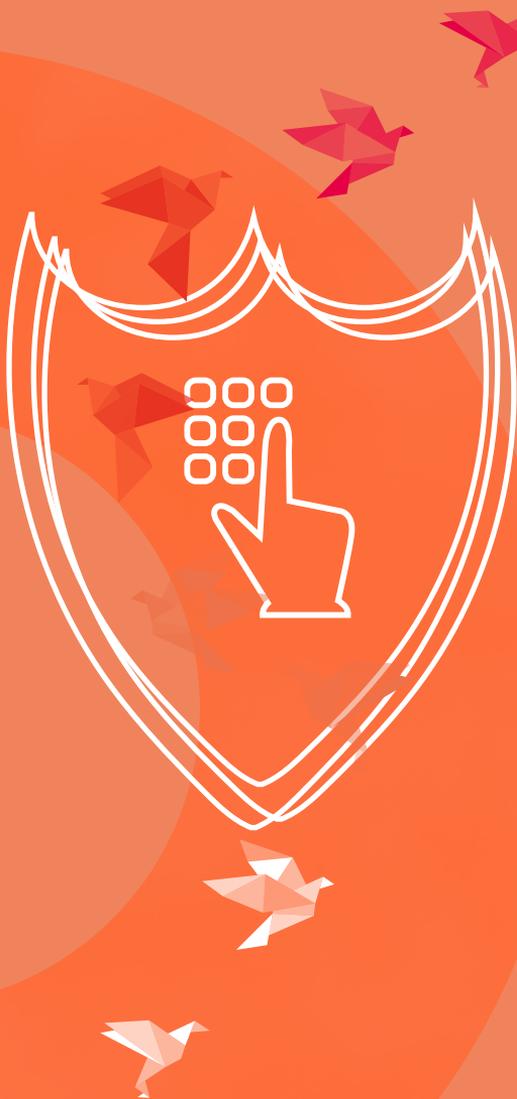




European  
Commission



# SECURITY RESEARCH AND INNOVATION

Boosting  
effectiveness  
of the Security  
Union



## SECURITY RESEARCH AND INNOVATION - Boosting effectiveness of the Security Union

European Commission  
Directorate-General for Research and Innovation  
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## FOREWORD



*Carlos Moedas*



*Julian King*

Security and the economy are top concerns for Europeans. The security research funded by the European Union under Horizon 2020 brings both improved security and better industrial performance. Focused research enhances security by developing technologies and tools that meet the real needs of those on the front line of dealing with threats such as terrorism, cybercrime, weapons and human trafficking, as well as natural disasters. Security research is helping European industry stand its ground against strong competition from the United States and Asia. More, however, needs to be done in this area and the European Commission is working to promote better take-up by industry of research results.

There is clear added value offered by EU funding in this area. Only a few Member States fund their own national security research programme and most rely on the European Union for their needs in this area. Moreover, the cross-border collabora-

tion inherent in EU funding prevents fragmented approaches and differing standards of knowledge and capacity within different Member States – this is a vital concern when dealing with issues such as terrorism, border security and cybercrime.

The Focus Area ‘Boosting the effectiveness of the Security Union’ is the Commission’s response to ensuring Horizon 2020 funding delivers maximum impact when it comes to strengthening security in the EU. By making the different relevant parts of the programme for the period 2018 to 2020 more visible, we aim to improve the quality of project proposals and increase the impact of funded projects.

***Carlos Moedas,***

*Commissioner for Research, Science and Innovation*

***Julian King,***

*Commissioner for Security Union*

# INTRODUCTION

## WHAT IT TAKES FOR A SECURE, RESILIENT EUROPE...

**T**hrough Horizon 2020, the EU has budgeted just over EUR 1 billion between 2018 and 2020 on research and innovation to boost the effectiveness of the EU's Security Union. This builds on research spending in previous years, including on civil security. Some results of past years' projects are presented in this booklet.

The EU is working on many fronts to improve security for Europeans. This includes adopting new laws (in areas ranging from firearms to terrorist financing), upgrading EU external border security, and improving operational cooperation in areas such as information exchange with other entities. These actions taken together are designed to create a Security Union.

Horizon 2020 funds research throughout the innovation cycle, from curiosity-driven investigations to close-to-market innovation. It ensures that Europe produces world-class science and technology, removes barriers to innovation and makes it easier for public and private sectors to work together in delivering solutions to challenges facing our society. Improving security is also about ensuring that new technologies like the Internet of Things are developed in a way that prevents new security risks from emerging.

While people living in Europe have a very high level of security compared to elsewhere in the world, threats evolve constantly, and security and resilience are constantly being challenged.

