



The DRIVER+ project, which has been running throughout Europe for the past two and a half years, is now drawing to a close, but its achievements and ongoing

sub-projects are continuing, delivering valuable benefits to Crisis Managers in Europe and around the world. **Stephen Prendergast** reports on the project's activities, results and enduring legacy

How the DRIVER+ project is boosting Crisis Management innovation, operational effectiveness and networking

Climate change is exacerbating the intensity of natural disasters such as wildfire and flooding throughout the world, and conditions will continue deteriorating in the future. Other major public safety threats such as earthquakes and industrial accidents also continue to endanger lives, property and natural environments, as do medical emergencies such as the spread of the coronavirus.

Governments are increasingly aware of the dangers to public safety posed by climate change and other threats,



and citizens understandably expect that the most advanced measures will be put in place to respond effectively when crises occur.

DRIVER+ is an ambitious pan-European project, supported by the European Union, that over the past two to three years has been supporting the capability development of Crisis Management (CM) organisations in a number of different ways, promoting and testing new, science-based improvements in Crisis Management. This has involved, among other things, staging four major Trials with participants from many European countries, plus one Final Demonstration, and the development of unique new technologies and approaches for integrating and assessing Crisis Management solutions.

The DRIVER+ project's scope has focussed on several key areas:

- The promotion and trialling of advanced technological and other CM solutions in realistic scenarios
- The development of a scientifically based evaluation methodology for assessing CM solutions (The Trial

DRIVER+ Trial 1 was staged in Warsaw from May 21 to 25, 2018 at the Main School of Fire Services (SGSP) in Poland. It was set up to demonstrate the potential of a more integrated high-level Crisis Management system in the European Union, in terms of improved situation assessment and awareness, coordination, resource pooling and sharing, and cross-border cooperation. The Trial, which involved both table-top and field components, served as a demonstration of a Common Operational Picture (COP) approach at the European level





Guidance Methodology supported by the Test-bed Technical Infrastructure)

- The development of the Portfolio of Solutions online database
- The building of a cooperative information sharing community of practice (the Crisis Management Innovation Network Europe – CMINE)
- The establishment of a network of Centres of Expertise.

The Trials aspect of the project saw specialist, multinational Crisis Management teams using and testing a diverse range of different Crisis Management solutions under realistic conditions. These were not staged to test the participating organisations themselves, but to assess the solutions used by the teams using the evolving Trial Guidance Methodology as the assessment mechanism. The TGM is a DRIVER+-developed system for identifying gaps in solutions capability, for researching and defining required capabilities, and for assessing their operational effectiveness.

A key requirement for Crisis Management solutions is the capability, under the pressure of multiple incidents, communications disruption and multi-national deployments, to be able to create and share a clear, integrated, dynamically updated Common Operational Picture and to support the most effective deployment of resources and management of emergency responders, including volunteers.

But just buying solutions off the shelf does not necessarily result in operational benefits arising from the adoption of such solutions. The objective of the Trial Guidance Methodology is to provide a more systematic, objective and rigorous framework for identifying needs and selecting and testing solutions.

The lessons learned from the DRIVER+ trials, held in Poland, France, the Netherlands and Austria, are helping Crisis Managers identify proven technologies and approaches for saving lives, protecting communities and caring for volunteers – lessons which were outlined at the DRIVER+ Advanced Crisis Management Conference held on February 19-20 this year and which are contained in the (freely available) DRIVER+ Project Report. www.driver-project.eu

The Project Report flipbook can be opened here: <http://online.fliphtml5.com/zjvxu/kbwq/>

The conference featured Keynote presentations from leading speakers and experts, Trial Reports, Plenaries and specialist demonstrations, as well as a Solutions Marketplace offering access to a wide variety of CM solutions. Many of these had been used throughout the DRIVER+ Trials and are available through the online Portfolio of Solutions. Delegates were also informed of the benefits of joining the Crisis Management Innovation Network Europe – CMINE.

