

Accelerated Solution for Smart Meter Platforms

Capgemini's Core platform ready for Utilities

The rapid changes of the Utilities industry

Utilities around the world are going through a phase of deregulation, unbundling, privatization and re-regulation. Changes in regulations have encouraged Utilities to open up to competition wherever possible and put in place tight regulations and performance benchmarks in areas of monopoly.

Smart Meters are considered to be the key enablers which will help Utilities achieve the objectives of better management of energy demand, improved productivity and providing a breadth of services to customers. The Advanced Metering Infrastructure (AMI) consists of meters to gather consumption data, concentrators, telecommunication networks to transport data, head ends to interpret meter data, and meter

data management systems to store, analyze, and validate information, and pass this on to back-end systems for functions like billing.

With its unmatched track record in the Utility market and excellent understanding of business and technology imperatives, Capgemini has created a ready, reusable and scalable AMI platform for the Utilities market. Capgemini was faced with strong challenges of multiple, continuously maturing technology standards, non-standard communication protocols and frequent changes. Yet, we are able to develop the platform by addressing a number of risks including the impact on the standard business processes.



Our Smart Meter goals

Capgemini's goals to initiate the integrated platform for Smart Metering can be summarized as follows:

- **create market-aligned business processes for Smart Metering** – these are complex
- **develop a pre-configured, integrated, ready system for AMI functionalities** – this would serve as a visible face of Smart Metering for Utilities that plan to roll out Smart Meters into an integrated system
- **employ complex industry standard Smart Meter related technologies and tools** – Smart Meter technology has yet to refine its complexities and provide smooth IT integrated platforms, hence increasing the implementation and project timelines

- **build associated multi-platform complex devices** – Capgemini built and integrated the platform with all complex devices necessary for Smart Meter implementation, sometimes partnering with device market leaders Landis+Gyr, and Itron, the world's leading providers of intelligent metering
- **build a scalable environment** – Capgemini designed the architecture for the platform to be robust, scalable, and ready for the Smart Meter implementation market
- **build platforms leveraging Meter Data Management (MDM)** – the market has yet to mature with MDM solutions and it is a challenge for Utilities to have a ready in-sync MDM and Smart Meter platform to help them with solution prototyping.

Capgemini's approach

Capgemini embarked on a joint collaboration with our partner companies to prepare a core platform for Utilities in the AMI arena. As the platform was built to provide a set of key business functions that would cut across an entire gamut of technologies, Capgemini ensured that the right steps were taken at the right time to match the market needs. This was achieved by:

- **leveraging the technology ecosystem** – Capgemini leveraged its longstanding relationships with partner companies, technology alliances and Utilities
- **employing SAP expertise** – With its deep knowledge and expertise in SAP, and having been credited with numerous implementations of the SAP Industry Solution for Utilities (SAP IS-U), Capgemini helped in developing the SAP components of the platform with Itron
- **applying knowledge of the Utility industry** – the Capgemini-Itron core platform was conceived based on the potential needs in the

integrated platform arena of the Energy and Utility industry for Smart Energy Services

- **experimenting and innovating** – this platform was developed by experimentation with tools and technologies, and this ensured that knowledge and expertise were gained in the relevant components and tools.

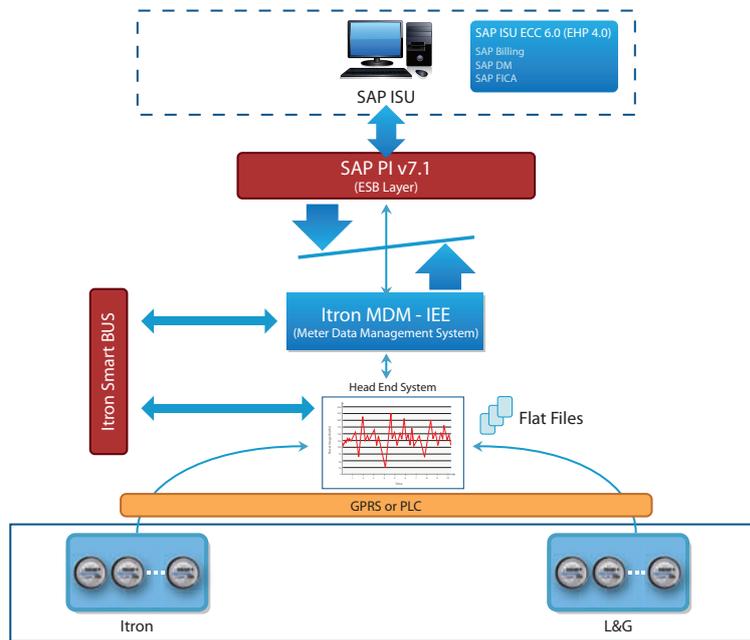
Powerful architecture

The Core platform is a set of key business functions that are captured from industry standards and from the wealth of experience of the Capgemini Utilities team. This platform is a fully serviceable landscape where all the basic functions are integrated with the ecosystem of Itron's metering environment and Customer Information and Billing Services business drivers using SAP IS-U. The benefits of the solution are:

- **a set of integrated tools** – the architecture is built on a set of integrated components from the entire Smart Meter landscape; from meters to back-end billing and monitoring systems
- **an industry standard platform** – this architecture was targeted to be the Utilities industry platform with standard, accepted and market-oriented tools and technologies to ensure the platform to be fit for a futuristic landscape
- **an SOA platform** – to make the Core platform ready for use in various environments and to enhance adaptability
- **reusability** – the objective was to make the components in the architecture and the overall architecture reusable at a granular level
- **scalability to adapt to future business needs** – with rapidly evolving technology and ever changing IT needs, the architecture



Figure 1



had to be made fit for future growth and industry standard requirements; therefore, the best technology and products with proven capacity for market adaptability were chosen.

This Core platform was proposed to be the basic stage for specific present and future client developments in which Capgemini and Itron will be engaged. It was designed to be a robust, scalable and ready-made platform for Smart Metering.

Business benefits

Utilities are also faced with the needs to reduce energy consumption, control emission levels, and improve their technology platforms. They view Smart Metering as a technology that can tackle some of the critical challenges in the energy sector, including capacity management, promoting more efficient use of energy, consumer enablement and satisfaction, and establishing better tariff models. Capgemini presents the Core platform as the means and device to enable Utilities to get started with implementing the Smart Metering technology in a predictable manner without surprises.

The following are some of the benefits we deliver:

- **the visualization of complex technology and risk mitigation** – Smart Meter technology is complex but the Core platform helps Utilities to see clearly through this complexity and reuse its various scenarios and reduce implementation risk
- **enhanced IT implementation strategy and shorter implementation time** – to help them overcome the twin challenges of needing to reduce operating costs and maximizing operating profits, Utilities are always looking for solutions that are scalable and reduce implementation time
- **the creation of a platform for stakeholder knowledge enhancement** – the market has yet to mature with MDM solutions but the Core platform helps Utilities to educate their stakeholders and take up their Smart Meter roll-out programs
- **smart grid and capacity management readiness** – the Core platform enables Utilities to plan for their future smart grid and capacity management needs, and therefore switch to more advanced technology to beat the competition
- **accelerated delivery with a pre-configured environment and appropriate tools** – because integration issues have already been fixed, and the architecture is robust and ready for implementation, the implementation lifecycle is shortened considerably
- **cost effectiveness so platforms can break even as early as possible** – to achieve maximum profits, Utilities need to reduce the infrastructure and IT implementation timeline, so ready platforms are very advantageous
- **a scalable and robust platform** – pre-configured with basic settings for AMI functionalities and related configurations.

Capgemini has the Core platform, and a wealth of expertise and experience to enable you to implement Smart Meter technology today.

Why are Capgemini's Smart Energy Services Unique?

Capgemini's Smart Energy Services are real, in the market now, and already making a difference for utilities around the world. Our expertise and our resources are unmatched in the industry. In fact, only Capgemini Smart Energy Services:

- Has extensive utilities industry experience with an unequaled track record for successful innovation and delivery.
- Leads the industry in the delivery of smart energy solutions in mass deployment and production
- Offers a unique, turn-key solution called Managed Business Services, which has a usage-based pricing model

What also makes Capgemini's Smart Energy Services different from any other organization is our long-standing commitment to working collaboratively with our clients to deliver unique—and ultimately, successful—results. In fact, collaboration is central to the Capgemini philosophy and a pillar of our service delivery. From strategy development through implementation, our clients benefit from our tailored approach.

For more information about Smart Energy Services, please visit www.capgemini.com/smartenergy.

Smart Energy Services—Experience Reduces Risk

Capgemini's Smart Energy Services (SES) provides the full spectrum of smart metering, smart grid, smart home and smart analytics solutions through leveraging best practices developed over the last 10 years working alongside the world's leading utilities. Our team has extensive utilities industry experience with an unequaled track record for successful innovation and delivery. We are helping over 43 million utility customers by delivering sustainable energy efficiency and environmental solutions—transforming utility operations and the customer experience. Our commitment is strong with more than 8,400 professionals dedicated to the utility sector. More information is available at www.capgemini.com/smartenergy



About Capgemini

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Rightshore® is a trademark belonging to Capgemini

With EUR 670 million revenue in 2011 and 8,400 dedicated consultants engaged in Utilities projects across Europe, North & South America and Asia Pacific, Capgemini's Global Utilities Sector serves the business consulting and information technology needs of many of the world's largest players of this industry.

More information is available at www.capgemini.com/energy

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