Selex ES CBRNe experience: the European project EDEN

2° International CBRNe Workshop "IW CBRNe 2015"
Rome, 20 November 2015

Selex ES

150 YEARS OF TECHNOLOGY

EDEN Project

Project full title: "End-user driven DEmo for cbrNe"
Project duration: 42 months (Sept 2013 - Dec 2016)
Funded under: FP7-SECURITY
Total investment: 36.5 million euro

Consortium

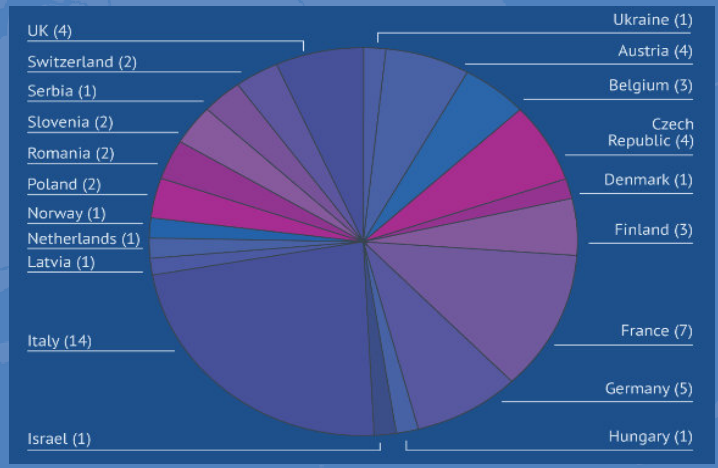
- 36 partners
- 15 countries

Supplier and SME Platforms

- 29 Suppliers
- 38 SME's

End-User Platform

- 94 End-users
- 21 Countries



End Users' geographical spread as of Nov 2013

EDEN Objectives

The main focus of the EDEN project is to provide solutions to improve CBRNe resilience and allow enhanced interoperability and effectiveness between CBRNe operators.

EDEN will improve CBRNe resilience by:

- Shortening time to response;
- Reducing the impact on the population, e.g. improved evacuation;
- Enhancing protection of sensitive or critical infrastructures;
- Achieving a European lead in CBRNe sampling, detection, proficiency testing and forensics;
- Reinforcing technological, societal, and psychological resilience.

EDEN Framework

[PRACTICE]

F·R·E·A·C·T

CBRN∃map

DECOTESSC1

LINKS TO R&D PROJECTS & PROGRAMMES:
PRACTICE,
DECOTESSC1,
CBRNE MAP,
IF REACT,
D-BOX,
SICMA,
...

EDEN STORE
(Toolbox of Toolboxes)

END-USERS NEEDS & GAPS

DEMONSTRATIONS & EVALUATION

DEMO 1 CONTAMINATION IN THE FOOD CHAIN (B AND C)

DEMO 2 MULTI-ATTACKS AGAINST CHEMICAL SITES AND MULTI-C ATTACKS

DEMO 3 RADIOLOGICAL AND NUCLEAR

Toolbox of Toolboxes concept

THE REQUIREMENTS:

- Open Simple and Secure approach
- Share capacities & provide access to multiple stakeholders
- From basic tools to Systems and human expertise and knowledge
- Supports an EU CBRNE market development
- Covering CBRNe preparedness, crisis response and recovery phases

CURRENT STATUS:

- >220 Tools and Toolboxes already on the Store (new, improved, under improvement or combined tools):
  - From other EU projects (ex. PRACTICE, DARIUS..)
  - Existing tools from Consortium
  - Innovative tools from SME platform, Supplier platform, End user platform…
- Up to 4 levels of standardized “plugs” between tools (& legacy systems)

29th October: Rome Table Top Exercise

- ✓ The demonstration has been led by Selex ES
- ✓ About 50 attendees: military and civilian operator, stakeholders and first responders in the audience
- ✓ Tool technology corners allowed end users to deepen tools features
- ✓ Thematic tables allowed participants to enter into more detailed discussions regarding the management of the given scenario and tools, and provide input on the overall management from their perspectives and background

Main purpose of the EDEN Table Top Exercise (TTX):

- ✓ evaluate benefit derived by the EDEN Tools in preparedness and response phases focusing on a scenario of Chemical Warfare Agent (CWA) release in urban environment;
- ✓ demonstrate the seamless integration among EDEN tools for the provision of new capabilities for the decision making process either at strategic and tactical levels;
- ✓ address specific gaps related to training, consequence assessment, situational awareness, tech support to the first responders.

