

# ERNCIP - Academic Committee

a snapshot



Dr. Alois J. Sieber  
Chairman AC

## **Academic Committee (AC)**

a multidisciplinary advisory body to ERNCIP Office and Thematic Groups

a link between the Academia and ERNCIP-stakeholders

a forum for discussion on how to further develop CIP-related knowledge in the academic community





• Laboratory availability

Certifications

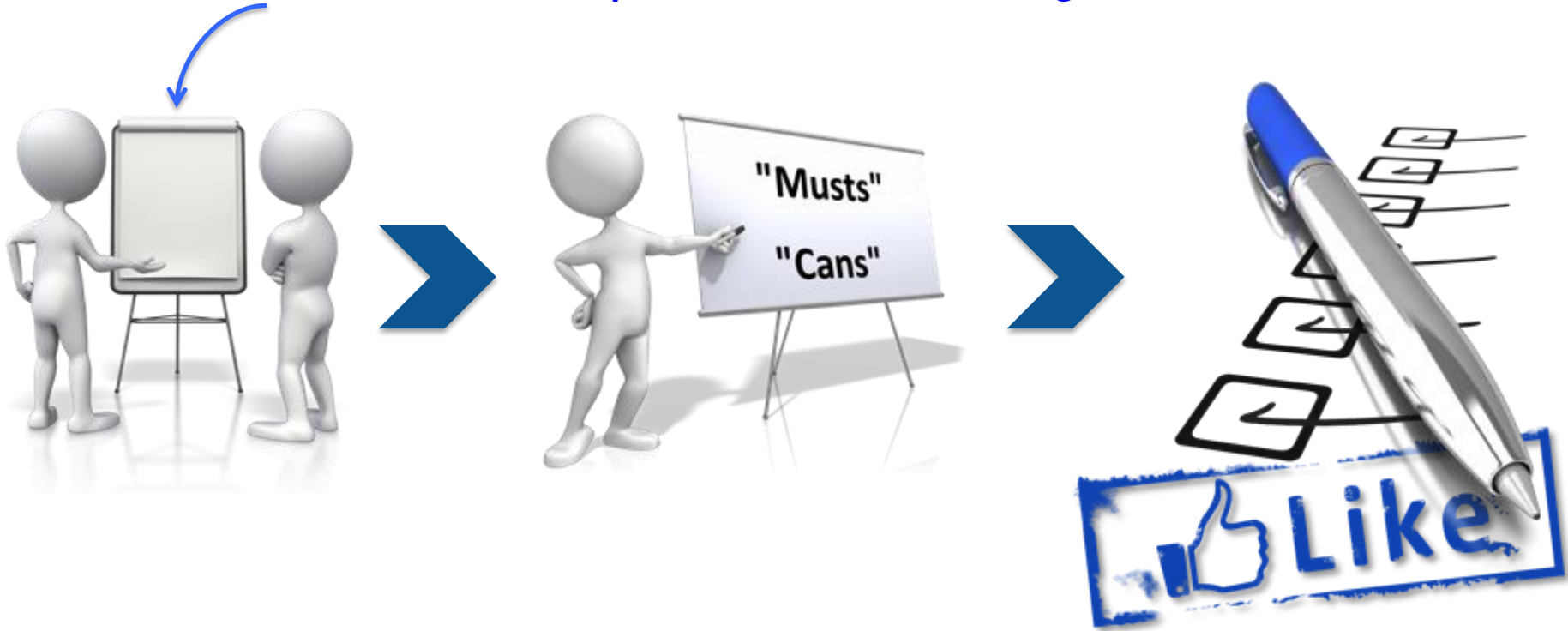
Labelling

Best practices

Relative dissemination

Testing practices

*How can the AC help to address these challenges?*



## ‘Science-based training curriculum in Critical Infrastructure Protection and Resilience’

- training for professionals involved in the safe and secure design, implementation, operation, management and regulation of critical infrastructures

**1<sup>st</sup> proposed task**

Modeling and Simulation for the risk  
assessment of CI and the management of their  
protection and resilience