Protecting Europeans by meeting future security threats and safeguarding their freedom is one of the priorities under Horizon 2020, the EU's research and innovation funding programme. Funded projects help to keep the EU's borders secure, build resilience against disasters (both natural and man-made), fight crime (including cybercrime), and prevent and deal with terrorism.

**Within this Focus Area, Horizon 2020 funding is designed to deliver:**

- ▶ better-protected key infrastructure against natural and man-made threats, including cyberattacks
- ▶ efficient responses to and recovery from natural and man-made disasters
- ▶ improved prevention, investigation and prosecution of crime, including organised crime and terrorism
- ▶ better-secured borders against undesirable people or goods entering the EU
- ▶ effective security and privacy in the digital realm

- ▶ the ability to harness space-related research to support security
- ▶ better understanding of relevant societal contexts and dynamics for insightful policymaking.

Research and innovation is needed to develop new technologies and ways of working that can make practitioners more effective: those who are directly called upon to respond to security challenges, as well as those working on prevention.

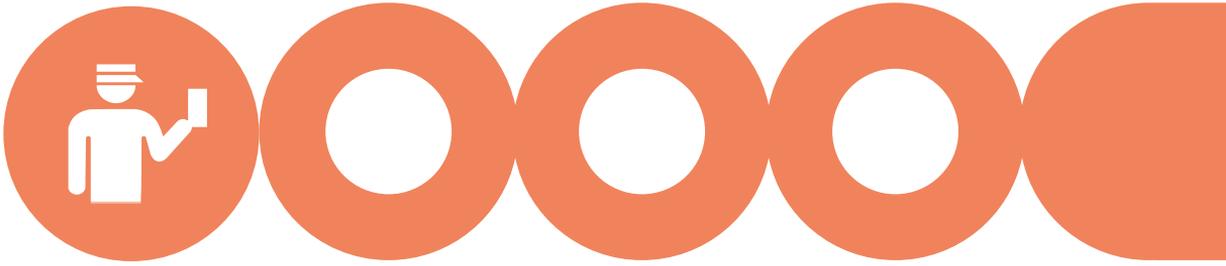
This means research needs to involve those on the front lines – police, firefighters, ambulance staff, border and coast guards – as well as social workers, educators, municipalities and those operating airports, energy grids and other key infrastructure.

The EU is also helping to bridge the gap from research to market for new security technologies by making sure potentially promising R&D is explored to the fullest. Horizon 2020 funds innovative procurement, as well as networks, to bring together practitioners and the research to tackle this challenge.

Research and innovation is also needed to better understand societal developments and individual life styles that lead to insecurity. The results of such research can help us design better policies at all levels of government, from the local town council to the EU.

The EU security industry turns over close to EUR 200 billion and creates employment for 4.7 million people (2015 figures). It is a sector with significant potential for growth and job creation. The projects presented on the following pages are just some examples of how EU spending is making Europe more secure, resilient and well placed to capitalise on technological advances and market developments.

This focus area builds on the results of previously funded projects, including those mentioned in this booklet.



The EU's Schengen Area works on a system of common rules to control its external borders, prevent threats to security and better manage immigration. But a series of crises beyond Europe's southern and eastern borders have created a surge in undocumented migration, which is putting added pressure on the EU's already overstretched external borders and systems. At the same time, globalisation continues to spur cross-border crime – including counterfeit goods, trafficking in drugs, arms and people, supply chain theft and growing levels of customs fraud. Organised criminals exploit new and emerging vulnerabilities in the system, including those introduced through new digital and transport technologies.

Staying ahead of these threats requires new capabilities. Advanced IT systems are needed to exchange data and issue alerts between border authorities in different EU countries, and to analyse that data. Integrated surveillance-and-communications systems need to link information from satellites, vessels and ground relay stations.

Equipment must provide end-to-end security for Europe's supply chains against theft, tampering and vandalism, for example. And these technologies and systems must take care not to disrupt legitimate flows of people and goods entering and exiting the EU. This is why national border and customs authorities take part in consortia carrying out related research projects.

These projects bring partners together from industry, transport and customs authorities, as well as academia, to develop innovative,

cost-effective and efficient solutions that minimise disruption to regular border flows.

*“Technologies and systems must take care not to disrupt legitimate flows of people and goods entering and exiting the EU.”*

## Budget

Research targeting border security has been allocated some EUR 125 million within this 'Security research in support of border control' Focus Area in Horizon 2020.

