

INNOVATION PROCUREMENT AS A CATALYST FOR THE UPTAKE OF SECURITY RESEARCH OUTCOMES



WEBINAR 14 December 2023

WEBINAR

Innovation Procurement as a catalyst for the uptake of Security Research Outcomes



[Watch the replay video of the webinar through:](#)

https://youtu.be/Gacc5lybK_I



Welcome

Stephan Corvers
CEO & Founder

Corvers Procurement Services BV

Introduction & Agenda



House rules

It is possible to ask questions in the private chat



The recording of the webinar will be made available on the EAFIP website

The list of participants will not be disseminated



In case there are technical problems, the session will be recorded and published

AGENDA

TIME (CET)	TOPIC	SPEAKER/PARTICIPANTS
10:00 – 10:05	Registration to the platform	Participants can ensure that the platform's functionalities are working fine
10:05– 10:10	Welcome & Introduction Agenda	Stephan Corvers European Assistance For Innovation Procurement CEO – Corvers Procurement Services
10:10 – 10:40	Factors hindering and enabling uptake of EU-funded Security research: <i>how innovation procurement can work as catalyst for innovation</i>	Giannis Skiadaresis DG Home - European Commission Area Coordinator for Strengthening Security Research and Innovation (SSRI)
10:40 – 11:10	SHIELD4CROWD : Preparing the grounds for a PCP in the security domain <i>Methodology for the definition and assessment of needs based on threat scenarios and use cases scoring.</i>	André Druet SNCF, Coordinator of SHIELD4CROWD CSA
11:10 – 11:40	PREVENT-PCP : Exploring the potential of Venture Capital White Paper and methodology implemented with PCP contractors.	Maria Kampa Corvers Procurement Services, Partner of PREVENT-PCP
11:40 - 11:55	Discussions and Q&A	
11:55 – 12:00	Conclusions & closure	Stephan Corvers



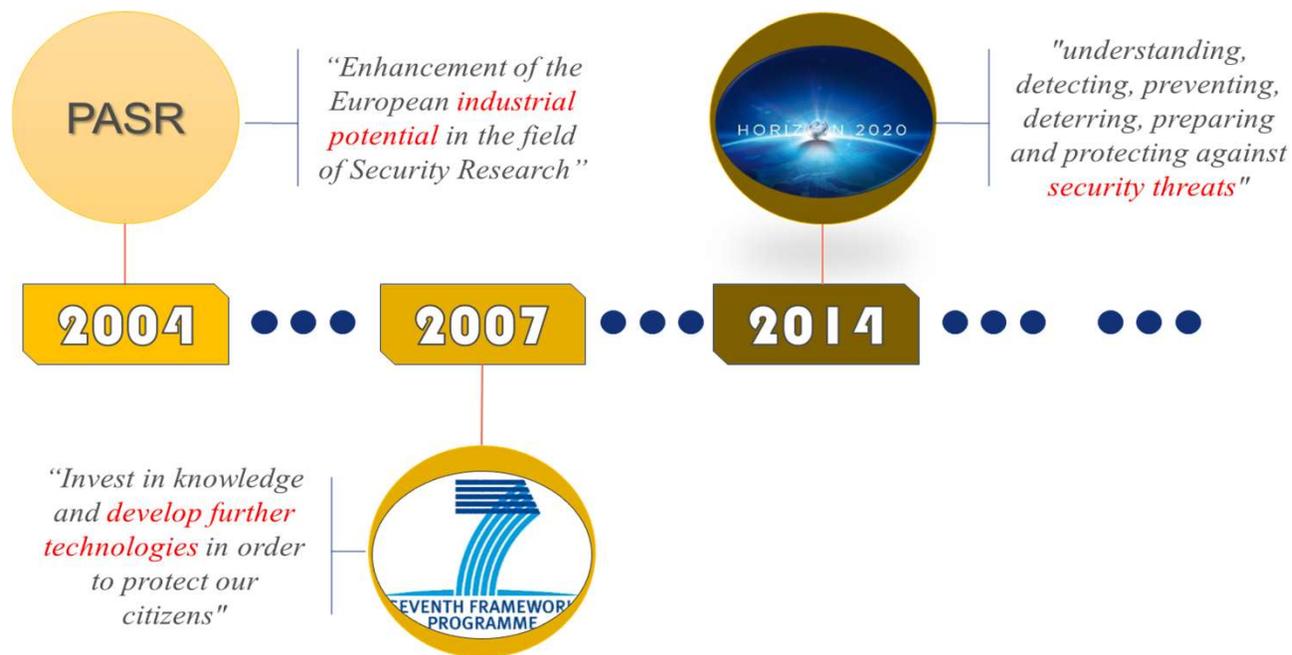
“Factors influencing the uptake of EU-funded security research and innovation outcomes”

*EAFIP Webinar on “HOW INNOVATION PROCUREMENT CAN WORK AS A CATALYST
OF SECURITY RESEARCH OUTCOMES”*

Thursday, 14 December 2023

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

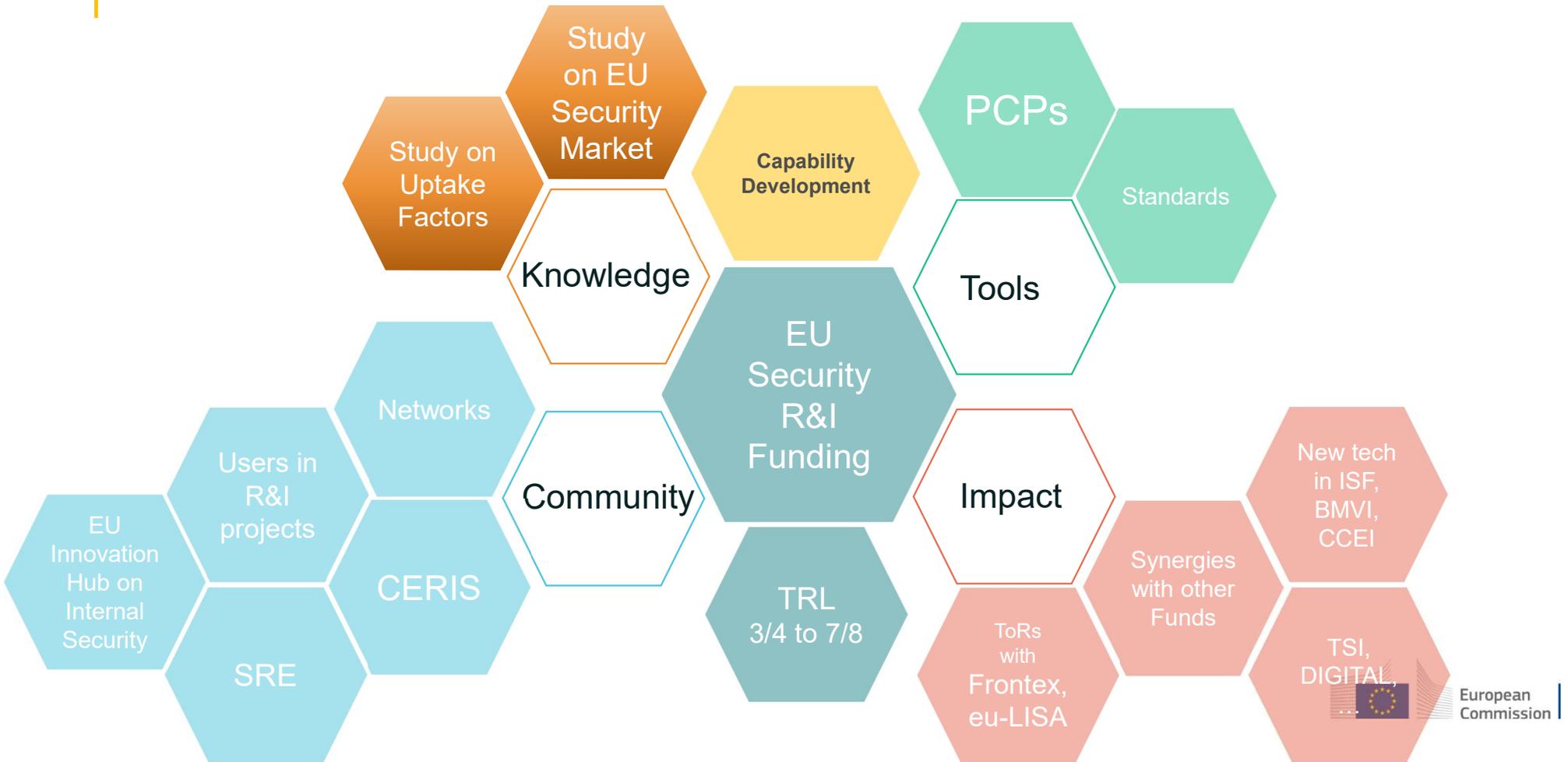
EU-funded Security Research: Then and now



EU-funded Security Research: Then and now



Addressing civil security innovation in the EU



HE CLUSTER 3: Civil Security for Society

- A work programme structured in 6 destinations



Supporting EU policy priorities

Meeting Capability requirements and End-User oriented

Ensuring ethical outcomes that are supported by society

Exploiting synergies and creating market opportunities

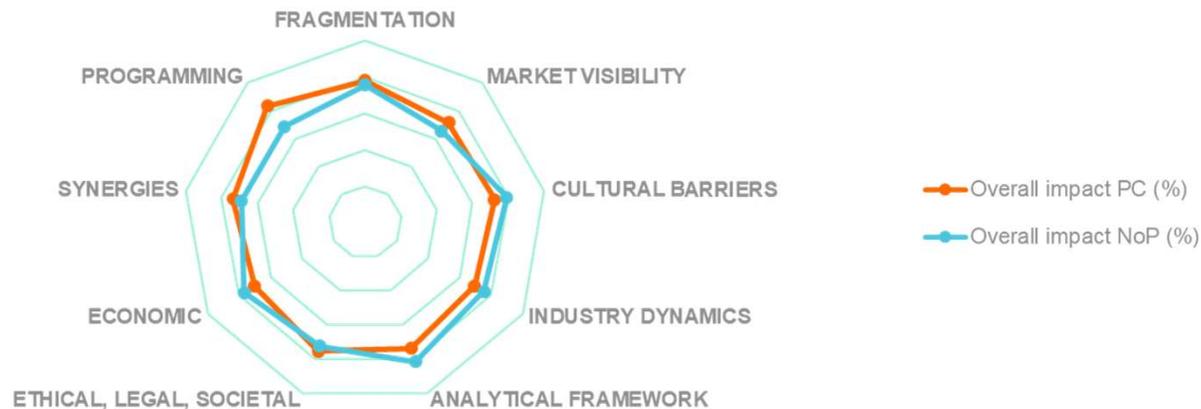
A more impactful Security R&I investment

