

# Visegrad Sustainable Living Labs

• Visegrad Fund  
• •

Network 4 Youth of Universities  
(VSLLN4YOU)

## LESSONS LEARNED



Publication of the Lessons Learned with the financial support of the project: Visegrad Sustainable Living Labs Network 4 Youth of Universities (VSLLN4YOU)

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## Introduction and acknowledgements

This publication is a follow-up to a previous publication titled “Toolkit”, published in 2023 within the project *Visegrad Sustainable Living Labs Network 4 Youth of Universities* (VSLLN4YOU), which was dedicated to university staff, enabling effective support for Students Living Labs, their development and successful operation. This time, all authors of the publication “Lessons Learned” are teachers or lecturers from the academic environment, who, together with students from four universities of the V4 countries, participated in the organization of the Summer University, which took place from the 18<sup>th</sup> to 29<sup>th</sup> September 2024 at the Kielnarowa campus of UITM in Rzeszów. During this project event, several lectures, workshops, and discussions of the participants concerning the topics of sustainable development goals and Student Living Labs took place on the premises of the university.

The Lessons Learned publication presents a summary of specific activities that were carried out during the implementation of the VSLLN4YOU project at individual universities as well as a retrospective view of some of the topics that were the subject of lectures at the Summer University in Rzeszów. During their two-week stay at the campus, the students had the opportunity to learn, how they use their knowledge from Living Labs (LLs) in their academic activities, how they want to use it in their future careers and if they find this knowledge useful in their daily lives. The VSLLN4YOU project itself was aimed to create the Living Labs network, which could enable the co-creation and testing of innovative and sustainable solutions, relevant to the Visegrad Universities and region, in cooperation with partners from the private, public, and civil society sectors. It included engagement of students with real-world experience by working on sustainable projects and green solutions and preparing them to be the agents of change in their personal and professional lives. Apart from sustainable Living Labs, workshops and lectures were delivered at the Summer University, and published training materials and the final project conference were also included – all of these activities offered the knowledge transfer for sustainable change. In this way, a very successful community building event was the “Hackathon”, organised by the University of Pécs twice (2023, 2024) during the project implementation period. The success of this event was not overshadowed by the fact that it was not financed by the project itself.

The utilization of the concept of Sustainable Living Labs with collaboration on VSLLN4YOU project activities was considered as

a significant benefit, particularly in terms of developing problem-solving and project management competencies of students. Through the Living Labs experience and Summer University, students not only refined their academic expertise but also cultivated a strong sense of social responsibility and empathy. Engaging directly with their communities and addressing genuine societal issues, the students learnt to prioritize ethical considerations and understand the broader implications of their actions.

The project VLLN4YOU was co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants. At this point, we deliver our sincere gratitude to the International Visegrad Fund, whose mission is to advance ideas for sustainable regional cooperation in Central Europe.

We believe that Lessons Learned, as the second publication of the project, will also be helpful for teachers, students, and others interested in developing their professional skills and obtaining relevant information on topics of Sustainable Development Goals and Sustainable Living Labs.

Wishing you a pleasant reading.

Mgr. Gabriel Székely, PhD. and contributing authors.

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VSTLEN VÁMOU

## Lessons learned from Slovakia

Michal Cirner – Gabriel Székely

Sustainable development is a constant challenge in the world of capitalist consumerism, and in the age of populism, it is difficult to find balance between the demands of developed countries, whose inhabitants are “spoiled” by success and sufficiency or economic growth, and the so-called third world, where they need what is already taken for granted elsewhere. At the same time, they are mutually dependent, because we live in a globalized world, where Edward Lorenz's butterfly effect<sup>1</sup> is often mentioned, and even small changes in one part of the world can mean big changes in other parts of the world. Moreover, we live in a time of polycrisis, which means that advanced societies, in addition to insisting on their living standards, create tension multiplied by the polycrisis itself. If anything is being addressed, it is trendy topics such as the climate crisis, “green” topics and the like, which are of utmost importance, but issues such as *poverty, hunger, access to quality education, gender equality, and other types of inequality* remain in the background, which prevents achieving the ideal - social equality.

Although there are universally valid and recognized definitions and types of poverty, and we also have universal algorithms for measuring poverty, we are still aware that each country measures poverty or the living wage differently. At the same time, it is very difficult to state in general who is poor and who is not (so-called relative poverty). Is it the one who lives on two dollars a day in Somalia or the one who earns ten dollars a day in the United States of America? Are they both poor? Is the poor man from the United States rich in Somalia? However, it is also about other variables, such as who lives where, whether they have access to water and food, and what they can afford to buy with the money they earn. At the end of the day, a poor person in Somalia may feel better because he may earn two dollars a day but has a modest abode and a field to grow his food, unlike a homeless person in New York who has no place to sleep and no food and other necessities - ten dollars a day may not be enough. Oftentimes, it's about a subjective feeling, like measuring whether people are happy. Even

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<sup>1</sup> See more: The Decision Lab (2023). *The Butterfly Effect*. Retrieved January 25, 2024, from <https://thedecisionlab.com/reference-guide/economics/the-butterfly-effect>



envy the success and wealth acquired through honest work and ideas, but it is often the opposite of generational poverty – generational wealth full of rentiers who have not contributed in any way and do not even develop the acquired wealth. It is the same with entire countries, the poorest countries in the world are still in Africa. There are many reasons for this, including some on the part of those countries in the same way in which some people are responsible for their own state of poverty. However, when we look at it comprehensively, we find that it is a global structural problem. Therefore, voices of solidarity and giving a helping hand to the poor need to be supported. It is not a wasted resource. We once heard a saying somewhere that a country is only as rich as the poorest member of the given society. Even the world is only as rich as the poorest countries in it. In addressing this issue, we are still failing on a local, regional, and global level. UN statistics have not changed much over the years. Around 1.1 billion people in the world are poor (research in 110 countries of the world includes 6.1 billion people). It is estimated that just over 18% of people on Earth live in acute multidimensional poverty.<sup>3</sup> There's still much work to do!

