



## **FINAL REPORT**

PROJEKT: BILATERAL COOPERATION IN SUSTAINABLE MOBILITY EDUCATION

ID: 96P10

DURATION: IUIY 01, 2023 - DECEMBER 31, 2023

PARTNERS: THE FACULTY OF TRANSPORT ENGINEERING, UNIVERSITY OF PARDUBICE CZECHIA / FH JOANNEUM – UNIVERSITY OF APPLIED SCIENCES, KAPFENBERG, AUSTRIA

The aim of the project is to establish long-term cooperation between the Faculty of Transport Engineering (FTE) at the University of Pardubice and FH Joanneum's Institute of Energy, Transport and Environmental Management (FHJ). This will be achieved by establishing contacts at the faculty level.

The project was based on three controllable outputs: (i) an agreement between project partners for Erasmus+ partnership, (ii) two business trips between project partners, and (iii) the organization, implementation, and participation in a Five-day educational workshop.

Firstly, an initial online meeting was organised via MS Teams to clarify the agenda for the project and the documents required for the preparation of the Erasmus+ cooperation agreement. The agreement was signed vie EWP network on August 8 resp. September 1, 2023 (see Appendix A).

Secondly, two business trips were carried out to partner institutions. The first trip took place from 10 to 13 October at the FHJ in Kapfenberg, with three representatives of the FTE (Mr. Krupka, Mr. Pasek and Mr. Vojtek) in attendance. The second trip took place in Pardubice from 1 to 3 November, with two attendees from FHJ (Mr. Kiers and Ms. Jolly).

During the meeting, project participants met with representatives from FTE and FHJ, and with guarantors of study programmes. They visited Educational and Research Centre in Transport at FTE and special laboratories at FHJ.

They discussed about a curricula subjects comparison in the master's degree study programmes 'Transport Operations Management' at FTE (Available on: <a href="https://dfjp.upce.cz/en/dfjp/transport-operations-management">https://dfjp.upce.cz/en/dfjp/transport-operations-management</a>) and 'Mobility Technologies' at FHJ (Available on: <a href="https://www.fh-joanneum.at/mobility-technologies/master/en/">https://www.fh-joanneum.at/mobility-technologies/master/en/</a>). The comparison of subjects is shown in Table 1 and will be used for a definition of Mobility Window.

For the future, the possibility of a Mundus project was also discussed.

Table 1

FH JOANNEUM	University of Pardubice
Traffic Safety Aspects (Mgr., WS, 2 ECTS)	Bezpečnost dopravy / Transport Safety (XBBEZ, Mgr., SS, 4 ECTS)
International Human Resource Management (Mgr., SS, 4 ECTS)	Personální management / Human Resources Management (XAPRM, Mgr., SS, 5 ECTS)
Crisis Communication, Coaching Skills and Organizational Development (Mgr., SS, 4 ECTS)	Koučování a teambuilding / Coaching and teambuilding (XBKAT, Mgr., SS, 4 ECTS)
International Project development and management (Mgr., SS, 4 ECTS)	Projektový management / Project Management (XAPMN, Mgr., SS, 5 ECTS)
Advanced Traffic Technologies (Mgr., WS, 5 ECTS)	
Public Transport Operation (Mgr., WS, 3 ECTS)	
Mobility Laboratory I - Traffic Simulations and Telematics (Mgr., SS, 5 ECTS)	Modelování v dopravě I/ Transport Modelling I (XAMVD I, Mgr., WS, 5 ECTS)
Traffic Simulations and Telematics a Mobility Laboratory II (Mgr., WS, 5 ECTS)	Modelování v dopravě II / / Transport Modelling II (XAMVD II, Mgr., SS, 5 ECTS)
Number of credits: 32	Number of credits: 28

Finally, the Five-day workshop was held at the FTE in Pardubice from the 20th to the 25th of November. It was dedicated to the issue of Sustainable Mobility. The programme of the workshop is given in the table (see Appendix C).

The following lecturers participated in the lectures:

Mr. Abramović, B. from the Faculty of Transport and Traffic Sciences, University of Zagreb, Croatia Mrs. Bražuliené, R. and Mrs. Poudžiukiené, D. from Vilniaus College of Technologies and design, Lithuania

Mr. Došlý, J. from the Public Transit Company in Prague, Czechia

Mr. Kiers, M., Ms. Jolly, J. and Mrs. Sovec, T. from FHI

Mr. Chocholáč, J.; Mr. Matuška, J.; Mr. Pašek, J.; Mrs. Seidlová, A.; Mrs. Skalská, M. and Mr. Vojtek, M. from FTE.

A group of 11 students participated at the Five-day workshop from FHJ (see Appendix B).

The workshop was preceded by an online part and both parts (workshop and online part) form a module called Sustainable Mobility for which students received 6 ECTS after the successful defence of the project. The module combines a five-day face-to-face workshop with distance learning. The content of the module was available in the digital library with the possibility of online communication in the Discord platform. The teaching module focused on the characteristics of transport and its relation to sustainable development. The aim of the module was to acquaint students with the basic procedures and principles used in planning, managing and monitoring sustainable transport and to teach them to apply these procedures and principles to specific examples. The module had four main parts/sections with the following structure:

Section 1 Environmental aspects of sustainable mobility (Mrs. Monika Skalská)
 Application sections:

Measures in European cities in the context of environmental aspects of sustainable mobility (Mr. Jan Chocholáč)

Cargo bikes in cities (Mrs. Andrea Seidlová)

Emission calculators and their use (Mr. Jan Chocholáč)

