

TFK-ohjelmasta 2021 tuetut hankkeet

TFK programme funded projects 2021

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| Project title: TOWARDS CARBON NEUTRAL SOCIETIES: DEVELOPING AND TESTING A DIGITAL CLIMATE CHANGE CURRICULUM IN ARCHITECTURE EDUCATION | |
| Coordinator Tampere University Sofie Pelsmakers sofie.pelsmakers@tuni.fi | <p>We are facing a global climate and biodiversity crisis, brought about by the proliferate burning of fossil fuels and the exploitation of finite resources at an unprecedented global scale. There is no doubt that we need “rapid, far-reaching and unprecedented changes in all aspects of society” to limit global warming to 1.5°C [1]. As such, the EU is aiming for climate neutrality by 2050 [2], while Finland committed to carbon neutrality by 2035 [3], with many cities such as Tampere and Helsinki aiming for this by 2030. China aims to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060 [4]. Clearly, these ambitious but necessary climate targets cannot be achieved without the decarbonisation of the design and construction of buildings, which is responsible for 40% of the EU's energy use with an associated 36% CO2 emissions [5]. In China, the construction and operation of buildings account for 51% of national carbon emission. In response to this, the building energy consumption needs to be controlled and the average annual growth rate should be kept within 2.20% [4, 6]. In the EU since 2020, all new buildings have to be designed to be nearly Zero Energy Buildings (nZEB), and existing buildings have to be upgraded to this standard no later than 2050 [7].</p> <p>Yet typically each architecture project continues to contribute to the current climate and biodiversity crisis instead of protecting or enhancing planetary health. One reason is because current and future architects (i.e. students) and educators are not equipped with the necessary knowledge, competencies and know-how to design for a carbon neutral society. This ARCH4FUTURE mobility project aims to tackle these skills gaps in architecture education through student and teacher virtual and physical mobility exchanges and co-</p> |
| Partners Southeast University | |

development (and testing) of virtual curriculum content relevant to the China and Finland context. ARCH4FUTURE proposes to build on (and geographically expand) the EU Erasmus+ funded project ARCH4CHANGE: DIGITAL CLIMATE CHANGE CURRICULUM FOR ARCHITECTURAL EDUCATION: METHODS TOWARDS CARBON NEUTRALITY (2020-2023) between 5 project partners led by Tampere University with partners in Denmark, Estonia, Ireland and Italy. In doing so we will be sharing exemplary practices (in pedagogy, content, teaching and building case studies) between China and Finland for the benefit of both partners, and the broader ARCH4CHANGE consortium. Similarly, the ARCH4CHANGE content will be made more inclusive and international by including non-European contexts and perspectives, and therefore also more relevant to stakeholders in China, increasing the impact of both the ARCH4CHANGE and ARCH4FUTURE projects.

The ARCH4FUTURE 3 main objectives are to:

- Create CHINA-FINLAND architecture knowledge exchange for a carbon neutral society
- Tackle skills gaps for students and teachers in both countries
- Diversify access to knowledge and tools via a digital platform



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