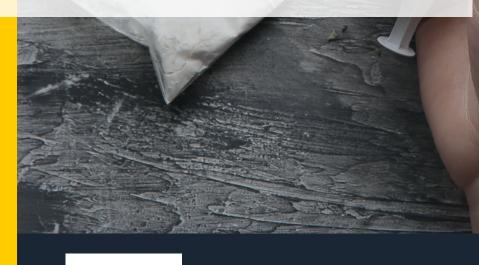
# DRUG PRODUCTION, DISTRIBUTION, AND FORENSICS RESEARCH IN HORIZON 2020 AND HORIZON EUROPE





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#### About ENACT

ENACT is a knowledge network focused on the fight against crime and terrorism (FCT). The network is funded under the Horizon Europe Framework Programme in Cluster 3 – Civil Security for Society. The project addresses the call topic HORIZON-CL3-2022-SSRI-01-02 'Knowledge Networks for Security Research & Innovation', aiming to collect, aggregate, process, disseminate and make the most of the existing knowledge in the FCT area.

The project aims to satisfy two major ambitions,

- Provide evidence-based support to the decision-makers in the EU research and innovation (R&I) ecosystem in the FCT domain, targeted explicitly at enabling more effective and efficient programming of EU-funded R&I for the fight against crime and terrorism.
- Act as a catalyst for the uptake of innovation by enhancing the visibility and reliability of innovative FCT security solutions.

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# Acronyms

3D	Three-Dimensional
ATS	Amphetamine-Type Stimulants
CLI	Crime Light Imaging
CORDIS	Community Research and Development Information Service
DG-HOME	Directorate-General for Migration and Home Affairs
eLLI	Electrified Liquid-Liquid Interface
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ERC	European Research Council
EU	European Union
EUCST	EU Civil Security Taxonomy
EUDA	European Union Drugs Agency
FCT	Fight against Crime and Terrorism
H2020	Horizon 2020
GC-QEPAS	Gas Chromatography Quartz Enhanced Photo Acoustic Spectroscopy
GC-PID	Gas Chromatography with Photoionization Detection
GHB	Gamma-Hydroxybutyrate
IMS	Ion Mobility Spectrometry
LC/MS	Liquid Chromatography with Mass Spectrometry
LIF	Laser Induced Fluorescence
LS-LIF	Laser Scattering and Laser Induced Fluorescence
MDMA	3,4-methylenedioxymethamphetamine
MIPs	Molecular Imprinted Polymers
МОх	Metal Oxides
NIR	Near-Infra-Red
NPS	New Psychoactive Substances
GC-QEPAS	Gas Chromatography Quartz Enhanced Photo Acoustic Spectroscopy
R&I	Research and Innovation
SME	Small and Medium-sized Enterprises
THz	Terahertz
UAV	Unmanned Aerial Vehicle



# Drug production, distribution, and forensics research in Horizon 2020 and Horizon Europe: Introduction

In July 2024, the EMCDDA (European Monitoring Centre for Drugs and Drug Addiction) formally became EUDA (the European Union Drugs Agency) [1]. EUDA, in its new role, has four main areas for action:

- Anticipate future drug-related challenges and their consequences.
- Alert in real time on new drug risks and threats to health and security.
- Help the EU and its Member States strengthen their responses to the drug phenomenon.
- **Facilitate** EU-wide knowledge exchange and learning for evidence-based policies and interventions.

The transformation from EMCDDA to EUDA provides a stronger mandate for tackling both emerging health and security challenges of illicit drugs. The focus of this report supports the latter of these areas under three specific pillars: **drug production**; **drug distribution** and **drug forensics**. Specifically, the commission of this flash report places the spotlight on research in these three areas funded through the European research programmes: **Horizon 2020** and **Horizon Europe**.

The first topics under Horizon 2020 launched in 2014 with the final projects commencing in 2021. Following this, the Horizon Europe programme began in 2021 and will continue until 2027. The most recent calls were in 2023 with projects beginning in 2024. Therefore, this report covers projects funded during the last 10 years with many complete already completed, but several still active. The most recently funded projects will begin in the autumn of 2024. Outside the scope of this report, several projects related to drugs have also been funded under the Internal Security Fund – Action Grants theme where calls specifically focused on drug topics were launched in 2017 [2], 2019 [3], 2020 [4] and 2022 [5].

