

## O3 RoboSTEAM Environment – First overview and discussions

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### Abstract

First overview and proposal about the Technological Ecosystem for the RoboSTEAM Erasmus+ project presented in the RoboSTEAM Kick-off meeting held in Bragança, Portugal, February 15-16, 2019.

### Keywords

RoboSTEAM, Erasmus+, STEAM, Robots, Computational Thinking, Technological Ecosystem, EU

### Link to the presentation

<https://goo.gl/hro7tc>

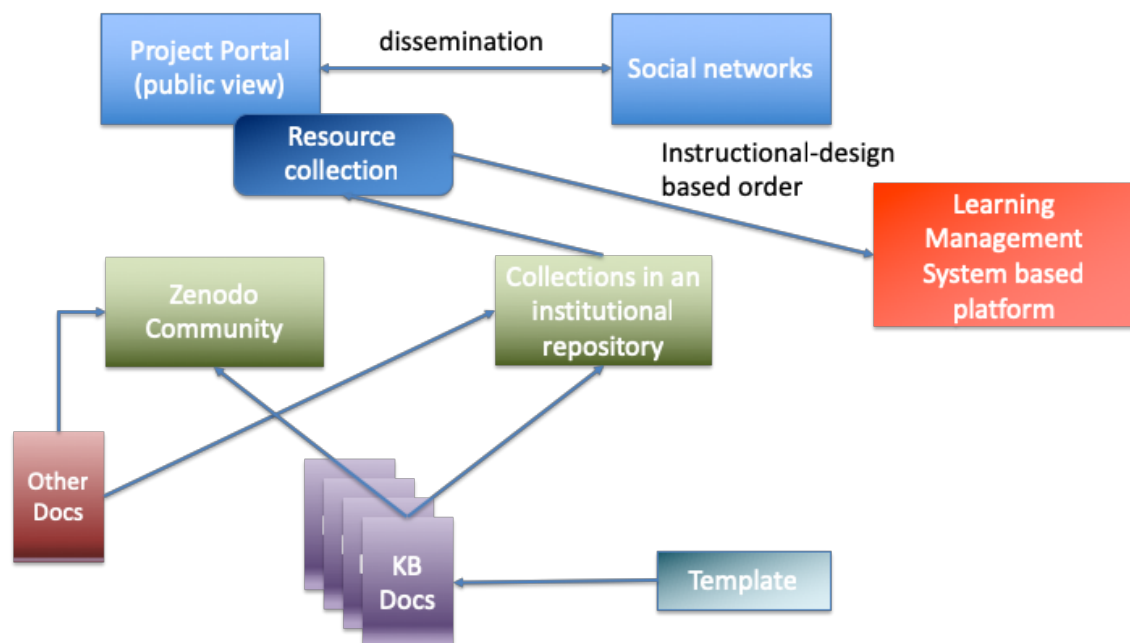
### DOI

10.5281/zenodo.2571497

### The intellectual output O3: RoboSTEAM Environment

GRIAL Research Group [1-3] leads the development of the intellectual output O3, which is devoted to define the technological ecosystem [4-8] for the project development.

The approach for the proposed technological ecosystem is shown in Figure 1.



**Figure 1.** RoboSTEAM technological ecosystem first proposal

This ecosystem is composed by the project website (<http://robosteampoint.eu/>), a community in Zenodo (<https://zenodo.org/communities/robosteampoint>), a community in the GRIAL institutional repository (<https://repositorio.grial.eu/handle/grial/1519>), and a Learning Management System (LMS) as the main components.

The institutional repository [9-12] will play an important role for amplifying the visibility of the project outcomes and document in the academical area [13-15], while the Zenodo community allows a more relationship with Society and decision-makers [16], but both initiatives contribute with the European Union policy about open access [17-21].

The LMS component will allow, if it is needed, a way to organize learning paths using the project related materials using an eLearning platform [22, 23], or a MOOC-based platform [24, 25], or both.

The GRIAL group has a significant experience in developing technological ecosystems for different application domains such as health [26, 27], public administration [28-30], eLearning [31-38], knowledge management [39, 40], etc.

GRIAL has also been involved in other EU projects with a particular relation to RoboSTEAM. In TRAILER (Tagging, recognition and acknowledgment of informal learning experiences) project [40-45] the informal competences and the knowledge of the institutions were managed through a technological ecosystem. In VALS (Virtual Alliances for Learning Society) project [46-57], computer science students made their placements in technological companies around the world. In TACCLE 3 – Coding project [58-64] computational thinking resources, including robotics [65], were developed. In WYRED (netWorked Youth Research for Empowerment in the Digital society) project [66-74] the opinion of the young people is considered in relation of the construction and future of our society. In W-STEM (Building the future of Latin America: engaging women into STEM) project [75] the gap between gender and STEM studies is tackled.

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