

Trend study

# Digital Utilities: From Behind the Curve to Innovation

How Europe's energy and water retailers plan to ride out the revolution in customer engagement

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# Preface



Digital Utilities: From Behind the Curve to Innovation is published at a pivotal moment for Europe's utilities markets. Energy and water retailers understand the opportunities for growth and profitability that lie in competitive marketplaces. However, they are conscious of the scale of the challenge that lies ahead.

For one, utility retailers will need to master the challenges of customer acquisition and retention: to win and keep business, they will have to fundamentally change the way they engage with the customer. To defend and grow margins, they will need to overhaul and modernise processes – and they must achieve this with new competitors snapping at their heels.

Digital technology is the key that will enable utility retailers to unlock the opportunities of competitive markets. Smart meters will provide data to drive more customer-focused processes. Robotics and analytics will transform the customer experience, allowing retailers to tailor service to individual customer needs. Operational improvements, enabled by more flexible automated back office systems, will make organisations more efficient and agile, ready to respond to changes in fast-moving markets with new products and services.

The study confirms our experience at CGI that many utility retailers are already using digital technologies to build and strengthen customer relationships. We are reassured to see these same companies prioritising cyber protections: the ability to safeguard information, your own and your customers', is an increasingly critical factor for performance and competitiveness.

Technology can transform the competitive and operational performance of energy and water retailers, equipping them with the speed and responsiveness they need to outpace rivals and win. The firms that move quickest to harness the potential of digital transformation will be best placed to meet the challenge of Europe's customer-driven utilities markets.



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# Digital utilities: from behind the curve to innovation

## INTRODUCTION

The utility retail market in Europe stands on the edge of a revolution.

Suppliers of electricity, gas and water are under unprecedented pressure to rethink their business models against a backdrop of rising customer churn, increasing competition and massive technological disruption.

The utilities sector consistently rates as one of the industries with the lowest levels of customer satisfaction. Complaints about pricing levels, billing transparency and the ability to switch supplier are under scrutiny from industry regulators and have become political causes célèbres in several European countries.

New market entrants are starting to eat into the market share of the established order, with renewable energy specialists, digital natives and non-utility companies starting to make their mark.

Meanwhile, utilities continue to wrestle with the challenge of harnessing the power of technology to make their operations more efficient and drive innovation. Gas and electricity retailers – and a growing number of water utilities – are working hard to deploy smart meter infrastructure. However, big questions remain about where the value lies in their investment, and whether it will serve as a stepping-stone to building closer, more dynamic customer relationships.

Some big decisions need to be taken. Should utilities 'stick' and focus on delivering a better service to their existing customer base? Or should they 'twist' and diversify into potentially more lucrative areas, which may include products and services from way outside the traditional utilities domain?

This study explores the directions that major European utilities are planning to take in order to ensure lasting relevance and growth. Based on interviews with 200 senior business and technology executives, the study analyses their views on the biggest challenges facing their businesses. It also explores where utilities will channel their digital technology investment in the coming years and where they see the real business value in hot areas such as artificial intelligence (AI) and advanced data analytics.

## KEY FINDINGS

-  **New customer acquisition** is the biggest issue facing European utility retailers, with 73% of participants citing it as a major challenge to the business.
-  **Competition is coming from all sides.** Traditional utilities are still viewed as the biggest threat, but new utility start-ups are seen as the main competition by more than a quarter of participants.
-  **Quality of customer service** (66%) and the launch of new energy-related products and services (60%) are viewed as the two most important strategies for driving differentiation from the competition.
-  Most utilities (78%) expect their **customer base** to expand by up to 20% over the next three years (with M&A activity a likely driver). However, 10% expect current levels to either stay flat or decline – with electricity retailers the least optimistic.
-  Utilities identify **three major battlegrounds** that will be critical to gaining or losing customers: quality of customer service (30%); client satisfaction with products & services (27%); and the impact of new competitors (27%).
-  **Increased pricing transparency** is seen as the area where digital technology can deliver the greatest value (62%). Utilities are investing in new billing platforms, self-service functionality and underlying data management and analytics tools to tackle this issue.
-  More than half of European utilities have already invested in **AI agents**, and expect them to deliver the greatest value in improving service responsiveness (53%) and taking cost out of contact centre processes (30%).
-  82% plan to invest in **connected home propositions** in the next three years. This is a clear sign that utility retail organisations are looking to fundamentally redefine their relationship with the customer by getting 'beyond the meter'.
-  59% describe their **smart metering rollouts** as being at a mature or advanced stage. Consumer acceptance and security concerns are viewed as the biggest obstacles on the path to full and successful deployment.
-  Less than half are currently analysing **interval data** generated by smart meters, with two thirds saying that building the business case for data analytics is a major challenge.

# KEY TRENDS

## Key trends by sub-sector

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<b>Electricity retail</b>	More than <b>two thirds</b> see quality of customer service as a way to differentiate from the competition. They are the most ambitious group in terms of profitability, with <b>53%</b> expecting to grow their bottom line by more than 10% over the next three years.
<b>Gas retail</b>	<b>66%</b> see lowering the cost of operations as a highly important way to differentiate from the competition. <b>17%</b> expect their customer bases to stay at current levels over the next three years.
<b>Water retail</b>	<b>76%</b> plan investment in non-human voice interfaces/chat-bots in the next 12 months. They see profitability analysis as a highly important element of their customer data analytics strategy.

## Key trends by region

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<b>Benelux</b>	<b>44%</b> see new utility start-ups as a major competitive threat. <b>77%</b> have invested in a connected home proposition. <b>65%</b> see identification of unbilled revenue as a major opportunity for smart metering.
<b>DACH</b>	<b>72%</b> see the evolving security threat as a major challenge. <b>38%</b> see taking cost out of contact centre processes as an area where machine learning/AI will have the greatest impact on their customer engagement.
<b>Eastern Europe</b>	<b>78%</b> see customer retention as a major challenge. <b>62%</b> see tariff innovation as highly important to differentiating from the competition. <b>22%</b> see security concerns as a major barrier to gaining full value from smart metering.
<b>France</b>	<b>86%</b> see new customer acquisition as a major business challenge. 50% believe that they already have 'partnerships' with their customers. 22% say they are at an advanced stage with their smart metering programmes.
<b>Nordics</b>	<b>48%</b> see themselves as digital innovators. Just <b>19%</b> see operational issues such as accurate billing as a major business challenge. <b>81%</b> see operational efficiency as a highly important element of their future strategy.
<b>Southern Europe</b>	More than <b>two thirds</b> expect their customer base to increase by more than 10% over the next three years. <b>25%</b> see new entrants from other sectors as a major competitive threat. Just 18% believe that they have 'partnerships' with their customers.
<b>UK &amp; Ireland</b>	<b>15%</b> expect their customer base to stay at the current level or decline over the next three years. Utilities in this region lead the way in viewing non-utility products and services as a way to differentiate from the competition ( <b>48%</b> ). More than <b>one third</b> see foreign utilities as a major competitive threat.



