



BEYOND BILLING:

Unlocking the **Full** **Operational Value** of Your Smart Meter Infrastructure



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Utilities have invested billions in smart meter infrastructure, establishing a strong digital foundation for the modern grid. These expenditures already deliver value by enabling remote meter reading, supporting billing operations, and providing basic outage detection. **But today's smart meters are capable of much more.**

As meter technology evolves, more intelligence is generated at the grid's edge by the meter itself. Advanced Metering Infrastructure (AMI) 1.0 and 2.0 systems give utilities of every size access to a continuous stream of operational intelligence that can be leveraged to manage the grid proactively. By linking that meter data with daily operations, utilities can improve reliability, reduce the number and duration of outages, strengthen field operations, and enhance customer service.

While there is a tremendous opportunity to unlock greater value, filtering and analyzing petabytes of meter data can be daunting. Traditional wisdom holds that separating actionable data from all the noise requires building complex architectures that are both costly and time-consuming. But there is a better way.

A vendor-neutral, no-code operational platform — one that sits atop AMR, AMI, and back-end systems — leverages a robust, data-driven rules engine to bridge the gap between raw meter data and prioritized field action. This leads to improved reliability, faster operational decision-making, and better outcomes for both the utility and its customers.



On the AMI Journey, All Roads Lead to **More Data**

Utilities are at different stages in their AMI journey, but regardless of where they stand, the data their meters generate holds significant operational value.

AMI 1.0 systems automate billing data collection, enabling utilities to create time-of-use pricing structures that more accurately reflect the true cost of energy delivery. Plus, their remote disconnect switches significantly reduce truck rolls for routine connects and disconnects.

“That meter is also a sensor that's sitting on the side of a house,” said Philip Mezey, former CEO of Itron. By deploying smart meters at scale, he explained, utilities have built a comprehensive network that extends visibility all the way to the edge of the distribution system — measuring power flow, detecting outages in real time, and facilitating proactive customer communication rather than waiting for calls to come in.

This visibility is particularly beneficial when assessing storm damage.

"Before smart meters, we waited for the customer to call us and tell us they'd lost power. With smart meters and our analytics behind the scenes, we are able to be more proactive in our storm response, rather than just simply reacting."

MITCH DAVDA,

Director of Meter Operations, Duquesne Light Company, Pittsburgh

As more intelligence is embedded directly in the meter, AMI 2.0 networks enable utilities to process and act on data at the source. That capability becomes increasingly critical as the grid grows more complex. The rise of solar panels, batteries, and EVs means power no longer flows in just one direction, and the meter's ability to detect and report on these conditions in near real time gives utilities the visibility to manage these new realities safely and effectively.

The volume and variety of data that today's meters generate present both an enormous opportunity and a real operational challenge — one that begins with understanding what the data is actually saying.





What Smart Meters Are **Already** Telling You

Today's advanced meters continuously generate intelligence that goes well beyond billing intervals. Voltage monitoring, once possible only at the substation level, can now be performed at the meter itself. Malfunctioning field equipment that causes power quality issues can be detected and flagged. And, by analyzing readings across the network, utilities can identify equipment that is trending toward failure — enabling them to act before an outage occurs.

"If you can mitigate a transformer that is being overloaded before it fails, versus after, there's a significant financial difference," said Davda, noting that proactive intervention can reduce both the duration of outages and supply chain challenges.

Advanced meters can also spot broken neutrals, detect energy theft, and flag backfeed conditions that pose safety risks to field crews. Taken together, these signals transform the meter into an early warning system. But without the right structures in place, the volume of data can be as overwhelming as it is valuable.

"It's a blessing and a curse. Vast amounts of data are being collected, but trying to figure out what is actionable — separating the signal from the noise — is very challenging."

