Underground Storage Tank Compliance and Reporting Goes Digital

Category: Digital Government - Government to Business
State: Arizona
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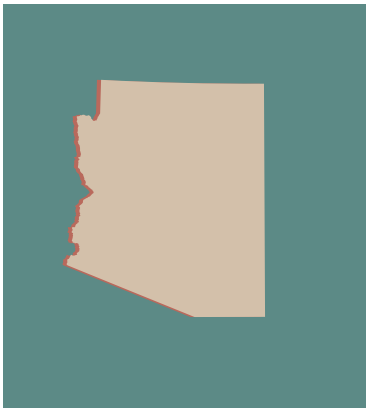


IDEA

Citizens expect a clean, safe, healthy environment and a strong economy. However, compliance with complex environmental regulations can be burdensome. As a regulatory agency, simplifying government services is critical to achieving our mission to protect and enhance public health and environment in Arizona. In addition, ADEQ's vision is to be the number one state in the nation in balanced, leading-edge environmental protection by providing technical and operational excellence with radical simplicity.

ADEQ regulates over 5,700 active Underground Storage Tanks (USTs) that require compliance and reporting from 1,000 customers statewide. Leaks from tanks that store petroleum or hazardous substances could pose a threat to groundwater, a major source of drinking water for Arizonans. Regulations require owners and operators of USTs to provide (1) notifications of tanks prior to installation and operation, (2) update financial responsibility annually, and (3) report suspected leaks in a timely manner. The paper process in place required duplicative data entry efforts and was time consuming and error-prone.

Online portals have become a necessity for state governments to efficiently regulate and effectively serve customers while achieving mission outcomes for citizens. Digital systems help customers navigate complex regulations with ease making compliance a breeze.

It was time to act and find a way to process UST compliance and reporting faster. ADEQ's goal was to create a convenient, digital solution for UST customers that would yield positive, productive outcomes and instill high confidence in an efficient, reliable and transparent process. Rapidly emerging technologies provided ADEQ with the opportunity to streamline regulatory obligations for UST customers through automation, which in turn reduces the overall time and cost of compliance with environmental regulations. Helping customers start operations sooner, advances job creation and increases economic output, which enhances Arizona's attractiveness to business.

Developing and providing UST customers with digital systems allows them to complete the same regulatory compliance activities more efficiently and effectively with less time so that they can spend more time on business outcomes. Further, digital solutions that offer a one-stop shop for their regulatory transactions provide an opportunity to shape customer views toward government by enhancing customer experience.

IMPLEMENTATION

Since 2014, ADEQ has aggressively transformed its operations in pursuit of our vision to deliver balanced, leading-edge environmental protection through operational and technical excellence and radical simplicity for customers and staff. We started with implementing a results-driven management system that transforms the way the government thinks and does business as one enterprise.

Embarking on a system that serves and meets the dynamic and multimedia compliance and reporting needs for businesses from a diverse customer base ranging from big power plants to small gas-station owners is no small feat. Traditional paper forms and processes were decades old and needed a major overhaul. Lean initiatives were needed to streamline the current state of these forms and processes.

Aligned with the Governor of Arizona's initiative to provide "government at the speed of business," which allowed project funding, ADEQ initiated an online environmental management portal to transform over 180 services into self-serve applications. The portal was developed as a platform that could accommodate unique applications for each service ADEQ offers. To provide the best digital experience, ADEQ focused on providing a simplified user-centric design from the get-go:

- Chose and created a turbo-tax like approach to break down complex regulations into questions and answers that simplify user-interpretation of environmental law and regulation.
- Applied global standards for seamless navigation across various applications and a uniform user experience that results in effective use of the customers' time.
- Pre-defined the look and feel of each page, colors used and format and incorporated "Tool Tips" on each page to provide additional clarity.

Other customer-centric online service features include:

- Automatic due date reminders are sent to customers to help them stay on top of reporting deadlines,
- Required fields resolve issues of paper reports missing critical information,
- Helpful hints called "Tool Tips" are included throughout the screens to provide customers with information about what needs to be included in the online report,
- Effectively utilizing previously reported information to reduce customer data entry time, and
- A map feature customers can use to pinpoint locations more easily to increase accuracy and speed.

