European Commission

The security research programme of the EU

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State Of The Union speech (2018)

"Europeans rightly expect their Union to keep them safe (...) Terrorists know no borders. We cannot allow ourselves to become unwitting accomplices because of our inability to cooperate."

"When fires rage in one European country, all of Europe burns"

European Agenda on Security (2015)

*"**Research and innovation are essential** if the EU is to keep up-to-date with evolving security needs. Research can identify new security threats and their impacts on European societies.*

Horizon 2020 can play a central role in ensuring that EU's research effort is well targeted, including factoring in the needs of law enforcement authorities by further involving end-users at all stages of the process, from conception to market."

EU Security Research

- EU is a major fund-provider for security research;
- majority of MS depend entirely on H2020 for security research; **only eight MS** (AT, DE, FI, FR, NL, PL, SE, UK) have national security research programmes.
- H2020 in this area represents **50% of overall public funding** for security research in the EU;
- Budget of "Secure Societies" is €1.7 billion (2.2 % of the H2020 budget) of which EUR 1.26bn under DG HOME, and EUR 450m under DG CNECT
- Budget under the 2018-2020 Work Programme is EUR 716 million.

The security research landscape

Notwithstanding the effort still
gap between research output and market uptake

- *highly fragmented and mostly institutional market*
- *the limits of existing funding schemes*
- *the misalignment between demand and supply*

Research is not a stand alone process

Research is part of a wider process:

The Capability Development Process

Five main Actors:

- Policy makers
- Practitioners
- Industry
- Researchers
- Citizens

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Researchers

Make an idea become reality

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Policy makers

- *Define the policy objectives and provide the overall strategic direction*
- *Topics in the security research calls are supporting the implementation of the different policies in the different domains.*

Practitioners

Define the operational requirements to ensure achievement of intended policy objective

Many topics in the security research calls foresee a compulsory participation of practitioners to

- *Enhance policy support and adherence to operational requirements*
- *Improve market uptake*
- *Increase Innovation dimension*
- *Reduce oversubscription*
- *Reduce duplications*

Industry

- *a single and strong EU security market is fundamental to increase the competitiveness of the industrial base and the level of confidence in the security of supply for strategic technologies*

- *private and public sector to work hand in hand in developing a vision for tomorrow's security ecosystem*

- *Many topics in the security research calls foresee a compulsory participation of the private sector.*

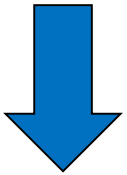
Citizens

- *All Calls have a “Human Factor” embedded within.*
- *A better integration of the societal dimension means more trust and resilience*
- *A better societal consideration into technological requirements means socially compatible solutions.*
- *Understanding of causes and societal roots of a an event and of human behavior (prevention).*

