



Modelling crisis management for improved action and preparedness

Modelling crisis management for improved action and preparedness (CRISMA)

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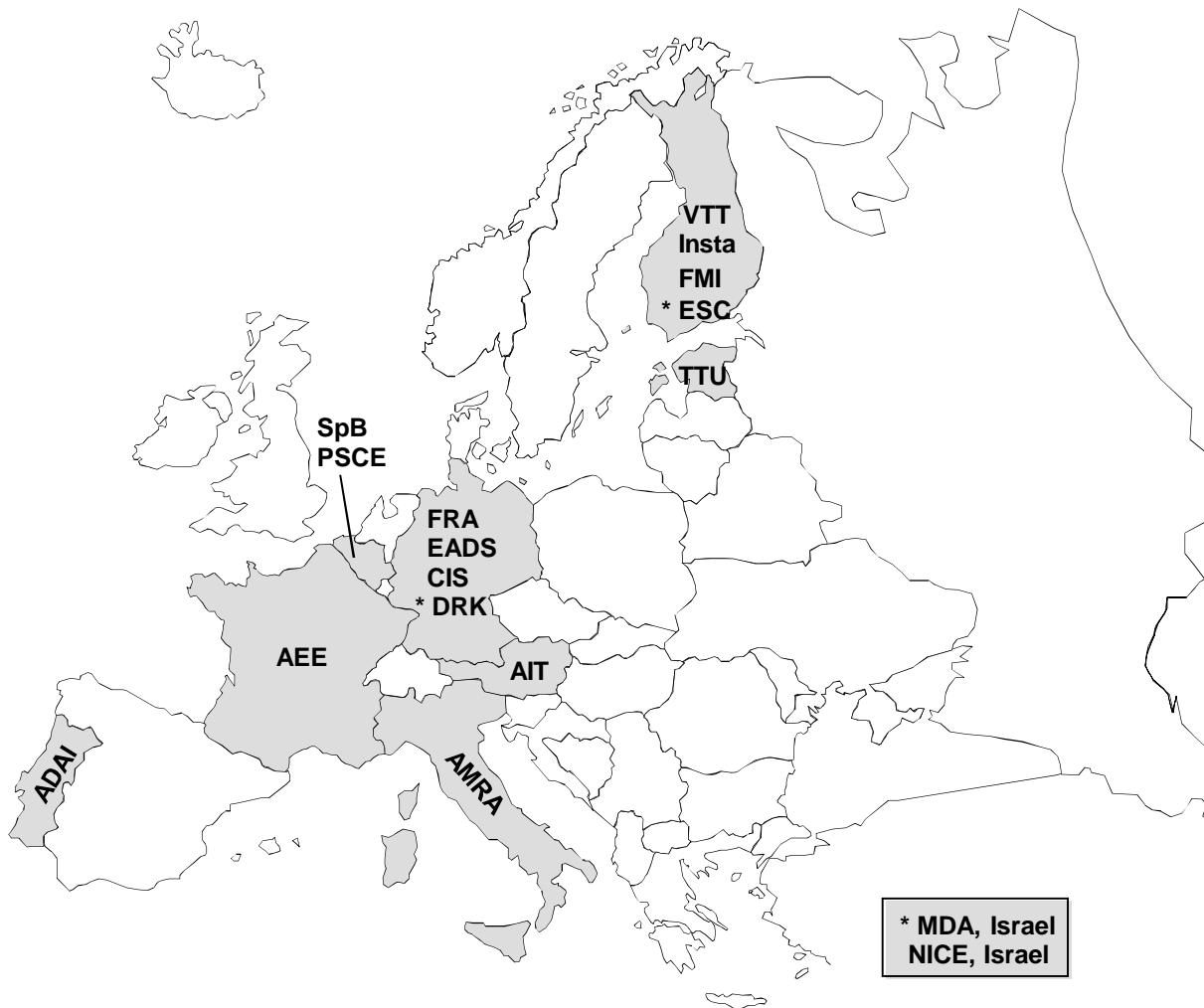


