
Sessió informativa sobre el clúster 3: Seguretat civil de les societats

Oportunitats de recerca col·laborativa a Horizon Europe

Núria Claver

Cap de la Oficina de Projectes Internacionals (OPI)

01

Resultats UAB al H2020

Resultats UAB al Horizon Europe



81

Milions d'euros

183

projectes signats

7^a

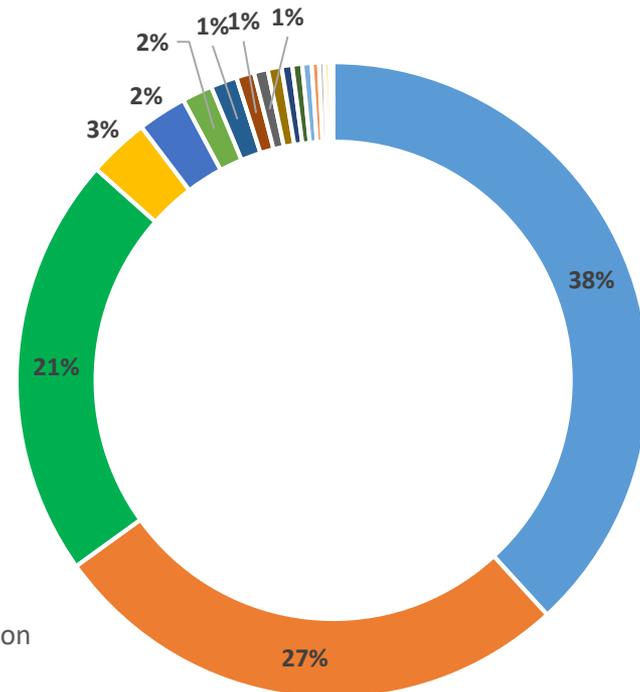
Entitat
espanyola en el
rànking
general

1^a

Universitat
espanyola
generalista
en nombre
de projectes

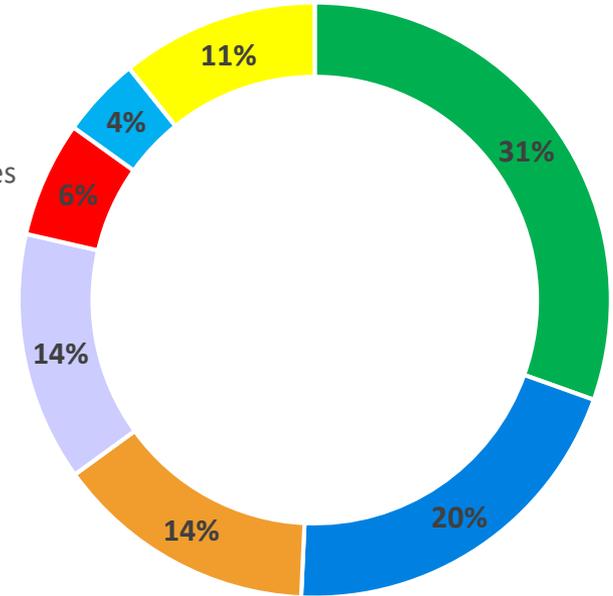
Finançament segons prioritats temàtica

- ERC - European Research Council
- MSCA - Marie Skłodowska-Curie actions
- Societal Challenges
- FET - Future and Emerging Technologies
- LEIT-ICT - Information and Communication Technologies
- LEIT-BIOTECH - Biotechnology
- TPT - Smart, green and integrated transport
- INFRA - Research infrastructures
- CROSST - Cross-theme
- LEIT-ADVMANU - Advanced manufacturing and processing
- TWINING - Twinning of research institutions
- SWAFS-CROSST - Science with and for Society - Cross-theme
- EURATOM - Euratom
- INEGSOC - Integrate society in science and innovation
- GOV - Develop the governance for the advancement of responsible research and innovation
- CAREER - Make scientific and technological careers attractive for young people
- LEIT-SPACE - Space



Finançament per reptes socials

- ENV - Climate action, environment, resource efficiency and raw materials
- SOCIETY - Europe in a changing world - inclusive, innovative and reflective Societies
- FOOD - Food security, sustainable agriculture and forestry, marine
- HEALTH - Health, demographic change and wellbeing
- TPT - Smart, green and integrated transport
- ENERGY - Secure, clean and efficient energy
- SECURITY - Secure societies



Secure Societies (SC7)

- IT tools and methods for managing migration (ITFLOWS) - Coordinat
- Border detection of illicit drugs and precursors by highly accurate electrosensors (BorderSens)
- Scalable privacy preserving intelligence analysis for resolving identities (SPIRIT)
- Understand the Dimensions of Organised Crime and Terrorist Networks for Developing Effective and Efficient Security Solutions for First-line-practitioners and Professionals (TAKEDOWN)
- Whole-of-Society Conflict Prevention and Peacebuilding (WOSCAP)

02

Per què participar al proper Horizon Europe?

Beneficis

- Finançar activitats de recerca
- Desenvolupar la carrera acadèmica i guanyar reconeixement i visibilitat
- Col·laborar amb socis i col·legues internacionals
- Abordar reptes que només poden ser solucionats a través d'un enfocament internacional
- Incloure diferents tipus d'agents per ampliar la perspectiva i l'impacte del projecte

03

La Oficina de Projectes Internacionals (OPI)

La Oficina de Projectes Internacionals (OPI)

Responsable de la Oficina

Gestió administrativa i gestió de dades

Pre-concessió

Post-concessió

Ciències
Socials
i Humanitats

Ciències de
la Vida

Medi
Ambient

C Experm i
Enginyeries

Mobilitat
(Programa
MSC)

Educatius
(Erasmus +)

Gestió projectes ERC
i coordinats
H2020/HEU

Activitats

1. Informació i
Promoció

2. Valoració i
planificació

3. Suport a
propostes

4. Negociació i
Signatura

5. Gestió de
Projectes

En resum

La Oficina de Projectes Internacionals ofereix suport:

Pre-concessió: des de la identificació de convocatòries passant per la preparació de la proposta i la negociació i concessió.

Post-concessió: pull de gestors/es dedicats a gestionar projectes ERC íntegrament i a tasques de *project managment* de projectes coordinats.

HORIZON EUROPE

EURATOM

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on
defence research
& development*

Research
actions

Development
actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I
EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



Pillar II
GLOBAL CHALLENGES &
EUROPEAN INDUSTRIAL
COMPETITIVENESS

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



Pillar III
INNOVATIVE EUROPE

European Innovation
Council

European innovation
ecosystems

European Institute of
Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

Fission

Joint
Research
Center

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Gràcies per la vostra atenció!

El meu contacte:

nuria.claver@uab.cat

opi@uab.cat

#innovacion
#ayudascdti
#asesoramiento
#internacionalizacion



@CDTIoficial



Clúster 3: Seguridad Civil para la Sociedad

Maite Boyero Egido
Representante y NCP Clúster 3



Horizonte Europa (2021-2027)



Pilar 1

Ciencia excelente

Consejo Europeo de Investigación

Acciones Marie Skłodowska-Curie

Infraestructuras de investigación



Pilar 2

Desafíos mundiales y competitividad industrial europea

- Clústeres
- Salud
 - Cultura, creatividad y sociedad inclusiva
 - Seguridad civil para la sociedad
 - Mundo digital, industria y espacio
 - Clima, energía y movilidad
 - Alimentación, bioeconomía, recursos naturales, agricultura y medio ambiente

Centro Común de Investigación



Pilar 3

Europa innovadora

Consejo Europeo de Innovación

Ecosistemas europeos de innovación

Instituto Europeo de Innovación y Tecnología

Ampliar la participación y fortalecer el Espacio Europeo de Investigación

Ampliar la participación y difundir la excelencia

Reformar y mejorar el sistema europeo de I+i

EU Security Union Strategy (2020-2025)

“Your security is our priority”

La Estrategia establece los **instrumentos y las medidas** que han de desarrollarse durante los próximos cinco años para **garantizar la seguridad en nuestro entorno físico y digital.**



Bases de la Estrategia de Seguridad de la UE

- Amenazas de seguridad en **constante cambio**, que pueden afectar a distintos países y producir inestabilidad en la sociedad Europea
- La Estrategia es parte de uno de los grandes objetivos de la nueva Comisión (Von der Leyen) *“Protecting our European Way of Life”* – entre otros
- Conexión entre **seguridad interior y exterior**
- **Autonomía estratégica** en términos de productos, servicios, infraestructuras y tecnologías vitales
- Necesidad de mejorar **la coordinación** en la gestión de crisis y otros retos de la UE

Respuesta coordinada de la UE

- ✓ **Desarrollar capacidades y medios** para la detección temprana, la prevención y la respuesta rápida ante las crisis
- ✓ Centrarse en los resultados (y dotarse de fondos)
- ✓ **Conectar a todos los actores de los sectores público y privado en un esfuerzo común**

Nueva estrategia UE en Ciberseguridad

- **Legislación:** Directiva NIS, Legislación sectores críticos, CyberAct
- **Coordinación:** Blueprint, Joint Cyber Unit, 5G toolbox
- **Financiación:** Horizonte Europa, CEF y Programa DIGITAL
- Puesta en marcha del CCCN



Particularidades Clúster 3

- Enfoque basado en **desarrollar capacidades para usuarios finales de seguridad → criterios de elegibilidad + market uptake**
- Reforzar la colaboración con industria y academia
- **Factor social**
- **Impacto en políticas** de seguridad de la UE
- **Creación de mercado**

+ 2 Partenariados: Ciberseguridad (Centro Europeo de Competencias en Ciberseguridad) y Preparación ante pandemias y gestión de las mismas*

Otros aspectos de interés sobre el Programa

- ✓ 3 DGs aportan financiación: **DG HOME, DG CONNECT y DG RTD**
- ✓ Orientación a **USUARIO FINAL**
- ✓ **Proyectos cercanos a mercado** (TRL 4 a 8)
- ✓ Aplicación civil, exclusivamente, pero posible uso dual
- ✓ Algunos proyectos resultarán **clasificados**
- ✓ **Estandarización y certificación** de soluciones / **demostración** de resultados / **Aspectos éticos** de los proyectos

Strategic plan (2021-2024)

