



# DARKNESS OF **DIGITAL** SHADOWS







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# FOREWORD



**Tiffany Carpenter**

Head of Customer Intelligence  
SAS UK & Ireland

**Over the last few years we've seen a major shift from a product-based economy to an experience-based economy. Customers increasingly want to do business with organisations on their own terms. They demand fast, easy access to information and expect to receive relevant and personalised experiences that consider all the data an organisation holds on them, regardless of where and when they choose to engage.**

Research by Gartner supports this, suggesting 89 per cent of marketers will primarily compete on customer experience instead of price in the coming years.<sup>1</sup>

At the same time, the increased use of social media and mobile devices, combined with the burgeoning Internet of Things, is resulting in higher volumes of increasingly complex data being generated. For an organisation to understand their customers and deliver relevant and personalised experiences, they need to consider the best way to analyse all of this data, extract useful insights and action those insights in a timely manner, even in real time where appropriate.

Those organisations that can achieve this will realise significant competitive advantage.

McKinsey reveals that organisations using analytics to leverage customer behavioural insights outperform peers by 85 per cent in sales growth, and more than 25 per cent in gross margin.<sup>2</sup>

And there is evidence that many organisations are recognising the competitive edge that analytics can deliver. According to research by Gartner, the biggest share of marketing budgets – 9.2 per cent – went to marketing analytics in 2017, indicating that customer insight is a priority for Chief Marketing Officers (CMOs).<sup>3</sup>

There is clearly a drive for improved customer experience and more efficient use of resources through use of analytics, but there remains a broad spectrum of analytical capability – from organisations that are just starting out using analytics to segment their customer base, to 'leaders' that are deploying predictive analytics and machine learning in real time. We were interested to find out more about where organisations are on this analytical spectrum and, in particular, where they think they are. We also investigated organisations' progress in the adoption of Artificial Intelligence (AI), given the amount of conversation and interest around this technology.

What is clear is that while many organisations are already using analytics to enhance decision-making, there is significant opportunity to improve. Many organisations are still targeting broad audiences and using analytics to report on the past rather than for predict the future; very few are able to capture relevant data in a timely manner and fewer still have any capacity to apply analytics to the data in real time. The net result is that they are making decisions based on their customers' 'digital shadows', working within an echo chamber.

This means they are making decisions to and about customers based on an incomplete view of those customers. Many organisations are not as far along the analytical maturity curve as they would like to be when it comes to delivering relevant customer experiences. Three key business challenges are most often cited within the context of customer data and analytics:

### 1: Incomplete customer view

Ability to synchronise varied data sources (channels, media, interactions, online/offline, location, point-of-sale, etc.) for a holistic view of the customer.

### 2: Delivering insights at speed

The traditional approach to analytics brings with it too much latency in the process. Analytics and decisioning processes need to move closer to the sources of data to deliver insights at the speed of the customer.

### 3: Actioning insights in real time

Delivering optimal decisions into the customer interaction in real time to deliver better customer experience, greater loyalty and ultimately higher share of wallet.

These may seem like big challenges but the technology to overcome them is already here. So why aren't more companies taking advantage of the opportunities from analytics? Many have the appetite to leverage their customer data assets but lack the skills, resources, time and budget to act effectively. Yet we believe many organisations could be doing more despite these obstacles - sometimes their analytical capability is down to the fact they have struggled to get value from analytical projects in the past, undermining their confidence in achieving the desired outcomes. Or they may have a specific analytical need

being met (e.g. recommendations, attribution, content optimisation) but have not expanded this to other parts of the customer journey.

The results of the most advanced insight-driven organisations are impressive:

- » They perform better as the analytical insight shows where they can streamline their processes
- » They have deployed analytics closer to the sources of data and the customer interaction to automate and speed up every customer decision
- » They are more profitable as they are able to optimise customer decisions in real time
- » They are operationally more predictable as data insights fuel current and future decisions, keeping their finger on the pulse of the market.

These advantages make an organisation more shock-resistant and less likely to be surprised by the next economic or technological disruption. From a day-to-day perspective these capabilities result in an enhanced customer experience. And with customer experience now recognised as the key differentiator for organisations, improving it is something all businesses should be striving to do.

# KEY FINDINGS

SAS set out to understand how organisations describe their ability to use customer intelligence (CI) and Artificial Intelligence (AI) to personalise customer interactions, including where real-time context can be used - and whether there is a gap between perception and reality when it comes to the level of capability they have in delivering exceptional customer experience.



Many think they're further along the development curve than they actually are - a quarter describe themselves as 'transformational' yet fewer than half of them (10 per cent) are actually 'leaders'



Organisations are not using all the available data, targeting broad audiences rather than a segment of one and therefore many are 'casting customers into digital shadows'



This contradicts most organisations' claims to be 'customer first'



Few marketers can effectively attribute success to different marketing channels - only six per cent have complete omnichannel measures in place incorporating online and offline data



There remains an opportunity for a large proportion of organisations to improve CI capability using analytics and therefore improve competitiveness



AI is only being used by a small minority (14 per cent) - while many plan to implement AI shortly, more than a third will use it to report on the past rather than predict the future

# ABOUT THE RESEARCH

SAS commissioned 3GEM Research & Insights to survey 350 heads of marketing, customer service and experience, digital and data. They were asked about:

- » Information currently collected about customers
- » Ability to segment customers and personalise campaigns based on current and anticipated customer behaviour
- » Anticipated impact of GDPR on the type of data collected
- » Use of analytics and AI to enhance customer experience

Survey respondents were split equally across seven customer sectors:



Energy



Government



Insurance



Media



Retail



Retail Banking



Telecoms

# CUSTOMER DATA ANALYTICS

## Organisations claim to have leading CI capabilities, but in reality, many do not meet the criteria to be truly transformational

**Advanced customer analytics reveals insights that enable businesses to predict customer product and channel preferences, likely customer behaviours, expected spend and lifetime value in order to deliver more relevant experiences and improve customer value. Few would disagree. The real issue is how do you achieve this and are you doing everything you could to achieve it?**

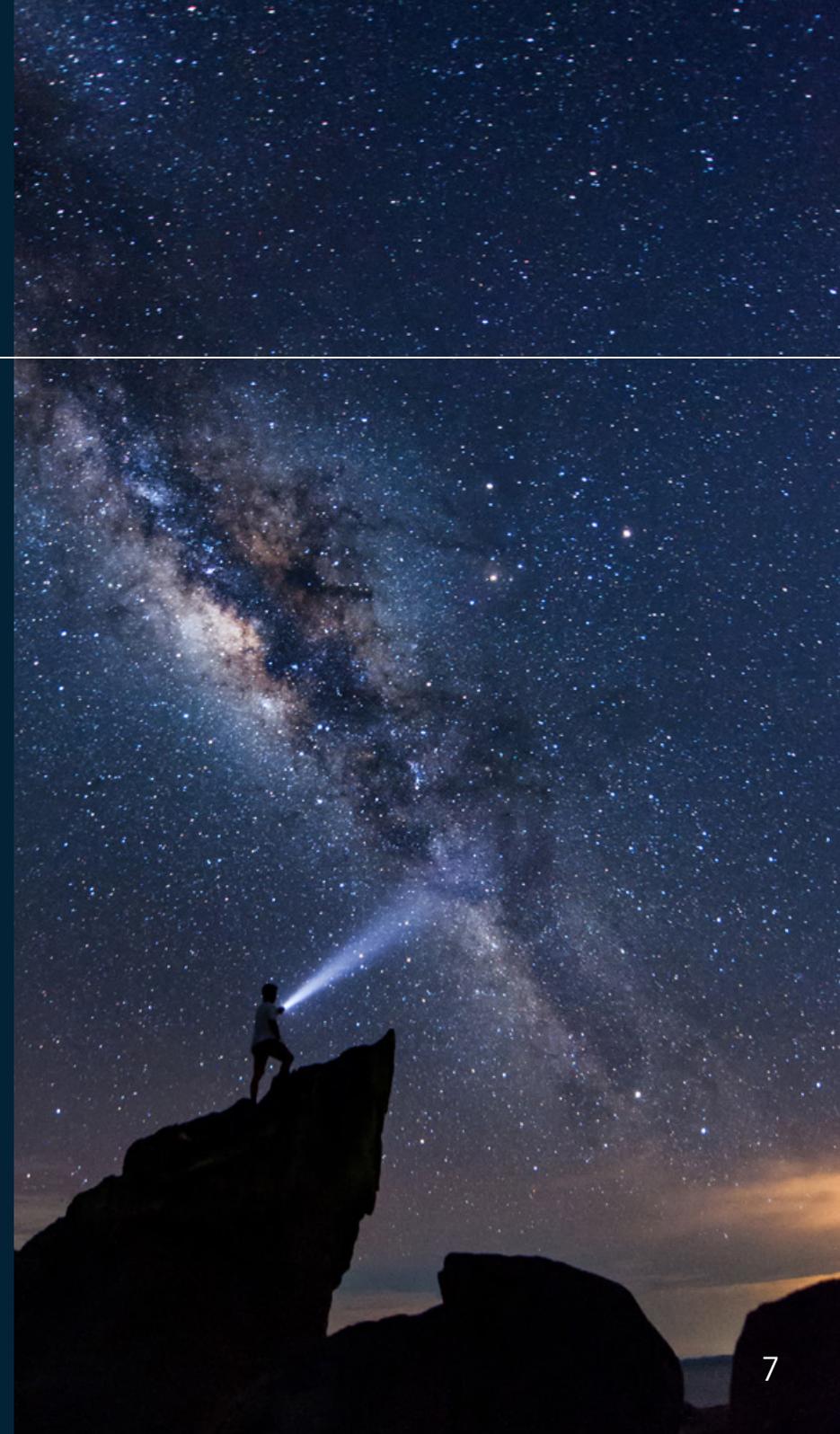
Many organisations are collecting lots of data but not analysing all of it. Most organisations are using analytics to report on the past rather than to predict future behaviour. So while many companies might claim they 'do analytics', the reality is often that they only have a partial or blurred view of the customer. The customer may have 'moved on' and have different personal circumstances, along with slightly altered preferences and behaviours. In this situation the organisation is looking into the customer's 'digital shadow' rather than where the customer is positioned right now.

The knock-on effects are clear. Any interaction with that customer will be hit-and-miss: you are not interacting with the individual you

think you are. By contrast, a clear up-to-date view of each individual customer and real-time context ensures that each customer interaction is effective.

We wanted to explore this further and undertook a detailed market study. We asked participants to position their organisation's technical ability to use CI to shape the customer experience and marketing campaigns. More than half of those asked (54 per cent) ranked themselves as 'best in class' or higher. The definition of 'best in class' included organisations that optimise offers and suggested actions using analytics, and target customers based on real-time behaviour.

To be classed as 'transformational' in their use of CI, organisations must also have the ability to calculate and arbitrate new offers and decisions in real time, based on real-time content and context (i.e. information captured at the moment of a live customer interaction). A quarter of participants (25 per cent) ranked their companies as 'transformational' based on this definition [Fig 1].

