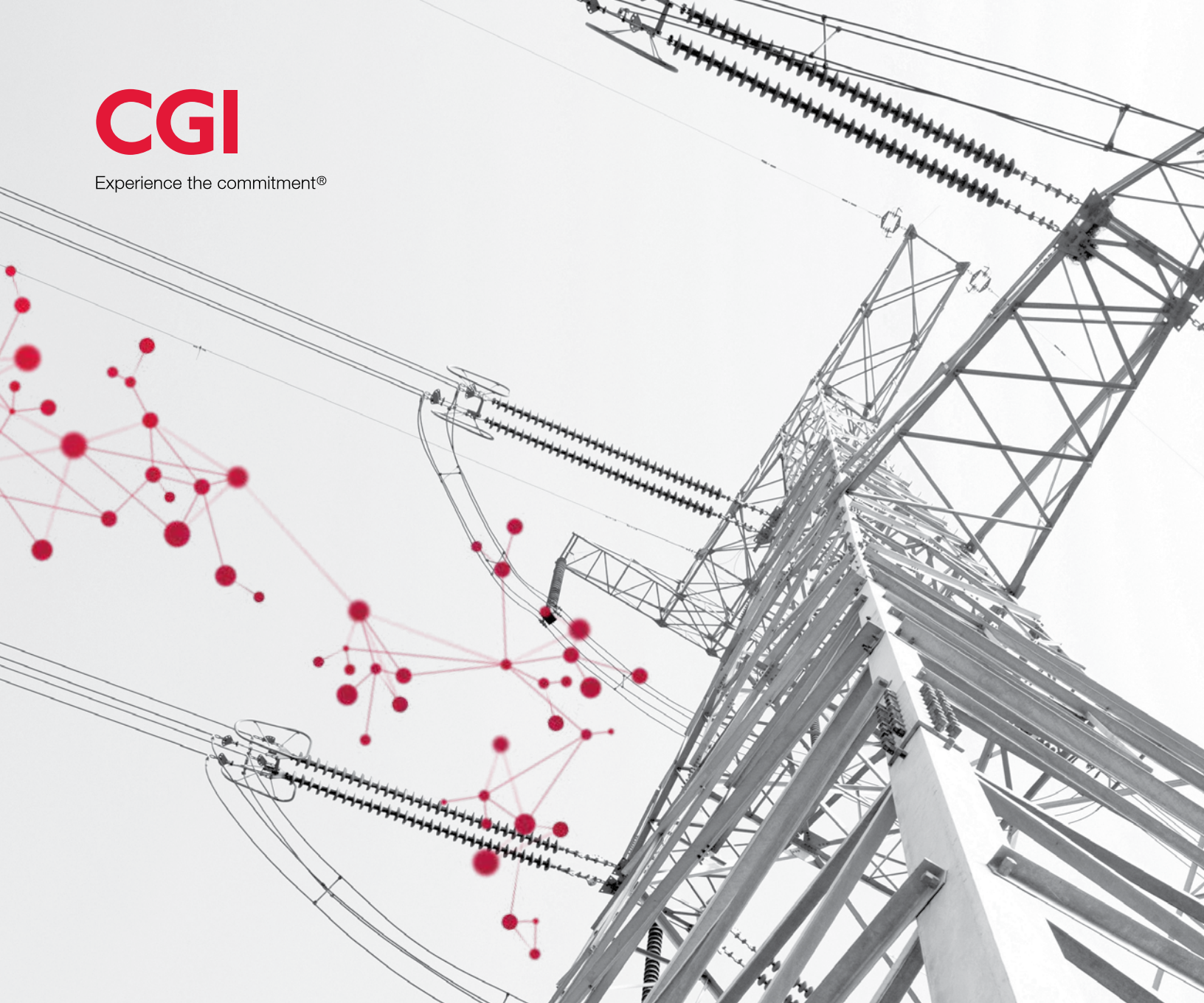# ARM2

Advanced Enterprise Work and Asset Management for Performance-Driven Utilities

Asset & Resource Management (ARM) 2

CGI's Asset & Resource Management (ARM) 2 suite is a solution designed to streamline the business processes that support utility operations with a specific focus on enterprise asset management (EAM) for transmission and distribution (T&D). ARM 2 provides unparalleled support to performance-driven utilities in their drive to create, expand and maintain a first-class network infrastructure and operation. ARM 2 is the only enterprise work and asset management solution designed to support the management of all T&D utility work, assets and resources.