- **Security policy priorities will need modern capabilities enabled by innovative technology**

- Investment in alignment with such priorities
- Ensure that there is capacity to produce
- Ensure that there is capacity and willingness to buy

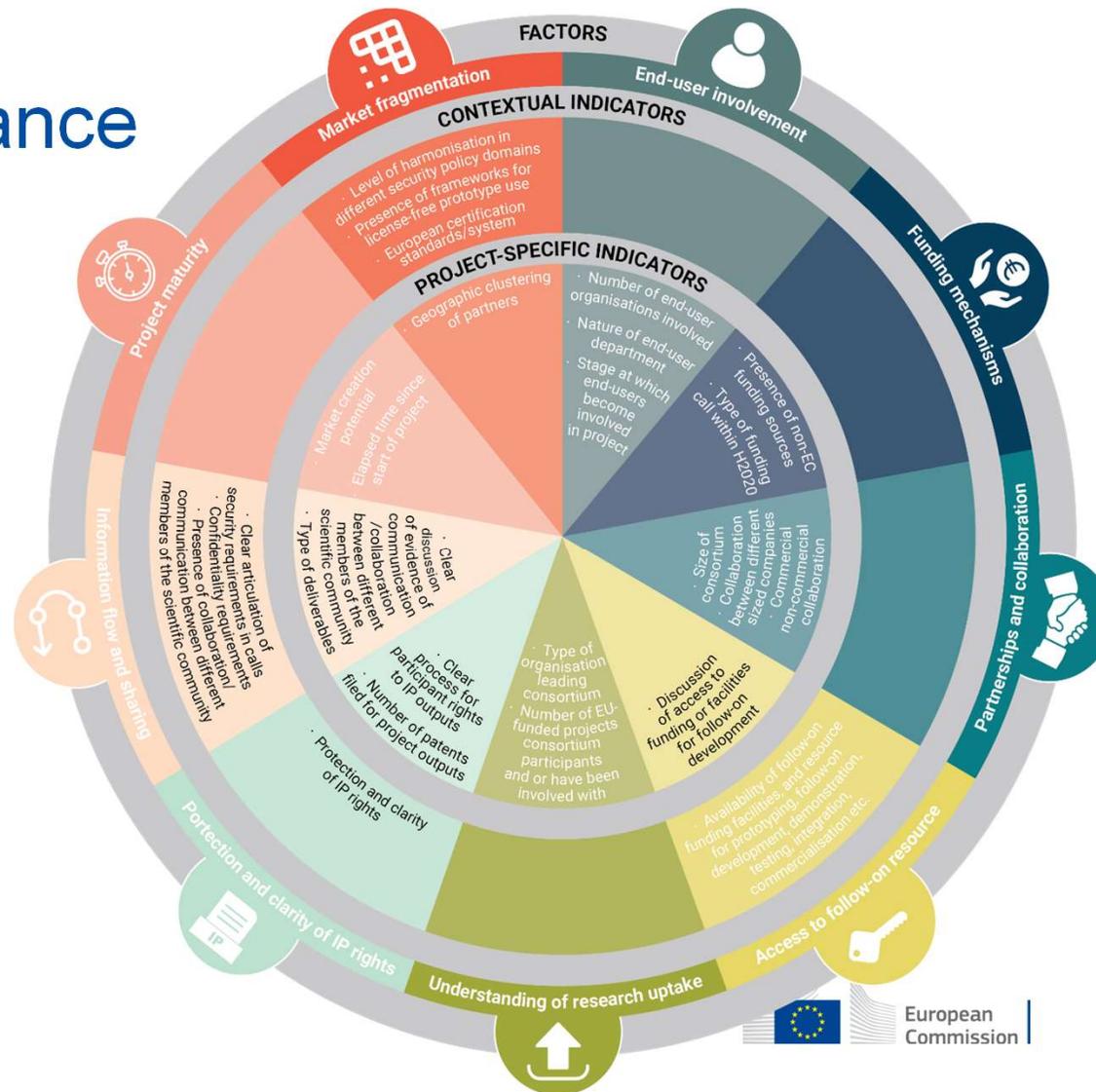
→ Innovation Uptake

- **Factors inherent to the Civil Security Market hinder innovation uptake**



Decision-making guidance

Defining key factors and indicators at the contextual and project levels



Hindering & Enabling factors*

- Protection and clarity of IP rights
- Quality of information flows & sharing
- Market fragmentation
- Insufficient output maturity for uptake
- Lack of foresight & evolving end user requirements
- Challenges associated with public acceptance
- Challenges of an institutional market
- Funding mechanisms
- Communication & dissemination of information
- Procurement mechanisms
- End-user involvement
- Partnerships & collaboration
- Testing & demonstrations

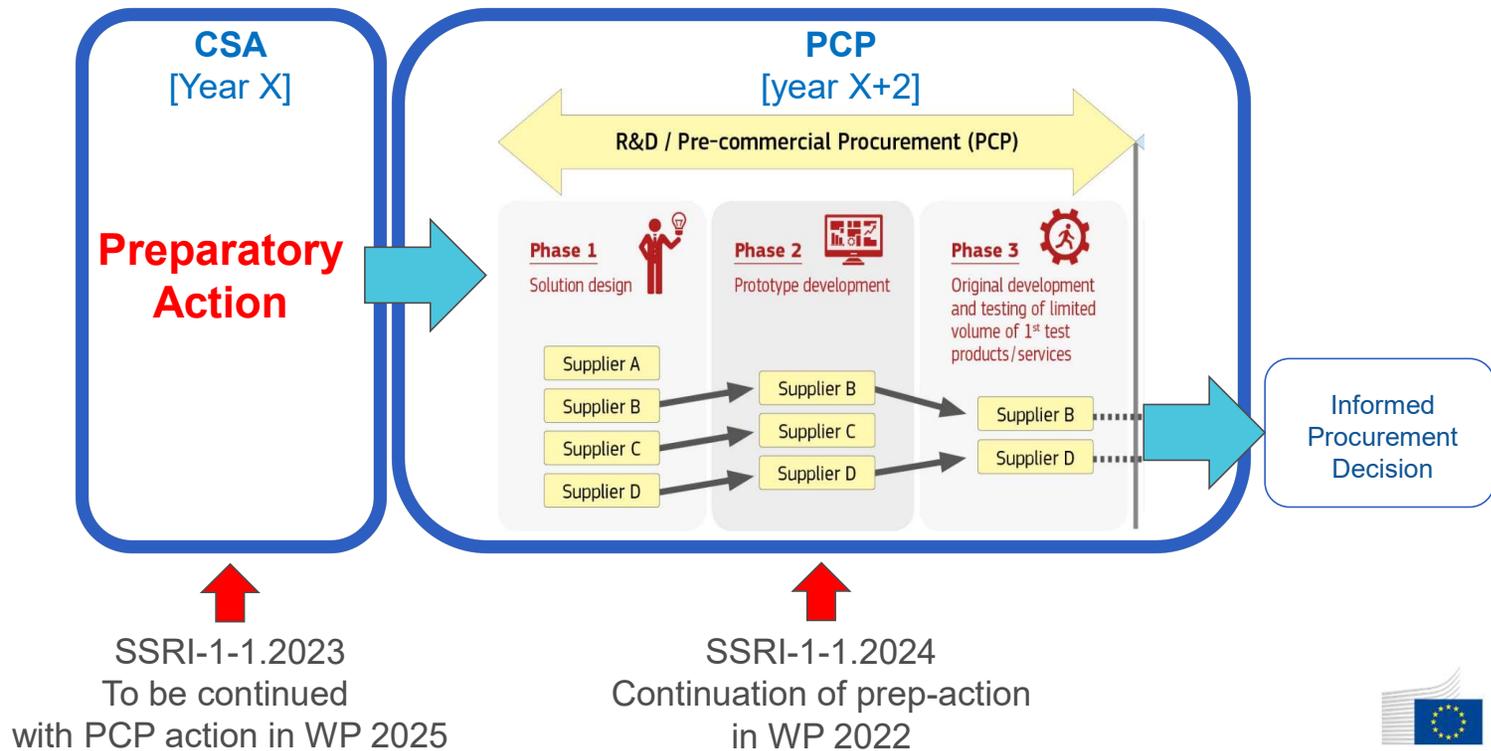
*Findings from the Study on Factors Influencing the Uptake of EU-Funded Security Research Outcomes

Meeting Capability Requirements

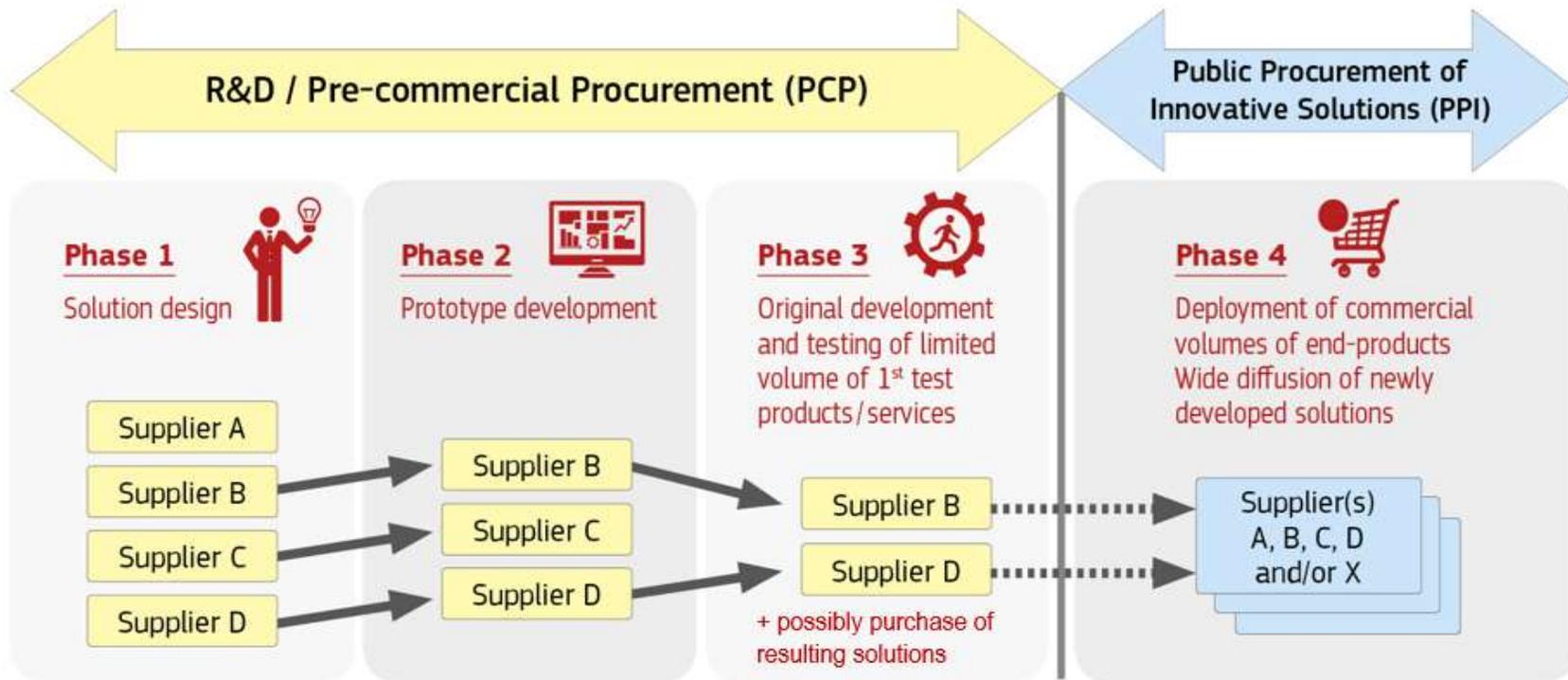
- R&I activity focusing on the final use of the generated knowledge and innovative technologies
- Capabilities expressed in terms of **THREATS** and **NEEDS**
- Non-prescriptive in terms of technologies, except when:
 - Technology itself can be a source of threat or a channel for its propagation;
 - There is a push at programme level for the development of strategic technologies;
 - There is a need to give continuity to previous research on one technology that proved effective to address a particular need.

