
HORIZON EUROPE 'CIVIL SECURITY FOR SOCIETY'

CLUSTER 3 CALLS - 2022



Emmanouil Vergis
Programme Manager
DG HOME

HORIZON EUROPE

Gender Equality





Eligibility Criterion

Gender Equality Plan (applicable from calls with deadlines in 2022 onwards)

Participants (as Beneficiaries and Affiliated Entities) that are **public bodies, research organisations or higher education institutions*** established in a Member State or Associated Country **must have a gender equality plan** in place, fulfilling **mandatory process-related requirements**

- A self-declaration is requested at proposal stage (for all categories of participants)
- Included in the legal entity validation process (based on a self-declaration questionnaire)

* Private-for-profit entities (incl. SMEs), NGOs, CSOs, as well any types of organisations from non-associated third countries, are exempted for the criterion. [See legal categories definitions in the Funding & Tenders Portal](#)



Ranking Criteria for ex aequo proposals

- **Method to establish the priority order**

For each group of proposals with the same score, starting with the group achieving the highest score and continuing in descending order:

1. Aspects of the call that have not otherwise been covered by more highly ranked proposals
2. Scores on 'Excellence' then on 'Impact' (for IAs, scores on 'Impact' then 'Excellence')
3. **Gender balance among personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities, and who are included in the researchers table in the proposal**
4. Geographical diversity

HORIZON EUROPE CIVIL SECURITY FOR SOCIETY

LUMP SUM FUNDING



Why use lump sum funding?

Reducing the financial error rate

- Following the ECA annual reports 2019 and 2020, there is wide agreement that the error rate in the R&I Framework Programmes must be reduced
- Lump sums are a key measure to achieve this in Horizon Europe

Significant potential for simplification

- Lump sums remove the obligation to report actual costs and resources
- Easier to use for beneficiaries with limited experience
- Funding based on reimbursement of real costs remains complex and error-prone. Little scope for further simplification

Focus on content

- Focus less on financial management and more on content

Guidance and information available

- [General presentation](#) – Lump sum funding: what do I need to know?
- [Quick guide](#) – Lump sum grants: Why do we need them? How do they work?

Reference documents

- [Model Grant Agreement Lump Sum](#)
- [Decision authorising the use of lump sum contributions under the Horizon Europe Programme](#)

Studies

- [Lump sum funding works in practice – assessment of the pilot in Horizon 2020](#)
European Commission assessment of lump sum funding (October 2021)
- [A reimbursement system based on a fixed lump sum: is it the right tool for the EU Framework Programme for Research?](#)
European Parliament (STOA) study on lump sums in Horizon 2020 (May 2022)



HORIZON EUROPE

CLUSTER 3 - CIVIL SECURITY FOR SOCIETY

DESTINATION

“BETTER PROTECT THE EU AND ITS CITIZENS AGAINST CRIME
AND TERRORISM”

CALL - FIGHTING CRIME AND TERRORISM (FCT) 2022



MAIN IMPACTS

- Modern information analysis for Police Authorities, allowing them to efficiently fight criminals and terrorists who use novel technologies;
- Improved forensics and lawful evidence collection, increasing the capabilities to apprehend criminals and terrorists and bring them to the court;
- Enhanced prevention, detection and deterrence of societal issues related to various forms of crime, including cybercrime, and terrorism, such as violent radicalisation, domestic and sexual violence, or juvenile offenders;
- Increased security of citizens against terrorism, including in public spaces (while preserving their quality and openness);
- Improved intelligence picture and enhanced prevention, detection and deterrence of various forms of organised crime;
- More secure cyberspace for citizens, especially children, through a robust prevention, detection, and protection from cybercriminal activities.

FCT02 - Improved forensics and lawful evidence collection

- HORIZON-CL3-2022-FCT-01-01: Improved crime scene investigations related to transfer, persistence and background abundance
 - IA, 7 M€ EU contribution, TRL7-8, at least 2 Police Authorities, and at least 2 forensic institutes from at least 3 different EU Member States or Associated countries.
- HORIZON-CL3-2022-FCT-01-02: Better understanding the influence of organisational cultures and human interactions in the forensic context as well as a common lexicon
 - RIA, 3 M€ EU contribution, at least 2 Police Authorities, and at least 2 forensic institutes from at least 3 different EU Member States or Associated countries.