Driving visibility and performance across the enterprise

ARM 2 provides T&D utilities with unparalleled organizational control over assets, work, resources and field processes allowing companies to manage the enormously complex and dynamic combination of those assets, work and resources. ARM 2 provides the automation, integration and business intelligence needed to meet this challenge with true efficiency and effectiveness. Through integration with geospatial information systems (GIS), supply chain, customer care and billing, plant and property accounting, service inspection, timesheet, human resources, and other strategic systems, companies are able to maximize business performance.

Innovative functionality

Leading electric, gas and water T&D utilities are focused on moving to more customer-centric business models and achieving operational excellence. By using innovative technology to optimize field activities and gain complete visibility into all work related to distributed assets, they are improving operational performance and regulatory compliance while reducing costs. ARM 2 has the products and solutions to help companies meet these demands.

ARM 2 boosts performance and productivity through:

- Integrated views of all assets and resources

- Flexible, rule-based workflow creation

- Sophisticated business analytics for decision support

- Easy integration with other enterprise systems

- Spatial presentations and visualizations for more readily actionable information

- Optimized maintenance and compliance regimes

Product offerings

Industry-defining utility work management capabilities

Work Manager

Work Manager is designed specifically to help utilities standardize their business processes to ensure work is efficiently executed and bottlenecks are quickly identified. It excels in managing construction work through utilization of construction units and also allows for management and execution to support T&D operations for all types of work. With ARM 2, Work Manager upgrades into the realm of HTML5 with a state-of-the-art web user interface providing significant usability and productivity improvements. It helps utilities:

- Drive collaborative work execution in the office and field

- Gain visibility into resource workload, adherence to due dates and progress of ongoing work

- Define labor, material, equipment and contractor requirements accurately, using construction units

- Support contractor work and resources with built-in security for individual contractors

- Incorporate spatial abilities

- Integrate analytics

InTouch

Introduced as a new application with ARM 2, InTouch is a standalone module and is specifically designed for executing back-office work with a smartphone or tablet. InTouch enables visibility and interaction with many ARM Work Manager capabilities and can be performed outside of the office. With InTouch, a subscription service allows users to manage subscriptions and notifications so they never lose sight of any critical, time-sensitive work tasks. It helps utilities:

- Review and update key work information: Attributes, tasks dates, task completions, comments and attachments or drawings from the field

- Receive email and SMS alerts for system and subscribed notifications

- Ensure accessibility is no longer limited to desktops

- Maintain a low footprint, while including a wider audience within and outside the organization (e.g., external contractors and temporary staff)

- Provide a desktop alert functionality for employees in the office

- Enable contact with employees who are responsible for any task via email, SMS, Skype or phone

Advanced asset management focus on current and emerging needs for utility network operations

Asset Manager

Asset Manager unifies all asset data within a single asset repository to facilitate compliance tracking, maintenance management, asset risk management and asset investment planning. By providing a unified view of all work related to their distributed assets, ARM Asset Manager assures work is performed on the right asset at the right time and helps increase regulatory compliance in the process. It offers utilities:

- A single asset repository

- Efficiency within the operations and management (O&M) function through automation of work identification based on rules and conditions together with planning capabilities incorporated to reduce multiple visits to the same location

- A rules engine that evaluates cyclical maintenance, criticality, regulatory requirements, revenues and valuation to initiate work and follow-up activity

- Integrated geo-spatial visualizations

- Enabling technology to support regulations such as NERC CIP, DOT 192, DIMP and TIMP

Asset Investment Planner

Also new with ARM 2, Asset Investment Planner (AIP) enables faster, data-driven asset investment decisions that help utilities to mitigate risks, drive performance, improve customer service and generate sustainable investor returns through more effective asset investment. AIP is fully integrated into ARM 2 to extract asset performance data and automatically generate asset investment plans and supporting projects or work. It offers utilities:

- An out-of-the-box integrated solution with market-leading risk and investment tools

- Sophisticated decision optimization capability

- Investment decisions based on high-quality information

- Access to a large library of asset models for better comparisons

- Trend and prediction tools

- The ability to integrate and consume data from other enterprise sources

- The facility to generate unlimited investment scenarios

Resource optimization tools tailored for multi-skilled, multi-activity workforces

Scheduler

Scheduler allows utilities to manage commitments with confidence by identifying priorities, geographic locations and the skills necessary to perform any type of work. By evaluating resource and schedule constraints and tracking travel times, onsite hours, certifications and qualifications, Scheduler allows for both manual and automatic scheduling and re-optimization of work. Managing this across the entire enterprise helps to remove inefficiencies and reduce costs while improving productivity. It offers utilities:

- A proven solution for all work types: From construction to maintenance and service orders

- The ability to plan, schedule and dispatch complex construction and maintenance work in processes uniquely geared for T&D operations

- Optimized work scheduling and appointment-making throughout the work lifecycle

- Enterprise-wide visibility of work progress and availability

- Elimination of operational silos and maximization of efficiency for construction and maintenance tasks

Optimizer

Optimizer offers an enterprise view of all work and resources, while continuously assessing and optimizing schedules based on the changing priorities of work and a crew's current status, location and skill set. The result is the right work, dispatched to the right crew, at the right time. Optimizer is fully configurable to automatically build efficient schedules to meet your business needs while fully utilizing resources. It offers utilities:

- Full automation of scheduling and dispatching

- Dynamic response to schedule wreckers

- Constraint-based scheduling
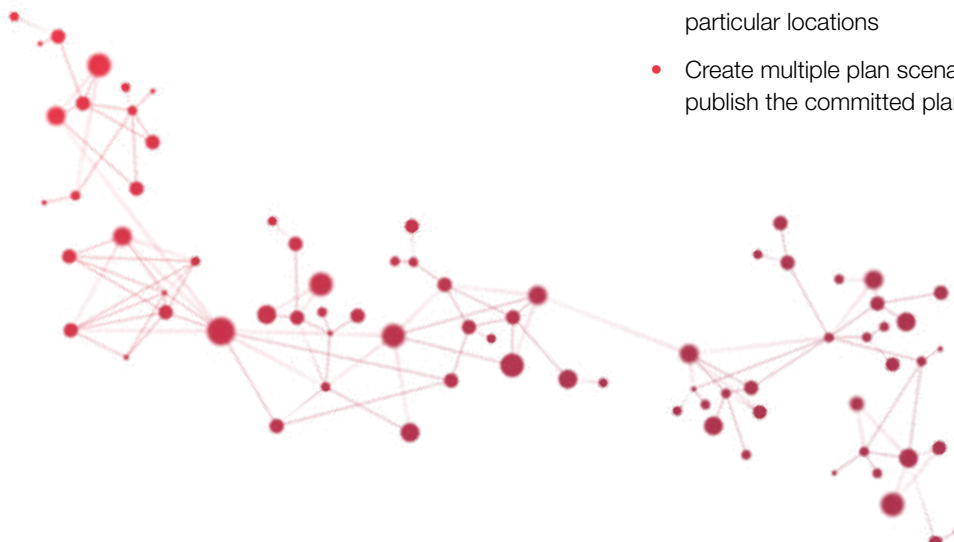
Appointment Maker

Appointment Maker provides customer-facing representatives with a real-time picture of existing demand and availability of resources when choosing appointments for customers. Customer representatives can search date ranges and configured time frames to identify available appointment slots and their associated cost. This tool makes it possible for organizations to improve appointment-making confidence with a true picture of availability and required resource skills in specific geographical and organizational areas. It helps utilities:

- Control cost

- Enhance customer service

- Provide configurable search parameters by work type to ensure appointment date ranges and availability meet business requirements

- Improve customer satisfaction, without over-committing field resources

Planner

New to ARM 2, Planner allows utilities to understand upcoming work demands, balance commitments and resources, and plan personnel and equipment in the same way they plan materials. ARM Planner offers visibility into resource demands versus true resource availability while providing a look into the future. This facilitates resource optimization, reliable work commitments and actionable plans that can be applied to day-to-day operations and work processes. It helps utilities:

- View both known and forecasted work

- View resource skill availability based on known and forecasted availability

- Modify date commitment details and dependencies for work

- Modify resource locations to level demand and resources

- Add or remove contractor resources in particular locations

- Create multiple plan scenarios and then publish the committed plan

Mobile workforce management capabilities ranging from service work to complex construction tasks

Field Manager

Field Manager provides a mobile reporting platform designed to capture and return quality data for all work types, including emergency situations, customer service, asset and maintenance (procedure-based) work, or construction (compatible unit-based). This platform completes the work execution loop by providing a mobile reporting function that enforces standardization of the work execution process. Field Manager provides an enterprise reporting function to support a utilities' operation and a forward-thinking approach that allows field workers to perform any type of work and capture information out in the field. It offers utilities:

- A single mobile reporting function that supports all work types and enables true process and workforce unification

- Streamlined business processes that lower work execution cost through removal of labor intensive dispatch and work reporting functions

- Improved data quality through provision of data validation at the point of data entry

- Enhanced levels of customer service through improved visibility of work status and provision of real-time optimization based on in-day scheduling constraints