PHILIP MEZEY,
Former CEO of Itron

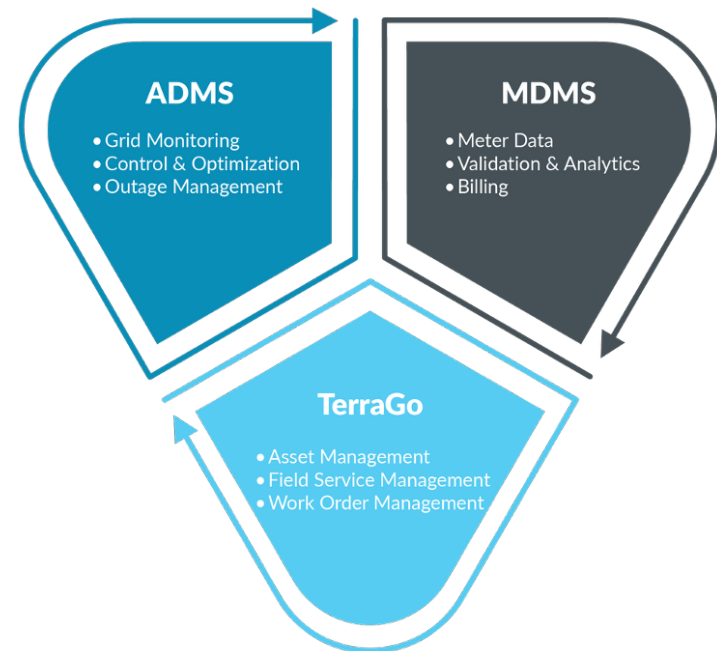
That challenge is compounded by the fact that the back-office systems utilities rely on — Meter Data Management, Head-End, Customer Information, and Advanced Distribution Management Systems — were each built to optimize a specific function, not to deliver cross-system operational intelligence. And meter data is only part of the picture. Other operational data sources, including outage management, truck location, and Geographic Information Systems (GIS), are also siloed. This makes it difficult to compile the full field intelligence needed to anticipate and diagnose problems effectively. The result is signal abundance without operational clarity.

FROM SIGNALS TO ACTION:

Closing the Operational Gap

Bridging the operational gap starts with a unified operations layer that sits above existing systems and transforms meter data into operational value. This layer normalizes data across all meter generations, vendors, and communications protocols. In addition to applying configurable business rules that convert signals into prioritized field actions, it connects back-office and operational systems, extending their value rather than replacing them.

Unlike the large-scale data architectures traditionally proposed to solve this problem, this approach is designed to be lightweight and iterative. Rather than engaging outside consultants to build expensive, hard-coded algorithms, it puts configuration in the hands of experienced field personnel.





How No-Code Architecture **Accelerates** **Operational Value**

A no-code platform lets users configure, adjust, and update business rules and workflows without writing a single line of code. It enables real-time testing, iteration, and optimization of field operations, transforming operational agility from an aspiration into a competitive advantage.

For utilities, this matters. A no-code operations layer can be deployed rapidly and configured to reflect the specific workflows, priorities, and grid conditions of any utility environment. Rules can be updated by operations teams in real time as conditions change. It also embraces the heterogeneous reality of many utility environments, supporting multi-vendor, multi-generation meter portfolios without requiring infrastructure standardization.



The operational impact compounds across every stage of utility operations:



FASTER, SMARTER AMI DEPLOYMENTS

Eliminate manual data entry, enforce data quality at the point of capture, and compress deployment cycles to accelerate return on AMI investment.



FASTER, MORE EFFECTIVE OUTAGE RESPONSE

Detect and validate outages before customers call and prioritize restoration based on customer count, critical infrastructure, and real-time grid conditions.



PROACTIVE GRID MANAGEMENT POWERED BY EDGE INTELLIGENCE

Identify transformer stress, communication issues, and system anomalies before they cause outages; route crews to the highest-priority issues based on grid conditions and customer impact — not alarm volume.



FIELD OPERATIONS THAT SCALE WITHOUT PROPORTIONAL HEADCOUNT GROWTH

A 24x7x365 intelligent operations layer monitors the full network, coordinates field crews, and closes the loop on every event — putting the meter intelligence at the fingertips of field crews.



REVENUE PROTECTION THROUGH OPERATIONAL INTELLIGENCE

Surface billing exceptions and unbilled consumption through meter telemetry, reducing revenue leakage across the full customer lifecycle.

A photograph of two utility workers, a woman and a man, wearing hard hats and high-visibility vests. They are standing outdoors near power lines, looking at a tablet held by the woman. The background shows a clear sky and the structure of a power line tower.

Six Questions to Ask of Any Meter Operations Platform

1. Does it work across your existing infrastructure today — AMR, AMI 1.0, AMI 2.0 — without requiring a full technology migration first?
2. Is it vendor-neutral and capable of multi-vendor MDMS, HES, and field system integration?
3. Can it be configured and changed by operations teams without software development engagements or IT dependencies?
4. Does it extend the value of your existing back-office investments rather than replace them?
5. Does it deliver actionable intelligence directly to field crews and operations teams — not just better reports for back-office analysts?
6. Is there a proven track record of managing large-scale multi-vendor utility asset environments in production?

The Fastest Path to **Measurable Results**

Operational value is available today, regardless of where a utility is in its AMI journey. Waiting for full AMI 2.0 deployment is not a prerequisite — the data utilities need to improve reliability, protect revenue, and optimize field operations, which is already flowing from the smart meters they have in place.

