European Commission

HERA HEALTH EMERGENCY PREPAREDNESS AND RESPONSE AUTHORITY

#HealthUnion

HERA Industry days

Health Emergency Preparedness and Response Authority

2 & 3 June 2025, Brussels

European Commission

Side session

Dual-use funding: opportunities and challenges in bridging civil and defence innovation

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Dual-use funding: opportunities and challenges in bridging civil and defence innovation

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European Defence Agency role in supporting collaboration between civilian and defence sectors

- **Dual-Use Research & Innovation -** projects to serve both civ and mil purposes (cybersecurity, space-based services, AI, Aut. Syst, CBRN Protection)
- **Funding Synergies -** bridge funding from civ to mil sources (EC coord and EU Funds)
- **Standardization & Certification -** harmonizing standards and certifications across the civil-military (development of interoperable systems, lowers cost)
- **Critical Infrastructure Protection -** civ-mil cooperation in crisis management
- **Capability Development - CDP -** areas for sharing platforms and technologies (avoid duplication and enhance interoperability)
- **Cross-sector Platforms & Dialogues - Workshops and WG** (sharing best practices, technologies roadmaps)

2.1. CAPTECH CBRN OBJECTIVES

The CBRN CapTech objective is to support the strengthening of European armed forces' capability to safely operate in a CBRN environment while contributing to civilian-led crisis response operations if needed, focusing on specific defence CBRN R&T and Capabilities.

CAPABILITY NEEDS:

- Sustainable protection against CBRN Threats
- Adequate response on CBRN Incident
- Personal & Collective Protective Equipment

TECHNOLOGIES & RESEARCH DOMAINS:

- CBRN Detection Identification and Monitoring
- CBRN Hazard Management and Medical Counter measures
- Protection of Critical Infrastructure from CBRN

2.2. CAPTECH HUMAN FACTORS OBJECTIVES

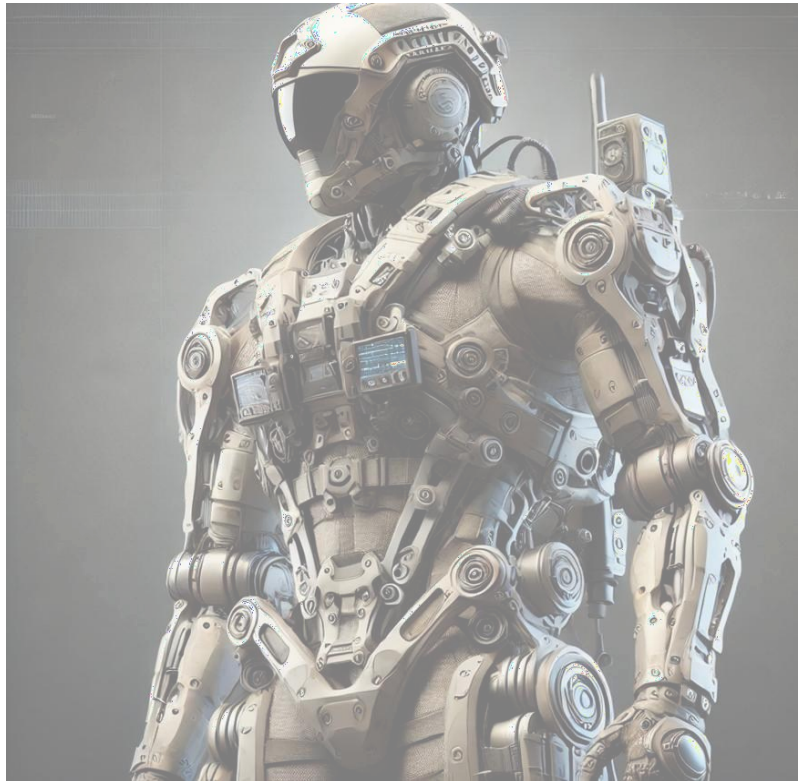
The activity of the Human Factors (HF) CapTech seeks to support and promote EU collaborative research initiatives and the development of innovative technologies for the improvement of future Human Factors Defence Capabilities & Human Capability Enhancement.

