

# Identifying unmet needs

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# FOLDOUT

Through-foliage detection of illegal  
cross-border activities

from Border Guards - for Border Guards

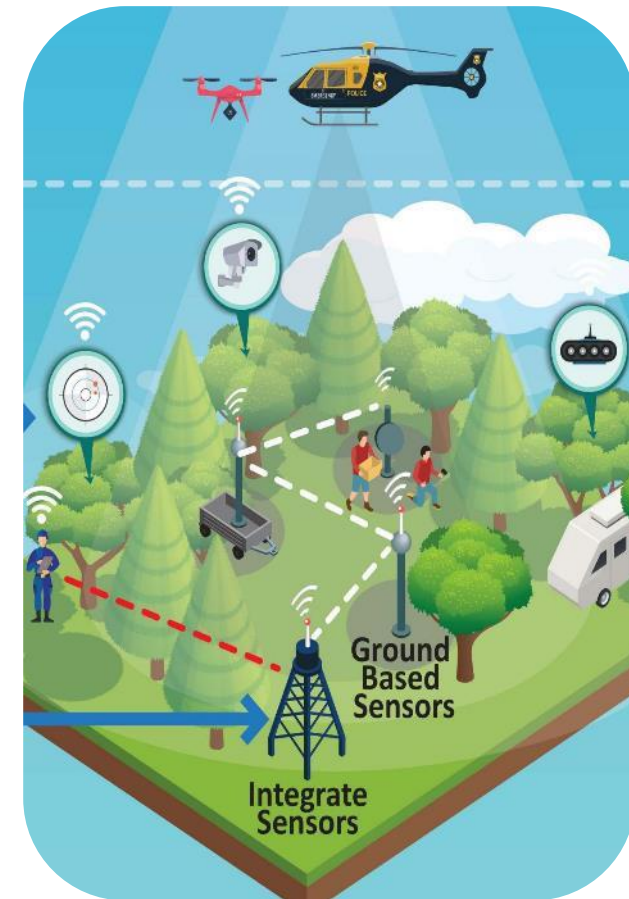


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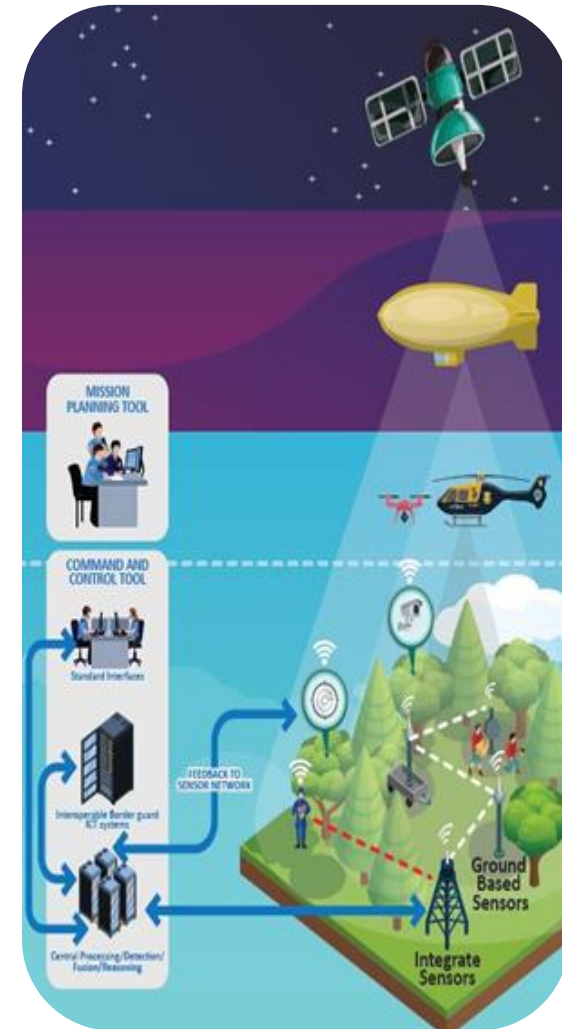
# Summary

- Monitor Temporary “Hot Spots” of **illegal activity**
  - **Irregular border crossings** in **forested** terrain
  - Detection of illegal transport and entry of goods
- **Tracking** until **apprehension**
- **Robust:** combination of the best sensors and technologies;
- **Reliable:** intelligent fusion and self learning
- **Open:** integrate existing and 3. party sensors
- **Effective:** 24/7 situational awareness
- **Cost-effective:** monitoring of hot-spots



# Timeline for End User involvement

- Proposal Writing Phase-  present at workshop
- Make sure the  understand the benefit FOR THEM
  - H2020 projects have lots of hidden opportunities- for everyone
- **Project Plan- by M4 we hold at least 1  Workshop**
  - To understand HOW they actually work
- DEMO early- in M6 we had a fist demo- without any new hardware...
  - We want to do trials (and have a few beers) as often as possible
- Visit your  and make sure the first is “open”
  - This will set the scene on future visits
  - You want to be in the control room- not the conference room







## What's the Problem?

1. Go there
2. Build trust
3. DEMO early
4. Get to where the action is happening
5. Try often- nothing ever goes as planned
6. Every F\*ckup is important- embrace it- it will make the team closer
7. A person you trust is better than the big boss





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**EU|TE|MA**  
RESEARCH SERVICES

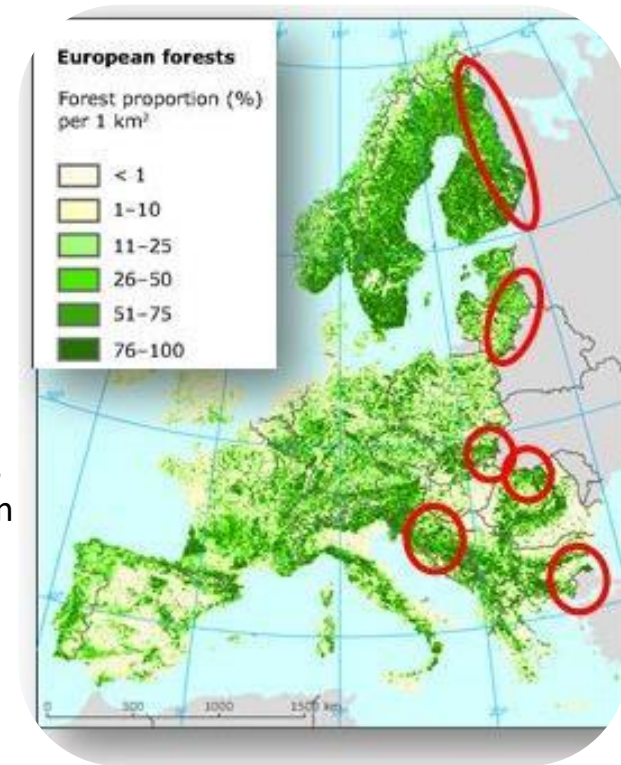
Thank you!

