USING REAL-TIME DATA TO DRIVE DEEP CUSTOMER LOYALTY

We live in a time of unprecedented change, when technology impacts almost everything we do—from the way we live to the way we work. A time when applications can define a business.

Today, people and devices are more connected than ever before, raising the bar for customer experiences and the brands behind them. That's why businesses are committed to innovating and scaling in faster, more cost-effective ways, all in the name of customer experience. They're investing in agile models that heavily rely on multi-cloud and IoT environments, distributed services and microservices, APIs, and relentless code releases that introduce constant improvement and constant change.

But while these technology trends enable businesses to innovate faster and scale in more cost-effective ways, they also reduce visibility across the technology stack and introduce significant operational complexity. The result? Most organizations don't understand the connection between the changes they make and the impact these changes have on customer experience and business performance—until it is too late. By the time a team is pulled together to solve an issue, the impact on revenue and brand loyalty is already at risk.

And enterprises know this story all too well. In an age that's all about instant gratification, consumers have little patience for poor digital experiences, and they're not afraid to say it. Just think about any big consumer shopping day—like Black Friday or Cyber Monday—when websites crash or apps take too long to load. Within minutes, consumers are sharing their dissatisfaction with these technical difficulties over social media, and before you know it, you're making headlines for the wrong reasons. And even worse, brand loyalty is now at risk.

At AppDynamics, we know that business happens in real time. That's why we deliver an application performance solution that leverages AI to help you solve problems before they impact customer experience. Our mission is to empower the enterprise with a solution that correlates end-user experience with business outcomes at a massive scale and across multi-cloud, distributed environments.

To gain insights into key drivers behind customer experience—and the role that real-time analytics plays within it—we sponsored research by Harvard Business Review Analytic Services to conduct a global survey that delves into what the most successful companies are doing to drive brand loyalty.

DANNY WINOKUR
CHIEF PRODUCT OFFICER
APPDYNAMICS

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Businesses are diligently pursuing the quest for customer loyalty and the experiences that drive it. According to a recent Harvard Business Review Analytic Services study, nearly 50% of companies say that they have stronger customer loyalty than their competitors do. Only a handful—about 10%—say they have less.

The strength of a company's customer loyalty relies heavily on the quality of the experiences it offers its clientele. These experiences, in turn, increasingly involve apps, which are made more effective and efficient through monitoring tools. To gain insights into those experiences, this study delved into what the most successful companies are doing differently in terms of how they assess and improve their customer experience (CX) apps.

The drivers of success aren't what most executives would expect. For example, after decades of struggling with data quality, business leaders now say that their organizations have solved many of those issues. Senior management support and alignment aren't much of a challenge, either.

Moreover, most companies rely on the same standard CX and app metrics and have not turned to more detailed metrics such as app load time and crash rate. Businesses are also intimately familiar with their customers' journeys—nearly 90% of respondents have identified all customer touchpoints across channels and know which are the most important to invest in. Equally surprising is that businesses with the strongest customer loyalty cannot act quickly on data any more than their competitors can.

What then makes the leaders more successful? The study's key findings are that companies with the greatest amount of customer loyalty have much more frequent access to CX performance data, often in real time. They also involve the largest number of functions to assess and improve the CX.

Arming cross-functional teams with data is paramount. These teams are much more likely to discover the root causes of performance issues, particularly those that cross organizational boundaries. For example, IT may be under pressure to accelerate page loads, but marketing needs more robust functionality that can affect speed. IT or marketing groups on their own probably couldn't resolve the conflicts to everyone's satisfaction.

App performance metrics can **yield important insights** into why customers abandon an online experience.

But the jury is still out on whether today's leaders will remain at the helm. The survey found a sizable gap between the capabilities business leaders believe are important to using real-time CX data and how successful they think their organizations are at each. For example, as pointed out above, companies struggle to act on data yet deem the capability highly important. As technology continues to develop at a relentless pace, today's leaders could easily become tomorrow's laggards.

