driver+

Driving Innovation in Crisis Management
for European Resilience

TRIAL - AUSTRIA

SEVERE EARTHQUAKE SCENARIO IN EISENERZ

Austria, September 2019


Research
Operational needs
Lessons learned
Shared Understanding
Trials
Guidance
Methodology
Knowledge base
Reference implementation
Tools
Pragmatic
European
Test-bed
Crisis
Virtually connected facilities
Unpredictability
Management
Challenges
Innovative solutions
Cooperation
Experience
Innovation
Disasters
Crisis Labs
Analysis
Trial-driven development
Portfolio of Solutions
Practitioners

ABOUT DRIVER+

A EUROPEAN PROJECT TO DRIVE INNOVATION IN CRISIS MANAGEMENT

The scale and pace of crises pose enormous challenges for the Crisis Management (CM) sector, with new threats emerging all the time. An already complex field must also strive to integrate new technologies and methods, cope with a rapidly changing infrastructure, understand evolving risks, be effective across cultural, administrative and national boundaries and engage with populations to enhance their resilience. Innovation is therefore critical but will only be successful if it is relevant and accessible to practitioners and operators. Many crises involve interfacing diverse CM systems and solutions. Major crises can also frequently involve more than one country or region, which may have differing CM infrastructures and cultures. It is also highly likely that this will necessitate interfacing different systems and combining different solutions. CM innovation must therefore be capable of meeting these multifaceted challenges and delivering solutions that are modular, flexible and adaptable.

These solutions must be tested and validated in realistic environments; they must be evaluated to assess their true benefits and for their overall suitability, before being adopted by end-users. Failure to meet these needs could result in less than perfect solutions being introduced or in the increased costs of CM capability development, due to the imperfect management of ever more complex crises.

In May 2014, dedicated practitioners' organisations, research institutes, industries and SMEs teamed up to support the European Union to tackle this issue. Until April 2020 the broad aim of the DRIVER+ project, funded under the European Union's 7th Framework Programme, will be to improve the way capability development and innovation management are addressed, by assessing and delivering solutions that can be used, and combined, to address different types of large-scale crises.

DRIVER+ CORE OBJECTIVES

A pan-European Test-bed

To develop a pan-European Test-bed for Crisis Management capability development enabling practitioners to create a space in which stakeholders can collaborate in testing and evaluating tools, processes or organisational solutions.

A Portfolio of Solutions

To set up a Portfolio of Solutions in the form of a database-driven website documenting several Crisis Management solutions, open to any external organisations willing to share data and experiences of solutions.

A shared understanding

To foster a shared understanding in Crisis Management across Europe, through the enhancement of the cooperation framework.

WHAT IS IN THIS BOOKLET?

TABLE OF CONTENTS

TRIAL GUIDANCE METHODOLOGY
GUIDELINES TO SUPPORT PRACTITIONERS

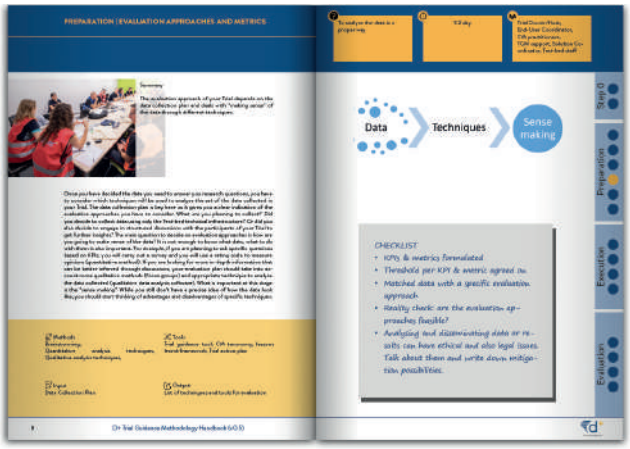
WHY A TRIAL GUIDANCE METHODOLOGY ?
ADDRESSING CURRENT CRISIS MANAGEMENT CAPABILITY GAPS

The Trial Guidance Methodology is designed for Crisis Management practitioners as it facilitates the investigation of innovative solutions. The TGM provides step-by-step guidelines on how to assess them in non-operational contexts (such as a Trial) through a structured approach. Trials are collective efforts. They imply a co-creative approach and an open mind in order to stimulate innovation and true capability development within the Crisis Management (CM) domain.

The methodology consists of three phases: preparation, execution and evaluation. The preparation phase results in a Trial design with multiple elements that are captured in the Trial Action Plan whose main outcome – the design of the Trial methodology – is meant to be applied and executed in the second phase. It is up to the Trial committee to ensure that all the decisions taken in the first phase can be carried out. Each Trial includes three elements: the tailoring of the Test-bed in accordance with the Trial design, the finalisation and simulation of the identified scenario within the Test-bed, and the ability to run an assessment of the three DRIVER+ performance measurement dimensions (CM, Trial, solutions). The execution phase terminates with the running of the actual Trial through the simulation of the pre-defined scenario, the deployment of potential innovative solutions and the collection of relevant data. In addition to the data collected during the Trial, additional feedback from external stakeholders (participating actively as Trial actors or passively as observers) is gathered after the main event. During the third phase, the gathered data is processed in order to assess and analyse the real impact of the innovative solutions. This information is not only very useful for the CM practitioners but is also valuable for the solution providers concerned with improving their solutions further.

To that end, DRIVER+ has developed and issued a Trial Guidance Methodology Handbook providing an overview of what Crisis Managers would need to do in order to depict a specific operation and integrate new socio-technical solutions in their ways of working.

The TGM offers not only a guidance on what to do by whom and when, but also introduces appropriate tools and methods to conduct those tasks. The Handbook should also be of interest to CM experts working in coordination centres, especially those considering participating in Trial-like activities (e.g. in the execution phase) to understand the potential added value of the DRIVER+ Test-bed.



Download the Handbook today at:
driver-project.eu/trial-guidance-methodology

TRAINING MODULE
FOR TRIAL ORGANISERS

The Trial Guidance Methodology (TGM) Handbook supports Crisis Management professionals in organising and evaluating their own Trials. The TGM Handbook will be accompanied by the Trial Guidance Tool (TGT) and a Training Module (TM), so future Trial organisers not only have a document to consult and a tool guiding them through the methodology, but can also attend a training course instructing them what the Test-bed offers and how it can be used to best fit their needs.

The aim of the TM is to train and instruct all persons involved how they can best organise their own Trials. This means that the TM should explain how to make best use of the pan-European DRIVER+ Test-bed:

- How to use the DRIVER+ Trial Guidance Methodology (TGM).
- How to use the supportive methods and tools.
- To make reference to the pan-European network of fellow Test-bed users and organisations that can deliver Test-bed support

Because the TM is designed to support future Trial organisers and thus future Test-bed users (i.e. the TM's learners), one can distinguish two main categories of training target groups for the TM:

1. Trial organisers, being the TM's primary training target group, who could be employed as:
    a. High-level crisis managers
    b. Senior CM field practitioners
    c. CM policy makers
    d. CM procurement officers
    e. CM innovators
    f. Researchers in the field of CM
    g. Consultants in the field of CM

2. Other stakeholders in a Trial, who are the TM's secondary training target groups:
    a. Practitioners (not being the main Trial organiser)
    b. Solution providers
    c. Developers and technicians (for any kind of socio-technical solution)

The TM will use a blended approach by combining e-learning and an instructor-led contact phase.

Different learners are probably interested in different aspects of the Test-bed. According to their different roles in organising a Trial, their training should be focused on different (sub-)sessions of the Training Module. The final TM will therefore use a learner role-based set-up, in which learners are first allocated to a specific target group based on their role in a Trial and then lead to the content that is most applicable to them.

The TM will be implemented in the Moodle e-learning environment of the Estonian Academy of Security Sciences (EASS). EASS will also be the first point of contact in case you would like to enroll in this training course. Furthermore, the TM will be delivered as a complete training package, such that it can also be implemented at other academies and knowledge institutes

Session	E-learning phase	Contact phase
Session 1: Introduction		
Session 2: Preparation phase		
2.1 Step 0	✓	
2.2 Six-step approach	✓	✓
2.3 How to iterate within the six-step approach	✓	
Session 3: Execution phase		
3.1 Trial execution	✓	
3.2 Steps in the execution phase	✓	
3.3 Transition from preparation to execution: TIM	✓	✓
3.4 What to be tested in Dry Run 1 and 2	✓	
Session 4: Evaluation phase		
4.1 Data quality check	✓	✓
4.2 Data analysis	✓	✓
4.3 Data synthesis	✓	✓
4.4 Dissemination of results	✓	✓
Session 5: Supportive tools and methods		
5.1 Trial Guidance Tool and Trial Action Plan	✓	
5.2 Test-bed infrastructure	✓	
5.3 CM gap assessment and gap selection methods	✓	
5.4 Base-line and Innovation-line	✓	✓
5.5 Societal Impact Assessment	✓	✓
5.6 Lessons Learned Framework	✓	
Session 6: Pan-European networks and references		
6.1 Networks: CoE, CMINE and Community of Users	✓	
6.2 Portfolio of Solutions	✓	
6.3 Training Module glossary	✓	

