driver+

Driving Innovation in Crisis Management
for European Resilience














FINAL DEMONSTRATION

MAJOR FOREST FIRES – EUCPM ACTIVATION

Warsaw and The Hague, November 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
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Disasters
Crisis Labs
Analysis
Trial-driven development
Portfolio of Solutions
Practitioners

A WARM WELCOME
TO THE FINAL DEMONSTRATION OF THE DRIVER+ PROJECT!

Dear participants and visitors,

With this Final Demonstration of DRIVER+ an impressive series of Trials is coming to an end. Our first Trial was in May 2018 (Warsaw, Poland), the second Trial in October 2018 in Aix-en-Provence (France), the third one in May 2019 (The Hague, the Netherlands) and the last Trial in September 2019 in Eisenerz, Austria. We have learned a lot during these Trials and we are very pleased to share this body of expertise and experiences with the Crisis Management community in Europe, and showcase this during the Final Demonstration.

DRIVER+ improves the way capability development and innovation management are tackled. We have explicitly put the practitioners in a central position, in the driver seat. With the products we have developed, practitioners are able to take the lead in assessing and validating solutions that are addressing their operational needs.

Practitioner organisations have fulfilled a key role in the whole process of hosting, developing, conducting and evaluating Trials. Their feedback, reflections, suggestions and ideas have contributed greatly to both the success of the Trials and the high quality of our products: the Trial Guidance Methodology, the Test-bed Technical Infrastructure, the Training Module, the Portfolio of Solutions and Trial Guidance Tool, and the CMINE – Crisis Management Innovation Network Europe.

For the Final Demonstration this practitioner involvement has not changed. We are delighted to have SGSP and SRC PAS as the main hosts of this event in Poland, as well as SRH being the hosts in the Netherlands. We are especially proud to have the ERCC actively involved in our Final Demonstration. This will for sure stimulate the further uptake and implementation of the DRIVER+ products. To facilitate this, we are supporting the establishment of a pan-European network of Centres of Expertise leading to an enhanced sustainability of the project results and a large impact in the European crisis management community.

Wishing you, on behalf of the whole DRIVER+ team, a successful, informative and pleasant event!

Marcel van Berlo
DRIVER+ Technical Coordinator

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?

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TRIAL GUIDANCE METHODOLOGY

STRUCTURED APPROACH FOR ASSESSING SOLUTIONS

WHAT IS IT?

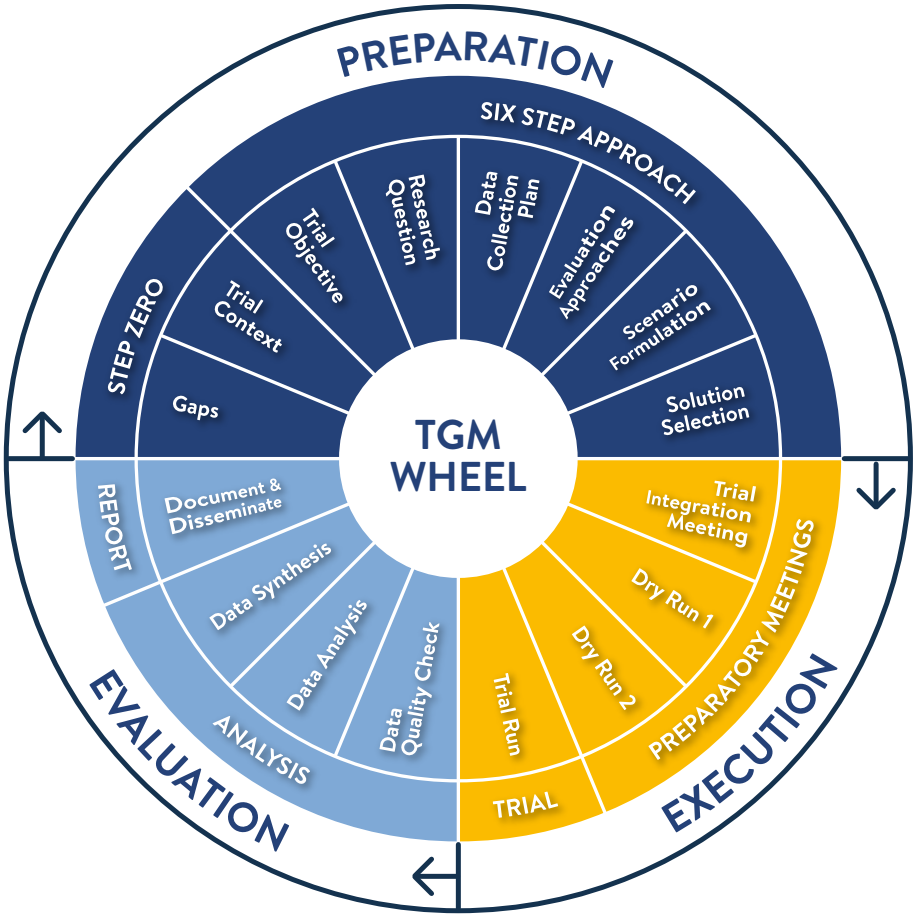
Many different innovative solutions are available to address the specific needs involved in improving Crisis Management. Before investing both time and money in figuring out which solution will best meet your needs, you may want to assess them in a non-operational context, such as in a Trial. The DRIVER+ project has developed a structured methodology called the Trial Guidance Methodology (TGM) to help you do this.

The TGM consists of three distinct, but connected phases:

Preparation phase: The objective of this phase is to design your Trial. The design follows an iterative and non-linear six-step approach. It starts with the identification of the objectives and the formulation of research questions. In the Trial, you should try to address the questions through an appropriate data collection plan as well as through evaluation approaches and metrics to analyse the data collected during your Trial. To do this, realistic scenarios must be developed and solutions to be trialled must be selected to figure out if they can be innovative.

Execution phase: This phase is much more than just the actual Trial. Before getting there, you need to check if you have everything you need to gather relevant data. After checking and testing, you are ready to run your Trial.

Evaluation phase: This phase amounts to a systematic assessment of the potential added value of the solutions that were trialled. When the analysis is done, you are ready to sum up the results, providing evidence of the impact of the solutions and to disseminate the results within and beyond your community.



TGM
Trial Guidance Methodology

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. Modules cover all aspects of organising a Trial and are delivered as a complete training package.

WHO IS IT FOR?

The TGM is specifically designed for:

Crisis Management practitioners who have identified one or more gaps, or have in mind solutions that can address these gaps

Research and innovation professionals, for instance in an innovation department of a Crisis Management organisation

Designing a Trial using the TGM is a collaborative effort involving various stakeholders in a co-creation process. Other interested stakeholders may include solution providers, R&D organisations, universities and consultancies.

WHAT IS THE ADDED VALUE?

With the help of the TGM, you can assess the potential impact of a change brought by a solution on the socio-technical set-up of a Crisis Management organisation. Crisis Management organisations often face difficulties in assessing the potential impact and benefits of new solutions. Investments in new, yet inappropriate, socio-technical solutions not only produce significant costs but may also have a negative impact on the operational performance of response organisations. The TGM has been co-developed and tested in various Trials with practitioner organisations, research organisations and solution providers. It has become a robust methodology to evaluate a wide range of innovative solutions.