Who Are the Leaders?

To determine which companies are at the head of the pack, the survey asked respondents to compare their organization's level of customer loyalty with that of its rivals. Those that have stronger loyalty than competitors—44% of the total— are leaders. Those with the same amount—45%—are the followers. Laggards are behind their competitors and account for 11% of the total.

Each of the three groups spans most industries. Leaders, however, are slightly more likely to be manufacturing, technology, or media companies. Laggards have somewhat greater penetration in consulting and energy sectors.

Interviews with executives and other experts found that the performance of CX applications drives a great deal of customer satisfaction and loyalty. "Companies are realizing that operational metrics of app performance are becoming more integral to designing and managing an effective customer experience," says James Walker, global head of analytics at London-based OC&C Strategy Consultants. "Businesses in the lead are starting to track the entire customer experience at fairly granular levels."

Customer Knowledge Playing Field

The expectation that businesses understand customer journeys and all the touchpoints across channels has not fallen on deaf ears. Most leaders and followers somewhat or strongly agree that their organizations have identified those touchpoints—60% and 54%, respectively. For laggards, the number drops to 39%. A clear majority of leaders and followers also regularly assess the effectiveness of the experience at each touchpoint and how important it is relative to the others. Only a minority of laggards say the same.

Nonetheless, a majority of companies—leaders, followers, and laggards—are not yet aggressively measuring the performance of the applications along the customer journey. For example, many organizations measure the repeat use rate of apps and the number of monthly and daily users. But very few track performance statistics such as app failure rates. FIGURE 1

These measures—like app crashes and time from app request to page load— may appear to be only back-office metrics, but they actually tie directly to the overall customer experience and impact whether customers will return or will defect to a competitor.

Consider global furniture retailer IKEA. It has a significant online presence and is focusing on building real-time analytics capabilities. The company thoroughly tracks app performance, including how often an app crashes and performance of business transactions in a customer's online sessions. Most important, IKEA will be able to tie these metrics to strategic business KPIs, such as the conversion rate of online prospects to customers.

To make the connection, IKEA is using machine learning. Algorithms measure

and learn what normal should be for the performance of each application and on business transaction level. Thus, when customer conversion rates decline, IKEA can see which app operational issues fell outside of normal ranges and contributed to the problem. "You need to understand the context of any anomaly in metrics," says Christian Sjöbohm, one of the firm's solution leaders. "Some large anomalies can turn out to be normal. Some small ones can indicate trouble ahead. You need to know which is which and put them in context and how it impacts the customer experience."