## THE CUSTOMER ENGAGEMENT CONUNDRUM

Europe's leading energy and water retailers are in a state of flux.

Volatile wholesale prices, the swing to renewable sources, changing customer demands and an evolving competitive landscape are all having a clear impact on the progress of the established order.

Only one of the region's top ten players posted an increase in revenue during 2016, while their combined top-line figures for the period showed a 9% decline (source: PAC). In terms of profitability, half of the top ten reported a decline or flat progress during 2016.

Across Europe, energy retailers are making sweeping changes to their business models. France's Engie is two years into a three-year, €22bn transformation programme that will see it focus on low carbon activities, integrated customer solutions and activities not exposed to commodity prices. Italian leader Enel is investing €17bn in a three-year programme targeting areas including renewables, grid technology and operational efficiency.

A new wave of M&A activity is also sweeping through the sector as companies look to combine in order to diversify, build economies of scale and share the burden of investment required to support transformation. Spain's Gas Natural is approaching Portugal's EDP about a €35bn deal to create Europe's fourth-largest utility, while the break-up of E.ON into two separate organisations looks set to trigger consolidation among German utilities.

The water industry is under similar pressure. The cost of minimising leakage from an ageing infrastructure coupled with an increasingly competitive supplier marketplace – notably in the UK's business supply sector – are driving a renewed focus on operational efficiency and service transformation.

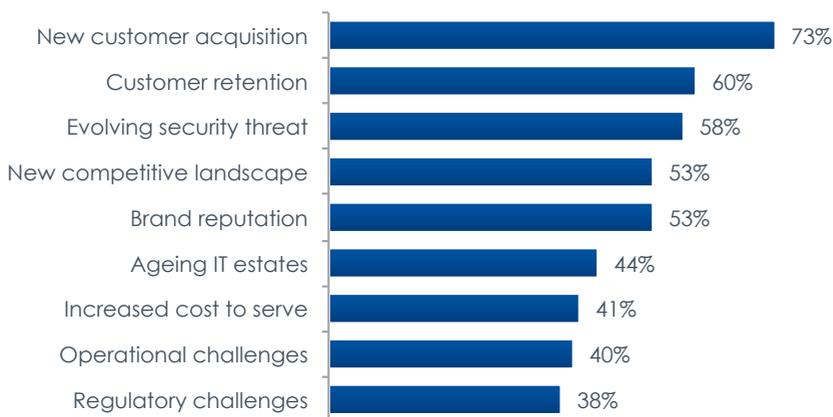
So what are the biggest challenges that are driving these shifts? PAC's new study, based on interviews with 200 senior business and technology decision-makers at European energy retailers, found that close to three quarters view new customer acquisition as a major challenge facing their business today. In addition, holding onto existing clients was seen as a significant issue by 60% of participants.

Customer engagement has long been a challenge for energy retail organisations, with contact between the two sides generally limited to billing and service issues. As a result, the customer view of their energy provider tends to be influenced primarily by pricing levels and transparency and the responsiveness of the support team. Utilities have struggled to develop the relationship beyond this transactional nature and as a result, they are often poorly rated.

In the UK, the utilities sector as a whole continues to score below average on the UK Customer Satisfaction Index (UKCSI), while the country's Government is responding to opposition to rising energy bills and low supplier switching levels by introducing retail energy price controls.

The evolving security threat ranks as the third-biggest challenge facing utility retailers in 2017. As a key part of the region's critical national infrastructure, utilities are up against a growing and increasingly sophisticated threat landscape targeting customer information and power supply networks. Sweden's Vattenfall and British Gas have both reportedly been the targets for major attacks in recent years.

The changing competitive landscape was cited by more than half of European utility retailers as a key challenge, while incumbent utilities are viewed as the prime source of competition by close to one third of participants in the study. But interestingly, this group was closely followed by utility start-ups (28%), which reflects the surge of new players emerging in the market across the region, underpinned by national government efforts to increase competition.



n=215

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Fig. 1: What are the major challenges facing your company in 2017?

This trend is most noticeable in the UK, where the share of the big six utility companies has fallen from 100% to 86% in the last five years, during which time more than 40 new energy retailers have entered the market. OVO Energy reported its first annual profit in 2016, while First Utility has quadrupled the size of its customer base in the last four years to more than one million.

But the more interesting trend is the emergence of companies from outside of the traditional utilities space (seen as a major competitive concern by 15% of participants), particularly in the area of smart home energy management systems.

This includes global brands such as Google or Apple, with the former addressing smart home users with its Nest product line, and the latter provides the Homekit platform as an integration point for third-party smart home solutions. There are domestic challengers emerging too. German start-up Tado provides products for heating control, while *digitalSTROM*, an associate of Swiss university ETH Zurich, develops and sells smart home solutions. Telecoms giant Deutsche Telekom has also established a smart home platform that integrates solutions from several providers.

What tactics are utilities adopting in order to stand out from the competition? Three areas were highlighted by the study: improving the quality of customer service (seen as highly important by 66% of participants); the launch of new energy-related products and services (60%); and lowering the cost of operations (60%).

As we shall see, technology is playing a huge role in the transformation of customer service activities, while the drive to improve cost efficiency is leading to a new wave of outsourcing in order to transform and optimise business processes ranging from finance and accounting, through to human resources and IT.

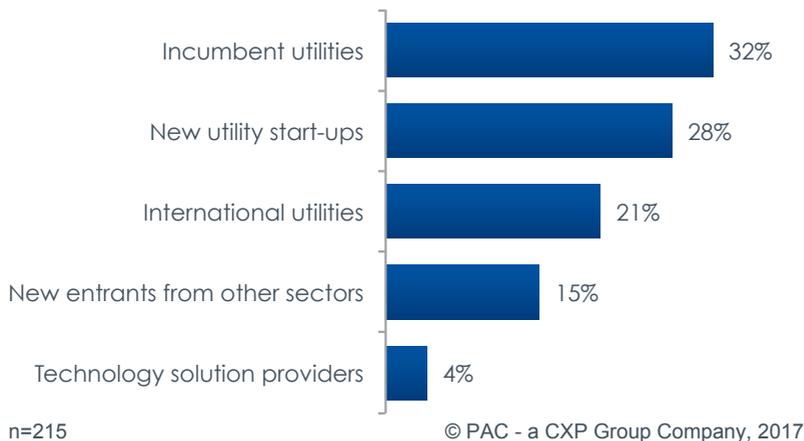


Fig. 2: Who is your main competition in 2017?

