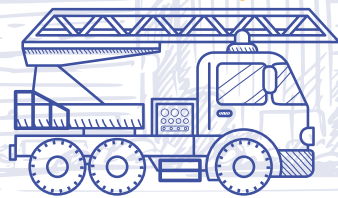


WHAT CONNECTIVITY TO IMPROVE PPDR?

PSCE Spring Conferences 2022 & 2023 - Connectivity Workshops



STRATEGIC GOALS with connectivity

- Borderless, seamless, and ubiquitous networks
- Better and dynamic use of limited resources and capacities
- Shared, real-time, continuous situational awareness
- Rapidly connect and deploy scattered teams and technology

UNDERLYING NEEDS for connectivity

- Designed for complex ecosystems
- Works with diverse infrastructures and applications
- Based in simple, inexpensive, trust-building processes
- Balances local, national, and EU needs

PRIORITIES FOR SAFETY

STRATEGIC GOALS

How interconnectivity research and innovation could create benefit and positive change for safety.

BORDERLESS NETWORKS

Safety requires borderless systems, with actors who are already vetted, and connectivity that works as responders move around.

SEAMLESS AVAILABILITY & UBIQUITY

Communication tools should work everywhere. Information should be available from anywhere to anywhere.

INTEROPERABILITY

First responders from different agencies and countries use different communication systems and data streams but need interoperability.

LEARNING FROM EXPERTS NOT AT THE SCENE

Local responders need to be supported by specialists who are not onsite, providing an added layer of knowledge and expertise that a phone call cannot provide.

REALTIME CONTINUOUS MONITORING

Ability to assess responders' health, location, equipment, and their wider situation to ensure safety, readiness to be called upon, and confidence in policies and leadership.

RAPID DEPLOYMENT

Support more efficient and effective pan-European coordinated multidisciplinary rapid deployment teams from anywhere in Europe.

SHARED SITUATIONAL AWARENESS

Exchange of knowledge and data regardless of jurisdiction or discipline for a dynamic overview of assets, decisions, and information.

DYNAMIC ALLOCATION OF CAPACITY

Dynamically allocate connectivity capacities to address the changing communication and knowledge needs of different phases of a crisis.



BETTER USE OF LIMITED RESOURCES

Reach more people with PPDR services, equalising benefits via responsibility and accountability structures.

UNDERLYING NEEDS FOR CONNECTIVITY

Features connectivity systems should have to enable the success and beneficial impact of work towards safety goals



WORK ACROSS DIVERSE STANDARDS & APPLICATIONS

Infrastructure needs to build upon pre-existing capacities, different systems and network, tool typologies, levels of security, end-user points, practices, and onboarding.



MAINTAIN CONTINUOUS COVERAGE OF NETWORK & SERVICES

Communication needs to work inside buildings, in dense cities, in rural areas, in blackouts, all without users changing the tools in their hands.



SUPPORT COMPLEX ENVIRONMENTS

Safety requires complex communication and information that draws together multiple modes and methods of gathering and sharing.



IMPROVE INFRASTRUCTURE

Existing infrastructure does not establish the necessary connectivity framework and priorities to meet the PPDR strategic goals.



BALANCE LOCAL, NATIONAL & EU REQUIREMENTS

Standards and objectives should not be rules but structures that allow flexibility to maintain local cultural and organisational differences yet support collaborations.



BUILD ECOSYSTEMS, NOT NETWORKS

Context, use, training, readiness, public support, governance, and impacts need to be considered to not exacerbate the existing lack of common semantics, cultures, processes, policy, and motivations.



ENSURING TRUST, IN ALL ITS MODULARITY

Trust is built upon novel interactions and governance structures between people, technology, organisations, and the public.



BE AFFORDABLE & AVAILABLE

Safety solutions should be available to all, quickly and inexpensively.



CREATE SIMPLE & WORRY-FREE PROCESSES

Those engaged in safety need to focus on the concern at hand, not the complexity of how a system works.

The Workshops

These insights emerged from PSCE workshops that drew upon the forum's interdisciplinary members' experiences and challenges to identify priorities for connectivity of platforms, systems, and people towards improving PPDR. Their aim was to collaboratively exchange knowledge between first responders, crisis managers, technology developers, solution and service providers, researchers, as well as stakeholders more broadly to jointly define key areas for interconnectivity research and development. Participants started from the premise that safety is not an issue for PPDR alone to consider, but one that is intimately intertwined with all areas of life and innovation. To consider it in isolation would be to misunderstand how and what drives safety as a societal value. From this, strategic goals and underlying needs were articulated for connectivity.

Engaging Collaborative Methods

Based upon a mixture of design-thinking, co-design, and value-centred design practices, activities were guided by key questions and themes related to PPDR and connectivity, and methodologically developed to be driven by the voices of participants. They also focused on innovation as something that brings about a fundamental change in how a society or a system works. This perspective looks beyond 'wants' that are often framed as a new technology or novel performance measures, instead focusing on 'needs' that consider the rationale, concerns, and values that drive a user to seek change.

Value-Driven Connectivity

Participants considered how interconnectivity contributes to safety and how key values related to safety could drive broader policy and societal objectives around innovation in this area, such as 5G, 6G, IoT, satellites, connecting people and sensors, etc. In doing so, participants raised important questions that need further consideration around responsibility and accountability for safety when using the tools, managing digital inequalities, and how to ensure short-term benefits do not result in long term harm. Values considered included:

DEMOCRACY	ECOSYSTEM	INNOVATION
Privacy	Sustainability	Safety
Fairness	Business value	Security
Digital inclusion	Economic growth	Accountability
Trust	Open collaboration	Responsibility
Regulation	New value chain	Energy efficiency