Gerard du Toit, partner and head of global customer experience capabilities at Bain & Co., points out that app performance metrics can also yield important insights into why customers abandon an online experience. Most companies rarely delve into that question and are often unaware of how many customers give up. As an example, he describes an Australian bank that discovered that nearly 70% of customers signing up for an account online either abandoned the process out of frustration with the functionality or went to a branch location instead. "Businesses only get one part of the picture," he says. "People answer a survey after the completion of a transaction or online experience. But companies rarely find out what caused people to abandon and whether or not they came back."
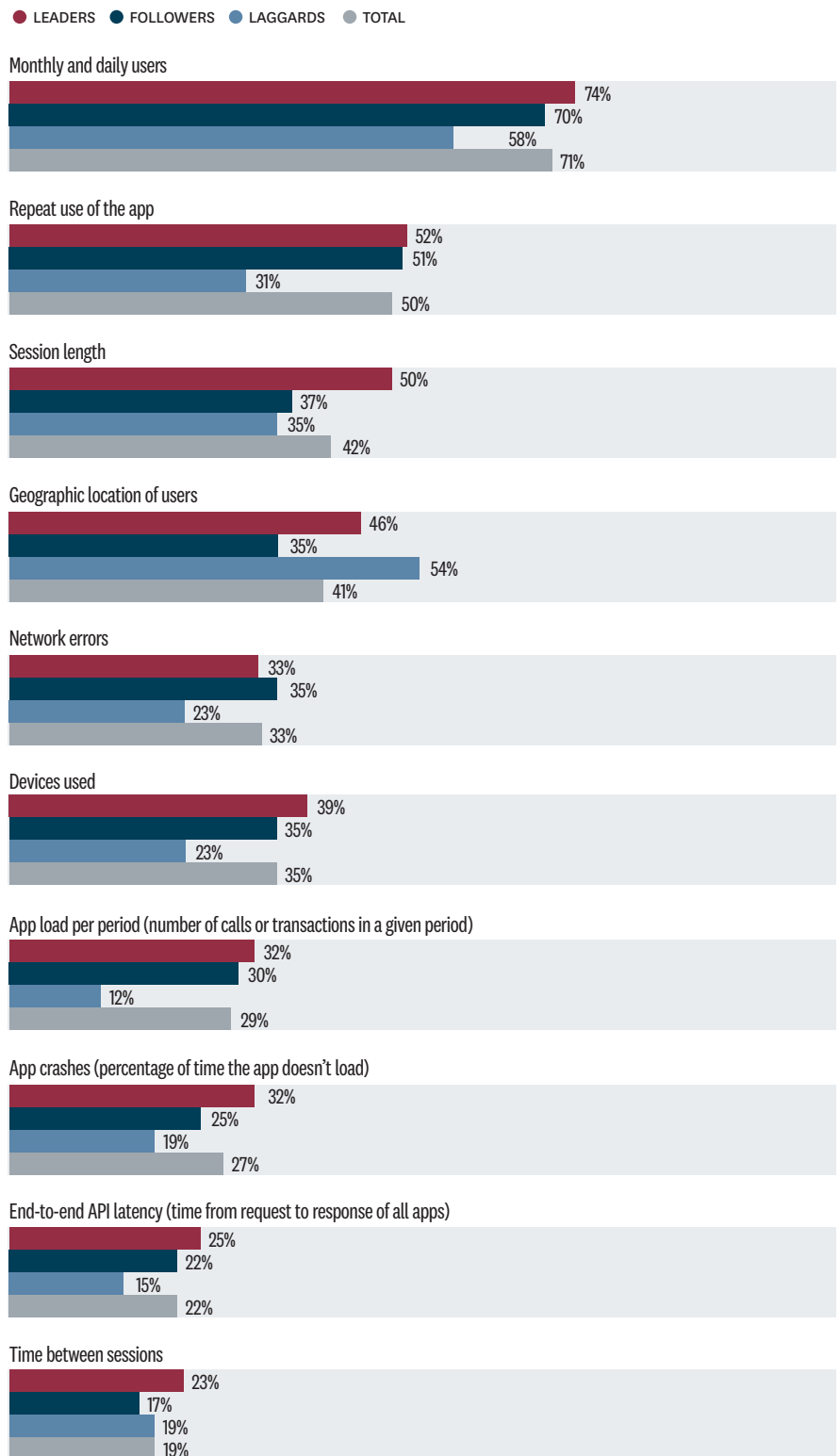
Using App Metrics Better
The quality of app performance data and how frequently managers have access to it are two of the biggest drivers of customer loyalty. More than 30% of leaders can access CX app performance data in real time. A scant 4% of laggards say the same. Many executives are forced to wait a month or more for such data. FIGURE 2 Nearly 40% of laggards wait a month between app performance reports. More than 25% of leaders do as well. Large time lags between reports can keep causes of customer dissatisfaction hidden for long periods with significant impact on satisfaction and loyalty.