Questions & additional information



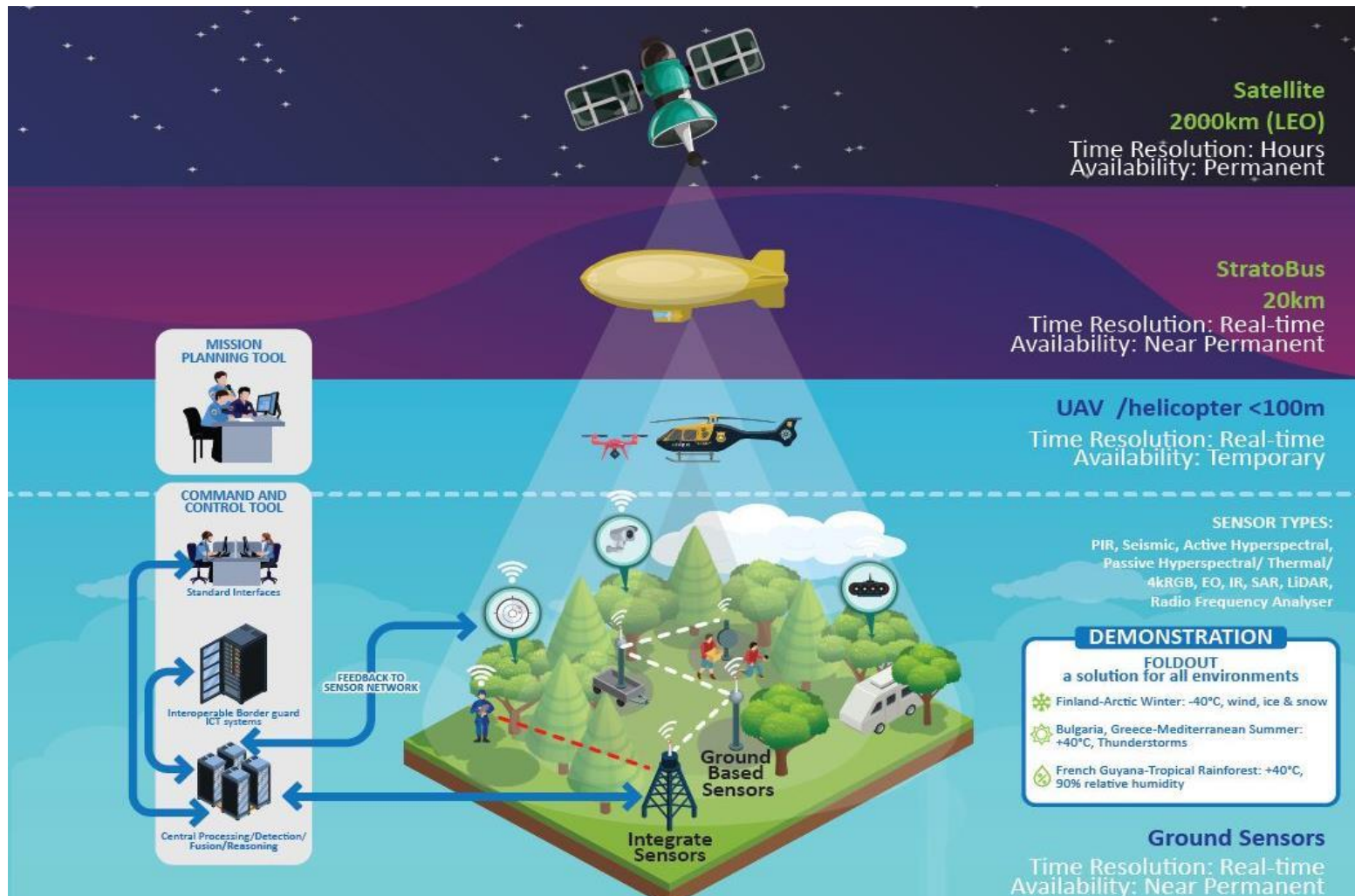
# Motivation & Need

- Hundreds of km **green border**
- Temporary “Hot Spots” of **illegal activity**
  - **Irregular border crossings** in **forested** terrain
  - **Detection of illegal transport and entry of goods** (drugs, weapons human trafficking) in temperate broadleaf **forest** and mixed terrain
- **Tracking** of object until **apprehension**
- Border Surveillance **needs**
  - **Robustness/Reliability**: resistance in all climates; combination of the best sensors and technologies; intelligent fusion and self learning systems
  - **Effectiveness**: situational awareness results with the help of simple/interactive management in effective operations
  - **Cost/benefit**: total monitoring of the green borders is not cost effective





# The FOLDOUT product



## SCENARIOS:



Search & Rescue



Detection of Smuggling



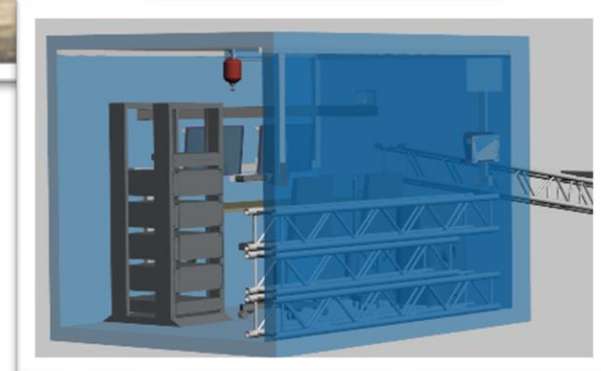
Detection of illegal border crossings

# Easy-to-deploy mobile Command Centres

A Mobile Command Centre is built as a base station for deploying FOLDOUT system in remote areas.

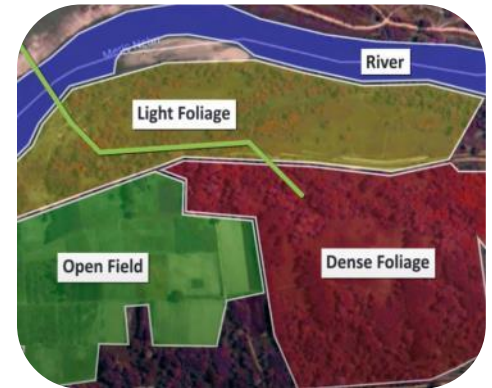
Key Features:

- Transportability (truck or trailer helicopter)
- Energy Autonomy
- Sensor mounting mast
- Base station for local small area sensors
- Onsite data collection and processing
- Communication with C2 platform



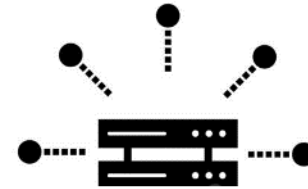
# Added Value

- **Planning tool** for system configuration and **procurement**
- Improved security though **automated detection in real-time**
- Full **situational awareness**
  - Pre-warning system
  - Improved detection and tracking
  - novel AI designed for 24/7 use
  - Intelligent fusion of data
  - **Target tracking in forest**
- **Cost reduction** by flexible self-deployment
  - transportable/mobile detection system
  - Simple to deploy in relevant border areas



# Added Value 2

- Homogenous system
  - **integration of existing** border-system
  - **open interfaces** to other sensors & systems
  - **Extends** available systems
- Effective and trusted system
  - intuitive “easy to use”
  - Delivers border-guards with transparent, descriptive reportable results
- Border guards like to work with it