Moreover, it is essentially a snowball effect. Poor people devote their energy to ensure that their primary needs (e.g. hunger and thirst) are met, but they also have problems with meeting them. They don't have the energy, resources, time, knowledge, and often even the possibilities to have access to quality education. It is symptomatic that this applies not only to underdeveloped countries, but also to developed countries, including the V4 countries, where the socially weaker ones from the majority are worse off, but primarily marginalized groups of the population (in the V4 countries, it is mainly the Roma communities), when social exclusion and segregation are a common part of life in our societies. It is the failure on the part of the public institutions that are interwoven with racism, intolerance, and discrimination with respect to a part of society. Worse, in this case, it is no longer possible to talk about the economic/infrastructural causes of such a situation. We can call it poetically – a vicious circle, but in reality, it is a systemic failure. In the Slovak constitution, everyone's right to education is declared as follows in Article 42:

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<sup>3</sup> See more: UNDP (2023). Global Multidimensional Poverty Index 2023 – Unstacking global poverty: Data for high-impact action. Retrieved February 10, 2024, from <https://hdr.undp.org/system/files/documents/hdp-document/2023mpireportenpdf.pdf>

*“Everyone has the right to education. School attendance is compulsory. Its length up to the age limit is established by law. Citizens have the right to free education in primary and secondary schools, according to the citizen's abilities and the possibilities of society, and also at universities.”*

Despite that, we segregate two-thirds of Roma students, for which the Slovak Republic is even facing a lawsuit from the European Commission before the Court of Justice of the European Union. Another negative fact is that Roma children are often wrongfully placed in special schools for pupils with mild mental disabilities, and therefore Roma children make up the majority of pupils in special classes and schools for children with mild mental disabilities, which limits their opportunities to achieve complete primary education and continuing education at secondary school.<sup>4</sup>

The right to education is also problematic in Slovak re-education centres, which we have known about since the publication of the report of the General Prosecutor's Office of the Slovak Republic on how re-education centres in Slovakia are failing, which caused considerable outrage in the Slovak public at the beginning of 2024. As we mention in the text above, in addition to many other and perhaps more significant failures, the right to education is also violated in these Slovak centres. For example, children don't necessarily even have access to a desk where they can do their homework. More significant are the stories of children who could not get to the secondary school of their dreams, where they were accepted, because they had to stay in a re-education centre due to transportation problems to the given secondary school (due to the long distance, etc.). Children are moved between facilities based on where there is space available, not based on the school they would like to attend. Based on a court decision, they can be kept in a re-education centre until the age of 21, which some observers also consider to be in violation of the right to education when a young person cannot go to university.<sup>5</sup> Among other things, it can be considered as unequal access. It is inequality of opportunity that is mostly transformed into income inequality, and so we arrive back at the beginning – to poverty. These

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<sup>4</sup> See more: Štenclová, E. (2023, April 25). Dve tretiny rómskych žiakov segregujeme. Slovensko čelí žalobe, školy aj starostovia presúvajú zodpovednosť na rodičov. *Pravda.sk*. <https://spravy.pravda.sk/regiony/clanok/664624-slovensko-celi-zalobe-za-segregaciu-problemom-su-cisto-romske-skoly/>; Hapalová, M. (2020). Segregácia rómskych detí. In Hall, R. et al. (Eds.), *Analýza zistení o stave školstva na Slovensku* (pp. 96-105). MESA10. Retrieved from: <https://analyza.todarozum.sk/analyza-zisteni-o-stave-skolstva-na-slovensku.pdf>

<sup>5</sup> Benedikovičová, M. (2024, January 17). Žijú horšie ako väzni. Deti v polepšovniach bijú aj sexuálne zneužívajú. Toaletný papier majú na prídel. *DennikN.sk*. <https://dennikn.sk/3776915/ziju-horsie-ako-vazni-deti-v-polepsovniach-biju-aj-sexualne-zneuzivaju-toaletny-papier-maju-na-pridel/>

inequalities not only threaten social cohesion and a sense of belonging, but if larger numbers of people live in poverty, such people may face increased deprivation, homelessness, or social exclusion.

