# CERIS SSRI Workshop on Capability-driven Approaches Across Security Sectors

Brussels | 2nd March 2023

# Welcome and opening remarks

**Marta Cygan**
DG HOME

Brussels | 2nd March 2023

# Forward-looking planning and capability-driven approaches across security sectors

**Giannis Skiadaresis**
DG HOME

Brussels | 2nd March 2023

# *“Capability Driven Approaches across security sectors”*

Key outcomes of Action 1 of the Action Plan on Synergies between civil defence and space industries

*Thursday, 02 March 2023*

*CERIS SSRI event on “Capability driven approach for security”*

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

# Action Plan on Synergies - Context

**The three headline objectives:**

- enhancing complementarity between relevant EU programmes and instruments to increase efficiency of investments and effectiveness of results (the '*synergies*');
- promoting that EU funding for research and development, including on defence and space, has economic and technological dividends for EU citizens (the '*spin-offs*');
- facilitating the use of civil industry research achievements and civil-driven innovation in European defence cooperation projects (the '*spin-ins*').

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# The eleven actions

**ACTION 1:** Before the end of 2021, the Commission will present a proposal to strengthen the forward-looking and early identification of needs and solutions in the field of internal security and law enforcement by fostering **capability-driven approaches across security sectors**, building on best practices from the defence and space sectors.

**ACTION 2:** Before the end of 2021 and with a view to the 2022 work-programmes, the Commission will further enhance its internal process **to promote synergies** between space, defence and related civil industries by improving coordination of EU programmes and instruments and by launching actions to facilitate access to finance.

**ACTION 3:** Starting in the second half of 2021, the Commission will announce targeted actions for **start-ups, SMEs and RTOs** to raise awareness about EU programmes and instruments that offer funding opportunities, provide technical support and hands-on training, provide business-accelerating services, showcase innovative solutions, and facilitate market entry to the defence, security, space or other relevant civil markets.

**ACTION 4:** The Commission will develop **technology roadmaps** to boost innovation on critical technologies for the defence, space and related civil sectors and stimulate cross-border cooperation using all relevant EU instruments in a synergetic way. These roadmaps will be based on an assessment produced every two years by a new Observatory for Critical Technologies within the Commission. The roadmaps may lead to the launch of new flagship projects.

**ACTION 5:** Before the end of 2022, the Commission, in close cooperation with other key stakeholders, will present a plan to promote the use of existing hybrid civil/defence **standards** and the development of new ones.

**ACTION 6:** In the first half of 2022, the Commission will launch, in cooperation with the European Innovation Council and other stakeholders, an **'innovation incubator'** to support new technologies and shape **dual-use innovation**. The Commission will also support **cross-border defence innovation networks** that will test the relevance of technologies from the civil sector and support responsible innovation in defence value chains. These actions will also address the current fragmentation of the civil-defence innovation landscape, shortages of skills as well as equality and inclusion goals.

**ACTION 7:** From June 2021 onwards, the Commission will set up together with Member States the Cybersecurity Competence Centre, allocating the necessary resources from relevant EU programmes and instruments. The Commission will seek to strengthen synergies, spin-ins and spin-offs between the work of the Centre, the EDF and the EU Space programme on **cybersecurity and cyber defence** with a view to reduce vulnerabilities and create efficiencies.

**ACTION 8:** Starting in the first half of 2022, to support **disruptive technologies,** the Commission will present innovative forms of funding to promote participation of non-traditional players, attract start-ups and promote cross-fertilisation of solutions, building upon opportunities offered by EU programmes and instruments including the DEP and the EDF.

The Commission launches intensified dialogue and development work on three flagship projects with the potential to become game changers. After adequate analysis and consultation with stakeholders, the Commission will decide on possible follow-up steps, including legislative proposals where appropriate.

**ACTION 9: 'EU drone technologies'.**

**ACTION 10: 'EU space-based global secure communications system'.**

**ACTION 11: 'Space Traffic Management'.**

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# Capability Driven Approach

## 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.

# Challenges to implement CDA

- Scattered small actions that are not enabling solutions equal to the size of the EU market
- CDA takes a lot of time
- Difficulty to identify right stakeholders
- Planning structure for CDA does not exist
- Fragmentation of needs - Fragmentation of stakeholders
- Protection of “national industries”
- Lack of standards

# Benefits of Capability-Driven Approach

- CDA will increase industrial and innovation sovereignty of the EU.
- Clear definition of needs with stability and flexibility in the future procurement.
- CDA reduces market fragmentation and achieves better understanding of future threats.
- Investment in research which leads on future roadmaps (to avoid losing time and money).
- Alignment of the strategy and R&D planning processes of all stakeholders involved → Better synchronisation of EU research programming with other EU programmes
- Facilitation of uptake of R&D results to acquisition and ensure the uptake of R&I
- Avoiding/minimising the risk of duplicating efforts and creation of economies of scale.

# Elements to foster CDA

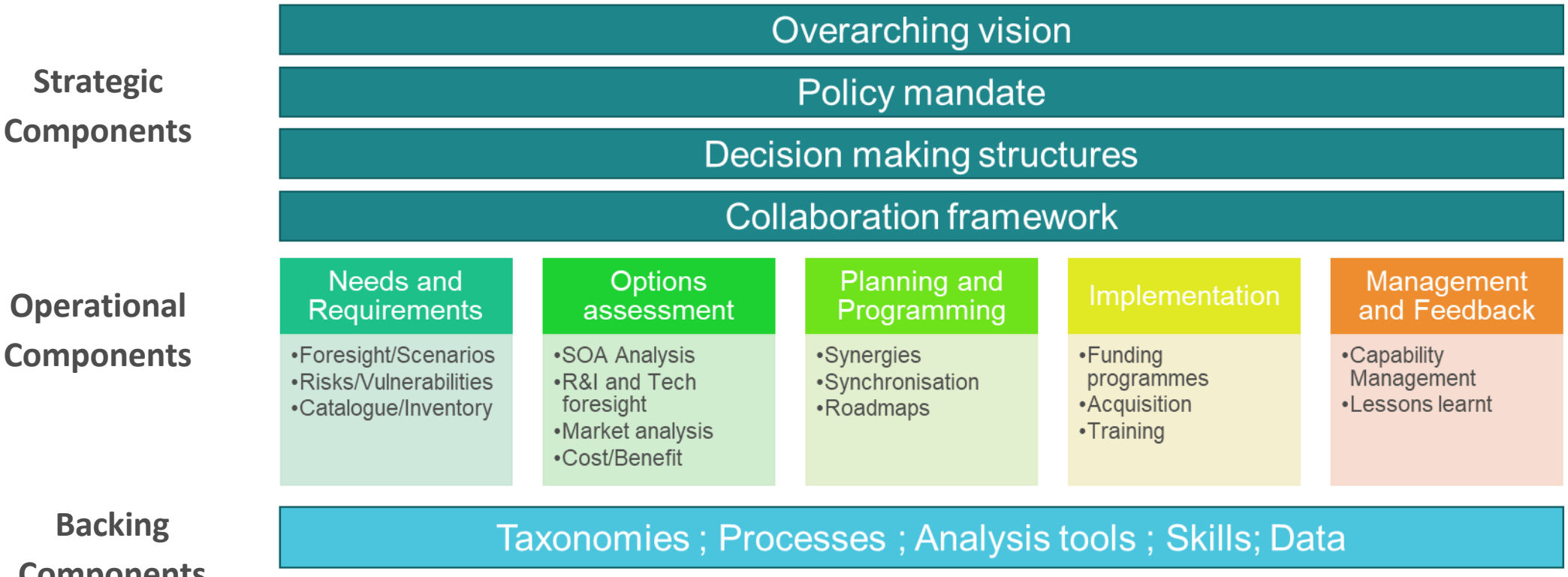
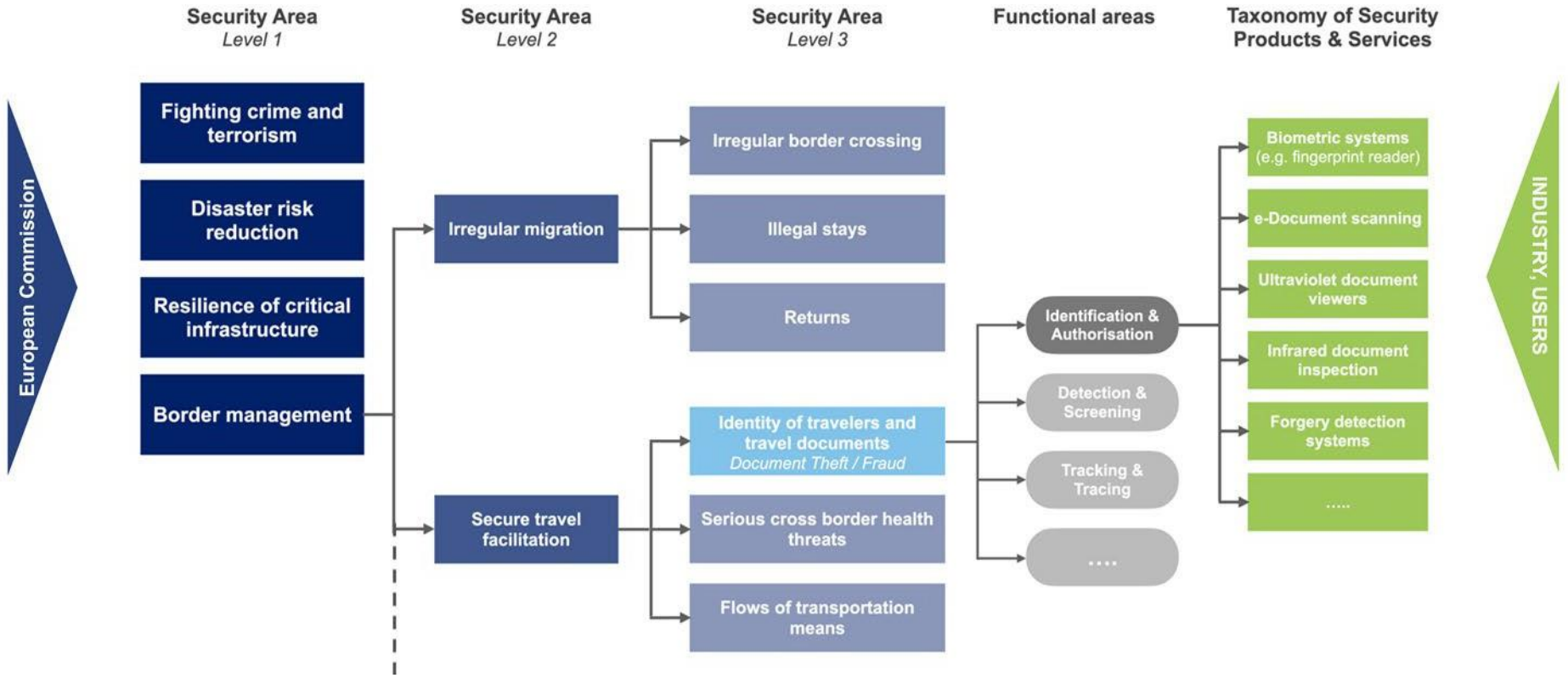



*Figure 1- High-level components of a Capability Driven Approach*

# EU Civil Security Market Taxonomy

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# Main focus areas

- **Proposal 1:** The Commission should establish roles and responsibilities for the management and implementation of Capability Driven Approaches in the area of Internal Security and Law Enforcement.
- **Proposal 2:** The Commission should improve the alignment of capability needs and solutions with the programming of security funds.
- **Proposal 3:** The Commission should create common vocabularies and decision-support knowledge that is available to all civil security stakeholders, including industry and technology stakeholders.
- **Proposal 4:** The Commission should expand the planning of capabilities to longer-term horizons.

# Q&A

# More Information and resources

EU Innovation and Security Research

Community for European Research and Innovation for Security (CERIS)

Annual Security Research Event

National Contact points for EU security research

@EUHomeAffairs

#EUSecurityResearch #SecureSocieties

EUHomeAffairs

Enhancing security through R&I CSWD(2021)422

Frontex on EU research

Eu-LISA on EU research

EU Innovation Hub for Internal Security

Horizon Europe Cluster 3 “Civil Security for Society” (2021-2022 Work Programme)

EU Funding & Tenders Portal

European Commission

# Thank you

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# Capability Driven Approach and Border Management

**Ilker Aydin**
DG HOME

Brussels | 2nd March 2023

# Capability Driven Approach in Defence sector

**Gustaf Winroth**
DG HOME

Brussels | 2nd March 2023

EUROPEAN UNION

EUROPEAN DEFENCE FUND

CERIS SSRI 2023

2 March

# Capability Driven Approach in Defence sector


Speaker

**Dr Gustaf Winroth**
Deputy Head of Unit DEFIS A3
Defence Technologies


#EUDefenceIndustry
#StrongerTogether

European Commission | DEFIS

# European Defence Fund : The EU defence R&D programme

Support **collaborative and cross-border** research and development projects, including **disruptive technologies**

Contribute to the **competitiveness and innovation capacity** of the EDTIB

Encourage the **participation of SMEs and other actors** not usually active in the defence field