Innovation Procurement

- PCP projects contribute to overcoming barriers to innovation uptake in civil security
- A two-stage approach for the implementation of PCP for security



Innovation Procurement (PCP/PPI)



PCP falls outside WTO GPA and EU public procurement directives ([COM\(2007\)799](#) & [SEC\(2007\)1668](#))

PPI uses procurement procedures defined in EU public procurement directives and national law

Impacts achieved EU funded PCPs

- **Boosting business opportunities for SMEs and startups**
 - Awards 70% instead of usual 30% of contracts to SMEs and startups
 - Boosts their international growth (20 X more contracts awarded cross-border)
 - Doubles commercialisation success rate (>50% companies increased their revenues/grew their company)
 - Helps create strategic partnership with larger companies, acquire new companies or enter the stock market
 - Helps startups/SMEs obtain financial investments > 4 times the amount invested in the pre-commercial procurements
- **More efficient, higher quality solutions** solving real-life problems
 - 20%-30% of quality and efficiency improvements in public services.
 - Startups/SMEs really changed the life of citizens, public administrations and other businesses with their innovations
- **Contributes to roll-out of more interoperable solutions / uptake of standards**
 - 40% of innovation procurements are done to obtain more interoperable solutions
- **Reinforces strategic autonomy** through 'made in Europe' solutions
 - Procurements of R&D and deployment of first batch of tested solutions can be limited to EU (controlled) companies and require large part of R&D and later commercialisation to take place in EU -> new EU lead markets

More info on impacts achieved [here](#)

Accelerating uptake through open proposals for advanced SME innovation

Expected Outcomes of the topic 2023-SSRI-01-02:

- Development of a **mature technological solution** addressing EU security policy priorities
- Facilitated **access to civil security market** for small and medium innovators (SMEs)
- Improved **cooperation between public buyers and small supply market actors** for a swifter uptake of innovation;
- Stronger **partnerships** between SMEs, EU security industry and technology actors to ensure the sustainability of the EU innovation capacity in the civil security domain

EACTDA Model



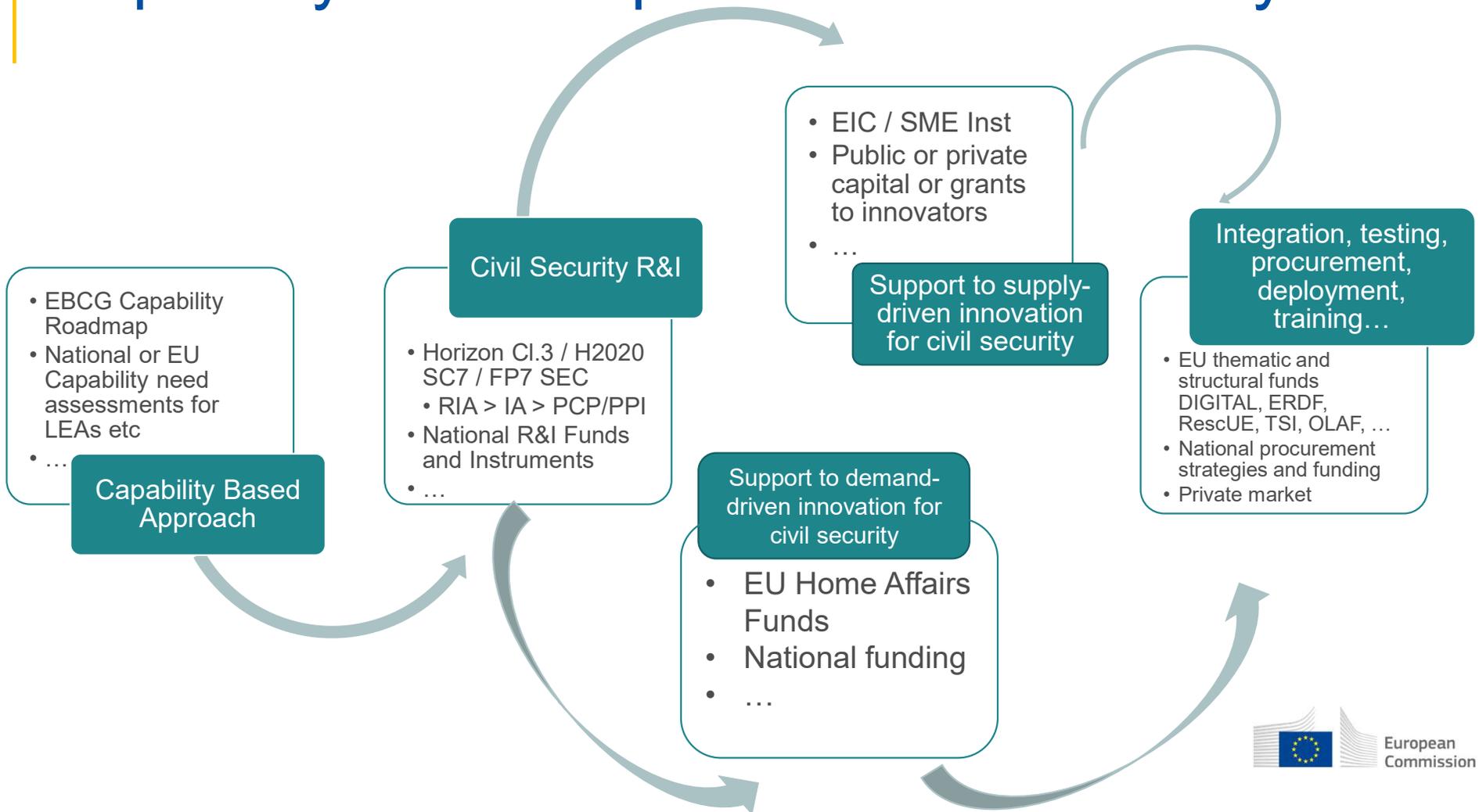
EUROPEAN ANTI-CYBERCRIME TECHNOLOGY DEVELOPMENT ASSOCIATION (EACTDA)

Key Activities:

1. Create and develop technological solutions for their operational use by LEAs
2. Establish and maintain connections with relevant EU Agents in the fight against crime.
3. Identify the needs for technological solutions, establish development priorities and set a roadmap for the development of those technological solutions.
4. Create and maintain a repository of technological solutions.
5. Monitor R&D&I European projects and reach collaboration frameworks that enable the knowledge of new developments made by those projects.



Capability-Based Uptake for civil security R&I



Thank you



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SHIELD4CROWD:

Preparing the grounds for a PCP in the security domain

*Methodology for the definition and assessment of needs
based on threat scenarios and use cases scoring*

André Druet
SNCF

Coordinator of SHIELD4CROWD CSA



SHIELD
4CROWD



SHIELD4CROWD

Preparing the grounds for a PCP in the security domain

EAFIP

14th of December 2023

Agenda

- 1. Project overview**
2. Method implementation and first results
3. PCP – Example of the PREVENT project



SHIELD4CROWD

Setting **Baseline for a PCP Heightening Innovation Procurements** in the European Security Ecosystem and Leveraging Synergies Through Dissemination Activities for Crowd Management.



SHIELD4CROWD connects security practitioners across Europe to identify the common vulnerabilities posing risks to the **protection of public spaces**. Through an iterative process, the project will prioritise the pertinent challenges and threats, establishing the technology gaps and assessing the market ecosystem in each area.

The outcome will be identifying the critical threat and preparing an environment that allows contributors to complete a future **pre-commercial procurement**.