FCT03 - Enhanced prevention, detection and deterrence of societal issues related to various forms of crime

- HORIZON-CL3-2022-FCT-01-03: Enhanced fight against the abuse of online gaming culture by extremists
 - RIA, 3 M€ EU contribution, at least 3 Police Authorities from at least 3 different EU MS or AC.

FCT04 - Increased security of citizens against terrorism, including in public spaces

- HORIZON-CL3-2022-FCT-01-04: Public spaces are protected while respecting privacy and avoiding mass surveillance
 - CSA, 3 M€ EU contribution, at least 3 Police Authorities from at least 3 different EU MS or AC, if satellite solutions present must use Galileo/EGNOS. The use of Copernicus for earth observation is encouraged.

FCT05 - Organised crime prevented and combated

- HORIZON-CL3-2022-FCT-01-05: Effective fight against corruption
 - IA, 5 M€ EU contribution,, TRL6-7, at least 2 Police Authorities, and at least 2 Border Guards Authorities from at least 3 different EU Member States or Associated countries.
- HORIZON-CL3-2022-FCT-01-06: Effective fight against illicit drugs production and trafficking
 - IA, 5 M€ EU contribution,TRL6-7, at least 2 Police Authorities, and at least 2 Border Guards Authorities from at least 3 different EU Member States or Associated countries. If satellite solutions present must use Galileo/EGNOS. The use of Copernicus for earth observation is encouraged.
- HORIZON-CL3-2022-FCT-01-07: Effective fight against trafficking in human beings
 - IA, 5 M€ EU contribution,TRL6-7, at least 2 Police Authorities, and at least 2 Border Guards Authorities from at least 3 different EU Member States or Associated countries. If satellite solutions present must use Galileo/EGNOS. The use of Copernicus for earth observation is encouraged.
- **The total indicative budget for the topics is EUR 15.00 million**

Cluster 3: Civil Security for Society

Destination
“Effective management of EU borders”



Destination “Effective management of EU borders”

- Expected impact of the Horizon Europe Strategic Plan 2021-2024:
 - “Legitimate passengers and shipments travel more easily into the EU, while illicit trades, trafficking, piracy, terrorist and other criminal acts are prevented, due to improved air, land and sea border management and maritime security including better knowledge on social factors.”
- Specific impacts
 - Improved security of EU land and air borders, as well as sea borders and maritime environment, infrastructures and activities, against accidents, natural disasters and security challenges such as illegal trafficking, piracy and potential terrorist attacks, cyber and hybrid threats;
 - Improved border crossing experience for travellers and border authorities staff, while maintaining security and monitoring of movements across air, land and sea EU external borders, supporting the Schengen space, reducing illegal movements of people and goods across those borders and protecting fundamental rights of travellers;
 - Improved customs and supply chain security through better prevention, detection, deterrence and fight of illegal activities involving flows of goods across EU external border crossing points and through the supply chain, minimising disruption to trade flows.

HORIZON-CL3-2022-BM-01-01: Improved underwater detection and control capabilities to protect maritime areas and sea harbours

- Area: Efficient border surveillance and maritime security
- Expected Outcome:
 - Improved security of maritime infrastructures and maritime transport, including sea harbours and their entrance routes;
 - Improved detection of illicit and dangerous goods and/or of threats hidden below the water surface, either threatening infrastructures or vessels, or moving alone or connected to vessels. Monitor wide border areas. Capabilities for border surveillance but also for monitoring challenges and threats to maritime activities
- At least 3 Border or Coast Guard from at least 3 different EU Member States or Associated countries
- A particularly critical environment would include the abilities to detect and act below the water surface. Possible threats concealed below the water surface should be detected.

HORIZON-CL3-2022-BM-01-02: Enhanced security of, and combating the frauds on, identity management and identity and travel documents

- Area: Secured and facilitated crossing of external borders
- Expected Outcome:
 - Improved capabilities of border management and law enforcement practitioners to identify citizens and the use of identity and travel documents and credentials in the context of border and police checks, for a better, more reliable and more secure experience for citizens and security practitioners, including in connection to optimised e-Government settings;
 - Improved capabilities of border management and law enforcement practitioners to defend identity and document/credential management against attacks to their security and attempts to falsify biometrics, identity thefts and online frauds;
 - Improved knowledge for European approaches to future identity management systems and document and credential security, building on and integrating with existing tools and respecting the privacy of European citizens.
- At least 2 Border or Coast Guard Authorities and 2 Police Authorities, from at least 3 different EU Member States or Associated countries
- Contribute to future evolutions of European identity strategies based on eIDAS (Electronic Identification, Authentication and Trust Services), and could explore synergies with tools offered by the eIDAS Regulation