# SECURITY RESEARCH IN SUPPORT OF BORDER CONTROL



## XP-DITE

XP-DITE has developed a passenger-centred, system-level approach to evaluating, designing, tailoring and testing airport security checkpoints, taking into account throughput, performance, passenger satisfaction, comfort, cost and EU regulations. It also built a prototype threat-detection platform for new and current checkpoints. XP-DITE's tools were trialled in the world's first airport checkpoint combining EU and US requirements. Its findings can benefit regulators, airport operators, airlines equipment manufacturers and the travelling public.

**WEB:** [www.xp-dite.eu](http://www.xp-dite.eu)

**COORDINATOR:** Netherlands Organisation for Applied Scientific Research, Netherlands

**TOTAL COST:** EUR 14 600 000

**EC CONTRIBUTION:** EUR 10 000 000

**START/END:** September 2012 to March 2017

**OTHER COUNTRIES:** Switzerland, Germany, France, Ireland, Sweden, United Kingdom

## CLOSEYE

CLOSEYE brought together civil and military authorities in Spain, Portugal and Italy to test maritime border-surveillance capabilities, including a combination of tools for small-vessel detection and tactical data exchange to boost awareness and responses to cross-border crime, irregular migration and drownings at sea. The validated results are feeding into EUROSUR Fusion Services, managed by the European Border and Coast Guard (Frontex) Agency, and have been taken up by Guardia Civil for use at the Spanish national control centre.

**WEB:** [www.closeye.eu](http://www.closeye.eu)

**COORDINATOR:** Ministerio del Interior, Spain

**TOTAL COST:** EUR 12 250 000

**EC CONTRIBUTION:** EUR 9 250 000

**START/END:** April 2013 to February 2017

**OTHER COUNTRIES:** Italy, Portugal



Security research can foster new technologies and capabilities to tackle crime, including illegal trafficking in people and goods, as well as terrorist threats. It is also about developing insights that keep decision-makers well informed. Research is needed to keep pace with fast-moving developments in the realm of cybercrime, and to enable law enforcement to take advantage of new technologies.

Particular challenges to Europe's security include increasingly diverse and international organised crime, as well as cyberattacks on critical infrastructure and networks vital to Europe's safety and economic well-being. Other areas of potential research include risk-based screening at border crossings, data fusion for maritime security applications, urban security, food safety threats, and security during large gatherings.

Looking further, threats emanating from chemical, biological, radiological, nuclear and explosive materials are also on the agenda. Countering these so-called mass-effect risks is a high priority for all Member States and calls for advanced

solutions to improve detection, preparedness and prevention measures. At the same time, the EU recognises that security can only be strengthened whilst fully respecting fundamental rights, including the right to privacy and personal data protection.

Close partnerships between security practitioners, civil society, industry and the research community is required – groupings for which security research projects are ideally suited.

*“Countering these so-called ‘mass-effect’ risks is a high priority for all Member States and calls for advanced solutions.”*

## Budget

Research targeting crime and terrorism threats has been allocated some EUR 135 million within this ‘Countering terrorism and crime’ Focus Area of Horizon 2020 .

# COUNTERING CRIME AND TERRORISM



## ASGARD

ASGARD concentrates on helping police and other law-enforcement authorities (LEAs) co-create, maintain and develop a set of top-class tools that are easy to configure and use for analysing, extracting and exchanging 'big data', with forensics and foresight actions as a key focus. Frequent 'hackathons' and close contact between the 33 partners from 14 countries are driving this active and sustainable community of practitioners. After each hackathon, LEAs can deploy and evaluate the tools on-site and feed this field data back into the project for the whole ASGARD benefit of the community.

**WEB:** [www.asgard-project.eu](http://www.asgard-project.eu)

**COORDINATOR:** Fundacion centro de tecnologias de interaccion visual y comunicaciones vicomtech, Spain

**TOTAL COST:** EUR 12 000 000

**EC CONTRIBUTION:** EUR 12 000 000

**START/END:** September 2016 to February 2020

**OTHER COUNTRIES:** Austria, Belgium, Cyprus, Germany, Finland, France, Greece, Ireland, Italy, Portugal, Netherlands, United Kingdom



## DANTE

DANTE uses automated data mining and analytics in an integrated system to detect, retrieve and process huge amounts of heterogeneous and complex (multimedia and multi-language) terrorist-related content from the internet, including so-called deep and dark nets built to hide identities and activities. Focusing on online fundraising activities, but also considering propaganda, training, disinformation, violent radicalisation and cybercrime, the project strives to help law enforcement 'connect the dots', joining potential terrorist-related activities, people, content and places across Europe and beyond.

