

# NorthStar

*Pointing people to safety*



**NorthStar**

# Imagine being caught in a flood

Floods are becoming increasingly common and dangerous, posing a significant risk to communities across Europe.



Flooding sparked by Storm Boris in central Europe [\(1\)](#)

**!** EMERGENCY

now

Dangerous flooding  
near you!

# Statistics and Recent Event



Valencia Oct 29, 2024

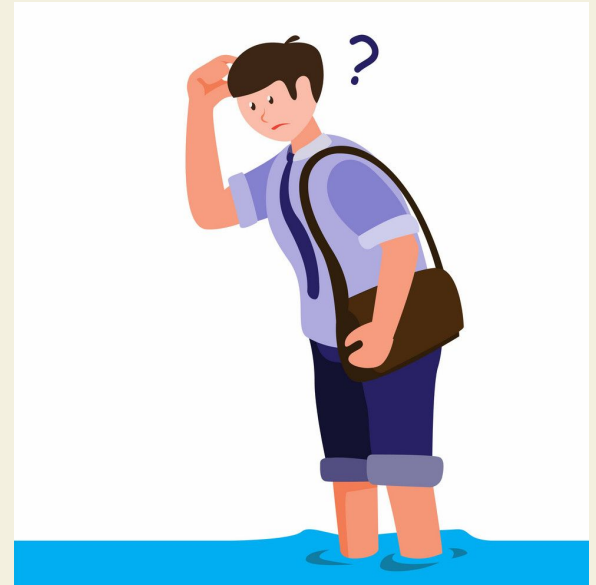
949 deaths in the last  
10 years (2)

1 in 8 europeans  
at risk from  
floods (3)

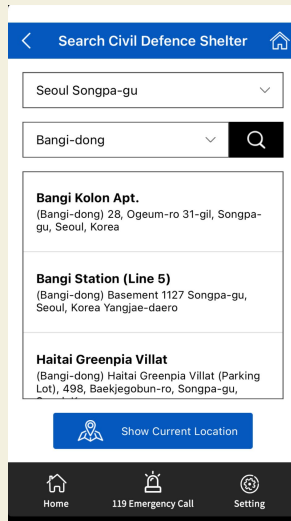
“We started to drive not  
knowing which direction to  
take.” (4)

# How could you navigate to safety during a flood?

Floods can block roads and destroy infrastructure, leaving people stranded without clear routes to safety

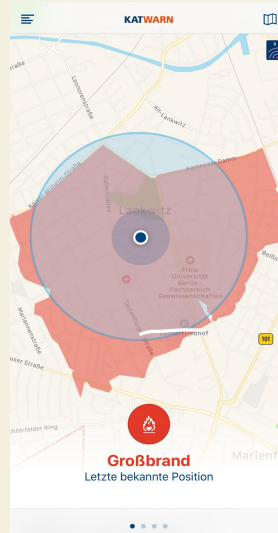


# Current solutions



## Emergency Ready App

- Provide locations
- Embassy Info



## KATWARN

- Customize areas of interest



## Storm Shield

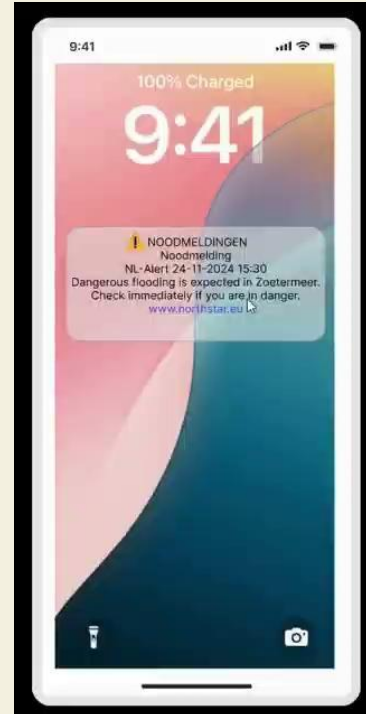
- Get alerts based on your location

# NorthStar WebApp

Click the phone for a short prototype demonstration

## Key Features:

- **Location-Based Alerts:** Detect if you're in a safe or danger zone.
- **Action-Oriented Navigation:** Guides users to higher ground if at risk.
- **Emergency Assistance:**
  - Button to call 112 with location sent to rescuers.
- **Dynamic Routing:** Request updated routes if roads are blocked.
- **Safety Guide:** Practical tips for before and during a flood.