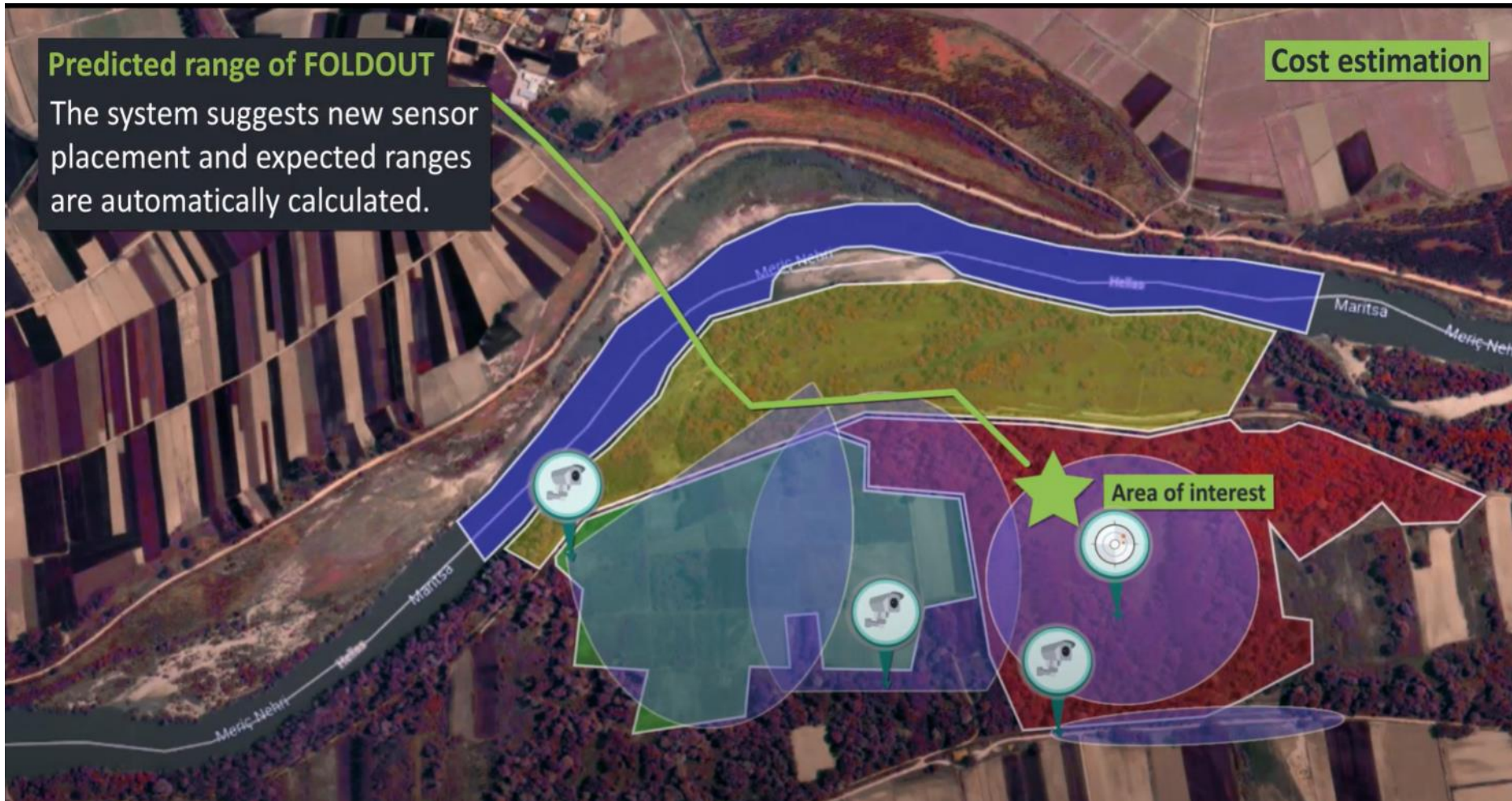
# Planning Tool

## Predicted range of FOLDOUT

The system suggests new sensor placement and expected ranges are automatically calculated.

## Cost estimation

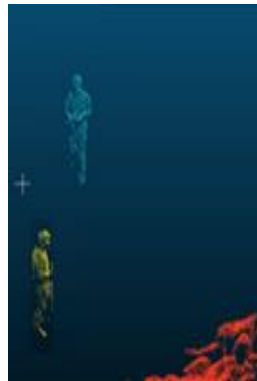
## Area of interest





## Smart sense Platform

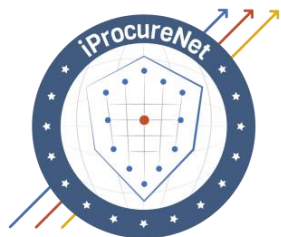
- **Novel sensors detect activities**
  - **AI Algorithms classify and track the object in cooperation with fusion**
    - **Intuitive UI guides the BG to the Apprehension**



# FOLDOUT

# IDENTIFYING UNMET NEEDS

BY EVALDAS BRUZE, L3CE



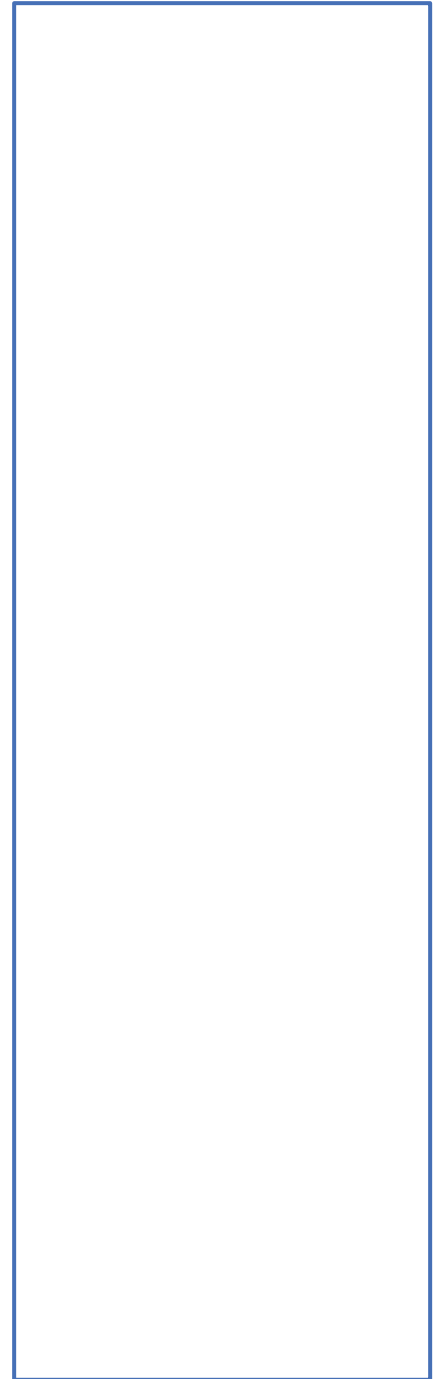
Innovation by developing a European Procurer  
Networking for security research services



