

TRANSFORMING
RELATIONSHIPS:

THE UK SMART METER ROLLOUT

AN EXCLUSIVE RESEARCH REPORT

UtilityWeek[™]

In association with

WNS
Extending Your Enterprise

Smart meters play a critical role in the integration of new technologies and innovations across the power grid. While their physical rollout poses a huge challenge, it also presents a great opportunity for energy suppliers to take their relationship with their customers to the next level and move into an energy advisory role. Automated Metering Infrastructure (AMI) opens the doors for greater integration of new resources and new energy services for customers, including an analytics capability to reduce revenue leakage. It marks a paradigm shift in the way customers and service providers communicate, and presents a host of advantages and opportunities such as:

- Improve customer experiences multi-fold
- Innovation to bring value in every customer interaction
- Insights from smart meters and related technologies to create an omni-channel experience for customers
- Bringing energy innovation for public and private services, leveraging analytics, digitisation, the Internet of Things (IoT) and business intelligence

This study was aimed to ascertain how smart meters change the relationships between energy suppliers and customers, especially domestic customers. With the smart meter rollout deadline in 2020 fast approaching, Utility Week in collaboration with WNS embarked on a study to understand the readiness of various stakeholders (such as energy suppliers and distribution network operators) and the ensuing impact of the rollout.

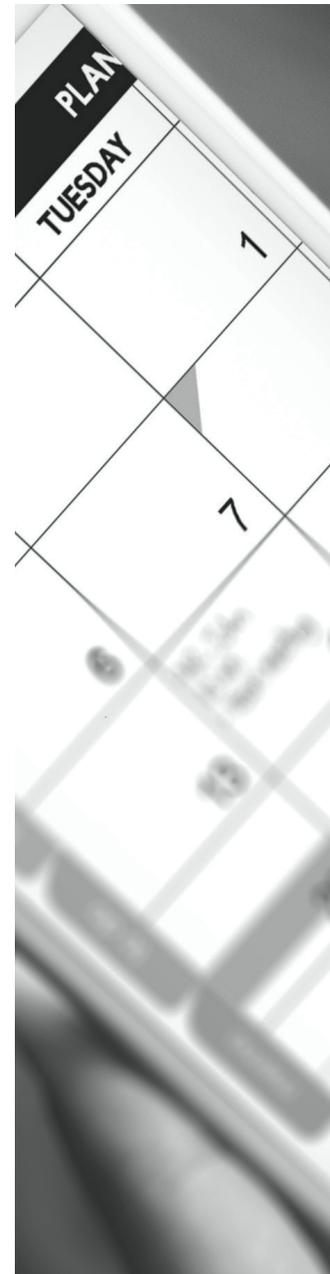
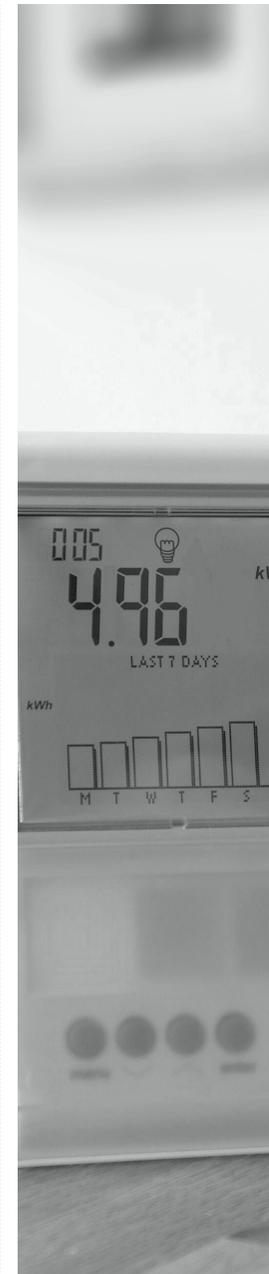


It is evident from the analysis that there is little confidence in achieving total smart meter coverage by 2020. There is, however, better enthusiasm about the mass smart meter rollout commencing this year, with the majority of businesses being ready for it. Most respondents did not believe that an on-time rollout of the Data Communications Company (DCC) system would be possible. DCC is a market hub that handles data interactions between smart meters and suppliers. Respondents cited this as the biggest risk factor to achieving full smart meter coverage.

Additionally, over 80 per cent of the stakeholders claim that necessary changes involving internal structures and systems (required for smart meters) have already been completed. The survey also touched upon two key elements regarding (1) the ability to address increased call outs and (2) the requirement for adequate field technicians to manage the smart meter rollout. Both form a part of our strategy to manage the smart meter rollout and operations.

The takeaways from the study are quite clear.

- Smart meter rollout is to be viewed as an opportunity that although well underway, has still a long way to go
- It will be difficult to meet the rollout deadlines
- While the rollout process has potential issues from a logistical perspective, it will ultimately be worth it
- Conversations with 'smart' customers will be more about energy efficiency, insights and new products and services, and less about billing or meter reading issues
- The true success of the rollout will hinge on customer engagement and the ability to understand and predict their needs





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It may have suffered repeated delays, but the mass smart meter rollout will finally commence in September.

The drive to make smart meters mandatory dates back to when Ed Miliband was secretary of state for energy in the last Labour government.

But the rollout has proved more problematic than envisaged in 2011 when Miliband's successor Chris Huhne announced that the exercise would commence in 2014.

The delays have largely stemmed from glitches with the DCC (Data Communications Company), the central communications system that is designed to handle data transfer between meters and suppliers, as well as dithering over meter specifications.

So far, approximately 3.6 million smart and advanced meters have been installed. But illustrating the scale of the challenge facing the industry, this figure represents a small fraction of the approximately 56m meters that will have to be installed in 30

homes and small businesses by 2020 in order to meet the government's goal of full coverage.

However now that rollout is due to begin in earnest, the focus is shifting to the impact that the smart meter revolution will have on the way the industry is organised.

As the industry gears up for the long awaited rollout 'go live' date, Utility Week in association with WNS, has conducted a wide-ranging survey of senior industry figures to gauge their expectations and concerns about the impact the rollout will have on their businesses.

They were probed on the industry's readiness for the smart meter rollout. But the survey also looks beyond the rollout itself to examine how smart meters are changing the way energy companies, and

METHODOLOGY

The 'Transforming Relationships' study is based on a survey of key industry decision-makers, carried out by Utility Week earlier this year.

The first step was an online survey, with follow up telephone questions. The survey findings were based on input from 39 individuals working in a range of job roles from energy supply companies as well as energy distribution network operators. All of those surveyed were managers or in more senior positions. 31 per cent were directors or board members and 25 per cent were chief officers or heads of department.

energy networks, organise themselves and interact with customers, as well as a range of other factors.

Overall the survey shows confidence is low that the rollout programme will both begin on time this year and be completed for the 2020 deadline

The vast majority of businesses claim though, that they individually are ready for the rollout. Two thirds (63 per cent) say that they have started rollout and 83 per cent say they are ready to do so.

The 'go live' date for the DCC is perceived by the sector overall as the biggest factor jeopardising the timely delivery of the rollout. For networks the chief risk factor was the nature of customers' property.

As a result of these concerns, the sector backs an extension of the deadline for smart meter rollout. Three quarters (75 per cent) of respondents to the survey agreed that the deadline should be extended beyond 2020 with just 22 per cent opposed. An even higher proportion (78 per cent) agreed that the smart meter target rollout target should be cut to 80 per cent coverage by 2020 allowing more time for installations in hard to reach properties.

The survey also shows that the rollout is already having an impact on the way energy companies are organised. Eighty per cent of businesses claim that they have already implemented internal changes designed to maximise the benefits of smart meter rollout. The biggest structural changes have been or are expected to be made in IT, CRM and customer contact.

