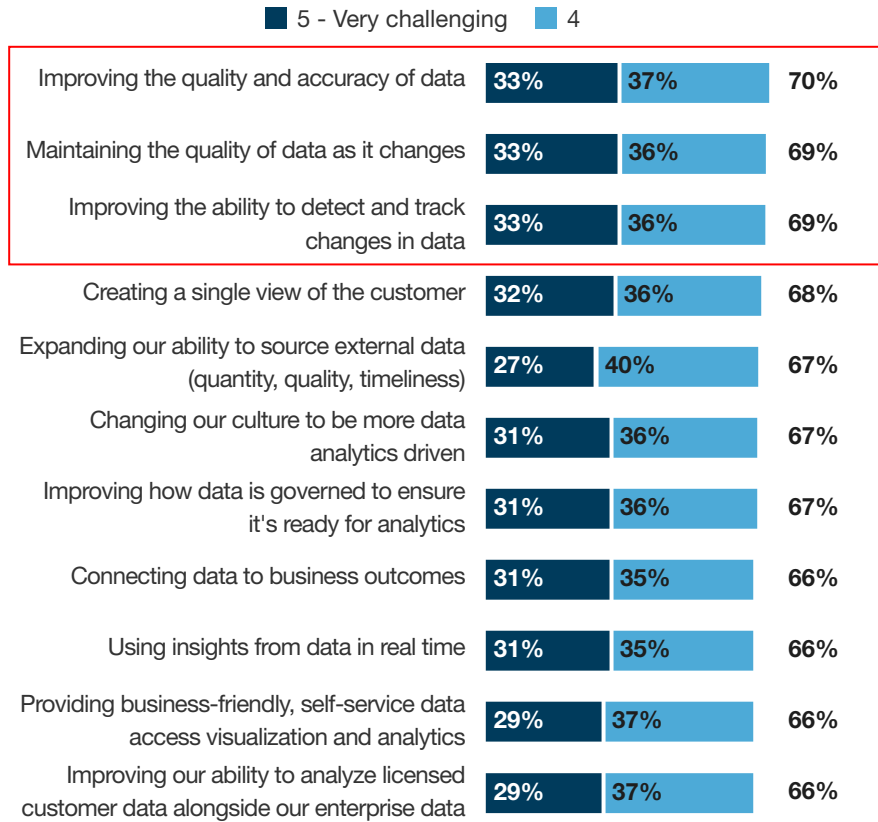Source: A commissioned study conducted by Forrester

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"We normally refresh third-party data at least monthly. I would love to have it down to a daily update because we're moving toward real-time interactions. Ideally, I would love to have things updated as soon as possible, if there are any changes."

Principal data scientist, telecom company

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Figure 4

"Thinking about the customer data that's most important to you, to what extent are the following challenges you experience with using that customer data?" (Showing "5" and "4" on a 1 to 5 scale where 5 is "Very challenging" and 1 is "Not at all challenging")

■ 5 - Very challenging   ■ 4

Challenge	5	4	Total
Improving the quality and accuracy of data	33%	37%	70%
Maintaining the quality of data as it changes	33%	36%	69%
Improving the ability to detect and track changes in data	33%	36%	69%
Creating a single view of the customer	32%	36%	68%
Expanding our ability to source external data (quantity, quality, timeliness)	27%	40%	67%
Changing our culture to be more data analytics driven	31%	36%	67%
Improving how data is governed to ensure it's ready for analytics	31%	36%	67%
Connecting data to business outcomes	31%	35%	66%
Using insights from data in real time	31%	35%	66%
Providing business-friendly, self-service data access visualization and analytics	29%	37%	66%
Improving our ability to analyze licensed customer data alongside our enterprise data	29%	37%	66%

Base: 793 global professionals with responsibility or influence over data acquisition and analytics decisions
Note: .88% selected "None of these; we don't experience any challenges with using customer data."
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

Despite their confidence, 99% of firms experience challenges using customer data. They are primarily challenged with change-related data quality problems.

The Need For Action Will Drive Next-Generation Data Marketplaces

Four in five firms in this study said connecting data to business outcomes was important. However, acting to achieve desired outcomes gets more difficult as firms move away from slow to real-time customer engagement, which is exactly what the firms in this study told us they wanted.

This desire for faster action to engage customers in real time breaks down into two important data capabilities that must work together:

› **The ability to track customer data at it changes.** Sixty-nine percent of firms said that tracking and understanding how data changes would have a significant impact on their ability to make fast decisions and engage customers in the moment of need (see Figure 5). Anecdotes from our interviews reinforced this conclusion. For example, a data scientist told us that using data to recognize when a child is going to college creates upsell opportunities.