This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 284552 "CRISMA"

CRISMA project in a nut shell

- An EU's Integration Project funded in EU FP7 Security Programme
- Started 1st March 2012, and ends 30th August 2015
- 17 partners in 9 countries
- Coordinated by VTT, Finland
- Web-pages: www.crismaproject.eu
- Contacts: Dr Anna-Mari Heikkilä (VTT) - crisma.coordinator@vtt.fi

CRISMA Participants



VTT	Teknologian Tutkimuskeskus VTT, Finland
FRA	Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V., Germany
AMRA	Analisi e Monitoraggio del Rischio Ambientale, Italy
AIT	AIT Austrian Institute of Technology GmbH., Austria
ADAI	Association for the Development of Industrial Aerodynamics, Portugal
TTU	Tallinna Tehnikaulikool, Tallinn University of Technology, Estonia
NICE	NICE Systems Ltd, Israel
AEE	ARTELIA Eau & Environnement, France
EADS	European Aeronautics Defence and Space Company – CASSIDIAN Division, Germany
INS	Insta DefSec, Finland
SpB	Spacebel S.A, Belgium
CIS	Cismet GmbH, Germany
ESC	Pelastusopisto, The Emergency Services College, Finland
MDA	Magen David Adom, Israel
PSCE	Public Safety Communication Europe Forum, Belgium
FMI	Ilmatieteen laitos, Finnish Meteorological Institute, Finland
DRK	Deutsches Rotes Kreuz, Germany

CRISMA End-user Advisory Board

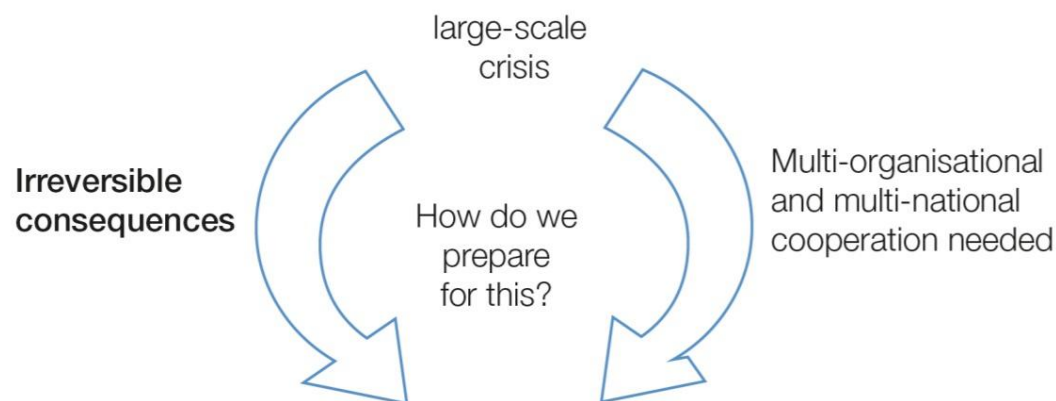
- *Ms Leena Ahonen*, Senior Safety Engineer, TUKES (Safety Technology Authority in Finland)
- *Mr K. Harald Drager*, President of the International Emergency Managements Society (TIEMS)
- *Mr Siegfried Jachs*, Head of Unit II/4/a, Disaster Management, Civil Protection, at Federal Ministry of the Interior in Austria
- *Mr Kjell Larsson*, Senior Advisor, Swedish Civil Contingencies Agency
- *Mr Heiko Werner*, Bundesanstalt Technisches Hilfswerk (HTW), Head of department E1 – Strategie
- *Dr Raul Savimaa*, Estonian Police Board