Two thirds of networks believe that call outs will rise following smart

meter rollout. Nearly half (46 per cent) confessed that they do not know whether they have enough qualified staff to handle this anticipated surge.

The majority of suppliers do not expect a rise in complaints. However, 41 per cent admit they do not whether they can access enough qualified meter installers to meet their smart meter rollout commitments.

Suppliers expect a 'considerable' step-change in their relationship with domestic customers following the rollout. Across the sector, respondents expect less impact on their dealings vis-à-vis businesses.

But the sector expects that customers will be receptive to the smart meter rollout and willing to change their behaviour, at least in the short term. Nearly two thirds report that they have either found customers receptive to smart meters or expect them to be so. A similar proportion expects customers to change their behaviour after receiving smart meters. Around one-fifth (21 per cent) of energy companies have yet to kick-start any customer education programmes.

Access to more customer data and more transparent billing are perceived as most significant business opportunities thrown up by the smart meter rollout. Networks see customer data as particularly useful for analysing usage and monitoring network events.

However, while the energy companies surveyed are confident that they will be able to realise the benefits of smart meter rollout, they are less bullish about reaping a return on investment from the exercise, which they anticipate will take an average of 10.9 years.



Utility Week's survey of the industry shows that confidence remains low about the successful delivery of the smart meter rollout, which officially launched this month.

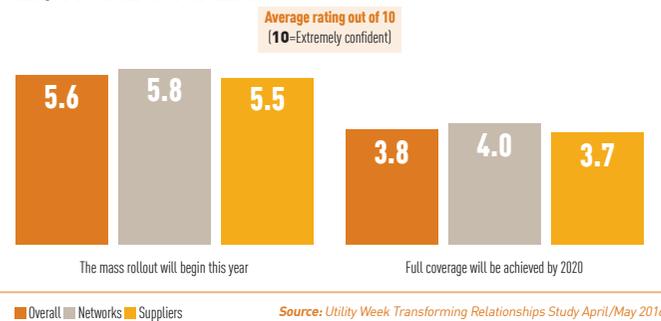
Under the programme, suppliers are under a regulatory requirement to make all reasonable efforts to ensure that every customer has a smart meter installed.

When asked how on a scale of one to ten how confident they were that the mass rollout would begin this year, in which ten equates to 'extremely', the average response to the survey was 5.6. Breaking this overall figure down, networks were marginally more bullish (5.8) than suppliers (5.5).

The even more worrying finding relates to whether full smart meter coverage will be achieved by 2020. On the same one to ten scale, confidence is much lower (3.8) that the target can be achieved with networks again more bullish (4.0) than suppliers (3.7).

The sector is in agreement; low levels of confidence in all the phases of the rollout

Q: How would you rate your confidence that the smart meter rollout will begin and/or be delivered on time?



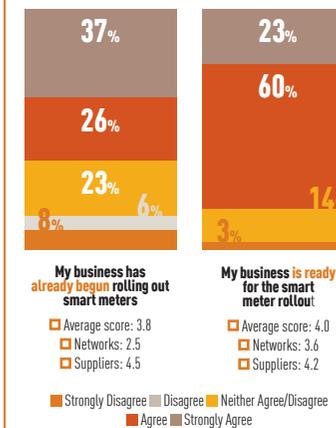
However, while firms lack confidence about the prospects for delivering the overall programme, they are more positive when quizzed on their own state of preparedness for the rollout.

Asked whether their own businesses had begun rolling out smart meters, 63 per cent said they had, with only 14 per cent responding that they had not. A higher proportion (83 per cent) were ready to begin smart meter rollout, according to the survey.

Figure 2

However, the vast majority of businesses claim they are ready for the rollout

Q: To what extent do you agree or disagree with each of the following statements about the smart meter rollout?



However, while businesses might be confident about their own ability to commence the rollout, they are more nervous about the external factors that will impact on the programme.

The key external factors impacting on the timely delivery of the 2020 rollout were the extent of customer buy-in and the ability of the DCC to hit its 'go-live' date.

Respondents were asked to rate out of ten the risks posed by a series of factors on the rollout's timely delivery, with 10 extremely high risk and 1 no risk at all.

KEY FINDINGS

5.6: Sector's out of ten confidence level that the mass rollout will begin this year

3.8: Sector's out of ten confidence level out of ten that full smart meter coverage will be achieved by 2020

63%: Proportion of businesses that have begun rolling out smart meters

83%: Proportion of survey respondents that are ready commence mass smart meter roll out

DCC 'go live date':

Perceived as most significant overall risk factor to timely delivery of smart meter roll out though the biggest risk factor identified by network companies was the challenge of securing customer cooperation

75%: Proportion of survey respondents backing extension of deadline for smart meter rollout beyond 2020

78%: Proportion of survey respondents backing a revision of the deadline to 80% coverage by 2020

READINESS FOR ROLLOUT

1 2 3 4 5 6

Overall, respondents rated DCC 'go live' as their biggest concern with an average score of 6.6, which was even higher amongst suppliers (6.8). Networks rated securing customer co-operation (6.8) an even bigger risk factor than the DCC 'go-live' date (6.3). Suppliers were less worried about securing customer buy-in (6.1) and the nature of properties. Suppliers deemed the least significant risk factors to be securing adequate addressing data and adopting foundation meters.

Generally, with the exception of the DCC 'go-live' date, networks are more concerned about the risks surrounding the rollout than their counterparts in the supplier companies.

The survey showed that networks were far more worried about suppliers' ability to contact their customers than these companies are themselves. In addition, networks were more concerned than suppliers about the communicate between market participants.

WNS VIEWPOINT...

Customer engagement as a perceived major risk to smart metering success – how should this be mitigated?

The 2020 deadline envisages the installation of more than 100,000 new smart meters every week. This is one of the largest logistic exercises ever undertaken in the utility sector. The deployment of smart meters is likely to generate large volumes of data. This means energy and utility companies can leverage this data to get better insights which can help them improve customer relationships even further and drive business benefits.

The right customer engagement is pivotal to the success of this initiative. It is important that energy companies take their customers forward with them as part of the deployment and post-deployment programmes. This includes:

- Communicating a compelling consumer value proposition in an honest and transparent manner. Consumers need to feel the solution has been designed for their benefit
- Generating awareness through targeted campaigns on how they will receive, use and benefit from smart meters
- Educating customers on how a smart meter will affect their bill, how it will work and

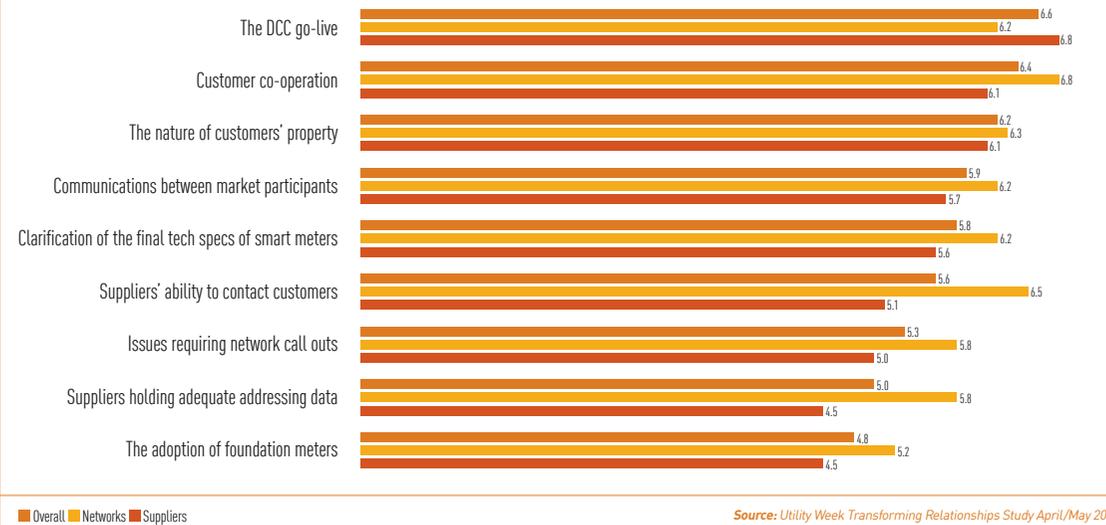
the costs to install and maintain them. Consumers must be shown the relation between responsible consumption behaviour and savings, and how smart meters can help them in their efforts. This will help them understand the true value of smart meters in their daily lives

- Making customers aware of how they are empowered in controlling their energy usage
- Addressing their concerns around data privacy. Customers need reasons to trust their energy suppliers. They need transparent agreements on consumption data to analyse, compare and benchmark against other customers
- Giving due consideration to customers' availability in scheduling installation and maintenance visits

To manage positive and credible customer relationships, utility providers have to augment their existing customer service channels in a manner that adds value to the customer. This will enable them to offer additional services via multiple channels.

