2019-04-29

Project Plan for the CEN Workshop on the semantic and syntactical interoperability for crisis and disaster management) (approved during the Kick-off meeting on 2019-04-29)

1. Status of the Project Plan

- Initial draft Project Plan, to be further developed, prior to submission for approval
- Draft Project Plan to be approved at the Kick-off meeting of the Workshop
- Approved Project Plan

2. Background to the Workshop

2.1. Introduction to DRIVER+ project

Current and future challenges due to increasingly severe consequences of natural disasters and terrorist threats require the development and uptake of innovative solutions that are addressing the operational needs of practitioners dealing with Crisis Management. DRIVER+ (Driving Innovation in Crisis Management for European Resilience) is a FP7 Crisis Management demonstration project aiming at improving the way capability development and innovation management is tackled. DRIVER+ has three main objectives:

1. Develop a pan-European Test-bed for Crisis Management capability development:
    - Develop a common guidance methodology and tool (supporting Trials and the gathering of lessons).
    - Develop an infrastructure to create relevant environments, for enabling the trialling of new solutions and to explore and share Crisis Management capabilities.
    - Run Trials in order to assess the value of solutions addressing specific needs using guidance and infrastructure.
    - Ensure the sustainability of the pan-European Test-bed.
2. Develop a well-balanced comprehensive Portfolio of Crisis Management Solutions:
    - Facilitate the usage of the Portfolio of Solutions.
    - Ensure the sustainability of the Portfolio of Tools.
3. Facilitate a shared understanding of Crisis Management across Europe:
    - Establish a common background.
    - Cooperate with external partners in joint Trials.
    - Disseminate project results.

In order to achieve these objectives, five sub-projects (SPs) have been established. **SP91 *Project Management*** is devoted to consortium level project management, and it is also in charge of the alignment of DRIVER+ with external initiatives on crisis management for the benefit of DRIVER+ and its stakeholders. In DRIVER+, all activities related to Societal Impact Assessment (from the former SP8 and SP9) are part of SP91 as well. **SP92 *Test-bed*** will deliver a guidance methodology and guidance tool supporting the design, conduct and analysis of Trials and will develop a reference implementation of the Test-bed. It will also create the scenario simulation capability to support execution of the Trials. **SP93 *Solutions*** will deliver the Portfolio of Solutions which is a database driven web site that

documents all available DRIVER+ solutions, as well as solutions from external organisations. Adapting solutions to fit the needs addressed in Trials will be done in SP93. **SP94 *Trials*** will organize four series of Trials as well as the final demo. **SP95 *Impact, Engagement and Sustainability***, is in charge of communication and dissemination, and also addresses issues related to improving sustainability, market aspects of solutions, and standardization.

The DRIVER+ Trials and the Final Demonstration will benefit from the DRIVER+ Test-bed, providing the technological infrastructure, the necessary supporting methodology and adequate support tools to prepare, conduct and evaluate the Trials. All results from the Trials will be stored and made available in the Portfolio of Solutions, being a central platform to present innovative solutions from consortium partners and third parties and to share experiences and best practices with respect to their application. In order to enhance the current European cooperation framework within the Crisis Management domain and to facilitate a shared understanding of Crisis Management across Europe, DRIVER+ will carry out a wide range of activities, whose most important will be to build and structure a dedicated Community of Practice in Crisis Management, thereby connecting and fostering the exchange on lessons learnt and best practices between Crisis Management practitioners as well as technological solution providers.

2.2. Motivation for the Creation of this Workshop

DRIVER+ partners identified that the communication between different organisations, regions and countries – with their specific processes and tools – is a major challenge in crisis management. But efficient communication and access to critical information is a key requirement for the operations of public safety and security services in disasters. Several examples demonstrate the relevance of adequate information exchange, e.g. Altay & Labonte 2014[1] for the management of the devastating earthquake in Haiti or Tso & McEntire 2011[2] related to the Chi-Chi earthquake in 1999. Information exchange remains a key factor in present time, as shown by Wolbers & Boersma 2013 or Smith 2012[3].

The DRIVER+ partners have therefore proposed to develop a standardization deliverable on a process to implement interoperability and hence formulate requirements on this process, whilst also looking at the technical sides of communication – the communication of different tools with each other via a common information space. The overall goal is to ensure syntactical as well as semantic interoperability in crisis situations.

The developed information sharing concept is based on automated sharing of information between participating organizations in a machine-readable way. It is made possible to

[1] Altay, N. and Labonte, M. (2014), Challenges in humanitarian information management and exchange: evidence from Haiti. Disasters, 38: S50-S72. doi:10.1111/disa.12052

[2] Tso, Y. E. and McEntire, D. (2011), Emergency management in Taiwan: Learning from past and current experiences. David McEntire (Ed.), Comparative Emergency Management: Understanding Disaster Policies, Organizations, and Initiatives from Around the World, Emmetsburg, MD: Federal Emergency Management Agency.