HORIZON-CL3-2022-BM-01-03: Better, more portable and quicker analysis and detection for customs

- Area: Better customs and supply chain security
- Expected Outcome:
 - Portable or easily deployable solutions used in customs inspections for detecting threat agents such as drugs, including new psychoactive substances;
 - Improved capacities of customs authorities to acquire, analyse, share drugs spectra, and detect new drugs in the context of customs inspections.
- 3 Customs Authorities from 3 different MS/AC
- Example of target substances include drugs, with a focus on new psychoactive substances, but also gems or precious metals and other threats or illicit goods.
- These capabilities would allow customs to deploy detection capacity where and when more appropriate and efficient and to carry out inspections “on the move” and more quickly.
- The improved capability includes being able to update more easily and quickly the references for the target goods and substances, and to be able to detect them.
- The involvement of police authorities is encouraged, as well as synergies with relevant topics of the Fight against Crime and Terrorism Destination, to ensure operational scenarios are best identified for detection capabilities by customs.

HORIZON-CL3-2022-BM-01-04: OPEN TOPIC and HORIZON-CL3-2022-BM-01-05: OPEN TOPIC

- Area: Any of the three areas within the Border Management Destination
- At least 2 Border or Coast Guard Authorities and 2 Customs Authorities, from 3 different MS/AC
- Under the Open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions within this Destination that are not covered by the other topics, in either Call Border Management 2021 and Call Border Management 2022.

Destination “Resilient Infrastructure”

CALL RESILIENT INFRASTRUCTURE (INFRA) 2022



Resilient Infrastructure (INFRA)



Expected impact of the Horizon Europe Strategic Plan 2021-2024:

- “[...] resilience and autonomy of physical and digital infrastructures are enhanced and vital societal functions are ensured, thanks to more powerful prevention, preparedness and response, a better understanding of related human, societal and technological aspects, and the development of cutting-edge capabilities for [...] infrastructure operators [...]”

HORIZON-CL3-2022-INFRA-01-01: Nature-based Solutions integrated to protect local infrastructure

Area: INFRA02 - Resilient and secure smart cities

- Expected Outcomes:
 - Integrated Nature-based solutions (NBS) into overall concepts for the protection of infrastructures and existing integrated risk management plans for cities and urban areas with a view of complementing existing methods for protection and resilience
 - Adaptation and mitigation strategies for infrastructure protection applied by local authorities and operators, including lessons learned from studying reactions of natural eco-systems to different external shocks
 - Resilience of local infrastructures enhanced by integrating local knowledge from population and historical documents, as well as natural components in their physical assets preventing potential damages from different types of hazards, including storms, floods and heatwaves
 - Novel construction materials and solutions resulting in more durable and damage resistant infrastructure
 - Full potential of Nature-based Solutions exploited by local authorities and operators to mitigate the risks related to multiple hazards manifesting at the same time

HORIZON-CL3-2022-INFRA-01-02: Autonomous systems used for infrastructure protection

Area: INFRA02 - Resilient and secure smart cities

- Expected Outcome:
 - Autonomous surveillance, detection and fast and coordinated response based on updated integrated contingency plans to threats against different types of infrastructures
 - Long term deployment of autonomous solutions for the decontamination of large scale infrastructures in case of the release of CBRN materials - reduce the spread of infectious diseases, preventing and responding to pandemics
 - Long term deployment of autonomous solutions/systems/devices to detect CBRN threats in a fast, secure and forensic way
 - Consideration of system performance, interdependencies, new failure modes and conditions that need to be in place for this to work as intended
 - Concepts for the use of advanced materials, smart technologies and built-in monitoring and repair capabilities to reduce the destructive potential of natural disasters and (terrorist) attacks on infrastructures

HORIZON-CL3-2022-INFRA-01-02: Autonomous systems used for infrastructure protection

Area: INFRA02 - Resilient and secure smart cities

- Expected Outcome:
 - Improved knowledge and solutions for the protection and response against large-scale attacks or intentional disruptions with (fast moving) unmanned vehicles or other moving objects reducing critically the time to react also close to residential areas
 - Enhanced knowledge on the ethical and legal impact on individuals and society as a whole of the use of robotics in order to maintain the vital functions of society
- For security incidents, there are so far less solutions available which would take into account the specific challenges of intentional disruptions as compared to accidents or material failure.
- Solutions and measures must take into account legal and ethical rules of operation, as well as fundamental rights such as privacy and protection of personal data.
- In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.
- If projects use satellite-based, positioning, navigation and/or related timing data and services, beneficiaries must make use of Galileo/EGNOS.

