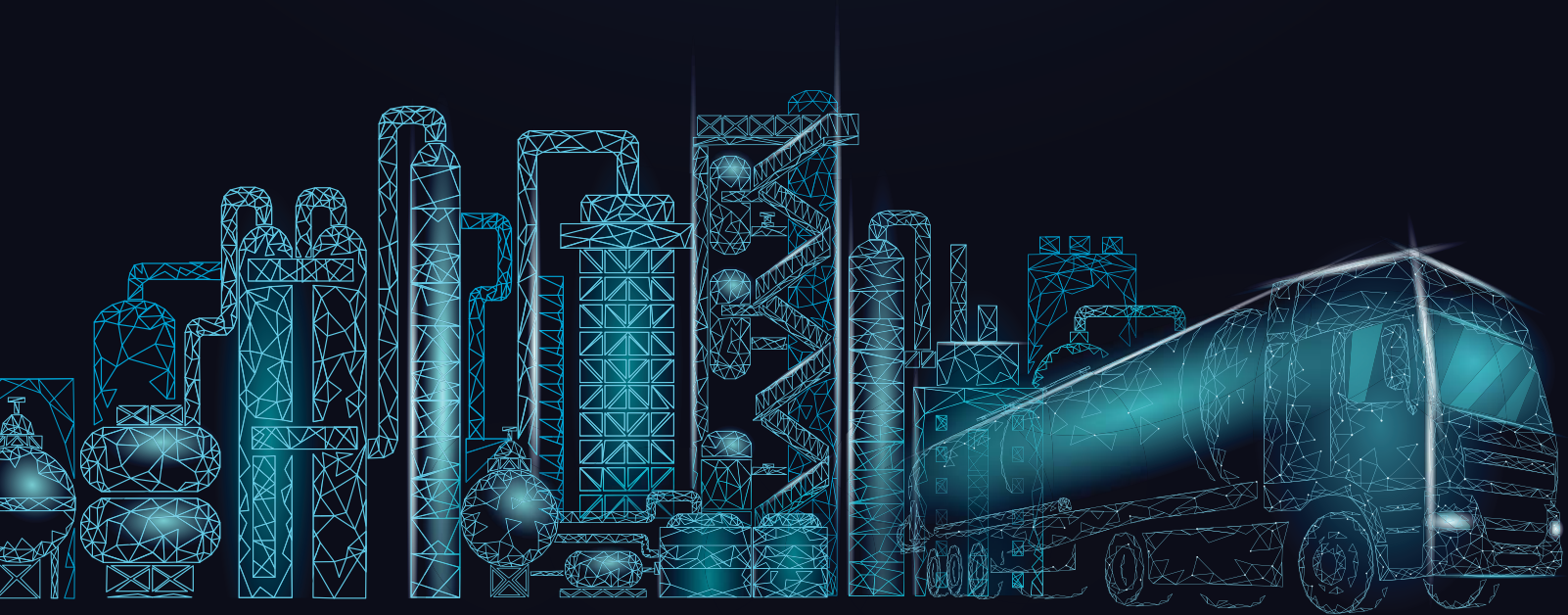




Cutting Installation Costs and  
Driving Operational Excellence



An AMETEK Level Measurement Solutions White Paper

# OBJECTIVE

Companies today of all shapes and sizes are plagued by high operational costs and stringent regulatory demands. Whether Oil & Gas, Chemical, Wastewater or otherwise, they are under pressure to optimize their processes, maximize efficiency, and reduce overall operational costs. Now more than ever, companies are asked to essentially do more with less.

BrightTEK, from AMETEK Level Measurement Solutions, offers an end-to-end remote tank monitoring solution that takes a comprehensive, hassle-free approach to achieving these goals by allowing safe remote access to insightful data. Here, we'll explore how BrightTEK can help facilities enhance operational performance, reduce downtime, and cut operational costs through remote monitoring.



***BrightTEK improves business performance by reducing installation costs, strengthening operational excellence through insightful data, and enhancing personnel safety.***

## CHALLENGES IN TODAY'S INDUSTRY

Companies today face several challenges that hinder operational efficiency and drive up costs. One major issue is the limited availability of skilled workers, especially in remote or harsh environments where finding qualified operators, maintenance workers, and instrument technicians is difficult. Additionally, rising operational costs from high electricity bills to equipment maintenance, installation, and programming are certainly factors. Let's not forget travel expenses—including gas, car repairs, and food for field personnel. Another layer of cost is the burden of maintaining critical systems like DCS/PLC and securing materials amid supply chain shortages. BrightTEK addresses these pain points by streamlining monitoring and reducing dependence on scarce resources, ultimately lowering costs and improving operational efficiency.

**Smart Insights - Smarter Operations.**

# HOW BrightTEK DRIVES COST SAVINGS AND OPERATIONAL EFFICIENCY

BrightTEK addresses industry challenges directly by delivering robust cost-saving benefits through its advanced wireless, cellular-based solution. Unlike traditional wired installations, BrightTEK requires no complex cabling, significantly reducing material and labor expenses. The streamlined plug-and-play design ensures rapid deployment, minimizing installation time and associated downtime resulting in a more efficient and cost-effective setup process.

Once installed, BrightTEK's remote access capability further enhances savings by enabling continuous monitoring and troubleshooting from a distance, minimizing the need for on-site labor and reducing ongoing operational costs.

