

TRANSFER AT CHARLES UNIVERSITY: TWO INSTITUTIONS, ONE ECOSYSTEM, ONE COMMON VISION

Two institutions that play a key role in the support and long-term shaping of the innovation ecosystem collaborate closely on the transfer of knowledge and technology at Charles University. At the same time, they ensure an important function of the university, which is connecting the academic sphere with the commercial sphere. Both institutions have been pursuing one common goal for a long time: to find suitable solutions for the commercialization of scientific research results.

We could briefly describe their agenda as follows. As an internal part of Charles University, the Centre for Knowledge and Technology Transfer (CKTT CU) focuses on supporting academic staff, students, and faculties in their activities, which in any way contribute to the development of the university's innovation ecosystem. At the same time, its priorities include education in the field of transfer, the application of innovations in practice on the one hand, and project management in the field of grant and subsidy opportunities, especially in the field of applied research and innovation on the other.

The second of the institutions involved in cultivating the transfer ecosystem is Charles University Innovations Prague (CUIP). The subsidiary of Charles University was founded in 2018 and has 132 licenses granted, 23 patents sold, and implemented 10 spin-offs. As part of the incubation process, it assesses the stage in which the relevant research or the innovation being developed is located while being able to define suitable sources of funding for their further development. In the process of scientific transfer, its key role is setting the business strategy of transferring the innovation into practice. The team conducts market analysis, searches for investors and commercial partners, sets legal conditions for cooperation, and takes care of the strategy of intellectual property protection. In CUIP, the PR team also sets up the communication strategy of new brands and the media coverage of technologies and innovations. Examples of successful brands arising from CUIP's collaboration with the academic and commercial sphere include spin-off companies originating from the Charles University such as Charles Games, Genespector, or FOGA technology.



The visual appearance of the game project Velvet 89, a spin-off of the Charles Games company, which focuses on the key moments of the Velvet Revolution in Czechoslovakia. Source: Charles Games



The clean extinguishing technology FOGA, developed in cooperation with the 1st Faculty of Medicine of the Charles University at the BIOCEV center, introduced in 2024, continues to confirm its high commercial potential.
Source: FOGA / CUIP, www.cuip.cz

CPPT: HOW TO EXPAND THE HORIZONS OF UNIVERSITY EDUCATION

One of the pillars of the activities of the Centre for Knowledge and Technology Transfer is education, more specifically education for entrepreneurship. Entrepreneurship and entrepreneurial skills are key concepts. However, this is not business education or training in business skills. This concept of education is based on a much broader approach as well as the context in which these activities take place. CPPT creates space for interdisciplinary cooperation and an individual and value-driven approach, all with lecturers from practice and the prestige of Charles University.

The university as an institution, not only Charles University, is a place where countless ideas with the potential to change the world for the better are born. And within the transfer ecosystem, every such idea deserves care and support to fully develop. The educational activities that CPPT organizes and offers are therefore designed to develop participants not only in entrepreneurship and creative thinking but also to help change their way of thinking. The goal is for students to be able to translate their academic knowledge into practice and shape it in a way that will positively impact the society. And it's not just Charles University students. CPPT courses, which are newly evaluated with micro-certificates, are open to anyone from the university environment and beyond, who wants their ideas to turn into practice, implement beneficial commercial and non-profit activities, or progress in any way in their professional and personal growth.

ENTREPRENEURSHIP AT CHARLES UNIVERSITY AND THE LIVING LABORATORY

The Living Laboratory of Cooperation is one of the courses in the field of entrepreneurship that students and non-students can take at Charles University. As part of the concept of entrepreneurship, they are organized by the Centre for Knowledge and Technology Transfer, and as of this year, the courses are newly evaluated with micro-certificates. At the same time, the term entrepreneurship and entrepreneurial skills are not equal to enterprising skills, it is not about learning to do business. Here, students learn how to take their ideas and use them to create value with a longer-lasting social impact. How to turn your idea into practice. They will encounter concepts such as management in science, self-organization, changemaking, or a Human-Centered Management. These and other concepts will be explained to them during experiential learning by the lecturer of the Living Laboratory of Cooperation course, Kateřina Jiřinová, an expert on innovative approaches in management.

What should we imagine under the term Living Laboratory?

The Living Laboratory is the terminus technicus. Simply put, it's a space where people test and develop new ideas together in the real world. Well, we are focusing on new ways of cooperation.

Why is that?

Today's world is very fast, connected, and has many challenges. With whom no one is alone. If we aim for social impact, we need to be able to work together. At the same time, we tend to assume that we can do it all by ourselves. But I think having a safe training space where we can test whether this is the case can be very beneficial.

I myself prefer the form of learning through experience. Students prepare real socially beneficial events in teams and learn from them. For newbies, it can be one of the first practices, and for the more experienced, it is an opportunity to try something new or see how they work in a different context.