Help **reducing fragmentation** of the European defence and industrial landscape

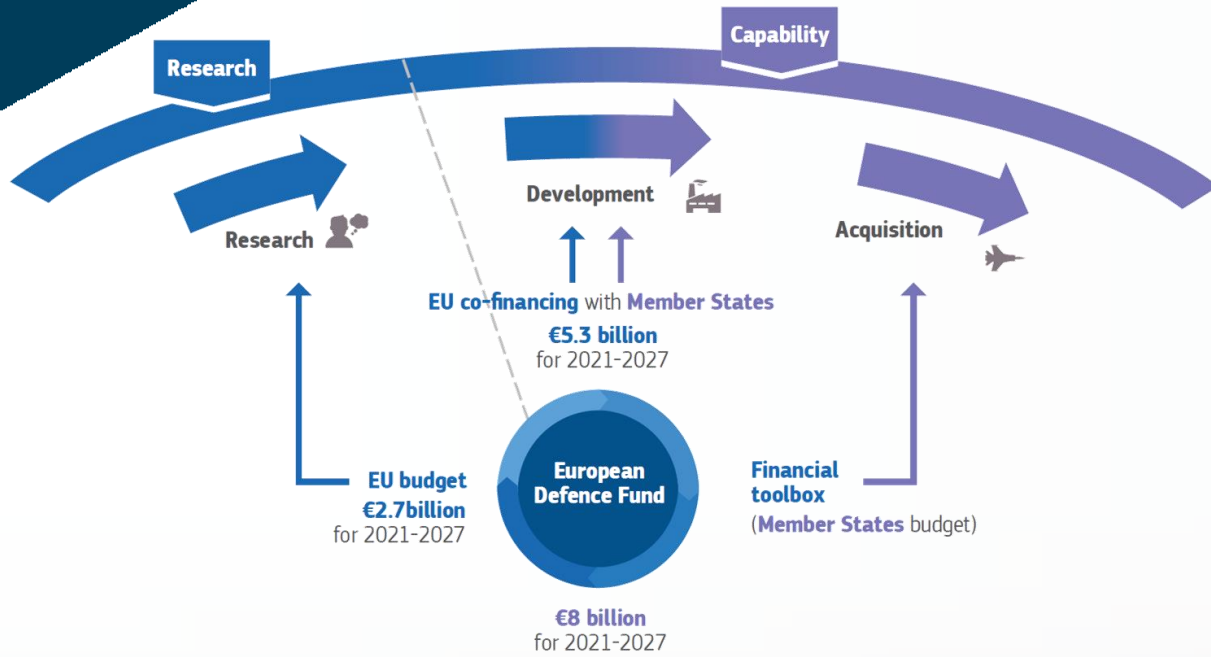
**Build partnerships** between defence actors, on both demand and supply sides

Help **maximising the outcome** of defence spending

Lead to **close defence technological gaps**

Strengthen other **security and defence initiatives**

Strengthen **Europe's resilience** and **strategic autonomy**




- ***EDF financial support mainly in the form of grants***
- ***Open to EU Member States and Norway***
- ***Security-based participation conditions for entities controlled by third-countries***

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**#StrongerTogether**



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# EDF: an enabler in a larger eco-system

- EDF annual Work programmes **informed by:**
  - **Capability Development Plan (CDP):** consistency with commonly agreed priorities
  - **Coordinated Annual Review on Defence (CARD):** opportunities for collaborative R&D
  - **Permanent Structured Cooperation (PESCO) projects**
  - **Synergies and complementarity** with other EU programmes
- EDF multiannual perspective **informed by MS/NO co-financing & planning**

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# EDF CATEGORIES OF ACTIONS

## Addressed by annual work programmes & calls for proposals

- Medical response, CBRN & human factors
- Information superiority
- Sensors
- Cyber
- Space
- Digital transformation
- Energy resilience & environmental transition
- Materials and components

- Air combat
- Air and Missile defence
- Ground combat
- Force protection and mobility
- Naval combat
- Underwater warfare
- Simulation and training

**Horizontal categories**

- Disruptive technologies
- Innovative defence technologies (SMEs)

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# Capability Driven Approach in Space sector

**Anna Samsel**
DG DEFIS

Brussels | 2nd March 2023

# 1st Panel Discussion

# Capability Based Planning across security sectors

**Dinesh Rempling**
Frontex

**Valentina Zuri**
Europol

**Giuseppe Dello Stritto**
EDA

**Isabelle Linde-Frech**
Fraunhofer

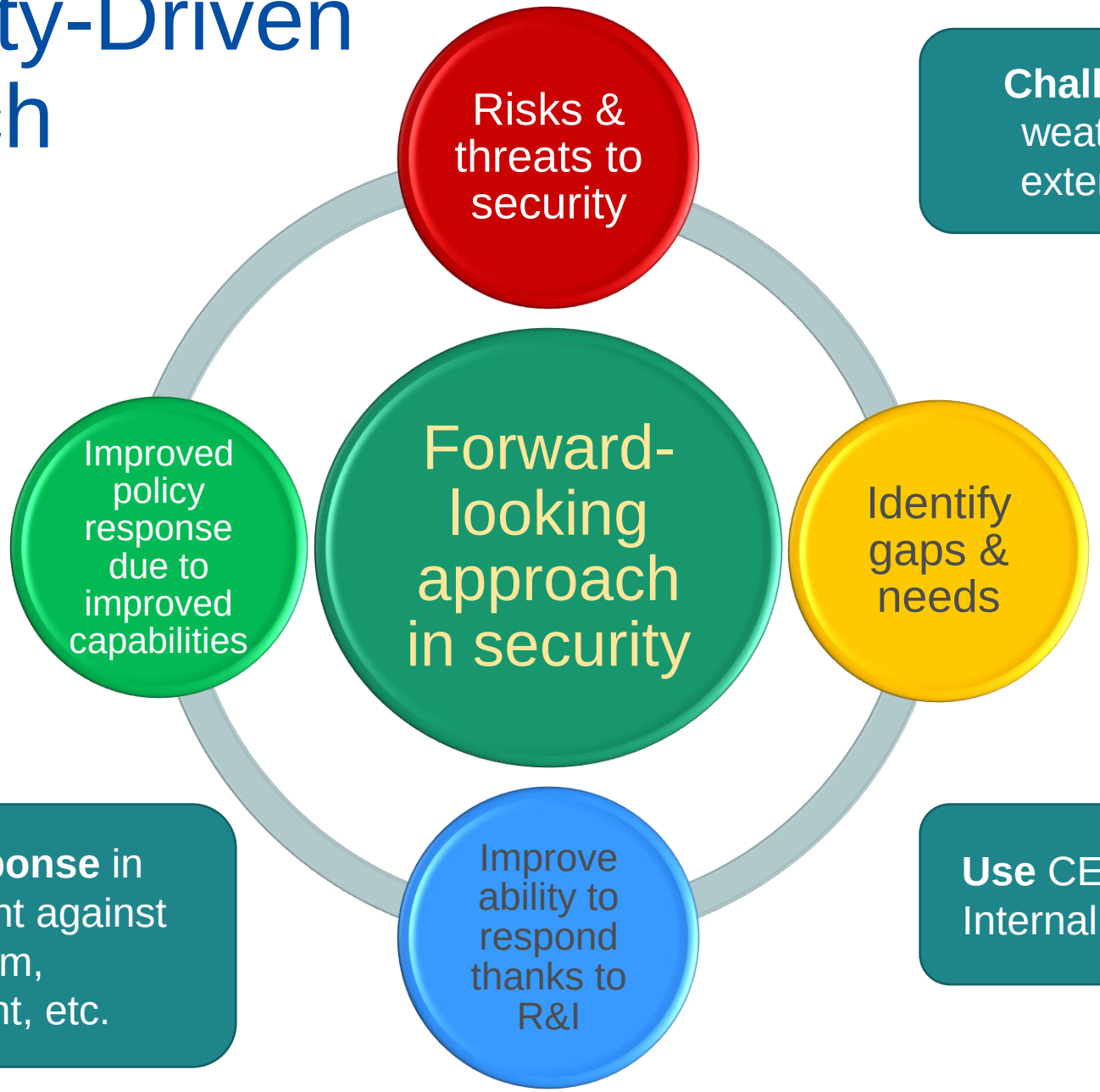
**Wilhelmus van Heeswijk**
DG TAXUD

**José Manuel Colodras**
Spanish Police

Moderator: **Oliver Seiffarth,** DG HOME

Brussels | 2nd March 2023

# Capability-Driven Approach




**Challenges**: COVID, extreme weather events, pressure at external borders, crime, etc.

**Use** CERIS, EU Innovation Hub for Internal Security, EU agencies etc.

**Support policy response** in disaster resilience, fight against crime & terrorism, border management, etc.



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EUROPEAN DEFENCE AGENCY

# EUROPEAN DEFENCE AGENCY

**Giuseppe DELLO STRITTO**

Project Officer Capability Assessment

giuseppe.dellostritto@eda.europa.eu

# WHO WE ARE & WHAT WE DO

**Intergovernmental Agency**
of the Council of the European Union

**Established in 2004**
Based in Brussels

## DESIGNED TO BE

1

Main intergovernmental
**prioritisation instrument**
at EU level in support of defence capability development

2

**…peration forum**
… technology and capability development

3

**…ilitary interface**
…etween Member States …nd EU wider policies

# PRIORITISATION

## EDA - main architect of the EU's Defence Capability Priorities

### Capability Development Plan (CDP)

Defines priorities on which Member States should focus their **collaborative capability development efforts**

At the 2018 CDP revision, steered by EDA, **11 new priorities** were set

### Overarching Strategic Research Agenda (OSRA)

Sets priorities for **collaborative European Defence Research**

Aligns strategic research agendas with operational needs & requirements

### Key Strategic Activities (KSA)

Identified out of the OSRA and CDP priorities via the KSA process

Based on the need to identify **critical know-how** (skills, technologies, manufacturing capabilities) to be safeguarded and supported within EU

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# CAPABILITY DEVELOPMENT PLAN

**Strand A:**
Headline Goal CSDP Shortfalls

**EUMC**

**EDA**

**Strand B:**
Long Term Capability Assessment

2018 EU Capability Development Priorities

- Cyber Responsive Operations
- Space-Based ICS
- Information Superiority
- Ground Combat Capabilities
- Logistic & Medical
- Naval Manoeuvrability
- Underwater Control
- Air Superiority
- Air Mobility
- Air Integration
- Cross Domain Cap

**Strand D:**
Lessons from operations

**Strand C:**
Potential for cooperation

NOV 23

- **Common set of output oriented priorities**
- **Agreed at political level**
- **Key reference & Coherence for CARD, PESCO & EDF**

Coherence of output with relevant NATO activities

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# CDP STRAND B – INNOVATION FROM R&T PUSH TO CAPABILITY PULL

- Cutting-edge military capabilities
- Technological innovation for defence

Strategic Compass

EDA RTI

- Technology Foresight Report
- EDTs Action Plan

- Impact on future warfare
- Future Capability requirements

Strand B

**CDP**

- **EU Cap Dev Priorities**

- Table Top Exercises with pMS, EU and NATO experts to address future capability requirements
- 2 Scenarios developed in timeframe 20+ years ahead
- Fictitious, politically neutral, unclassified

**Long-term Capability Assessment**

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# COHERENCE

**EDA is involved in all existing EU defence tools to ensure coherence & focus on capability priorities**

- **CAPABILITY DEVELOPMENT PLAN (CDP)**
  Common priority setting
- **COORDINATED ANNUAL REVIEW ON DEFENCE (CARD)**
  Defence review & identification of cooperation opportunities
- **PERMANENT STRUCTURED COOPERATION (PESCO)**
  Common planning & project implementation
- **EUROPEAN DEFENCE FUND (EDF)**
  EU co-funding for capability development and research

Objective = collaborative projects for a coherent set of **usable, deployable, interoperable and sustainable capabilities**

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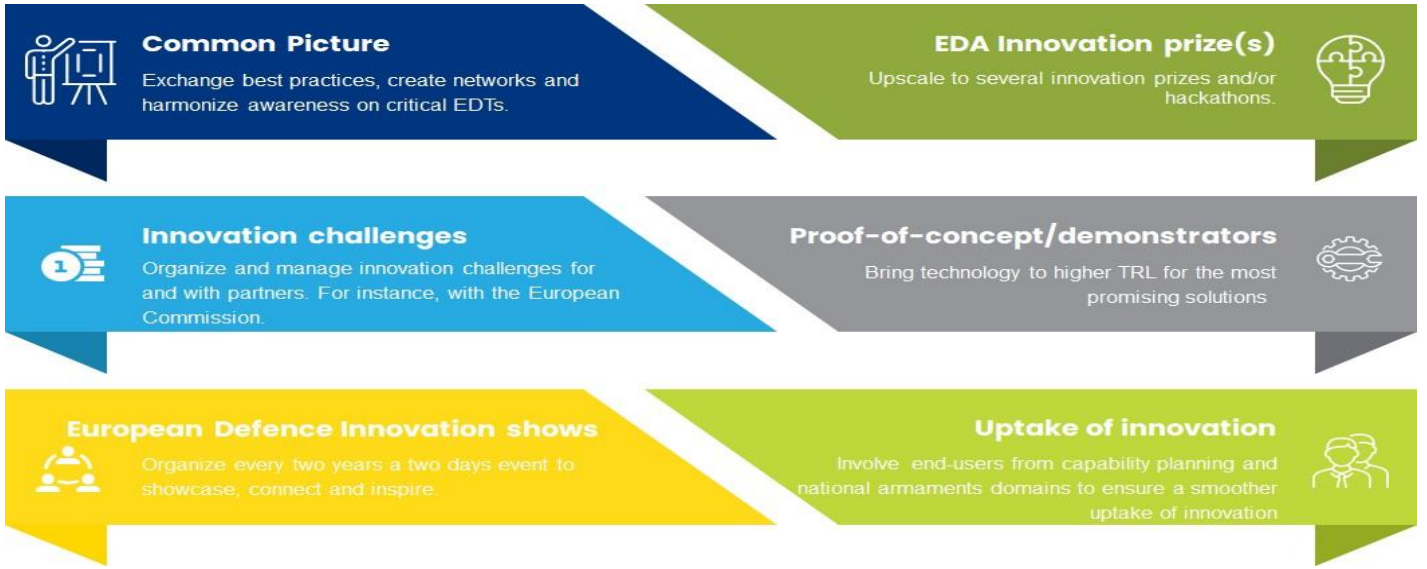
# DEFENCE RESEARCH

