



THE SMART CITY OF RIVERSIDE, CALIFORNIA

“We had disparate data and systems – everything was everywhere,” said CJ Smith, a Project Manager for the City of Riverside Public Utility (RPU), which operates grids, substations, water plants, and maintenance fleets to provide 120,000 residents with essential resources. Faced with an aging workforce and aging infrastructure, the city invested in an aggressive initiative that connected myriad systems into a data-rich integrated system. The result has transformed how the city operates, and today, Riverside has a digital and connected utility that has streamlined reporting, maintenance and emergency response and that is projected to save the City of Riverside \$3 million over the next five years.

AN AGILE START

In July 2016, the City of Riverside signed an Enterprise Agreement with OSIsoft to implement the PI System as the city’s data infrastructure. A group of stakeholders from the City of Riverside IT department, Riverside Public Utility, and OSIsoft designed an architecture that could support an ambitious five-year plan for the city’s digital transformation.

Their first priority was to wrangle data scattered across disparate systems into a single place. The PI System became the data hub and systemic glue that helped RPU turn disparate reports and data streams – including financial data, work orders, weather data, customer information, and even call center data – into meaningful information. By October 2016, 80 percent of RPU’s systems were connected to the PI System.

A core implementation team of five people then used an agile approach with 4-6 week sprint to develop applications feeding off PI System data. Every sprint, they delivered a new dashboard, report or solution based on end user needs. They worked with subject matter experts upfront to validate data quality. To make it easy for anyone to access data, Smith and her team created an internal web page for quick navigation to a wide range of PI Vision dashboards as well a custom application – called “Search PI” – that makes it easy to search and locate data within the PI System.

“We were able to say to a user group I only need you for five weeks. If you can give me five weeks of your time, we promise you will have your product that will change how you do business,” said Smith.

HIGHLIGHTS:

Projected ROI of **\$3+ million over 5 years** from process automation alone

Automated water operations reporting and **saved 8 hours employee time** per report

Connected **80% of disparate** utility systems to the PI System



Riverside Public Utility provides a single web interface that any user can drill down into to see what is happening in real time.

SMART CITY DASHBOARDS

Preparing reports on water operations used to be a manual task that required eight hours of work with a series of Excel spreadsheets. Today, those reports are automated and easily accessible on a water operations dashboard. Another dashboard shows the real-time blend in Riverside’s water wells.

Riverside has also set up dashboards that allow managers to drill down and see how substations are performing. System alerts are set up for key performance indicators, so that automated notifications are sent anytime something is operating abnormally.

For water field work orders and power outages, data is now available on a map, so employees out in the field can see field work orders and outages in real time and better prioritize work. “Before there would be an outage and a customer would call and say we have an outage

on this line. We would then dispatch someone, and he would drive the line in his truck from one end to the other looking for a blinking grid sensor to see where the outage was,” said Smith. “Now instead of driving the entire line and trying to find a grid sensor blinking, they can see it on a map on their iPhone or iPad.”

Ultimately, better information in the hands of employees has transformed how the City of Riverside works. Over the next five years, the city projects over \$3 million in savings from process automation alone. But they aren’t done yet, Smith and her team plan to continue rolling out dashboards and data solutions to make Riverside an even smarter city.

For more information about the City of Riverside and the PI System, watch the full presentation [here](#).

PI System Components:

PI Server™

- Asset Analytics
- Asset Framework
- Data Archive
- Event Frames
- Notifications

PI DataLink™

PI Interfaces and Connectors™

PI Integrator for ESRI ArcGIS™

PI Vision™



“The OSIsoft team that we worked with – we had a great partnership and they were instrumental to our success.”

— CJ Smith, MPA, PMP Project Manager, City of Riverside, Public Utilities

CJ Smith. “From Paper-Based Processes to a Digital & Connected Utility.”
 <<https://www.osisoft.com/Presentations/From-Paper-Based-Processes-to-a-Digital-and-Connected-Utility/>>