Making Mobile Workforce Optimization a Reality for Municipal Utilities

Oracle Mobile Workforce Cloud Service

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Compelling Challenges Require Better Performance

Delivering low-cost, highly-reliable service that customers value and regulators demand is becoming increasingly difficult. The reasons are myriad. Foremost among them is that utilities globally are grappling with aging infrastructure that has to serve growing populations. Additionally, operational costs continue to climb and outpace rate increases, and customers and regulators are clamoring for better service and more environmentally-friendly stewardship.

Overcoming these challenges requires municipal utilities to improve business performance across the board. Visibility to and management of distribution infrastructure condition needs to be better. Repair/replace decisions have to be more informed and the resulting work completed more efficiently. Best practices and process flexibility have to be incorporated into workflow to maximize efficiency and assure safety. All of these necessary improvements require that operational systems be upgraded and increasingly integrated. As it isn't enough, this business performance improvement needs to be accomplished with the same or diminishing budget.

As municipal utilities examine how to realize this performance improvement, a mobile workforce solution provides a low-risk, highly effective way to optimize work, lower cost, improve customer service and reduce risk. In terms of productivity improvement alone, many utilities have seen an increase of 30%-50%.

With the advent of cloud services, many of the traditional barriers to transformational business solutions have disappeared. Complexity and risk can be offloaded to the cloud service provider, minimizing the human and technology resources needed as part of the traditional deployment model, for example. With the release of Oracle Mobile Workforce Cloud Services, municipal utilities now have the opportunity to more quickly and easily implement safer and more efficient work processes, reduce the cost and impact of operations, and improve customer service.
Mobile Workforce Optimization: Why Now?

The topic of mobile workforce management certainly isn’t new for utilities, but it often has taken a back seat to other business priorities. However, under increased pressure to improve both their asset management and capacity to serve customers, and do so more cost-effectively, utilities are scrutinizing all aspects of the business. This is leading to greater clarity for municipal utilities on how mobile workforce optimization can help drive significant business improvement. The benefits are many, with examples including:

» Better allocating resources to each job by considering multiple, utility-specific conditions—skills, location, cost, service and safety risk, and more

» Improving information flow necessary for customer-centric service by integrating critical systems such as customer care and self-service, geospatial information, and asset management

» Increasing wrench time and limiting cost by managing dependencies and other complexities of construction and other long cycle work.

» Reducing the cost and environmental impact of fuel and truck rolls through the use of street-level routing.

» Avoiding fines and regulatory scrutiny by harnessing automation to ensure best practices for work and safety are adhered to and documented.

» Improving responsiveness by employing real-time coordination of materials, dispatch, call centers, and mobile resources to adapt to changing conditions during planned and emergency situations.

As market drivers continue placing pressure on municipal utilities to transform their operations, the ability of mobile workforce optimization to deliver mission-critical benefits is making it a high priority endeavor. As such, for municipal utilities it is no longer if, but how to overcome the organizational barriers that prevented the adoption of mobile workforce solutions in the past.

"Mobile workforce management (MWM) solutions are more than just mobile extensions of backend systems; they are designed to optimize utility field work by improving productivity and reducing costs."

RANDY RHODES
RESEARCH DIRECTOR, ENERGY AND UTILITIES INDUSTRY ADVISORY SERVICE GARTNER

Organizational Barriers to Transformation

The reticence of municipal utilities to adopt solutions for mobile workforce optimization isn’t based on a single factor. Cost, of course, will always be a consideration, and many solution providers have simply priced themselves out of the budget of cash-strapped municipalities. However, cost is simply one of the decisions points.
Information technology complexity

Information technology has been a key roadblock, particularly when the solution offered impacted core competency process, meant the addition of hardware, or entailed the management of an ever-changing variety of mobile device types. Add to that the additional cost and skills needed for 24/7 solution support and many business improvement initiatives never got off the ground.

Unlike standalone, investor-owned utilities, different services are offered by specific departments within a municipality. Typically, the municipality has an organization-wide information technology (IT) group supporting not only the water department but all agencies such as electricity, public works, parks, fire and police. As a result, IT staff may have responsibility for all software and hardware across the entire enterprise.

With this across-the-organization responsibility comes the necessity to manage (and many times discourage) the proliferation of technology. The IT group does this by using its authority to dictate applications and vendors of choice, software standards, security, middleware, and databases. As an extension of that authority, IT may also be responsible for identifying hardware and servers for applications. The group is also relied upon to assemble the proper project team for any IT upgrades and process change. In this environment, IT, not the service-specific department, is the driver of technology decisions.