**WEB:** [www.h2020-dante.eu](http://www.h2020-dante.eu)

**COORDINATOR:** Ingegneria informatica SPA, Italy

**TOTAL COST:** EUR 6 200 000

**EC CONTRIBUTION:** EUR 5 000 000

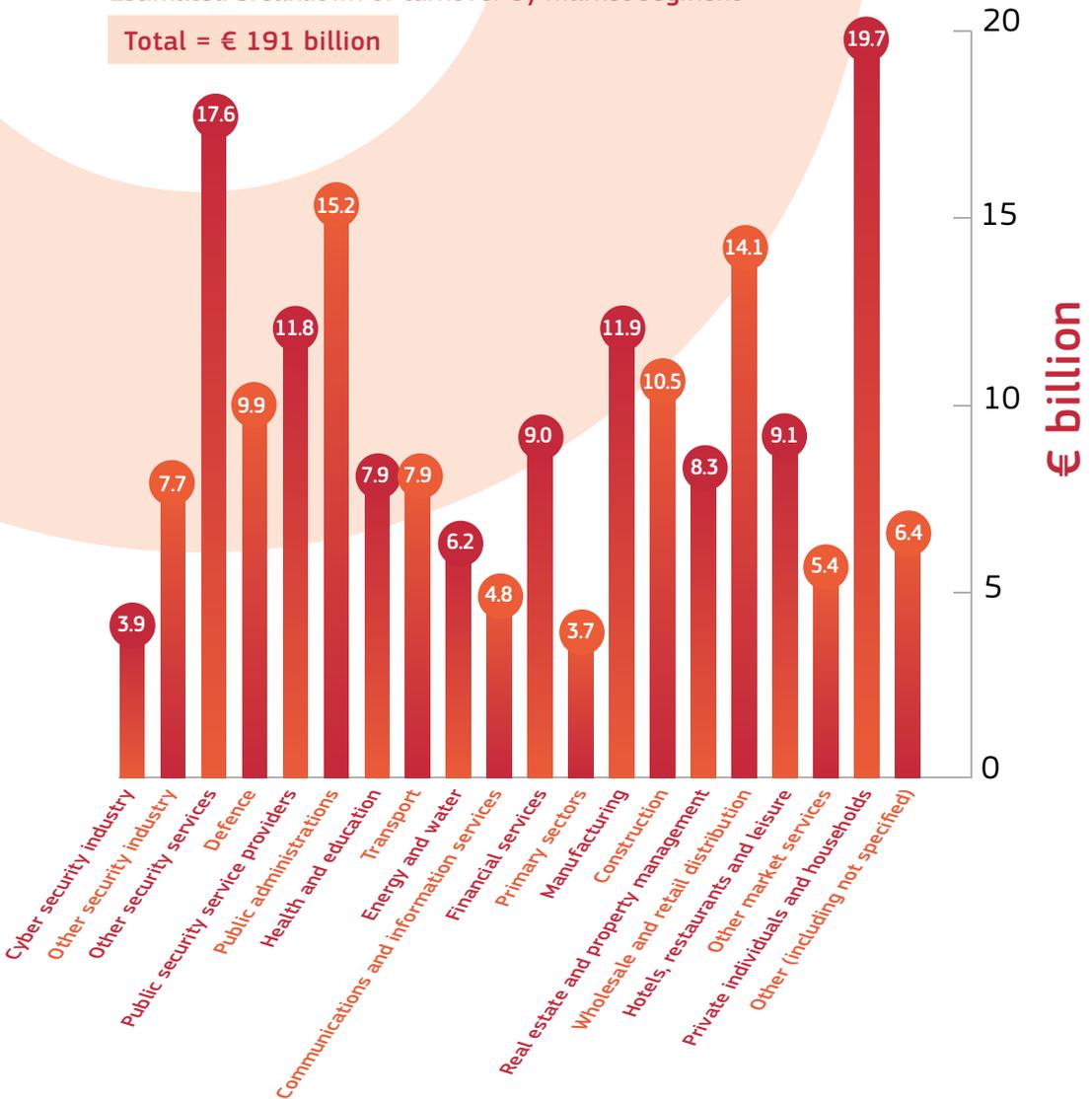
**START/END:** September 2016 to February 2019

**OTHER COUNTRIES:** Austria, Belgium, Germany, Spain, France, Greece, Ireland, Portugal, United Kingdom

# EU SECURITY MARKET: A BOOMING BUSINESS

Estimated breakdown of turnover by market segment

Total = € 191 billion



# TECHNOLOGY TO KEEP EUROPEANS SAFE

## Schengen Information System (SIS)

Centralised information sharing system for EU border management and security among 22 EU Schengen members + Switzerland, Norway, Iceland & Liechtenstein.

