# PARATUS

**Increasing Preparedness and Resilience of European Communities by Co-Developing Services Using Dynamic Systemic Risk Assessment**
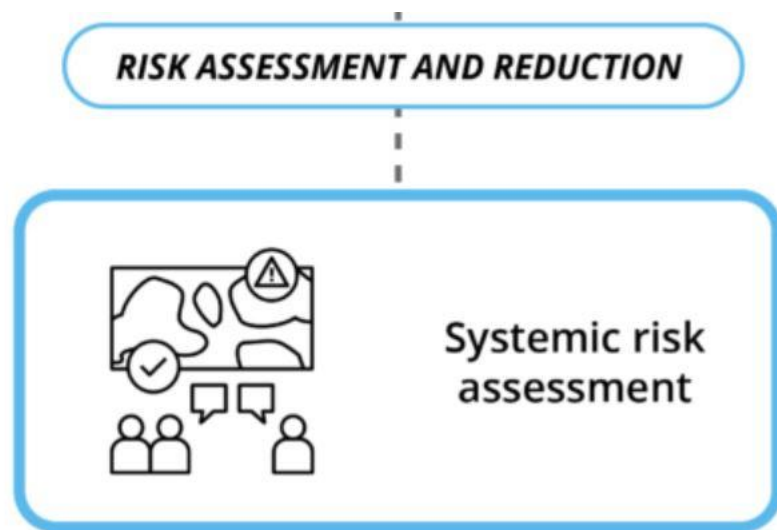
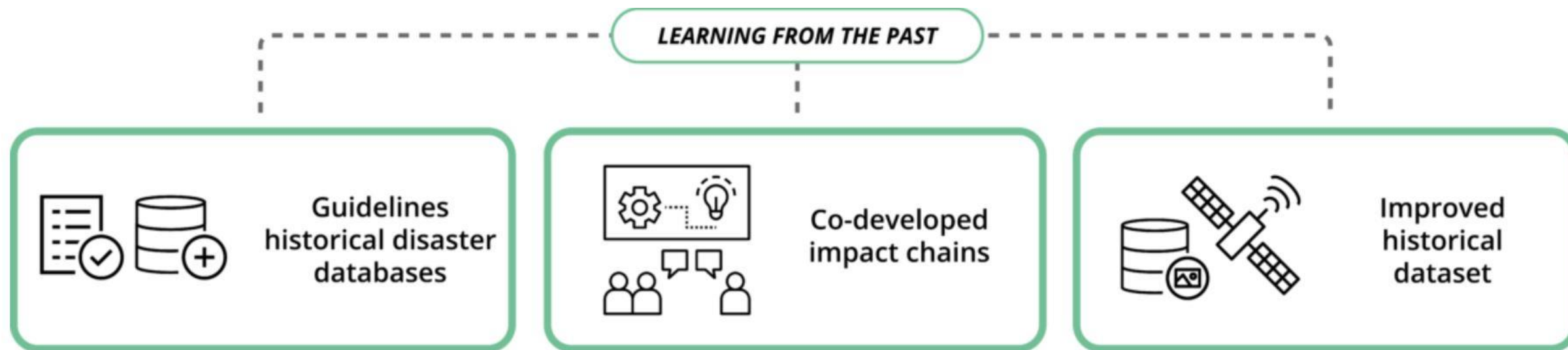Funda Atun & Cees van Westen

