

POLICY RESEARCH DIALOGUE ROUNDTABLE 1 -

Position paper on a pan-European trial and validation framework to support Disaster Risk Reduction

Context

Adopting the Sendai Framework for Disaster Risk Reduction 2015-2030¹ showed a clear shift from managing disasters to managing the underlying risks. It clearly recognised the strong role that the scientific community can play in an improved understanding of risk and communicating about new knowledge and innovations, and it stimulated the launch of the Disaster Risk Management Knowledge Centre² as a contribution to the Science and Technology Roadmap of the EU. With the new rescEU policy framework recently entering into force³, new ways of collaboration, decision-making, information exchange and of allocating responsibilities will need to be established. In order to share identified lessons, these emerging needs have to be tackled in a harmonised way.

In the past years EU research and innovation projects have delivered extensive results. However, no possibilities exist to assess and compare thoroughly whether the outcomes actually provide valid contributions for the capability development of practitioner organisations that they target. Furthermore, a thorough understanding is often lacking concerning the extent to which the outcomes actually address the defined policy demands. Although some initiatives have been adopted^{4,5} there is still the need to further strengthen the policy-research dialogue on research and demonstration activities in the field of Disaster Risk Reduction and Crisis Management.

For this purpose, DRIVER+ project⁶ organised a Policy-Research Dialogue Roundtable (PRDR) in Brussels on 28th February 2019 to explore how a pan-European approach to capability development and innovation management could be supported through a common trial and validation framework that ensures comparability and improves the uptake of results stemming from EU-funded research and capacity building projects.

¹ <https://www.unisdr.org/we/coordinate/sendai-framework>

² <https://drmkc.jrc.ec.europa.eu/>

³ Decision (EU) 2019/420 of the European Parliament and of the Council of 13 March 2019 amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism

⁴ <https://drmkc.jrc.ec.europa.eu/knowledge/Projects-Explorer#project-explorer/631/projects/list>

⁵ https://ec.europa.eu/info/sites/info/files/181116_booklet-forest-fire-hd.pdf

The discussion was structured around three main questions:

- How to best facilitate an innovation eco-system in the DRR and CM area, in the context of emerging networks of crisis management practitioners and innovation clusters and relevant knowledge networks?
- What would be the requirements for a better exchange of information and results from research projects dealing with solution development, trialling and validation in order to develop a shared understanding regarding basic requirements and core elements, pertaining to a prospective pan-European trial and validation framework resulting in policy-relevant recommendations?
- What would be the requirements to introduce a pan-European trial and validation framework stemming from European funded security research and innovation actions into the currently ongoing research programming of Horizon Europe and/or capacity building projects?

Recommendations

From the debate which took place among the PRDR participants, five key recommendations were identified and framed by the DRIVER+ project (as captured in the drawing below).



In a more detailed way, these recommendations are:

1/ Making security research more efficient with **a partnership-based approach**

The application of a pan-European trial and validation framework, within the context of a structured capability process in the field of DRR, should not be an isolated effort of only one type of stakeholder. DRIVER+ believes that a DRR innovation ecosystem calls for the establishment of a well-functioning partnership with Member States' authorities, European institutions, the research community and the

private sector (industry, incubators). This innovation eco-system should be practitioner-driven to ensure practical outputs, systematic tests and trials, and a service-oriented approach. Achieving this would require the adoption of a co-creation process and the constant involvement of practitioners. This multiple-stakeholder engagement is crucial, as the perspectives of practitioners, researchers and policy-makers on what a “good” result is can be very different.

Such a partnership is a prerequisite for the proper launch of a capability process aimed at reinforcing European security through targeted investments, both in research and in the deployment of capabilities. Experience shows that European funded projects may result in innovations that not all stakeholders are ready to receive, including the project’s partners. Despite an exploitation agreement, uptake may not actually occur. Furthermore, not all consortium partners may be interested in, or be relevant for, facilitating the market uptake or results.

The rationale for a partnership-based approach lies in the need to implement an efficient capability process that would allow the common missions, needs and operational requirements to be defined and, at the same time, identify possible solutions matching these requirements in a mid to long-term time frame. In the process, the demand side (responsible for the assessment of needs), the research community (better placed to identify technology and capability gaps) and the private sector (well positioned to develop solutions and provide services) complement each other.

Such a “requirement pull” approach would make security research investments more efficient by linking R&I activities to capability deployment, completing the mission-oriented approach proposed in the Horizon Europe Regulation.