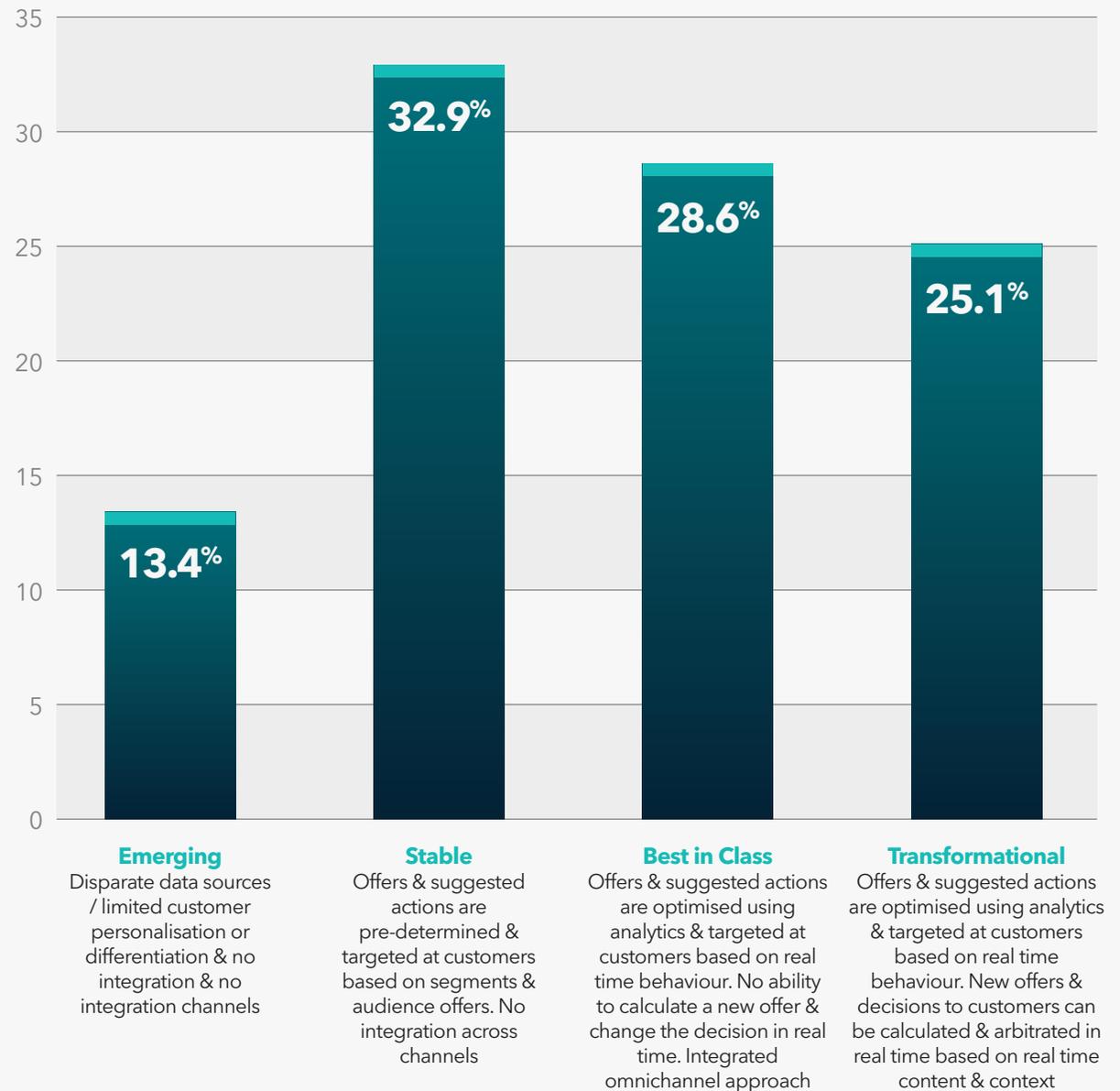


However, when the survey questioned CI capabilities in more depth, participants revealed a gap between their initial claims and the true capabilities they currently have within their organisations. For example, fewer than 10 per cent said they use online and offline -data in real time to personalise the entire customer experience [Fig 2].

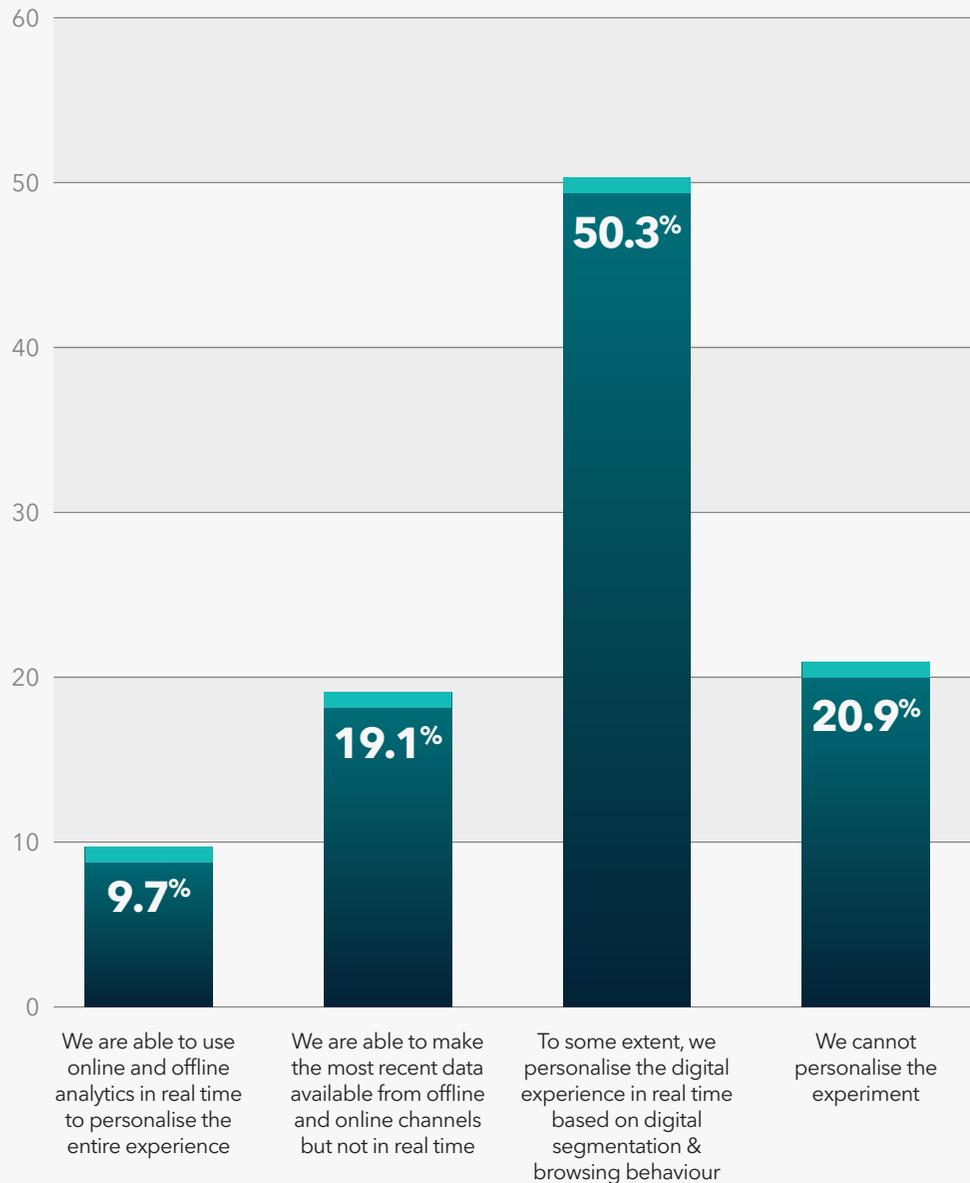
This highlights that there are only a few 'leader' organisations delivering successful real-time engagement, creating personalised experiences for consumers, driving expectations and changing the dynamics of the market. There is also a significant proportion of companies being left behind - more than a fifth (21 per cent) are not able to personalise customer experience at all.

Many companies are unable to use real-time analytics to interact with customers. Nevertheless, they recognise the importance of real-time customer engagement. Research conducted by SAS in 2017 found that over half of the UK organisations that took part felt that improved real-time customer engagement could see revenues increase by 10 per cent. One in five expected revenues could jump by as much as 20-40 per cent.<sup>4</sup>

**Fig 1:** How would you describe your organisation's technical ability to use customer intelligence (CI) to shape campaigns?



**Fig 2:** How would you describe your organisation's technical ability to use customer intelligence (CI) to shape campaigns?



## Avoiding the digital shadows through personalisation

Making accurate and profitable decisions requires insight into offline and online historical and real-time data to build up a complete, holistic view of the customer. Only then are organisations in a position to provide a truly personalised service.

While many companies use online data to personalise the digital experience, the insight from online data alone does not provide a full picture of the customer. Indeed, looking at what a customer has just clicked on does not tell you much in isolation.

For example, a customer of a utility company may click on the website for information about smart meters. Personalising the experience, based on this behavioural data alone, might result in promotions to the customer about the benefits of signing-up for a smart meter. However, the customer might already have a smart meter and instead be looking for more information about how it works.

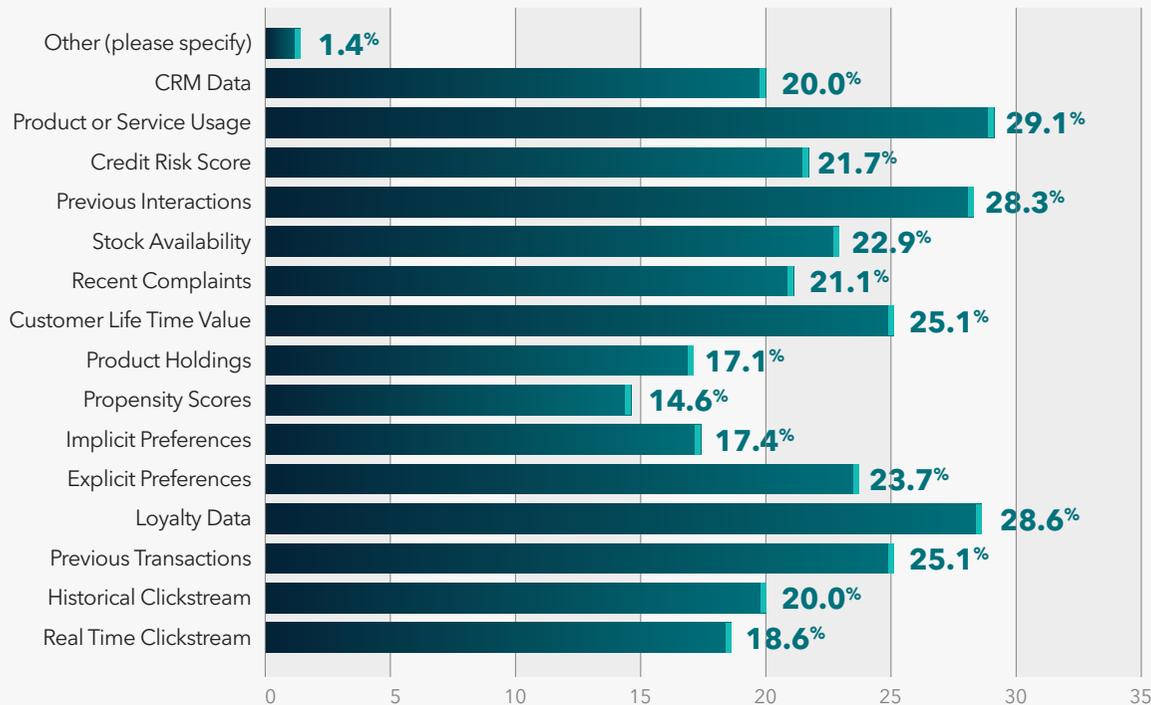
Having a more holistic approach that integrates offline data would have revealed this, leading to a much more relevant 'next best action' for that customer. Relying on the online information alone can again lead organisations into the digital shadows - focusing on where customers' interests were in the past (acquiring a smart meter) rather than anticipating future requirements (how best to use a smart meter). The upshot is that organisations may be causing irritation and potentially eroding customer loyalty.

