EXPERIMENTING A COMMON OPERATIONAL PICTURE IN A SIMULATED ENVIRONMENT
A TRIAL OF THE EU/FP7 DRIVER PROJECT

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THE OBJECTIVES

To develop **a pan-European Test-bed** for Crisis Management capability development

To develop a comprehensive **Portfolio of Crisis Management Solutions**

To facilitate a shared understanding in Crisis Management across Europe

TRIAL RATIONALE

- South Region CP HQ officier, (Nov. 2014): *"I want an Operational Data Lift"*

- DRIVER, D41.22: SOTA response systems (Feb. 2015, Jan 2016)

    Understanding the relief effort as a whole

    Inter-agency information sharing

- Mandate M/487 – (July 2013) *"… improve the management of vertical bottom-up information flow for situation assessment"*
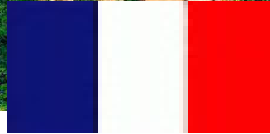
RESEARCH QUESTIONS

- RQ1: Do COP solutions enable better, faster sharing of information with less effort?

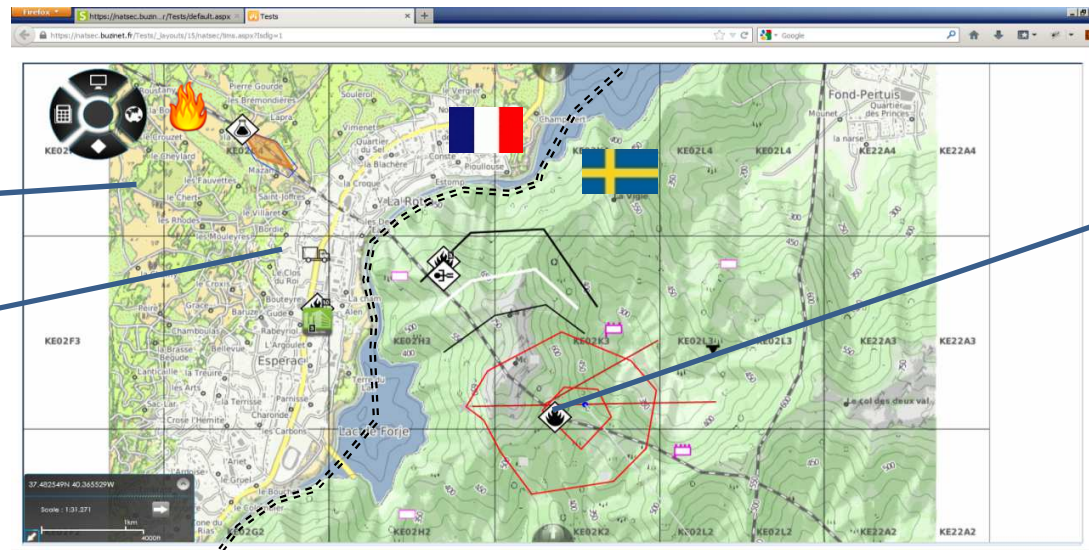- RQ2: Can a simulator bring effective support to this kind of trial?

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SCENARIO

- *Forest fire with cascading effects* on a **main road** creating a **chemical threat** on the nearby town across the **border**
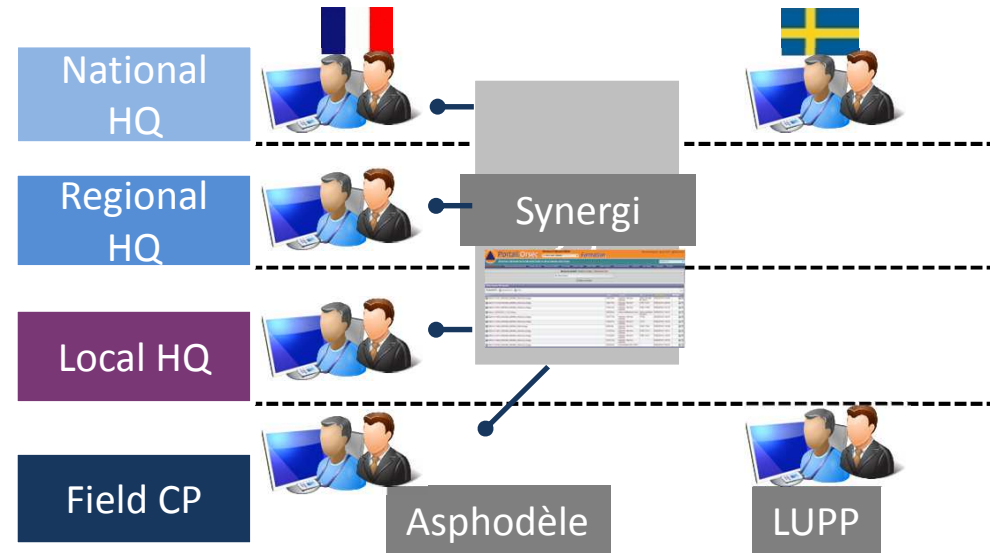- 45 minutes of simulated time => 3 to 4 hours of operational time