CRISMA Scope

CRISMA Objectives

Expected outcome

CRISMA Vision

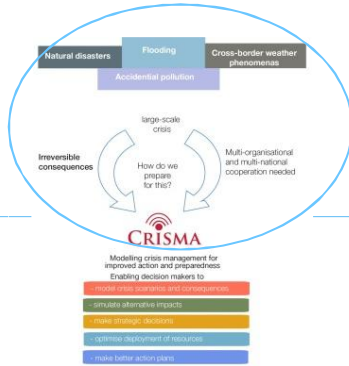


Modelling crisis management for improved action and preparedness

Enabling decision makers to

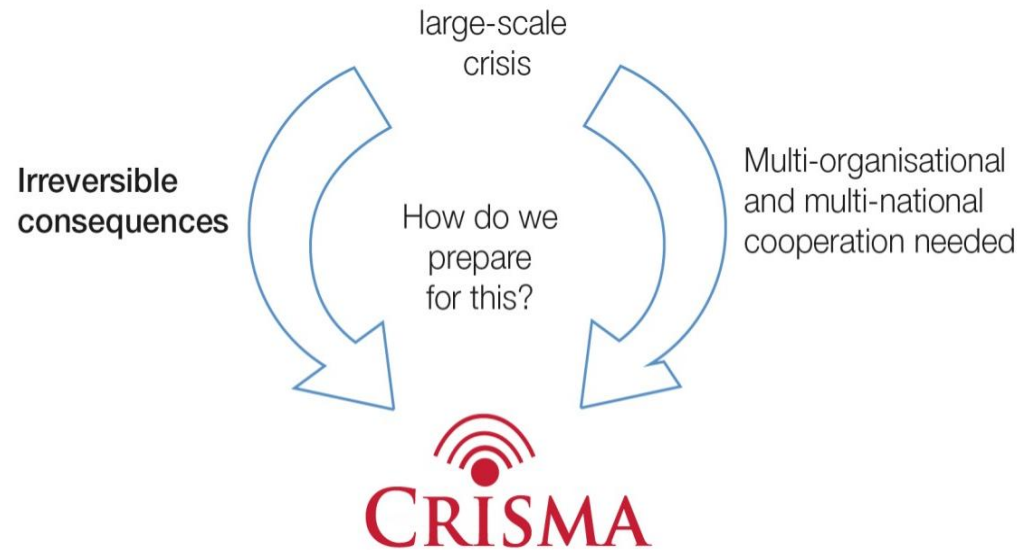
- model crisis scenarios and consequences
- simulate alternative impacts
- make strategic decisions
- optimise deployment of resources
- make better action plans

CRISMA Vision 1/2

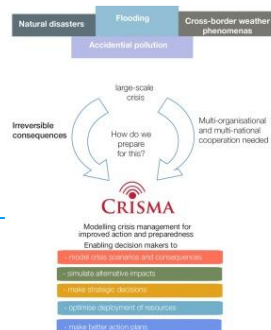


To support crisis managers and other stakeholders in planning activities related to large scale crisis.

These crisis typically surpass the capacity of the local crisis management and may have significant cascaded and side-effects.



