



RFID JOURNAL LIVE!

SEPTEMBER 26 - 28, 2021
PHOENIX CONVENTION CENTER | PHOENIX, AZ

RFID Helps Manage Fuel Storage Facility Inspections

SunWest Engineering Constructors, Inc.

Pam Lawrence, President

Michael Barber, General Manager

INTRODUCTION

**General Contractor Founded in 1994
and Specializing in:**



**Fuel Systems
Design**



Testing



Construction



Repairs

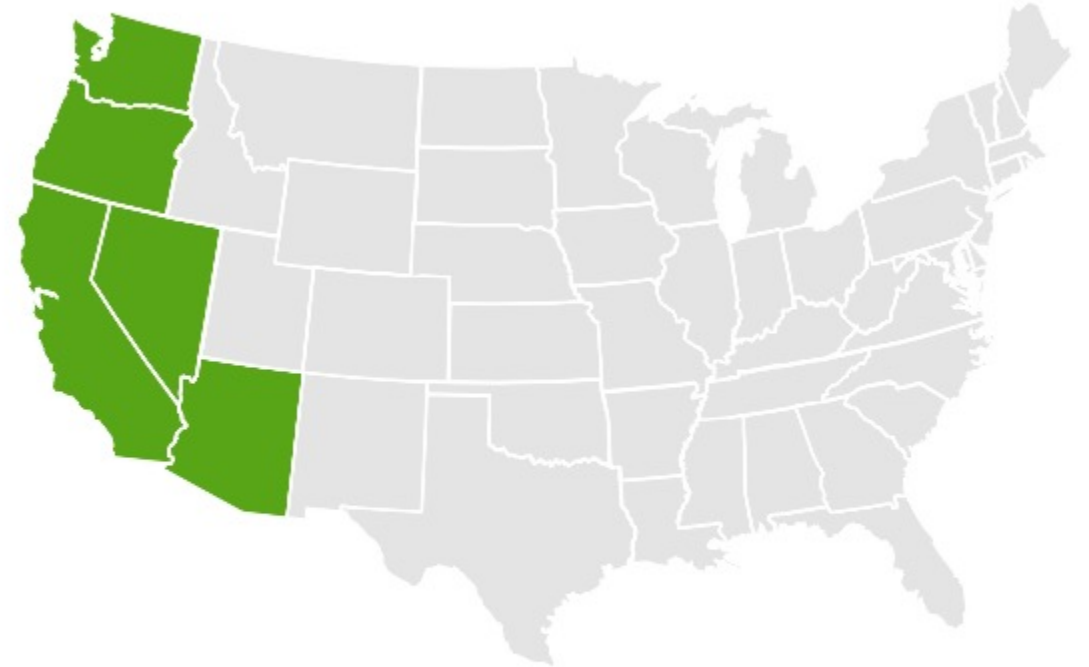


Maintenance



**Compliance
Services**

Licensed in Five Western States





REGULATIONS

USEPA

State Agencies

- Office of the State Fire Marshall

- California Air Resources Board (CARB)

