

# CUSTOMER SUCCESS STORY

Drone Detection at

# MetLife Stadium



*Early drone detection lets MetLife Stadium reduce public safety risks during events.*

## About MetLife Stadium

MetLife Stadium, home to the New York Jets and New York Giants, seats 82,500 and is one of the largest stadiums in the National Football League (NFL). Since opening in 2010, the Stadium has hosted over 500 ticketed events including 20 NFL games per season (more than any other stadium), major events including Super Bowl XLVIII, WrestleMania 29 and 35, and the Copa America Centenario soccer final as well as concerts, international soccer, Monster Jam, Supercross, religious events, college football, high school football championships, lacrosse, band competitions and graduations. In 2018 and 2019, MetLife Stadium ranked number one for safety by *Security Magazine's* "Security 500" in the Spectator Sports (Facilities) division.

## Threat Landscape

Unmanned aircraft systems (UAS), also known as unmanned aerial vehicles (UAV) or drones, are widely used today not only by hobbyists but also by first responders, government agencies, and private businesses. While there are many positive uses for drones, we have also seen malicious uses by terrorist groups,

*“RF is currently the best solution to identify where the drone and operator are, and the only one that we found that can detect the drone and controller when the RF connection is first established. Therefore, it’s possible that we can detect the drone before it even takes off.”*

*Daniel DeLorenzi*

*Vice President Security and Safety Services,  
MetLife Stadium*



lone actors, and criminal organizations.

As a large public venue responsible for two million guests each year, MetLife Stadium takes a very proactive approach to public safety and wanted to protect themselves and their guests against drone threats, whether by careless hobbyist or nefarious actor.

## **The Challenge**

As MetLife Stadium explored their drone detection and mitigation options including Radar, Radio Frequency (RF), Acoustic, and Camera-based systems, they encountered three key challenges.

### **Legality**

The Federal Communications Commission prohibits using a transmission blocking signal to interfere with communication between a drone and its pilot also known as “jamming.” This is especially dangerous in a stadium environment as a drone could immediately crash land wherever it is at the moment of signal interruption. Jamming also poses a serious risk of interfering with public safety communications.

Furthermore, U.S. Federal Wiretapping laws prohibit demodulating and decoding ‘private’ RF signal transmissions to extract the drone type or GPS coordinates, a method used by some RF-based drone detection systems.

### **Operator Detection**

MetLife Stadium reviewed several system types, but only RF systems were able to detect and locate the operator and could do this potentially before take-off.

*“To detect the drone is nice. To detect and locate the pilot is a form of mitigation.”*

*Daniel DeLorenzi*

*Vice President Security and Safety Services,  
MetLife Stadium*

MetLife Stadium determined that the best form of mitigation was to use an RF-based drone detection system to locate the drone operator and report them to on-site law enforcement. The pilot could then be instructed to cease preparation for take-off or land the drone already in flight.

## **High RF Urban Environment**

MetLife Stadium invited several RF-based drone detection companies to come and demonstrate their products.

Initially these demonstrations occurred on non-event days, when the parking lots were empty. Under these conditions, most of the systems worked.

Finalists were then invited to come back during an event to demonstrate their product under live conditions. Unfortunately, many of these products were not able to operate during an event. Why not?

MetLife Stadium, located in East Rutherford, New Jersey, is surrounded by many sources of RF signals such as Wi-Fi hotspots, cell phones, and security equipment. But on an event day, this RF “background noise” increases significantly. In fact, it can be 50,000 times higher than on a non-event day. Why?

With 27,500 parking spaces filled with die-hard fans, MetLife Stadium is a tailgating mecca. Guest-generated RF signals include cell phones, dashcams in cars, live streaming video on televisions, and even Wi-Fi enabled tailgating grills. All of this noise makes it much harder to detect drone signals.



## Why AirWarden™?



### Detects Drone and Controller

Detects both the drone and the controller so you can find the pilot.



### Urban Environment Performance

Reliable detection, even in the toughest, busiest urban environments.



### Unidentified Drone Detection

Detects and locates both known and unidentified drones and controllers.



### DHS SAFETY Act Designated

Passive system that does not decode or demodulate signals.

## The Solution

As the only solution able to detect and locate drone controllers in the RF-heavy environment of event day, the AirWarden™ Drone Detection System was installed at MetLife Stadium in 2018.

Since then, AeroDefense has partnered with MetLife Stadium to continuously enhance its drone detection and location capabilities on event days so that staff can notify local law enforcement for a quick and effective response to drone incidents.

## Results

As a result of the early warning provided by the AirWarden system, MetLife Stadium and local law enforcement have been able to interdict many different types of drones and create a safer and more secure environment.

## Learn More

For more information on the AirWarden™ drone detection system, contact us at:

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