



## UNEXMIN DELIVERABLE D5.1

# STAKEHOLDER ENGAGEMENT PROTOCOL

### Summary:

This document corresponds to Deliverable D5.1 of the ongoing Horizon2020 project UNEXMIN and it is a part of the Work package 5. This deliverable: “Stakeholder engagement protocol” aims to fulfill two functions. Firstly, the types and overall profile of project stakeholders will be identified. Secondly, it details the approach towards engaging stakeholders and involving them into the project in most efficient way in order to achieve quality final results and successful implementation of the project final product. The document defines the main groups of the potential stakeholders and provides general guidelines on how to establish the first contact and how to engage them. Additionally, it contains a list of challenges which may occur along the process together with possible solutions.

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## 1. Introduction

This document corresponds to Deliverable D5.1 of the ongoing Horizon2020 project UNEXMIN and it is a part of the Work package 5. This deliverable: “Stakeholder engagement protocol” aims to fulfill two functions. Firstly, it identifies the types and overall profile of project stakeholders. Secondly, it details with the approach towards engaging stakeholders and involving them into the project in most efficient way in order to achieve quality final results and successful implementation of the project’s final product.

This deliverable defines the protocol for stakeholder mobilization and engagement that will help setting the final user requirements for the Surveyor (UX-1). This will be achieved by data collection on specification and requirements in the frame of Task 5.2, which will further elaborate on the preliminary user requirements and robot specification assessed during the development of the project proposal.

## 2. Identification of stakeholders

The objective is to identify the types of institutions and/or organizations with expertise in the area, or those with an interest and are engaging in the specification and/or requirements data collection and finally into manufacturing, implementation and maintenance of the UX-1 robot. Identification of all types of stakeholders is holistic, as it shall include a relatively wide range of companies or organisations. Several different groups of them were identified during the WP5 workshop as part of project Kick of Meeting. Detailed contact information of the potential stakeholders will be collected from the project partners using the template already available on the project Google drive and prepared by WP Leader. The template comprises:

- Basic stakeholder identification data (name, web page, contact person and country)
- Category and subcategory of the stakeholder (Table 1)
- Area of activity (Research and Innovation, Education and Outreach, Industry and trade, and General)
- Information about which partner provided the data

**Table 1.** List of potential stakeholders

Stakeholder category	Stakeholders subcategory	
❖ Future consumers	<ul style="list-style-type: none"> <li>• Mining companies</li> <li>• Geological surveys</li> <li>• Mine owners</li> <li>• Geoheritage sites</li> <li>• National authorities</li> <li>• Industrial diving companies</li> <li>• Universities</li> </ul>	<ul style="list-style-type: none"> <li>• Water supply companies</li> <li>• Nuclear facilities</li> <li>• Earth Science and Mining service providers</li> <li>• Environmental companies</li> <li>• Hydropower companies</li> <li>• Sea floor mining companies</li> <li>• Touristic sites (diving, caving...)</li> </ul>
❖ Future collaborators	<ul style="list-style-type: none"> <li>• Technology developers</li> <li>• Earth science and/or mining related Industry</li> <li>• Technical Universities</li> <li>• Sensor producers</li> <li>• Universities</li> </ul>	
❖ Future investors	<ul style="list-style-type: none"> <li>• Private sector <ul style="list-style-type: none"> <li>✓ Future consumers</li> </ul> </li> <li>• Public sector <ul style="list-style-type: none"> <li>✓ National authorities</li> <li>✓ Regional authorities</li> <li>✓ Local authorities</li> <li>✓ Other organizations directly financed by the State</li> </ul> </li> </ul>	

### 3. Steps to contact the stakeholders

Project partners will contact the potential stakeholders using the standardized e-mail prepared by the WP Leader (Annex 1) and contact data from the template mentioned above according to the WP Leader instructions and in coordination with Project Coordinator.

Objective is to:

- a) Ensure that potential stakeholders understand the nature and scope of the project
- b) Ensure that relevant regular updates are provided to stakeholders in different phases of the project
- c) Engage stakeholders to transfer further of the protocols established
- d) Provide regular updates about the project in order to maintain high stakeholder engagement

#### 3.1. Guidelines

1. Potentially interested individuals will receive email, containing a short summary of the project accompanied by a phone call. Information regarding the project in more details, either in electronic or printed format, should be provided upon request. A sample e-mail is provided by the WP leader and initial contacts will be coordinated so that cross-postings and multiple contacts are to be avoided.
2. Face-to-face meetings or other networking activities can be arranged to provide a summary of the project and to discuss potential collaboration. A communication briefing on this will be organized by the WP leader (via a dedicated Skype session or connected to a project meeting).
3. Video and/or tele-conferences will be organized if needed for interstate or international colleagues to explain the project and to request information how they see their benefits if involved into the project. A communications briefing on this will be organized by the WP leader (via a dedicated Skype session or connected to a project meeting).
4. Announcement and/or invitation to participate in the workshop(s) where potential stakeholders can exchange their opinion with other parties involved in the project. This will be discussed with the other WP leaders in charge for organizing workshops and the Project Coordinator.
5. Regular updates (e-mails and short newsletters) will be provided to stakeholders, not only to ensure continual engagement, but also to understand the progress of the project. Informal networking is an important process in sharing ideas. The frequency and the nature of these communications will be discussed with the leader of WP8 (Dissemination).
6. All stakeholders that are contacted at an early stage will be given a summary of the UNEXMIN project, including the aim of the project, the nature of the project and anticipated completion time. This summary will be prepared by the leader of WP8 and will be approved by the Project Coordinator.
7. The stakeholders should be kept informed of progress and the dates when major Milestones are achieved and the final product of interest will be available. This will be synchronized with the WP leaders.
8. Presentations at conferences and research-in-progress papers, if possible and appropriate, will also be prepared and delivered in order to further engage stakeholders (in close cooperation with WP8).
9. A summary of the project reports may be delivered to stakeholders upon request and subject to permission from European Commission.
10. A detailed stakeholder data base will be created together with the stakeholder contact and engagement templates.
11. In order to provide a consistent implementation of these Guidelines the leader of WP5 will coordinate the development of communicational materials and the actual timeline for stakeholder engagement with the leader of WP8 (Dissemination) and the Project Coordinator.