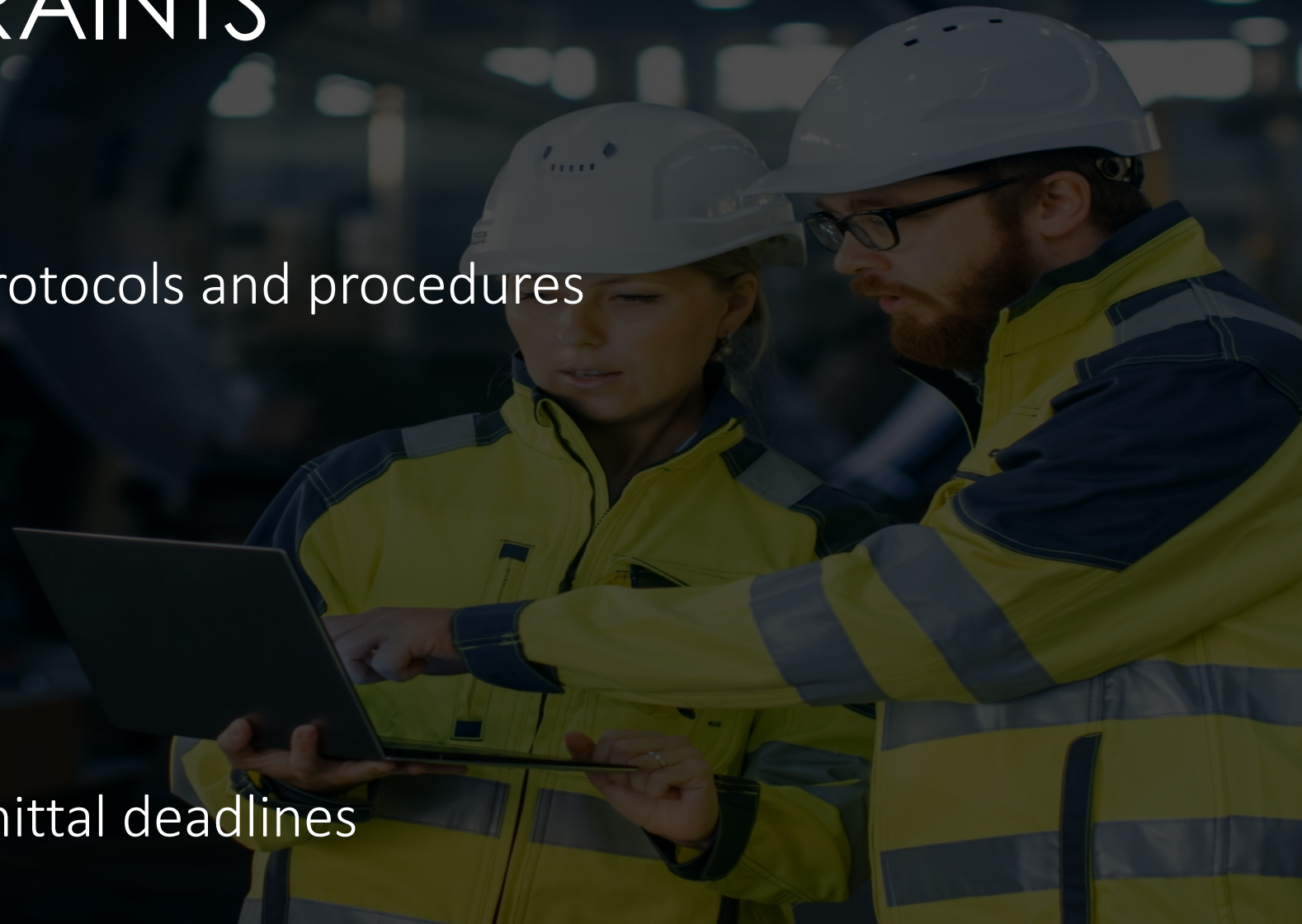
- State Water Resources Control Boards

- Various regional water boards

Local Fire and Environmental Health districts

SERVICE CONSTRAINTS

- Defined inspection intervals
- System-specific inspection protocols and procedures
- Agency-specific forms
- Extensive report forms
- Strict inspection report submittal deadlines



STATISTICS-SINGLE CLIENT

28,536

monthly
inspections from
2005-2017

\$3,138,960.00

Estimated
Customer cost

3,000,000+

Cumulative miles
travelled by
technicians

272,727

Estimated gallons
of fuel consumed

\$749,999.00

Estimated fuel
costs

5,356,358 lbs.