Inequality of opportunity is also linked to the fact that disadvantage is passed on from one generation to the next. Another important indicator of equal opportunities is the relationship between the educational results of adolescents and the socioeconomic status of their parents. If there is a high correlation between low educational performance and low skills achieved by parents, it follows that public services (especially education) are not successful in promoting equality of opportunity for all children regardless of their social background. It is probably obvious that one of the causes of income inequality is unemployment or bad redistribution/social policy of the state. But in addition to the known facts and the current polycrisis, it is necessary to mention the advent of artificial intelligence or technological changes (industry 4.0), because it rewards highly qualified individuals, especially in high-value sectors of the economy, such as information and communication technologies. At the same time, automation tends to displace low- and medium-skilled workers.<sup>6</sup>



The ageing of the population and the consequent increase in single-person households also contribute to income inequality (reducing the so-called ability to pool resources). Internal and external migration also creates inequality of opportunity, because the natives naturally have the upper hand – the old settlers, the original inhabitants, whatever you want to call them. And the xenophobia on the part of the public also plays in their favour. In addition, recently we often read that the number of single mothers is increasing. The share of households in which only one parent takes care of a child was already 19% in 2016 in the European Union. In the overwhelming majority of them, the child lives only with the mother. In such a situation, women are more at risk of poverty, depression, or unstable employment.<sup>7</sup> In Slovakia in 2023, up to 200,000 children are raised by only one parent, which

<sup>6</sup> Európska komisia (2018). Tematický informačný prehľad európskeho semestra. Riešenie problému nerovností. Retrieved from: [https://commission.europa.eu/system/files/2018-06/european-semester\\_thematic-factsheet\\_addressing-inequalities\\_sk.pdf](https://commission.europa.eu/system/files/2018-06/european-semester_thematic-factsheet_addressing-inequalities_sk.pdf)

<sup>7</sup> Heine, S. (2016, March 30). V EÚ narastá počet matiek samoživiteliek. *Euractiv.sk*. <https://euractiv.sk/section/podnikanie-a-praca/opinion/v-eu-narasta-pocet-matiek-samoziviteliek/>

makes up about 150,000 households.<sup>8</sup> In short, it is a phenomenon that has a rising tendency and is connected with all the topics related in this text and, simultaneously, it opens the issue of gender equality.

Because, as Sophie Heine (2016) writes, the problem can also be looked at from a positive point of view. According to the author, within her freedom, a woman is not satisfied with her caring role or economic dependence on her husband and has the right to leave a dysfunctional relationship, as she desires better personal fulfilment. However, according to her, women are still under the pressure of gender stereotypes. It is said that European legislation, which should help overcome obstacles to women's entry into the labour market and reduce their unemployment rate and the risk of poverty, can ease the situation for single mothers. The next step to improve the situation is the so-called shared parenting, where parents participate in education equally and mothers have easier access to the labour market, while the child is not separated from one of the parents. Single mothers should, in the authors' opinion, focus more on themselves as individual beings with their individual interests instead of seeing themselves as providers of care for others. Women will be able to fight more for shared work and a fairer distribution of parenting roles between both ex-partners. They will be better able to overcome obstacles within their single-parent status and, consequently, better fight against the injustice they face today, writes Sophie Heine.<sup>9</sup>

Of course, this is just a small sample of what we call the fight for gender equality because we know that a woman in the labour market in the EU countries is financially about 15% worse off if we are talking about a wage for the same work performed in the same position. If we look at Slovakia, after taking into account the days already worked in 2023, from November 1, 2023, compared to men, women in Slovakia worked for free until the end of 2023. In other words, this means that for every one euro earned by men, women receive only 83 cents a year. Compared to 2022, there was a deterioration in Slovakia in this comparison to the disadvantage of women, with the principle reasons being the COVID-19 pandemic, as women were more likely to be at home, lose their jobs, and have the growth of their wages

<sup>8</sup> Galvánková, V. (2023, May 2). Sociálnu pomoc môžeme decentralizovať. Jednorodičom by mohlo pomôcť ročné sprevádzanie. *Hnonline.sk*.  
<https://hnonline.sk/focus/ekonomika/96080703-socialnu-pomoc-mozeme-decentralizovat-jednorodicom-by-mohlo-pomoc-rocne-sprevadzanie>

<sup>9</sup> Heine, S. (2016). The Rise of Single Motherhood in the EU: Analysis and Propositions. *European Policy Brief* (March 2016, No. 42).  
<https://www.egmontinstitute.be/app/uploads/2016/03/EPB42.pdf?type=pdf>

and bonuses inhibited by companies. The existence of the “women's euro” in the remuneration of women in the labour market is a factual and warning indicator of the inequality of the position of women and men on the labour market. The gender wage gap in unadjusted form (this is the average hourly gross earnings) in Slovakia in 2021 was 16.6% to the disadvantage of women. This is a deterioration of 0.8% compared to the previous measurement. The average of the European Union was 12.73%, while Slovakia was fifth from the end, i.e. a decrease by five ranks. If we look at average gross monthly wages in 2022, according to the Statistical Office of the Slovak Republic, the difference between men and women in average nominal monthly earnings was higher than in 2021, up to 19% (this is an increase of 1.1%). Women earned 311 euros less (on average men earned 1,654 euros and women 1,343 euros), increasing the difference in monthly wages compared to men. The pay situation for women and men in Slovakia is worsening compared to other EU countries.<sup>10</sup>

