The Smart Operations Centre
The key to smart meter rollout in the UK
Field deployment is perhaps the biggest single challenge that UK energy suppliers face in their smart metering programmes. A dedicated deployment management function can rapidly overcome obstacles in an agile manner and significantly reduce delivery cost and risk.

The scale and complexity of smart meter rollout coupled with the unique conditions of the UK programme mean that to achieve an effective and efficient deployment suppliers must find a robust solution to significant operational and managerial challenges.

Capgemini’s Smart Operations Centre approach has been developed on some of the world’s largest and most complex smart metering programmes to date and has been adapted specifically for the UK market. It has proved successful in addressing the key deployment challenges through:

- Taking accountability for the overall field deployment
- Delivering all the critical success factors in an integrated manner
- Providing focus, drive and coordination across all business functions
- Ensuring your programme delivers in all areas: cost, volume and customer service

“The right approach to field deployment can result in a saving of as much as 30% in your programme’s final operational costs.”
The challenges and opportunities of smart metering in the UK

By the end of 2020, the UK government wants energy suppliers to have installed a smart meter in the homes of 97% of their customers. This equates to over 53 million meters, which means that around 20,000 new meters must go live each day in this seven-year period.

During the rollout, suppliers will need to deal with intricate new technology, a range of legislation and compliance constraints, and vast technical and logistical difficulties around field deployment — not to mention potential customer resistance. They will also need to be extremely agile and flexible in order to respond fast enough to the regulatory, market and industry changes. Overall, the rollout of smart meters represents one of the biggest challenges that UK energy suppliers have ever faced.

We believe that this is as much a management challenge as a technical one. The key is to organise and deliver field deployment efficiently — this is clear from our experience of similar programmes in other countries, but it is especially true of the UK for the following reasons:

Access rates

Our global survey of smart meter deployment experts found that gaining access to the meter is the number one challenge. Access rates are a key driver of cost and installation volumes; in the UK they will be particularly important because meters are typically housed internally. Effective planning, flexibility and communications throughout the programme can minimise the number of failed visits (and the costs of re-visits) and improve overall access rates.

UK energy suppliers must ensure that they are able to manage any deployment incidents promptly and tightly, with a coordinated response from all business functions. This is particularly true of incidents that may lead to public health and safety concerns or accusations of mal-practice against suppliers. Currently, there is a lack of public understanding and acceptance of the smart meter initiative, and there has already been some negative press coverage. The industry cannot afford badly managed incidents that could turn apathy into hostility, making customers less likely to provide access.

Resource constraints

Given the ambitious schedule and the volumes required, the availability of skilled resources will be the key constraint for the smart deployment programme. Smart meter installation requires skilled, qualified electricians and/or gas engineers. A high proportion of properties will require dual fuel.

Not only are the skills in limited supply, but the number of successful installations per engineer per day is expected to be low relative to other global geographies. Many antiquated electricity meters are still in place in the UK, often connected to even more aged infrastructure. In these cases, safe and compliant installation of a smart meter will require considerable additional work. Field engineers will also be tasked with educating customers about the use of their new meter in line with the government-backed smart metering installation code of practice (SMICOP) guidelines. This will require a new skill set and represent a major challenge for many Engineers. This is not optional and will have a significant impact on the overall customer experience and adoption of the new technology.

Labour costs

Field deployment efficiency is a significant driver of overall programme cost. Labour costs have historically accounted for over 40% of the costs for build-run programmes and this percentage will continue to rise as metering and communications asset costs fall. The proportion may be significantly higher in the UK because of the anticipated low installation rates per engineer.

Given a limited supply of labour and potential cost impact, UK energy suppliers need to ensure that the utilisation and efficiency of the field force are as good as they can be. They need to plan how they will manage a remote workforce effectively to ensure the right level of efficiency, quality and customer experience.

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Competitive market

A special feature of the UK market is that it is increasingly competitive, and therefore suppliers need to ensure that smart meter deployment improves, rather than undermines, their competitive position. Keeping costs down will be critical, but so will providing a positive customer experience.

Smart meter programmes will, in any case, oblige companies to increase their levels of customer service and support activity. Contact centres will require extra resources to arrange access to homes, compensate for poor-quality customer data, and address the need for customer education and the complexities of the legacy meters and infrastructure.

The quality of this service and support will have a major impact on customer experience and overall brand reputation – as well as on customer call volumes. Delivering a positive experience will require close integration of all business functions to ensure seamless coordination of field, customer contact and technical dimensions.

Complex objectives for field deployment

Clearly, a smart programme’s success depends heavily on effective field deployment. In fact, our experience suggests that adopting the right approach here can result in a saving of as much as 30% in your programme’s final operational costs.

The deployment management team will face demanding targets relating to volume, cost and customer satisfaction, and these will sometimes conflict. The team will have to keep the field force utilised and efficient while ensuring a good level of service and keeping promises to customers. To complicate the job further, key variables such as access rates and installations per engineer per day are currently unknown, and will undoubtedly vary by customer segment and over the lifetime of the programme.
Tackling the deployment challenge:
critical success factors

Smart meter rollout presents UK energy suppliers with a challenge of unprecedented scale and complexity, and they need a robust solution. We have identified several critical success factors for the solution based on our experience in other countries.

Detailed planning

It pays to anticipate and mitigate risks. The mantra is plan, plan and plan again. We strongly recommend the creation of a highly granular deployment plan, fully integrated across all business functions and fully tested through a range of scenarios.