Destination “Increased Cybersecurity”

TOPICS CALL 2022



Expected impact of the Cybersecurity Actions

4. Destination – Increased Cybersecurity

*“Increased cybersecurity and a more **secure online** environment by developing and using effectively EU and Member States’ **capabilities** in digital technologies supporting protection of data and networks aspiring to **technological sovereignty** in this field, while respecting **privacy** and other **fundamental rights**; this should contribute to secure services, processes and products, as well as to robust digital infrastructures capable to resist and counter **cyber-attacks and hybrid threats**.”* (Strategic Plan 2021-2024)

HORIZON-CL3-2022-CS-01-01: Improved monitoring of threats, intrusion detection and response in complex and heterogeneous digital systems and infrastructures

Expected Outcome

Projects are expected to contribute to all of the following expected outcomes:

- Improved disruption preparedness and resilience of digital infrastructure in Europe
- Improved capacity building in digital infrastructure security including organisational and operational capabilities
- Robust evidence used in cybersecurity decisions and tools
- Better prediction of cybersecurity threats and related risks
- Improved response capabilities based on effective collaboration and/or coordination with other relevant national or EU bodies in charge of Cybersecurity, including holistic incident reporting and enabling coordinated cyber-incident response

HORIZON-CL3-2022-CS-01-02: Trustworthy methodologies, tools and data security “by design” for dynamic testing of potentially vulnerable, insecure hardware and software components

Expected Outcome

Projects are expected to contribute to all of the following expected outcomes:

- Effective access control to system components and management of trustworthy updates
- Modelling of security and privacy properties and frameworks for validating and integration on the testing process
- Integrated process for testing, formal verification, validation and consideration of certification aspects
- Tools providing assurance that third-party and open source components are free from vulnerabilities, weaknesses and/or malware
- Data security “by design” e.g. via secure crypto building blocks

HORIZON-CL3-2022-CS-01-03: Transition towards Quantum-Resistant Cryptography

Expected Outcome

Projects are expected to contribute to all of the following expected outcomes:

- Measuring, assessing and standardizing/certifying future-proof cryptography
- Addressing gaps between the theoretical possibilities offered by quantum resistant cryptography and its practical implementations
- Quantum resistant cryptographic primitives and protocols encompassed in security solutions
- Solutions and methods that could be used to migrate from current cryptography towards future-proof cryptography
- Preparedness for secure information exchange and processing in the advent of large-scale quantum attacks

HORIZON-CL3-2022-CS-01-04: Development and validation of processes and tools used for agile certification of ICT products, ICT services and ICT processes

Expected Outcome

Projects are expected to contribute to all of the following expected outcomes:

- Availability of applicable tools and procedures for partial and continuous assessment and lean re-certification of ICT products, ICT services and ICT processes.
- Reduction of time and efforts spent for (re-) certifying ICT products, ICT services and ICT processes.
- Improved stakeholder collaboration on cybersecurity certification information, including manufacturers and end users from different Member States.
- Efficient (re-)use of information and evidence relevant to certification and in support of multi-scheme (re-)use.
- Integration of certification on the whole system modelling, verification, testing and verification process

HORIZON EUROPE CIVIL SECURITY FOR SOCIETY

DISASTER-RESILIENT SOCIETIES (DRS)



DRS Destination – Expected impacts (extract)

- Enhanced understanding and improved knowledge and situational awareness of disaster-related risks by citizens, empowered to act, thus raising the resilience of European society.
- More efficient cross-sectoral, cross-disciplines, cross-border coordination of the disaster risk management cycle (from prevention, preparedness to mitigation, response, and recovery) from international to local levels.
- Enhanced sharing of knowledge and coordination regarding standardisation in the area of crisis management and CBRN-E.
- Strengthened capacities of first responders in all operational phases related to any kind of (natural and man-made) disasters so that they can better prepare their operations, have access to enhanced situational awareness, have means to respond to events in a faster, safer and more efficient way, and may more effectively proceed with victim identification, triage and care.