But perhaps the most intriguing findings here are around two areas that point towards the future direction that many utilities will take. The first is around the sale of third-party non-utility products and

services, which 43% of participants see as a highly important part of their strategy to differentiate from the competition.

White labelling is increasing as utilities look to sell a more diversified portfolio, and get closer to the customer. One area where this is particularly prevalent is in the area of smart home energy management systems, with Sweden's Vattenfall bundling a smart home starter pack from technology partner Qivicon.

Interest in service diversification is strongest in the UK, where 48% see selling third-party offerings as a highly important part of their future direction. Government pressure on pricing levels is a key driver towards portfolio expansion, with First Utility launching a broadband package in 2017 and OVO Energy acquiring Corgi HomePlan, one of the country's largest providers of boiler maintenance services.

The second area of interest is the use of secondary brands and business models, where established players are looking to create new operations that are able to attack new areas of the market without being encumbered by legacy constraints or brand preconceptions. More than a third of participants see this as a key way to differentiate and one example is Centrica, which has created a new global division 'Centrica Consumer' as part of a wider strategic move towards a greater focus on consumer services.

Despite the upheaval in the market, utilities are generally optimistic about their future prospects. More than three quarters (78%) expect their revenue to increase by up to 20% during the next three years, but it is interesting that they are not as bullish on their profitability

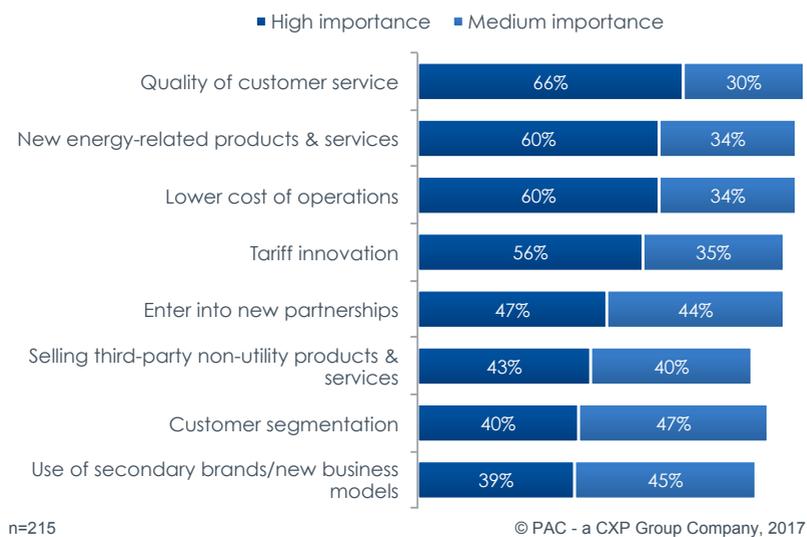


Fig. 3: What is your main strategy for differentiating from the competition?

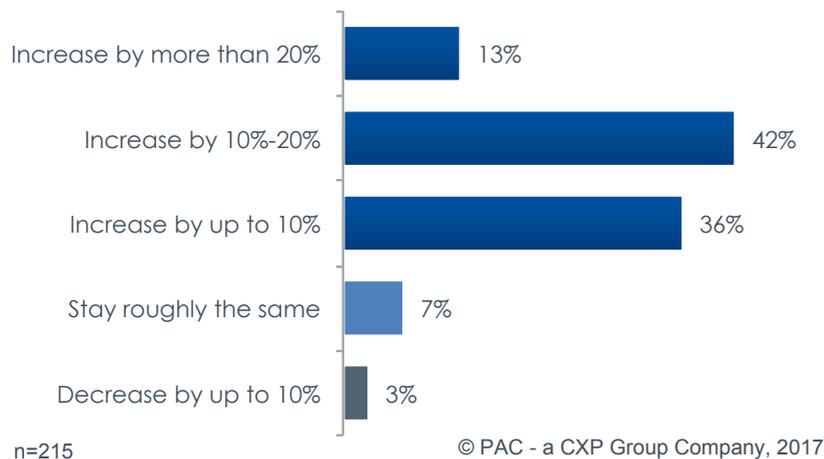


Fig. 4: How do you expect your customer base to develop over the next three years?

expectations. Some 66% expect their profits to rise by up to 20% during the next three years, with 17% expecting either a decline or flat development on current levels. In contrast, only 10% expect their customer base to shrink or stay the same over the same period.

This slightly more cautious outlook on profitability reflects both the pricing pressure on core energy and water supply, as well as the need to make significant investment to transform the business. We have already mentioned Engie and Enel's multi-billion euro programmes. In the water sector, France's Suez is spending €3.2bn on the purchase of General Electric's water business, as part of a push in the industrial water supply market.



Fig. 5: What will be the single biggest reason for gaining or losing customers?

What do utilities believe will be the main factors in adding or losing customers? The quality of operations and customer service was seen as the main area where utilities believe they can differentiate from the competition, and it is also seen as the topic that will make or

break their customer acquisition and retention. Both water and gas retailers cite this as the key battleground, while for electricity retailers it is the impact of new competitors that they believe will have the biggest influence, which reflects the greater competitive disruption that is likely to play out in this part of the market.

But for many energy retailers, the next stage of the market evolution will not simply be about adding more customers, it will be about fundamentally changing the customer relationship beyond commodity service provision to one that can be better described as a partnership.

According to the study, only one third (32%) claim that their relationship has already evolved to partnership status, with a further 43% aiming to make this shift in the next 12 months. Energy retailers in France were most bullish about having made this transition (50%), with EDF having launched a new subsidiary called Sowe, which will supply gas and other services including a smart connected device to help manage consumption and show real-time usage estimates.



## DIGITAL TRANSFORMATION: WHERE IS THE INVESTMENT GOING?

Technology will be increasingly critical to the future success of European utilities, both in driving efficiency and supporting the transformation of the portfolio and customer services activities.

This is partly driven by the need to adapt to changing customer preferences in terms of how they interact with their energy retailer. By 2020, about 95% of a utility company's bill-paying customers will have either grown up during the age of digital technology or will be fully digital savvy.