Information flow

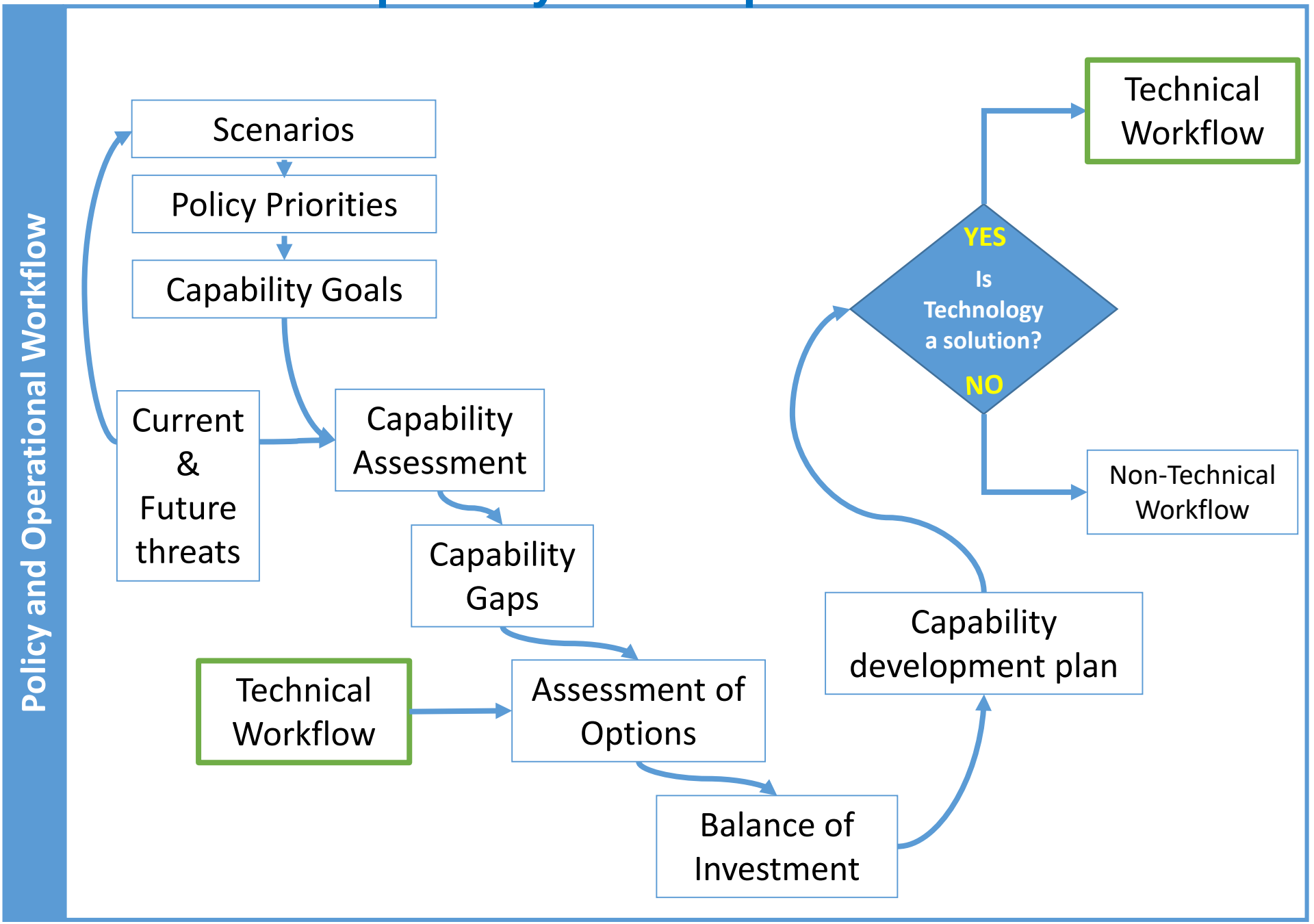
(A strategic enabler of the research cycle)

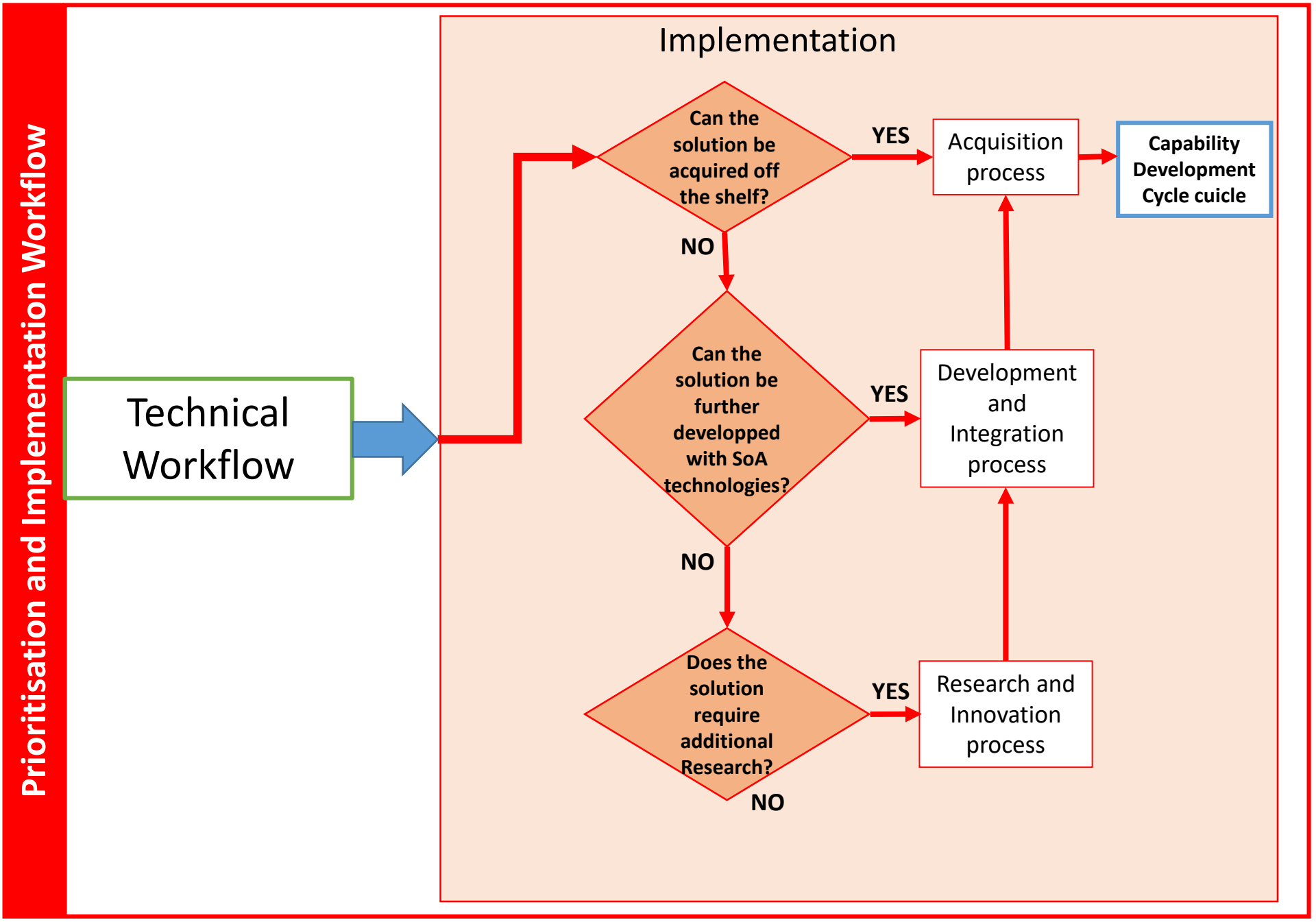
- *security research results are not always communicated and/or disseminated amongst the relevant communities, which could either bring them to the market or make the best use of them on the ground.*