Sign up and download the latest version of the TGM Handbook at:

www.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

TOOLKIT FOR ASSESSING INNOVATIVE SOLUTIONS

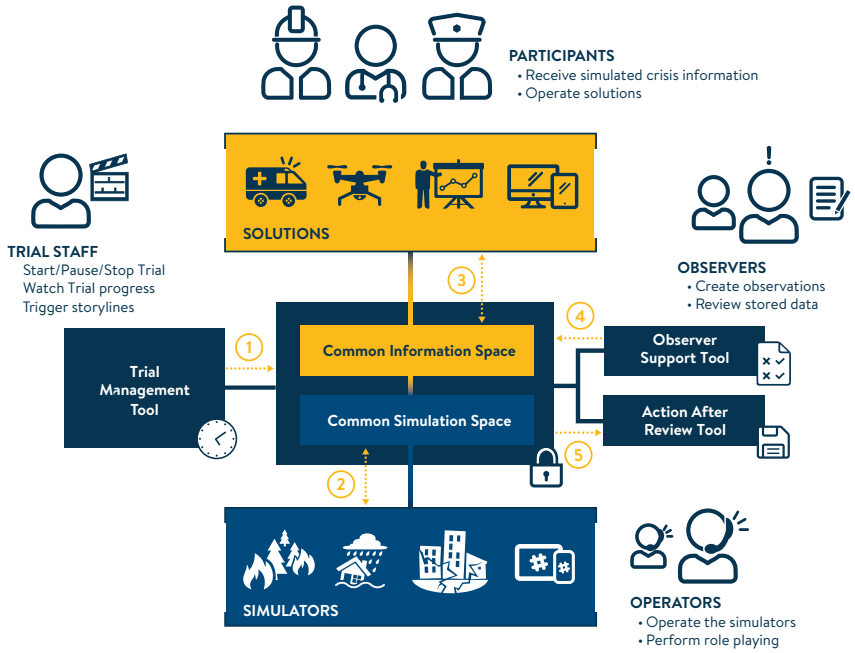
WHAT IS IT?

Do you as a Crisis Management professional need to find a solution to a gap you experienced during operations, or perhaps do you foresee an emerging need? 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. In addition, different simulators can be connected to create a realistic crisis environment for you to try out a new solution. We call this the Common Simulation Space. It allows you to create a realistic environment in which you can trial solutions in a structured and systematic way.

This Technical Infrastructure, which is free of charge and open source, consists of several software components to facilitate preparation, execution and evaluation of a Trial:

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

The Test-bed Technical Infrastructure can also support you to enhance the quality and realism of your training and exercises.



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. Participants use the Solutions and enter information. Solutions are fed with simulator data, share information, and request actions from the Simulators.
4. Observers create observations, which are shared and recorded.
5. The Trial ends and all logs and observations are collected for evaluation.

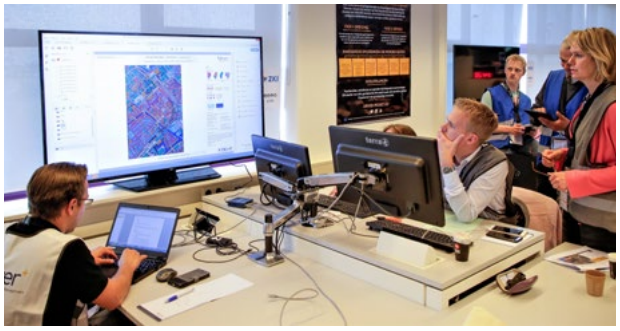
Test-bed
Technical Infrastructure

WHO IS IT FOR?

Any organisation that wishes to support and run Trials to test new Crisis Management solutions, or to facilitate realistic training can use this toolkit. Training centres, practitioner knowledge centres, Crisis Management academies, and Research & Development institutions can all benefit.

Providers of new solutions can test their innovations in a realistic environment and get meaningful feedback on their products from potential customers.

To support the use of the Test-bed Technical Infrastructure, a Training Module (TM) has been developed providing education, practice and assignments via e-learning and face-to-face workshops. Next to technical explanation,



this course covers all aspects of organising a Trial and is aimed at Trial organisers, solution providers and technicians. The TM is delivered as a complete training package, which means it can be hosted by several Centres of Expertise throughout Europe.

WHAT IS THE ADDED VALUE?

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. This methodological and technical support helps Crisis Management organisations avoid spending a great deal of money on acquiring and implementing solutions that turn out to have little added value.

Organisations can also contribute to the upskilling and training of Crisis Management professionals by using the Test-bed in combination with existing tools and systems. Including these operational systems provides a high-fidelity training environment, and thereby Crisis Management staff can gain valuable experience and become better prepared to handle unforeseen situations during actual crises or incidents.

An animated video illustrating the Test-bed Technical Infrastructure can be found at:

https://youtu.be/si0YEQKNCkM

PORTFOLIO OF SOLUTIONS
ONLINE CATALOGUE OF INNOVATIVE SOLUTIONS

WHAT IS IT?

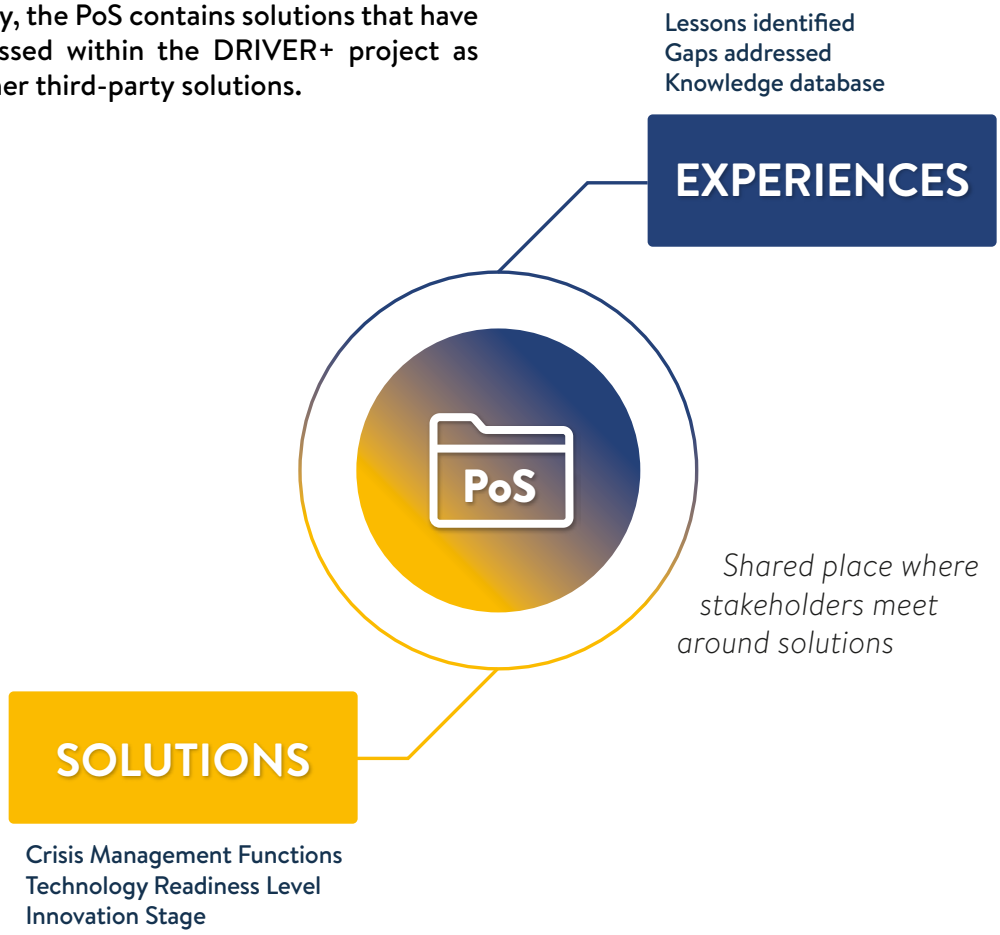
The Portfolio of Solutions (PoS) is a state-of-the-art catalogue that provides an overview of innovative solutions for Crisis Management. The PoS is online, open-source and interactive, and matches available solutions (supply) with practitioner needs (demand).