The survey confirms that the majority of organisations are investing or planning to invest in linking offline data to personalise online customer experience - more than two-thirds plan to make it happen within the next two years. [Fig 3]

**Fig 3:** When do you plan to make offline customer data available to personalise the online digital experience?



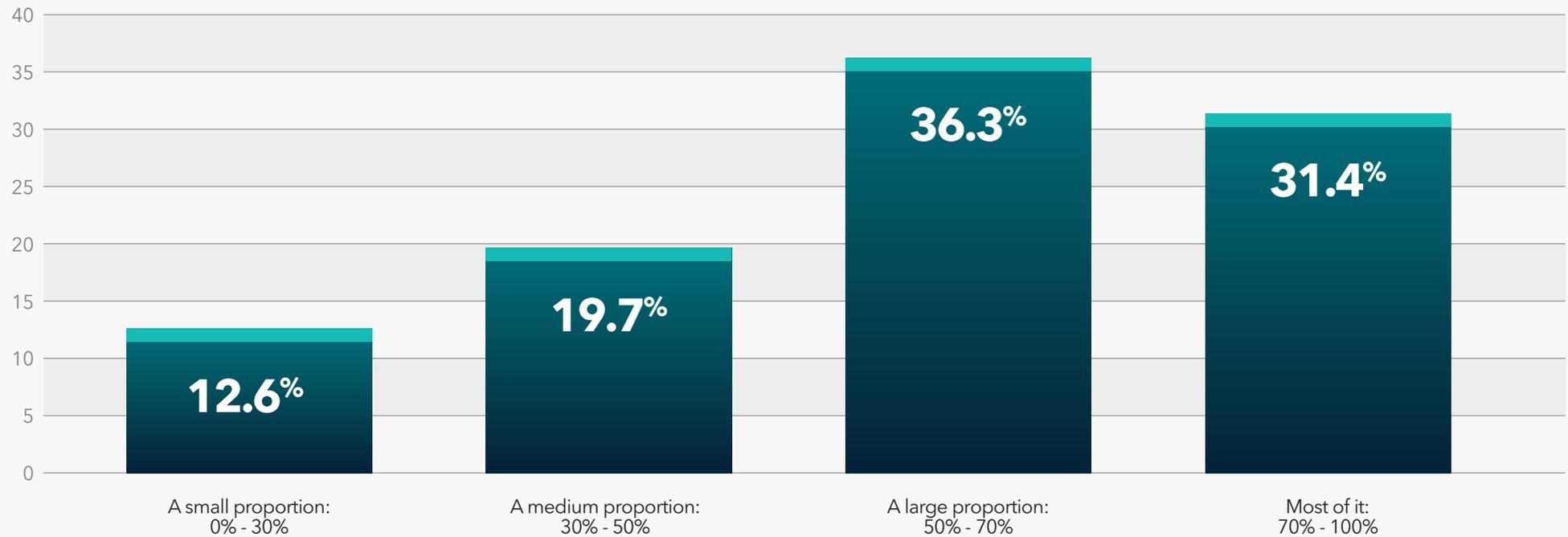
**Fig 4:** What data do you use to personalise digital experience?



Despite most organisations planning to make offline data available, there could be a number of reasons why they are unable to use it today, such as poor data quality or not properly sharing data already collected across the organisation.

Around 70 per cent of organisations are typically not collecting meaningful data to personalise digital experiences [Fig 4]. They are not looking at what products a customer has already bought, not looking at their previous transactions, not using loyalty or CRM data nor any previous engagements. If only 30 per cent of organisations are using this type of data to personalise, then a significant majority are not delivering relevant or personalised experiences at all. This is clearly at odds with the fact that over half (54 per cent) think they are 'best in class' or even 'transformational' [Fig 1].

**Fig 5:** How much of the data held about customers across your organisation do you use to personalise the customer experience?

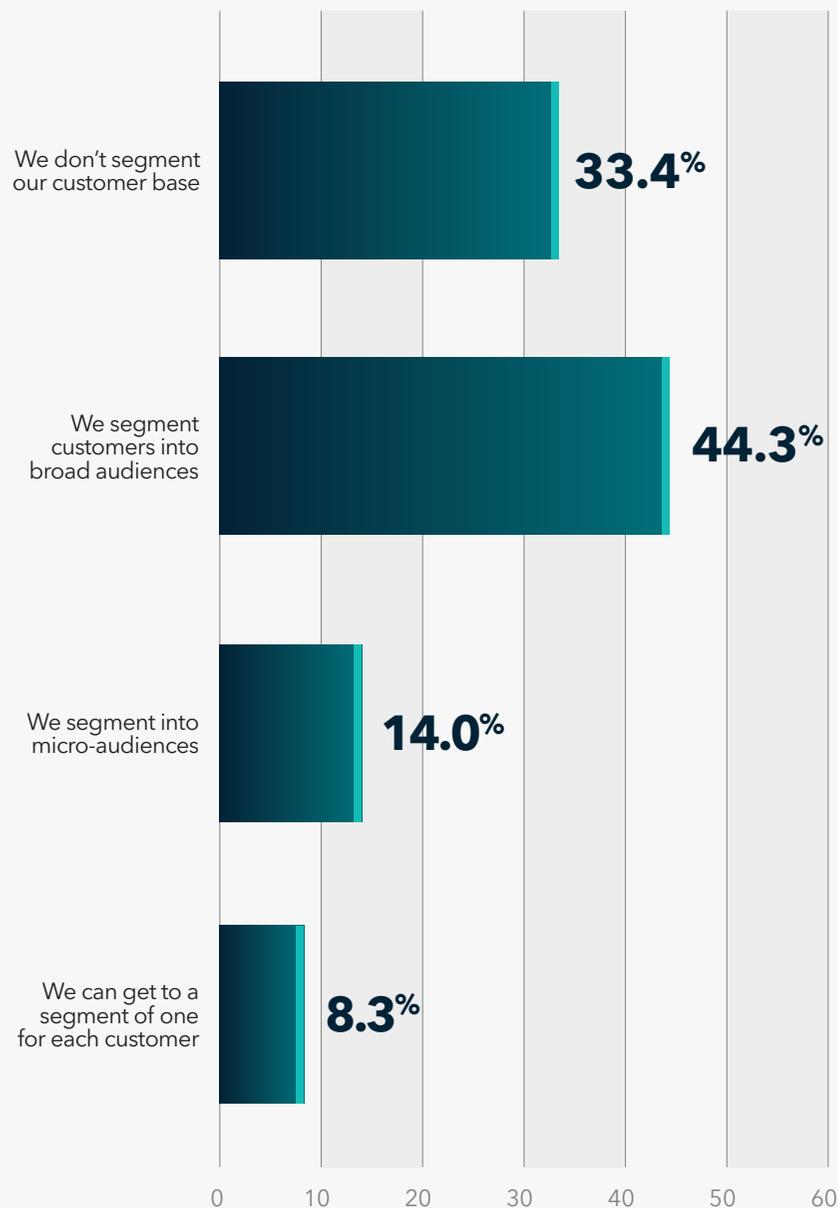


The fifth of organisations that have the data [Fig 2] but do not use it yet in real-time are undoubtedly missing an opportunity. By expediting the incorporation of offline data into real-time personalisation, they stand to reap the benefits and stave off competition. Without progress, there may be other organisations with further to go on their journey towards real-time personalisation preparing to accelerate past them. With more than a third of companies planning to combine online and offline data in the next 12 months [Fig 3], incorporating valuable offline data should be a priority for the one-in-five organisations that already collect but do not use offline data.

There is further opportunity for nearly a third of organisations (30 per cent) that apply less than 50 per cent of customer data to personalising their experiences [Fig 5]. McKinsey reports that 61 per cent of consumers are more likely to buy from companies that deliver custom content based on real-time interactions. The same report found that successful projects that optimise customer experience typically achieve revenue growth of five to 10 per cent and cost reductions of 15 to 25 per cent within just two or three years.<sup>5</sup>

The clear conclusion is that there is a lack of relevant data collection. Not only that but there is a lack of exploitation of data that is collected, preventing true personalisation. Combined with the failure to fully embrace technology behind real-time customer engagement, this means loss of opportunity and revenue share in a rapidly evolving market.

Fig 6: To what extent are you able to segment customers?



## Creating a segment of one for true personalisation

The segment of one is the cornerstone of customer intimacy and real-time interaction. It gives organisations the ability to know each customer individually, and target each one based on their needs, motives and preferences at any given moment

The alternative is grouping customers into broad audiences, meaning there is limited scope for relevancy and personalisation. 'Next best actions' are based on what is considered best for the group rather than the individual within that group.

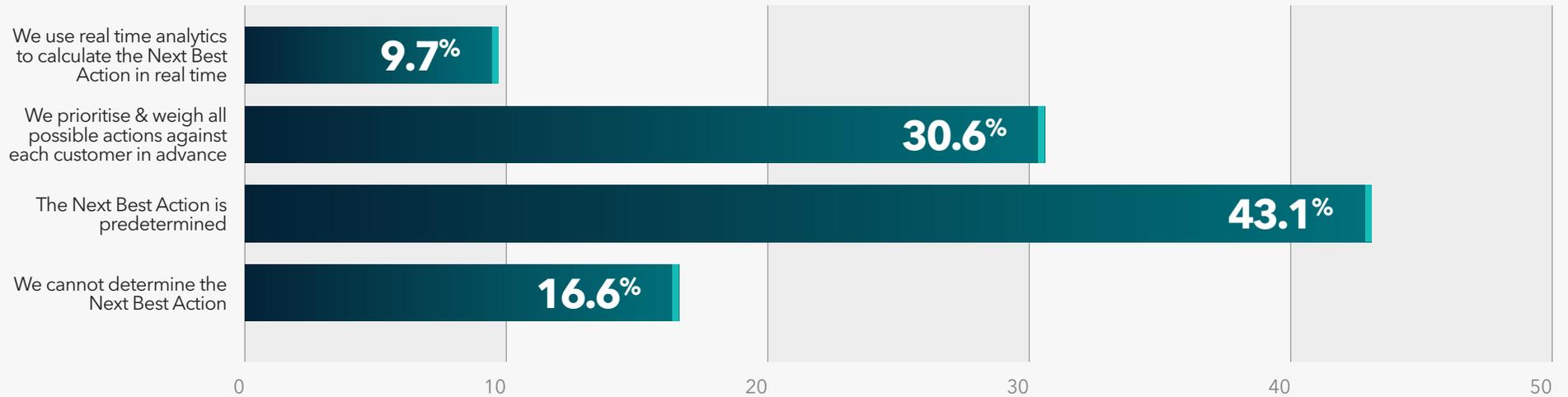
This research shows that the vast majority of organisations (92 per cent) cannot achieve a segment of one for their customers. More than 44 per cent of businesses surveyed segment customers into broad audiences but worryingly, over a third said they do not segment their customer base at all [Fig 6].

When it comes to determining the 'next best action' for customers, the research again shows the majority of participants work with predetermined actions based on the segment customers are placed in, or they react to the immediate response a customer gives. Only around 10 per cent use real-time analytics to drive the next best customer action [Fig 7], which is in line with the proportion able to combine offline data with online data to drive personalisation [Fig 3]. This supports the view that only around 10 per cent of organisations can be considered 'leaders' in terms of overall customer intelligence capability.