TEST-BED TECHNICAL INFRASTRUCTURE

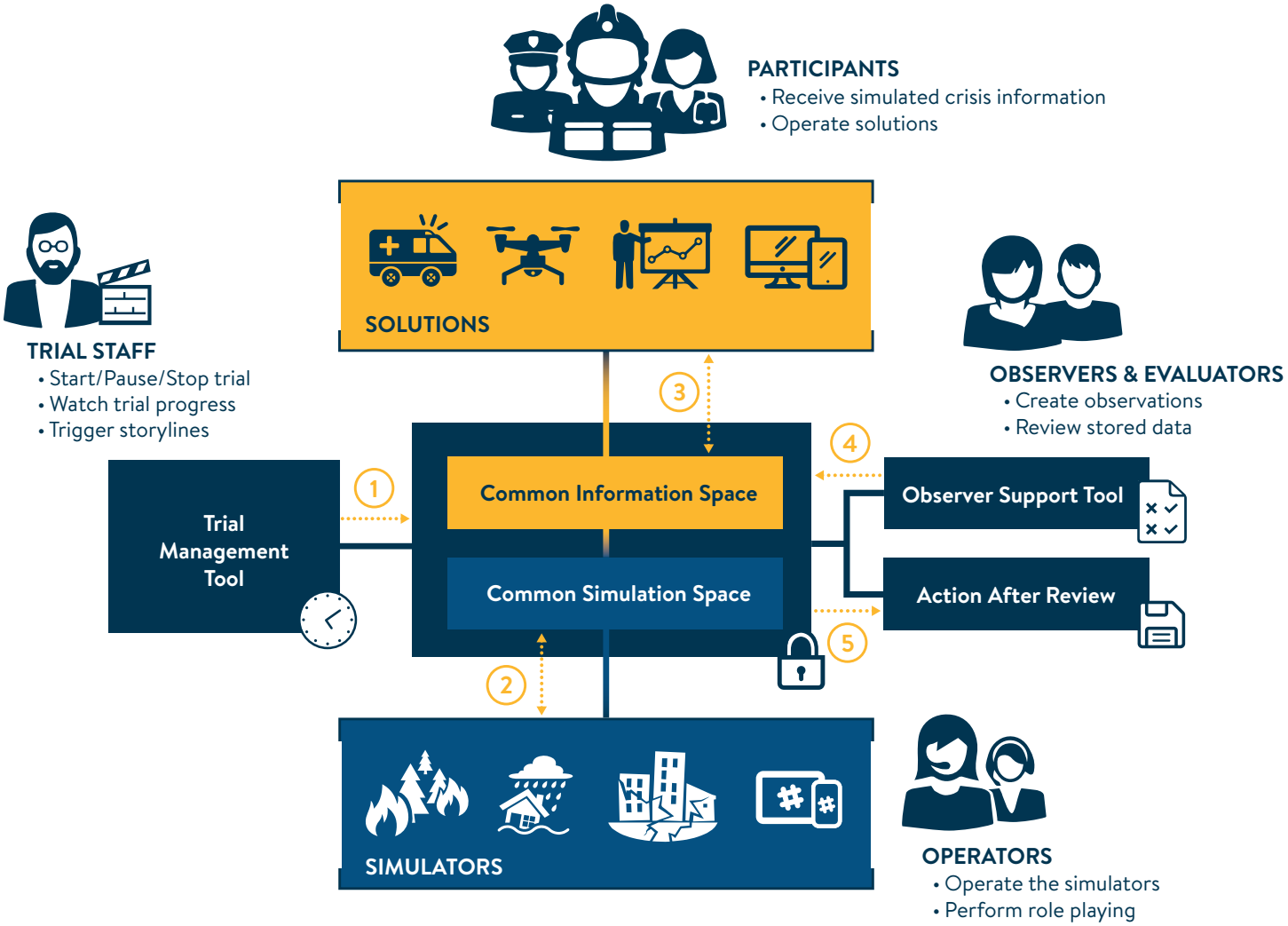
A SPACE FOR TRIALLING

WHY A TEST-BED?

TO FACILITATE PREPARING, EXECUTING AND EVALUATING A TRIAL

The Test-bed provides you with software components to:

- Connect Solutions for data and information exchange
- Connect Simulators to create a fictitious, but realistic, crisis
- Create and control the scenario's storylines
- Record and collect observations and logs



1. The Trial starts: storylines are activated, and the fictitious crisis evolves.
2. Simulators process storylines and additional operator actions. Simulator data is sent to the Solutions.
3. Solutions are fed with simulator data, share information, and request actions from the Simulators.
4. Observers create observations, which are shared and recorded in the Test-bed.
5. The Trial ends and all logs and observations are collected for evaluation.

SOLUTIONS

The solutions are assessed during the Trial. They can be connected to the Test-bed via CIS adapters such that they can send and receive data from other solutions and simulators.

Common Information Space (CIS)

Set of KAFKA topics to exchange data between solutions, to receive data from and send commands to simulators.

SIMULATORS

Provide a fictitious crisis during the Trial for participants and solutions, so solutions can be evaluated effectively in a realistic setting and such that participants feel immersed in the simulated crisis. They offer data and visualisations, such as 3D virtual reality views, flooding plots, fire progressions, panicking crowds and jammed traffic, simulated (social) media messages or a regional/national set of available resources.

Common Simulation Space (CSS)

Set of KAFKA topics to exchange information between simulators, so they are synchronised and can act as one. Simulators send, via a gateway to the Common Information Space, data to solutions and receive instructions to be executed.

Trial Management Tool

Acts as composer and conductor, offering the Trial staff control over the Trial. During preparation, the staff can create storylines and acts, which represent possible evolutions of the simulated crisis. During the Trial itself, the staff can start and pause the Trial, its storylines and acts, thereby influencing the direction of the Trial and the challenges that the participants face.

Observer Support Tool

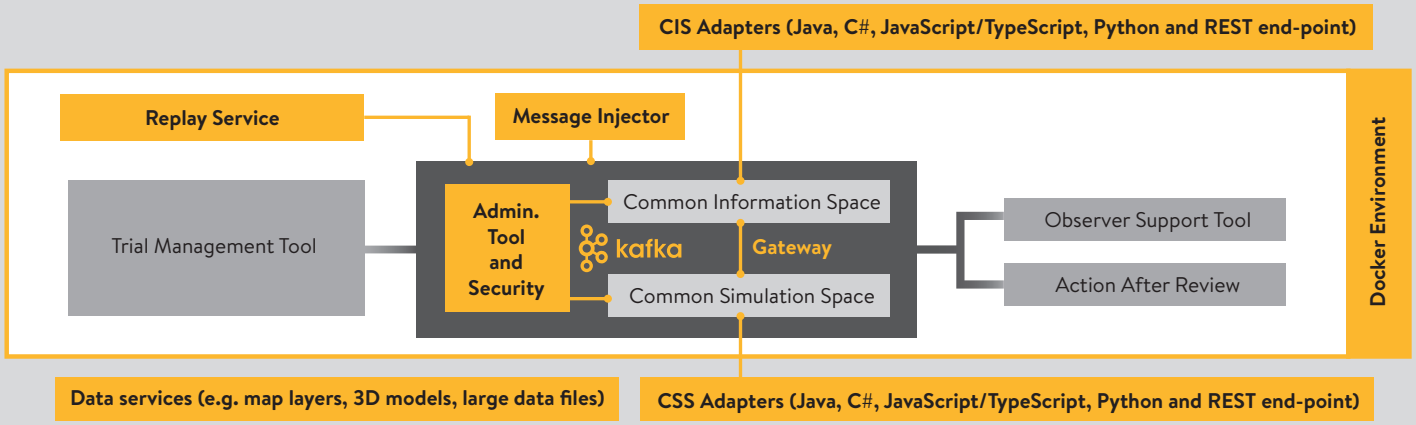
Runs on tablets and in browsers, to create observations quickly that are targeted at specific moments in time during the Trial.

After Action Review

Facilitates a detailed, data-based evaluation after the Trial. Stores all messages and observations exchanged during the Trial execution, as well as screenshots from running applications, so it can be reviewed together.

TEST-BED TECHNICAL INFRASTRUCTURE
FOR SOFTWARE DEVELOPERS AND SYSTEM ADMINISTRATORS

To deploy, configure and run the Test-bed technical infrastructure anytime and anywhere, and to simplify connecting Solutions and Simulators, these extra components are available to software developers and system administrators.



Docker environment

Part of the DRIVER+ website on which you can select the Test-bed components to be installed. It creates one installer containing the Docker images of all the selected components, such that these can be easily installed in one go.

Replay Service

Developer component to send out a set of pre-recorded messages across one or more KAFKA topics. Can also be used to demonstrate solutions in a realistic context.

Administrator Tool and Security

Developer component to set-up and manage the KAFKA topics and security needed in the CIS and CSS for a specific Trial.

Message Injector

Developer component to quickly send out a message on one KAFKA topic.