[3] ARMY COMMAND AND GENERAL STAFF COLL FORT LEAVENWORTH KS SCHOOL OF ADVANCED MILITARY STUDIES (2012), Comprehensive Common Operating Picture (COP) for Disaster Response

exchange information between the different IT tools used by the entities active in managing a disaster without making it necessary that stakeholders change their IT tools. That way one of today's challenges in crisis and disaster management is overcome.

2.3. The market environment

There is a broad market environment including the Civil protection authorities, Local Emergency Management Authorities (LEMA), Fire brigades, Police authorities, First responders (e.g. Red Cross, Johanniter), Cross-border operations, and Military forces involved in crisis and disaster management, Critical infrastructure operating forces, Companies involved in disaster management and civil protection, and R&D community.

2.4. The legal environment

The following regulations are relevant for the proposed CWA:

- Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism,
- Council Regulation (EU) 2016/369 on the provision of emergency support within the Union,
- Regulation No 375/2014 of the European Parliament and the Council on establishing the European Voluntary Humanitarian Aid Corps ('EU Aid Volunteers initiative'),
- Regulation (EC) No 1257/96 concerning humanitarian aid.

2.5. Existing standards and standard related activities and documents

The most important existing standards for the Project Plan are listed in the following table.

Number	Title
ANSI/INCITS 415	Information Technology - Homeland Security Mapping Standard - Point Symbology for Emergency Management
ANSI/NFPA 1620	Standard for Pre-Incident Planning
CTA-CEB25-A	Best Practices for Implementing Common Alerting Protocol (CAP) based Alerts for Consumer Electronics Devices
CWA 15537	Network Enabled Abilities - Service-Oriented Architecture for civilian and military crisis management
EN 61938	Multimedia systems: guide book for requirements to allow interoperability
ETSI TR 103273 V 1.1.1	Emergency Communications (EMTEL) - Recommendations for public warning making use of pre-defined libraries
ETSI TR 103335 V 1.1.1	Emergency Communications (EMTEL) - Guidelines for alert message content accessibility
ETSI TS 102181 V 1.2.1	Emergency Communications (EMTEL) - Requirements for communication between

	authorities/organizations during emergencies
ETSI TS 103 478 V1.1.1	Emergency Communications (EMTEL); Pan-European Mobile Emergency Application
GB/T 28923.1	Mapping requirements for the natural disaster remote sensing thematic maps - Part 1: Classification, codes and mapping
GB/T 28923.2	Mapping requirements for the natural disasters remote sensing thematic maps - Part 2: Monitoring thematic maps
GB/T 28923.3	Mapping requirements for the natural disaster remote sensing thematic maps - Part 3: Risk assessment thematic maps
GB/T 28923.4	Mapping requirements for the natural disaster remote sensing thematic maps - Part 4: Loss assessment thematic maps
GB/T 28923.5	Mapping requirements for the natural disaster remote sensing thematic maps - Part 5: Relief and recovery assessment thematic maps
ISO/IEC 23005-5	Information technologies- Media control and context -- Part 5: Data formats for interaction devices
ISO/TR 22351	Societal security - Emergency management - Message structure for exchange of information
ITU-T X.1303	Common alerting protocol (CAP 1.1)
ITU-T X.1303bis	Common alerting protocol (CAP 1.2)
OENORM A 2260	Interface for digital exchange of geographic data
TR 103 480 DTR/EMTEL-00038	Emergency Communications (EMTEL); Interoperability testing of core elements for network independent access to emergency services
TS 103 479 DTS/EMTEL-00037	Emergency Communications (EMTEL); Core elements for network independent access to emergency services
CEN/TS 17091	Crisis management - Guidance for developing a strategic capability

3. Workshop proposers and Workshop participants

The original proposer of the Workshop is the Austrian Institute of Technology (AIT), Austrian partner of the DRIVER+ consortium. The AIT is Austria's largest research and technology organisation. Among the European research institutes, AIT is a specialist in the key infrastructure issues of the future[4].
Other consortium partners such as XVR Simulation, Valabre - Centre de Recherche et d'Essais, Public Safety Communication Europe (PSCE) and FRQ will contribute and therefore be part of the Workshop.

[4] AIT website: https://www.ait.ac.at/en/about-the-ait/ (01/30/2019)

DIN, the German Institute for Standardization, as a CEN national member will hold the workshops secretariat.

The workshop is open to any interested party or entity that is willing to support the aims of the project plan.

All registered participants at the Kick-off Meeting can be found in Annex A.

4. Workshop scope and objectives

This Workshop will develop a CEN Workshop Agreement (CWA), which defines requirements to achieve organizational and cross border interoperability on syntactical and semantic level for crisis and disaster management.