- [1] https://www.euda.europa.eu/
- [2] <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/ISFP-2017-AG-DRUGS</u>
- [3] <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/ISFP-2019-AG-DRUGS</u>
- [4] <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/isfp-2020-ag-drugs</u>
- [5] <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/isf-2022-tf1-ag-drugs</u>

The primary driver of research in both Horizon 2020 and Horizon Europe relating to drugs comes under the responsibility of DG-HOME (Directorate-General for Migration and Home Affairs); and specifically, the calls under the Secure Societies and Civil Security for Society work programmes.

ENACT is aligned to the topic of the Fight against Crime and Terrorism; however, for the purpose of this report it was also relevant to consider projects funded under the Border Management pillar as many of these projects have clear alignment with combatting illicit drugs, due to many detection activities happening at the border. As with all ENACT products, analysis of the data collected is undertaken in line with the EU Civil Security Taxonomy (EUCST) and classifications of the EU security market in policy areas, security functions and technology areas [6].

# Horizon programme and drugs-related projects

For the purposes of this report, data was extracted from the ENACT Knowledge Repository, the analysis of FCT R&I from the first ENACT Analytical Report [7], additional analysis of projects funded under the call topics under the Border Management pillar and searches on CORDIS [8] for projects mentioning 'drugs' or 'illicit substances' to form a baseline set of projects under consideration. Projects were only included if they were directly related to drugs in the context of the fight against crime and terrorism; therefore, projects that focused on health-related research were excluded.

The goal of this report is to analyse projects that relate to drug production, distribution or forensics techniques. Broadly, the scope of each of these topics included the following:

- **Drug Production**: the creation or cultivation of illicit drugs.
- **Drug Distribution**: the sale or trafficking of illicit drugs.
- Forensics: techniques for screening, detecting, and identifying illicit drugs.

Furthermore, we also included a separate category to highlight projects that aligned to the border security and border management perspective; especially as these projects often focused on non-forensics-based detection. Given the wide scope of many projects funded through the Horizon programmes, projects could be linked to more than one category.

[6] <u>https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security/eu-security-market-study/eu-civil-security-taxonomy-and-taxonomy-explorer\_en
 [7] ENACT (2024) FCT R&I: An analysis of EU priorities 2014- 2024. <u>https://enact-eu.net/wp-content/uploads/2024/04/ENACT-Analytical-Report-01-FCT-RI-An-analysis-of-EU-priorities-2014-2024.pdf</u>
 [8] <u>https://cordis.europa.eu/</u>
</u>





In total 34 projects – 23 from Horizon 2020 and 11 from Horizon Europe were identified. The majority of these are from the Secure Societies (H2020) or Civil Security for Society topics; however, a small number of projects are from Marie Skłodowska-Curie Actions, European Research Council (ERC) and SME instruments. As shown in Figure 1, most projects are related to drug distribution, followed by drugs and border security, drug forensics and then limited number of projects that link to drug production; although projects may encompass more than one category. Currently, the analysis includes seven years of projects from Horizon 2020 and only three years of projects under Horizon Europe. In general, there are more projects funded under Horizon 2020; however, with the exception of drugs forensics, there appears to be an overall increase in projects relating to drugs in the Horizon Europe programme.

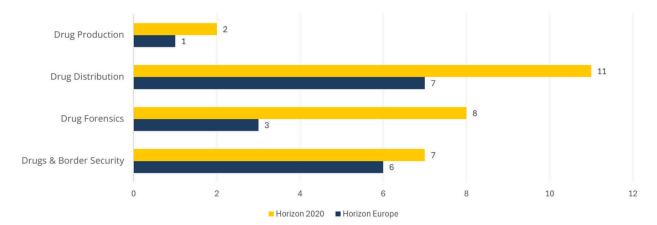


Figure 1 - Projects funded under H2020 and Horizon Europe.

In addition, it is worth noting that there were several call topics that could be related to the topics of drugs that either did not result in funded projects related to drugs (as the topic covered multiple areas) or no calls were funded overall. These were:

- FCT-02-2015 Forensic topic 2 [9]: Advanced, easy-to-use in-situ forensic tools at the scene of crime.
- SEC-08-FCT-2016: Forensics techniques [10] on: a) trace qualification, and b) broadened use of DNA.
- SU-FCT04-2020 [11]: Chemicals: intelligence, detection, forensics.
- HORIZON-CL3-2022-FCT-01-01 [12]: Improved crime scene investigations related to transfer, persistence, and background abundance.