Lucha contra la delincuencia,
el crimen y el terrorismo

Seguridad cibernética

Protección y *resiliencia* de
infraestructuras críticas –
físicas y ciber

Recuperación de Europa
frente a crisis y desastres

Mejorar la seguridad y la
gestión de las fronteras

Seguridad asociada al
cambio climático

Gestión de crisis y catástrofes

Estandarización e
interoperabilidad de sistemas

La implementación



[wp-6-civil-security-for-society_horizon-2021-2022_en.pdf \(europa.eu\)](https://ec.europa.eu/horizon/wp6-civil-security-for-society_horizon-2021-2022_en.pdf)

- **Convocatoria 2021 → ABIERTA desde el 30 de junio de 2021. Cierre: 21/10/2021 (convocatoria CS), y 23/11/2021 (resto de convocatorias de 2021)**
- Condiciones de elegibilidad (USUARIOS FINALES)
- Presupuestos por topic → ES NECESARIO SER EL MEJOR

6 “Destinations” (Convocatorias 2021-2022)



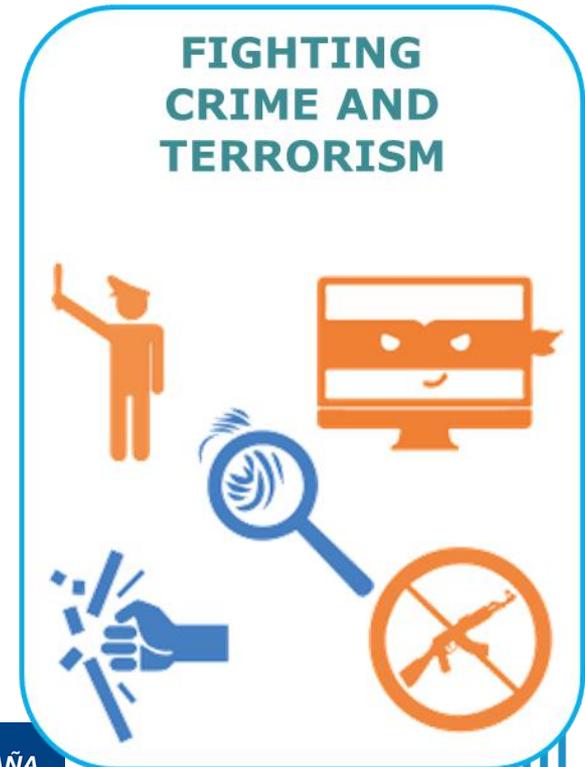
La importancia del Impacto (call 2021-2022)

- ✓ Useful research
- ✓ Policy impact / implementation impact
- ✓ Strategic programming
- ✓ Destination Impact
- ✓ Topic impact

**Destination FCT:
Better protect the EU and its citizens against
Crime & Terrorism**

Impacto esperado en FCT

- “**Crime and terrorism** are more effectively tackled, while **respecting fundamental rights**, [...] 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 **police authorities** [...] including measures against cybercrime.”



Áreas de I+D+i en FCT

- **Prevención, investigación y mitigación** de los impactos de actos criminales (tb. ciber) y terroristas
- Seguridad en **espacios públicos urbanos**
- Modernización del **análisis de información**;
- Mejora en la capacidad **forense** y la obtención legítima de evidencias
- Comprensión de **aspectos sociales** ligados a diversas formas de criminalidad
- Mejora en la obtención de **inteligencia**
- **Ciberespacio más seguro para ciudadanos**, en especial para menores



	Action Type	Funding/Project (M€)	TRL	Eligibility conditions
FCT01 - Modern information analysis for fighting crime and terrorism				
HORIZON-CL3-2021-FCT-01-01: Terrorism and other forms of serious crime countered using travel intelligence	IA	5	6-7	3 Police
HORIZON-CL3-2021-FCT-01-03: Disinformation and fake news are combated and trust in the digital world is raised	IA	4	6-7	3 Police
HORIZON-CL3-2021-FCT-01-04: Improved access to fighting crime and terrorism research data	IA	7	7-8	3 Police
HORIZON-CL3-2021-FCT-01-02: Lawful interception using new and emerging technologies (5G & beyond, quantum computing and encryption)	RIA	5	5-6	3 Police
FCT02 - Improved forensics and lawful evidence collection				
HORIZON-CL3-2021-FCT-01-05: Modern biometrics used in forensic science and by police	IA	5	6-7	2 Police + 2 Forensic
FCT03 - Enhanced prevention, detection and deterrence of societal issues related to various forms of crime				
HORIZON-CL3-2021-FCT-01-06: Domestic and sexual violence are prevented and combated	IA	6	6-7	2 Police + 2 CSOs

	Action Type	Funding/Project (M€)	TRL	Eligibility conditions
FCT04 - Increased security of citizens against terrorism, including in public spaces				
HORIZON-CL3-2021-FCT-01-07: Improved preparedness on attacks to public spaces	IA	3	6-7	2 Police + 2 First Responder
FCT05 - Organised crime prevented and combated				
HORIZON-CL3-2021-FCT-01-08: Fight against trafficking in cultural goods	RIA	5	5-6	2 Police + 2 Border
HORIZON-CL3-2021-FCT-01-09: Fight against organised environmental crime	IA	5	6-7	2 Police + 2 Border
HORIZON-CL3-2021-FCT-01-10: Fight against firearms trafficking	IA	5	6-7	2 Police + 2 Border
FCT06 – Citizens are protected against cybercrime				
HORIZON-CL3-2021-FCT-01-11: Prevention of child sexual exploitation	RIA	3	---	2 Police + 2 CSOs
HORIZON-CL3-2021-FCT-01-12: Online identity theft is countered	RIA	3	5-6	3 Police

HORIZON-CL3-2021-FCT-01-01: Terrorism and other forms of serious crime countered using travel intelligence (EJEMPLO DE CONDICIONES DE ELEGIBILIDAD)

Specific conditions	
EU contrib. /project	The EU estimates that an EU contribution of around EUR 5.00 million ...
Indicative budget	EUR ≈5.00 million (budget of 16 M€ shared among HORIZON_CL3_2021-FCT-01-03 & 04).
Type of Action	Innovation Actions
Eligibility conditions	[...] This topic requires the active involvement of at least 3 Police Authorities from at least 3 different EU Member States or Associated countries . For these participants, applicants must fill in the table “Eligibility information about practitioners” in the application form with all the requested information, following the template provided in the submission IT tool. Some activities, resulting from this topic, may involve using classified background and/or producing of security sensitive results (EUCI and SEN) . Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.
Procedure	[...] grants will be awarded to applications not only in order of ranking but at least also to those that are the highest ranked within set topics, provided that the applications attain all thresholds.
TRL	Activities are expected to achieve TRL 6-7 by the end of the project (General Annex B).

Recomendaciones para la “Destination FCT”

- ✓ Tener en cuenta las políticas y comunicaciones de la Comisión y la UE en este área
- ✓ Las herramientas que se desarrollen deben ser **validadas por los usuarios finales**
- ✓ Relacionar la propuesta con otros proyectos en marcha o pasados
- ✓ Es necesario incluir a la **sociedad** en los proyectos

Destination BM: Effective Management of EU external Borders

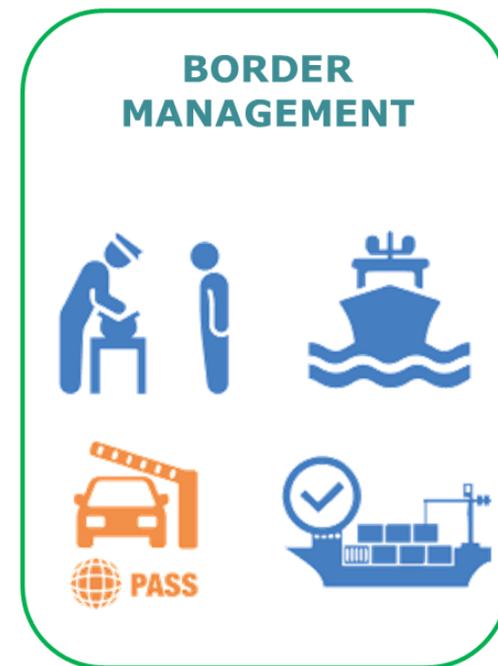
Impacto esperado en BES

- “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.”



Áreas de I+D+i en BES

- Mejora en **la seguridad de las fronteras exteriores de la EU**, así como de las actividades e infraestructuras del **entorno marítimo**
- Mejora en **la experiencia en el cruce de fronteras para viajeros y autoridades fronterizas**
- **Monitorización de movimientos** transfronterizos de personas y bienes
- Protección de los **derechos fundamentales** de los viajeros
- **Mejora de la seguridad** aduanera y de la cadena de suministro, minimizando la interrupción del flujo de comercio



	Action Type	Funding/Project (M€)	TRL	Eligibility conditions
BM01 – Efficient border surveillance and maritime security				
HORIZON-CL3-2021-BM-01-01: Enhanced security and management of borders, maritime environment, activities and transport, by increased surveillance capability, including high altitude, long endurance aerial support	IA	7	7-8	3 Border
BM02 - Secured and facilitated crossing of external borders				
HORIZON-CL3-2021-BM-01-02: Increased safety, security, performance of the European Border and Coast Guard and of European customs authorities	CSA	2.5	N/A	2 Border + 2 Custom
HORIZON-CL3-2021-BM-01-03: Improved border checks for travel facilitation across external borders and improved experiences for both passengers and border authorities' staff	IA	4	7-8	3 Border
BM03 – Better customs and supply chain security				
HORIZON-CL3-2021-BM-01-04: Advanced detection of threats and illicit goods in postal and express courier flows	RIA	4	4-6	2 Custom + 2 Police
HORIZON-CL3-2021-BM-01-05: Improved detection of concealed objects on, and within the body of, persons	IA	5	7-8	3 Custom

Recomendaciones para la “Destination BM”

- ✓ Tener en cuenta las políticas y comunicaciones de la Comisión y la UE (*borders – air, land, sea/maritime; Flow of goods, Flow of people*)
- ✓ **Actividades e informes de FRONTEX**
- ✓ Siempre: leer las páginas introductorias de la “destination” y de la sección en el documento de Plan estratégico
- ✓ Topics con TRL altos → explicar y justificar las demostraciones / validaciones
- ✓ Uso de los servicios de **Galileo y Copernicus**
- ✓ Demostrar conocimiento del área BM, dinámicas y problemática

Destination INFRA: Resilient Infrastructure

Destination INFRA: Resilient INFRAstructures

- **Expected Impact:** “[...] **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 [...]”