Gateway

Translates messages from CSS to CIS and vice versa. CIS messages are standardised for use in emergency services communications. CSS messages are optimised for massive throughput and quick handling by simulators.

Data Services

A set of complementary services to support the Trial, e.g. for storing large data sets, a height model, data from a flooding simulator, a set of fictitious resources, points of interest, map layers, et cetera.

PORTFOLIO OF SOLUTIONS
SHARING INFORMATION ABOUT INNOVATION

WHAT ARE WE LOOKING FOR?
CRISIS MANAGEMENT SOLUTIONS

A solution is a building block that contributes to a Crisis Management function. Solutions can be technologies, tools, methods, concepts, or recommendations that regard potential technical, organisational, procedural, legal, policy, societal, or ethical improvements to the European Crisis Management legacy. It may be a new piece of software or training approach, a new item of equipment or a new way of collaborating. In the context of the DRIVER+ Portfolio of Solutions, a solution is presented as a coherent set of tools and methods to use them, which can be used "as is" in the Trials and which addresses specific needs of the stakeholders by providing matching functionality.

WHY A PORTFOLIO OF SOLUTIONS?
THE RATIONALE

The scale and pace of crises pose enormous challenges for the Crisis Management sector, with new threats emerging all the time. An already complex field must also strive to integrate new technologies and methods, cope with a rapidly changing infrastructure, understand evolving risks, be effective across cultural, administrative and national boundaries and engage with populations to enhance their resilience. Innovation will be successful if it is relevant and accessible to practitioners and operators. Major crises can also frequently involve more than one country or region, which may have differing Crisis Management infrastructures and cultures. It is also highly likely that this will necessitate interfacing different systems and combining different solutions. Crisis Management innovation must therefore be capable of meeting these multifaceted challenges and delivering solutions that are modular, flexible and adaptable.

Practitioners can be reassured that solutions used in the four DRIVER+ Trials, which are listed in the portfolio of solutions, have been assessed in a realistic and challenging environment. These solutions must be tested, validated and evaluated to assess their true benefits and for their overall suitability, before being adopted by end-users.

HOW IS THE PORTFOLIO OF SOLUTIONS ORGANISED?

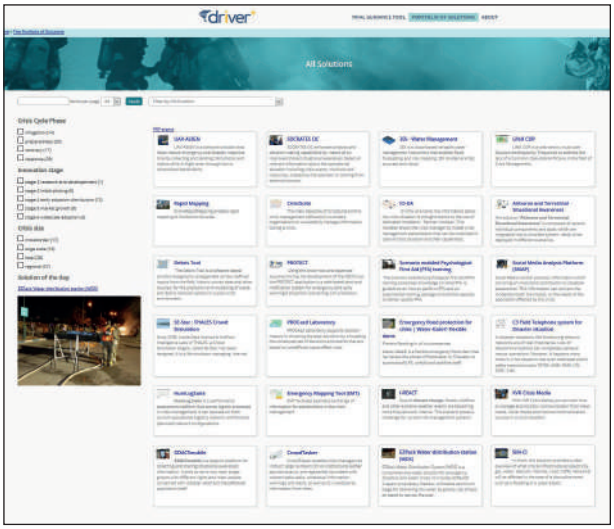
A DATABASE-DRIVEN WEBSITE TO DOCUMENT CRISIS MANAGEMENT SOLUTIONS

The Portfolio of Solutions (PoS) is a database driven website aiming to document all the available Crisis Management Solutions, independently from their use in DRIVER+.

Specifically for the solutions that are used in DRIVER+ Trials, the website will contain much of the information that is being gathered while applying the Trial Guidance Methodology. It includes information on the experiences with a solution (i.e. results and outcomes of Trials), but also the needs it addresses, the type of practitioner organisations that have used it, the regulatory conditions that apply, the societal impact considerations, a glossary, and the design of the Trials. It will be extended with third-party solutions when required by the Trials, allowing for the introduction of solutions already used by practitioners or relevant to the Crisis Management field. Ultimately, the Portfolio of Solutions will be opened up for external organisations to share data and experiences of their solutions, which should in turn ease the successful implementation and usage of solutions by other practitioners.

In the DRIVER+ context, a PoS has distinctive meanings:
It includes a set of building blocks (DRIVER+ Solutions) that can be used in Trials and beyond. These solutions are adapted to the DRIVER+ Test-bed and the Trials. This includes the integration of the tools in the Test-bed, the integration testing, resolving of the technical issues and the documentation of the solutions in a Trial-independent manner.

The results of the assessment of the solutions and outcomes of the Trials will be stored and made accessible via the PoS database, downloadable in PDF format.



Discover the Portfolio of Solutions today at:
pos.driver-project.eu/PoS/solutions

TRIALS
TOWARDS INNOVATIVE SOLUTIONS

WHY ORGANISE TRIALS?
ASSESSING AND EVALUATING SOLUTIONS IN REALISTIC ENVIRONMENTS

The DRIVER+ approach takes as a starting point the fact that there is a strong innovation momentum present in the Crisis Management community. At the same time, there is inertia to change, which can prevent this momentum from resulting in sustainable improvement. This points to the need for a better evidence base for Crisis Management capability investment decisions.

Innovation is critical but will only be successful if it is relevant and accessible to practitioners and operators. Many crises involve interfacing diverse Crisis Management systems and solutions. Major crises can also frequently involve more than one country or region, which may have differing Crisis Management infrastructures and cultures. It is also highly likely that this will necessitate interfacing different systems and combining different solutions.

Crisis Management innovation must therefore be capable of meeting these multifaceted challenges and delivering solutions that are modular, flexible and adaptable.

These solutions must be tested and validated in realistic environments; they must be evaluated to assess their true benefits and for their overall suitability, before being adopted by end-users.

This is why a total of four trials and a Final Demonstration have been planned, Trial - Austria being the last one in the series of Trials. The aim is to investigate innovative solutions under simulated crisis conditions, by gradually adapting them to operational constraints, as well as creating acceptance among users through their active involvement and by providing evidence to decision makers that they are cost-effective.

IDENTIFYING THE GAPS TO BE BRIDGED
ASSESSING AND IMPROVING

DRIVER+ seeks to improve the way capability development and innovation management are tackled, by testing and evaluating solutions that address the operational needs of practitioners dealing with Crisis Management (CM). Therefore, it is of utmost importance for the project to start by understanding the main problems CM practitioners are currently facing, and to build upcoming DRIVER+ activities on this basis to ensure that the project results correspond to the practitioners needs.

In January 2018, DRIVER+ drew up a list of 21 gaps organised in five CM functional domains: decision support; information sharing and coordination; engaging the population; resource planning and logistics, casualty management. Starting first by identifying and describing the CM capability gaps faced by the end-users involved in the project, this initial set of gaps was then challenged and enriched through an in-depth analysis of the available literature in this field and during an assessment and validation workshop involving the wider CM community.

The four Trials conducted during the project duration therefore focus on these capability gaps, i.e. "the difference between a current capability and the capability considered necessary for the adequate performance of one or more disaster management tasks", as identified by the CM practitioners.

HOW DO WE PICK THE SOLUTIONS TO BE TESTED?
DRIVER+ CALLS FOR APPLICATION

For each of the Trials, a Call for Applications was launched to identify innovative solutions that address the identified gaps and help the emergency services manage major crises more and more effectively. Both internal and external applicants interested in submitting an application were invited to answer the same set of questions, which subsequently ensured a fair and equitable comparison. On the basis of these answers, the solutions to be tested were selected.

Mission	How does the solution contribute to crisis management?
Integration	How is it integrated into the existing crisis management operations?
Readiness	How mature is the solution and has it been tested or proved?
Motivation	How does the solution address the problems of practitioners?
References	Which references on the provider's experience and solution application exist?
Resources	Which resources are needed to operate the solution?
Know-How	What expertise is needed to operate the solution?
Platform	On which platforms (e.g. technical/organisational) is the solution available?
Technique	On which technique (or technology if applicable) is the solution based?
Investment	Which investments are necessary to deploy the solution?

Trials selection criteria

TRIAL - AUSTRIA

EISENERZ – 12-14 SEPTEMBER 2019

IN A NUTSHELL

WHAT? WHY?

The DRIVER+ Trial focuses on a severe earthquake and subsequent heavy rains simulated in the central area of Austria, causing extensive damage in the most affected area, the local region of Eisenerz (in Styria, Austria).

The main objective of this Trial is to find solutions that overcome shortcomings and limitations in the management and monitoring of spontaneous as well as affiliated volunteers on the crisis scene in terms of location, tasking, capabilities and duration of operations. It will also highlight the ability to merge and synthesise disparate data sources and models in real time (e.g. visualisation of resources, critical assets map, damaged objects/ infrastructure etc.) to support incident commander decision making, situation assessment and exchanging crisis-related information.

The Trial also focuses on solutions for providing psychosocial first aid and support as well as interaction with population (e.g. foster communication capabilities, registration of affected people, provide safety information, etc). Additionally, the Trial aims at validating the methodology and solutions produced by the DRIVER+ project to benefit and enhance by systematisation the already existing best practices of organising exercises, Trials and tests.

ORGANISATION

WHO? WHERE?

