



2021 Technology Trends

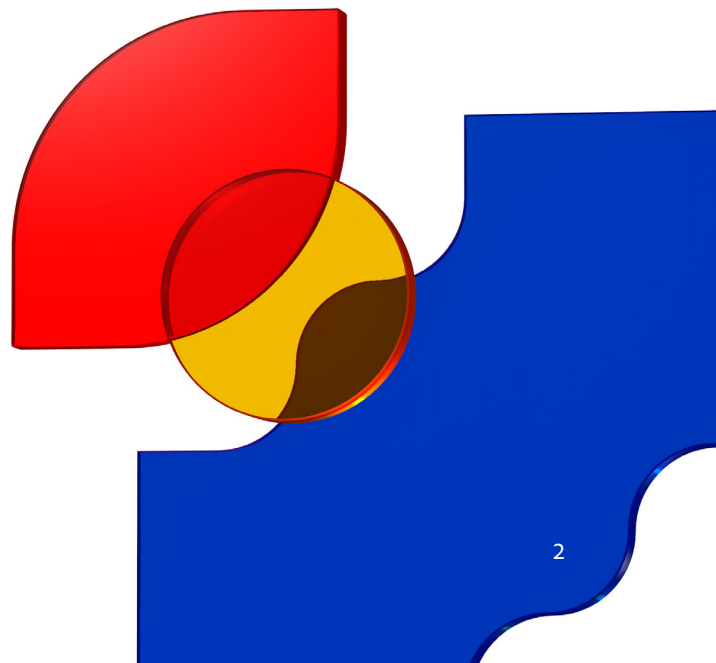
IT in Focus

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With over 13,000 participants in the 2020 study, more than 85,000 businesspeople from every continent (including Antarctica) have contributed their time and insights to this research since its inception in 2010. Their contributions make this the largest and most durable study of how digital trends are changing the marketing discipline.

Adobe and Econsultancy would like to thank everyone for their effort and insight.



Foreword

Welcome to Adobe's 2021 *Technology Trends Report*, our annual survey that charts the evolution of marketing, advertising, ecommerce, creative and technology professionals around the world.

Last year, we published a landmark report to celebrate a decade of *Digital Trends*. As we celebrated its launch, nobody could have predicted what the next 12 months would bring. Well, it certainly hasn't been 'more of the same'! The global pandemic and the sustained level of uncertainty that followed has led to the most innovative period in the history of marketing, essentially rewriting the rulebook for many businesses.

Instead of deviating from predicted trends, the dramatic events of 2020 have acted as an accelerant for digital transformation. Topics that were years away from consideration are now at the top of today's agenda. Whether demand for their products and services has increased or decreased, businesses are all grappling with the same challenges: remote working, new digital customers, the need for greater convenience, changes in buying behaviour and, added to that, their employees' and their customers' well-being. More than two-thirds of the companies with top-tier customer experience (CX) functions outpaced their sectors in the second half of 2020 and they were three times more likely to have 'significantly outpaced' their sectors than the rest of the sample.

The results of our survey show that past investments in customer experience have paid off, which further underlines the importance of speed and personalisation as we enter the new era in experience. As business leaders look towards the new year and scan the horizon for a return to normal, it's apparent that the new era in experience will be born digital. The economic



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impact of this acceleration and the opportunities it presents will only become clearer as the dust settles. The 2021 *Technology Trends Report*, produced in collaboration with Econsultancy, brings key trends to life with startling clarity.

The 2021 *Technology Trends Report* looks to both the past and the future, and presents two equally valuable perspectives: What has changed in the last year as a result of the pandemic, and the trends that are waiting around the corner.

Thousands of seasoned professionals have shared their hard-won lessons of the pandemic – offering advice on everything from hybrid working and attracting talent, to catching up with the exponential rise of the digital-first consumer.

From these insights, we present three guiding principles for 2021: *empathy* is the future of experience, the new era is *disruptive*, and *brand purpose* becomes even more relevant.

With the world on the brink of change, this year's report provides timely insights to help marketers and business leaders realign their vision and bounce back stronger in 2021.

Executive Summary

In a world where commercial success is increasingly defined by the quality of the customer experience (CX), the IT function plays a crucial role in making sure organisations deliver against the needs and expectations of their customers.

This Econsultancy/Adobe report focuses on how IT professionals responded to the 2021 *Digital Trends* survey, compares their answers with their peers from other business functions, and also looks at the differences between top-performing companies and the mainstream.

The research highlights how close cooperation between IT and other functions, such as marketing, is crucial for success, but needs to be supported by technology that fosters collaboration and facilitates efficient workflows and the sharing of customer data.

Key findings from the report include:

The IT function needs to be at the forefront of CX technology development.

IT respondents working for top-performing companies are significantly more likely to 'strongly agree' that CX priorities are pushing their IT/Tech team to work more closely with other parts of the business (59% vs. 44% for mainstream companies). They are also more likely than respondents from mainstream companies to 'strongly agree' that their IT/Tech team is involved in the selection and implementation of CX technology (56% vs. 44%).

Organisations are held back by legacy technology and workflow issues.

IT professionals and their peers in other functions agree that legacy systems are one of the most significant internal barriers to success (both at 39%), while workflow issues are regarded as a challenge by 33% of IT professionals and 40% of their peers.

Shared customer data and customer journey insights are the bedrock of CX initiatives.

IT respondents rate predictive analytics (37%) and customer data platforms (33%) as the technologies most likely to have a positive impact on CX. IT respondents working at top-performing companies are twice as likely to have 'significant insight' into the friction points in the customer journey (43% vs. 21%) and into the mindset of the customer across the whole journey (48% vs. 26%).

Section 1: CIOs lead the way in driving the CX-focused digital transformation

The rise of the CIO embodies the evolution of the IT department from a supporting function to a pivotal strategic player within the modern business enterprise. According to Gartner¹, 84% of the top CIOs surveyed have responsibility for areas of the business outside traditional IT, while KPMG research shows that more than 60% now have frequent access to the main boardroom².

CIOs now sit at the top table and ensure that their teams help organisations meet commercial objectives by championing the digital transformation initiatives which will ultimately help to drive revenues and reduce costs.

Of course, like all other business functions, IT teams faced a year of uncertainty in 2020 as they dealt with considerable pressure to help their organisations adapt to a remote workforce, while also prioritising 'typical' items such as security and increased adoption of cloud services.

Like other C-suite leaders, the CIO has also faced tough budgeting decisions for 2021 with long-term projects sometimes being parked to focus on the more immediate challenges and opportunities surfaced by the Covid-19 pandemic. According to a 2020 TechRepublic survey of IT spending and priorities, almost two-thirds (62%) of IT professionals said that budgets would be tightened in 2021, compared to only 12% who said there would be an increase in spending³.

As the Covid pandemic has created a new societal normal, IT teams have gradually been able to move from reactive, 'fire-fighting' mode to more strategic imperatives, such as helping their companies kick start their digital transformation projects and improving, or even reinventing, the customer experience.