Whilst, timely delivery will largely depend on the DCC and customer buy-in, the networks highlight other risks

Q: How would you rate the risk of each of the following impacting on the timely delivery of the smart meter rollout?



Source: Utility Week Transforming Relationships Study April/May 2016

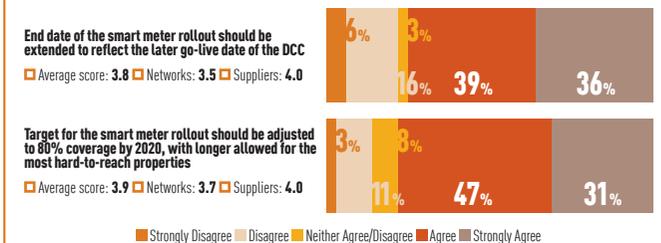
The widespread concerns about different aspects of the smart meter rollout help to explain why the sector overall is keen to see the 2020 deadline extended.

When asked whether the deadline for smart meter rollout should be extended beyond 2020, 75 per cent agreed that it should with just 22 per cent opposed.

The survey then asked whether the smart meter rollout should be adjusted to 80 per cent coverage by 2020 with more time allowed for the hardest to reach properties, such as flats and bedsits. Nearly eight in ten of respondents (78 per cent) agreed that the smart meter target rollout target should be relaxed.

Consequently, the sector would like to see extended deadlines and adjusted targets

Q: To what extent do you agree or disagree with each of the following statements?



Source: Utility Week Transforming Relationships Study April/May 2016

The survey's findings on the industry's state of readiness echo those voiced by a battery of suppliers over recent months.

In a recent submission to the House of Commons energy and climate change select committee, Eon estimated that the industry will need 'at least' five years from the 'go live' of full DCC services to successfully achieve a complete rollout of smart meters to its domestic and businesses customers' homes.

The delay of the DCC 'go live' date to the middle of 2016 means the sector only has a maximum of four years to deliver the programme, Eon said, warning that compressing the rollout into a much shorter timescale would increase costs with an 'adverse impact' on customers' experience.

Lord Bourne, former Parliamentary Under Secretary of State at now dismantled Decc, recently told the select committee that the government remained 'firm' on the 2020 deadline. He added that with the volume of installations due to ramp up during the course of this year, the rollout was 'on course.'

Paul Abreu, smart meter programme business lead at the Energy Networks Association, echoed the industry support for a relaxation of the 2020 deadline, revealed by the survey.

"The challenge is getting harder and



harder with every week. The pressure is building and at some point something is going to have to give," he said, adding that the compression of the timetable will impose greater pressure on resources, particularly in 2018/19 when it is reckoned that the rate of installations will peak.

The added complication, he said, is that the hardest to access properties are likely to be disproportionately concentrated in the final phases of the programme.

"Moving the end date would help everyone to spread the workload a bit and have a better chance of getting the resources needed to get these installations completed. Anything that makes it slightly easier to achieve would tend to lessen pressure on network operators,"

Consultant Sue Furnell agreed: "Just continually compressing the start date and not correspondingly changing the end date will cause a bottleneck," she said.

However, Steve Jennings, utilities leader for PwC, described the 2020 deadline as "achievable", adding that the existence of the deadline was important for maintaining momentum in the programme.

While acknowledging the scale of nerves across the industry about the feasibility of the 2020 deadline, National Skills Academy for Power head Nicki Hussain said the pace of the rollout will increase as the industry gets to grips with the exercise.

"A significant delay to the deadline may mean we are back in the same situation when we get closer to the new deadline. The longer you delay, the more people take the foot off the gas. A lot of companies would be very happy with a delay but I'm not sure it will help."

The impending 2020 deadline had already encouraged many companies, such as British Gas, to ramp up their training efforts over the past few months, Hussain added.

COST OF DELAY

The DCC 'go live' date was rated by respondents to Utility Week's survey as the biggest risk factor threatening the timely delivery by 2020 of the smart meter rollout.

The postponement of the original commencement mass rollout date means that suppliers have been deploying significantly higher volumes of the less functional SMETS 1 meters than originally envisaged.

As well as being less functional than the more modern SMETS 2 meters, companies' first generation devices are not able to communicate with those of other suppliers. This creates barriers to customers switching energy suppliers.

Any further delay to the roll out of DCC 'go live' means there will be more of the relatively low-tech SMETS 1 meters in circulation.

Andrew Warren, honorary president of the British Energy Efficiency Association, said one of the limitations of the SMETS 1 meters currently being deployed is that they are not interoperable with smart phones.

But the ENA's Paul Abreu says that suppliers have had no choice but to roll out early versions of the meters due to the pressure on them to begin the smart installation programme.

"We would prefer the smart version of the smart meter, the fully functional, smart capable asset that will become available later on. We were hoping they would be available now but they've gone through some technical challenges.

"There's not the full network functionality in those meters that we would like, so having a large number of SMETS 1s is not good news for network."

SSE warned that the increased rollout of SMETS 1 resulting from delays to the DCC 'go live' date could increase the total cost of the smart meter programme in the longer-term.

“ Moving the end date would help everyone to spread the workload a bit and have a better chance of getting the resources needed to get these installations completed ”



The business areas within energy companies that have seen the greatest impact as a result of the smart meter rollout are those dealing with IT, CRM and customer contact, according to the survey.

The biggest shake-ups have been seen with respect to IT systems, where 44 per cent of respondents claim to have already made changes to accommodate the rollout. Another 47 per cent said they will do so in the future and just 9 per cent

reported that no change is required.

The biggest anticipated change though is due to take place in CRM. While only 29 per cent reported that they had changed their CRM systems in order to facilitate the smart meter rollout, 53 per cent of respondents said they will be doing so.

Energy companies clearly see there is also still work to do on making their customer contact operations smart meter-ready. Exactly one half reported that they will be making changes to their customer operations, including call centres, with 35 per cent reporting they had already done so.

Respondents observed less need to make changes to their websites, social media and billing systems. The area

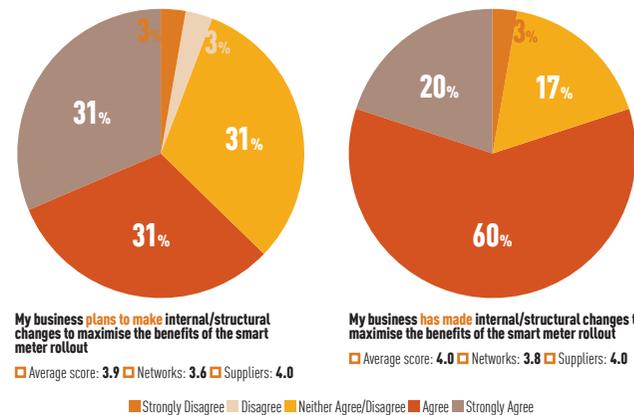
A programme as wide-ranging as the smart meter rollout is bound to have widespread ramifications on how energy companies organise themselves. One respondent to Utility Week's survey said the better and more accurate information delivered by smart meters will have an impact on "nearly every aspect" of their business, including trading, billing and customer support.