**70 million**  
alerts as of Dec. 2016

**4 billion**  
times consulted in 2016



## Visa Information Service (VIS)

Connects consulates in non-EU countries and all external border crossing points of 22 EU Schengen members + Switzerland, Norway, Iceland & Liechtenstein

**23 million**  
visa applications

**19 million**  
fingerprints



## EURODAC

Fingerprint database for third-country nationals applying for asylum in the EU.

**28 EU member states**  
+ Switzerland, Norway, Iceland & Liechtenstein.

## ECRIS

Allows 28 EU countries to exchange information on criminal convictions in the EU.

**2 million**  
messages exchanged in 2016

## New EU information systems in the works

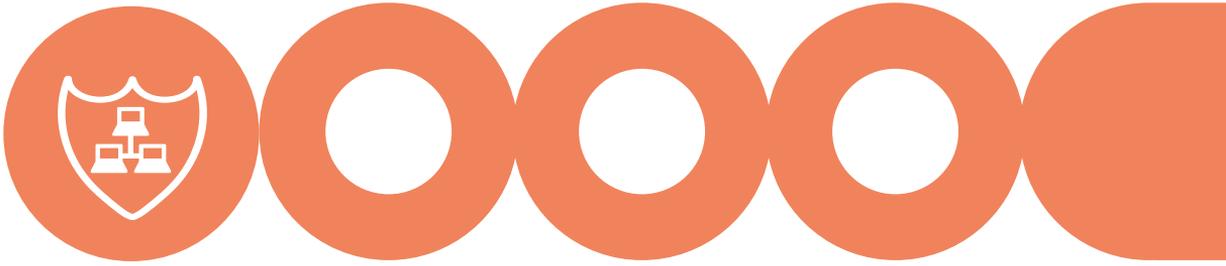
These systems are expected to be operational by 2020.

### Entry/Exit System (EES)

Records non-EU nationals when they cross external EU borders

### European Travel Information and Authorisation System (ETIAS)

Pre-travel security and irregular migration screening of visa-exempt non-EU nationals.



In line with the EU's policies on strengthening cyber resilience and fostering the cybersecurity industry, research aims at addressing the main challenges of digital security, while building trust and security is at the heart of Digital Single Market strategy.

Engaging with stakeholders is a key component of research in this area. A cybersecurity public-private partnership, established in 2016, provides a channel for introducing the needs of end-users (e.g. energy, transport, health, finance) into new cybersecurity solutions being developed.

Research activities include assuring security and privacy in the design and management of networks, and achieving a high degree of trust in EU digital networks, products and services. Specific topics are complemented by multidisciplinary research on long-term and non-technical challenges, such as economics and law, as well as political science and international relations.

Priorities for research in this Focus Area include raising cybersecurity capabilities in all EU countries to ensure that exchanges of information and cooperation are efficient and compatible, and actions aimed at making the EU a cybersecurity leader. Innovation in this field helps businesses gain a competitive advantage while access to the latest digital security technology benefits everyone.

*“Innovation in this field helps businesses gain a competitive advantage while access to the latest digital security technology benefits everyone.”*

To achieve this, steps need to be taken to mainstream cybersecurity into other EU policies and initiatives, especially regarding new technologies and emerging sectors such as connected cars, smart grids and the Internet of Things.

## Budget

Research targeting digital security research has been allocated some EUR 346 million within this 'Research that fosters digital security' Focus Area of Horizon 2020.

# RESEARCH THAT FOSTERS DIGITAL SECURITY



## SECURED

SECURED has a track record developing network security solutions to protect mobile devices in a constantly changing landscape. Some three-quarters of mobile apps would fail basic security tests today. Gaps and flaws in operating systems, configuration issues and bugs in public networks have also been identified as problems. Consumers have to buy heavy, often expensive add-ons of varying quality to protect their sensitive data and devices from attack. SECURED is designing a programmable 'home gateway' which acts as a reliable all-in-one protective shield at the edge of the network.

**WEB:** [www.secured-fp7.eu](http://www.secured-fp7.eu)

**COORDINATOR:** Politecnico di Torino, Italy

**TOTAL COST:** EUR 4 150 000

**EC CONTRIBUTION:** EUR 2 700 000

**START/END:** October 2013 to September 2016

**OTHER COUNTRIES:** Cyprus, Spain, Finland, United Kingdom



## ASPIRE

ASPIRE has developed innovative, programmable, royalty-free middleware for RFIDs, a form of radio-transmitted identification device that helps monitor and manage items securely. The project's platform significantly lowers the entry cost of deploying RFID, which means SMEs can afford to use them, especially for 'sensing' physical properties (quantities, temperature, humidity, pressure, acceleration) and in mobile environments. This paves the way for new applications and business cases, including security measures, better supply chain tracking and as a tool for monitoring customs and trade.

