Driving Innovation in Crisis Management for European Resilience

DRIVER+ MAIN RESULTS (SO FAR)

TOWARDS A PAN-EUROPEAN APPROACH TO CAPABILITY DEVELOPMENT

Marcel van Berlo, TNO

15/5/2019, Barcelona, Spain (FIRE-IN dissemination workshop)


Atos


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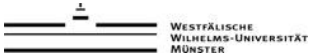
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gmv
INNOVATING SOLUTIONS


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Disaster
Waste
Recovery


CITET

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

THE OBJECTIVES OF DRIVER+

To develop **a pan-European Test-bed** for Crisis Management capability development

To develop a comprehensive **Portfolio of Crisis Management Solutions**

To facilitate a **shared understanding** in Crisis Management across Europe

MAIN RESULTS SO FAR

WORK IN PROGRESS

- Pan-European Test-bed:
  - Trial Guidance Methodology Handbook (and Trial Guidance Tool)
  - Technical infrastructure
  - Training Module
- Portfolio of Solutions
- CMINE – Crisis Management Innovation Network Europe
- CoE – Centre of Expertise

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 – Flood and power outage (May 2019)
4. Austria – Earthquake (September 2019)
5. Italy and Poland (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

TRIAL GUIDANCE METHODOLOGY (TGM)

A PRAGMATIC AND SYSTEMATIC SUPPORT

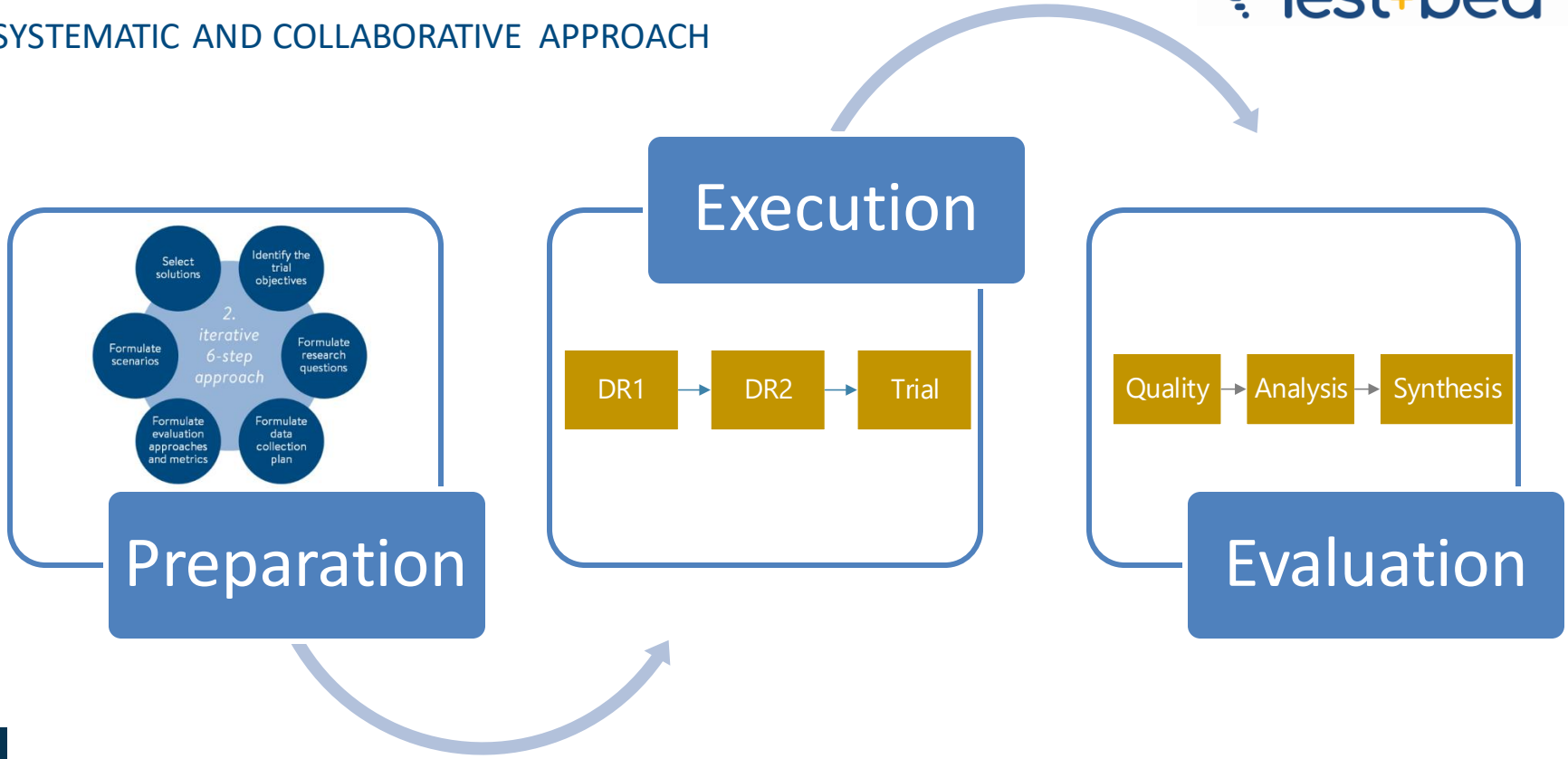
TRIAL → Find out **if and how** some **innovative solutions** can help resolve the **needs of the CM practitioners**

