Driving Innovation in Crisis Management for European Resilience

DRIVER+

RESULTATEN, ERVARINGEN EN DEMONSTRATIE TEST-BED

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CCR summit, 09/10/2019, Hoeven, Nederland

OVERVIEW OF SESSION

RESULTATEN, ERVARINGEN EN DEMONSTRATIE

1) Introduction to the results of DRIVER+ (Marcel)
2) Trial The Netherlands (Andre)
3) Demonstration of Test-bed Technical Infrastructure (Erik & Rinze)
4) Q&A

DRIVER+ seeks to improve the way capability development and innovation management are tackled, by assessing and validating (in realistic environments) solutions that are addressing the operational needs of Crisis Management practitioners


Atos
TNO
AUSTRIAN RED CROSS
RESEARCH
GMBH
THALES
ARTTIC
INTERNATIONAL MANAGEMENT SERVICES
EOS
EUROPEAN ORGANISATION FOR SECURITY
DLR
DANISH
RED
CROSS
SGSP
ECORYS
European
Commission
PRIO
EDISOFT
DEFENCE & AEROSPACE TECHNOLOGIES
A THALES Group Company
CBK
FREQUENTIS
HKV
iTTi
e-technologies & business
XVR
PSCEurope
Public Safety Communication Europe
DIN
AIT
AUSTRIAN INSTITUTE
OF TECHNOLOGY
WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER
SDM
ЦМСО
VALABRE
ANTICIPER VOTRE PRÉSENT
VREDE EN RECHT
Den Haag
ARMINES
MAGEN
DAVID
ADOM
IN ISRAEL
מגן דוד
אדום
בישראל
gmv
INNOVATING SOLUTIONS
VERBIS AUT RE
SISEKAITSEAKADEEMIA
ESTONIAN ACADEMY OF SECURITY SCIENCES
Disaster
Waste
Recovery
CITET

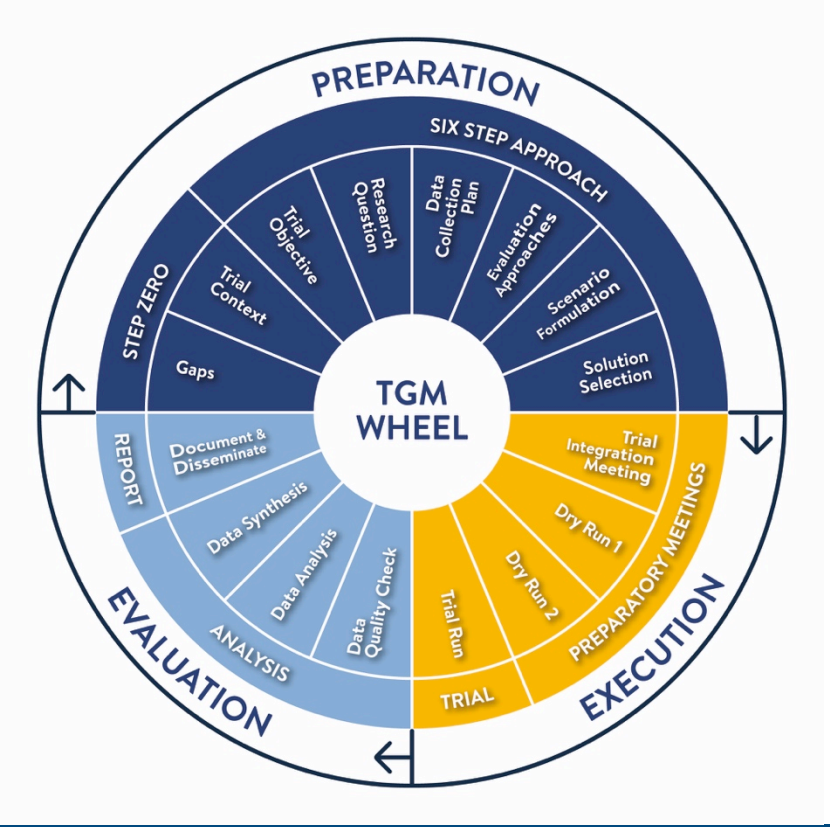
MAIN RESULTS SO FAR

WORK IN PROGRESS

- Trial Guidance Methodology Handbook (and Trial Guidance Tool)
- Test-bed Technical infrastructure
- Training Module
- Portfolio of Solutions
- CMINE – Crisis Management Innovation Network Europe
- Centre of Expertise
- NB: User Workshop 17 Oktober in Brussels