## EDA - Manager of European defence research

EDA promotes, facilitates & manages collaborative Research and Technology (R&T) activities in **15 technology domains (CapTechs)**

**Since 2004, roughly 200 R&T projects managed by EDA**

### HUB FOR EU DEFENCE INNOVATION (HEDI)



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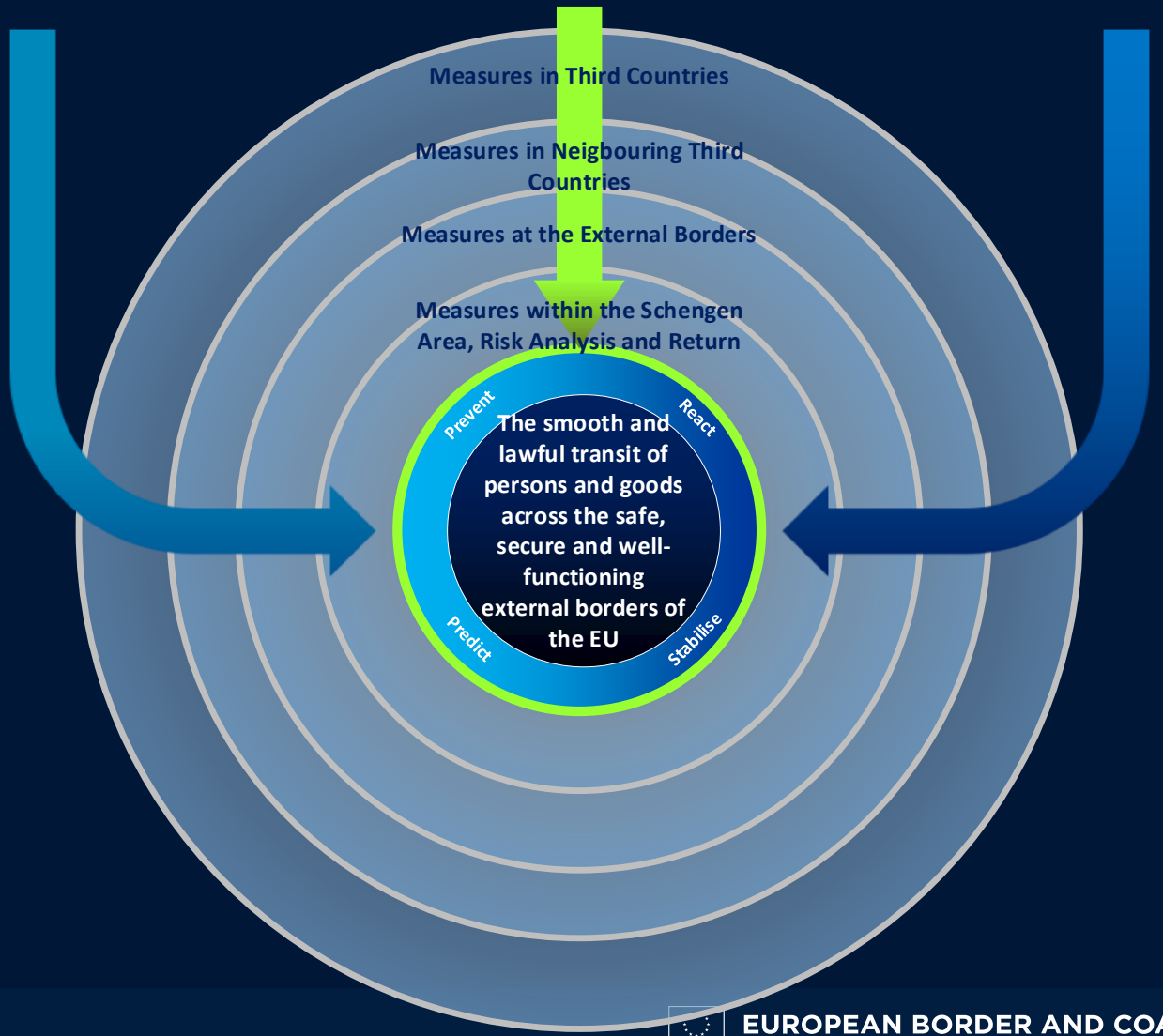
# European Integrated Border Management and Integrated Planning

# European Integrated Border Management in 360°

| Strategic Objective 1<br>Reduced Vulnerability of the External Borders based on Comprehensive Situational Awareness | Strategic Objective 3<br>Sustained European Border and Coast Guard Capabilities | Strategic Objective 2<br>Safe, Secure and Well-Functioning External Borders |
|---|---|---|
| Predict & Prevent | Enable | React & Stabilise |

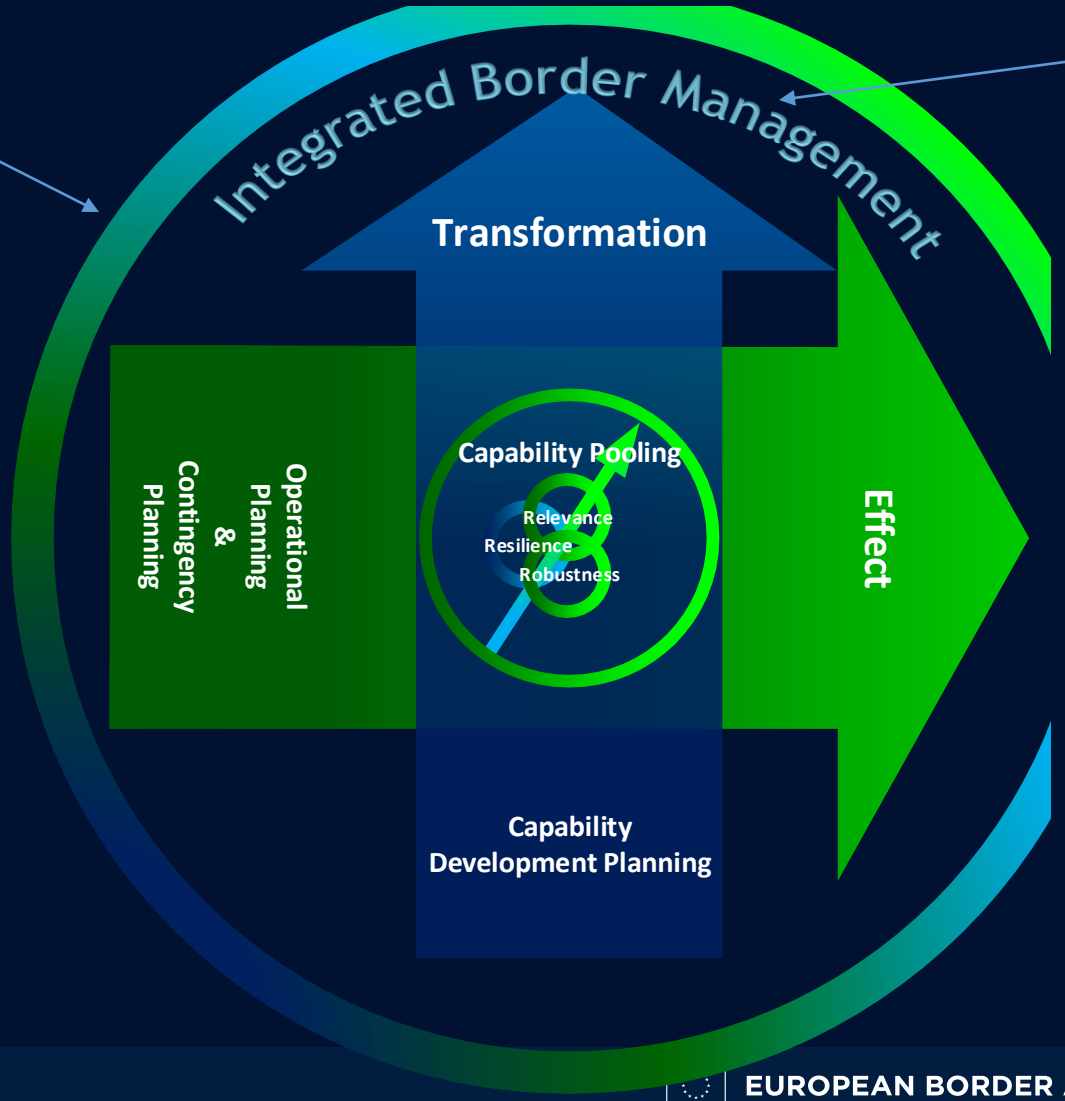


# Operating and Transforming the European Border and Coast Guard

**Article 8**
Integrated Planning

Managing Strategic Risks

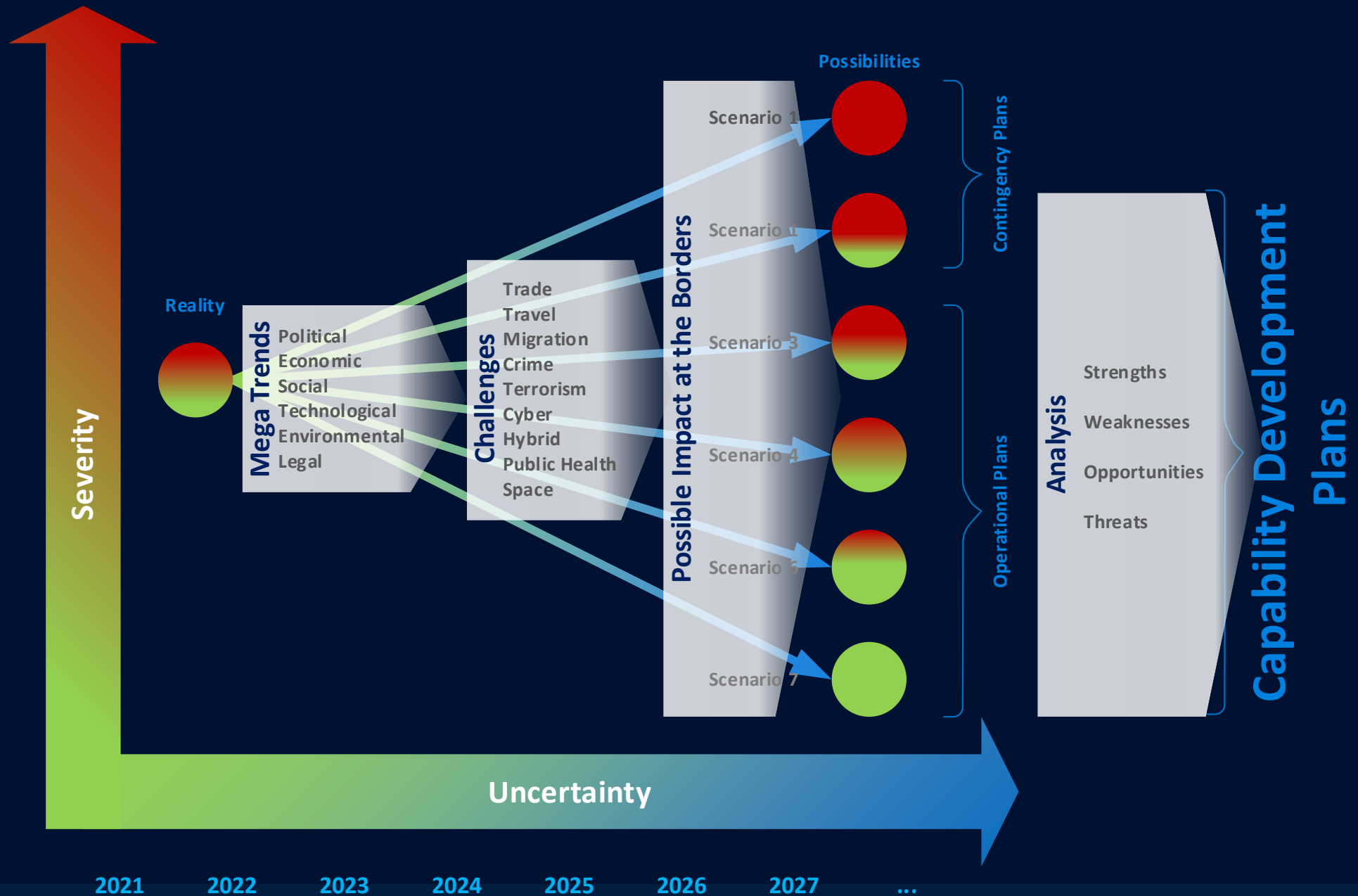
**Article 9**
Multiannual Strategic Policy Cycle for Integrated Border Management