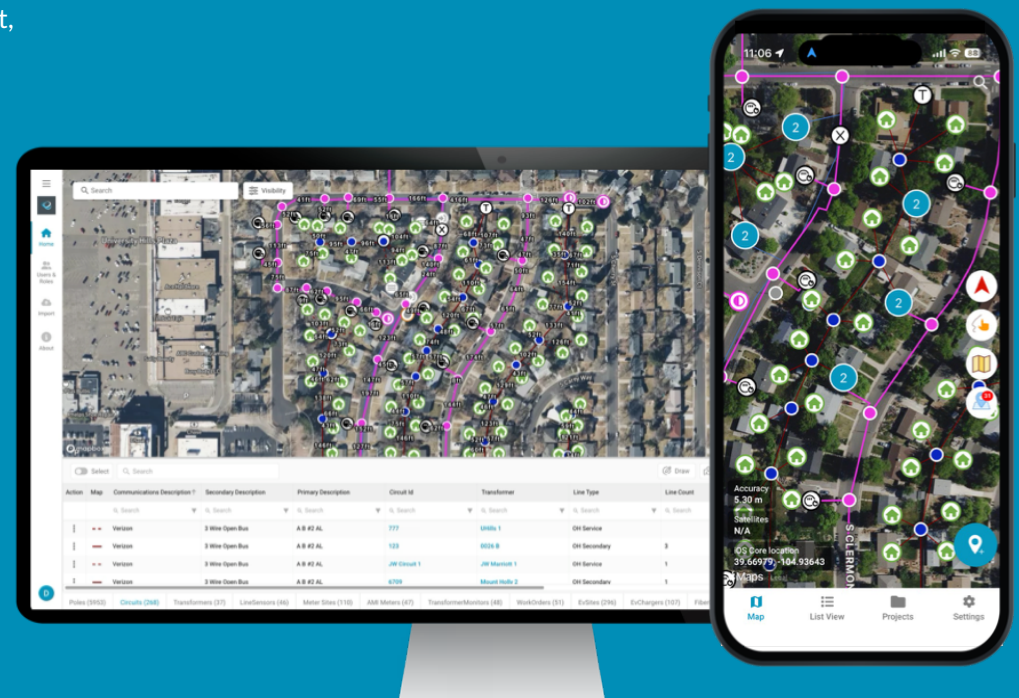
TerraGo's no-code, vendor-neutral operations platform is designed to meet utilities where they are. By unifying field crews, meters, vendors, and back-office systems into a single operational backbone, TerraGo connects the full range of utility systems regardless of vendor, generation, or communications protocol.

Guided mobile workflows and built-in validation accelerate AMI rollouts and reduce rework. Intelligent work order creation, assignment, and real-time tracking ensure crews are in the right place at the right time, with the right information. And as a fully managed SaaS solution, TerraGo configures, deploys, monitors, and maintains system integrations so utilities can focus on operations rather than infrastructure.

The value of deploying an intelligent operations layer compounds over time. Early adopters gain immediate improvements in crew productivity, outage response, and revenue protection, while building the operational foundation for predictive maintenance and grid optimization as their infrastructure evolves.

Smart meter infrastructure investments are already delivering value. The next frontier is operational — connecting meter intelligence to field operations to enable faster decisions and more proactive responses across the grid.

Contact TerraGo to learn how your utility can start turning meter intelligence into operational action today.





TerraGo is a comprehensive no-code SaaS platform for field operations, asset management and work management, with more than 20 years of experience helping utilities, cities and infrastructure operators modernize critical operations. TerraGo's highly configurable platform enables organizations to rapidly deploy and adapt operational workflows through configuration rather than custom development, accelerating time-to-value while reducing IT complexity.

Trusted by 9 of the 10 largest U.S. utilities to manage millions of assets, TerraGo helps organizations transform smart meter and grid-edge data into operational action. By operationalizing AMI telemetry, meter alarms, outage notifications, voltage events, tamper alerts and other field intelligence, TerraGo automates workflows, prioritizes work, dispatches crews and drives faster issue resolution across the utility enterprise.

TerraGo serves as an integrated operational data fabric, connecting AMI, MDMS, HES, OMS, ADMS, GIS, EAM and other enterprise systems to provide a single operational view of assets, work and field activities. The platform enables utilities to turn disconnected data into operational AI, delivering actionable insights that improve asset performance, increase workforce productivity and support smarter decision-making.

Recognized as an IDC global market leader and supporting award-winning smart city and utility programs, TerraGo helps customers reduce truck rolls, lower operations and maintenance costs, improve service levels, accelerate outage response and maximize the value of smart infrastructure investments. From smart meter operations and grid modernization to field service optimization and asset lifecycle management, TerraGo enables organizations to operate more efficiently, more intelligently and at greater scale.

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