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Utilities



Oracle Utilities Work and Asset Cloud Service

Optimize Your Asset Performance. Oracle Utilities Work and Asset Cloud Service is a foundation to **Asset Performance Management**

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Oracle Utilities has built asset performance management (APM) into the Oracle Utilities Work and Asset Cloud Service. It provides an end-to-end, low-cost solution 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.

DOES YOUR ASSET PERFORMANCE MEASURE UP?

According to American Society of Civil Engineers, there are an estimated 240,000 water main breaks per year in the United States, wasting over two trillion gallons of treated drinking water.¹ While on the electric side, aging infrastructure continues to be an issue, there's a tremendous distributed energy generation shift underway. For instance, it is estimated that the United States will have 246 GW of solar capacity by 2040.² This means asset operations have to maintain performance of both older and newer assets with variable complexities.

When the effective use of assets determines whether you can handle tough market conditions and succeed, you need world-class performance management of them. That means delivering exceptional work and asset management performance, such as:

- Equipment effectiveness of at least 85%
- Material deficiencies under 2% for assigned work
- Rework of less than 1%
- Proactive work comprising at least 75% of all work hours

How do you measure up?

Oracle Utilities Work and Asset Cloud Service ensures you can measure and continually improve performance by providing comprehensive and centralized support of all fixed and linear assets as well as the growing portfolio of intelligent devices. Using it, you can deliver an array of mission-critical benefits:

- Improve asset integrity by reducing process and infrastructure weaknesses.
- Harness real-time asset condition monitoring to improve capital planning.
- Drive down maintenance costs by increasing proactive work levels.
- Eliminate unnecessary work on assets and devices.
- Ensure projects are prioritized and managed according to business value.

360-DEGREE BUSINESS VIEW THROUGH APM

When it comes to assets, what if you knew exactly what to do, when to do it, and what to expect in

Asset Performance Management ensures mission-critical goals are met:

- Reduce risk across the enterprise. Decrease the cost of work. Increase asset reliability.
- Minimize the impact of equipment failure and work on customers
- Avoid regulatory scrutiny due to operational error
- Maintain workforce skills
- Reduce on-off inspection visits
- Reduce manual data collection tasks

¹ <http://www.infrastructurereportcard.org/cat-item/drinking-water/>

² Solar Energy Industries Association (SEIA). <http://www.seia.org/research-resources/solar-industry-data>

return? That's what Oracle Utilities Work and Asset Cloud Service provides.

Advanced analytics tools monitor performance while cloud-based services ingest high volumes of complex data and use it to identify asset and infrastructure weaknesses. A backbone of information technology and software can be added to support all aspects of corporate administration, such as supply chain, enterprise resource planning and financials.

With asset performance management in the cloud, utilities can optimize the asset value during its lifecycle, starting with acquisition, construction – including predictive maintenance, repair, and inspection activities—and can also manage purchasing and inventory.

Most importantly, operations have a real-time view of assets' health and can make accurate investment plans.

Comprehensive business-driven solution with Work and Asset Cloud Service

- **Asset management** – Capabilities provide inspection, work order management, historical data analysis, on-going condition management, and construction management. On-going work information is updated based on asset health scores.
- **APM with Predictive Analytics** – Operations have real-time data of asset risk and health. Utilities can see asset condition information with build-in algorithms that enables timely decision-making.
- **Oracle Field Service Cloud** (optional) – Packaged mobile workforce integration in the cloud enables seamless work order scheduling and completion. Operations and field crews have a single pane of glass into predictive maintenance tasks.
- **Pre-defined Reporting** – Configurable dashboards with asset performance real-time and historical data. It enables operations to look at risk thresholds and roll up results for executive investment planning.
- **Oracle Utilities Operational Device Cloud Service** – Automate intelligent device, including IoT, performance management with device's location, characteristics, health, and firmware updates. Oracle solution prepares utility professionals to derive business results from complex IoT interactions instead of managing Big Data and analytics infrastructure. Find risks of device failures faster with increased visibility into the age and reliability of each device.
- **GIS Integration** – With GIS and asset management integration the ability to visually track and manage enterprise assets and resources is enhanced. It is paramount to improving work execution required to deliver exceptional customer care, safety and regulatory compliance.
- **Connector for Enterprise Resource Planning (ERP)** – Allows users to leverage the strengths of both systems without disrupting workflow. Users can perform work in the preferred application while still having access to relevant information in either system.

Key benefits

- Harness real-time asset condition monitoring to improve capital planning
- Improve asset performance by dynamically adjusting maintenance based on changes in operation
- Drive down maintenance costs by increasing proactive work levels
- Eliminate unnecessary work
- Enhance operational efficiency and reduce costs via embedded industry proven best practices

Key features

- Support for all asset types
- Asset condition assessment
- Automated situational maintenance
- Maintenance history automation
- Single system asset data repository
- Job templates
- Out-of-the-box embedded analytics
- Supply chain management
- GIS integration
- ERP integration