Mitigating Operational Risks and Current Vulnerabilities

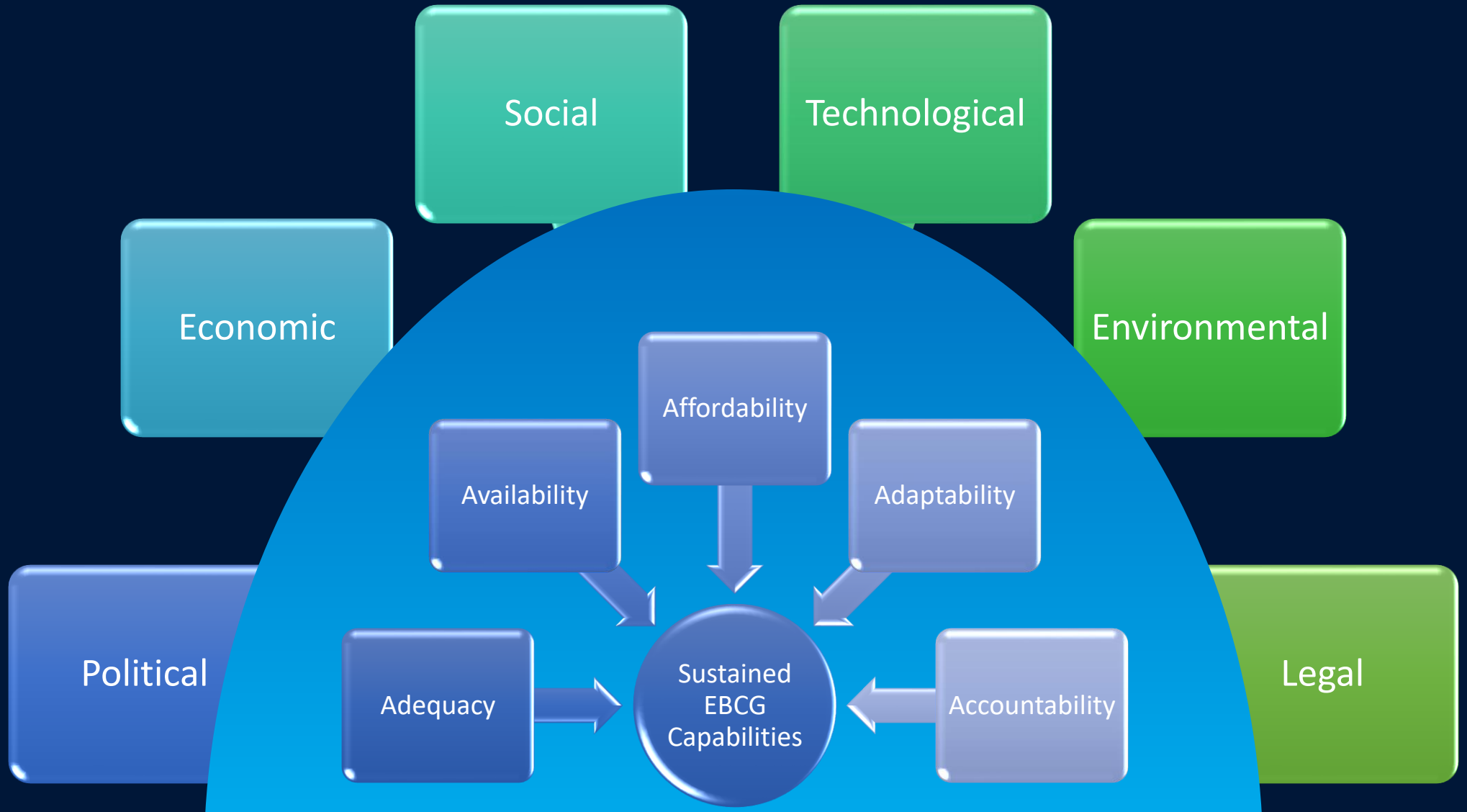
# A Capability is More than Just Equipment

# Scenario-Based Planning



# Sustained European Border and Coast Guard Capabilities

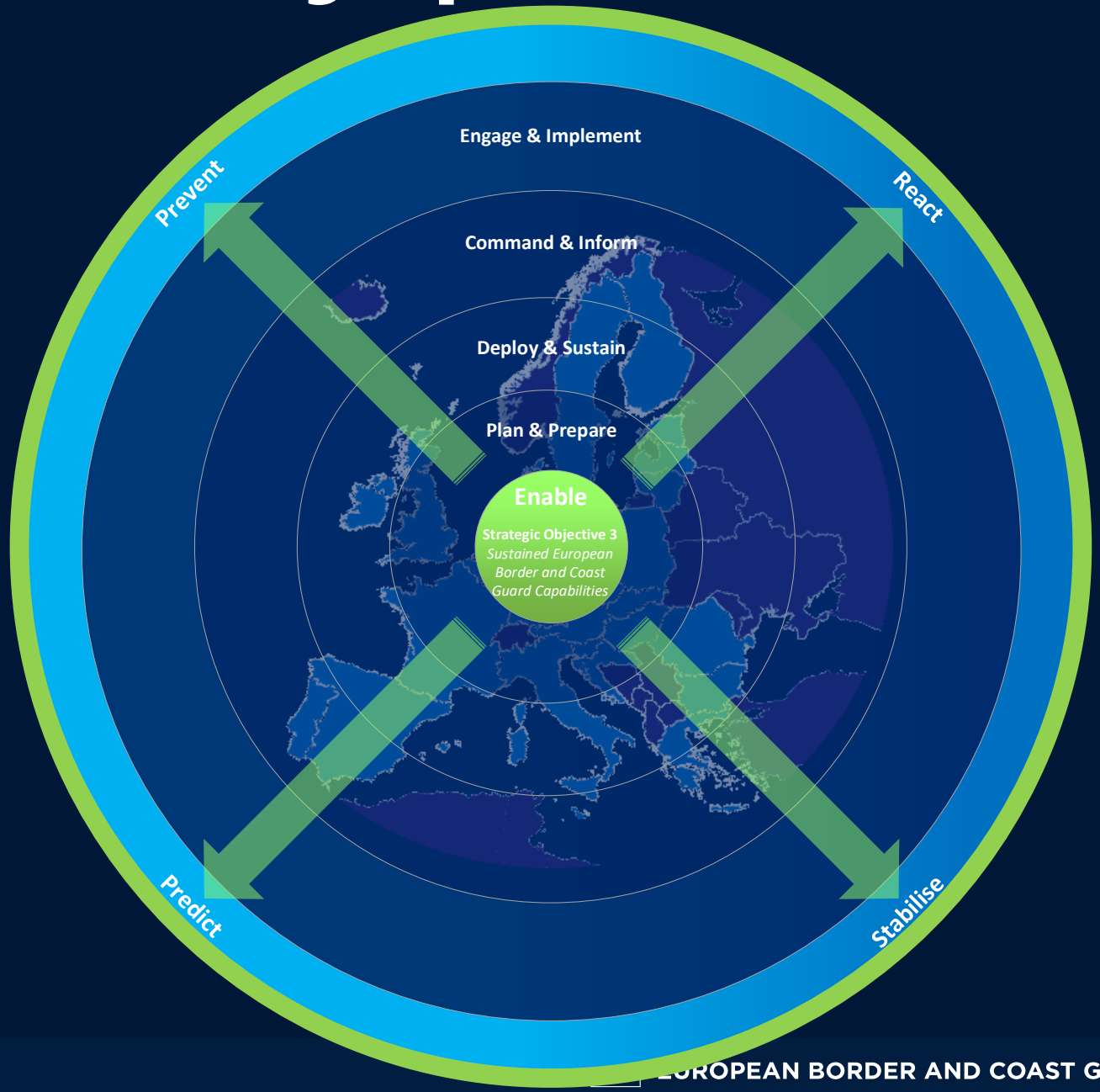
## Balancing Needs, Costs and Benefits – Being Resilient in a Dynamic Environment



# Capability Development Plans

- Methodology and Procedure MB Decision 02/2021

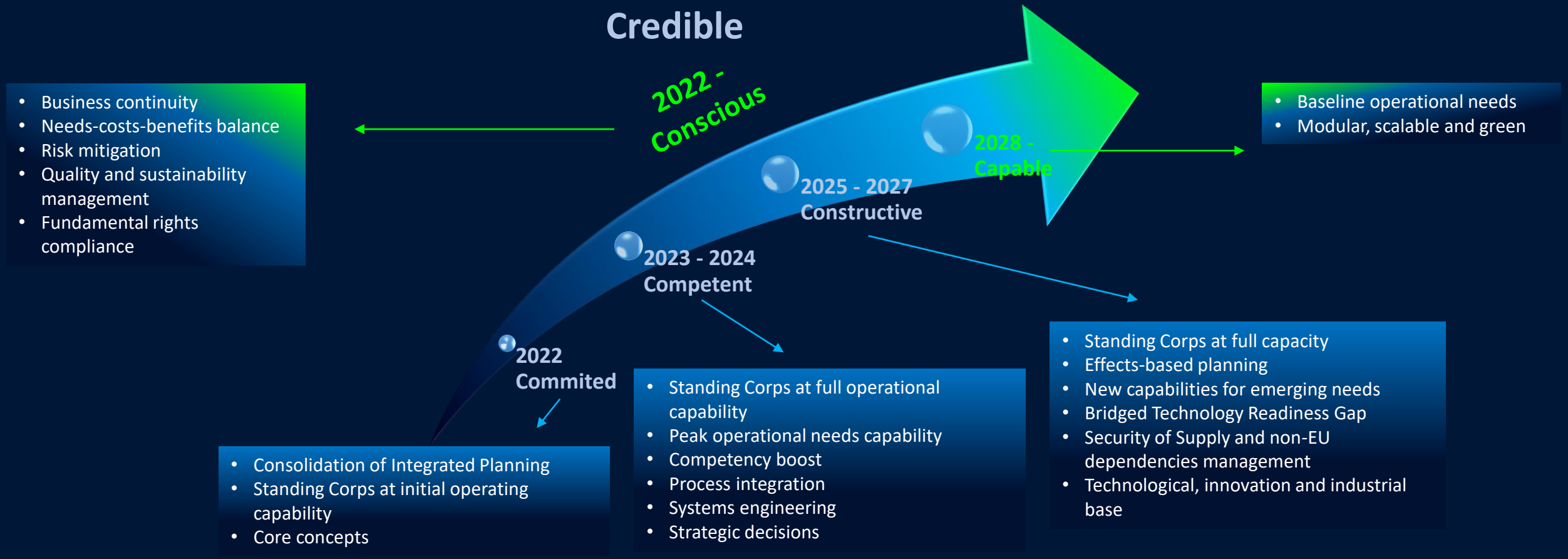
# Covering Capabilities in 360°



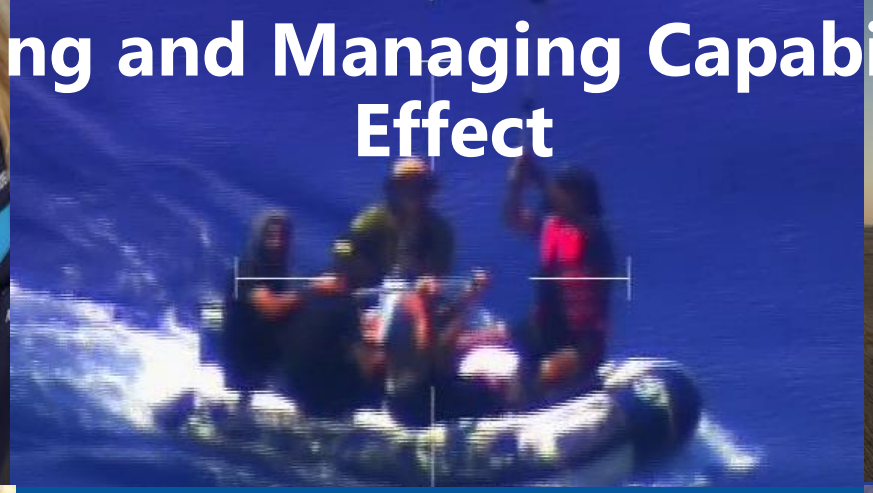

**Strategic Objective 1**
*Reduced Vulnerabilities of the External Borders based on Comprehensive Situational Awareness*

**Strategic Objective 2**
*Safe, Secure and Well-Functioning External Borders*

# Capability Development Framework



# Developing, Delivering and Managing Capabilities for Operational Effect



FRONTEX

OPERA

EVOLUTION

# European Integrated Border Management and Integrated Planning

# Customs Control Equipment Instrument (CCEI)

HOME - CERIS SSRI Workshop “ Capability driven approaches across security sectors”.

*Brussels, 02/03/2023*

# CCEI within the Multiannual Financial Framework

## MFF 2021-2027 Headings 1 and 4

### SINGLE MARKET

- Single Market Programme
- Union Anti-Fraud Programme
- Fiscalis Programme
- Customs Programme
- COSME, Food, Health, Competition…
- TAXUD prerogative lines (studies)

### MIGRATION AND BORDER MANAGEMENT

- Asylum & Migration Fund
- Integrated Border Management Fund
  - Border Management and Visa (people)
  - Customs Control Equipment (goods)

### OTHERS

- …

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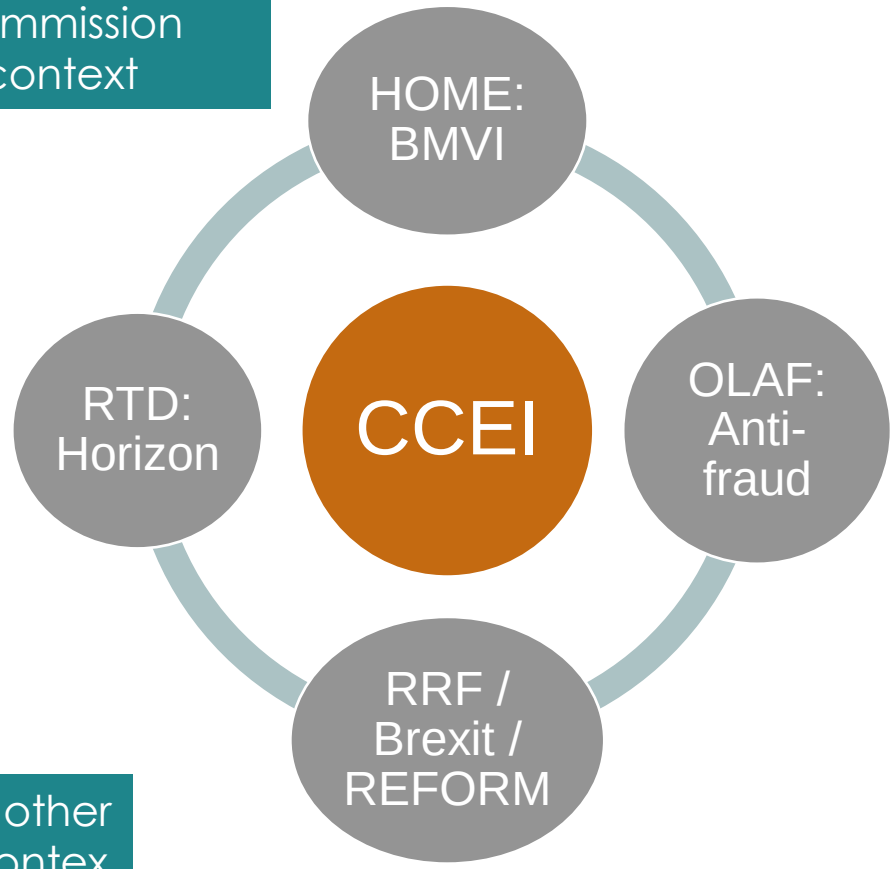
# Context and synergies