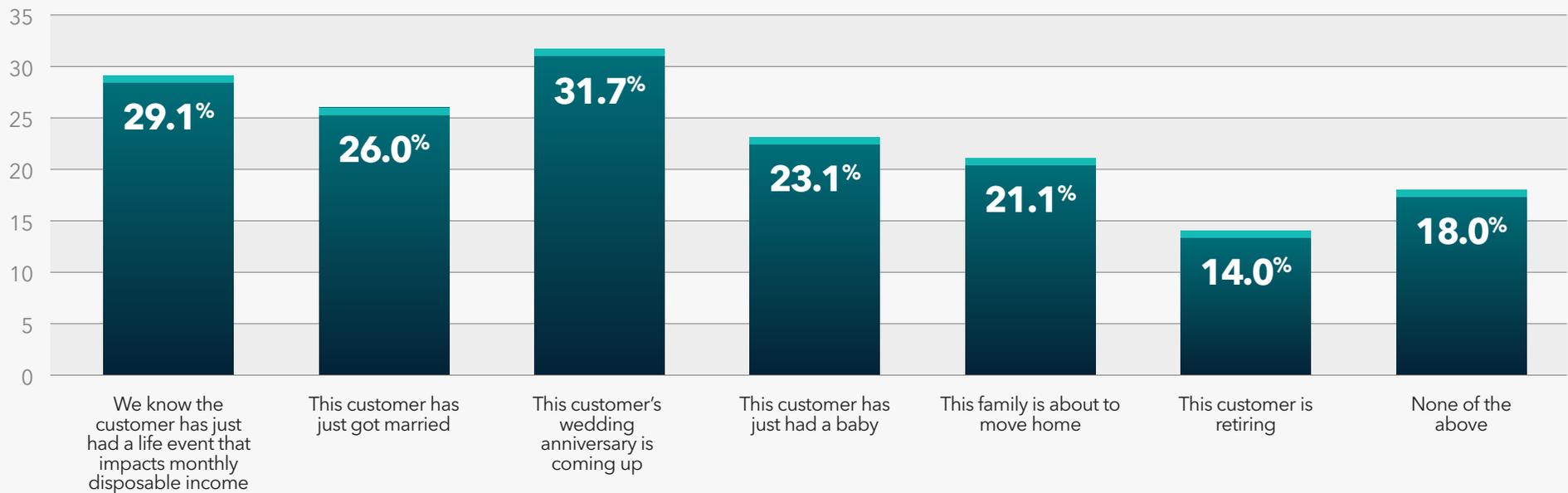
Many more organisations collect data than are using it effectively to personalise the customer experience. Only eight per cent of organisations can get to a segment of one, yet more than a fifth of organisations routinely collect data that points to significant life events for their customers [Fig 8].

They are also collecting a wide range of other customer data. More than a fifth are typically collecting data including personal demographics, contact details, partner status, shopping habit preferences, favourite brands, responses to promotions, social media activity, web and mobile browsing behaviour – to name just a few.

**Fig 7:** How do you determine the right Next Best Action for your customer?



**Fig 8:** Is your Segment of One understanding intimate enough to know the following?





Harnessing the data that many organisations claim to hold about customers with real-time omnichannel analytics will make it possible to deliver relevant, highly personalised experiences for each individual customer. It is something that Shop Direct is working hard to achieve.

In today's hyper-connected world, customers demand the sorts of bespoke experiences Shop Direct is providing. Competitiveness depends on the ability to carry out individual segmentation and real-time targeting, offering the right 'next best action' every time.

### Shop Direct

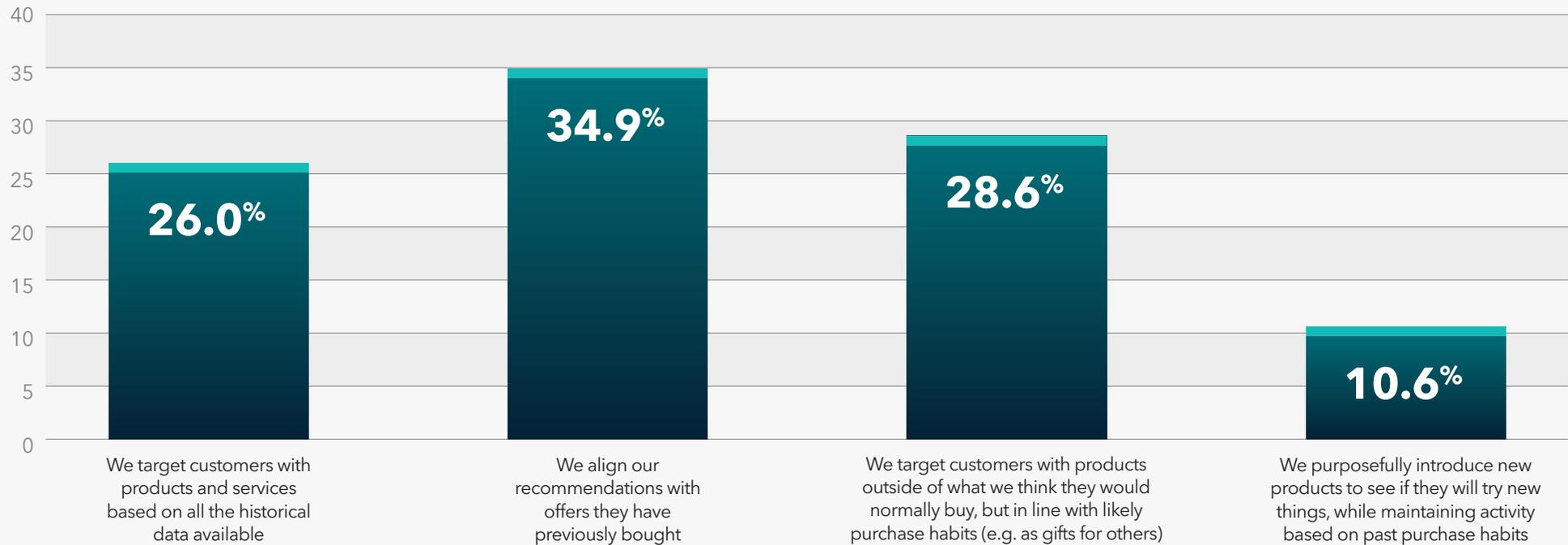
Shop Direct is the UK's second biggest pureplay digital retailer, which counts Very.co.uk and Littlewoods.com among its digital department store brands. Search for a pair of jeans at very.co.uk, and instead of scrolling through over 100 pages of results to find the colour, style and price you're looking for, Shop Direct uses all the data it has about your past purchases, preferences and behaviours as well as up-to-the-minute contextual data to personalise the sort order and show you the jeans you are most likely to want

Shop Direct's goal was to make it easier for customers to shop with them, improving the customer experience while increasing customer spend. As a 40-year-old business that started as a catalogue company, it was sitting on a huge amount of data that had been captured over the years about its customers, and it wanted to find a way to use that data to deliver a highly personalised customer experience.

Personalisation goes beyond search results. Shop Direct tailors customer emails, off-site advertising, homepage content, navigation menus and product suggestions. The upshot is that customers find the products they are looking for quicker, resulting in higher conversion rates and increased customer loyalty.

The results speak for themselves. The group's last annual results showed a fifth consecutive year of record sales and underlying profits. It again attributed these results to investment in technology, including the ability to drive better personalisation and timely interactions with customers.

Fig 9: What is your approach to offering customers a new product or service?



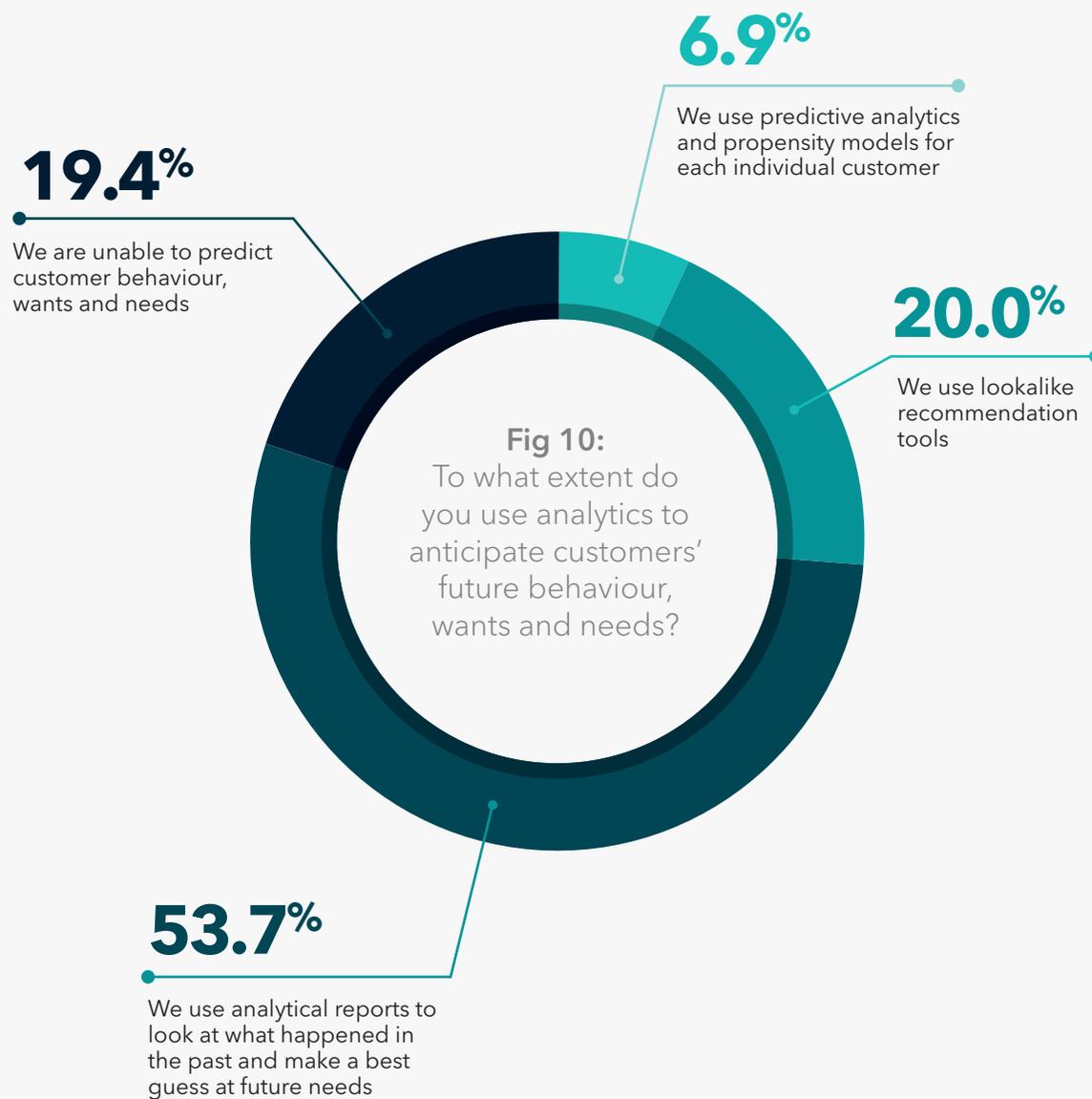
## Bringing customers out of the digital shadows through analytics

The majority of participants in the survey (more than 60 per cent) base future offers to customers on purchase history alone. Only 10 per cent purposefully introduce new products to customers to see if they will try new things [Fig 9].

Looking backwards in this way runs the risk of customers being viewed in their digital shadow, marketing to their previous tastes and needs rather than anticipating current or future preferences. The study showed that more than half of organisations (63 per cent) use analytics to look at what happened in the past, but then are only equipped to make a best guess about customers' future needs.

Predictive analytics enables organisations to predict customer's future wants and needs with a high degree of accuracy, and looks at customers beyond their digital shadow. Propensity models use predictive analytics to identify those customers most likely to respond to an offer or next best action, buy a product or churn.

Despite the importance of predictive analytics in anticipating customer needs, fewer than seven per cent of participants use predictive analytics and propensity modelling to understand customers [Fig 10].