ENERGY



HEALTH



TRANSPORT



FINANCIAL



ICT



WATER



FOOD



PUBLIC & LEGAL
ORDER AND
SAFETY



CHEMICAL &
NUCLEAR
INDUSTRY



SPACE AND
RESEARCH

Policies relacionadas con la destination INFRA

- ✓ Strategic plan
- ✓ Security Union strategy
- ✓ Joint framework on countering hybrid threats
- ✓ Union Civil protection mechanism
- ✓ NIS2 Directive
- ✓ CER Directive (Critical entities resilience)

	Action Type	Funding/Project (M€)	TRL	Eligibility conditions
HORIZON-CL3-2021-INFRA-01-01: European infrastructures and their autonomy safeguarded against systemic risks				
HORIZON-CL3-2021-INFRA-01-01: European infrastructures and their autonomy safeguarded against systemic risks	IA	10	6-7	3 Gov Entities
HORIZON-CL3-2021-INFRA-01-02: Ensured infrastructure resilience in case of Pandemics	IA	10	6-7	1 OCI + 1 RTO Health infectious

HORIZON-CL3-2021-INFRA-01-01: European infrastructures and their autonomy safeguarded against systemic risks (OJO A LA CONDICIÓN DE ELEGIBILIDAD)

Specific conditions	
EU contrib. /project	The EU estimates that an EU contribution of around EUR 10.00 million ...
Indicative budget	EUR ≈10.00 million (1 project ONLY → 20 M€ shared with HORIZON-CL3-2021-INFRA-01-02).
Type of Action	Innovation Actions
Eligibility conditions	<p>[...] This topic requires the active involvement of at least 3 government entities responsible for security on national level from at least 3 different EU Member States or Associated countries. For these participants, applicants must fill in the table “Eligibility information about practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely the security sensitive nature of the autonomy of European infrastructures against systemic risks and hybrid threats, participation is limited to legal entities established in Member States and Associated Countries. <u>Proposals including legal entities which are not established in these countries will be ineligible.</u></p> <p>When using satellite-based, positioning, navigation and/or related timing data & services, beneficiaries must make use Galileo/EGNOS. The use of Copernicus for EO is encouraged. Some activities, resulting from this topic, may involve using classified background and/or producing of security sensitive results (EUCI and SEN).</p>
Procedure	[...] grants will be awarded to applications not only in order of ranking but at least also to those that are the highest ranked within set topics, provided that the applications attain all thresholds.
TRL	Activities are expected to achieve TRL 6-7 by the end of the project (General Annex B).

Recomendaciones para la “Destination INFRA”

- ✓ Reducir las vulnerabilidades
- ✓ Incrementar la resiliencia de las ICs
- ✓ Imprescindible cubrir **todos** los “*expected outcomes*”

Destination CS: Increased cybersecurity and a more secure on-line environment

Destination 4: Increased cybersecurity and a more secure on-line environment

- **Expected impact:** “Increased cybersecurity and a more **secure online environment** are by developing and using effectively EU and Member States’ capabilities in digital technologies supporting **protection of data and networks**, 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**.”



Expected impacts CS (cont'd)

1. Strengthened **EU cybersecurity capacities** and **European Union sovereignty** in digital technologies
2. **More resilient** digital infrastructures, systems and processes
3. Increased software, hardware and **supply chain security**
4. **Secured** disruptive technologies
5. Smart and quantifiable **security assurance and certification** shared across the EU
6. Reinforced **awareness** and a common **cyber security management** and culture

Áreas de I+D+i en CS



	ACTION TYPE	Budget	FUNDING /PROJECT (M€)	Nr. Of projects	TRL	Eligibility conditions
CS01 - Secure and resilient digital infrastructures and interconnected systems						
HORIZON-CL3-2021-CS-01-01: Dynamic business continuity and recovery methodologies based on models and prediction for multi-level Cybersecurity	RIA	21,5 M€	3-5	5	4	N/A
CS02 - Hardware, software and supply chain security						
HORIZON-CL3-2021-CS-01-02: Improved security in open-source and open-specification hardware for connected devices	RIA	18 M€	3-5	4	4	N/A
CS03 - Cybersecurity and disruptive technologies						
HORIZON-CL3-2021-CS-01-03: AI for cybersecurity reinforcement	RIA	11 M€	3-4	3	4	N/A
CS05 - Human-centric security, privacy and ethics						
HORIZON-CL3-2021-CS-01-04: Scalable privacy-preserving technologies for cross-border federated computation in Europe involving personal data	RIA	17,50 M€	3-5	4	4	N/A

Recomendaciones para la “Destination CS”

- ✓ En resumen:
 - Productos más resilientes
 - Soberanía y autonomía estratégica
 - Productos HW y SW más ciber-seguros
- ✓ Los topics CS no tienen condiciones de elegibilidad
- ✓ **OJO: fecha de cierre 21/10/21**

**Destination DRS:
A Disaster-resilient society for
Europe**

Destination DRS

Losses from **natural, accidental and man-made disasters** are reduced through **enhanced disaster risk reduction** based on preventive actions, better **societal preparedness** and resilience and improved **disaster risk management** in a systemic way



Destination DRS

- Prevención, mitigación, respuesta y recuperación ante **crisis y desastres**
- Servicios de emergencias y Protección civil europeos (NBRQ-E, eventos extremos, pandemias, etc.)
- Mejorar la base de **conocimiento y la conciencia situacional**;
- Mejora en la coordinación entre sectores y disciplinas, así como a través de las fronteras, desde el plano de la **coordinación transnacional hasta el plano local**;
- Mejora en el intercambio de conocimiento y la coordinación en lo relativo a estándares en el área de gestión de crisis y NRBQ-E





Disaster Resilient Society

DG HOME
Internal Security

COM(2009) 273 final
CBRN Action Plan
+ COM(2014)247 final
CBRN-E risks
+ European Agenda on Security

DG ECHO
Civil Protection

Decision 1313/2013
EU Civil Protection
Mechanism

Environmental threats

DG ENV
Environment

Decision 1386/2013
Environment Action
Programme
Directive 2012/18/EU
(Seveso III Directive)

Climate threats

DG CLIMA
Climate action

EU Climate Adaptation
Strategy

Health threats

DG SANTE
Consumer Health

Decision 1082/2013
Serious cross-border
threats to health

DG ENER
Energy

Regulation 347/2013
Tran-European Energy
Infrastructure
Directive 2009/7/EU
Safety of nuclear
installations

DG MOVE
Transport

Decision 661/2010
Tran-European Transport
Network

DG TAXUD
Customs

EU Custom policy for
supply chain security and
use of customs detection
technology for CBRN-E

International

DG DEVCO
International
cooperation

CBRN-E Centres of
Excellence

EEAS
Ext. security

Intergovernmental

+ UN Bodies, NATO

Nuclear non-proliferation treaty
Chemical Weapons Convention
Biological Weapons Convention

DG GROW
Enterprise & Industry

Security Industrial policy
COM(2012)417 final
Internal Security Strategy
COM(2010)673 final
European Agenda on Security

DG TRADE

Regulation 428/2009
Transit of dual use items

HORIZON
2020

EU Reseach

EDA
Defense

Joint Investment
Programme / EFC

	ACTION TYPE	FUNDING/PROJECT (M€)	TRL	Eligibility conditions
DRS01 - Societal Resilience: Increased risk Awareness and preparedness of citizens				
HORIZON-CL3-2021-DRS-01-01: Improved understanding of risk exposure and its public awareness in areas exposed to multi-hazards	RIA	5	N/A	3 practitioners (first and second respondents) / local communities/local or regional authorities
DRS02 - Improved Disaster Risk Management and Governance				
HORIZON-CL3-2021-DRS-01-02: Integrated Disaster Risk Reduction for extreme climate events: from early warning systems to long term adaptation and resilience building	IA	6	N/A	3 practitioners (first and second respondents) / local communities/local or regional authorities
HORIZON-CL3-2021-DRS-01-03: Enhanced assessment of disaster risks, adaptive capabilities and scenario building based on available historical data and projections	RIA	5	N/A	3 practitioners (first and second respondents) / local communities/local or regional authorities + representatives of scientific areas / on DRS
HORIZON-CL3-2021-DRS-01-04: Developing a prioritisation mechanism for research programming in standardisation related to natural hazards and/or CBRN-E sectors	CSA	2	N/A	2 national standardization orgs + chairs of CEN or ISO + scientific stakeholders on standardization of natural hazards and CBRN-E
DRS03 - Strengthened capacities of first and second responders				
HORIZON-CL3-2021-DRS-01-05: Fast deployed mobile laboratories to enhance situational awareness for pandemics and emerging infectious diseases	IA	4 (2 proyectos)	6-8	3 first responders of local or regional authorities managing sanitary crises

Recomendaciones para la “Destination DRS”

- ✓ First responders **AND** second responders
- ✓ Galileo and Copernicus very welcome!
- ✓ Vínculo de los 5 topics de 2021 con proyectos ya financiados en el pasado → revisar ppts del INFODAY europeo

**Destination SSRI:
Strengthened Security Research
and Innovation**

- **Expected Impact:** “Security threats are more effectively addressed thanks to better cross-cutting knowledge across different areas of security and diverse disciplines, included social sciences & humanities, enhanced implementation of the **research & innovation cycle and improved uptake** at all levels of society.”



MARKET UPTAKE



Destination Strengthening Security R&I

- Mejorar la **llegada a mercado** de los resultados de la I+D+i
- Incrementar el **impacto**
- Planificación y análisis de **necesidades** a medio-largo plazo
- Financiar acciones de **PCP / PPI**



	ACTION TYPE	FUNDING/PROJECT (M€)	TRL	Eligibility conditions
SSRI 01 - Stronger pillars of security Research and Innovation				
HORIZON-CL3-2021-SSRI-01-01: A maturity assessment framework for security technologies	RIA	1,5	N/A	N/A
HORIZON-CL3-2021-SSRI-01-02: Knowledge Networks for Security Research & Innovation	CSA	2	N/A	N/A
HORIZON-CL3-2021-SSRI-01-03: National Contact Points (NCPs) in the field of security and cybersecurity	CSA	2,5	N/A	N/A
SSRI 02 - Increased Innovation uptake				
HORIZON-CL3-2021-SSRI-01-04: Demand-led innovation for situation awareness in civil protection	PCP	6	6-8	3 end-users + 3 public procurers
SSRI 03 - Cross-cutting knowledge and value for common security solutions				
HORIZON-CL3-2021-SSRI-01-05: Societal Impact assessment and impact creation transdisciplinary methods for security research technologies driven by active civil society engagement	RIA	2	N/A	N/A

https://seren4-heu-cluster3-infoday.b2match.io/

← → ↻ 🔒 https://seren4-heu-cluster3-infoday.b2match.io 🌟 📺 📌 📁 (No sincronizando)

Horizon Europe Civil Security for Society Infoday and Brokerage Event
June 30 - July 1, 2021

Home Participants Marketplace Agenda Live stage Meetings Messages



30 June 2021 - 1 July 2021

Horizon Europe Civil
Security for Society Infoday
and Brokerage Event

Home Pitch presentations How it works **Presentations & recordings** FAQ SeReMa Contact

1st Horizon Europe Cluster 3 Information Day and
Brokerage Event - ONLINE

ORGANISED BY

Aspectos transversales / complementarios

- ✓ SSH
- ✓ Cooperación internacional
- ✓ Aspectos de género
- ✓ Impacto: científico, social y económico
- ✓ Aspectos éticos y de privacidad
- ✓ Uso y generación de información clasificada

A COMMUNITY OF USERS FOR SECURE, SAFE AND RESILIENT SOCIETIES

In a world facing growing risks from man-made and natural disasters, the security of citizens, infrastructure, and assets is a high priority for the European Union.