1. Project overview

Shield4Crowd stakeholders

UOGs

FRANCE 

 
SERVICE DÉPARTEMENTAL D'INCENDIE ET DE SECOURS DES ALPES-MARITIMES



BELGIUM 



SPAIN 


Generalitat de Catalunya

Project members

FRANCE 



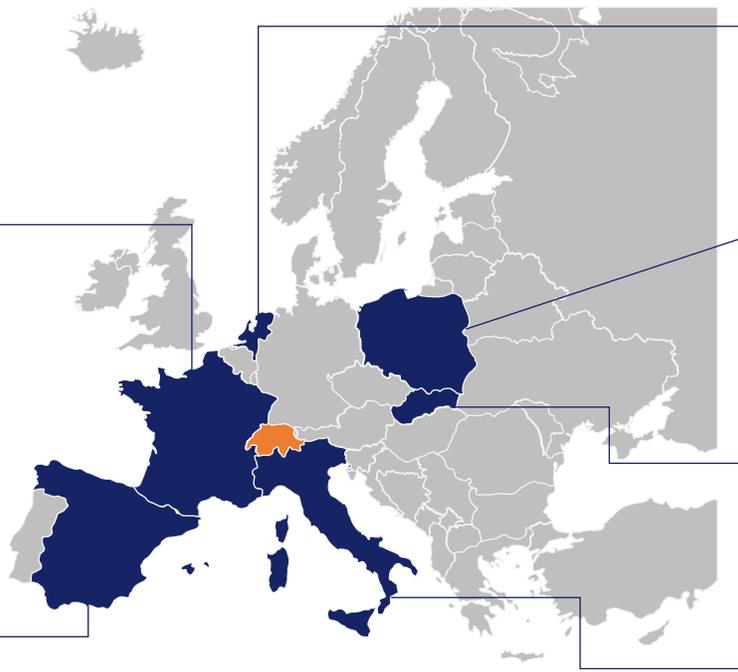





MINISTÈRE DE L'INTÉRIEUR ET DES OUTRE-MER
*Liberté
Égalité
Fraternité*

SPAIN 


GOBIERNO DE ESPAÑA | MINISTERIO DEL INTERIOR



Project members

NETHERLANDS 


COMMERCIAL & LEGAL AFFAIRS

POLAND 


Polish Platform
For Homeland Security

SLOVAKIA 


MINISTERSTVO VNÚTRA SLOVENSKEJ REPUBLIKY



ITALY 



UOGs

POLAND 

 | SECURITY OBSERVATORY

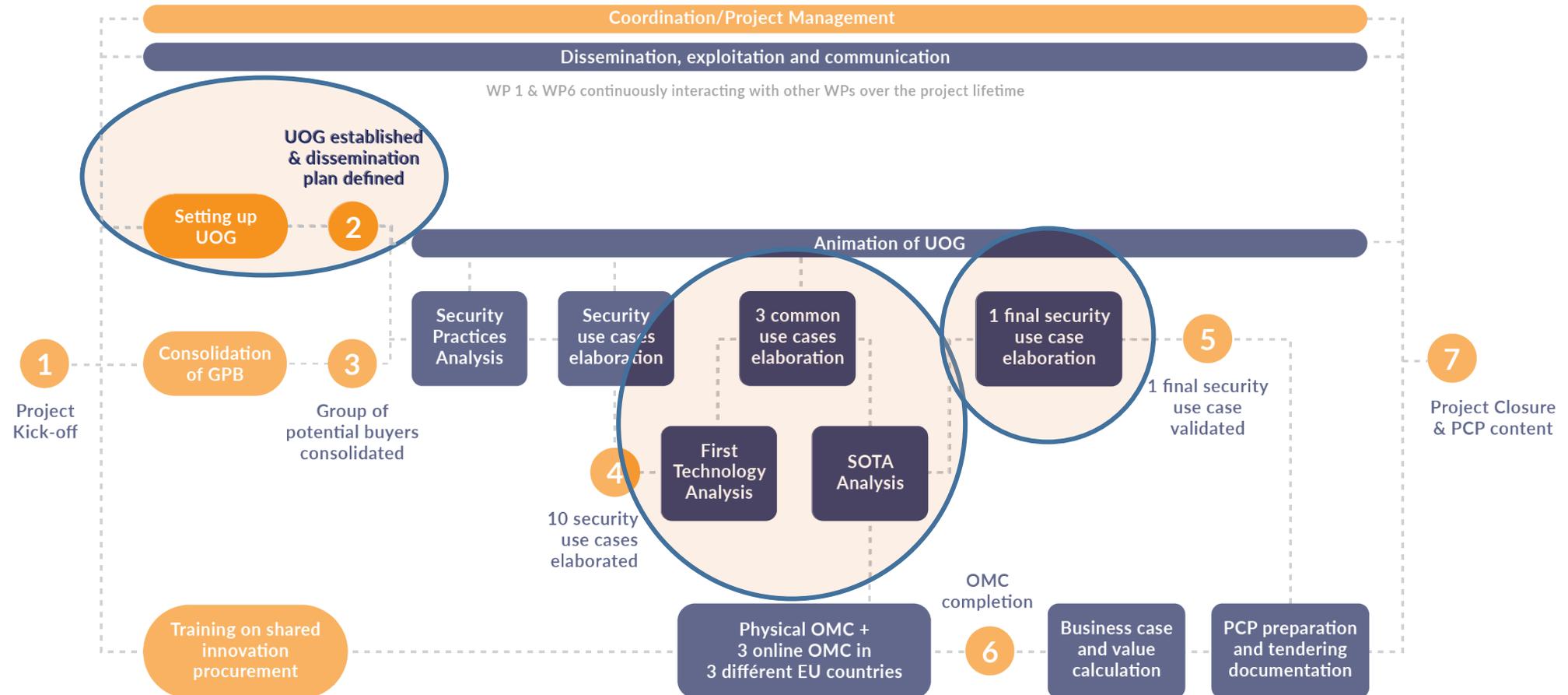
SWITZERLAND 





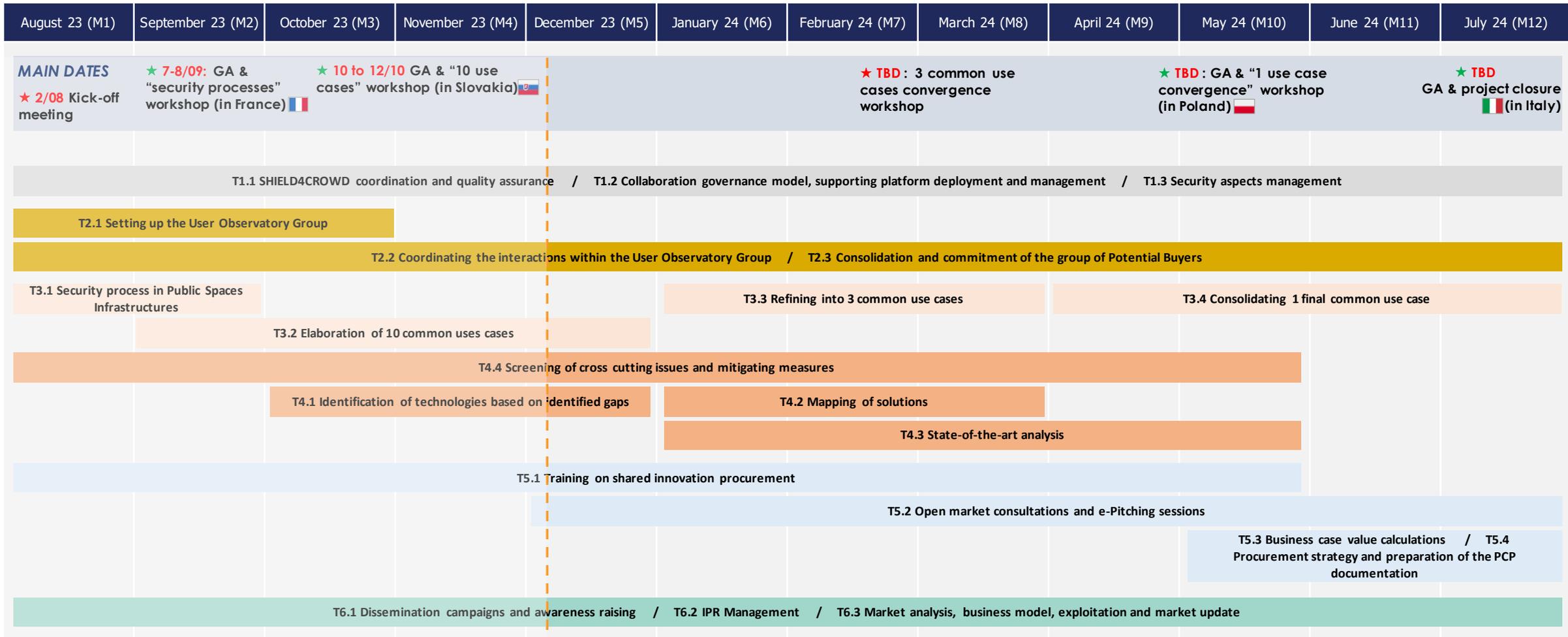
1. Project overview

Workplan



1. Project overview

Project planning – Global view



CAPTION

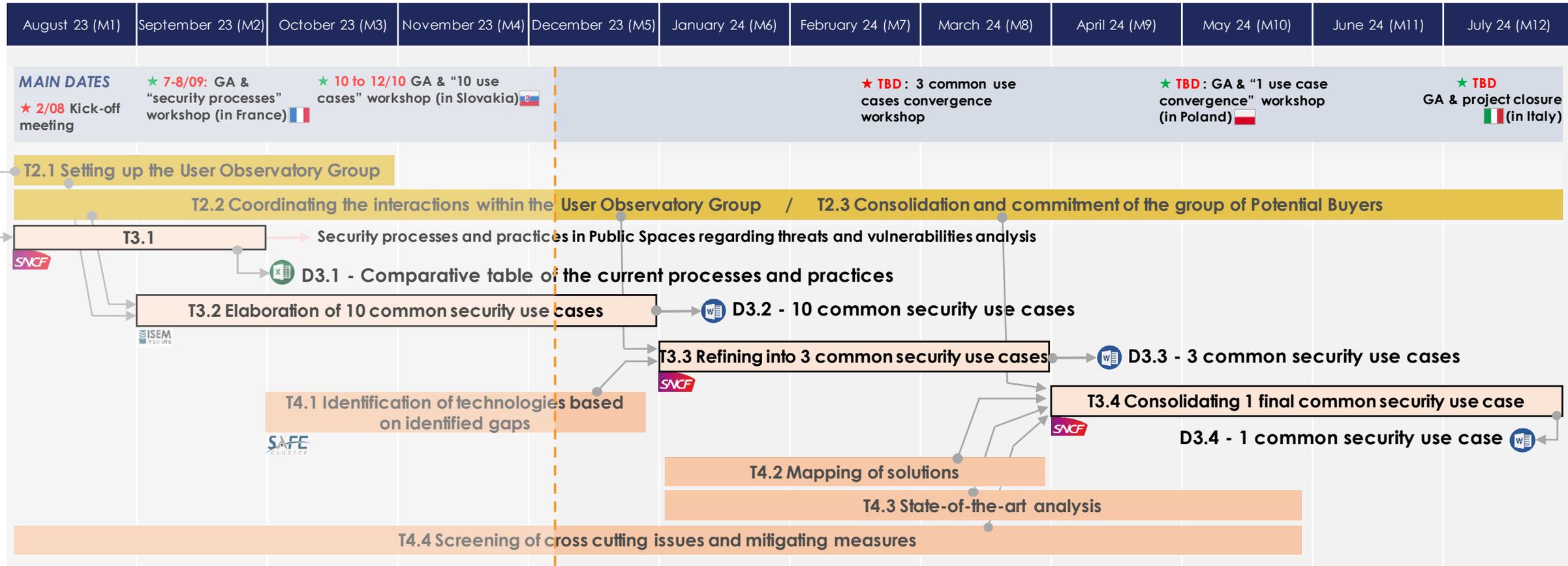
- ★ Online meeting
- ★ Physical meeting

WP1: Coordination / Project Management	WP4: Technology analysis (legal, societal, ethical and environmental considerations)
WP2: End users group set up and outreach	WP5: Pre-commercial procurement preparation
WP3: Common security threats and needs mapping	WP6: Dissemination, exploitation and communication



1. Project overview

Project planning – Focus on the core of the project (WP 3)



CAPTION

- ★ Online meeting
- ★ Physical meeting
- Deliverables

WP2 : End users group set up and outreach

WP3 : Common security threats and needs mapping

WP4 : Technology analysis (legal, societal, ethical and environmental considerations)



Agenda

1. Project overview
- 2. Method implementation and first results**
3. PCP – Example of the PREVENT project

2. Method implementation and first results

Synthesis of the “Security Process” workshop



Threat mapping (WS #1)

- **Common threats related to crowd management** in European cities environment to be assessed in the project were identified.
- **Common situations regarding crowd management** stakes to tackle were illustrated.
- **Topics** (threats, vulnerabilities, needs, etc.) to address through SHIELD4CROWD **were prioritized**.