DRIVER+ Trial – Austria is being organised by the Austrian Institute of Technology and hosted by the Austrian Red Cross in Eisenerz/Münichtal from Thursday 12 to Saturday 14 September 2019. The Trial will be conducted as a multi-day tabletop exercise run in parallel to the large-scale European Civil Protection field exercise IRONORE2019. National emergency organisations will be present with their volunteers and experts while making use of equipment, vehicles and tools in simulated disasters scenarios.

Gap1: Volunteer Management: Insufficiencies in the management of spontaneous and affiliated volunteers on the crisis scene in terms of location, tasking, capabilities, and shift duration.

Gap2: Real-time data and information fusion to support incident commander decision-making: Limitations in the ability to merge and synthesise disparate data sources and models in real time to support incident commander decision making.

Gap3: Incorporating information from multiple and non-traditional sources: Insufficiency in the ability to report dangerous areas and situation overview from multiple and non-traditional sources (e.g. crowd-sourcing and social media) into response operations.

Gap4: Psycho-social support: Lack of having the capability to measure stress and/or improving the communication and the awareness of psychological stress of those affected, especially spontaneous and affiliated volunteers.

Gap5: Interaction with the population: Improving the process of communicating with the population.

List of selected and validated gaps

TRIAL SCENARIO
SEVERE EARTHQUAKE SCENARIO IN EISENERZ

The central area of Austria has been struck by a severe earthquake and subsequent heavy rain. The local region of Eisenerz (in Styria, Austria) is one of the most affected with missing persons, casualties, collapsed buildings, blocked roads, and endangered industries working with hazardous substances. Inhabitants have left their houses for fear of aftershocks and collapsing buildings. Lifelines such as water, food, shelter, transportation and medical care have been disrupted. Electricity and mobile networks have also been severely damaged.

All local and national emergency response organisations have been deployed on site (Austrian Red Cross, fire brigades, police and the army); however, due to the extension of the affected area and overwhelmed national response capacities, the Union Civil Protection Mechanism was activated. A request of international assistance was made with regards to medical treatment, water purification as well as search and rescue.

Due to the difficulty of accessing the affected area and considering the impact of the disaster, there is an urgent need for humanitarian assistance and assessment. A large amount of volunteers and rescue equipment is needed to deal with the increasing number of affected people i.e. search and rescue, shelter, medical care, water food and transportation. Additionally, there is also an urgent need for the management of spontaneous volunteers.

The scenario will require a commitment of stakeholders from every Crisis Management level and from all the agencies participating in the response: Austrian Red Cross, Austrian Fire Brigades, Police, Army, decision-makers and authorities. Other emergency response organisations from neighbouring countries are expected to participate following the procedures from the Union Civil Protection Mechanism (UCPM).

The Trial intends that actions will be taken by the stakeholders in a realistic information environment, based on currently available means, crisis management plans, rescue procedures and good practices of participants. Various exercises will serve as the testing environment for the introduction and establishment of the standard operational procedures (SOPs) standards and concepts, of the UCPM within the central European region.

Nineteen applications were originally received in response to a Call for Applications and eleven solutions were pre-selected after a double-blind review, meta-review process and a pre-selection meeting. Ten of the pre-selected parties presented their solutions to the Trial committee, end-users and practitioners for the Austrian Red Cross as well as the Styrian Red Cross (conducting and coordinating the EUCP Exercise IRONORE 2019).

After a meticulous selection process, face-to-face meetings and Trial rehearsals, five innovative Crisis Management solutions were selected based on their ability to solve the series of gaps identified by practitioners earlier in the project. They will be deployed and evaluated during Trial – Austria by practitioners playing their own roles in their respective Action Centres. It is expected that the solutions will facilitate the management of crises in similar types of incidents, improve the situations assessment, decision making, interoperability and the sharing of information.

IRONORE 2019
EU CIVIL PROTECTION EXERCISE

Around 40 minor earthquakes occur in Austria per year and looking back into the historic data also heavy shakes with a magnitude 7+ on Richter scale are possible. One of the earthquake lines goes along the Alps and therefore earthquakes in and close to the mountain areas are possible. Many citizens live in or near mountain areas and also the primary infrastructures are concentrated in the main valleys along the Alps.

The main purpose of the IRONORE2019 project is to test the understanding and response in the framework of the Union Civil Protection Mechanism in an Alpine region using a discussion-based exercise and a full-scale civil protection exercise. The focus of these exercises will be placed on the development of response starting with local response, request of assistance using the communication tool "CECIS" via the Austrian Ministry of the Interior and to open the Union Civil Protection Mechanism, receiving international assistance (EU modules, other response capacities and a Union Civil Protection Team), train host nation support and embed incoming assistance into the Austrian response system. Especially for the discussion-based exercise, innovative virtual reality technology will be used to simulate assessments.
The exercises give a learning opportunity to train mobilisation, interoperability and serving / receiving international assistance following the Mechanism procedure.

Aims and objectives of IRONORE

The aims of the IRONORE2019 exercise are to strengthen the preparedness of response to an earthquake disaster within Austria in an Alpine area, including training of interoperability of UCP capacities, the procedures to activate the UCP Mechanism, communication with Emergency Response and Coordination Centre as well as to exercise the Austrian Host Nation Support. The Styrian command and control system and a virtual reality simulation during the DBX will be used to improve the interoperability of all involved teams and participants. The exercise will involve some 800 participants with a focus on USAR and CBRN.

The objectives are:

- To verify and improve procedures and to establish a common understanding of the cooperation in civil protection assistance.

- Increased earthquake response capacities through planning and conducting of DBX and FSX and subsequent improvement planning.

- Enhanced Training impact by using simulation tools in the DBX and the FSX.

- Interoperability improvement by using the Styrian government command and control system.

IRONORE2019 AND DRIVER+
A COOPERATION FOR INNOVATION

During the IRONORE2019 full scale exercise in September 2019 the DRIVER+ project will hold one of their Trials in parallel and using the same scenario as well as the same sites.

We see this cooperation between DRIVER+ and IRONORE2019 as a cooperation to facilitate innovations and to facilitate a common understanding of disaster/crisis management in Europe, as well as the fact that we are happy to share our exercise area with this interesting activity.

IRONORE Partners:

- Austrian Red Cross
- Austrian Red Cross Styrian branch
- Hungarian Red Cross
- iHELP Institute
- Disaster Competence Network Austria

Further information

- www.ironore.eu
- facebook.com/Ironore2019
- twitter.com/ironore2019

Contact

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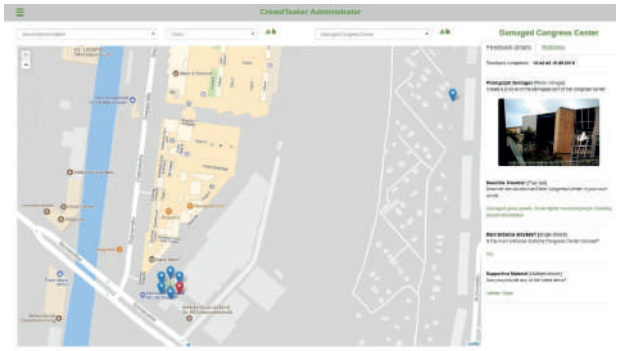
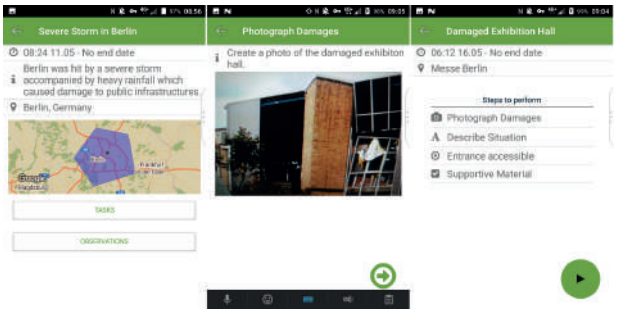
CROWDTASKER
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

ABOUT THE SOLUTION
IN A NUTSHELL

CrowdTasker is a solution for citizen involvement and community interaction. It supports informing citizens, eliciting contributions to the common operational picture by pre-registered parties and integrating efforts of self-organisation. This is achieved by issuing assignments and situational information to a selected crowd of citizens based on their location and skill set, as well as offering a chatbot interface for emergent groups to participate using their own organisational infrastructure (such as social media groups).



The objective of CrowdTasker is to improve informed decision-making of both crisis managers and citizens. It enables professionals to rapidly query information from users at relevant locations and to provide meaningful assignments to citizens during preparation, mitigation and response. CrowdTasker helps to include several forms of volunteering in to the overall relief efforts: spontaneous contributions of individual citizens, requests for contribution that originate from the crisis manager and are then executed by volunteers or even the integration of existing groups for guidance and support.



The platform's features and workflows were developed under continued involvement of end users to assure a high degree of relevance for crisis managers and volunteers alike. CrowdTasker offers a high technological readiness level. The solution has been deployed and evaluated in multiple national and international research projects under field conditions with up to 200 users.

ABOUT THE PROVIDER
WHO ARE THEY?