 $[10] \underline{https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/sec-08-fct-2016} \\ [10] \underline{https://ec.europa.eu/info/funding-tenders/opportunities/topic-details/sec-08-fct-2016} \\ [10] \underline{https://ec.europa.eu/info/funding-tenders/opportunities/topic-details/sec-08-fct-2016} \\ [10] \underline{https://ec.eu/info/funding-tenders/opportunities/topic-details/sec-08-fct-2016} \\ [10] \underline{https://ec.eu/info/funding-tenders/opportunities/topic-details/sec-08-f$ 

[11] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/su-fct04-2020

[12] <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl3-2022-fct-01-01</u>

<sup>[9]</sup> https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/fct-02-2015

# **Classification of drugs-related projects**

#### FCT policy areas

Out of the 34 projects identified, they are mainly classified under three L2 policy areas – **organised crime** (76%); **terrorism and radicalisation** (29%); and **societal and horizontal issues** (38%). Typically, organised crime is the primary area, while other policy areas are secondary areas – as projects often cover multiple topics and use cases (e.g., projects related to chemicals/precursor detection may detect chemicals for use in drug production but also for explosives).

#### **Organised crime**

Overall, 76% of all identified projects has some relation to organised crime and all of these projects were specifically working in the area trafficking of humans and goods. It is worth noting that according to the EUCST the trafficking of humans and goods topic also explicitly includes illicit drug production as well as distribution (i.e., trafficking). Additionally other projects also relate to other aspects of organised crime including cargo crime, economic crime and environmental crime.

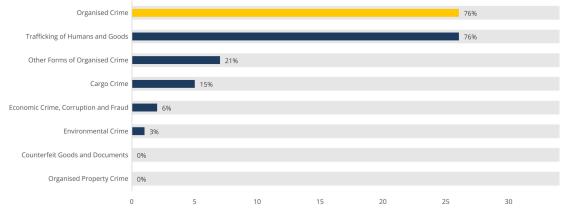


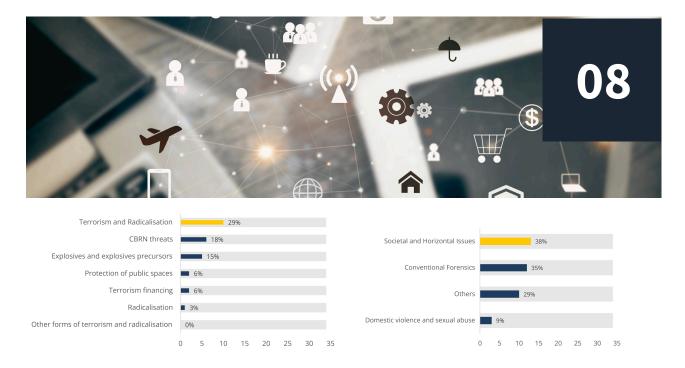
Figure 2 - Distribution of projects classified under the organised crime policy area.

#### **Other policy areas**

Considering other areas of the EUCST, 29% of drug-related projects also touch on the topic of Terrorism and Radicalisation – this includes the projects that consider aspects of chemicals, explosives, and protection of public spaces (such as **SYSTEM**). Furthermore, this includes projects such as **NOTIONES** (a network project that covers a wide range of areas), **TITANIUM** which looks at underground markets that may be used to sell drugs but can also contribute to terrorist financing or **COPKIT** which develops tools for early warning of threats in the context of fighting organised crime and terrorism.

Other projects in this area include Border Management-related projects that are detecting various substances in packages or cargo – which may be drugs but also substances that relate to terrorism.





*Figure 3 – Distribution of projects in the areas of terrorism and radicalisation and societal and horizontal issues.* 

While 38% of projects relate to societal and horizontal issues, the majority of these are for projects developing solutions in conventional forensics – typically the screening, detection and identification of drugs through forensic techniques (e.g., **MicroMole**, **NOSY** and **NARCOSIS**). Additionally, some projects are specifically focused on drugs that facilitate or contribute to sexual abuse (e.g., **DrugStop**, **ARMADILLO** and **e-gainstRapeDrugs**) which are also classified here; although many overlap with the projects focused on conventional forensics.

#### **FCT Functions areas**

In the functions area, the overwhelming correlation was with the **detection of goods**, **substances**, **assets** and **people**, and **incidents**. Overall, 62% of all projects delivered some function that was aligned to this functional area which includes various approaches to detection from chemical detectors to x-ray, to spectroscopic techniques through to video analysis. Other primary functional areas include i**nvestigation and forensics** (32%) which includes conventional forensics but not digital forensics and therefore primarily includes projects that are developing various sensors and come from the FCT area rather than the Border Management area. Similarly, **data**, **information**, **& intelligence gathering management and exploitation** (32%) also include projects that place a greater emphasis on online detection and other data analytic-oriented projects.