Call	Budgets (EUR million)		Deadline(s)
	2021	2022	
HORIZON-CL3-2021-DRS-01	26.00		08 Sep 2021
HORIZON-CL3-2022-DRS-01		46.00	08 Sep 2022
Overall indicative budget	26.00	46.00	

HORIZON-CL3-2022-DRS-01-01

Enhanced citizen preparedness in the event of a disaster or crisis-related emergency (IA)

- **Area: Societal Resilience: Increased risk awareness and preparedness of citizens**

- Expected Outcome:

- Preparedness actions linking together multilevel interventions involving citizens, communities, business organisations, public administrations for **empowering citizens and their communities to act by themselves** together with emergency services and managing spontaneous volunteers in the case of a disaster or crisis-related emergency of any kind in the form of **best practices and guidelines exploiting local resources (knowledge, networks, tools)** developed with practitioners and local decision-makers.
 - **Effective means for communication** improving inter-organisational collaborative processes e.g. early warning systems and communication chains, roles, tasks and responsibilities of citizens, communities, local authorities, NGOs, business companies and practitioners, taking into account the legal framework, procedures for normal operation and organizational boundaries.
 - **Improved early warning systems, forecasts and strategies** to reach different public representatives with proper messages in the event of a disaster.
 - **Demonstration exercises involving citizens**, training and educational institutions, local decision-makers, employees in public administrations and in business companies, and practitioners, to identify practices, test guidelines and communication strategies in near-real-case situations in the framework of field exercises, virtual trainings and serious gaming, school / university curricula and professional training.
 - **Building a 'culture of disaster preparedness'** for citizens, communities, public administrations, business companies, practitioners: Development of an **effective education system** and integration of theory and practice of preparedness in school curricula; development of an effective **integration of multilevel action in public administration** (at local and regional national and international levels) focusing also on responsibility and deliberation issues; development of effective preparedness practices for citizens, communities, business organisations and practitioners (and their associations).
 - Deployment of **evidence-based assessment methods/models** to monitor and strengthen emergency preparedness.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of organisations representing citizens or communities, practitioners (first and/or second responders), and local or regional authorities and private sector from at least 3 different EU Member States or Associated countries.

HORIZON-CL3-2022-DRS-01-02

Enhanced preparedness and management of High-Impact Low-Probability or unexpected events (RIA)

- **Area: Societal Resilience: Increased risk awareness and preparedness of citizens**
- Expected Outcome:
 - **Increased understanding of high impact-low probability events** in the short and medium term, both from natural and man-made hazards. These perspectives include cultural, societal, regional, ethical and historical contexts. This should capture new and emerging risks and develop end-user-friendly tools for risk assessors to conceptualise such risks.
 - **Improved methods/tools for decision-making** under uncertainty to prepare for high-impact low-probability events. These methods could include the impact of past events, communication and linguistic components, and regional specificities. These should be developed in close cooperation with end users to maximise application of these tools in practice.
 - **Improved mapping of socioeconomic aspects.** This could be based on an in-depth understanding of past events, a mapping of the current societies' cultural sensibilities in a geographical space / region context, and/or their ethical and legal contexts.
 - **Improved preparedness** at an individual level, at local level and at the governmental level, clarifying roles and management responsibilities. improved understanding of existing risk and resilience management capacities across Europe at national and regional levels for responding to high-impact low-probability risks that Europe may face.
 - **Development of appropriate simulation tools** to identify areas under higher risk of occurrence of HILP events and development of preparedness plans and management mechanisms, including communication, to address the effects of such occurrence.
 - **Multi-disciplinary reference library around HILP events and their impacts** would allow to build up a record of observations that can help quantify the impacts and, by analogy, similar risks that might arise in the future.
 - **Scenario-building exercises and stress-test risk-related practices** in critical infrastructure sectors (e.g., transport, communications, energy) would enhance preparedness and help identify particularly affected social groups while enabling rapid financial and practical support where national organizations are unable to cope or where the consequences are cross-border in nature.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of representatives of scientific areas that are relevant for this topic as well as representatives of stakeholders (both practitioners and policy-makers) from at least 3 different EU Member States or Associated countries. Galileo/EGNOS (other data and services may additionally be used) and Copernicus for earth observation encouraged. TRL 4-5 expected.