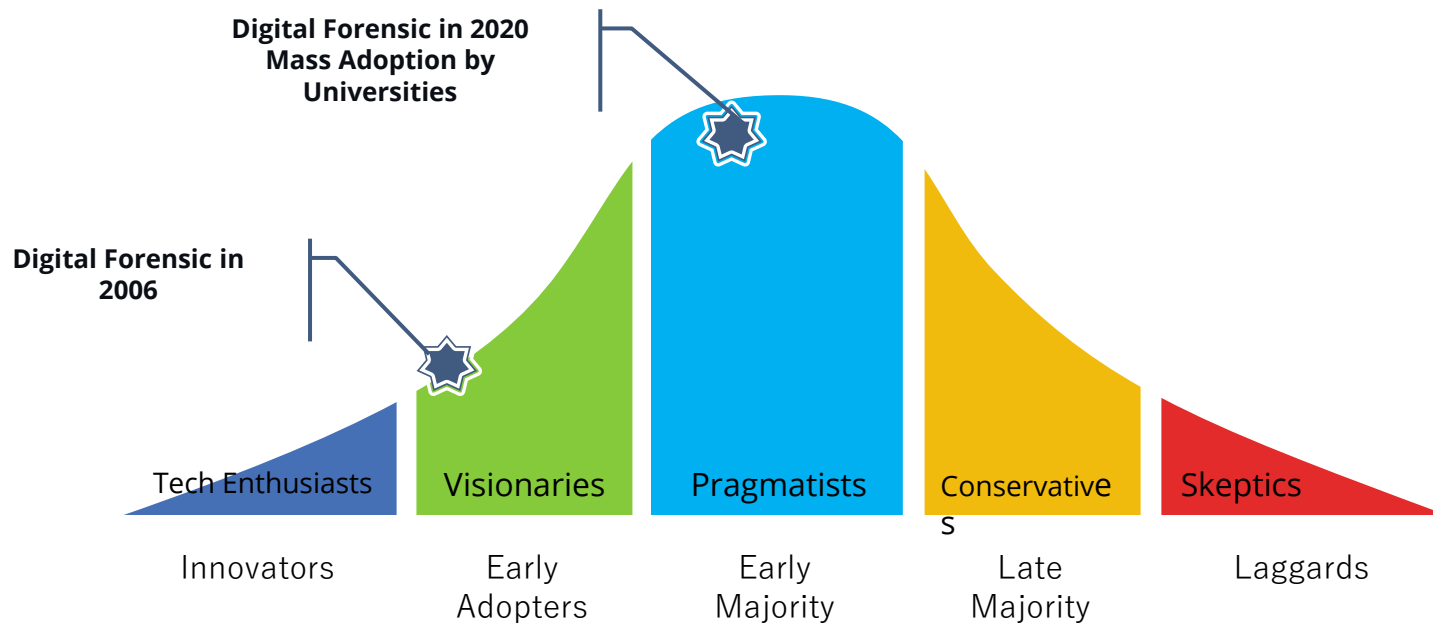
SPARTA-NAAS



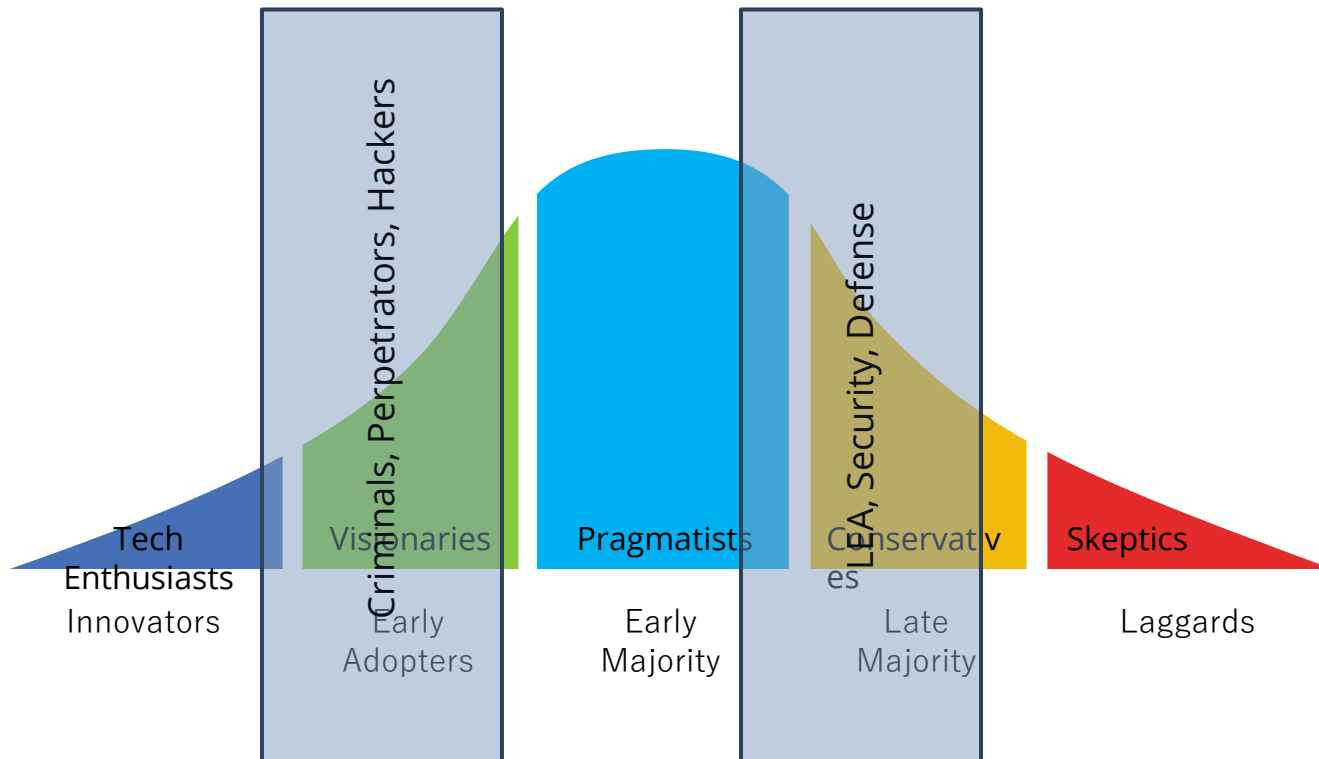
# ADDRESSING DISRUPTIVE CHANGES



# PRODUCT ADOPTION CURVE AND NEW CRIMES/THREATS

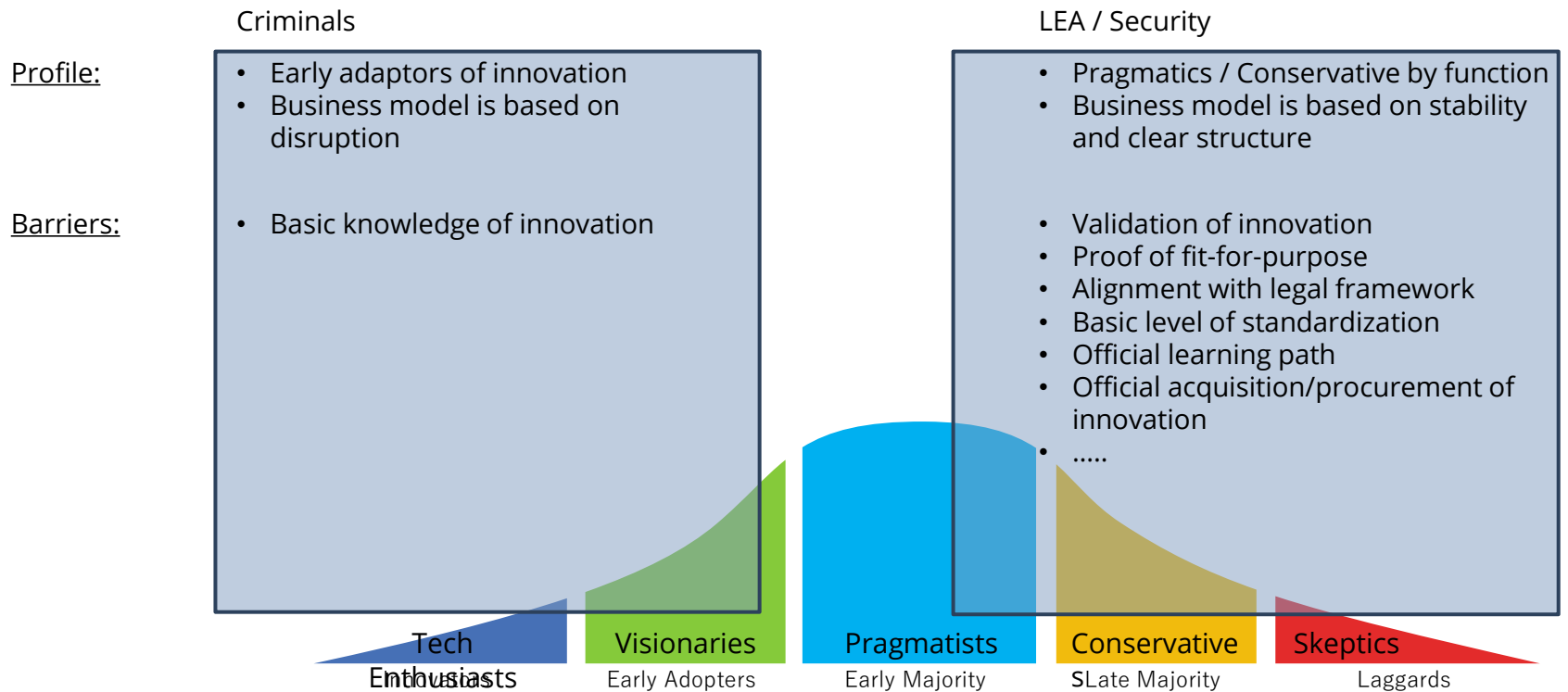


# PRODUCT ADOPTION CURVE AND NEW CRIMES/THREATS



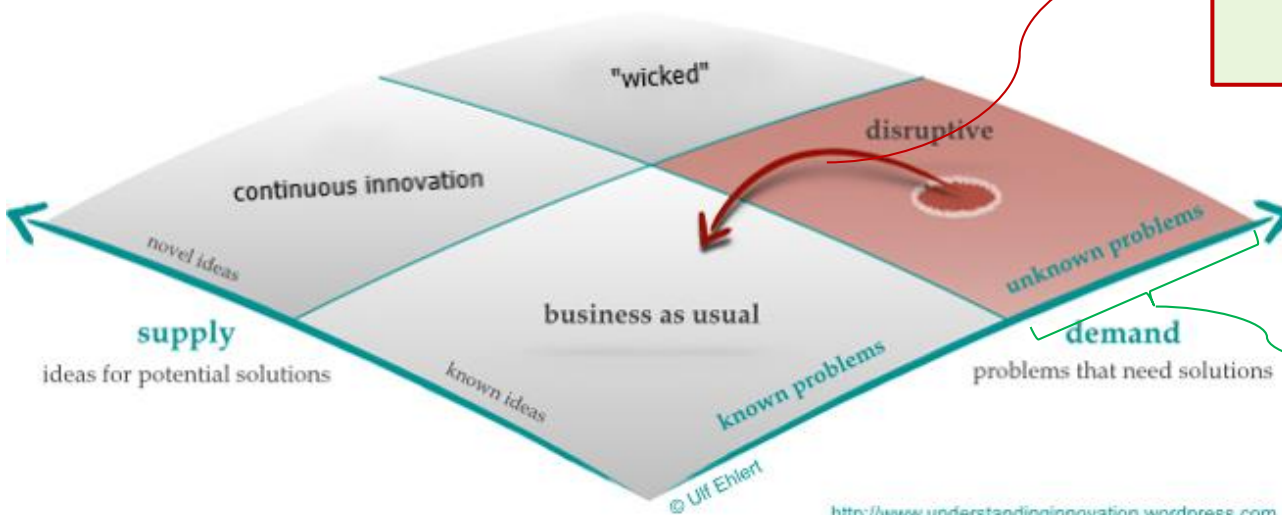


