Oracle Utilities' Integrated Platform Enables Greater Time to Value

Introduction

Accelerating innovation is the key challenge facing utilities around the world. Numerous business drivers are rapidly changing our utilities industry, and the speed with which this change is occurring continues to accelerate.

The pressure on utilities to run their operations better and more efficiently has never been stronger. Consumers are demanding more personalized, individual service, while sustainability and efficiency are reducing utility revenues, and putting additional pressures on asset reliability. Real-time data and analysis, from processes across the utility enterprise, are essential to meeting these increased demands.

Consequently, electric, gas, water and wastewater utilities are now shifting their attention from business-as-usual to the urgent need for faster business processes, reduced process latency, and quicker access to data for swift, actionable analysis and decision making in order to respond more quickly to the changing industry environment. Consolidation of information and processes across the utility enterprise, and interoperability between technology, applications and solutions, is of paramount importance in this accelerated environment.

Oracle Utilities recognizes the necessity of being able to change quickly, and our supporting technologies are a critical component in utilities' ability to adapt and adopt new and innovative business processes and solutions. We have made significant investment in a common platform and the migration of our applications to that platform. Our best-of-breed solutions address interoperability pain points. Innovative technology and pre-integrated solutions ease the many challenges utilities face in today's environment.

As well, Oracle's hardware and software products are designed and tested as an integrated, end-to-end stack in order to provide users with a complete, comprehensive solution, offering optimum functionality, top performance, and reduced complexity. As a complete systems provider, Oracle can offer the maximum level of integration of hardware and software components, delivering the best value in the industry.

The Challenge

Ultimately, integration is the reason most companies do not have agile processes. There are three contributing factors at play here:

» Disparate, disconnected systems that aren't designed to communicate with each other.

» A lack of alignment and understanding between IT and the business.

» Cumbersome handoffs between teams when managing and resolving problems due to nonstandard technology used to integrate across applications, as well as a lack of exception handling ability.
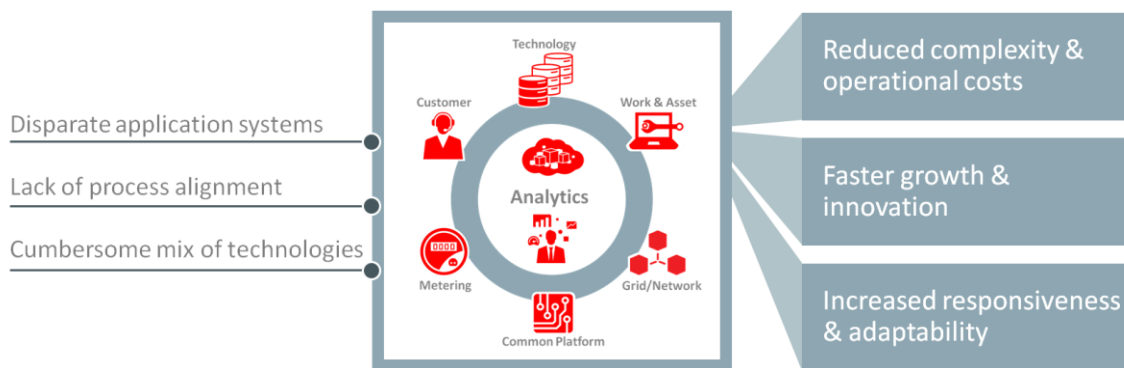
These three factors end up holding back the business in areas of organizational efficiency and effectiveness; innovation and the ability to bring products and services to market faster; and the ability to react to change.

How Oracle is addressing these challenges

Oracle now provides a common platform for its applications that fully addresses the challenges of integration. We have made significant investment in our solutions and integrated platform to provide productized solutions that will meet the business process demands of today's utilities. Oracle offers an integrated, end-to-end solution stack that includes Oracle's Sun servers and storage, the Oracle Solaris and Oracle Enterprise Linux operating systems, and Oracle Database, middleware, Java, and applications software (including the Oracle Utilities suite of applications, PeopleSoft, JD Edwards, E-Business Suite and more).

Our solutions are extensible--meaning utilities of today can also connect existing legacy or other non-Oracle applications—providing the full lifecycle solutions required, and allowing utilities to fully benefit from existing and future investments made. Choosing Oracle solutions provides a straightforward process that helps make for faster implementations and smoother operations. We want utilities to spend their time focused on how to get the most value from their new applications and not wasting resources concerned with what should be standard integrations.