Rome Table Top Exercise: data sharing

- The Integration Infrastructure designed and developed by Selex ES in the scope of the EDEN project allows data gathering and sharing between tools using Middleware of Messages (MoM).
- When an event occurs, fixed and mobile devices (sensors, cameras, softwares, monitors, etc.) are made available on the field for gathering as many as possible information. This data are made available to the interested authorities to increase the situational awareness.

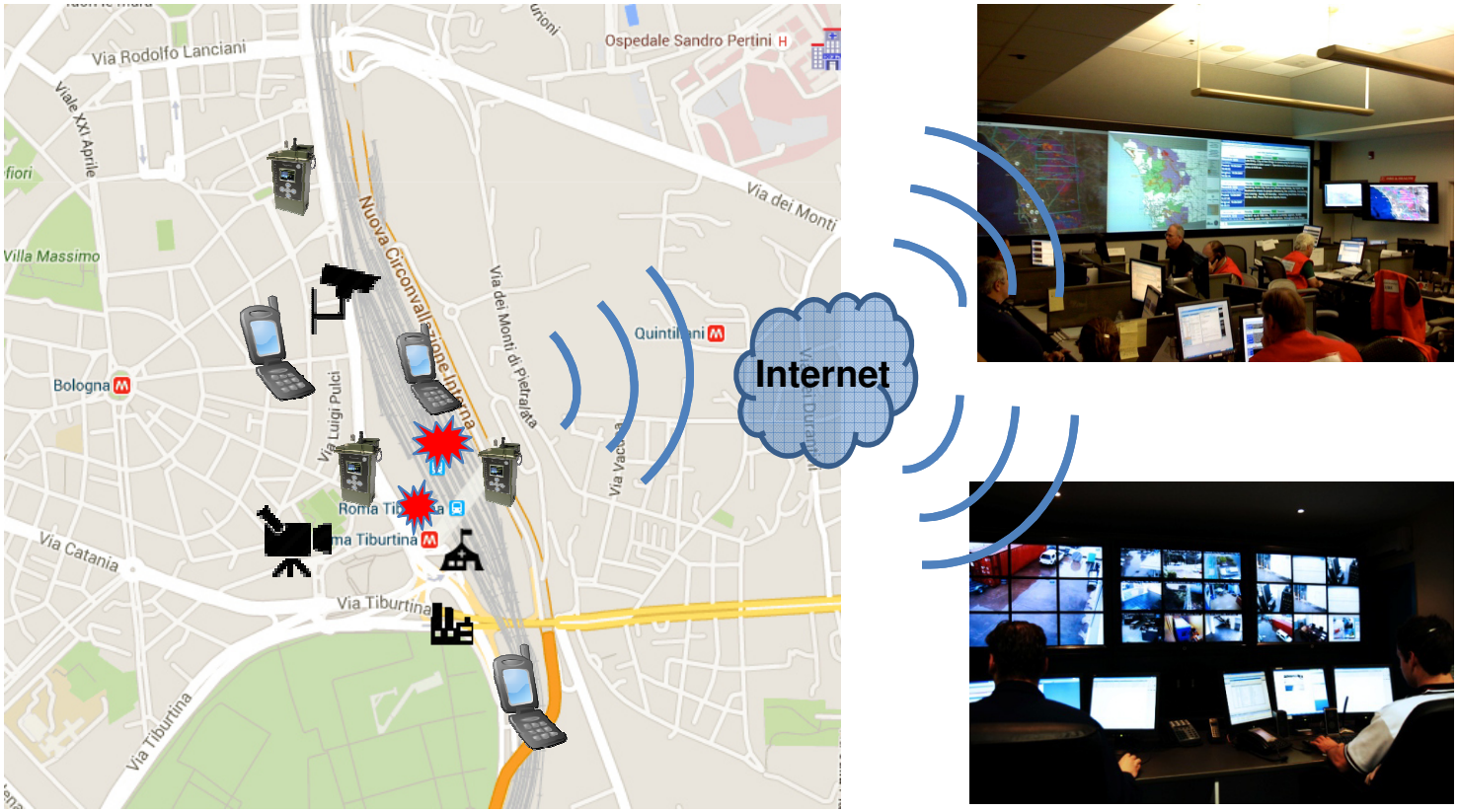
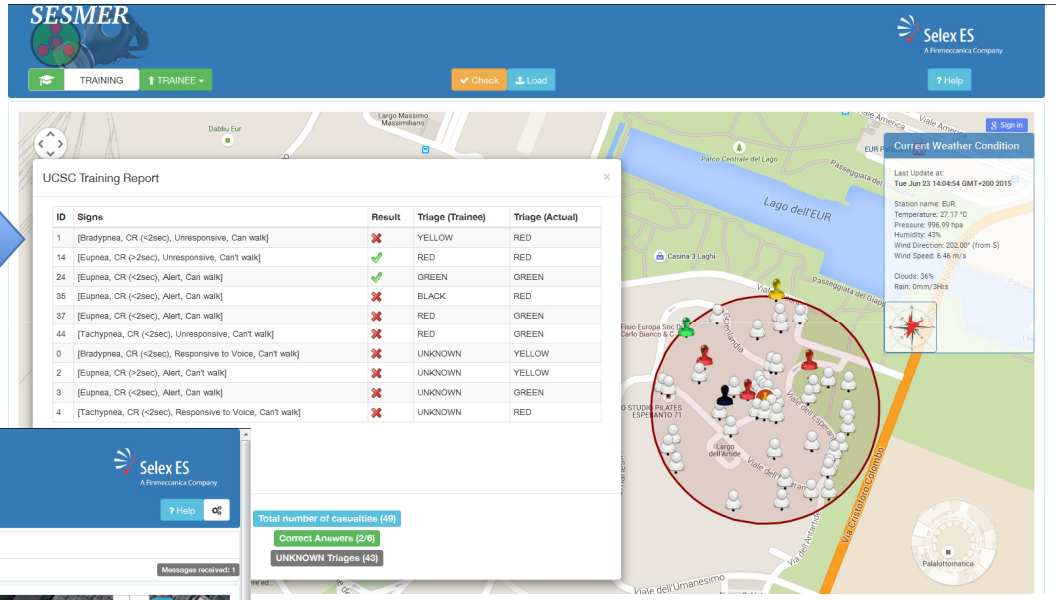
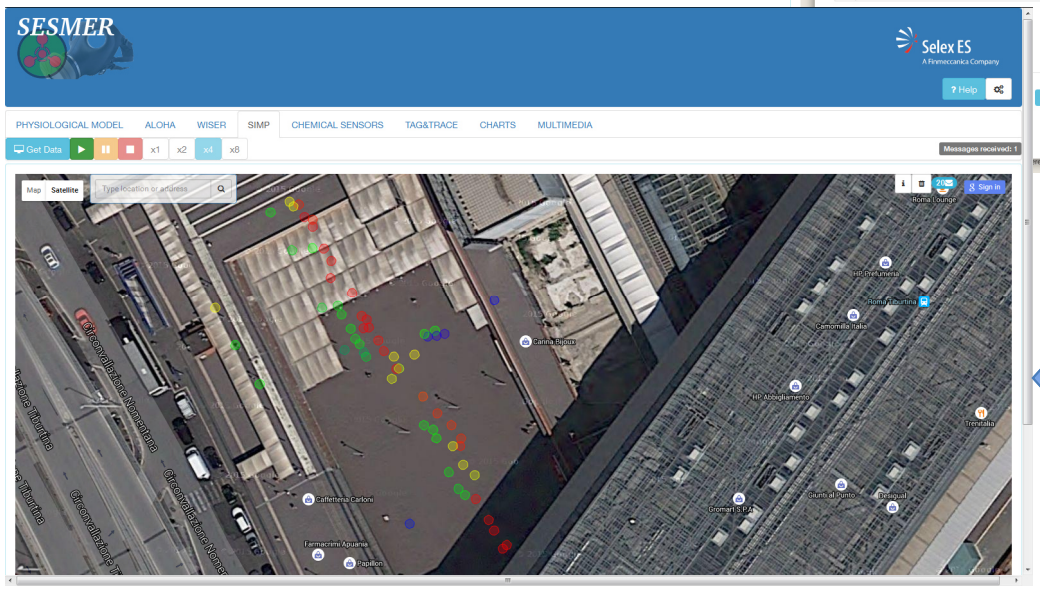