GUIDANCE → **Enable practitioners** to set up a Trial

METHODOLOGY → Create a step-by-step process that enables to carry out a Trial in a **systematic yet pragmatic way**.

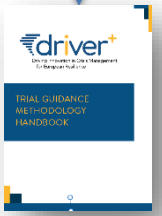
PHASES OF THE TRIAL GUIDANCE METHODOLOGY

SYSTEMATIC AND COLLABORATIVE APPROACH



First Version

Final Version



The Netherlands

Austria

Italy-Poland

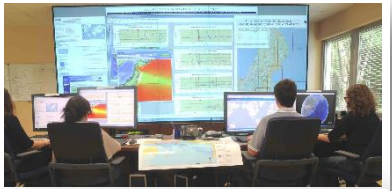
Dec 2018

May 2019

Sept 2019

Oct 2019

Nov 2019



SIGN UP TO DOWNLOAD THE TRIAL GUIDANCE METHODOLOGY HANDBOOK

rescEU: A stronger collective European response to disasters

PROTECTING CITIZENS IN TIMES OF NEED

TRIAL GUIDANCE TOOL

Book navigation

- TGT Tutorials
- Trial Guidance Methodology
- Trial preparation
- Analysis Technique - Example
- CM Gaps selection - Example
- Formulate Scenario - Examples
- Research Question - Example
- Solution Selection Example
- Trial Objectives - Example

PREPARATION

Trial preparation step

EXECUTION

Trial execution step

The preparation of each Trial starts with defining the trial context, which refers to who, what, why and how. Within the GT, the very first step is to add a new "Trial Group" and invite the initial Trial Team to join this group. Trial Groups are virtual working spaces for organising trials. They allow the Trial Owner to organise a team and assign different roles and responsibilities to team members.

