CGI OpenGrid Foundation
Network data model and integration layer

Utility network operators require real-time decision making to ensure effective operation of the grid. As electricity networks become increasingly complex with the move to decarbonization, access to quality data is vital to ensure the safe automation needed for smart grids. Attaining a holistic view of the network is imperative to stay competitive. CGI's OpenGrid Foundation, part of our CGI OpenGrid360 suite, enables a single view of a utility's network through master data management and integration.

Changing market dynamics

Utilities require access to data from multiple systems to enable a smart grid as the market undergoes enormous change. Power is coming into the grid from many different points via distributed energy resources (DERs). Electric vehicles (EVs) soon will be the dominant consumer choice, and prosumers are changing customer relationships from one-way to two-way.

The data imperative

Today, separate core systems for asset management, geographic information and distribution management provide disparate views of the same assets, and with varying data quality. In order to operate the future grid effectively, utilities need complete and accurate visibility of their network, as well as of the potential external assets that will affect the grid. Data-driven insight also is imperative to compete with disruptive market entrants who are adept at using data to deliver a highly personalized customer experience. While some utilities are centralizing unstructured data into data lakes, they also will need to integrate those sources with data across their core systems to make faster decisions and share data with internal and external systems and stakeholders in a complex ecosystem.

Bringing it all together

The CGI OpenGrid Foundation provides a network reference model and integration layer to enable a single view of a utility's network across IT and operational technology (OT) systems. The solution is part of our CGI OpenGrid360 suite, co-developed with large network operators as part of our work on UK smart grids innovation programs. CGI OpenGrid360 solutions and services are designed to help network operators improve data insight and accelerate innovation to meet the evolving demands of the new energy system.

CGI OpenGrid Foundation takes data from each core system and automatically correlates it across all systems, notifying data stewards to the vast majority of corrections needed. Logic to correct remaining issues can be configured. Daily reporting ensures a continuous data quality initiative as opposed to a one-off migration. This is a key enabler for delivering your data governance strategy and providing an enduring, integrated digital representation of your network, which is integral to successful adoption of data governance.
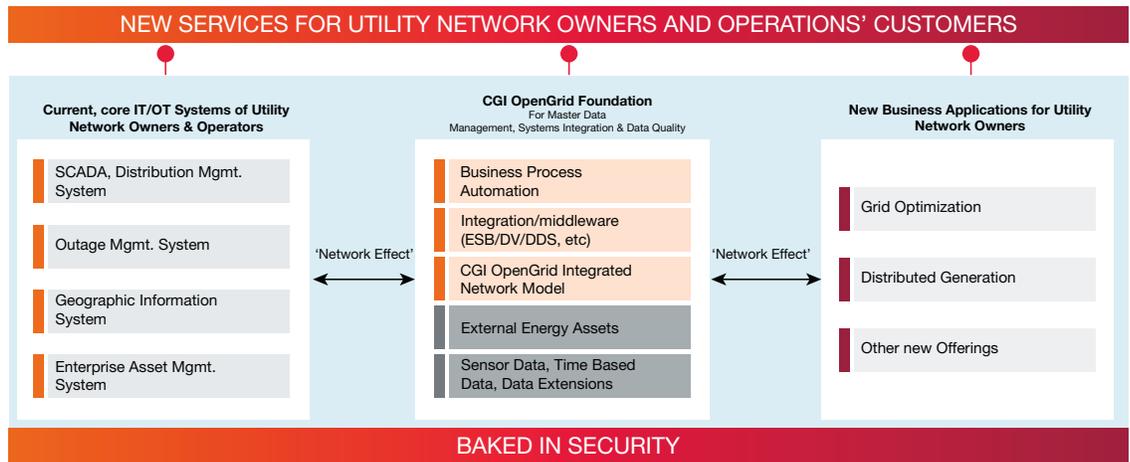
KEY BENEFITS OF CGI'S OPENGRID FOUNDATION

- Delivers a single view of a utility's network model against which all data and applications can be assessed
- Enables data-driven insights to improve grid operation, network planning, investment and event management, and drive new business models to meet changing customer demands
- Improves data quality through automated issue identification with embedded rules and integrated issue management
- Enables faster adoption of emerging technologies and applications to deliver innovative new services more rapidly

Utilities need to rethink how they become more innovative and agile—and data is the key enabler.

CGI OpenGrid Foundation is the heart of the CGI OpenGrid360 suite

Accelerating innovation through data

KEY FEATURES OF CGI OPENGRID FOUNDATION

- **Network model**: provides trusted reference data for your network and everything attached to it, serving as the critical mechanism to assess the network

- **Integration/middleware layer**: provides an enterprise master data management (MDM) function that connects with all of the underlying technologies from which you need to pull and push data

- **Business process automation**: supports a data-centric approach and enables low-cost, data governance across the organization through enduring data quality reports, eliminating one-off initiatives

Low-impact approach

The CGI OpenGrid Foundation is compatible with your existing architecture, infrastructure and data approach and can be delivered in North America and Europe, with onsite, onshore and offshore implementation available. It uses a technology-agnostic cloud architecture, integration techniques that comply with the Common Information Model (CIM) to facilitate data exchange, and built-in security that aligns with regulatory needs. Modular, scalable and interoperable, the solution can be deployed incrementally to deliver future capabilities, systems and functions, and can be configured to your core systems to maximize business benefits.

CGI in Utilities

As the move to a secure, affordable and fair low-carbon energy ecosystem intensifies, CGI supports the energy transition by helping utilities transform to address growing volumes of distributed energy resources, exploit data insights and other digital enablers to diversify revenue streams, support real-time operational excellence, and enhance customer experience, all while keeping the business secure.

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.