Section 2 Economic aspects of sustainable mobility (Mrs. Monika Skalská)
 Application sections:

Intermodal transport (Mr. Martin Vojtek)

Logistics centres (Mrs. Andrea Seidlová)

Interoperability in transport in relation to CBTC (Mr. Petr Nachtigall)

• Section 3 Social aspects of sustainable mobility (Mrs. Monika Skalská)

Application sections:

Public service in transport (Mr. Martin Vojtek)

Modern public transport systems (Mr. Petr Nachtigall)

Accessibility of transport for PRM (Mr. Jaroslav Matuška)

Section 4 Institutional aspects of sustainable mobility (Mrs. Monika Skalská)

Application sections:

Sustainable Urban Mobility Plans (Mrs. Michaela Ledvinová)

Decision support systems I (Mr. Jiří Křupka)

Decision support systems II (Mr. Jiří Křupka)

On behalf of both organizers, I acknowledge gratefully the AKTION program and DZS for their support.

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January 30 2024

Assoc. Prof. Jiří Křupka

### Overview of controllable outputs:

Appendix A. Agreement between FTE and FHJ

Appendix B. Lists of participants / students of the Five-day workshop from FHJ

Appendix C. Schedule of the Five-day workshop

Appendix D. Photos, screenshots (sent separately)

# Erasmus+ Programme

#### **Bilateral Inter-Institutional Agreement**

Key Action 1

Learning Mobility for Higher Education Students and Staff among EU Member States and third countries associated to the Programme<sup>1</sup>

The institutions agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, including automatic recognition of the credits awarded to students by the partner institution as agreed in the Learning Agreement and confirmed in the Transcript of Records, or according to the learning outcomes of the modules completed abroad, as described in the Course Catalogue, in line with the European Credit Transfer and Accumulation System. The institutions agree on exchanging their mobility related data in line with the technical standards of the European Student Card Initiative.

#### Grading systems of the institutions

Receiving higher education institutions need to provide a link to the statistical distribution of grades or make the information available through EGRACONS according to the descriptions in the ECTS users' guide. The information will facilitate the interpretation of each grade awarded to students and will facilitate the credit transfer by the sending institution.

#### Validity period of the agreement

Timeframe	Academic Year	Call Year	
Start of validity	2022/23	2022	
End of validity	2027/28	2027	

A Transcript of Records will be issued by the receiving institution no later than 5 weeks after the assessment period has finished at the receiving HEI.

#### G. SIGNATURES OF THE INSTITUTIONS (legal representatives)

Institution [Erasmus code]	Name, function	Date	Signature <sup>5</sup>
CZ PARDUB01	prof. Ing. Petra Bajerová, Ph.D., vice-rector	01.09.2023	Approved via EWP network
A GRAZ09	Hemády Birgit	08.08.2023	Approved via EWP network

Appendix B. Lists of participants / students of the Five-day workshop from FHJ

Last name	First name	Sex	
Astuti	Kristi	F	
Abdalla	Akram	M	
Ilic	Leopold	M	
Hinfelaar	Jennifer	F	
George	Amal	M	
Paprocki	Tomasz	M	
Spatzier	Daniel	M	
Klasnic	Stefan	M	
Magar	Bijay	M	
Zec	Muhamed Ali	M	
Oberthaler	Lotte	F	

Appendix C. Schedule of Five-day workshop

Time	20.11.2023 <b>Monday</b>	21.11.2023 <b>Tuesday</b>	22.11.2023 Wednesday	23.11.2023 <b>Thursday</b>	24.11.2023 <b>Friday</b>	
9:00 – 9:15	Introduction Pašek, J. Skalská, M.  Social aspects of SuMo Skalská, M.	Cargo bikes	SuMo	Travelling by train  Departure from Pardubice hl.n. (main station) at 7:28  Arrival to Prague hl.n. (main station) at 8:31  From 9:00 Excursion in Prague Public Transit Company Vojtek, M. Chocholáč, J. Abramović, B. Kiers, M. Jolly, J. Bražuliené, R. Poudžiukiené, D.  After excursion free time  Travelling back from Prague to Pardubice individually	Institutional aspects of SuMo and sust.	
9:15 – 10:30		in cities Seidlová, A.	in Prague Došlý, J.		urban mobility planning Skalská, M.	
10:30 – 11:30	SuMo in smart cities Kiers, M.	Sustainable urbanization Jolly, J.	Green logistics Sovec, T.		at 7:28  Arrival to Prague hl.n.	Railway transport labs Matuška, J. Vojtek, M.
11:30 – 12:00	Welcome refreshment	Coffee break	Coffee break		Coffee break - farewell	
12:00 – 13:00	Accessibility for people with	From private car to public transport Abramović, B.	Climate change challenges Bražuliené, R.		Excursion in Prague Public Transit	Project presentation Skalská, M. Chocholáč, J.
13:00 – 14:30	disabilities Matuška, J.	Sustainable public transport Vojtek, M.	Environmental aspects of transport Chocholáč, J.		Křupka, J. Němečková, M. Abramović, B. Kiers, M. Jolly, J.	
14:30 – 15:30	Lunch	Lunch	Lunch		Bražuliené, R.	Bražuliené, R. Poudžiukiené, D.
15:30 – 17:00	Teamwork	Teamwork	Consultations Skalská, M. Chocholáč, J. Vojtek, M.		Free time	
17:00 – 18:00	Free time	Free time	Free time		Free time	
18:00 – ?	Town Tour ESN	Paintball ESN	Quiz Evening ESN		Free time	