For each solution, practitioners can share their user experiences and solution providers can give background information and offer support. The PoS therefore helps practitioners to decide whether a solution may be useful for them and provides support for the implementation and deployment of the listed solutions.

The PoS is a living platform where new solutions can be added and information updated at any time. Today, the PoS contains solutions that have been assessed within the DRIVER+ project as well as other third-party solutions.

You can easily search all available solutions within the PoS by using various filters such as by crisis cycle phase, innovation stage, crisis type and size.

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.



PoS
Portfolio of Solutions

WHO IS IT FOR?

Do you, as a Crisis Management professional, need to fill a gap you experienced during operations, or do you foresee an emerging need? Do you want to scout the market for new trends and capability offerings? An innovative solution may already be available for you in the Portfolio of Solutions.

Are you a solution provider searching to improve your solutions' visibility and get to know your customers better? The PoS gives you the opportunity to showcase your solutions and to receive direct feedback from your target community.

WHAT IS THE ADDED VALUE?

Practitioners can explore both available and emerging innovative CM solutions and learn which of them cover their needs. They do not have to rely solely on the information of the solution providers, but can also obtain feedback from their peers as well.

Solution providers can use the Portfolio of Solutions to showcase their solutions. In particular, smaller and niche solution providers can benefit from this opportunity, given that a large marketing budget is not necessary to gain visibility through the PoS. The PoS therefore helps providers overcome the obstacles of a fragmented Crisis Management market, by allowing them to target their solutions directly towards the practitioner community.

The Research community can use the PoS to study available solutions and understand specific gaps that should be addressed by further research. The presence of smaller and niche players is of particular value, as these players and their solutions are typically under-represented at main industry events.

By making it easier to adopt new, innovative solutions, the PoS contributes to a shared understanding of Crisis Management and an improved handling of crisis situations across Europe.

Look for innovative solutions,
or add a solution yourself at:

https://pos.driver-project.eu/en/PoS/solutions

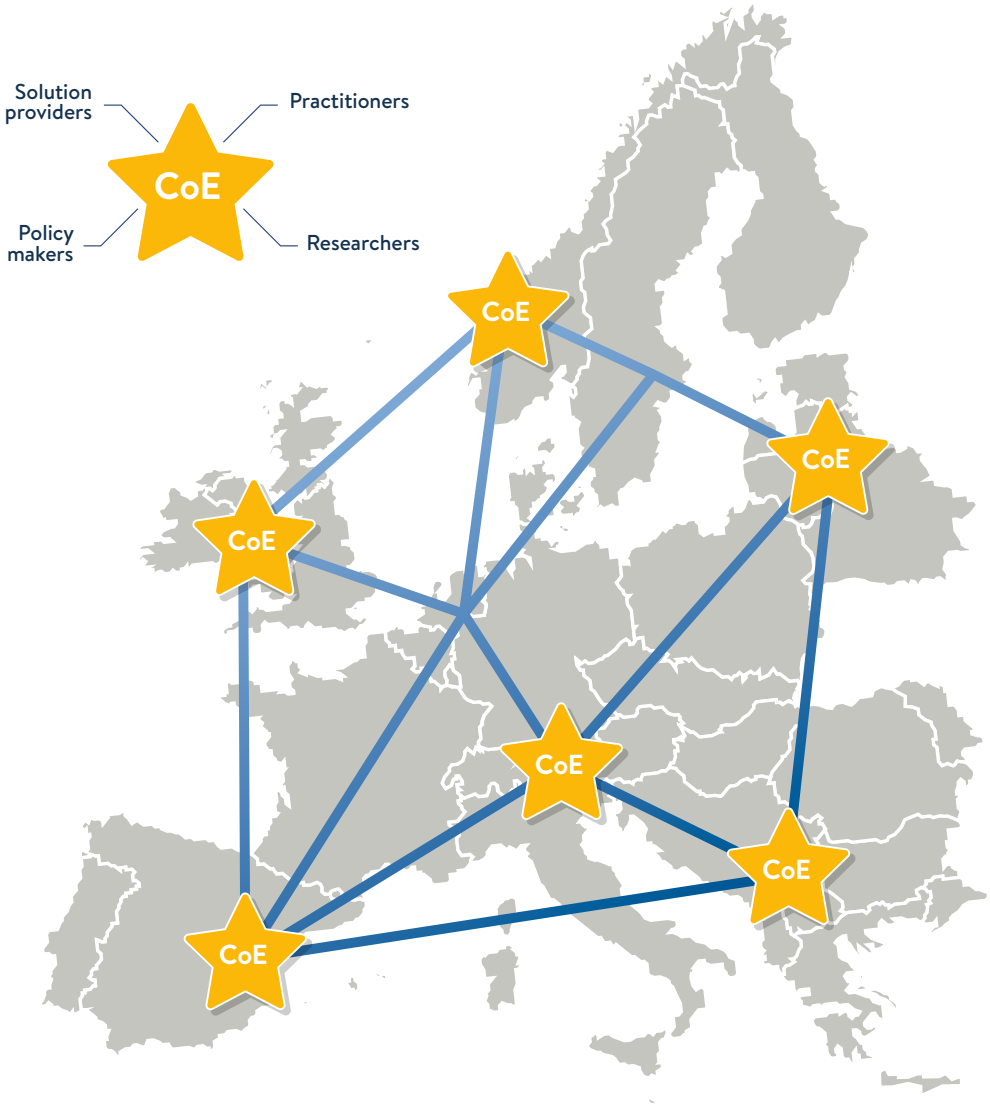
CENTRES OF EXPERTISE

CAPABILITY DEVELOPMENT & INNOVATION MANAGEMENT

WHAT IS IT?

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. A CoE may choose to adopt either the whole suite of DRIVER+ outputs or only some of its components.

While applying these outputs, organisations are free to tailor and adapt them to local or national needs, circumstances and capacities. A CoE not only uses the DRIVER+ outputs but also supports other organisations in using these. It can also maintain and update DRIVER+ outputs and exchange lessons learned between other Centres of Expertise in the various European Member States. In this way, CoEs become part of a pan-European network.



WHO IS IT FOR?

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. These may be national or regional training centres, Crisis Management academies and knowledge centres for specific crisis types such as forest fires. They may cover a wide range of Crisis Management aspects or focus on a specific topic such as the usage of drones or training of firefighters. A CoE is a practitioner-centred organisation that has close relations with (applied) research organisations, solution providers and policy-makers.

WHAT IS THE ADDED VALUE?

Becoming a Centre of Expertise will strengthen your pioneering position in the Crisis Management and Disaster Risk Reduction ecosystem, both nationally and internationally. It will increase the visibility of your organisation at the EU level as an early adopter bringing forward innovation in Crisis Management.

Through this, you can expand and strengthen the portfolio of services that you already offer, for instance by sharing lessons learned and improving knowledge transfer between practitioners and research organisations. This can help with the development of new training programmes and improving curricula, as well as producing clear recommendations for policy-makers about research programming and specific funding needs.

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.

