

## WaterSpy – revolutionising water quality analysis

Pervasive and on-line water quality monitoring data is critical for detecting environmental pollution and reacting in the best possible way to avoid human health hazards. However, it's not easy to gather such data, at least not for all contaminants. Currently, water utilities rely heavily on frequent sampling and laboratory analysis in order to acquire this information. For this situation to be improved, portable and high-performance devices for pervasive water quality monitoring are required. Such devices should expand current limitations in detecting contaminants, transcending today's paradigms, and bridging different technologies available, allowing on-line monitoring of possible contaminants.

**WaterSpy** addresses this challenge by developing water quality analysis photonics technology suitable for inline, field measurements. WaterSpy technology will be integrated, for validation purposes, to a commercially successful water quality monitoring platform, in the form of a portable device add-on. WaterSpy will be used in the field for the analysis of critical points of water distribution networks. This will be demonstrated in two different demo sites in Italy.

WaterSpy is being developed by a multi-disciplinary team, coordinated by CyRIC, Cyprus Research and Innovation Center Ltd, in the framework of EU's Horizon 2020 Programme. The project has just been launched (1<sup>st</sup> November 2016) and will run for three years, to allow enough time for the development and real-world validation of the technology.

WaterSpy addresses a major challenge of today's societies: water quality. While water availability used to be a major challenge, it has now become more available (over 90% availability worldwide). People's attention is thus turning towards water quality. WaterSpy is taking advantage of advances in cutting edge photonic devices, in order to provide new capabilities in water analysis.

The aim of the WaterSpy team is to develop a device that will require about 30-45 minutes for a full sample analysis of 250 mL. This is in line with the EC and national regulations that require that no bacteria should be present in a sample of 250mL of drinkable water. The 30-45 minutes will allow to perform 32-48 tests per day in the same site. With currently used systems, the same analysis could take up to 3 days.

The project is funded by Horizon 2020, the EU Framework Programme for Research and Innovation for 2014-2020. The project is an initiative of the Photonics Public Private Partnership ([www.photonics21.org](http://www.photonics21.org)).

Project partners include: CyRIC - Cyprus Research and Innovation Centre (Cyprus), National Research Council (Italy), Alpes Lasers SA (Switzerland), National Technical University of Athens (Greece), Technische Universität Wien (TUW), Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany), AUG Signals Hellas (Greece), VIGO Systems SA (Poland) and IREN SpA (Italy).



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

Notes for editors:

1. Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

2. For media enquiries, please contact CyRIC on +357 22 777200 or e-mail [info@cyric.eu](mailto:info@cyric.eu)