

Sm@rtering

Smart enough to power up your grid?

A new energy world is coming as energy and utility businesses change radically. It's a world where consumers can generate power as well as use it more responsibly; where sustainability really matters and behavior helps control energy costs. It's a world where vehicles are powered by electricity; where demand and supply are efficiently balanced.

THE CHALLENGE

Smart Meters are enablers of Smart Grids. They will become the norm over the next few years as an answer to the challenges posed by climate change and regulators. They will facilitate suppliers with more information and consumers with more choice. This will create opportunities to streamline operations, improve quality of service and customer engagement.

Meanwhile, their adoption will pose new challenges like:

- Many manufacturers; many protocols; few standards
- New types of data including: load profiles, events, quality of service (QoS), configurations, firmware versions
- Huge volumes of events and soft real time data
- Integration on the utility Smart Grid path (like micro generation and electric vehicles)

Utilities need new Meter Data Management (MDM) architectures to address these challenges. At the same time, they have to respond to the growing need for integration with the commercial and technical systems, and with other market players like suppliers and transmission system operators (TSO).

OUR ANSWER

Sm@rtering is a new generation MDM solution developed by CGI. It offers data collection, energy data management (EDM), supervision and smart grid capabilities on an integrated platform.

Our solution is web-based with a user friendly interface, developed using market standards, and modern, flexible technologies. It allows utilities to rapidly adapt to the new business environment and to integrate water, gas and electricity meters as well as residential, commercial and industrial C&I clients. Sm@rtering can be readily implemented in multiple geographies.

Flexible Machine to Machine Interfaces (M2M)

Sm@rtering is based on service oriented architecture (SOA). All the operations can be performed through graphical user interface (GUI) or an M2M interface. Interfaces and business workflows are easily implemented using a graphic tool. Enterprise service bus (ESB), a fundamental tool for interfacing with legacy systems, enables quick conversion of data formats.

Interoperability

Sm@rtering presents a single interface to the end-users. It manages the two-way communications with different Smart

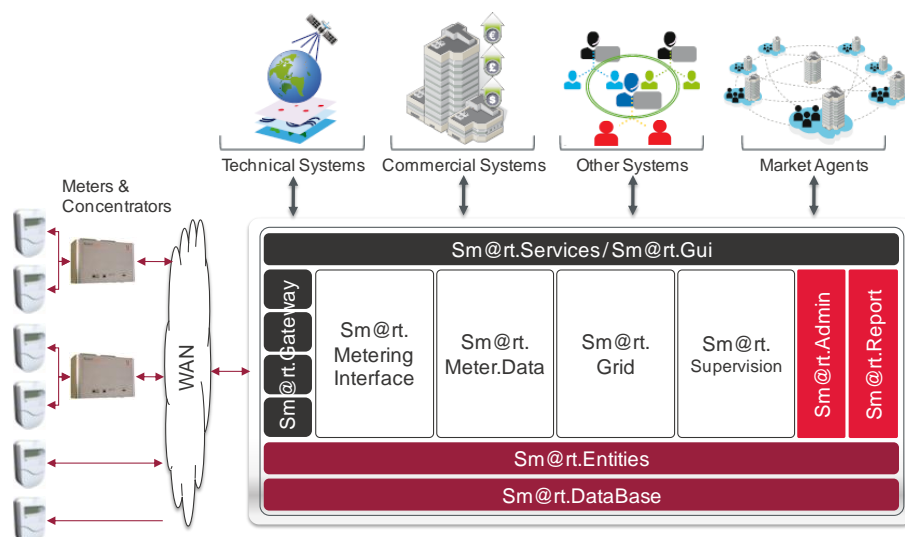


FACT SHEET

UTILITIES

Key Benefits

- Support active distribution network management
- Support the extension to use of micro generation and electric vehicle charging
- Understand customer usage patterns to manage demand and peak usage periods through demand side management mechanisms and advanced tariff-plans and new services that reflect customer usage
- Improve customer service and operational savings through increased efficiencies (including the network planning, maintenance and operation)
- Reduce cost-to-serve for utilities by decreasing non-technical losses, customer complaints and customer debt



Meter infrastructures and protocols. New protocols can be quickly implemented. Priority, repetition and automatic tasks are standard features as well as monitor and control mechanisms.

Energy Data Management - event-driven Validation and Estimation Engine (VEE)

Sm@rting stores and publishes all the different data types registered by smart meters, including events, load profiles, network quality data, meter configuration values, firmware and low voltage substation measurements. Our solution is ready to integrate with specific time series solutions. Validation and estimation is based on event-driven processes, configurable rules and workflows.

Supervision and control – ITIL® compliant

Utilities will require specific meter operation centers supported by tools to monitor and control the new Smart infrastructure and guarantee performance according to KPIs. Sm@rting's Supervision module includes functionalities and features specific to address this need, compliant with ITIL best practices.

Smart Grid for active network management

Sm@rting has real-time processes to analyse data and events relevant to electrical network management like confirmation of network topology and

services to improve energy fault detection and repair. Sm@rting is a Smart Grid enabler. Utilities can move forward on their Smart Grid programs to actively manage the network.

WHY CGI

We have been at the forefront of the AMI (Advanced Meter Infrastructure) revolution ever since it was just an idea. We displayed unmatched, solid credentials in our ongoing involvement in the EDP Distribuição InovGrid project, where the Sm@rting solution is a key module. Working with leading companies in industry and research, we've been a key partner in developing a world-leading SmartGrid in Portugal. It has been selected by the European Union Commission and Eurelectric as a leading smart grids reference project in Europe. It automates grid management, improves service quality, reduces operating costs, promotes energy efficiency and increases the penetration of renewable energies and electric vehicles.

We understand the implications of different economic and social circumstances, as well as different legal and regulatory regimes. And have a flexible, collaborative culture. Our innovative, practical solutions are tailored to your needs. We deliver a blended service model that combines local knowledge with global resourcing.

Sm@rting responds to the new paradigms imposed on an MDM solution through:

- Interoperability for multiple Smart Meter technologies
- Event-driven and real-time operations
- Strong integration capabilities
- Ability to handle high volumes of data of different types
- Supervision and monitoring of infrastructure
- Modular and scalable architecture

ABOUT CGI

Founded in 1976, CGI is a global IT and business process services provider with 69,000 professionals delivering high-quality business consulting, systems integration and outsourcing services.

For more information about CGI, visit www.cgi.com or email us at info@cgi.com.