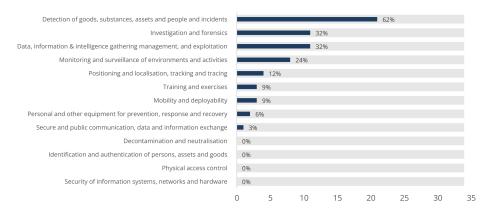


Figure 4 – Distribution of drugs projects in relation to FCT functional areas.

# FCT technology areas

As a natural follow on from the alignment with the FCT functions areas, the main classification of the technology areas in drugs-related projects focus on **screening and detection** (62%), followed by **surveillance systems** and **monitoring tools and services** (both 24%), and finally **laboratory equipment for gathering and forensic analysis of samples** and **data analytics** (both 21%). Screening and detection include projects that are detecting substances using forensics-based techniques as well as those applied to detection of drugs in the post or through cargo.

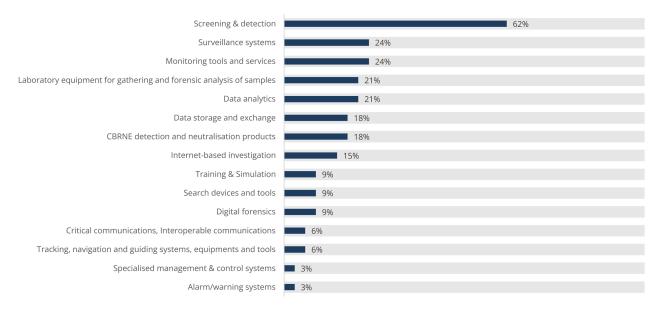


Figure 5 – Distribution of drugs-related projects according to FCT technology areas.

# In-depth: Innovation in Technology in the Horizon programmes

#### **Drug production**

Only a limited number of projects explicitly concern drug production within the Horizon programmes, such projects focus on environmental monitoring, such as through sewage systems, which may indicate the presence of clandestine laboratories. **MicroMole** (completed) focuses on detecting amphetamine-type stimulants (ATS), and their precursors in the sewage system by deploying small carrier robots that install small sensors in sewage pipes that detect abrupt changes in pH consistent with the spillage of ATS-like substances and can wirelessly transmit information to a monitoring station up to 200m away. These results were taken up in the **SYSTEM** (completed) project that expanded to the detection of NPS and merged with the results of the **NOSY** (completed) project, expanding on the available sensors to include those that detect metal oxides (**MOx**) molecular imprinted polymers (**MIPs**), liquid chromatography with mass spectrometry (**LC/MS**), fast gas chromatography with photoionization detection (**GC-PID**) with the aforementioned pH sensors.





# **Drug distribution**

Drug distribution projects primarily focus on detecting the sale and trafficking of drugs; however, the point and mechanism for detection varies significantly across projects.

A number of FCT-based projects focus on the **intelligence** aspects by anticipating and detecting of drug-related organised crime from online information. Projects such as **COPKIT** (completed) take a broad approach covering early warning systems for all organised crime threats [13] by developing data acquisition and analysis tools, as did **ROXANNE** (completed) which looked at specific techniques for network, text and speaker analysis for intelligence extraction, with a use case focused on drug distribution.

More specifically, projects such as **ANITA** (completed) place a greater emphasis on analysing online vectors for the sale and trafficking of drugs including **counterfeit medicines** and **NPS** as well as illicit drugs by developing a plethora of analytical techniques applied to **cryptocurrency transactions** and other **online data** (surface, deep and dark web) to identify patterns across drug trafficking activities. Similarly, **TITANIUM** (completed) focused more explicitly on the analysis of the financial and **cryptocurrency** aspects in relation to terrorism and organised crime.

The **ARIEN** (ongoing) project represents another data-oriented project that uses **artificial intelligence** to understand the **distribution of illicit drugs online**, as well as how such information may support the identification on **physical drug hotspots** and wider drug **distribution networks**.

**Training** that supports investigators in their investigations is also a crucial factor to consider for investigations. **LAW-TRAIN** (completed) project exclusively focused on improving training for joint investigations through **virtual reality**. A specific scenario was developed and tested for drug trafficking investigations integrating multiple activities within the investigation timeline from preparation to interviews to debriefing [14].