CAPABILITY NEEDS:

Human Capability Enhancement

TECHNOLOGIES & RESEARCH DOMAINS:

- Human Clothing, Equipment & Integration in Platforms
- Human Machine Interface & Teaming
- Human Performance Monitoring & Enhancement
- Human Team Customized Training



Contribution to dual-use innovation by EDA CBRN – related programmes/ projects

EDA CBRN & Human Factors Captech:

- About 70 members
- 17 EU MS
- Great mix of governmental and non-governmental experts (MODs, Academia, Industry)

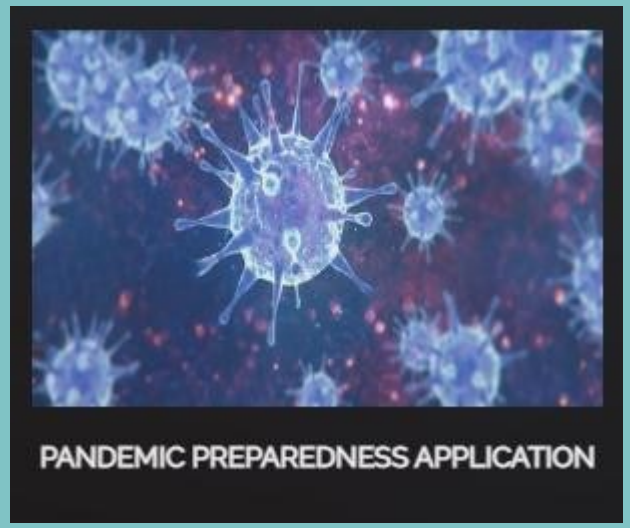
Aim: Develop interoperable and deployable European CBRN capabilities useable for both civil protection and military forces through relevant research and innovation projects.

Current Projects:

- European Bio Laboratory Network - EBLN 2
- BIOSENSORS – paper-based BIOSENSORS
- New Decontamination methods OB study – EDF Project
- Testing and Evaluation of Personal Protective Equipment
- BIO Detection, Identification and Monitoring - Testing and Evaluation

EUROPEAN BIODEFENCE LABORATORY NEETWORK - EBLN 2

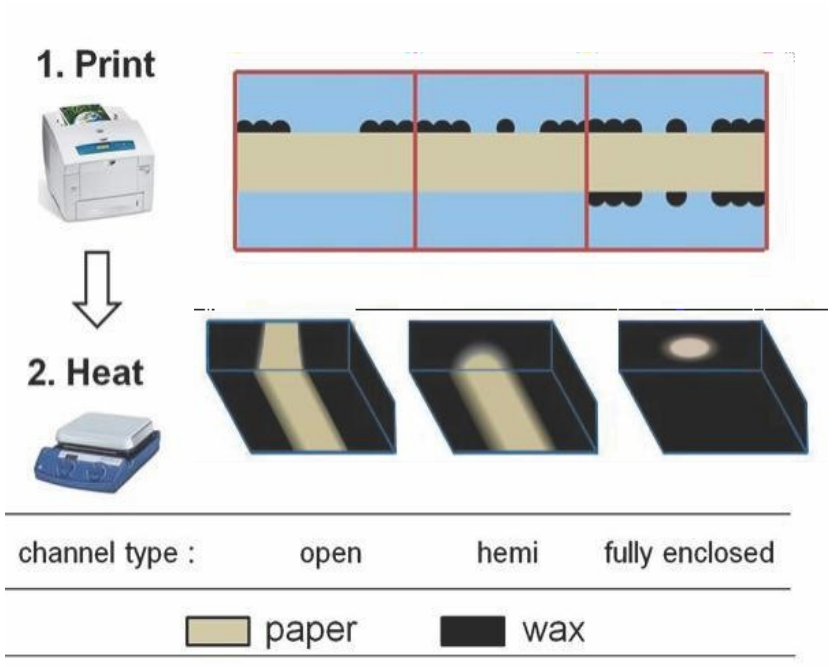
- The objective of the project is to improve the European capability of biothreat agents' identification and tracking systems taking advantage of the already established network of biodefence laboratories (EBLN). This project will develop and challenge tools, including Standard Operating Procedures with QA/QC requirements and their validation.
- Explore possibility for "European Biothreat Reachback"
- 10 Member states participate in this project