### 3.2. Challenges and proposed solutions

1. The great challenge is the provision of adequate information for stakeholders without information overload. Therefore, a short summary will be created for all potential stakeholders. Abstract from the Grant Agreement will be enough for the initial contact.
2. Many project partners can explain the details of the project from different point of view (robot designers, robot manufacturers, software developers, geologists, mine and SMEs owners). It is important that these individuals could be easily reached and contacted to explain the project to potential stakeholders in more details from their perspective.
3. Keeping stakeholders engaged throughout the project is a great challenge. To do that electronic means and informal networking tools will be used when appropriate.
4. Many individuals from organizations not involved initially into the project may have important and relevant information to assist this project. This knowledge, however, may not be widely known or published. It is very important that key individuals are contacted and discussion initiated in order to identify best solutions to problems faced.
5. Presentation at conferences forms an important informal networking opportunity to share experiences and strategies for problem solving. More importantly, research-in-progress papers, if appropriate, can provide stakeholders with useful information.
6. The stakeholders are often interested and eager to obtain the preliminary outputs and products of the project. It is very important to explain them carefully that the current protocols for obtaining such information should be in accordance with the European Commission and Horizon2020 regulative.



#### 4. Conclusion

This document is the first Deliverable within the Work package 5 of the Horizon2020 Project UNEXMIN.

The document defines the main groups of the potential stakeholders and provides general guidelines on how to establish the first contact and how to engage them. It contains guidelines as well as a list of challenges during the process together with possible solutions. The implementation and the further definition of this Protocol will be maintained by the WP leader.

#### 5. Annex 1.

Template e-mail for the UNEXMIN initial contact with future stakeholders

Dear [\_\_\_\_\_]:

I am contacting you in my role as the representative of the UNEXMIN Project Partner, to inform you, as a potential stakeholder, about the scope and the aim of a new, recently launched project named “Autonomous Underwater Explorer for Flooded Mines (UNEXMIN)”. This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 690008.

UNEXMIN project will develop a novel robotic system for the autonomous exploration and mapping of Europe's flooded mines. The Robotic Explorer (UX-1) will use non-invasive methods for autonomous 3D mine mapping for gathering valuable geological and mineralogical information. (Please find below/attached the full abstract/summary of the Project)

As a part of the work carried out in this project we would like to make sure that the overall specifications of the Robotic Explorer meet user requirements within the technological and budgetary constraints that we have. For this reason, if you agree, we would like to contact you by e-mail and afterwards by phone for the purpose of conducting a quick survey on the desired functions and specifications of the robot that we are developing.

If you agree to engage into this Project, please confirm so we can put you on our mailing list.

Thank you very much for considering this request/proposal.

Sincerely,

[\_\_\_\_\_]

### Project summary:

This project will develop a novel robotic system for the autonomous exploration and mapping of Europe's flooded mines. The Robotic Explorer (UX-1) will use non-invasive methods for autonomous 3D mine mapping for gathering valuable geological and mineralogical information. This will open new exploration scenarios so that strategic decisions on the re-opening of Europe's abandoned mines could be supported by actualised data that cannot be obtained by any other ways. The Multi-robot Platform will represent a new technology line that is made possible by recent developments in autonomy research that allows the development of a completely new class of mine explorer service robots, capable of operating without remote control. Such robots do not exist nowadays; UX-1 will be the first of its kind. Research challenges are related to miniaturisation and adaptation of deep sea robotic technology to this new application environment and to the interpretation of geoscientific data. Work will start with component validation and simulations to understand the behaviour of technology components and instruments to the application environment. This will then be followed by the construction of the first Prototype. Post processing and data analysis tools will be developed in parallel, and pre-operational trials are launched in real life conditions. In the final stage of the project extensive pilots will take place during which UX-1 will be iteratively improved after each trial session, which will be increasingly demanding. The final, most ambitious demonstration will take place in the UK with the resurveying of the entire Ecton mine (UK) that nobody has seen for over 150 years. This final pilot will demonstrate the Platform's scalability from small missions to the largest ones by increasing the number of deployed autonomous drones, and supporting multi-robot cooperation in confined 3D spaces with real-time sensor and data fusion for reliable navigation and communications.