CRISMA Vision 2/2



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Enabling decision makers to

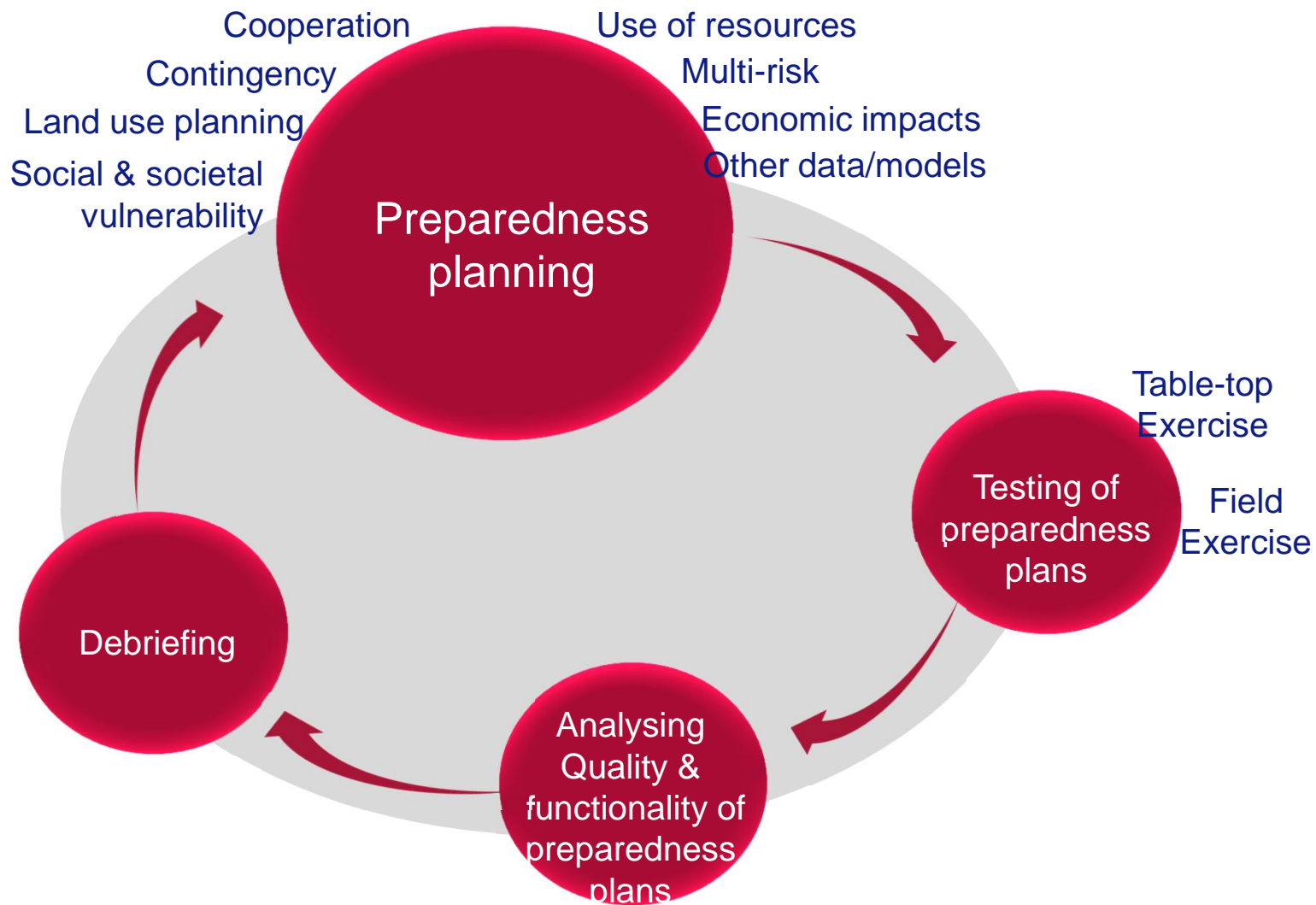
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CRISMA Scope