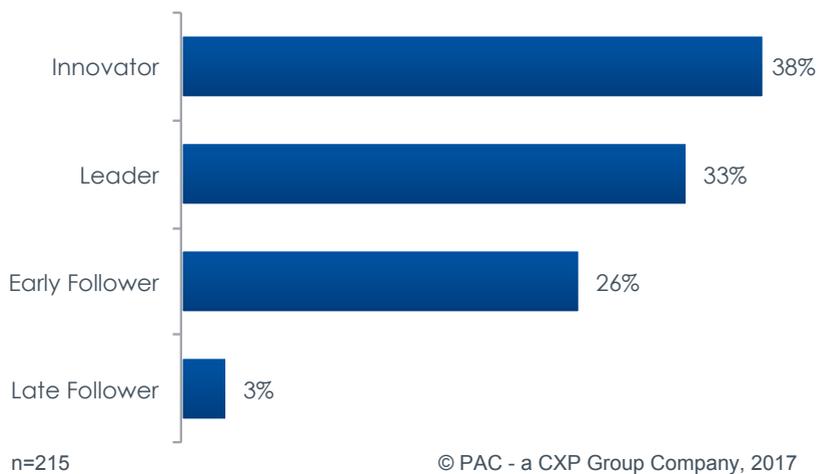


Fig. 6: How do you see your company in terms of how it uses digital technology to engage with customers?

But how do energy and water suppliers perceive themselves in terms of their use of digital technology to engage with customers? Perhaps surprisingly, the majority are positive about the progress they have made to date, with 38% categorising themselves as 'innovators' and one third seeing themselves as 'leaders' in their use of technology such as portals or mobile applications.

Electricity retailers were the most bullish with 42% seeing themselves as innovators, compared to 36% of water utilities. From a regional perspective, utilities in the Nordic region (48%) and France (45%) perceive themselves as being ahead of the curve, compared to just 21% in Eastern Europe.

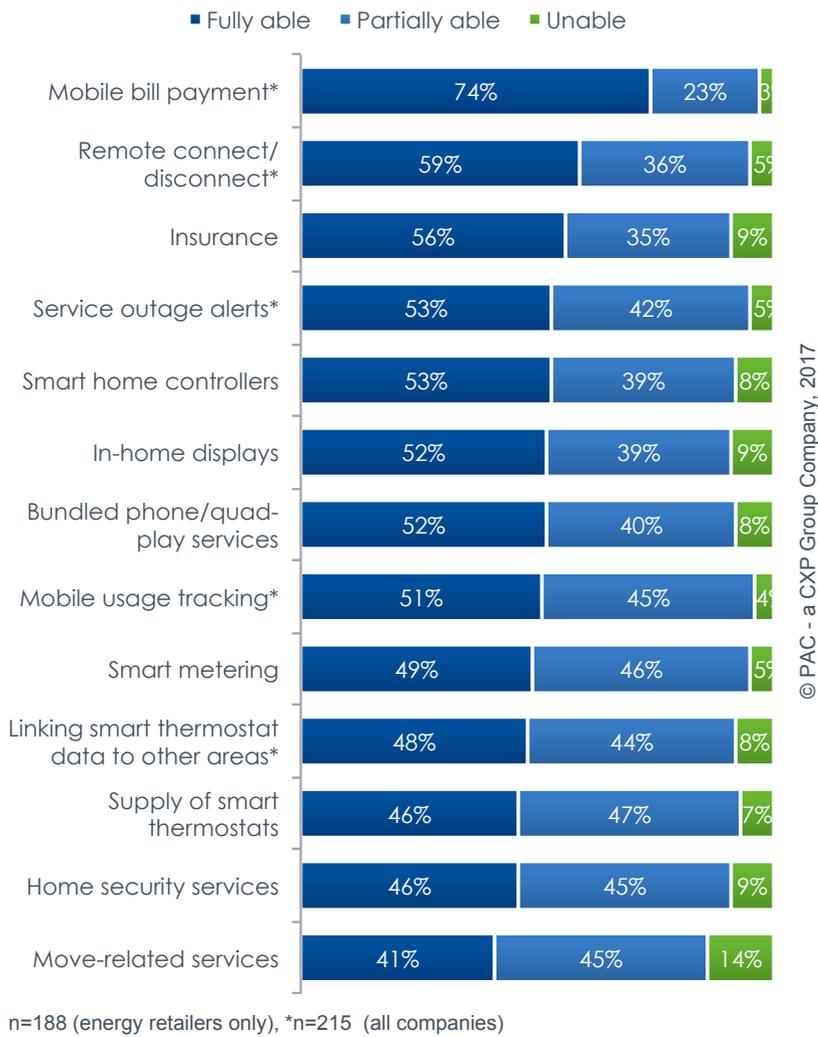
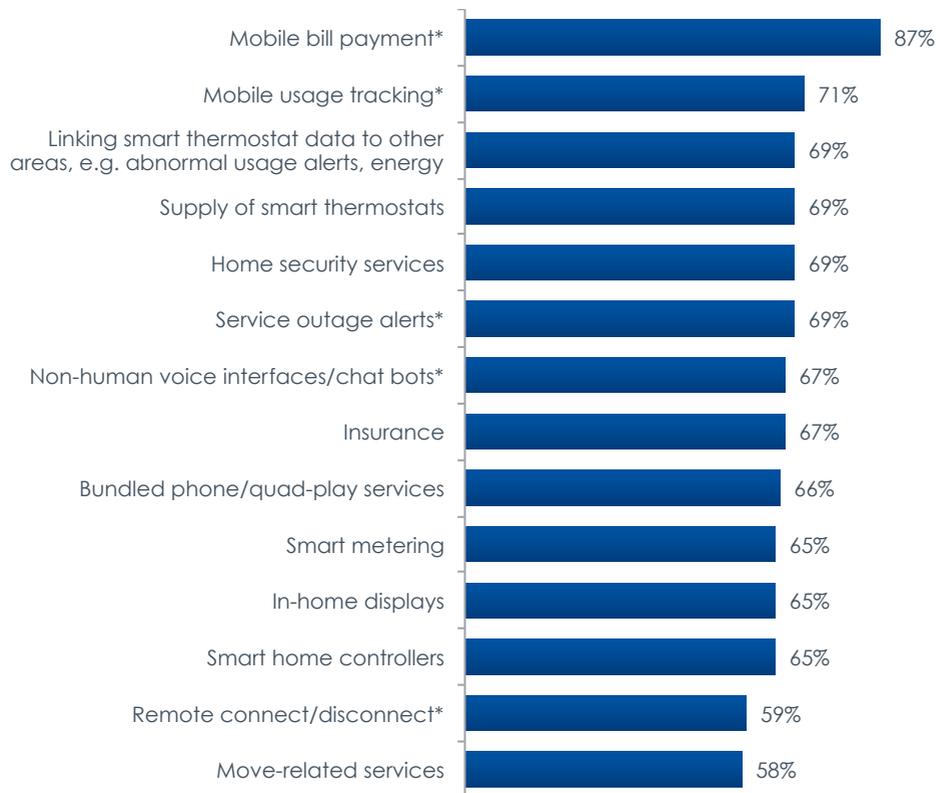


Fig. 7: To what extent are you able to provide the following customer services?