To transform UST compliance and reporting and reduce the burden for customers to submit notifications and reports, ADEQ thoroughly vetted each UST online application to ensure all regulatory requirements were included.

ADEQ's development team used Agile methodology due to the changing nature of regulations. The Agile methodology allows for small incremental development with ample room for improvements and flexibility that provide high customer value. Changes can be incorporated quickly thereby making the development cost-effective.

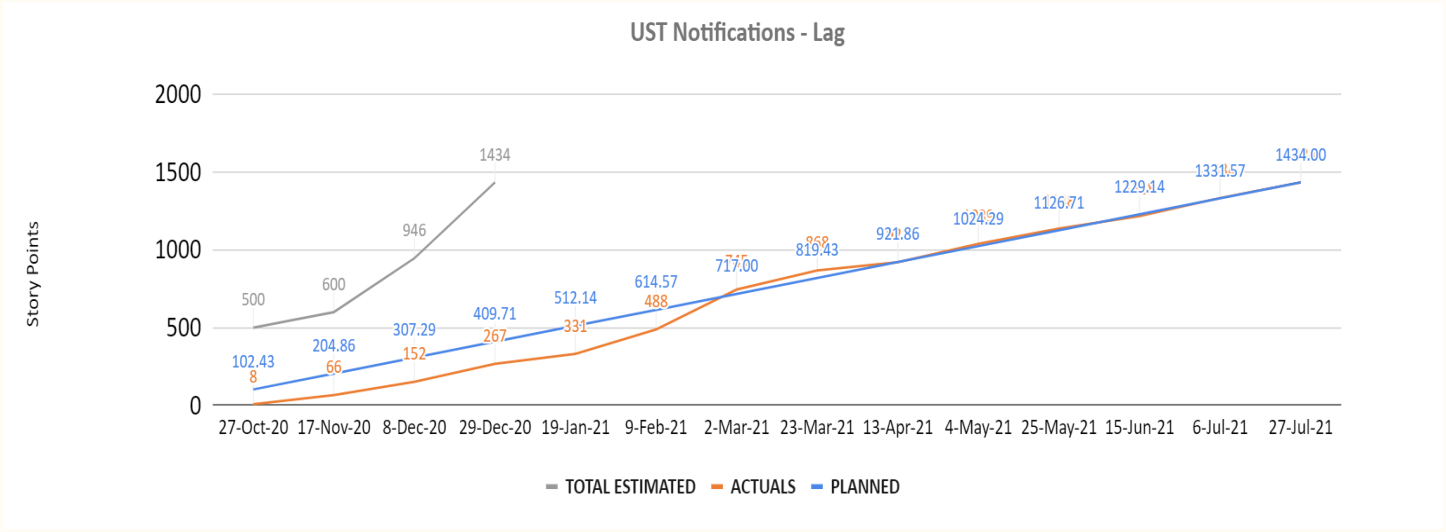
The project started with leaning out decades old existing processes. Collaboration with end users provided the voice of the customer and yielded a mutually beneficial system for businesses and the agency.