Meanwhile the **border management and customs aspects** of detecting drug distribution range from remote border monitoring, especially in maritime environments, to container and cargo search, scanning of items through the postal service through to the detection of drugs on persons or in their luggage.

<sup>[13] &</sup>lt;u>https://cordis.europa.eu/article/id/435695-fighting-crime-through-technology-and-collaboration</u> [14] <u>https://cordis.europa.eu/article/id/218539-virtual-reality-training-to-help-catch-drug-trafficking</u>

For **remote border monitoring**, several projects aim to combat all forms of trafficking by deploying UAVs (or similar) alongside sensor technology such as radar, LIDAR, acoustic sensors and cameras. **SafeShore** (completed) focused on the detection of small boats or other drones [15] as vehicles that support trafficking, with similar approaches also used by **ALFA** (completed) to detect low-flying aircraft. More recently, the **EUROMARS** (ongoing) project develops a wider surveillance system that supports maritime security including those activities that support the trafficking of drugs.

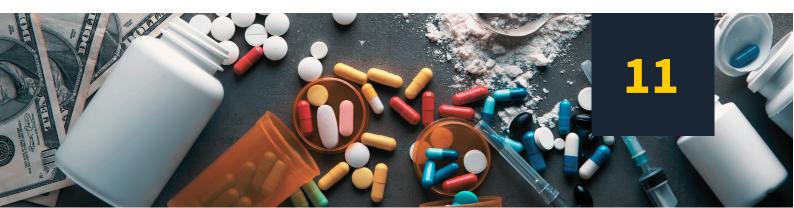
Several projects, especially those in the border management area focus **on non-intrusive inspection** of cargo or packaging to detect the transmission of drugs, amongst other things. **C-BORD** (complete) applies a number of techniques to support drug detection **including x-ray, target neutron interrogation, photofission, sniffing and passive detection**. A similar approach is also developed in **ENTRANCE** (complete) which also further supports **automated risk assessment** of cargo and freight containers. The ongoing **MULTISCAN 3D** project also scans cargo using **laser-plasma technologies** and **3D tomography** supported by photofission for inspection, which is similar to the approaches being explored in the **SilentBorder** project that utilises **cosmic ray tomography** for passive detection of contraband in containers. Finally, the **CosmoPort** (ongoing) project develops **atmospheric ray tomography** scanning techniques for advanced detection of contraband materials.

The **METEOR** (ongoing) project takes an alternative approach using **air sampling** and a differential mobility analyser to detect chemical fingerprints of various substances for non-intrusive detection of cargo containers. **SAUST** (commencing September 2024) also takes an air-based detection approach by applying **explosive vapour detection techniques** to the detection of drugs and NPS, specifically for luggage inspection.

The postal service is also another common vector for trafficking of drugs (and other contraband), the **PARASEC** project (ongoing) tests three non-intrusive inspection techniques - a **multi-energy photon counting** detector, **neutron-induced gamma-ray spectroscopy**, and **x-ray diffraction** for the analysis of letters and parcels. A similar goal is found in the **iFlows** project (ongoing) which combines enhances intelligence with novel detection technologies including **THz** and **Ultrawideband** scanning connected to legacy systems that use **x-ray** or **Raman-based imaging**.

The **MELECHIOR** (ongoing) project considers the trafficking of drugs concealed on (or inside) a person through the use of **mechanical impedance**. While currently focused on border crossing, the technology may also apply to domains such as prisons or be combined with bioaerosols or chemical vapour detection. The approach avoids the need for contact with the individual in question enhancing privacy for those searched.

[15] <u>https://cordis.europa.eu/article/id/358597-plugging-gaps-in-threat-detection-at-borders-protects-against-smallscale-agents</u>





Finally, the **BorderSens** (complete) project developed an array of sensors for detecting drugs, their precursors and cutting agents in the context of drug smuggling. Specific approaches include a sensor for the detection of cocaine [16] as well as a multi-drug detection system for substances such as heroin, ketamine, and amphetamines.

# **Drug forensics**

Both on-site and laboratory-based forensics appear across various Horizon projects. **RISEN** (on-going) focuses on analysis that could take place at the crime scene through both the development of **contactless sensors** for detecting trace materials and **3D modelling** of the crime scene. The system detects all-types of trace materials including drugs, sensors developed for drug detection include **Crime Light Imaging** (CLI), **GC-QEPAS** (Gas Chromatography Quartz Enhanced Photo Acoustic Spectroscopy), **LS-LIF** (Laser Scattering and Laser Induced Fluorescence), **Raman**, **Infra-Red**, and **IMS** (Ion Mobility Spectrometry) [17].

