

Outcomes Portfolio Offerings

INFORMATION & GRID MANAGEMENT



DATA MANAGEMENT



GRID OPERATIONS



INTELLIGENCE

AMI & WATER OPERATIONS MANAGEMENT



AMI OPERATIONS MANAGEMENT



GAS DISTRIBUTION
AND SAFETY



WATER OPERATIONS MANAGEMENT



REVENUE ASSURANCE

DISTRIBUTED ENERGY



DISTRIBUTED ENERGY MANAGEMENT



ENERGY FORECASTING



CONSUMER ENGAGEMENT

PREPAYMENT



PREPAYMENT

FLEET ENERGY RESOURCE MANAGEMENT



FLEET ENERGY
RESOURCE MANAGEMENT

Value-added Services

A NEW ERA OF OPPORTUNITIES

Utilities and cities are evolving rapidly to leverage digital technologies and get more value from their investments. Innovations in technology, coupled with dramatic changes in consumer expectations and exponential growth of data—often in disparate, disconnected silos—are driving system shifts for utilities and cities the world over. We have been helping our customers adapt to change, refine business processes and grow for over 40 years—and we can help you harness the power of technology and data to address your challenges, transform your business and help you achieve your business goals.

As utilities and cities have deployed new smart devices, IoT technology, AMI and streetlight networks, they have accumulated a wealth of data and are confronted with new challenges:

- » Deriving actionable, timely insights from the data gathered over time
- » Simplifying enterprise business processes
- » Managing IT environments to support the new business processes enabled by the latest technologies

This sets the stage for a new paradigm of delivering value to *our* customers by enabling you to focus more on *your* customers.

OUTCOMES: DEFINED

Itron introduces the concept of **value-added outcomes**—defined as tangible operational or financial benefits delivered to, and realized by, utilities and cities. Examples of such outcomes-based use cases include:

- » Billing accuracy
- » Water loss detection
- » Revenue protection
- » Outage prevention
- » Energy efficiency
- » Demand response
- » Workforce productivity

Shifting the focus from a particular technology or product(s) to delivering outcomes changes the conversation, so together, we can concentrate on what is most important—solving *your* challenges, unlocking these opportunities and meeting *your* needs.

These value-added outcomes are enabled via offerings that comprise products, services and new business models to alleviate your risk.



We group these value-added outcomes into these categories, specific to your needs:

- » Information and grid management outcomes that deliver actionable insights that unify the high-volume data present in your enterprise
- » AMI and water operations management outcomes that deliver workforce efficiency, business process efficiency and revenue protection
- » Distributed energy management outcomes that allow for higher participation of consumers in energy efficiency and demand response programs, and also allow you to better manage the grid
- » Prepayment outcomes that deliver solutions to reduce debt and increase customer satisfaction while consumers manage payments
- » Fleet energy resource management outcomes that provide an integrated approach to orchestrate and optimize electric vehicle charging for utilities and fleet owners

By consolidating and capturing these outcomes into a unified and streamlined portfolio, our goal is to minimize complexity and maximize simplicity. We are delivering intelligence that empowers.

Outcomes deliver results and value across a broad set of outcomes spanning electricity, gas, water and smart cities, which help you achieve value created from an end-to-end integrated set of solutions.

Comprised of key areas tied directly to customer imperatives, our outcomes are supported by and built upon a cloud foundation. By mapping imperatives across your value chain to our outcomes, we are ensuring that these outcomes directly address and solve your challenges so you can achieve your goals and maximize business operations.

Outcomes capture the value-driven and active process of how data is enhanced from inception at the edge all the way to the back

Bottom line:

We deliver intelligence that empowers.

office, conveying a paradigm shift toward a value-driven mindset and instilling confidence to help you realize your potential.

