



# Why Connectivity is the New Safety Normal

A Special Report for Safety Professionals



WE KNOW WHAT'S AT STAKE.

# Why Connectivity is the New Safety Normal

## We live in a connected world.

*The IIoT (Industrial Internet of Things) has forever changed the way we do things by making ordinary devices smart, and everyday tasks more efficient.*

*From the smart phones in our pockets to the smart doorbells on our porch, smart technology is becoming a ubiquitous solution across a growing number of markets. Yet, despite these amazing capabilities, which have enabled greater productivity and conveniences, the world of safety lagged... but not anymore.*

*Fire service, oil & gas, utilities, and industrial organizations have made the smart move towards a more connected world. And they've done so for one simple reason:*

### The Connectivity Advantage: Visibility

The pre-connectivity safety statistics are staggering. There are nearly 3 million annual injuries in the workplace, costing companies some \$171 billion in lost productivity, wages, and medical expenses. Even worse? Some 80-90% of these injuries are caused by human error.

While nobody can claim that smart technology is 100% perfect every time, these technologies are proving their capabilities of reducing the potential for human error.

With **remote access**, **automated alarms**, and immediate **data visualization**, a connected Safety Program is simply unmatched by human capabilities. Instead, a connected Safety Program with a 360-degree connection between workers, worksites, and workflows empowers safety-focused organizations with more and better ways to help reduce risk.

### Connected and Protected

Information is fundamental when it comes to averting crises and responding to emergencies. Without information, crucial questions remain unanswered like: What's happening? Where is it happening? Is this a true emergency or is it a false alarm? Do we need to investigate or evacuate?

For Safety Managers, the tension lies between knowing that something is going on but not knowing exactly what. Yet without connectivity, it happens all the time.

**Fortunately, connectivity is becoming the great equalizer. It allows any authorized person located remotely to participate in value-added, time-saving, safety-promoting activities, including:**



Automation of processes and systems.



Situational awareness of workers and equipment.



Remote access to information and data sources.



Notifications, alarms, and alerts about manned and unmanned locations.

## Adaptable, Proactive Safety Programs

Worker safety is crucial, and so is saving time and money. By adopting IIoT smart-enabled technologies, organizations can optimize operations and improve predictive maintenance.

With connectivity, Safety Managers get much-needed insight – insight that can be the driving force behind analytical, life-saving decision-making. Without insight, Safety Managers are hard pressed to adequately troubleshoot a problem, overcome challenges, and protect workers from harm.

Connectivity helps accelerate functions, enhance processes, and expand the reach of the Safety Program. The resulting data is both reliable and actionable. The work environment is safer and more efficient. And profitability needs are better aligned with safety goals.

Secure connectivity, done correctly, can give Safety Managers peace of mind and free them up to focus on the bigger goals of the overall Safety Program.

## Enabling Autonomous Operation

Disparate devices are a fact of life in the world of safety. However, a connected Safety Program helps to solve the problem of transforming a disparate network of devices and varying data streams into a single, more manageable system with smart, simple connection among devices, data sources, and decision makers.

For example, oil & gas, wastewater, and alternative fuel companies that are operating from multiple locations, including offshore and remote, face unique challenges. The biggest challenges outside of market volatility are workforce shortages and operational resiliency. The insufficiency of an available skilled labor force often serves as the impetus for seeking alternatives to relying on human capital. For many, this means adopting technological innovations – namely IIoT solutions – that enable autonomous operation.

## The Significance of Remote Notifications

IIoT is key to shifting toward more autonomous operations that are both smarter and safer. The combination of advanced fixed gas and flame detectors (FGFD) with remote monitoring capabilities empowers organizations with instantaneous insights that keep production going and workers protected.

For example, MSA FieldServer partners with O&G companies to quickly and reliably provide analytics data, diagnostics, and updates via the FieldServer FGFD ProtoAir wireless gateway and MSA's IIoT Cloud Platform or other third-party cloud solutions.

**In addition to automatically uploading calibration changes and firmware updates, this type of IIoT solution answers these questions:**

How do we inform the right people at the right time about a potentially wrong situation when no one is on site to assist?

