

Lightning: A serious Threat to People & Economy

Nowcast's ultra-precise LINET Lightning Detection Technology

The Situation

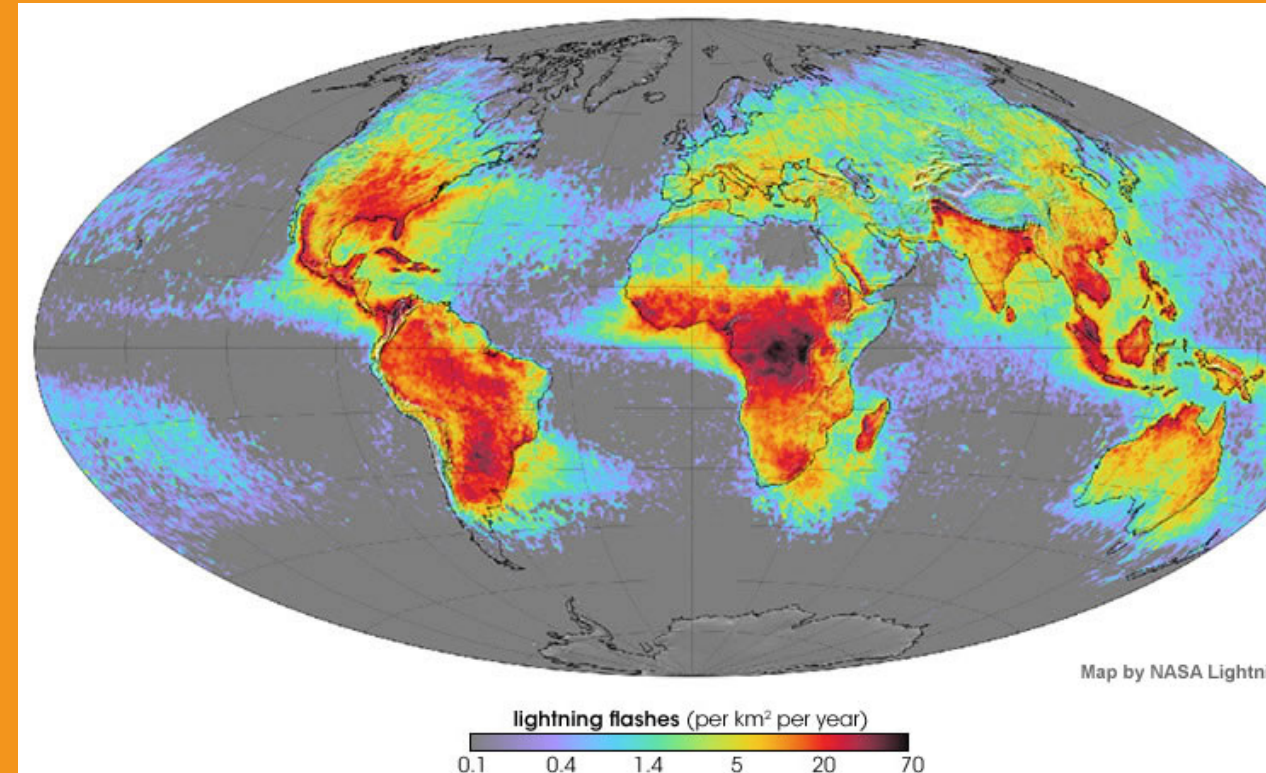
The Suggestion

The Benefits



The Caribbean: Hotspot for lightning and severe weather

- Every year many fatalities due to lightning strikes
- Big damages and tragedies due to severe weather events / natural catastrophes
=> More than 50% of severe weather warnings attributed to thunderstorms
- Thunderstorms cause huge costs due to damages and disturbance in operations in many industry sectors



The Situation

1. Highly affected region
2. Fragmented area with many islands
3. No homogenous and precise data source

The Suggestion

1. One homogenous high-precision lightning detection network for whole area
2. Partnership approach of the participants and the supplier
3. Training, research, long term support and knowledge transfer for optimum resilience and value add

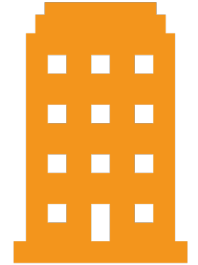


The Benefits

Why nowcast's LINET technology?

