

TFK programme, funded projects 2022

<p>Project title: Communications and Information Technologies for the provision of Fresh Agricultural pRoduets in Metropolitan areas</p>	
<p>Coordinator</p> <p>Aalto-korkeakoulusäätiö sr</p> <p>Alexis Dowhuszko alexis.dowhuszko@aalto.fi</p>	<p>Currently, over half of the world’s population are living in urban areas, and this tendency will reach 80% by 2050. As the urban population grows, meeting the demand for high-quality fresh food has become highly challenging. This situation becomes even more difficult since the land and water resources in the world for agriculture are scarce, and must be used in a much more sustainable way than today to achieve the UN’s Sustainability Development Goals. Vertical farming is the solution to this problem, and the implementation of a multi-disciplinary educational training program to prepare young citizens to address the Information and Communications Technology (ICT) challenges of this relevant food industry use case is the main purpose of CITY-FARM.</p> <p>The activities of CITY-FARM are divided into three phases, namely: 1) Development of existing courses lectured by team members, focusing on knowledge and comprehension of the new challenges that the vertical farming use case will introduce into the disciplines of electronics, signal and information processing, communications and networking, automation and control, horticulture and hydroponics; 2) Creation of new intensive courses for summer schools, including multi-disciplinary content-variable project-based elective courses, putting emphasis on the application and analysis of competences acquired by students during Phase 1; 3) Instruction of undergraduate student Theses and hosting of international visits for practices, addressing multi-disciplinary challenges and focusing on activities that put together the knowledge acquired during Phase 1-2 to create a new whole.</p> <p>A key part of CITY-FARM will be the preparation of two summer schools, to be held in Cordoba (2023) and Espoo (2024). During these events, the Finnish participants will learn specific principles for agricultural production in the vertical farming format, thanks to the knowledge of expert trainers from Argentina. Similarly, Argentine audience will learn about tools to improve the quality and efficiency of farming, regarding automatic control algorithms, signal and information processing, and ICT tools in general. Participants may also benefit from a wide range of complementary non-technical training activities, such as entrepreneurship, authoring scientific papers/patents, dissemination, and commercialization.</p>
<p>Partners</p> <p>Fac. Cs. Exactas, Físicas y Naturales (FCEFN), Universidad Nacional de Cordoba,</p>	

	<p>CITY-FARM will promote collaboration between one Higher Education Institution (HEI) in Finland (Aalto-ELEC) and two HEIs in Argentina (FCA-UNC and FCFyN-UNC), as well as non-academic collaborators that will give a pragmatic view to the activities of the program. The members of the consortium have complementary expertise in the key vertical farming disciplines included in the proposal. It is noted that, according to the 2022-23 edition of the Center for World University Rankings (CWUR), Aalto University is ranked as the 2nd best university in Finland and the National University of Cordoba (UNC) as the 3rd best in Argentina.</p>
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