DRS Research & Innovation as a driver for Resilience

NIGHTINGALE Final Event

15 January 2025

Giannis Skiadaresis
DRS & SSRI Area Coordinator
DG HOME - Innovation and Security Research
European Commission

Core values of our strategy

- Ensure that security R&I maintains the focus on the final use of its outcomes **in alignment with policy priorities**;

- Contribute to a **forward-looking planning of EU security capabilities** that allows to anticipate solutions to future threats;

- Ensure the development of innovative security technologies that are **socially compatible**;

- Pave the way to **industrialisation, commercialisation, acquisition and deployment** of successful R&I outcomes;

- Safeguard **EU autonomy and technological sovereignty** in critical security areas by contributing to a more competitive and resilient EU security industrial base.

European Commission

TACKLING KEY RESEARCH NEEDS
(DRS DESTINATION)

Societal Resilience

- Enhanced understanding and improved knowledge and situational awareness of disaster-related risks by citizens, empowered to act and involved in relevant research

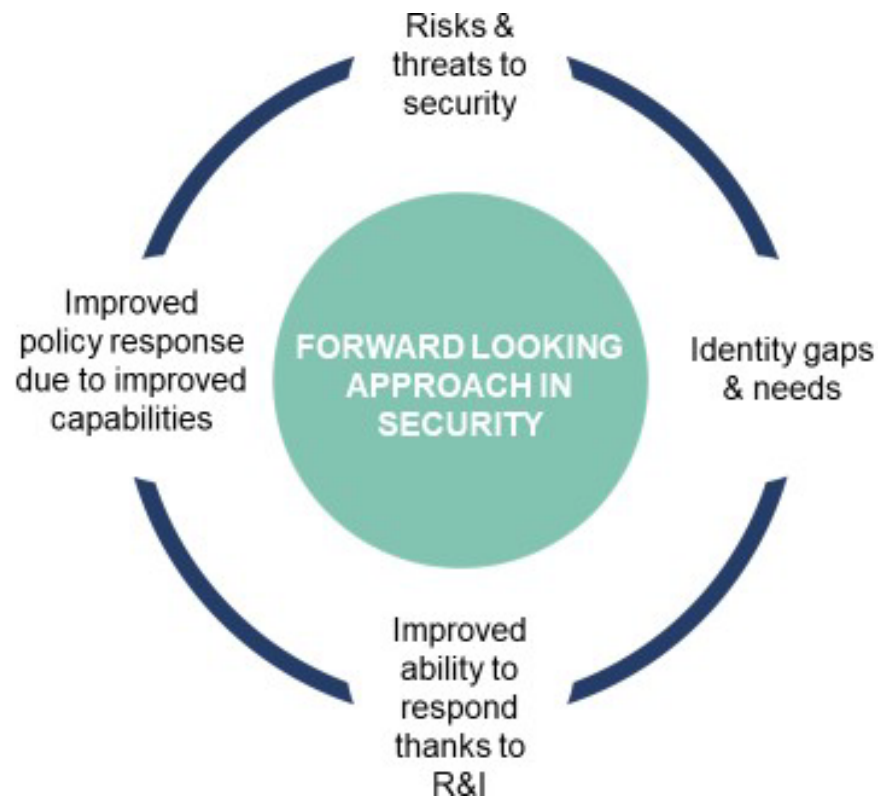**Improved Disaster Risk Management and Governance**

- More efficient cross-sectoral, cross-disciplines, cross-border coordination of the disaster risk management cycle and governance from international to local levels

Strengthened capacities of first and second responders & Interoperability

- Strengthened capacities of first responders in all operational phases related to any kind of natural and human-made disasters so that they can better prepare their operations; Improved ability to rescue and manage the first phases of emergencies that take into account extreme climatic events and/or geological hazards that may threaten urban areas

Disaster Research Days 2024 - Shaping the Future of Science and Research for Disaster Risk Reduction

European Commission

Pursuing a forward-looking capability-driven approach in security

- Move from a reactive to a proactive approach in security, based on foresight, prevention & anticipation.

Risks & threats to security

Identity gaps & needs

Improved ability to respond thanks to R&I

Improved policy response due to improved capabilities

FORWARD LOOKING APPROACH IN SECURITY

Challenges:
COVID, extreme weather events, pressure at external borders, crime, terrorist attacks, hybrid attacks etc.

Use tools & actors
referred to in Commission staff working document (2021) 422 final: CERIS, EU Innovation Hub for Internal Security, EU agencies etc.

Support policy response
response in disaster resilience, fight against crime & terrorism, critical infrastructure protection, border management, cyber security.