According to the survey, the vast majority (80 per cent) of energy businesses claim that they have already made structural or internal changes in order to maximise the benefits of the smart meter rollout. Suppliers claim to be more prepared than their network counterparts.

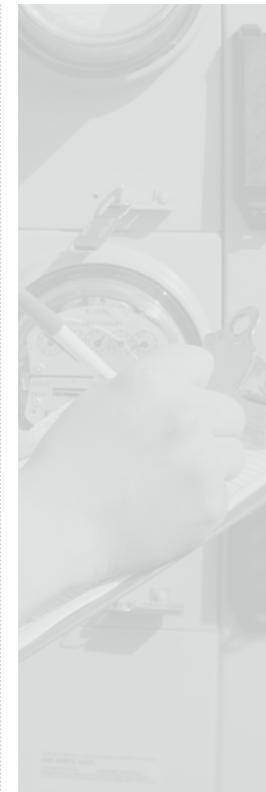
In addition, just under two thirds (62 per cent) of firms plan to change the way they run their business to benefit from the rollout.

The state of readiness is reinforced by 80% claiming that changes have already been implemented

Figure 5



Source: Utility Week Transforming Relationships Study April/May 2016



perceived to require the least change was billing where nearly one third (29 per cent) of firms said no change was required in the light of the smart meter rollout programme. However, even in this area, a higher proportion reported that they had already (35 per cent) or were planning (36 per cent) to make changes.

Just over one third (35

KEY FINDINGS

80%: Proportion of businesses claiming to have implemented internal changes to maximise benefits of smart meter roll out

62%: Proportion of businesses planning to make internal changes to maximise benefits of smart meter roll out

58%: Proportion of networks that predict callout volumes will rise following smart meter rollout

27%: Proportion of suppliers that have access to enough installers to meet demand for smart meter rollout

per cent) reported that they had changed their online presence to reflect the smart meter rollout with 47 per cent saying they planned to do so. A slightly higher proportion (38 per cent) said they were revamping their social media presence to reflect the smart meter rollout, although another 24 per cent saw no need to do so.

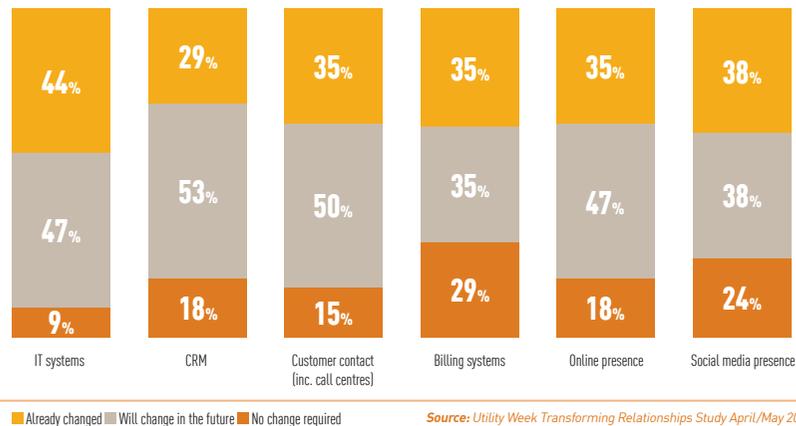
And while a reduction in call outs is one of the predicted benefits of the smart meter roll out, Utility Week's survey shows that a majority (58 per cent) of network respondents believe that the opposite will be the case. Just under half

STRUCTURAL & OPERATIONAL CHANGES

Figure 6

These changes have and will be mainly centred on IT, CRM and customer touchpoints

Q: Which **operational areas** has your business changed, or will change, in light of the smart meter rollout?



(46 per cent) of respondents to the survey were confident that they had enough qualified staff to handle increased callouts resulting from the smart meter rollout in a timely manner (see Callouts panel)

Nearly half (49 per cent) of firms surveyed said the smart rollout is a significant part of their cost to serve with barely one in six (17 per cent) disagreeing. Concerns over cost to serve were more pronounced amongst suppliers than amongst networks.

However, firms believe that the cost hit from the rollout will tail off. While 40 per cent of respondents said they expected costs to rise over the next five years due to the introduction of the smart meter rollout, another 26 per cent said they would not.

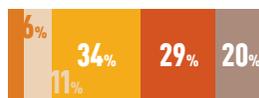
Figure 7

Suppliers' costs to serve are more significant now than over the next 5 years

Q: To what extent do you agree or disagree with each of the following statements about the smart meter rollout?

The smart rollout is a significant part of my business's cost to serve

Average score: **3.5**
 Networks: **3.0**
 Suppliers: **3.7**



I expect my business' cost to serve to increase in the next five years due to the smart meter rollout

Average score: **3.2**
 Networks: **3.3**
 Suppliers: **3.2**



Legend: Strongly Disagree, Disagree, Neither Agree/Disagree, Agree, Strongly Agree

Source: Utility Week Transforming Relationships Study April/May 2016

COMPLAINTS AND CALL OUTS

The spread of smart meters should lead to fewer complaints and hence a reduction in call outs. The theory is that because customers are able to see exactly how much energy they have used, there will be less room for disputes. As well as ending the need for meter readers, energy companies hope to be able to reduce the number of call centre staff that they employ by up to 30 per cent.

However, Utility Week's survey shows that majority of network respondents believe that call outs will rise rather than fall – though it should be noted that since no timescale was placed against this question, respondents may have expressed their expectations about the immediate, rather than long term impact of rollout on call volumes.

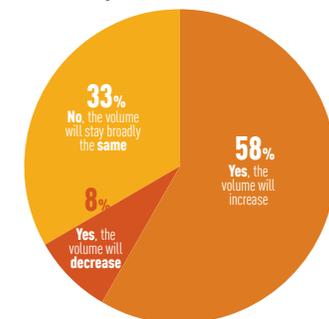
As a result of the smart meter rollout, 58 per cent said they expected the number of call outs to increase, with 33 per cent predicting no change and just 8 per cent anticipating a reduction. Suppliers were less worried than networks about the likely impact of the rollout on call out volumes. The biggest proportion (40 per cent) of those surveyed predicted that call out volumes would fall with the remaining 60 per cent of respondents evenly divided between those expecting no change or an increase.

Just under half of respondents (46 per cent) were confident that they had enough qualified staff to handle the increased callouts they expected to result from the smart meter rollout in a timely manner. Exactly the same proportion said they did not know whether they had enough staff with 8 per cent responding that they did not.

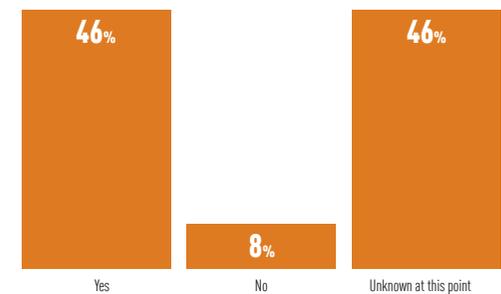
Figure 8

Many networks believe that callouts will rise, however over half admit that there maybe a staff shortfall

Q: As a result of the smart meter rollout, will the **volume of callouts** change at all? (Net)



Q: Do you have enough **qualified staff** to handle increased callouts arising from the smart meter rollout in a timely manner? (Net.)



Source: Utility Week Transforming Relationships Study April/May 2016

“Knowing what the likely defect rate is going to be is key because having a lot of people standing around waiting for work is not a good use of money.

