

**APLICACIONES
TECNOLÓGICAS**

**LIGHTNING
& EARTHING**

ATSTORM®

**Expert local early warning
system for lightning storm
risk prevention**

**WE
ALERT**

**WE
CONNECT**

**WE
PROTECT**

 **at3w.com**

ATSTORM® Expert local early warning system for lightning storm risk prevention

Adheres to Standard:
IEC 62793



When a local lightning warning system is required

Lightning and thunderstorms are unavoidable natural phenomena that pose serious threats to people, goods and services

Lightning is one of the most destructive natural phenomena, responsible for an estimated over 20.000 annual deaths and 240.000 injuries worldwide.

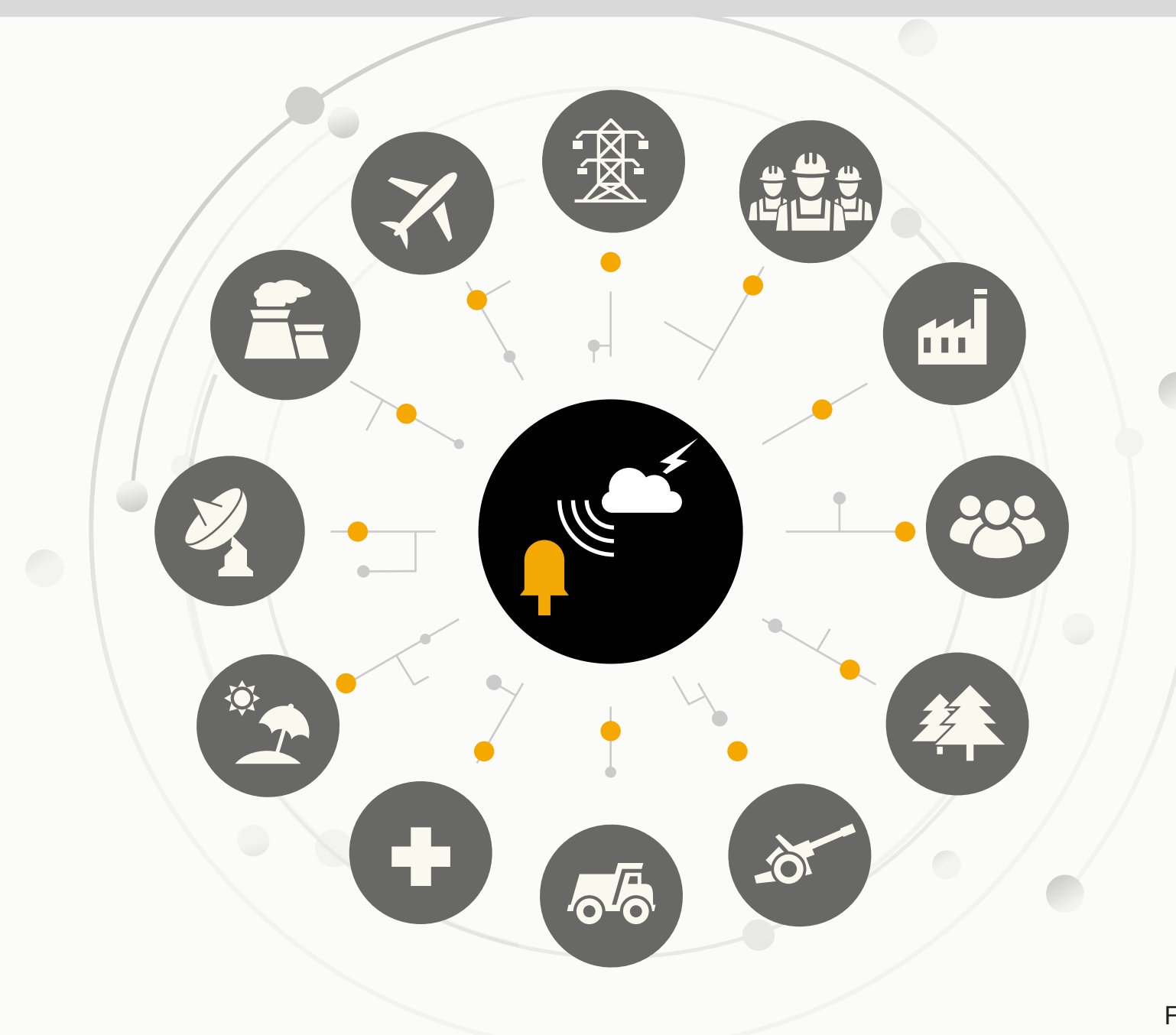
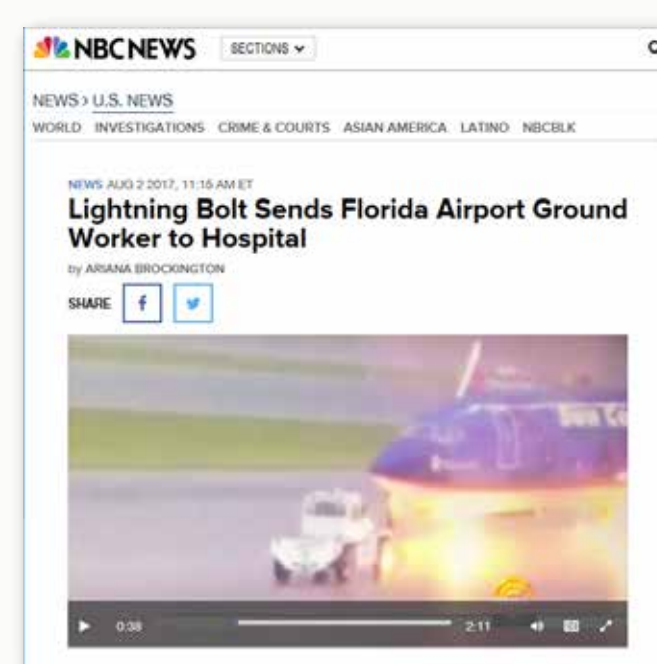
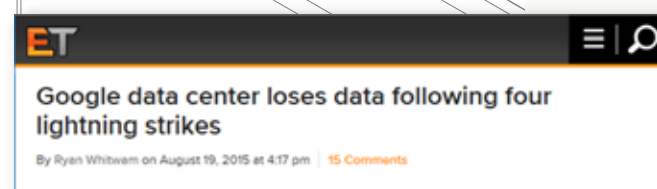
“Thirty percent of US businesses suffer damage from lightning storms”