MOST COMMON CX APP METRICS
Percentage of respondents measuring the following metrics

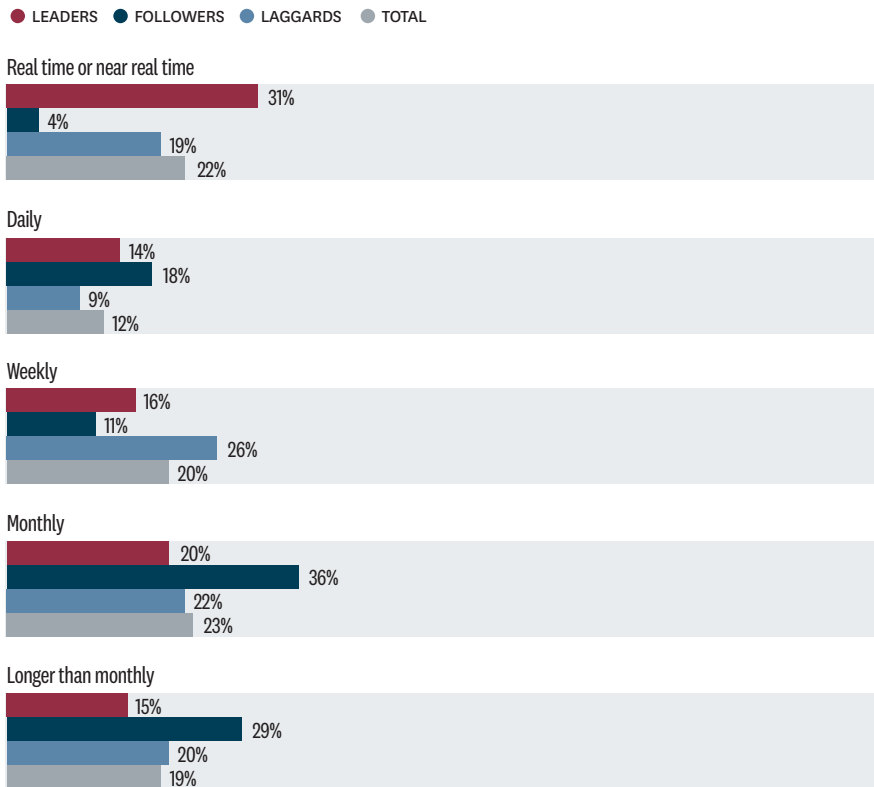● LEADERS ● FOLLOWERS ● LAGGARDS ● TOTAL

Monthly and daily users
- 74%
- 70%
- 58%
- 71%

Repeat use of the app
- 52%
- 51%
- 31%
- 50%

Session length
- 50%
- 37%
- 35%
- 42%

Geographic location of users
- 46%
- 35%
- 54%
- 41%

Network errors
- 33%
- 35%
- 23%
- 33%

Devices used
- 39%
- 35%
- 23%
- 35%

App load per period (number of calls or transactions in a given period)
- 32%
- 30%
- 12%
- 29%

App crashes (percentage of time the app doesn't load)
- 32%
- 25%
- 19%
- 27%

End-to-end API latency (time from request to response of all apps)
- 25%
- 22%
- 15%
- 22%

Time between sessions
- 23%
- 17%
- 19%
- 19%

FIGURE 2

HOW FREQUENTLY MANAGERS CAN ACCESS DATA

Percentage of respondents indicating each of the following time frames for app data access

● LEADERS ● FOLLOWERS ● LAGGARDS ● TOTAL

Real time or near real time
- 31%
- 4%
- 19%
- 22%

Daily
- 14%
- 18%
- 9%
- 12%

Weekly
- 16%
- 11%
- 26%
- 20%

Monthly
- 20%
- 36%
- 22%
- 23%

Longer than monthly
- 15%
- 29%
- 20%
- 19%

SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2018

APP PERFORMANCE OFTEN NEEDS IMMEDIATE ACTION SINCE IT IMPACTS THE QUALITY OF EXPERIENCE IN THE MOMENT.