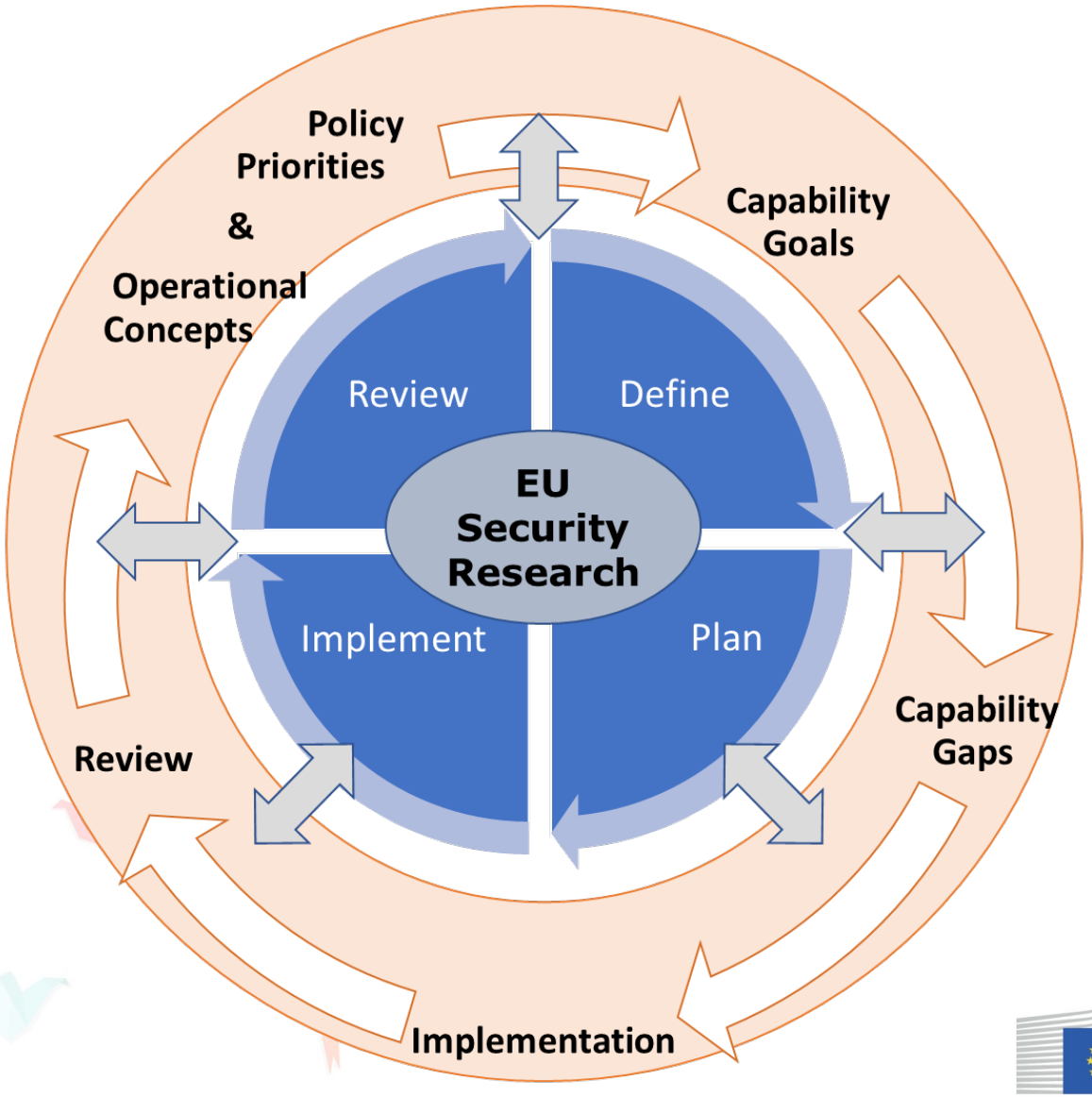
- Community of Users for Safe Secure and Resilient Societies
- Security Research Events – Brussels 05-06 December 2018