nature protocols PROTOCOL
https://doi.org/10.1038/s41596-019-0186-y

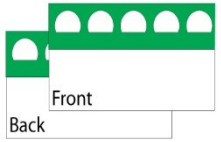
Preparation of paper-based devices for reagentless electrochemical (bio)sensor strips

Stefano Cinti[1*], Danila Moscone[2] and Fabiana Arduini[2*]

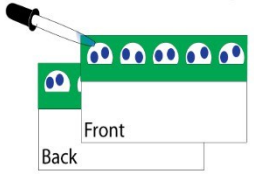


Drawing

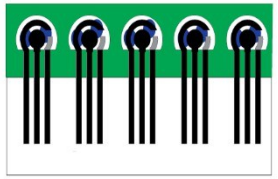
Wax Printing



Heating



Modifying



Screen-Printing

Multidisciplinary, civil-military, cooperation in the context of the CBRNe Expertise Centre of the Belgian National Crisis Centre (NCCN)

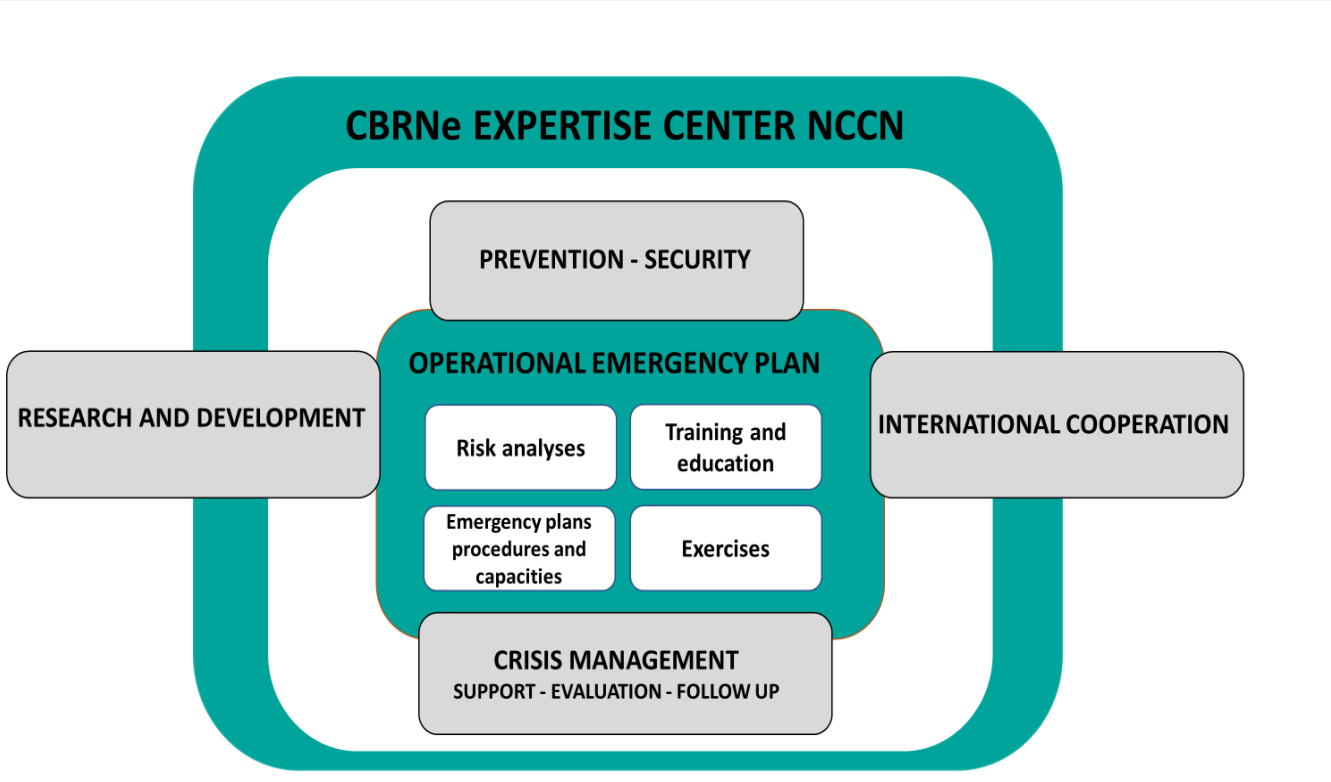
Hans De Neef
Head CBRNe Expertise Centre
National Crisis Centre