CoU becomes CERIS

As the first work programmes under the EU Framework for Research and Innovation called Horizon Europe approach their completion, the Community of Users underwent a much needed revision. Please welcome the Community of European Research and Innovation for Security (CERIS). The objectives of CERIS are:

- To analyse identified capability needs and gaps in the corresponding areas
- To identify solutions available to address the gaps
- To translate capability gaps and potential solutions into research needs
- To identify funding opportunities and synergies between different funding instruments
- To identify standardisation needs
- To integrate the views of citizens

UPCOMING EVENTS

Next Events



Climate Extreme Events

We are pleased to announce our next discussion in the framework of the Community of Users on Secure, Safe and Resilient Societies – area Disaster Resilient Societies, which is planned as a virtual meeting on 30 March 2021 between 10:00 and 12:00. Registrations will be available soon.



Cross-Sectorial networking with practitioners and policy-makers

We are pleased to announce our next discussion in the framework of the Community of Users on Secure, Safe and Resilient Societies – area Disaster Resilient Societies, which is planned as a virtual meeting on 21 April 2021 between 10:00 and 12:00. Registrations will be available soon.



Multihazards disaster risk management, including cascading effects

We are pleased to announce our next discussion in the framework of the Community of Users on Secure, Safe and Resilient Societies – area Disaster Resilient Societies, which is planned as a virtual meeting on 5 May 2021 between 10:00 and 12:00. Registrations will be available soon.



CBRN State of the Art technology

We are pleased to announce our next discussion in the framework of the Community of Users on Secure, Safe and Resilient Societies – area Disaster Resilient Societies, which is planned as a virtual meeting on 19 May 2021 between 10:00 and 12:00. Registrations will be available soon.



Standardisation (Stair4Security final event)

We are pleased to announce our next discussion in the framework of the Community of Users on Secure, Safe and Resilient Societies – area Disaster Resilient Societies, which is planned as a virtual meeting on 27 and 28 May 2021 between 10:00 and 12:00 and 14:00 and 16:00. Registrations will be available soon.



Portal Horizonte Europa en español

The screenshot shows the top navigation bar of the portal. On the left, there are logos for 'HORIZONTE EUROPA', the Spanish Government ('GOBIERNO DE ESPAÑA'), and the Ministry of Science and Innovation ('MINISTERIO DE CIENCIA E INNOVACION'). On the right, there are social media icons for Telegram and RSS, and a search bar. Below the navigation bar is a blue horizontal menu with the following items: 'Ciencia Excelente', 'Desafíos mundiales', 'Europa Innovadora', 'Widening+ERA', and 'Más Europa'. A red oval highlights this menu, and a large blue arrow points from it to the right. Below the navigation bar is a large banner for 'HORIZON EUROPE' featuring the European Union flag, the text 'EUROPEAN UNION', '#HorizonEU', and 'Arranca oficialmente Horizonte Europa'. The banner also includes the text 'THE EU RESEARCH & INNOVATION PROGRAMME 2021 - 2027' and an illustration of various people and activities. At the bottom of the banner, it says 'Horizonte Europa: Programa Marco de Investigación e Innovación'.

Icon representing Events (Events)

Icon representing News (Noticias)

Icon representing Documents of Interest (Documentos de interés)

Icon representing Links of Interest (Enlaces de interés)

www.horizonteeuropa.es

NCPs en el Clúster 3



maite.boyero@cdti.es



ripaca@inta.es



marina.cdti@sost.be

Apoyo CDTI en todas las fases



HORIZONTE EUROPA

+ info sobre programas y ayudas
para la
internacionalización de la I+D+I española



@HorizonteEuropa - @CDTIoficial

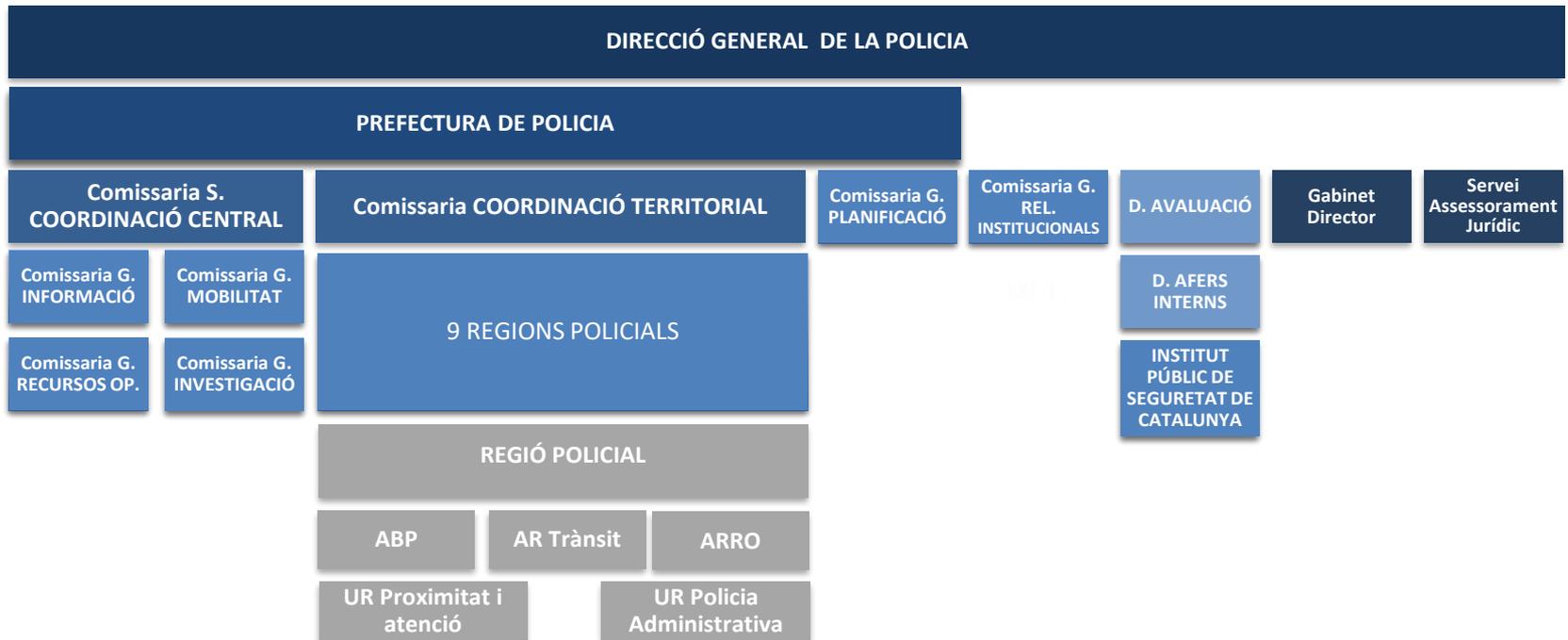


POLICIA DE LA GENERALITAT - MOSSOS D'ESQUADRA

mossos d'esquadra



Generalitat de Catalunya



- **ACINT: Filtratge i recopilació informació**
- **Prefectura de la Policia:**
 - **Valoració i avaluació de les propostes**
 - **Assignació al servei especialitzat**



- **Partner** : soci del consorci amb entitat
- **End-user** : requeriments eines tecnològiques
proves desenvolupament eines
avaluació eines
- **Col-laborador expert** : aportació en temes específics



- **BENEFICIS PER A LA PGME:**
 - **Internacionalització**
 - **Participació en el desenvolupament tecnològic de noves eines**
 - **Accés a informació privilegiada i als resultats de la recerca**