Download the toolkit and get your organisation ready:

www.driver-project.eu/centres-of-expertise-coe

CRISIS MANAGEMENT INNOVATION NETWORK EUROPE

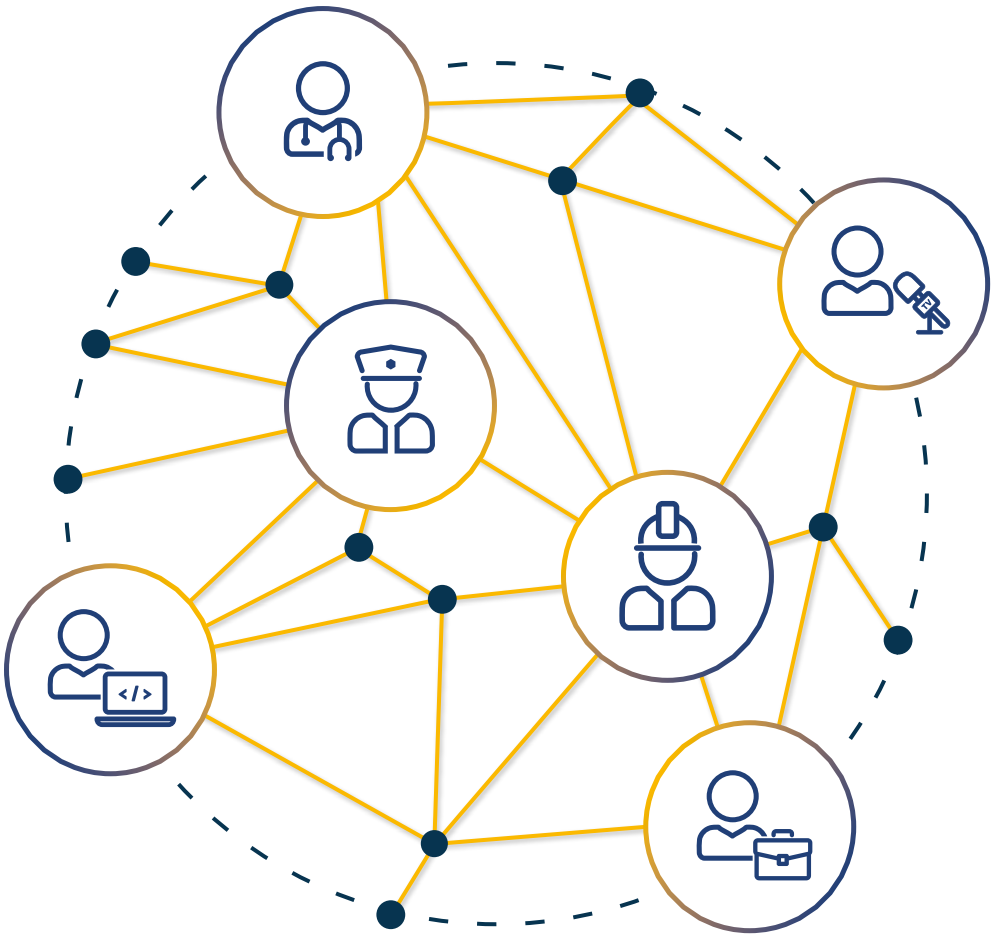
A COMMUNITY OF PRACTICE TO FOSTER INNOVATION

WHAT IS IT?

The Crisis Management Innovation Network Europe (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. CMINE is creating an umbrella network of stakeholders active in Crisis Management by linking existing projects, networks and initiatives. By doing so, CMINE reduces fragmentation, generates ideas and helps to identify innovative solutions to improve European resilience.

CMINE comprises an online community platform and face-to-face meetings and workshops with the aim of tackling current and future challenges and facilitating the uptake of research and innovation by practitioner organisations. 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.



CMINE
Fostering Innovation in Crisis Management

WHO IS IT FOR?

CMINE aims to bring together a diverse group of stakeholders that would not normally interact with each other on a regular basis. This includes policymakers, practitioners, members of the private sector, NGOs /CSOs, science & research, training & education, media and standardisation representatives.

WHAT IS THE ADDED VALUE?

CMINE offers its members an online and offline environment to actively engage with other Crisis Management professionals. Its guiding principles and ambitions are to:

Foster multi-stakeholder and cross-sectoral interaction:
Join a diverse group of stakeholders active in Crisis Management, share knowledge, ideas and work together to solve current and future challenges

Engage members through a content-driven approach:
Benefit from a structured, moderated and open space to generate ideas and foster innovation through interaction

Become a hub for Crisis Management Innovation in Europe:
Discover key information such as results of research projects and cutting-edge Crisis Management solutions and stay up to date on Crisis Management news and events

Provide visibility and networking opportunities to the Crisis Management community:
Showcase your results (e.g. EU-funded research projects) to increase visibility, while expanding your networks through our expert database

Join the community and become part of this compelling initiative

www.cmine.eu

TRIALS
INSIGHTS AND FINDINGS SO FAR

DRIVER+ has conducted four Trials so far: in May 2018, three innovative technical solutions were trialled in the context of a toxic spill scenario in Warsaw, Poland. Trial - France, organised in October 2018 in Aix-en-Provence, trialled four solutions, focussing on the scenario of a large forest fire in southern France, which threatened a campsite, nearby towns and an industrial chemical plant. Trial - Netherlands in May 2019 was based on a flood scenario: severe weather had caused the Scheveningen lock to fail, flooding The Hague city centre, putting more than 500,000 people at risk. A total of six solutions were trialled on this occasion. Finally, five solutions were assessed in September 2019 in a scenario involving a heavy earthquake and subsequent heavy rains in the central area of Austria.

All DRIVER+ Trials have been developed and evaluated using the DRIVER+ Trial Guidance Methodology (TGM). The TGM gives very practical, concrete, yet systematic and robust, support to help clearly identify the Crisis Management gaps and formulate the questions the practitioners want to address, the performance indicators needed to support proper evaluation, the guidelines to develop a realistic scenario, and the tools to create this realistic environment and support the assessment.

What have these Trials shown about the use of innovative socio-technical solutions in European Crisis Management? Have the solutions proved to be useful?

The following findings are based mainly on the evaluation of Trials 1 and 2 in Poland and France. Both events together involved around 40 practitioners from 13 EU countries and trialled seven different solutions.

IMPROVED COORDINATION AND SHARING OF INFORMATION

Both Trial - Poland and Trial - France have shown the value of investing in solutions that improve the Common Operational Picture (COP) during an incident and lead to a more effective communication, both horizontally and vertically across the chain of command.

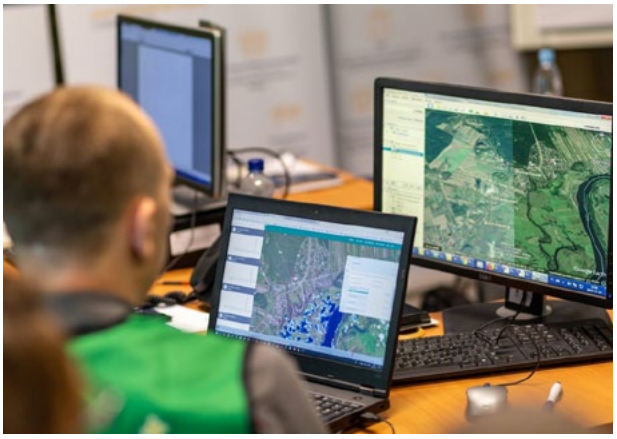
Improved horizontal communication is important especially during cross-border interventions and is likely to positively influence neighbours'

support to a country affected by a disaster. Horizontal communication can also affect the cross-sector level: sharing a common information space between, for example, firefighters and Emergency Medical Services (EMS) allows a situation to be better assessed, both concerning crisis dynamics (for example fire contour visible for the EMS) and the dispatching of resources (ambulances visible to the fire service incident commanders).