Crisiscentrum
Centre de Crise

CBRNe Expertise Centre

Crisiscentrum
Centre de Crise

CBRNe EXPERTISE CENTRE: WHAT?



Interministerial agreement of the 4th of June 2019 between the **Ministers of the Interior, Health and Defense**

- **National platform**: NCCN together with: Public Health, Defense, Police, Civil Protection, FANC, Sciensano.
- Developing **integrated approaches to CBRNe risks** with national impact
- **Independant of their origine:** unintentional/accidental, malicious/terrorist, military
- **Facilitating, supporting and coordinating** national and international initiatives
- By **respecting individual responsabilities**

Crisiscentrum
Centre de Crise

Key points on multidisciplinary civil-military CBRNe cooperation in civil and military preparedness plans

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CIVIL AND MILITARY CBRNe PREPAREDNESS PLANS

Civilian CBRN preparedness plans :

- (national) CBRNe emergency plans: national nuclear emergency plan, national CBRNe terro emergency plan,….
- **Primarily:** protection of the public and responders in the field against CBRNe risks
- Civilian CBRNe experts and specialized equipment, supported by military CBRNe experts and specialized equipment

Military preparedness plans :

- Belgian national defense plan, NATO CBRN response measures
- **Primarily**: CBRNe support to and protection of deployment of troops
- Military CBRNe experts and specialized equipment, supported by civil CBRNe experts and specialized equipment

KEY POINTS

- **Dual use** of civilian and military CBRNe expertise and specialized equipment within civil emergency plans and military defense plans
- Civil military CBRNe cooperation: **complementary/supplementary**
- Examining the need for **interoperability** of equipment, procedures, training and education, exercises ….
- **Specialized equipment**: DSIM, decontamination, CBRNe medical countermeasures, individual protection equipment….

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Centre de Crise

Challenges and opportunities of CBRNe multidisciplinary civil military cooperation

Crisiscentrum
Centre de Crise

CHALLENGES AND OPPORTUNITIES

Challenges:

- CBRNe **low probability high impact risk** in a multi risk society (BNRA considers 118 major types of risks)
- Preparation within (regulatory) determined **responsibilities of individual organizations and (the limitations of) attributed budgets**
- **Broad scope** of potential CBRNe risks: Covid, Fukushima, CBRNe threats war Ukraine…
- Need for (expensive) **specialized expertise and equipment**

Opportunities:

- Looking for **synergies: integrated efforts, joint procurement, dual use applications…**
- To enhance **efficiency** of preparations and **optimal use** of available budgets

