



Case Study

KloudGin's Single Work Management Platform Transforms Louisville Water into Utility of the Future



About Louisville Water

Since October 16, 1860, Louisville Water Company has provided safe, high-quality drinking water. Service began with Pumping Station No. 1, now a historic landmark, located at Louisville Water Tower Park. Our water tastes so good we gave it a name – Louisville pure tap®. Today, Louisville Water provides water to almost one million customers in Louisville Metro and parts of Bullitt, Hardin, Nelson, Oldham, Shelby and Spencer counties. We are a lifeline to the region, supplying safe drinking water for homes, businesses and schools.

Louisville Water Company provides safe, high-quality drinking water to nearly one million people every day. They have a 164-year history of quality, innovation, value and service. The company began operations in 1860 as Kentucky's first public water provider and today supplies water and fire protection to communities in Louisville Metro and parts of Bullitt, Hardin, Nelson, Oldham, Shelby and Spencer counties.

The Challenge

Louisville Water has a strong sense of pride in their company heritage, brand, and technology. They wanted to embrace these values while transforming their operations to be the utility for the next generation. They saw a digital transformation project as the nexus to provide insights into all connected things for the organization – assets, work and customers.

Digital transformation presented challenges:

- Current Systems were 30+ years old; paper-driven, inflexible and manual
- No mobile integration for field workers to communicate and record their work
- Data was stale and did not adequately represent field activities
- Limited product support and no enhancements available

With consumers and employees demanding more services while pressure was high to drive lower rates, Louisville Water decided the time was right to embark on what would become a multi-phased digital transformation project to streamline operations and boost efficiencies. Their driving mission was "Doing the right thing – in the right place – at the right time."

The Challenge

Louisville Water selected WAM for enterprise asset management and began Phase 1 of the project which involved Plant and Facilities work. From a field operations standpoint, they were receiving work tickets from a homegrown legacy application that generated tickets but had no way to tie any of the work back to the assets that were being serviced. The work tickets were distributed with Oracle Workforce Management (WM), and they were using a separate GIS platform which was unable to share files back and forth within WM. For the project to move forward, Louisville Water needed to be able to track the work performed on different assets – what work was performed, why they were doing the work, and why the assets were failing. They began looking for a new solution for work management to replace Oracle WM.

The Solution

Louisville Water chose KloudGin based on recommendations from their project implementation manager and other utility companies. There were three driving factors in their choice. First, KloudGin was developed as a mobile first, cloud first application. Second, the KloudGin team has deep understanding and experience with the utility industry. And third, KloudGin was integrated with GIS.

Initially, in Phase 1 of the project, KloudGin was implemented to handle work management in the treatment facilities where there is typically poor cellular service. Work activities were created in their asset management system, and they needed to schedule that work out to the crews while they were in a disconnected mode. KloudGin was used for scheduling, and the mobile app filled the void for the field workers.

Phase 2 involved expanding from their plant and facilities maintenance to distributed asset maintenance. They use WAM to manage preventive and corrective maintenance on their assets including water mains, valves, hydrants, etc. KloudGin is providing the mobile work execution and automated scheduling engine for that work.

Knowing these are mission-critical applications, KloudGin built the platform from scratch on AWS Cloud leveraging more than 20 services covering networking, computing, database, messaging, storage, analytics, and more to ensure the application is resilient and fault tolerant.

Solution Components

- Field Service Suite (FSM)
- KloudGin Mobile Application
- WAM Integration
- ESRI ArcGIS Integration
- CC&B Integration

Quick Facts

- One platform for all work with a single offline mobile interface
- Replaced Oracle MVM with KloudGin in less than 12 weeks
- Optimized scheduling of employees and work orders with tracking for future benchmarking
- Eliminated paper trails and optimized the use of labor and inventory
- Work orders prioritized by both system criticality and work order criticality
- GIS Integration allows field crews to update work activity with exact location of repairs
- Implemented Single Sign-On allowing crews to use network username and passwords
- Automated timekeeping and approval process



Connect with the KloudGin team to learn more.

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The Solution

AWS services like EC2 instances, relational database services, and storage services are leveraged across multiple availability zones to avoid a single point of failure.