The AIT Austrian Institute of Technology is Austria's largest Research and Technology Organisation and an international key player in many research areas. The centre focuses on Cyber Security for Industrial Control Systems, Cyber Physical Systems and Internet of Things, highly secure and highly available software and systems as well as next generation wireless communication (5G), encryption for virtual IT systems, data science, command and control systems for use in modern crises and disaster management. The centre's dedicated research group on crisis and disaster management has been actively developing CrowdTasker since 2015.

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY
TOMORROW TODAY

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Eliciting highly relevant, location-based, critical information and situation updates from citizens on site. Examples include reports about infrastructure damage, road blockage, remaining emergency supplies or volunteer activity on site.

· Issue warnings and alerts for geographically restricted areas in real time, based on the user's location. For example, citizens can be warned of blocked roads if they get too close to an affected area.

· Distribute targeted assignments to action, e.g., helping neighbours in need or stocking appropriate supplies, based on the person's current position and / or skills; as well as to coordinate citizens on-site, e.g., helping to clear road blockage.

· Support and integrate self-organised groups of spontaneously available volunteers, who are forming emergent organisational structures, e.g., on social media networks, and optimally include them into the overall operational picture and demands of the mission.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Maintain public awareness on hazards and respective services; Communicate hazard information to the public: CrowdTasker provides real-time warnings, information and guidelines to the public. Recipients can be selected based on their location to warn them of hazards in certain areas or provide guidance once they enter an area.

· Conduct coordinated tasking and resource management; Task volunteers: CrowdTasker addresses the management of informal volunteers («citizens as volunteers») and provides appropriate and relevant tasks to selected pre-registered volunteers, at the right time and location and according to their respective skills.

· Conduct systematic monitoring and data collection: Through its tasking system, CrowdTasker offers options to utilise informal volunteers and responders as sources of information («citizen as a sensor») for targeted and up-to-date data from the incident site.

PLANNED ACTIVITIES
DURING THE TRIAL

CrowdTasker will be used to coordinate pre-registered volunteers as well as to evaluate computer-supported interaction with spontaneous, emergent groups that are not registered. Pre-registered volunteers will be tasked with confirming observations on site both via the smartphone application and a chatbot interface. Emergent groups will be guided in their activity as well as supported in coordinating amongst each other to achieve more complex goals such as setting up tents.

TECHNOLOGY READINESS LEVEL
SOLUTION TECHNOLOGY MATURITY

· TRL 7 – System prototype demonstration in an operational environment

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

CrowdTasker's objective is to facilitate the interaction between crisis managers and citizens in such a way that the efficiency of relief efforts is increased. Response efforts of civil society to crises and disasters provide an important contribution for effective relief. However, due to a lack of coordination and a dearth of information, informal relief efforts can put a strain on professional responders on site and decrease the overall effectiveness of relief efforts. CrowdTasker ultimately aims to include the emergent efforts of citizens to cope with crises and disasters in such a way that their contributions provide the best benefit for the overall response operation; thereby decreasing the strain on the resources of official emergency response organisations and increasing the efficiency of relief missions.

AIRBORNE & TERRESTRIAL SITUATIONAL AWARENESS
GERMAN AEROSPACE CENTER (DLR)

ABOUT THE SOLUTION
IN A NUTSHELL

Real-time aerial imaging significantly enhances situational awareness during major and large-scale disasters. DLR's solution "Airborne and Terrestrial Situational Awareness" comprises of four modules to provide such a real-time aerial imaging and analysis system.

Module 1 is the ground control station U-Fly, used to plan, engage and monitor aerial missions. The full-size research aircraft D-CODE, which is operated as a drone demonstrator with safety pilots on board, allowing drone based missions to be executed without regulatory restrictions or safety concerns, executes the missions.

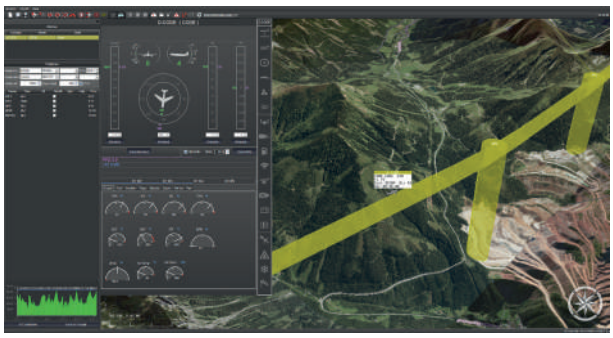
Module 2 is the 3K aerial camera system, specifically developed to acquire and evaluate aerial photographs in near real-time. In addition, it can transfer aerial imagery via data link directly from the aircraft to a mobile ground station to provide the data to decision makers and rescue forces immediately.

Module 3 is the Center for Satellite based Crisis Information, which analyses aerial imagery and generates crisis information maps.

Module 4, called KeepOperational, has traffic analysis and route planning capabilities.

The solution can be applied as a complete system or the individual modules can stand alone.

Within Trial - Austria, the ground control station U-Fly and the 3K system have been selected to demonstrate their capabilities. U-Fly is used to create aerial missions based on the request of the operational command. These can either be missions to assess larger areas of a (simulated) crisis or to monitor and investigate certain points of interest. The 3K system will provide live aerial images of these missions to U-Fly to support an assessment of the overall situation on the ground.



ABOUT THE PROVIDER
WHO ARE THEY?

The German Aerospace Center is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport, digitalisation and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, it has been tasked by the federal government with the planning and implementation of the German space programme. The German Aerospace Center is also the umbrella organisation for one of Germany's largest project management agencies.

DLR

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

Up-to-date aerial information provides an overview of a situation. Derived height information presents a detailed view of the current terrain and possible changes caused by events like earthquakes, heavy rains or the subsequent landslides. Our drone-demonstrator provides imagery, which is sent to the ground station with terrain information derived. These data are available shortly after image acquisition and can, therefore, contribute to a common operational picture, supporting crisis managers. If required, the solution can provide output data (optical imagery and terrain information) in standardised GeoTIFF format for integration into a geo-information system or COP tool.

Aerial information (i.e. images, elevation maps or reference maps) constitutes the first detailed and comprehensive data after a disaster. Crisis managers can assess remote areas or inaccessible damaged zones. To help organise the available resources effectively, our solution can assist with damage assessment of infrastructure, buildings or blocked roads before rescue forces are deployed.

Our solution offers data acquisition individually tailored to crisis managers' needs. Repeated flying allows for monitoring of not only remote areas but also the progress of relief actions.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Planning & Response. The solution can be used to determine the nature of the crisis, survey the affected area, collect information and distribute information to other solutions to assist in evacuation planning.

· Response & Recovery. Shared situational awareness can be established and maintained by contributing crisis information to a Common Operational Picture.

· Crisis Communication & Information Management. The Solution monitors the affected area and the progress of relief actions (e.g., infrastructure, rescue operations and volunteers on site) and contributes significantly to situational awareness.

PLANNED ACTIVITIES
DURING THE TRIAL

The operational command will request aerial images of a certain area by informing the U-Fly remote pilot. The remote pilot will create a mission based on this request and activate the mission. The drone demonstrator, equipped with the 3K system, will collect aerial images of the area and send them to the ground immediately. The geo-referenced aerial images will be displayed in U-Fly in near real-time and will be provided to practitioners and other solutions.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 7 - System prototype demonstration in an operational environment. (Drone demonstrator and related systems have been tested and approved by the German Civil Aviation Authority.)

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

· Provide near real-time information for situation assessment (damage assessment, identification of access routes and equipment, localisation of volunteers) and monitoring.

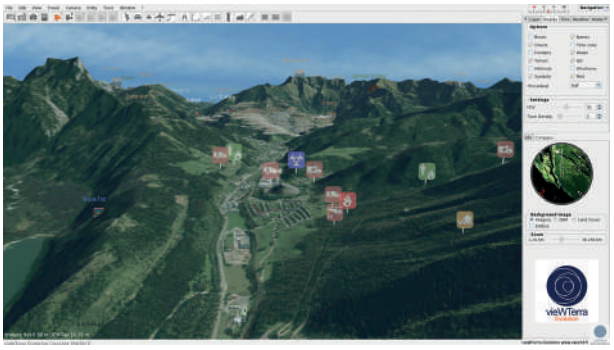
· Acquire tailor-made data according to the requirements of the responsible parties.

· Provide aerial imagery (GeoTIFF) and reference map products (JPG, GeoPDF).