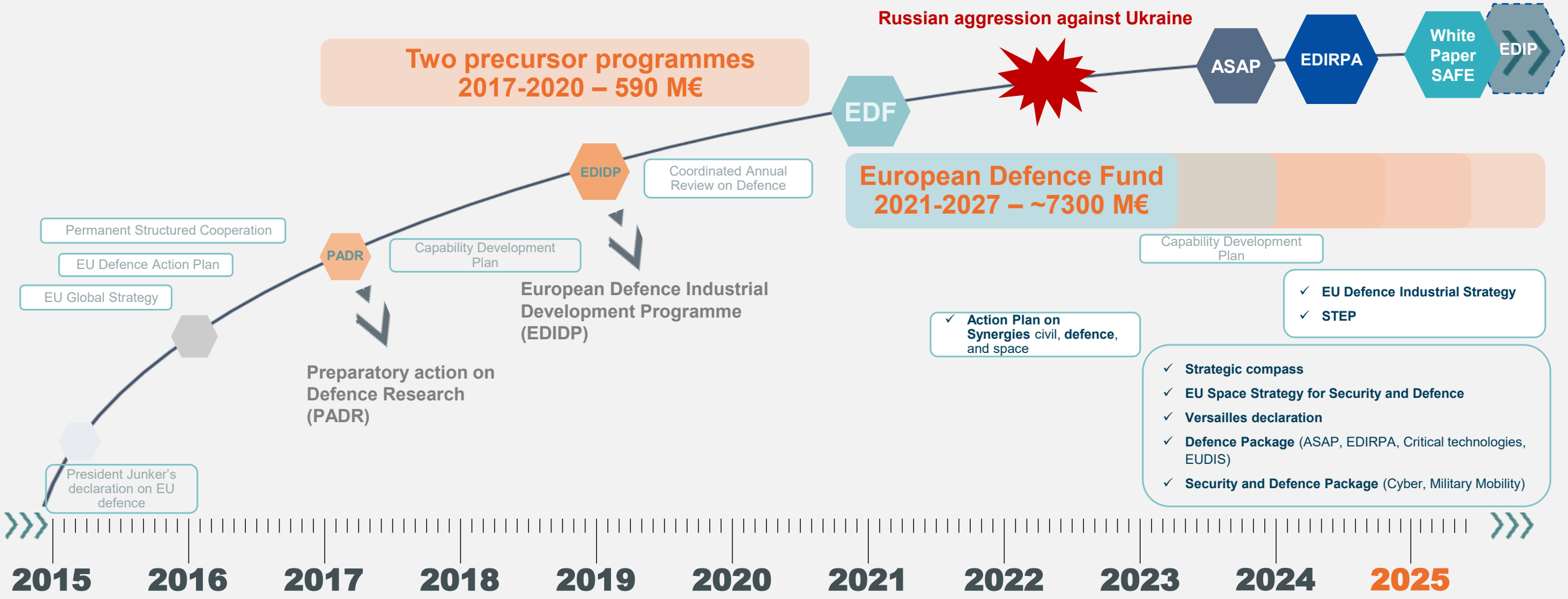
Funding opportunities for dual-use innovation

Luca Fiorani

MSc-Physics – PhD-Laser sensing – CAS-Laser safety – MAS-Economics & politics – MAS-CBRNe

Policy Officer, DEFIS.B.2

Ramping-up EU's collaborative approach to defence investment



CBRN projects funded by EDIDP & EDF (7.3 B€)

134 M€

+25 M€ for RESILIENCE (R, D) 2024

Project short name	Call Year ▲
CBRN-RSS	2020
COUNTERACT	2021
MoSaiC	2021
Nano-SHIELD	2021
TeChBioT	2021
iMEDCAP	2022
RESILIENCE	2022
WEMOR	2022
CBRN SoS	2023
RESILIENCE-R-2023	2023