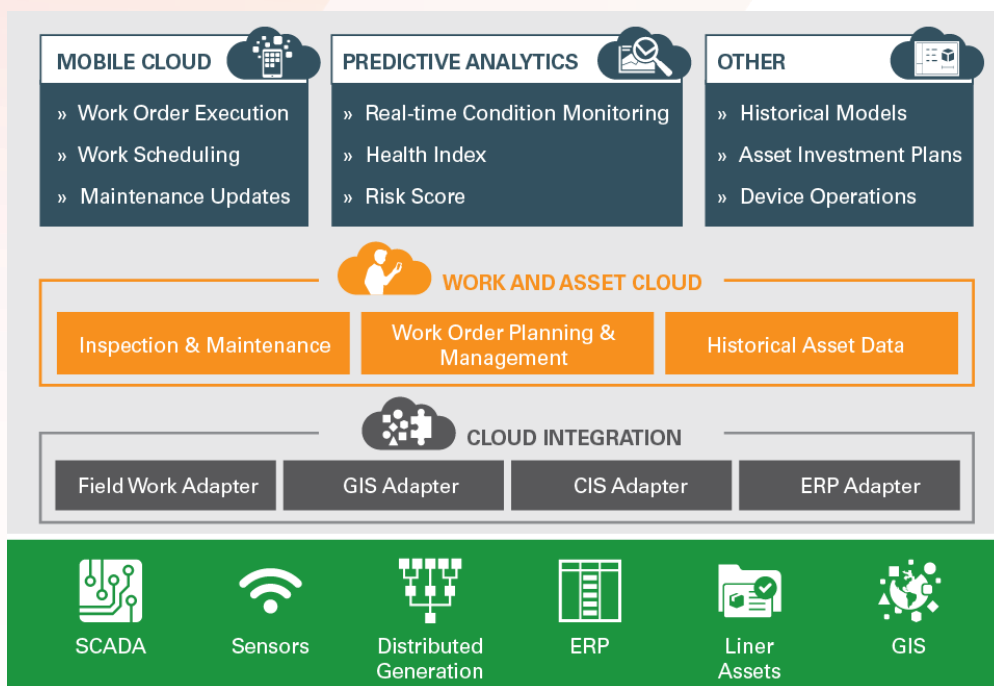


Figure 1. Complete Asset Performance and Work Management Solutions with Analytics in the Cloud

CREATE AN ASSET PERFORMANCE DRIVEN PROGRAM FROM DAY ONE

Asset operations leaders that cannot maximize the value of their assets are left with compromised investment decisions, reactive and costly work, and less reliable performance. Oracle has worked with numerous decision-makers and recommends the following 3-phase approach to asset leaders:

1. **Prevent** – Learn to find risks of asset failures faster than you do today. Eliminate day-to-day tasks of collecting data and maintaining systems of record. Instead, have the breadth of new data work for you to identify an asset’s performance and its condition before you make any decision. By using predictive analytics, utilities can identify an asset’s failure pattern and gives you alerts for faster decision making.
2. **Act** – Look to predictive condition maintenance to reduce costs. With real-time and accurate asset data, asset managers improve the reliability and performance of their infrastructure. You can act in timely fashion without losing time and resources to investigate faults; create work orders based on the criticality of the asset and schedule the field visits accordingly; and manage and monitor work progress via dashboards.
3. **Optimize** – Improve your asset maintenance program by benchmarking your asset performance. This is where you can accurately plan your investment based on asset conditions. As well, you can implement ISO 55000 plans quickly and generate results faster.

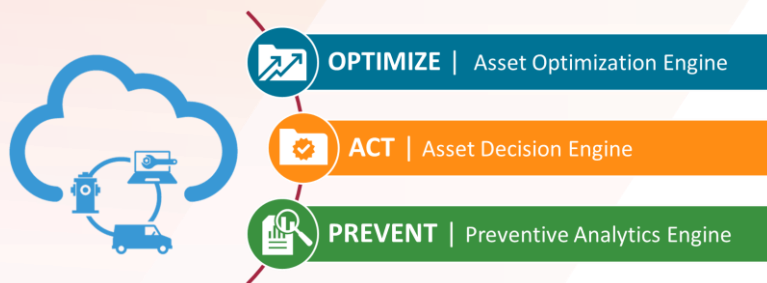


Figure 2. Oracle Utilities Three-phase Approach to Asset Performance Management

DELIVERING VALUE FASTER

Business innovation is too expensive when it's going to cost you years of exhausting work just to get your systems and processes up to a point where they can handle your basic challenges, much less your complex ones. Innovation is too risky when you don't know if what you're doing is going to work.

Cloud brings efficiency to asset performance and optimization initiatives

Utilities now have the opportunity to more quickly and easily implement safer and more efficient asset management processes, reduce the cost and impact of operations and maintenance, and maximize the value of their assets. Cloud infrastructure gives utilities the flexibility to scale their systems in near real-time as new assets have the potential to explode with trends like IoT and increased number of sensors on the network. Oracle clients indicate that when using cloud services;

- They are able to scale their programs rapidly
- Allows utilities to respond faster
- Brings flexibility and availability of information quickly



Figure 3. Become part of the Trusted Community

Security and compliance in the cloud matters

- Oracle uses layered security with best-of-breed components including identity and access management, separation of database avoiding data commingling,³ security operations center, up-to-date patches, and current system configurations.
- Oracle cloud service is tested on multiple levels including federal certifications.⁴ Also remember, not all of your assets have to be NERC CIP compliant. Cloud can actually help you in identifying NERC CIP compliant assets, which allows you to focus on their maintenance versus check-box compliance.

³ Data commingling, in computer science, occurs when different items or kinds of data are stored in such a way that they become commonly accessible when they are supposed to remain separated. In cloud computing, this can occur where different customer data sits on the same server. https://en.wikipedia.org/wiki/Data_commingling

⁴ Oracle Utilities Cloud is tested and used in mission critical environments. It maintains certification such as PCI, FISMA, NIST, and ISO.

WHY ASSET PERFORMANCE MANAGEMENT IN THE CLOUD IS THE RIGHT ANSWER?

- Quick time to value
- Rapid and instant results - visibility of assets, know the condition of the assets, better repair vs. replace decisions
- Reactive to proactive - right work, right place, right time

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Integrated Cloud Applications & Platform Services

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