nowcast: A brief Overview

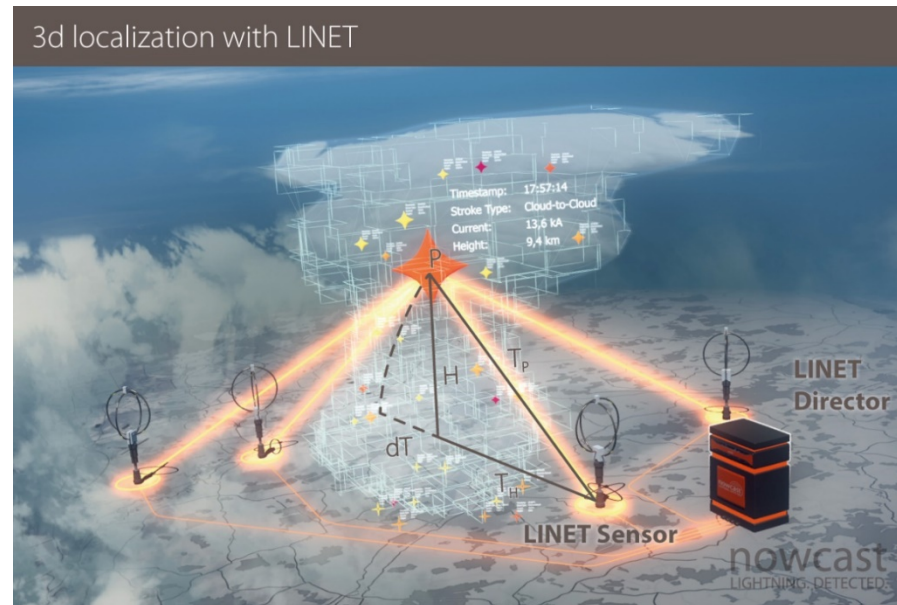
- R&D started in 1988 at Ludwig-Maximilian-University in Munich
- nowcast GmbH founded in 2002
- Ongoing international scientific cooperation and research
- Patented 3D-locating-algorithm and unique antenna design
- Over 600 active high-precision lightning detection sensors deployed around the globe



Optimum Completeness: Patented 3D-Detection incl. IC-altitudes

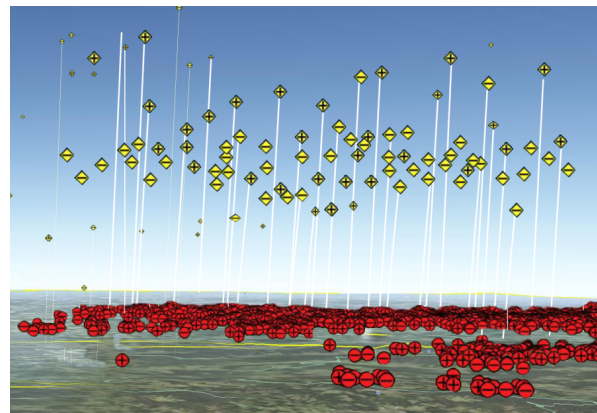
Effective 3D-detection of CG & IC-
Strokes provides information about:

- ✓ Life cycle of storm cells
- ✓ Development of super cells
- ✓ Severe Weather
- ✓ Probability of
 - hail
 - strong wind
 - heavy precipitation

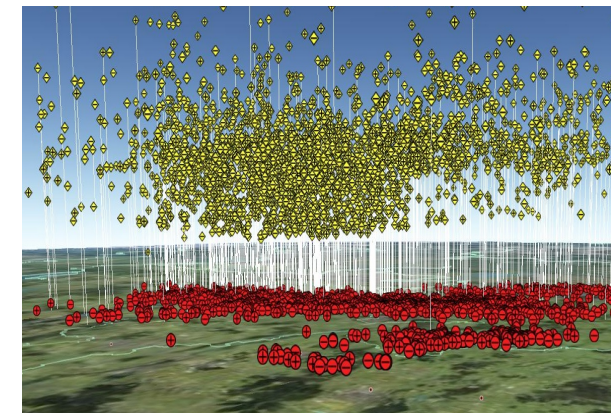


Nowcast's LINET unique and patented solution uses the VLF-spectrum of stroke-emissions and is therefore extremely robust, reliable and efficient for large-area coverage.

