ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

PROTECTION OF CRITICAL INFRASTRUCTURES

The security and resilience of critical infrastructures need to be guaranteed, disruptions in their operations may entail the collapse of large sectors of economic and social activities.

The research of the University of Bologna on protection of critical infrastructures tackles the problem from very different perspectives, addressing all of its facets. Engineering, physics, and computer science approaches are complemented by legal studies, political and social sciences ones, addressing a wide range of issues:

- Analysis of seismic vulnerability and mitigation of seismic risk
- Earth observation (e.g., transport systems) and remote sensing via satellite and drones
- Assessment of the impact on lifelines of accidents involving hazardous substances
- Assessment of damage potential of improvise explosive devices
- Real–time automated surveillance systems for the smart city
- Large-scale wireless sensor networks for critical structures monitoring and early alerting
- Early alerting systems for tsunami and Earthquake events
- Policies and regulations for the protection of critical information infrastructures

HIGHLIGHTS

In FP7 the University of Bologna has been granted for several projects:

FP7 **TRIDEC** - *Collaborative, Complex And Critical Decision-Support In Evolving Crises* (2010-2013)

FP7 **NearToWarn** - *Near-field Tsunami Early Warning and Emergency Planning* (2012-2013)

FP7 **AEROCEPTOR** - *Uav Based Innovative Means For Land And Sea Non-Cooperative Vehicles stop* (2013-2016)

FP7 **ASTARTE** - *Assessment, STrategy And Risk Reduction for Tsunamis in Europe* (2013-2016)

FP7 **SPARTACUS** – *Satellite Based Asset Tracking for Supporting Emergency Management in Crisis Operations* (2013-2016)

FP7 **ECOSSIAN** - *European Control System Security Incident Analysis Network* (2014-2017)