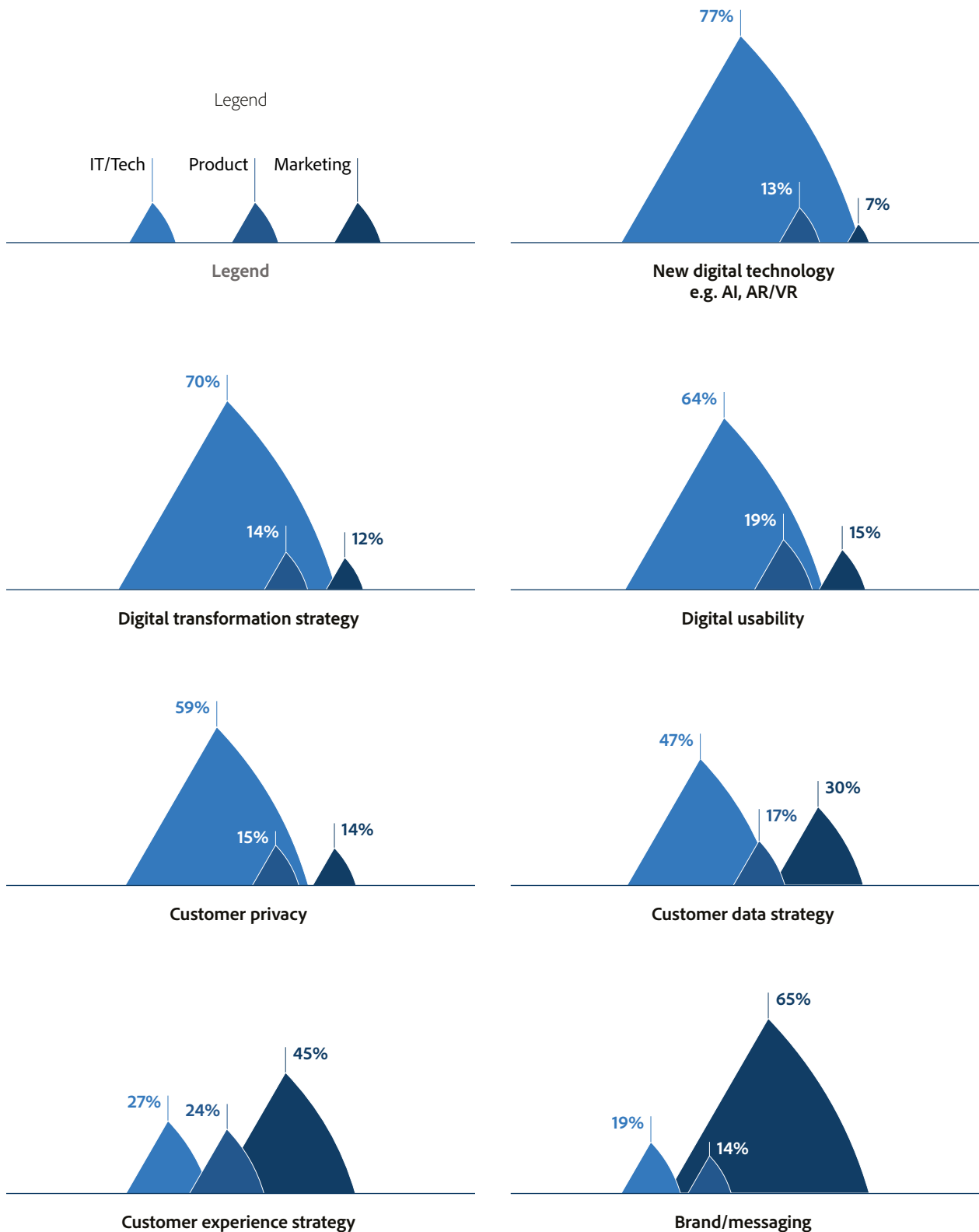
Figure 1 shows where IT respondents to the 2021 *Digital Trends* survey feel responsibility should reside for various business imperatives. For most of these areas they claim ownership ahead of their colleagues in product and marketing teams.

¹ <https://www.gartner.com/en/newsroom/press-releases/2017-10-02-gartner-survey-of-more-than-3000-cios-confirms-the-changing-role-of-the-chief-information-officer>

² <https://www.i-cio.com/management/insight/item/vital-statistics-for-cios>

³ <https://www.zdnet.com/article/research-how-covid-19-will-affect-2021-it-budgets/>

Figure 1 **In your opinion, where should responsibility reside within the organisation for the following?**



Respondents – 1,403

IT respondents are most categorical about IT/tech ownership of *new digital technology, e.g. AI, AR/VR* (77%), *digital transformation strategy* (70%), *digital usability* (64%) and *customer privacy* (59%). It is only for *brand/messaging* and *customer experience strategy* that they defer to marketing.

As well as showing how integral IT professionals think they are to the wider business, *Figure 1* also highlights the importance of having a close working relationship between IT and marketing, a theme that will be more fully explored later in the report. Customer experience strategy (generally seen by IT respondents as the domain of marketers) is very much interlinked with digital transformation strategy where IT respondents believe the buck very much stops with them.

While the IT function may not be ultimately responsible for the customer experience strategy, it plays a fundamental role in helping organisations meet their customers' evolving requirements and increased expectations of their services and experiences.

Customer data

Another area where close co-operation between IT teams and other functions is required is customer data strategy, an important discipline and something that is also crucial for delivering the best possible customer experiences. As we have just seen, slightly under half of IT respondents (47%) say the IT function has responsibility for customer data strategy, compared to 30% who say ownership resides with marketing.

Figure 2 shows that the two technologies thought by IT respondents to have the greatest impact on the customer experience are based on customer data, namely, *predictive analytics to calculate the value of any particular interaction* (37%) and *customer data platform (CDP) to optimise data management* (33%).