PRINCIPLE OF TRIAL

- Compare Legacy system with COP Solution

- Run three times the same scenario:
  - Run1 with **Legacy** system
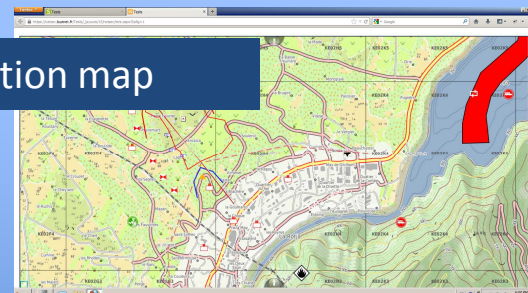 - Run2 & Run3 with **COP Solutions**

National HQ

Regional HQ

Synergi

Local HQ

Field CP

Asphodèle

LUPP

COP SOLUTIONS

Information exchange
(EMSI, CAP, EDXL-DE)

Web access

Situation map

Logbook

EXPERIMENT SET-UP
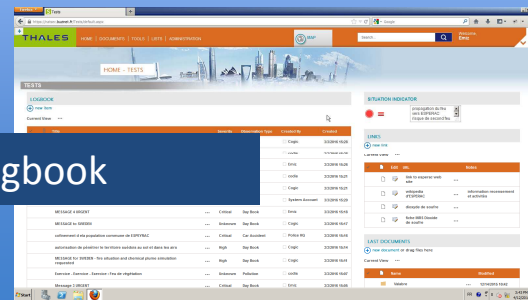
LEGACY (Run1)

COP Solutions (Run 2 & 3)

ERCC

National HQ

Regional HQ

Synergi

Local HQ

Field CP

Asphodèle LUPP

Valabre XVR-Simulator

ERCC

National HQ

Regional HQ

Crisis Wall

CAP

COP Solution

≡ Large Event (2)

Life-X COP (3)

Local HQ

EMSI

Field CP

Asphodèle LUPP
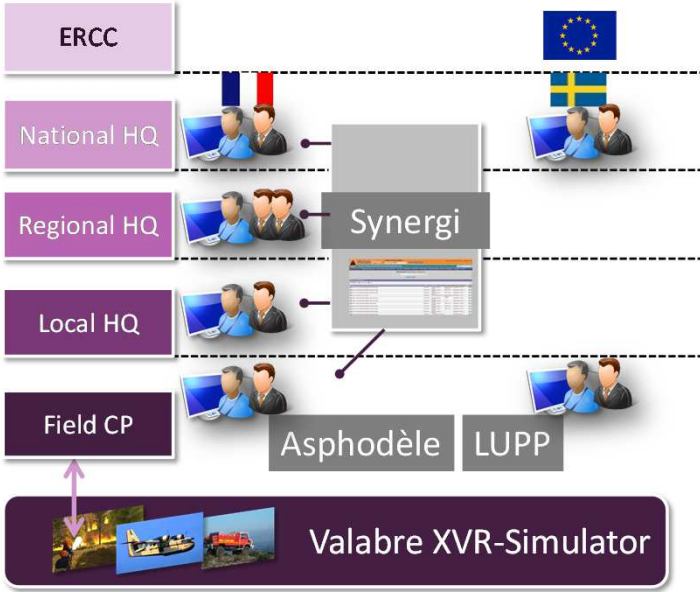
Valabre XVR-Simulator
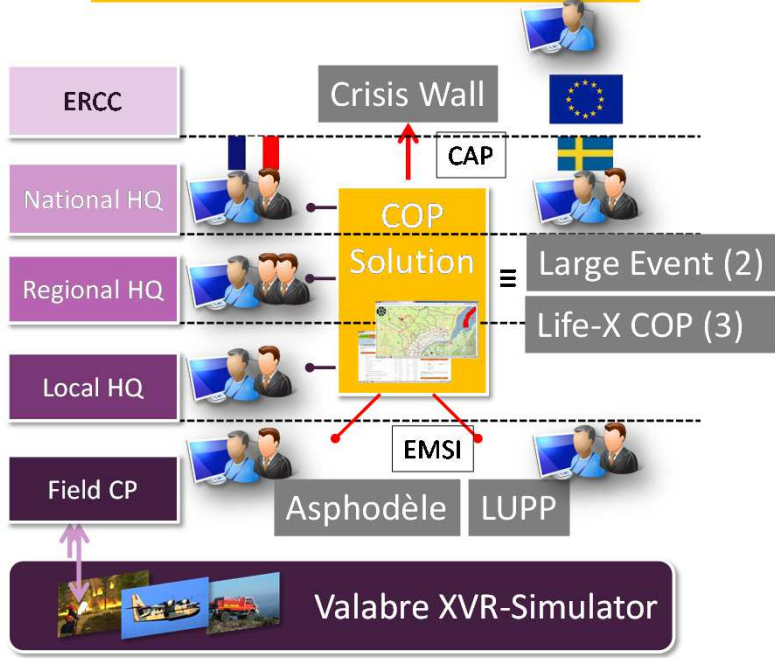
PARTICIPANTS