Customs context

Commission context




Outside Commission: other border authorities/ Frontex

# CCEI Vision

## 1. Short-term: **adequacy** – 1st WP 2021-2022

- **Fill in gaps:** critical needs, urgencies, unmet controls requirements
- **Added value:** Customs controls **performance**
- Definition of EU standards
- Improve **knowledge and information**

## 2. Medium-long term: **equivalence** – 2nd and 3rd WP

Implementation of **EU equipment standards**

Take stock and use **knowledge and information gathered**

**Co-sharing** of equipment

**Innovation**

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# CCEI Work programme 2021-2022

## Financial envelope

**Total budget 2021-2027**
**~ EUR1 billion**

**271 514 000*** Euros for first two years 2021-2022

**80%** for **Border Crossing Points**

**20%** for **Customs laboratories**

**Co-financing**: 80% Commission + 20 % Member States

Maximum **15%** of budget per each category per **Member State**

The **duration of the project** presented in every work package shall **not** exceed **36 months**



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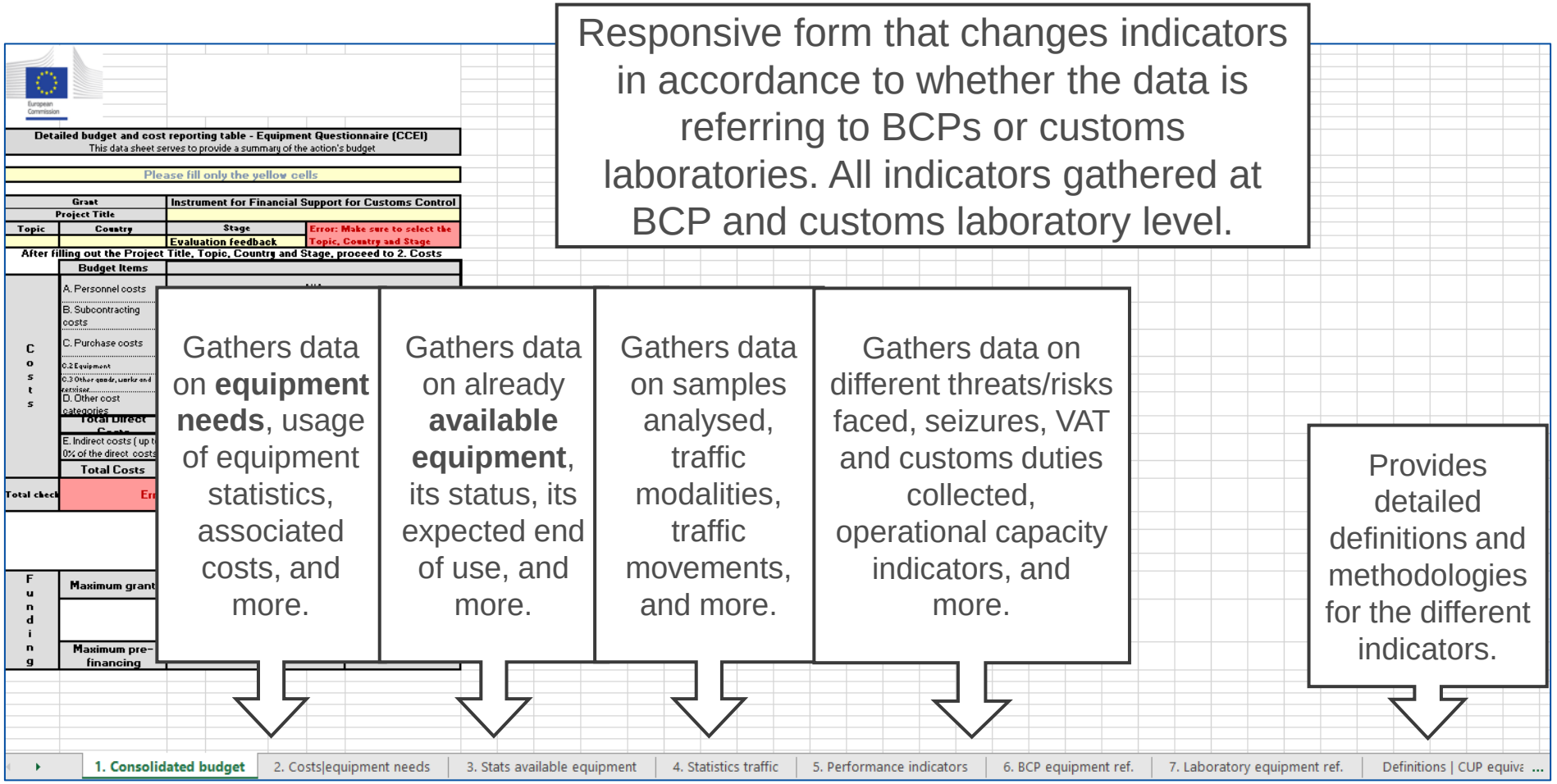
# Detailed budget and cost reporting table – Equipment Questionnaire




Responsive form that changes indicators in accordance to whether the data is referring to BCPs or customs laboratories. All indicators gathered at BCP and customs laboratory level.

Gathers data on **equipment needs**, usage of equipment statistics, associated costs, and more.

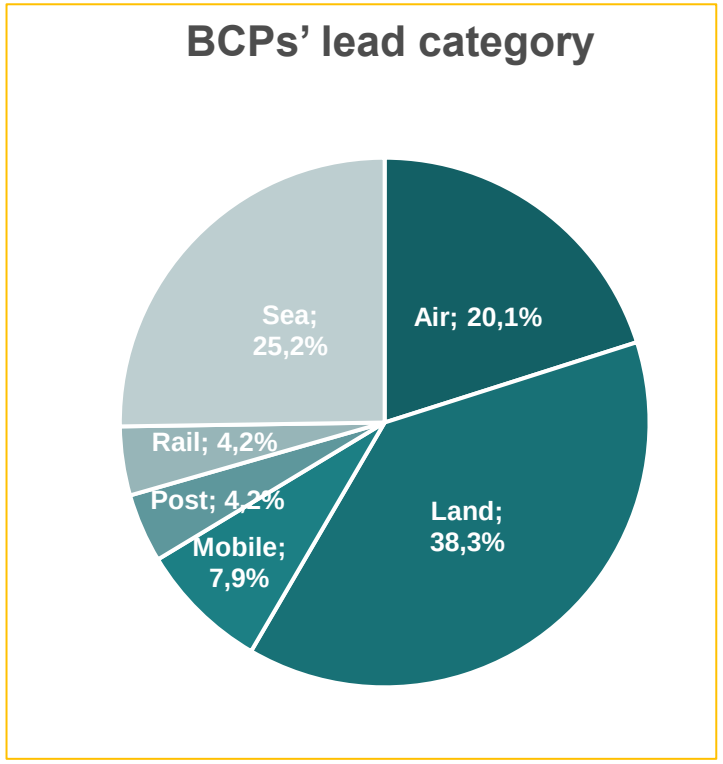
Gathers data on already **available equipment**, its status, its expected end of use, and more.

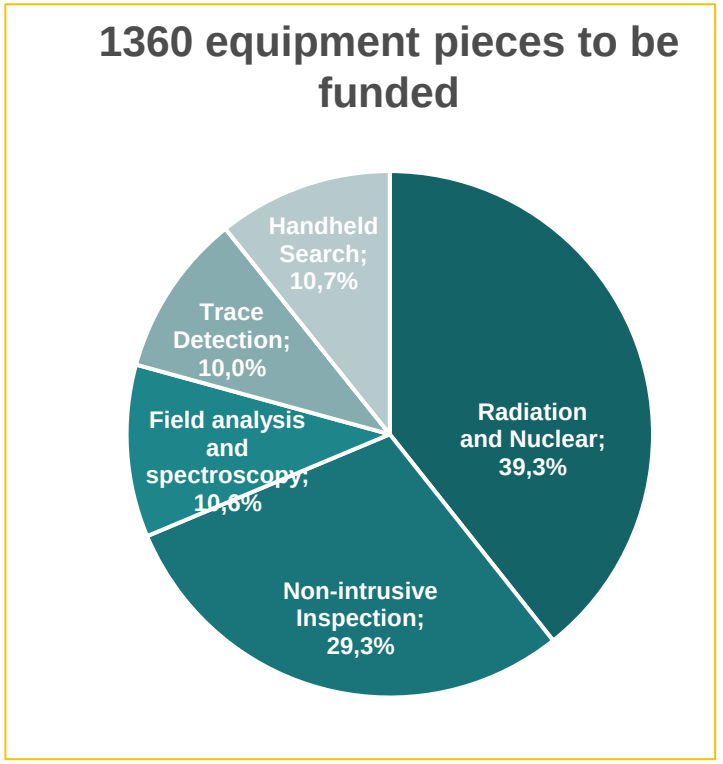
Gathers data on samples analysed, traffic modalities, traffic movements, and more.

Gathers data on different threats/risks faced, seizures, VAT and customs duties collected, operational capacity indicators, and more.

Provides detailed definitions and methodologies for the different indicators.

# Border Crossing Points




| Country | BCPs |
|---|---|
| Austria | 5 |
| Belgium | 4 |
| Bulgaria | 18 |
| Croatia | 17 |
| Cyprus | 2 |
| Czechia | 8 |
| Denmark | |
| Estonia | 1 |
| Finland | 17 |
| France | 9 |
| Germany | 8 |
| Greece | |
| Hungary | 13 |
| Ireland | **9** |
| Italy | 20 |
| Latvia | 2 |
| Lithuania | 13 |
| Luxembourg | 3 |
| Malta | |
| Netherlands | 9 |
| Poland | 11 |
| Portugal | 15 |
| Romania | 19 |
| Slovakia | 3 |
| Slovenia | 3 |
| Spain | 20 |
| Sweden | 2 |



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# Policy priorities MAWP 2023 - 2024

**284.6 million EUR**



European Commission

# CCEI Coordination Group with all EU MS

- ***Objectives***

➢ Smooth, transparent and efficient programme management process (particular focus on the application and evaluation process);

➢ Guidance documents (17 thematic deliverables) produced supporting the achievement of the CCEI policy objectives and the implementation of the programme.

# Role of innovation - Horizon Europe Cooperation with DG HOME/RTD

- TAXUD has a proactive approach towards Horizon Europe Research and innovation programme

- Ensure that future research and development activities are in line with TAXUD strategy and policy, and the specific customs control needs and technological requirements

- CCEI promotes the market uptake of HE project outcomes and provide the opportunity to test new emerging technologies prior to procurement



European Commission

# Thank you!

## CCEI Information & Contact Points:

TAXUD-CCEI-A1@ec.europa.eu

CCEI webpage

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# 2nd Panel Discussion

# CDA Challenges and Opportunities


**Marcel Van Berlo**
TNO/EARTO

**Sandra Mezzadri**
Europol

**Gerogios Kolliarakis**
MEDEA

**Tiina Ristmaee**
THW

**Teija Mankinnen**
Finish Ministry of Interior

Moderator: **Hans-Martin Pastuska**


Brussels | 2nd March 2023

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MIGRATION AND HOME AFFAIRS
Directorate F – Innovation & Audit
**F.2 – Innovation & Security Research**
**Community of European Research and Innovation for Security (CERIS)**

# CERIS SSRI workshop: *"Capability Driven Approaches Across Security Sectors"*

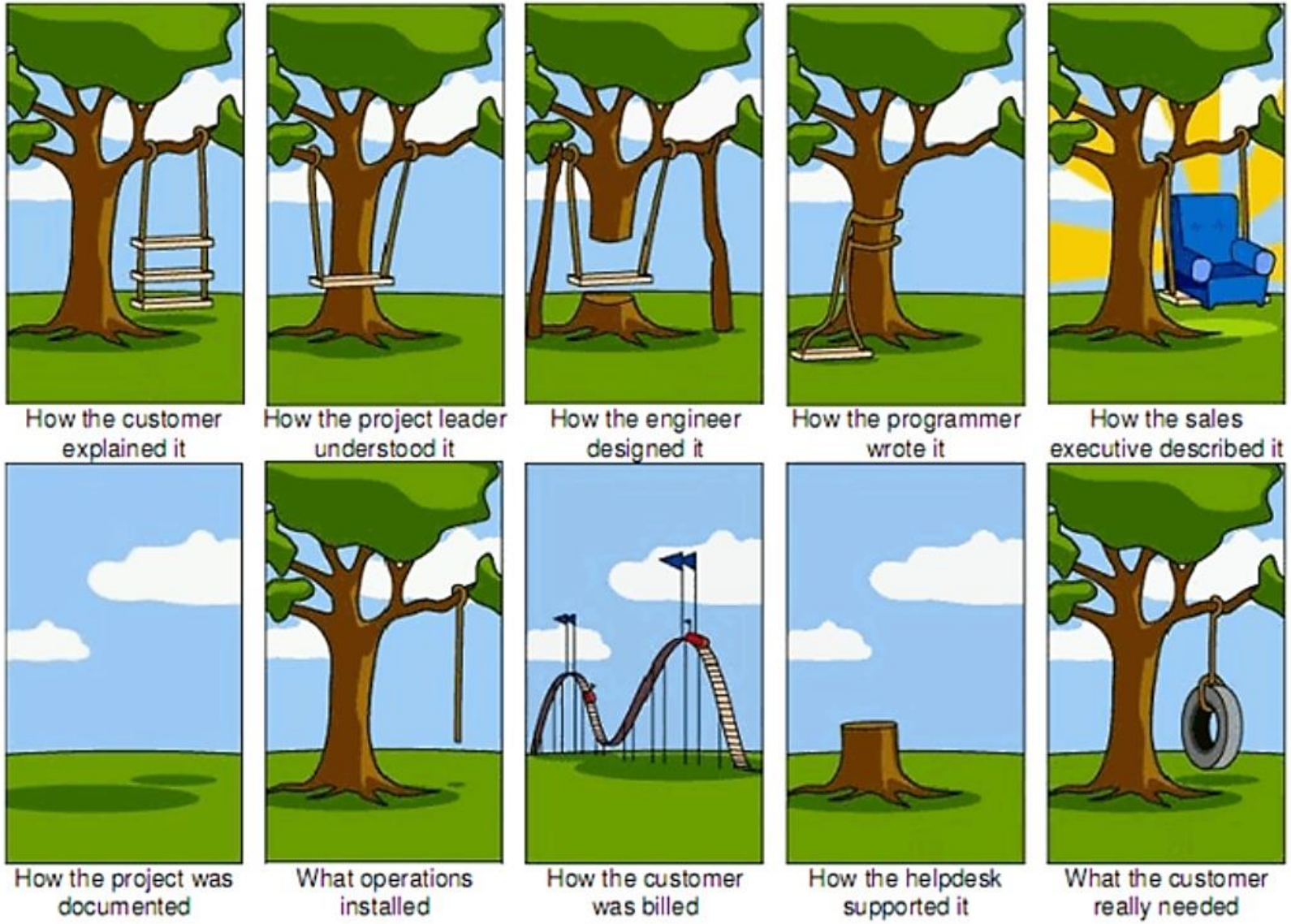
**02 March 2023**
**Le Bouche à Oreille, Rue Felix Hap 11, 1040 Brussels**