HORIZON-CL3-2022-DRS-01-03

Improved quality assurance / quality control of data used in decision-making related to risk management of natural hazards, accidents and CBRN events (IA)

- **Area: Societal Resilience: Increased risk awareness and preparedness of citizens**
- Expected Outcome:
 - **Evaluation of Quality Assurance / Quality Control (QA/QC) needs** in areas not prone to systematic quality checks prior to decision-making in the natural hazards and CBRN-E areas, for physical, chemical and biological parameters.
 - Based on past experience, organised intercomparisons among laboratories and institutes at EU level which are in charge of providing data for risk- and evidence-based decision-making in order to **evaluate the comparability of data produced worldwide**.
 - Production of reference materials and possible certification schemes for the **systematic checking of laboratory and method's performance for monitoring data used in risk- and evidence-based decision-making** that are not prone to readily established schemes.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 5 accredited measurement institutes / laboratories in charge of delivering data to risk management decision-making authorities from at least 3 different EU Member States or Associated countries. Galileo/EGNOS (other data and services may additionally be used) and Copernicus for earth observation encouraged. TRL 6-8 expected.

HORIZON-CL3-2022-DRS-01-04

Better understanding of citizens' behavioural and psychological reactions in the event of a disaster or crisis situation (RIA)

- **Area: Societal Resilience: Increased risk awareness and preparedness of citizens**
- Expected Outcome:
 - **Qualitative and quantitative analyses on the behaviour** of diverse society groups affected by a natural and man-made disaster or crisis situation, during and after an event occurs, based on real cases and testimonies, lessons learned from past disasters or crisis and recommendations from citizens and local authorities. **Examine how this analysis could be integrated into preparedness plans** and processes to include cultural, historical, and ethical perspectives on what defines disasters and how they are responded to.
 - Analyses of human behaviour as triggering or cascading factors of disasters or crisis situations, and **transformation of qualitative data into quantitative information to improve vulnerability and exposure analyses.**
 - **Development of community-centred (vis-à-vis victim- or patient-centred) approaches** and corresponding preparedness plans: in view of limited emergency response capacities and threat of systems collapses (e.g. health system, food distribution, supply chains) in large-scale disaster scenarios, analyse what community practices and communication strategies can help mitigate the latter and enable the public to be a capable partner in emergency planning and response.
 - **Specific measures to better address the needs and requirements of most vulnerable groups** (chronic sufferers, persons with disabilities, children, elderly persons, economically and social deprived persons, refugees and irregular migrants in emergency planning and recovery measures.
 - **Analyses of the nature and scope of mental health issues** of the affected populations and of first-responders arising during and following natural or man-made disasters or crisis situations and their implications for response and recovery, and options to address these issues, including through social and health services such as emergency psycho-social support.
 - **Analyses of mechanisms and factors that can lead to false alarms and misdirected actions**, and of the direct consequences on both population and decision-makers.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 2 organisations representing citizens or communities, and at least 2 representatives of societal sciences (psychology, history) from at least 3 different EU Member States or Associated countries.

HORIZON-CL3-2022-DRS-01-05

Improved impact forecasting and early warning systems supporting the rapid deployment of first responders in vulnerable areas (IA)

- **Area: Improved Disaster Risk Management and Governance**

- Expected Outcome:

- **Comparison of measures and technologies to enhance the response capacity** to extreme weather and geological events (including local measures and warning systems) affecting the security of people and assets.
 - **Adjustments of warning and response systems in the light of cross-disciplinary cooperation**, involving planning authorities and first responders, to better manage the rapid deployment of first responders and communication to citizens in vulnerable areas in the case of extreme climate events or geological disasters.
 - **Timely operational forecasts** of severe (short-term focus) extreme weather events (e.g. floods, hot waves, storms, storm surges) or geological hazards (e.g. volcanic eruption, earthquake, tsunami) to aid planning authorities, civil protection agencies and first responders in their decision-making.
 - **European-scale multi-hazard platform** to facilitate the identification of expected natural hazards with great specificity in time and space and improve science communication for boosting interactions between scientists, general media and the public.
 - **Methodologies to integrate innovative state-of-the art early warning systems into existing tools for decision-making** and situation reporting already used by civil protection authorities from international to local level.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of representatives of scientific areas that are relevant for this topic as well as practitioners (first and second responder) and representatives of local or regional management authorities, from at least 3 different EU Member States or Associated countries. TRL 6-8 expected.