› **The ability to trust data because it is accurate and timely.** Ninety-six percent of firms thought higher data confidence would bolster their ability to act. What will help firms trust their data? Our study found that accuracy and timeliness are the most important data quality dimensions.

NEXT-GENERATION DATA MARKETPLACES WILL HELP TURN ACCURATE AND TIMELY CUSTOMER DATA INTO ACTION

Many firms in the midst of digital transformation are learning that just improving digital experience and processes is not enough. It takes acting on digital insight gained from fresh, accurate, and high-quality external customer data. But our study found issues including reliability, cost, and product/needs fit (see Figure 6). For example, a VP of customer engagement marketing said the problem of mixing acquired commercial data with messy internal data results in inaccurate customer targeting.

Firms' thirst for external customer data and the growing demand to acquire it through marketplaces will create competitive pressure to fix these issues. As a result, data service providers will bring next-generation data marketplaces online over the next year. For example, we expect evolving marketplaces to get better at helping firms:

› **Find new data sets by monitoring data usage.** Half of firms said that finding the right data in the open market was challenging. Marketplace vendors will provide more built-in intelligence over time. For example, by monitoring data usage rather than just data downloads, next-generation markets could identify new data sets to customers based on how they use existing data. This, however, will require market participants to install agents that feed data usage information back to data providers.

> "When a teenager goes off to college, we'd love to be able to follow them and offer them an appropriate package as they leave the house, or as they get their own account. So being able to monitor those kinds of data changes over time would be very important for us. We'd be able to target the right offers to them at the right time."
>
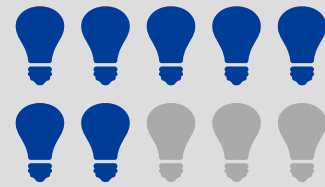> *Principal data scientist, telecom company*

> "I think it's a really, really tenuous relationship with some of our vendors because they don't give us exactly what we need, and our own customer data is sometimes really messy. So when you combine that with external messy data, you end up with inaccurate targeting, which is not the point."
>
> *VP of customer engagement marketing, financial company*

Figure 5

"What business benefits do you expect as a result of improving your company's ability to track and understand how and why third-party customer data changes over time? What benefits would your company achieve if it had higher confidence in the quality of its third-party data?"
(Select all that apply)

■ Benefits expected as a result of higher confidence in the quality of third-party data

■ Benefits expected as a result of improving ability to track and understand how and why third-pary customer data changes over time

Benefit	Higher confidence	Improving ability to track
Ability to better compete for and win new customers	42%	48%
Increased confidence in fact-based and objective information leading to faster business decisions	45%	46%
Improved insights/ability to retain existing customers	45%	46%
Ability to implement improvements to our business processes (i.e. reduce cycle time, increase throughput, etc.)	45%	40%
Reduced cycle time for developing new or better products and/or customer experiences	37%	39%
Measurable improvement of customer experience	36%	38%
Reduced business risk	29%	35%
Opportunity to become a disruptor in our industry	35%	33%
Reduction in the number of subjective decisions made by top management	34%	32%
None of these; we would not experience any benefits	4%	4%

More than two-thirds believe they would see <u>notable impact</u> on their ability to act on insight if they could better track and understand changes in data.

Base: 364 global professionals with responsibility or influence over data acquisition and analytics decisions whose companies use third-party data
Source: A commissioned study conducted by Forrester Consulting behalf of Pitney Bowes, October 2017

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Figure 6

"What challenges does your company face in acquiring second and/or third-party customer data products or services?" (Select all that apply)

55% The high cost of licensing reliable data sets from third parties

54% The timeliness and reliability of open data sets

50% Difficulty in finding the right data products in the open market

49% Contracting requirements for licensing data from third parties

39% The immaturity of data marketplaces

4% None of these; we don't experience challenges with acquiring data products or services

Base: 611 global professionals with responsibility or influence over data acquisition and analytics decisions whose companies use second-party or third-party data
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

› **Blend internal and external data.** Firms we interviewed were downloading data sets or pulling data from APIs, but data blending and analytics work was typically done in-house. Next-generation data marketplaces will enable users to upload data sets more easily and blend their first-party data with high-quality third-party customer data. These marketplaces will also ensure that uploaded data is secure and private until firms are ready to offer it within the market.