# OUTCOME: User Centred Risk Assessment and Mitigation Service



RISK ASSESSMENT AND REDUCTION
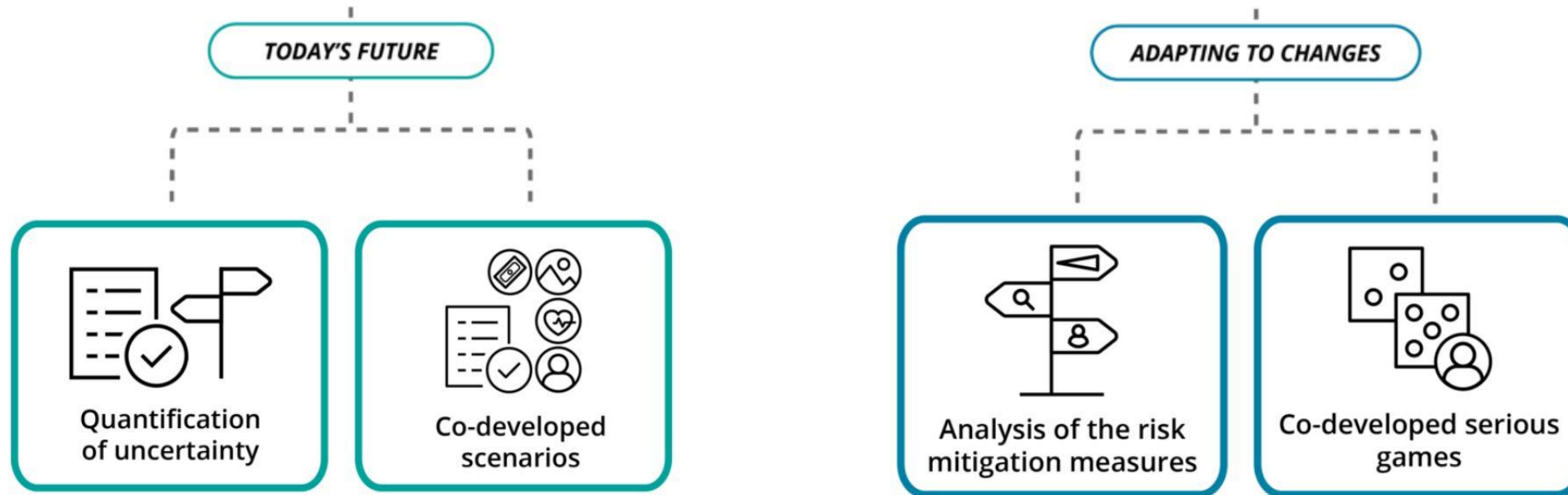
Systemic risk assessment

**An open, online and user-centred platform for systemic risk assessment**, **co-developed** with various stakeholders and addressing changes in the risk drivers in physical, socio-economic, and natural environments.

# Would future events echo the past ones in highly dynamic environments?



1) Design of **multi-hazard impact chains** and definition of the quantifiable components.

2) **Dynamic modelling** of exposure, hazard and vulnerability data tailored **to the specific user**

**3) Co-development** of **future scenarios** based on changes in causes (climate change, land use, socio-economic changes).
**4) Co-development** of **planning alternatives** and selection of optimal risk reduction options.

# OUTCOME: User Centred Risk Assessment and Mitigation Service

What do the stakeholders consider relevant?
Can the output serve very different needs?

What will be simulated? Hazards? Impacts? Direct? Indirect?

Also information on mitigation/adaptation options

Co-development of a web-based simulation and information service for first and second responders and other stakeholders to evaluate the impact chains of multi-hazard events with particular emphasis on cross-border and cascading impacts.

Work out the impact chains together with stakeholders
Determine what determined the various components.
Which ones can be quantified?

What is a service? A platform? A hub?
A website with information? A calculation tool?

## Significance

Risk management policy decisions

- based on a static view of risks;
- do not take into account the continuous and sometimes rapid changes in the drivers of risk and so may underestimate risk.

PARATUS will support authorities from Europe and beyond in developing **more adequate and efficient policies**. By promoting policies that reduce risk and avoiding maladaptive actions that increase risk, PARATUS can **also positively influence the risk environment of the future.**