- **MARGIN**
H2020



- **VALID(ENFSI)**
ISF-Police



- **PHIT**
ISF-Police



- **TENSOR**
H2020





MOLTES GRÀCIES

mossos.cooperaciointernacional@gencat.cat

mossos d'esquadra



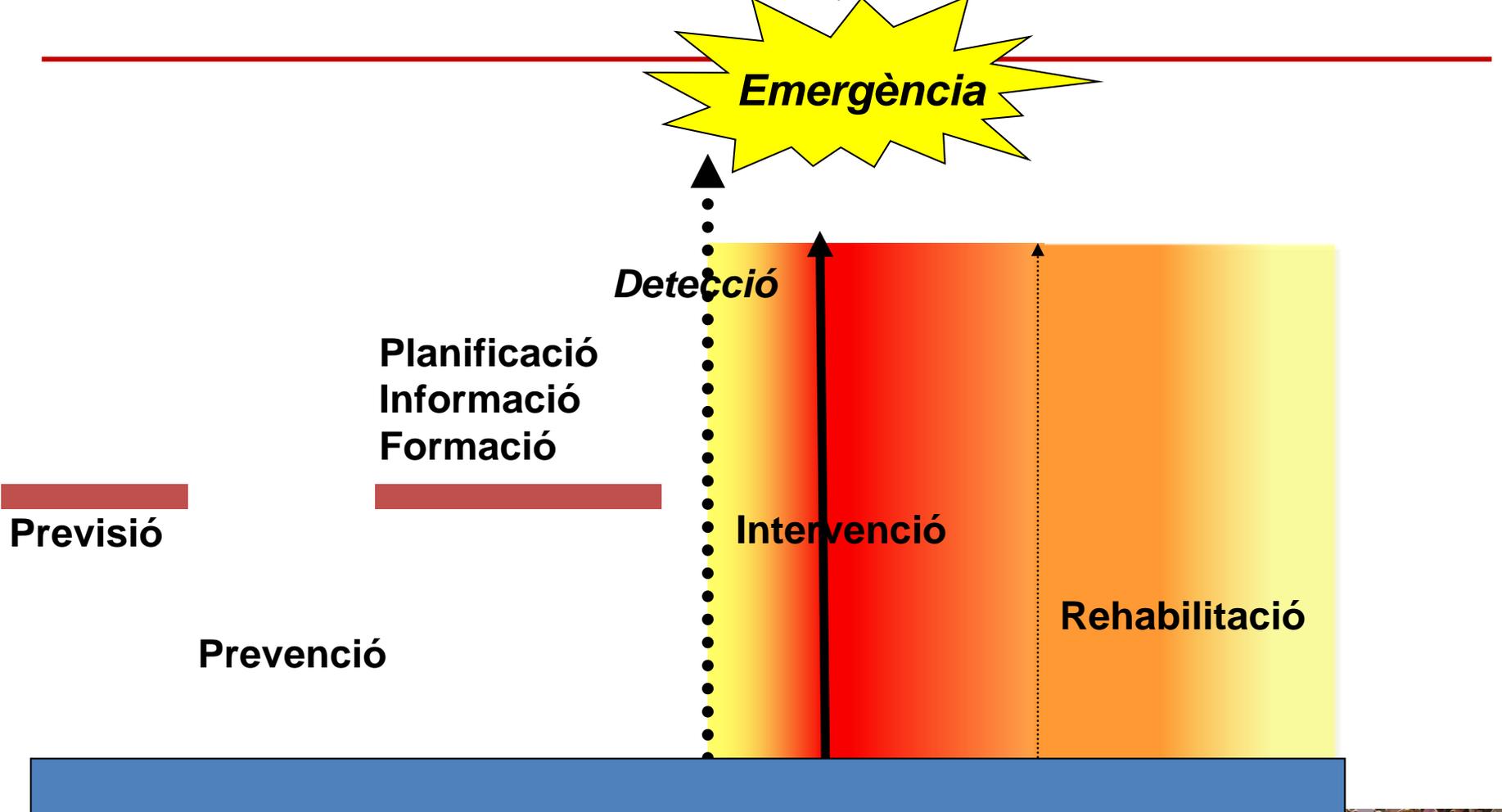
Generalitat de Catalunya

Sessió informativa sobre el clúster 3: Seguretat civil de les societats

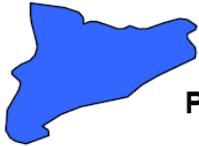
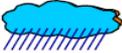
Participació d'usuaris finals
DIRECCIÓ GENERAL DE PROTECCIÓ CIVIL



QUÈ ÉS LA PROTECCIÓ CIVIL



PLANS DE PROTECCIÓ CIVIL

PLA TERRITORIAL	PLANS ESPECIALS
 PROCICAT	 INFOCAT
	 INUNCAT
	 TRANSCAT
	 SISMICAT
	 PLASEQCAT
	 NEUCAT
	 CAMCAT
	 AEROCAT
	 ALLAUCAT
	 RADCAT
 VENTCAT	
FERROCARRIL MALALTIES EMERGENTS	
PROTOCOLS: ESTAT DE LA MAR SUBMINISTRAMENTS BÀSICS ATENCIÓ A LA POBLACIÓ (APCAT)	



PARTICIPACIÓ RECENT EN PROJECTES EUROPEUS

ANYWHERE: Horizon 2020 DRS-01-2015 (6/2016 – 8/2019)

LODE: DGECHO Civil Protection Mechanism (1/2019 -1/2021)

POCRISC: POCTEFA 2014-2020, FEDER INTERREG V-A (1/2018-1/2022)

RECIPE: DGECHO Civil Protection Mechanism (1/2020 – 12/2021)



- **Aprofundir en l'anàlisi del risc a escala local, sobretot per la identificació de punts d'acumulació d'efectes i valoració de la vulnerabilitat. En aquest sentit, obtenció i tractament massiu de dades. Exemple: punts negres per inundacions torrencials.**
- **La valoració dels efectes del canvi climàtic en les emergències.**
- **Definir estratègies de penetració dels missatges a la població, augmentar la seva resiliència a nivell comunitari, etc. Capacitació en l'autoprotecció.**
- **La detecció de fenòmens de ràpida evolució. El seguiment dels fenòmens, l'afectació a les poblacions en directe. Exemple: risc químic.**
- **L'avís fiable a la població. Exemple: incendis forestals en urbanitzacions.**
- **Sistemes per la integració i posada en comú de la informació entre els operatius.**
- **Sistemes per la presa de decisions, amb el recolzament d'intel·ligència artificial...**



Gràcies per la vostra atenció





UAB
Universitat Autònoma
de Barcelona

Dep. of Information and Communications Engineering

DEIC

- Relatively small department
 - (15 permanent PDI)
- Research on **security** since ~1987
- 3 research groups
- Research expertise:
 - EU and national projects (research and industry)
 - High publication record, active role in academic venues

Coding, Compression and Security



Combinatorics, Coding
and Security Group



Group on Interactive
Coding of Images



Security of Networks and
Distributed Applications

- Combinatorics, Coding and Security Group
- Group on Interactive Coding of Images
- Security of Network and Distributed Applications

<https://deic-web.uab.cat/recerca.php>

Combinatorics, Coding and Security

Study, construction and classification of nonlinear families of optimal codes for the detection and correction of errors in digital transmission systems and data storage by using both combinatorial and algebraic techniques.

- Optimal codes,
- Codes over rings,
- Network coding,
- Steganography and hiding information
- Distributed storage
- Locally Repairable Codes,
- Quantum codes,
- Code-based post-quantum cryptography

Group on Interactive Coding of Images

Research lines:

- Data compression
- Data transmission
- Data sharing
- Data storage
- Data archiving

Topics of interest:

- Remote sensing
- Earth Observation
- Big data
- Internet-Of-Things
- Machine Learning

UAB-DEIC-GICI

Experience & Proficiency: Examples of previous participation in funded projects.

1. WhiteDwarf 2.0 Maintenance of Compression Implementations

Reference: European Space Agency (ESA) Contract No. 4000133664/20/NL/AS. January 2021 – December 2021

2. Framework para la evaluación de la calidad de imágenes para segmentación y clasificación con algoritmos de deep learning

Ministerio de Ciencia e Innovación, Satellogic Solutions SL, Fundació EURECAT, RTC2019-007434-7. July 2020 – December 2022

3. Robust Compression of Fixed Length Housekeeping Data // Raw SAR Compression

Consultative Committee for Space Data Systems.

Centre National d'Etudes Spatiales (CNES), French Space Agency. Multi-Hyperspectral Data Compression Working Group, with participation from ESA. July 2020 – December 2021.

4. High-Speed Integrated Satellite Data Systems For Leading EU Industry (Hi-SIDE)

European Commission H2020, Leit Space,776151. January 2018 – July 2022.

5. Multicomponent remote-sensing data compression

Centre National d'Etudes Spatiales (CNES), French Space Agency. September 2011 – June 2020.

6. Multidimensional Image Coding. Applications to Remote Sensing and Telemedicine (MIC-RS-TM)

European Union Framework Program VII, People Marie Curie Actions, FP7-PEOPLE-2009-IIF, FP7-250420. July 2010 – January 2012.

Security of Networks and Distributed Applications

- **Opportunistic Networks**
 - Routing, security, VANETs, network privacy, ...
- **Bitcoin** and cryptocurrencies
 - Blockchain, lightning networks, privacy, ...
- **Privacy in user/data analysis and publication**
 - Privacy-preserving data publication, privacy in machine learning, ...

Security expertise/interest

- **Blockchain technology**
 - High technical knowledge
 - Bitcoin, Lightning Network (Layer 2)
- **Network security**
 - Opportunistic networks
- **Data Privacy**
 - Machine learning and privacy, data mining, differential privacy, k-anonymity, ...

DEIC - Contact

<http://deic.uab.cat>

- Guillermo Navarro-Arribas guillermo.navarro@uab.cat
- DEIC Manager:
 - Joan Serra Sagristà joan.serra@uab.cat

Proyecto BORDERSENS

Manel del Valle

Grup de Sensors i Biosensors

Departament de Química

Universitat Autònoma de Barcelona

7 de julio 2021



BORDERSENS



BorderSens project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 833787. This document reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains.

Detección en paso de fronteras/aduanas de drogas de abuso y sus precursores mediante el empleo de sensores electroquímicos



**Agentes de fronteras /
aduanas necesitan
confirmar la presencia
de las sustancias
reguladas**



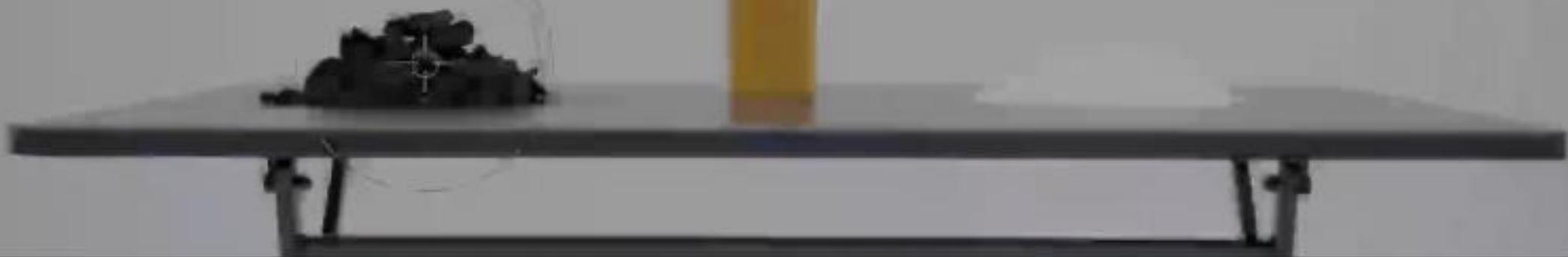
**Agentes de fronteras /
aduanas necesitan
confirmar la presencia
de las sustancias
reguladas**



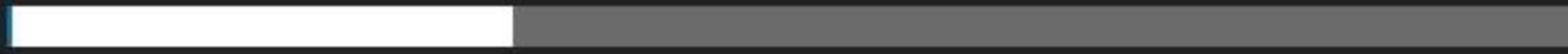
Agentes de fronteras / aduanas necesitan confirmar la presencia de las sustancias reguladas