Does this self-assessment paint an accurate picture of the digital transformation of their customer engagement processes? There are many examples of highly innovative projects throughout the sector, such as UK challenger First Utility, which has incorporated Facebook Messenger and Live Chat into its customer engagement channels. But digging deeper, it becomes clear that many utilities are yet to fully take advantage of some of the more potentially disruptive customer service technologies.

While almost three quarters of participants (74%) claim to offer mobile payment and 59% state that they provide a fully remote connect/disconnect service, the adoption of services such as mobile usage tracking (51%) and the supply of smart thermostats (46%) are lower. This will change in the near future, with both areas among the top four areas in which utilities plan to invest in the next 12 months. There looks set to be a major push on smart thermostats in particular, with 69% planning to invest in these in the next year, and the same proportion also planning to explore how data from these devices can be connected to other areas.

One company that already does this is Germany's E.ON, which offers the Tado smart thermostat device as part of its new E.ON Plus package, which customers can use to automatically control their home's temperature. In the UK, Centrica has sold more than 500,000 units of its Hive device, which controls heating and lighting either manually or by voice and in some cases can provide advanced warning of potential problems with boilers.



n=188 (energy retailers only), \*n=215 (all companies)

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Fig. 8: In which of the following areas do you plan to invest in the next 12 months?

Another interesting area where two thirds (66%) of utilities are planning to invest in the next 12 months is in bundled quad-play services. French utilities look set to be most active in this area, with three quarters planning to explore this area in the next year, slightly ahead of their peers in the DACH region. German regional utility RWE is currently working with Deutsche Telekom to link a million households in the north of the country to fast broadband connections by 2026. Telecoms operators have mapped out the path that many utilities are looking to follow, having successfully branched out beyond basic landline provision and into higher-value content, mobile and compute services.

As we have seen, customer engagement is a particularly tricky area for utilities, with new client acquisition seen as a big challenge in the face of a generally dim view of the quality of service. So in which areas are utilities investing in order to drive improvement?

Customer experience management platforms top the list, with 84% planning to spend in the next 12 months, with the aim of building a single, dynamic view of all customer interaction across the organisation. This will become a growing challenge for those utilities looking to expand their portfolios into different service lines, often in conjunction with partner ecosystems.

Utilities already generate massive volumes of data across their organisations, be it on the status or condition of operational assets, customer behaviour and history, or financial performance. But this is only the tip of the iceberg, with current initiatives in areas such as smart metering and connected home generating data volumes that will eventually dwarf current levels.

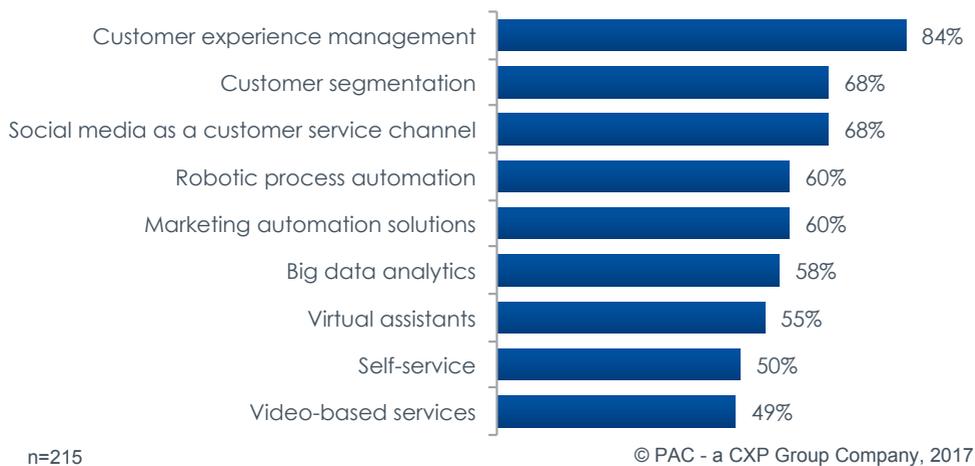


Fig. 9: In which areas do you plan to invest to improve customer engagement?

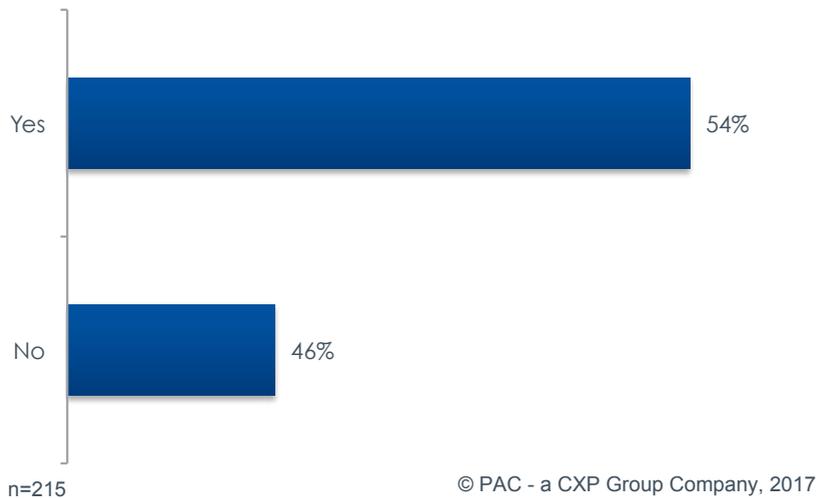


Fig. 10: Have you already invested in AI agents?

Turning this raw data into insight will be one of the critical future success factors for utilities, and in this context, it is unsurprising that 58% plan to invest in big data analytics in the next 12 months. Enel is working with analytics platform provider C3 Energy to help it improve network reliability and reduce maintenance costs, while EDF has been leveraging big data analytics for some time to help it to measure the success of its social media activity.

Interestingly, social media analytics is not one of the main focus areas for customer analytics investment. The study found that customer experience analytics (60%) and customer segmentation analytics (53%) were the two areas seen by utilities as being of the greatest importance. EDF uses a predictive analytics platform from SAS to help it analyse its customer base and assess the likelihood that individuals will defect to a competitor.

