

A Possible Way to Enhance European Competitiveness

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Abstract: In our Conference presentation, we would like to present a possible way to enhance European Competitiveness, which is registered in the Hungarian Intellectual Property Office under the name of the “IK & International Innovation Center” Project. (Voluntary registration number: Y2500012). In the introductory part, our previous research results – primarily related to Library Innovation, generating creativity and startups and the associated social media platform – will be briefly presented. In our presentation, we will also discuss the results of university students’ responses to online questionnaires related to this topic. The International Innovation Center Project (IICP) aims to increase the competitiveness of the EU by establishing an International Innovation Center, which would be implemented in the capital of an EU member state, with the participation of all EU countries. Some main parameters: in the 27-story “Metropolis”, each EU member state would have its own floor – research lab, mini innovative exhibition area, luxury apartment – as well as a “common” innovative Startup centre (permanent interactive exhibition open to both professionals and the general public), a common, high-tech equipped, ergonomic, library research and development lab including Coworking elements, an international conference centre, a cultural and sports centre, an Innovation Park with a helipad. The Project would be an investment of a similar volume to the MOL Campus in Budapest. In the conclusion, we outline the research directions that will generate further innovation.

Keywords: Competitiveness, EU Innovation Tower, Research Lab, International Exhibition, Conference Centre, Library Innovation

1. Introduction, Research Background

Our research topic: “Electronic library services in the 21st century”. We carried out our research by studying and analyzing the integrated library systems of 19 county libraries, 65 higher education libraries and 39 university libraries in the USA – using inductive and quantitative methods – primarily with the help of the Internet. (Ferenc, 2017), (Iszály, 2014)

The practical implementation of our research results, according to the experiences so far – one of the defining goals and directions of which is the promotion of innovation and creativity in university and public libraries – could significantly compensate for the negative tendencies of the digital revolution on libraries. (Ágnes, 2023)

Libraries are unable to maintain their previous position due to the widespread use of E-book readers, Google books, E-libraries, and smartphones, therefore are at a disadvantage.

One of the results of my PhD research (our research) is the UnInLib system. (Ferenc, 2022)

The purpose and importance of my UnInLib system: The UnInLib system is intended to create the “Library Innovation Ecosystem”. Its primary purpose is to implement and apply a new, closed Web-based service system primarily for university libraries – domestic and international – that facilitates the creation, development and implementation of innovation and Startup ideas and inventions of university students, lecturers, graduates, and professionals participating in dual training. The central part of UnInLib is the Web Innovation Library Knowledge Base (WIKT) software system, which is a new library portal with a structure similar to LinkedIn and Facebook. (Ferenc, 2018)

The system provides all the information and assistance for starting and running a successful innovative enterprise: Startup information, Online courses, Startup Problems database, Ideas database, Professional database, Professional dating, creating new Startups, ensuring the conditions for online and offline meetings. Through the GenLib subsystem, it supports the innovation efforts of public libraries in several areas, the main functions of which are: value preservation, value creation, library Coworking, exhibition, online applications, skill development competitions, forums, blogs, online opinions, rankings, organization of modern electric means of transport in a library environment, library tourism.

Benefits of using the UnInLib system.

- Helping libraries to increase their participation in research, innovation, and the adoption and implementation of university Startup ideas.
- Involving university students in innovation and arousing interest in inventions.
- Playing a motivating, catalytic, and inspiring role.

- Promoting the discovery of new inventions.
- Supporting university students, lecturers, graduates, and professionals participating in dual training to jointly carry out developments, research, and possibly apply for joint applications.
- Helping to conceive and implement inventions and Startup ideas.
- Support for the formation of professional groups with the help of the Professional Partner Search and the Professionals database.
- Increase in the number of inventions and Startup ideas with the help of the Problems database and Ideas database.
- Concentration of a large amount of innovation potential by registered students, lecturers, graduates and researchers participating in dual training of domestic and international university libraries.
- Significant reduction in the implementation time of inventions and Startup ideas from idea to exit by WIKT.
- Arousing the interest of university students and future students in inventions with the Startup exhibition.
- The Startup subject promotes the birth of Startup ideas, the formation of professional groups and developments, and the Startup lab promotes experimentation and practical implementation.
- The system also supports the process of becoming a Startup entrepreneur. (Iszály, 2016)

Patent: The invention of our research, which is also implemented in practice: “New innovative electronic service system for libraries” – is under patent protection based on the acceptance statement of the Hungarian Intellectual Property Office (Case No.: P2000283).

