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UTILITIES

Oracle Utilities Work and Asset Management Solutions

A Roadmap for Maximizing Work and Asset Value for Utilities

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ASSET VALUE

Delivering low-cost, highly-reliable service that customers value and regulators demand is becoming increasingly difficult. The challenges to doing so aren't confined to just one service type; electric, gas, and water utilities each face their own daunting issues.

Water utilities confront crumbling infrastructure and the need to make crucial network repair/replace decisions in the midst of ongoing drought and supply scarcity. Electric utilities have to make good on smart grid investments well beyond time-of-use pricing. Gas providers are held to ever higher levels of accountability due to safety concerns. And with operating costs skyrocketing, all utilities are being pressed to reduce expenses while finding new ways to decrease their environmental impact and deliver more customer-centric service.

More than ever, utilities are turning toward assets, and their related work, to address these complex, enterprise-level challenges. When done correctly through the adoption of standards and best practices, asset management unlocks new ways to deliver strategic value to the organization. Utilities that cannot maximize the value of their assets are left with compromised investment decisions, reactive and costly work, and less reliable performance.

A ROADMAP TO BEST PRACTICES

Best practices aren't just wishful thinking. In fact, industry standards such as International Standards Organization (ISO) 55000 and its predecessor Publicly Available Specification (PAS) 55 are excellent guidelines. Or, a utility can choose to design its own best practices program based on its specific operating environment or market situation.

Either way, both paths require performance to be objectively measured and continually improved upon with the goal of maximizing each asset's value to the organization, customers and regulators.

Oracle Utilities Work and Asset Management Solutions provide an end-to-end, low-cost roadmap to maximizing the value assets can deliver. Electric, gas, and water utilities of all types and sizes have used these solutions as a means to achieve best practices across the entire work and asset management lifecycle. The results: maximum asset value at the lowest risk and operating cost.
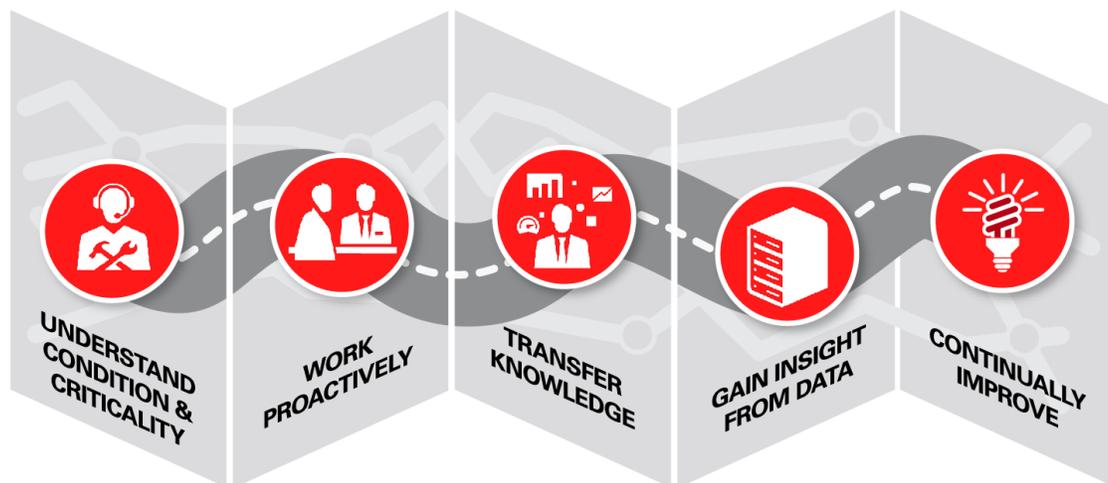
Five steps to achieving best practices that maximize asset value

Understand condition and criticality

Determining whether to replace or repair an asset requires an understanding of its condition and importance to the organization. That understanding is best gained by aggregating all asset data, including work history and condition rating, into a single system, balancing the importance of one factor versus another, and updating any condition changes as they occur. Armed with this data in real time, the utility has a more reliable view of asset health and can make more meaningful investment and work decisions on how to best balance compliance, reliability, safety, and risk.


Real-time condition-based assessment and scoring improves mission-critical performance and investment planning

Work proactively

Many utilities face the grim reality of having to do more work with the same or fewer resources and tighter budgets. Often, the outcome is that both the quality and quantity of work is reduced due to a traditional orientation toward tasks, rooted in historic, run-to-failure asset operation. The solution to this challenge is to increase the amount of proactive work done, thereby eliminating future tasks and preventing small maintenance problems from growing into larger, costlier ones. But how do you move from reactive to proactive work?