But gender equality isn't just about money and equal pay, and it's not just about women. It is a very complex and comprehensive issue. Therefore, in the final part of this text, we address the controversial topic related to gender equality. Vladimír Burjan, a recognized Slovak expert on education, claims that Slovak education is over-feminized. According to him, very few men teach in Slovakia. Only 10% are men in the 1<sup>st</sup> stage of elementary schools, 24% in the 2<sup>nd</sup> stage of elementary schools, 26% in high school, and 29% of men teach at secondary vocational schools. Burjan believes that when girls and boys do not meet men in classes, they cannot learn how to communicate with them and have no chance to penetrate their thinking, values, and attitudes. In this way, there is no real preparation for life (this can also apply to socializing with other human beings). According to Burjan, the school system favours girls. Among other things, it turns out that many boys have better knowledge, but worse grades than girls. He found this out, for example, during KOMPARO testing, where the grade from the test and the grade on the report card are compared. Many boys who had a worse grade on the report card wrote the test much better, so the grade on the report card did not correspond at all to the number of points obtained on the test. Vladimír Burjan therefore believes that female teachers are subconsciously more satisfied with what they see in girls than with what they see in boys, and thus subconsciously give girls better grades. According

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<sup>10</sup> Inštitút pre výskum práce a rodiny (2023). Tlačová správa ku dňu rovnosti v odmeňovaní žien a mužov. Retrieved February 10, 2024, from <https://ivpr.gov.sk/tlacova-sprava-ku-dnu-rovnosti-v-odmenovani-zien-a-muzov-2023/>

to him, sometimes this is also because girls express themselves better orally, know how to create more beautiful sentences, and have a richer vocabulary, and so many female teachers think that girls know the subject matter better than boys. All of this creates the impression that our schools were built mainly for girls, adds Burjan. And why, according to Burjan, are few men teaching in Slovakia? He cites the lack of money in education as the first and basic reason. For many years, teachers in Slovakia have been paid very poorly. Our society perceives the position of a man of the family conservatively and still considers him the breadwinner of the family. Men also perceive themselves that way, and this is one of the main reasons why they do not want to work in education. The second reason why men don't want to teach is that in society, raising children is seen as a woman's job. According to Burjan, this is a very strong factor. Several male teachers admit that they encounter the opinion in society that they are blamed for not being able to find a better job than teaching. Overall, in a world of conservative patriarchal cultures, a male teacher is not viewed positively.<sup>11</sup> When society perceives the teaching profession in this way, it discourages many men from



learning, concludes Burjan.<sup>12</sup>

**BELONGING**

**INCLUSION**

**TOLERANCE**

**HUMANITY**

<sup>11</sup> There is a lack of men in Slovak schools, their share among teachers is among the worst in the developed world. They are an unspoken minority. There are the least number of men in Slovak schools among all OECD countries. In elementary schools, they make up only fourteen percent of the teaching staff. The younger the children, the more rare a male teacher is for them. At the first stage, only one child out of ten will experience a male teacher. Many of them do not have good working conditions, they work in the evenings and earn poorly. Even though they affect the lives of thousands of people at key stages every day, society sees their profession as something secondary. Link: <https://www.postoj.sk/13595/pokriveny-svet-nasich-skol-bez-muzov>)

<sup>12</sup> Koničková, J. (n.d.). V. Burjan: Muži sú v školstve potrební. *Eduword.sk*. Retrieved January 20, 2024 from <https://eduworld.sk/cd/jaroslava-konickova/5387/v-burjan-preco-potrebuje-viac-muzov-v-skolstve>

We don't have to agree with these views, we should even subject them to criticism and argue with them, but we can also think about and perceive arguments from the "other side", which are not common in these contexts. And we haven't even opened up the discussion of more controversial topics related to gender. In any case, one of the basic lessons, in addition to encouraging an open mind, in other words, the constant effort to learn and the effort to understand a complex world, is to respect the plurality of opinions in the context of decent and honest argumentation based on facts. Humanity, solidarity, respect, tolerance, but also the determination to change things and unceasing idealism combined with hopes, setting goals and not ignoring the surrounding world can constitute basic attributes for finding solutions to such complex and sensitive problems, which we only sketched superficially in our text.