COMMAND POSTS & STAFFING

Zone Headquarter
EMIZ, Valabre, Gendarmerie

National Headquarter
SDIS 83, Paris firebrigade

Swedish Headquarter
MSB

Field Command Post
Marseille Firefighters

Local Headquarter
SDIS 13

PARTICIPANTS

SIMULATION SUPPORT TO THE TRIAL

- XVR simulator
- Map: Valabre Island
- CESIR Rooms

DIREX

Firefighting intervention team

Chemical intervention team

Helicopter situ assessment
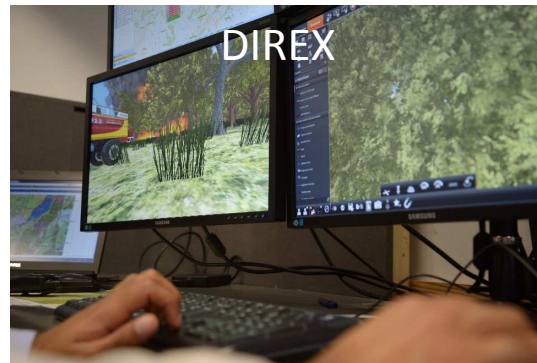
PARTICIPANTS

EVALUATORS & DRIVER PARTNERS

External Evaluators:

- Norfolk Fire Rescue Service (UK), (Incident commander, teacher of incident command)
- Institut der Feuerwehr (D) (Incident commander, teacher of incident command)
- CESS Company (Ecossian Project), security expert

Driver partners:

- Evaluators: JRC, FhG IAO, MSB
- Tool providers & organisers: Thales, Frequentis, JRC, Valabre, Safe cluster (13 persons)