# DISRUPTIVE INNOVATION ADOPTION BY SECURITY ACTORS



# TACKLING DISRUPTIVE CHALLENGES

Tackling new challenges ...

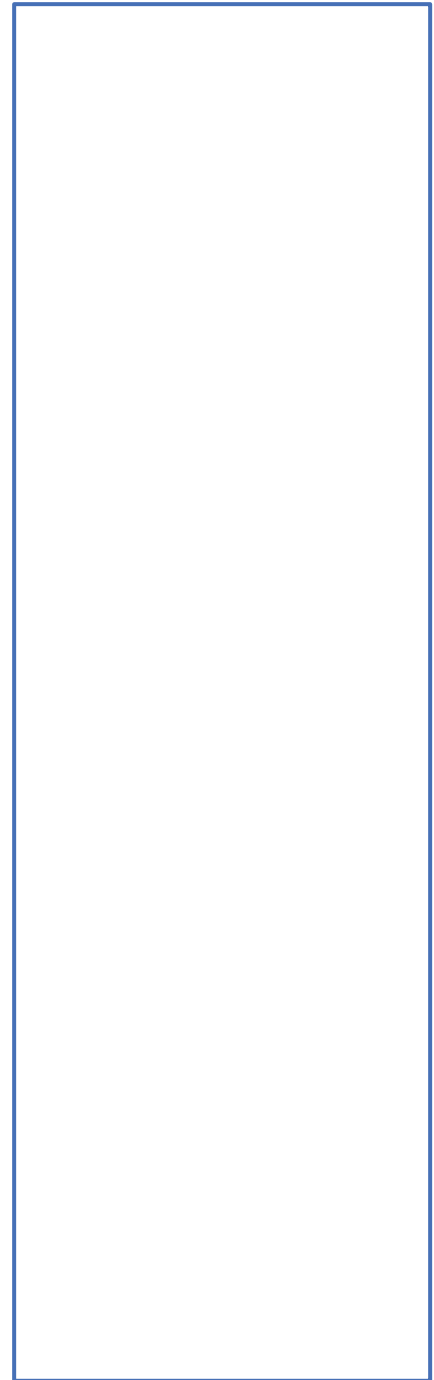


We need to establish ecosystem that **facilitate and speed-up** LEA innovation uptake for disruptive challenges