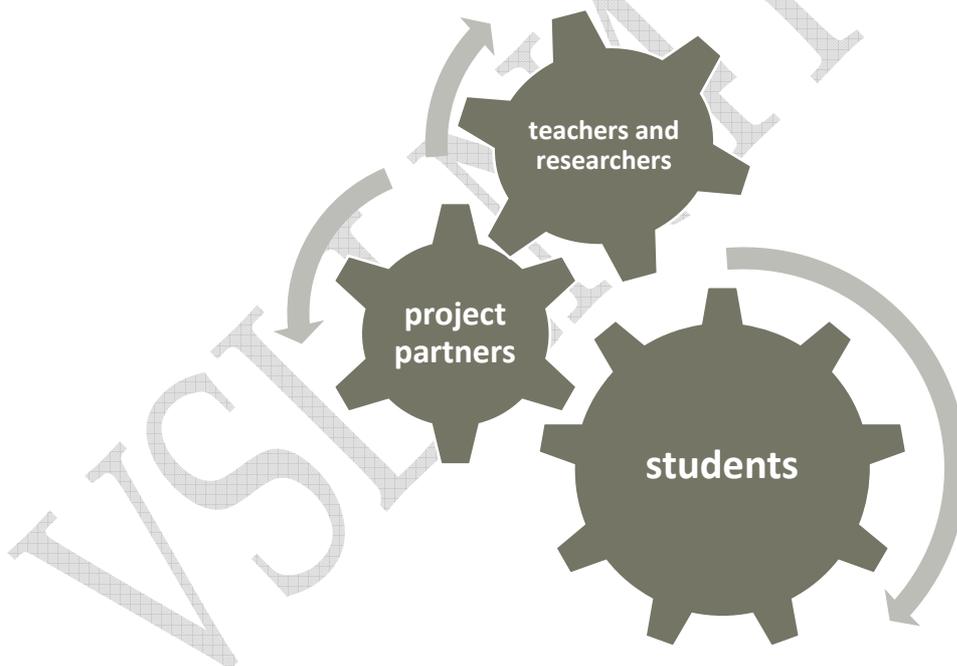
VSLNVAKOU

## Lessons learned from Poland

Małgorzata Rataj

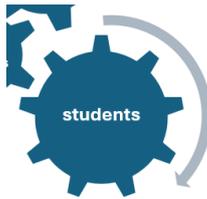
The goal of Visegrad Sustainable Living Labs Network 4 Youth of Universities (VSLLN4YOU) was to help academic teachers and trainers involved in the development of green competencies and disseminating knowledge in the field of sustainable development in shaping sustainable attitudes and engaging students and the entire academic community in the process of green transformation of the university. Universities have a special role to play – they educate new generations of eco-leaders.

Lesson Learned is divided into 3 groups:



Each of the 3 sections describes:

- 1) How did the project inspire students and teachers directly involved in the project and the academic community which the partners represent?
- 2) What success have we achieved?
- 3) What challenges have we faced?



During the Visegrad Sustainable Living Labs project – Network 4 Youth of Universities (VSLN4YOU) – THE STUDENTS had the opportunity to participate in a 2-week workshop. What did they learn?

- 1) How do they use this knowledge in their academic activities?
- 2) How do they want to use it in their future careers?
- 3) Do they find this knowledge useful in their daily lives?

The Day 3 workshop held in Rzeszow, Poland, was dedicated to Equality in the broadest sense.

According to the UN, the primary school enrollment rate in developing countries has reached 91%, meaning that 57 million children are out of school. 103 million young people around the world are still illiterate, more than 60% of whom are women. However, access to quality education is also a challenge for the EU as many EU citizens belonging to ethnic minorities that face daily discrimination and treatment as second-class citizens.

Students' scientific association – Intercultural Research Club "The Globe" – organized the debate "Every gender is equal" as part of the annual Human Rights Day celebration (December 12, 2023).



Using the knowledge gained from the workshop (Visegrad Sustainable Living Labs) Iranian student Alireza Hoghoughi Esfahani actively participated in the debate.



Alireza Hoghoughi Esfahani is also a leader of the Aviation Management Club. This student was inspired by the activities of the 5<sup>th</sup> day of the workshop on the topic of “What key climate actions need to be taken to save our planet?” “What the current global energy mix is and what the climate change targets are?” On his initiative, he prepared and delivered a lecture (December 15, 2023) at the City Hall in Rzeszów (Municipal Office) on the topic of “Eco-Friendly skies:

Green Aviation”. Alireza Hoghoughi Esfahani said: “Sustainable aviation is the future of air travel. With continued innovation and investment, we can reduce the environmental impact of air travel while creating new opportunities for growth and development.” Alireza Hoghoughi Esfahani wants to combine his future career with his passion for aviation.



Using the knowledge gained from the workshop (Visegrad Sustainable Living Labs), the students from the University of Information Technology and Management in Rzeszów are in the process of editing a scientific article on green aviation. They plan to publish the article in a reputable international journal in the field of air transport ecology.

Students also contribute to a book on the topic of sustainable development. The book will be used in lessons on sustainable development.

Students, inspired by the activities of the workshop, actively support eco-initiatives at the university such as: “We act environmentally to reduce plastic. Water dispenser, come with your own cup.”

Creating a free electric bike rental service at the college campus in Kielnarowa on the GREEN VELO route.



The benefits that students have derived from the project have been their 100% success – in their involvement in university initiatives, future careers, and activities in their daily lives.

The only challenge that students faced was that they had a lot of ideas and a lot of youthful energy in their involvement in eco-initiatives, but unfortunately, their enthusiasm was not fully shared by academic staff burdened with too many responsibilities in their academic careers.



Visegrad Sustainable Living Labs project – Network 4 Youth of Universities (VSLN4YOU) – aimed to bring knowledge of sustainable development and green transformation to the Academic Community.

- 1) What were the benefits for the participating academics?
- 2) What has the project contributed to their scientific work?
- 3) Will the results of the project influence the curriculum?
- 4) Was the academic community interested in this project and the tools developed during the project?

The commitment to the project was inspiring.

The tools prepared during this project will influence the curriculum and are being considered for use in new fields of study: Sustainability and the environment and Sustainable development in the economy.



It inspired us to write an article which is under review: “Development of The Green Policy of Enterprises: Decent Work and Economic Growth.”

The results of the project were presented in the Human Resources Management department and at a seminar of the Department of Cognitive Science and Mathematical Modeling. The project was considered interesting and promising from the point of view of the aspirations of the European Union and the possibilities of scientific research in this field. However, because they are long-planned, scientists have not been able to take an interest in the project Visegrad Sustainable Living Labs project – Network 4 Youth of Universities. There are ecological research projects underway at UITM, and researchers need to focus on them because they involve term grants from the Ministry of Higher Education.

The biggest success of this project from the teacher's point of view was the involvement of the students and their further initiatives related to the knowledge gained during the project.



4 Universities – project partners – with extensive experience in various green fields participated in the project.

- 1) What have we learned from each other?
- 2) What challenges have we faced?
- 3) What recommendations would we make for the future?