The first step to creating more proactive work is improving and automating planning and scheduling so manual process error is eliminated, job preparation is better, and goals for the work week align accurately with labor availability. The second step is to optimize the use of mobile resources by dispatching and routing in real-time. This step accelerates job completion by getting the right resources to the right job at the right time while reducing emissions and operational costs.

These two steps, which can take place independently or in combination, reduce backlog and enable utilities to engage in more proactive work, which eliminates future cost, tasks, and risk.
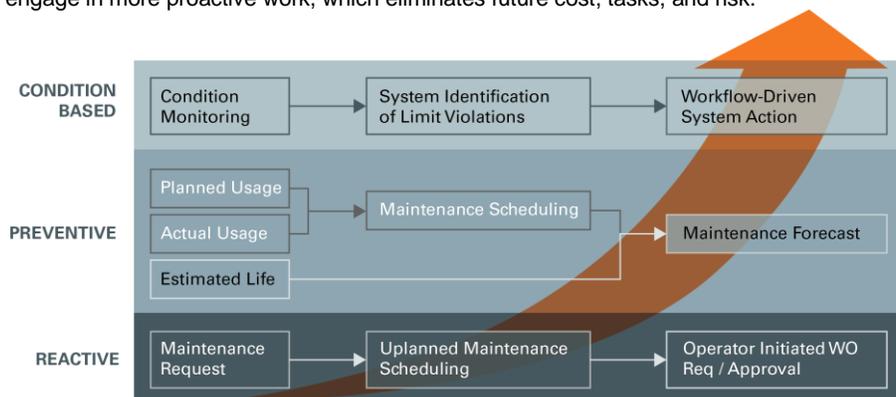
Moving from reactive to proactive, condition-based work enables implementation of optimal maintenance strategies

Transfer knowledge

As highly experienced employees age out of the workforce, it is imperative utilities build a repository of organizational knowledge based upon the expertise of these highly valuable individuals. To do so, utilities need a knowledge transfer mechanism, such as job templates. By automating the capture of details such as labor estimates, equipment used, safety information, maintenance history, job process, and notes, the templates become a formal repository of knowledge on what works—and what doesn't—for any task that needs to be undertaken.

Gain insight from data

In an increasingly digital utility environment, business insight based on intuition and subjective or observed assessment is quickly disappearing. Instead, utilities can gain far more actionable insight from objective data analysis that is by its very nature more accurate. When automated as a core business process, analysis has demonstrated significant capacity to affect margin by lowering operational costs while increasing revenue.

Using algorithm-based and predictive analytics, utilities can capture information from numerous and seemingly disparate data sets, consolidate it, and then run it through multiple analytical models. These models can identify for correction anomalies or causal linkages that typically aren't evident but often lead to increased risk. The output is actionable work lists that correct or prevent cost, reliability or safety issues.
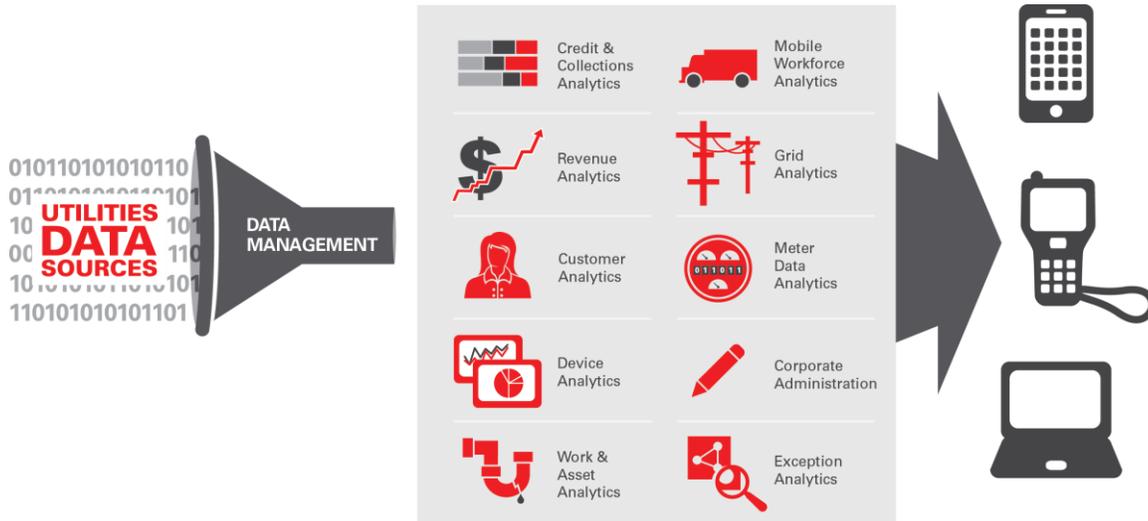
An enterprise view of data enables the creation of high-value, actionable insight that predicts and prevents risk