Security processes (WS #2)

- Main common components of **existing crowd management processes** used by **security practitioners** involved in the project through the steps shown below were **identified and described**.
- All related **strengths, weaknesses/vulnerabilities, technological needs, and legal constraints** regarding all the steps of a security event, from prevention to resolution and post-investigation were identified.



All the results are the basis of the **Deliverable related to the Comparative table of the current processes and practices**

This deliverable aims to provide a **list of threats and vulnerabilities related to crowd management stakes in European Union cities** built and **shared by the security practitioners involved in SHIEDL4CROWD** (France, Spain, Slovakia, Poland, Switzerland) either from the consortium or from the UOG members

It also proposes the **main common components of security processes and practices**, identified through 5 generic scenarios related to the top priority threats on crowd management, and following the **steps of a security event**: Prevent, Detect/Alert, Assess/Follow, Resolve, Post-investigate

As a result, based on the identified component of the security processes, **strengths and weaknesses are pointed out** in this report, and some **new technologies that could possibly help to tackle the weaknesses**, as well as the potential linked **legal constraints** are also proposed.



2. Method implementation and first results

Identified Threats



Medium priority threats

1. Strikes
2. Cyber-attack
3. Terrorist attack



TOP 5 priority threats

1. Crowd panic
2. Urban riot
3. Bomb alert
4. Attack by UAV/UGV
5. Climate event



Low priority threats

1. CBRN Attack
2. Fire
3. Infra. damage
4. Violent protests

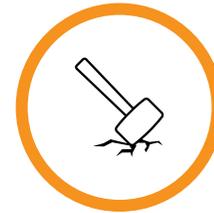
2. Method implementation and first results

Common strengths and weaknesses



COMMON STRENGTHS

- ✓ **The building or area management** are being improved increasingly.
- ✓ The **coordination** between the involved actors is generally **already set up** and many **Operational Coordination Centre exist**.
- ✓ **The mitigation capabilities** - such as closing the station, stopping the train operations, etc. - are clearly defined in the existing security processes.
- ✓ **Many sensors**, especially **CCTV cameras**, are already used for crowd management stakes.



COMMON WEAKNESSES

- ✗ The **communication towards the people involved in a crowd panic movement** is very difficult to manage.
- ✗ The **management of the information spreading in the media** and social networks is also difficult to control.
- ✗ **Spontaneous or undeclared demonstrations can happen and are difficult to predict**.
- ✗ Even if **sensors and detectors** are part of the strengths, **more of those could be helpful to improve** the crowd management process and the detection of specific threats.

2. Method implementation and first results

First common needs identification



TO PREVENT



Fastest possible means of **identifying crowd activities** using sensors, GPS data from phones, etc...

TO ASSESS/FOLLOW



Access to information used/shared by all partners, to conduct analyses. This information could consequently be used as a **learning tool** in the "prevent" phase within the AI model

Digital twin of the environment combined with an AI solution

which will allow to rapidly visualize and anticipate the potential crowd movements through simulations



TO DETECT/ALERT

Exchange of information between all actors, and therefore the potential creation of a **temporary joint Operational Coordination Centre** physical/virtual, with strong interoperability capacity



TO INVESTIGATE

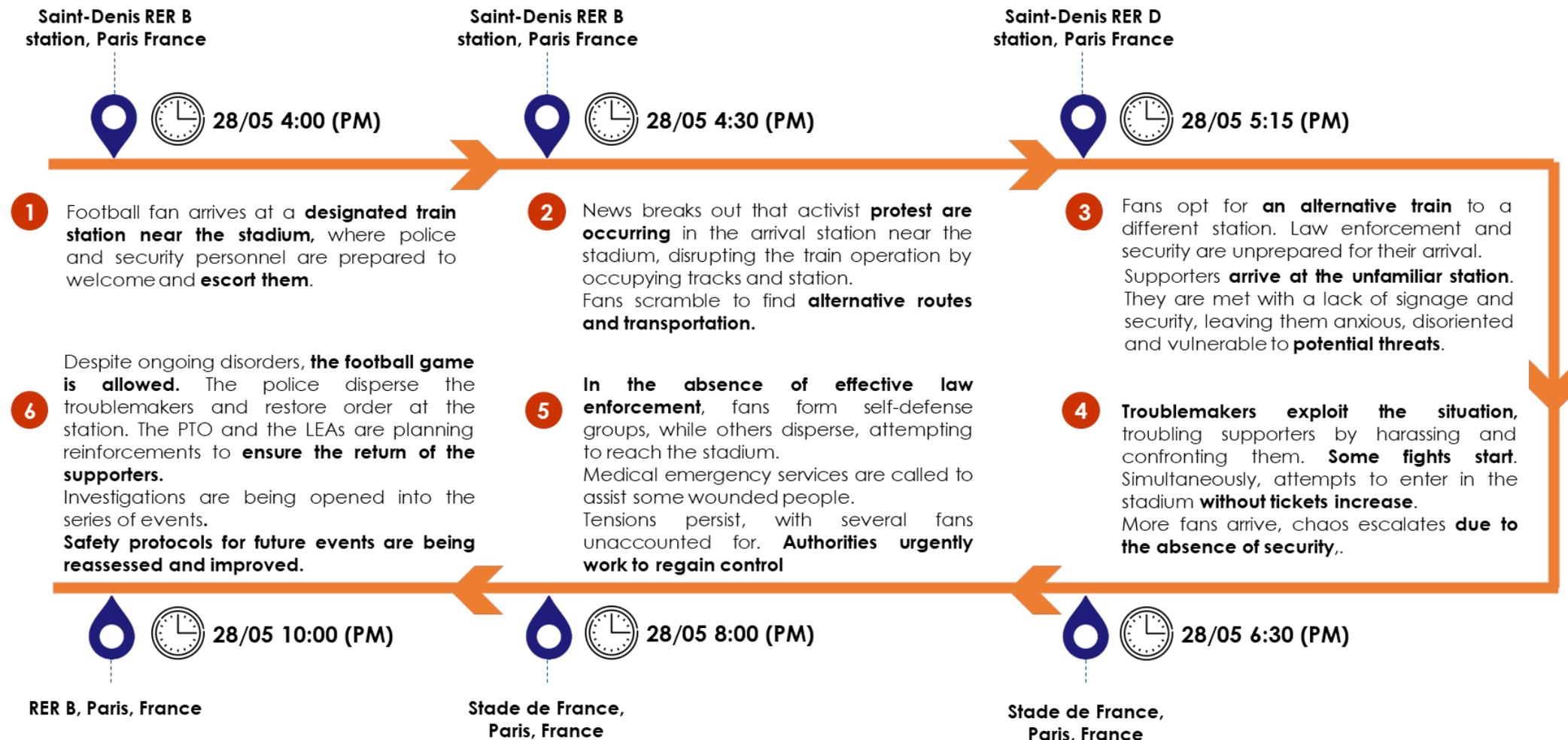


2. Method implementation and first results

10 common security use cases – scenarios example (in progress)



Scenario of a Public disorder due to an activist protest during a major sport event



2. Method implementation and first results

10 common security use cases – scenarios example (in progress)



Scenario of a Public disorder due to an activist protest during a major sport event



Agenda

1. Project overview
2. Method implementation and first results
- 3. PCP – Example of the PREVENT project**

3. PCP – Example of the PREVENT project



Project overview

Objectives

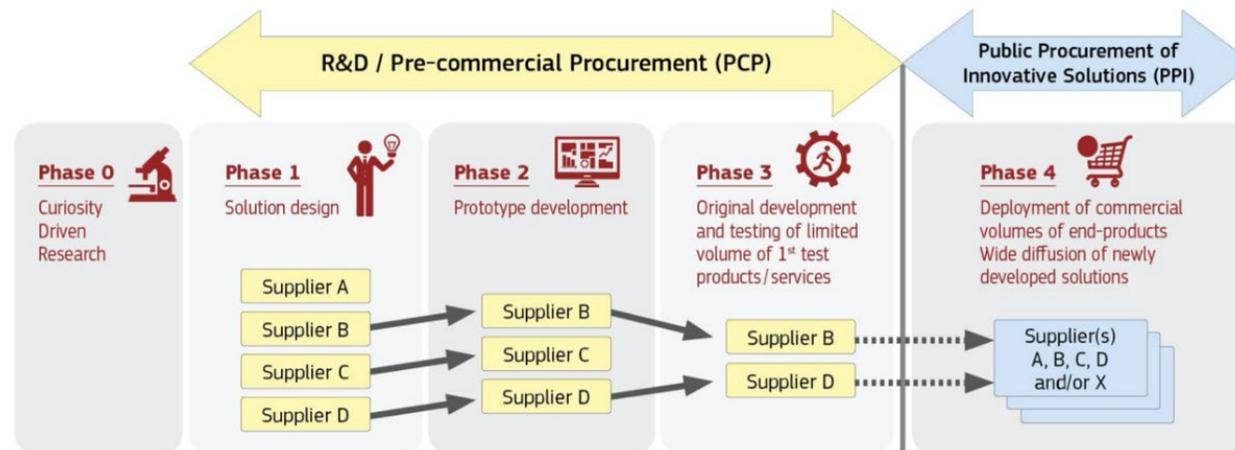
- To define the needs for **security in public transport with regard to terrorist threats**
- To conduct a comprehensive gap analysis of existing processes and solutions
- To benchmark technological solutions
- To evaluate the effectiveness of new solutions and carry out an economic analysis



Challenges

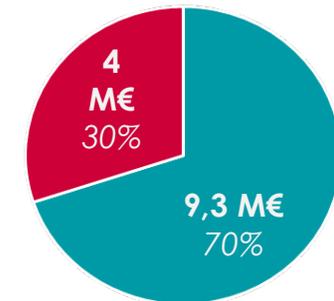
- To respond to the common challenge identified as part of the PREVENT project : **being able to automatically detect an unattended item and immediately find the owner(s)**
- This solution should be able to be integrated into a more global incident and/or crisis management system
- This project will be part of a Pre-Commercial Procurement (PCP) process

PCP : HOW DOES IT WORK ?