The Hungarian Patent and Trademark Gazette published our patent application on March 28, 2022. (Iszály, 2022)

The need for the UNINLIB system is supported by the results of online questionnaires conducted among university students:

Distribution of answers to the Startup question

Would you consider it to be advantageous and support a “University Startup” service for the university library? (Figure 1.)

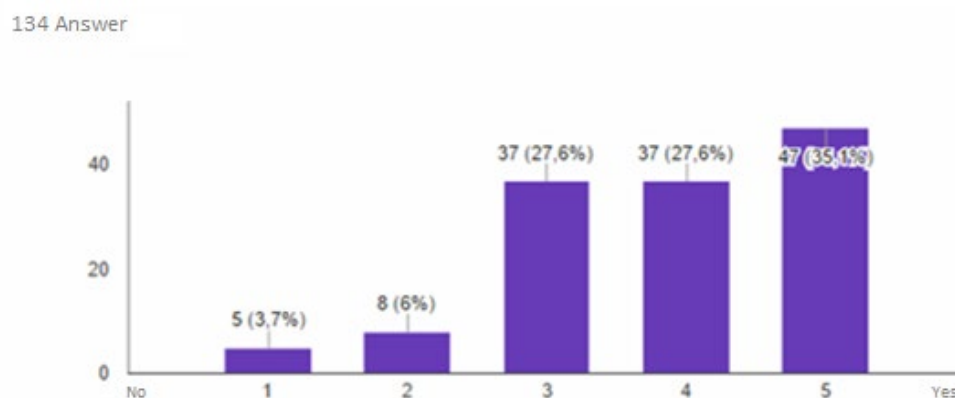


Figure 1: University Startup service

The scale ranges can be interpreted as follows:

1 – I strongly disagree

2 - I disagree

3 - Neutral/neither agree nor disagree

4 – I agree

5 – I strongly agree

It is very important that the vast majority of students require the Startup service of university libraries.

At the international level, joint developments, research, the WIKT system, the database of professionals, the professional matchmaker, the database of problems, the ideas, the Library Coworking, greatly promote international innovation, the effective practical implementation of ideas, and the enhancement of European competitiveness. (Figure 2.)

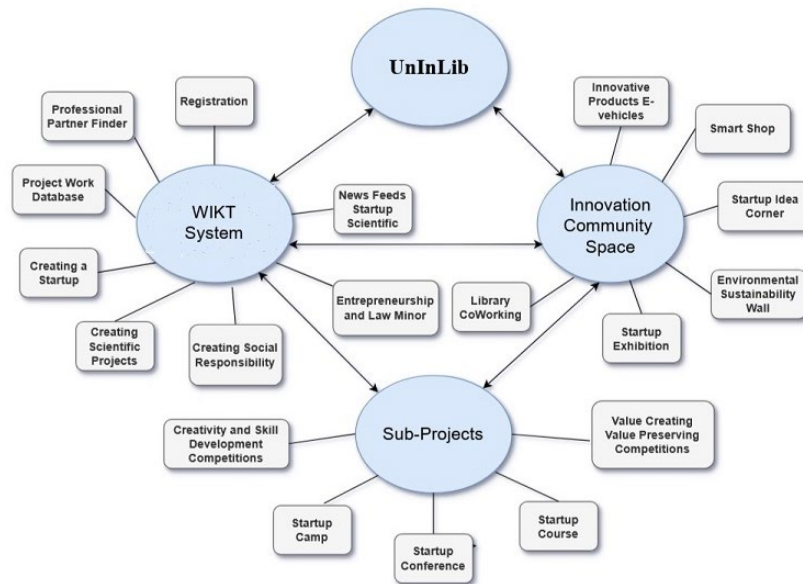


Figure 2: Structure of the UnInLib system

2. The International Innovation Center Project (IICP)

Objective: to enhance the competitiveness of the EU by establishing an International Innovation Center, which according to the plan would be implemented in the capital of an EU member state, for example Budapest, with the participation of all EU countries. Some main features: in the 27-storey “Metropolis”, each EU member state would have its own floor – research lab, mini innovative exhibition space, luxury apartment – as well as a “common” innovative Startup centre (permanent interactive exhibition open to both professionals and the general public), a common, high-tech equipped, ergonomic, library research and development lab including Coworking elements, an international conference centre, a cultural and sports centre, an Innovation Park with a helipad, and an Innovation Hotel. The Project would be an investment of a similar volume to the MOL Campus in Budapest. (Figure 3.)