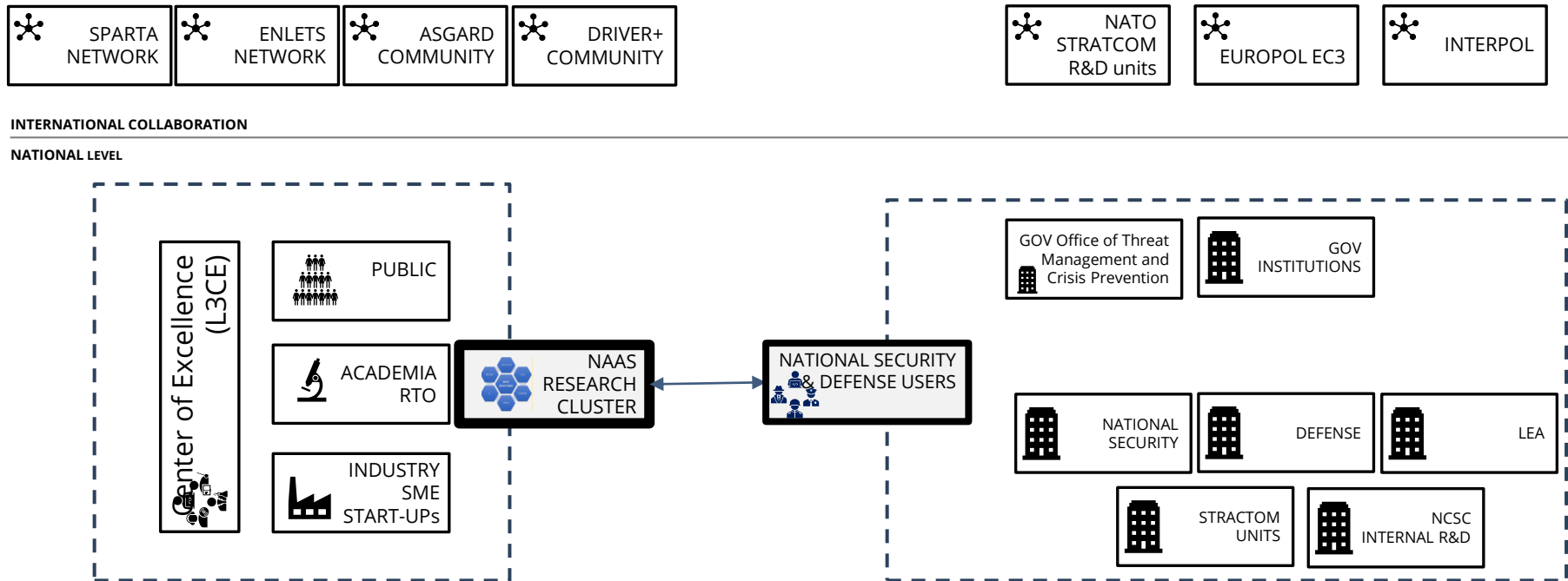
Criminals are Early Adaptors of technological and social innovations and acts as disruptive challenge for LEA/Security



# NAAS NATIONAL ECOSYSTEM



# NAAS\* COLLABORATIVE MODEL FACILITATED BY CENTER OF EXCELLENCE



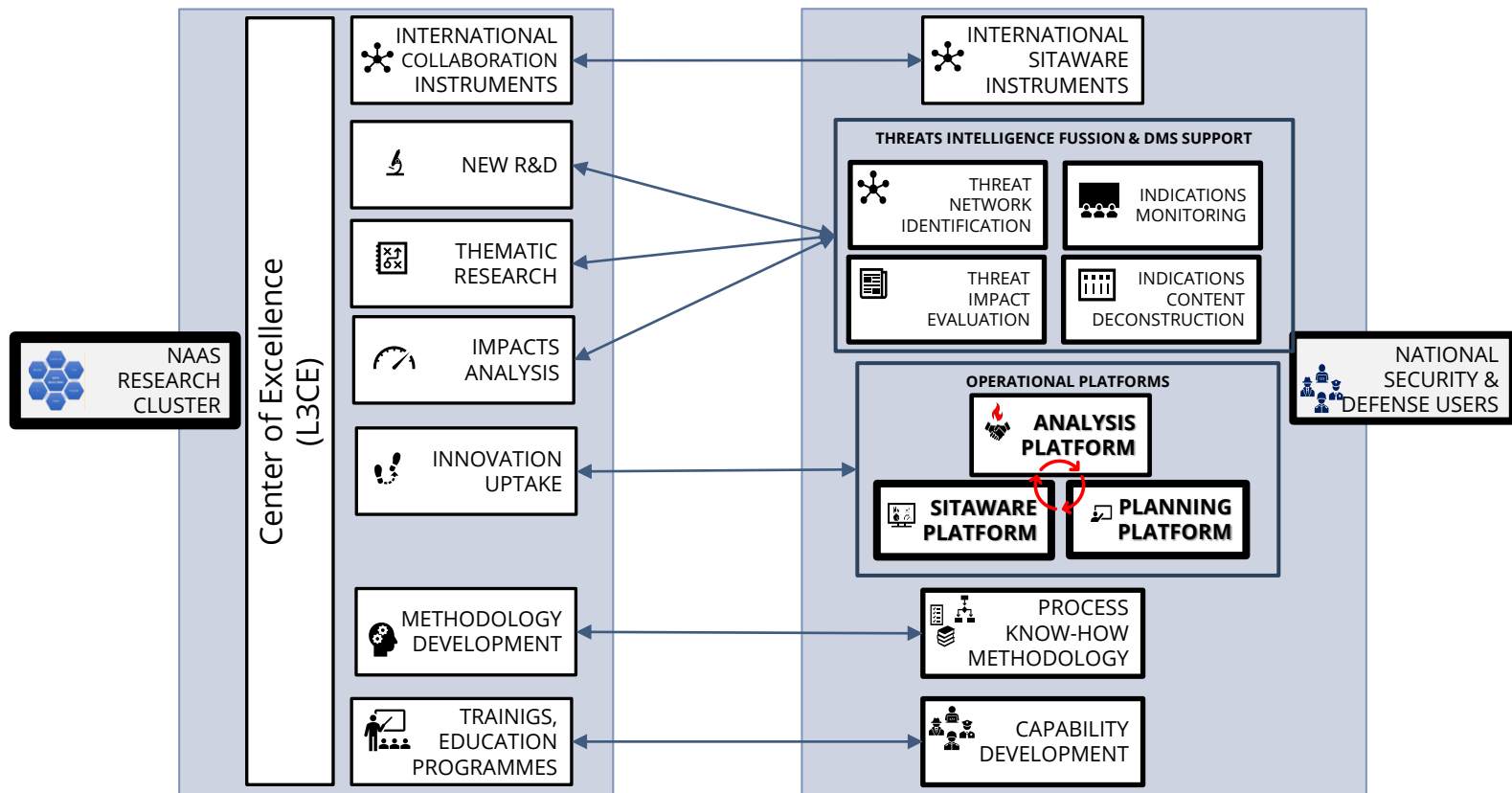
**\* NAAS – “Information Security and Information Threats’ Detection, Analysis, Research and Education Ecosystem”**

# CRITICAL SUCCESS FACTORS

- **Trusted Environment**
- **Co-Creation**
- **Fit For Purpose**
- **Open mindedness And Flexibility**
- **Function or Goal Oriented**
- **Open Innovation**

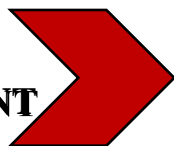


# NAAS: VALUE EXCHANGE MODEL



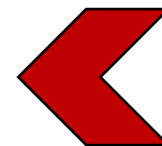
# EXPECTATION ALIGNMENT

**EVOLVING  
ENVIRONMENT**



**EFFECTS**

ON TIME INFORMED NATIONAL INSTITUTIONS MANAGEMENT ON THREATS  
PROTECTED, SUPPORTED DEFENCE & SECURITY DECISION MAKING PROCESSES  
NATIONAL RESOURCES ARE EFFECTIVELY PLANNED