Leaders are also significantly more likely to say that they have enough data to assess how well the apps are performing: 41% of leaders somewhat or strongly agree that they have sufficient data, versus 24% of followers and 26% of laggards.

App performance data needs to be frequently disseminated for it to have an impact. "Strategic metrics such as average cart size or number of new customers acquired take time to act on and improve," says OC&C's Walker. "So this data doesn't have to be reported in real time. App performance, on the other hand, often needs immediate action since it impacts the quality of experience in the moment. The faster a company has access to this data, the better off it will be."

Leaders also bring the largest number of functions together to assess and improve the customer experience. Nearly 60% of leaders involve product development and R&D versus only 32% of laggards. Even more telling, only about 45% of laggards say that customer service/care is heavily involved in managing the customer experience. FIGURE 3

Using cross-functional teams is essential to improving the customer experience, says Walker. If only one function, such as IT, is involved, poor trade-off decisions inevitably emerge. For example, the IT department may be charged with reducing web page load time. But marketing may be trying to sell very expensive items such as luxury leather goods that customers need to explore.

If IT is the only function at the table, it may remove some of that functionality to meet load-time targets. But that could have the unintended consequence of quashing the amount of merchandise customers buy. "Someone needs to analyze and quantify the trade-offs between functionality and sales," Walker says. "Only a cross-functional group will be able to do that effectively."

Cross-functional teams are also more effective at finding and eliminating the root cause of an issue and solving the problem. For example, the time

between online customer visits is mounting, and many customers abandon carts when filling out shipping information. The issue could be the app is confusing. But shipping charges could be too high or customers feel they have to purchase too much to qualify for free shipping. Understanding why customers are abandoning requires multiple perspectives on the business and customer expectations.

The combination of real-time data access and cross-functional problem solving shows up across the buying process. Both the front- and back-end experiences that leaders provide are far superior to what competitors have to offer. FIGURE 4

Acting Faster on Data Still Aspirational

If having access to real-time customer data and acting on it is the foundation of strong customer loyalty, the survey found that most companies still have much work to do. Although leaders have achieved a clear edge, their lead could be difficult to maintain. Leaders, followers, and laggards all report sizable gaps between what they believe is important to accessing and using data in real time and how well their organizations perform on each of these capabilities.
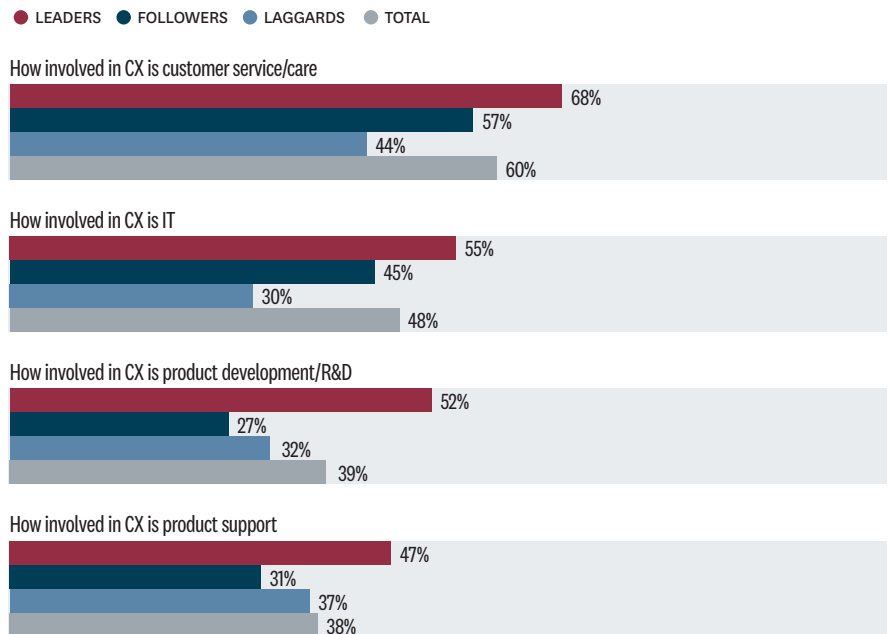
For instance, the vast majority of respondents believe that the ability to act on data quickly is important. But only a small minority are successful at it. Similarly, some 90% of respondents believe that managing data from different sources is very important. But fewer than 30% report that their companies excel in this regard. FIGURE 5

