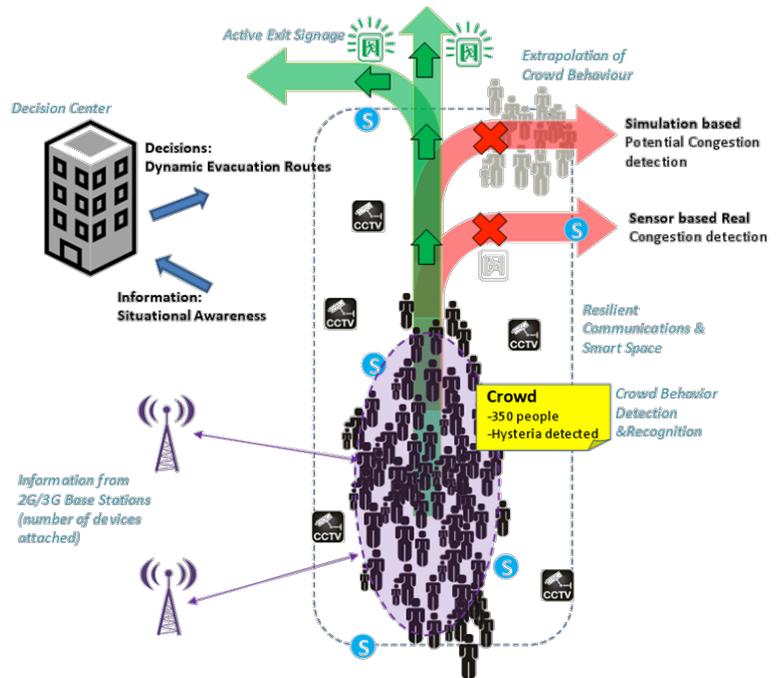


Empresa: IK4-TEKNIKER
Topic de interés: Gestión de crisis y emergencias
Proyecto: eVACUATE [www.evacuate.eu]
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eVACUATE project

eVACUATE aims to address the needs of the safety of citizens during complex evacuation processes following normal and abnormal events (crises) towards the creation of a holistic system that a) will enhance the effectiveness of complex evacuation operations at any type of venue or infrastructure, b) adapt evacuation plans to the current conditions, c) dynamically survey how an evacuation is evolved and d) support civil protection authorities. eVACUATE framework employs all key elements in the design and operation of the envisaged system; the eVACUATE **Crowd Models**, the **Simulator Tools**, the **Emergency Operations Control Centre** and finally the major constituent of all proposed work, which is the **Smart Spaces**.



The ultimate goal is to **identify, designate and sustain an Active Evacuation Route (AER)** comprised of the most recently generated evacuation route that adapts dynamically according to current and evolving circumstances.

Objectives

eVACUATE will yield a holistic system:

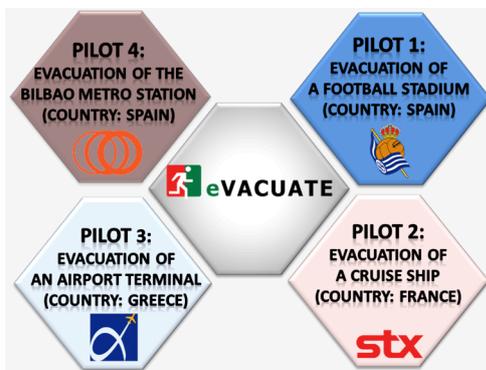
- ⊗ To provide a valuable tool to guarantee **total Situation-Awareness** both to the crowds involved during a crisis but also to the crews operating in situ as well as in remote locations (security crews, first responders, crisis managers)
- ⊗ To **adapt dynamically** evacuation plans to current conditions
- ⊗ To provide a clear, easy to use (visual, multi-lingual) set of **safe evacuation instructions** for citizens/tourist/visitors, available over a multitude of alternative and complementary presentation channels under a resilient, reliable and robust way regardless of the functionality of the “global network”
- ⊗ To set-up **visible demonstrations of innovative Crowd Evacuation Support Systems** in realistic situations
- ⊗ To **support civil protection authorities** in the formation and validation of proper safety procedures for crowd management (Reconstruction of Experiences)
- ⊗ To set a cornerstone for the **standardization of equipment, processes and methodologies** for evacuation purposes on a EU level addressing the cross-cultural issues emerging from diversity imposed by citizens.

Innovation - Technological components

- ✧ *Innovative Multi-scale behaviour recognition techniques*
- ✧ *3D common operational Pictures & Interactive Simulations*
- ✧ *Innovative Advanced Strategic Spatial Evacuation simulation tools*
- ✧ *Smart Spaces, sensing and actuating elements*
- ✧ *Advanced Integrated Situation Awareness System (SAS)*
- ✧ *Resilient and robust Communication Technologies*

Validation and Field Demonstration

The system will be tested at lab scale (running simulations) and at field scale during 4 pilot demonstrations (real evacuation exercises) involving evacuation of:



Soccer Stadium - Real Sociedad de Futbol S.A.D
(Anoeta Stadium, San Sebastian, Spain)

Mustering and evacuation of passenger cruise ship- STX-FR (Cruise Ship, France)

Airport evacuation-Athens International Airport
(Airport Terminal, Athens, Greece)

Metro Tube evacuation – Metro Bilbao S.A (Metro Station, Bilbao City, Spain)

First Pilot: Soccer Stadium - Real Sociedad de Futbol S.A.D

During the third week of October 2016 it was performed the first pilot demonstration in the Anoeta Soccer Stadium, in San Sebastian (Spain).

The objective of the exercise, which was conducted with the help of 120 volunteers, was to establish in real time, the optimal evacuation routes in situations where a large mass of people are gathered, such as a football match at Anoeta stadium. In order to achieve this, a large number of fans were asked to enter the ground through Gate 27 and take their places in the lower tier of the main stand. From that point on, the fans were requested to follow the instructions from stewards and experienced in situ, four different types of evacuations under diverse conditions and situations. Completely different emergency situations were created through a number of methods, such as evacuation instructions being relayed through the stadium's in-house Public Address system, via signage assembled at various points of the stadium and the opening of the main exit doors.

The results of the pilot demonstration were a great success. It was demonstrated the effectiveness of the technologies developed within the project and **it was measured a 25% of improvement in the evacuation time** comparing a similar evacuation conditions, without and with the eVACUATE system.

Video of the First Pilot available in Youtube:

<https://www.youtube.com/watch?v=g10hsRKw5PQ>