European Commission

Niinistö Report: Shifting from Crisis Response to Resilience
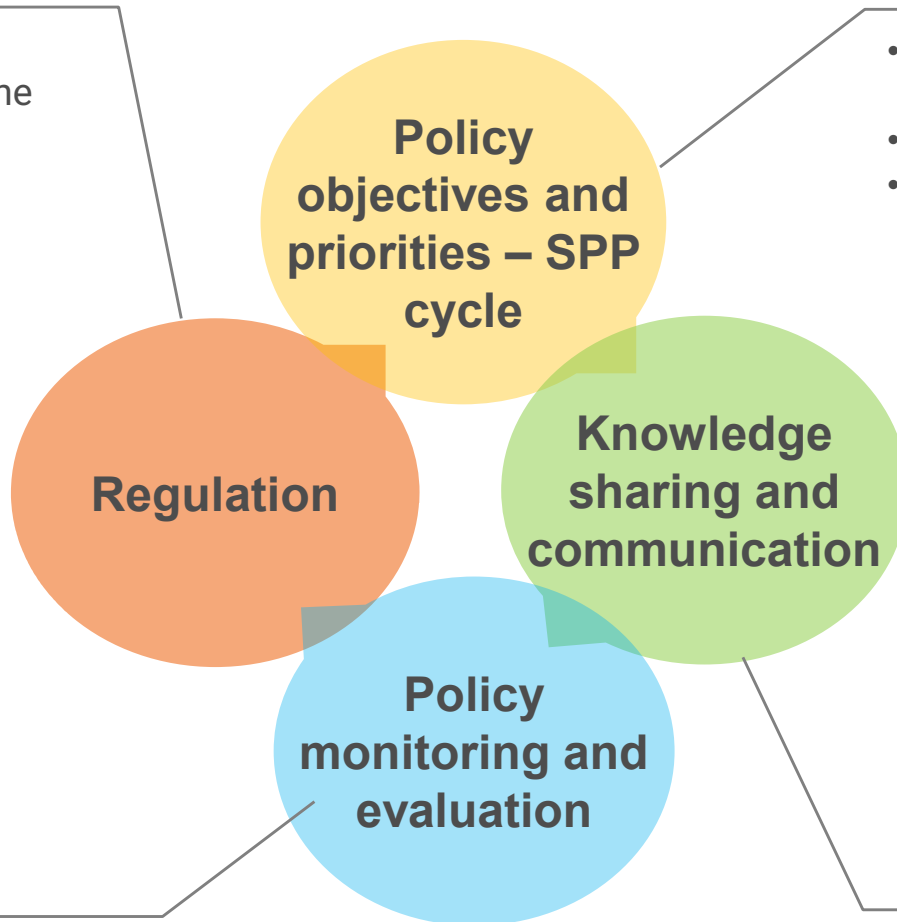
Feedback to Policy

It is about operational experience and knowledge stemming from research projects being fed back into the Commission's policy making work.

- Input to legislation
- Support R&I input in line with the innovation principle
- Commission Decisions

Policy objectives and priorities – SPP cycle

- Framework programme, Work programmes, calls for proposals
- Green and White papers
- Strategic Plans

Regulation

Knowledge sharing and communication

Policy monitoring and evaluation

- Programme evaluation
- Policy impact assessments
- Staff working documents

- Policy events
- Policy briefs
- Articles, publications, success stories

European Commission

Novel Integrated Toolkit for Emergency Medical Responses
Upgrading pre-hospital life support and triage

NIGHTINGALE

THE TOOLKIT

Triage and vital signs devices

Devices and mobile applications that assist with unique identification of victims and show the triage status of patients. The devices offer hands-free functionalities and visualisation of vital signs of patients

DEVICES
DIGITAL TRIAGE TAG
VITAL SIGNS EARPLUG
FIRST RESPONDER WEARABLE
TRIAGE AND VITAL SIGNS APP
AUGMENTED REALITY GLASSES

Intelligent systems

Intelligent systems that enhance situational awareness and operational capacities of emergency teams. The systems provide information about mass casualty incident scenes quickly, supporting fast triage, diagnosis and prognosis of patients whilst allowing optimal utilization of resources and assets

DEVICES
UAV RAPID TRIAGING SYSTEM
THERMAL SCANNING SYSTEM
RESOURCES AND ASSETS OPTIMISATION
DIAGNOSIS AND PROGNOSIS SERVICE

Interoperability and data fusion

Information-processing modules support interoperable access of heterogeneous data from the field and open data sources. The system integrates early warning notifications and provisional recommendations that can be communicated to victims and the general public.

DEVICES
EARLY WARNING AND RISK ASSESSMENT
DECISION SUPPORT SERVICE
INTEROPERABLE DATA LAKE
DATA LAYER

Multi-Agency collaboration

Integrated systems that provide a common operational picture and advance coordination and cross-team collaboration of emergency medical services and civil protection agencies

DEVICES
(C3/IMS)*
NG 112 (PSAP)**
SWAPP APP
SCENARIO BUILDER
AUGMENTED REALITY SERVICE

**PSAP = PUBLIC SAFETY ANSWERING POINT
*CC3/IMS = COMMAND, CONTROL AND COORDINATION & INCIDENT MANAGEMENT SYSTEM

Thank you

European Commission