“Nearly 30% of all utility power outages are lightning-related with total costs approaching one billion dollars”

“In the U.S. 16 out of 20 accidents involving petroleum storage tanks were due to lightning strikes”

Areas of application

- ✓ Health and Safety.
- ✓ Open-pit operations such as mining, shipyards or energy, etc.
- ✓ Potential risk sectors such as oil, gas, chemical, etc.
- ✓ Defence, military equipment, bases, communication sites, etc.
- ✓ Infrastructure operations such as airports, ports, etc.
- ✓ Outdoor activities and events: sports, cultural, tourism, etc.
- ✓ Public administrations responsible for open spaces such as parks, beaches, districts, etc.
- ✓ Environmental risk, disasters, civil protection, etc.
- ✓ Critical electronic environments: data centers, industry, medical centers, laboratories, etc.



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Objective

The main purpose of a Lightning Warning System is to identify, with the maximum anticipation, the risk posed by both forming and incoming lightning storms.

- ✓ Prevention of occupational hazards
- ✓ Suspend work or outdoor activities
- ✓ Suspend or postpone dangerous operations
- ✓ Disconnect electronic equipment
- ✓ Activate auxiliary power systems
- ✓ People evacuation



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Maximum efficiency

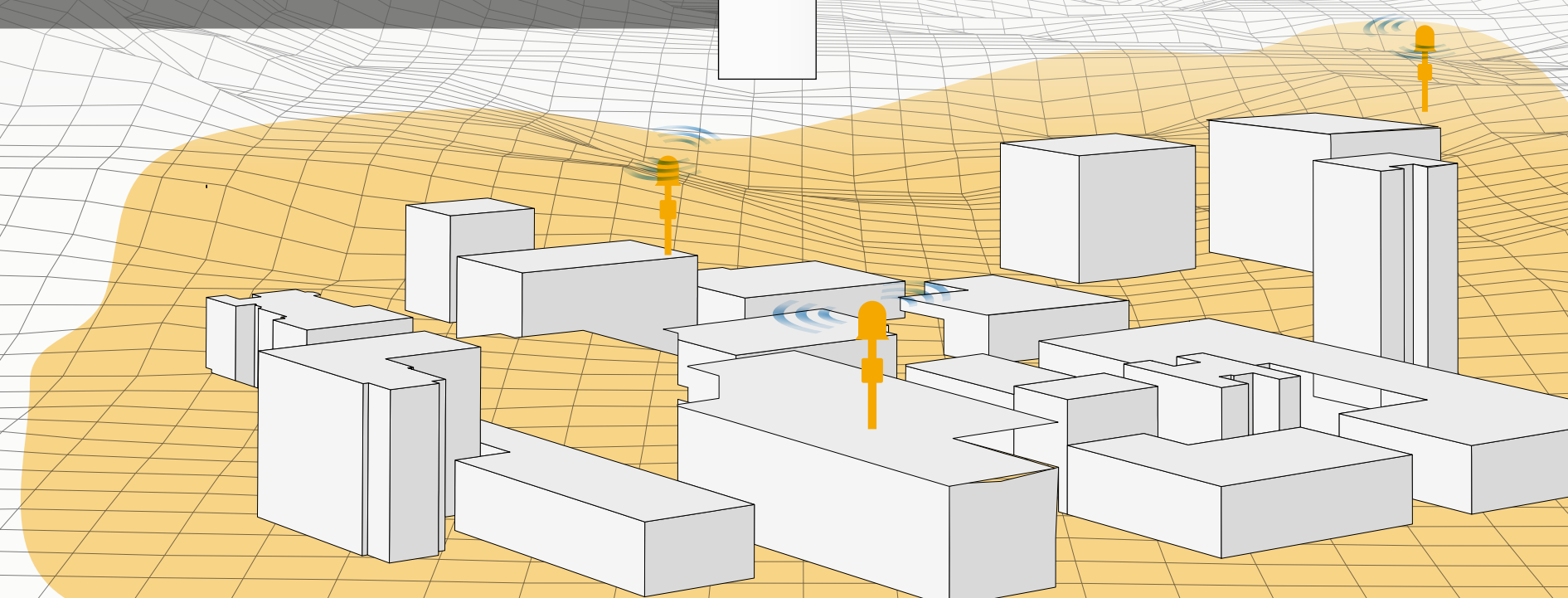
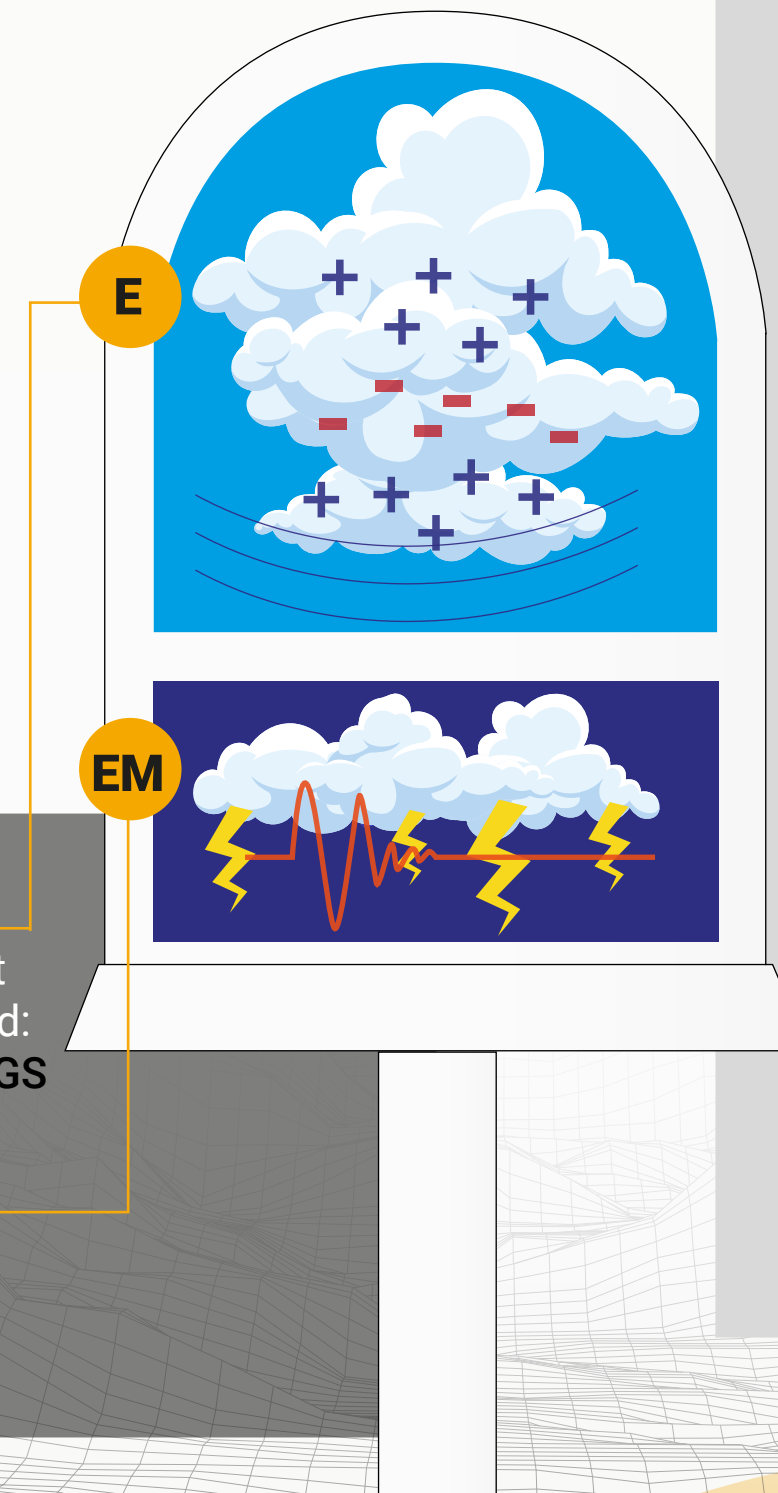
- ✓ **Detection during all phases of a thunderstorm**