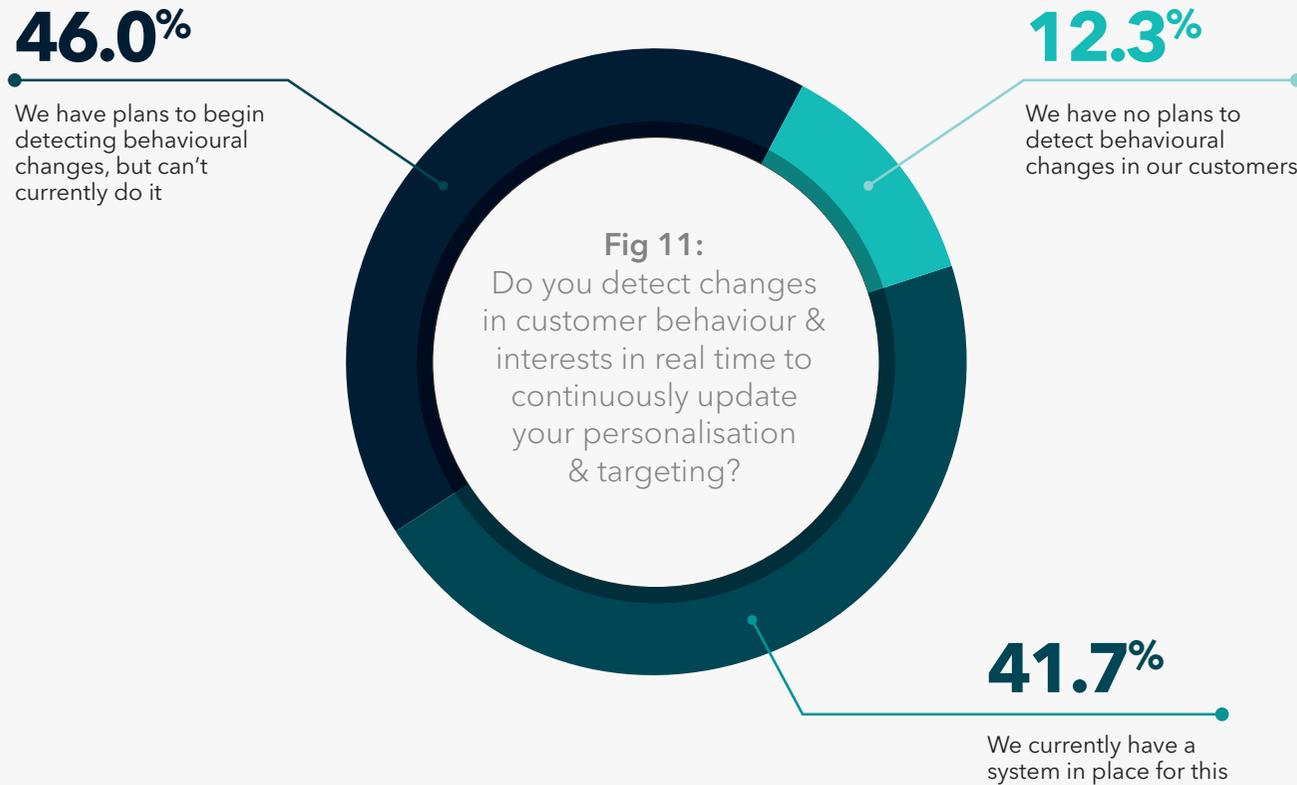


Using analytics to understand what happened in the past, and why, is important; but without the ability to predict what will happen next, organisations will continue to struggle to deliver on customer expectations.

The research shows more than 40 per cent of participants have a system in place to detect changes in customer behaviour and interests in real time to update personalisation and targeting [Fig 11]. But we know that only eight per cent can achieve a segment of one, fewer than 10 per cent are integrating online and offline data in real time and fewer than seven per cent are using predictive analytics. This would lead us to believe that the ability to react is based on a narrow view of what a customer is doing in a single channel in the moment, rather than a holistic view.

With only seven per cent using predictive analytics, the majority of respondents who say they can detect changes in customer behaviour in real time [Fig 11] are reacting to behavioural data in the moment, without the ability to analyse the data in real time to understand relevancy before determining the next best action.

The seven per cent using predictive analytics also equates to fewer than one in seven of those organisations that consider their customer intelligence capability to be either 'best-in-class' or 'transformational' according to Fig 1. As a result, the difference is wide between what organisations think they are doing and the reality. The gap needs closing: customers will not wait.



While many organisations claim some kind of real-time capability, the majority of them prompt next actions of 'groups' of customers based on pre-set rules.

Similarly, only a small proportion of organisations surveyed have real-time capabilities for executing on detailed information in relation to customer journeys. The challenge with capturing customer-level digital data is that customers do not exclusively use one channel or one device when they navigate the digital landscape, meaning the journey can be complex. Organisations must try to capture and piece together all of these digital footprints, ensuring that the customer is recognised across different devices and channels.

Only around 14 per cent of companies bring together complex data sources and track customer journeys on an individual basis in real time. Most organisations are only able to do this on a daily or weekly cycle [Fig12].

In an always-on world, daily or weekly cycles are too slow. Organisations need to move to real time to be truly customer-centric.

Fig 12: How frequently can you execute on detailed information relating to your customer journey?



## Commerzbank , Germany

Commerzbank's retail banking is individual, digital and customer-centric. The bank is using predictive analytics to deliver real-time web personalisation and an omnichannel experience. Sabine Schmittroth, Executive Vice President for Private Customers, and Anja Stolz, Managing Director Customer Management and Communications ,describe the influence of digitisation and how they are using SAS to deliver an increase in product conversions:<sup>6</sup>

*“Our industry is currently going through an unbelievable transition and one of the major factors is the influence of digitisation. There are two main questions - how can digitisation make existing processes faster and more efficient? And more importantly, how can digitisation help me make life easier for customers?”*

*“Marketing automation is the key to connecting with the customer and personalising communications. When you've got 12 million customers in any given segment, you can't possibly know each one of them. That's why we need systems that are based on data, so we can still deliver personalised content to all of our customers.*

*“Our approach to multi-channel banking is to set things up so that the customer can choose the channels themselves. The bank is not the one that decides which channel is best for the customer. People don't stay in one place - they might start a bank consultation on an iPad at home on the couch, and then look for more information later, on their phone while they're out. If they have questions, they can call a consultant or pop into the nearest branch. **Our strategy is both digital and personal.**”*

*“The SAS technology we've developed gives us analytics that lets us look at the data and see what customers actually want. We can offer the perfect 'next best offer' or 'next best service' for each one of them. Speed is one of the biggest topics in digitisation right now and it's really important for us to present the right offer in real time - at the very second someone shows an interest. That's why we have to evaluate our data in real time too.*

*“Even though we're just getting started, **we already have a 10 per cent increase in product conversions**, which we feel is a big success.”*



# MARKETING ATTRIBUTION CAPABILITY

Few marketers can effectively attribute success to different marketing channels and campaigns and as a result, many struggle to optimise marketing budgets

Marketing Attribution is the process of assigning a value to a marketing activity, action, event or touchpoint.

The majority of marketers cannot say with certainty exactly how valuable each channel or touchpoint is during each customer journey. That means they cannot say they are spending their budgets effectively and optimising revenue, which is the entire goal of attribution.

For any company to truly make any kind of informed decision for future marketing strategy, it needs to understand the value of everything it does today.

For example, as a business you may be spending significant budget on top-of-the-funnel social media and display advertising, to drive brand awareness and direct traffic to your site. After seeing and engaging with various Facebook videos and display ads, a customer types your domain into the search bar and navigates directly to your site. They sign up to your email marketing list in return for an offer. After receiving an email with a further offer the customer purchases a product from you.

Which marketing activity should get the credit for this conversion? How much credit should go to the top-of-funnel activity versus website offers or email marketing?

Marketing Attribution helps you answer this question and map the journey from awareness to prospect to purchase, considering every touchpoint and interaction along the way. This level of insight helps marketers understand exactly where to spend their marketing budgets based on what works and what doesn't.

Research also supports the business benefits arising from marketing analytics. A review by McKinsey of more than 400 diverse client engagements from the past eight years, across industries and regions, found that an integrated analytics approach can free up some 15 to 20 per cent of marketing spend.<sup>7</sup>

In the SAS study, participants were asked about the extent to which they could attribute success measures to different marketing channels - when a customer made a purchase, did they understand which channel contributed most to that decision? [Fig 13]

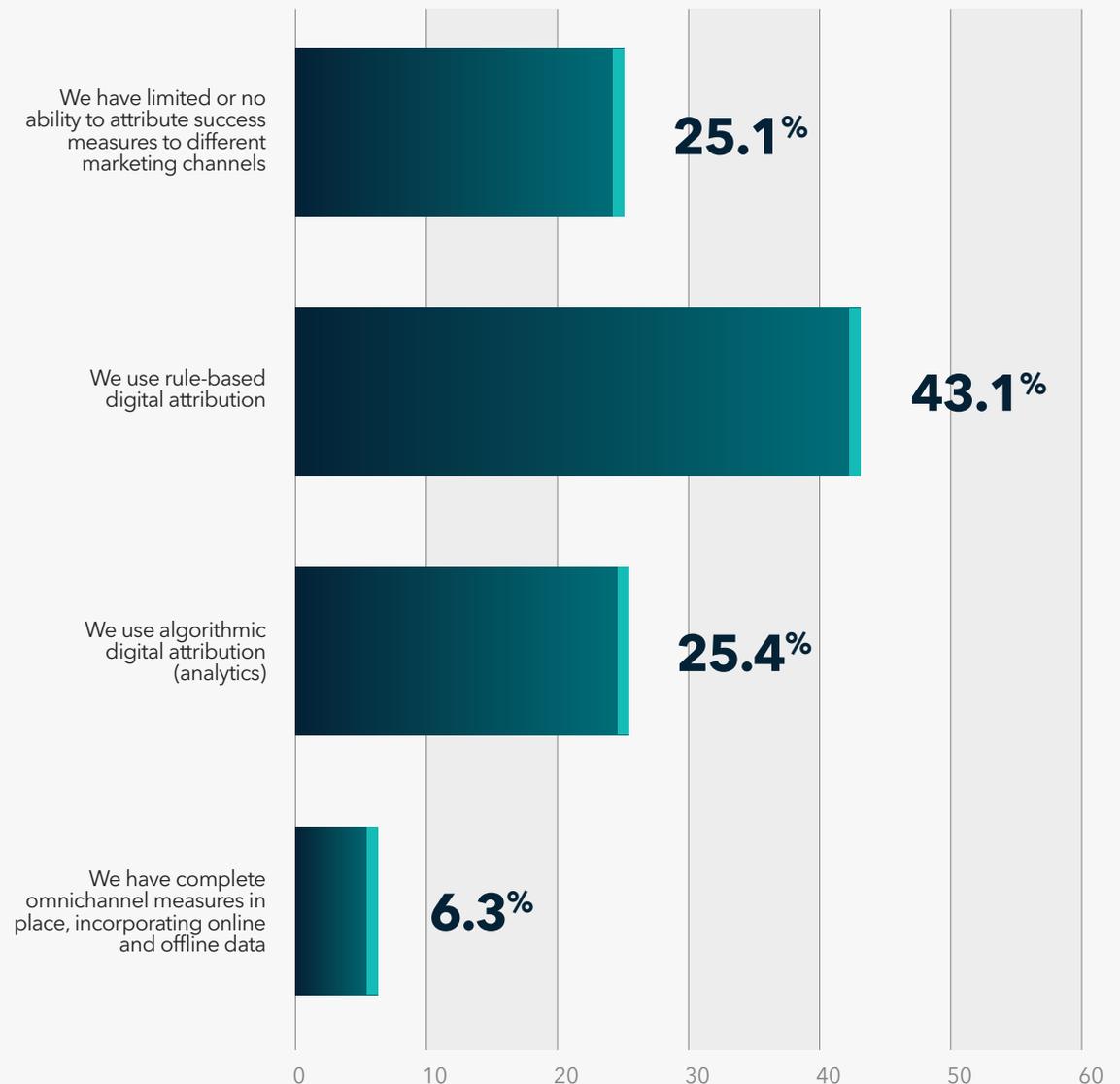
The findings show that only a small proportion of organisations – just over six per cent – have complete omnichannel measures in place, incorporating online and offline data, to attribute effectively. It is a complex challenge, so perhaps not surprising that few organisations can do this. A quarter of participants have limited or no ability to attribute success to different marketing channels and are therefore unable to report the impact of marketing spend on important metrics such as turnover, profit, customer retention and sales.

Just under half of organisations (43 per cent) use a traditional rules-based approach for digital marketing. Rules-based attribution models are based on easily understood assumptions. For example, it was the last thing the customer saw that drove the conversion, or each touchpoint gets equal share of credit. Rules-based models can be very subjective as you choose the rules which best meet your goal and perceptions. For organisations just starting out with attribution modelling, this more descriptive process is a good point to start from.