This plan can then form the basis for day-to-day operational management and reporting. With the plan in place, it becomes easier to identify issues and slippage, analyse root causes rapidly, and take immediate corrective action.

Integration

Smart meter installation requires the successful combination of a number of elements – customer awareness, customer service, asset supply, communications infrastructure and skilled field resource. Any variation in the plan of one function may have significant impacts on the overall deployment plan, which may not be immediately obvious.

A multi-functional operation of this kind requires a truly integrated, coordinated approach. Teamwork is important: simply bringing together all the key people from the different functions into one location will have significant benefits.

Speed and agility

Once rollout starts at volume, any slippage or issues will be costly, especially given the ambitious timescales.

Success depends on speed and agility of response: the ability to spot trouble early on and then rapidly diagnose, adapt, optimise and co-ordinate response to remain on course. These skills can only be developed through first-hand experience of smart deployment. They must be mastered quickly to prevent teething troubles turning into expensive, damaging and potentially highly public disasters.

Focus

Once mass rollout starts, there will be lots of distractions from all directions. Many obstacles will surface from day to day. It is vital to compartmentalise problems, prioritise them and solve them before they escalate. The mindset must be to do everything possible to keep to the plan.

Business transformation

The smart meter programme is the start of a journey that will fundamentally change the way UK energy suppliers do business, with an impact on nearly every part of their organisations. The most successful companies will start the journey with transformation in mind, and take the bold steps needed to transform their management structures, culture and performance. This will require strong executive leadership, a strong transformation team and excellent coordination and communications across business functions.
Choosing the right management approach for deployment

These success factors need to be addressed in an integrated manner – trying to deal with them individually will have little impact.

Deployment management could be structured in various ways. At first sight, it might seem attractive to adopt a model close to the current organisation – usually a traditional, functional structure with separation between field operations, customer services and supply chain. This approach would certainly keep disruption to a minimum. However, because of the barriers between functions, it cannot achieve the required level of focus, coordination and speed of response. Functions will react independently with unforeseen negative consequences or else decision making is disjointed and slow.

If your company has already set up a Programme Management Office (PMO) to handle the IT for its smart metering programmes, it may be tempting to use it to manage deployment too. But smart meter deployment is a complex operational management challenge focusing on installation volumes, efficiency and orchestration; it requires a completely different skill set and mindset from IT programmes. Giving the PMO this extra job to do will both distract it from its core role and result in unsatisfactory deployment management.

Experience tells us that there is only one really viable way to address the scale, complexity and pace of the rollout, and meet the need for integration and agility. That is to create a management function dedicated to smart meter deployment, reporting directly to the overall smart metering programme lead and the senior business management team. This dedicated deployment management function will be able to orchestrate operational business functions effectively, breaking down silos and providing the required focus and coordination.

**Approaches for managing Deployment: Dedicated function delivers maximum value**

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<tr>
<th>PMO Managed Deployment</th>
<th>Functionally Managed Deployment</th>
<th>Dedicated Deployment Management Function</th>
</tr>
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<tbody>
<tr>
<td><strong>PMO</strong></td>
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<td>Programme Functions</td>
<td>Programme Functions</td>
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<td>Business Functions</td>
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- The Programme Management Office orchestrates deployment
- Lacks the specialist operational management capability to effectively orchestrate deployment alongside IT programme and business change. Risk of compromising the core role of the PMO
- Functionally organised deployment management team, reflecting the BAU organisation
- Lacks specific focus upon deployment activities, risks & issues. Retains any operational silos. Not agile enough to respond to pace and complexity of the deployment challenge
- Dedicated Deployment Management Function
- Deployment and Operationally focused, specialist function capable of optimising deployment activities across operational silos in a rapid and agile manner
To help clients implement their dedicated deployment management function, Capgemini has developed the Smart Operations Centre (SOC) solution. This solution has been conceived, developed, tested and refined as part of our work on some of the world’s largest and most complex smart metering programmes. We have now adapted and tested it specifically for the UK market.

As an independent business unit within a smart metering programme, the SOC orchestrates deployment across business functions, acting as the central “mission control” unit and taking overall responsibility for delivering an optimised deployment programme.

Key capabilities of the SOC include:

- Providing a single version of the truth of deployment progress: The SOC produces dashboards to enable agile decision-making at the executive level, as well as detailed reports to support its own troubleshooting activities and facilitate continuous improvement at an operational level.
- Enabling rapid resolution of issues through stakeholder coordination: With its comprehensive view of the programme, and its ability to spot exceptions and analyse trends, the SOC can swiftly identify any issues that threaten to derail deployment. Clear governance linking operational teams directly to senior management ensures the rapid decisions, coordination and alignment that are necessary to resolve or mitigate the issues quickly.
- Spotting optimisation opportunities and embedding continuous improvement: By analysing trends in operational data and applying methodologies such as root cause analysis, LEAN and Six Sigma, the SOC’s optimisation function helps deployment stakeholders to increase efficiency, and drives down overall cost-to-install.

Several conditions must be met before the SOC can realise its full potential. Firstly, strong executive sponsorship is needed to cut across traditional power bases and push through decisions that individual departments might not like.

Secondly, it is important to have the right digital foundation in place. To optimise the programme, the SOC needs to be able to make full use of data and apply sophisticated diagnostic and analytical capabilities.

Finally, the capabilities of the people within the SOC are a key to success. The ability to analyse trends and coordinate multiple stakeholders is essential, but most important of all is real, hands-on experience of managing smart deployment through to successful delivery.
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