- a proposal for action for a new TA in ERNCIP

**2<sup>nd</sup> proposed task**

## Risk Assessment

***Risk = (probability of the accident occurring) x  
(expected loss in case of accident)***

Passau & Burghausen





Passau (Donau)

June 3, 2013

Water level at 12.89 m  
2<sup>nd</sup> highest in recording



Schutzhöhe  
Ufermauer

H.W.  
14.9.1899

H.W.  
3.6.2013

H.W.  
14.8.1959

H.W.  
12.8.2002

H.W.  
9.7.1954

Burghausen (Salzach)

between 1961 and 1971  
Construction of  
a water protection wall



Burghausen (Salzach)

Risk mitigation based  
on meaningful risk assessment?

Inventory of results in CIP research  
– in national EU programs and in EU

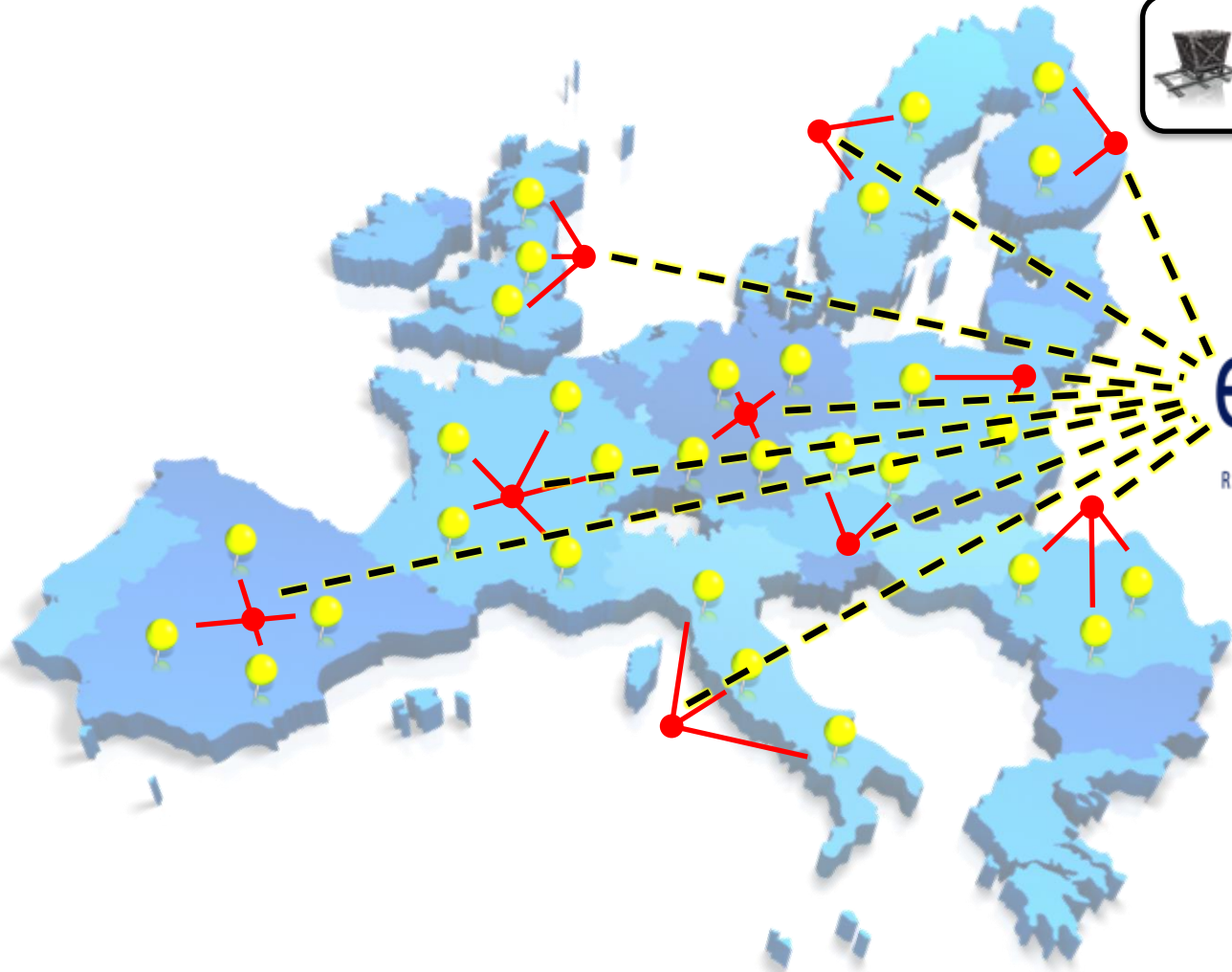
Possible new fields for research to be considered by ERNCIP

