

NEWSLETTER



ODYSSEUS

ODYSSEUS H2020 PROJECT

Preventing, Countering, and Investigating Terrorist Attacks through Prognostic, Detection, and Forensic Mechanisms for Explosive Precursors

Welcome to the first edition of the ODYSSEUS project newsletter!

Dear readers,

We are happy to share with you the first ODYSSEUS project newsletter!

The ODYSSEUS project kicked off its activities in October 2021, and we already count more than one year of activities and developments that we look forward to sharing with you. This first issue gives an overview of the project, explains its vision and goals, and introduces the members of our Consortium. The newsletter intends to provide you with up-to-date information on the project's results, on the latest news and developments.

We hope you enjoy reading it!

The ODYSSEUS team



Let us introduce ODYSSEUS

ODYSSEUS – PREVENTING, COUNTERING, AND INVESTIGATING TERRORIST ATTACKS THROUGH PROGNOSTIC, DETECTION, AND FORENSIC MECHANISMS FOR EXPLOSIVE PRECURSORS is a research project funded by European Union's Horizon 2020 Research and Innovation Framework Programme under Grant Agreement No 101021857. The project will last for 36 months (1 October 2021 – 30 September 2023) and is funded with a total amount of about 5 Million Euros.

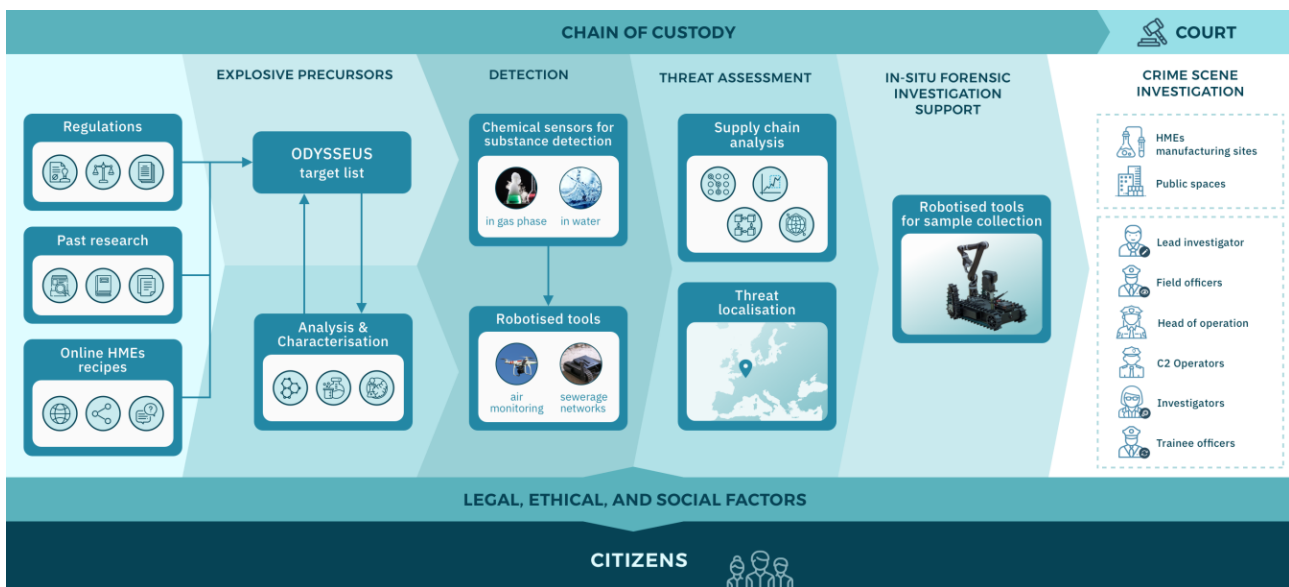
ODYSSEUS will focus on prognostic monitoring of online and offline environments where explosives and their precursors are discussed and traded, by collecting explosives recipes posted in online sources (such as social networks and the Dark Web), and by tracking explosive precursors in irregular transactions on the supply chain of chemicals and their reactants, with the goal to discover, retrieve, and improve knowledge on not yet studied precursors.

The ODYSSEUS project's Objectives are to:

- Discover potentially hitherto unknown information about explosive precursors and HMEs (Home Made Explosives) based on (i) gathering, mining, and understanding HME-related multilingual and multimedia online content in order to extract knowledge about (possibly unknown) precursors, and (ii) the subsequent characterization and analysis of selected precursors, including precursors not previously studied, for the determination of their explosive properties, feasibility, and potential for becoming a threat through appropriate theoretical and experimental investigations and tests.



- Monitor chemical supply chain operations in order to identify anomalous patterns that may predict future threats.
- Detect potential threats in identified areas of interest, including detection of HMEs at the manufacturing stage.
- Facilitate mobile detection of explosive precursors by using Unmanned Autonomous (Aerial and Ground) Vehicles (UAVs/UGVs) equipped with the developed sensors.
- Support forensic investigations through automated sample collection by robotized tools.



ODYSSEUS will achieve innovation in multiple dimensions and examine, in a novel manner, the interplay among several factors affecting the intelligence, detection, and forensic aspects associated with explosive precursors, including aspects not previously considered (such as the chemical supply chains).

ODYSSEUS Consortium



The ODYSSEUS Consortium consists of 18 partners, including from Academia (3), SMEs (3), Industries (2) and LEAs (4), residing in 11 EU countries and in one Observer State.



