

CGI

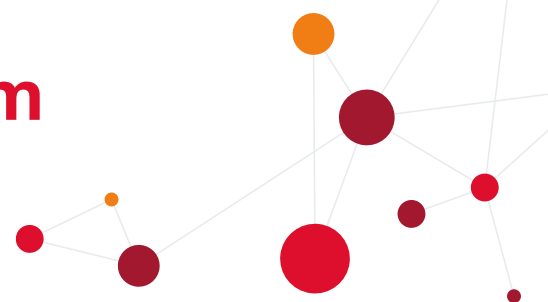
Experience the commitment®

Sm@rtering™

Grid Control



Advanced metering system
for distribution networks



What is Sm@rtering?

CGI Sm@rtering™ is a next-generation solution that helps grid operators manage their advanced metering infrastructure (AMI) to improve customer service, achieve operational savings and decrease the cost-to-serve of smart meter projects (including electricity, gas and water). Sm@rtering aids supervision, data collection, energy data management (EDM) and smart grid capabilities on an integrated platform. Web-based with a user friendly interface, the solution also supports active distribution network management, microgeneration, electric vehicle (EV) charging and grid balancing.

The Sm@rtering platform is an 'out-of-the box' solution for smart grids, in both newly operational and mature AMI implementations.

Sm@rtering modules

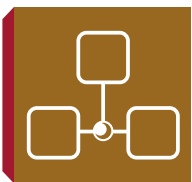
Sm@rtering has several independent modules that can be used as a fully integrated solution or in different combinations, based on clients' needs and system landscapes, and also offers business integration capabilities.

Sm@rtering can manage communications with several AMI networks and equipment types, and offers advanced monitoring capabilities for the AMI infrastructure itself.



Grid Control module

- Real-time operational analytics for decision support
- Flexible automatic rules for filtering, correlating and enriching field events and alarms
- Intuitive geospatial and schematic views of network assets and KPIs



MDM/EDM module

- Meter data management / Energy data management
- Manages all energy data collected
- Includes validation, editing and estimation engine (VEE), data aggregation and energy calculations and energy balance



Head-End module

- Manages communications with AMI and smart grid networks
- Provides multi-vendor, multi-protocol interoperability
- Manages automatic meter reading strategies



Grid Control tools

Grid Control is built on three fully integrated tools that monitor and control field operations. The module can be integrated into the existing system landscape to optimize performance and reliability, and enable advanced smart meter capabilities.



Real-time alarm management

- Processes and displays events and alarms (generated by meters or other devices, such as concentrators or sensors) and applies automatic rules for filtering, enriching, correlating and messaging
- Applies automatic or user-defined rules and actions when an event occurs, including notifying an external system (e.g. an outage management system in case of a power outage) or creating an incident to be analyzed by the back-office team or an external entity



Operational analytics

- Uses AMI operational real-time and historical KPIs and dashboards to support top-down monitoring and analysis of the AMI grid, including non-communicating devices, missed readings and events, and alarms
- Provides straightforward benchmarks of different manufacturers, technologies and AMI networks
- Includes drill-down capabilities



Map view

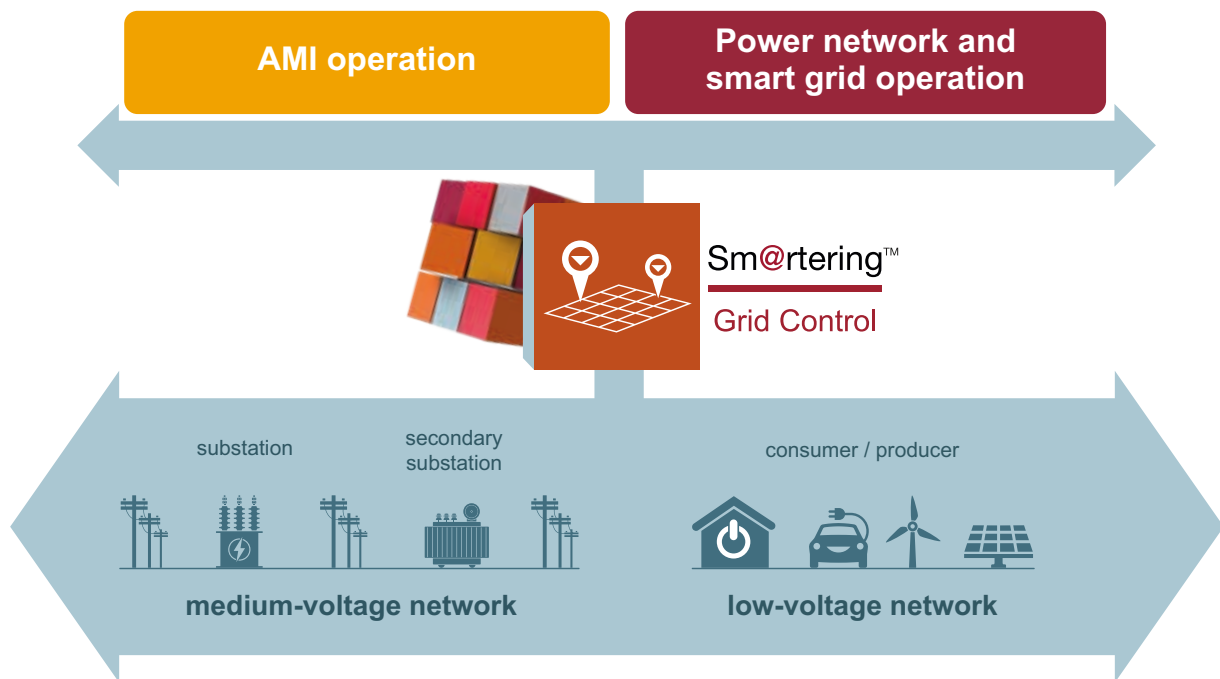
- Provides a geographical representation of both AMI devices and electrical networks, including different map KPI themes and layers by region
- Sends device requests and commands directly from the map (e.g. ping, set-points)
- Supports root cause analysis and presents contextual data, as required

Sm@rtering Grid Control acts as middleware that integrates the AMI network and power grid with business processes to implement a truly smart grid.



Grid Control business processes

The Grid Control module primarily supports the AMI meter operation center and power network and smart grid operations business processes by enabling AMI control and leveraging AMI information and capabilities in network operations.



Grid Control features

AMI operation:

- AMI operational analytics for users to readily view KPIs and take action
- Mesh network performance monitoring
- Geographical view of assets, KPI themes and map interaction
- Smart meter deployment
- Fraud detection support
- Predictive asset management of meters and sensors through continuous monitoring of equipment condition

Power network and smart grid operation:

- Increased reliability of automatic outage detection
- Confirmation of outage extension and restoration
- Event pattern analysis for prediction of network failures
- Integration of micro-generation into the network
- Integration and correlation of data from network sensors

ABOUT CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. Operating in hundreds of locations across the globe, CGI delivers an end-to-end portfolio of capabilities, from IT and business consulting to systems integration, outsourcing services and intellectual property solutions.

CGI works with clients through a local relationship model complemented by a global delivery network to help clients achieve their goals, including becoming customer-centric digital enterprises.