Moderate Storm

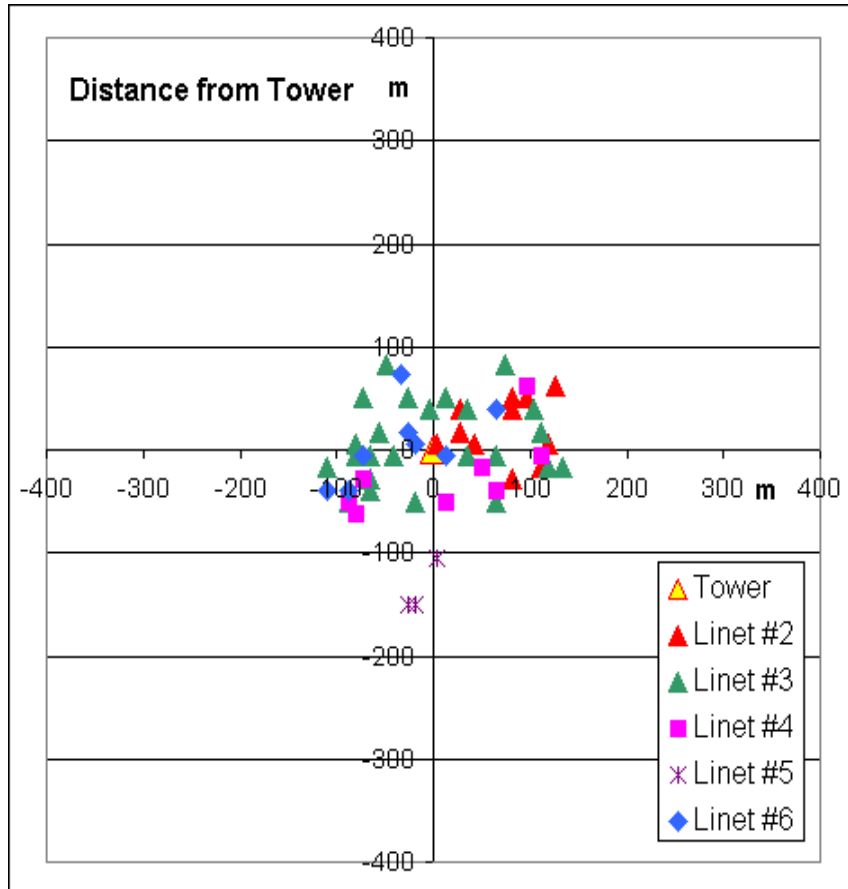


Severe Storm

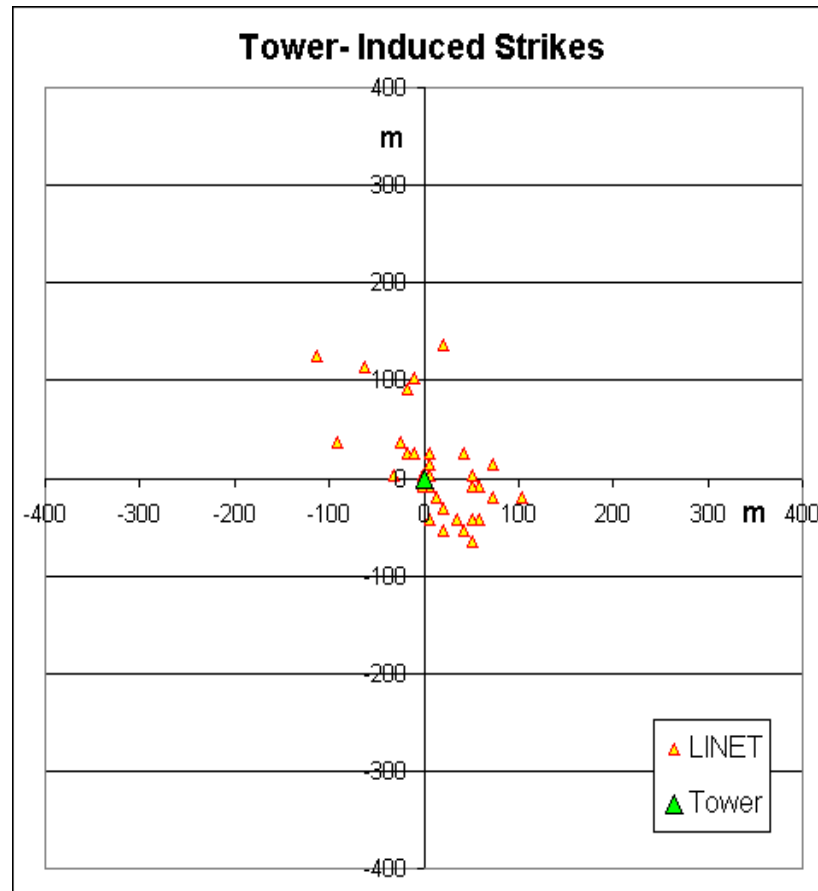


Optimum Accuracy: For Professional Use

Locating strikes into towers:



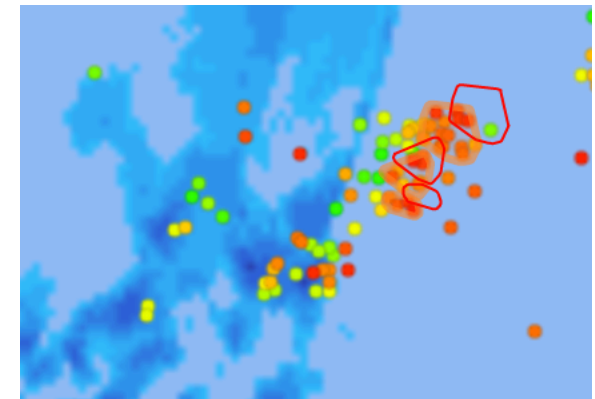
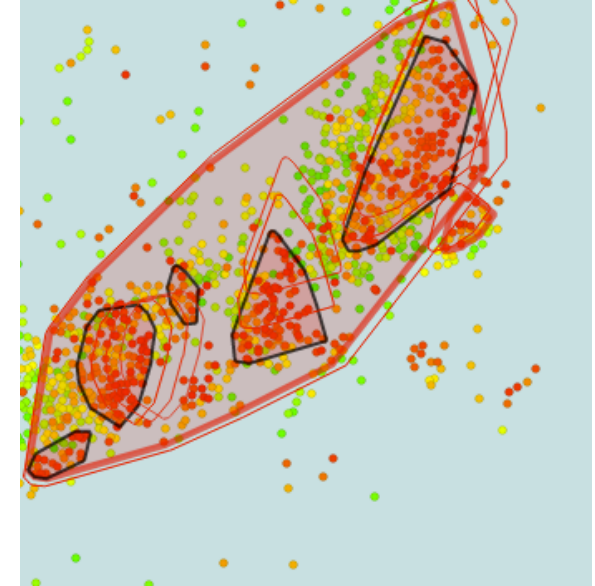
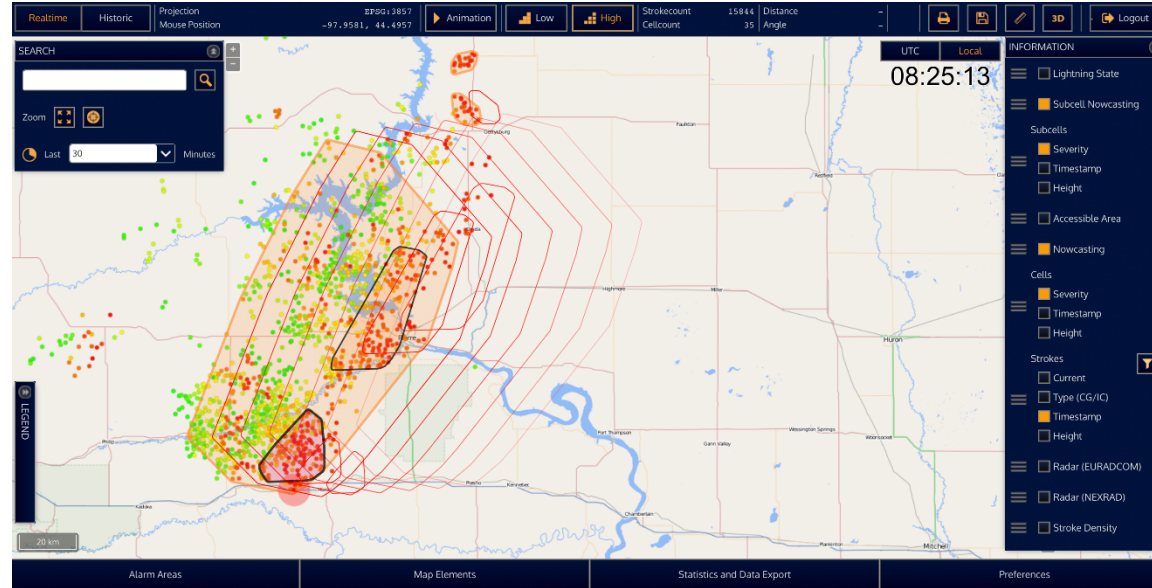
Slovenia Tower



Gaisberg Tower



Optimum Simplicity: User-friendly, easy Setup and Operation



Optimum Efficiency: Low total Cost of Ownership

- Extremely robust and reliable technology.
(Hardware life-time and support)
- LINET Sensors need no scheduled maintenance
- Easy exchange of spare parts
- Low power consumption
- Standard Internet connection (few kB/s only)
- Standard Server architecture, based on LINUX OS



Optimum Approach: True partnership with nowcast

- Strong expertise in all climate zones and different terrain
- Hand-in-hand approach with long-term support of the components and network
- Training, knowledge transfer and joint research



Optimum Reach: Big cost savings for many industry sectors

- Aviation:
 - Enhance safety for personnel and approaching airplanes
 - Minimize ground handling stoppage (due to lightning)
(Case studie: Intl. European airport saves 96 min. of ground handling stoppage in 2017)
- Energy Companies:
 - Enhance safety for personnel
 - Minimize down-time of transmission lines (due to lightning)
 - Anticipate possible tripping
 - Track damages, fulfill duties by law
- Wind farms
 - Enhance safety for personnel
 - Deliver proof for damage claim handling
 - Mitigate costs for damaged blades
- Insurance companies, Telcos, Media companies, Golf courses, Sport arenas, Mines, Marine sector



*„nowcast is not a huge, anonymous corporation!
We are dedicated, highly specialized and here to care
about your lightning project
- as partners! – in the long run“*