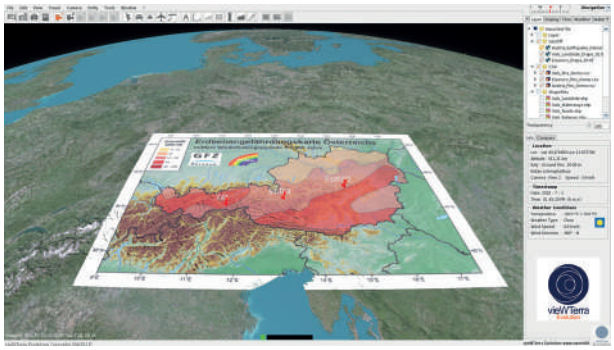
VIEWTERRA EVOLUTION
VWORLD

ABOUT THE SOLUTION
IN A NUTSHELL

vieWTerra Evolution, vieWTerra Base, vieWTerra Mobile form a combined "GIS & Simulation" suite of products allowing responders to rapidly build a virtual 4D representation (3D synthetic environment + Time dimension) of any potential crisis area on Earth. These solutions provide a Common Operational Picture to both the Crisis Centre and the rescue units out in the field.
vieWTerra Evolution is a 4D Earth Viewer as well as a data & assets integration and development platform. It presents an ellipsoidal model of the Earth allowing its users to integrate their own precise datasets anywhere on the Globe, without any area coverage limitations, or to access data streams (Imagery, cartography layers).



It can be used to model any type of 3D scene on Earth and create scenarios at their real-world location to simulate events in the Crisis Preparedness phase, and to serve as a global repository for building a custom Earth-wide GIS, either used perfectly off-line or ported on an on-line architecture in order to allow



the sharing of multiple information, data and assets from disparate sources between all stakeholders in the Crisis Response phase (3D entities, icons, shapefiles, geotagged reports, photos, videos, sound, multiple overlays such as disaster maps, heat maps, tactical situation...). Within Trial - Austria, it will notably be used to instantly visualise newly-acquired Imagery from drone acquisition and photos taken from the field, shared in real-time with the Crisis Centre and displayed into/mixed with the 3D view. vieWTerra Mobile complementary software allows display of the same data & assets database in a plug-in free Web-browser based HTML5 app.

ABOUT THE PROVIDER
WHO ARE THEY?

VWORLD has bridged the gap between the Geospatial and Simulation worlds in providing a unique suite of 3D/4D Earth Viewers, data & assets integration and development platform software, available off-line or on-line on PC/Mac, tablets and smartphones, and global true-colour, cloud-free and artifacts-corrected database products, grouped under the vieWTerra label. VWORLD has been capitalising on years of research on how to render large real-time procedural 3D scenes and is proud to have clients in the Aeronautics & Space, Defence & Civil Security, Town & Country Planning, Energy, Geosciences and Education sectors.

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Lack of Common Operational Picture: brings 3D visualisation (real-world like environment) in support of the conduct of operations.

· Limitations in the ability to model large areas and provide instant mapping.

· Interoperability issues / cross-border coordination: notably by incorporating disparate data sources anywhere on the Globe and allowing data sharing between multiple stakeholders, as all datasets and assets are merged in a single database.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Develop & maintain shared situational awareness: Providing a cognitive 3D real-time visualisation of the area and supporting integration of multiple information, data & assets into the 3D view. Enables the modelling of large areas and provides instant mapping: state of the art almost on-the-fly orthorectification of Live Imagery data (terrain paging) and quick integration of local datasets and drapes via simple drag and drop.

· Supports C3 decision making and facilitates logistics operations: Provides a more cognitive 4D GIS view rather than a 2D map, saving time in assessing the best area for base of operations; facilitates conduct of operations through terrain analysis with targeting, distance, area, height, profile, line-of-sight tools.

· Information and data sharing: Supports exchange of crisis-related information either to/from the field among crisis responders, agencies and organisations, and possibly volunteers, the media and the public. Incorporates information from multiple and non-traditional sources.

· Conduct SAR operations: Helps identifying the location of injured, trapped, deceased casualties in major catastrophes by providing automatic display of geo-referenced photos into a 3D view.

PLANNED ACTIVITIES
DURING THE TRIAL

· Provision of an already-defined average resolution interactive 4D Globe model presenting viewing, integration, display, terrain editing, weather changing, terrain querying and analysis capabilities.

· Support in the conduct of operations based on the provided virtual 3D environment augmented with live assets from the field.

· Instant integration and display of precise drone-acquired Imagery data over crisis area.

· Instant integration and display into the 3D view of geo-oriented and geotagged photos taken by volunteers; integration of geozones defining e.g. go/no go zones.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 7 - System prototype demonstration in an operational environment

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

The main objective of the vieWTerra Suite is to build a global “Earth-size” repository of all data and assets authorities and practitioners already have at their disposal to build an as detailed as possible “base” virtual 4D Earth GIS in the Preparedness phase, and complement it with “Live” acquired Imagery (via satellite or drone) & other assets produced in an emergency (e.g Copernicus EMS maps, EFFIS reports…), as well as assets coming from the field (photos, information from first responders or civilian witnesses source) in the Management & Recovery phases, in support of any potential crisis and relief operations on Earth.

PSYCHOLOGICAL FIRST AID (PFA)
REFERENCE CENTRE FOR PSYCHOSOCIAL SUPPORT

ABOUT THE SOLUTION
IN A NUTSHELL

The solution comprises two separate trainings programmes :

The psychological first aid (PFA) training for spontaneous volunteers is a one-day training course, in which you learn and get to practise the main skills needed to give good PFA in a crisis situation. You will learn the internationally recognised principles of Look Listen Link, developed by the World Health Organisation (WHO). The training includes sessions on these three principles as well as role plays, discussion sessions, sharing knowledge and experience between participants. Organisations responding to a crisis can implement the training to leverage the resources that spontaneous volunteers bring to a crisis in a positive and safe way.

The Leadership seminar for engaging with spontaneous volunteers in crisis response combines the WHO's Look Listen Link principles for PFA, knowledge of caring for volunteers and theory on power relations to build the skills of field level leaders working for crisis response organisations to engage with spontaneous volunteers during crisis response. Through a series of exercises, analytical sessions, roleplays and discussion and reflection sessions, the participants activate their own experience and knowledge and learn from each other to be better placed to engage positively and constructively with spontaneous volunteers.

ABOUT THE PROVIDER
WHO ARE THEY?

The main purpose of psychosocial support is to build resilience – and to help people to cope with and recover from a disaster or critical event in a positive way. Experience also shows that early and adequate psychosocial support can prevent distress and suffering from developing into something more severe, and will help those affected cope better and readjust more quickly to everyday life. Volunteers are often exposed to trauma, loss, devastation, injury, and even death; they also need psychosocial support.

To address these issues, a centre of excellence – the Red Cross Red Crescent Reference Centre for Psychosocial Support – was established in 1993. As an outsourced capacity of the International Federation Secretariat in Geneva, the Centre has a mandate to speak on behalf of the Federation on matters relating to psychosocial support. Apart from that, our main objective is to promote psychosocial wellbeing for beneficiaries, staff and volunteers.

DANISH RED CROSS

International Federation of Red Cross and Red Crescent Societies

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Insufficiencies in the management of spontaneous volunteers on the crisis scene in terms of location, tasking, capabilities, and shift duration.

· Low awareness and lack of ability to address the risks of adverse mental health effects and decreased psychosocial wellbeing in spontaneous and trained volunteers following response operations.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· By building the capacity of its existing field level leaders, the solution enables organisations to use the resources represented by spontaneous volunteers in a safe way. It fosters resilient societies by enabling spontaneous volunteers, who are most often a part of the affected community, to be part of response and recovery in a safe and constructive way.

· Through training, crisis response organisations can ensure that spontaneous volunteers (defined as an individual who is not affiliated with an existing incident response organisation or voluntary organisation but who, without extensive pre-planning, freely and willingly offers support to the response to, and recovery from, an incident) are prepared, able and confident in providing psychological first aid and in a safe manner.

PLANNED ACTIVITIES
DURING THE TRIAL

Two groups of spontaneous volunteers will be trained in PFA. One group supported by virtual reality tooling (XVR), the other without. In parallel, a group of field level leaders will be trained in engagement with spontaneous volunteers in crisis management by taking part in the leadership seminar.

The newly-trained spontaneous volunteers will exercise their newly acquired skills in a realistic scenario, supported by a field level volunteer leader from the Austrian Red Cross that attended the leadership seminar.

Data will be collected to assess the quality and usefulness of the training outcomes to assess the relevance of virtual reality supported training relative to regular training in PFA.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 7 - System prototype demonstration in an operational environment

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

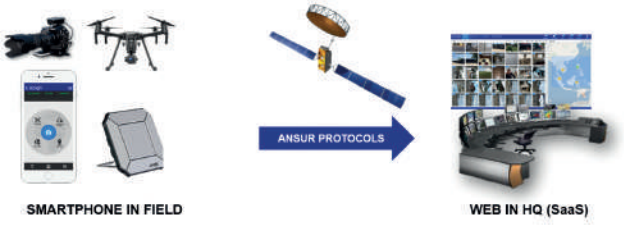
The ultimate goal of the solution is to alleviate human suffering and foster resilient societies.
The training contributes to this goal by supporting crisis management organisations' staff so they can engage positively with spontaneous volunteers, and by building the capacity of PFA providers to deliver quality support.

Psychological first aid is a method of helping people in distress so they feel calm and supported in coping with their challenges. It is a way of assisting someone to manage their situation and make informed decisions. The basis of psychological first aid is caring about the person in distress. It involves paying attention to the person's reactions, active listening and, if needed, providing practical assistance, such as problem solving or help to access basic needs.