Advanced analytics and machine learning, on the other hand, show an almost opposite trend. Some 80% of respondents believe that developing and testing analytics models collaboratively is very important. A healthy 50% of business leaders say their organizations are very skilled at it. Walker quips that "analytics is solved." His point, while an exaggeration, is well taken. The primary challenge to using data to improve CX is no

FIGURE 3

WHICH FUNCTIONS ARE INVOLVED WITH THE CUSTOMER EXPERIENCE?

Percentage of respondents who say the following functions are heavily involved in assessing and improving their organization's customer experience

● LEADERS ● FOLLOWERS ● LAGGARDS ● TOTAL

How involved in CX is customer service/care

- 68%
- 57%
- 44%
- 60%

How involved in CX is IT

- 55%
- 45%
- 30%
- 48%

How involved in CX is product development/R&D

- 52%
- 27%
- 32%
- 39%

How involved in CX is product support

- 47%
- 31%
- 37%
- 38%

SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2018

FIGURE 4

HOW FRONT- AND BACK-END CUSTOMER EXPERIENCES RANK AGAINST COMPETITORS

Percentage of respondents who somewhat or strongly agree that their company's front- and back-end experiences are superior to those of competitors

● LEADERS ● FOLLOWERS ● LAGGARDS

Front-end experiences

- 47%
- 32%
- 21%

Back-end experiences

- 40%
- 25%
- 18%
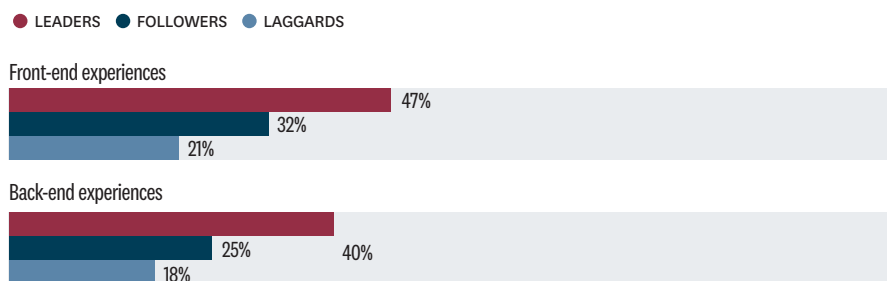
SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2018
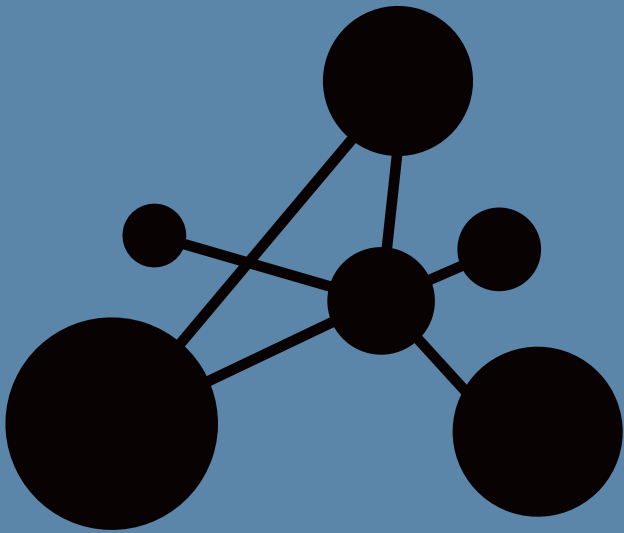
"COMPANIES DON'T HAVE TO REORGANIZE THEMSELVES IN ORDER TO AVOID SILOED THINKING. THEY CAN CREATE CROSS-FUNCTIONAL AND AGILE TEAMS TO ADDRESS A PARTICULAR CHALLENGE."
GERARD DU TOIT, BAIN & CO

longer analytics capabilities. Instead, management silos and processes that prevent organizations from acting on data are moving front and center on corporate agendas.