MEASUREMENTS (1/3)
DISSEMINATION INFORMATION

- **Dissemination of key information (Log analysis)**
  - 2 threads of information
    - Chemical leak
    - Warning to sweden
- **Usability of tools**
- **Questionnaire (Players, Evaluators)**
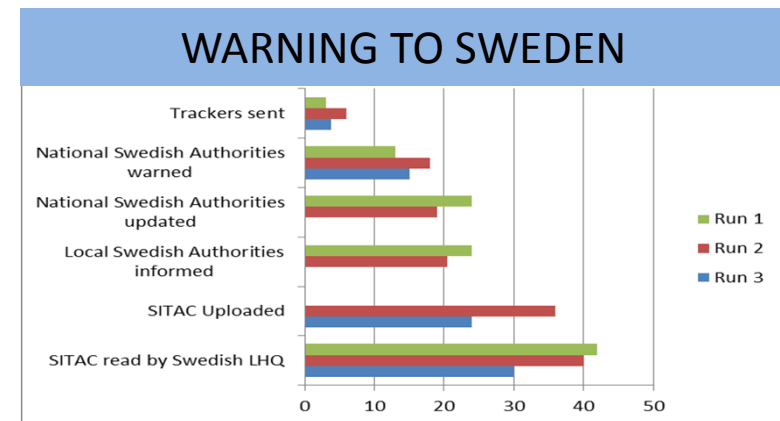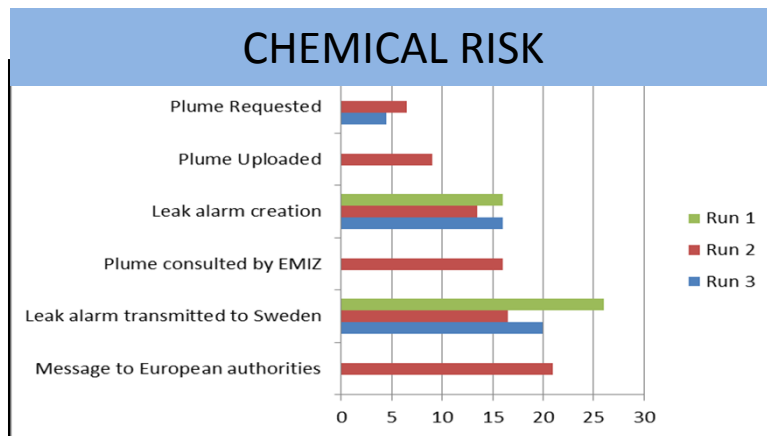- **Open feedback sessions**

Nr	Thread key points
1	Chemical risk known
2	Plume Requested
3	Plume Uploaded
4	Leak alarm creation
5	Plume consulted by EMIZ
6	Leak alarm transmitted to Sweden
7	Message to European authorities

CHEMICAL THREAT

MEASUREMENTS

DISSEMINATION TIME OF KEY INFORMATION

CHEMICAL RISK

Categories (top to bottom): Plume Requested, Plume Uploaded, Leak alarm creation, Plume consulted by EMIZ, Leak alarm transmitted to Sweden, Message to European authorities. Legend: Run 1, Run 2, Run 3. X-axis: 0 to 30.

WARNING TO SWEDEN

Categories (top to bottom): Trackers sent, National Swedish Authorities warned, National Swedish Authorities updated, Local Swedish Authorities informed, SITAC Uploaded, SITAC read by Swedish LHQ. Legend: Run 1, Run 2, Run 3. X-axis: 0 to 50.
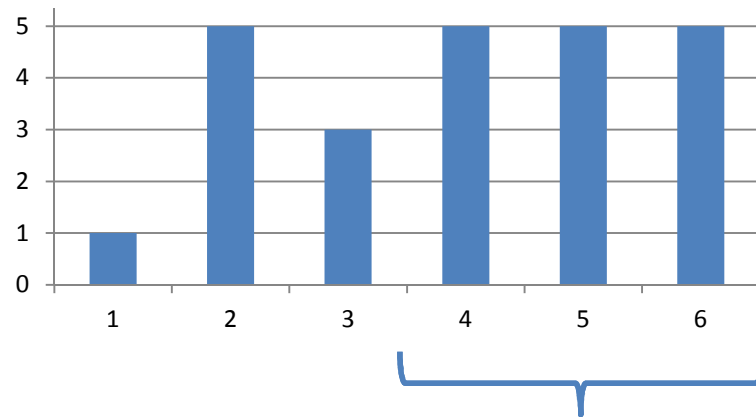
- Not faster
- Easier: « less explanation required »
- Shared information is richer due to higher interoperability level
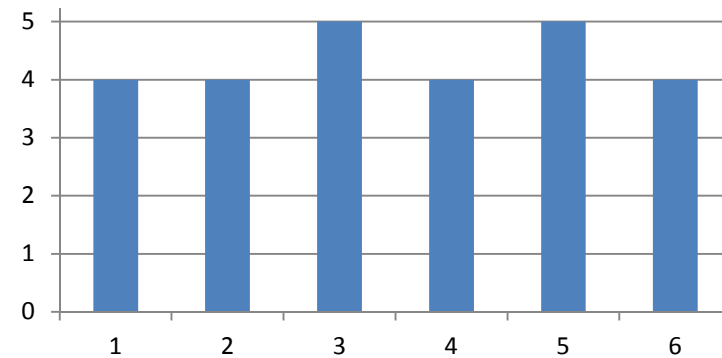
MEASUREMENTS RQ2

Interest of Simulator is validated

Q11 - Do you think that the simulator plays an interesting role in the experimentation?