2nd panel discussion:

## CDA – Building Blocks, Challenges and Opportunities

Just to reiterate after lunch:

**Why capability-driven approaches?**



# 2nd panel discussion (14h30 – 16h00)
# CDA – Building Blocks, Challenges & Opportunities

- Panel Moderator:
  - Hans-Martin Pastuszka (Fraunhofer INT & CERIS-SSRI)
- Panellists:
  - Marcel van Berlo (TNO & CERIS-SSRI, Chair EARTO-SDWG)
  - Georgios Kolliarakis (DGAP, Advisor for Research Strategy)
  - Teija Mankkinen (FI-MoI, Ministerial Adviser)
  - Tiina Ristmäe (THW & CERIS-DRS)
  - Sandra Mezzadri (IABG & CERIS-SSRI)

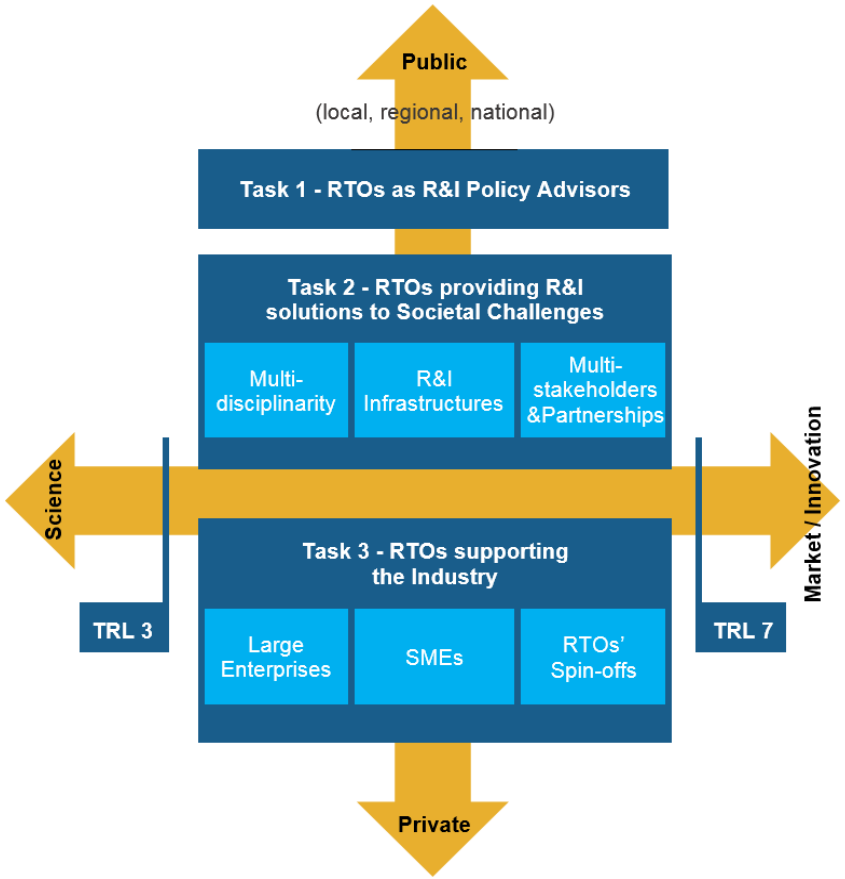
# Capability Driven Approach

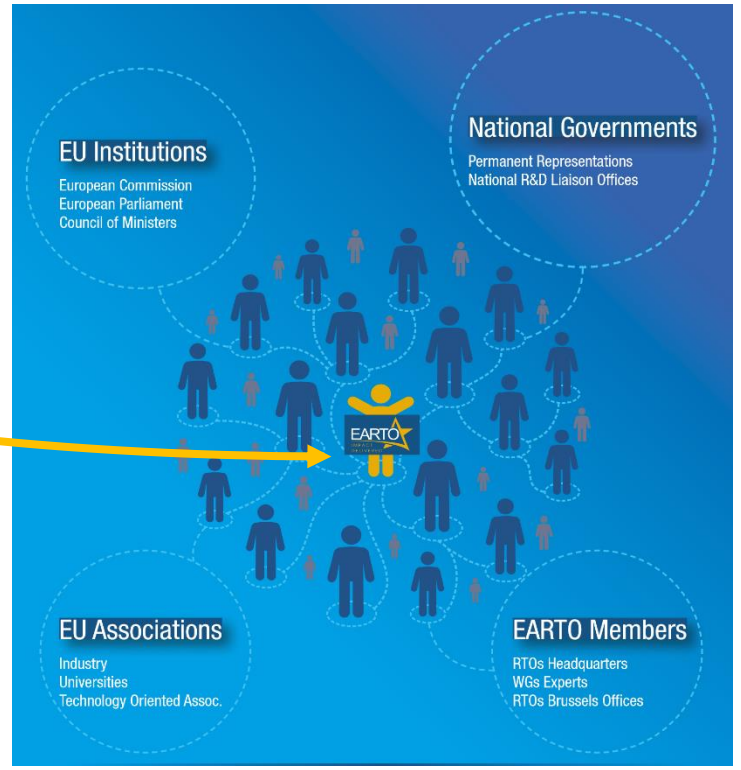
An RTO perspective

**Dr. M.P.W. van Berlo |**

CERIS SSRI workshop “Capability Driven Approaches Across Security Sectors”, Brussels, 2 March 2023

# EARTO Motto: **Impact Delivered!**
# EARTO Vision: **Technology for a Better World**





# EARTO Working Groups

| POLICY WORKING GROUPS |
| --- |
| 1. EU RD&I Programmes |
| 2. Financial Experts |
| 3. Legal Experts |
| 4. Impact |
| **TECHNOLOGY ORIENTED WORKING GROUPS** |
| 5. Security and Defence Research |
| 6. Emerging Technologies for Healthcare |
| 7. Critical Raw Materials |
| 8. Space Research |

# Main barriers for adoption of CDA in security domain

A **complex mix of many different aspects is hindering** the effective implementation and application of CDA in the security domain:

a) These approaches are **not well-integrated** nor interconnected.

**b)** **Regulatory frameworks, market conditions** and an **institutional culture**, which is not promoting inter-agency dialogues and exchange of best practices, pose significant hurdles to cross-domain capability management and to the establishment of a common long-term vision.

**c)** **Differing (technical) languages** and a **low level of trust** among different organisations from the same or different security sectors are very common. They are even intensified through the **diversity of organisations** involved on the demand side.

d) Governmental executive organisations have rather **complex and multifaceted operations-driven organisational structures** and **limited capabilities** to effectively deal with forward-looking capability development and related appropriate longer-term R&D initiatives. A dominant factor in this context is still **the short-term oriented purchasing strategy** of equipment/tools.

# Building blocks of a CDA in security domain

1. A **common vocabulary**.
   - Understanding and definition of “capabilities” and the identified “gaps”
   - A common security technology taxonomy, allowing for a bi-directional link between capabilities and technologies, should be defined.
2. **Jointly formulating ambitions**, identifying and defining the required **common capabilities and gaps** with respect to civil security and across security sectors is needed.
   - Actors from governments, end-user organisations, research (RTOs, universities), industry and other solution providers should be involved.
3. Anticipation and preparation for the characteristic resistance to change by adequately **implementing change management**.
   - Successfully implementing new solutions in an existing complex environment usually leads to certain changes in this environment. In specific, the mentioned (side)-effects require attention for dealing with resistance of people and organisational structures to successfully adopt new technologies and capabilities.
   - Given the potential sensitiveness and impact of solutions, the CDA in Security should anyway sufficiently consider the inclusion of end-user and societal acceptance of solutions.

# Building blocks of a CDA in security domain

4. **Forward-looking mind-set and skills**
   - Think big
   - Take a longer-term perspective (10-15 years)
   - Not exclusively focus on technological possibilities
   - A realistic view on the financial possibilities of the organisations
5. **Scenario-driven approach**
   - Both realistic ones as well as well-designed wildcards that facilitate non-linear thinking really going beyond the ‘here and now’ status.
   - Near-, mid- and long-term scenarios. This time dimension is essential to make decisions regarding the development of roadmaps, when to achieve readiness levels, and required investments.
6. **Sand-box environments**
   - Concept Development and Experimentation
   - Sand-box environments illustrate the added value of capability development alongside technology development, mutually inspiring each other.

# Building blocks of a CDA in security domain

7. **Procurement** and development of technologies
    - A good mechanism needs to be installed to communicate the needs and expressed intentions to procure and develop technologies to possible solutions providers and/or include other approaches to overcome financial hurdles.
8. Increased **cooperation activities**
    - Fundamental in bringing effectively together end-users, public authorities, industry and research. Creating a community that is committed and has the (financial) means to collaborate.

To summarise:

The essential prerequisite for any successful implementation of a CDA is a **sustained political will** to do it: it requires **ownership**, **sustained funds for participation of security stakeholders, and a visible uptake of its results into actions.**

# Recommendations

A. Implement a **continuous process**

- This can only be done if the funding of the core elements of such activities is organized as a longer-term (at least 5 to 10 years) commitment, and that a core team of people and organisations uphold this process.
- A clear ownership and governance structure of this process at the EC level should be established

**B. Broaden the collaborative framework**

- Sustained establishment of a broader collaborative framework (initiatives that are being launched in different technological domains and industrial sectors), with institutionalized working groups formed by the different actors
- This collaborative framework could deploy its activities in different EU regions, aiming at interfacing with already existing CDAs on Member States level, so that its actions and results can achieve a wider scope.

C. Have an **open discussion on gaps**

- Joint discussions around potential shortfalls in the future are by far less sensitive than those on immediate, current gaps. It is thus recommended to develop and initiate the process by firstly focussing on common gaps in the near future (10 years ahead).

D. Establish a more **structured and harmonized approach for capability and innovation management between the various national authorities**

- This would also help to enhance the involvement of public authorities in EC-funded research and innovation projects

Theme name

Place text here

# Thank you for your attention!

Marcel.vanberlo@tno.nl

https://www.earto.eu/earto-wg-security-defence-paper-on-capability-driven-approaches-across-security-sectors/

Mediterranean (and Black Sea) Practitioners' Network & Capacity Building for Effective Response to Emerging Security Challenges

# Capability Gaps & Requirements Analysis along THOR Dimensions

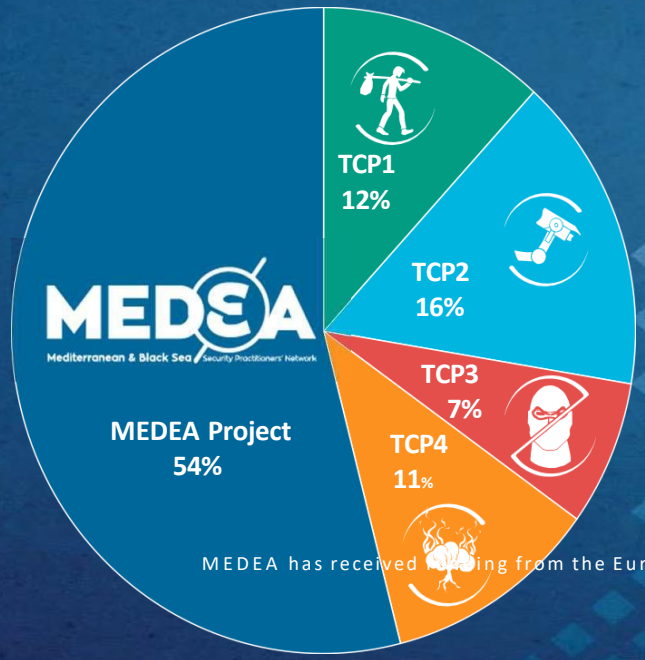
**Dr Georgios Kolliarakis**

**DGAP**

MEDEA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 787111

# MEDEA in a nutshell

**20 Partners : 13 countries**
Start/End Dates:01-06-2018 … **31/05/2023** (60M)
Total budget: **3.5 M€**



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# Methodological Approach I

1/ Community of Practice Model

2/ Threat Scenario-building (in two time horizons) incl. practitioners (several scenarios per each of the 4 Thematic Communities of Practitioners

3/ Capability Gaps identification in the scenarios

4/ Each Capability Gap Finding (CGF) gets disaggregated/elaborated in requirements along FOUR Dimensions: THOR

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# Methodological Approach II

- Each Capability Gap Finding (CGF) is characterized by several TECHNOLOGICAL, HUMAN-related, ORGANISATIONAL, and REGULATORY attributes
- The set of all attributes for a given CGF gives more specific and targeted cues for requirements, be they in research, investment, procurement, legislation, organizational change, inter-institutional or cross-Member-State cooperation, etc.