Improved vertical communication between hierarchical levels, on the other hand, facilitates the assessment of operational needs and gaps, which supports, for example, the formulation of a precise Request for Assistance under the Union Civil Protection Mechanism. It also promotes the participation of local and regional level authorities in the formulation of such requests.

ENHANCED ACCURACY OF INFORMATION

The use of dynamic modelling, for example for flood simulation, has proved to enhance the precision of emergency planning (risk management related to floods and to critical infrastructure). It also eases forecasting impacts during the response phase.



NEW TYPES OF INFORMATION

The use of drones, for example for orthophoto map generation and 3D modelling, has been shown to be of considerable operational support and can be useful for the European Emergency Response Capacity assets (modules/teams) which have "searching competence". Aerial observation and mapping also makes post-disaster needs' assessment easier, especially in the case of major disasters affecting a large area.

SELECTION AND PRIORITISING OF INFORMATION

Dynamic modelling solutions are a potential game-changer in the decision-making process, because they enable information to be limited and prioritised in relation to the time available for implementing certain response measures. This considerably speeds up the aerial assessment of damage and needs and, consequently, coordination and resource management. Time-saving effects have been observed in most processes, particularly at the alert step, for example when searching for victims.

In summary, the trialled solutions have demonstrated that they can support communication, coordination and resource management through better operational documentation quality, especially with respect to accuracy, completeness, reproducibility, composition and format of the information. Furthermore, solutions involving dynamic threat modelling and 3D mapping improve internal communication in the decision-making team as well as the accuracy and the duration of the decision-making process.

FINAL DEMONSTRATION

WARSAW & THE HAGUE – 26-28 NOVEMBER 2019

IN A NUTSHELL

WHAT? WHY?

The Final Demonstration (Final Demo) is the last Trial, concluding the series of DRIVER+ Trials. It also provides an opportunity to showcase the main outcomes of the Project. The event has been tailored to the needs of the main End-User – the **Emergency Response Coordination Centre (ERCC)** – and will be conducted in accordance with the project's methodology. The ERCC, situated in Brussels, was created in 2001, following the European Parliament Decision on **Union Civil Protection Mechanism (UCPM).** It is the highest Crisis Management coordination body in the European Union. The primary aim of the UCPM is to strengthen cooperation between Participating States – Members States and others affiliated in the UCPM – in the field of civil protection, in order to respond to disasters as effectively and synergistically as possible. Since 2001, the UCPM has been activated over 300 times and each year the number of activations is growing. New innovative solutions, improving the realisation of the Union Civil Protection Mechanism tasks, are continually being sought.

The ERCC monitors the situation from Brussels and has an expert support group deployed on the ground called the **European Union Civil Protection Coordination Team (EUCPT).** The main role of the EUCPT is to coordinate activities in the field by liaising between the UCPM Modules and the Local Emergency Management Authority (of the country stricken by a disaster), in order to provide a common understanding of the needs and to ensure a relevant and timely response.

The Final Demo addresses the communication aspects between the UCPM components, mainly the ERCC, the EUCPT and the Modules, which are sent to the country in crisis by states affiliated within the scope of the UCPM. The main areas to be addressed are:

- reporting on the operational activities from the field to the ERCC;
- information exchange among Team Leaders of the Modules, and the EUCPT;
- geo-information support for situation assessment and decision-making for Team Leaders of the Modules and the EUCPT.

The Final Demo's overall goal, similar to the other four Trials, is to follow the DRIVER+ methodology and show if, and how, the innovative DRIVER+ solutions can minimise a specific set of identified gaps in Crisis Management.

Gap1: Shortcomings in interoperability in the ability to exchange crisis-related information among agencies and organisation.

Gap2: Lack of a "Common Operational Picture" to integrate data sources and calculation results from different models crucial for the decision making process.

Gap3: Limitations in the ability to merge and synthetise disparate data sources and models (e.g. historic events, spreading models, tactical situation, critical assets map) in (near) real time to support decision making .

List of selected and validated gaps

ORGANISATION
WHO? WHERE?

The Final Demo is being organised by the Space Research Centre of Polish Academy of Sciences with the support of Consortium Members, including: The Main School of Fire Service, the Joint Research Centre, Thales Communication & Security SAS, XVR Simulation BV, Frequentis AG and the Safety Region Haaglanden in The Hague. The Final Demo, as a command post exercise, has several locations:

1) The Emergency Response Coordination Centre (ERCC) situated in the Space Research Centre of Polish Academy of Sciences (Warsaw, Poland);

2) The European Union Civil Protection Team (EUCPT) located at the Main School of Fire Service (Warsaw, Poland);

3) 4 Ground Forest Fire Fighting using Vehicles (GFFFV) Modules command posts placed in the Main School of Fire Service (Warsaw, Poland);

4) 1 AirMedEvac Module command post in the Safety Region Haaglanden (The Hague, The Netherlands).

The different locations are expected to simulate remote conditions, in which different actors of the Union Civil Protection Mechanism work on a daily basis.

FINAL DEMO SCENARIO
MAJOR FOREST FIRES – EUCPM ACTIVATION

The fictional country Driverstan, situated outside the European Union but relatively close, is a democratic republic, however, is not yet as fully developed as the EU countries – it is lacking solid Crisis Management structures, a stable economy and a strong civil society. The scenario of the Final Demo will focus on large-scale forest fires in a rural area with potential developments, causing a complex humanitarian crisis.

Due to high temperatures and lack of rainfall during recent weeks, the number of forest fires is multiplying in the country. Domestic response capabilities are not sufficient to cope with the fires alone. Driverstan creates a Request for Assistance (RfA) that is shared with the ERCC, EU Member States and affiliated countries. The Union Civil Protection Mechanism is activated and offers of support from different countries are gathered.

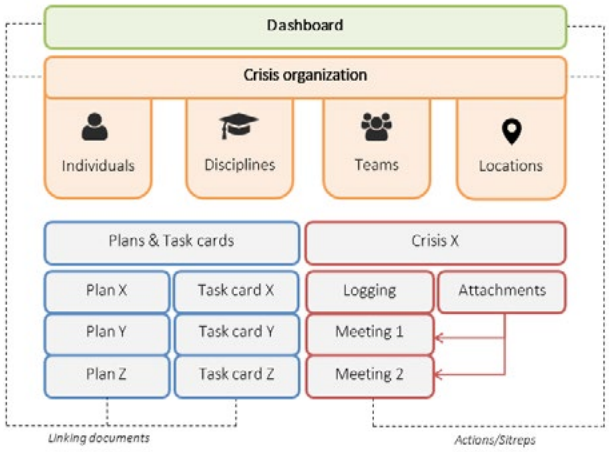
The scenario is expected to trigger an exchange of information between the ERCC, EUCPT and the National Disaster Management Authority (NDMA). The use of the DRIVER+ selected innovative solutions, tested alongside the standard operational procedures of the ERCC, EUPCT and Modules, will show the potential added value of the solutions in such a Crisis Management situation.

CRISISSUITE
MERLIN SOFTWARE B.V.

ABOUT THE SOLUTION
IN A NUTSHELL

CrisisSuite is an online software application enabling organisations to successfully manage information during a crisis. All crisis information is securely stored in the cloud and is available anytime, anywhere. This solution supports the netcentric working method (an information management approach) of crisis teams by creating an universal picture of the crisis by sharing it horizontally and vertically with all the other teams in the crisis organisation. It also assists in maintaining an effective crisis meeting structure and it decreases the administrative workload for the people managing the crisis.

Each member of a crisis organisation gets access to CrisisSuite and has their own personalised dashboard with the crisis plans that are relevant to them, an overview of the current crisis and a list with all their unfinished actions for the current crisis.