Integrated stack testing strengthens Oracle's position as a best-in-class technology provider, driving improvements in product stability, performance, scalability, and manageability. In addition to integration testing, our systems are subjected to load and performance testing on the Oracle stack to ensure they run optimally and take full advantage of this known technology.

Underlying our core utility solutions is Oracle's Application Integration Architecture. This single, common platform for Oracle's productized and standardized integrations reduces the time and cost of application integration, dramatically

eases upgrading and testing and, in general, helps lower total cost of ownership for the complete set of Oracle applications and technology.

Key Benefits to a Common Platform

One of the leading benefits to adopting a common platform is that it speeds time to utility value, as well as reducing the total cost of ownership. Oracle Utilities accomplishes this in six significant ways:

» **Interoperable solutions**
  » Process-based integrated solutions
  » Optimized and streamlined business process across applications
» **Common data management**
  » Data mastering strategy to reduce duplication/redundancy
  » Data packaging, archiving, migration tools across environments
» **Consistent user experience**
  » Common user experience (look & feel)
  » Reduced user adoption and training
» **Cross-enterprise business intelligence**
  » Enterprise-grade, consistent ETL and BI tools across the platform
  » Drill down capabilities from analytics to source applications (closed loop)
» **Platform management tools**
  » Application and IT monitoring and management
  » Automated testing
» **Reusable IT skills**
  » Consistent development and integration approach
  » Share development resources across the platform

Together, these benefits remove the biggest barriers to innovation—implementation cost and implementation time—and provide the ability for utilities to make the most of their technology deployments with process-driven, standard architecture that is URM-defined, upgradeable, and open.

Because Oracle's products are designed and tested to work together, the solution stack provides immediate benefits to utilities. The integrated design of the elements makes them less complicated to deploy and manage, reducing total cost of ownership. Users can easily leverage out-of-the-box features including intelligent resource management, best-in-class security, and advanced file management. And should they need help, service is much less cumbersome with the integrated product stack strategy, thanks to a single point of contact for complete customer support. Furthermore, the stack helps reduce development and maintenance costs because IT staff no longer must maintain different skills sets to manage packages from multiple vendors.
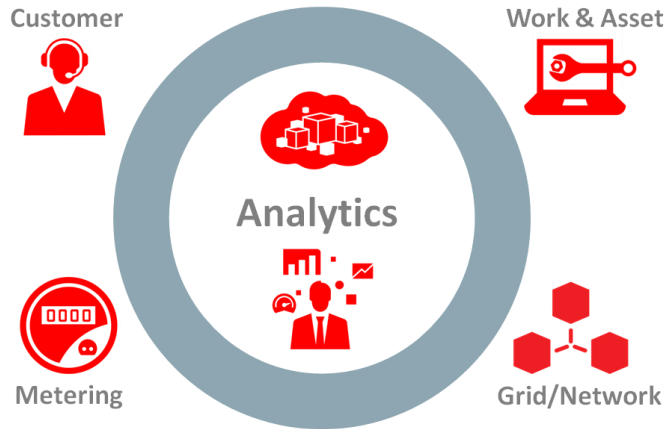
In building new, innovative business models and delivery approaches, we have taken our deep understanding of utility business processes and needs, and productized many of the industry's common solutions. With increased standardization and interoperability, our solutions can be implemented in much less time, with lower project implementation costs and delivery risks.

Utility-specific, interoperable solutions working together

Oracle started by offering productized integration between our applications. We then took that integration a step further by using open industry and technology standards that also lowered the cost and time for our applications to work with non-Oracle Utilities applications. Now, we are providing our applications as interoperable solutions (customer, metering, work and asset, network/grid, and analytics) based on utility industry best-practice business process flows. These core solutions collectively provide the most complete solution set for the utility industry available today.

Oracle Utilities also provides a broad set of tools to support implementation and maintenance of its solutions. Some of these tools include Utility Reference Models (enabling utilities to jumpstart their new processes), User Productivity Kits (providing a robust starting point for employee training on using the system) and Oracle Enterprise Manager (dramatically reducing the time to support application environments).