Bain's du Toit tells the story of a consumer products company that had separate pricing, demand generation, and inventory management units. The pricing unit decided to raise prices to increase overall revenue, but it never told its peers. As a result, overall revenue went up, but demand fell, and the company lost money because of excess inventory.

To avoid such siloed behavior, du Toit suggests that organizations follow the lead of large technology companies and how they structure all aspects of the product and customer experience including analytics capabilities. "Companies don't have to reorganize themselves in order to avoid siloed thinking," he says. "They can create cross-functional and agile teams to address a particular challenge such as setting up a new account or improving online checkout."
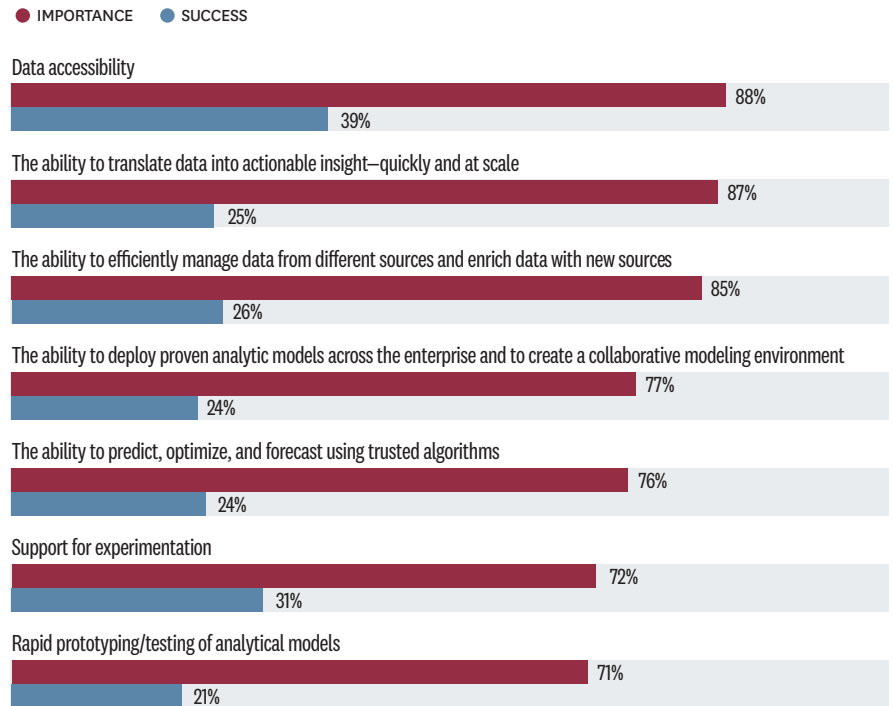
Cross-functional, agile teams can cover all the bases and move quickly, says du Toit. Many organizations charge these teams with decision making and overall accountability. An employee with expertise in a particular area can be put in charge and become the general manager of a specific challenge. Customer committees or councils often oversee the work of these teams. The effort also often extends beyond cross-functional teams, to the organization's overall corporate structure and how to act on data through such things as centralized analytics hubs.

Walker, who suggests a similar approach to du Toit's, also advocates for the creation of an analytics hub. The hub would be a center of excellence that keeps tabs on data across the enterprise and alerts the organization when trade-off decisions need to be made. For example, analysts can calculate the expected return of $1 spent on marketing versus product support or another area. Such analyses can go a long way in counteracting the effects of silos.

