Case 1 - ESDALAB DIH (Greece) – networking & test-before-invest service

Embedded System Design & Application Laboratory DIH (ESDALAB EDIH) (Greece), is a candidate EDIH, a non-profit organisation and part of the Embedded System Design and Application Laboratory of Electrical and Computer Engineering Department of the University of Peloponnese in Greece. ESDALAB is coordinating an extensive network of DIHs spanning across South and Eastern Europe, through which it offers funding opportunities and supports multi-partner cooperation between organisations with complementary experience. The hub is fully aligned with the RIS3 strategy for the area of Western Greece and coordinates REBRAIN WESTERN GREECE EDIH.

ESDALAB EDIH covers several application domains including agriculture, ambient assisting living, e-health and hospital 4.0, environment and smart cities, industry 4.0 and transport. It hosts a state-of-the-art High Performance Computing Center and offers a wide range of services covering, among others, ecosystem boosting, through a dynamically expanding online networking tool, virtual hub hosting, access to high performance computing and special purpose computing resources, software tools and applications support, training on digital technologies through its advanced training facilities, a dedicated matchmaking service based on Artificial Intelligence and a service for strategy development aligned with European networks and funding schemes. The hub has also developed ATLAS, a communication and computational cloud infrastructure, a novel platform that aims to interconnect cyberphysical systems and innovative services. Apart from SMEs, big industry players and RTOs, ESDALAB hub also provided services to several public entities which mainly benefit from the training, matchmaking and networking services. It is interesting to mention that in an effort to contribute in tackling the consequences of the global Covid-19 pandemic, the hub developed a social distancing application which is widely used on a regional and national level.

ESDALAB EDIH is coordinating Horizon 2020 project SMART4ALL, a flagship proposal for interconnecting DIHs in the area of South & Eastern Europe. In the context of SMART4ALL, ESDALAB EDIH has developed a **unique concept**, the Marketplace-as-a-Service (MaaS). MaaS comprises a unique one-stop-smart-shop for experts and non-expert third parties seeking ICT technologies that will reduce the development time of startups, SMEs and slightly bigger companies. For startups and SMEs, ESDALAB EDIH through MaaS offers a bouquet of services called **Prepare for Growth**, comprising a set of open-source project and product management tools, tools for creating and maintaining business plans and financial tracking tools. ESDALBA EDIH Marketplace is interconnected with other European marketplaces, including the marketplace of Smart Anything Everywhere initiative.

Example of service provided to SME

ESCALAB EDIH has recently supported TOBEA, a regional SME specialized in developing products to support people with disabilities. More specifically TOBEA has developed SEATRAC, a device that allows people with disabilities to have access to beaches. Given the harsh environment in which SECTRAC operates (near the sea, in sandy and windy beaches), malfunctions and failures on the technical equipment are quite often. Given the extended network of SEATRACs, identifying correcting failures was a significant challenge for TOBEA which was addressed through its collaboration with ESDALAB EDIH which led to the development of a novel system that allows motoring in real time and predictive maintenance of SETRACs worldwide. SEATRACs have been equipped with sensors and has been connected

using ATLAS infrastructure of ESDALAB EDIH that allows TOBEA to have a clear view day by day of the conditions of all SEATRACs' installations. In addition, AI based algorithms have been developed in order to allow TOBEA to predict failures and malfunctions before they actually happen. The system is fully operational for almost a year and, according to TOBEA, it has allowed the non-stop operation of SEATRACs with a 60% reduction of maintenance costs.