The Capability Development Process




Prioritisation and Implementation Workflow
Implementation
Technical Workflow
Can the solution be acquired off the shelf?
YES
Acquisition process
Capability Development Cycle cuicle
NO
Can the solution be further developped with SoA technologies?
YES
Development and Integration process
NO
Does the solution require additional Research?
YES
Research and Innovation process
NO

Capability Development / Research cycles



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The EU Security Research work-programme

Main areas:

- **Critical Infrastructure Protection**
- **Fight against Crime and Terrorism**
- **Disaster Resilient Societies**
- **Border and External Security**
- **Digital Security**

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Critical Infrastructure Protection

- Reducing the vulnerabilities of critical infrastructure and increasing their resilience.

- An adequate level of protection must be ensured and the detrimental effects of disruptions on the society and citizens must be limited as far as possible.

- Taking stock of the different policy initiatives in the area of protection of critical infrastructure *(Action Plan protection of public spaces (2016); Directive 2008/114/EC – Identification and designation of EU Critical Infrastructure; European Programme for CI Protection)* EU funded projects aim to protect and improve the resilience of critical infrastructures (including communications, transport, health, food, water, energy, logistic and supply chain, and environment) and soft targets against all threats and hazards.

Fight against Crime and Terrorism

“Terrorism, organised crime and cybercrime are the three core priorities which are highlighted in this Agenda for immediate action. They are clearly interlinked and cross-border threats, and their multi-faceted and international dimension shows the need for an effective and coordinated response at EU level". - European Agenda on Security 2015

Policy context: ***Cybersecurity package*** *(2017);* ***Anti-terrorism package*** *(2017),* ***Communication addressing EU priorities and further concrete actions on trafficking in human beings*** *(2017); (2016);* ***Commission reports on the measures taken by MSs to combat the sexual abuse and sexual exploitation of children and child pornography***

In this context Horizon 2020 security research programme funds relevant activities under the "Fight against Crime and Terrorism (FCT)" part of the Security Call with the aim to mitigate potential consequences of crime- and/or terrorism-related incidents or to avoid them. They address the fight against and the prevention of crime (including cyber-crime), illegal trafficking and terrorism (including cyber-terrorism and CBRN-E attacks), along with understanding and tackling terrorist ideas and beliefs.

Disaster Resilient Societies

Increasing Europe's resilience to crises and disasters requires the development of dedicated technologies and capabilities to support different types of emergency management operations (such as civil protection, firefighting and marine pollution, humanitarian aid, civil defense, conflict prevention, development of medical information infrastructures rescue tasks and post-crisis-stabilisation) as well as law enforcement.

Building on policies such as the Union Civil Protection Mechanism the Disaster Resilient Societies strand of the Security Call funds projects with an objective of advancing innovation in the society at large, and among first responders, to reduce the loss of human life and to reduce environmental, economic and material damage from natural and man-made disasters, including from climate-related weather events, earthquakes and volcanic events, space weather events, industrial disasters, crime and terrorism threats.

Border and External Security

EU security research enables the development of technologies, capabilities and solutions to:

- **Improve EU border security**
  - Flow of people: research supports the exploitation of the potential given by the **European Border Surveillance System** (EUROSUR - Regulation No 1052/2013) and promote an enhanced use of new technology for border checks in relation to the **SMART BORDERS** legislative initiative (DG HOME)
  - Flow of goods: research addressing, in the context of the EU's customs policy, supply chain security trying to strike the right balance with trade facilitation (DG TAXUD)
- **Support the EU External Security Policies in civilian tasks (EEAS).**

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Digital Security

- The EU's FP7 and Horizon 2020 research programmes have both placed strong emphasis on digital security, also known as cyber security. Past and on-going research goals include identity management and privacy-enhancing tools, security and resilience of network infrastructures, cloud security, socio-economic eco-systems and heterogeneous networked computing environments.

- The Digital Security calls of the Horizon 2020 secure societies programme are managed by DG CONNECT.