



## CUSTOMER BACKGROUND

Founded in 1884, Arizona Public Service (APS) is the largest electric utility in Arizona, providing electricity to more than 1.2 million retail and residential customers in 11 of the state's 15 counties. With 6,400 employees and more than 4,000 megawatts of generating capacity, APS primarily serves downtown and northern Phoenix as well as Flagstaff, Prescott, Yuma, and Douglas. The utility, which also operates three nuclear reactors, plans to add 700,000 new customers by 2030. APS is regulated by the Arizona Corporation Commission, with oversight by the North American Electric Reliability Corporation (NERC) and Federal Energy Regulatory Commission (FERC).



## CHALLENGES

# Correcting deficiencies in the system's operations and reporting capabilities

Three days before the 10th anniversary of 9/11 and in the middle of a heat wave, a widespread power failure cut electricity to approximately 5 million people in Southern California, Arizona, New Mexico, and parts of northern Mexico. Almost all of San Diego was blacked out, all outgoing flights from the city's international airport were grounded, and two nuclear reactors went offline.

The failure—the result of an employee error—triggered 23 events across five power grids in an 11-minute span. Officials initially determined that safeguards had failed, allowing the incident to spread far wider than it should have. Further investigation by FERC and NERC found several APS compliance violations and serious deficiencies that undermined reliable operation of the power system. (In a settlement reached three years later, the utility agreed to pay \$3.25 million in penalties and fines.)

Following a corrective action program (CAP) and an evaluation of the utility's asset management system, APS officials realized their existing system's issues management fell short of internal and external requirements in areas such as ease of use, workflow management, action tracking, and reporting. The ability to make timely changes to the system to keep up with evolving business operations and processes was also a challenge.

At that point, a high-level APS executive with a background in the highly regulated nuclear industry engaged DevonWay for a demonstration to understand the capabilities of the platform. The goals were: **1)** to confirm that the solution was compatible with two implementations of the legacy system for data capture and work order management, and **2)** to ensure seamless integration across all organizations.

APS started with a pilot test of the DevonWay platform with its Transmission & Distribution group, then expanded configured solutions to individual plants and supporting corporate groups. The disparate processes across these plants and groups proved challenging but not insurmountable.







## SOLUTION

# Highly configurable, integrated performance improvement

Once the CAP project proved successful, the APS-DevonWay partnership was born.

The next step was to implement another organization-wide solution to manage safety events, which was configured to include associated vehicle accidents, employee injuries, property damage, and environmental events. Three of the four DevonWay components included:

- **Condition Reporting**, which identifies awareness gaps and enables corrective actions to be taken quickly and efficiently—cutting down on response time and instances of recurrent noncompliance.
- **Safety Events**, a highly configurable and intuitive platform that reports, manages, and records procedure-adherence errors and safety events, including near-misses to recordable injuries—designed to meet all Occupational Safety and Health Administration (OSHA) compliance regulations.
- **Observations**, a proactive, methodical program that empowers workers to identify and eliminate gaps in safe behaviors. This solution is now being extended to a mobile app that leverages features such as offline data capture, voice-to-text, and photos.

The above programs satisfied the utility's need for integrated performance improvement. Because DevonWay solutions are natively integrated and offer a consistent look and feel, the platform serves as a single point of entry for all of a user's assignments and reports. Records of different types can reference and then connect to one another, to other systems of record, and to a common set of tools.

A fourth DevonWay solution, **Ergonomic Assessments**, was adopted once utility officials realized the DevonWay platform could be used to effectively manage any manual (paper) process. This solution tracks ergonomic equipment preferences and links injuries to potential pre-existing conditions or ergonomic deficiencies. It offers automated workflows with organization-specific rules, trigger-based notifications, and date-based assignments.

The entire solution proved easy to implement. Once APS gave the go-ahead, DevonWay project teams mobilized to gather configuration requirements. Together, the partners held weekly project status and coordination meetings to collaborate on key decisions, discuss open issues, maintain project scope, and demonstrate progress.



## RESULTS

# Improved, streamlined reporting processes and stricter compliance with regulations

Each DevonWay solution was delivered within the targeted 100-business day project deadline. Since the implementation, APS has increased efficiency (automated workflow), awareness (reporting and notifications), accountability (due dates and ability to track to completion), and safety performance (OSHA events management). Plus, by allowing varying workflows driven by unit-specific business rules, each group can operate in the most efficient manner without the need to conform to the limitations of out-of-the-box software packages.

## THE APS-DEVONWAY PARTNERSHIP

# Safety first, then peace of mind

For Arizona Public Service, one employee error plus an outdated, inefficient, “fail-safe” reporting system equalled a massive power failure when millions of people lost electricity and the utility had to pay millions of dollars in penalties and fines. Following this well-publicized 2011 incident, APS recognized an urgent need to upgrade its system in order to better report, address, and close the loop on issues at all levels. In doing so, it would be more confident of their ability to adhere to state and federal regulations—and avoid another power breakdown.

After APS enlisted the support, services, and technology solutions of DevonWay, the utility increased operational efficiency and accountability, significantly improved its reporting processes, and has achieved compliance every year since the incident.

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