# Technology Used

## User Navigation



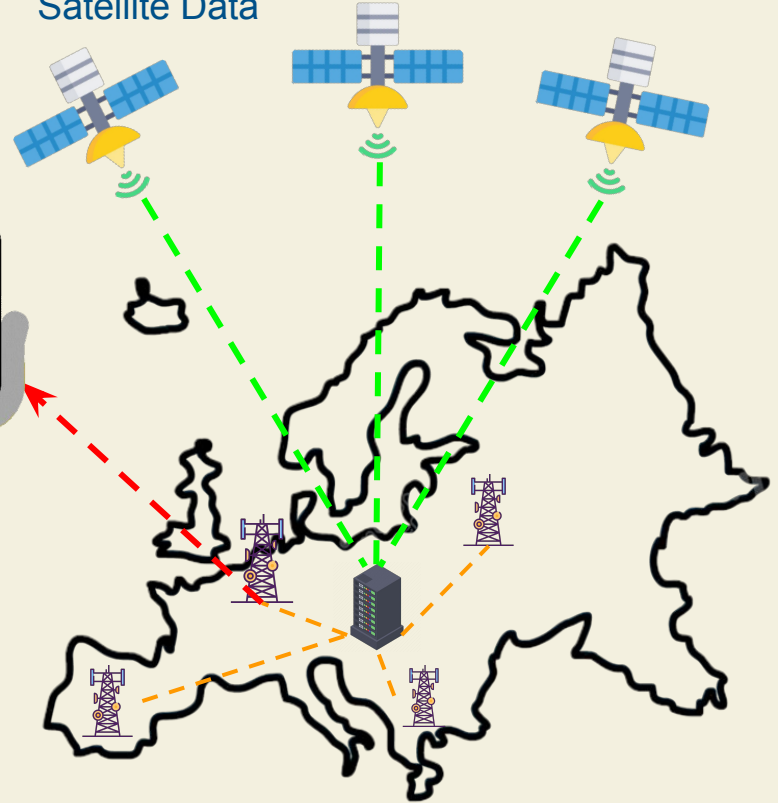
**Data:** Copernicus Digital Elevation Model  
**Frameworks:** Flask, Python  
**Routing Tools:** OSMNx, networkx, Folium  
**Navigation Source:** OpenStreetMap



OpenStreetMap

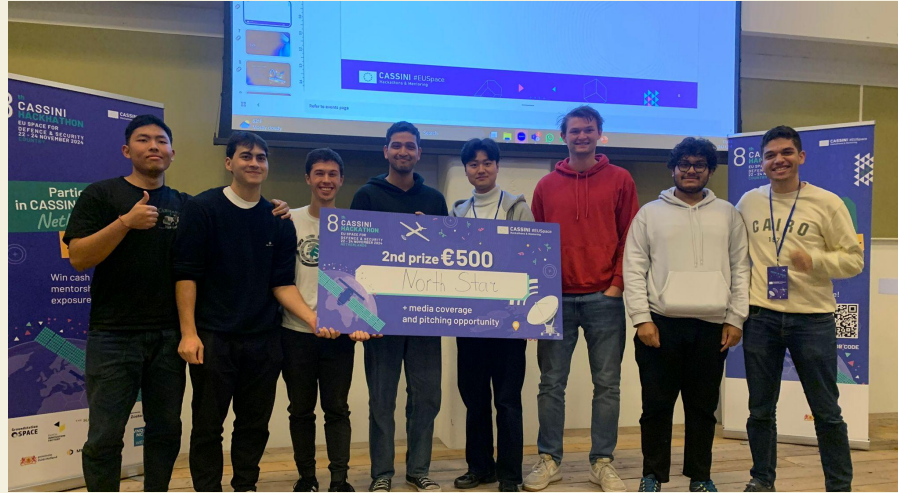


## Satellite Data



# Our Team

For contact or to learn more about us, check our LinkedIn profiles mentioned in the article or simply click on our names!



*Names in left to right order*

**Divo** – Data engineer   **Yusef** – Security Specialist   **Yunsu** – UI Designer   **Ayudh** – Python developer

**Marom** – AI Specialist   **Abbas** – Signals and Systems   **Thomas** – Team lead   **Salah** – Marketing and Navigation



# Business Model



Govn



Our primary clients are EU governments and municipal agencies, aiming to enhance public safety during natural disasters.



End-users are citizens, who benefit directly from the app's life-saving navigation features.

**3** GOOD HEALTH AND WELL-BEING



**11** SUSTAINABLE CITIES AND COMMUNITIES



NorthStar aligns with the EU's SDG goals by prioritizing safety and innovation.

## Costs



€71,000 per Month  
1M concurrent users (1)

## Benefits

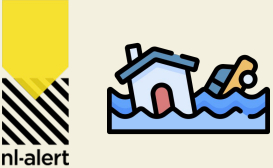


€31,069,406 in value of  
lives (10 years) (2, 3)

# Future Road Map

**2025 Q2**

- Launch in NL
- Floods



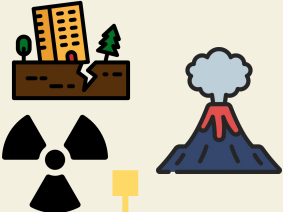
**2026 Q2**

- Horizon Europe partnership (EC)



**2027 Q4**

- Earthquakes, Volcanic eruption and Nuclear



**2025 Q4**

- Benelux
- Wildfires



**2026 Q4**

- Adoption by EU through EU Alert