Incident commanders
Evaluators & players

Q10 - Do you think that the set-up of this experimentation is well adapted to the objective ?
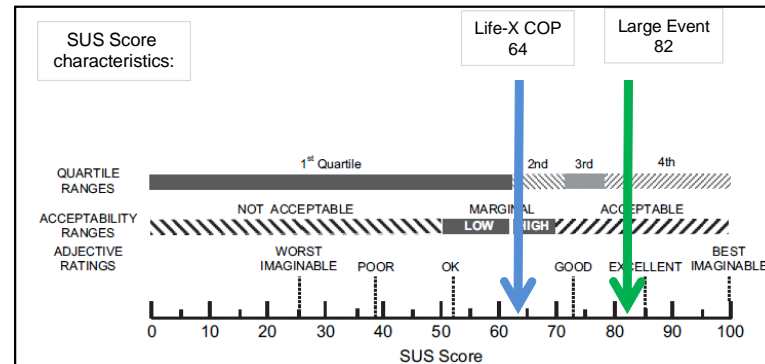
MEASUREMENTS RQ1
USABILITY

- 1 hour training on tools
- Easy appropriation
- Good usability evaluation
- No significant difference between the two COP tools

MAIN RESULTS (1/2)

Operational benefits:

- Information is **NOT** disseminated **FASTER** (at least we could not observe it)
- Exchange of information is perceived as **EASIER** (less explanations required)
    - Can explained by richer information (use standards & ability to exchange)

Usability:

- COP tools are useful only if the right information is shared (necessary to other bodies)
- COP tools are easy to use: no significant difference between them
- Agregation is required for higher levels of command
- Language barrier is there
    - Language of logbook
    - Symbology (need for a standard)

MAIN RESULTS (2/2)

Benefit of Valabre simulator (CESIR):

- Praise by players (feeling of reality)
- Ability to compare
- => New opportunity (testing of new procedures, solutions)

Others

- Increase of interoperability (LUPP and ASPHODELE)
- A step towards a computerized chain of command
- Ideas for future trials: more complex scenario, more Bodies involved (e.g: health)

CONCLUSION

« The comparison with SYNERGI was really interesting. It enabled users [...] *the legacy »*

« The set up e [...] *(Norfolk fire a* [...]

« I would be [...] *der Feuerwe* [...]

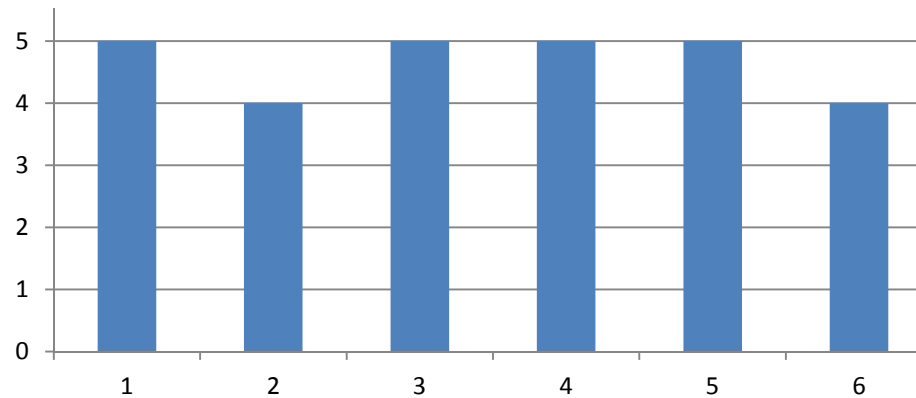*« I lea* [...] *FP7 se* [...] *projec* [...] *(ECOSSIAN EU project)*

Q16 - Would you be interested in being involved in these future experimentations?

CONCLUSION

- LEARNING BY DOING TOGETHER: Context based, no abstract truth
- STANDARDS are beneficial to heteoreneous coalitions
- A Common Operational Picture requires INFORMATION MANAGEMENT
- Main benefit is: EASIER, RICHER INFORMATION

- NEXT STEP: Trial 2, Valabre, Octobre 2018

THANK YOU.
ANY QUESTION?

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