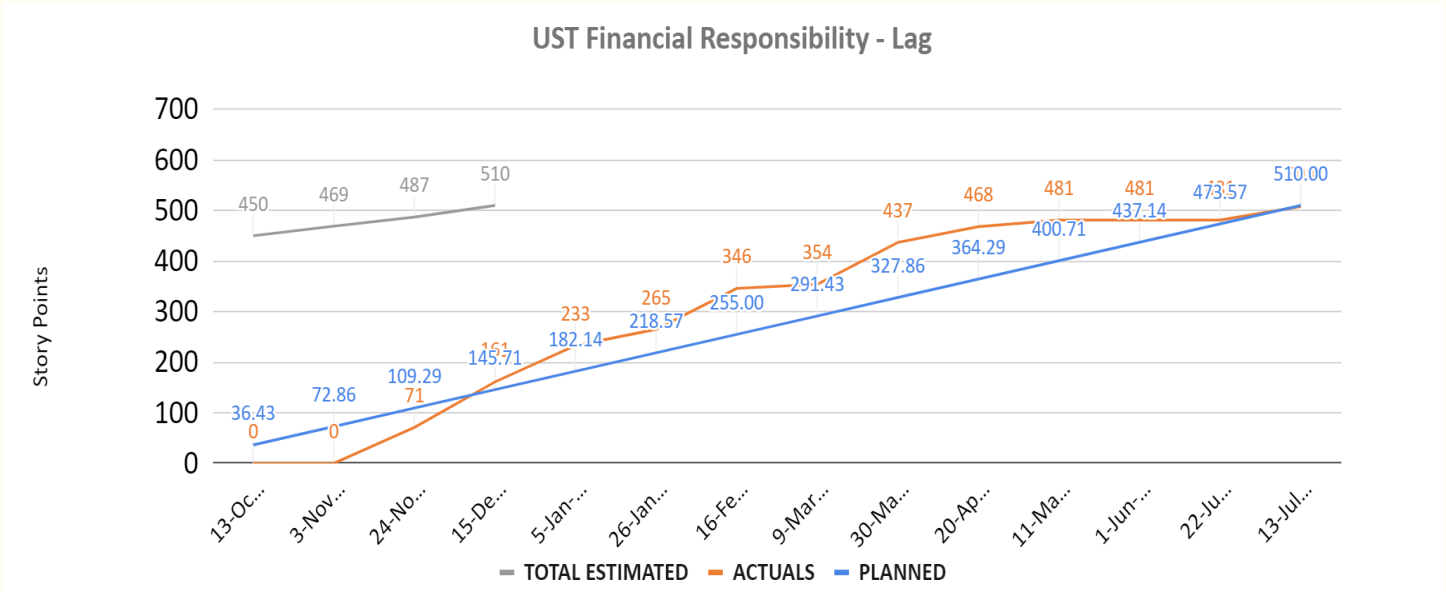
ADEQ accomplished the UST online application development process in phases:

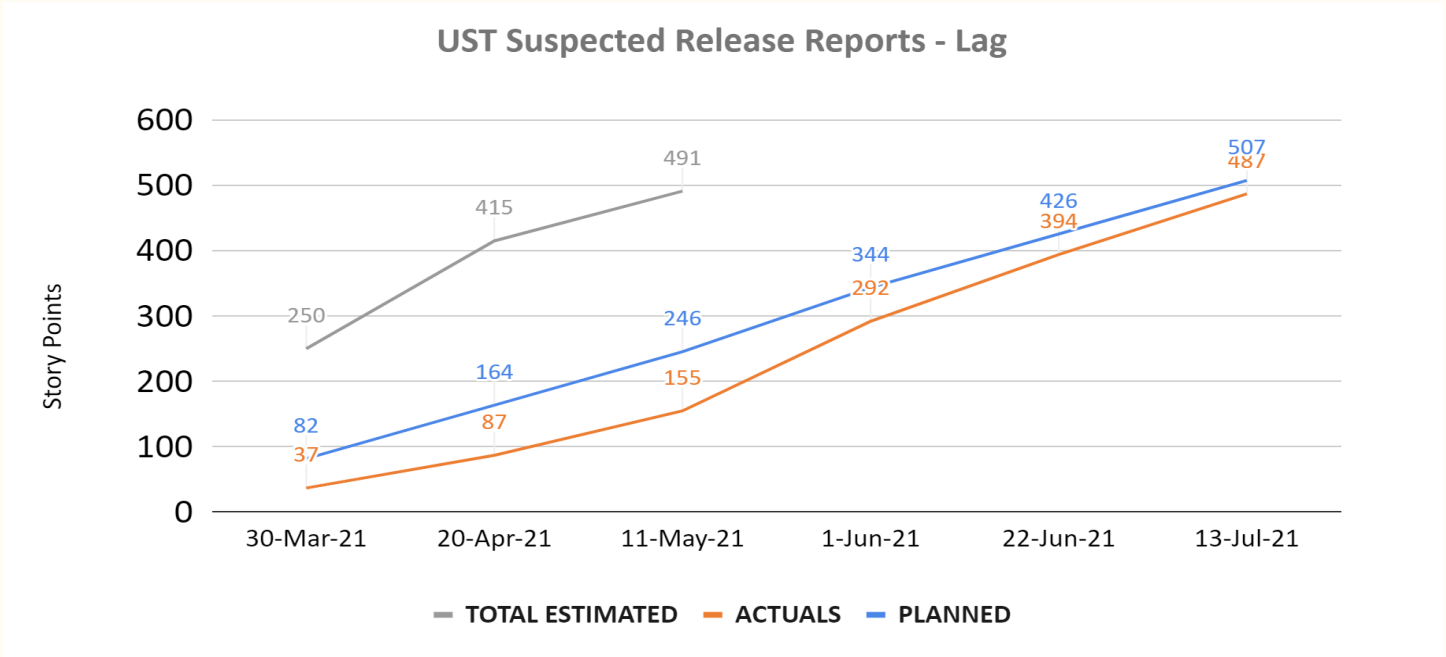
- **Phase I: Requirements and Analysis -** ADEQ's IT team worked with the UST program staff to establish internal discovery meetings that resulted in documented analysis of system requirements. Use of the discovery phase with several Lean initiatives reduced waste in the process. A comprehensive and detailed requirements document was finalized during this phase. A Kaizen event, a Sino-Japanese word for "improvement," was integrated into the development process. This was a week-long event with all stakeholders involved that includes customers and staff. Feedback on the rough-sketched design of look-and-flow of the applications was obtained from end-users and helped reduce changes after development. This ensured cost-effectiveness that provided a high customer value product in the first iteration. Lessons learned from early builds were incorporated into standard work that further reduced the development costs for each application.
- **Phase II: Design -** Using the detailed requirements document from Phase I, the Design phase of the project specified system requirements and helped define the overall system architecture. The Technical Lead defined the tasks leading to the project goals.
- **Phase III: Construction -** The detailed design documents created in Phase II were used by the development teams for coding the prototypes.
- **Phase IV: Integration -** The process of integrating the system into the test environment, which replicates the production environment, was conducted in this phase.
- **Phase V: Testing and Debugging -** The development team worked in coordination with the Quality Assurance/Testing team to test the functionality and usability of the systems as specified in the design documents.
- **Phase VI: User Acceptance -** The business analysts worked with the UST program to test the functionality and usability of the prototypes. A bug-tracking system captured errors in functionality.
- **Phase VII: Implementation -** Upon acceptance of the UST applications, the completed projects were implemented into production. This was coordinated with the Network Administrator team and the development team's Technical Lead.
- **Phase VIII: Maintenance -** A maintenance schedule was created to support each new UST application.

Stakeholders including subject matter experts, IT professionals, legal experts, executive leadership, and actual users were involved in all phases of development.

Burn-up charts for the development were used to display progress and keep the projects on track. The charts and a snapshot of the applications developed are included in the following pages.


UST Notifications - Lag
Story Points
2000
1500
1000
500
0
27-Oct-20
17-Nov-20
8-Dec-20
29-Dec-20
19-Jan-21
9-Feb-21
2-Mar-21
23-Mar-21
13-Apr-21
4-May-21
25-May-21
15-Jun-21
6-Jul-21
27-Jul-21
TOTAL ESTIMATED
ACTUALS
PLANNED


UST Financial Responsibility - Lag
Story Points
700
600
500
400
300
200
100
0
13-Oc...
3-Nov...
24-No...
15-De...
5-Jan-...
26-Jan...
16-Fe...
9-Mar...
30-Ma...
20-Ap...
11-Ma...
1-Jun-...
22-Ju...
13-Jul...
TOTAL ESTIMATED
ACTUALS
PLANNED


UST Suspected Release Reports - Lag
Story Points
600
500
400
300
200
100
0
30-Mar-21
20-Apr-21
11-May-21
1-Jun-21
22-Jun-21
13-Jul-21
TOTAL ESTIMATED
ACTUALS
PLANNED

NEED HELP ? SAVE & EXIT

UST SUSPECTED RELEASE NOTIFICATION

What is the source of the suspected release?