WHAT IS A MICRO-CERTIFICATE

A micro-certificate (micro-credential or micro-certification) is an additional form of education that allows students to expand their qualifications as part of lifelong learning. At the same time, it offers greater flexibility in choosing the educational content that suit best their professional goals, as well as time options. It makes it possible to combine studies with other study or work commitments. Microcredits are a way to demonstrate that the student has acquired specific skills in the standards of the specific institution. At CKTT UC, they allow interested parties to deepen their knowledge in the field of project management, science and innovation management or the application of science to practice, but also, for example, to improve their entrepreneurial skills.

By working on real projects, we naturally have the opportunity to experience real situations and real emotions – joy, stress, communication noise, feelings of victory and failure, experience of conflicts, gratitude, surprise. It is simply alive by all means. In practice, we usually tend to run away from these situations to other things that we need to solve. However, we have space to reflect on all that is happening. Discuss the quality of cooperation and share research-based tips and good practices for different situations, learning from them. This is how we get the most out of the experience together.

What does the concept of self-organization mean?

It is one of the possible approaches to how a group of people can work together. The natural counterpart is the managerial hierarchy. Self-organization is based on the assumption that people can make their own decisions and coordinate according to what makes sense to them and how they agree with each other. There is no need for someone at the top to assign tasks to be completed. This system of self-organization can work not only in smaller, but also larger communities. When one knows how to prevent chaos from arising.

However, it is not that self-organization is good and managerial hierarchy is bad. Rather, it is useful to know the different ways of cooperation and to know what to expect from them, where to look for them, how to be successful in it and most importantly - which form of cooperation makes you feel good.

How would you explain the term Human-Centered Management? Can it even be learned? Doesn't it follow from a person's natural setting?

I think most people have at one time or another experienced the feeling, whether at work, school, or elsewhere, as if they were more of a cog in a machine than a person. Why do we feel this way what does it entail, where does it come from? It's good to stop and examine it. When we also consider the development of artificial intelligence and the expected impact on jobs, this thinking acquires another dimension.

There is always tension at the core of cooperation - people versus performance. We need both. Let's talk about how to do it. Either we can alternate the two extreme modes, or we will connect the two concepts at the core level. That will bring words like trust, freedom, personal responsibility, talent, meaningfulness, shared leadership, and others. When we talk about humanity in cooperation, this is what I mean. Performance

KATEŘINA JIŘINOVÁ

Kateřina Jiřinová, an expert on innovative approaches in management, creates space for personal development in several areas at CKTT. Katka deals with topics such as self-organization, Human-Centered Management, learning through experience and changemaking. She intensively supports the third role of the university and believes in the positive social influence of the academic environment. If you don't find Kateřina in the corridors of Charles University, she is probably busy with another socially beneficial initiative in cooperation with organizations such as Red Button, Ashoka or the OSF Foundation. She believes that it makes sense to devote her energy to projects and activities that have the potential to make the world a better place to live.

is also important here, but it is not the only measure of success. And what's more, we reach it differently. Thus, the key debate does not take place at the level of new tools or techniques, but rather at the level of mindset and personal paradigms. Everything else grows out of it.

Is it possible to learn humanity through cooperation?

Paradoxically, someone needs to unlearn some things first. But the answer is yes. Two typical triggers will make you rethink what you want out of a collaboration. A crisis such as burnout or a way of ending an employment relationship that leaves you with very unpleasant feelings. Or an encounter with a person, situation, or book - through which you learn something significantly new. Both of these triggers will make you think, search for more information, and experiment.

AN EXAMPLE OF GOOD PRACTICE IN TECHNOLOGY TRANSFER BY CUIP FOGA: TECHNOLOGY THAT SERVES SOCIETY

In April 2024, Charles University, on behalf of its subsidiary Charles University Innovations Prague, Inc. (CUIP) and the company Walk on Water Ltd., introduced fire blankets that cannot cause burns. Leveraging technology founded on cutting-edge scientific discoveries, these blankets emerge as a novel product in the marketplace, boasting firefighting capabilities comparable with conventional fire extinguishers, a claim validated by a certification authority. Foga is a clean and safe option offering a modern alternative to fire extinguishers. It finds application in manufacturing, gastronomy operations, laboratories, but also in households. The material is made of 100% cotton, engineered to maximally absorb the contained extinguishing agent. In parallel, it employs the technology of a thermal shield, formed by scientists from the First Faculty of Medicine at Charles University in the BIOCEV center, which ensures the effect of a safe, thermally impermeable layer thanks to stabilized metal nanoparticles.

The Foga technology has continued its successful development and has also enjoys media interest. Since 2021, a continuous study has been underway, confirming that Foga still maintains its fire-fighting capabilities, which makes it possible to declare a three-year product shelf life. This project, in the launch of which CUIP participated, is one of the best examples of connecting academic research with the commercial sphere, which brought about innovative solutions with a practical impact on society.

It is worth noting that in 2024 the Foga fire blanket project achieved several significant milestones that strengthened its position on the market and expanded the possibilities of using this innovative fire-fighting agent. As an example, we can cite the expansion of use in academic institutions. For example, the Academy of Performing Arts in Prague decided to equip its workplace with Foga fire blankets in November 2024.

For more information about transfer at Charles University: www.cppt.cz and www.cuip.cz

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