3.7%

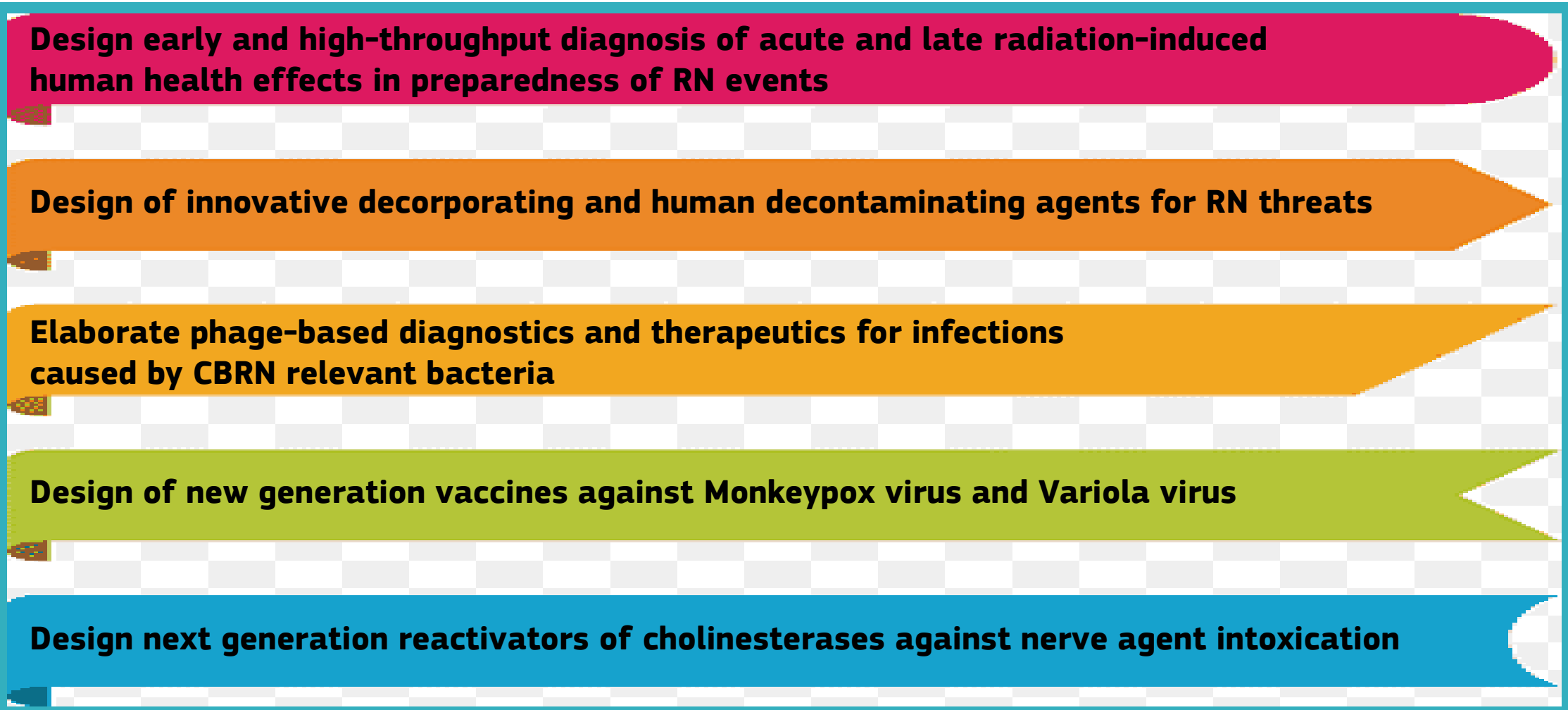
3 other CBRN related projects (ALTISS, VERTIgO, VireTS) are funded under another category of action (Simulation and training): 13 M€