Algorithmic attribution applies analytic modelling to the data to create a comprehensive view of the impact of each touchpoint, interaction and campaign on a customer journey, taking the guesswork out of attribution. A quarter of organisations use analytics to perform attribution. Algorithmic attribution is increasingly being used by organisations seeking a more accurate and objective view.

Participants were also asked which measures they prioritised when planning campaigns. The results show that organisations rate number of responses most highly [Fig 14].

**Fig 13:** To what extent can you attribute success measures to different marketing channels? (i.e. if a customer makes a purchase, how do you decide which channel contributed most to that decision?)



**Fig 14:** Rank the following by order of priority when planning a marketing campaign:



Interestingly, volume of communications sent, number of responses and overall response rate were ranked higher than metrics such as response uplift (the number of responses in addition to those customers who would have responded automatically) and overall campaign profit. This suggests that marketers are more focused on effectiveness rather than efficiency goals. Effective goals and strategies, such as volume-based activities, accomplish a purpose to produce an expected result. By contrast, efficient goals and strategies, such as incremental uplift and overall profit, perform those activities in the best possible manner with the least waste of time and effort.

Given that most marketers are being asked to deliver more with smaller or constrained budgets, there is an opportunity to create more balance between effective and efficient marketing strategies. When asked if they would consider reducing the overall volume of communications if it would increase response rate, over a third (35 per cent) said 'no' or were unsure [Fig 15].

These results suggest there is an opportunity for organisations to optimise use of their marketing budgets by creating a greater balance between effectiveness and efficiency, and through better understanding of attribution and return on investment.

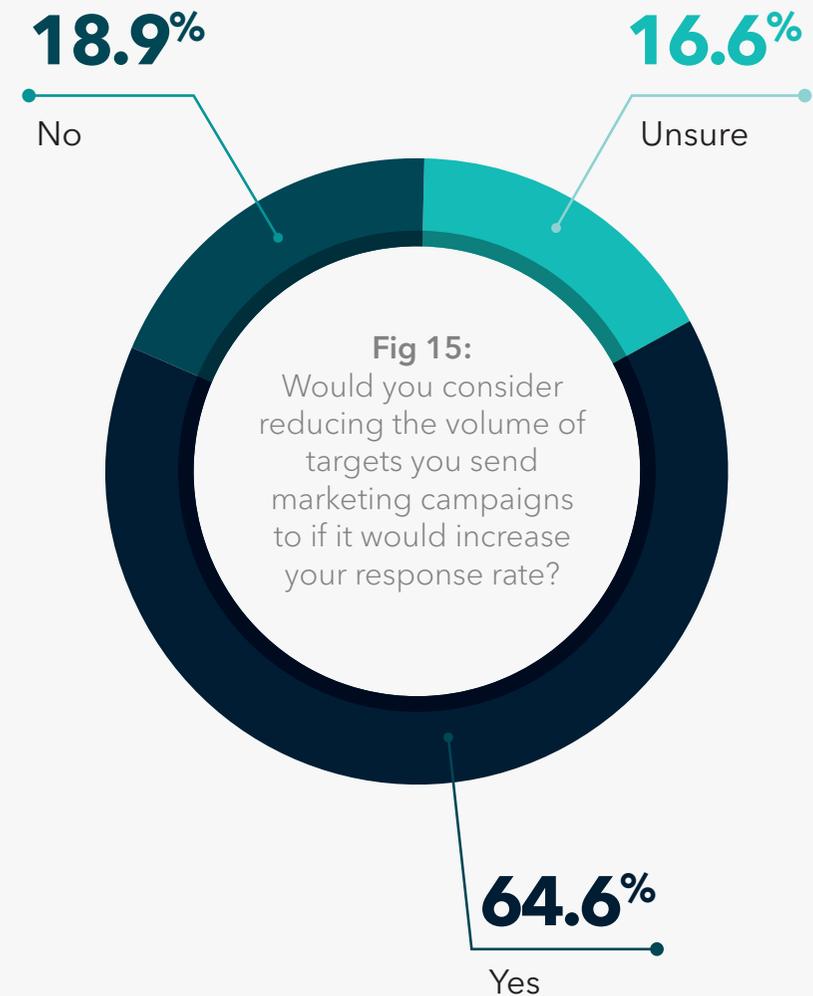
## Expedia

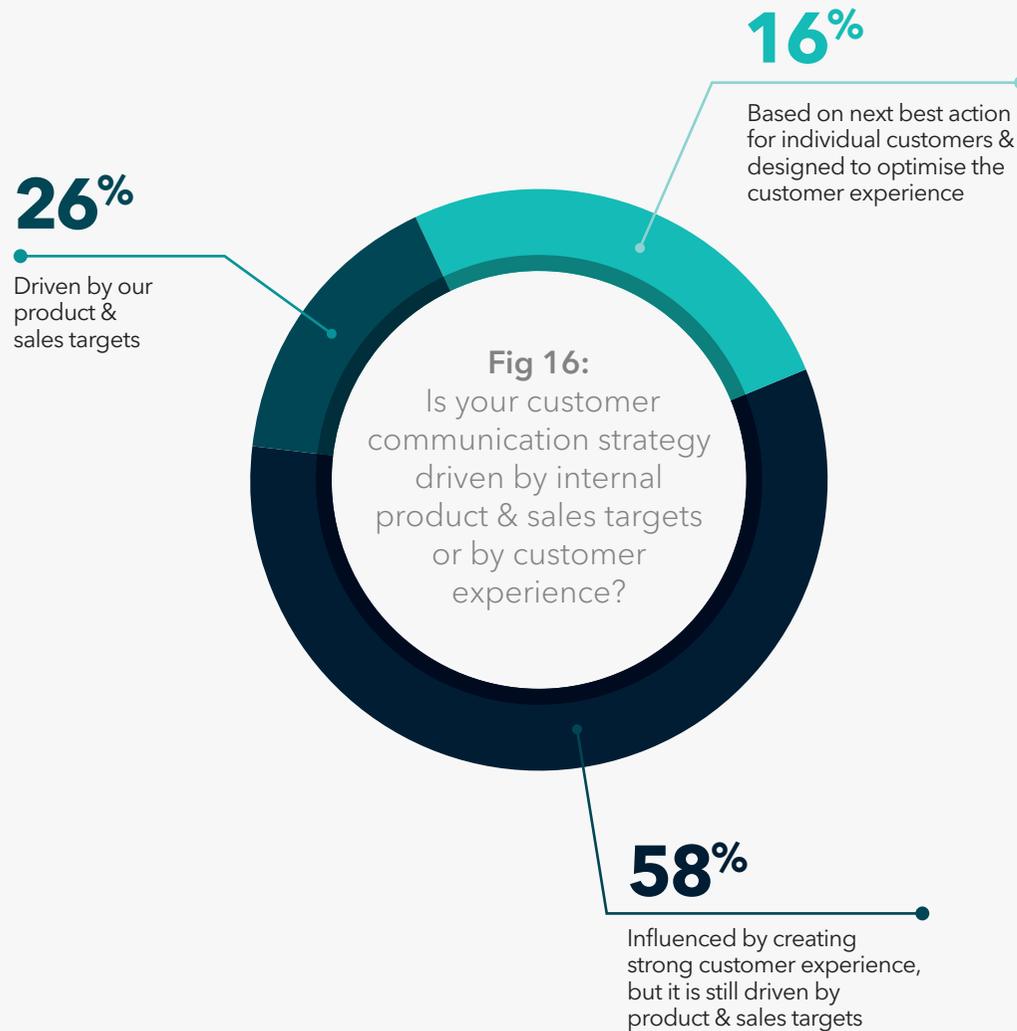
Expedia - a pioneer in offering online hotel, plane and car reservations - is an example of a company that can now identify the impact of marketing activities to influence and drive revenue conversions on its digital sites, optimise marketing spend by channel, increase customer lifetime value, improve the overall experience for customers while on the site and discover usability glitches that can lead to lost revenues.

Expedia employs analytics to help web developers discover and fix issues that might be impeding customer satisfaction and new revenue opportunities.

Expedia discovered that some customers were confused by certain form fields, resulting in customers abandoning their journey before converting. Customer journey analytics revealed the size of the problem to Expedia and allowed them to quickly prioritise changes to the site, recovering a million dollars a month in lost business.

Read the full story: [www.sas.com/en\\_gb/customers/expedia.html](http://www.sas.com/en_gb/customers/expedia.html)





More than a third (37 per cent) of respondents say they have seen a definite improvement in marketing performance since introducing predictive analytics. This is significant when you consider that in response to a different question most organisations [Fig 10] admit they only have a view of what has happened in the past and only seven per cent say they are using predictive analytics to predict customers' future behaviour, wants and needs. This suggests most of those in the 37 per cent group are not even using predictive analytics - perhaps a number are using some form of more basic analytics to support marketing performance. Not only that, but you can infer many more organisations would see a clear improvement in marketing performance if they genuinely were using predictive analytics.

These findings are sufficiently inconsistent to indicate confusion over what is meant by the term 'predictive analytics'. There are inconsistencies in the research findings highlighted elsewhere, suggesting organisations may be both unclear as to what some of the terminology means and/or what level of capability they have.

Although many organisations are seeking to become more customer-focused, most organisations admitted that their communication strategies are still driven by internally-focused product and sales targets. More than a quarter (26 per cent) admitted their customer communications were driven by solely by internally-focused targets rather than by delivering on customer experience. And more than half (58 per cent) said that while communications were 'influenced' by customer experience, they were actually 'driven' by product and sales targets [Fig 16].

Only 16 per cent of organisations are currently prioritising customer experience over internal targets. Clearly there is still a long way to go for companies to truly start competing on customer experience. The research by Gartner<sup>8</sup> referred to earlier supports this as 89 per cent of marketers will primarily compete on customer experience instead of price in the coming years.

# CUSTOMER DATA AND GDPR

Compliance with GDPR means many organisations are re-evaluating their approach to data collection. The survey finds that companies expect to collect less data under GDPR.

Across all industry sectors, organisations gather vast quantities of data about their customers, ranging from basic demographics to customers' web browsing patterns and purchase history.

Currently, the top five pieces of information that organisations collect include personal details, demographics and location in addition to complaint history.

- » Personal contact details, e.g. postcode, home address, mobile number (34%)
- » Basic demographics e.g. age, gender, social economic group (31%)
- » Complaints they have made or customer services issues (31%)
- » Physical location (30%)
- » Devices they are using e.g. iPhone, Android, desktop, tablet, etc. (26%)

The new General Data Protection Regulation (GDPR) in force from 25 May this year, creates a new set of personal data rights for consumers. It gives every EU citizen the right to know and decide how their personal data is stored, protected, transferred and deleted. Organisations therefore need to reconsider how data is handled from source to the point of consumption.

They will also need to consider how data management and data governance frameworks will support GDPR requirements. Failure to do so could result in heavy fines - up to €20 million or four per cent of the company's global annual turnover of the previous financial year (whichever is higher), not to mention the reputational damage. It means companies might be more selective about what personal data they collect and in deciding whether it is relevant. Perhaps not surprisingly, following the implementation of GDPR the percentage of organisations intending to collect the same information falls by several percentage points in most areas.





For example, knowing the physical location of a customer disappears from the top five in terms of importance. Areas of data collection seeing the biggest drop following GDPR are as follows:

- » Physical location (-8 per cent)
- » Personal contact details (-8 per cent)
- » Basic demographics (-7 per cent)
- » Web and mobile browsing behaviour (-6 per cent)

Understanding a customer's response to campaigns becomes more relevant. The top five pieces of information that organisations plan to collect about their customers post-GDPR is as follows:

- » Personal contact details, e.g. postcode, home address, mobile number (25 per cent)
- » Basic demographics e.g. age, gender, social economic group (25 per cent)
- » Complaints they have made or customer services issues (25 per cent)
- » Devices they are using e.g. iPhone, Android, desktop, tablet, etc. (23 per cent)
- » Response to promotions, campaigns and offers (22 per cent)

These results suggest organisations have fallen into the habit of collecting far more customer data than they are using. Some organisations,

however, could put that data to good use within their analytics processes.

