

ОФОНД ЗА
ИНОВАЦИИ И
ТЕХНОЛОШКИ
РАЗВОЈ



Fab Labs

**CHALLENGE FOR THE
ESTABLISHMENT OF PRODUCTION
LABARATORIES
“YOUNG PEOPLE CREATE”**

Name of competitor

**Trade company CENTER FOR RESEARCH, DEVELOPMENT AND
CONTINUOUS EDUCATION CIRKO DOOEL Skopje**

Project title

„FabLab Skopje“

Amount of allocated funds by FITD

4,487,000.00 MKD

Amount of own co-financing

852,000.00 MKD

Description:

The Center for Research, Development and Continuous Education (CIRKO) was established as an independent organization by the Faculty of Mechanical Engineering (FME) within the “St. Cyril and Methodius” University in Skopje. Since 2010, CIRKO DOOEL Skopje has been registered as a Center for technology transfer, i.e. as an entity of technological development. CIRKO will implement the “FabLab Skopje” project in cooperation with FME, whose premises of 144m² will be made available for the laboratory. For the purposes of implementation of this project, the digital libraries of FME, as well as two other laboratories where the industrial 3D printers, polymer processing machines, metal processing machines, and the equipment for testing the mechanical characteristics are located, will be made available for use.

The partnership enables the involvement of professional academic staff for FME's traditional and advanced production technologies and the use of the network of industry partnerships established by CIRKO, as well as external collaborators in the field of industrial design, biophysics, and other related activities.

With its main focus on STEM education, FabLab Skopje will cover education in several areas - 3D printing, laser cutting and engraving, CNC machining, working with mechatronic systems, working with engineering materials and joining - through a set of activities such as training sessions and workshops, research, prototyping and networking with industry partners.

The primary target group of FabLab Skopje is high school students (15-18 years old), students (18-22 years old), and young graduates (22-29 years old), and the secondary target group is professionals-individuals, companies, designers, and creators, as well as high school teachers. The laboratory aims to become self-sustaining after 1-2 years, and this will be achieved by offering services to individuals and industries, training for professionals, thematically adapted professional training sessions and workshops with registration fees for participants, professional and applicative technology transfer projects, as well as research projects in collaboration with other universities in the country and abroad.

Due to the nature of the laboratory work (practical operation of machines), most of the activities will be available for people who live in Skopje or can travel here. However, online activities will be available for young people living in other cities. Physical access will be provided for people with mobility and hearing disabilities. Special activities (training and workshops) will be organized for the promotion of technical sciences (STEM) among the female population of different age groups.

In addition to the project application, letters of support and cooperation were submitted by more than 20 institutions, industry representatives, the public sector, and the education sector.

Name of competitor**UKIM – Faculty of electrical engineering and information technologies Skopje****Project title****“Production laboratory FEIT FabLab”****Amount of allocated funds by FITD****4,500,000.00 MKD****Amount of own co-financing****1,129,000.00 MKD****Description:**

For the establishment of the new production laboratory “FEIT FabLab”, space will be provided in a separate building, with an area of about 150 m². Its renovation will be carried out by FEIT as an additional contribution, outside the project scope. The aim is for the spatial and technical conditions of FEIT FabLab to fully meet the standards set by the international network of production laboratories.

The team in charge of project implementation includes members of the management structures of FEIT, academic staff which will be involved in the implementation of training and mentoring activities, as well as young people active in various fields relevant to young people such as game design, graphic design, assistive technologies, etc.

The implementation of the FEIT FabLab program will include representatives of the private sector such as Loging Electronics, M3DS Academy for 3D and game design, as well as representatives of civil society organizations. One of the collaborators in this project is “Open the Windows” which is the only organization in the country and the Western Balkans fully committed to promoting assistive technology and digital inclusion. This cooperation will enable the FEIT FabLab program to include aspects of inclusive industrial design, which increases the social impact of this project.

FEIT FabLab will offer basic and advanced courses and mentoring in several areas such as 3D printing modeling and work with a 3D printer, practical electronics and embedded microcomputer systems, free and open source software and more. Some of the most recognizable workshops and schools already organized by FEIT will continue to be implemented within FEIT FabLab: summer school for design of embedded microcomputer systems, workshop “Technology for you”, student program “Innovations in Smart Anything Everywhere –INNO-SAE, RoboMac - International Robotics and Artificial Intelligence Workshop and Summer School for Multimedia Technologies.

The income that will be provided from the funds obtained through the expert assistance of the FEIT staff as well as the use of the laboratory by interested users from the private sector who will be able to use the laboratory as a one-stop-shop for their own development and research needs, will be invested in further development and ensuring the sustainability of the laboratory.

Name of competitor

Association INNO TECH CLUB Shtip

Project title

„Inno Fab Lab“

Amount of allocated funds by FITD

2,584,800.00 MKD

Amount of own co-financing

530,000.00 MKD

Description:

The INNO TECH CLUB (ITC) operates as a think-tank organization whose main mission is to create innovation-based culture, to connect people and institutions, and to implement projects that will result in creating young leaders with strong innovation and entrepreneurial spirit. By organizing Inno Café events, ITC motivates high school and university students to be interested in science, innovation and technology as key factors for rapid technological and economic development of the Republic of North Macedonia. By connecting young innovators with potential investors, ITC continuously helps them implement their ideas and opens up opportunities for career development. The production laboratory “Inno Fab Lab” managed by ITC will be located on an area of 70 m2 at the Faculty of Technology and Metallurgy within the “St. Cyril and Methodius” University in Skopje.

The team that will implement this project includes representatives of the academic community, experts in the field of public relations and external collaborators from several academic institutions and companies.

Inno Fab Lab will enable fifty creative high school and university students to get involved in working on specific projects that will result in the development of at least six product prototypes. The teams will be composed of 6-8 young people, and the main requirement will be at least 40% of the team members to be girls. During the four-month mentoring at the “Inno Fab Lab” production lab, teams will have the opportunity to upgrade their technical knowledge and skills, gain teamwork experience and learn how to develop an idea to a product prototype. This program for product development will enable the participants to dive deeper into the world of technology and gain experience and skills that will help them build their careers successfully in the future. In addition, participants will be provided with training in basic business and entrepreneurial skills that will be crucial for the next phase of their career development.

The establishment of the Inno Fab Lab production laboratory is just one of the steps in the long-term vision of the Association INNO TECH CLUB to grow into an incubator for development of innovative projects, where young people will have access to knowledge, equipment and infrastructure for development of innovative product prototypes regardless of their educational background.