Abreu said that the survey's findings on call outs tallied with the ENA membership's experience.

The distribution network operators' funding agreements with Ofgem assume that two per cent of all smart meter installations will result in a call out. However, Abreu said the call out rate had been around three to six per cent during the rollout's early phases and that pressure on networks is likely to increase as the rollout speeds up and networks struggle to deal with a higher than assumed volume of call outs within the envelope of existing resources.

“Knowing what the likely defect rate is going to be is key because having a lot of people standing around waiting for work is not a good use of money.”

However, the increase in call out volumes should be a short term phenomenon, according to one respondent, noting that while “some issues...drive increased call volumes in the short-term...more accurate billing should diminish calls in the long run.”

Another agreed, noting that an initial increase in complaints was to be expected as a consequence of the installation process, which would diminish over time as customers became more engaged with the new technology.

Furnell said call outs could rise within the first six months of the rollout before then dropping off. “Any company worth its salt should see what's driving that (increase) and put something in place. I don't think that ought to be a long-term problem between now and 2020. It should be a teething problem you can learn from.”

Once the rollout has kicked off in earnest, she said it would be possible for companies to identify the key factors driving call outs, which could then be addressed via their online customer engagement platforms.

Customer education would play a key role in ensuring that staff were called out for the right reasons, said Abreu. “If you turn up and it's not an emergency, it's quite disappointing to have used up that experienced resource.”

SOURCING INSTALLERS

Energy companies' nervousness about how they will find enough qualified installers is one of the more worrying findings of Utility Week's rollout survey.

Suppliers clearly lack confidence about being able to source sufficient installers to carry out the smart metre installation programme itself.

When asked whether they have access to enough qualified meter installers to meet the smart meter rollout commitments, barely one quarter (27 per cent) said they did. This proportion was lower than those who said they either did not have access to sufficient qualified installers (32 per cent) or did not know. (Chart on slide 17)

The National Skills Academy for Power's Nicki Hussain acknowledged that the industry currently lacks sufficient trained workers for the installation programme.

“Nobody says there's enough people ready and waiting,” she says, adding that the same picture is true of training capacity.

In a bid to remedy this shortfall, Decc has commissioned the academy to scope the skills challenges facing the smart meter programme.

Hussain says the academy has been tasked with finding out how much training capacity each employer possesses. If they have any spare capacity, the academy is establishing whether companies are willing or able to sell or share it with other firms. It is examining capacity for training both smart meter apprentices and equipping existing staff with new skills.

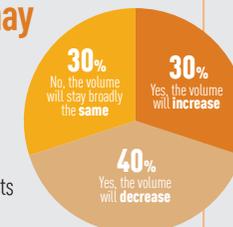
The good news from the work carried out so far, she said, is that the picture does not look as “scary as we thought initially”.

The ENA's Abreu stressed the importance of avoiding training a glut of installers. “We don't want to recruit lots of people who will be unemployed in four or five years time,” he said, adding that training installers is a long-winded and expensive process.

Hussain acknowledged that this one of the challenges when encouraging potential installers to sign up. “It doesn't sound attractive if you are going to be laid off in four years.”

Figure 9

Whilst the majority of suppliers do not expect a rise in complaints, they may not have access to enough installers



Q: As a result of the smart meter rollout, will the volume of complaints change at all? (Supp.)

Q: Do you have access to enough qualified meter installers to meet your commitments in the smart meter rollout? (Supp.)



Source: Utility Week Transforming Relationships Study April/May 2016

To overcome these concerns, she said that the Trailblazer apprenticeship for smart meter installers contains modules that will be relevant once the rollout has ended. These include training skills such as cutting-out fuses and cabling which will be transferable to other parts of the industry.

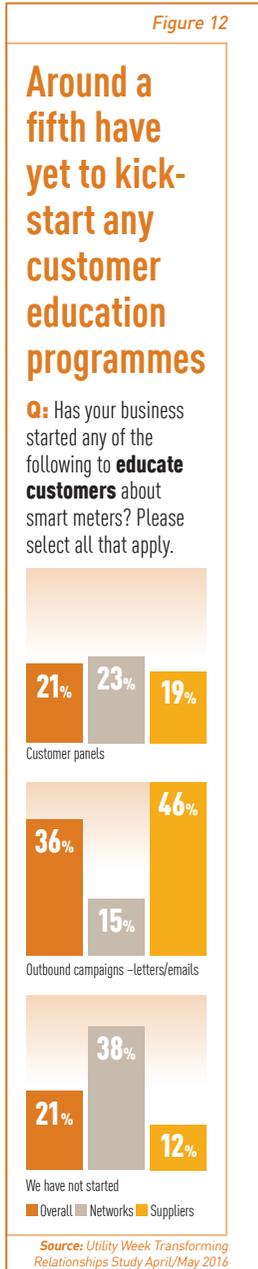
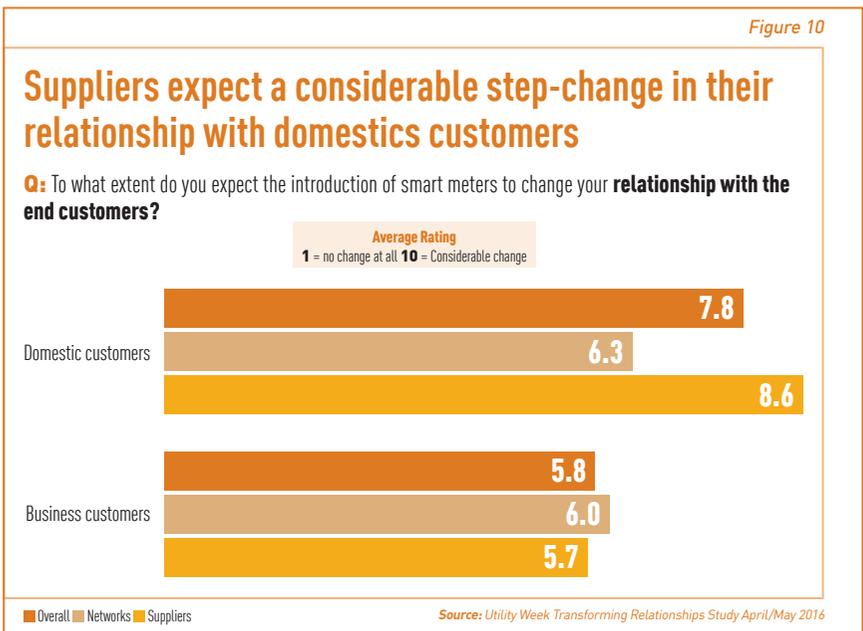
In addition, she said the modules would also embrace customer service skills, which will be important for helping to facilitate the changes in consumer behaviour that are key to the smart meter programme. Hussain said that such ‘soft’ skills would also boost trainees' ability to compete in the wider job market.

As well as taking on apprentices, Abreu said companies can make more flexible use of their existing resources to cope with peaks in demand for rollout activity by training staff who have related experience.



By contrast the survey showed less expectation amongst that relationships with business customers will be disrupted. However, around a fifth (21 per cent) of energy businesses have yet to begin any customer education programmes. The proportion of suppliers yet to commence customer education was lower (12 per cent) than that for networks (38 per cent). Reflecting this much greater level of customer education, nearly half (46 per cent) of suppliers had launched outbound campaigns, using letters or emails, compared to only 15 per cent of networks. Networks were though more likely to have used customer panels to school customers, with 23 per cent having done so, compared to the 19 per cent of suppliers that had gone down this route.