TRIAL GUIDANCE METHODOLOGY

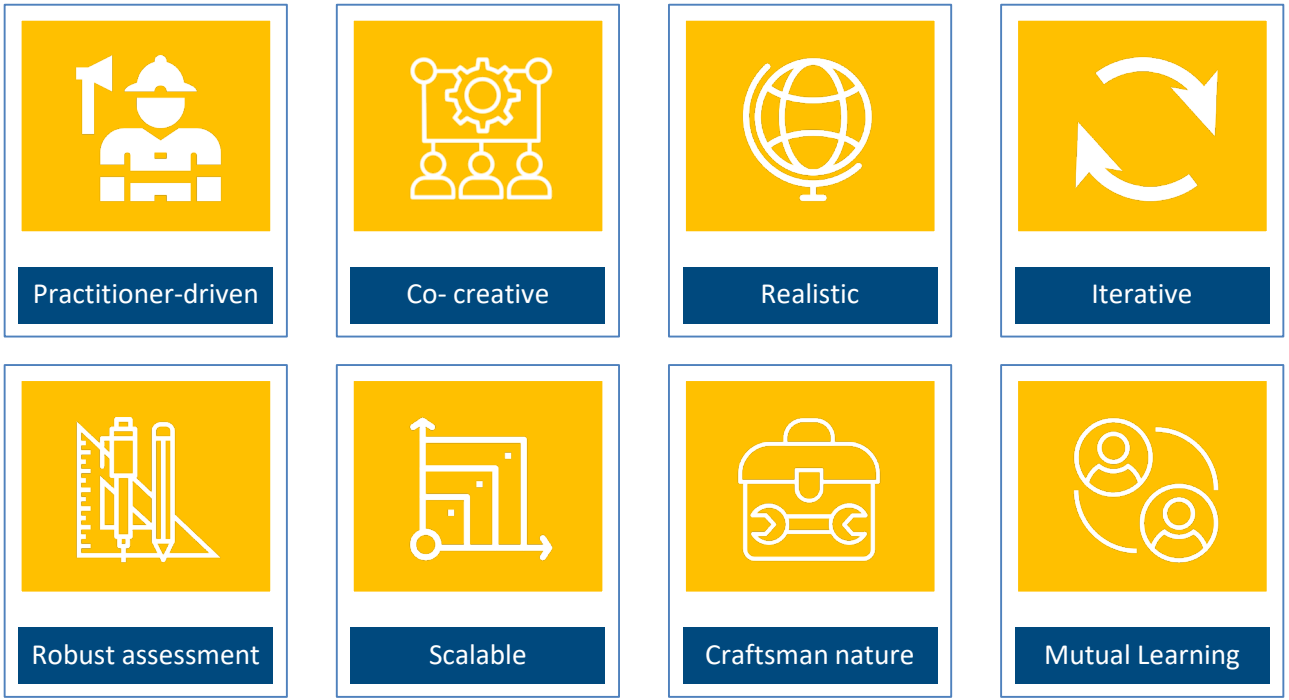
KEY MESSAGE



Practitioner-driven, structured approach (Step-by-step guidelines) to carry out a robust assessment of solutions and their potential impact on the set-up of a Crisis Management organisation

TRIAL GUIDANCE METHODOLOGY (TGM)

A PRAGMATIC AND SYSTEMATIC SUPPORT



PORTFOLIO OF SOLUTIONS

KEY MESSAGE

Open-source and interactive database for CM solutions (online market place) that:

- Provides access to information about available CM solutions (supply) and matches it with practitioner needs (demand)
- Enriches solution descriptions with experiences and lessons identified from practitioners
- Feel free to upload information on solutions yourselves (pos.driver-project.eu/)

OVERVIEW OF SOLUTIONS

PoS Portfolio of Solutions

Crisis Cycle Phase

- ☐ mitigation (14)
- ☐ preparedness (20)
- ☐ recovery (17)
- ☐ response (30)

Innovation stage

- ☐ stage 2 research and developement (1)
- ☐ stage 3 initial piloting (6)
- ☐ stage 4 early adoption distribution (12)
- ☐ stage 5 market growth (8)
- ☐ stage 6 widescale adoption (4)

Crisis size

- ☐ crossborder (18)
- ☐ large scale (16)
- ☐ local (29)
- ☐ regional (28)

Solution of the day:

ICM – Incident & Crisis Management

PDF export

UAV-ASIGN

UAV-ASIGN is a software solution that helps reduce emergency and disaster response time by collecting and sending UAV photos and videos while in-flight even through low or constrained bandwidths.