**WEB:** [www.fp7-aspire.eu](http://www.fp7-aspire.eu)

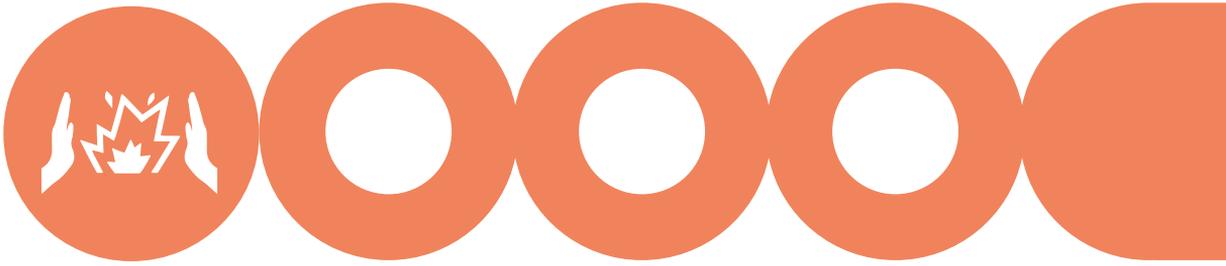
**COORDINATOR:** Aalborg Universitet, Denmark

**TOTAL COST:** EUR 6 000 000

**EC CONTRIBUTION:** EUR 4 500 000

**START/END:** January 2008 to November 2011

**OTHER COUNTRIES:** Belgium, Switzerland, France, Greece, Portugal, United Kingdom



The management of crises, whether natural disasters such as earthquakes, wildfires and flooding, or man-made tragedies like industrial accidents and terrorist attacks, has become a far more complex challenge for civil security stakeholders. The approach encompasses more than responding to an incident, saving lives and managing the clean-up.

More proactive capability development, risk assessment, prevention and mitigation, resilience-building and post-disaster recovery measures are required. Citizens expect to be better informed and more engaged before, during and after incidents. Social media is increasingly employed for these needs.

Mission-driven research can help draw up operational principles to be used across different types of incident and in an interoperable way between various services and EU countries. Combined with better technologies and innovative solutions, this boosts overall situation awareness among the ‘communities of users’ dealing with often fast-changing and mobile crises.

Innovative research involving public, private and academic partners helps European industry stay competitive and gain leadership in emerging technologies and fields.

EU-supported research backs internal and external security goals. It can also help to identify ways of dealing with specific issues, such as the release of chemical, biological, radioactive and nuclear materials, which invariably has international implications. Research also supports the EU’s Common Security and Defence Policy by enabling the EU to work better with partner countries when responding to crises and disasters beyond our borders.

*“More proactive capability development, risk assessment, prevention and mitigation, resilience-building and post-disaster recovery measures are required.”*

## Budget

Research targeting crisis management and disaster response has been allocated some EUR 130 million within this Research to strengthen crisis management and disaster response, Focus Area of Horizon 2020.

# RESEARCH TO STRENGTHEN CRISIS MANAGEMENT AND DISASTER RESPONSE



## EDEN

EDEN developed a 'system-of-systems', including tools and procedures, for dealing with the deliberate release of chemical, biological, radiological, nuclear or explosive (CBRNE) materials. A 'resilient response' calls for trained teams with access to the right tools, including protective equipment, and the ability to employ them in diverse situations (i.e. detection, decontamination, medical care, command and control, etc.). EDEN developed over 60 prototype security solutions, including hazard and population-response models and remote-detection tools, many of which are being marketed.

**WEB:** [www.eden-security-fp7.eu](http://www.eden-security-fp7.eu)

**COORDINATOR:** BAE Systems (Operations) Limited, United Kingdom

**TOTAL COST:** EUR 35 800 000

**EC CONTRIBUTION:** EUR 2 480 000

**START/END:** September 2013 to December 2016

**OTHER COUNTRIES:** Belgium, Germany, Estonia, Spain, Switzerland, Israel, Finland, France, Italy, Netherlands, Norway, Poland, Romania, Sweden

## WATERWORLDS

WATERWORLDS studied local responses to water-related environmental disasters, including the impact of melting ice sheets, rising seas and accelerating desertification of parts of Africa. The work fed into a renewed theory of resilience that builds on the realities of social life in different contexts and locations. By analysing social resilience in different parts of the world and linking it to climate change adaptation strategies on the ground, this project makes a contribution to future disaster resilience.