Oracle also offers various delivery options to reduce overall time to value. These delivery options include Express Implementations (pre-built accelerators to reduce implementation risk, time and cost) and Cloud or Managed Services options.
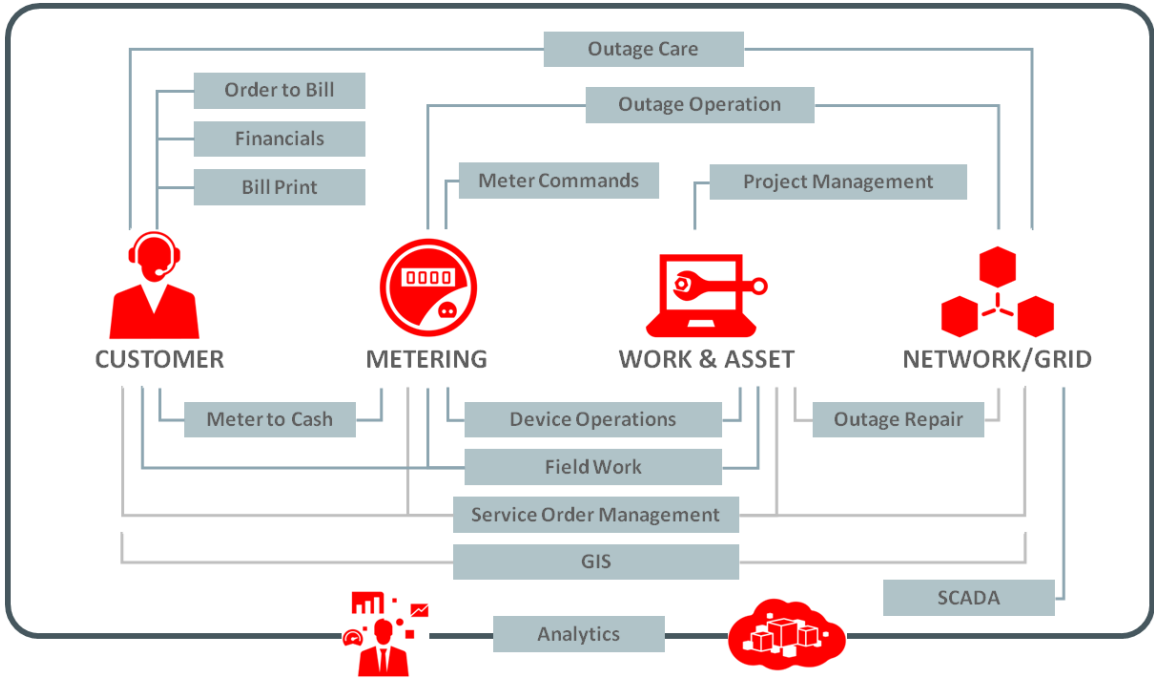

Customer:	Metering:
Improves management of information and processes needed to establish and grow all types of customer relationships, enabling business transformation, compliance and profitability.	Improves profitability and service quality by transforming volumes of data into information that enables utilities to realize revenue, ensure reliability and manage demand
» *Supports even the most complex customers and requirements* » *Empowers decisions by delivering personalized information* » *Provides multi-communication channels that lower cost* » *Unmatched within the industry for scalability performance* » *Need-based, flexible delivery models*	» *Productized head end integration* » *Complete and accurate meter-to-cash lifecycle* » *Consistently recognized as a leader in the field* » *Benchmarked data scalability* » *Provides Express Implementation for electric utility meter-to-cash*

Work & Asset:	Grid/Network:
A utility-specific solution providing comprehensive management of all fixed & linear assets and smart grid devices, enabling utilities to reduce maintenance costs and protect capital investments	A utility-specific solution that leads to greater grid safety, network reliability and operational efficiencies, while reducing network operations cost and protecting capital investments
» *Delivers visibility of all linear, fixed and fleet* » *Extends lifecycle via proactive, automated asset management* » *Real-time, intra-day scheduling means more jobs completed* » *Best-in-breed project management ensures valuable work gets done* » *Reduces the expense of repair-related truck rolls*	» *Storm-proven scalability and performance* » *Real-time, grid-specific communication to customers* » *Superior switching management to ensure safety* » *Modeling improves event assessment, management and outcomes* » *Extends the workforce reach via customer smart devices*

Analytics:

» *Prebuilt extracts, data warehouse and analytics to provide immediate visibility into business operations effectiveness*
» *Closed loop process to enable continuous improvement and quick route cause analysis*
» *Drill back capability enabling immediate resolution of problems identified*
» *Predicts future issues and automatically initiate resolution activities*

A View of Integration Solutions:

CUSTOMER / METERING SOLUTION

Productized Integration Name	Interoperability Benefits	Integration Flows
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management **Meter to Cash**: Ensures accuracy of billing processes that rely on interval data and complex rates while minimizing data replication	» *Facilitates accurate billing at the highest levels of automation and scalability* » *Improves customer satisfaction by providing billing timeliness and accuracy that reduces bill estimation* » *Speeds the implementation of Meter-to-Cash business processes and related Smart Grid initiatives* » *Eliminates unnecessary data duplication and synchronization* » *Permits CC&B and MDM users to continue with normal business processes without needing to be aware that data arrives from "outside" their primary application* » *Consistent user experience allows for efficient billing care (inquiry and resolution) across both CC&B and MDM applications* » *Reduces implementation cost and risk by substituting packaged, vendor-supplied code for the work of implementation teams* » *Reduces upgrade cost and risk through integration updates that coincide with product releases*	» *Person Synchronization* » *Service Point Synchronization* » *Service Agreement Synchronization* » *Meter Information Synchronization* » *Meter Configuration Synchronization* » *SP-Meter History Synchronization* » *Scalar Meter Reads Data Synchronization* » *Batch Bill Determinants Request* » *Online Determinants Request* » *Replacement Reads* » *Register High / Low Boundaries* » *Rate Check / Charges to Date* » *CSS Get Usage Adjustment* » *CSS Usage Overview* » *CSS Usage Detail*

Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System
 	
Outage Care: Allows utilities to respond efficiently and effectively to power outages. Significantly improves the ability to manage customer relationships by synching up-to-date outage information with your customer system and providing single view for all users
	» *Improves outage reporting with a high-volume interface and more detailed trouble call records*
	» *Uses a single customer care application for trouble reports and find associated job and call history details*
	  ▪ *Provides a consolidated view of real-time outage related information*
	  ▪ *Enhances user experience*
	  ▪ *Improving customer satisfaction*
		» *Customer Data Synchronization*
		» *Electric Trouble Calls*
		» *Query Job Status and History*
		» *Query Trouble Call History*
		» *Query Planned Outages*

Oracle Process Integration Pack for Oracle Utilities Field Work **Field Work PIP:** Facilitates a timely exchange of critical field work information across multiple applications while providing a centralized approach for planning, scheduling, dispatching and completion of work	» *Manages field work in an efficient, accurate, and timely manner* » *Consolidates the scheduling, dispatching, and completion of work* » *Creates a smooth flow of field work processes routed across multiple applications* » *Dramatically reduces or eliminates data & task duplication* » *Helps customer service representatives with work updates and status* » *Ensures field technicians have all the available information needed to complete their work*	» *Create Order from CC&B* » *Create Order from WAM* » *Create Order from MWM* » *Update Order from CC&B* » *Cancel Order from CC&B* » *Update Order from WAM* » *Cancel Order from WAM* » *Update Order from MWM* » *Cancel Order from MWM* » *Complete Order in MWM* » *Complete Order in WAM* » *Complete Order in CC&B* » *Appointment Scheduling* » *Update Appointment Scheduling*