Of CO₂ produced
2,678 Tons

EQUIVALENCIES

CO₂ emissions from



Source: [EPA.gov/energy/greenhouse-gas-equivalencies-calculator](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)

OBJECTIVES

- Reduce technician travel
- Improve inspection details and evidence
- Consistent, accurate information gathering
- Identify equipment changes
- Scalability

REGULATORY ACCEPTANCE

- First in industry
- No current regulations
- No agency standards
- No regulatory restrictions
- Acceptance by CA State Water Resources Control Board



TECHNOLOGY CONSIDERATIONS

- Class 1 Div 1 environments
- Proof of presence
- Multiple surface applications (FRP, steel, plastic)
- Limited or no internet and cell service
- Affordable



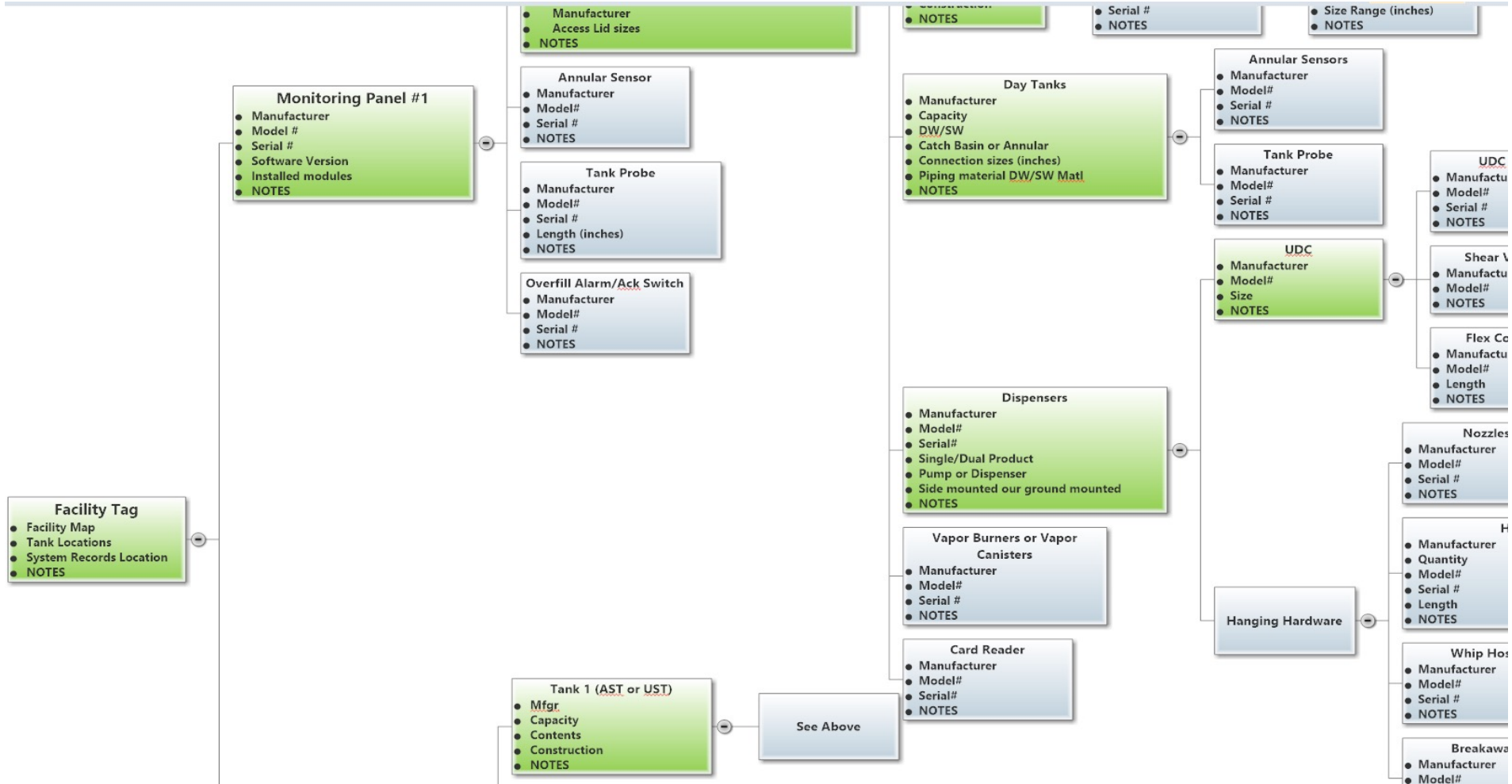


SEPTEMBER 26 - 28, 2021

TESTING DISCOVERIES

- Data errors in commissioning process
- Cumbersome template
- Tag-specific data entry
- Placement standards needed
- Vehicle traffic damage