Co-development, co-design and co-evaluation in four Application Case Studies (Istanbul, Bucharest, Alps, and Caribbean Islands)
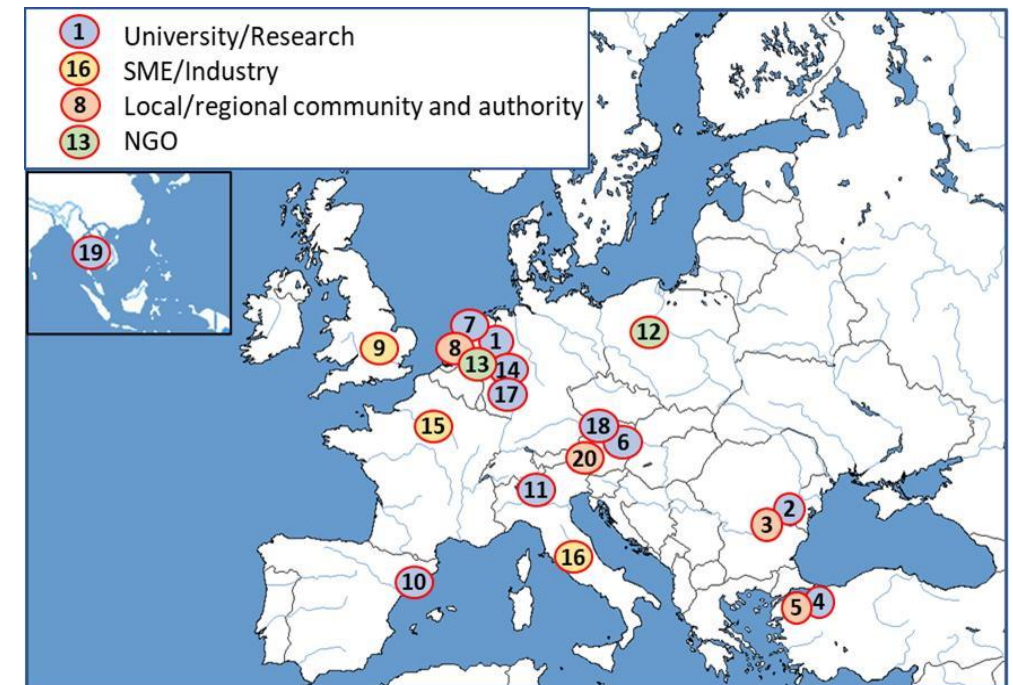
**10 Universities and research centers**, providing the science components;

**3 SME/industry partners** that focus on the project management issue and the uptake of the results;

**4 Local or regional communities and authorities**, that are the main stakeholders for this project;

**2 Non-governmental organizations**, working in humanitarian related activities, such as the Red Cross;

and the support of the UN University, functioning as a bridge between the international academic community and the United Nations system.

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Legend:
① University/Research
⑯ SME/Industry
⑧ Local/regional community and authority
⑬ NGO

# Application Case Study Areas



- Istanbul (Megacity)
- Bucharest (Medium size European City)
- Alps (Brenner Corridor between Italy and Austria)
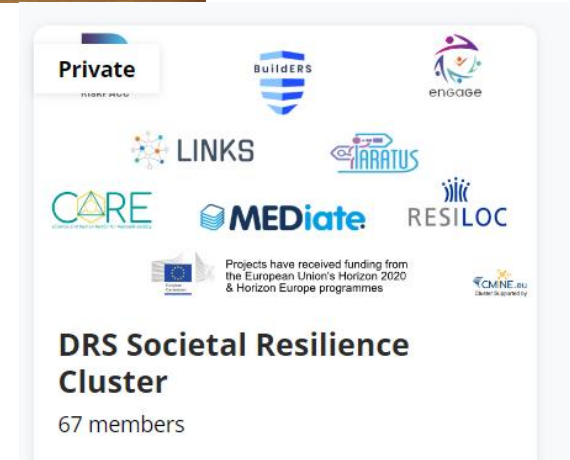- Caribbean Island

# Action Impact Objectives

Improved technical policy measures and implementation of recommended actions

Building a community of users that supports the project as users, co-designers & co-owners of its results.

Towards a less fragmented technological landscape

# SHH and STEM

- Why and when did you include SSH researchers?

- Who started the collaboration (SSH or STEM)?

- How did you find SSH researchers to be involved in the proposal?

- What is the SSH researcher's role in the proposal?

- How is the collaboration between STEM and SSH going ?

-  Are there any challenges? If so, what strategies have been put in place to overcome them?

https://www.paratus-project.eu/



Contact us to join our stakeholder hubs and register our newsletter!



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