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RESIST: 'RESilient transport InfraSTructure to extreme events

Overview of the first year of EU Horizon 2020 RESIST project

During the first year of the [RESIST](#) project, Consortium made a great progress. RESIST partners worked in the design of the hardware adaptations of the previously-developed aerial platforms for inspecting, by contact, steel and concrete bridges and tunnels, including the general architecture and localization and navigation functions. A dual sensor perception module was designed and built for high resolution image acquisition and 3d reconstruction of the structure surfaces, ultrasonic sensors for contact inspection and radiometric sensor for rebar characterization. Also, the vibration modules were designed to be installed permanently on the structure. Prototypes of these systems have been tested in the partners' labs.

In addition, the network architecture for supporting resilient and secure communications was defined. For this purpose, partners have explored the scenarios of exploiting a REDComm node in the field. A study on security concerns for the communication between the Remotely Piloted Aircraft System (RPAS) and the Ground Control Station (GCS) has been performed. Moreover, a server in the REDComm node has been set up and installed that provides a visualization Environment (proxmox) to be exploited by various RESIST functionalities as required.

Furthermore, During the first year of the project, partners presented the early exploitation plan of the project that is highly correlated to the innovation management plan. According to the plan, all the innovation results of the project are identified and classified according to their TRL level. The results with a low TRL will be considered as Innovation Results (IRs) and further innovation actions will be organized for them (publications in scientific journals and papers, presentations in scientific meetings, conferences and workshops, etc.), while the results with higher TRL, that are more mature to be launched to the market, will be considered as Key exploitable results (KERs) and further exploitation actions will be organized for their efficient exploitation. To achieve this, a Business Model Canvas methodology was presented that identifies and analyses several parameters (key resources, key activities, key partners, value propositions, customer relationships, channels, customer segments, cost structure and revenue stream) that can boost the exploitation of RESIST's results. Several standardization activities have been performed regarding the new European UAS regulation. It has been already developed a definition of a pre-risk assessment scenario after applying the SORA methodology (risk assessment methodology for the Specific category of the UAS regulation) to RESIST missions. Furthermore, the future European U-space regulation, related to the integration of the drones in the airspace, is being closely monitored.

Dissemination activities during of the first year can be found [here](#).

For more details on RESIST, visit <http://www.resistproject.eu/>
or contact the Dissemination and Communication leader Dr Adewole Adesiyun (adewole.adesiyun@fehrl.org).

RESIST on Social Media: [Twitter](#) - [LinkedIn](#)
Register [here](#) to receive the RESIST Newsletter.

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Project Fact Sheet

Duration: 36 months (1st September 2018 – 31st August 2021)

Total budget / EC contribution: 4 956 810,00 Eur.

Call: MG-7-1-2017 Resilience to extreme (natural and man-made) events

Coordinator: Institute of Communication and Computer Systems (ICCS), Greece.

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Project website: <http://www.resistproject.eu/>



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