2025 (OPEN CALL): RESILIENCE 2025 & Autonomous triage and evacuation

2026: RESILIENCE 2026 (R, D) & another possible future MCBRN related call

RESILIENCE-R-2023
SGA: Specific Grant Agreement

RESILIENCE RA 2023

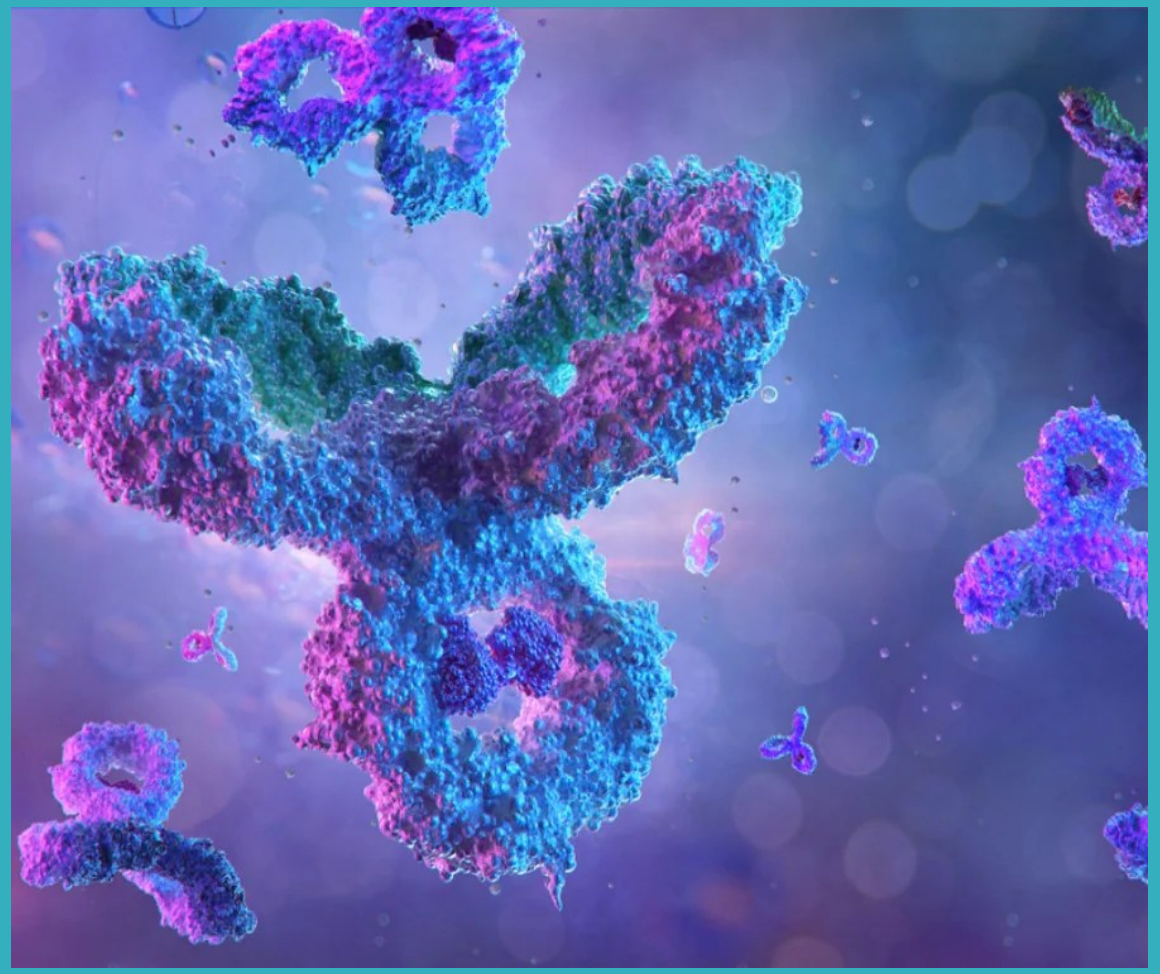


RESILIENCE-D-2024

- DOSI: personalized dosimetry for soldiers exposed to nuclear or radiological threats
- PROT PROD: faster, scalable, and cost-efficient methods for producing protein-based medical countermeasures

RESILIENCE-R-2024

- Bioscavengers for nerve agent poisoning
- Monoclonal antibodies against toxins like ricin, abrin, and botulinum
- Smart modular system for wound care
- Rapid point-of-care diagnostic tests for biological agents
- New methods to discover infection biomarkers