**EVOLVING  
THREATS**

## NEW ACTIVITIES



Training of professionals



Scientific research



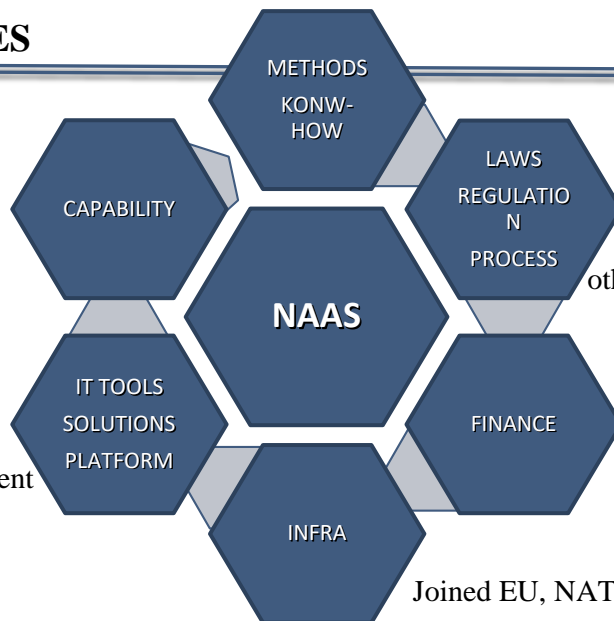
Scientific collaboration



New concepts, methods development



Funding instruments



## VALUE ADD

Public Resilience,  
Hybrid Threats Analysis Specialists



Info Threats impact analysis and  
other phenomena based research & analysis



National and international  
collaboration



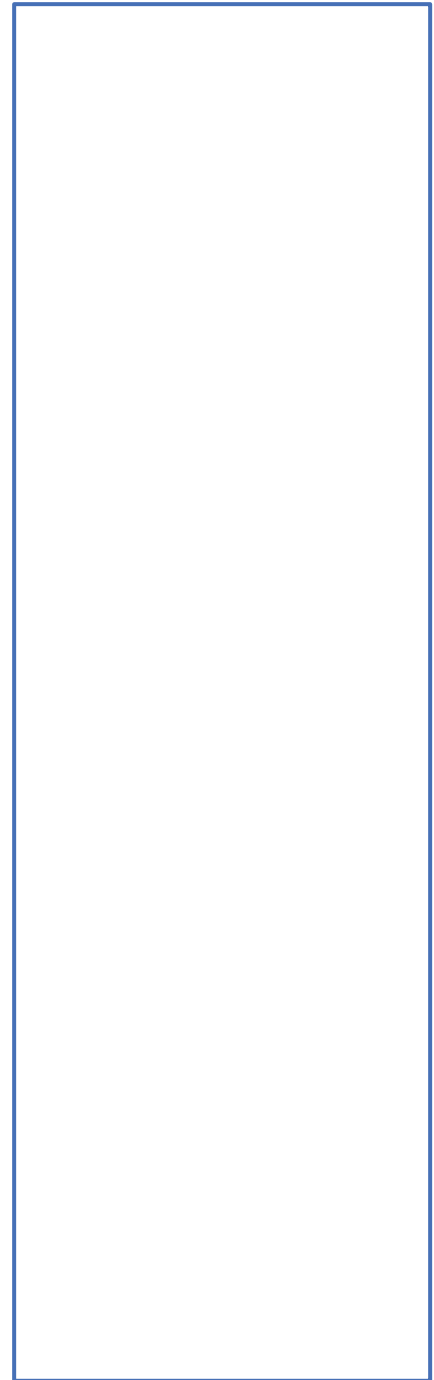
Public Resilience, Information Security  
and Defense Methodology



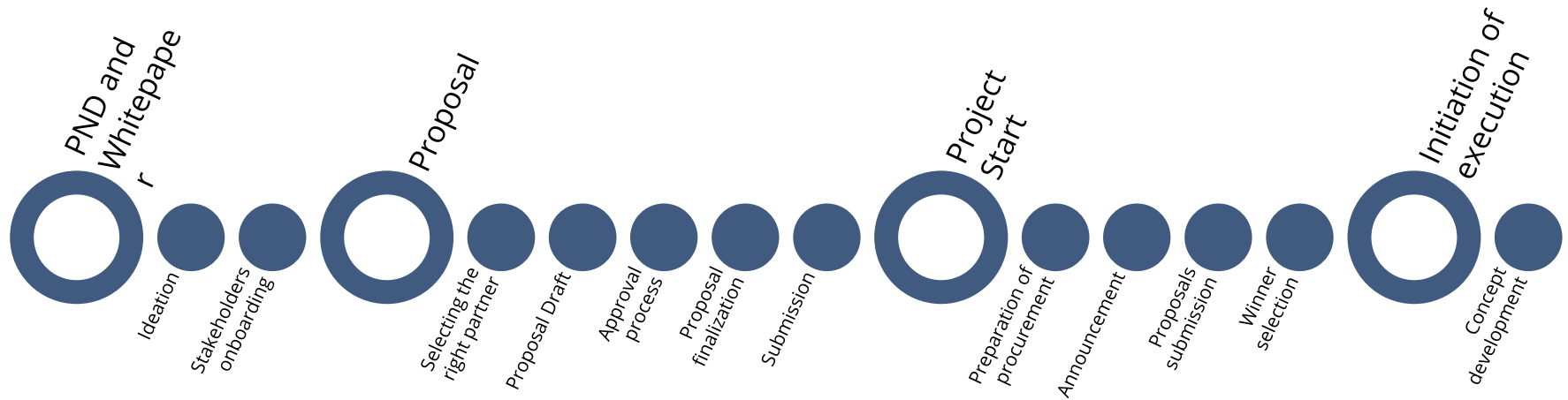
Joined EU, NATO RIA actions and projects,  
Innovations' uptake