<https://www.youtube.com/watch?v=XOvkjU-ILjI>



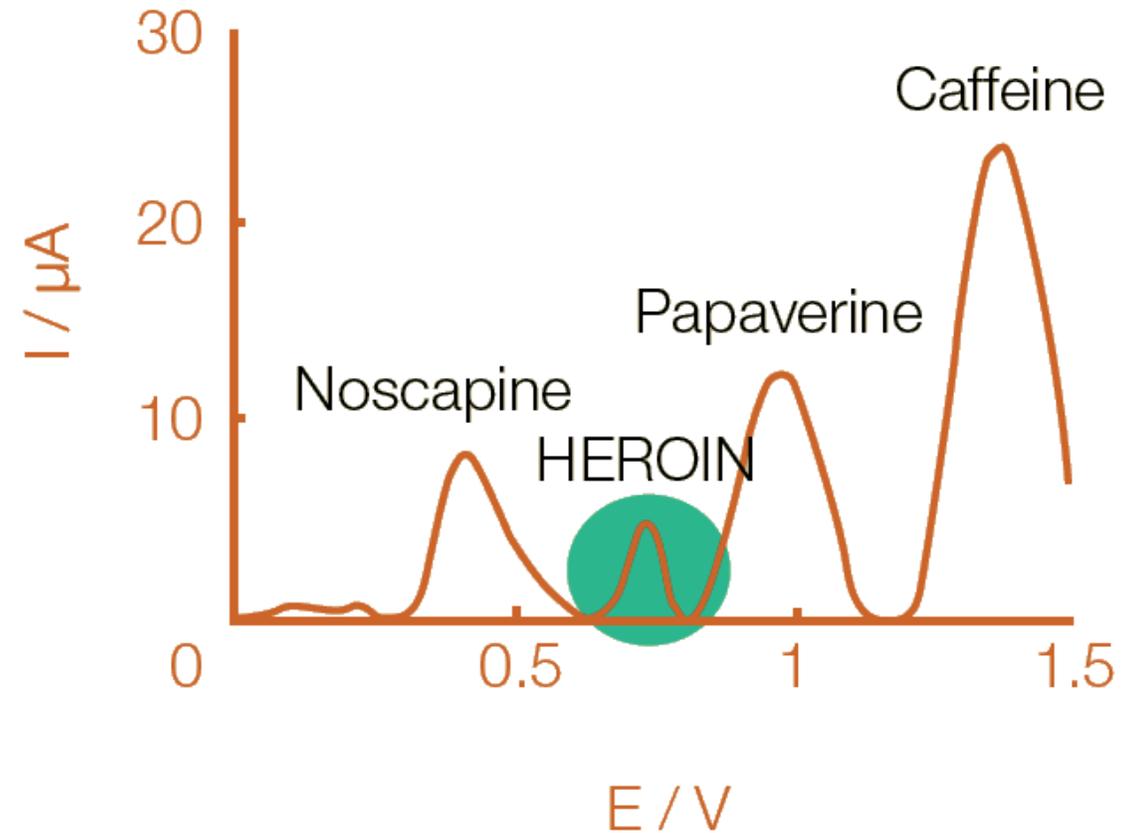
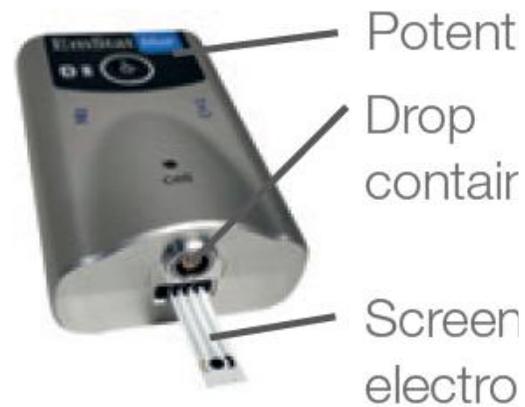
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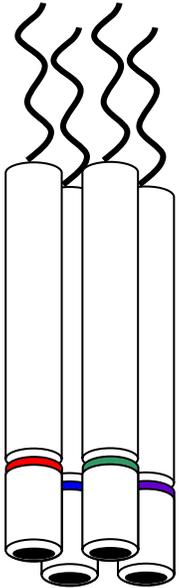


03:24



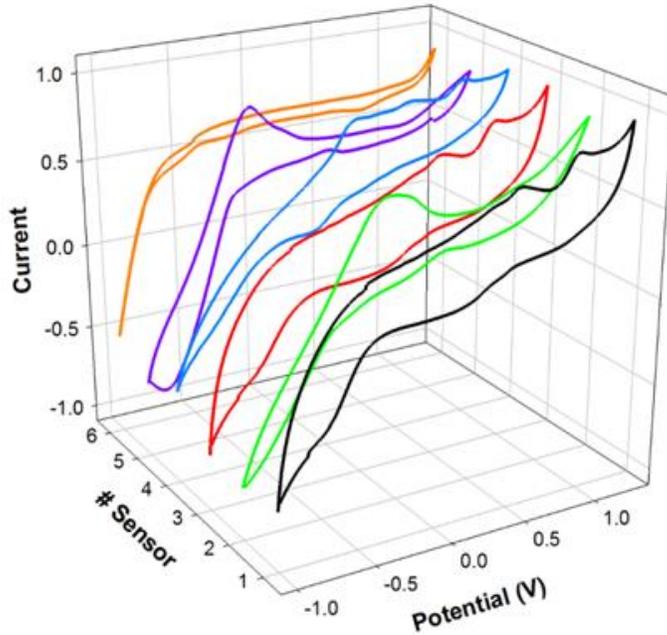
Utilizamos sensores serigrafados de un solo uso. Cada sustancia, si es electroactiva, se manifiesta con una señal característica, su 'fingerprint'.