Detectors for in-place drug detection are developed in **NarcoScan** (complete) focusing on pocket-sized scanning for screening narcotics on the streets utilising **near-infra-red** (NIR) sensors, combined with a mobile application for identification. Similarly, **NARCOREADER** (complete) also develops **portable approaches** to detection using **electrochemical sensors** specifically focused on detecting cocaine, heroin, amphetamine, methamphetamine, MDMA and cannabinoids. A third project, **BioMensio** (complete) also develops a portable drug sensing platform for multiple drugs using saliva samples based on a **microarray biosensor**.

The **DrugStop** (complete) approach develops a solution for detecting if a drink has been spiked with an illicit substance, although the project itself was oriented towards the identification of the market for such a device. **ARMADILLO** (starting October 2024) is also developing a series of portable sensors focused on detecting GHB in urine, saliva, and drinks using spectroscopic and electrochemical sensors combined with data fusion approaches. The **e-gainstRapeDrugs** (ongoing) project specifically considers the detection of benzodiazepines using electrified liquid-liquid interface (**eLLI**) analytical tools for non-experts to perform on-the-spot detection.

 <sup>[16] &</sup>lt;u>https://cordis.europa.eu/article/id/450455-new-sensor-innovations-aim-to-tackle-drug-smuggling</u>
 [17] RISEN (2023) D8.3 Testing methods and a validation plan for each analytical sensor in laboratory tests, p45-46. <u>https://cordis.europa.eu/project/id/883116/results</u>

The **NARCOSIS** project, which will begin in late 2024, focuses on the ecosystem of NPS detection by supporting the development of a diagnostic platform that adapts to changes in the make up on NPS utilising approaches based on **Raman sensors**, **infra-red**, **high-resolution mass spectrometry**, and **hyper-spectral imaging** alongside a **reference database** to support rapid identification of drugs.

A limited number of projects were oriented away from technology and focused towards analysing the criminal hierarchies in organised crime groups involved in drug trafficking (e.g., **UCOC** - completed).

These types of projects can help to understand the wider social structures surrounding organised crime and drug trafficking, an approach also shared by the **FORENSICS** project (complete) that models illicit markets such as those that support the sale and trafficking of drugs. Similarly, projects such as **NOTIONES** (on-going) cover organised crime more broadly and places drug-related crime in this wider context [18].

[18] https://www.notiones.eu/wp-content/uploads/2024/04/Cross-agency-situation-report-organised-crime-2023.pdf



#### APPENDIX A - List of drugs-related projects

Framework	Grant Agreement	Acronym	Name	Funding Call	CORDIS Link	Start	End
Horizon 2020	653626	MicroMole	Sewage Monitoring System For Tracking Synthetic Drug Laboratories	FCT-05-2014: Law enforcement capabilities topic 1: Develop novel monitoring systems and miniaturised sensors that improve Law Enforcement Agencies' evidence- gathering abilities	<u>https://cordis.europa.eu/project/id/653626</u>	Sep-15	Feb-19
Horizon 2020	653839	NOSY	New Operational Sensing sYstem	FCT-05-2014: Law enforcement capabilities topic 1: Develop novel monitoring systems and miniaturised sensors that improve Law Enforcement Agencies' evidence- gathering abilities	<u>https://cordis.europa.eu/project/id/653839</u>	Sep-15	Aug-18
Horizon 2020	653587	LAW-TRAIN	Mixed-reality environment for training teams in joint investigative interrogation- Intelligent interrogation training simulator	FCT-07-2014: Law enforcement capabilities topic 3: Pan European platform for serious gaming and training	<u>https://cordis.europa.eu/project/id/653587</u>	May-15	Apr-18
Horizon 2020	787128	SYSTEM	SYnergy of integrated Sensors and Technologies for urban sEcured environMent	SEC-10-FCT-2017: Integration of detection capabilities and data fusion with utility providers' networks	https://cordis.europa.eu/project/id/787128	Sept-18	Feb-22
Horizon 2020	700643	SafeShore	System for detection of Threat Agents in Maritime Border Environment	BES-02-2015: Maritime Border Security topic 2: affordable and easily deployable technologies for EU coastal border surveillance with reduced impact on the environment	https://cordis.europa.eu/project/id/700643	May-16	Dec-18
Horizon 2020	700002	ALFA	Advanced Low Flying Aircrafts Detection and Tracking	BES-04-2015 Maritime Border Security topic 4: Detection of low flying aircraft at near shore air space	https://cordis.europa.eu/project/id/700002	Jan-17	Dec-19
Horizon 2020	752743	ucoc	Understanding the Commitment in Organized Crime	MSCA-IF-2016 - Individual Fellowships	https://cordis.europa.eu/project/id/752743	Mar-18	Feb-21
Horizon 2020	101021853	NOTIONES	iNteracting netwOrk of inTelligence and securIty practitiOners with iNdustry and acadEmia actorS	SU-GM01-2018-2019-2020: Pan-European networks of practitioners and other actors in the field of security	https://cordis.europa.eu/project/id/101021853	Sept-21	Aug-26
Horizon 2020	786687	СОРКІТ	Technology, training and knowledge for Early-Warning / Early-Action led policing in fighting Organised Crime and Terrorism	SEC-12-FCT-2016-2017: Technologies for prevention, investigation, and mitigation in the context of fight against crime and terrorism	https://cordis.europa.eu/project/id/786687	Jun-18	Sept-21
Horizon 2020	787061	ANITA	Advanced tools for fighting oNline Illegal TrAfficking	SEC-12-FCT-2016-2017: Technologies for prevention, investigation, and mitigation in the context of fight against crime and terrorism	https://cordis.europa.eu/project/id/787061	May-18	Oct-21