Firefighting in Victoria, Australia, 2020. Human-induced warming has already emerged as an upwards pressure on fire risk in many regions. Wildfire was one of the key focus areas for the DRIVER+ project
Photo: Department of Environment, Land, Water and Planning, State Government of Victoria, Australia



Key project themes, activities and outcomes

Trials

The DRIVER+ approach took as a starting point the fact that there is a strong innovation momentum present in both the technological community and the different user communities in Crisis Management.

This pointed to the need for a better evidence base for Crisis Management capability investment decisions. However, the complexity of CM makes it hard to predict analytically the potential benefits of new solutions and approaches, particularly considering the wide scope of potentially relevant contingencies, and it is even harder doing this in a way that convinces practitioners of the benefits of investing in these solutions.

In this context, a series of four Trials and a Final Demonstration were carried out by the DRIVER+ project team, using the scientifically based Trial Guidance Methodology (TGM) and the Test-bed Technical Infrastructure (TTI) that were developed during the project.

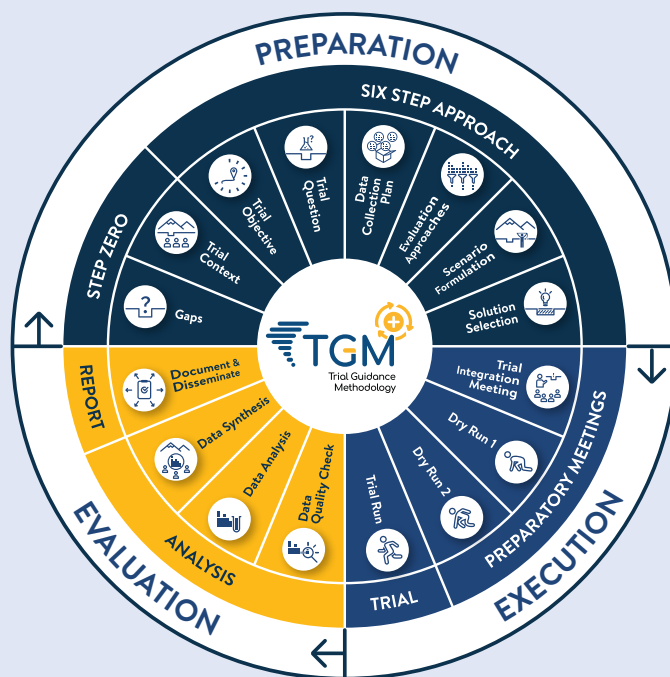
These two-day Trials were held in Poland, France, the Netherlands and Austria, each one using a realistic scenario – a toxic chemical spill, major wildfires, severe flooding and a serious earthquake.

Operational practitioners evaluated a range of innovative technical solutions to see if they would help them to manage an incident better or fill an operational gap they had identified.

Trial Guidance Methodology

The Trial Guidance Methodology (TGM) was designed for CM practitioners who have identified one or more gaps in capability or have in mind solutions that can address these gaps. Before adopting potentially innovative solutions and investing time and money to determine what solutions fit an organisation's requirements best, crisis managers may want to assess them in non-operational contexts (such as a Trial) using a structured approach.

The TGM consists of three clear phases (Preparation, Execution, Evaluation) and distinct steps, which are explained in full in the TGM



The Trial Guidance Methodology consists of three clear phases (Preparation, Execution, Evaluation) and distinct steps, which are explained in full in the TGM Handbook – downloadable off the DRIVER+ website

Handbook and which are illustrated in the Trial Guidance Wheel. It is not a one-size-fits-all methodology, but it will certainly help an organisation setting up a Trial and wanting to ensure there is an objective evaluation of the results.

The Test-bed Technical Infrastructure

The Test-bed Technical Infrastructure (TTI) is a free-of-charge and open source platform developed to create a rich Trial and training environment. The TTI connects innovative solutions both to each other and to legacy systems and enables the exchange of information between them.