Use of some data sources is expected to increase under GDPR. These include media preferences, shopping habits and lifetime customer value, but the increases are small as indicated below.

- » Implicit shopping habit preference e.g. customer implicitly states a preference based on which channels customers interact in, what they purchase and which communications they respond to (+3%)
- » Media preferences e.g. type of newspapers/publications/TV shows/radio they are influenced by (+3%)
- » Political preference (+1%)
- » Credit rating (+1%)
- » Lifetime value of the customer, e.g. CLV or CLTV; net profit from relationship with customer (+1%)

GDPR undoubtedly presents an opportunity to improve data hygiene. With better data hygiene comes improved data security and compliance. This improved level of overall data governance creates the opportunity for faster, more efficient preparation of data for more effective analysis.

However, organisations will need to balance the need to simplify GDPR compliance by discarding disused data with the need to maintain enough data to enable the extraction of meaningful insights via analytics.

# UNDERSTANDING EXTERNAL INFLUENCES

Organisations able to adapt messages in real time are the ones that will seize competitive advantage

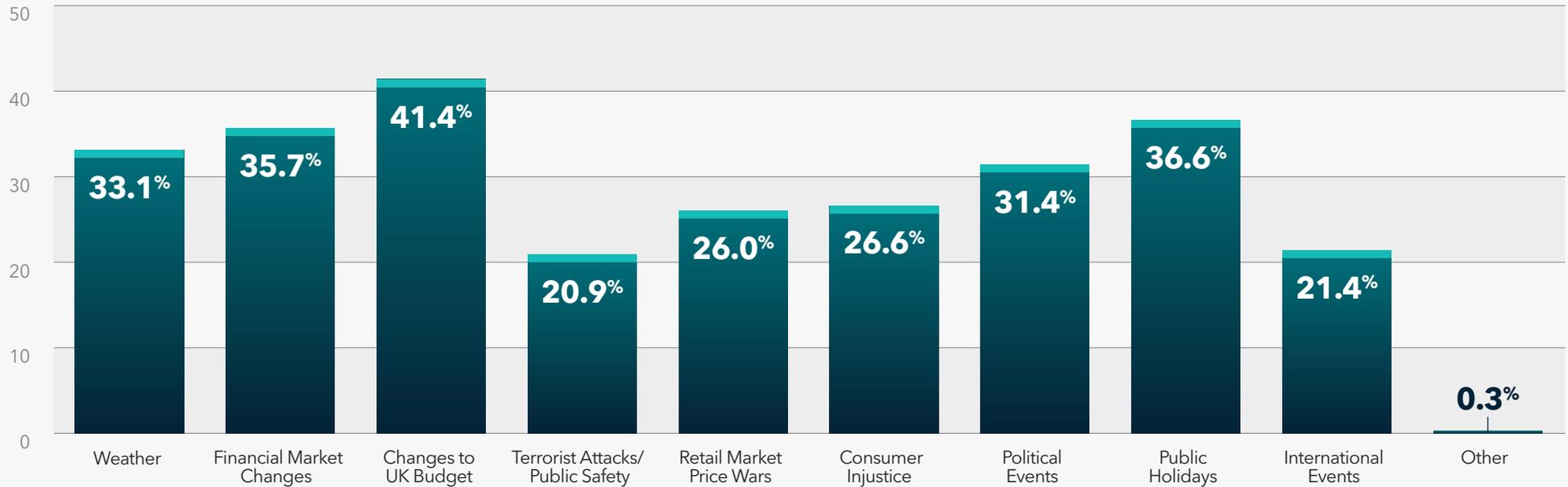
The survey investigated use of publicly available data to influence or change marketing tactics. There is widespread use of external information across industries to inform marketing activity. The top five external data sources currently used include changes in government policy (41 per cent) followed by political events, movement in interest rates and the effects of the weather and public holidays [Fig 17].

Taking external factors into consideration will provide more context for marketing activity, but the question remains whether organisations are able to use this insight effectively enough.

For factors like the weather, or unforeseen political events, customer experience can quickly fall out of step with marketing activity. When circumstances are changing rapidly, those organisations able to adapt messages in real time are the ones that will seize competitive advantage.



Fig 17: Which external data sources do you use to influence or change your marketing tactics?

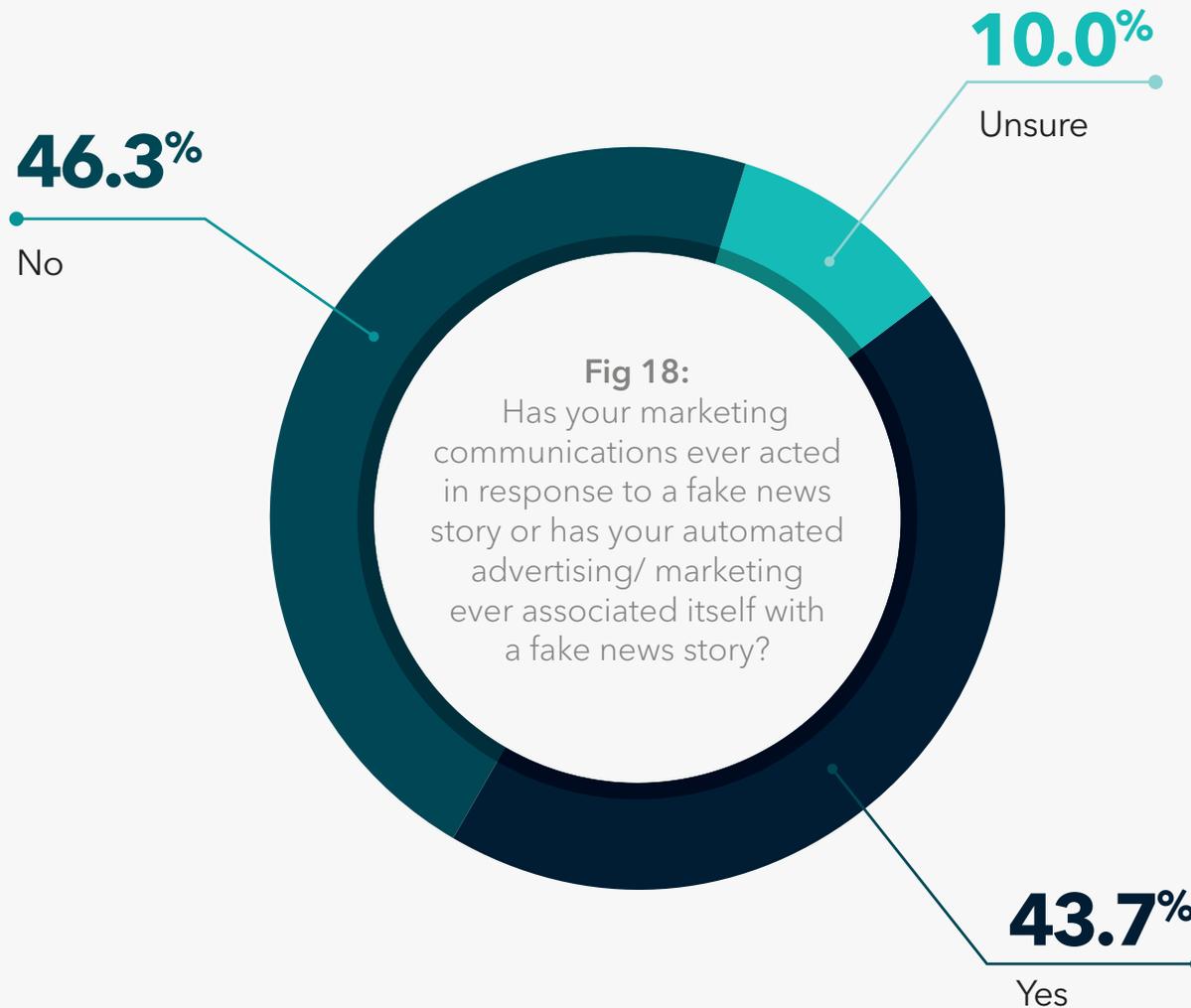


Recognising how and when to act on external factors can be important for brand reputation. Taking too long to react, or ignoring unfolding events entirely, can cause lasting damage. Predictive analytics enables external insights to be applied in real time in an effective and controlled way. Moreover, integration of social media feeds allows breaking news and unfolding events to flow into the real-time decision-making engine.

### Knowing when to act

A day after the London Bridge terror attack in 2017, stories emerged of Uber hiking its prices in the area immediately after the incident. Of course, the taxi firm was not deliberately exploiting the sudden need for transport. Its algorithms were simply doing what they are programmed to do: respond to demand. As soon as it became aware, Uber switched off its dynamic pricing, and the firm later reimbursed customers who had been overcharged.

But it was too late to avoid some harmful media headlines and a furious social media backlash – the organisation’s behaviour was deemed ‘absolutely sickening’<sup>9</sup>. As Uber explained what had happened, the story evolved. The next wave of headlines criticised the company for taking too long to disable its surge pricing.



Marketers must be able to react in the moment in an informed and controlled manner, if they are to protect their brands and influence customer behaviour effectively. In the era of 'fake news', organisations admit to vulnerability when it comes to the ability to differentiate fact from fiction.

In the survey, more than two-fifths (44 per cent) of respondents say their company has acted in response to or associated itself with a fake news story. A further 10 per cent say they cannot be sure [Fig 18].

The risk of damage to brand reputation is high unless organisations have the ability to generate real-time analytical insight based on robust, reliable and up-to-date data. Organisations with this capability could still get caught up in fake news stories, but it also means they can immediately correct or adjust communications if necessary once fake news has been exposed.



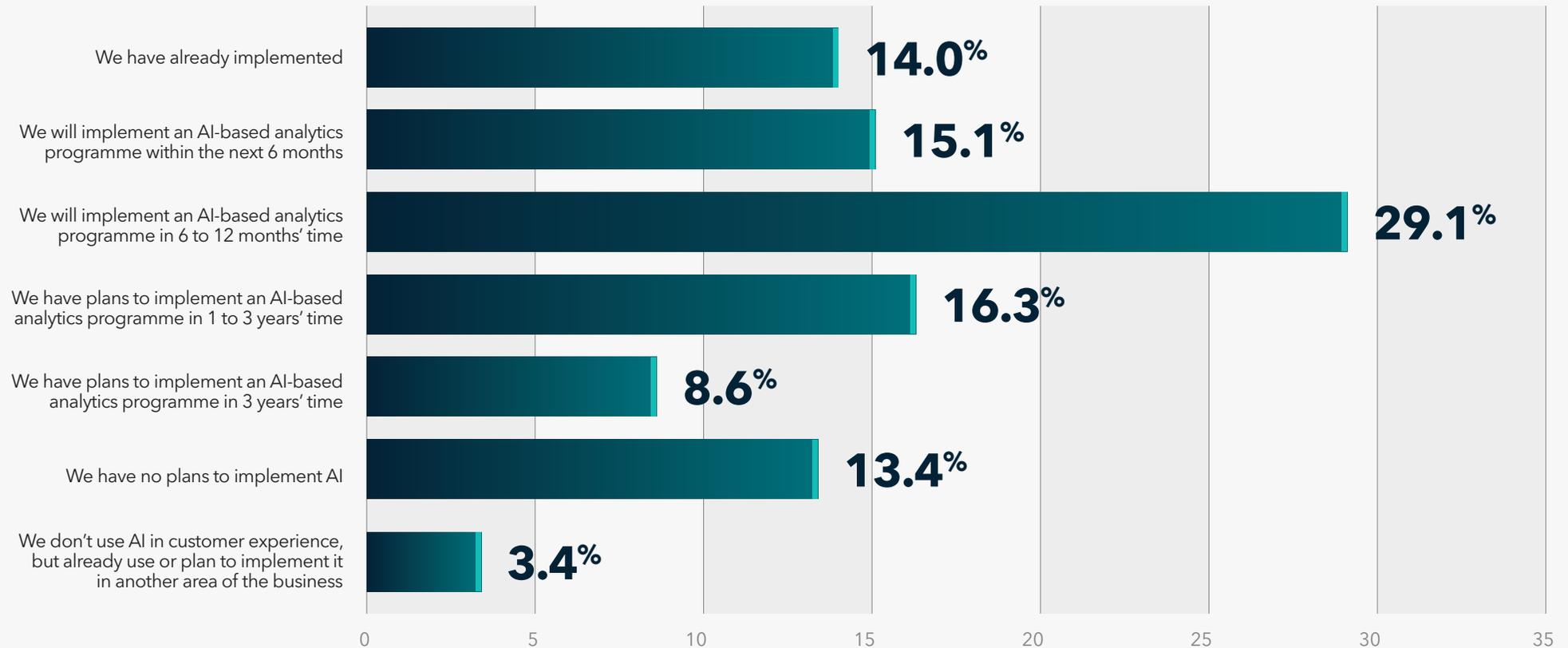
# HARNESSING ARTIFICIAL INTELLIGENCE

**Effective real-time customer marketing at scale is not possible if human intervention is required throughout to make it work**

Artificial Intelligence (AI) has the potential to take real-time marketing to the next level. It offers organisations the opportunity to deliver highly personalised, hyper-relevant customer experiences at scale and in real time, that maximise profitability and reduce risk. Machine learning in particular offers powerful data analysis, sophisticated prediction, and intuitive adaptiveness across vast amounts of data to drive 'next best actions' and profitable customer decisions across multiple channels in an instant. Although there is plenty of interest in AI, we are far from wide-scale adoption.