TRAINING TOOLS

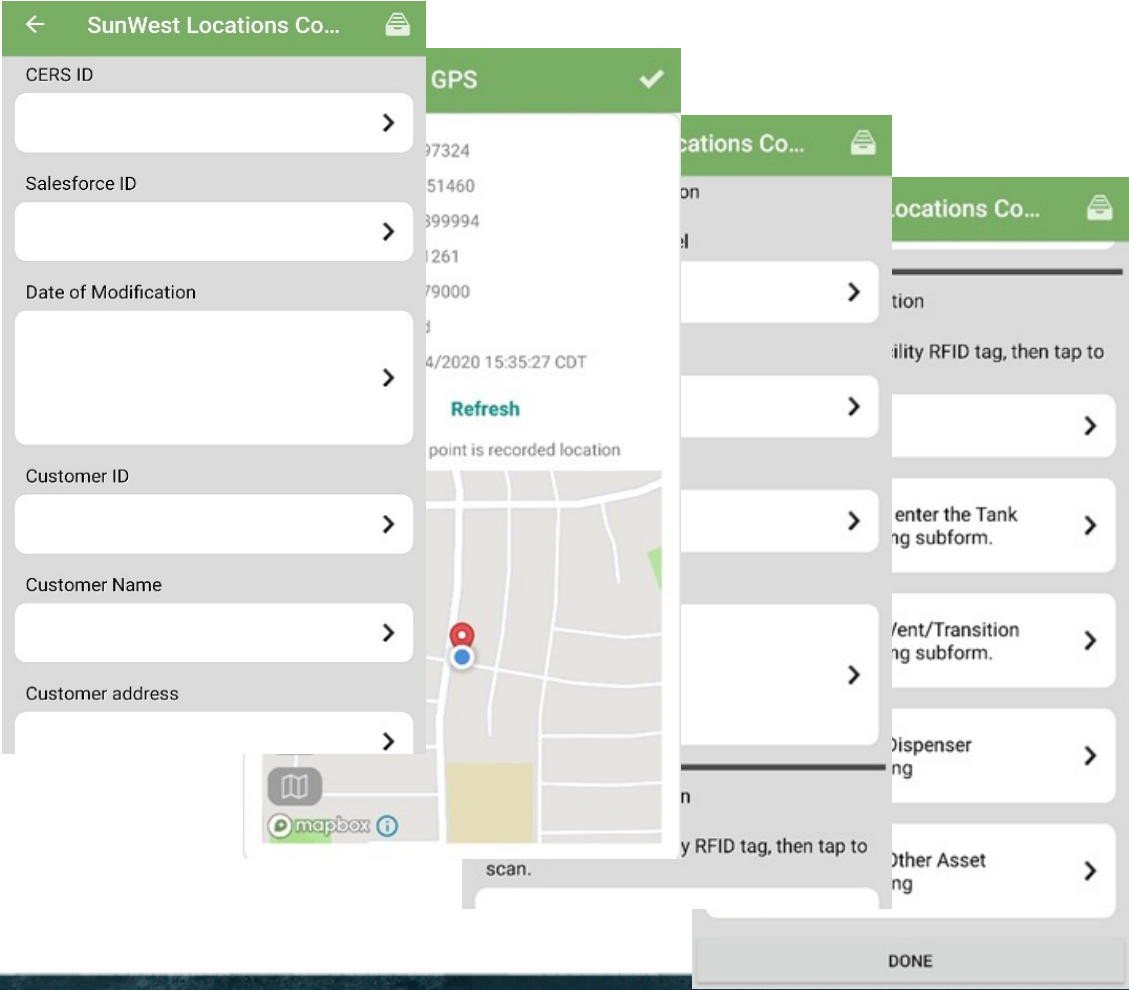
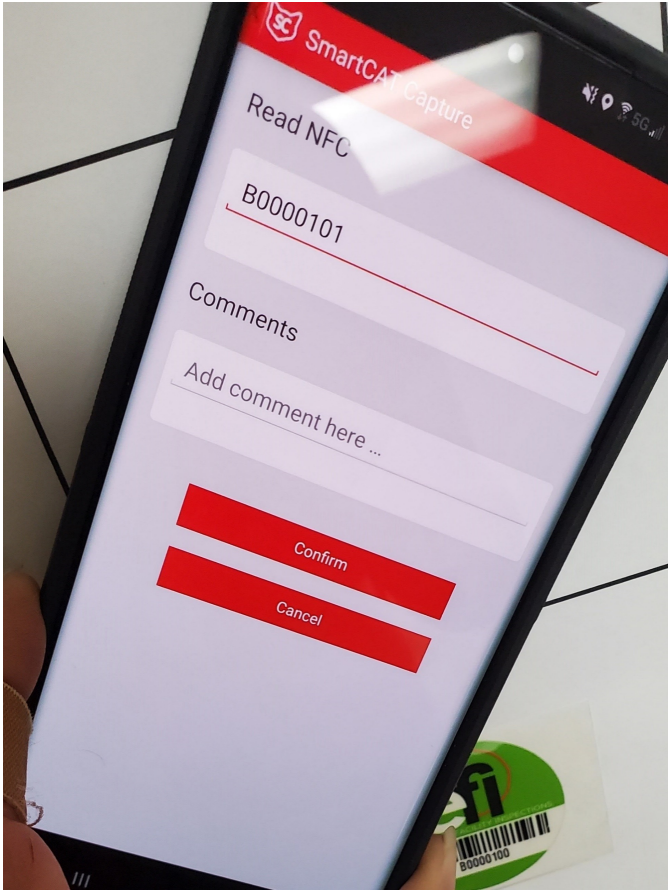
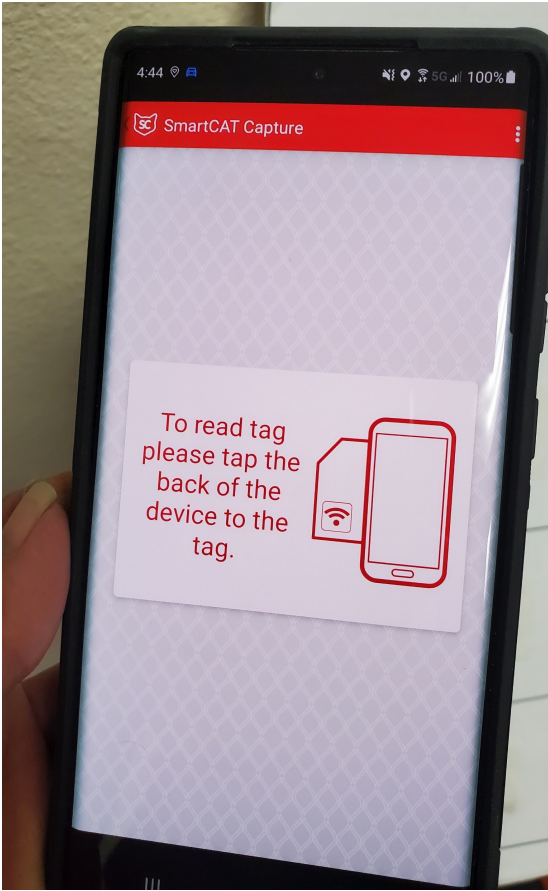


IMPLEMENTATION CHALLENGES

- Existing infrastructure restrictions
- Data integration with CRM system
- Rollout restricted
- Data mapping



IMPLEMENTATION



RESULTS



- Service improvements
 - Proof of inspection integrity
 - Report accuracy
 - Time Reduction
- Reduced Costs
 - Flexibility in scheduling
 - Improved facility security
 - Improved report submission

INDUSTRY IMPACT



CURRENT

- Technician dependency
- No proofs of inspection
- Lengthy report prep
- Costly travel
- Environmental impact

FUTURE

- Verifiable data
- Evidence of inspection
- Auto-generated reports
- No travel – reduced costs
- Reduced environmental impact



WWW.SUNWESTENGINEERING.COM

THANK YOU

RFID
JOURNAL
LIVE!