

Carson City Public Works

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“What we’ve created here is a smarter Carson City. One with a complete solution that involves the Wonderware System Platform running the Wonderware mobile reporting application with SmartGlance on virtual machines. The solution provides our team with communications over wireless platforms that include both standard and mobile monitoring and control.”

—James Jacklett
Electrical/Signal Supervisor
Carson City Public Works

Carson City Public Works Leverages “Smart City” Technology from Schneider Electric

Goals

- Efficiently manage the City’s water, wastewater, transportation, landfill, fleet, environmental and renewable power systems around the clock
- Leverage the latest virtualization technologies, including iPads and smart phones, to increase the efficiency of operators and management, as well as increase situational awareness to achieve a high level of operational readiness

Challenges

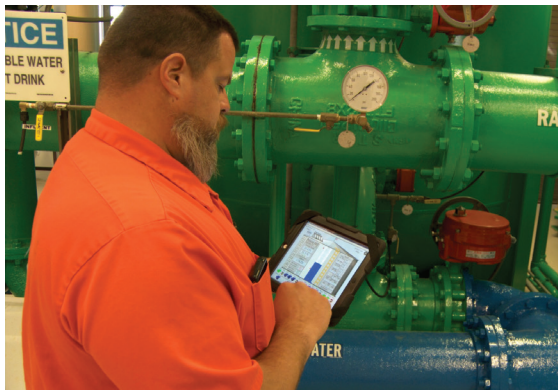
- Deliver affordable and reliable transportation, power, water, and wastewater services to citizens and visitors to Carson City and surrounding counties
- Reduce administration and overhead costs while significantly increasing the City’s operations reliability and disaster recovery processes

Solutions and Products

- Wonderware® System Platform
- Wonderware InTouch® HMI
- Wonderware Historian
- Wonderware SmartGlance™

Results

- Remote management capabilities have resulted in 15% reduction in operations staff hours due to saved “drive time”
- Reduced work week from five eight-hour days to four ten-hour days
- Helps manage the city’s solar plants that provide up to 748,000 KWH of clean power each year
- Delivers more than 22 million gallons of water while processing 6.9 millions of gallons of wastewater each day



Background

Carson City, Nevada – In 1859, Carson City, Nevada drew hundreds of prospectors with the news of the rich silver strike known as the Comstock Lode. Originally serving as a stopover for pioneers traveling to California, Carson City quickly became a place for others to seek their fortunes in the silver mines of the city’s local mountains. Today, Carson City continues to draw residents and visitors alike who are drawn to the year-round sports offered by the local Sierra Nevada Mountains, the excitement of hitting it rich with “Lady Luck” at the casinos, or to simply live in a community which still offers a “small town” atmosphere..

To successfully maintain a city of more than 50,000 residents and the growing number of visitors to the City each year, the men and women of the Carson City Public Works Department created a municipal services infrastructure revolving around the capabilities of its people and the best available “smart city” technology from Schneider Electric.

Leveraging the latest in virtualization technologies, including iPads and smart phones, to increase the efficiency of its operators and management team, Carson City Public Works has successfully increased its situational awareness and achieved a high level of operational readiness through its use of Schneider Electric applications.

Keeping a City “Humming” Year-Round

Since 1992, Carson City Public Works has used the Wonderware SCADA Software Solution to manage both water purification and wastewater recycling facilities. Featuring the award-winning Wonderware InTouch HMI, the department is able to quickly create standardized, reusable visualization applications and easily deploy them across its entire enterprise.

As the demand on public works escalated in recent years and staff mobility became increasingly important, the City realized that it was necessary to expand the department’s ability to remotely monitor and manage services across the area’s three counties. To successfully integrate its remote operations management systems, the Public Works department implemented the Wonderware Mobile Reporting application with SmartGlance.

These automated infrastructure management applications run on Wonderware System Platform to effectively control a broad range of the City’s municipal services including water and wastewater, traffic control, service truck fleets, landfill processes, and renewable energy production. Implementing the latest remote management technology from Schneider Electric enables the Public Works team to deliver affordable services to both citizens and visitors.



“To effectively and efficiently perform our duties each day, we’ve developed a highly intuitive infrastructure based on ‘smart city’ technology from Schneider Electric.”