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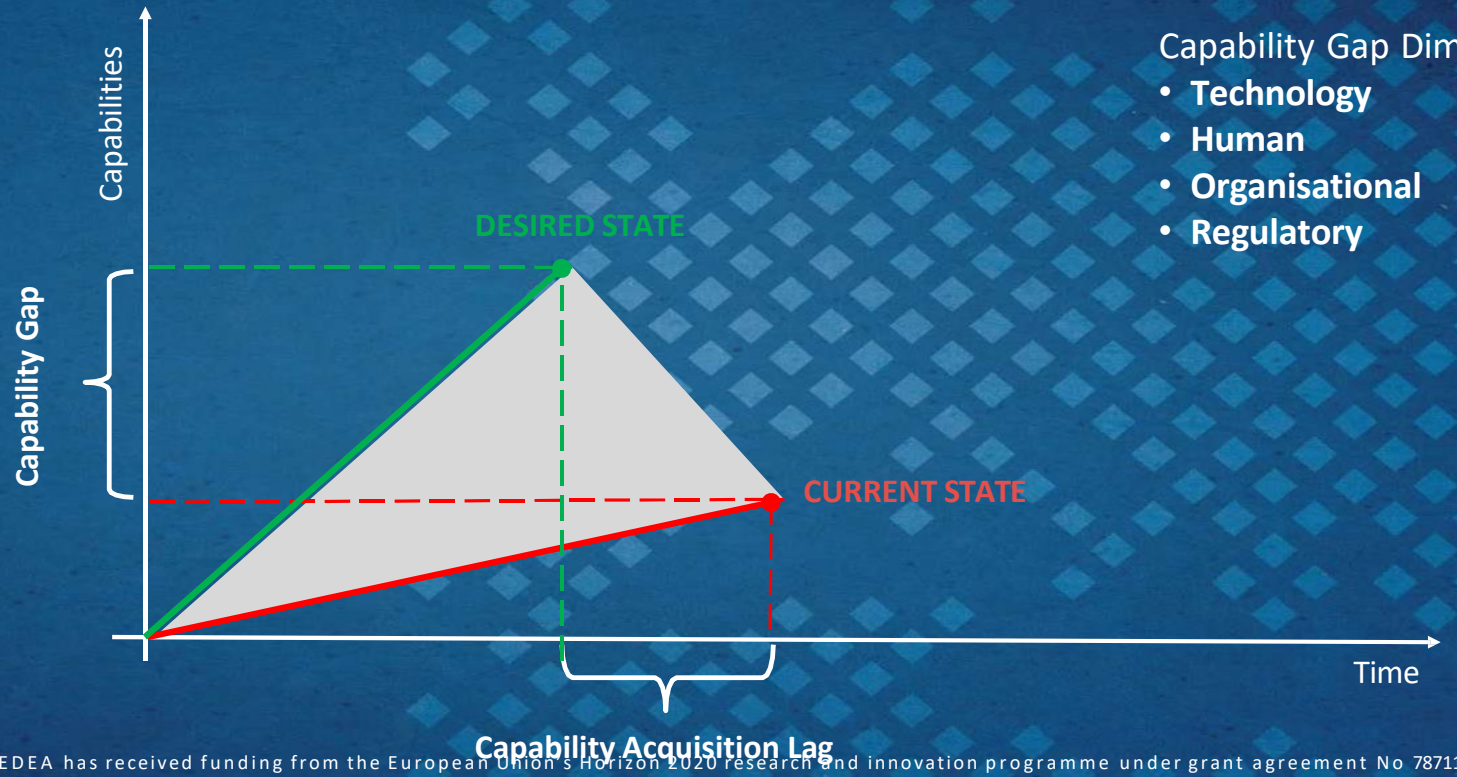
# Present / Short-term




Capability Gap Dimensions

- **Technology**
- **Human**
- **Organisational**
- **Regulatory**

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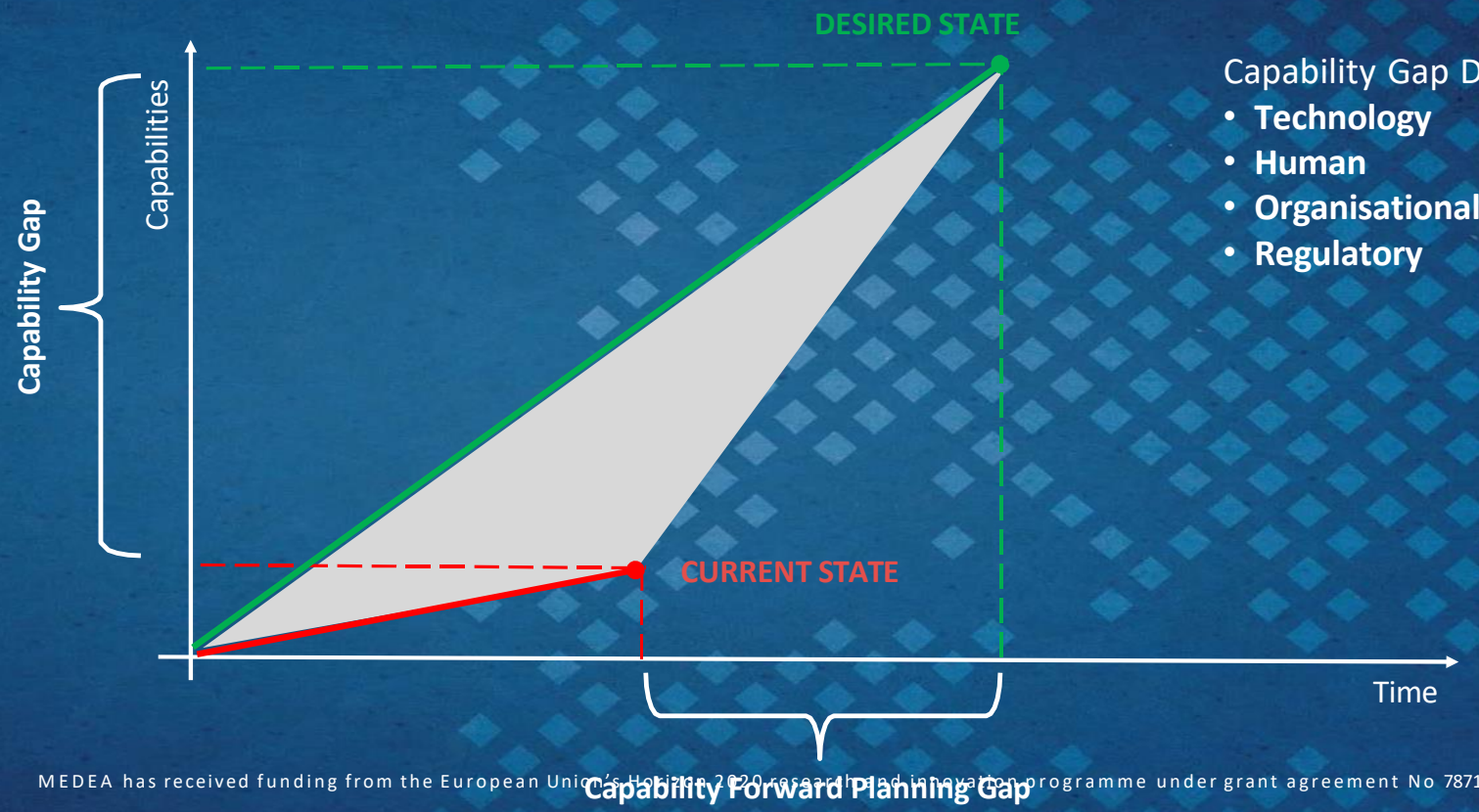
# Future – Middle / Long Term




Capability Gap Dimensions

- **Technology**
- **Human**
- **Organisational**
- **Regulatory**

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# Findings & Insights

- Multi-stakeholder engagement for knowledge generation is labour- intensive: Diverging LOGICS, LANGUAGES, INTERESTS
- Practitioners: deliver hands-on & fine-grained insights on needs, what doesn't work; challenged with middle-term forward-looking
- R&D actors lack access to rich-context of application
- Confusion & Conflation of FUNCTIONAL and OPERATIONAL gaps, requirements
- T(echnology) maturity (TRL 9) is a NECESSARY, however NOT SUFFICIENT condition: It is the H, O, R factors which ENABLE innovation into becoming a SOLUTION (USABLE & factually USED)

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# The Way Ahead

- **Change MINDSET & SPEAK: Capability is NOT (merely) a technological thing: It is always also an ORGANISATIONAL, HUMAN, and REGULATORY achievement**

- **Be CONTEXT-SENSITIVE: From FUNCTIONAL GAPS to OPERATIONAL REQUIREMENTS, and from INNOVATIVE POTENTIAL to factual CAPABILITIES is a long way**
- **Build up on existing work for pooling, systematizing, comparison, validation, harmonization of CDA methodologies  IFAFRI?**
- **CERIS SSRI NoP Day, 27 April 2023**

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# MEDEA Public Repository

https://www.medea-project.eu/capability-gaps/

MEDEA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 787111

# Thank you for your attention!


## Georgios Kolliarakis

e-mail: kolliarakis@dgap.org

MEDEA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 787111

# CDA – Building Blocks, Challenges & Opportunities

IFAFRI & THW experiences

Tiina Ristmäe

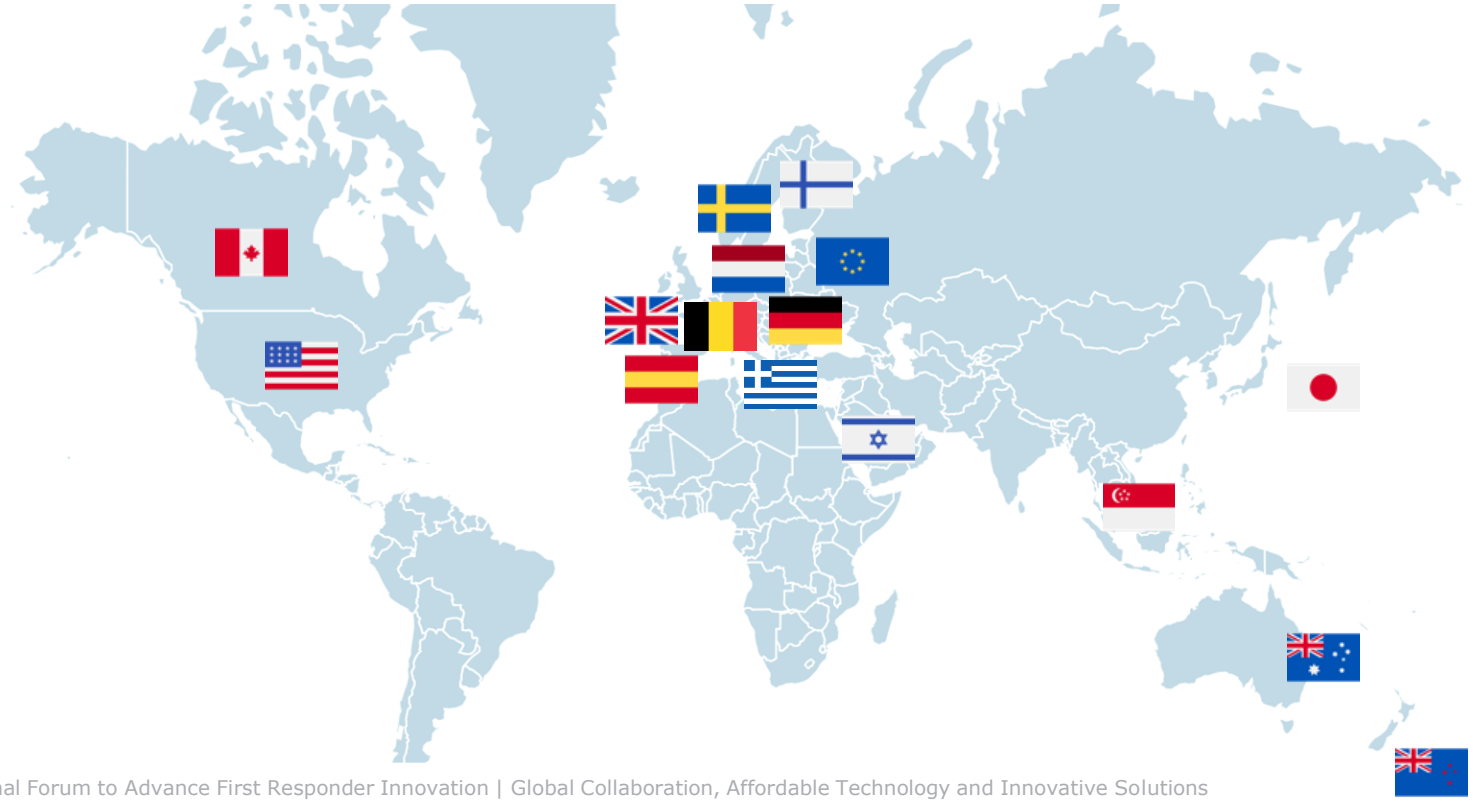
02.03.2023 Brussels

## IFAFRI Participants

- Australia
- Belgium
- Canada
- European Commission
- Finland
- Germany**
- Greece
- Israel
- Japan
- Netherlands
- New Zealand
- Singapore
- Spain
- Sweden
- United Kingdom
- United States

** IFAFRI Chair as of September 2021

IFAFRI is a global collaboration of government leaders focused on enhancing and expanding the development **of affordable technology** and innovative solutions **to improve first responder safety, efficiency, and effectiveness**.