Participants in the survey were asked about the level of AI being implemented to enhance customer journeys. Only 14 per cent have already implemented some form of AI to enhance customer experience. Nearly half plan to implement an AI-based analytics programme within the next 12 months, indicating it is a priority for many organisations. Only a small minority (13 per cent) have no plans to implement AI at all [Fig 19].

Fig 19: Where are you in the implementation of AI to enhance customer experience?



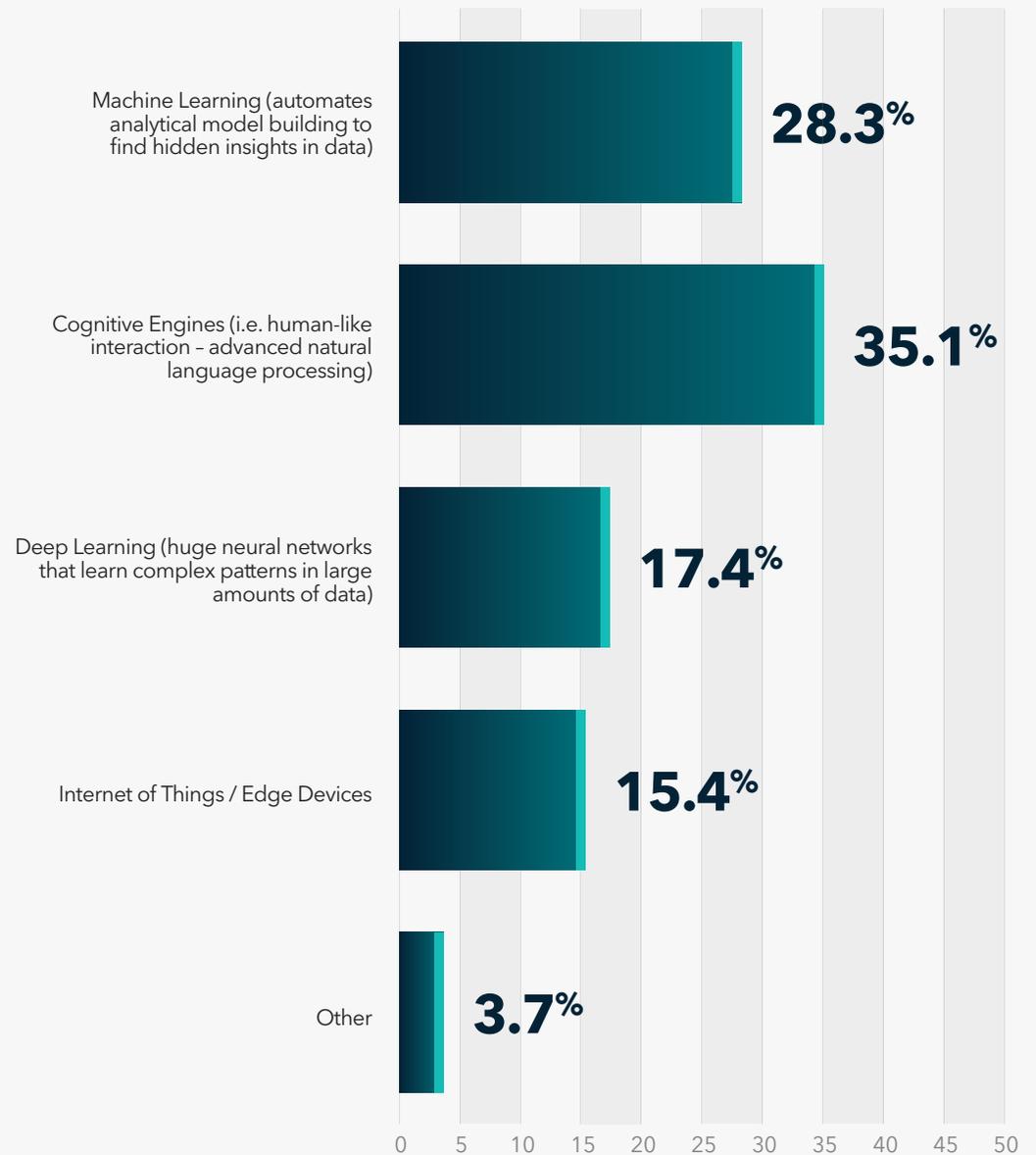
Looking at the type of AI that is being implemented, the majority of organisations are working on machine learning to automate analytical insight or cognitive engines - chatbot-style solutions that provide humanlike interaction and advanced natural language processing [Fig 20].

More companies are leveraging the power of AI to analyse massive volumes and types of data in seconds, and augment customer experiences through human-like interactions. Increasingly, AI will be a powerful asset to help build meaningful relationships between individuals and companies.

Analytics maturity is a key milestone on the path to being successful with AI. Without the transparency that analytics provides, it will be difficult to judge the results of any AI system. Given the majority of respondents are currently using analytics to report only on the past, it is interesting that 36 per cent of organisations say they also use AI to report on the past [Fig 21].

Only 39 per cent say they use AI to predict 'next best actions' in the future, yet this is a key capability from AI adoption. These results suggest there is still much confusion around AI, what it is and how organisations can best benefit.

**Fig 20:** What type of AI are you planning/or have implemented to enhance your customer experience?

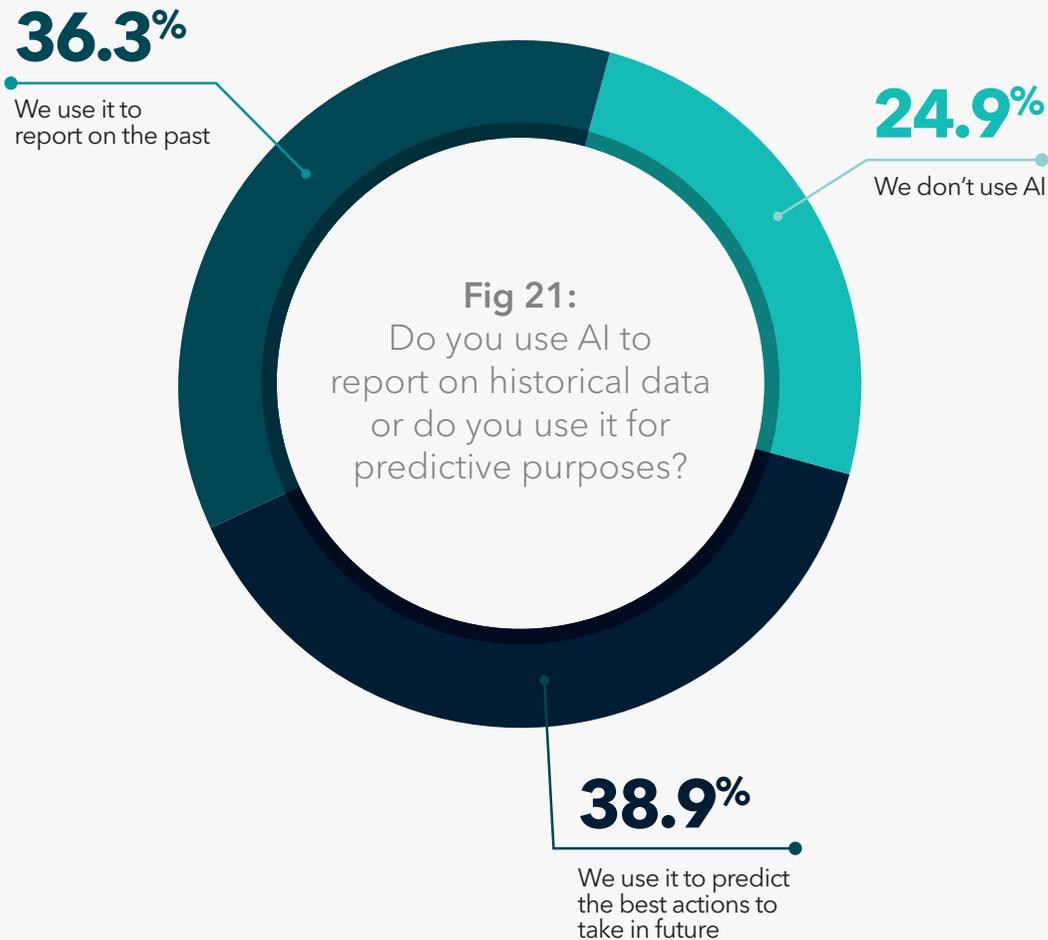


## SAS' VIEWPOINT

The survey shows that most organisations recognise the importance of improved customer experience and more efficient use of data. While some are just starting out on the analytics maturity curve - using analytics for reporting purposes and to segment their customers - others are deploying predictive analytics. Yet relatively few are highly mature in their use of prescriptive analytics, machine learning and the ability to deploy these capabilities to customer interactions in real time. There is a broad spectrum of capability and most organisations can make significant improvements to drive important business benefits.

Insight-driven organisations are better able to make appropriate and profitable decisions more quickly and are more likely to be operationally ready for unexpected changes in the market. Organisations that use analytics to go beyond knowing what has happened to predict what will happen in the future are seeing the biggest increases to their bottom line and seizing competitive advantage.

Without a commitment to investigate their route to more powerful analytics, many companies will be left looking into customers' digital shadows - making decisions for and about customers based on an incomplete or out-of-date view of information. With customer experience now recognised as the key differentiator for organisations, moving beyond customers' digital shadows to develop accurate up-to-the-moment insight and being able to act on this to deliver superior experiences that optimise resources and costs, is something all businesses need to prioritise.



# ABOUT SAS

SAS is the leader in analytics. Through innovative software and services, SAS empowers and inspires customers around the world to transform data into intelligence. SAS gives you **THE POWER TO KNOW®**.



## Leader in Real-Time Interaction Management

Forrester named SAS a Leader in Real-Time Interaction Management awarding near perfect marks for predictive and real-time analytics, AI and offer optimisation.



## Leader in Digital Marketing Analytics

Gartner recognised SAS for delivering a robust set of marketing analytics tools in an integrated product suite to meet data-driven analysts' end-to-end requirements.



## Leader in Predictive Analytics & Machine Learning

SAS earned the highest scores in all three categories: current offering, strategy and market presence from Forrester, recognising SAS' unified tooling approach for providing the consistent user experience that data scientists need to build even the most sophisticated models.

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