Urban Chemical Threat Location and Identification

Sprawozdania

Informacje na temat projektu

UCTIL

Identyfikator umowy o grant: 837253

Strona internetowa projektu

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10.3030/837253

Projekt został zamknięty

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Data rozpoczęcia
1 Lutego 2019

Data zakończenia
31 Lipca 2019

Finansowanie w ramach
INDUSTRIAL LEADERSHIP - Innovation In SMEs

Koszt całkowity
€ 71 429,00

Wkład UE
€ 50 000,00

Koordynowany przez
KARSA OY
Finland

Ten projekt został przedstawiony w...

Periodic Reporting for period 1 - UCTIL (Urban Chemical Threat Location and Identification)

Okres sprawozdawczy: 2019-02-01 do 2019-07-31

Podsumowanie kontekstu i ogólnych celów projektu

The main goal of the project is to conduct feasibility study of a system concept to continuously monitor urban air for traces of dangerous chemicals and signatures of illicit activities such as production of narcotics and home made explosives. In a nutshell, Urban Chemical Threat Detection and Identification (or UCTIL) is a novel approach to address existing and emerging security risks related to criminal and terrorist activities in modern urban areas. Terrorist attacks and illicit drug distribution networks have caused significant damage to European society and direct harm to its citizens, the UCTIL approach promotes the preventive approach to address those threats - where security if focused on locating criminal activities on the stages of production and preparation. Other benefit to society can be seen in complex monitoring of chemical composition of the urban air: this has potential to allow for better understanding of air quality and more comprehensive monitoring capabilities for toxic industrial chemicals and atmospheric pollutants. Thus, the benefit to society is twofold: 1) direct benefit from enhanced security of European urban areas, and 2) environmental benefits from better data on chemical composition of urban air. The overall objectives of the project are: 1) to conduct technical feasibility study, proving that the concept is viable in theory, 2) IPR and commercial feasibility study, supporting the idea of economic benefits of the concept, 3) plan for further development and exploitation of the results. The work has been concluded successfully, UCTIL concept has proven feasible both technically and economically. As the result of the action Karsa and their consortium partners have submitted a project proposal for the research and innovation action under H2020 Secure societies programme.

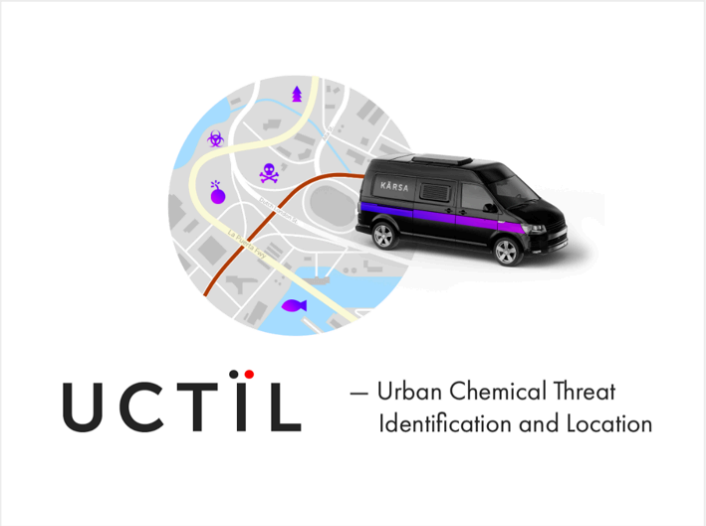
Prace wykonane od początku projektu do końca okresu sprawozdawczego oraz najważniejsze dotychczasowe rezultaty

The work performed during the project can be divided into following parts:

1) Technical feasibility study: open literature search and validation of technical concept against DARPA's SIGMA+ programme (US initiative to create a comprehensive sensor network to monitor urban air for chemical threats). The result of this study is a set of simplified calculations that support the idea of technical feasibility of the concept and its potential performance against the objectives set out in SIGMA+ solisitation documents. The outcome of this study is that UCTIL concept deemed technically feasible and has the potential to exceed the objectives set in the US initiative within 3 years of further development.
2) Economical feasibility study and end-user relevance. Open search have been conducted to estimate costs of development of the product and commercialization viability after performance of the system is validated. Karsa have conducted several interviews with Police institutions and national security laboratories to develop the product concept further. Another outcome of this work is that UCTIL consortium for the submitted RIA proposal includes 7 LEA's from different EU countries (as well as Israel), who have endorsed the UCTIL concept and are committed to validate the relevance of this approach to security of the society.
3) IPR search and novelty of the idea. During the project Karsa together with an external patent attorney have conducted a freedom to operate study, which has confirmed that the idea is novel and doesn't seem to have limitations in terms of patentability. As a result of this work Karsa have submitted patent application protecting the main features of UCTIL.
4) Plan for further development. With help of this project and results from 1,2 and 3, Karsa have developed a detailed plan for further development and exploitation which had become the basis for for a project proposal UCTIL for the call H2020-SU-SEC-2018-2019-2020. Karsa have managed to prepare said proposal and gather a consortium of 17 organisations, including security laboratory, research institutes, universities, SMEs and LEAs.

Innowacyjność oraz oczekiwany potencjalny wpływ (w tym dotychczasowe znaczenie społeczno-gospodarcze i szersze implikacje społeczne projektu)

As this particular project concerned only feasibility study no progress beyond the state of the art was made in reality. The project was successful in preparing a more detailed plan to further develop the technology and submitting the proposal of the said project to the funding agency. The socio-economic and wider societal implications such as boost to European economy and mitigation of security risks are expected to follow the implementation of the RIA project.



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