The smart meter rollout will undoubtedly change the relationship between energy customers and the utilities that provide these services. The surveyed companies expected that the introduction of smart meters would have a bigger impact on relationships with their domestic as opposed to their business customers. Suppliers in particular expect a 'considerable' step-change in their relationships with domestic customers following the rollout of smart meters. When asked the extent of the impact that the rollout programme will have on relationships with their customers, the average for suppliers was 8.6 on a sliding scale of one to ten, where 10 equalled 'considerable'.



KEY FINDINGS

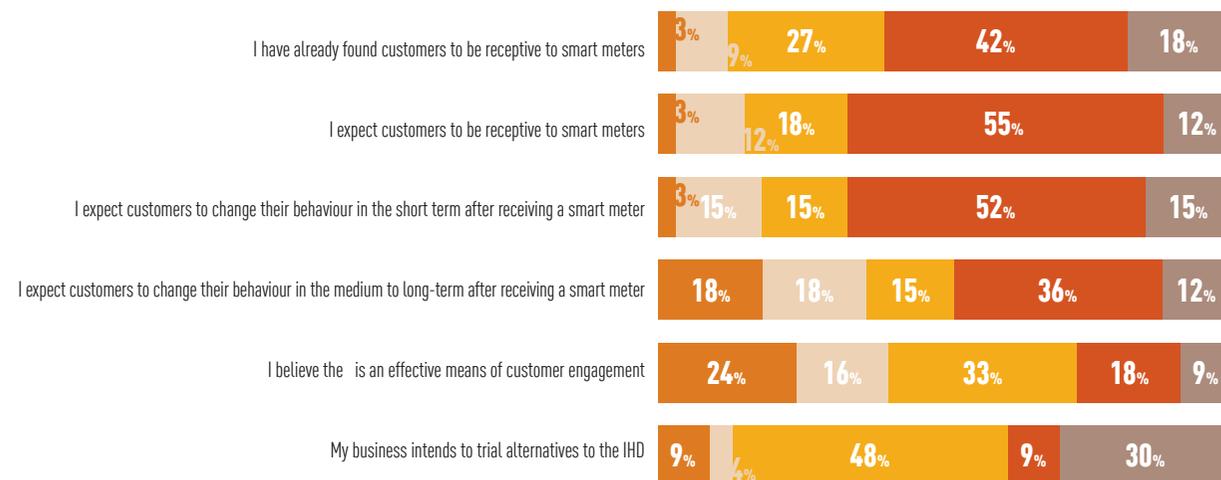
- 21%:** Proportion of energy businesses yet to begin a customer education programmes on the mass smart meter roll out
- 60%:** Proportion of respondents reporting that customers had been receptive to smart meters
- 67%:** Proportion of survey respondents predicting that customers will be receptive to smart meters
- 67%:** Proportion of respondents expecting short-term behaviour change by customers after receiving a smart meter
- 27%:** Proportion that expect IHDs to provide an effective means of customer engagement

Confidence is high though that customers will embrace smart meters. Nearly two thirds (60 per cent) said customers were receptive to the devices, with just 12 per cent reporting the opposite. An even higher proportion (67 per cent) said that they expected customers to become more receptive to the meters in the future. Exactly the same proportion

Sector is expecting receptive customers who will change their behaviour, at least in the short term

Figure 13

Q: To what extent do you agree or disagree with each of the following statements about the smart meter rollout



Legend: Strongly Disagree, Disagree, Neither Agree/Disagree, Agree, Strongly Agree

Source: Utility Week Transforming Relationships Study April/May 2016

said they expected customers' short-term behaviour to change after receiving a smart meter. However confidence about longer term behaviour change was less marked. Just under half (48 per cent) reported that they anticipated medium to long term behaviour changes once customers had received a smart meter.

The survey also pointed to low levels of confidence in existing in-home display (IHD) interfaces, typical of the first generation SMETS 1 meters.

Only 27 per cent of respondents said that they expected IHDs to provide an effective means of customer engagement.

“ The majority of consumers will find IHDs “useless”, adding that the mobiles, tablets and the internet would enable information to be delivered in “richer and more engaging” ways ”

One respondent described IHDs as “too limited to be engaging for the long term” and only likely to offer short-term benefits. He added that “more sophisticated engagement strategies are required.”

Another commented that the majority of consumers will find IHD's “useless”, adding that the mobiles, tablets and the internet would enable information to be delivered in “richer and more engaging” ways.

One respondent, when asked to identify how energy companies could overcome barriers to customer engagement, described the rollout as “an opportunity to drive more digital

WNS VIEWPOINT...

Changing modes of customer engagement – both during, and post rollout

Digital technology and social media platforms have redefined the customer engagement model. Customers now expect quick resolutions and improved customer experience. They also have the choice to influence other customers. In such a context, it's imperative for companies to create a positive experience, both during and after the rollout of smart meters. A comprehensive and consistent communications plan will need to be deployed as an integral part of the smart meter rollout programme. This will include specific customer engagement agenda for pre-rollout, rollout and post-rollout stages.

During the rollout stage, customer engagement will be predominantly driven by dissemination of relevant information covering smart meter replacement appointments, overall schedule, status updates, education, provision of tariff options and an overview of potential benefits.

Leveraging the momentum created by the pre-rollout and rollout engagement, the post-rollout handshake will need to shift to more of an energy advisory and consultant role. By leveraging analytics, companies can get better insights and target the right group of customers initially. IoT coupled with analytics can enable companies to provide smart solutions and help customers manage their energy and water requirements more efficiently. Companies will be able to suggest tools (such as IHDs to provide near real-time feedback) and empower customers to analyse their consumption patterns and maximise savings.

As IoT and big data analytics paves the way for multiple devices to be connected, companies have an opportunity to explore more innovations that can take customer experience to a new level. Smart meters give companies a valuable opportunity to provide value-added services and take on the role of energy consultants.

customer interaction because ‘smart’ generates data that can be turned into online content.”

But engaging customers in the smart meter rollout will be tough, particularly if they have to book time off work to let the installers in, unless they see the benefits of the devices.

Based on an estimate that installations are taking an average two to three hours to carry out, one commentator said: “This is a big commitment for customers who will question the value of reduced consumption against time off work.”

Another questioned whether the significant number of customers, who pay several hundred pounds per annum because they cannot be bothered to spend five minutes choosing a new tariff, will book a day off work to have a smart meter installed.

“Taking time off work to have a meter replacement is a lot of effort for relatively small customer benefits.”

The ENA’s Abreu said he was not surprised by customers’ apparent receptiveness to smart meters, predicting that the ‘vast majority’ of customers would see the benefits of smart meters.

“ **The high levels of customer interest in smart meters also reflects our own insight. Eight in ten of those with a smart meter would recommend them to others**

“Once consumers understand what smart metering offers, most will want one,” he said.

Furnell said that now initial concerns about privacy had been tackled, there was little to prevent customers from being receptive to smart meter concept.

One benefit of the delayed ‘go live’ date for the smart meter rollout was that it had allowed time for such concerns to be dispelled. In addition, she said, advertising for more sophisticated connected home products like British Gas’ Hive meant customers were more aware of smart home technology.

Claire Maughan, director of policy and communications at Smart Energy GB, said the ability to monitor consumption by using smart meters had already led to changes in customer behaviour.

She pointed to the Smart Energy Outlook survey, conducted by her organisation on a twice per year basis, which showed that 80 per cent of smart meter users have taken at least one step

to cut down their energy use with more than half already reaping the rewards in their bills.