This structure makes it difficult for business units such as the water and electricity departments to leverage internal IT capabilities to accomplish utility-specific business transformation. For water or electric utilities looking to effect significant process and system transformation, it leads to:

- Governance and internal standards that eliminate software applications from consideration.
- Budget for both software and hardware that limit the scope of process change possible.
- Lack of dedicated resources and necessary skills to manage deployment and ongoing use.

The competition for money

Another traditional barrier, the procurement process, is essentially a competition for resources, in this case funding. Underfunded to begin with, the municipality usually doesn’t have the advanced analytics necessary extract and examine data to inform planning and investment. Without that hard data embedded into a business case, money flows to projects that seem the most necessary, not what can be proved to make the most strategic sense.

As the procurement process unfolds, projects funds are at the mercy of the many gateway points where seemingly on-track funds can either be cut or stalled without limited input from the individual department. Finance and information technology ultimately weigh in on the approval of those funds and do so with their own internal objectives and standards in mind. As an example, if a software solution requires adding a server or procuring a different middleware solution, IT will inevitably be brought into the process. At best, their addition as a stakeholder means the procurement process gets slowed. At worst, a decision is made that the addition of the hardware/middleware isn’t viable for IT, regardless of the potential benefit for the water or electric utility.

However, it’s more than just fighting other departments for funds. Once a budget is set, there is also competition within the water or electric utility for that money. Immediate and more visible needs get funded instead of strategic initiatives. As an example, a single burst water main or failing transformer has the potential to negatively impact the public due to service disruption. So for any agency with aging infrastructure, funding will include repair and replacement, perhaps with overtime and contractor money included. What then gets overlooked is investment in mobile workforce optimization that enables more work to be done by the existing workforce, effectively stretching limited repair/replace funds by reducing costly overtime and contractors.
The cost of status quo

These barriers often prevent a business case from being made or approved, regardless of the proven cost, efficiency, and customer service benefits a mobile workforce solution provides. The ongoing result is that needed business innovation and process transformation are continually sacrificed and the municipality is unable to change. Utilities stuck in this cycle simply cannot evolve at the pace of required by regulators and customers and will continue to face increasing risk of revenue, customer service, and safety failures.

Eliminating Constraints via the Cloud

Using a cloud model, municipal utilities sidestep barriers to business transformation. The IT environment is simplified since the need for many traditional resources, including people, time, and skills, can be bypassed. Also, while the issues of an internal procurement process don't disappear the water or electric utility has much more flexibility in providing the finance department with options for how problems can be solved.

Removing IT resource and complexity bottlenecks

The most evident challenge a cloud-based approach to mobile workforce optimization solves is IT complexity. Beginning with more predictable budgeting of IT cost and resources, many of the typical information technology concerns dissipate:

» The need to find technical personnel, often with new and costly skills, to staff the project is eliminated.
» The layers of technology components to support a solution become unnecessary as back-office operations are housed in a state-of-the-art environment, managed 24 x 7.
» Responsibility for applying patches and updates, along with fail-over strategies, and any other support concerns shift to the cloud service provider.
» The provider ensures software is current, standards are kept, and operating procedures are rigorously maintained.

Also, since new functionality can be unlocked more quickly, cloud service mobile workforce optimization means that business departments, not IT, control their pace of innovation. Additionally, one of the main reasons IT groups avoid new technology deployments —security risk—is allayed if the cloud service provider has world-class expertise and best practices in regulatory compliance as well as privacy, data, and audit management.
Adding flexibility and choice

Rather than attempting to navigate an unwieldy, unpredictable, and often all-or-nothing procurement process, utilities can use the cloud’s flexible deployment options to more easily manage business-specific initiatives or changing work environments. For example, a company may want to use software as a service (SaaS) model to gauge a program with the final goal of bringing the solution in house. In some circumstances, the cloud can be used as a test environment for new releases, freeing up expensive internal IT resources and hardware that typically support those projects. In contrast, others may find that operating solely in the cloud provides better levels of service than they would achieve internally. Regardless of the use, a cloud model for mobile workforce optimization avoids the one-size-fits-all characteristics that often bogs down or scuttles the internal project funding process.