ASIGN
ANSUR

ABOUT THE SOLUTION
IN A NUTSHELL

ASIGN is a solution that helps reduce critical emergency and disaster response time. It is a complete all-in-one disaster assessment software tool for easy collection, optimal communication and effective management of operationally relevant critical information. ASIGN supports collection and communication of photos, videos, geo-texts, tracking, geo-zones, geo-alerts and assessment forms in a very bandwidth-efficient manner. Specifically, it can communicate photos and video with 99% bandwidth reduction, enabling communication even through low bandwidth cellular and satellite communication networks while maintaining full precision and accuracy. While the ASIGN Apps work perfectly with regular mobile networks, they also allow satcom to be used when needed, with a lower cost, taking cost and delay concerns away, while leaving the core benefit: Always able to communicate.



ASIGN is comprised of the ASIGN Server, a cloud-based platform from which the incoming information is managed, plus the field user applications ASIGN PRO and UAV-ASIGN, which collect and send information from the field to the Server, all with end-to-end encryption. With up to 99% saving in cost and capacity, ASIGN photos and videos from the field can arrive 100x faster at their coordination centre destination. Better and faster information is essential for a swifter decision-making process and subsequent action.

ASIGN has been actively developed with, and used in the field by, the United Nations, police forces and civil protection entities.

ABOUT THE PROVIDER
WHO ARE THEY?

AnsuR Technologies researches, designs and sells innovative solutions for satellite and radio networks. It specialises in mission-critical applications for interactive visual communications, for safety, security and disaster management. AnsuR's software solutions help communicate high precision visual contents using minimum bandwidth with the aim to help increase situational awareness, decrease reaction-time and save resources. Since its conception in 2005, AnsuR has been working with the United Nations, emergency responders, civil service and police forces to create software which can deliver high-precision mission-critical visual contents through any network and under any circumstance.

ansur
Innovations in Communications

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

Information is the foundation for decision-making in any crisis. However, in the most critical of situations, one cannot rely on plentiful broadband as communication channels may be unavailable or congested. High-definition photos and videos require plenty of bandwidth and cloud-based solutions are not optimised and restricts the transfer of potentially critical information.

The ASIGN software solutions provide an easy, effective and bandwidth-resilient tool to both collect and communicate visual data, with no investment in new hardware. ASIGN requires 99% less bandwidth than traditional methods, enabling the fast and accurate transmission of photos and videos through low and unstable networks.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

ASIGN enables field users to provide accurate visual awareness despite low bandwidth, communicating mission-critical photos and videos from smartphones up to 100x faster than through traditional methods, providing the same precision for the critical data.

The ASIGN software also provides an information management platform to analyse, filter and manage the collected data to aid in decision-making. ASIGN data can also be easily exported onto further mapping platforms for the provision of a combined and comprehensive situational picture.

PLANNED ACTIVITIES
DURING THE TRIAL

· Communication of photos, videos, text and tracks using smartphones with ASIGN software applications.

· Testing in different scenarios, including scenarios where little bandwidth may be available, or where Satellite Communication may be necessary.

· User and team management plus analysis of incoming data using the ASIGN Server.

· Geo-spatial photo and video clip communication, with mapping integration, for providing improved visual situational understanding.

· Use of smartphones and ASIGN applications in the field for photo/video capture.

· Use of 360 photos and videos in addition to regular photos/videos.

· Use of portable Inmarsat SatCom to target mobile networks are down after earthquake.

· Option: Use of flying camera (drone) for use with smartphone Apps and possibly satcom.

· Use of tracking of field responders.

· Use of safe zones / geo-zones and geo-alerts.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 8/9 - Actual system proven in operational environment

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

The goal of ASIGN is to reduce disaster response time, by enabling effective and precise communication of photos, videos and other data forms from the field to remote headquarters for the fast development of situational awareness and subsequent decision-making.

FUTURE

WHAT WILL HAPPEN AFTER THIS TRIAL?

This Trial is the last one of a series of Trials and various events. The Trials have been organised to operationalise and test Crisis Management solutions. A final demonstration will take place in November 2019 and will incorporate all the lessons learnt as well as the outcomes of Trial – Austria. The very first results and recommendations have already been provided following Trial Poland (May 2018) and Trial France (October 2018) on the dedicated Trial section of the DRIVER+ website https://www.driver-project.eu/events/trials/

Final Demonstration

The Final Demonstration will take place from 25 – 29 November 2019 in Ispra, Italy and Warsaw/ Poland. The event aims to showcase the DRIVER + achievements to a large audience involved in Crisis Management, comprising industrials, researchers, Crisis Management professionals, policy makers and civil organisations. The ambition is to build a sustainable event outliving the project. The Final Demonstration will present the potential of a more integrated high-level Crisis Management system in Europe, especially in cross-border contexts in term of improved situation assessment, coordination, resource pooling & sharing, and cross border cooperation. The event will also serve as a demonstration of the potential of a Common Operational Picture approach at European level. To achieve this, it will include solutions enhancing joint COP production and usage for improved interoperability between agencies.

Policy Research Dialogue Roundtables

The DRIVER+ project will organise three Policy-Research Roundtables (PRDR). The PRDR events especially aim to foster dialogue on how a pan-European approach to capability development and innovation management in the field of Disaster Risk Reduction and Crisis Management can be supported through a common Trial and validation framework. This ensures comparability and improves the uptake of results stemming from EU-funded Research projects. By doing this, these events will bring together EC DGs, the JRC/DRMKC, international organisations (UNISDR), national civil protection authorities from the Member States and selected Research & Innovation projects and/or initiatives. The next roundtable will take place within November.

More information on the PRDR events at **www.driver-project.eu/events/prdr**

DRIVER+ International Final Conference

A Final Conference will be organised in February 2020 to celebrate the project's achievements and results, but also to encourage participants to look ahead and make them aware of the DRIVER+ legacy. More specifically, the event will give an overview of DRIVER+ key outcomes and trialled solutions, featuring roundtables, workshops, and high-level keynotes. It will also represent an opportunity to showcase DRIVER+ solutions such as the CMINE community and the first Centres of Expertise (CoEs) and to facilitate their adoption, contributing to the lasting impact of the project in accordance with the DRIVER+ sustainability objectives. The DRIVER+ Final Conference is anticipated to convene up to 300 international participants, bringing together policy makers, solution providers, and crisis management practitioners and experts. It will be held from 18 – 20 February 2020 in Brussels. Registrations will open in September. Find out more at **www.driver-project.eu**

Centres of Expertise

A Centre of Expertise (CoE) is an organisation operating in the domain of Crisis Management and Disaster Risk Reduction that acts as the primary contact point for practitioner organisations at the national or regional level, supporting their capability development and innovation management.
Organisations that already play a role in the capability development and/or innovation management of practitioner organisations are well-suited to adopt DRIVER+ outputs and become a Centre of Expertise.

The DRIVER+ team has developed a toolkit to

support you in jointly assessing the requirements for becoming a CoE, depending on which (combination of) outputs you wish to adopt. If you are interested in knowing more about how to become a Centre of Expertise, please approach us at: cooperation@driver-project.eu

Test-bed Technical Infrastructure

The Test-bed Technical Infrastructure provides a toolkit to connect innovative Crisis Management solutions to each other and to your legacy system, to enable an exchange of information between them. This is referred to as the Common Information Space. The Test-bed Technical Infrastructure provides a platform for creating a rich Trial and training environment. The Trials are designed by applying the Trial Guidance Methodology, while the Test-bed Technical Infrastructure creates the realistic and controllable Trial environment.

A detailed description of the Test-bed can be found at: driver-eu.github.io/test-bed-design

Trial Guidance Methodology

Before investing both time and money in figuring out which solution will best meet your needs, you may want to assess them in a Trial. The DRIVER+ project has developed a structured methodology called the Trial Guidance Methodology (TGM) to help you do this. The TGM gives step-by-step guidelines to carry out a robust assessment of the solutions through recommendations from the preparation phase until the evaluation of the results. To support the application of the TGM, a Training Module (TM) has been developed providing education, practice and assignments via e-learning and face-to-face workshops.

For further information, please download the latest version of the TGM Handbook at:
www.driver-project.eu/trial-guidance-methodology

Driver+ Portfolio of solutions

The Portfolio of Solutions (POS) is an online catalogue to access information about innovative solutions for Crisis Management. For each solution, practitioners can share their user experiences and solution providers can give background information and offer support. The PoS is currently being scaled up and has the ambition to become the leading platform and one-stop-shop for Crisis Management solutions in Europe.

The Portfolio of Solutions can be accessed at:
pos.driver-project.eu/en/PoS/solutions

CMINE: DRIVER+ Crisis Management Innovation Network Europe

The CMINE is a Community of Practice that fosters innovation and enhances a shared understanding in the fields of Crisis Management and Disaster Risk Reduction in Europe. Different Task Groups have been set up to develop approaches aimed at resolving current issues in different Crisis Management domains, such as Floods, Wildfires or Volunteer Management. CMINE is designed to evolve continuously through collaboration with the aim of becoming a pan-European platform, which is centred on the exchanges between various Crisis Management professionals.