The Outcomes Portfolio

INFORMATION AND GRID MANAGEMENT



Data Management | 🍐 🗲 🧥



Deliver operational efficiency while revolutionizing and accelerating business value

We provide data management outcomes for smart utilities and cities around the globe, while delivering mission-critical data to support applications for meter-to-cash and beyond—all through an enterprise-wide, highly scalable Itron Enterprise Edition (IEE) MDM solution. By delivering secure, accurate and reliable data to a wide array of your utility billing and analysis systems, IEE MDM can help you:

- » Extend data for growth. Utilize AMI data to extend and expand value to innovative applications such as distributed intelligence and smart city applications
- » Serve as a system of record. Centralize data collection and distribution functions into a single repository from which data can be used to drive business operations and analytic outcomes
- » Deliver high-quality data. Robust validation, estimation and editing (VEE) for interval and register data of energy and water meters. Designed to meet the highest data quality standards, supply billing determinants and support non-billing scenarios

Through the outcomes portfolio, we are unveiling the next evolution of data management. New features and functionality of our leading MDM system, along with edge analytics and superior data quality provisions, provides you clearer insights into the dynamics and interactions of your endpoints, network and customers. Near realtime data streaming and easy access to visualization tools means you are better equipped to evolve your business - opening up new revenue streams and leveraging the power embedded in the Industrial Internet of Things (IIoT).

Over **100** energy and water companies manage data from more than 45 million meters across six continents using our data management solution.



Distributed Intelligence | -



Solve critical challenges facing the world's power grids by enabling an increasingly diverse ecosystem of smart meters, grid devices and distributed energy resources that communicate and collaborate intelligently in real time at the edge of the network. With Distributed Intelligence, business problems are solved with key outcomes such as:

- » High Impedance Detection. Detect high-impedance faults and related grid safety issues utilizing sensing and data processing capabilities without requiring a significant or additional investment in distribution automation equipment
- » Residential Neutral Fault Detection. Provide real-time identification of conditions where the neutral is broken or in poor condition and the customer or transformer ground connection
- » Theft via Meter Bypass Detection. Find meter tampering theft in near real-time with close to 100% accuracy
- » Location Awareness. Effectively use smart meters as grid sensors to know exactly where they are in your distribution network

We deliver these benefits through our Distributed Intelligence outcomes, which are augmented by value-added solutions within our partner ecosystem:

- » Grid reliability. Improve resiliency of the grid via distribution element metrics, real-time outage detection and restoration
- » Distribution network efficiency. Real-time management of distribution network assets (ex: transformers) and voltage optimization
- » Customer service. Optimize load control, demand response and dynamic pricing programs



Grid Operations |

Understand the distribution grid, and optimize investments and quality of service

The grid is becoming more participatory—there are increasing expectations in reliability and service, and regulators are awaiting results from smart grid investments. With Grid Operations outcomes, you can:

- » Aggregate data across operational, transactional and financial silos to garner a better, more intelligent understanding of your business
- » Identify anomalies in order to automatically reroute electric paths away from failed devices or links
- » Improve grid reliability and efficiency
- » Reduce technical and non-technical losses

Through a combination of applications such as Voltage Analysis, EV/PV Detection, Grid Connectivity, Temperature Monitoring, Reliability Analysis, Transformer Load Management and Outage Detection, you now have the tools to gain valuable insight into your operations.

AMI & WATER OPERATIONS MANAGEMENT



AMI Operations Management | 🌘 🧚 🧥



Realize operational savings, understand the state of your system and apply corrective actions where and when needed

Your business processes are now dependent on timely and accurate meter data. AMI systems provide data on millions of endpoints. Your focus should be on meeting the needs of your customers; not on dealing with AMI data. AMI Operations Management provides the tools, integrated with state-of-the-art data management applications to deliver accurate functional capabilities that enhance AMI operational efficiencies while managing and operating these systems at scale. By integrating seamlessly into your business operations, we take the necessary steps to ensure operational excellence, making your job easier.



Gas Distribution & Safety | 🕟



Enhance safety and efficiency through advanced technology and services

As gas distribution networks age, they are increasing in complexity and creating network resiliency issues. Coupling that with high-profile incidents and regulatory concerns results in more demanding standards and compliance. By utilizing sensors, communication networks and value-added analytics, response and repair times are optimized for safety incidents and associated business processes for you and your customers. Our gas distribution and safety offerings deliver the following outcomes:

- » Valve management
- » Cathodic protection
- » Methane detection
- » Pressure management
- » Water ingress

Revenue Assurance | 🦊 🧥





Detect, investigate and mitigate non-technical losses

Revenue Assurance allows you to quickly identify, monitor and manage potential losses and revenue leakages. Alleviate safety concerns and enhance revenue by utilizing analysis and investigation tools such as algorithms, data filters and pattern detection to identify meter tampering and service bypass conditions. Revenue Assurance can help you:

- » Increase revenue. Combat energy and water diversion and loss through analytics
- » Alleviate safety concerns. Identify unsafe conditions and reduce safety issues that can be caused by meter tampering
- » Improve business operations. Greatly increase the accuracy, efficiency and effectiveness of managing the revenue assurance process

Over 40 million endpoints are analyzed every day using our Revenue Assurance outcome across 35 utilities.



