Press Release

Athens, 18 November 2020

The European project INGENIOUS offers cutting-edge technologies in the service of the First Responder of the future

Rescue operations in both small-scale emergencies and major natural or man-made disasters are undoubtedly more dangerous than in the past and the needs of First Responder teams have increased. Today's First Responders struggle with their time and abilities to save as many lives as possible, often risking their own lives. They deal with life-threatening situations, hazardous environments, uncharted surroundings and limited awareness. In such situations, complex response operations that involve cross-agency collaboration are required. But above all these it is of utmost importance to armour First Responders with state-of-the-art technology in order to conduct their response duties safely.

The **INGENIOUS** project, funded by the European Union and the Republic of Korea under the Horizon 2020 Research and Innovation Program, was officially launched in September 2019 and will run for three years. This research initiative will deliver the innovative **Next Generation Integrated Toolkit (NGIT),** which consists of state-of-the-art technological equipment integrated in the uniform, boots and helmet of the First Responder to facilitate seamless and resilient interconnectivity and boost her/his awareness. The advanced tools and services will ensure high level of protection and augmented operational capacity, assisting the first responders of different disciplines (police, fire service, emergency medical units or civil protection) to combine their strengths and experience, save more lives and, in the end, return from the disaster scene safe and sound. The ultimate goal is to immediately communicate the gathered information to the public

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security service control centers and civil protection agencies in order to develop a common, integrated and coordinated operational plan of action.

The **NGIT** integrates robotic, IoT and Augmented Reality technologies, for both the first responder himself and the accompanying K9 Units. Among other things, the system includes wearables, communication and localization components, sensors, add-ons delivering augmented reality functions, smart devices in the air and on the ground, such as self-exploring drones, and also multi-fusion and expert reasoning modules, web and mobile applications, social media "push" and "pull" messaging etc.

The **NGIT** will be provided to the first responders for extensive small and large-scale field tests and validations as part of a rich Training, Testing and Validation program geared towards empowering the First Responder of the Future, who will be fully aware, fully connected and fully integrated. The first round of Laboratory Tests of the project has been successfully conducted and the tests were focused on the K9 Vest, the smart flying and ground devices, the Field Communication system, the Social Media App, the Multi Source Information Fusion Engine, the Worksite Operations App, the Helmet and the Augmented Reality Services, the gas sensor, the uniform and the boots.

Dr. Angelos Amditis, Research Director at the Institute of Communication and Computer Systems (ICCS) and Project Coordinator notes: *"Today's First Responders face high-risk challenges that make their work difficult. The ability to be fully aware and to communicate automatically and rapidly with the cooperating forces can save critical minutes of effective and coordinated response to the crisis. The ultimate goal is to save more human lives with less risk for First Responders".*

In complex challenges such as the COVID-19 pandemic, the INGENIOUS project seems to be more urgent and necessary than ever. Worldwide an increasing number of first responders are undertaking new vital roles to tackle the coronavirus and are making great contributions that require correct PPE & training. As such it is of utmost importance to ensure that the first responders are sufficiently protected in terms of personal protective equipment in order to conduct their response duties safely and efficiently.

"INGENIOUS has great prospects and an ambitious vision, the results of which are expected to significantly improve the level of response to natural and man-made disasters or even seemingly insurmountable challenges such as the coronavirus. Therefore, researchers and practitioners from the scientific and business world, as well as civil protection organisations from all over Europe and Korea are involved, contributing their know-how and valuable experience in achieving the project's objectives", explains **Dr. Angelos Amditis.**

More specifically, **the Consortium comprises of 23 partners** from 12 European Union member states and associated countries as well as the Republic of Korea, at a total of 13 countries. The consortium has a rich diversity of organization types, among them six End-Users Practitioners (first responder teams of all disciplines; fire brigades, emergency medical services, civil protection, K9 units and law enforcement agencies), seven specialized SMEs and Industries, nine research entities and one organisation specialised in legal, privacy, ethical and social, human and security factors.

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NOTES TO THE EDITOR

Project Duration:	**1 September 2019 - 31 August 2022 (36 months)**
 	*This project has received funding from the European Union's Horizon 2020 research and innovation programme and the Korean government under grant agreement no 833435. Content reflects only the authors' view and European Commission is not responsible for any use that may be made of the information it contains.*
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Financial Contribution:	E.U.: 8.616.111,25€ Republic of Korea: 345.000,00€
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