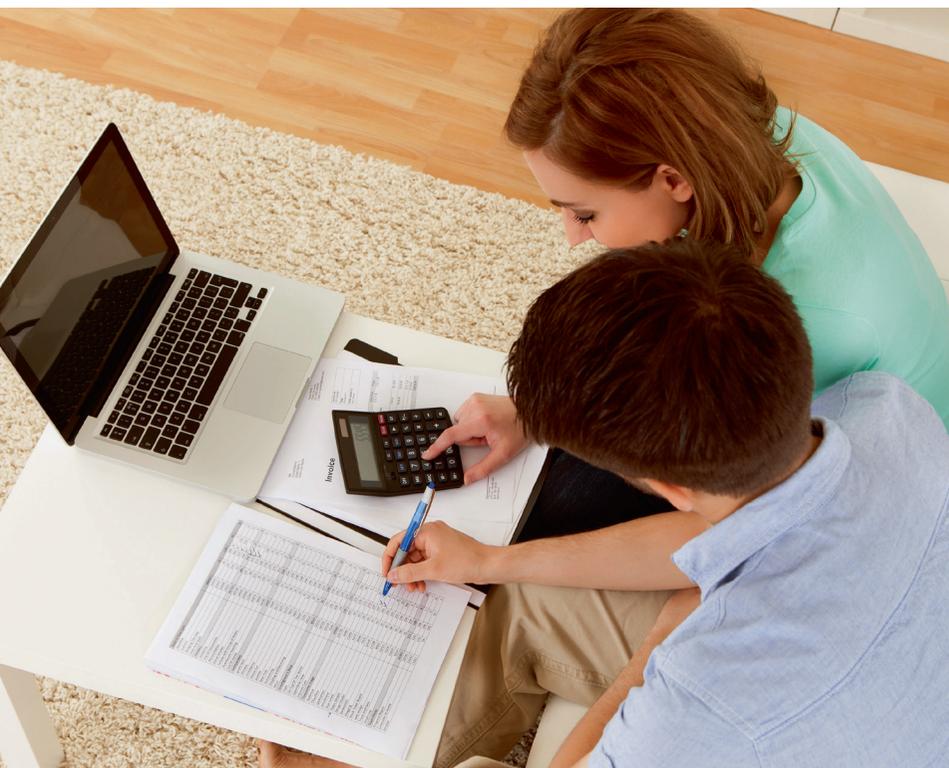
“We have spoken to people who have saved as much as 30 per cent through increased efficiency alone. So the suppliers spoken to for this report have good reason to feel optimistic about the potential of smart meters to inspire significant behaviour change.”

“The high levels of customer interest in smart meters reported by suppliers also reflects our own insight. Eight in ten of those with a smart meter would recommend them to others. They like feeling more in control of their energy use, they are more conscious of what they are spending and are less worried about bills.

Abreu said successful take-up of smart meters would depend on developing this awareness of their benefits. “It’s important that customers get all the right messages. They need to want a smart meter. If you are asked to install a smart meter there is a much greater chance that you will be allowed in when you turn up. If you are asking to install a smart meter, the customer won’t always remember to be in at the right time.”

Ensuring those customers who had a smart meter installed were satisfied would be crucial to the rollout’s wider success, said Abreu.

“The challenge for the industry is to ensure that it works and for the customer experience in the installation process to be a positive one. If you start with a negative experience, it doesn’t bode well.”





customers with proactive energy guidance and recommendations for new and potentially money-saving behaviours and devices.

The BEEF's Warren said deploying a skilled installer into every home would provide opportunities to spread information about more energy efficient boilers and insulation. *(See fig 14)*

Suppliers believe they are better prepared than networks to exploit the explosion in data flows that will follow the mass rollout of smart meters.

Networks appear though to have a clearer idea about how they will use the data generated by the smart meters, judging by the results of the survey. Respondents from such companies cited usage analysis as most valuable use of the



KEY FINDINGS

Transparent billing: Most significant opportunity for suppliers arising from smart meter roll out

77%: Proportion of respondents confident about their ability to realise the benefits of smart meter rollout though

10.9 years: Predicted period it will take companies to achieve return on investment from the smart meter rollout

33%: Proportion of networks that never anticipate making ROI on smart meter rollout

The smart meter rollout presents energy companies with a host of opportunities.

Of these, securing greater access to customer data is viewed as the most significant by the respondents to Utility Week's survey.

Respondents were asked to rate on a scale, where 10 was 'extremely', the significance of opportunities arising from the smart meter rollout.

For networks, access to more customer data was the most significant in the list of six opportunities identified by Utility Week's researchers.

For suppliers by contrast, transparent billing was rated as the most significant opportunity arising from the rollout (8.9) with networks rating it as far less important. (5.9).

One respondent commented real time billing could reduce the confusion surrounding estimated bills, offering energy companies an opportunity to re-build the trust that has eroded between energy companies and their consumers.

PwC's Jennings agreed: "Going from a world of living with estimated meter data to one where you have accurate meter data has to be positive."

The contribution that smart meters could make to improved energy efficiency was regarded as the third most significant opportunity arising from the rollout, given roughly equal weight by both networks and suppliers.

One respondent commented that the additional information generated by the smart meters would give energy companies opportunities to provide

There are a number of opportunities, however accessing more customer data is viewed as the most significant

Q: How would you rate each of the following opportunities arising from the smart meter rollout in significance for your business?

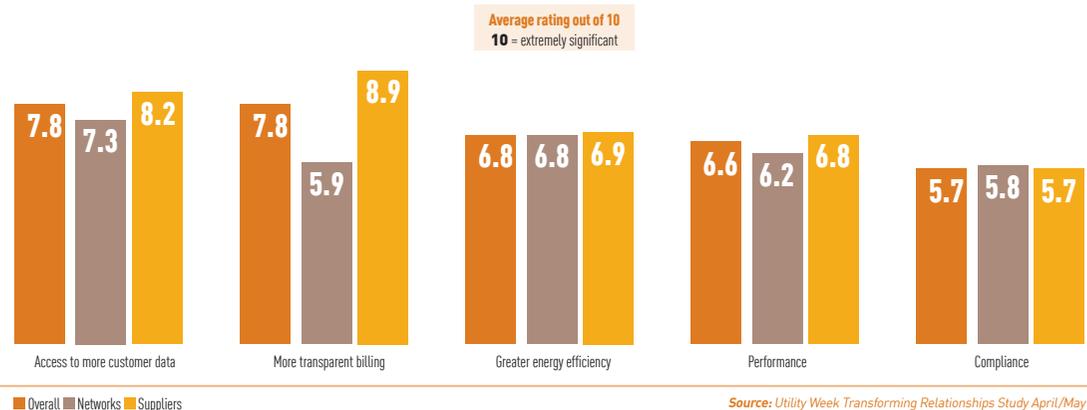


Figure 14

Source: Utility Week Transforming Relationships Study April/May 2016

BUSINESS OPPORTUNITIES

increased network data their businesses will gain access to post- rollout. This was followed by outage restoration and the ability to monitor network events (7.3). Time of usage pricing was deemed less useful by the networks.

Like many other sectors, the energy sector is concerned though about how to access and analyse the information flows that will be generated by the smart energy meters.

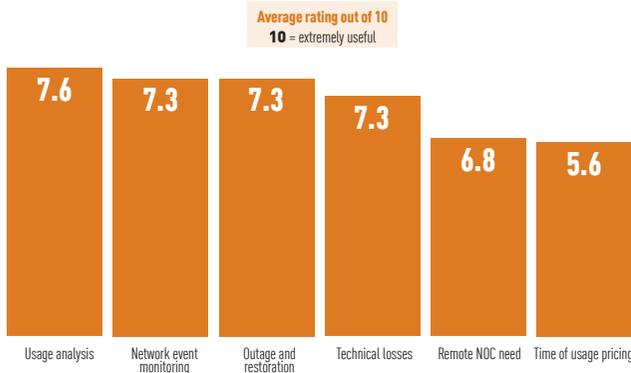
When asked to identify the biggest challenge to using the data businesses will gain from the rollout of smart meters, the sheer volume was cited by one respondent and 'understanding it all' by another. Another identified making this data 'interesting and insightful for consumers'.