To achieve this target, it is necessary to provide a conceptual frame and basic requirements for the development of software interfaces, that allow different organisations, using different IT systems for the execution of their crisis and disaster management procedures, to connect to common platform in order to receive and send data while maintaining the same data formats on their systems. Such interfaces serve as two way converters between the data format of the platform and that of any participating organization. Apart from the concept of the platform and the connectors a conceptual frame for security requirements of such a data exchange process needs to be set up encompassing authentication, grouping functionalities and encryption. Moreover, a conceptual frame for a distribution mechanism including service registration, communication, synchronization, message repository and resilience aspects (concepts to avoid single point of failure) will be provided. Other conceptual aspects to be covered are requirements for semantic services and finally management of registration procedures as well as participants registration data.

The target groups of the Workshop are Civil protection authorities, Local Emergency Management Authorities (LEMA), Fire brigades, Police authorities, First responders (e.g. Red Cross, Knights of St. John), Cross-border operations, Military forces involved in crisis and disaster management, Critical infrastructure operating forces, Companies involved in disaster management and civil protection, and R&D community.

5. Workshop programme

5.1. Work plan

The overall timeframe for the envisaged CWA can be seen in Figure 1. This project plan can be comment by anyone in the given timeframe. The comments will be collected by the secretary. At the Kick-off meeting each of the received comments shall be discussed and considered.

The Kick-Off meeting will be held in Berlin. Any other planned meeting could be a virtual meeting. The timeframe for the workshop is limited to the DRIVER+ project runtime. The elaboration of the draft CWA is planned from May to end of November 2019. The final draft CWA should be finalized January 2020. The publication of the CWA is foreseen for February 2020.

The CWA will be drafted and published in English.

	2019												2020	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
Preparation of Project Plan														
Public availability of Project Plan														
Kick-off Meeting														
Elaboration of Draft CWA														
Finalisation and Approval of CWA														
Publication of CWA														

Figure 1 Gantt chart Workplan

5.2. Work already delivered

Potential content for the CWA can be found within the DRIVER+ deliverables on the DRIVER+ website.[5]

6. Workshop structure

6.1. Workshop Chairperson and Vice-Chair

The Workshop Chairperson has five main responsibilities. If necessary or if assigned to him/her, the Workshop Vice-Chair may take over these duties from the Chair.

- Presides at Workshop plenary meetings
- Ensures Workshop delivers the agreement in line with its Project Plan
- Manages the consensus building process, decides when the Workshop participants have reached agreement on the final CWA, on the basis of the comments received
- Interface with CEN-CENELEC Management Centre (CCMC) and CEN Workshop Secretariat regarding strategic directions, problems arising, and external relationships
- Ensures information exchange with the Workshop Secretariat

6.2. Workshop Secretary and Vice-Secretary

The Workshop Secretary has five main responsibilities. If necessary or if assigned to him/her, the Workshop Vice-Secretary may take over these duties from the Secretary.

- Formally register Workshop participants and maintain record of participating organisations and individuals
- Offer infrastructure and manage documents and their distribution through the electronic platform
- Prepare agenda and distribute information on meetings and meeting minutes/follow up actions
- Initiate and manage CWA approval process upon decision by the Chairperson

[5] DRIVER+ PUBLIC REPORTS can be found on: https://www.driver-project.eu/discover-our-results/project-public-reports/

- Advise on CEN rules and bring any major problems encountered (if any) in the development of the CWA to the attention of CEN-CENELEC Management Centre (CCMC)

7. Resource requirements

Registration and participation at this CEN Workshop are free of charge, but each participant shall bear his/her own costs for travel, accommodation, and subsistence. If needed it is possible to reimburse reasonable travel costs of CEN Workshop participants external to the DRIVER+ project; upon previous request to the CEN workshops secretary (DIN).

The administrative costs of the CEN Workshop will be covered by the DRIVER+ project which received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n° 607798. The copyright of the CWA will be with CEN.

8. Related activities, liaisons, etc.

Related technical committees:

- ISO/TC 292 – Security and resilience
- CEN/TC 391 – Societal and Citizen Security (Liaison with DRIVER+)

The WG3 Crisis management/civil protection of the CEN/TC 391 Societal and Citizen Security will be informed about the initiation of this project and invited to contribute to the preparation of the CWA. The draft CWA shall presented at CEN/TC 391 meeting in Vienna on June 18th 2019. It is expected that the experts from the Working Group will actively contribute to the initiative and will be involved in the CWA development.

9. Contact points

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Annex A

Name	Organisation	Approved project plan
Alice Clemenceau	Valabre - Centre de Recherche et d'Essais	YES
Andreas Seipelt	ARTTIC	YES
Angela Schmitt	Deutsches Zentrum für Luft- und Raumfahrt (DLR)	YES
Camilo Palacio Ramirez	Austrian Red Cross (OeRK)	YES
David Lund	Public Safety Communication Europe (PSCE)	YES
Laurent Dubost	Thales	YES
Georg Neubauer	Austrian Institut of Technology (AIT)	YES
Harold Linke	HITEC Luxembourg S.A.	webex
Noel Mitchell	CSNR Technologies Ltd.	webex
René Lindner	DIN e. V.	–
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