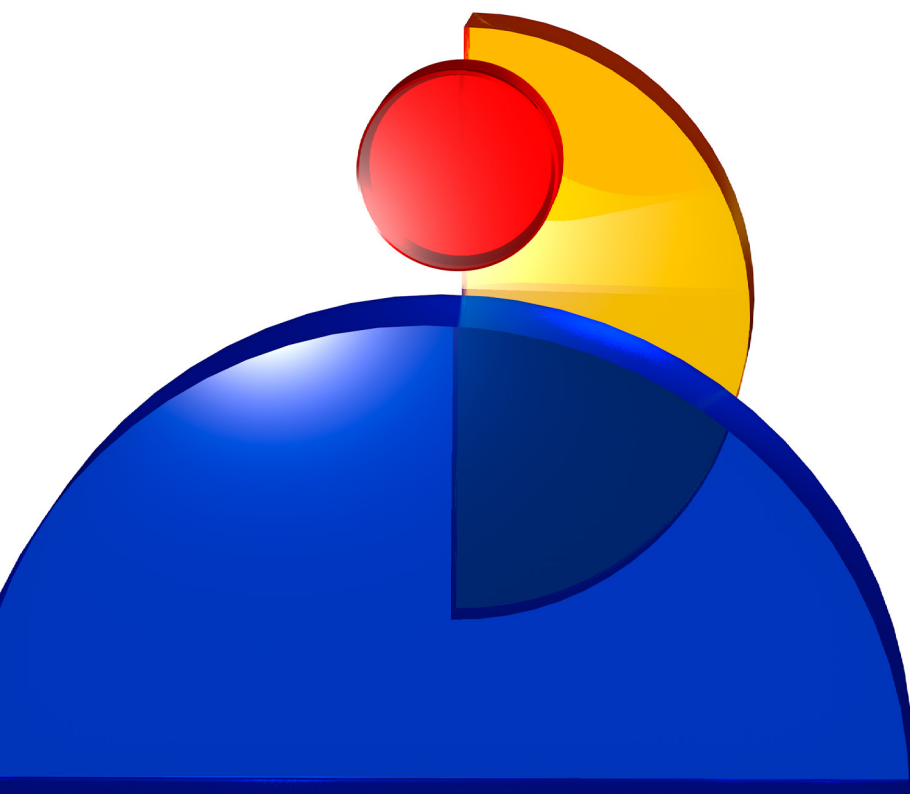
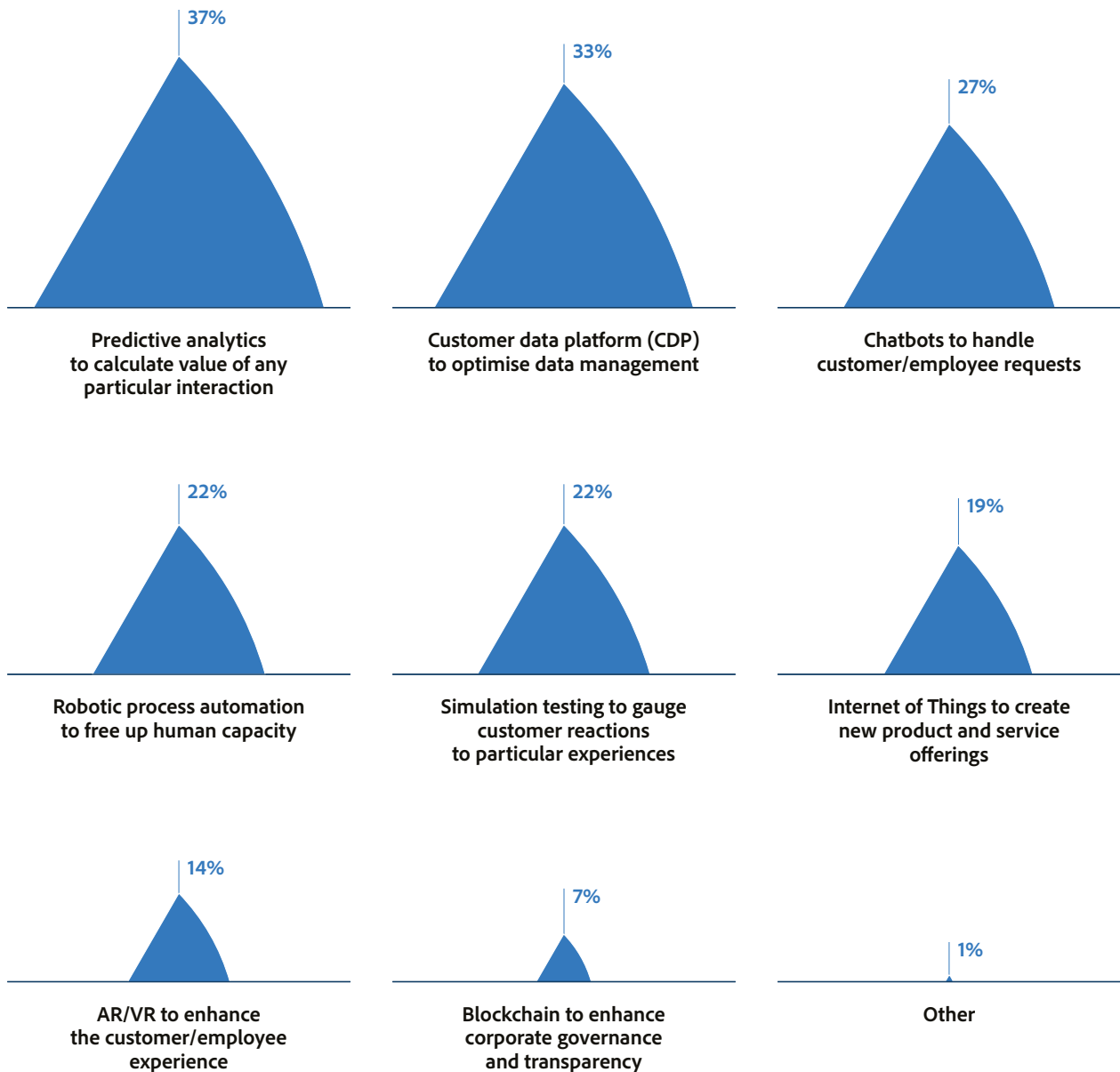


Figure 2 **What top two technologies do you believe have the greatest positive impact on customer experience?**



Respondents – 1,475

Predictive analytics help brands transform vast quantities of data into insights which can, in turn, help them better serve the needs of prospects and customers in real time. With the right software and data foundations in place, companies are increasingly able to understand what their customers want by identifying patterns and addressing anomalies.

To benefit from predictive analytics and 'next best actions', companies need to have a rounded view of their customers, something which is only possible with integrated technology. CDPs help companies unify and surface their first-party data in real time so marketers can activate the best possible marketing messages through the most appropriate channel.

According to Gartner's latest *CMO Spend Survey*, 2020 saw MarTech investments surviving unscathed, despite making up about a quarter of marketing budgets (26%)⁴. The analyst firm commented that CDPs are perceived as helping executives navigate through difficult times and recover faster. Indeed, this reasoning is likely to drive accelerated uptake of such technologies in 2021.

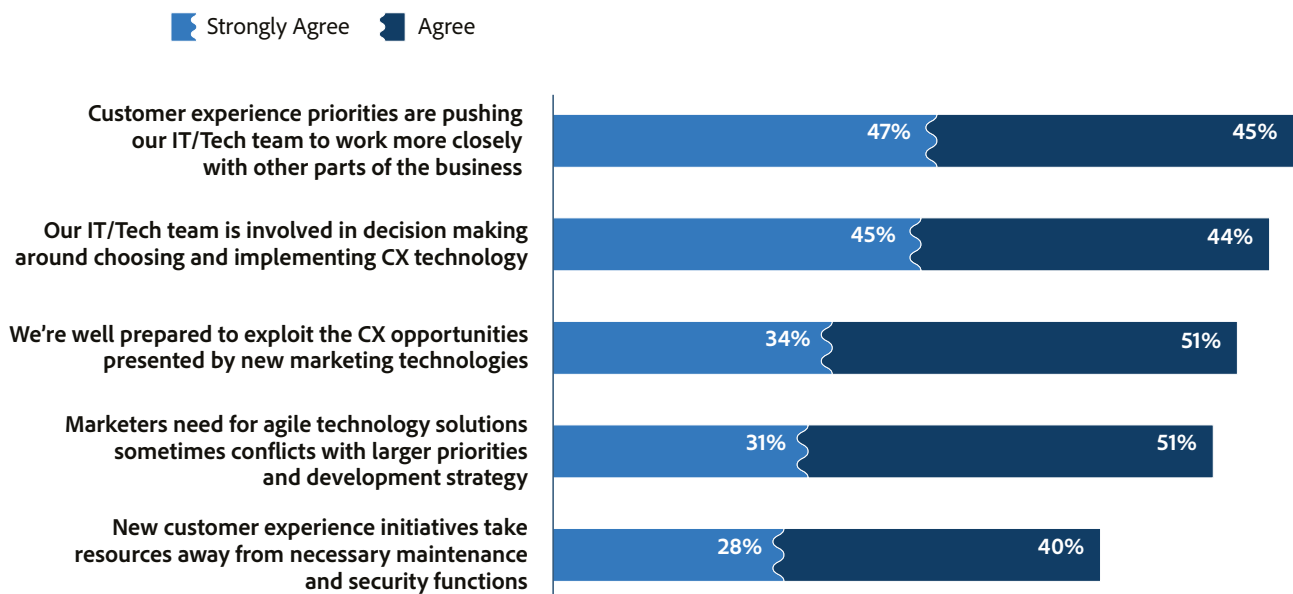
The adoption of CDPs and predictive analytics are good examples of areas where IT professionals need to collaborate with other functions to ensure they are getting the right technology for their businesses to meet commercial objectives, such as improved revenues and better CX, while complying with relevant industry regulations and legislation.