BUDGET

Global budget of 13,3 M€

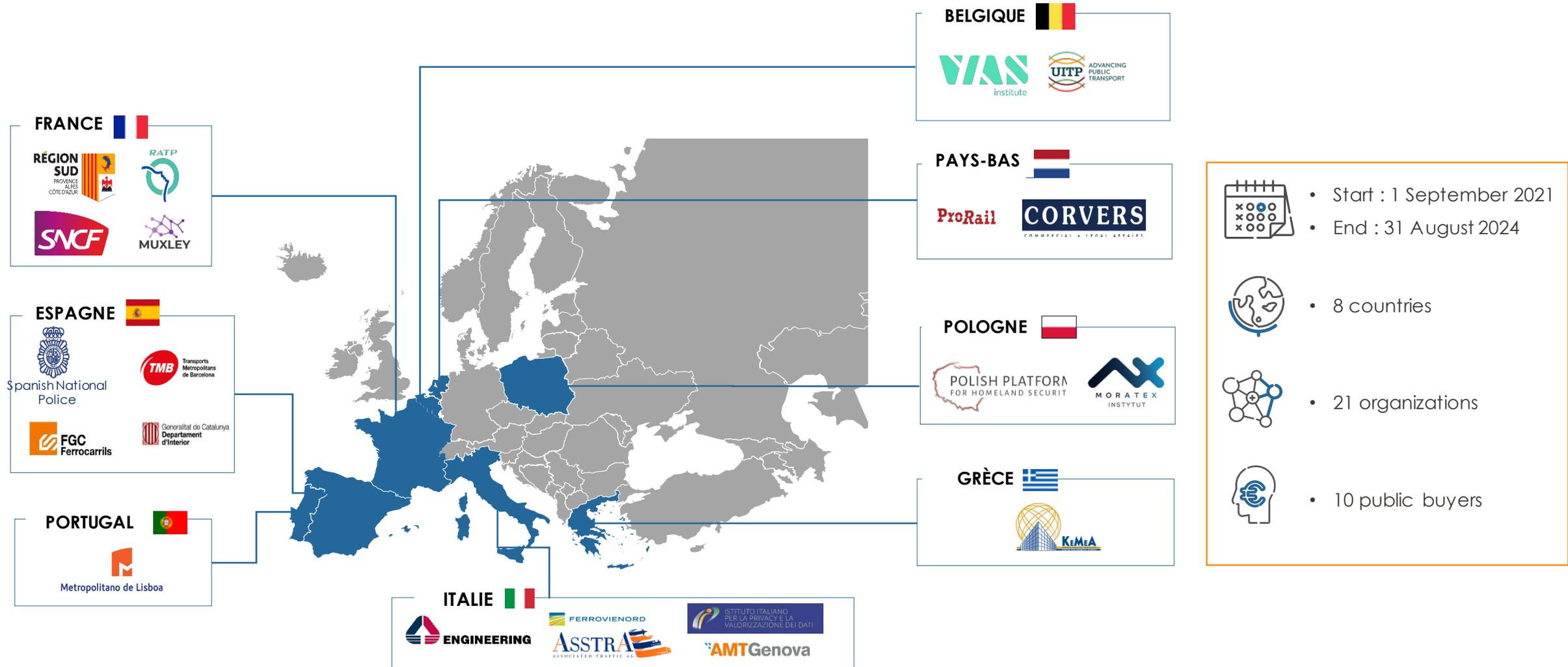


- Solutions development
- Partner project costs



3. PCP – Example of the PREVENT project

Stakeholders



- Start : 1 September 2021
- End : 31 August 2024
- 8 countries
- 21 organizations
- 10 public buyers



Thank you for your attention!



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www.linkedin.com/company/shield4crowd

PREVENT-PCP:

Exploring the potential of Venture Capital
White Paper and methodology implemented with PCP
contractors

Maria Kampa
Corvers Greece IKE
Partner of PREVENT-PCP



Exploring the potential of Venture Capital

Corvers Procurement Services BV





Agenda

1. Introduction to Innovation Procurement and VC
2. Link between Venture Funding and the success of the companies that participated in FP7 Funded Pre-Commercial Procurement
3. PREVENT PCP contribution
4. Gaps in the Innovation Pathway
5. Contribution of VC Investment in Innovation Procurement
6. Benefits and Costs of VC Involvement
7. Schemes in Place
8. Observations and Future work





1. Introduction to Innovation Procurement and VC





VC definition

VC stands for "Venture Capital." It is a form of private equity financing that investors provide to startups and small businesses with high growth potential. Venture capitalists are individuals or firms that invest money in these early-stage companies in exchange for an ownership stake.

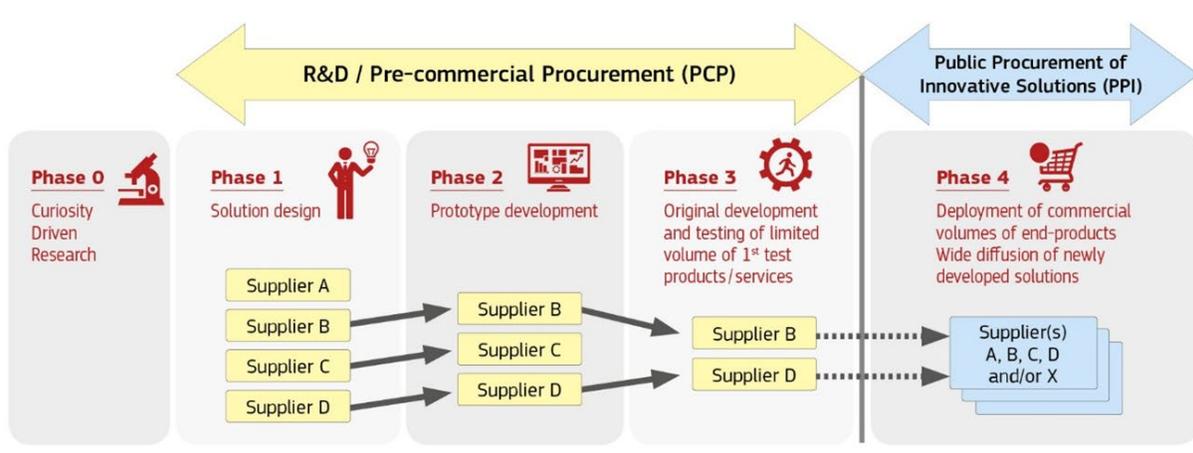
- **Venture capital can take various forms depending on the investment focus, stage, and industry preferences of the venture capital firm.**
- **Types of VC include:**
 - Corporate Venture Capital
 - Private Venture Capital
 - Public Venture Capital
 - Angel Investors
 - Stage-Specific Venture Capital
 - Industry-Specific Venture Capital





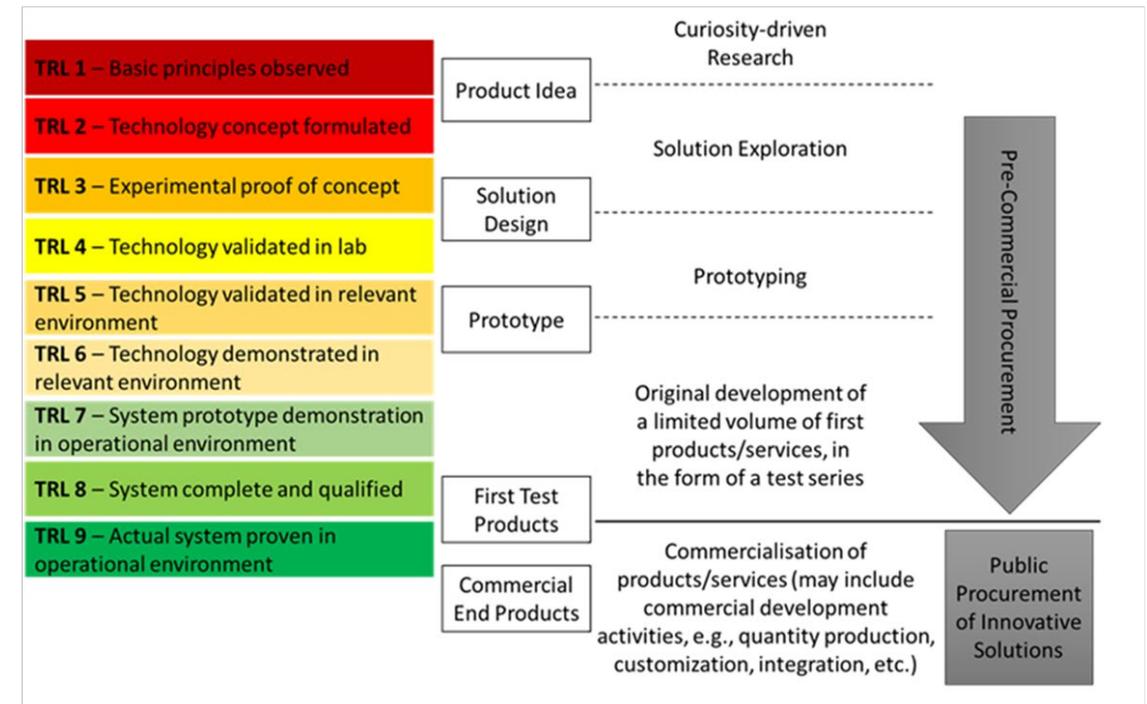
Innovation Procurement happens when public buyers acquire the development or deployment of pioneering innovative solutions to address specific mid-to-long term public sector needs.

TRLs and Public Procurement of Innovation



- ▣ PCP (pre-commercial procurement)
- ▣ PPI (public procurement of innovative solutions)

Source: European Commission





What is in it for demand and supply side?