How do we do it affordably and reliably?

**The “how” for the MSA FieldServer FGFD ProtoAir wireless gateway is by remotely delivering alarms, alerts, updates, reminders, and other notifications to relevant personnel independent of network or internet availability so that decision makers can remotely:**



Inspect critical infrastructure and monitor for breaches.



Identify early warning signs to prevent operational failure, disruption, and high-risk conditions.



Evaluate potential worker hazards and risks, such as spills and gases that can lead to explosions.



Eliminate personnel, time, and network dependencies to ensure real-time, around-the-clock situational awareness.

## The Rewards of Connectivity

**There are numerous productivity and cost advantages of implementing IIoT solutions, including:**

- *Saves time and expenses* related to manning remote locations and deploying personnel for on-site inspection
- *Minimizes downtime*, including production shutdowns resulting from the need for in-person investigations
- *Helps to improve safety* by providing visibility into potentially hazardous situations
- *Enhances communication*, alerting key stakeholders in real time about alarms, threats, and other perilous circumstances
- *Provides critical and more accurate insight*, so that assets remain operational and decision makers stay informed

## Connectivity Challenges

While there are a tremendous number of benefits to smart technologies and connectivity, they are not impervious to the risk of IIoT security breaches. These can include a wide range of unauthorized activities from illegally obtaining sensitive data like worker location to hacking into a network system. Fortunately, connectivity risks can be managed and thwarted with the right know-how.

Here's a high-level look at what you should know to help prevent your connected Safety Program from being at risk of disruption and destruction by cyber criminals:

- Employ industry-standard password policies and require user verification
- Require annual penetration and vulnerability testing on devices, applications, infrastructure, and APIs
- Restrict network and data access with encryption and Virtual Private Network (VPN) tunnels
- Limit usage to authorized users with an advanced set of encryption and logging features
- Implement a comprehensive incident response plan

There are additional questions to ask your solutions provider. MSA can help you gain a better understanding of cybersecurity as it relates to a connected solution.

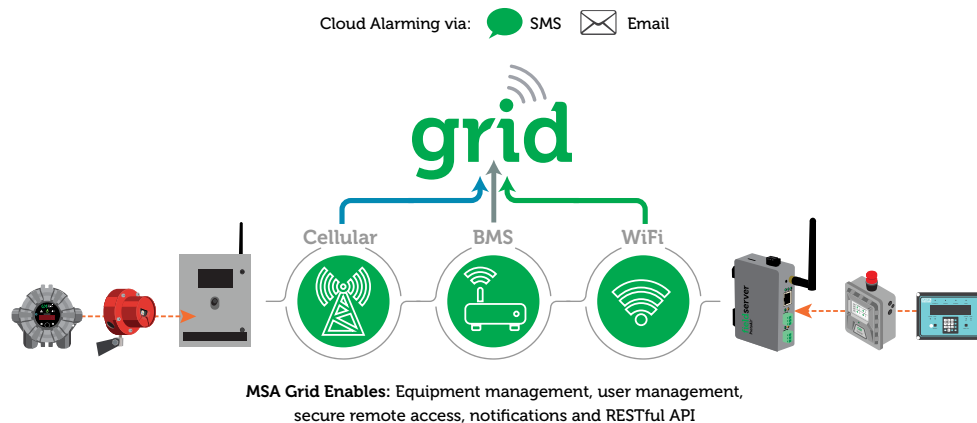
## Conclusion

When it comes to monitoring and managing worker and workplace safety, it's imperative to remove clear and present dangers and obstacles. An IIoT solution like the **FieldServer FGFD ProtoAir** effectively eliminates the "Who do we call?" and "What do we do now?" questions from the operational equation.

Whether paired with MSA Modbus and BACnet FGFD devices or devices from other manufacturers, the FieldServer FGFD ProtoAir enables remote monitoring, control, SMS or email alarm notifications, and data visualization, and supports all major cellular networks.

Most importantly, it allows safety professionals to leverage connected technologies for a more proactive safety culture.

## fieldserver FGFD ProtoAir Gateway



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