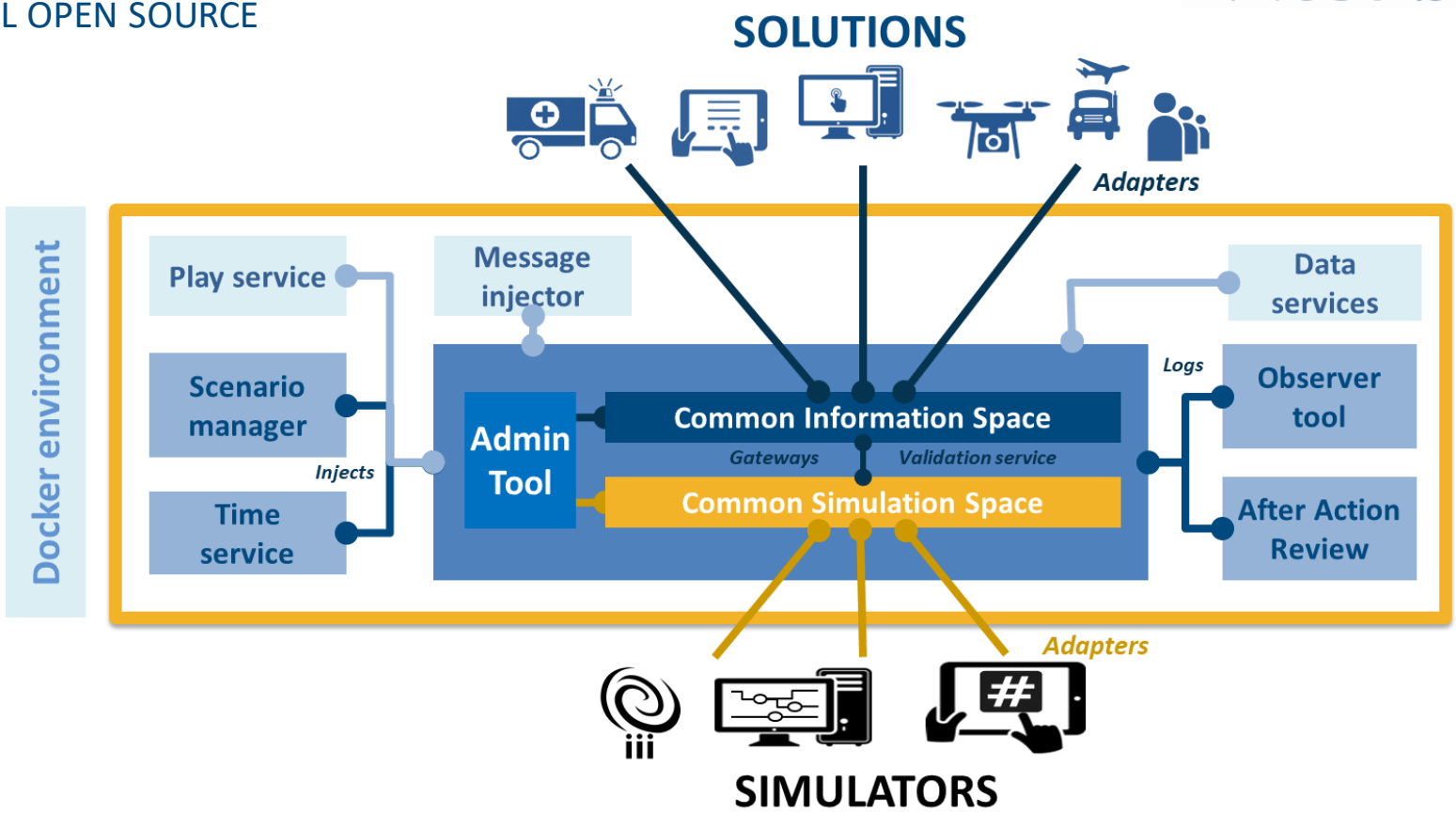
The starting point for designing the trial is to indicates which of the generic CM gaps the trial is going to address, followed by defining of the Trial Objectives, formulating the Research Questions, discovering and pre-assessing the potential solutions etc.. GT assures that this work proceeded in line with the TGM 6-step methodology, as illustrated below:

Trial Context > Trial Team > Relation to Gaps > Trial Design (6-step approach)

TGM defines this 6-step approach as *iterative* process, where steps in the process are iterated as many times as needed, until they reach the quality level that is deemed sufficient by the trial owners and their teams.

