



# Wearable Tech Transforms Plant Project Efficiency

How Spot-r Mesh by Triax® helped one contractor identify ways to increase operational efficiency during a pre-turnaround.

When an active petrochemical plant recruits as many as 1,000 temporary workers for pre-turnaround work, logistical challenges arise. Using wearable devices can help to improve safety outcomes by providing real-time site information. But can they increase efficiency as well?

That was the question posed by project and asset services provider Worley, working in partnership with United Rentals and Triax Technologies, during a pre-turnaround project at an INVISTA petrochemical plant in Victoria, Texas. Triax Technologies' Spot-r Mesh solution supplied by United Rentals were already in use at the site.

"When we first started using wearable devices in June 2019, our objective was to improve safety," said Kim McAllister, Worley's Solutions and Technology Lead. "But we also wanted to see if we could improve efficiency by removing barriers and bottlenecks for our people."

Wearable devices were used across approximately 100 acres of the 1,000-acre site, all of which had network coverage.

## Analyzing Pinch Points

Used in conjunction with Spot-r beacons placed in strategic locations to identify specific points of interest, the devices accomplished the job.



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“The goal was to gain a very clear understanding of pinch points at site locations or in work processes,” said McAllister. “I sat down with the site manager once a week to discuss the analysis from the previous week. The analysis uncovered several issues that were causing inefficiency or even creating potential safety risks.”

One issue was identified at the toolroom, where workers frequently had to wait 15 minutes to turn in or access a tool. To address this problem, Worley increased the number of toolroom staff. This small change reduced each worker’s wait time per visit down to a few minutes.

In another instance, analysis revealed that people were delayed frequently as they were required to sign in and out of a control room repeatedly. “Wearable devices enabled this process to be automated so that our people could move freely in and out of the units,” said McAllister. “It was a huge time saving for our people.”

Spot-r also revealed another time saver. Analysis indicated that there was a delay for workers entering the jobsite at the beginning of their shift. Through this insight, Worley was able to quickly mitigate the problem by staggering worker start times.

Given the success of the device and the improved worksite processes it facilitated, INVISTA now plans to use the Spot-r Mesh technology for the next phase of the project: the turnaround.

### Turnaround Technology

“Digital technology, like wearable devices and Spot-r, offer great potential to improve safety and productivity on worksites,” said Rahim Ghassemi, Business Manager at Worley. “But when technology like this is combined with our team’s intimate knowledge and experience of our customer’s site and workforce, the outcomes are transformational!”

United Rentals is there to help. “Our Advanced Solutions Group is designed for these types of initiatives,” said Kevin Noonan, Region Product Development Manager at United Rentals. “For this project, we identified the need, incubated the technology and operationalized it through the digital team at Worley.”

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