

WaterSpy – full lab validation is starting!

The WaterSpy project is developing water quality analysis photonics technology suitable for online, field measurements. WaterSpy technology will be integrated, for validation purposes, into an existing, commercial water quality monitoring platform, in the form of a transportable add-on. WaterSpy will be used in the field for the analysis of critical points of water distribution networks. This will be demonstrated in real-world scenarios in Italy.

The project has just reached its final stage, where full system integration and lab validation will take place. After that, the prototype will be transferred to Italy for the field trials. Since the last press release about a year ago, significant progress was made:

- Even better Quantum Cascade Lasers (QCL), suitable for the application were developed. A novel beam combiner was also prepared for allowing aligning more than one QCLs for their use in the prototype.
- The final version of the WaterSpy photodetectors was delivered, including an upgraded version of the auto-balanced detection amplifier.
- The measurement approach was simplified. The bacteria can be retained over the ATR element just by using the WaterSpy ultra-sound-based particle concentration module. This allows us to keep them there while an enzymatic reaction takes place and the product of this reaction can be measured through the WaterSpy lasers and photodetectors.
- The overall spectroscopy configuration was optimised and finalised.
- Upgraded prototypes were delivered for the WaterSpy automatic sample incubator and liquid handling module prototypes.
- After confirming that sample pre-concentration would be required, a pre-concentration module prototype is being manufactured by CyRIC, based on the know-how of a new subcontractor.
- A new partner has been added in the WaterSpy consortium: GISIG, the European Association on Geographical Information. They will be assisting with the standardisation and exploitation planning activities.

During June, the WaterSpy team will meet in Vienna for the first fully integrated testing in a laboratory environment and the first validation tests. In parallel, the field validation is being planned and is going to take place in fall 2019.

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 was launched in November 2016 and will run for three years. 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).

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 (Austria), Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany), AUG Signals Hellas (Greece), VIGO System SA (Poland) and IREN SpA (Italy), Geographical Information Systems International Group (Italy).



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

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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