The survey shows that businesses are confident about their ability to realise the benefits of smart meter rollout though. Just over three quarters (77 per cent) believed that they would with only 3 per cent disagreeing. Suppliers were more confident than networks about their business's ability to reap benefits from the rollout.

However, the businesses surveyed by Utility Week were less bullish about reaping a return on their

The networks have a clear idea of how they plan to utilise the access to more data

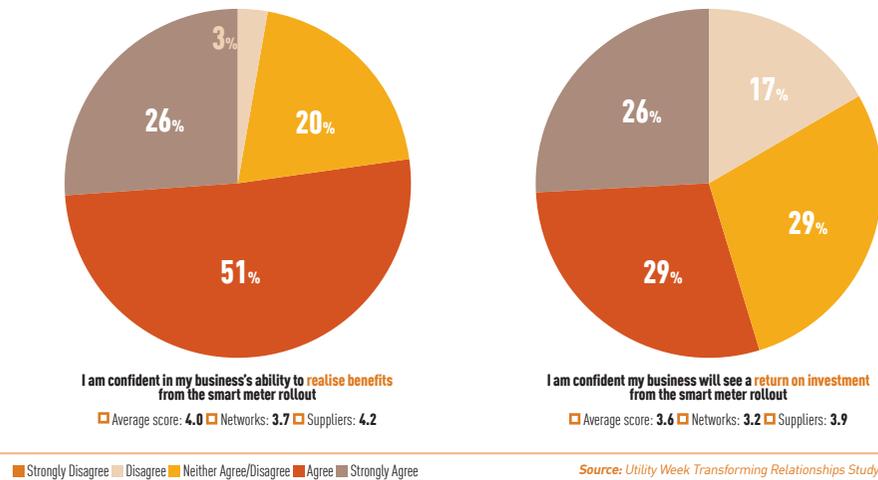
Q: Following the smart meter rollout, how would you rate the usefulness of your business obtaining access to **more network data?** (Net.)



Source: Utility Week Transforming Relationships Study April/May 2016

Whilst confidence in realising the benefits is high, this is not necessarily the case for return on investment

Figure 16



Source: Utility Week Transforming Relationships Study April/May 2016

investment in the exercise. Across the sector, the perceived ROI from the smart meter rollout is 10.9 years. And while suppliers anticipate making their money back in ten years, networks believe they will not achieve payback for 12.5 years.

Just one quarter of the businesses surveyed expected to see their ROI by 2020 with a much higher proportion of suppliers (35 per cent) anticipating payback by the mass rollout target date than networks (8 per cent). Many of the latter confess scepticism that they will ever recover their

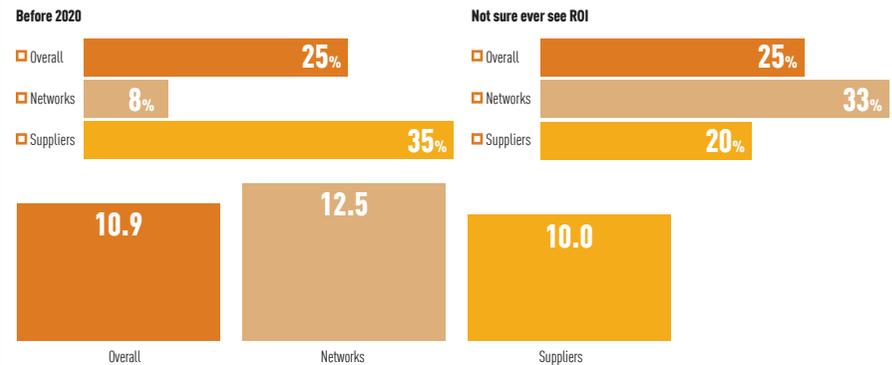
investment. One third (33 per cent) of networks are not sure whether they will ever see ROI on the smart meter rollout, compared to 20 per cent of suppliers.

Jennings said he hoped to see more suppliers developing new propositions and business models, citing time of use tariffs as the clearest example of how companies could use from smart meter data. "If you can offer a proposition to a customer that they pay less by altering their energy use, customers will be interested."

Perception is that the average timeline for ROI is 10 to 13 years

Figure 17

Q: When do you anticipate a **return on investment** on the smart meter rollout for your organisation?



Source: Utility Week Transforming Relationships Study April/May 2016

WNS VIEWPOINT...

Effective scheduling as a means to tackle: payback (via increased efficiency) customer disengagement, shortage of skilled personnel

Deploying smart meters is a huge task, both in terms of scale and from a cost perspective. The rollout will test utility providers in many areas including process, people and technology, many of which have an element of the unknown.

It is estimated that field service costs will form the largest component in the overall cost of the smart meter rollout programme. Early estimates point to the need for 8000 more engineers during the peak of the rollout programme. Looking at the current performance against targets, it is anticipated that an additional 2000 engineers will be required.

Companies should address this increased demand by choosing the most appropriate field force model to maximise value. The strategy will hinge on enabling customers to realise the benefits in an optimal payback period. Analytics can help companies to offer variable pricing plans based on consumption patterns. The field force should also have excellent customer service acumen to engage and educate customers in the most effective manner.

Here are some key drivers for effective scheduling:

- ❑ Provide comfortable advance notification to customers regarding the date and time of installation. Clarify that they will not be charged any installation fee
- ❑ Accommodate customer requirements during the installation day
- ❑ Explain the need for customers to be present during the installation. Agree on the duration of installation, inform them about the length of time their gas/electricity supply will be powered off and provide assurance of demonstrating how the smart meter will work
- ❑ Articulate clearly the use of smart metering system/device in an easy-to-understand manner. Explain its features and provide in-home displays to demonstrate its importance to customers



By reducing usage at peak periods in the day, the industry could also afford to save on investment in new generation capacity, he pointed out.

Warren said: "It's helpful for energy suppliers to buildings to have better knowledge of their consumers and when they consume."

Jennings warned that the flipside of improved data flows was that it would make it easier for customers to switch suppliers to another. (Smart meters) will facilitate a faster switching process because you have the confidence of an accurate meter read at the time when you switch."

Instead of relying on averaged-out estimated readings, authorised third parties will be able to analyse precise consumer information over a 36-month period, which will help competitors to identify the best suited tariffs for each consumer.

Furnell agreed that this greater access to information would encourage new entrants into the energy supply market as well as encouraging greater bundling of services.

"When you have online customer engagement interface that people come to, there is an opportunity to engage with customers and sell them other things."

The ENA's Abreu said the kind of granular data provided by smart meters will become increasingly valuable as local networks become more sophisticated with the electrification of both transport and heating together with the spread of solar panels.

"It used to be all one way and very predictable but in a smart world and low carbon tech world networks will behave differently. More granular information is necessary to enable network operators to be ahead of the game and understand how those load flows are evolving over time."

“When you have online customer engagement interface that people come to, there is an opportunity to engage with customers and sell them other things”

CONCLUSION

This study highlighted a major challenge for the energy sector vis-à-vis the smart meter rollout. The industry ready for the exercise with many changes having been implemented and others planned.

However, confidence is low that the mass rollout will start on time and achieve full coverage by the target date of 2020.

The chief risk to the timely delivery of the programme is reckoned to be the DCC go-live date. But while the remaining risk factors are customer-centric issues, the provision of consumer education remains patchy.

To help meet the 2020 deadline, the utility sector needs help to;

Manage the lead-up to the mass roll-out

Manage the roll-out itself

Maximise the use of data post-implementation

These phases will incorporate

- ❑ Systems or processes required to deliver the appropriate programmes
- ❑ How to access, store, manage and analyse the wealth of data that the mass coverage will generate
- ❑ Guidance on how to utilise the rollout to become more customer-centric

TRANSFORMING
RELATIONSHIPS:

THE UK SMART METER ROLLOUT

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