**Further proposed task**









entsoe

Reliable Sustainable Connected



# **Growing Complexity**





**Terrorism**



**Natural Hazards**



**Human failure**



**Cyber attacks**

***To be continued...***

**NATECH accidents**



**Extreme space weather**





# Smart X

*Transport*

*City*

*Grid*

*Home*

*...*

**2020** > 17.000.000 flights / year

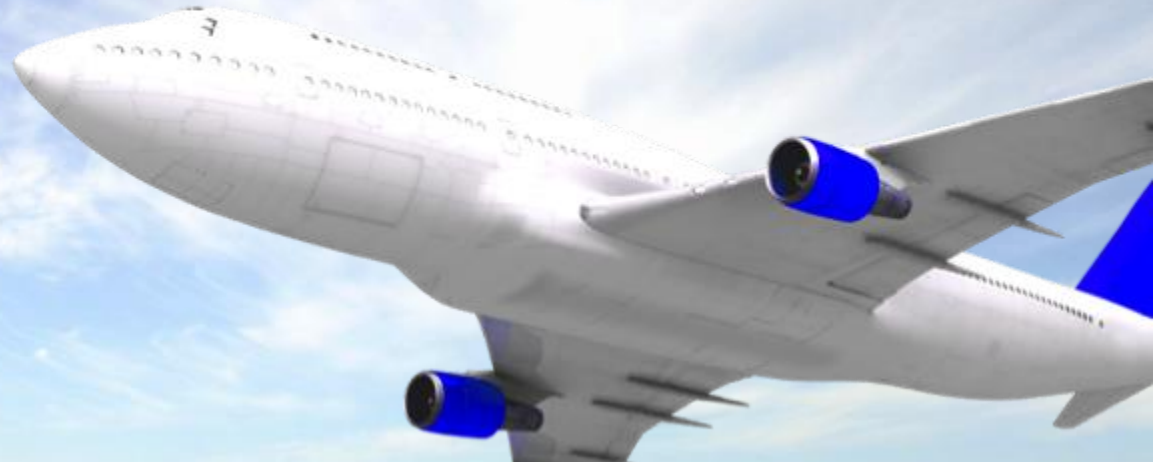
**2010**

12.5 millions

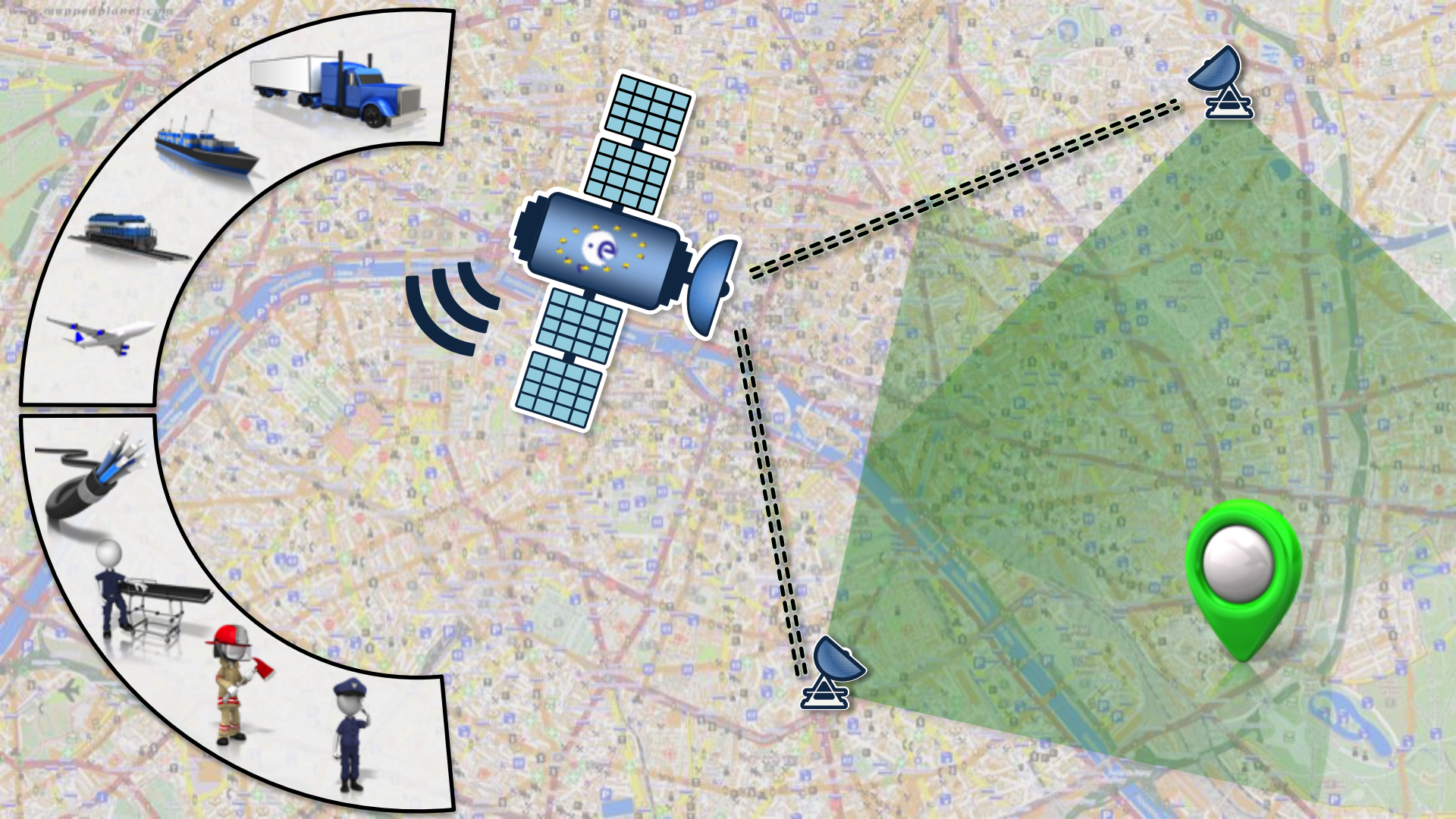
**2006**

10.5 millions

**2005**







# JAMMERS



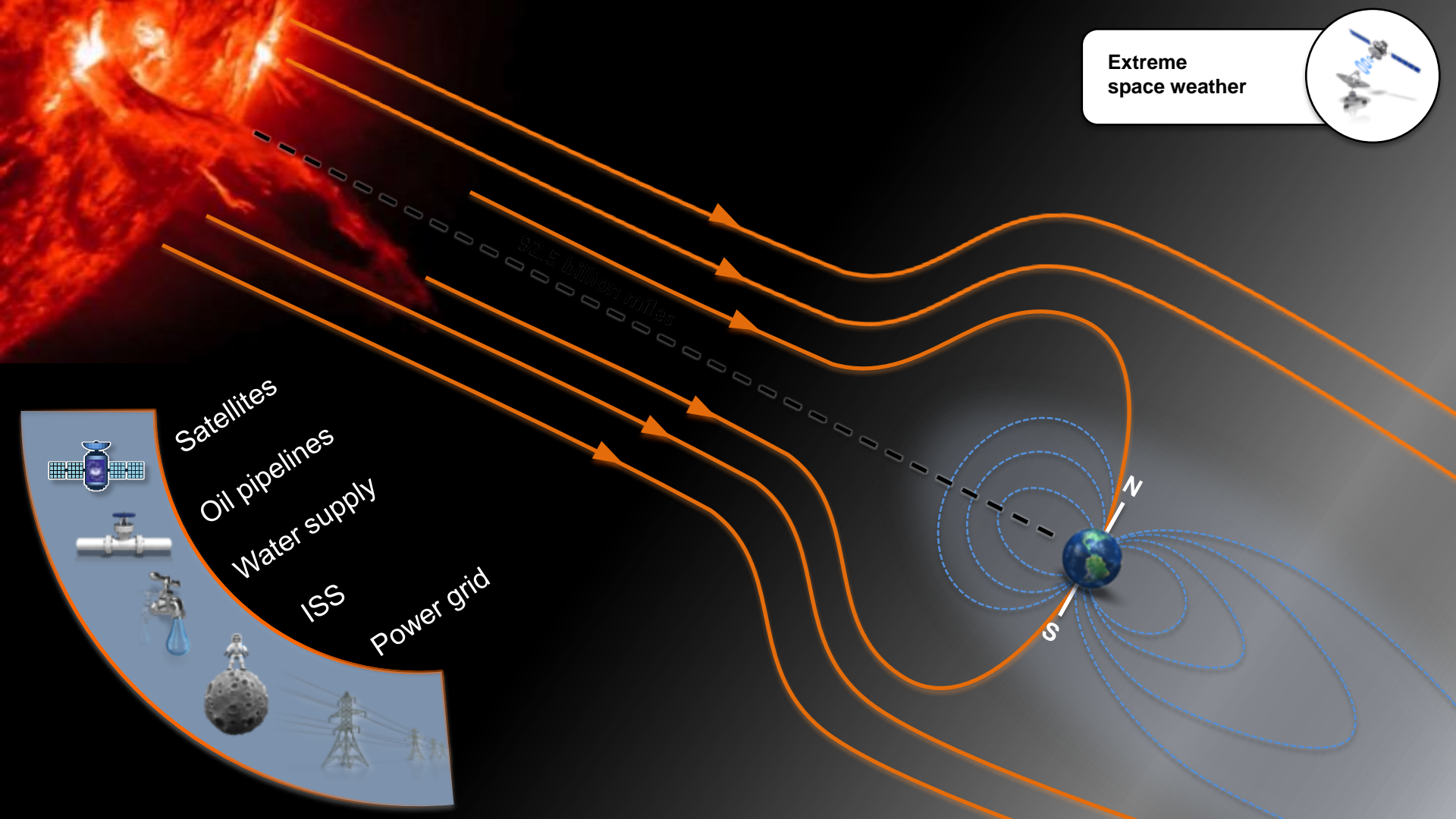
# JAMMING: Three Examples

- San Diego – January 2007
  - US Navy ships doing communications jamming tests
  - Their own GPS stopped working
  - Jammed the whole San Diego harbour region
  - Stopped phone systems, cell-phones, hospital paging
  - It took NAVCEN 3 days to finger the culprits!
  - GPS jamming was unintentional
- UK – 2009
  - General Lighthouse Authority jamming trials
  - showed that GPS receivers may visit “exotic locations”
- Newark Airport 2010
  - A GPS jammer in a truck interfered severely
  - a GPS-based aircraft landing system. The FAA needed
  - four months to identify the source of the jamming
  - attack





Extreme  
space weather





Several teams in EU are active, but no common strategy, goal, etc

**Proposal:** ERNCIP should act as facilitator of a round table involving:  
ESA's Space weather working team board, HORIZON 2020 SAG, UK Met Office,  
FMI as potential operators, national civil contingency agencies, etc

## **In conclusion**

ERNCIP`s AC is reaching out to all stakeholders in order to propose new science based TA, establish a metrology for CI, measurement standards for CI

However, where is the inventory of achieved research results at EU as well as national level?