Framework	Grant Agreement	Acronym	Name	Funding Call	CORDIS Link	Start	End
Horizon 2020	740558	TITANIUM	Tools for the Investigation of Transactions in Underground Markets	SEC-12-FCT-2016-2017: Technologies for prevention, investigation, and mitigation in the context of fight against crime and terrorism	https://cordis.europa.eu/project/id/740558	May-17	Apr-20
Horizon 2020	833635	ROXANNE	Real time network, text, and speaker analytics for combating organized crime	SU-FCT02-2018-2019-2020: Technologies to enhance the fight against crime and terrorism	https://cordis.europa.eu/project/id/833635	Sep-19	Dec-22
Horizon 2020	883116	RISEN	Real-tIme on-site forenSic tracE qualificatioN	SU-FCT02-2018-2019-2020: Technologies to enhance the fight against crime and terrorism	https://cordis.europa.eu/project/id/883116	Jul-20	Dec-24
Horizon 2020	653323	CBORD	effective Container inspection at BORDer control points	BES-09-2014: Supply Chain Security topic 2: Technologies for inspections of large volume freight	https://cordis.europa.eu/project/id/653323	Jun-15	Nov-18
Horizon 2020	783790	NarcoScan	NarcoScan pocket-sized and affordable narcotics screener: making drug detection on the streets as common as catching drunk drivers	H2020-SMEINST-2-2016-2017: Open Disruptive Innovation Scheme	https://cordis.europa.eu/project/id/783790	Sep-17	Jun-19
Horizon 2020	753223	NARCOREADER	Novel electrochemical strategies for rapid, on-site multiscreening of illicit drugs	Novel electrochemical strategies for rapid, on-site multiscreening of illicit drugs	https://cordis.europa.eu/project/id/753223	Nay-17	Apr-19
Horizon 2020	725081	FORENSICS	Illicit Markets, Unobserved Competitors, and Illegal Behavior	Illicit Markets, Unobserved Competitors, and Illegal Behavior	https://cordis.europa.eu/project/id/725081	Sep-17	Aug-23
Horizon 2020	848986	BioMensio	BioMensio mobile biosensing platform: the first truly palm-sized and accurate digital multi-drug test	BioMensio mobile biosensing platform: the first truly palm- sized and accurate digital multi-drug test	https://cordis.europa.eu/project/id/848986	Mar-19	Mar-22
Horizon 2020	833787	BorderSens	Border detection of illicit drugs and precursors by highly accurate electrosensors	Border detection of illicit drugs and precursors by highly accurate electrosensors	https://cordis.europa.eu/project/id/833787	Sep-19	Nov-23
Horizon 2020	883424	ENTRANCE	EfficieNT Risk-bAsed iNspection of freight Crossing bordErs without disrupting business	EfficieNT Risk-bAsed iNspection of freight Crossing bordErs without disrupting business	https://cordis.europa.eu/project/id/883424	Oct-19	Nov-24
Horizon 2020	101020100	MULITSCAN 3d	Laser-plasma based source 3D Tomography for cargo inspection	Laser-plasma based source 3D Tomography for cargo inspection	https://cordis.europa.eu/project/id/101020100	Sep-21	Feb-25
Horizon 2020	101021812	SilentBorder	Cosmic Ray Tomograph for Identification of Hazardous and Illegal Goods hidden in Trucks and Sea Containers	Cosmic Ray Tomograph for Identification of Hazardous and Illegal Goods hidden in Trucks and Sea Containers	https://cordis.europa.eu/project/id/101021812	May-21	Apr-25
Horizon 2020	698568	DrugStop	Drug detection for personal protection	DRS-17-2015-1 - Critical infrastructure protection topic 7: SME instrument topic: Protection of Urban soft targets and critical infrastructures	https://cordis.europa.eu/project/id/698568/	Nov-15	Feb-16