HORIZON-CL3-2022-DRS-01-06

Improved disaster risk pricing assessment (IA)

- **Area: Improved Disaster Risk Management and Governance**
- Expected Outcome:
 - Contribute to the **public accessibility of fiscal data and information related to disaster risks, and available risk transfer mechanisms such as insurance** in an easily available and understandable way.
 - **EU-wide or international standard or guidance** on how to monetise and account intangible values from Climate Adaptation and Disaster Risk Reduction measures
 - **Innovative financial instruments and IT-solutions to reduce transaction costs for disaster risk finance and insurance products** (e.g. earth observation data, artificial intelligence, financial technologies)
 - **Research and testing of novel European, cross-border, national and regional disaster risk financing frameworks.** This needs to involve a wide range of stakeholders (e.g. disaster risk management, finance, communication) from public and private sectors.
 - **Risk model development** for future natural catastrophe events, development of European stress-testing scenarios including vulnerable hotspots and uninsurable risks.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 2 representatives of the financial sector and of insurance companies, from at least 2 different EU Member States or Associated countries. TRL 5-6 expected

HORIZON-CL3-2022-DRS-01-07

Improved international cooperation addressing first responder capability gaps (RIA)

- **Area: Strengthened capacities of first and second responders**
- Expected Outcome:
 - **Improved real-time detection**, tracking and analysis of different situations, incidents and risks (including the location and well-being of first responders)
 - **More targeted actionable intelligence and more efficient command operations** due to the fast analysis of different information sources
 - **Enhanced European and global interoperability** for different types of first responders (e.g. firefighters, medical responders, police, civil protection)
 - **Availability of first responder solutions that are oriented on internationally defined requirements and recognised practices**, and thus can be used with different national systems and equipment
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 3 first responder's organisations or agencies from at least 3 different EU Member States or Associated countries.

HORIZON-CL3-2022-DRS-01-08

Enhanced situational awareness and preparedness of first responders and improved capacities to minimise time-to-react in urban areas in the case of CBRN-E-related events (IA)

- **Area: Strengthened capacities of first and second responders**
- Expected Outcome:
 - **Development of tools and technologies**, including novel multiplatform CBRN-E systems, to enhance situational awareness **to prepare for and rapidly react to CBRN-E events** both for responders on the ground as well as for dispatch and crisis centres, especially in urban areas.
 - **Support of first responders' situational awareness** via high level processing solution, e.g. based on dispersion modelling or threat recognition / prediction solution using sensor data fusion and algorithms that combine heterogeneous sensor data in order to reduce the likelihood of false alarms and contribute to an improved decision-making process for the responders.
 - **Development of fast, reliable and portable devices for responders to perform an in-situ provisional identification of CBRN-E suspicious samples**, enabling to decide which personal protective equipment (PPE) is required for first responders, including smart wearable equipment.
 - **Solutions integrating different commercial and experimental sensors/platforms**, which should improve the state-of-the-art products in terms of communication (e.g. by using novel and open communication protocols, pre-processing of data), power consumption (e.g. by offering supplemental power source to the existing sensors), interfacing capability (e.g. by proposing an open interface specification). The proposals should also cover the system transportability, online capability and continuous operation issues.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 3 first responder's organisations or agencies from at least 3 different EU Member States or Associated countries. Galileo/EGNOS (other data and services may additionally be used) and Copernicus for earth observation encouraged. TRL 6-8 expected.

HORIZON-CL3-2022-DRS-01-09

Enhanced capacities of first responders more efficient rescue operations, including decontamination of infrastructures in the case of a CBRN-E event (IA)

- **Area: Strengthened capacities of first and second responders**

- Expected Outcome:

- **Analysis on if and how the specific requirements of operating under CBRN-E conditions** can be taken into consideration also for teams/capacities that are traditionally not operating under CBRN-E conditions (e. g. search and rescue, medical care, shelter, firefighting, flood rescue, etc.).
 - **Development of innovative technologies and/or operating procedures for emergency management units that might need to work under CBRN-E** (Chemical, biological, radiological, nuclear and explosives) conditions such as search and rescue (including victim triage procedures), medical care, shelter, firefighting, flood rescue, etc.
 - **Develop innovative technology and procedures for mass decontamination** but also for the decontamination of inanimate material (infrastructure, buildings, vehicles, equipment), including identifying standards for determining something as “decontaminated” in close collaboration with Topic CL3-2021-DRS-01-05.
- Total indicative budget: 5 M€ - This topic requires the active involvement, as beneficiaries, of at least 3 first responder’s organisations or agencies from at least 3 different EU Member States or Associated countries. Galileo/EGNOS (other data and services may additionally be used) and Copernicus for earth observation encouraged. TRL 6-8 expected.