2. Link between Venture Funding and the success of the companies that participated in FP7 Funded Pre-Commercial Procurement

Update on results from completed and ongoing FP7 and Horizon 2020 funded Pre-Commercial Procurements (PCPs)

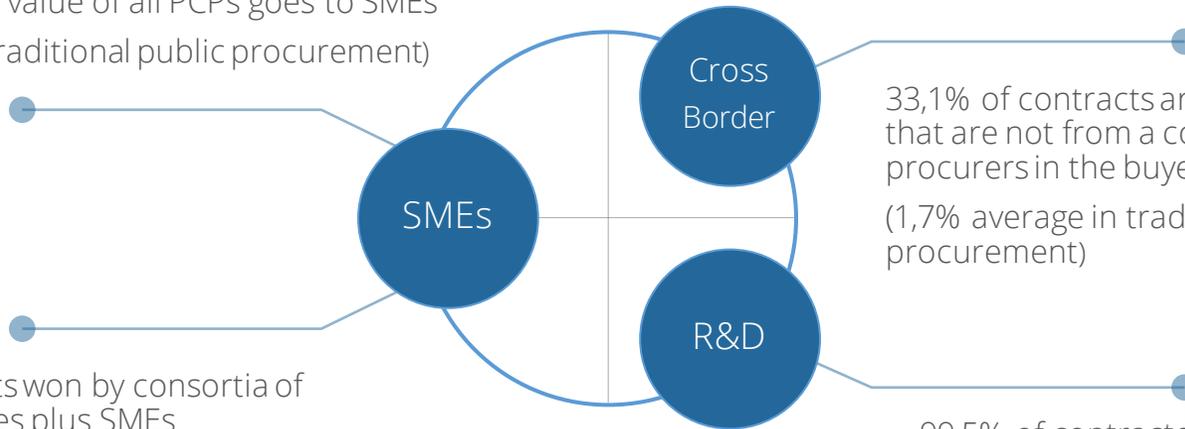
Lieve Bos DG CONNECT F3 unit ("Digital Innovation and Blockchain")





Impacts of EU funded PCPs

61,5% of the total value of all PCPs goes to SMEs
(29% average in traditional public procurement)



19% of contracts won by consortia of larger companies plus SMEs
73,5% of the contracts won by SMEs (SMEs alone, or as lead bidder)

33,1% of contracts are won by bidders that are not from a country of any of the procurers in the buyers group
(1,7% average in traditional public procurement)

99,5% of contractors do 100% of R&D activities in Europe





Longer term impacts of completed PCPs

Impacts for companies

Commercialisation of solutions

- 86% of Ph3 contractors, 75% of Ph2 contractors and 30% of Ph1 contractors have already commercialised (part of) their solutions
- 11% of contractors (across all phases) expect to commercialise within 2 years
- 17% of contractors do not plan commercialisation of solution

Business growth

- 50% of contractors already increased their revenues thanks to the PCP solution
- 24,2% of start-ups have secured equity investment since the PCP
- 18% of start-ups concluded partnerships with large corporates

Exit strategy (62,8% of companies in the PCPs are Start-Ups)

- 12,1% of start-ups have undergone a merger or acquisition
- 3% of start-ups have done an IPO since end of the PCP (1 on NASDAQ)



Share of companies from FP7 funded PCPs with VC backing

- **How many VC backed companies?**
 - 30% of all SMEs that participated in FP7 funded PCPs are today VC backed
- **Attracting first round of venture financing**
 - 47,5% already their first VC backing before starting the PCP
 - 19% received first VC backing during phase 1 of the PCP
 - 9,5% received first VC backing during phase 2 of the PCP
 - 5% received first VC backing during phase 3 of the PCP
 - 19% received first VC backing after the PCP (this number is still expected to grow in the future)
- **Attracting further rounds of venture financing**
 - 10% of VC backed SMEs received additional VC backing in phase 1 of the PCP
 - 35,7% of VC backed SMEs received additional VC backing in phase 2 of the PCP
 - 18,8% of VC backed SMEs received additional VC backing in phase 3 of the PCP
 - SO FAR 17,6% of VC backed SMEs received additional VC backing after the PCP (this number is still expected to grow in the future)

Participation in the PCP helps several companies attract VC financing





Success rate of VC backed companies in PCPs

Success rate in winning PCP contracts

- **Compared to all contractors (also large corporates)**
 - 12,1% of all phase 1 contractors were VC backed when starting the PCP
 - 16,3% of phase 2 contractors were VC based when starting phase 2
 - 27,6% of phase 3 contractors were VC backed when they started phase 3
- **Compared only to SME contractors**
 - 15,6% of all phase 1 SME contractors were VC backed before the PCP
 - 22,55% of SME contractors were VC backed when they started phase 2
 - 42,1% of SME contractors were VC backed when they started phase 3
- **Success rate in completing the PCP**
 - 20% of contractors that were already VC backed at the start of the PCP was awarded both a phase 1, phase 2 and a phase 3 PCP contract

Having VC backing is not a guarantee to win PCP contracts or to successfully complete a PCP. Keeping a dual focus on developing a product that meets the customer requirements alongside growing the company is important.





Success rate of VC backed companies in commercialising their PCP solutions

- **Success rate in growing the business**
 - 38,1% of VC backed companies did not commercialise their PCP solution (yet)
 - 52,4% of VC backed companies have already commercialised their PCP solution and are already making revenue from it (slightly more than the average across all companies that participated in the FP7 funded PCPs)
 - 9,5% of VC backed companies have already commercialised their PCP solution but not made revenue from it yet (still completing, certifying, marketing solutions)
- **Link with IPR protecting solutions**
 - Across all contractors (including large companies): 33,33% of all IPRs are held by venture funded companies versus 66,66% by non-venture funded companies
 - Across the SME contractors only: 41% of all IPRs are held by venture funded SMEs versus 59% of all IPRs by non-venture funded SMEs

First indicators suggest a higher growth rate of the VC backed companies compared to the non-VC backed companies that participated in the PCP.

There is no direct link observed (yet) between IPR protection and VC backing.





3. PREVENT PCP contribution



Operation

The main goal of the PREVENT PCP (GA 1 01020374) project is to improve safety and security in both public transportation and public areas.

- **Approach:** Procure innovative technologies via Pre-Commercial Procurement (PCP).
- **Objectives:**
 - Detect potentially dangerous unattended items automatically.
 - Identify and track perpetrators.
 - Implement an advanced crisis management system.
- **Collaboration:** Involved 23 partners, including 11 public buyers from 6 EU countries.
- **Current Stage:**
 - Four (4) contractors selected for Phase 2.
 - Aim: Develop their first working prototype.



Open Market Consultation study

- **VC Involvement Inquiry:**

- Explored Venture Capital (VC) involvement from the supply side.
- During the OMC specifically asked participants about VC support.
- 30% of companies were SMEs, and 10% were Start-ups/spin-offs.

- **Interest in External Support:**

- 35% of responders expressed interest in external support.
- Support for developing and commercializing their PCP solution.



Backers

PREVENT PCP has been launched to develop novel technologies with the purpose of pre-empting attacks on public transport.

Aim to combat fragmentation in the European security market.

Most importantly, PREVENT PCP acts as a pilot to understand the benefits and the challenges of engaging VC funds in Innovation Procurement.



Roles of Key Actors

PREVENT PCP aims to ensure the engagement of VCs in the PCP in order to increase the chances of commercialization of the developed solutions.

- **Informal Working Group (IWG) 'Fostering Venture Capital involvement in Pre-Commercial Procurement':**
 - Consortium engages external experts to form IWG.
 - Members include academics, representatives from CA & VC, members from the EC services.
- **IWG's Primary Objective:**
 - Facilitate interactions between VC organizations and PCP contractors.
- **Overall Aim:**
 - Commercialize the final solution in public and private sectors.
 - Increase chances of a profitable return on investment.
 - Act as a pilot and produce a set of lessons learned and policy recommendations



Interactions in progress

- **Contracting Authorities: Workshop organised**
 - Discuss the introduction of the VC in a PCP and identify potential blocking points as well as opportunities
- **Contractors: One to one calls & questionnaire on company level**
 - Explore in detail the structure of the company, the needs and the commercialisation plans
 - Discuss interest in receiving further funding, the desired conditions and the familiarity with the process
 - All Phase 2 contractors are taken into account in this study.



4. Gaps in the Innovation Pathway



The barriers in the commercialisation process of innovative solutions

The development of new technology through PCP or through any other mechanism such as R&D&I that a firm autonomously undertakes has the goal of moving an initial idea [a 'basic principle' forward to become, eventually, an operational product or service] to 'TRL 8, [at TRL 9, a technology is considered commercial and on the market].

Phases in PCP Regulation:

- Phases are used in PCP.
 - First two phases involve competitive R&D.
 - Followed by Phase 3 which involves the deployment and testing of the solutions developed during the earlier phases.

EU Public Funding:

- Public funding in the EU for TRL pathway development through PCP stops at TRL8.
- This occurs at the end of Phase 3.



Gaps and risks

- **Vendor Risks:**
 - Risk 1: No guarantee that their product will be purchased after the PCP.
 - Risk 2: May struggle to secure capital for commercialization, even with a successful product.
- **'Valley of Death' (VOD):**
 - This gap between development and commercialization is colloquially known as the 'Valley of Death' or 'VOD.'
- **Additional risks (IPR Loss and Lack of Visibility):**
 - Small firms often lose Intellectual Property Rights (IPR).
 - Lack of visibility has two aspects:
 - Innovation struggles to secure investment due to a lack of capital.
 - Potential purchasers may not be aware of the innovation, impacting sales.



The VC Gap

- **US and EU R&D Procurement:**
 - Both the US and EU have R&D procurement systems.
 - A common risk: Firms successful in early tech development may lack capital for product/service development.
- **US Approach:**
 - Success at Phase II allows firms to proceed to Phase III without competition.
 - They can continue to access funds from the procuring authority.
 - VC fund allowed at any phase.
- **EU Approach:**
 - VC fund allowed at any phase.
 - Competition is required except the Innovation Partnership Procedure.
- **EU's Response:**
 - Urgent consideration on addressing the gap in further technology development by involving venture capital. The EU European Investment Fund plays a pivotal role providing data access.





5. Contribution of VC Investment in Innovation Procurement





Evidence we have already from EC and elsewhere of benefit of VC

- **VC-Backed Firm and Milestones:**
 - VC-backed firms receive financing to reach specific milestones (e.g., prototype development or major customer acquisition).
 - Parties can renegotiate at each milestone with new information.
- **Pre-Commercial Procurement (PCP) Approach:**
 - PCP follows a staged or phased approach.
 - Divided into three consecutive phases.
 - Access to each phase depends on achieving contract-defined milestones.
- **VC Fund and Innovation Procurement:**
 - VC funds can use the phases of Innovation Procurement to adjust their investments in a company.