Encouragingly, IT survey respondents believe that they are now working more closely with other parts

of the business, including marketing functions. The overwhelming majority of respondents (92%) agree that *customer experience priorities are pushing their IT/Tech team to work more closely with other parts of the business* (Figure 3). Furthermore, 89% of IT respondents agree that their IT/Tech team is involved in decision making around choosing and implementing CX technology.

The last word in this section on the integral role of IT within the CX-focused modern enterprise goes to Deloitte US CIO Doug Beaudoin, who said in December 2020⁵: *"Like many organizations, Deloitte is re-envisioning IT as technology becomes increasingly inseparable from business. For example, systems and processes connected with customer data and platforms require tightly linked IT and business strategy expertise."*

Figure 3 **Thinking about how your organisation approaches customer experience (CX), to what extent do you agree or disagree with the following statements?**



Respondents – 1,406

⁴ <https://www.gartner.com/en/newsroom/press-releases/2020-07-01-gartner-says-cmos-remain-optimistic-about-budgets-pos>

⁵ <https://deloitte.wsj.com/cio/2020/12/02/deloitte-u-s-cio-on-the-evolving-it-landscape/>

Section 2: CX transformation is held back by legacy technology and workflow issues

While there is evidence that the wider business is capitalising on the tech expertise residing in IT departments for CX and marketing initiatives, there are also clear signs that more progress is needed to fully align IT teams with other business functions.

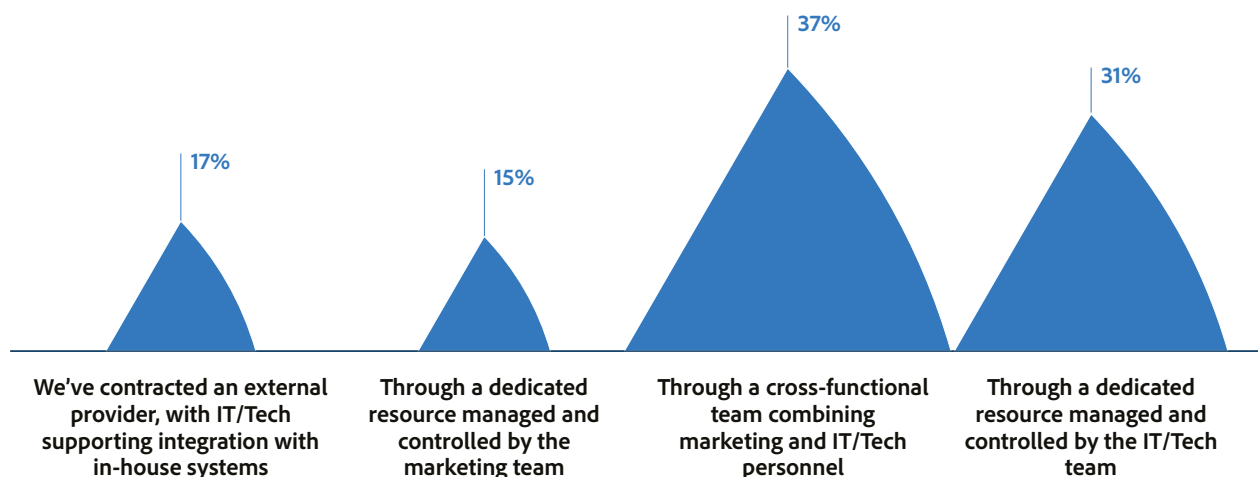
Only around a third (37%) of IT respondents report that their organisation's main approach to supporting marketing technology needs is achieved through **a cross-functional team combining marketing and IT/Tech personnel** (Figure 4).

The other two-thirds of the IT respondents say their organisations take a more siloed approach: about a third (31%) say that the **IT/tech** team supports marketing technology needs, 15% say it falls under the **marketing team**, and 17% say they outsource to an **external provider**.

The greater alignment between the CIO and the CMO the better. To deeply understand the customer and deliver strategically-crafted experiences, marketers must have a comprehensive picture of the buying journey. This is only made possible through tech teams connecting internal systems to build dynamic, unified profiles of the customer.

Organisations whose marketing and tech teams take joint ownership of their marketing and technology functions will emerge stronger in 2021, driving digital transformation strategies that enable more meaningful customer engagement.

Figure 4 **What is your organisation's main approach to support marketing technology needs?**



Respondents – 1,464

People, process and technology

For organisations to succeed in their digital transformation initiatives, they need to be aligned in respect of people, process and technology. In terms of **people**, successful organisations are typically characterised by high levels of collaboration between teams straddling different functions, including centres of excellence made up of people with complementary skills drawn from across the entire business.

In terms of **process**, organisations require agile ways of working across different functions and the ability to share knowledge easily, and with **technology** that supports these requirements by being user-friendly, easy to integrate, and supportive of collaboration.