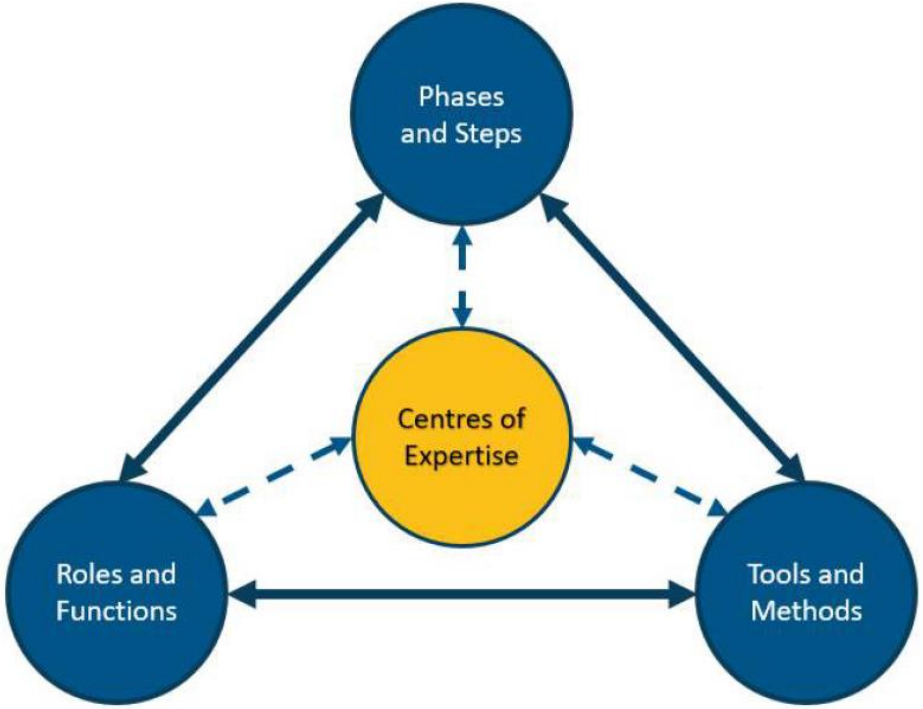
TECHNICAL TEST-BED INFRASTRUCTURE

ALL OPEN SOURCE



TRAINING MODULE

BOTH E-LEARNING AND CONTACT PHASE



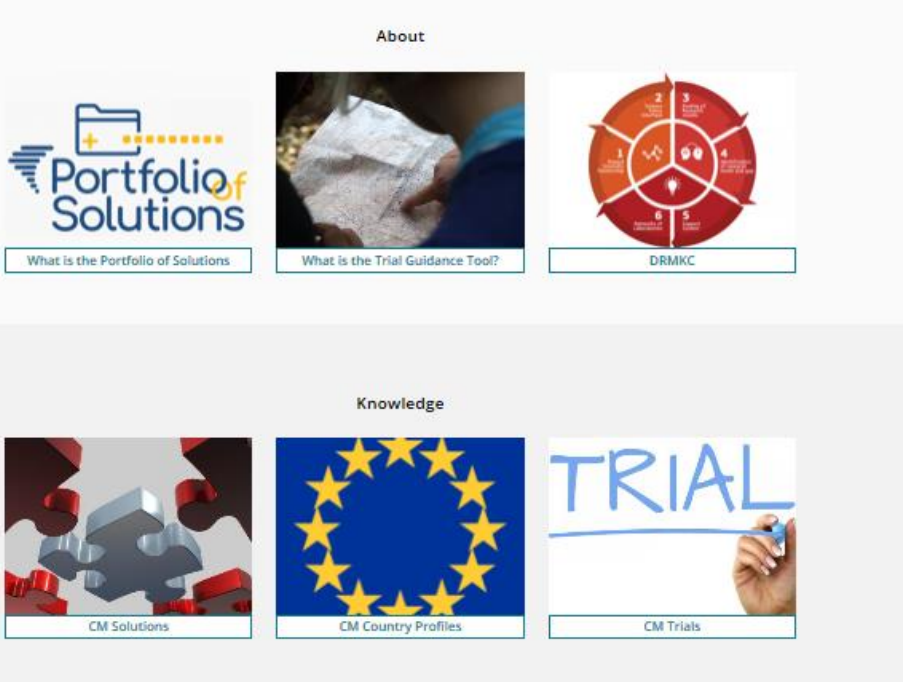
Various didactics:

- Slides with voice-over
- Video lectures
- Quizzes
- Animations
- Videos
- Take-home assignments
- Group work

PORTFOLIO OF SOLUTIONS

A CENTRAL REPOSITORY TO SHARE INFORMATION ABOUT INNOVATION

- An on-line, open source database with existing and emerging solutions,
- Linked to CM functions and practitioner needs
- Containing not only product information, but also experiences and lessons identified from practitioners after conducting Trials
- **Feel free to upload information on solutions yourselves (pos.driver-project.eu/)**