## The Challenges and Solution

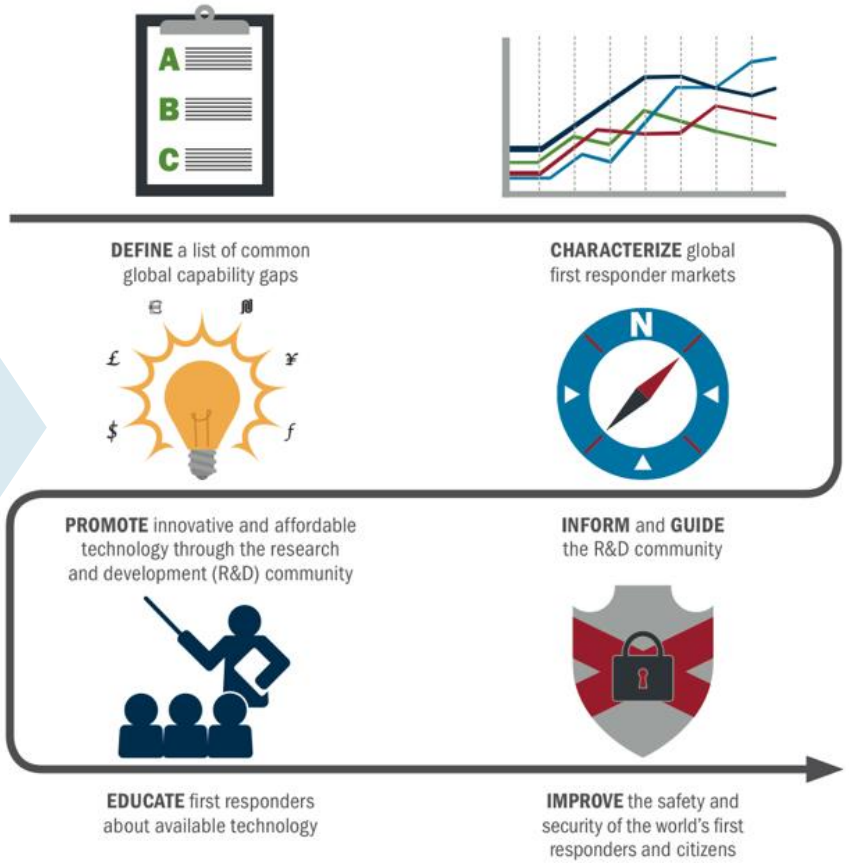
**Challenge**

There is no mechanism to identify and discuss shared first responder capability gaps

**Challenge**

The global first responder market is fragmented, which limits their buying power

IFAFRI addresses these challenges by influencing the global market to develop affordable, innovative solutions for first responders



## IFAFRI Committees

### Capability Gaps Committee

**Chaired by: Sweden**

Analyzes, organizes and prioritizes a list of *Common Global Capability Gaps* to help characterize current and future technology requirements for first responders

### Research and Development (R&D) Committee

**Chaired by: United Kingdom**

Facilitates dissemination of information that is useful for industry and academia to initiate development on relevant solutions to established capability gaps

### Stakeholder Engagement Committee

**Chaired by: United States**

Identifies, cultivates and maintains relationships with responders, industry and academia that would advance the goals of IFAFRI on behalf of the global first responder community

# IFAFRI 10 Capability Gaps

The ability to:

- know the location of the FR
- detect, monitor and analyse passive and active threats
- identify hazardous agents
- incorporate information from multiple sources
- maintain interoperable communication with FR
- obtain critical information remotely
- conduct on-scene operations remotely
- monitor physiological signs of FR
- create actionable intelligence based on data and information from multiple sources
- provide appropriate and advanced personal protective equipment

# How IFAFRI collects capability gaps

- National input
- Cross-disciplinary
- FR involvement
- Scenario based
- FR review: current capabilities & needed capabilities
- Operational parameters/ requirements
- Validation& priorisation

→IFAFRI Capability Gaps Committee

| Capability Gap Assessment Categories |
| --- |
| Situational Awareness |
| Communications & Information Sharing |
| Command, Control, & Coordination |
| Responder Health & Safety |
| Logistics & Resource Management |
| Casualty Management |
| Training & Exercise |
| Risk Assessment & Planning |
| Intelligence & Investigation |

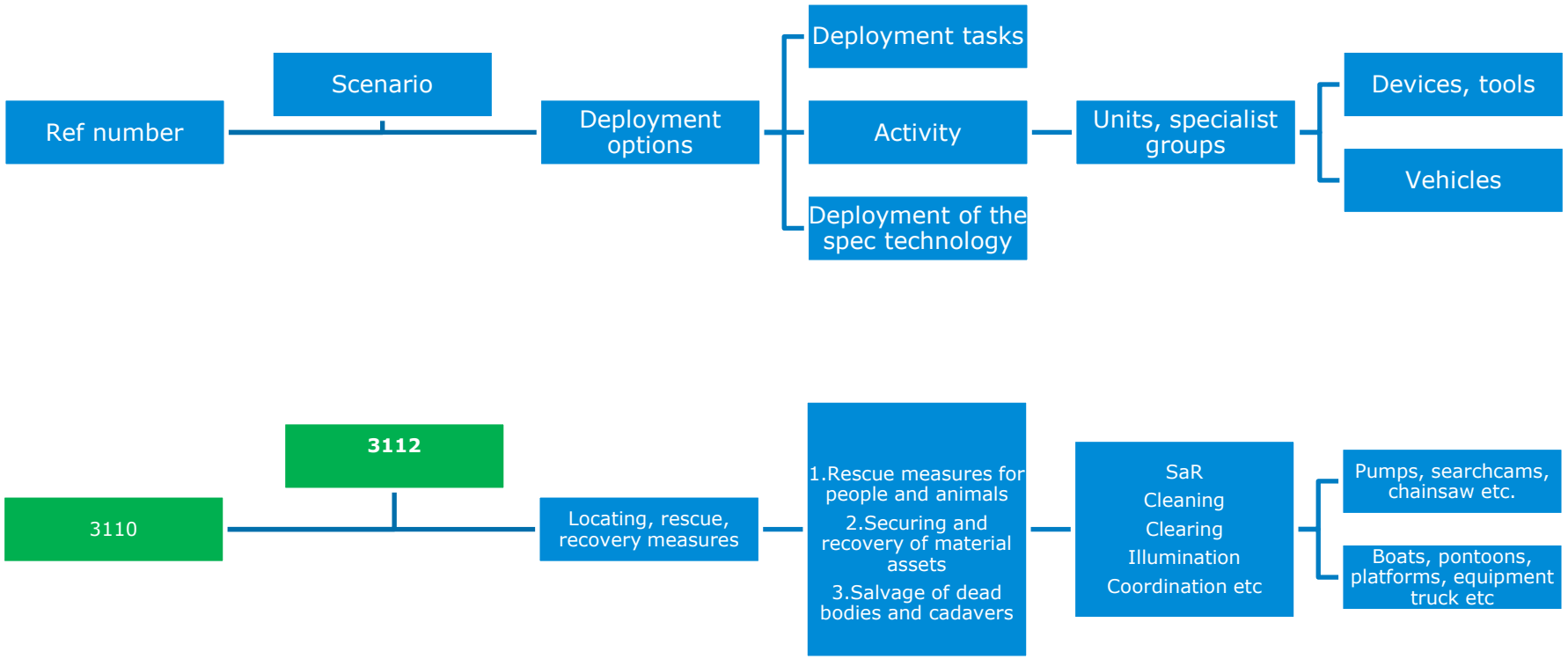
https://www.internationalresponderforum.org/

# THW – das Technisches Hilfswerk

- Governmental operational agency
- THW provides needs-based technical assistance at the request of the bodies responsible for hazard prevention (second responder)
- Volunteer basis (83 000)

- Modular standardised deployment system

# Deployment options – capabilities?




3100: Hazards and requirements due to natural or man-made environmental incidents
3110: Extreme weather
3112: Heavy rain

# The Planning Principles of Finnish Rescue Services

Dr Teija Mankkinen, Ministerial Advisor

CERIS –workshop 2.3.2023, Bryssel

Ministry of the Interior
Finland

# Reforming the Organization of Finnish Rescue Services

- The legislation on establishing new administrational layer (wellbeing service counties + Helsinki) responsible for organizing rescue services and healthcare and social welfare services.

- Previously 22 municipality owned Regional Rescue Services, which all had their own systems and practices
  - Aim of the reform was to develop nationally uniform system and harmonized services.

- Funding received from the State Budget.
  - New tools for strategic guidance and direction at the national level (e.g. reports, annual negotiations).
  - Guidance must be based on systematic research, development and evaluation.
  - Need for nationally unified database, data structure and unified model for planning services.

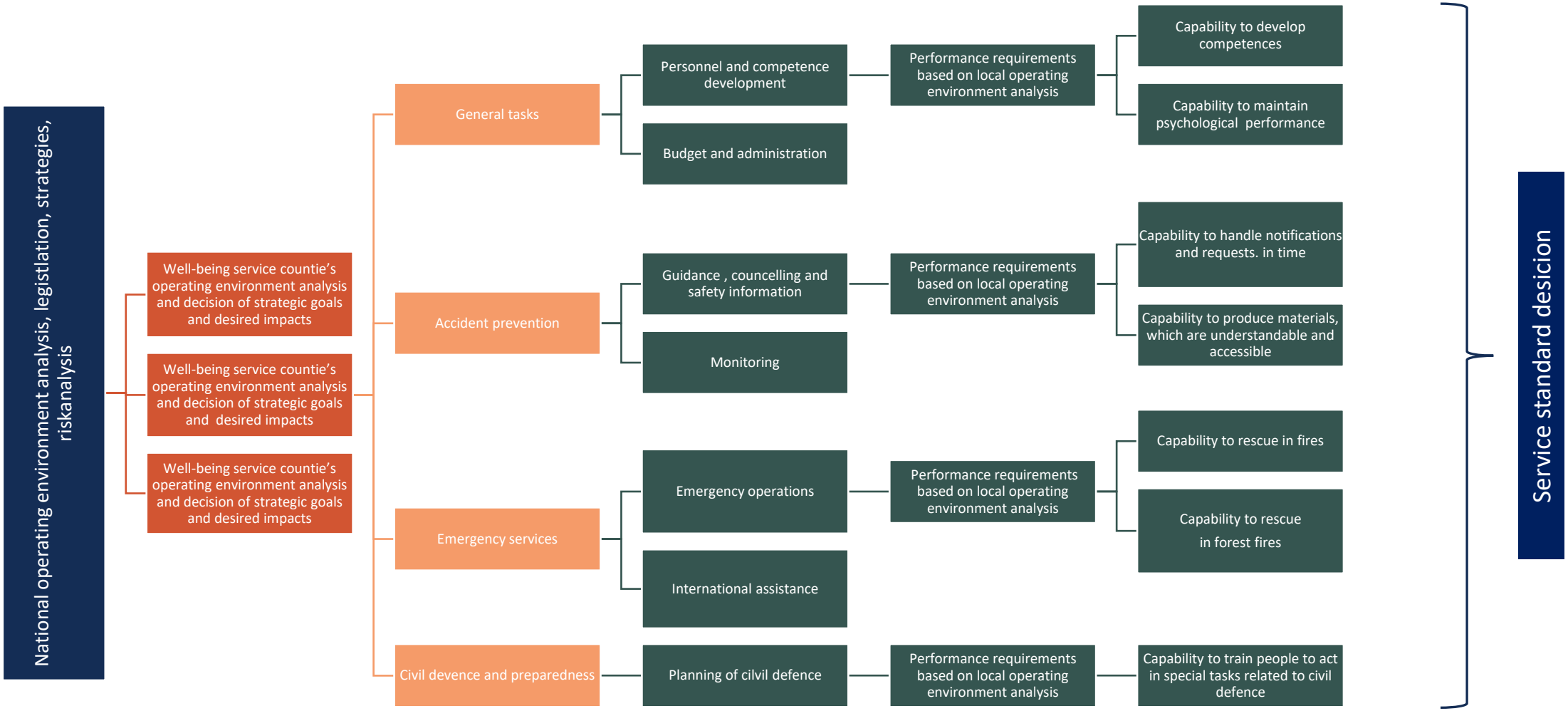
# Objectives

1. Focus on transparency
   - how risks, threats and changes in operating environment are related to the services

2. Focus on comparing, monitoring and assessing services and performance both on national and wellbeing service county level
   - » Nationally defined data structure, which is connected to service and cost structure

3. Focus on quality and uniformity
   - » Nationally defined performance requirements and capabilities

# Capacity driven service planning process




Ministry
Finland

Operating environment analysis and objectives

Services regualted in service strandard decision degree

Services and rescue tasks

Definitions of performance requirements

Data base

# Capability to work in CBRNE operations

- Capability to monitor the place of an accident in CBRNE operation, assess the damages caused by the accident, secure own activity, rescue people and animals in danger, isolate the area, warn those in danger, prevent the spred of dangerous substance, stop the leakage of the substance, render the spilled substance safe, collect the substance and contaminated soil and other material, prevent ignition and minimize other damages related to accident (also afterwards).

Ministry of the Interior
Finland

Kirkkokatu 12, Helsinki
PO Box 26, FI-00023 Government
Finland
+358 295 480 171 (switchboard)
www.intermin.fi

# Thank you!

Brussels | 2nd March 2023