The most dynamic technology topic in the sector in 2017 is artificial intelligence. Utility companies have not been as fast as other markets in exploring the potential of AI, but activity is accelerating in 2017 across a diverse mix of use cases. More than half of the study

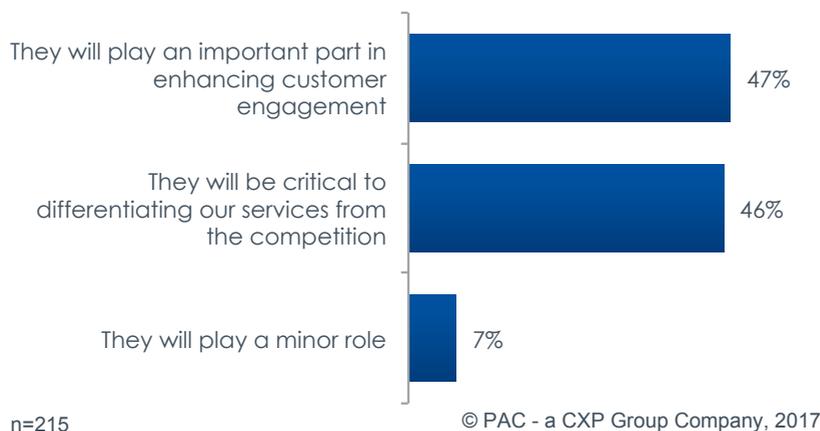


Fig. 11: How will the role of AI agents evolve in the market in the next two years?

participants state that they have already invested in AI agents, while an overwhelming 81% plan to do so or continue to invest in the next two years. Nordic utilities lead the way in the adoption of AI agents, with two thirds already having them in place.

First Utility is one of several utilities that are using AI-powered virtual assistants as part of their customer services strategies, with its 'Ask First' platform. Some 47% of participants in the study state that AI agents will play an important part in enhancing customer engagement, while 46% believe that they will be critical to driving differentiation from the competition.

The overall business case for AI investment is being built around improving service responsiveness, which more than half of utilities (53%) view as the area of greatest impact. Some 30% believe AI agents will help to take cost out of the contact centre, and it is worth noting that only 2% think that AI agents will have no impact on their business. This underlines what a critical role it will play in customer engagement transformation in the coming years.

As we have seen, many energy utilities are looking to go "beyond the meter" and forge a new position in the day-to-day lives of their customers. The concept of the connected home is in its infancy, but companies from many different sectors – technology, telecoms and utilities – are jostling for position as more and more devices in the home become 'smart'.

Some 70% of participants in the study state that they have already invested in a connected home proposition, while 82% plan to make an investment or to continue current investment during the next three years. Among those businesses currently pushing connected home and Apple. So how do the energy retailers believe they can drive value against these powerhouse consumer brands?

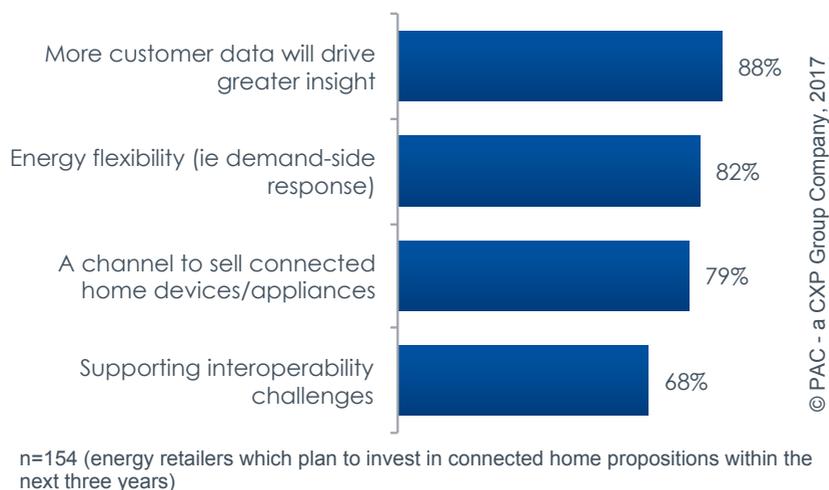


Fig. 12: How will your connected home propositions drive business value over providers such as Nest, Tado and Apple?

Some 88% of participants believe that by getting a seat at the table in the connected home, they will be able to gain more insight into customer behaviour and preferences, which will enable them to provide a more personalised service. 82% believe that the improved insight into consumption habits will help them to better match generation and supply with demand.

One of the ways that utilities are looking to innovate in the area of connected home propositions is by engaging with and in some cases investing in start-ups. Germany's Innogy has invested in IoT software provider People Power and house moving start-up Move24, while EDF's Blue Lab accelerator has worked alongside Howz, a start-up whose home system measures a household's usage of electricity and combines this with information from a series of sensors that detect door movement, temperature and light levels in a person's home.





## TURNING SMART METER DATA INTO BUSINESS VALUE

Europe's energy and water retailers have already invested billions of euros in deploying smart meters into their customers' homes.

And this spending will not slow down in the next three years, as utilities hurry to meet the 2020 deadline set by the European Union to replace 80% of dumb meters when it is cost-effective to do so. Spain's Iberdrola is spending €2bn in its 'STAR' smart meter rollout, which has already seen more than nine million smart meters deployed.

The largest proportion of participants in the study (48%) claim to be at a relatively mature stage in the smart meter implementation (1-2 years), with a group of 11% stating that they are at an advanced stage. French utilities lead the way, with almost a quarter (23%) claiming to be at an advanced stage.

The EU mandate is clearly the driving force behind smart meter initiatives in Europe, but what do energy and water retailers see as the potential benefits from their investment in terms of how it can improve customer engagement?

Much of the business case for smart meter investment has been based upon the removal of the need for manual meter readings, with the cost reduction theoretically being passed on to the customer's bill. More than three quarters of participants (78%) see this as a major opportunity, while 61% believe that it will have a significant impact on customer satisfaction.

But to take a view from the other side, what do utilities believe are the benefits that customers expect from smart meters? One third think that the greatest value for the client is going to come from greater transparency on billing and consumption, while 21% highlight the ability to sell self-generated electricity back into the grid. Micro-

generation remains at an early stage in Europe, but will accelerate in the coming years as key players put their shoulder to the wheel. As part of E.ON's efforts to introduce more green energy into its grid, it has teamed up with Google to sell its Sunroof solar platform, which helps customers calculate the solar potential of their homes.

The implementation of smart metering infrastructure has been far from plain sailing for most utilities. Large national deployments in countries such as the UK, represent some of the most ambitious and complex technical projects that have been attempted in any area of critical national infrastructure.