The project partners are experts (with several years of experience) in eco-initiatives not only in their home country but also on different continents. Cooperation with experts is always fruitful.

Unfortunately, beyond focusing on the implementation of the project, we had no time for anything else (exchange of experiences, development of strategies for further cooperation, etc.) due to other projects we have underway and the teaching and research workload. That was definitely our weak point. Success is based on cooperation and exchange of experiences with different experts. It seems that we will benefit more if, in the future, we get involved in fewer projects, and thus we'll be able to devote more time to the projects we carry out and to scientific relations with partners.

## Lessons learned from Hungary (Hackathon)

Balázs Borkovits

### Background

The VSLLN4YOU project aims to create the Living Labs (LLs) network, which will enable the co-creation and testing of innovative and sustainable solutions, relevant to the Visegrad Universities and Region, in cooperation with partners from the private, public, and civil society sectors. The University of Pécs joined the project to engage students with real-world experience, by working on sustainable projects and green solutions, and prepare them to be the agents of change in their personal and professional lives. Through the Sustainable Living Labs, workshops, training materials and conference, the project offers knowledge transfer for sustainable change. One of the most successful community building events was the Hackathon, organised twice during the project – but not financed from the project.

### How does a hackathon take place?

Hackathons for students are especially useful for skills development, networking, and personal development. Practical assignments and the practical application of the knowledge gained in lectures have been increasingly used in educational institutions over the past few years.

Hackathon is a full-day exciting event where you can meet open-minded people, solve interesting tasks, improve your teamwork skills, and get a crash course on how to turn an idea into a specific product or service. If you apply to the International Hackathon, you can generate some ideas and come up with specific suggestions for the different themes. Our goal is to make your



solutions as diverse as possible, which is why your teammates come from different part of the world.

There is nothing that could hinder your creativity!

### History of hackathons

“Hackathon” combines the terms “hacker” and “marathon”, and refers to an intensive period of development. The first hackathons date back to the late 90s in the open-source community and were a way to quickly schedule important changes to open-source software. These early hackathons were by invitation only and focused on writing code without any frills. Today, the term is used more generally: in a hackathon, participants work in small groups to create a working prototype for any targeted issue in a limited time. These events are quite different in terms of their purpose and implementation, but they generally share a common structure and characteristics.

### Experiences of the Hackathon at the University of Pécs (2023)

The Hackathon was a shortened version of the event, as the full 1.5 days were not available. The main challenge was built around sustainability, based on the 17 UN Sustainable Development Goals. Sustainability was the main challenge of the Hackathon, so the Opportunity seeking / Problem solving is also based on the UN's sustainability goals.



## SUSTAINABLE DEVELOPMENT GOALS



For the Hackathon, we divided the participants into 2 teams and the teams learned the following milestones and applied them to a real-world problem:

**Team building:** this was only a learning lesson at the moment, we could not apply it properly due to the lack of available time. But the theory of effective team building was learned, how the MBTI (Myers-Briggs Type Indicator) personality traits can interact and form a well-functioning team.

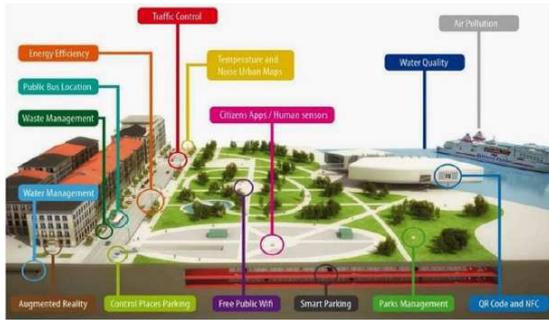


**Defining problems:** Teams should define “painpoints” from everyday life that relate to the problems of the Hackathon that have not yet been solved or existing solutions to which are not efficient enough. In order to succeed at this step, students should think about the experiences of those affected empathetically, and they should work to understand the circumstances under which the problem arises. It is key that the mentor keeps their focus on carefully defining a problem, and not on finding a solution.



Generally speaking, the two teams brainstormed on problems and pain points in their respective countries, mainly related to the smart city and zero waste challenges. They then narrowed this list down to 3 problem areas and worked from there.

The team, after defining the problem with the idea of what the solution should be, i.e. the characteristics and concept of the product or service. It is important that they then move towards a solution that they can model, that is, create an MVP for it, and brainstorm on a solution that the team has the competencies to create. Knowing the problems, they looked for benchmark solutions on the market, which were studied by the students and a competitor analysis was carried out. They then started to put together their own solution concept, which they had to implement specifically in the city of Rzeszów.

Smart city architecture [Source: <https://www.dragon1.com/resources/smart-city-architectures>]

The actual implementation process was already prepared on the spot, and in the afternoon course session, we went into the city together and modelled the solutions in real environments.

The most valuable lessons the students learned and took home from the Hackathon workshop were:

- ☒ problem-solving/opportunity identification is a very important soft skill in life, which not only helps in life but is also very useful in the job market;
- ☒ creativity and critical thinking are also soft skills that can be developed, and with smaller tasks, the students were able to experience them and learn about the process of their development;



- ☒ localism, which is also essential if we want to find a solution to something, as large global problems can be modelled at a local level, and if something works on a small scale, it can be scaled up and developed on a larger, broader scale;
- ☒ open-mindedness and the process of project-based work, which will also provide students with useful support for time management of study or work in the future.