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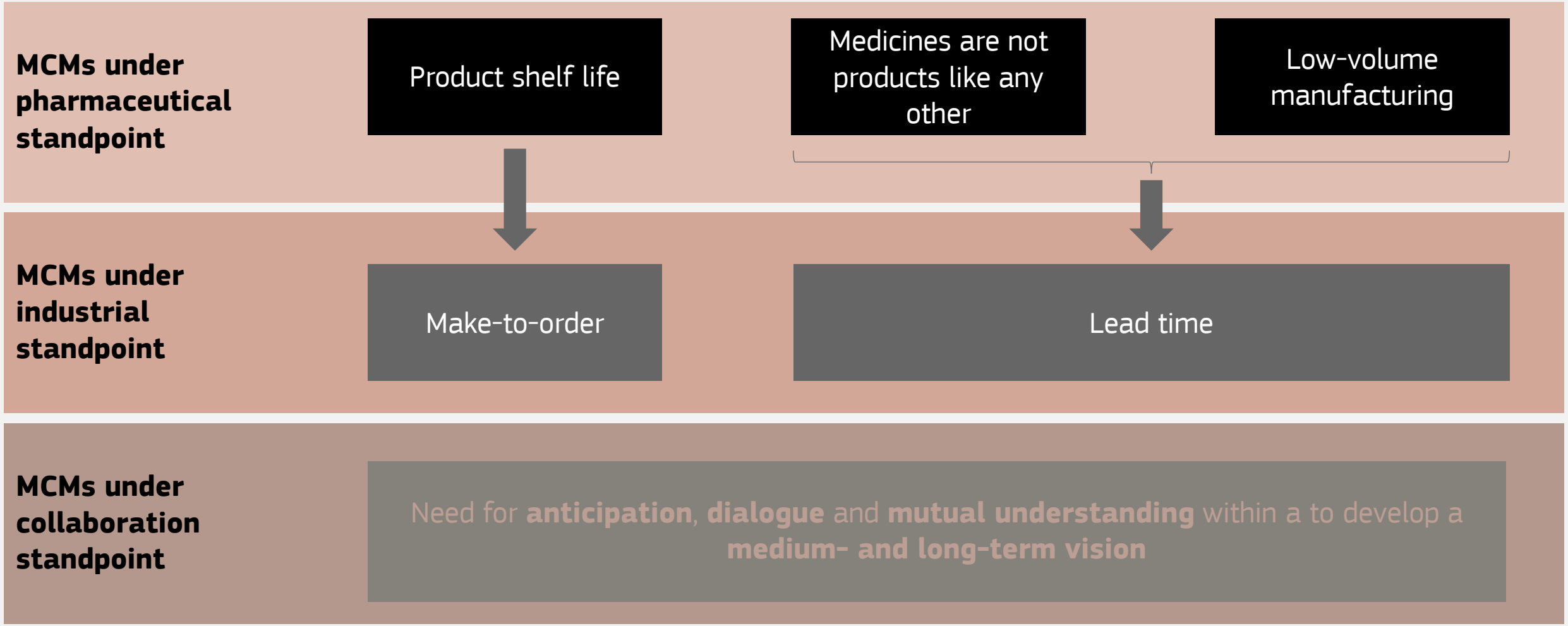
Thank you for your attention!

Supporting dual-use MCMs, the industry perspective: *“Tell us what you need and we'll work on it together”*

Dual-use MCMs: a healthcare approach in a niche CBRN environment



The primary issue is not funding, but the clear expression of needs and an effective collaboration

- Covering a CBRN risk or threat is not the same as developing a medicine against a disease with a given prevalence

	Civilian approach	How to better support CBRN MCM industry?	Military approach
Relationship with industrial players	Customer-supplier relationships	Need for long-term partnerships	Culture of massive medium- and long-term industrial projects
Ability to define a need	Capacitated by a risk-based approach and annual budget vision	Need for greater transparency on the MCM market and medium- to long-term budget commitments	CBRN often perceived as an elite issue, multi-year vision
Specific use-related needs	General population, from children to the elderly	Need a framework for sharing a strategic vision and co-constructing solutions	Operational requirements of forces

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Thank You!

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Thank you