



Digitally Transforming Oilfield Chemical Services

A WellAware Case Study

A photograph of an oilfield chemical services site. In the foreground, there are three large white spherical storage tanks on black bases. In the background, a large black pumpjack is visible, with the name "LUFKIN" on its arm. The sky is overcast and grey.

Introduction

ChampionX – a global leader in oilfield technology – used WellAware’s Connected Platform to create a data-driven culture that reduced costs, increased operational safety, and outpaced the competition.

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About the Operator:

ChampionX is an oilfield services & technology company that delivers forward-thinking innovations, unmatched global supply chain capability, and market-shaping solutions in reservoir, drilling, production, midstream, and water applications. A global leader in the oilfield – with operations spanning over 55 countries – ChampionX carries a world-class safety culture that fuels its purpose to improve lives through its commitment to deliver globally sustainable operations.

The Challenge: Rising competition and thinning margins

ChampionX knows all too well the challenges of serving the oil and gas industry. With over a century of experience developing technologies and services for the oilfield, the company has had to constantly evolve to remain relevant, especially considering the cyclic “boom-bust” nature of the industry.

Recently, ChampionX began to face increased competitive pressure from other oilfield technology companies. This, paired with increasing scrutiny and demands from customers to reduce costs, threatened the company’s profit margins in its largest business unit: Oilfield Chemical Services.

Pump failures destroying profits and eroding trust

Chemical injection pumps are a critical component of ChampionX’s service delivery model. This distributed network of simple injection pumps inject chemistry from temporary storage tanks directly into oil and gas processes, providing critical treatment that helps ChampionX’s customers maintain flow, ensure asset integrity, and avoid safety incidents.

Unfortunately, these chemical pumps are prone to failure, especially in rugged oilfield environments. ChampionX estimated that some areas suffered from pump failures – resulting in a complete loss of injection – at a rate of 25% or more. Not only did this negatively impact the company’s customer relationships, but it also resulted in a direct decrease in topline revenue, as the company generates income based on the quantity of chemical injected.

Growing labor shortages and carbon footprint

ChampionX manages a global supply chain of oilfield specialty chemicals, delivering precisely engineered and blended chemistries for a variety of oilfield applications all the way to the field. To manage such a vast distributed inventory of chemistries requires a large, mobile labor force. A company that focuses heavily on operating safely and sustainably, ChampionX was concerned about not only the growing cost of labor in a constrained market but also the increased safety risks associated with vehicle accidents. Furthermore, ChampionX understood how all of these vehicles on the road added up to a hefty carbon footprint, one which they sought to reduce to remain sustainable for the long haul.

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We want to be leaders in our field, in technology, and in the industry, providing better solutions and better technology for our customers and still be cost effective.

– Cory Batla, Area Manager, Permian Basin

To continue to grow and deliver world-class chemistry to their customers, ChampionX needed to change the way they operated to drive better efficiency, safety, and sustainability.



The Solution: A technology partner to create a firm data foundation

ChampionX partnered with WellAware, creating a plan for digital transformation that would positively impact their business, reduce their bottom line costs, and allow them to extend their reach to world-class oil and gas production and midstream customers while remaining safe, efficient, and sustainable.

The partnership allowed ChampionX to solve specific field problems affecting their operations while also creating a strong foundation of high-quality operational data that would enable them to retrospectively review, analyze, and correct their operational practices to improve business results.

Reliable chemical tank monitoring

Central to the ChampionX oilfield chemical services business model is the use of temporary chemical storage tanks at customer facilities. These tanks, each with a capacity of several hundred gallons of chemical, temporarily hold ChampionX chemistries until they are injected. They must frequently be checked for inventory and refilled when needed.

Prior to utilizing WellAware, ChampionX sent service technicians on scheduled inventory trips – their sole purpose to document tank inventories so that deliveries could be scheduled. With WellAware, ChampionX now monitors inventories remotely, getting real time updates and alerts on usage variances, inventory stockouts, and days until empty. Armed with this data, ChampionX is able to optimize their delivery schedules at a local level, and also plan supply chain at the regional and national level.

Remote pump control to reduce site visits and increase treatment accuracy

In addition to tank level monitoring, ChampionX implemented remote chemical pump control utilizing the same hardware platform as their existing tank monitoring system. For minimal incremental cost, ChampionX added tremendous value to their operation. Remote pump control allows account managers and service technicians to dial in chemical treatment targets from the safety of their office or truck, reducing the cost and risk of a service trip while simultaneously improving service quality.

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For several years we have wanted to do business with bigger customers, but this technology, and WellAware specifically, has allowed us to show our willingness to collaborate with world-class producers to develop solutions to these problems and show the industry what can be done.”

– Cory Batla, Area Manager, Permian Basin



Complete injection automation for unparalleled customer outcomes

ChampionX wasn't satisfied with simple monitoring and control. In keeping with their desire to be viewed as a global technology leader, the company needed a way to continue to improve treatment outcomes, hitting targets consistently without cost overruns even in harsh oilfield environments.

To do so, ChampionX utilized WellAware On Demand Chemical, a unique, cutting edge chemical automation platform that links chemical treatment rates directly to critical process parameters, delivering the right amount of chemical at the right time without manual oversight.

In addition to injection automation, ChampionX benefits from automated delivery detection, pump power failure alerts, weekly variance reporting, tailored chemical management dashboards, and Quarterly Business Reviews with WellAware Client Success to ensure that their tank and pump data streams are delivering value to the business.

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WellAware caught two pumps that had lost power. We were able to visit those sites by exception to address the chemical pump issues from the data we gathered from WellAware. If we hadn't caught this issue, we would have missed out on nearly 150 gallons of chemical injected.

– Garrett Harker, Regional Manager, Wyoming



The Results: Significant improvement in service outcomes

With WellAware, ChampionX has been able to significantly improve chemical treatment performance, ensuring that chemical injection programs hit their delivery targets more often. Using tank level monitoring, pump control, and chemical injection automation, ChampionX has reduced empty tank rates, decreased pump failure rates, improved chemical delivery efficiencies, and drastically reduced chemical treatment variances from target. The result is higher quality service outcomes for their customers without increased cost or overhead to maintain the customer programs.



A lasting digital foundation to forge ahead

ChampionX has installed thousands of WellAware devices to generate high-quality data streams from their distributed chemical injection systems, creating a foundation of reliable data that will serve the business into the future. With WellAware installed, ChampionX is able to serve more accounts, with better quality and at lower cost. By partnering with WellAware, ChampionX has positioned itself as a leader not only in oilfield chemical services and technologies, but also as a strong digital player that will continue to add value to its customers for the long haul.

50%

**DECREASE IN
EMPTY TANK RATE**

5X

**BETTER TREATMENT VS
INDUSTRY AVERAGE**

\$1.3M

**NET RETURN
FIRST TWO YEARS**



There are a lot of companies out there that have come to us with a number of solutions to these problems, whether it be automation, pumps, or monitoring, and overall we have been very happy with what ChampionX and WellAware have provided. Overall, it has been very, very good.

– ChampionX Customer

Want to achieve the same result?

Check out our remote equipment monitoring platform for chemical operations.

Get Started



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