So what are the main challenges that utilities see to getting full value from their smart meter infrastructure? For 38%, the primary challenge is consumer acceptance, which is seen as a particular stumbling block by utilities in France (41%) and the Nordic region (56%).

Some 16% see security concerns as the primary challenge, and the two areas are closely linked. Many consumers are concerned about the data privacy implications of having a connected device in their home – if it is hacked, will criminals be able to determine when their house is vacant? Energy retailers are also investing in testing and security technology to reduce the vulnerability of the devices, networks and underpinning data platforms. Almost a quarter (22%) of German utilities see security concerns as the biggest challenge to reaping full benefits from the smart infrastructure.

Almost all of the business cases that utilities have constructed for smart meter investment depend upon harnessing the flow of data that will be generated from the devices. From understanding customer behaviour, through improving billing transparency and service outage management, utilities will need to capture, process and analyse massive data volumes in as close to real time as possible, in order to take full advantage.

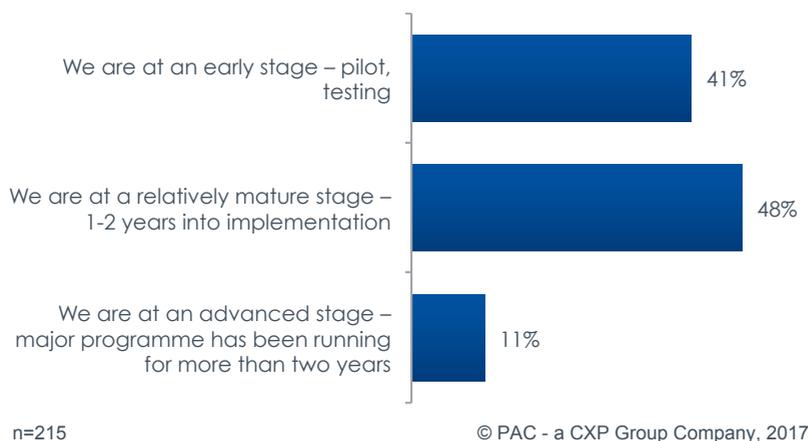


Fig. 13: What is the current status of your smart metering programme?

However, less than half of participants (48%) are currently analysing their 'interval' data being generated from the existing smart infrastructure, be it half-hourly or hourly flows. A further 47% plan to

have this capability in place in the next 12 months, which will provide a platform for generating truly valuable insight.

The next stage of the journey will not be straightforward, with participants in the study struggling to develop their smart meter analytics strategy in a number of areas. At a fundamental level, it is concerning that two thirds state that building the business case for analytics investment is a major challenge. This will surely become less of an issue as smart meter deployment reaches critical mass in the next three years. One sign of the market maturing came in 2017 with Dutch energy provider Eneco acquiring a stake in UK smart analytics provider Onzo.

Selecting and building a technology stack, and ensuring that it has the scalability to support the escalation in data volumes are both seen as major challenges by more than 40% of respondents. There is a large and highly fragmented technology vendor landscape targeting the smart meter opportunity, which can be highly challenging for utilities to negotiate. Cloud computing platforms can provide the compute and storage elasticity, but utilities will need to work closely with partners to address issues around security and performance.

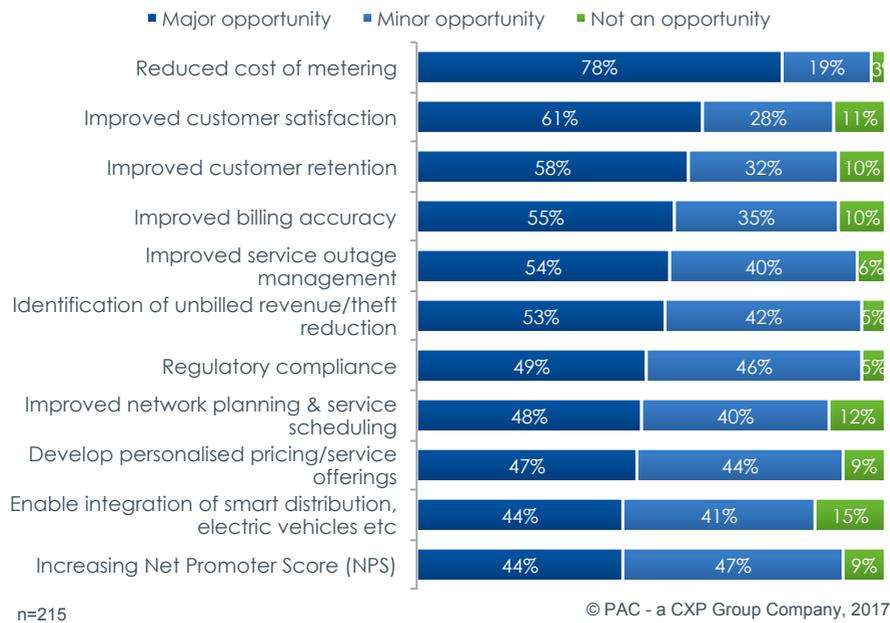


Fig. 14: To what extent are the following areas of smart metering an opportunity for your company to improve customer engagement?

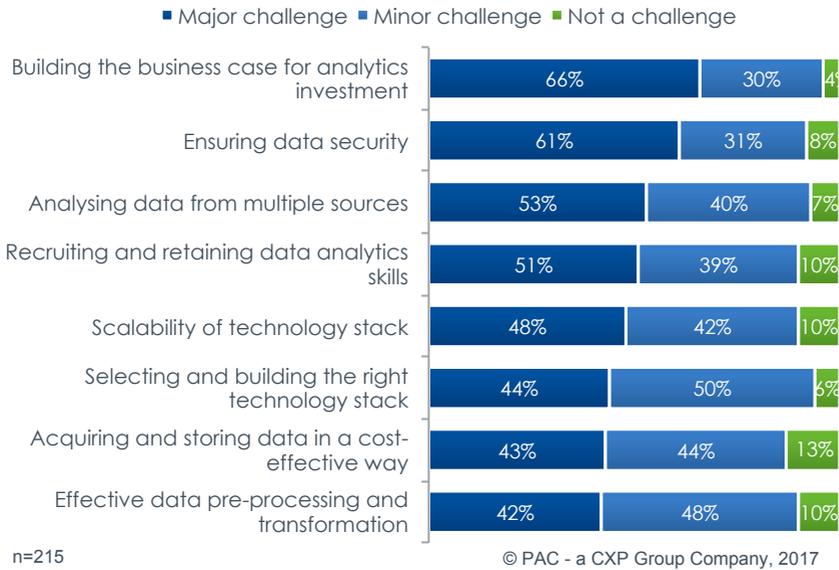


Fig. 15: What are the main challenges in developing your data analytics strategy for smart metering?

