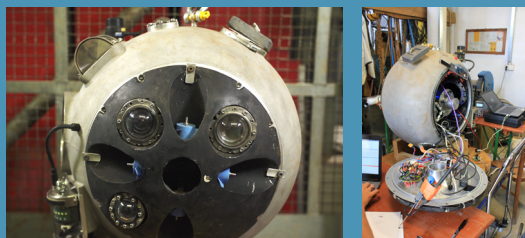


UNEXMIN

UNEXMIN is an EU-funded project that develops a novel robotic system for the autonomous exploration and mapping of Europe's flooded mines. The robotic platform, made by three robots, uses non-contact methods for 3D mine mapping to gather geological, mineralogical and spatial data.

Meet UX-1

UX-1 is the first of its kind: an autonomous robot capable of re-discovering otherwise inaccessible flooded mines, without major costs.



Technical features

- Maximum operation depth: 500m
- Spherical shape with 0.6m diameter
- Autonomy up to 5 hours
- Instrumentation: Water sampler, measuring units (conductivity, pH, magnetic field), exploration tools (UV and SLS, multispectral and acoustic cameras, sub-bottom profiler, laser scanners and SONARs).

 **Learn more about UNEXMIN!**

UX-1 is able to map flooded mines while navigating through confined spaces and obstacles, to create 3D models from geological and spatial data. Water sampling, multispectral imaging and magnetic measurements are some of the tasks the robot can do. It was designed and developed in close collaboration with stakeholders.

The UNEXMIN project aims to demonstrate the operation of the prototype at four pilot sites. The trials at the Kaatjala pegmatite and Idrija mercury mines are completed and data is being processed and analysed. The next trials are going to be in the Urgeiriça uranium (February 2019) and Ecton lead-zinc mines (May 2019). The final aim is to explore the whole flooded section of Ecton that nobody has seen for the past 160 years!

The results will be publicly available on request and an open access platform will be set up to allow technology transfer and further development. A continuously updated [inventory of flooded mines](#) with relevant information is already available on the project website.

The UNEXMIN consortium will soon launch a company to offer the services provided by the technology to the market.



 **See how the UX-1 works!**



www.unexmin.eu



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