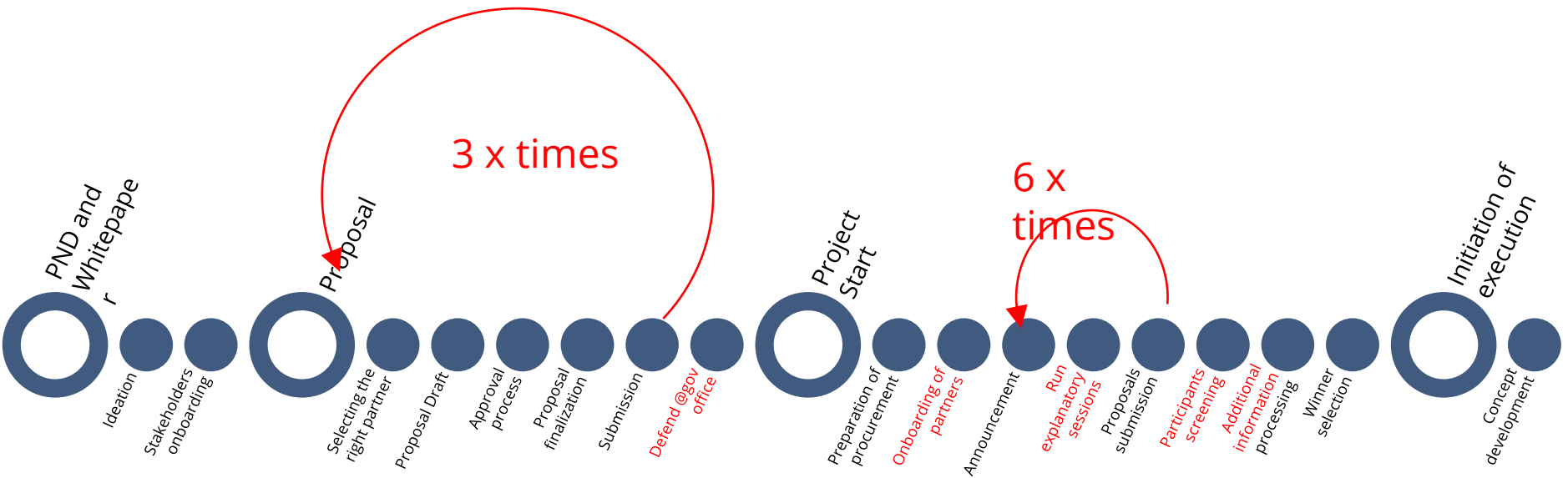
# PROCUREMENT CHALLENGES



# NAAS ACQUISITION PROCESS



# NAAS ACQUISITION PROCESS



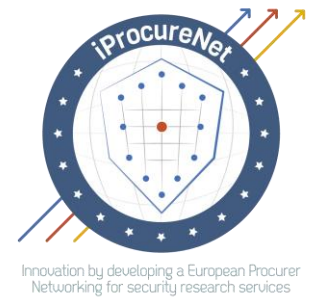


# NEEDS AND FINDINGS

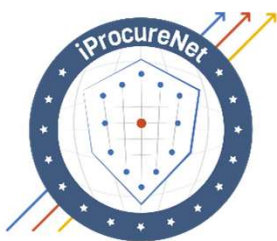
- Why innovation uptake is so difficult
  - Lack of references, high risk of failure
  - Undefined scope, high level of abstraction
  - Co-Creation – require iterative approach
  - Ignorance paradox
  - Knowledge to buy innovation creation process
  - Innovation policy and strategy
  - Exposure to failure

# THANK YOU!

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 32875.



# THE NEED FOR OPERATIONAL MOBILITY FOR PUBLIC SAFETY



Innovation by developing a European Procurer  
Networking for security research services



The BroadWay  
project  
10-03-2021

Marie-  
Christine  
Bonnamour

PSCE Secretary  
General

Chair of the  
Procurement  
Committee

# THE CHALLENGE

- Operational mobility for public safety to enhance cross-border cooperation



## What?

- Secure, Mission Critical broadband communication – operable everywhere
- Applications & the Internet of Public Safety things (IoPST) Ecosystem
- Future evolution as technology advances – standardised with no vendor lock

## Why?

- To Improve Collaboration between responders from different agencies and different countries
- To Enable mobility of responders between different countries

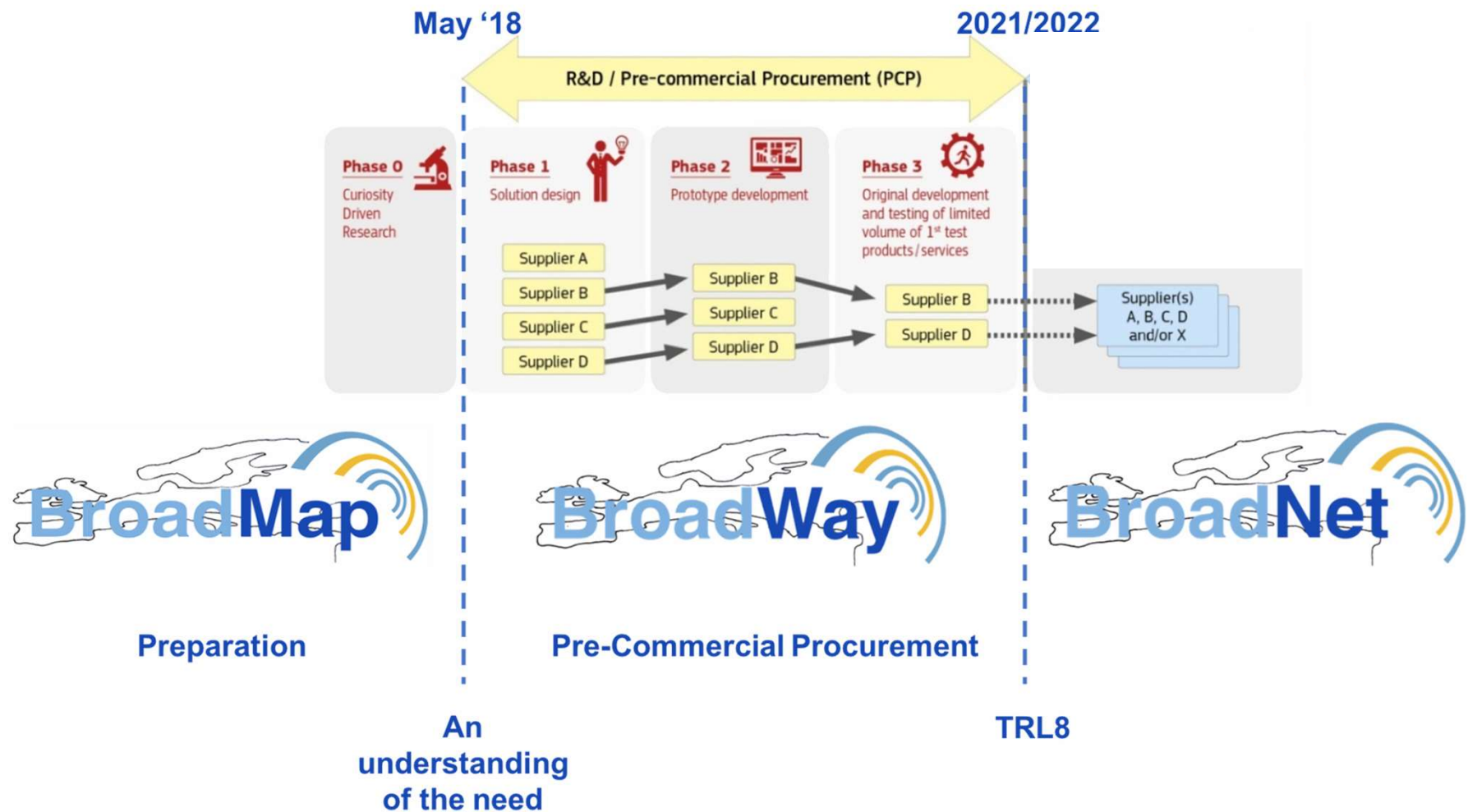


# THE CHALLENGE

## ■ Unmet needs

- A long list of existing R&D projects with no commercial results
- A request from PSCE membership to take the lead and find solutions
- Old technology – vendor lock situation
- Slow migration of national PPDR communication systems to broadband
- Need to have a boost for innovative solutions

# THE PCP PROCESS



# HOW TO MEET THE NEEDS? A TWO STEPS APPROACH

- 1 one year study (CSA) to assess needs and define requirements (validation and prioritisation)
  - ✓ A large team of practitioners: 14 national organisations as partners of BroadMap
  - ✓ Check of requirements from previous R&D projects
  - ✓ A massive consultation of all public safety organisations

3 months of workshops	276 PPDR organisations
18 countries involved	530 practitioners

# HOW TO MEET THE NEEDS?

the Pre- Commercial Procurement Process:  
a **user driven** approach – a **continuous**  
approach

- A strong team of 11 buyers in BroadWay involved in all the Technical Validation Phases to define and check the fulfilment of the technical specifications
- The involvement of practitioners to evaluate the non technical features of the solutions/systems in competition



# LESSONS LEARNT

Success factors	Points of attention
Have enough time to define the requirements/specifications	A very legal process –deviations are risky
Huge involvement of buyers to define/monitor/evaluate	Efforts should not be underestimated
Need to engage with more practitioners despite procurement limitations	Limitation of the budget split (30/70%)
Sustainability	Commercialisation after PCP (PPI?)

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