



## Work Force Management and Mobile

*The Quintel-Sempra Project Team partnered to develop and innovative mobile solution using Adobe forms.*



### Background

Sempra Energy Utilities (SEU) is comprised of two utilities, San Diego Gas and Electric (SDGE) and Southern California Gas Co. (SCG). SDGE is a full service utility that provides electricity and natural gas to 3.5 million customers across a 4,000 square miles area from Orange County to the Mexican border. SCG is the nation's largest natural gas distribution utility. It serves more than 20 million consumers across 20,000 square miles through central and Southern California.

SEU is undergoing an initiative 'OpEx 20/20' that includes 20 enterprise technology and process initiatives that will upgrade SEU's capabilities over a 15 year period. The major areas of focus were: Transmission/Distribution, back-office field/mapping support, customer service, customer contact centers and IT Infrastructure and network. Both SDGE and SCG were using home-grown legacy systems for construction and maintenance work management and wanted to implement SAP to streamline processes and integrate systems. SEU's ERP system was SAP.

Quintel was the lead system integrator for the full lifecycle of the WMS project (SAP EP5 EAM with Compatible Units and Operational Account Assignment; Over 450 RICEFW objects; ClickSoftware (scheduler and mobile); and, Telvent Graphical Design Tools.

### Solution Implemented

Quintel and SEU integrated Adobe forms with the ClickSoftware mobile solution as this was the mobile software at SEU. However, the Adobe form can be

used in conjunction with any mobile software. The solution included the design, build and integration of nine mobile forms. This functionality included the automated pre-population of the forms with SAP data; the automated updating of SAP fields and tables and the automated generation of forms specific to job type and crew. Other form functionality included form consolidation (single easily navigable work package); drop down menus, data entry validation, and form completion validation. These forms were delivered to the mobile as an attachment. The following are the forms created for the SEU implementation:

- As-Built Smart Form
- Electric Underground Service Order
- Electric Overhead Service Order
- Gas Service Order
- Electric Meter Form (Install / Remove)
- Excavation
- MSA
- Street Light Install
- Street Light Repair

### As-Built Smart Form

The As-Built Smart Form provides the means for the crew to accurately report the actual material usage relative to the planned usage from the design. As a result, the As-Built Smart form is tightly integrated with the SAP work order, Compatible Units, and Operational Account Assignment (accounting treatment, automated settlement rule determination, automated asset unitization, etc.)

- Display the As Designed materials grouped by design location,
- View/edit comments field associated with each design location
- Mark each material with an "As Designed Flag" indicating that Actual Quantity = Planned Quantity.
- For each material indicate a material Actual Quantity that differs from the Planned Quantity.
- Identify when a material is not used in the construction or maintenance job.
- Add a new material if not included in the design.
- The user is able to enter partial data into the As-Built Smart form and close it in the MDT without completing the form.

**As-Built Smart Form**  No Materials Used

Printing Options:  All Locations  Selected Location  
 Equipment Information  
 Header Information

Header Information

Comments:

Crew Comments: Installed 2 Anodes

Buttons: Save, Validate, Submit, Print

Location: (All locations)

Location	Work Function	Stock Code	Stock Description	Planned	Actual	Scrap	As Designed	Equip Info
Default Location	INSTALL	N391073	Anode, Magnesium, 20-lb	EA	2	2	<input checked="" type="checkbox"/>	Equip Info
	INSTALL	N391073	Anode, Magnesium, 20-lb	EA	2	2	<input type="checkbox"/>	Equip Info

**Figure 1: As-Built Smart Form**

### Project Successes

SEU was able to realize significant benefits through its partnership with Quintel and its implementation of the mobile smart form solution.

- Significant reduction in project schedule because of the integration between Adobe and SAP. Development cycle time inherent with customization mobile software was eliminated. In addition, SEU was able to achieve a more custom mobile solution because of the ease of customizing the form. This increased user acceptance and use of the solution.
- Reduced project schedule as a result of reduced testing and defect cycles given the integration of Adobe and SAP.
- The integrated mobile solution removed the need for duplicate entry of data in the field and in the office (paper to computer). This provided gains in efficiency.
- With the reduction of paper and duplicate entry, data integrity improved. Paper documents were not lost, data was entered in a common system and users had access to consistent data.

### About Quintel

**Quintel is a certified TQM SAP partner; a certified Business Analytics) partner; and, AQM (Active Quality Management.** Quintel is a 100% woman owned business and is a provider of Management Consulting and IT services that

specializes in performance improvement for utilities (Investor Owned, Cooperatives, Districts, Federal Government and Municipalities) (electric, water, wastewater, gas, power generation) and public sector organizations. Quintel has completed numerous management consulting projects and 27 large scale software implementations (Billing/Customer Service, ERP, Enterprise Asset Management, Mobile Data, Customer Web, EP6) over the last ten years.

Our consultants have over 20 years of utility and public sector consulting experience and project management skills. Our IT services include software selection, business case and project plan development and full system integration services.

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