Select all that apply, provide any additional information and click SAVE & CONTINUE.

☑ Tank

	UST#	Compartment	Total Capacity (gallons)	Product	Installation Date	Compartment Status	Verify Location
☐	Tank 1	COMPARTMENT A	15000	Diesel	03/01/1991	In Use	LOOK UP ON MAP >
☐	Tank 2	COMPARTMENT A	10000	Unleaded Gasoline	03/01/1991	In Use	LOOK UP ON MAP >
☐	Tank 3	COMPARTMENT A	10000	Unleaded Gasoline	03/01/1991	In Use	LOOK UP ON MAP >
☐	Tank 4	COMPARTMENT A	8000	Unleaded Gasoline	03/01/1991	In Use	LOOK UP ON MAP >

NEED HELP ? SAVE & EXIT

ADD NEW FINANCIAL RESPONSIBILITY (FR)

What type of financial mechanism is being used?

Select one, provide any additional information and click SAVE & CONTINUE.

Note: A Corporate Guarantee, Surety Bond, Letter of Credit, or Local Government Guarantee must have a standby trust in place.

- ○ Financial Test of Self-Insurance
- ○ Corporate Guarantee
- ○ Insurance
- ○ Risk Retention Group
- ○ Surety Bond
- ○ Letter of Credit

NEED HELP ? SAVE & EXIT

SUBMIT UST NOTIFICATION FORM - AMENDMENT

What UST characteristics have been updated?

To modify a section, click the pencil icon. Once finished modifying that section, repeat as needed until all sections are updated and click SAVE & CONTINUE.

UST Information

Section	Status	Edit
1 Coordinates	Complete	✎
2 Field Constructed System	Complete	✎

Compartment Information

Section	Status	Edit
3 Status	Complete	✎
4 Substance	Complete	✎

IMPACT

Around 2,100 UST facilities now have the opportunity to transact with ADEQ more efficiently online. ADEQ's outreach efforts assisted UST customers in adapting to the new, more efficient way of doing business with the agency and yielded the fastest adoption rate of online services ADEQ has launched to date.

To date, 80 percent of UST customers are successfully using the online applications to complete their reporting requirements. These onlines services, which provide real-time compliance data, help prevent leaks and associated environmental/health impacts, aid facilities in returning to compliance faster, and allow for better agency planning, which helps reduce costs to taxpayers.

The digital transformation of UST compliance and reporting using the online portal for UST owners and operators has radically simplified complex regulatory requirements and is providing government services at the "speed-of-business" with 24/7 availability. UST customers receive timely confirmation of receipt and other communications through the online portal.

ADEQ staff and customers also are saving processing and data entry time that gives time back for increased focus on mission-related activities and business outcomes.

Cost Benefit Analysis (CBA)

The annual benefit estimation for implementing the UST online services is $7 million arrived using a calculator developed by the Environmental Information Exchange Network (EIEN) that allows states to estimate the economic activity (construction, industrial, or commercial activity) that could occur sooner when processing times are reduced through online services process streamlining. Data from County Business Patterns 2015 and U.S. Department of Commerce, Bureau of Economic Analysis, Gross-Domestic-Product--by-State 2015 were used in the calculations.

Some other benefits include cost savings to industry from increased efficiencies in online compliance reporting; cost avoidance of environmental cleanup (when customers) spend fewer days in "an out of compliance state"; and efficiencies gained within the agency - from increased outputs with the same or lower resource consumption.

Most existing standard models and methods for CBA are focused on direct financial returns or cost avoidances and hence lack the systematic attention on how government IT investments generate value to their customers. Arizona's investment in online services benefits Arizona industry, the general economy and the health of the environment. Accordingly, the CBA provided is focused only on the value creation to industry and citizens, and not to the agency. ADEQ's investment decisions were driven by the voice of the customer and CBA.