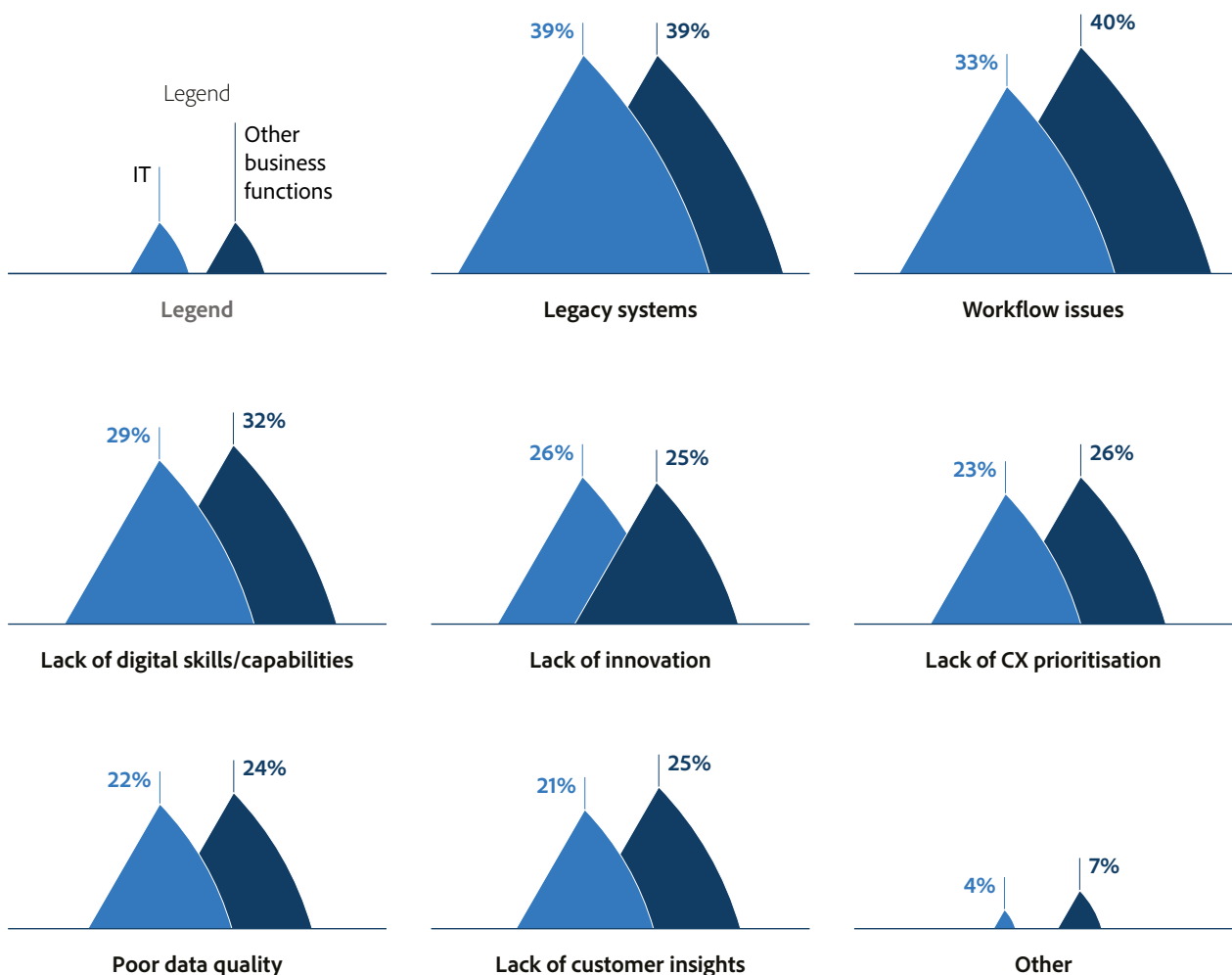
Figure 5 shows that IT professionals and their peers in other functions agree on the two most significant barriers holding back marketing and CX initiatives within their organisations. Nearly four-out-of-10 of both IT and non-IT respondents (39%) report that *legacy systems* are an internal barrier to success. This indicates that the challenge of outdated technology affects a large swathe of businesses.

Issues with technology can manifest themselves in different ways, most obviously in terms of the experience for both customers and employees. For *customers*, a lack of technology integration resulting from outdated software can result in a poor customer experience with unnecessary pain points and friction. while for *employees*, systems that aren't user friendly or compatible with the rest of the tech stack can discourage their use internally and make employee collaboration across the business extremely difficult.

From the perspective of survey respondents, *workflow issues* are regarded as a challenge by 33% of IT professionals as well as by 40% of those working in other functions.

Figure 5 **Internal barriers holding back marketing/customer experience organisation**

What is holding your marketing/customer experience organisation back, if anything?



Respondents (IT) – 774, Respondents (Other business functions) – 3,033

The third most significant barrier to success is a *lack of digital skills/capabilities*, something which is flagged up by 29% of IT respondents and 32% of their peers. Though the best marketing and CX technology should be user-friendly even for those in non-technical roles, the onus is still on organisations to ensure their staff have the right know-how to succeed with the technology that has been invested in, either through upskilling existing employees or by hiring the right people.

The importance of data and the customer journey

Another challenge highlighted in *Figure 5* is *poor data quality*, a problem often resulting from poor data hygiene practices and processes. Poor data is also associated with legacy technology which makes it difficult to surface needed information in real time, or even at all. Even with the necessary buy-in from relevant data owners, it can be a challenge to connect online and offline data, with silos and legacy technology limiting the ability to bring together the data required to build a holistic understanding of the customer experience.

As was discussed in the previous section of this report, companies can only be truly successful in their marketing execution if they have a 360-degree view of their customers.

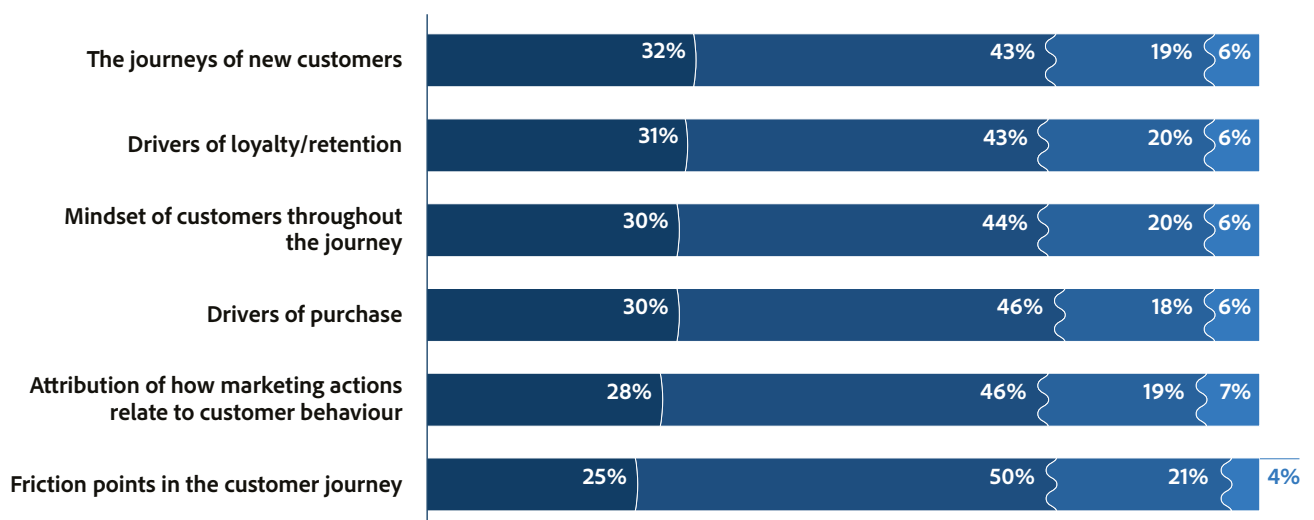
Customer journey analytics is crucial, and this was underscored by a 2018 Gartner survey which found that nearly half of IT and business leaders see customer journey analytics as their top analytics-related priority⁶. However, *Figure 6* suggests too few IT professionals believe their organisations have 'significant insight' into *the journeys of new customers* (32%), the *friction points in the customer journey* (25%) and the *mindset of customers throughout the journey* (30%).

The onus is on IT professionals to help their businesses deliver compelling experiences across all their engagement points at key moments within the journey. The next section of the report will further explore the importance of customer journey data, and analytics and insights more broadly, for achieving commercial success.

Figure 6 **Level of insight into customer journeys**

To what degree does your organisation have insight into the following?