In addition to deployment choice, a cloud model also provides more operational agility. The cloud makes it easy for the utility to quickly scale the mobile workforce to support short-term projects, such as smart meter rollout, that may require a temporary increase to staff or the use of contractors. Additionally, a cloud model provides the opportunity to use mobile workforce optimization to address complex work scenarios, such as multi-day and split-shift work, individual and crew-level assignment, and dependent task breakdown and tracking. It also then makes it easier for the utility to manage the phase out of temporary worker pool after a fixed period of time. No longer will the utility need to choose between overinvestment and underinvestment in solutions that cannot fit the business situation.

Oracle Mobile Workforce Cloud Service

Many field service applications on today’s market are designed for general use by companies whose mobile workers perform relatively simple, repetitive tasks—delivering packages or repairing just one type of equipment. What they lack are the industry-specific capabilities and best practice workflows needed to support a utility’s mission-critical activities. These include:

» Schedule and support the wide variety of both short-cycle and complex tasks required of utility field engineers working under normal and emergency conditions.

» Integrate contractors and loaned crews, with the capacity to easily scale the workforce.

» Ensure compliance with the service level agreements as well as the complex health, safety, and environmental regulations that lie at the core of utilities’ obligations to their communities.

» Support changing work and customer service requirements as the utility model and underlying infrastructure evolve.

Oracle Mobile Workforce Management Cloud Service is designed specifically for utility process and business needs, addressing the short comings and inflexibility of industry-agnostic field systems. The solution provides fully integrated, real-time, best-of-breed planning, scheduling, dispatch, mobile communications and performance analytics for all work types—routine and complex. Using embedded best practices built upon years of utility industry experience, the solution enables you to quickly get tools and features they need most and transfer technology management activities to the Oracle Cloud.
Complex and short-cycle work

The solution injects speed, efficiency and visibility into the management of both short duration tasks and complex activities spanning multiple days. By improving collaboration between operations, field crews and contractors in real time, optimization of the entire work lifecycle is finally a reality. Using real-time intra-day scheduling, you can adapt your workforce 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.

Performance analytics:

Oracle Mobile Workforce Cloud Service also offers pre-built dashboards that help you boost efficiency and improve customer satisfaction across your entire field service operation. Key performance indicators can be identified and tracked to ensure your mobile workforce is delivering service excellence and optimized work at the lowest cost possible. Via charts, graphs, maps, and tables, you gain insight into questions that address cost and performance, such as:

» What percentage of the day do mobile workers spend on tasks?
» Where are deviations from performance targets occurring?
» What impact are training and scheduling having on performance?
» Are workers missing multiple appointments?

Optimization the way you want it

Utilities require modern technology choices and business flexibility, so solutions must fit business needs, not the other way around. Oracle Mobile Workforce Cloud Service can be delivered flexibly and quickly via:

» Limited-duration SaaS for handling large but limited-duration projects like smart-meter roll-out. This is also suitable for utilities experiencing a need for fewer field personnel and truck rolls due to better maintenance practices, lengthening equipment life, or smart devices.
» Permanent SaaS solution that provides a predictable schedule of expenditure over time. Oracle’s cloud environments are managed 24 x 7 by trained professionals who:
  » Procure the right hardware, operating system software and databases
  » Manage the ongoing support of applying patches and updates
  » Provide fail-over strategies
» A cloud environment for new releases, freeing up expensive internal IT resources and hardware for acceptance testing.

“With Oracle’s mobile workforce management solution, customer service is improved because everyone – from office staff to field staff – knows the status of work. We also significantly improved productivity for field service management, dispatch staff, and field service technicians.”

DANA DRYSDALE
VICE PRESIDENT OF INFORMATION SYSTEMS, SAN JOSE WATER COMPANY
Delivering Greater Value Faster

For more than 30 years, Oracle Utilities has enabled electric, gas, and water utilities of all types and sizes to successfully navigate a wide range of mission-critical business challenges. Via innovations such as cloud-based services and the industry’s most comprehensive range of utility specific applications – Meter, Network Operations, Work & Asset, Customer and Analytics–Oracle deliver greater value faster.

The most complete solution

No other vendor offers as broad a solution footprint or as many best-in-class, interoperable solutions—based on utility industry best-practice process flows—as Oracle delivers to the utilities industry. Oracle’s operational solutions for electric, gas, and water utilities are comprehensive in scope, covering all major areas of utility infrastructure and field work. Capabilities within these solution areas provide the most complete approach for utilities to improve efficiency and achieve operational excellence.

Contact Us

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