Table Top Exercise in Rome: SESMER

SESMER is one of the tool provided in the TTX demo context by Selex ES: it is in charge of gathering and displaying over a geographical map data coming from different tools/toolboxes demostrating how the use of the Middleware of Messages (MoM) can improve integration among tools involved.

Data visualization of physiological model service provided by Università Cattolica Del Sacro Cuore. SESMER uses the model to support the first responder to get information about health status of the casualties on the scene.

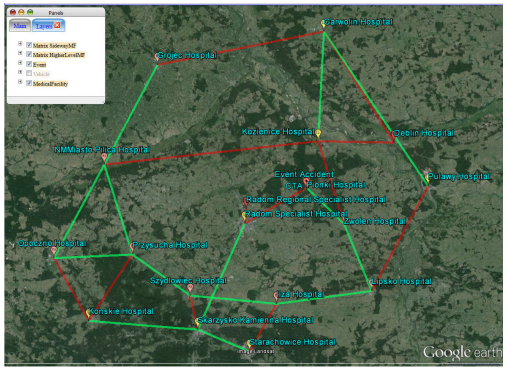




Data visualization of pedestrian dynamics inside infrastructures or public places, such as underground and train stations. SESMER receives pedestrian dynamics simulation from SIMP tool.

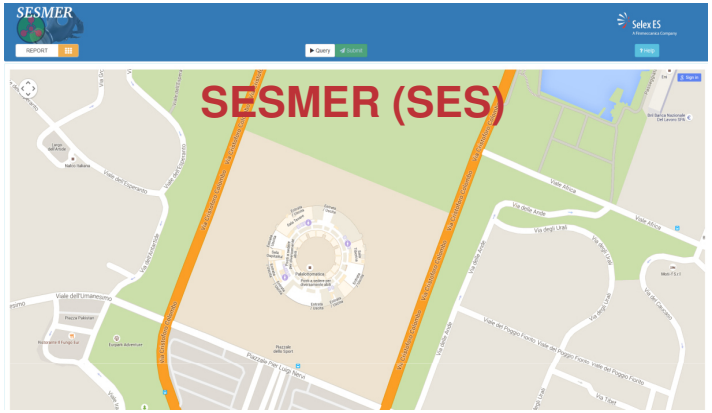
Table Top Exercise in Rome: Tools involved

Preparedness Toolboxes



Impact of two chemicals on Health Services

1



Info gathering and results display on Map

2/4/6/8

EDEN STORE / ToT

Internet

3

UCSC WS (UCSC)

Triage Training

5

CRYSTAL (BAE)

