

EdeN - Green and smart production and distribution of food

1. What is the purpose of the project?

The goal of EDEN is to develop novel concepts for the smart and sustainable operation of aquaponics systems. Aquaponics is a circular agricultural system that combines raising fish in tanks (recirculating aquaculture) with soilless plant culture (hydroponics). We provide improved information transfer for aquaponics research and practice enabling a more transparent food production and reuse of resources and materials in the systems.

2. What is the current status of the project (as of the 2nd quarter of 2024)?

We conducted an in-depth literature review and several interviews with aquaponics experts to analyze the status quo. We also developed solutions to improve system efficiency in two test systems.

3. What challenge does the project address?

The know-how and expertise on aquaponics have been dispersed and limited in the past. Therefore, improved methods and knowledge transfer are needed to facilitate wider and more sustainable aquaponic production in the local community.

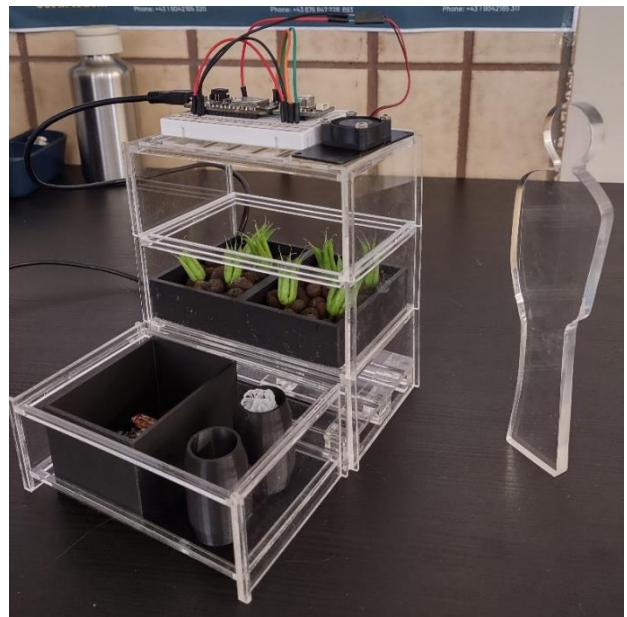
4. How does the project tackle the challenge? What is the project's impact, and what will be different after the project?

The project addresses the identified project goals by means of developing novel concepts with the utilization of emerging technologies, such as the Internet of Things, distributed ledger technologies and machine learning. As a result, concepts for smart operation of aquaponics systems will be developed, allowing improved information transfer to aquaponics practitioners, improved utilization of resources and materials in aquaponics systems and improved transparency of food production for the related food supply chain stakeholders.

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Aquaponics Demonstrator Model