2/ *Bridging the “valley of death” with the establishment of a forward-looking capability planning process in Security*

An approach based on security capability deployment would have the advantage of leading to the definition of shared requirements and standards that, in turn, would facilitate market defragmentation, bridge the gap between research and market, and ensure an acceptable level of strategic autonomy.

A pre-condition to a capability deployment programme would be the establishment of a forward-looking capability planning process in Security. Such a process would identify medium to long-term needs and gaps and would contribute to the definition of EU R&I agendas matching the operational requirements.

The structured dialogue could be managed initially through Working Groups focusing on the different security domains with the objective of starting a pilot phase for a structured capability process. The objective of the pilot phase would be to set the ground for a capability planning process and to identify innovative solutions that match the mid to long-term common operational requirements taking into account the digitalisation process of first responders and the need for interoperability.

The dialogue can later evolve into a more structured partnership where private (both security solution suppliers and operators of infrastructures) and public stakeholders will cooperate to implement the process.

3/ *Leveraging the knowledge-base of practitioner organisations with the **creation of national Centres of Expertise embedded at the EU level***

In order to work together within the innovation ecosystem, and applying a pan-European trial and validation framework, information and results exchange between all stakeholders, projects and knowledge networks should be facilitated. In many Member States, national institutions are often fragmented and spread across different line ministries leading to poor communication and lack of cooperation: national harmonisation is required. In addition, policy-makers should take ownership of the results. If they call for specific topics/research, they should feel responsible for implementing the results, or at least facilitating their implementation.

Furthermore, the workshop participants identified the need to leverage the knowledge-base of practitioner organisations. Many of these organisations lack knowledge and experience on research & innovation, and on Public Private collaboration. This is a barrier to receiving, understanding, appreciating, adopting and implementing the outcomes conveyed by research projects. This requires a change of culture ("fire-fighters are not trained to innovate") and at the same time the reduction of uncertainty about innovation management (e.g. indicate whose responsibility it is to generate innovation). It is recommended that some Centres of Expertise are established at national level to support practitioner organisations in their capability development and innovation management, and to facilitate the access to both research results and relevant stakeholders in the (international) DRR ecosystem. These national Centres of Expertise should work together, and share facilities and experiences in a structured manner; this may potentially be embedded within the to be established Union Civil Protection Knowledge Network⁶

4/ *Using European standards with the introduction of a **Pan-European framework for trialling and validation of solutions***

Regarding the requirements for introducing a Pan-European trial and validation framework into the European research programme, it was acknowledged by all workshop participants that a standardised methodology for trialling and validation should be adopted, or at least that there should be a requirement to clearly explain the trial and validation methods to be used. This is not always the case, leading to the potential risk of having an imprecise or inaccurate understanding of the outcomes of a trial, of the reliability and validity of its results and its potential benefits for practitioner organisations.

Validation should be related to the real needs of the Member States, being also responsible for validating whether these needs have been properly addressed. It may be beneficial to use standardised reference scenarios for validation. These reference scenarios should be used across several domains and take national legislation into account. Common requirements, standards and certification procedures can ensure harmonisation of demand, interoperability of capabilities, uniform technical performances and better protection from malicious actions. As identified in the 2012 EU

⁶ Decision (EU) 2019/420 of the European Parliament and of the Council of 13 March 2019 amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism

Security Industrial Policy⁷, the definition of common European standards and certification mechanisms may also support reducing market defragmentation.

*5/ Improving the 2021-2027 Financial Framework with **increased synergies among the budget lines***

A more efficient approach to the research programming, and the consecutive procurement of solutions should be based on a medium to long-term approach following a systematic process of the definition of needs, identification of capability gaps and definition of common operational requirements that would allow the successful implementation of the solutions, enhancing interoperability and minimising, at the same time, the risk of security breaches.

The 2021-2027 Financial Framework does not address security funding in a coherent and comprehensive manner. Funding for security is still fragmented across different budget lines and there is no structural link between research activities and market uptake. This gap has been successfully overcome in the defence sector with the approval of a European Defence Fund aimed at enhancing competitiveness, innovation and strategic autonomy, which will support research and joint development of capabilities. To effectively support a capability process, a coordination mechanism should be established to exploit synergies among the different budget lines.



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⁷ COM(2017) 479 – A renewed EU Industrial Policy Strategy – 13 September 2017