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CRISMA purpose of use

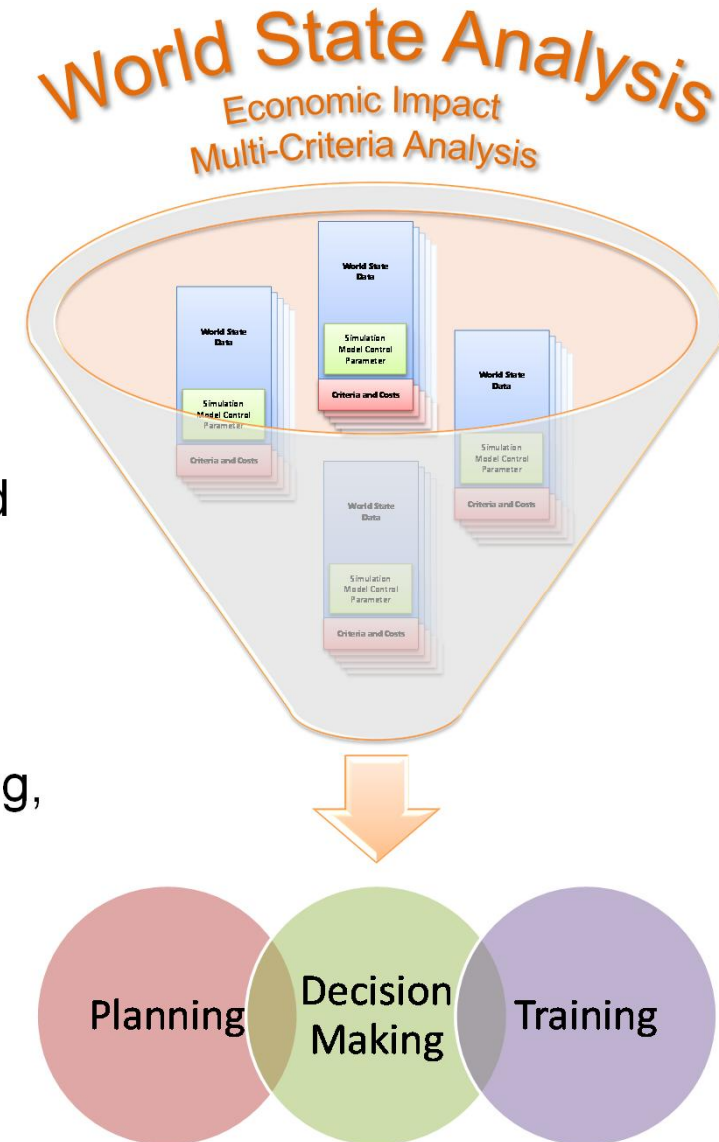


CRISMA objectives

- CRISMA shall :
 - (1) model possible multi-sectoral crisis scenarios and assess the consequences of an incident,
 - (2) simulate possible impacts resulting from alternative actions,
 - (3) support strategic decisions on capabilities, related investments, reserves and inventories,
 - (4) optimise the deployment of resources dedicated to crisis response in-line with the evolvement of a crisis, and
 - (5) to improve action plans for the preparedness and response phases of the crisis management.

CRISMA approach

- A framework to build integrated modelling and simulation systems
- CRISMA facilitates simulation and modelling of
 - realistic crisis management scenarios;
 - possible response actions; and
 - the impacts of crisis, depending on crisis evolution and various crisis management actions.
- CRISMA will support
 - multi-organisational short and long term strategic planning,
 - impact evaluation of e.g. investment options,
 - improving multi-organisational cooperation, and
 - more flexible training.