N x sensores

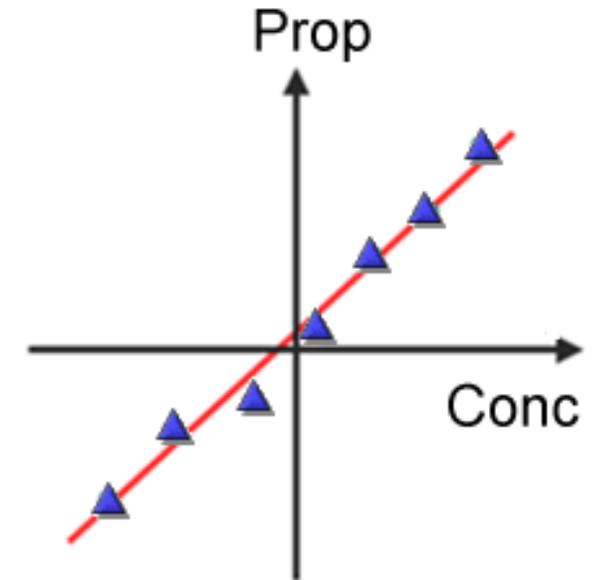
SAMPLE



N x voltamogramas



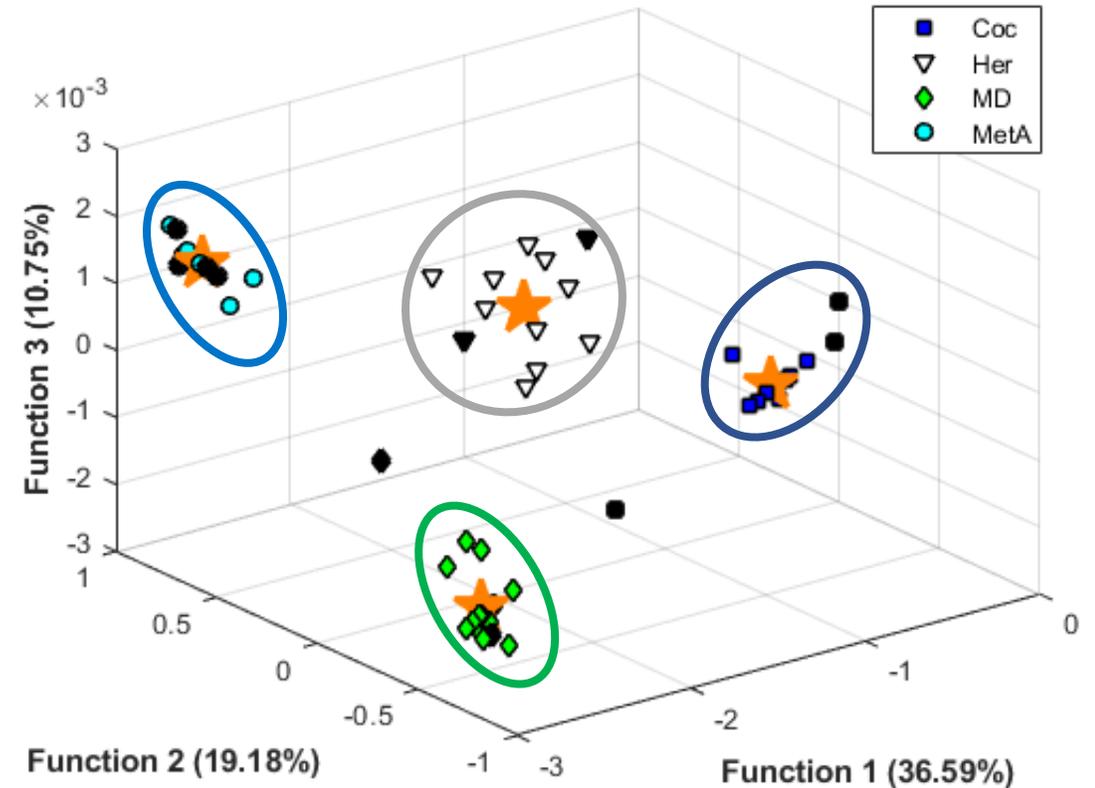
Extracción/
compresión



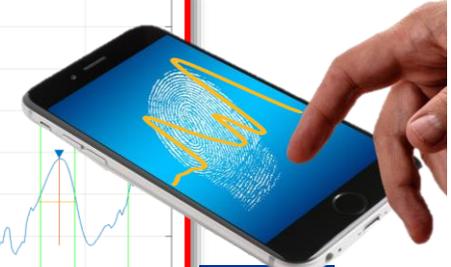
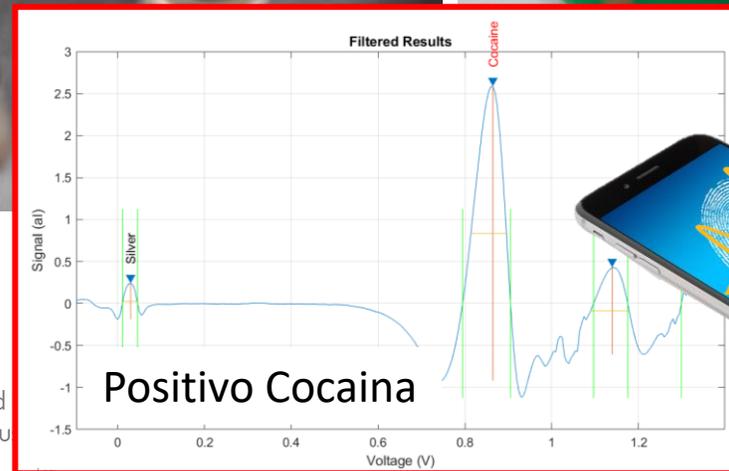
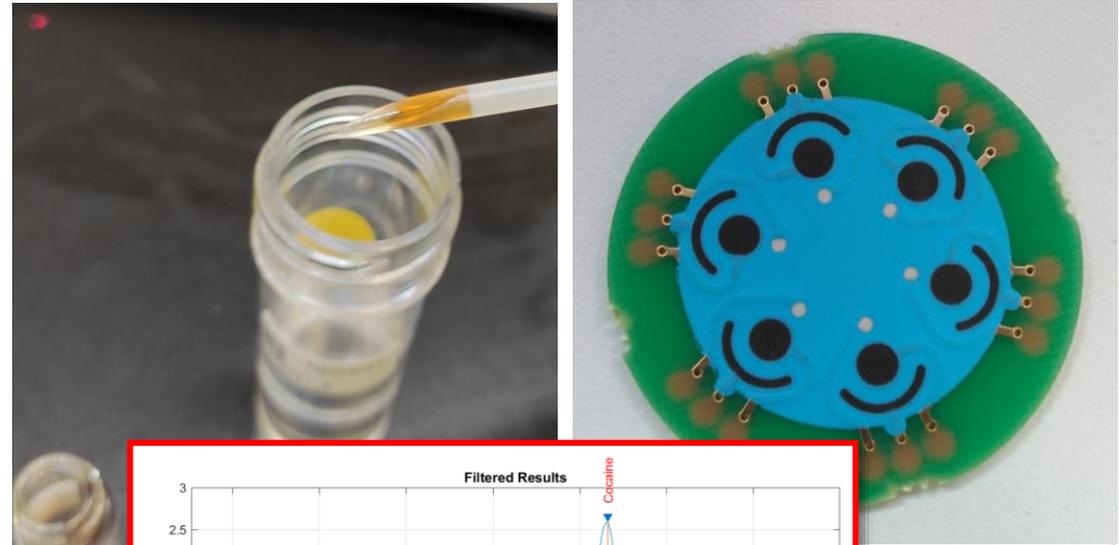
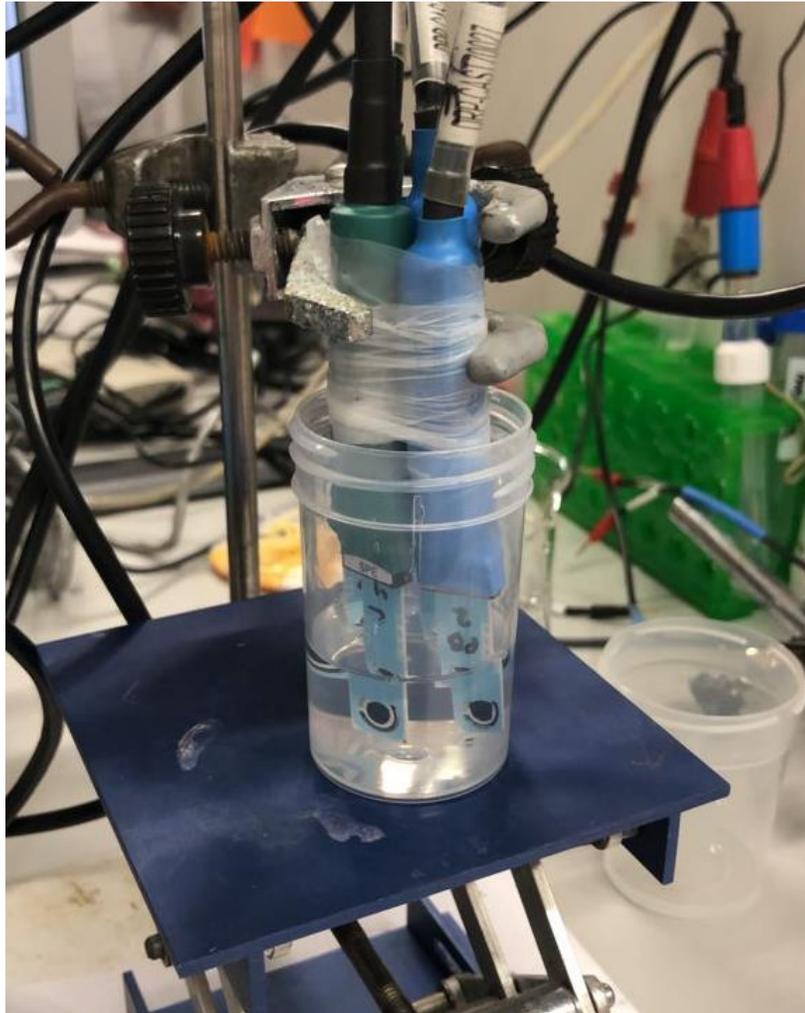
Modelización

- 🌀 Drogas puras, concentración variable
- 🌀 Validación cruzada: division (train/test): 80:20
- 🌀 Acierto en la identificación (conjunto test externo): 91.7%

	Coc	Her	MDMA	MetA
Coc	2	1	0	0
Her	0	2	0	0
MDMA	0	0	3	0
MetA	0	0	0	4



Prototipo para la detección rápida, sensible, in situ de drogas y precursores



BorderSens project has received funding from the European Union's Horizon 2020 research and innovation programme. This presentation reflects only the author's view and the Commission is not responsible for any use that may be made of the information contained therein.

Border detection of illicit drugs and precursors by highly accurate electrosensors



The ultimate research aim of the BorderSens project (grant agreement No 833787) is to develop a portable, wireless single prototype device with capability to test for different types of drugs, precursors and adulterants/cutting agents within 45 seconds, with outstanding accuracy and reduced false positives and false negatives.

Universities



Companies



End-users

Funding programme:
H2020 (topic SU-SEC-2018)

Total budget:
€5,504,415

Duration:
September 2019 – August 2023





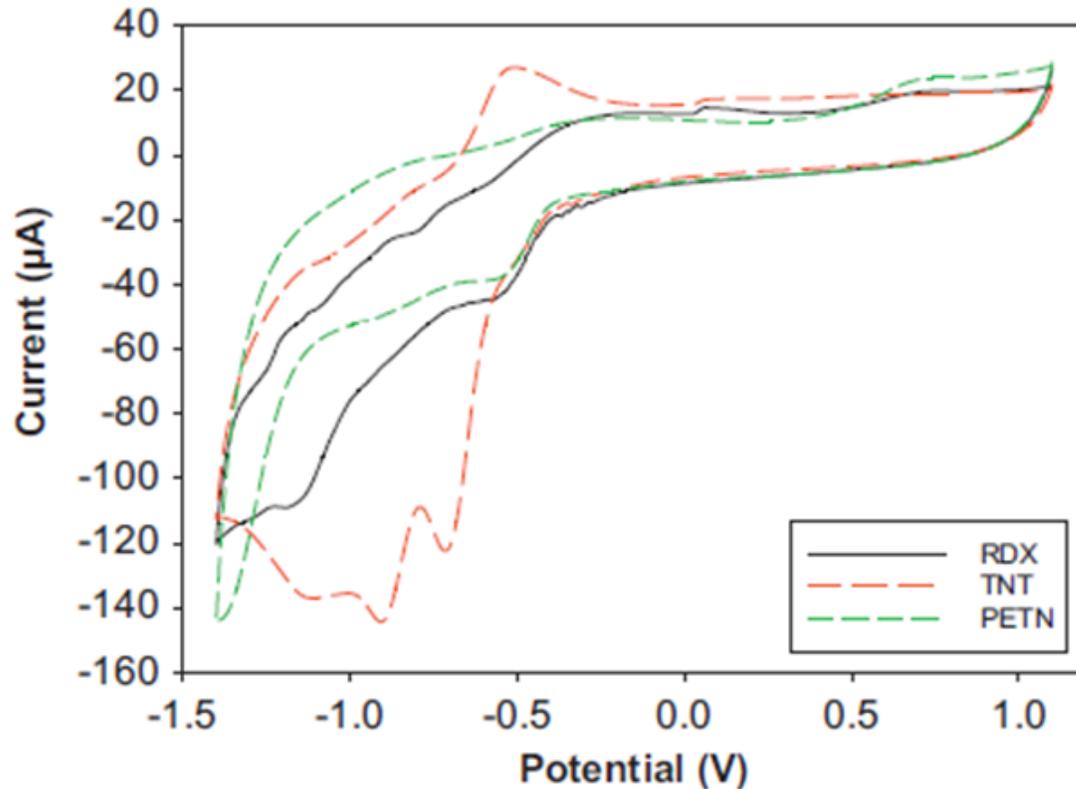
Contents lists available at SciVerse ScienceDirect