Colonel Professor Dr. Nikolai Stoianov – Project Coordinator of H2020 ODYSSEUS Project



Col. Prof. Dr. Nikolai Stoianov is well experienced in development of information systems with different designation, many of which are already brought into use in the different governmental systems. He is specialized in the sphere of Information Security and as such is involved in the European Projects on

the FP7 “INDECT”, “HOMER”; H2020 “GaP”, “ROBORDER”, “CAMELOT”, “FOLDOUT”, “CREST”, “NOTIONES”, “VALKYRIES”, “MEDEA”, “ODYSSEUS”; EDIDP “CUIIS”; EDA “SPIDER” and “PYTHIA”, and NATO SPS “CyRADARS. He is member of external advisory group of FP7 project “PANOPTESSEC”.

Nikolai Stoianov is Principal NATO Science and Technology Board member for Bulgaria, chair of NATO Science and Technology Organization Information Systems and Technology Panel and he is member of “Future concepts and tools for Cyber Defence”, “Cyber Defence Situational Awareness”, “Defence Implications of Cloud Computing at Tactical Edge”, “Cyber Attack Detection, Forensics and Attribution for Assessment of Mission Impact”, “Visual Analytics (Cyber Security)”, “Intelligent Autonomous Agents for Cyber Defence and Resilience”, and Research Lecture Series Director on “Cyber Security Science and Engineering”. Prof. Stoianov has more than 80 published papers in national and international scientific conferences and journals, he is author and co-author of four books in the field in information security.



The project managing experience of Prof. Stoianov consists of: Project coordinator of H2020 ODYSSEUS Project, Project coordinator of EDIDP CUIIS Project, Project coordinator for Bulgaria of EDA „Predictive methodology for Technology Intelligence Analysis “(PYTIA) Project; Scientific Project Coordinator for H2020 ECHO Project: European network of Cybersecurity centres and competence Hub for innovation and Operations; SOLOMON “Strategy Oriented anaLysis Of the Market fOrces in EU defence”, EDA Project, Preparatory Action on Defence Research programme, PADR-STF-2018 (Strategic Technology Foresight) call, and PADR-STF-02-2018 topic, 2018-2021, Project coordinator for Bulgaria of “Mediterranean practitioners’ network & capacity building for effective response to emerging security challenges” (MEDEA) Project H2020, 2018-2023; Project coordinator of national project “Military Messaging System X.400” from 2007-2010. WP6 leader of FP7 HOMER project (2013-2016); WP2 leader of EDA SPIDER project (2016-2017), WP4 leader of EDA PYTHIA project, 2018-2019, Project coordinator of NATO SPS CyRADARS project (2018-2020), H2020 ODYSSEUS project (2021-2024), EDIDP CUIIS Project (2021-2024)., External Advisory Board member of FP7 Project PANOPTESec (2013-2016); Lecture series director for NATO STO research lecture series on “Cyber Security Science and Engineering” (2016-2019).



BULGARIAN DEFENCE INSTITUTE

"Professor Tsvetan Lazarov"

Short name: **BDI**

Type: **RESEARCH**

Country: **BULGARIA**

Website: <https://www.di.mod.bg/en/>



DESCRIPTION OF THE ORGANISATION

The Bulgarian Defence Institute (BDI) "Professor Tsvetan Lazarov" was established by a decree of the Council of Ministers of the Republic of Bulgaria #140 of 04.06.20009 as the main scientific-research structure at the Bulgarian Ministry of Defence.

The main areas of activities of BDI are: Scientific and Applied Research, Development and Experimental Design activities in the area of Armaments, C4I Systems, Military Technologies, Logistics, Equipment and Materials; Defence Technology Foresight; National, Regional and International Security; Human Factors in Defence and Security; Support to the Analysis of the Trends in the Development of the Armaments, C4I Systems, and Military Technologies, Logistic Equipment and Materials; Support to the Integrated Project Teams through taking part in the preparation, scientific monitoring and complete implementation of the defence programs and projects; Education of PhD students in accredited doctoral programs; Support of the activities of the Armaments Council and the Defence Capabilities Council of the Bulgarian MoD; Cooperation in the sphere of research, development, testing and



certification of the defence products in the frameworks of NATO, the European Union, as well as on bilateral basis; Development of technical specifications, programs and methods for testing, as well as standardization and other documents, related with the acquisition of defence products; Certification of Quality Management Systems of the Bulgarian Armed Forces in accordance with NATO Standards, guaranteeing of the quality and assessment of the compliance during the process of acquisition of defence products; Ensuring of air safety and flying suitability of the military aerial vehicles, as well as of the aerial vehicles of the Ministry of the Interior; Coordination of the national contribution to NATO Science and Technology Organization and the European Defence Agency.

PREVIOUS EXPERIENCE

The BDI has broad experience in managing and implementing national and international research projects on defence and security topics funded by the European Commission, European Defence Agency, NATO and national institutions. In addition, as the main scientific-research structure at the Bulgarian Ministry of Defence, BDI coordinates the activities in the framework of European Defence Agency and NATO Science and Technology Organization. Furthermore, BDI has established very good national and international scientific cooperation, cooperating with about 50 scientific organizations and business structures.

The knowledge and skills developed during the implementation of these research activities will guarantee successful completion of the ODDYSSEUS project.



ODYSSEUS kick-off in Sofia

ODYSSEUS kicked-off in Sofia, Bulgaria on the 14th and 15th of October 2021 in the premises of the project coordinator – the Bulgarian Defence Institute (BDI). More than 30 representatives of the ODYSSEUS Consortium participated in the meeting, carried out in hybrid mode with both physical and virtual presence. During the KoM, the partners discussed the planned activities and made decisions about actions to be taken in the near future as part of the project.





NEWSLETTER

ODYSSEUS H2020 PROJECT

*Preventing, Countering, and Investigating Terrorist Attacks
through Prognostic, Detection, and Forensic Mechanisms for
Explosive Precursors*



<https://odysseus-h2020.eu/>



LinkedIn



Twitter



ResearchGate