HORIZON EUROPE

THE EU
RESEARCH & INNOVATION
PROGRAMME

2021 – 2027

**Strengthened
Security R&I
SSRI**



SSRI Destination

Stronger pillars of security Research and Innovation

- A more effective and efficient **evidence-based** development of EU civil security capabilities built on a stronger, more **systematic** and **analysis-intensive** security R&I cycle

Increased Innovation uptake of security R&I outcomes

- **Increased industrialisation, commercialisation, adoption and deployment** of successful outcomes of security research reinforces the competitiveness and resilience of EU security technology and industrial base

Cross-cutting knowledge for common security solutions

- **R&I-enabled knowledge and value in cross-cutting matters** reduces sector specific bias and breaks thematic silos that impede the proliferation of common security solutions

2022-SSRI-01-01: Increased foresight capacity for security

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
HORIZON-CL3-2022-SSRI-01-01	CSA	1.50	Around 1.50	1

Expected Outcome

- An increased knowledge base on technology foresight that supports the consolidation of a forward-looking culture in the planning and use of resources in the area of security.
- Anticipatory steering of the foreseeable evolution of security-relevant technologies and of the challenges and opportunities brought by such evolution on the industrialisation and use of future security technologies facilitated by a common foresight framework for EU civil security.
- An evidence-based identification, prioritisation and programming of security R&I and capacity building investment sustained on an anticipated and consolidated view of how future technology, research and industrial trends impact, influence and shape future threats and security capabilities.
- A recognised EU-wide definition of critical technological building blocks and components for the development of future high-priority capabilities.

2022-SSRI-01-02: Knowledge Networks for security Research & Innovation

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
HORIZON-CL3-2022-SSRI-01-02	CSA	4,00	Around 2,00	2

Expected Outcome

- Enhanced analytical capacity to support the programming of EU-funded security research and capacity building funds through a periodic and timely evidence-based policy feedback.
- Periodic aggregated and consolidated view of the capability needs and gaps, the technological landscape and R&I landscape, including trends and best practices.
- More systematic assessment, validation and exploitation of security R&I outcomes.
- Identification of areas requiring standardisation and/ or certification, as well as training.
- Enhanced cooperation among security ecosystem stakeholders (policy makers, security practitioner, industry, researchers and citizens).

2022-SSRI-01-03: Stronger grounds for PCP of innovative security technologies

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
HORIZON-CL3-2022-SSRI-01-03	CSA	4,00	Around 2,00	2

Expected Outcome

- The formation of Consolidated demand for innovative security technologies built on the aggregation of public buyers with a common need expressed;
- Better understanding of the potential EU-based supply of technical alternatives to better informed decision-making related to investment in innovative security technologies;
- Better informed decision-making related to investment in innovative security technologies based on an improved visibility of the potential demand in the EU market for common security technologies;
- Increased capacity of EU public procurers to align requirements with industry and future products and to attract innovation and innovators from security and other sectors through common validation strategies, rapid innovation, experimentation and pre-commercial procurement and
- Increased innovation capacity of EU public procurers through the availability of innovative tendering guidance, commonly agreed validation strategies and evidence-based prospects of further joint procurement of common security solutions.

2022-SSRI-01-04: Social innovations as enablers of security solutions and increased security perception

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
HORIZON-CL3-2022-SSRI-01-04	RIA	4,00	Around 2,00	2

Expected Outcome

- Increased understanding of the capabilities and capacities of local communities and citizens to contribute to developing security solutions;
- Increased orientation of security solution development towards socially innovative and Responsible Research and Innovation approaches and Increased collaboration across all parts of the quadruple helix to develop innovations in line with the needs, values and expectations of society;
- Innovative, transferable and potentially scalable technological solutions co-created with citizens and local communities and Societal trust in security research products, their desired usefulness and social acceptability.
- New benchmarks, standards or other quality criteria for developing security solutions through Responsible Research and Innovation;

Thank you for your attention.



© European Union 2022

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.