	» *Improves customer satisfaction by ensuring that technicians arrive at customer sites fully prepared to complete tasks* » *Preserves customization & configuration choices during upgrades* » *Lowers the cost and time to build & maintain field work process integrations*	» *Meter Item Validation* » *Meter Item Validation* » *Time Sheet Creation* » *Send Cost Information* » *Customer Data Updates*
Oracle Utilities Customer Care and Billing Integration to PeopleSoft Financials for General Ledger and Accounts Payable **Financials:** Eliminates the need to enter data associated with refunds and rebates into multiple systems. It also ensures accurate summarization and transfer of financial balances to the general ledger without manual intervention	» *Configurable mapping to GL Chart of Accounts* » *Makes all information relating to AP request visible to a CSR from a single application* » *Transfers key financial information to the General Ledger in a timely manner* » *Features full General Ledger reconciliation to ensure accurate sub-ledger summarization*	» *General Ledger* » *Accounts Payable Request* » *Accounts Payable Data*
Oracle Utilities Customer Care and Billing Integration to Oracle E-Business Suite Financials for General Ledger and Accounts Payable **Financials:** Eliminates the need to enter data associated with refunds and rebates into multiple systems. It also ensures accurate summarization and transfer of financial balances to the general ledger without manual intervention	» *Configurable mapping to GL Chart of Accounts* » *Makes all information relating to AP request visible to a CSR from a single application* » *Transfers key financial information to the General Ledger in a timely manner* » *Features full General Ledger reconciliation to ensure accurate sub-ledger summarization*	» *General Ledger* » *Accounts Payable Request* » *Accounts Payable Data*
Oracle Utilities Customer Care and Billing Integration to JD Edwards Financials for General Ledger and Accounts Payable **Financials:** Eliminates the need to enter data associated with refunds and rebates into multiple systems. It also ensures accurate summarization and transfer of financial balances to the general ledger without manual intervention	» *Configurable mapping to GL Chart of Accounts* » *Makes all information relating to AP request visible to a CSR from a single application* » *Transfers key financial information to the General Ledger in a timely manner* » *Features full General Ledger reconciliation to ensure accurate sub-ledger summarization*	» *General Ledger* » *Accounts Payable Request* » *Accounts Payable Data*
Oracle Customer Data Synchronization Integration Pack for Oracle Utilities Customer Care and Billing and Siebel Energy **Customer Data Synchronization:** During the sales cycle, Siebel Energy masters and captures customer data. When a sales order is submitted from Siebel Energy the customer data is synchronized and a new customer record for billing service is created in CC&B via an implementation-defined process that accepts it and invokes the integration flow	» *Facilitates customer management (marketing, sales, and customer service) in Siebel Energy and billing in Oracle Utilities Customer Care and Billing* » *Reduces manual data entry, cross-checking, and the errors that often accompany such activities* » *Improves efficiency by allowing users to continue working in the system that is most familiar to them* » *Enables both applications to leverage their strengths, interacting as necessary within Order-to-Bill business processes* » *Configures to fit with the existing business processes of the utility*	» *Account Synchronization* » *Address Synchronization* » *Contact Synchronization* » *Primary Billing Profile Synchronization* » *Statement Profile Synchronization*

| Oracle Product Data Synchronization Integration Pack for Oracle Utilities Customer Care and Billing and Siebel Energy

Product Data Synchronization: Allows utilities to define rating, billing, and service options in CC&B and then synchronize a relationship for product information to Siebel Energy. CC&B sends new and updated product information to Siebel Energy, where it is enriched to support product configuration models, product eligibility and compatibility rules, product recommendations (for example, up-sell and cross-sell), promotions (for example, product bundling and pricing discounts), and catalog for sales and marketing activities	» *Facilitates customer management (marketing, sales, and customer service) in Siebel Energy and billing in Oracle Utilities Customer Care and Billing* » *Enables both applications to leverage their strengths, interacting as necessary within Order-to-Bill business processes* » *Configures to fit with the existing business processes of the utility* » *Supports sales and promotions by sending accurate product data to Siebel Energy* » *Simplifies order integration by abstracting complex billing setup from the CRM system*	» *Product Synchronization*

WORK & ASSET / GRID - NETWORK SOLUTION

Productized Integration Name	Interoperability Benefits	Integration Flows
Oracle Process Integration Pack for Oracle Utilities Field Work **Field Work PIP:** Facilitates a timely exchange of critical field work information across multiple applications while providing a centralized approach for planning, scheduling, dispatching and completion of work	» *Manages field work in an efficient, accurate, and timely manner* » *Consolidates the scheduling, dispatching, and completion of work* » *Creates a smooth flow of field work processes routed across multiple applications* » *Dramatically reduces or eliminates data and task duplication* » *Helps customer service representatives with work updates and status* » *Ensures field technicians have all the available information needed to complete their work* » *Improves customer satisfaction by ensuring that technicians arrive at customer sites fully prepared to complete tasks* » *Preserves customization and configuration choices during upgrades* » *Lowers the cost and time to build and maintain field work process integrations*	» *Create Order from CC&B* » *Create Order from WAM* » *Create Order from MWM* » *Update Order from CC&B* » *Cancel Order from CC&B* » *Update Order from WAM* » *Cancel Order from WAM* » *Update Order from MWM* » *Cancel Order from MWM* » *Complete Order in MWM* » *Complete Order in WAM* » *Complete Order in CC&B* » *Appointment Scheduling* » *Update Appointment Scheduling* » *Meter Item Validation* » *Meter Item Validation* » *Time Sheet Creation* » *Send Cost Information* » *Customer Data Updates*
Oracle Utilities Smart Grid Gateway Integration for Outage Operations **Outage Operations:** Assists in outage detection and verification as well as restoration confirmation, including, meter status information to NMS such as "last gasp" power off messages and restoration power-up messages. Supports "meter pings" to request a power-on status from the meter and	» *Reduces total cost of ownership by enabling NMS to benefit from SGG productized AMI integration via multiple AMI vendor adapters* » *Decreases operational costs with near real-time outage and restoration updates, and supports the filtering of momentary outages* » *Increases customer satisfaction by proactively responding to outages and*	» *Meter Ping Request* » *Batch Enable / Disable Request* » *Batch Suppress / Un-Suppress Request* » *Processing of Meter Statuses*