SOCRATES OC

SOCRATES OC enhances analysis and decision-making capabilities by means of an improved shared situational awareness based on relevant information about the operational situation including crisis events, missions and resources, created by the operator or coming from external sources.

MDA command and Control system

MDA C4I system allows for efficient, real time response to tasks on the field (e.g. people in need for medical assistance), by allocating the site, allocating the resources needed and available, tasking the resources and following up the acomplishment.

3Di - Water Management

3Di is a cloud-based versatile water management instrument that enables flood forecasting and risk mapping. 3Di models are fast, accurate and visual.

LifeX COP

LifeX COP is a web-centric multi-user Solution developed by Frequentis to address the lack of a Common Operational Picture in the field of Crisis Management.

GDACSmobile

GDACSmobile is a support platform for collecting and sharing situational awareness information. It aims to serve two main target groups with different rights and roles: people concerned with disaster relief and the (affected) population itself.

CrowdTasker

CrowdTasker enables crisis managers to instruct large numbers of non-institutional (either spontanoues or pre-registered) volunteers with customizable tasks, contextual information, warnings and alerts, as well as to crowdsource information from them.

Rapid Mapping

DroneRapidMapping enables rapid mapping of incident/crisis area.

CrisisSuite

The main objective of CrisisSuite (online crisis management software) is to enable organisations to successfully manage information during a crisis.

IO-DA

On the one hand, the information about the crisis situation is brought thanks to the use of dedicated modelers: · Partner modeler: This modeler allows the crisis manager to model crisis management stakeholders that can be mobilized in case of crisis situation and their capabilities.

Airborne and Terrestrial Situational Awareness

The solution "**Airborne and Terrestrial Situational Awareness**" is composed of several individual components and tools, which are integrated into a complete system, ready to be deployed in different scenarios.

HumLogSuite

HumLog Suite is a performance assessment platform that serves logistic processes in crisis management. It can operate on both current operational logistics network and fictional (planned) network configurations.

Emergency Mapping Tool (EMT)

EMT faciliates seamless exchange of information for stakeholders in the crisis management.

Debris Tool

The Debris Tool is a software based solution designed to amalgamate various defined inputs from the field, historic survey data and other sources, for the prediction and modelling of waste and debris removal options in a post-crisis environment.

PROTECT

Using the know-how and expertise acquired during the development of the CECIS tool, the PROTECT application is a web-based alert and notification system for emergency (and early warnings) situations concerning civil protection.

Scenario enabled Psychological First Aid (PFA) training

The scenario enabled psychological first aid (PFA) training comprises knowledge on what PFA is, guidelines on how to perform PFA and an experiential training package to build the capacity to deliver quality PFA.

Social Media Analysis Platform

I-REACT

XVR Crisis Media

SE-Star : THALES Crowd

CRISIS MANAGEMENT INNOVATION NETWORK EUROP

KEY MESSAGE

Community of Practice with the aim to:

- LinkedIn for Crisis Management Innovation in Europe ('One-stop shop')
- Foster innovation through multi-stakeholder and cross-sectoral interaction
- Contribute to an enhanced understanding of CM in Europe

TRIALS + FINAL DEMO

Five events to operationalise and test both the solutions and the Test-bed components

1. Poland – Toxic mud flood (May 2018)
2. France – Forest fire (October 2018)
3. The Netherlands – Flooding (May 2019)
4. Austria – Earthquake (September 2019)
5. Poland and the Netherlands – Multi hazard (November 2019)

Based on updated Crisis Management gaps and practitioner needs

Benefiting from the DRIVER+ Test-bed components

Testing the potential benefits of DRIVER+ Solutions and Test-bed at EU-level

All results to be made available in the Portfolio of Solutions

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TRIAL 'THE NETHERLANDS'

22+23 MAY 2019

Andre de Rond, THG/SRH

CCR summit, 09/10/2019, Hoeven, Nederland

TRIAL PROGRESS

March 2018
Gaps assessment workshop

May - July 2018
Open Call for Applications

August –September 2018
Double Blind Solution Review +
Solution Demonstration Days

November 2018
Trial Workshop 0

November 2018
Trial Integration Meeting (TIM)

February 2019
Dry-run 1
Technical run

April 2019
Dry-run 2
Full rehearsal

22-23 May 2019
Trial execution

July 2019
Lessons learnt Workshop

May – September 2019
Trial evaluation

2018 2019

Gap definition | Solution Selection | Baseline process description | Scenario development & verification | Trial rehearsal, execution & feedback

Practitioner Workshops

SELECTED GAPS

PRIORITIZED THROUGH PRACTIONER WORKSHOPS

Gap 1 - Objective: Enhance capability to plan/coordinate resources for large-scale/long-term events.