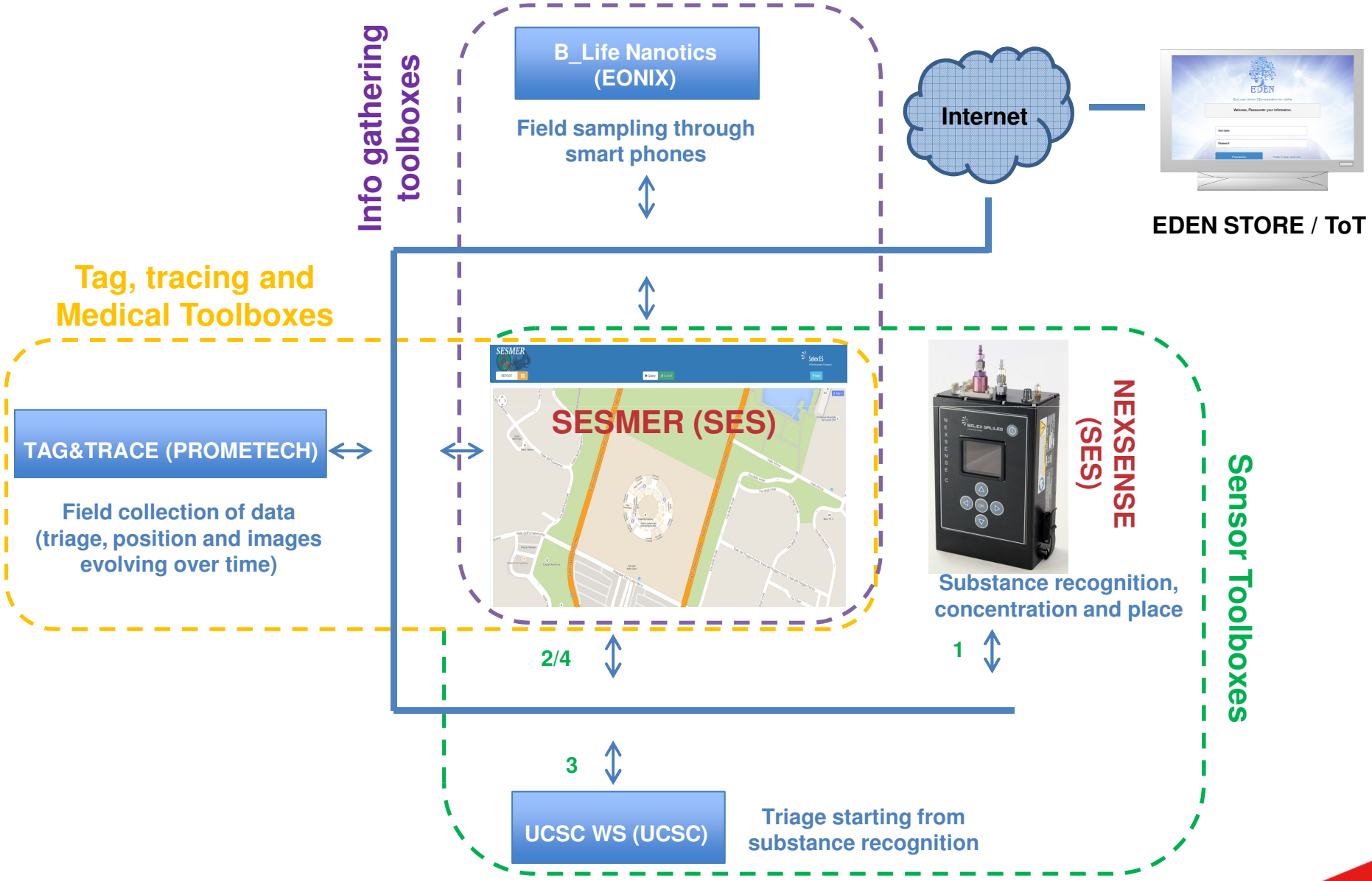
Statistical results about impact of CWA chemicals

7

SIMP (ENEA)

Crowd Behavior in urban environment

Table Top Exercise in Rome: Tools involved



EDEN Project: Next Demos

- **Chemical**
  - Large Multi-chemical demo in Antwerp - November 2015
- **Radiological**
  - Terrorist attack scenario at Nuclear Reactor in Italy – April 2016
  - Large scale open source incident at Nuclear Reactor in Ukraine – May 2016
- **Biological and food chain**
  - Food producer and chain Biological and Chemical contamination demos in Italy and Spain - May 2016

THANK **YOU** FOR YOUR ATTENTION

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