Let's take a look at an example of how the BrightTEK wireless solution could save up to 30% on installation costs. The example below assumes a new single tank installation.

## Wired vs. Wireless Installations: A Cost and ROI Comparison

Item		Traditional Wired Installation	BrightTEK Wireless Installation
Material Costs	Level Sensors	\$3500 per sensor	\$3500 per sensor BrightTEK ST95 Cellular Host: \$1200
	Wiring (including conduit, connectors, etc.)	\$15 per foot	NA
	Conduit and Mounting Hardware	\$400 per tank setup	NA
	Control Panels/Terminals	\$1000 per setup	NA
	Miscellaneous (tools, spare parts, etc.)	\$200 per setup	\$200 per setup
	<i>Assuming each tank needs 75 feet of wiring:</i>		
	Wiring Costs	75 feet × \$15/ft = \$1125 per tank	\$0 per tank
Total Material Costs per Tank		\$3500 (sensor) + \$1125 (wiring) + \$400 (conduit) + \$1000 (control panels) + \$200 (miscellaneous) = \$6225	\$3500 (sensor) + \$1200 (ST95) + \$200 (miscellaneous) = \$4900
Labor Costs	Installation Time per Tank	8 hours	2 hours
	Labor Rate	\$200/hour	\$200/hour
	Total Labor Costs per Tank	8 hours × \$200/hour = \$1600	2 hours × \$200/hour = \$400
Total Traditional Installation Costs per Tank	Material Costs	\$6225	\$4900
	Labor Costs	\$1600	\$400
<b>Total Cost per Tank</b>		<b>\$7825</b>	<b>\$5300 (32% Cost Reduction)</b>

Through this comparison, BrightTEK emerges as a powerful solution for companies looking to cut costs, enhance operational efficiency, and achieve greater flexibility in monitoring and managing remote assets. Its cost-saving benefits and ability to drive operational excellence make BrightTEK an invaluable asset for businesses seeking sustainable, scalable solutions in a competitive market. Let's take a look at other ways BrightTEK can help companies run more efficiently and save more on costs.

# COST-BENEFIT ANALYSIS OF IMPLEMENTING BrightTEK

## Reducing the Need for On-Site Expertise:

- **Traditional Approach**  
Tank monitoring and maintenance often require skilled technicians to perform manual inspections and troubleshooting, which can be challenging given the current skilled labor shortages.
- **BrightTEK:**  
Provides data and alerts from a webserver location, reducing the need for frequent on-site visits by skilled personnel. This allows less-skilled workers or even remote experts to manage and address issues through data analysis and remote troubleshooting.

## Simplified Maintenance and Operations:

- **Traditional Approach**  
Complex systems and processes require extensive training and experience to operate and maintain.
- **BrightTEK**  
Simplifies operations by automating data collection and analysis, making it easier for operators with less technical expertise to manage tanks. The system's user-friendly interfaces and automated alerts help guide less-experienced personnel through troubleshooting and maintenance tasks.

## Enhanced Training and Support

- **Traditional Approach**  
Training new staff can be time-consuming and costly, especially when it involves hands-on interaction with complex systems.
- **BrightTEK**  
Facilitates remote training and support. Technicians can receive real-time guidance from remote experts reducing the dependency on extensive on-site training.

## Increased Efficiency of Existing Staff

- **Traditional Approach**  
Highly-skilled workers are often stretched thin, performing routine tasks that could be automated.
- **BrightTEK**  
Frees up skilled workers to focus on more complex tasks and strategic initiatives by automating routine monitoring and reporting. This increases the efficiency and productivity of existing staff.

# THE SOLUTION

BrightTek introduces three cutting-edge uplink options designed to cater to diverse industrial needs:



## **ST95 Cellular Uplink**

A battery-powered cellular uplink providing power and monitoring to sensors in remote locations without the need for wired connections. The ST95 supports up to two 4-20mA sensors and offers compatibility with AT&T® and Verizon® cellular services.



## **ST95 Satellite Uplink Host:**

The ST95 Satellite Uplink Host is a solar-powered cellular uplink designed for connecting level measurement devices. Similar to the ST95 Cellular Uplink Host, it offers the benefits of remote monitoring and features unlimited communication range via the Iridium Satellite Network, eliminating the need for cellular service. The ST95 Satellite Uplink Host can support up to six ST95 clients and is intended for installations in non-hazardous areas.



## **ST90 AC Powered Host:**

Capable of powering and communicating with up to 32 4-20mA sensors, the ST90 is an excellent choice for various industrial applications, offering the same robust features as the ST95 in a compact, rugged design.

*BrightTEK™ is available on AT&T® / Verizon® networks or via satellite.*

## CONCLUSION

AMETEK's BrightTEK IIoT remote tank monitoring solution represents a leap forward for companies in Oil & Gas, Chemical, and other industrial sectors aiming to reduce costs, improve operational efficiency, and ensure regulatory compliance. By providing access to remote or difficult-to-access areas with convenient automated alerts, BrightTEK empowers organizations to make proactive, data-driven decisions. Implementing BrightTEK is not just an operational upgrade; it's a strategic move toward a more efficient, cost-effective, and future-ready facility.



[ametek-measurement.com](http://ametek-measurement.com)