Gap 2 - Objective: Improve ability to exchange crisis-related information among agencies and organizations.

Gap 3 - Objective: Facilitate planning and management of large scale evacuation in urban areas.

TRIALED SOLUTIONS

SELECTED THROUGH DOUBLE BLIND REVIEW & SOLUTION DEMONSTRATION

	INNOVATIVE SOLUTIONS					
	3Di A state-of-the-art hydrodynamic simulation software for pluvial, fluvial and coastal floods	**ZKI** Up-to-date situational awareness information such as satellite or aerial imagery as well as geo data	**Keep Operational** Provides information about the current traffic situation and routes regarding the flood information	**CrisisSuite** Provides a Common Operational Picture for those Crisis Teams not having direct access to LCMS	**HumLog** An adaptable simulation environment for discrete event-based and agent-based simulations	**SIM-CI** Creates digital visualisation of the disaster, showing cascading effects on critical infrastructure and utility networks
GAP 1: Long-term planning of resources	X				X	X
GAP 2: Extending information exchange	X	X		X		X
GAP 3: Managing large-scale evacuation	X		X		X	X

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THE NETHERLANDS TRIAL

21-23 MAY 2019

FLOOD SCENARIO IN THE HAGUE

Severe weather conditions cause the Scheveningen lock to fail, flooding The Hague city centre, putting more than 500,000 people at risk. Cascade effects will be loss of electricity, gas, drinking water, telecoms networks and damage to roads, houses, cars, shops, tramlines...

PHASE 1: THREAT

Serious flood risk: The Safety Region prepares for evacuation (routes, shelters, organisations), protects vital infrastructure and strengthens weak spots.

PHASE 2: IMPACT

Severe inundation: The Safety Region coordinates emergency response and rescue operation; plans for evacuation of trapped people in flood areas.

TRIAL SET-UP

TWO DAYS – FOUR BLOCKS

Trial Day	Phase	Simulation time	Block	Objective of Block
1	1. Threat	- 48 h	1: Cascade effects	▪ Assessment of 3 areas (The Hague City Center, Wateringse Veld & Leidscheveen) and cascade effects
1		-24 h	2: Evacuation	▪ Assessment of evacuation strategy, actions / measures for one area expected to be flooded (The Hague City Center)
2	2. Impact	+24 h	3: Damage assessment	▪ Assessment of damage in the flooded area (The Hague City Center) and mitigation measures
2		+ 48 h	4: Damage control	▪ Answering questions of International Organizations, planning personnel police, mitigation measures

TRIAL PARTICIPANTS

17
Trial Committee Members

38
Practitioners

16
Observers

13
Solution Providers

16
Trial Support Staff

8
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Consortium Members

37
Visiting Guests

TRIAL IMPRESSIONS

...IN 3 – 2 – 1 ... ENJOY!

VIDEO

TRIAL THE NETHERLANDS

FEEDBACK

FROM CM PRACTITIONERS

» It was good to be here; good to discussions with the solution providers. Some adjustments of the solutions are necessary, but then it could be really helpful. «

» Nice to meet and work together with the different disciplines, get to know people from different places. «

» Nice atmosphere! «

» Positive signs to be here. «

» It was a success! «

» Entire day: good day, interest scenario; very complex, in reality it takes much more time. «

» Loved the movies! «

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TEST-BED TECHNICAL INFRASTRUCTURE

DEMONSTRATIE

Erik Vullings (TNO), Rinze Bruining (TNO)

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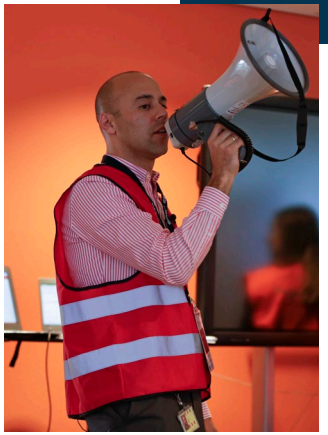
THANK YOU.
ANY QUESTION?



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