Framework	Grant Agreement	Acronym	Name	Funding Call	CORDIS Link	Start	End
Horizon Europe	101073985	EURMARS	An advanced surveillance platform to improve the EURopean Multi Authority BordeR Security efficiency and cooperation	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		Oct-22	Sep-25
Horizon Europe	101121329		ARtificial IntelligencE in fighting illicit drugs production and traffickiNg	HORIZON-CL3-2022-FCT-01-06: Effective fight against illicit drugs production and trafficking	https://cordis.europa.eu/project/id/101121329/	Nov-23	Oct-26
Horizon Europe	101168195	NARCOSIS	Non-tArgeted foRensic multidisCiplinary platfOrm for inveStigatIon of drug-related fatalitieS	HORIZON-CL3-2023-FCT-01-02: A harmonized European forensics approach on drugs analysis	https://ec.europa.eu/info/funding <u>- tenders/opportunities/portal/screen/how-to- participate/org- details/9999999999/project/101168195/program/ 43108390/details</u>	Oct-24	Sep-27
Horizon Europe	101168416	ARMADILLO	Accurate Reliable Portable and Rapid Methods And Technologies for Detection of GHB Substances and Prevention Against Different Forms of VioLence and AssauLt SuppOrted by These Drugs	HORIZON-CL3-2023-FCT-01-02: A harmonized European forensics approach on drugs analysis	https://ec.europa.eu/info/funding <u>- tenders/opportunities/portal/screen/how-to- participate/org- details/9999999999/project/101168416/program/ 43108390/details</u>	Oct-24	Sep-27
Horizon Europe	101073899	MELCHIOR	Mechanical Impedance and Multiphysics Concealed and Hidden Objects Interrogation	HORIZON-CL3-2021-BM-01-05: Improved detection of concealed objects on, and within the body of, persons	https://cordis.europa.eu/project/id/101073899	Sep-22	Aug-25
Horizon Europe	101073963		Parcel and Letter Security for Postal and Express Courier Flows	HORIZON-CL3-2021-BM-01-04: Advanced detection of threats and illicit goods in postal and express courier flows	https://cordis.europa.eu/project/id/101073963	Oct-22	Sep-25
Horizon Europe	101073990	iFlows	Advanced technologies for scanning and detection of illicit material for postal services and express courier flows	HORIZON-CL3-2021-BM-01-04: Advanced detection of threats and illicit goods in postal and express courier flows	https://cordis.europa.eu/project/id/101073990	Nov-22	Oct-25
Horizon Europe	101121379	CosmoPort	Using cosmic rays for better, more portable and efficient analysis and detection for customs (CosmoPort)	HORIZON-CL3-2022-BM-01-03: Better, more portable and quicker analysis and detection for customs	https://cordis.europa.eu/project/id/101121379	Oct-23	Sep-16
Horizon Europe	101121149	METEOR	Rapid, portable and reliable cargo screener - New concept of vapour screening technology - Ion Mobility Chemical Fingerprint Detector (METEOR)	HORIZON-CL3-2022-BM-01-03: Better, more portable and quicker analysis and detection for customs	https://cordis.europa.eu/project/id/101121149	Oct-23	Sep-16
Horizon Europe	101168146		High-Resolution vapour Screener for AUtomatic and faST belongings scanning	HORIZON-CL3-2023-SSRI-01-02: Accelerating uptake through open proposals for advanced SME innovation	https://cordis.europa.eu/project/id/101168146	Sep-24	Aug-26
Horizon Europe	101090335	e-gainstRapeDrugs	Electrified Liquid-Liquid Interfaces Supported in 3D Printed Platforms for Rapid Detection of Benzodiazepine Date Rape Drugs	HORIZON-WIDERA-2022-TALENTS-02: Fostering balanced brain circulation – ERA Fellowships	https://cordis.europa.eu/project/id/101090335	Apr-23	Mar-25







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