OVERVIEW OF SOLUTIONS

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

PORTFOLIO OF SOLUTIONS

FILTERING DEPENDING ON YOUR NEEDS

CRISIS MANAGEMENT INNOVATION NETWORK EUROPE

CMINE AIMS TO…

CMiNE
Crisis Management Innovation Network Europe

Currently three Themes:

- Wildfires
- Floods
- Volunteer management

Major update: mid-June

4CM
Innovation for Crisis Management

CENTRE OF EXPERTISE (CoE)

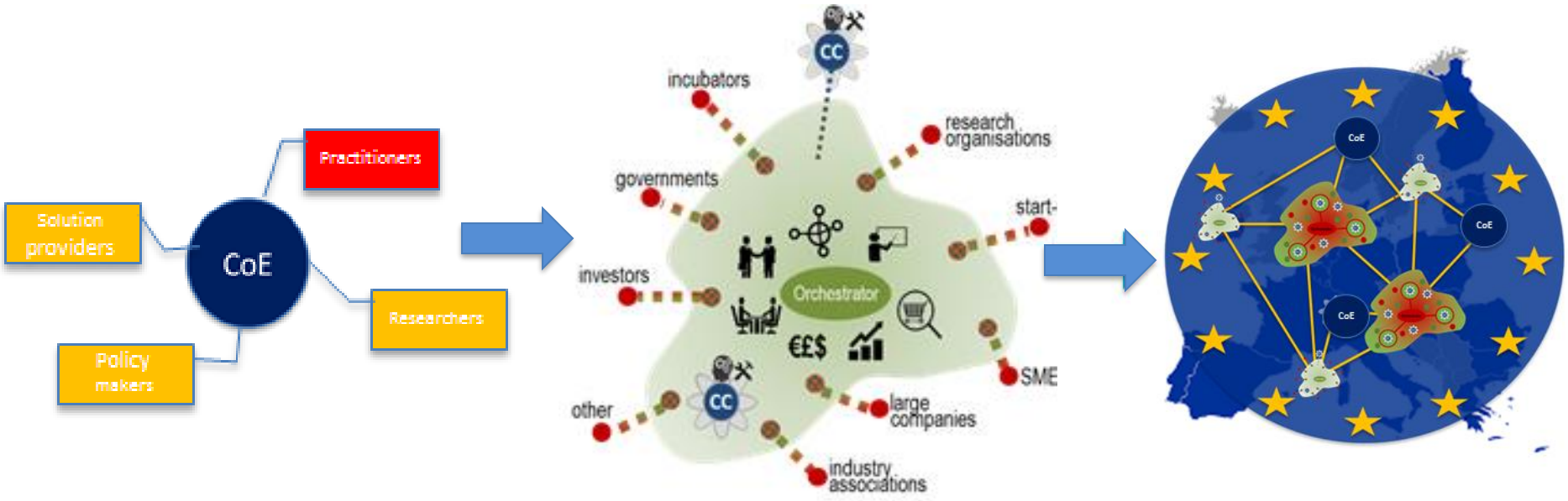
SERVICE PROVIDERS FOR CAPABILITY DEVELOPMENT

- A Centre of Expertise has the knowledge, expertise and facilities to design Trials, create realistic Trial environments using the Test-bed infrastructure, and to evaluate Trials.
- CoE has good connections with solution providers, researchers and policy makers
- Within the CoE, training modules and handbooks are developed and training courses, both on-line and face-to-face, are organised.
- The CoE inventories the experiences with all components (i.e. infrastructure, methodologies, tools, handbooks, Portfolio of Solutions, etc) and is responsible for maintaining the quality and upgrading the services.
- Ambition is to create a pan-European network of CoEs

- Development of a CoE toolkit supporting organisations, after the project, to take all steps in becoming a CoE

THE PAN-EUROPEAN DIMENSION

NEED FOR AN EUROPEAN MULTI-STAKEHOLDER NETWORK



THE I4CM EVENT: 12-13 JUNE, COPENHAGEN, DENMARK

REGISTRATION IS STILL OPEN!

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