› **Track data changes to exploit narrow opportunities.** The desire to act quickly on opportunities when data changes will drive markets to provide more sophisticated change tracking. For example, if a firm is blending acquired customer location data and uploaded mobile behavior data, the sudden use of the camera in a retail location could signal it is time to make an offer. It may be faster to discover this insight in a marketplace, where the fresh customer location data lives. Once discovered, a marketing automation tool can call it via an API based on an event trigger in the marketplace.

› **Improve their confidence through quality markers.** Opportunity to act is one thing; having the confidence to act is another. Signals from our study were clear: Higher-quality, fresher data bolsters confidence. Next-generation marketplaces can help participants by adding confidence-boosting metadata. For example, what is the precision of a customer's or merchant's location? When was a data point sourced, from where, and what is the error tolerance? Marketplace participants will be able to create rules that map quality thresholds to action rules.

› **Provide flexible data licensing and sharing models.** About 50% of the firms we surveyed expressed concern with acquiring external data, such as high costs and complex contracts. Online marketplaces are an ideal digital forum to experiment with new flexible approaches such as consumption-based pricing, try-before-you-buy scenarios, and streamlined licensing agreements. Not only will these be good for consumers of data products, it will also help more firms upload and monetize their data sets.

> "We have a lag between when the data is given to us and when we download. This concern is very relevant on our end. So it ranks very highly in terms of the support that we get from a provider."
>
> *VP Big Data and Smart Analytics, Insurance company*

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Key Recommendations

Currently, most firms perform customer engagement analytics in-house because most of the customer data they need has come from within, but this will change. As data marketplaces evolve and offer insight and action services, it will make increasingly more sense to move your customer and product data to a market, where vendor services and tools can help you connect data to action. Here is what you need to do:

Catalog and evaluate your external customer data sets. It is likely your business sources a lot of external customer data from many places already. It is time to get a handle on them all. Not only should you inventory the places, but you should also start identifying the challenges you have, such as freshness, confidence, and granularity that make it difficult to take action.

Speak with data providers about their data marketplace plans. Data providers are waking up to the need for better data marketplace capabilities. So are independent software vendors (ISVs), consultancies, and service providers. Use your inventory and analysis above to discuss your current vendor's plans and express your needs. If you do not use a data marketplace, it's time to evaluate them.

**Pilot customer engagement scenarios in next-generation marketplaces.** Look for opportunities to upload your data to next-generation data marketplaces, blend it with external customer data, and trigger insights for automated action. Marketplace platforms that support this are insight services, which is the ultimate evolution of data marketplaces. As they evolve, they can help your firm turn data into fast customer action.

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Appendix A: Methodology

In this study, Forrester conducted an online survey of 800 real estate, telecom, financial services, and insurance organizations in the US, Canada, UK, and Australia to evaluate the importance of accurate data and tracking and understanding changes in that data to derive actionable insight. Forrester supplemented the survey with four interviews with executives meeting the same criteria. Survey participants included decision makers in data, analytics, marketing, advertising, and IT. Questions provided to the participants asked about challenges with using and acquiring third-party customer data and openness to using a data marketplace. Respondents were offered incentives as a thank you for time spent on the survey. The study began in September 2017 and was completed in October 2017.
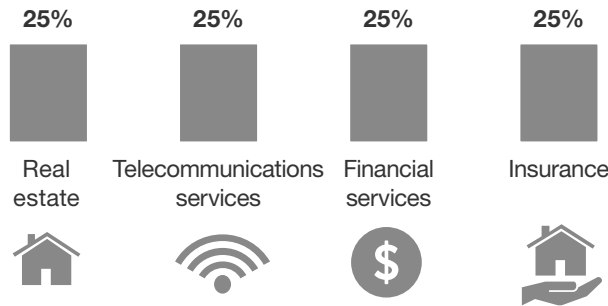
Appendix B: Demographics/Firmographics
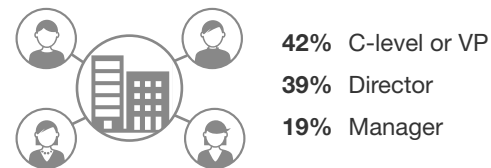
"In which country are you located?"

25%	25%	25%	25%
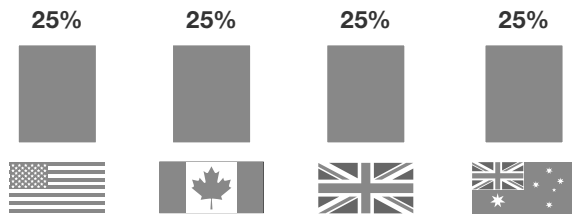
"Using your best estimate, how many employees work for your firm/organization worldwide?"