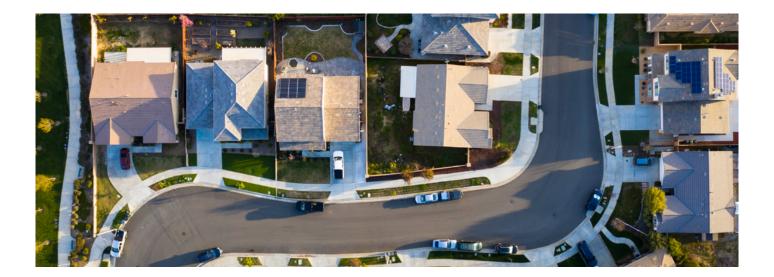
Water Operations Management | (



Optimize and efficiently manage water distribution networks

Asset management, revenue protection, operational efficiency, regulatory compliance and customer service are top of mind for water providers. By holistically optimizing distribution operations to efficiently manage your water networks, Itron helps you transform your network into a smart water network. Water Operations Management outcomes improve operational visibility, minimize leaks, reduce labor costs, optimize network operations and proactively improve the customer experience. These outcomes help you identify, prioritize and take action to reduce non-revenue water for both real and apparent water losses in your distribution network.

Utilities are reducing water loss by nearly 20%, identifying leaks and restoring water service within three days after catastrophic natural disasters using our Water Operations Management outcomes.



DISTRIBUTED ENERGY MANAGEMENT



Distributed Energy Management | -



Empower and engage your customers as active participants to make your grid more resilient and effective

Distributed energy resources (DERs), such as solar PV, are converting customers from energy consumers into energy producers. Increasingly, customers want more say in their energy future. Armed with abilities to effectively measure, monitor and orchestrate DERs, you can develop powerful programs that empower and engage your customers as active and constructive participants in the modern grid. Our portfolio of solutions also allows you to know where DERs are in your grid, identify and forecast their impacts and deploy controllable assets to improve grid efficiency and operations.

Energy Efficiency & Demand Response

Optimize a myriad of new resources on the grid

Deliver innovative demand response and energy efficiency applications on the edge of the distribution network—not just in the back office. With Distributed Energy Management solutions, combined with edge intelligence processing capabilities, we deliver on the promise of near real-time, autonomous and local demand response, and more engaging energy efficiency programs. Add to that the ability to integrate, forecast, measure, monitor and orchestrate distributed energy resources on the edge of the network, and suddenly you can ensure grid reliability and efficient utilization like never before.



Energy Forecasting | 7





Receive accurate, real-time electricity and natural

For four decades, Itron has helped energy companies understand and anticipate changes in energy demand; changes that drive both strategy and business operations. We combine industry-leading

Over 3 million energy management devices are enrolled and deployed via our mass market demand management programs.

forecasting knowledge with innovative software solutions and service to deliver distinctive business intelligence and outcomes. We have the expertise in all aspects of forecasting, ranging from very short term to very long term.

Forecast as a Service

Receive accurate and reliable forecasts

With Forecast as a Service (FaaS), all you need to do is provide updated energy data and Itron delivers updated forecasts as frequently as you need them. You get the power and accuracy of the Itron system without incurring the upfront cost of acquiring hardware and software or incurring the ongoing cost of operating and maintaining the system.