FIGURE 5

A CAPABILITY GAP

Percentage of respondents rating the importance and organizational success of each of the following 4 or 5 on a 5-point scale

● IMPORTANCE ● SUCCESS

Data accessibility — 88% / 39%

The ability to translate data into actionable insight—quickly and at scale — 87% / 25%

The ability to efficiently manage data from different sources and enrich data with new sources — 85% / 26%

The ability to deploy proven analytic models across the enterprise and to create a collaborative modeling environment — 77% / 24%

The ability to predict, optimize, and forecast using trusted algorithms — 76% / 24%

Support for experimentation — 72% / 31%

Rapid prototyping/testing of analytical models — 71% / 21%

SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2018

IKEA is on its journey to create highly empowered IT teams to quickly address any technical issues in the retailer's digital experience. The next step is to expand toward other teams not in the traditional IT area such as marketing, product, supply, and others to broaden and spur fast action based on real-time data. "When you expand your proactive monitoring and real time analytics to be used by all areas in your business and have empowered teams taking action on it, only then is when you have released the full potential and value." says Sjöbohm.

Final Words of Caution

The competition for loyal customers will only heat up and success today is no guarantee of winning tomorrow. Businesses that are hampered by silos will likely annoy their customers by creating inadequate experiences and taking too long to fix them.

Without real-time access to app data, competitors will spot issues sooner and act on them with greater precision and speed. Their speed, effectiveness, and customer knowledge will become magnets that draw ever-increasing numbers of customers into their ambit. "Businesses have embraced combining product developers, business representatives, and operational professionals in the development process and getting direct feedback from customers, " says Sjöbohm. "But organizations still need real-time analytics to spot and track trends. Every click is a transaction, and product teams need to be able to act quickly on what is happening with the performance of their product and the customer experience."

METHODOLOGY AND PARTICIPANT PROFILE

A total of 339 respondents drawn from the HBR audience of readers (magazine/
enewsletter readers, customers, HBR.org users) completed the survey.

SIZE OF ORGANIZATION

35%
100-499
EMPLOYEES

12%
500-999
EMPLOYEES

20%
1,000-4,999
EMPLOYEES

7%
5,000-9,999
EMPLOYEES

27%
10,000 OR MORE
EMPLOYEES

SENIORITY

24%
SENIOR
MANAGER/
DEPARTMENT
HEAD

21%
MANAGER/
SUPERVISOR

16%
DIRECTOR

15%
C-SUITE/
PRESIDENT/
CHAIR

7%
VICE PRESIDENT

6%
EXECUTIVE
MANAGEMENT
(EVP, SVP, GM,
MANAGING DIRECTOR,
ADMINISTRATOR)

ALL OTHER
TITLES ARE LESS
THAN 6% EACH

KEY INDUSTRY SECTORS

12%
TECHNOLOGY

12%
HEALTH CARE/
PHARMA

11%
FINANCIAL
SERVICES

11%
MANUFACTURING

8%
ENERGY/UTILITIES/
TELCOM

8%
EDUCATION

7%
GOVERNMENT

ALL OTHER
INDUSTRIES ARE
6% OR LESS EACH

JOB FUNCTION

19%
GENERAL/
EXECUTIVE
MANAGEMENT

11%
MARKETING/PR/
COMMUNICATIONS

10%
SALES/BUSINESS
DEVELOPMENT/
CUSTOMER SERVICE

7%
FINANCE/RISK

6%
HR/TRAINING

6%
IT

6%
R&D/INNOVATION/
PRODUCT
DEVELOPMENT

ALL OTHER
FUNCTIONS ARE
LESS THAN 6% EACH

REGIONS

50%
NORTH AMERICA

21%
EUROPE

15%
ASIA/PACIFIC

7%
LATIN AMERICA

6%
MIDDLE EAST/AFRICA

Figures may not add up to 100% due to rounding.