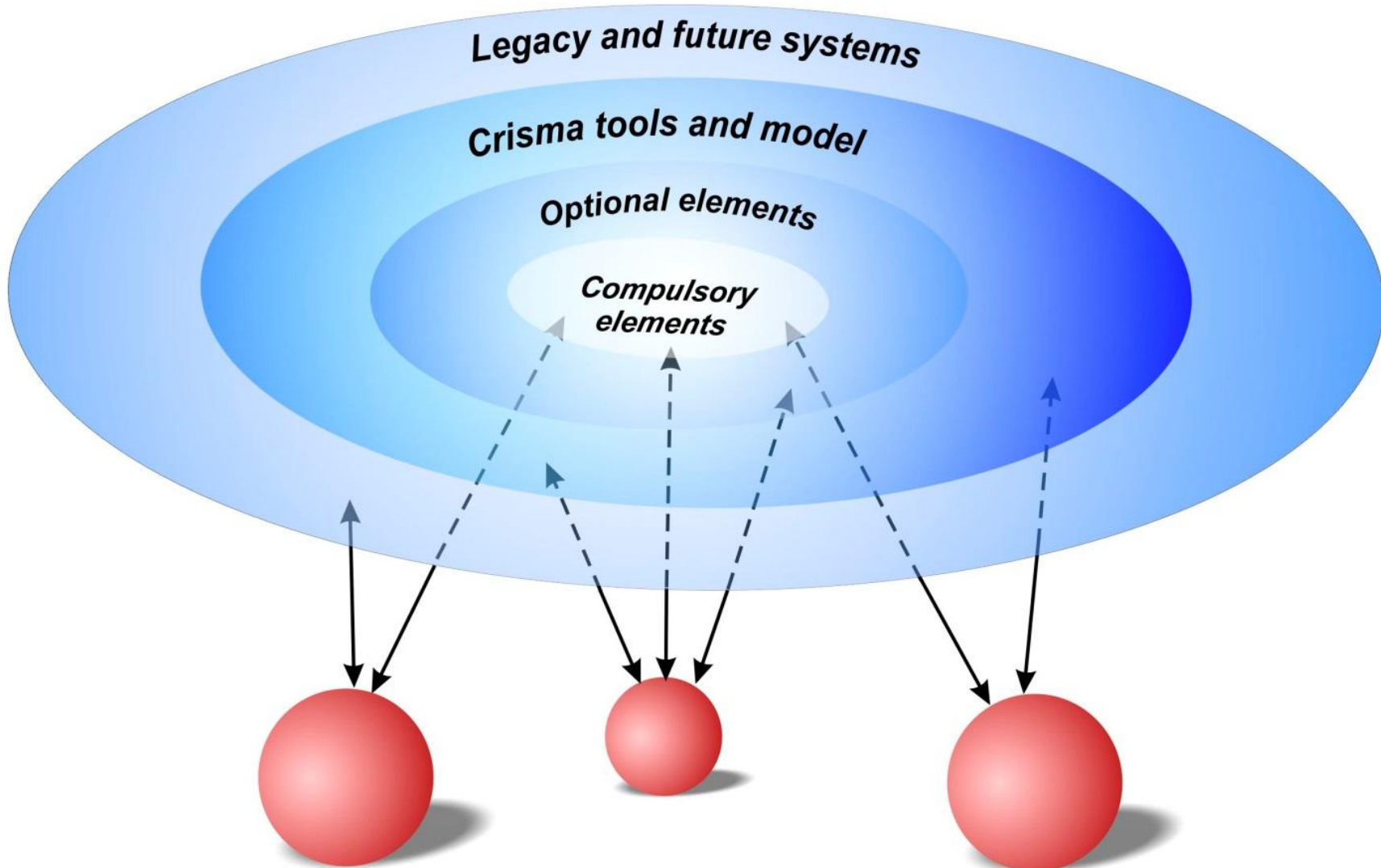


CRISMA Scope

CRISMA Objectives

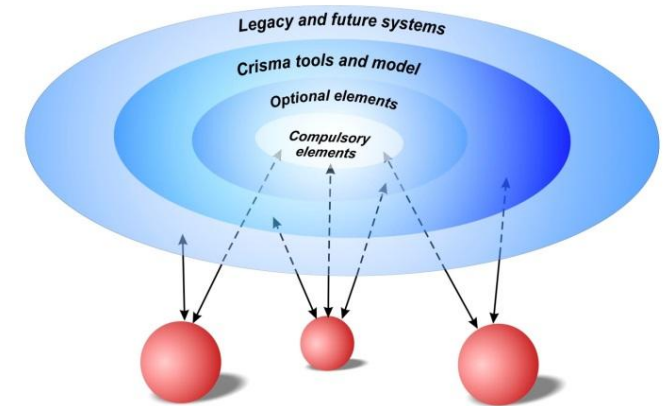
Expected outcome

CRISMA common structure



CRISMA common structure

- Combine the existing models and tools to foresee the evolution and consequences of specific hazards and the planning of the response.
- Cover the evolution of large-scale incidents by integrating existing models in this area.
- Enable integrating the future models and tools for better understanding of new hazards and scenarios.
- Enable the use of existing user interfaces but also provides a CRISMA user interface.



Main model types developed in CRISMA



RESOURCES MANAGEMENT



CASCADE EFFECTS



ECONOMIC IMPACTS



TIME DEPENDENT VULNERABILITY

CRISMA Test cases

- Pilot A : Northern winter storm with cross-border effects (Finland)
- Pilot B : Coastal Submersion – Charente-Maritime (France)
- Pilot C : Accidental Pollution – Ashod (Israel)
- Pilot D : Geophysical Hazards – L’Aquila (Italy)
- Pilot E : Mass casualty incident (Germany)

Thank You!

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