Continually improve

Because work is never perfect, an established cycle of continual improvement needs to be a core competency of any asset management effort. Work should be measured against key performance indicators (KPI) to identify barriers to operational efficiency and service excellence. This is accomplished by using performance dashboards and visualization tools that present hard data in meaningful ways. By using analysis to continually improve work process, utilities are assured all activities at all times are being performed as optimally as possible with the goal of maximizing the value of the asset portfolio.
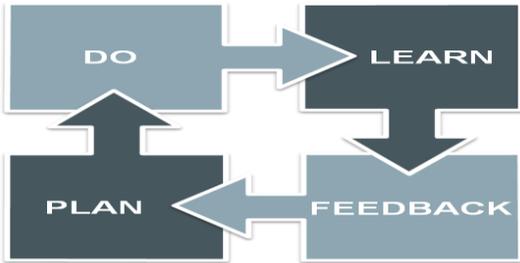

An ongoing feedback loop from activities into planning ensures continual work and process optimization

ORACLE SOLUTIONS

Maximizing the value assets can deliver to the organization requires the right processes supported (or in some instances created) by the right tools. The narrow capabilities of many traditional work and asset solutions limit the value that can be extracted from assets. In many instances, these limitations cause utilities to spend additional capital on supplemental software programs, rely on inefficient and error-prone manual process to fill gaps, or design complex technology work-arounds that cause more problems than they solve.

In contrast, by automating processes to increase their efficiency, creating actionable insight from data, and increasing workforce productivity, Oracle Utilities Work and Asset Management Solutions enable utilities to maximize the value of assets of all types, improving reliability and safety while reducing expenses

Oracle Utilities solutions encompass work and asset, mobile workforce, operational device, and project portfolio management for all fixed and linear assets, and smart devices for utilities with digital grids or networks. These solutions are also supported by business intelligence tools and cloud-based analytics services. Additionally, Oracle can add to these asset solutions a backbone of information technology and software to support all aspects of corporate administration, such as supply chain, enterprise resource planning, and financials.
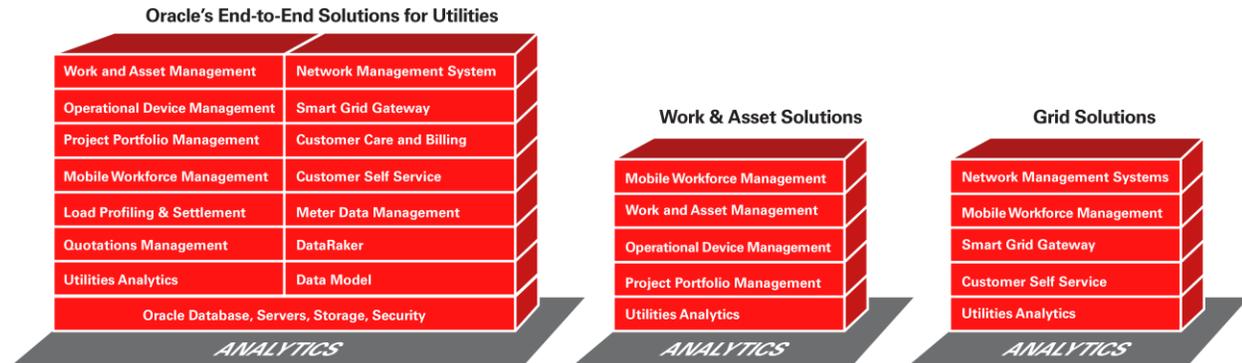
Oracle Utilities Work and Asset Management provides utility-specific, comprehensive, and centralized support of all assets and devices, enabling an organization's maintenance work to be requested, planned, prioritized, and recorded. Using the solution, utilities can optimize the entire asset lifecycle, from planning through disposal—including all intervening acquisition, construction, maintenance, repair, and inspection activities—and can manage purchasing and inventory.