Figure 3: MOL Campus (MOL, 2025)

<https://www.iguzzini.com/projects/project-gallery/mol-campus/>

The relevance of the IK & International Innovation Center Project is timely in several ways:

“European competitiveness is undergoing a serious decline”, “Europe needs a competitiveness turnaround”, “The Hungarian EU Presidency (2024.07.01 – 2024.12.31) therefore placed great emphasis on European competitiveness: the growth and innovation gap between the Union and its competitors must be reduced”

(In the Hungarian Intellectual Property Office, the “IK & International Innovation Center” Project voluntary work registration number: Y2500012)

Main units of the IK & International Innovation Center (Figure 4.)

The locations at the Innovation Center:

- National units of the EU Innovation Tower, each EU country’s own floors in the 27-story Innovation Tower: luxury apartment, home office, mini exhibition.
- Joint High-Tech Research Laboratory
- International Exhibition Unit, Community Space, Restaurant
- International Conference Centre, Conference Exhibition, Restaurant
- Innovation Library (Library Coworking, Virtual Library Elements)
- Sports, Cultural Centre, Theatre, Cinema
- Innovation Park
- Helicopter Landing Site
- Innovation Hotel (5-star)



Figure 4: NIC Vision Plan

Operation, brief description, main features

- Each country will own one floor of the 27-story “Metropolis”, select the most innovative market-leading company of its nation, provide for the high-tech equipment of its own floor, the innovative equipment of its own space in the International Exhibition Unit, and its continuous renewal. Of course, it can use the common areas and opportunities on a subject-right basis: research lab, exhibition, conference, library, cultural centre, innovation park. (The property can be sold, transferred, inherited)
- The Research Lab greatly facilitates the planning and implementation of innovative joint projects
- The International Exhibition is open to both professionals and the general public
- Annual local Innovation Conference with exhibition
- Biennial international Innovation Conference with exhibition
- Each EU country organizes its own exhibitions presenting its innovative products
- In the case of national investment, assets, the given country has ownership rights and utilization

2 main characteristic features of the IK & NIC Project

- Total area requirement of the Project: $\approx 34000 \text{ m}^2 \approx 3.4 \text{ ha}$

- Total planned cost of implementing the IK & International Innovation Center (Management, planning, land ownership, utilities, sustainability, technical implementation, high-tech equipment of objects, smart solutions): ≈ 85 M euros.

Some implementation options:

- In cooperation with the EIT (European Institute of Innovation and Technology)
- With the involvement of the governments of the EU countries
- From the research budget of the EU countries
- With the participation of the most innovative market-leading companies of the EU countries
- With the involvement of large investors, banks (“Innovation Science Center Plaza”)
- With the participation of EU Research Institutes
- With the involvement of the richest people in the EU TOP 100
- With EU grant funding

Within this framework, a brief description of 3 locations – International Exhibition, Innovation Community Space, Smart Cabin – will be given.

2.1 International Exhibition Subproject

Aim: To present the great inventions of humanity from ancient times to the present day with interactive elements and working models. EU and Hungarian inventors, Startups, the process of implementing ideas, and the role of creativity in coming up with discoveries will be given a prominent role. At the exhibition, every visitor has the opportunity to test their various abilities. The exhibition's goal is not to draw attention to creation, to provide inspiration – primarily for the younger generation – to come up with ideas and to implement them in practice. Visitors will learn – with the help of 3D online films and videos – the importance of the most successful Startups, the main stages of the path to success, and their “development history”. In the case of school groups, there is an opportunity for an ad hoc “ideas exchange”, online evaluation and awarding of ideas. There is an opportunity to take digital online photos with “Explorers, Scientists” and send them to your own email. Another important goal is to provide new Startups with an opportunity to introduce themselves, test them, and present a library Coworking.