- **EC Survey Findings:**
 - Indicates higher growth rate for VC-backed companies in PCP compared to non-VC backed companies.
- **Impact on VC Financing:**
 - Participation in PCP helps many companies attract VC financing, sometimes in multiple rounds.
- **Higher Commercialization Rate:**
 - Evidence suggests potentially higher commercialization rates for VC-funded companies





6. Benefits and Costs of VC Involvement



Benefits

- **Internal Benefits:**
 - Improved solutions:
 - Enhance service quality.
 - Reduce operating costs.
 - Possibly a combination of both.
- **Control in Innovation Process:**
 - PCP offers contracting authorities enhanced control of the innovation process.
 - Provides the ability to halt an R&D process if it doesn't promise a return.
- **Cost Reduction Through Joint Procurement:**
 - PCPs can facilitate joint procurement processes.
 - This reduces the costs of larger-scale activities.



Benefits

- **Transaction Benefits:**

- Firms participating in PCP gain various benefits, including:
 - Increased sales.
 - Business expansion opportunities by accessing new customer bases.
 - Employment creation.
 - Formation of new firms.
 - Generation of intellectual property.
 - Skill acquisition through innovative activities.

- **Networking and Innovation Ecology:**

- Participation in R&D enhances firms' networking and integration into innovative ecosystems.
- Firms may also publish results in trade and professional journals.

- **Control and Expertise:**

- Investing capital can provide control over the invested company.
- VC firms gain expertise in innovation procurement, opening further profit opportunities.
- VC firms investing in PCP gain access to innovating firms, providing investment opportunities and awareness of new markets.



Costs

- **Venture Capital Engagement in Innovation Procurement:**
 - Introduces a new actor with different incentives.
 - May lead to a loss of company control (dilution of equity).
 - Can create pressure for rapid growth, potentially misaligned with the firm's strategic and operational capacity.
 - These challenges necessitate a delicate balance between securing funding and maintaining a firm's strategic and operational alignment.
- **Risks for the CA:**
 - Business Risk: VC control can challenge specific technology goals.
 - Policy Risk: Broader projects with VC involvement risk policy priorities like European autonomy.
- **Alignment Challenges:**
 - The aims of venture capital companies may not align with the aims of precommercial procurement.
 - Procurement may fail if these aims diverge.
- **Risks for Venture Capital:**
 - Inherent uncertainty in competitive R&D processes and commercial competition/tendering.





7. Schemes in Place





USA Scheme

- **Venture Capital and SBIR Competitions in the United States:**
 - Many technology vendors participating in SBIR competitions have some form of venture capital funding.
- **Phase III Awards and VC Funding:**
 - SBIR Program doesn't directly award Phase III contracts.
 - Successful firms in Phase III may receive follow-on contracts for use by the US government and venture capital funding.
- **VC Ownership in SBIR:**
 - Initially, SBIR was reluctant to award firms majority-owned by venture capital.
 - Some departments now permit technology vendors majority-owned by VC to apply.





USA Scheme

- **US Rules for SBIR Competitions:**
 - Allow more than one venture capital firm to be owners of a technology vendor.
- **Involvement of VC in Technology Vendors:**
 - Limited evidence on VC involvement in different phases, studies done in agencies or departmental procurements may vary in their conclusions about VC investment and effects.





Polish Scheme

- **Green Deal Accelerator Program in Poland:**

- Implemented by NCBR and the Polish Development Fund on a national level.
- Aims to assist in the commercialization of "green deal" technologies developed by innovative companies.
- It is a national policy scheme.

- **Support for PCP Contractors:**

- Companies that have participated as PCP contractors and reached a mature TRL for their solutions receive assistance for commercialization plans and actions.

- **Program Structure:**

- Initial phase: Interviews with entrepreneurs to identify obstacles and gaps for commercialization.
- Support phase: Organized into 3 thematic modules.
 - Business tools.
 - VC funding.
 - Foreign expansion.



Support phase in Polish Scheme

- **Module 1 - Business Tools:**
 - Includes workshops covering important aspects for entrepreneurs.
 - Covers various models to introduce solutions to the market.
 - Topics include Public Private Partnerships, Horizon Europe funding program, loans, corporation funding, VC funding, etc.
- **Module 2 - VC Financing:**
 - Focuses on enhancing participants' knowledge of VC financing.
 - Provides knowledge and practical guidelines related to negotiations.
- **Module 3 - Business Expansion:**
 - Dedicated to contractors interested in expanding their business to other markets.
- **Matchmaking Component:**
 - Program includes matchmaking between industry and VC funds.
 - Organizes pitch days and reverse pitching days:
 - Companies pitch to VC funds.
 - VC funds present themselves to companies.





Additional actions

In addition to said Green Deal Accelerator program, in order to support the commercialization process, NCBR implemented an open call formula allowing investors, VCs, business angels and other interested parties to connect with PCP contractors and get to know their innovative technologies

In this formula, NCBR acts as a contact-point (connecting interested parties with PCP contractors), promoter and an advisor in scope of innovative technologies developed in PCPs.





8. Observations and Future Work



Observations

The connection between PCP schemes and venture capital funding is increasingly essential to innovation procurements.

- **PCP Initiatives:**
 - Drive innovation in areas like public transportation.
 - Identify pressing needs and create opportunities for innovative companies.
- **Benefits of VC Involvement:**
 - Boosts sales, expansion, employment, and IP generation.
 - Aligns with growth goals but poses control and growth challenges.
- **Dynamic Regulatory Frameworks:**
 - US shift to allow majority VC-owned tech firms in programs like SBIR.
 - In EU the Green Deal Accelerator program in Poland serves as a tangible example of how PCP and VC funding intersect.
- **EU Green Deal Accelerator (Poland):**
 - Merges PCP and VC funding.
 - Supports PCP contractors in advancing technologies for commercialization.





Future Work under the PREVENT PCP program

- **White paper**
 - The first publication introducing the topic.
 - Outlines the framework of benefits and drawbacks of connecting VC with innovation procurement.
 - Signals further reports on the topic.
- **Future Reports:**
 - Include considerations of lessons learned from the Green Deal Accelerator program in Poland.
 - Examine possibilities of such schemes in cross-border contexts.
 - Organise e-pitching sessions to pilot our methodology (March –April 2024).

If interested to receive the white paper, please register to PREVENT PCP newsletter: <https://prevent-pcp.eu/news/>





Thank you for your attention!



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Discussions and Q&A

Conclusions

Stephan Corvers
CEO & Founder

Corvers Procurement Services BV

Conclusions

- Procurement mechanisms can work as an **enabling factor** for the uptake of EU-funded security research and innovation outcomes.
- **End-user involvement** is **crucial** to the successful identification and assessment of genuine common needs based on use cases.
- The **methodology for the identification of threat scenarios** developed in the context of PREVENT-PCP and applied in SHIELD4CROWD is an **example of a good practice** in the definition of use cases and functionalities to assess the need for R&D efforts.
- **Venture Capital** can have an impact for the success of companies participating in a PCP in commercialising their solutions.



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Thank you for your attention

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EAFIP WORKSHOP-WEBINAR #6
INNOVATION PROCUREMENT AS A CATALYST
FOR THE UPTAKE OF SECURITY RESEARCH OUTCOMES

14st December 2023

Q&A



Factors hindering and enabling uptake of EU-funded Security research: how innovation procurement can work as catalyst for innovation

Speaker: Giannis Skiadaresis, CERIS, DG Home - European Commission

	Question	Answer
1.	Can the approach of bringing together demand and supply for constructive engagement as in EACTA be one way for deployment?	The EACTA model is innovative. It works well in the way that it puts the tools in the repository or catalogue of Europol and LEAS can make reviews. The list of tools can help end-users to take informed procurement decisions. .
2.	How does the end-user centric approach and ecosystem setting work in the security groups of CERIS?	Indeed, CERIS has a user centric approach. The end-users need to be at the epicentre of the proposals. Thus, applicants are required to include users in the consortium, who can define their requirements in an early stage. This has resulted in an increased number of proposals and applications for topics engaging end-users. This will lead to better uptake of innovation with tools that are useful to cover the capability needs of the end-users. CERIS organises thematic workshops regularly focusing on specific topics and the community provides feedback to identify gaps for discussion and provide new ideas. CERIS events - European Commission (europa.eu)
3.	How is the CERIS approach helping to work together from an EU perspective?	One of the aims is to involve end-users and other stakeholders and foster the exchanges between them. In this regard, the aim is to support end-users, researchers, EU industry and other stakeholders to formulate an EU approach towards various issues.



SHIELD4CROWD: Preparing the grounds for a PCP in the security domain

Methodology for the definition and assessment of needs based on threat scenarios and use cases scoring.

Speaker: André Druet, SNCF, Coordinator of [SHIELD4CROWD CSA](#)

	Question	Answer
1.	Is the project approach and methodology helping you to understand better the threats and security situation in a better way?	Yes, the project's approach and methodology have enabled us to gain a better understanding of the threats and security situation in relation to crowd management in European cities. Our approach, focused on studying the feasibility of the future PCP innovation project to improve security against crowd management threats, enabled us to gather valuable information from project members and the User Observatory Group. In fact, this participative approach has helped us to build up a picture of the current crowd management situation that is as accurate as possible through shared threats and processes, and the identification of common weaknesses and strengths on which our work should be focused.
2.	How can you synchronize the work of diverse participants to collaborate successfully from an EU perspective?	For a successful collaboration, the responsibility of different partners and the good organisation of meetings and workshops are key factors. It is important to involve and give responsibility to the different users for their active participation in the project. Online meetings are planned to monitor the progress and understand if there are struggles that need to be solved. In addition, the workshops to define the common needs are physical and designed to foster the interaction in real life.



PREVENT-PCP : Exploring the potential of Venture Capital

White Paper and methodology implemented with PCP contractors.

Speaker: Maria Kampa, *Corvers Procurement Services, Partner of [PREVENT-PCP](#)*

	Question	Answer
1.	Are private Venture Capital organisations reluctant to participate in the context of Pre-Commercial Procurement (PCP) in the security domain?	<p>It is true, private Venture Capital organisations are reluctant to connect with PCP as they are not aware about how this mechanism work. The inherent uncertainty in competitive R&D processes constitutes a risk for VC making them more sceptical to participate. To overcome this barrier informative interactions will be organized to give them insights on how they can benefit from the PCP approach.</p> <p>The interactive sessions will take place online at the end of March, beginning of April 2024. More information will be made available.</p>