### **Hackathon at the University of Pécs (2024)**

In March 2024, the University will organise the next hackathon during the VSLN4YOU project. Below, we introduce the agenda to support other partner universities in organising their events and merge Hungarian, Czech, Slovak, and Polish hackathons to joint events.

### March 20, 2024

- 13:00 - 14:00 Everybody wants to stay at Pécs - round table discussion
- 14:00 - 14:45 Welcome, Pitch training
- 14:45 - 15:00 Coffee Break
- 15:00 - 16:00 Teamwork: problem finding/problem identification
- 16:00 - 17:00 Teamwork: Problem analysis/problem definition

### March 21, 2024

- 8:00 - 8:15 Welcome - Quick refresh of the daily programme
  - 8:15 - 8:30 Coffee Break
  - 8:30 - 9:30 Teamwork: drafting of solution concepts
  - 9:30 - 10:15 Teamwork: Refinement of solutions, 1 final selection
  - 10:15 - 10:30 Coffee Break
  - 10:30 - 11:00 Teamwork: MVP<sup>1</sup>drafting
  - 11:00 - 12:00 Teamwork: MVP creation
  - 12:00 - 13:00 Lunch
  - 13:00 - 14:00 Expert validation I.
  - 14:00 - 15:00 Expert validation II.
  - 15:00 - 16:00 Teamwork: Preparing for the pitch
  - 16:00 - 16:30 Coffee Break
  - 16:30 - "Pitch" presentations, 2+5 min/team
- Jury decision (start depending on the number of teams presenting) and announcement of results



For further details please contact [simonyibedc@ktk.pte.hu](mailto:simonyibedc@ktk.pte.hu) or at Simonyi BEDC Facebook page.

<sup>1</sup> MVP – minimum viable product.

## Lessons learned from Czechia

Marek Jelínek

Students Living Labs engage students in addressing real global issues and research projects, providing a practical learning environment where students can work on projects with a direct impact on their communities or society.

The concept of Living Labs originates from the field of innovation and technology, where they serve as real testing grounds for new technologies and services. However, within the student environment, Living Labs have expanded to encompass a wide range of disciplines, including social sciences, sustainability, urbanism, healthcare, and more.

Living Labs allows students to actively contribute to change as they move beyond the boundaries of traditional classrooms and theoretical education. By engaging in practical projects, students gain valuable academic knowledge and develop skills such as critical thinking, problem-solving, collaboration, and effective communication.

These initiatives rely on interdisciplinary collaboration and foster an environment where students from different academic backgrounds exchange ideas and perspectives on relevant issues. Through this holistic and inclusive approach, Students Living Labs encourages students to appreciate the interconnectedness of real-world challenges, leading to the development of comprehensive and sustainable solutions.

Through experiences in Living Labs, students not only enhance their academic knowledge but also cultivate a strong sense of social responsibility and empathy. Students directly engage with their communities and address real societal issues, learning to prioritize ethical considerations and understand the broader implications of their actions.

As the concept of Living Labs continues to evolve, educational institutions worldwide recognize the transformative impact of these initiatives on students' personal growth and their ability to positively contribute to society. By supporting innovation, creativity, and community engagement, Students Living Labs plays a key role in shaping future leaders and problem solvers who are prepared to address the complexities of the modern world with confidence and compassion.



### **Inspiration in University Activities**

For students and experts at the Czech University of Life Sciences in Prague (CZU), the utilization of this concept and collaboration on VSLLN4YOU activities has been a significant benefit, particularly in terms of developing their problem-solving and project management competencies. The real impact of these activities was evident in the implementation of several projects, in which CZU students played a key role with the assistance of experts who participated in educational and project activities within VSLLN4YOU and the Summer University at the partner university in Rzeszow.

These activities also contribute to a wide range of CZU's initiatives, which have long aimed to increase the responsibility of its students and employees towards the environment and society. Our university strives to educate students in a manner that emphasizes sustainable development, minimizes the negative impacts of its activities on the environment, provides solutions to environmental and social problems, and disseminates knowledge about sustainable development. CZU educates about sustainability not only its own students as part of their study programs and individual subjects, but also provides education to its own employees and, to some extent, ensures the availability of information for the general public. The availability of suitable information allows for the preparation and adaptation of society to new trends and challenges in an informal manner.

In connection with activities within VSLLN4YOU, several project examples can be mentioned, in which teams were created, giving students the opportunity to develop their skills, especially in the areas of project management and practical problem-solving, and to be directly involved in practical initiatives with a positive impact on their surroundings.

## Successful participation of a team of young scientists in a prestigious hackathon

A team of five young student-scientists from the Faculty of Tropical Agriculture participated in the competition called the Youth Hackathon for Reducing Food Loss and Waste under the auspices of the Food and Agriculture Organization and other organizations. During the hackathon, students attempted to develop solutions that contribute to improving the situation in the field of food security and preservation.



The result of our students' efforts was the New Systemic Advisory Tool to Reduce Food Loss and Waste in Cambodia, which achieved significant success and was placed third in the New Services category. The award ceremony took place during the 7th Global Forum of Leaders for Agricultural Science and Technology (GLAST-2023), held in Sanya, Hainan Province, China, focusing on "Science and Technology for the Transformation of Global Agricultural-Food Systems".