Talanta

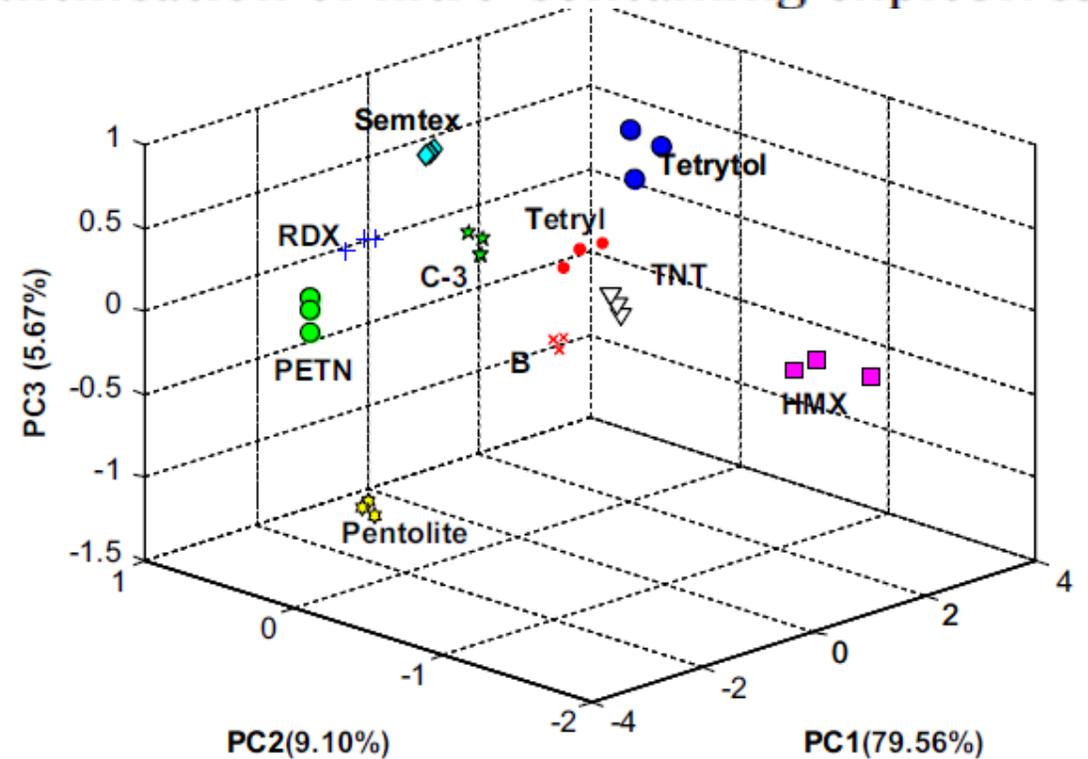
journal homepage: www.elsevier.com/locate/talanta



Simultaneous identification and quantification of nitro-containing explosives



data tr



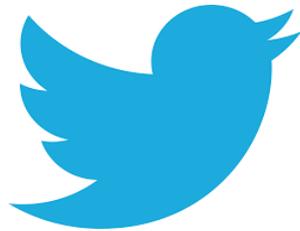
Para seguirnos:



<http://www.bordersens.eu>



<https://www.linkedin.com/company/bordersens>



<https://twitter.com/bordersens>

Infrastructure and Transport Engineering

Socio-Technical Systems

Dr.- Jenaro Nosedal-Sánchez

Jenaro.nosedal@uab.cat

Universitat Autònoma de Barcelona



Solutions

Situational Awareness Models

Risk analysis models

Agent Based Simulation

Causal Analysis

Participatory Modeling

Decision Support Systems

References

E-PILOTS (H2020)



PARTAKE (H2020)



EVOATM (H2020)



AGENT (H2020)



FUPOL (FP7)



INTERACTION (FP7)



- Human-in-the-Mesh
- Human-Hazard interactions
- Agent-Based Modeling and Simulation
- Shared Situational Awareness
- Digital Ecosystems
- Serious Games
- Resilience analysis



Institute of Law and Technology

Universitat Autònoma de Barcelona

Dr. Jorge González-Conejero

jorge.gonzalez.conejero@uab.cat

UAB
Universitat Autònoma
de Barcelona



Proyectos



TAKEDOWN



TAKEDOWN Identify . Prevent . Respond

HOME CONFERENCE NEWS ABOUT DISSEMINATION CONSORTIUM CONTACT

Are you looking for knowledge, tools and services for preventing and countering extremism and crime?
Visit First-Line-Practitioners.com

VISIT

A background graphic of a network diagram with blue nodes and connecting lines, set against a dark blue and purple gradient.

<https://www.takedownproject.eu>

OBJECTIVES



ANALYSE

the body of scientific knowledge on organized crime and terrorist networks



UNDERSTAND

the social, psychological and economic aspects of organized crime and terrorist networks



PROVIDE

dynamic, multi-dimensional models for organized crime and terrorist networks



CREATE

toolkits for first line practitioners, law enforcement and policy makers



BUILD

an extensive Open Information Hub for practitioners and the public



DEVELOP

a Solutions Platform for law enforcement agencies and security companies

SPIRIT



support@spirit-tools.com in f t

 SPIRIT
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HOME ABOUT SPIRIT CONSORTIUM NEWS & EVENTS LOGIN

Scalable privacy preserving intelligence analysis for resolving identities (SPIRIT)

The SPIRIT project will take a novel approach in the development, testing, training and evaluation of a new scalable privacy preserving intelligence analysis for resolving identities system prototype.

 The Workplan

 Ethical Monitoring Structures

 Pilot Prototyping

<http://spirit-tools.com>

Ethics self-assessment

Section 4: PROTECTION OF PERSONAL DATA	YES/NO		Information to be provided in the proposal	Documents to be provided on request
<p>Does your activity involve processing of personal data?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>1) Details of the technical and organisational measures to safeguard the rights and freedoms of the participants/data subjects. These may include:</p>	<p>1) Informed consent forms and information Sheets (if relevant). 2) Data management plan (if relevant). 3) Data protection impact assessment (if relevant).</p>

<p>Is it planned to export personal data (data transfer) from the EU to non-EU countries?</p> <p><i>Specify the type of personal data and countries involved</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>1) Details of the types of personal data and countries involved. 2) Explanation as to how the rights and freedoms of the participants/data</p>	<p>1) Confirmation that data transfers will be made in accordance with Chapter V of the General Data Protection Regulation 2016/679</p>
---	--------------------------	--------------------------	---	---

<p>Does your activity involve further processing of previously collected personal data (including use of pre-existing data sets or sources, merging existing data sets)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>1) Details of the database used or of the source of the data. 2) Details of the data processing operations. 3) Explanation as to how the rights of the participants/data subjects will be safeguarded. 4) Explanation as to how all of the processed data is relevant and limited to the purposes of the project ('data minimisation' principle) 5) Justification of why the data will not be anonymised/pseudonymised (if relevant).</p>	<p>1) Confirmation that the data controller has a lawful basis for the data processing and that the appropriate technical and organisational measures are in place to safeguard the rights of the data subjects 2) Permission by the owner/manager of the data sets (e.g. social media databases) (if applicable). 3) Informed Consent Forms + Information Sheets + other consent documents (if applicable).</p>
---	--------------------------	--------------------------	--	--

Legal & Ethics

- Identificar el marco ético y legal específico aplicable al proyecto
- Detectar los posibles riesgos en función de la propuesta
 - Datos personales y privacidad
 - Participación de individuos en la investigación
 - Participación/afectación de grupos vulnerables
 - Uso de tecnologías y su potencial impacto en individuos y en la sociedad
- Detallar las acciones que se llevarán a cabo para minimizar los posibles riesgos en caso de *misuse* e *incidental findings*

Work Package



- Establecer el marco legal y ético en función del proyecto
- Evaluación de impacto integral: derechos humanos, protección de datos, ética e impacto social
- Establecer un modelo regulatorio específico para el proyecto para asegurar el cumplimiento ético y legal de todas las actividades de investigación y los correspondientes resultados
- Diseñar/implementar la estrategia de monitorización interna y externa para el proyecto:
 - Nombramiento de comité ético independiente específico para el proyecto
 - Nombramiento de un Data Protection Advisor para el proyecto



UAB
Universitat Autònoma
de Barcelona

Dep. of Information and Communications Engineering

DEIC

- Relatively small department
 - (15 permanent PDI)
- Research on **security** since ~1987
- 3 research groups
- Research expertise:
 - EU and national projects (research and industry)
 - High publication record, active role in academic venues

Coding, Compression and Security



- Combinatorics, Coding and Security Group
- Group on Interactive Coding of Images
- Security of Network and Distributed Applications

<https://deic-web.uab.cat/recerca.php>

Combinatorics, Coding and Security

Study, construction and classification of nonlinear families of optimal codes for the detection and correction of errors in digital transmission systems and data storage by using both combinatorial and algebraic techniques.

- Optimal codes,
- Codes over rings,
- Network coding,
- Steganography and hiding information
- Distributed storage
- Locally Repairable Codes,
- Quantum codes,
- Code-based post-quantum cryptography

Group on Interactive Coding of Images

Research lines:

- Data compression
- Data transmission
- Data sharing
- Data storage
- Data archiving

Topics of interest:

- Remote sensing
- Earth Observation
- Big data
- Internet-Of-Things
- Machine Learning

UAB-DEIC-GICI

Experience & Proficiency: Examples of previous participation in funded projects.

1. WhiteDwarf 2.0 Maintenance of Compression Implementations

Reference: European Space Agency (ESA) Contract No. 4000133664/20/NL/AS. January 2021 – December 2021

2. Framework para la evaluación de la calidad de imágenes para segmentación y clasificación con algoritmos de deep learning

Ministerio de Ciencia e Innovación, Satellogic Solutions SL, Fundació EURECAT, RTC2019-007434-7. July 2020 – December 2022

3. Robust Compression of Fixed Length Housekeeping Data // Raw SAR Compression Consultative Committee for Space Data Systems.

Centre National d'Etudes Spatiales (CNES), French Space Agency. Multi-Hyperspectral Data Compression Working Group, with participation from ESA. July 2020 – December 2021.

4. High-Speed Integrated Satellite Data Systems For Leading EU Industry (Hi-SIDE)

European Commission H2020, Leit Space,776151. January 2018 – July 2022.

5. Multicomponent remote-sensing data compression

Centre National d'Etudes Spatiales (CNES), French Space Agency. September 2011 – June 2020.

6. Multidimensional Image Coding. Applications to Remote Sensing and Telemedicine (MIC-RS-TM)

European Union Framework Program VII, People Marie Curie Actions, FP7-PEOPLE-2009-IIF, FP7-250420. July 2010 – January 2012.

Security of Networks and Distributed Applications

- **Opportunistic Networks**
 - Routing, security, VANETs, network privacy, ...
- **Bitcoin** and cryptocurrencies
 - Blockchain, lightning networks, privacy, ...
- **Privacy in user/data analysis and publication**
 - Privacy-preserving data publication, privacy in machine learning, ...

Security expertise/interest

- **Blockchain technology**
 - High technical knowledge
 - Bitcoin, Lightning Network (Layer 2)
- **Network security**
 - Opportunistic networks
- **Data Privacy**
 - Machine learning and privacy, data mining, differential privacy, k-anonymity, ...

DEIC - Contact

<http://deic.uab.cat>

- Guillermo Navarro-Arribas guillermo.navarro@uab.cat
- DEIC Manager:
 - Joan Serra Sagristà joan.serra@uab.cat