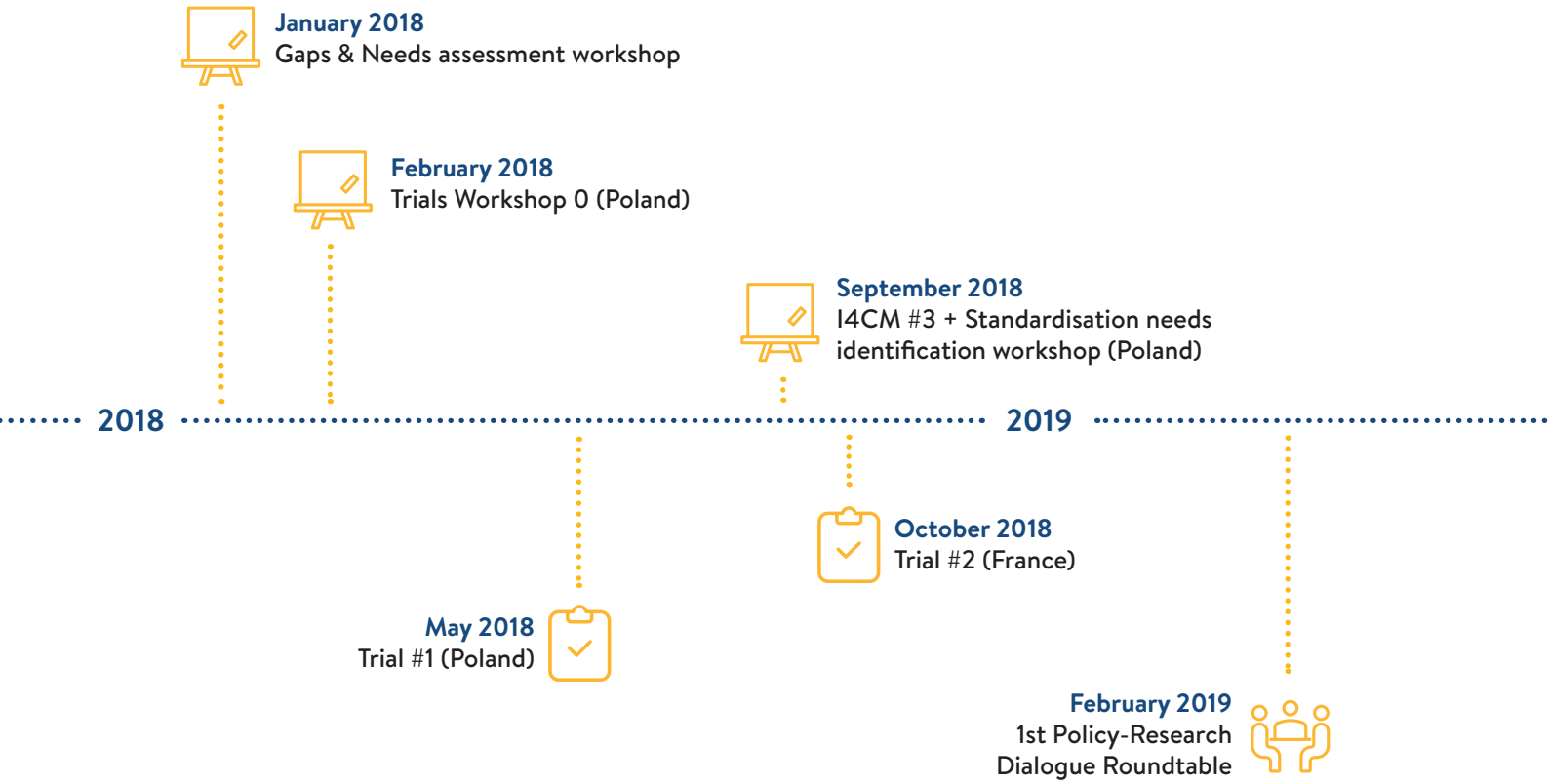
Join the community and become part of this compelling initiative: www.cmine.eu

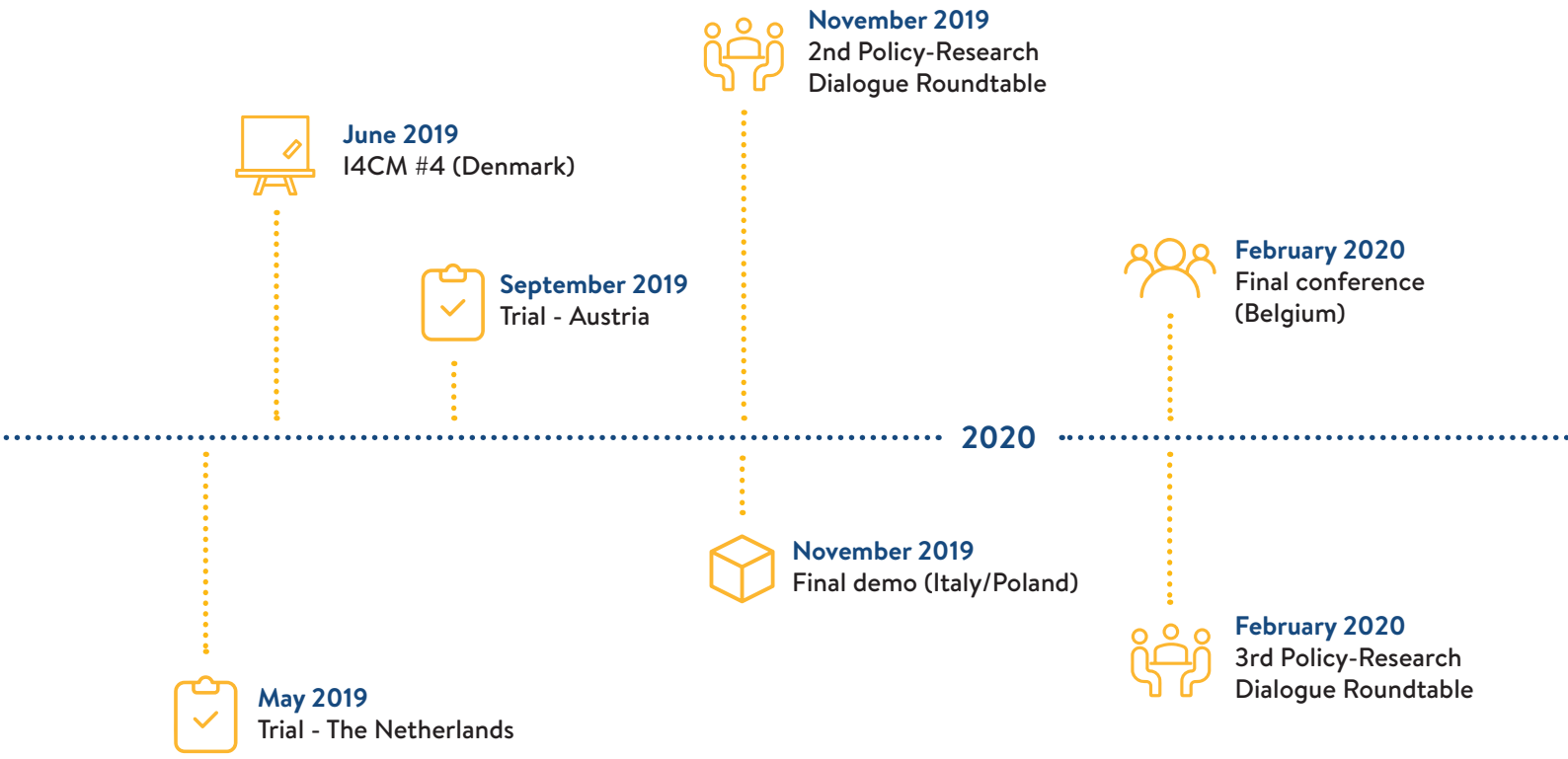
CMiNE
Crisis Management
Innovation Network Europe

LET US HEAR YOUR VOICE

CONTRIBUTE TO INNOVATION IN CRISIS MANAGEMENT

Are you a Crisis Management practitioner or solution provider? Are you a policy-maker impacted by Crisis Management issues? Are you involved in a related project or initiative? Your participation in the DRIVER+ activities is important to us and will help us to align with and to follow-up on relevant policies, challenges, gaps and community needs faced within the wide spectrum of thematic areas dealing with Crisis Management. To ensure that our activities are conducted taking into account your expertise and the technological state-of-the-art, we warmly invite you to take part in DRIVER+.





CONTACT US NOW!

DRIVER-PROJECT.EU

More information about the project - coordination@projectdriver.eu
Interested in collaborating with us? - cooperation@projectdriver.eu
Communication and media contact - communication@projectdriver.eu


Research
Operational needs
Lessons learned
Shared Understanding
Trials
Guidance
Methodology
Knowledge base
Reference implementation
Tools
Pragmatic
European
Test-bed
Crisis
Virtually connected facilities
Unpredictability
Management
Challenges
Innovative solutions
Cooperation
Experience
Innovation
Disasters
Crisis Labs
Analysis
Trial-driven development
Portfolio of Solutions
Practitioners















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