The actions are immediately forwarded to the appropriate teams or individuals; and they, in turn, can indicate that the actions are being carried out or completed. At the same time, a reply can be sent as well. The crisis team can follow the proceedings of the actions in a simple overview.

Based on the log, the crisis team may compile situation reports (SitReps) and share them with individuals, teams or with the entire organisation.

ABOUT THE PROVIDER
WHO ARE THEY?

Merlin Software B.V. develops practical software tools in the field of Crisis Management. These tools help an organisation to prepare for, respond to and learn from a crisis situation. Because crisis information is sensitive by nature, Merlin has spent the required efforts to obtain the ISO 27001 certificate for information security.

Merlin is affiliated with Parcival, specialist in Crisis Management and education, training and exercise.

Merlin
SOFTWARE FOR CRISIS

www.merlincrisis.com

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Adequate COP environment.

· Exchanging crisis-related information among agencies and organisations.

· Sending out and receiving critical information to and from the field.

· Generating complete and clear situation reports that can be shared with other stakeholders.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Support C3 decision making: By storing all relevant information in a logbook, the decision makers in the organisation can look up what the need to know in order to make the right decision.

· Communicate operational information across chain of command: Actions can automatically be sent down the chain of command to the people responsible for executing them. In a similar fashion, people in the field can send pictures of the situation on the ground up in the chain of command.

· Disseminate COP and assessments: Either by selecting entries from a logbook or by filling out a sitrep manually, any team can disseminate their part of the COP with the relevant stakeholders.

· Develop and sustain COP: Information from various sources can be send into CrisisSuite to build a common geographical and textual overview.

PLANNED ACTIVITIES
DURING THE FINAL DEMO

During the Final Demo, CrisisSuite will be used by teams within the EU Civil Protection Mechanism: the ERCC, the EUCPT and the various modules that will be deployed from different European countries. These teams will use CrisisSuite for internal communication through logbooks and by sending out actions internally.

CrisisSuite will also be used for vertical communication by sending out situation reports to other organisational parts. In addition to that, CrisisSuite will receive geographical information from Socrates and make this information available to the organisational parts that do not work with Socrates.

In summary, CrisisSuite will be used for the aggregation and dissemination of all crisis related information.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 9 – Actual system proven in operational environment

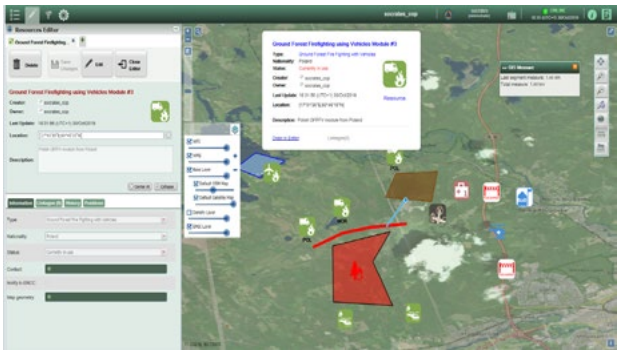
ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

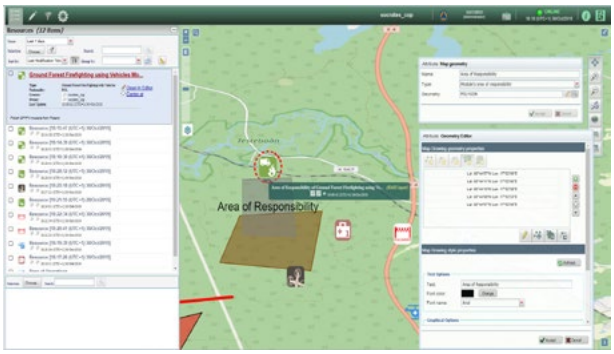
· The aim of this solution is to successfully manage information during a crisis. This implies that all involved organisations have access to the right information at the right time, in order to make the right decisions.

SOCRATES OC
GMV

ABOUT THE SOLUTION
IN A NUTSHELL

SOCRATES Operation Center (OC) sets up a Crisis Management network whose objective is twofold. It aims to improve the shared situation awareness amongst the different bodies involved in the management of crisis events, and to help the practitioners to make well-informed decisions by providing and supporting the real time exchange of information about the operational situation. It provides a web-based tool for generating a Common Operating Picture (COP) in Crisis Management, presenting functions which enable the reporting and tracking of events and resources. It brings support to both vertical (local, regional, national and/or international levels of command) and horizontal (inter-agency and cross-border) coordination and cooperation. Information on events and resources are displayed in a GIS (Geographic Information System). The solution allows crisis managers to determine the magnitude of the event, assessing its impact and potential consequences as well as evaluating the needs. They are also able to access real-time information about the availability and location of resources. SOCRATES OC also provides snapshots to operational commanders of what is being taken and by/with which resources. This enables them to establish action plans and determine further operational needs.





ABOUT THE PROVIDER
WHO ARE THEY?

GMV (Spain) is a privately-owned technology business group founded in 1984. Trading on a worldwide scale in the following sectors: Aerospace, Defence and Security, Transport, Telecommunications and IT, GMV has a revenue of more than 130 million Euros and more than 1,500 employees. The company's growth strategy is based on continual innovation; 10% of its turnover is ploughed back into R&D. GMV has achieved the level 5 of the CMMI (Capability Maturity Model Integration), the world's most prestigious business-process improvement model and holds several international patents and is currently the world's top supplier of Ground Control System for commercial telecommunication operators.

https://www.gmv.com

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Limitations in the cross vulnerabilities (people, property, environment) assessment to optimise task prioritisation and decision making.

· Lack of a «common operational picture» environment to integrate data sources and calculation results from different models, crucial for the decision-making process from the perspective of the incident commander.

· Insufficiencies in terms of resource management (humans, resources, hardware, etc.) during multistakeholder long-term response operations.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Conduct coordinated tasking and resource management: The solution allows the incident commander to register existing resources, update their status and position, assign resources to events or incidents and request details of their available resources. This information can then be shared with all nodes in the Crisis Management network.

· Maintain shared situational awareness: The solution is able to gather (collect), store (sustain) and share (disseminate) operational information about the crisis situation (regarding crisis events and resources) and exchange it with other nodes in the Crisis Management network.

· Support C3 decision making: The solution supports crisis managers and commanders in decision making by sustaining and sharing the COP with relevant information about crisis events, available (and in use) resources, etc.

PLANNED ACTIVITIES
DURING THE FINAL DEMO

· Conducting refreshment training for practitioners

· Setting up and integrating the solution with the DRIVER+ Test-bed Technical Infrastructure

· Physically handling the solution based on practitioners' decisions/orders

· Supporting practitioners and other solution owners in their interaction with Socrates OC

· Providing feedback to the DRIVER+ Test-bed

· Evaluating solution

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TRL 8 - Navigation, Maritime and Border Surveillance domain

· TRL 6 - Crisis Management domain

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

The aim is to have SOCRATES OC as a focal point for other solutions and to display their information in COP. This allows SOCRATES OC operators to create events and resources and to assign resources to events and track them as needed to perform Crisis Management.

DRONE RAPID MAPPING
CREOTECH INSTRUMENTS

ABOUT THE SOLUTION
IN A NUTSHELL

Drone Rapid Mapping enables an incident or a crisis area to be mapped quickly using local, network independent computing. A drone operator conducts a flight over an area of interest and acquires imagery (using the on-board camera) in line with the standard operational procedures. Data is then uploaded on the spot to the standalone and autonomous server (only a 230V AC power supply is required, with possible use of a portable generator) and automatically processed and viewed on the spot.