■ Significant insight ■ Some insight ■ Limited insight ■ No insight



Respondents – 673

⁶ <https://www.quadient.com/en-IE/resources/complimentary-gartner-report-customer-journey-analytics-2019>

Section 3: Top-performing companies are more focused on customer insights and workflow-friendly infrastructure

This report has so far highlighted how IT professionals in general have responded to rapidly changing market conditions. But what attributes separate the best performers from the rest?

To identify the characteristics of top-performing businesses we compared IT professionals working in organisations that had significantly outperformed against their primary competition over the last six months of 2020 ('leaders') with those that had either slightly outperformed, kept pace, or underperformed ('the mainstream').

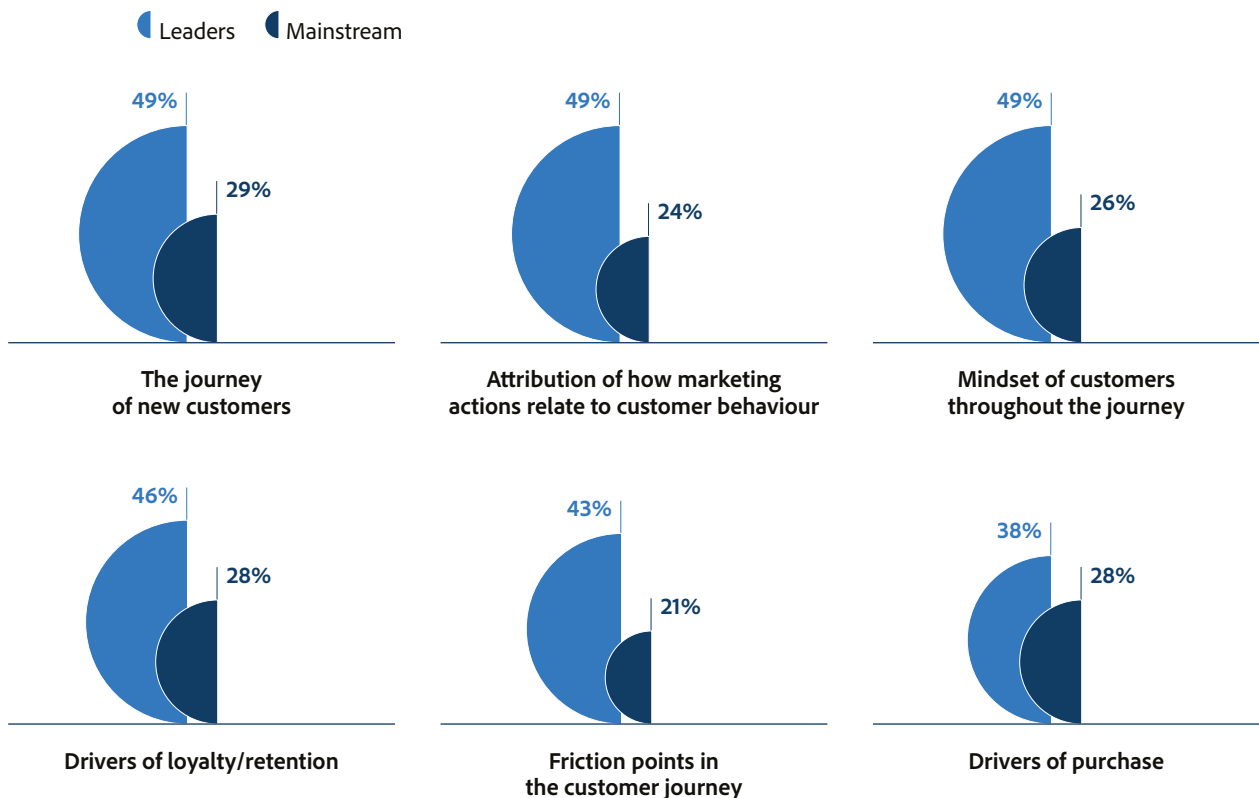
One of the key findings of this year's *Digital Trends* research is that good insights into customer journeys are closely correlated with strong business performance. As seen in *Figure 7*, IT respondents from top performing companies are 69% more likely than those from mainstream companies to say that they have 'significant insight' into the *journeys of new customers* (49% vs. 29%).

Even more strikingly, they are twice as likely to have 'significant insight' into the *friction points in the customer journey* (43% vs. 21%) and into the mindset of customer throughout the journey (49% vs. 26%).

This is particularly advantageous given the essential role customer journey analytics play in personalising experiences across all touchpoints.

Figure 7 **Level of insight into customer journeys**

To what degree does your organisation have insight into the following?



Respondents – 639

The importance of insights: speed, accuracy and actionability

Whatever industry they work in, people within a business need to make commercial decisions quickly based on accurate data and good analytics. At the same time, organisations require a set of marketing technologies that not only helps them derive insights, but also then helps determine the most appropriate type of marketing actions.

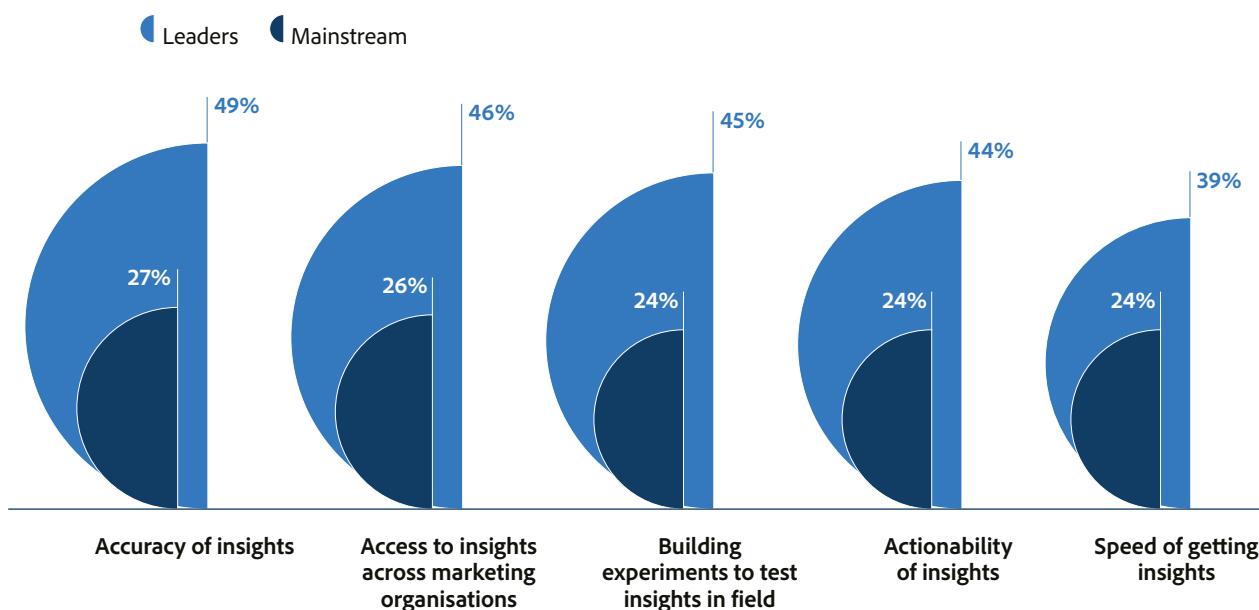
Although marketing automation has taken off by leaps and bounds in the last few years, enterprise companies also need people who possess data science and data governance skills to better ensure they are unlocking value from their data, while adhering to relevant data privacy legislation.