supports "turning off" the message flows from SGG to NMS for one or more meters in order to accommodate testing or false meter statuses	*providing more accurate problem identification*	
Oracle Utilities Work and Asset Management Integration to Primavera P6 Enterprise Project Portfolio Management **Project Management:** Utilities now have the ability to plan a project in the Oracle Utilities Work and Asset Management (WAM) application, send the project related records to Primavera P6 to manage it, and share data and updates throughout the work lifecycle, providing a powerful, end-to-end project portfolio solution	» *Assess, prioritize, and select the best projects to invest in while managing contingencies and other risk factors* » *Improves management and integration of the engineering, procurement, and construction processes and reduce associated risk* » *Reduces shutdown times and improve productivity of internal and external resources* » *Manage with a limited pool of talent to maximize existing craft productivity and capture best practices for future projects and new hires*	» *Create Project* » *Update Project* » *Retrieve Project Details* » *Synchronize Craft & Rates*
Oracle Utilities Integration Pack for Device Operations **Device Operations:** Provides enterprise integration to connect Oracle Utilities Operational Device Management and Oracle Utilities Meter Data Management with efficient data synchronization to optimize how utilities deploy, maintain, govern, operate, collect and process data from their automated infrastructure throughout the full asset lifecycles	» *Efficiently manages smart grid infrastructure from the meter components and communication networks, with different versions of firmware software, to ensure compatibility and reliability of grid operations* » *Tracks device locations and operations at all times from receiving into inventory, testing, and installation, removing, or exchanging at service point locations for strict security and control* » *Eliminates the need to build and maintain integration in-house, lowering the Total Cost of Ownership of Smart Grid deployments*	» *Synchronize device assets from ODM to MDM* » *Synchronize service points from MDM to ODM nodes* » *Synchronize contacts from MDM to ODM* » *Synchronize device installations / locations from MDM to ODM*
Oracle Utilities Network Management System Integration to Oracle Utilities Mobile Workforce Management **Outage Restoration:** Provides utilities with the ability during an outage event to identify the location and the affected devices. Crews are then assigned, scheduled and dispatched to restore service. As work progresses updates are communicated, unrelated work captured and reported along with any assistance requests if required	» *Reduces total cost of ownership by enabling NMS to benefit from SGG productized AMI integration via multiple AMI vendor adapters* » *Decreases operational costs with near real-time outage and restoration updates, and supporting the filtering of momentary outages* » *Increases customer satisfaction by proactively responding to outages and providing more accurate problem identification* » *Reduces total cost of ownership by enabling NMS to benefit from SGG productized AMI integration via multiple AMI vendor adapters* » *Decreases operational costs with near real-time outage and restoration updates, and supporting the filtering of momentary outages* » *Increases customer satisfaction by proactively responding to outages and providing more accurate problem identification*	» *Trouble Activity Creation* » *Intermediate Status Updates* » *Trouble Event Detail Updates* » *Crew Inquiry Request* » *Trouble Event Completion* » *Trouble Event Cancellation* » *Unrelated Damaged Assessment* » *Trouble Activity Detail Update* » *Trouble Activity Cancellation* » *Trouble Activity Creation (Assist Activity)* » *Notification (ERT expiration alarm)* » *AVL Update* » *Static Network Map* » *Heart Check* » *Re-Prediction*

Oracle Utilities Service Order Management	Oracle Utilities Service Order Management delivers a modern, scalable approach to service order processes.	» *Enable Service*

Oracle Utilities Service Order Management

Service Order Management: (SOM) delivers the first-of-its-kind solution for service order automation designed specifically for utility process optimization in the age of smart meter technology. With Oracle Utilities SOM, utilities leverage a centralized, predictive model to improve operational efficiency and drive down costs, and execute a perfectly orchestrated, streamlined smart meter program

Oracle Utilities Service Order Management delivers a modern, scalable approach to service order processes.