*–Darren Schulz,
Deputy Public Works Director, Carson City*

“With a staff of over 120 people, the Carson City Public Works Department is often called on to assist the public in many different ways and many of our duties go on around the clock,” says Darren Schulz, Carson City’s deputy Public Works director. “To effectively and efficiently perform our duties each day, we’ve developed a highly intuitive infrastructure based on ‘smart city’ technology from Schneider Electric.”

Access Critical KPI Data in the Field

The Wonderware SmartGlance solution enhances the mobility of the City’s staff and provides them with data in a format that can be easily read and manipulated using their smart phone screen navigation features. This innovative mobile application enables the City’s public works staff to instantly access key performance indicators (KPIs) and critical process information from Wonderware Historian and other data sources right on their phones.

With SmartGlance, data reports are sent to team members’ smartphones and reports are updated automatically. The ease of access to critical public works’ information is unprecedented, enabling team members to immediately access and share reports amongst themselves when needed in a cost effective and secure manner.

Improved Situational Awareness and Operational Readiness

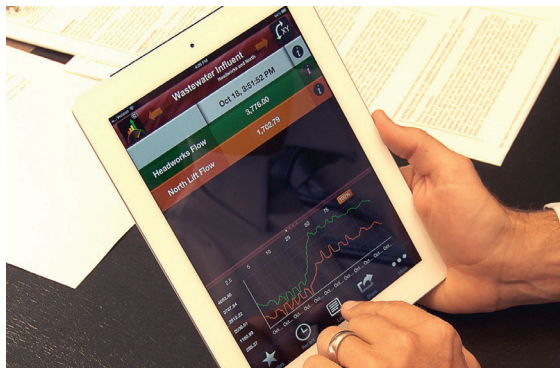
The power of SmartGlance allows Carson City staff to make more informed decisions based on realtime information while in the field. With the ability to access multiple reports and compare data, team members can quickly pinpoint problems at any of the City’s public works locations. The solution enables any team member to send reports or data graphs from Wonderware Historian or other data sources via e-mail to each other to initiate immediate action to address issues.

By viewing critical KPIs and reports generated by Wonderware Historian in the field, the Wonderware solution enables staff to more effectively monitor and manage the operational performance of the City’s municipal services. These capabilities have significantly increased the staff’s overall situational awareness enabling it to achieve a high level of operational readiness on a regular basis.

“The ability for our engineers and operators to use the iPad and smart phones for controlling city services has greatly increased situational awareness and allowed us to become more efficient by making sure that our people are always on the move,” Schulz said. “SmartGlance has enabled our senior staff with instant access to key performance indicators and critical process information right on their iPads and phones.”



The Wonderware solution enables staff to more effectively monitor and manage the operational performance of the City’s municipal services.



Leveraging the Latest in Mobile Visualization Technology

The Carson City Public Works department is using iPads and smart phones to their advantage. These advanced virtualization and communication devices increase the efficiency of the department's operators and management teams enabling them to achieve a high level of operational readiness.

"The virtual machines that we've implemented here in Carson City have allowed us to reduce the burden of administration and overhead costs while significantly increasing our reliability and disaster recovery processes," said James Jacklett, electrical/signal supervisor at Carson City Public Works. "Integration with Wonderware has enabled real-time status, alarm notification, and historization of the state of communications for effective monitoring of the City's transportation, power and water systems, providing us with better operational readiness."

From management of the City's solar plants that provide up to 748,000 KWH of clean power each year, to delivering more than 22 million gallons of water while processing 6.9 millions of gallons of wastewater each day, to maintaining the traffic light and transportation systems of three counties, Schneider Electric solutions has enabled the Carson City Public Works department to increase the reliability and efficiency of the services they offer.

The activities of the Public Works Department touch the lives of Carson City residents and visitors on a daily basis. With the implementation of Schneider Electric solutions, Carson City has achieved a 15 percent reduction in "man-hours," was able to reduce its work week from five, eight-hour days to four, 10-hour days, and lowered overhead costs. These time and cost reductions equate to more time department personnel can dedicate to developing innovative programs to better serve the citizens and visitors to Carson City.

"By combining the strength and knowledge of multiple work groups and sharing individual skills and equipment, the Carson City Public Works team can provide the community with the highest quality of customer service," Shulz said.

With help from Schneider Electric and its Ecosystem partner Wonderware PacWest, Carson City Public Works has created a "smarter" Carson City with innovative tools, capabilities and solutions that leverage advanced mobile communications and data management technologies to carry it into the future.

Schneider Electric Software

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