Topics: Significant discoveries, world inventions. Ideas, interesting things. Domestic inventions. International Startups. Domestic Startups. Startup, optimization tasks. Creativity development trainings. Completed Startups. Interactive presentations. Student Startup presentations. (Tóth, 2023)

Informatics, technical implementation: Exhibition of the history of inventions. Digital boards. Digital picture frames. Digital online photo creation. Interactive boards. Working models. Film screening (3D). Interactive exhibition, presentations. Simulators. Online creativity development training. Computer skills testing, measuring, developing online programs (Attention, Memory, reflex, speed of thinking, creativity... short competition for groups, announcement of results, awards). Digital "lecture" about Startup.

2.2 Innovation Community Space

(Boutiller, 2020)



Figure 5: Coworking Startup Exhibition

Aim: Creating innovation spaces that sufficiently increase efficiency, creativity and innovation, focusing on the ever-increasing digital social demand, creating a working environment for those working online and those engaged in inspiring work. Recommendation on the aspects of creating an ideal Coworking office. Helping with a startup camp. The goals of the Coworking office include assisting in the physical implementation of projects, as well as the possibility of testing and validating them. The UnInLib system would not only provide assistance to innovative users in the virtual space, but also in physical implementation. (Figure 5.)

2.3 Smart Cabin (Mini Medical Diagnostic Lab)

Aim: The primary aim of the IK & Smart Cabin is to provide a separate – sound, heat-insulated, ergonomic (chair, keyboard, mouse...) design space in libraries, educational institutions, air and rail waiting rooms, VIP railway carriages, local governments, catering units, cultural and healthcare institutions, and racetracks, where you can make phone calls, participate in video conferences, distance learning, do home office work, and enjoy diverse, safe, smart solutions that can be brilliantly utilized in everyday life, and at the same time have educational value. The three main characteristics of innovation must be fully taken into account when designing and creating the Cabin: optimization, efficiency, and sustainability.

Its secondary purpose is to assess the user's health status with the following services:

- Digital blood pressure measurement
- Body composition analyzer/bmi/fat-muscle measurement
- Blood oxygen level measurement
- Respiratory function/asthma monitoring
- Body temperature measurement
- Test strips (urine, blood sugar, triglyceride, cholesterol, uric acid)
- General condition assessment health index measurement
- Mental state, memory, reaction time
- Hearing status measurement
- Superficial inflammation check (thermography/medical infrared camera)
- Resuscitation device (aed/defibrillator).

The main units, modules, functions, and options of the Smart Cabin:

(In the Hungarian Intellectual Property Office, the "IK & Smart Cabin" Project voluntary work registration number: Y2500143)

3. Summary

The IK & International Innovation Center Project: the EU Innovation Tower, the Research Lab, the International Exhibition, the International Conference Center, the Innovation Library, the Sports and Cultural Center, the Innovation Park, the Innovation Hotel - with its creation and practical operation, can provide an ideal environment for the EU's leading "innovators", which will greatly promote the competitiveness of the EU, the reduction of the growth and innovation gap between the Union and its competitors, as well as Innovation and AI research. (Kristóf, 2025)

3.1 A Small Digression: Briefly About our Family Research Company

From 2021, our main area of activity within the framework of Innov Research Institute Ltd. is research, the defining direction of which is innovation. (figure 6., 7.)