While *Figure 7* looked specifically at data and insights in the context of customer journeys, *Figure 8* looks more broadly at organisational capabilities in the context of deriving insights.

Across the spectrum of insights-related capabilities, those working for top-performing companies are significantly more likely than the mainstream to regard their organisations as 'very strong', including for *speed of insights* (39% vs. 24%), *accuracy of insights* (49% vs. 27%), and *actionability of insights* (44% vs. 24%).

Figure 8 **Proportion of IT respondents rating insight-related capabilities as 'very strong'**

Thinking about key marketing insights in your organisation, (customer behavior, market shifts, predictions of demand) how would you rate the following?



Respondents – 590

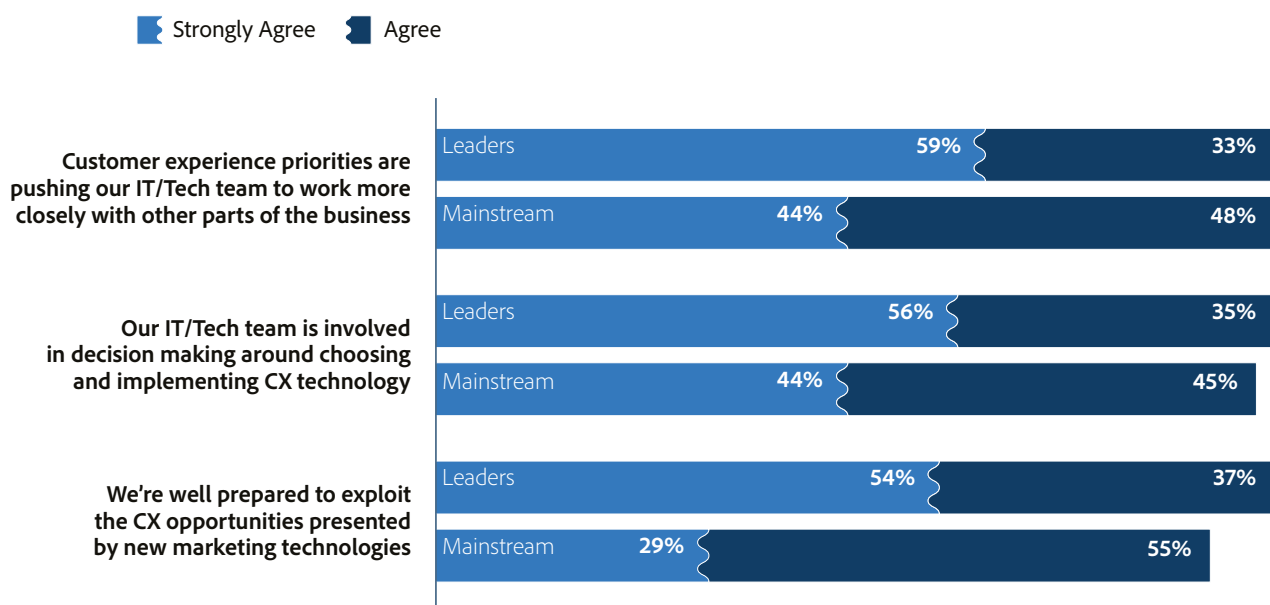
Importance of workflows

Figure 8 also shows that IT respondents from top-performing companies are significantly more likely than those in mainstream companies to give their companies the highest rating for *access to insights* (46% vs. 26%), something that requires the right combination of technology and collaborative workflows.

Solutions that facilitate more agile processes while creating visibility for all key stakeholders are key. IT teams should be leading the charge to ensure their organisations have the right infrastructure to deliver projects that come in on time, on budget and with the desired scope. As part of this effort, companies also need the right technology to drive CX initiatives, and high-performing businesses are benefiting from significant IT involvement on this front.

As illustrated in Figure 9, top-performing companies are significantly more likely than mainstream companies to 'strongly agree' that *CX priorities are pushing their IT/Tech team to work more closely with other parts of the business* (59% vs. 44%), and that their *IT/Tech team is involved in decision-making around choosing and implementing CX technology* (56% vs. 44%).

Figure 9 **Thinking about how your organisation approaches customer experience (CX), to what extent do you agree or disagree with the following statements?**