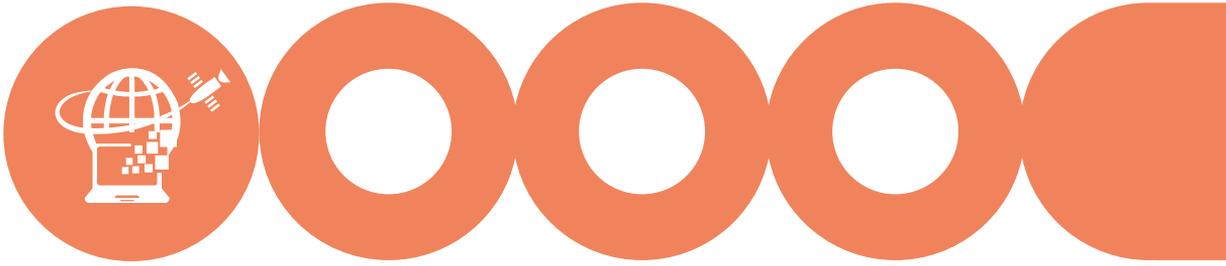
**COORDINATOR:** Københavns Universitet, Denmark

**TOTAL COST:** EUR 3 000 000

**EC CONTRIBUTION:** EUR 3 000 000

**START/END:** January 2009 to June 2014

**OTHER COUNTRIES:** NA



Satellite-based services are crucial to a modern society that has come to rely on them for navigation, ubiquitous communication and an array of services, from tracking and monitoring goods to weather forecasting, Earth observation and security.

The critical space and ground infrastructure that makes all this possible needs to be protected from threats, some of which originate in space. The contribution of space research to the Security Union addresses two main objectives.

The first is geared towards building and enhancing a European network for Space Surveillance and Tracking (SST) capabilities. Its task is to monitor objects orbiting Earth – satellites and space debris, including rocket stages, fragments from in-space collisions and other hazards – and issue early warnings when this debris threatens to enter Earth’s atmosphere. Users include spacecraft owners and operators, government entities and civil protection authorities.

The second objective is to develop the capability to monitor and forecast space weather events which could disrupt normal operations of satellites and ground systems, such as navigation, telecom networks and electricity grids.

*“Critical space and ground infrastructure ... needs to be protected from threats, some of which originate in space.”*

Europe has invested in its Global Navigation Satellite System (EGNSS) and related programmes like Galileo, EGNOS (a geostationary overlay system), and Copernicus (space infrastructure), which together provide highly accurate navigation services and satellite support for a

vast number of economic, humanitarian and social applications. Indeed, these are the focus of initial SST services, which in turn, nurture a wider ecosystem of innovative European businesses and technologies.

## Budget

Research targeting space and the Security Union has been allocated some EUR 90 million within this ‘Space in support of the Security’ Union Focus Area of of Horizon 2020 .

# SPACE RESEARCH IN SUPPORT OF THE SECURITY UNION



## HELIOS

HELIOS is developing second-generation beacon technologies for Galileo, EGNOS and EGNSS search and rescue (SAR) applications on land, at sea and in the air. Included in this are 'emergency position-indicating radio beacons' (EPIRBs) for marine use, emergency locator transmitters for aviation, and personal locator beacons. Innovative capabilities, such as faster alert detection, pinpoint location positioning, and remote acknowledgement and activation of distress-beacon signals – thanks to Galileo's 'return link service' feature – will help SAR operations save many more lives.

**WEB:** <http://helios-gsa-project.eu>

**COORDINATOR:** Orolia, France

**TOTAL COST:** EUR 4 900 000

**EC CONTRIBUTION:** EUR 3 500 000

**START/END:** March 2016 to April 2019

**OTHER COUNTRIES:** Belgium, Germany



## SAT406M

SAT406M is developing a sophisticated yet affordable personal-location beacon for marine emergency situations. The design and development of a wearable technology can improve the mobility and safety of seafarers, whether for leisure or professional reasons. Designs of the wrist-borne beacon include innovative signal-modulation techniques, as well as sensors to monitor the wearer's physiological characteristics (body temperature, heart rate, etc.). This helps search – and – rescue services respond better to critical and fast-changing emergencies, which translates into more lives saved.