Here, you plan ahead for parts and labor requirements and then rely on proactive and automated maintenance job templates and work order schedules designed to maximize an asset's value by extending its longevity. A common data model delivers single source of truth support for all asset types—linear, distributed, plant, facility, and fleet—ensuring you understand criticality and condition in real time to improve capital planning and repair/replace decision making.

All key data, such as inspection testing, are available within the asset record and can easily be viewed to determine if performance is changing. This same data can also be used in conjunction with Oracle Utilities Analytics to uncover trends for a specific asset or class of assets.

Oracle Utilities Mobile Workforce Management provides a centralized way to optimize all short and long cycle work, ensuring the right people are on the right job at the right time. You will deliver better service, safety, and network reliability by improving routine and complex work processes, seamlessly managing internal workers and contract crews, and enhancing back office/field visibility and collaboration. Using real-time, intra-day scheduling, you can adapt your workforce to changing conditions throughout the day, avoiding costly delays, repeat work, and inefficient allocation of resources. And by adding street-level routing, you will drive fewer miles and complete more jobs—the first time and the right way—with the same number of people.

Oracle Operational Device Management ensures cost-effective inventory, asset, and configuration management of smart devices. This ability is critical when you have vast numbers of microprocessor-based devices with unique requirements that must be maintained, inspected, updated, replaced, and secured, in addition to countless other tasks. Providing comprehensive knowledge of each device's location, characteristics, health, firmware updates, configuration management, compatibility, scheduled battery replacements, audit compliance, and associated tasks, it acts as an automated lifecycle management and maintenance shop, injecting speed and accuracy into process and activities.

Oracle Primavera P6 Project Portfolio Manager provides world-class management of all long- and short-cycle projects— construction, complex overhauls, major and routine maintenance, as well as capital-intensive initiatives—that need strict oversight, safety assurance, and budget control. Encompassing project prioritization, planning, management, and execution, it continually automates the alignment of work with the value it delivers. Via real-time insight and reports, executives are assured that at all times the work being executed is the most valuable activity for the utility and that crews have all the necessary resources to complete it on time and within budget. Via pre-integration with Oracle Utilities Work and Asset Management, it delivers enterprise and permission-based visibility and control of all asset work from start to finish. It also removes the challenges associated with work on electric grids and water networks that extend over great distances.

Oracle Utilities Analytics analyzes work, asset, outage, distribution, and device management, providing insight into how these areas affect a utility's total performance. With Oracle Utilities Analytics, staff can access easy-to-use dashboards, charts, and visualization tools to help formulate and support their decisions. You can also combine analyses from other departments to aid executive and board-level decision making.

Oracle Utilities Analytics—pre-built tools for standard reporting and performance tracking—is the foundation for many other analytics products in Oracle's enterprise application portfolio.

Oracle DataRaker delivers operational analytics of devices, grids and networks. You begin by feeding selected data streams, such as sensor or feeder load performance, to experts who analyze it using a set of leading edge technologies. Drawing on sophisticated algorithms, they mine your data for common indicators of problems and inefficiencies, returning a series of compelling recommendations based on clear evidence that you can turn into action items that lead to quantifiable results.

DELIVERING VALUE FASTER

Today's electric, gas, and water utilities need software applications and technology to serve as a robust springboard from which to meet the challenges of the future. To that end, we've matched our vision for asset management innovation with the most significant investment in this area this decade.

In addition to the benefits provided by that investment, you will gain real-world insight into how to improve your asset management processes from our extensive list of active users who continually share best practices

When it comes to quickly gaining solution value while also containing cost, you can rely on our deep experience designing utility-specific solutions and rich history in data and process management to deliver solutions faster and within budget.

Our consulting services team delivers additional value during implementations to steer you clear of unnecessary functionality or limited technology that inhibits performance. You'll gain business improvements more quickly and cost effectively via a streamlined production environment that includes::

» Extensive out-of-the-box process flows, built upon utility best practices, for full visibility, accountability, and flexible business rules encompassing virtually all work scenarios
» Productized integrations to reduce development expenses and automate work and information management processes that cross operational systems
» Tailored training, management, and geographic localization to accelerate time to productivity
» The largest partner network of system integrators to ensure you get the capabilities you need delivered the right way and on time

Contact Us

To learn more, please visit www.oracle.com/goto/utilities.

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