## Student activities supporting sustainability on campus and in the surrounding area

Among other activities, where students have successfully utilized the opportunity to actively participate in solving real-world problems and collaborate with local communities, are activities organized within the European Sustainable Development Week at CZU. During this event, teams of students had the opportunity to come up with their own ideas and innovations that would contribute to raising awareness and increasing interest among students, employees, and the public in sustainable development. The result of the student's efforts was the organization of several events, such as Fair-Trade Breakfasts and several swaps: clothes, books, and plants.



Students have the opportunity to participate at all levels of organization under the guidance of faculty members, who oversee and lead students during their projects. As part of the iterative process, efforts are made to obtain feedback and achieve gradual improvement of the organization and increase the reach of these activities. Due to the high interest attracted by these events, they are planned to continue and, for example, to follow up on the mentioned swaps with a Christmas swap in December 2023.



Another key element in the effort to develop in this area is the CZU Campus Sustainability Challenge, the main goal of which is to promote the principles of sustainable development among CZU students and employees. They can submit their own project proposals focused on improving campus sustainability or spreading responsible behaviour among CZU employees, students, and visitors. Successful projects in this competition include initiatives promoting renewable energy sources (biogas station, solar pergola), sustainability, and biodiversity.



Another key element in supporting students at the university is the Point One (PO) business incubator, which helps new and starting companies by providing supportive services. These include mentor consultations, workshops, and well-equipped facilities. This support is aimed at innovative projects and companies, particularly those associated with students, graduates, and CZU employees. When evaluating projects, consideration is given not only to their quality but also to their social impact and adherence to sustainable principles.

## Visegrad Sustainable Living Labs Network 4 Youth of Universities (VSLLN4YOU)

The VSLLN4YOU project aims to create the Living Labs (LLs) network, which will enable the co-creation and testing of innovative and sustainable solutions relevant to the Visegrad universities and Region in cooperation with partners from the private, public, and civil society sectors. The SLLs will engage students with real-world experience, working on sustainable projects and green solutions, and prepare them to be the agents of change in their personal and professional lives. The project offers knowledge transfer for sustainable change through SLLs, workshops, training materials, and conferences.



### University of Prešov



The University of Prešov ranks among the most renowned and distinguished universities in the Slovak Republic. The University was officially established by Act No. 361/1996 Coll. on the Pavol Jozef Šafárik University division in Košice, effective January 1, 1997. It is a member of the Danube Rectors Conference (DRC), the European Universities Association (EUA) and the National Rectors Conference with the primary aim of promoting a unified system of higher education in Europe. The University of Prešov is also a co-founder of the Alliance of the Central-Eastern European Universities and Euro-Mediterranean University (EMU NI). The University consists of 8 faculties that offer several accredited study programmes in all 3 degrees (Bachelor, Magister, and Doctoral degrees), and both full-time and part-time forms. The University of Prešov develops an intense research activity with three Centres of excellence. The Centre of Competences and Lifelong Learning offers various courses and educational products.

## University of Information Technology and Management



**UNIVERSITY of INFORMATION  
TECHNOLOGY and MANAGEMENT**  
in Rzeszow, POLAND

The University of Information Technology and Management (UITM) in Rzeszów is a non-public higher education institution operating since 1996. It is the largest and highest-ranked private university in south-eastern Poland. During 25 years of activity, over 60 thousand people have studied here from Poland and abroad. Currently, 6,000 undergraduate and postgraduate students are at four facilities: Management, Applied Computer Science, Media and Social Communication, and Medical Faculty. Since 2015, UITM has been entitled to award a doctoral degree as part of Media Studies and in 2022, the University obtained such powers in the fields of Economy and Finance, as well as in Medical Science. UITM is also very engaged in matters important to the regional (Podkarpacie) and local community and cooperates with a wide range of partners representing public administration, business, and the non-governmental sector.

## University of Pécs



**PÉCSI TUDOMÁNYEGYETEM**  
**UNIVERSITY OF PÉCS**

The University of Pécs, with its 20,000 students, more than 4,500 international students, 1,400 lecturers and researchers, and 10 faculties, is one of Hungary's largest higher education institutions and the centre of knowledge within the Transdanubian region. Its roots date back to 1367. The UP represents classical values, while the challenges of the present and future times are also being adapted to successfully. It extends far beyond the city of Pécs and covers various educational areas. The UP operates an independent faculty in Szekszárd and runs significant training programmes in Kaposvár, Szombathely, and Zalaegerszeg, as well as abroad in Zombor.

## Czech University of Life Sciences Prague



Czech University  
of Life Sciences Prague

The Czech University of Life Sciences Prague (CZU) is Prague's third largest public university. Backed by more than one hundred years of history, CZU combines cutting-edge technologies, progressive science, and research in agriculture, forestry, environment, engineering, economy, management, and business. CZU provides complete higher education, summer schools, lifelong learning courses and the University of the Third Age to over 19,000 people. About one-third of the study programmes are taught in English, with more than 2,000 students involved. CZU cooperates with several private and public organisations and research institutions at local and international levels. The university is a member of the EuroLeague for Life Sciences (ELLS), a prestigious network of universities, and also belongs among twenty-eight members of Agrinatura, a group of European universities and research institutions that foster sustainable agricultural development. In recent years, CZU established the Centre for Precision Agriculture, the Bioeconomy Platform of the Czech University and the Water, Soil and Landscape Centre. The university's research activities and PhD programmes target the faculties' focus areas, which are also intensely concentrated in research pillars reflecting the UN Sustainable Development Goals.