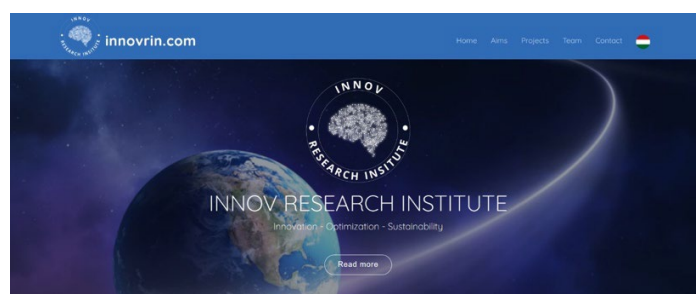


Figure 6: Our website

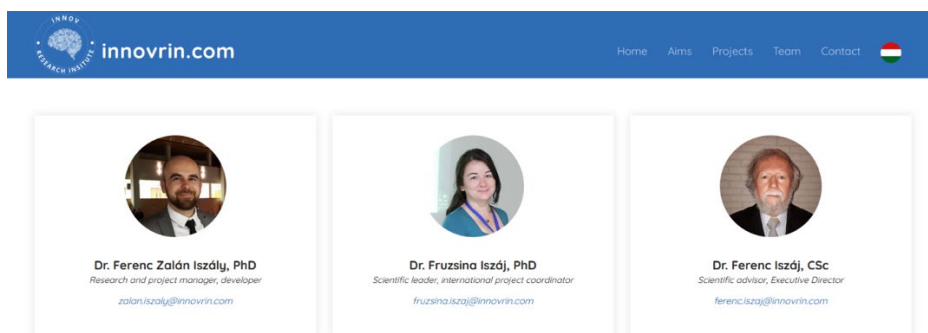


Figure 7: The team

Universal goals: Our general aim is to research innovation, implement innovative projects, and teach its methods. Our main goal is to further research library innovation, to implement the results so far – our UnInLib system – in practice at the domestic and international level. Another purpose is to prepare innovation studies, plans, projects for the business community and the public sector and to assist and coordinate their implementation. In all these goals, the key aspects are innovation, optimization, efficiency, economy, health protection, and sustainability. Our goal is also to scientifically examine innovation and successful startups from a psychological perspective.

The “general” formulation of innovation – according to our interpretation – is:

“Innovation is continuous innovation, development, creative problem solving, a universal phenomenon where the goal is more efficient implementation.”

The innovation motto, “Ars poetica” of the Innov Research Institute:

“Innovation should be optimal, efficient, energy-saving, value-preserving, and environmentally friendly.” (Deák, 2023)

3.2 In Conclusion

In order to implement projects as soon as possible, the Innov Research Institute plans to launch the following

Call for Proposals: The Innov Research Institute is looking for "Multi-investor" for the practical implementation of the following 3 projects.

3.2.1 *International Library Innovation Project*

The aim is to conduct further researches on library innovation and to put the results of the UnInLib system into practice at national and international level (this project has been published as an invention in the Bulletin of the National Intellectual Property Office, with the patent number P2000283). The importance of the project is reflected in the fact that there are 2.8 million libraries worldwide having more than 1 billion library card holders. The current research focus is the implementation of the International Virtual Library in the “Cloud” with innovative library services suitable for the 21st century.

3.2.2 *IK & International Innovation Centre Project*

The International Innovation Center Project (IICP) aims to enhance the competitiveness of the EU and Hungary by creating an International Innovation Center, which is planned to be located in Budapest and would be implemented with the participation of all EU countries. Some of the main parameters are the followings: in the 27-storey "Metropolis" each EU Member State would have its own dedicated floor - research lab, mini innovative exhibition space, luxury apartment - plus a common innovative Startup Centre (a permanent interactive exhibition open to both professionals and the general public), a common research and development lab with high-tech equipment, ergonomic library coworking elements, an international conference centre, a cultural and sports centre, an Innovation Park with helipad. This project would be an investment of similar scale to the MOL Campus.

3.2.3 IK & Smart Cabin Project

The primary objective of the IK & Smart Cabin Project is to provide - in libraries, educational institutions, air and rail lounges, VIP carriages, municipalities, catering facilities, cultural and health institutions, race tracks, customer services of leading service providers - a separate (sound, heat insulated, ergonomic, high-tech equipment and furnishings with excellent acoustics) design space, where it is possible to make phone calls, participate in video conferences, distance learning, home office, secure banking, and enjoy a wide range of innovative, smart solutions that are both highly practical in everyday life and have educational potentials - health, skill-building, entertainment, relaxation - in an uninterrupted and ideal environment.

3.2.4 Application Conditions

The volume of participation in the Projects – the investment, the consideration for the ownership share – is at least 2M euros. For a part of the invested amount, the investor acquires a share of ownership in the Projects. In case of serious intention and interest, we will hold a Project presentation at the given location.

3.2.5 Company Information

You can find out more about Project 3 at the following website: www.innovrin.com

3.2.6 Application Method

We welcome applications from investors with strong capital, by sending a short Company Profile electronically to: zalan.iszaly@innovrin.com

3.3 Finale, Closing

In summary: The International Innovation Center, with its research labs, Startup Center, local and international exhibitions, conferences, 21st century Library Coworking and the international virtual library implemented in the cloud, can be a very effective, excellent, exemplary field for innovative joint research, the implementation of new projects and inventions, and can play a catalytic role in dynamically enhancing the competitiveness of the EU. As a synonym for the US Silicon Valley, the 21st century “EU International Innovation Metropolis” could be realized.

Ethics Declaration

Not relevant to the paper.

AI Declaration

The paper used AI (Canva) in a form in Image 3: NIC Vision Plan

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