Two of the other major challenges that utilities highlighted around their smart meter data analytics strategy were ensuring data security (61%) and analysing data from multiple sources (53%). Both of these areas look set to be addressed in the next 12 months, as they top the list of priority areas of analytics investment.

Two thirds plan to invest in data security and a significant 71% are lining up investment in data security tools, highlighting the significance of this topic. More than half of participants also plan to procure tools relating to data visualisation, real-time analytics, database management and big data management. This suggests that now much of the foundations for smart metering has been laid, the European utilities market is about to enter a period of real focus of unlocking the value in the data.

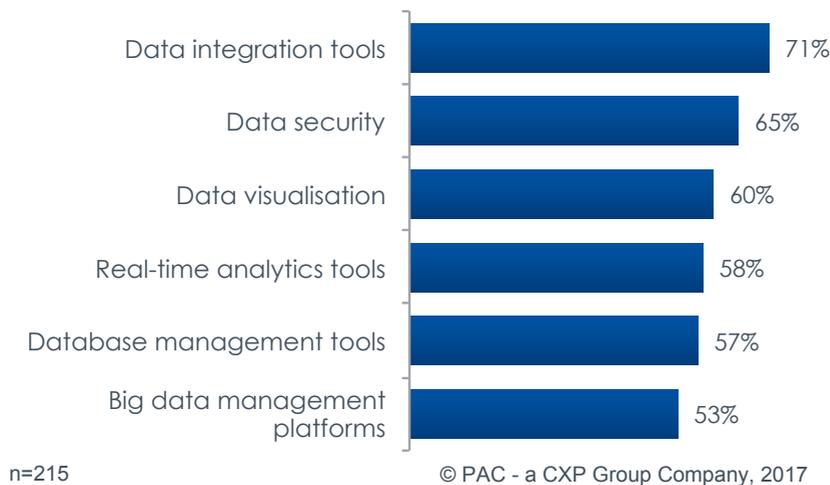


Fig. 16: In which of the following areas of smart meter analytics technology are you planning to invest in the next 12 months?

## CONCLUSIONS



The traditional utility retail model is under threat, and there is huge pressure to transform. The provision of core energy and water is a commodity market, and suppliers are making a major push to reposition themselves in a much more active role in the day-to-day lives of their customers.



Winning new business is the biggest challenge facing utilities today, and an evolving competitive landscape is not going to make this any easier. Incumbent utilities continue to account for the lion's share of the traditional supply market, but the study identifies an emerging threat from start-ups and new entrants from outside the sector.



The quality of customer service is seen by utilities as the main battleground for winning or losing new customers, as well as the main area where they can differentiate from the competition. This is not an area where this sector has historically excelled and change is needed. Technology will play a major role in overhauling and modernising processes, with the majority planning to invest in areas such as customer engagement management platforms, social media communication and robotics.



Connected home systems will become a critical area during the next three years, with 82% of participants in the study planning to invest in this area during the period. Almost half believe they will be crucial to differentiating their services from the competition, but they will have to work hard to make their offerings stand out in a market where global brands such as Google and Apple are already staking a claim. Partnerships and harnessing the innovation offered by start-ups will be crucial to success.



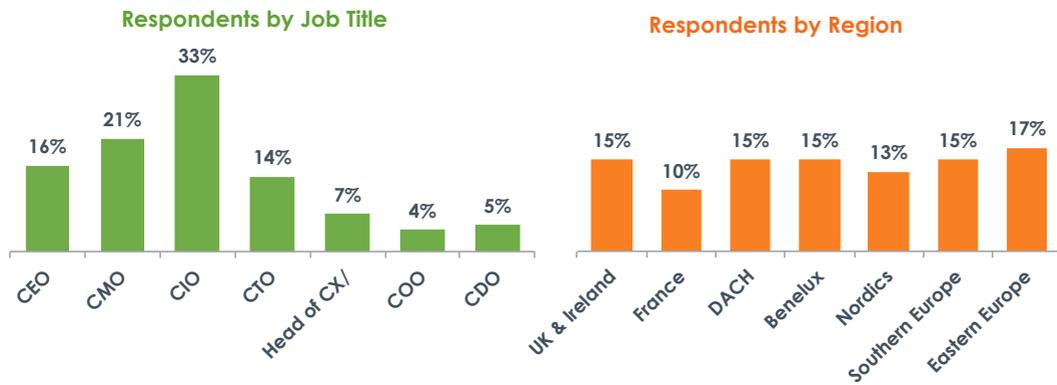
Despite being slow out of the blocks, more than half of Europe's utilities have invested in AI agents, with all but a small minority set to incorporate them into their operations over the next two years. Most see the role of AI as a way to improve service responsiveness, and it will increasingly become a standard part of customer engagement in the sector.



Europe's utilities are well on the way with their smart meter initiatives, but they have made limited progress to date in generating valuable insight from the data that is being generated from the devices. Many are planning to invest in this area during the next 12 months and it is vital that they put the platform in place as soon as possible in order to drive the benefits that they expect smart meters to deliver.

# METHODOLOGY

This study is based on interviews with senior business and IT decision-makers with responsibility for driving innovation strategies at 200 large European utility retail companies. The study was completed during the first half of 2017. Here is a more detailed breakdown of the participants in the study:



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CGI is a pioneer of technological innovation in the utilities sector with decades of experience in the electricity, gas and water sectors and nearly 6,000 members worldwide providing the solutions to transform the operations improve the customer experience and drive cost efficiencies to utilities clients across the globe.

We partner with 8 of the 10 largest utilities in Europe and North America and have more than 250 clients globally. We have long-term outsourcing relationships with clients such as ELEXON, UK Power Networks, Morrison Utility Services (UK); EDP (Portugal, Spain, Brazil and USA); EDF, Engie (France).

We designed and built 12 of the 18 central utility market systems in the world, leading the market in the provision of the technology that enables utility markets to operate effectively. In the UK, we designed, built and continue to operate the BSC Settlement systems for ELEXON; the data systems on behalf of the Data Communication Company (DCC) at the heart of Britain's smart metering implementation programme; and the central market system for Market Operator Services Ltd (MOSL) to support the operation of the non-household English water market.

CGI has been at the heart of every major change in Britain's energy and utility markets since privatisation. We have been at the forefront of enabling access to smart meter data through our Instant Energy and DCC Adapter solutions and implemented complex meter to cash and demand forecasting solutions for our energy retail clients.

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