With the KloudGin mobile app, the team designed a workflow for Louisville Water's Valve Trace process. This provides the ability for a crew to simply drop a pin on a map to select a main that is indicating a leak. KloudGin can then run a trace to tell them which of the valves in the system need to be shut off to isolate that leak. In addition to the affected valves, the trace also provides a list of customers and fire hydrants that are impacted. This allows them to proactively reach out to their customers and fire departments to alert them to a service outage or give them updates on repairs to be done in their area.

For GIS integration, KloudGin uses Web Services to call and render maps through the mobile app and this is built into the workflows and processes. With distributed assets, the crews need to know where they are going and which assets they are working on. They can view their work orders on the mobile app, and as the work is completed, they can reference and glean data from the GIS map and update work activities. This is a huge benefit – the mobile app can be used to pinpoint where the repair was made, which valve, which main, etc. KloudGin enabled this process so they can update the work activity with the exact location of repairs, all as part of their mobile process.

With the positive user adoption of KloudGin, Louisville Water decided to take it a step further. They were currently using Oracle Mobile Workforce Management (MWM) for CC&B-related (short cycle) work orders and decided to replace it with KloudGin. This involved implementation of the CC&B integration adapter along with configuration and testing that was all accomplished in a very compact 12-week timeframe. With the completion of that project, KloudGin field service management is now used by all of Louisville Water's customer-facing field service representatives.

Finally, Louisville Water licensed the KloudGin platform technology. This means they can create their own custom workflows. For example, they designed custom workflows for water quality and tank inspection. Louisville Water employees designed, built, and tested those workflows without using KloudGin resources or professional services.



Digital transformation will provide visibility to all work management that takes place in the organization. With insight into how we utilize resources, we can more effectively manage the service area. KloudGin filled a major gap by pulling together all our enterprise systems through integration. This enabled the collection of digital information from multiple systems that is now used to drive decisions, efficiencies and service reliability.

Obe Everett
Director, PMO and Business System Support



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Results

Positive Adoption by Field Users

For the digital transformation project to succeed, the process had to be focused on the workforce, and they brought KloudGin in to provide a single experience to all their workers, regardless of the type of work they are executing. All crews are interacting with one system and all scheduling is done in one engine so they can gain efficiency. Obe Everett stated, "The simplicity of the KloudGin mobile app allows field service representatives to ramp up in little to no time. It's easy but powerful, giving field reps the ability to capture resource time, track/ report changes to inventory assets, show asset location, and view routes and updates to work orders."

Improved Operational Efficiency

With a mission phrase of "Doing the right thing in the right place at the right time," James Bates, Director of Infrastructure Planning & Records felt the results they got from KloudGin helped with many of the key elements of this mission. He stated, "It's not just about capturing efficiencies in the way we work, but are we spending money where we're supposed to be spending money, are we replacing assets that truly are at the end of their asset life? That is data we can get from KloudGin, and those two elements alone will lead us to efficiency and effectiveness."

Better Decision Making

Louisville Water wanted to do a better job of managing the things that need to be done and taking care of their assets. They had a lot of manual interventions where they would have to pick data from one system and move it to another system to make sure they were making the right decisions. According to Dave Vogel, Executive Vice President, "We have a billion dollars' worth of assets to manage, so

taking care of our stuff became very important to us, and KloudGin helps us make better decisions so that we can extend the useful life of our assets."

Streamlined Processes Through Automation

With KloudGin, Louisville Water was able to eliminate a lot of the paper trail. Automation enabled them to not only enhance their processes, but to gain additional value. For example, the timekeeping process is not just about streamlining the process itself, but also the time can now be charged against assets which feeds back into the lifecycle asset cost, etc.

Superior Customer Experience

When asked if there had been any unexpected benefits from the KloudGin implementation, Vogel responded "An unexpected benefit was the implementation itself and how quickly KloudGin responded to requests and their nimbleness when there were issues. We could report a problem on Thursday or Friday, and KloudGin would have a fix for us on Monday. As a project sponsor, I felt confident that if issues cropped up on the KloudGin side, they were going to turn things around very quickly."

KloudGin Keeps On Giving

Louisville Water now has three implementations of KloudGin across the company. After originally being brought in for a quick fix for mobile access in Phase 1, they decided to use KloudGin for smart meter/AMI/AMR installation and repairs. They then used KloudGin to replace MWM for most of the short-cycle field work. And now with Phase 2, the last phase of the project, they use KloudGin for even more than before.



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