The results can be shared locally via wireless LAN or published in another system when Internet connection is available.

What does Drone Rapid Mapping provide?
A very fast generation of orthophotomaps based on imagery acquired by any drone (RPAS) available to rescue or crisis management actors. The resulting maps and models can be viewed and analysed locally in the dedicated geoportal or published via Internet in any GIS environment already used by Crisis Management institutions. A 3D terrain model can be viewed in any standard programme. It provides the practitioners with a better and more intuitive understanding of the area of interest.

The rapid mapping efficiency depends on the rugged server parameters - processors speed, memory size, GPU availability, etc. With an average HW configuration the mapping of 10 ha with 2 cm pixel takes up to 45 minutes. This period covers all activities: mission request, flight preparation, execution of the flight, landing, data retrieval and upload, all calculations with preparation of geoportal content. The generation of the high-quality 3D model requires an additional 20+ minutes.

ABOUT THE PROVIDER
WHO ARE THEY?

CREOTECH INSTRUMENTS is one of the leading Space sector companies in Poland. Headquarters and manufacturing facilities are located in Piaseczno, near Warsaw. Creotech's activities are currently focused mostly on space hardware and geospatial data processing services. Manufacturing processes are compliant with the certification requirements of space, automotive and medical industries. The company takes an active role in various hardware and IT projects for the European Space Agency – e.g. as Prime Contractor in CREODIAS (Copernicus DIAS - Data and Information Access Services).

http://creotech.pl

creo TECH
Instruments S.A.

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Limitations in the ability to model real-time (response phase) or pre-event (preparedness phase) dynamics of chemical and radiological threats with accurate visualisation of obtained results in a form that van be used directly by the incident commander

· Limitations in the situational awareness at all stages of emergency operations

· Lack of a Common Operational Picture environment integration of data sources and calculation of results from different models, which are crucial for the decision-making process from the perspective of the incident commander.

· Insufficiencies in terms of resource management (humans, resources, hardware, etc.) during multi-stakeholder long-term response operations.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Conduct flights to collect information & assess damage, needs and maintain a shared situational awareness: The solution provides an up-to-date mosaic of high resolution (up to 1pix=1cm) imagery in less than 45 minutes from drone start, available locally and (with Internet access) possible to be shared with every level of Crisis Management and accessible everywhere.

· Manage environmental recovery: The solution compares already existing maps and ad hoc generated orthophoto and detailed 3D model of the terrain. This facilitates the planning of decontamination and clean-up actions eye-witnessing the affected area from the safe distance of the Command Post.

· Monitor area & provide situational awareness: The solution presents data locally and is able to update over Internet any COPs and geoportals anywhere on the world easily and quickly.

· Provide information to media, decision makers and public: Drone Rapid Mapping provides key information in a clear and easily understood way by displaying online 3D models of affected areas (including displaying the Response actions).

PLANNED ACTIVITIES
DURING THE FINAL DEMO

· Training and demonstration for practitioners

· Sample data processing into map layers and 3D model

· Sending WMS data availability notifications to the DRIVER+ Test-bed Technical Infrastructure

· Data provision to other solutions

· Evaluation support

TECHNOLOGY READINESS LEVEL
SOLUTION TECHNOLOGY MATURITY

· TRL 7 - System prototype demonstration in operational environment

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

Provide high quality orthophoto products, which can be easily viewed on a geoportal as a Web Map Services. Giving users a better understanding of the situation in the field with possibility of the required measurements, 3D models allow users to provide extra viewshed analysis so that they can better plan the locations of teams and assets. To sum up, Drone Rapid Mapping significantly supports the decision-making process in the field.

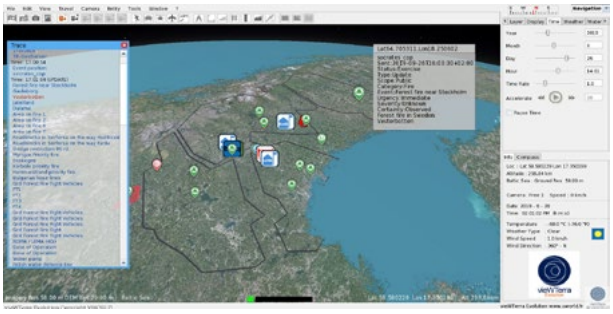
VIEWTERRA EVOLUTION
VWORLD

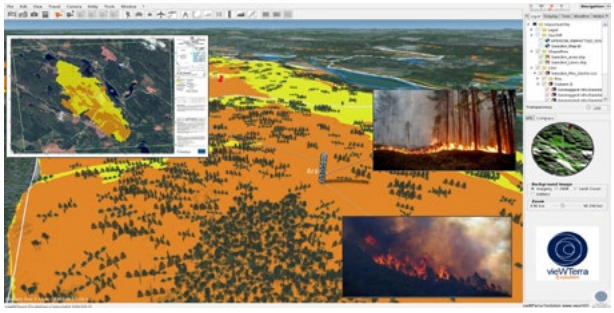
ABOUT THE SOLUTION
IN A NUTSHELL

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 environment to both Command Center and rescue units out in the field.

vieWTerra Evolution is a 4D Earth Viewer as well as data & assets integration and development platform (C/C++ SDK). It presents an ellipsoidal model of the Earth already defined globally at a medium resolution (vieWTerra Base 29m Imagery, 90m–incoming 29m-DEM, 29m Land Cover set of mosaics), and allows its users to integrate their own precise datasets anywhere on the Globe, without any area coverage limitations, or access available Open Geospatial Consortium-compliant WMS-WMTS data streams (imagery, cartography layers).

vieWTerra Evolution 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 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 between all stakeholders in the Crisis Response phase. Within the DRIVER+ Final Demo, it will notably be used to instantly visualise EFFIS Copernicus EMS fire danger maps and forecasts and newly-acquired imagery from drone acquisition, draped over the 3D environment for a more cognitive and immediate representation of the situation (data fusion). It will also allow joint visualisation of tactical and operational situation information (location of units, icons, firefront lines, etc.) entered through a third-party COP tool, as well as photos and reports from the field.





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 counts clients in the Aeronautics & Space, Defence & Civil Security, Town & Country Planning, Energy, Geosciences and Education.

www.vworld.fr

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

· Lack of Common Operational Picture: brings 3D rendering and visualisation (very cognitive, real-world like synthetic environment creation) in support of the conduct of operations.

· Limitations in the ability to model large areas (Preparedness phase) and provide instant mapping (Response phase).

· Integration of data and assets from multiple and disparate sources (GeoTIFFs, photogrammetry or LiDAR-acquired data, 2D maps, 2D/3D lines (shapefile), icons, PDF info, photos, videos, sound, 3D objects, dynamic entities, etc.

· Interoperability issues / cross-border coordination: notably by incorporating data anywhere on the globe and allowing data sharing between multiple stakeholders, since all datasets and assets are merged in a single « One World » environment and encapsulated a single database.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

· Develop & Maintain shared situational awareness/ Provide adequate COP environment: Supports the conduct of operations while shortening the decision cycle by providing a cognitive 3D real-time visualisation of the area and supporting the integration of multiple information, data & assets directly into the 3D view via simple drag and drop.

· Support C3 decision making and facilitate logistics operations: Saves time in assessing the best areas to implement a base of operations based on a 4D GIS view rather than a 2D map; supports decision-making and conduct of operations through terrain editing, 3D line drawing, and terrain querying/ analysis.