PREPAYMENT

Prepayment | 🍐 🗲 🧸

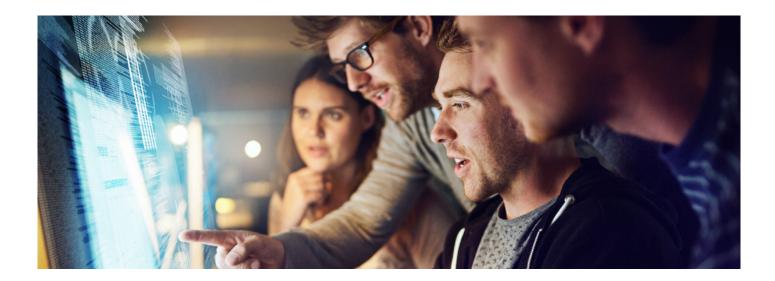




Engage consumers and enhance revenue

Prepayment solutions enable you to provide a higher level of service to your customers and empower them to directly and proactively manage their energy usage and costs. Likewise, you can protect revenue, reduce write-offs, improve cash flow and customer satisfaction, save administrative costs and reduce disconnects for non-payment. Prepayment solutions also enable you to analyze consumption, manage budgets, provide more payment flexibility, simplify utility operations, enhance revenue and ultimately, retain customers.

85% of customers are satisfied with utility prepay services and reduce write-offs by 80% or more



FLEET ENERGY RESOURCE MANAGEMENT

Fleet Energy Resource Management | -

Accelerate the adoption of electric vehicles, orchestrate their charging and other distributed energy resources via analytics and control to create value for you and fleet owners with Fleet Energy Resource Management. As an extremely flexible solution, you can start with simple charging management while also providing expanded distribution grid insights, then expand to more complex solutions through solar, storage and optimization.

VALUE-ADDED SERVICES

Enable value-added services, delivered to you in a cost-effective and repeatable way

Managed Services | 🌢 🗲 🥎



Focus on operations and maximize value from key applications

There's no system or network we can't manage. From application hosting to delivering operational outcomes via SLAs, we'll accommodate virtually any level or combination of managed services that fit your needs. We own the outcome you've engaged us to deliver (we'll even tie our compensation to your success).

Over 1,000 utilities, comprised of over 60 million endpoints, utilize our managed services.

Application Management as a Service

Optimize performance and efficiently maintain solutions

A fully supported managed services model allows your resources to focus on the critical issues that drive your business while Itron keeps your technology solutions current, optimized for performance and efficiently maintained. This allows you to maximize the value from your key applications. Through a managed services model that utilizes a secure, cost-effective and scalable cloud platform, we'll gather, host and analyze your field network data—and then leverage it to help you make the most of your investment.

Network as a Service

Accelerate your business benefits without the capital outflow and the operational overhead of managing your own network

As you embark on the journey of deploying new IoT applications, Itron's turnkey Network-as-a-Service (NaaS) option reduces both risk and up-front costs while delivering improved time-to-value.

As a NaaS customer, you will enjoy access to Itron's IoT network for a monthly network access fee per device. Itron assumes responsibility for deploying, extending, monitoring and maintaining the network, and will provide service-level guarantees for network availability and performance. You avoid upfront capital expenditure for procuring and deploying network equipment and ongoing operational expenditure related to managing and maintaining such a network.

Itron also provides options for private or shared network access, providing you with an additional layer of flexibility. Combined with our portfolio of other managed service offerings, the NaaS service will help you accelerate your time to value realization, minimize related risks and retain focus on your core business.



YOUR DIGITAL TRANSFORMATION PARTNER

Itron has decades of experience helping utilities and cities optimize their operations, increase efficiency and become more effective across their business. We stand ready to help you navigate the changes brought about by digital transformation and deliver the business outcomes you need to succeed.

- » We solve problems and unlock value by starting with the "end goal in mind," serving as a strategic partner who will be there with you at every step of your journey.
- » We deliver success you can measure through outcomes that produce measurable results and ROI, including increased revenue, reduced costs, reduced risk, improved customer satisfaction, and enhanced safety and reliability.
- » We deliver actionable insights with advanced analytics that help you derive more value from your investments in devices, networks and enterprise data.
- » We keep you state-of-the-art by understanding the latest industry trends and advanced technologies. Rely on us to deliver business value every day by taking responsibility for your infrastructure, systems and processes so you can focus on continuous improvement of your business operations.
- » We deliver innovation and are recognized worldwide for industry-leading solutions and services that enable and empower our customers.
- » We deliver with agility through infrastructure hosting and multiple delivery methods. We reduce your risk and take responsibility for delivering the outcomes and the experience you expect for you and your customers.

With more than 27 years of delivery service experience, managing over 400 projects simultaneously across the globe via secure cloud, mobile, on-premise and hybrid models, we have the knowledge and expertise to deliver the outcomes you expect and what your business needs—thereby delivering you intelligence that empowers.



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