28th of February, 2017 – Brussels
Joint Event on
Common Information Space – Cluster of European Projects for Enhanced Interoperability

Outcomes

Motivation: The interoperability, interconnectivity and intercommunication of systems are the current predominant challenges in European crisis and disaster management. A systematic overview demonstrated that 34% of stakeholders' requests aimed at improving disaster management included or were related to enhanced interoperability. This is by far the most frequently expressed request, followed by request for resources and technical solutions, 15% each. Aside from linguistic barriers, the lack of common taxonomies and standardized Network Enabled Communication are the two main impediments to European interoperability.

As a means of tackling these issues, the European Commission released a call for designing a Common Information Space in 2013 (Theme SEC-2013.5.1-1). Four projects were then selected by the EC for this purpose:

- EPISECC (Establish Pan-European Information Space to Enhance seCurity of Citizens)
- ReDIRNET (Emergency Responder Data Interoperability Network)
- SecInCoRe (Secure Dynamic Cloud for Information, Communication and Resource Interoperability)
- SECTOR (Secure European Common Information Space for the Interoperability of First Responders and Police Authorities)

The Joint Event: Supported by the European Commission, the four project teams jointly decided to demonstrate the idea of a Common information Space. During the Joint Event, they suggested possible approaches for its realization and collected feedback from organisations operating at the European level. The portfolio of concepts and related solutions was framed by presentations on joint activities, coordinated complementary concepts and specific solutions by the four projects.

Complementary approaches: In 2014, the projects started joint task forces to coordinate their approaches on Pan-European Inventories (PEI), taxonomies and Networked Enabled Communication (NEC). All projects brought in similar objectives which were aligned to overarching visions. For the PEIs, the projects performed studies to understand the as-is situation, created tools to make these results intuitively available or even setup knowledge bases to motivate uptake by communities in the domain of information technology for crisis management. Taxonomies were identified as an enabler to facilitate information exchange both conceptually (i.e., targeting shared terminologies) and technologically (i.e., targeting machine-readable semantic models). While technical specifications were aligned, the scope of the taxonomies was designed in a complementary way. NEC solutions target lower levels of interoperability as a backbone for information sharing. Contributions to 3GPP

standardisation resulted from the projects. At the same time, concepts for easier access to WiFi networks within continuous or situation-dependent communities were designed (RescueRoam).

Specific solutions: During the Joint Event, all projects were presented in a way to simplify comparison of specific properties and application fields. For instance, EPISECC advances standards for message exchange in joint command rooms while SecInCoRe supports information sharing and retrieval in preparedness activities. ReDIRNET adopts communication technology for on-site resource allocation, while SECTOR contributes means for the integration of various types of legacy systems.

Joint activities (I) – Ethical, Legal and Social Issues (ELSI): The consideration of Ethical, Legal and Social Issues (ELSI) is a key requirement in the process of developing and running a Common Information Space (CIS). This leads to ELSI conscious co-design of processes and technology facilitating exchange and provision of information in the domain of crisis, disaster and emergency management. In order to respond to this challenge, the four projects joint forces to provide guidance for developers and users. Apart from multiple publications, a community driven web platform was initiated in order to support stakeholders.

Joint activities (II) – Standardisation: Language barriers and lack of common understanding are main impediments for seamless, cross-border cooperation in crisis management on European level. Different stakeholders form varying domains use different terminologies reflecting the requirements of their specific fields of operation. This situation bears the significant risk of misunderstanding followed by wrong decisions and subsequent unpredictable consequences. In order to face this challenge, an initiative for the development of a thesaurus for crisis and disaster management was started. The CEN Workshop "Terminologies in Crisis and Disaster Management" (WS TER-CDM) is the platform for this joint initiative.

Panel Discussion: The panel discussion identified possible approaches for establishing a Common Information Space for crisis management. Additionally, the panel concluded on the following future steps towards the adoption of a CIS:

- Create a community of stakeholders (starting from the 3 project advisory boards)
- Refine the requirements of stakeholders and give priority to regional ones
- Demonstrate the common platforms to the stakeholder community and validate their impact using indicators and by listing the identified benefits to the users
- Provide a business model to ensure viability of the PEIs and adoption of the platforms

Outlook: As a coming starting point, all four projects are defined as cross-cutting activities solving gaps in current practices, products and projects. Co-operations beyond projects endings are predominantly important in the domain of ELSI as well as taxonomies and standardisation (CWA on terminologies in crisis and disaster management). The opportunity to combine the different interoperability concepts – all of them carrying the potential for individual exploitation – needs further investigations. The integration of Pan European inventories is under discussion. Interested parties like European associations and institutions are welcome to get in touch with the coordinators and engage themselves in take-up of results.