7% 100 to 499 employees

42% 500 to 999 employees

33% 1,000 to 4,999 employees

18% 5,000 or more employees
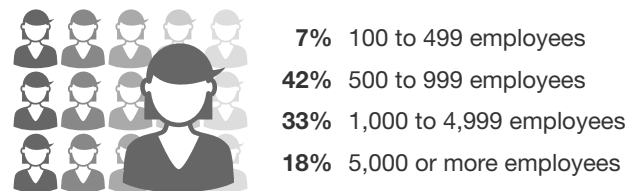
"Which of the following best describes the industry to which your company belongs?"

25%	25%	25%	25%
Real estate	Telecommunications services	Financial services	Insurance

"Which title best describes your position at your organization?"

42% C-level or VP

39% Director

19% Manager

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"Which of the following best describes your current position/department?"
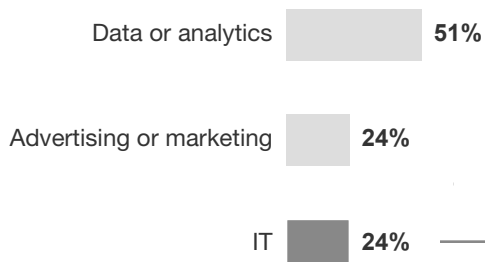
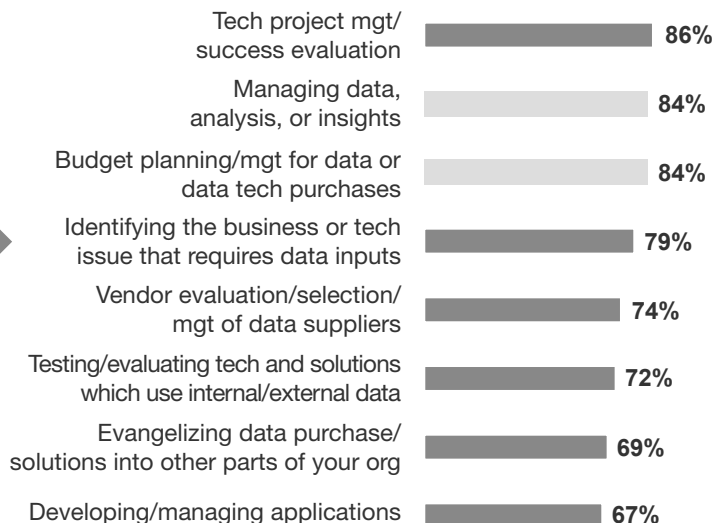|	
Data or analytics	51%
Advertising or marketing	24%
IT	24%

Base: 800 global professionals with responsibility or influence over data acquisition and analytics decisions at their companies
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

"Are you involved in any of the following activities during your typical workday?" (Select all that apply)

Tech project mgt/ success evaluation	86%
Managing data, analysis, or insights	84%
Budget planning/mgt for data or data tech purchases	84%
Identifying the business or tech issue that requires data inputs	79%
Vendor evaluation/selection/ mgt of data suppliers	74%
Testing/evaluating tech and solutions which use internal/external data	72%
Evangelizing data purchase/ solutions into other parts of your org	69%
Developing/managing applications	67%

Base: 195 global IT professionals with responsibility or influence over data acquisition and analytics decisions at their companies
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

"What is your level of responsibility when it comes to external data acquisition at your organization?"

77% I am the **final decision maker** for my organization's data acquisition decisions

20% I am a **part of a team** making decisions for my organization's data acquisition

3% I influence decisions related to my organization's data acquisition

"What is your level of responsibility when it comes to data analytics purchasing decisions at your organization?"

73% I am the **final decision maker** for my organization's data analytics purchase decisions

23% I am a **part of a team** making decisions for my organization's data purchase decisions

3% I influence decisions related to my organization's data purchasing

1% I provide analysis that is used by decision makers for my organization's data analytics purchasing

Base: 800 global global professionals with responsibility or influence over data acquisitions and analytics decisions at their companies
Source: A commissioned study conducted by Forrester Consulting on behalf of Pitney Bowes, October 2017

Appendix C: Endnotes

ENDNOTES

[1] Base: 1,559 services decision makers in NA/EU enterprises. Source: Forrester Data Business Technographics® Business And Technology Services Survey, 2017.