Respondents – 1,318

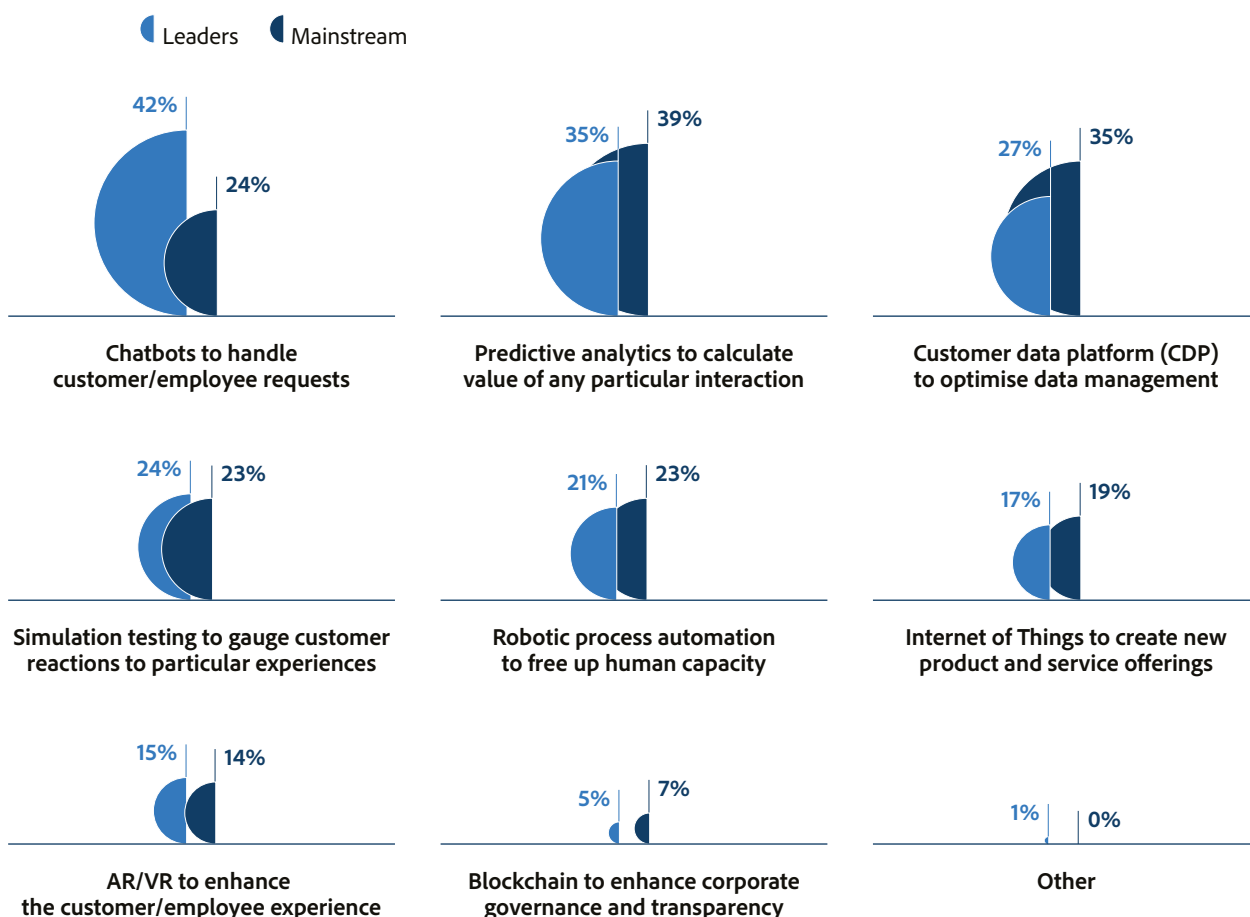
Innovation and experimentation

The role of the IT function in driving innovation and experimentation is very important, whether for marketing, CX or electronic signature technology, indeed for the broader digital transformation across all functions within the organisation. As *Figure 9* shows, IT respondents working for top-performing companies are nearly twice as likely than those in mainstream companies to 'strongly agree' that they're *well prepared to exploit the CX opportunities presented by new marketing technologies* (54% vs. 29%).

A good example of emerging technology is the use of chatbots to handle customer/employee requests, something which IT respondents working at leading organisations are almost twice as likely to identify as one of the two most impactful technologies for driving a positive customer experience (42% vs. 24% for IT respondents at mainstream companies, *Figure 10*).

Chatbots are by no means a panacea for all CX challenges, but they do offer exciting opportunities for companies to resolve issues, answer questions, and even drive sales in a way which is both on-brand and cost-effective.

Figure 10 **What top two technologies do you believe have the greatest positive impact on customer experience?**

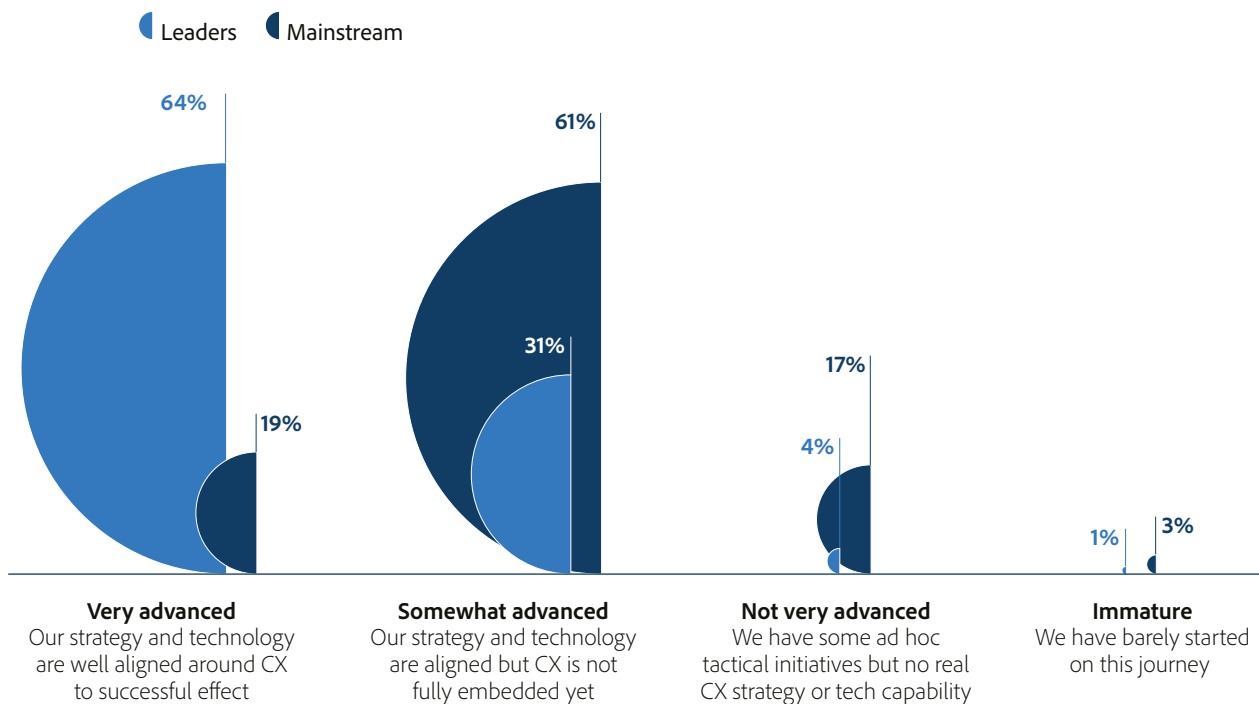


Respondents – 1,380

Chatbots are just one small facet of the overall CX which top-performing companies are on a relentless quest to optimise. The benefits of a positive customer experience are clearly illustrated by the closing chart (Figure 11) below which shows that IT respondents working at top-performing companies are more than three times as likely to say they are 'very advanced': their strategy and technology are well aligned around CX to a successful effect.

In summary, a modern IT function needs to be instrumental in driving CX initiatives within the business, helping to ensure that foundations are built on robust and actionable data, and on technology platforms that promote, rather than hinder, collaboration and efficient workflows.

Figure 11 **How do you rate your company's customer experience (CX) maturity?**



Respondents – 1,537

Conclusions – Four key takeaways for IT professionals

1. CIOs and their teams must be at the forefront of CX programmes.

Senior IT professionals need to ensure they are working as closely as possible with other parts of the business that are instrumental in delivering great customer experiences, including the marketing and product teams. At the top levels of the organisation, CIOs should play a leading role in helping define how technology can help their companies deliver against commercial objectives. At all levels of seniority, IT professionals should be integrated within the business rather than just staying within their own lane.

2. Modern organisations require software that facilitates collaboration, efficient workflows and integration.

Those working in IT need to be evangelists for tech solutions that promote agile and collaborative working relationships, define clear workflows and help to ensure that projects are delivered on time with clear visibility provided for all key stakeholders. Organisations are destined to fail unless they have an integrated technology stack which can transcend unnecessary gaps between different marketing channels and teams.

3. World-class CX requires actionable insights.

IT professionals need to help organisations surface customer insights as quickly as possible, while making sure they are both accurate and actionable. The organisations that will succeed in 2021 and beyond will be those that are most efficient at building new and existing revenue streams based on a clear understanding of customer needs through insights harnessed in real time.

4. IT teams must embrace experimentation and innovation.

CIOs must encourage their teams to champion innovative technology which, in turn, will help their companies become more customer-centric, whether through solutions that encourage collaboration and more efficient workflows internally, or through software that helps reduce friction within customer journeys.

Methodology

2021 Digital Trends 11th Edition is based on an online survey fielded to select Adobe and Econsultancy lists in the fourth quarter of 2020. The survey closed having collected 1,709 qualified responses from the IT sector.

Demographics profiles

- Seventy nine percent of all the responses were at manager level or above.
- As defined by target market, those addressing both markets equally accounted for 45%, followed by B2B (33%) and B2C (22%).
- The sample is global, with Europe providing the largest share of respondents (49%), followed by Asia-Pacific (24%) and North America (20%). The survey was translated into French, German, and Chinese.