**WEB:** [www.sat406.com](http://www.sat406.com)

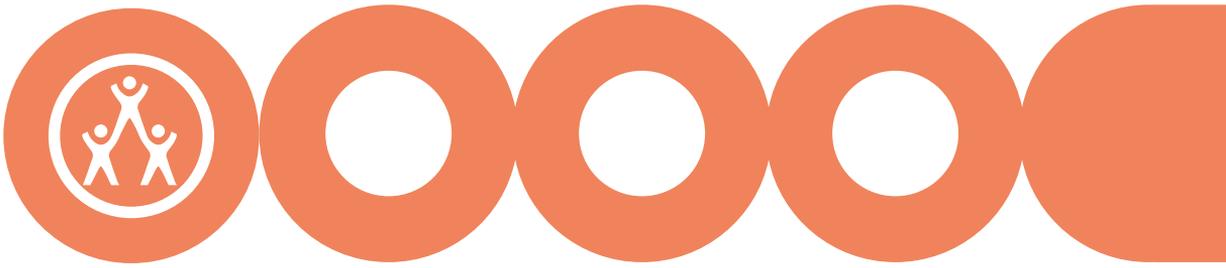
**COORDINATOR:** Mobit Telecom Limited, Israel

**TOTAL COST:** EUR 1 450 000

**EC CONTRIBUTION:** EUR 1 000 000

**START/END:** February 2015 to January 2018

**OTHER COUNTRIES:** Spain, France



Supporting inclusive, innovative and reflective societies is a prerequisite for sustainable European integration and social cohesion. It also shapes how Europe interacts on the international stage and is reflected in its commitment to tackling global challenges such as poverty, climate change, natural disasters and security threats, including terrorism.

Societal polarisation, socio-economic and cultural exclusion, and marginalisation can provide a breeding ground for disenchantment and alienation.

In turn, this may make certain groups, in particular young people, more susceptible to radical ideologies and even turn to violent extremism.

Research to better understand the dynamics of social inclusion and promote ways to counter marginalisation are therefore paramount in supporting the fight against radicalisation, and in securing safe and resilient societies both in Europe and outside the EU's borders. Special consideration is given to

research and cooperation with strategic partner countries and regions.

Research explores ways to foster inclusive and sustainable long-term growth, helping regions reduce poverty and conflicts that lead to large migration flows, which may further exacerbate security threats. Studies also inspire new ideas, strategies and governance structures for helping Europe deal better with the different types of security concerns that emerge, including the protection of vulnerable migrants such as women and unaccompanied minors.

*“Studies also inspire new ideas, strategies and governance structures for helping Europe deal better with different types of crises.”*

## Budget

Research targeting inclusive societies has been allocated some EUR 30 million in this ‘Research to support inclusive societies’ Focus Area of Horizon 2020.

# RESEARCH TO SUPPORT INCLUSIVE SOCIETIES



## MYPLACE

MYPLACE provided insights and case studies to help explain the context, culture and potential causes of politically disengaged youth. Surveys of young Europeans revealed a trust deficit in the political establishment causing lower engagement among this group and making it more susceptible to radical and populist agendas. The researchers advocate more attention should be paid to important youth-related issues, such as dropping out of school, high unemployment and low job security, and to general societal challenges.

**WEB:** <https://myplaceresearch.wordpress.com/about>

**COORDINATOR:** University of Manchester, UK

**TOTAL COST:** EUR 10 000 000

**EC CONTRIBUTION:** EUR 8 000 000

**START/END:** June 2011 to September 2015

**OTHER COUNTRIES:** Estonia, Slovakia, Germany, Finland, Denmark, Portugal, Russia, Latvia, Georgia, Croatia, Spain, Hungary, Greece

## ANTICORRP

ANTICORRP conducted a worldwide study to better understand corruption and develop effective policies, practices and tools to tackle it. The project brought together 20 research teams in 15 countries from a range of disciplines – anthropology, criminology, economics, gender studies, history, law, political science, public policy and public administration. It identified global trends and revealed what anti-corruption policies are most successful, and in which context. The project conducted a ground-breaking survey (85 000 sample) on the quality of government in all EU Member States.

**WEB:** <http://anticorrrp.eu>

**COORDINATOR:** Goeteborgs Universitet, Sweden

**TOTAL COST:** EUR 10 550 000

**EC CONTRIBUTION:** EUR 8 000 000

**START/END:** March 2012 to February 2015

**OTHER COUNTRIES:** Germany, Italy, United Kingdom, Greece, Netherlands, Belgium, Italy, Bulgaria, Switzerland, Hungary, Romania, Latvia, Turkey, Slovakia, Croatia, Kosovo

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Security and the economy are top concerns for Europeans. Security research and innovation funded by the European Union under Horizon 2020 - the European Union's research and innovation funding programme, brings both improved security and better industrial performance. Focused research enhances security by developing technologies and tools that meet the real needs of those on the front line dealing with threats such as terrorism, cybercrime, weapons and human trafficking, as well as natural disasters. Research and innovation is helping European industry stand its ground against strong competition from the United States and Asia. For this reason over €1 billion will be invested in the focus area 'Boosting the effectiveness of the Security Union' from the final Work Programme (2018 - 2020) of Horizon 2020.

*Research and Innovation policy*

