

## 2.22 Nordic safety and security project (short version)

Veljkovic M., Sweden

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Nordic Safety Security project  
for  
COST Action TU0904  
  
Integrated Fire Engineering and Response

Milan Veljkovic  
Barcelona, 2010, July, 06

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NORDIC SAFETY & SECURITY

**Nordic Safety and Security (NSS)** is a project within the program of the European Regional Development Fund, more specifically an Objective 2 project. The project is coordinated by the Luleå University of Technology and European CBRNE Center at Umeå University.

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NORDIC SAFETY & SECURITY

*The aim for NSS is to make the region prominent internationally when it comes to development of products, services and means related to safety, and risk- and crisis management.*

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### Partners

FOI holds the advanced expertise in CBRNE issues. FOI represents excellence in applied issues like **threat and risk assessment, scenario building and modeling.**

Umeå University, houses several research groups, in areas relevant to the issue of **societal security.**

Västerbotten County Council holds a highly specialized University hospital (NUS) in Umeå. NUS has a high profile when comes to **infectious medicine, epidemiology, acute and disaster medicine,** particularly disasters in a cold climate.

Luleå University of Technology, has several research groups, in areas of **smart communication, embedded sensors, structural safety.**

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The NSS project is a triple helix constellation where end users, scientists and entrepreneurs cooperate within the same framework. To interlink these parties and make them approach each other creates excellent potential for strong regional growth.



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The actual work within the NSS project is done in the northern part of Sweden although the project will have a broad international market through the results – i.e. products and services.


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### The NSS project

- involves about sixty researchers
- has a budget of approx. 6000 k€
- has resulted in several EU applications
- has been presented in large conferences and journal papers
- will end with a large scale exercise March 2011

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The NSS project consists of six work packages, activities, that together contribute to create a platform of safety and security in line with the project aims.

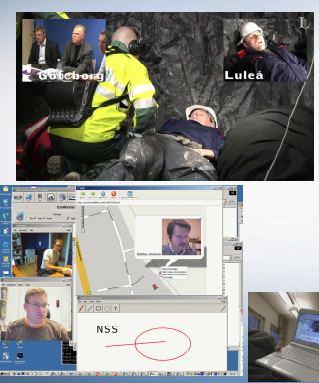
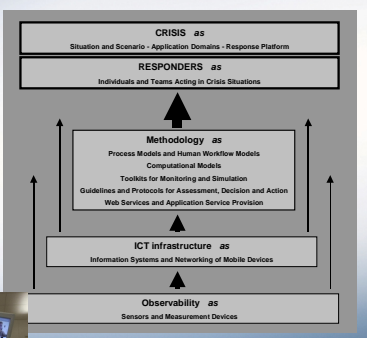
- Knowledge Management in Emergency Organizations
- Exercise as Base for Education and Training
- Leadership, Co-workers and Technology
- Method development
- Smart Communication for Crisis Response Management
- Working in Crisis Situations

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### Services: Smart communication for Crisis Response Management

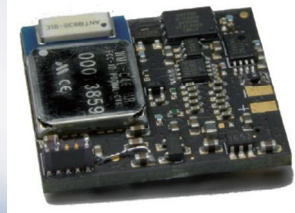
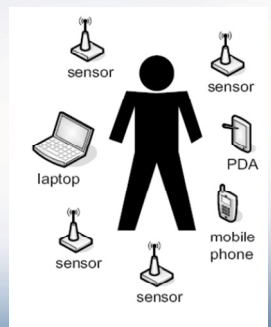



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### Products: Sensors

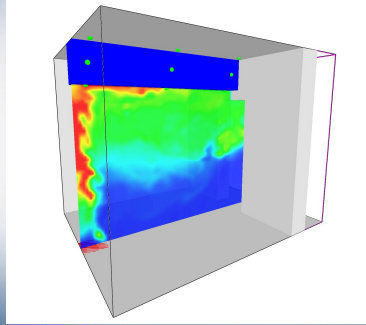
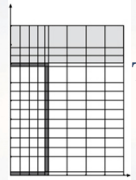
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### Methods: Computational / Measurements

#### CFD model

Tasef

AST adiabatic surface temperature

PT plate thermometers

$$\dot{q}_{tot}'' = \epsilon_s \sigma (T_{AST}^4 - T_s^4) + h(T_{AST} - T_s)$$

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### Objectives

- Develop a efficient method for assessment of risks in buildings, steel structures exposed to fire.
  - Adiabatic temperature, a new link between CFD models and structural models is a new concept that will be tested and used in the new approach for modeling of fire development and its influence on structural resistance
- Development of new project with NSS partners, Smart Communication, Sensor development
- New proposals.

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