· Share information and data between multiple stakeholders: Supports exchange of crisis-related information among crisis responders, agencies and organisations, and possibly volunteers, the media and the public. Incorporates information from multiple and disparate sources, jointly incorporated in the command centre main view of operations

PLANNED ACTIVITIES
DURING THE FINAL DEMO

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

· Support in the conduct of operations based on the provided virtual 4D environment (3D + Time) 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 geotagged photos and PDF reports (e.g. sharing of evacuation maps/plans).

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

· TR 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 and other assets produced in an emergency, as well as assets coming from the field in the Management & Recovery phases, in support of any potential crisis and relief operations on Earth.

FIELD REPORTING TOOL

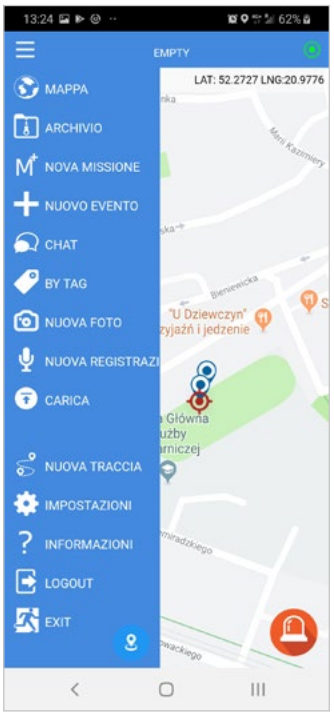
EUROPEAN COMMISSION – JOINT RESEARCH CENTRE

ABOUT THE SOLUTION
IN A NUTSHELL

The Field Reporting Tool (FRT) was developed in order to provide first responders with the capability to share information from the field easily and promptly with two major key points:

- The information must be georeferenced. Not only this allows a more effective visualisation: it also improves the management of the resources deployed on the field, without requiring a specific activity, but naturally included in the operations performed by the operators.

- The information must carry a valuable payload in terms of multimedia contents, which provides remotely a better understanding of the situation.



ABOUT THE PROVIDER
WHO ARE THEY?

The Joint Research Centre (JRC) helps to strengthen the EU's resilience to crises and disasters through its research in crisis management technologies, satellite image processing and analysis, disaster risk management and internet surveillance systems.

Linked to JRC, the European Crisis Management Laboratory (ECML), was created in 2010 and inaugurated in 2013 by the former EC President Manuel Barroso. The ECML studies innovative technological solutions applied to the Crisis Management. Within these activities, the ECML established a collaboration with the Italian Ministero dell'Interno, Dipartimento dei Vigili del Fuoco (National Fire Corps - CNVVF).

https://ec.europa.eu/jrc

GAPS ADDRESSED
WHAT DOES THE SOLUTION BRIDGE?

This solution provides first responders with the means to share promptly geolocated multimedia information with the minimum effort, thus relieving the operators from active communication, but vehiculating much more powerful and precise information about the situation on the field. Additional features allow tracking the activities of the operator, including an alert button, which is used to warn about a danger threatening the operator and to start streaming the sounds nearby.

CRISIS MANAGEMENT FUNCTIONS
WHAT IT DOES

FRT is a platform that provides the crisis rooms with additional features valuable to assess the situation and coordinate the response. Communications are improved in terms of reliability and quality.

PLANNED ACTIVITIES
DURING THE FINAL DEMO

With a simple tweak, the operator will pretend to operate remotely with a mobile phone running FRT. The data generated will then be uploaded to the platform, which will distribute them to the interested partners, allowing them to be incorporated in visualisation and data management interfaces.

TECHNOLOGY READINESS LEVEL
SOLUTION MATURITY

After a prototype aimed at Windows Operating Systems, the solution is being ported to iOS and Android. It has completed the first round of tests on the initial set of features present in the prototype and the second set is now being completed and tested. It is planned to be operational next year.

ULTIMATE GOAL
SOLUTION MAIN OBJECTIVE

If adopted by different corps (firefighters, civil protection, police, medical assistance) and by different countries, it can ease the interoperability, while providing a more effective and prompt way to exchange valuable information from and to the field.

FUTURE

WHAT WILL HAPPEN AFTER THIS FINAL DEMONSTRATION?

The Final Demonstration is the last Trial concluding the series of DRIVER+ Trials. The event is presenting the potential of a more integrated high-level Crisis Management system in Europe, especially in international contexts in term of improved situation assessment, coordination, resource pooling & sharing, and cross border cooperation, taking into account the lessons learnt and outcomes of the previous Trials.

The insights and findings of the series of Trials will be showcased at the future events of the Project: the PRDRs and Final Conference of the project described below.

Policy Research Dialogue Roundtables (PRDR)

The DRIVER+ project has been organising a series of three Policy-Research Dialogue Roundtables (PRDR). Focusing on ways to support a pan-European approach to capability development and innovation management in the field of Disaster Risk Reduction and Crisis Management, these events look into issues around common trial and validation frameworks to ensure comparability of EU-funded research projects' results and solutions to improve the uptake of these results. They are also meant to generate ideas to assist the EC in its strategic planning process of Horizon Europe (see: Orientations towards the first Strategic Plan implementing the research and innovation framework programme Horizon Europe).

Examples of questions tackled by PRDRs include: how to improve information and results exchange between research projects, practitioner and knowledge networks? How to introduce a Pan-European trial and validation framework into the research programming of Horizon Europe? How can the future program for research and innovation improve the current capability development process by ensuring a better uptake of results from previous projects? How these insights could be used to inform the Horizon Europe Work Programme and other funding instruments? ...

Convening an expert audience with representatives from EC DGs (in particular DG HOME, DG ECHO/ERCC, DG RTD and DG CLIMA), the JRC/DRMKC, international organisations (UNISDR), national civil protection authorities from Member States and selected Research & Innovation projects and/or initiatives, the PRDRs contribute to bridge the gap between the different communities. They all take place in Brussels and have been scheduled in February 2019, December 2019 and February 2020, the latter happening at the same time as the DRIVER+ Final Conference. PRDR outputs are all being captured in position papers accessible from the DRIVER+ public website.

For more information about PRDR1 and PRDR2: www.driver-project.eu/events/prdr

driver+ POLICY-RESEARCH DIALOGUE ROUNDTABLES (PRDR)
Driving Innovation in Crisis Management for European Resilience

DRIVER+ International Final Conference

The project has committed itself to deliver five sustainable outputs to the European Crisis Management community:

- Trial Guidance Methodology
- Pan-European Test-bed,
- Portfolio of Solutions,
- European Crisis Management Innovation Network,
- Centres of Expertise framework

The DRIVER+ Final Conference will provide exciting insights into the projects' achievements and results before the project finishes in April 2020. It will be held from 19 to 20 February 2020 at Blue Point Brussels and will allow you to:

- Discover and put DRIVER+ key outcomes and trialled solutions to the test through demonstrations, exhibitions and guided walks;
- Discuss the policy implications of the project with panellists and keynote speakers through plenary sessions and roundtables,
- Learn more on the DRIVER+ lasting impacts and how you can benefit from them – for example by joining the Crisis Management Innovation Network Europe or by becoming and adopter of a DRIVER+ solution.

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 – the perfect networking occasion for the crisis management community in Europe and beyond.

Register now and join us in February in Brussels.
More information and registration at:
www.cmine.eu/networks/events/22153

driver+ FINAL CONFERENCE
Driving Innovation in Crisis Management for European Resilience

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
Fostering Innovation in Crisis Management

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+ activities.

November 2019
Final Demo
(Warsaw and The Hague)

December 2019
2nd Policy-Research
Dialogue Roundtable
(Brussels)

February 2020
3rd Policy-Research
Dialogue Roundtable
(Brussels)

February 2020
Final Conference
(Brussels)

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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