We monitor both the electrostatic and electromagnetic fields, enabling the maximum anticipation in the risk of a lightning event
- ✓ **Fully electronic, with no moving parts**
Our equipment does not use moving mechanical parts, preventing blockages, wear and failures.
- ✓ **Operated by specialists through Internet of Things (IoT)**
The system is remotely operated, ensuring its proper functioning at all times.
- ✓ **Expert system**
Continuous improvement of its algorithms, increasing their adaptation to the monitored local characteristics.
- ✓ **Risk alerts via multiple channels**
Our customers receive the risk alerts through multiple means: smartphone, tablet, private web portal, emails and remote activation of alert devices.
- ✓ **Ad-hoc projects**
We study each location and determine the best system configuration in terms of number and positioning of the detection units.

Electrostatic field sensor

Detection of thunderstorms forming over the target area by monitoring the increase in electrostatic field:
· TENS OF MINUTES FOR EARLY ALERT WARNINGS

Electromagnetic field sensor

Detection of lightning in active thunderstorms approaching the target area:
· 40km / 24,85mi radius



Thunderstorm
detection network



LOCAL STORM
DETECTION



AIR TERMINALS
AND ACCESSORIES



EARTHING



EXOTHERMIC
WELDING



TRANSIENT
OVERVOLTAGES




PERMANENT
OVERVOLTAGES



APLICACIONES TECNOLÓGICAS S.A.

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