» *Centralized, predictive system for utilities to manage service orders*
» *Supports utilities' smart meter programs by delivering market leading intelligence and best practices for service order processing*
» *Patent-pending predictive integration engine automates service order task identification and orchestration*
» *Enables multi-directional communication across utility systems for accurate, real-time service order updates*

» *Enable Service*
» *Disable Service*
» *Update Service*
» *Cancel Service*
» *Cut for Non Payment*
» *Reconnect for Payment*
» *Specific Activities*
» *Enrichment Services*
» *Back to Back Activity*
» *Unrelated Pickup Activity*
» *Field Activity Remarks*
» *Item Support*
» *Meter Exchange*

Conclusion

Today`s electric, gas, and water utilities need industry solutions to meet the ever-increasing challenges being faced. Software, applications and technology alone do not address these issues and challenges. Utilities require interoperable, business-focused solutions, software applications and technology to serve as a robust springboard from which to meet the challenges of the future.

That`s what Oracle Utilities offers. We are unique in that our solutions help manage, measure, predict and then act on the issues that are being created by new challenges to our industry. We address these challenges in the following ways:

» **Vertical Focus**: We are dedicated solely to the energy and utility marketplace. Our team is a mix of industry, technology and operating professionals with deep experience in this space, and a common goal of innovating to meet the future needs of the space, rather than simply bandaging industry issues after they occur.

» **Solution Experience**: We are globally diversified with a broad customer base across electricity, water/wastewater and natural gas, as well as a new customer base in oil and gas. From the largest investor-owned utilities to the most focused municipalities, our solutions are driving value and innovation for our customers.

» **Solution Completeness and Integration**: We are the only company in the world that is able to provide a best-of-breed, integrated suite of solutions across all facets of the utility.

» **Advanced Analytics and Business Intelligence**: Oracle understands that Big Data is just that...data. In addition to providing the capability to capture advanced data, we provide utility-experienced, world-class data scientists to analyze and drive operational improvements into utility business processes. Further, we provide a utility architecture—a platform in which key systems are integrated in a manner that allows actionable analysis to flow and be used across the enterprise, quickly—which is key.

Value for the Modern Utility
Data insight + Quicker action = Consumer & Utility Benefits
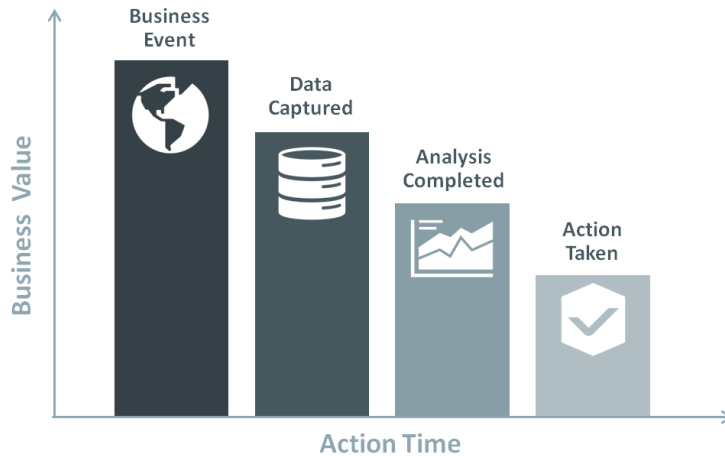
Oracle offers innovative operational and business solutions backed by decades of experience in helping utilities meet the challenge of change so that they can achieve operational excellence and enhanced customer service. Because it's not just about integration, it's about interoperability, Oracle is committed to focusing on solutions that re-engineer business processes based upon what users require, what and where the functions are being performed, and how they can be streamlined to achieve stated goals—rather than from a pure technical and application perspective.

More data PLUS interoperable solutions EQUALS quicker time to value with lower risk and cost. Oracle can help you transform your complex data into business value. With Oracle as your strategic technology partner, you can have a technology platform that not only meets today's needs but also tomorrow's unknowns.

For more information about Oracle Utilities solutions, visit oracle.com/industires/utilities or call +1.800.ORACLE1 to speak to an Oracle representative.

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Hardware and Software, Engineered to Work Together

Oracle Utilities' Integrated Platform Enables Greater Time to Value
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