The Crisis Management Innovation Network Europe

A shared platform for promoting knowledge sharing and collaboration

The Crisis Management Innovation Network Europe (CMINE) is an open, cooperative and inclusive community of practice for sharing information, experiences, best practice and lessons learned among CM organisations, researchers, industry and policy makers throughout Europe and beyond, building on the achievements of the DRIVER+ project. CMINE 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 by linking existing projects, networks and initiatives. This will reduce fragmentation, generate new ideas, and help to identify innovative solutions to improve European resilience. Find out more and join this community today at <https://www.cmene.eu/>.



Two-day Trials were held in Poland, France, the Netherlands and Austria, simulating a toxic chemical spill, major wildfires, severe flooding and a serious earthquake

The Portfolio of Solutions

Socio-technological solutions are a key and integral part of all Crisis Management responses, and there are many solutions on offer. But how are CM organisations best able to select and assess which solutions are best for them? The Portfolio of Solutions (PoS) is one option. It is an online, open-source and interactive catalogue, which can be used to match a range of solutions with practitioner needs.

Filters such as the crisis cycle phase, innovation stage, crisis type and size can be used to search all the available solutions within the PoS. The Portfolio of Solutions (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.

<https://pos.driver-project.eu/en>

Centres of Expertise

This is a network of organisations that will offer specialist support and training to users of DRIVER+ results and which will help to ensure the sustainability and further development of DRIVER+ project outputs. 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.

Becoming a Centre of Expertise will strengthen an organisation's pioneering position in the Crisis Management and Disaster Risk Reduction ecosystem, both nationally and internationally. Crisis Management organisations are encouraged to learn more about Centres of Expertise and to consider becoming one if it is considered to be of value.

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



The signing of the joint declaration for the Polish Space Research Centre to become a DRIVER+ Centre of Expertise. Signatories: Professor Iwona Stanisławska, Director of the Polish Space Research Centre, and Dr MPW (Marcel) van Berlo, Program Coordinator for the DRIVER+ project

www.driver-project.eu



The Trial Guidance Methodology

How can Crisis Management (CM) organisations assess potentially innovative solutions? What are the most important aspects that should be measured and why?

The Trial Guidance Methodology (TGM) addresses these questions by providing a practical guide so that Crisis Management organisations can follow a structured approach to understanding to what extent socio-technical solutions (such as an app for managing volunteers, a Common Operational Picture (COP) tool or a new training method) can be innovative.

Innovation does not imply an immediate gain: that's why it is important to apply adequate methodological know-how before investing in solutions that may be or may not be needed in specific contexts.

The benefits of having a structured methodological approach clearly emerge in CM trials which have, at their core, the identification and the assessment of solutions through the involvement of several stakeholders (from first responders to solution providers).

The practitioner-driven nature of the TGM, along with co-creation and the robust assessment, are the guiding principles of the trial design. CM practitioners are the key decision makers: the need for a trial, the identification of specific gaps to address, which data should be collected, why and within what scenario, are aspects informed by the knowledge and the experience of the practitioners.

The TGM consists of three phases and provides, for each phase, step-by-step recommendations to guide practitioners from the

preparation until the evaluation of a trial. Detailed explanations are available in the Handbook.

The success of a trial depends on its design, which starts in the preparation phase. It is in this key moment that the gaps are identified, the trial context is defined and an iterative and non-linear six-step approach must be followed.

After having agreed upon the objective of a trial, it is paramount to formulate some questions to generate robust results regarding the added value of solutions. To do this, a structured plan to capture relevant data is needed, as well as evaluation approaches and metrics to analyse the data at the end of the trial. Additionally, realistic scenarios must be developed and solutions to be trialled must be selected.

After having executed the trial, the data collected can be checked and analysed according to the decisions taken in the preparation phase. The dissemination of the results in the wider CM community is an integral part of the evaluation phase.

The Trial Guidance Methodology Handbook can be downloaded here: www.driver-project.eu/trial-guidance-methodology/