Field Manager Lite

Field Manager Lite is CGI's web-based mobile solution and is comprised of a web server and an HTML5-based UI that helps extend the power of enterprise workforce management to resources in the field. The solution provides crews in the field with the information required to extend their decision support capabilities while supporting full work order lifecycle management, extending the back office to the field. Field Manager Lite is a browser-based application and can be used on devices such as iPads or smartphones. It helps utilities:

- Provide a zero-footprint mobile solution that can be utilized on any device and is most suitable for short-cycle service work

- Create work requests and activities while in the field

- Capture work request details and attributes along with user-defined fields

- Incorporate spatial capabilities to review crew and work locations within ARM and Field Manager Lite

- Integrate offline capabilities that offer functionality anywhere, anytime—enabling effective field service

- Create custom HTML forms

Spatial and analytics solutions for complex decision making

Spatial

Embedded spatial views enable GIS and ARM 2 sourced data to be overlaid on web-based maps. Interaction between the maps viewer and ARM 2 allows you to perform spatial queries and extract spatial data to provide the analysis and understanding of your distributed assets with respect to work. This analysis will help utilities to better deal with the complex decision making that requires companies to understand how information, events and actions will impact business objectives. It helps utilities:

- Reduce the need to switch between GIS and ARM

- Enable improved linear asset management

- Geocode data

- Enhance ARM support for situational awareness

- Increase accountability within the work execution function

- Enable refinements to be identified to the scheduling algorithms

- Reduce the likelihood of reputational damage

- Use spatial resource management analysis to provide insight into schedule adherence

- Overlay data from other maps/systems (weather data, parking information)

- Make extensive use of analytics across the whole transmission and distribution operation

Performance Manager

With business analytics for network asset, work and resource management, ARM Performance Manager gives T&D utilities ready access to key metrics and the ability to customize dashboards and reports, freeing users from restrictive, pre-defined reporting frameworks. It helps utilities:

- Obtain comprehensive, near real-time key performance indicators for T&D asset maintenance and compliance

- Present performance views of the utility's workflow processes from initiation through to closing of all work requests

- Provide a workflow platform for tracking work throughout its life cycle

- Include metrics for scheduling adherence, work commitments, change impacts, accuracy and resource utilization

- Create easy to produce, vendor independent industry standard dashboards and reports

- Generate spatial presentations for situational awareness

The CGI commitment

CGI offers services and solutions across the utilities industry, including the electricity, downstream gas, and water and waste sectors. We have deep experience in both regulated and unregulated markets and have formed long-term client relationships with the world's largest utilities. We partner with utilities to deliver innovative technologies that meet current and future requirements and help ensure long-term growth and success.

CGI's utilities experience and expertise includes:

- Major presence across the Americas, Europe and Australia with 6,000+ professionals dedicated to the industry

- 250+ clients worldwide, including 8 of the 10 largest utilities in both Europe and North America

- Design and build partner for 11 of the 17 central market energy systems in the world today

- Provider of asset, resource and workforce management systems for 60 of the top 100 utilities in North America

ARM 2 enhancements

CGI is committed to our T&D utility clients and assuring these critical infrastructure providers have access to all the innovative technology needed for cost-effective operations and optimal performance. Enjoy the recent improvements with ARM 2. These include:

- Latest flexible HTML5 user interface and web architecture

- Integrated operational analytics allowing users and managers to readily view KPIs

- Expanded mobility choices for tablets and smart phones

- Fully integrated spatial views for work and assets with Esri, Smallworld, Google and Bing

- T&D asset management that tracks more asset classes, better handles linear assets, and offers more refined rules to drive actions and improve compliance

- An Integrated Asset Investment Planning module for T&D

- Packaged deployment methodology for upgrading customers

- Security framework consistent with ISO 27001

- A hybrid-cloud based option for routine workflow and data collection activities

- Compliance with web services standards, easing integration

- SharePoint document management integration

- Support for Java SE8, Oracle 12c, WebLogic 12c and .Net 4.5

Solution offerings

CGI's ARM 2 offers utilities:

- Gas network compliance management

- Contractor management

- Major pipeline construction

- Intelligent asset management

- Resource optimization

- Smart meter deployment

- ARM Express

- Construction work management for distribution utilities

- Electricity utility asset management

- Mobile workforce management for complex work

- Distribution work and asset management analytics

- Vegetation management

- Meter asset management

CGI

For more information about CGI's ARM suite for utilities, visit
cgi.com/en/solutions/asset-resource-management.

cgi.com