

ERASMUS + European Universities

D3.5 Annual Portfolio of Flagships' activities – 3rd report



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SUMMARY

The Annual Portfolio of Flagships' Activities – 3rd Report presents a comprehensive overview of the progress and achievements of the 4EU+ Flagships between November 2024 and October 2025. Prepared under Work Package 3 (WP3) of the iCORE project (One Comprehensive Research-Intensive European University), this report documents the Flagships' central role in advancing the integration of education, research, and innovation across the 4EU+ Alliance.

The four Flagships—Urban Health and Demographic Change; Europeanness: multilingualism, pluralities, citizenship; Digitisation – Modelling – Transformation; and Environmental Transitions—form the thematic backbone of the 4EU+ Alliance. Each section of this report follows a unified structure covering governance and community building, collaboration in education, research-based initiatives, and highlights of the academic year. Together, these narratives illustrate how interdisciplinary collaboration is translating into tangible institutional transformation and the development of a shared academic ecosystem across Europe.



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1 INTRODUCTION

The 3rd Annual Portfolio of Flagships' Activities continues the structured monitoring and documentation of Flagship progress within the iCORE framework. Building upon the previous two reports, it highlights the growing maturity of the 4EU+ Flagships as dynamic platforms for academic cooperation, institutional innovation, and interdisciplinary exchange.

The Flagships represent the strategic pillars of the 4EU+ Alliance, each addressing a set of interconnected global challenges through joint educational programmes, collaborative projects, and community-building activities. By combining disciplinary expertise and promoting research-based education, the Flagships directly contribute to the iCORE mission—to strengthen the integration of teaching, research, and innovation across Europe.

The Flagships Annual portfolio as such is a product of iCORE project and for context and complex overview, it partially goes beyond iCORE project. It also describes the operational synergy between internal 4EU+ schemes (notably SEED4EU+, 4EU+ Visiting Professorships and Charles University mini-grants) and the iCORE project. These internal mechanisms enable the creation of innovative research-based educational formats, support staff and student mobility, and foster new collaborations across member universities. Much of this progress is underpinned by human resources financed through iCORE, which ensure effective coordination, communication, and institutional capacity-building.

Aim, Audience, and Impact

The aim of this report is to provide a transparent, evidence-based overview of the Flagships' annual activities and to demonstrate their collective contribution to the iCORE objectives. It serves multiple audiences:

- The European Commission and EACEA, as an official deliverable, evidence of the impact and outcomes of iCORE Work Package 3.
- The 4EU+ governing bodies and Flagship leaders, as a strategic tool for planning and evaluating Flagship development.
- Academics, students, and project staff across the Alliance, as a resource showcasing collaboration opportunities, innovative practices, and success stories.

The report's impact extends beyond documentation. It functions as a model for best practices in transnational cooperation, highlighting how aligned funding mechanisms, shared governance, and integrated research-based teaching contribute to building a comprehensive, research-intensive European University.



2 METHODOLOGY

The Annual Portfolio of Flagships' Activities – 3rd Report was developed through a structured, collaborative, and multi-step process coordinated by WP3 and the 4EU+ Flagship leadership. Its preparation combined qualitative and quantitative data collection.

Each Flagship contributed detailed inputs based on a standardized reporting template designed by the WP3 coordination team. The template covered the following core areas:

1. Governance and community building – leadership structures, partner engagement, and coordination mechanisms;
2. Collaboration in education – teaching formats, joint courses, and student mobility initiatives;
3. Research-based approach – integration of research into education and doctoral training;
4. Reflections and highlights – evaluation of achievements, challenges, and future directions.

Inputs were collected through a combination of written reports, coordination meetings, and data from extensive mapping of joint educational activities prepared and coordinated by WP3. The WP3 coordination team synthesized all contributions, ensuring coherence across Flagships. This ensured that both the visible project outputs and the less visible operational efforts—such as planning, communication, and capacity-building supported by 1CORE-funded staff—were captured.



3 FLAGSHIP 1: URBAN HEALTH AND DEMOGRAPHIC CHANGE

Flagship 1 tackles the intertwined challenges of urban health, demographic transformation, and well-being. Rooted in global and European policy priorities, the Flagship promotes a cross-sector, international, and interdisciplinary approach to understanding and addressing how urban environments, aging populations, and social determinants affect health outcomes. Through 1CORE project, it has continuously developed innovative educational programmes based on active, research-driven pedagogies—aligning with the 4EU+ skills and competencies.

In February 2025, a [strategic meeting of the Programme Committee in Heidelberg](#) marked a pivotal moment for shaping the next phase of the Flagship's agenda. The following **priority areas** were defined:

- **Migration and Health** (Leads: CU, UniGe)
- **Inclusive Cities** (Leads: UHD)
- **Disabilities** (Lead: UniMi)
- **Global Health** Round Table (Lead: SU)
- **Urban Health** Case Challenge (Lead: UCPH)
- **Compatibility of Curricula in Geography** (Leads: UHD)

3.1 Flagship governance and community building

Flagship 1 continues to operate as a dynamic and well-coordinated initiative, supported by an engaged leadership team, Programme Committee members and a growing network of contributors. The flagship is jointly coordinated by three flagship leaders (academic coordinators) from three different universities. It is headed by Charles University (see below), University of Milan (Antonella Delle Fave) and Heidelberg University (Ulrike Gerhard). In 2025, the leadership welcomed a new member from Charles University, Aleksi Šedo, who replaced Luděk Sýkora. The Heidelberg team is supported by Jens Schneider, who joined the team in February 2025. Regular monthly online coordination meetings among the Flagship leaders and their assistants ensure continuity, agility, and strategic alignment across activities and 1CORE tasks.

The broader Flagship 1 community remains actively involved through scheduled virtual meetings that bring together Programme Committee members and partners across the Alliance. These online interactions are complemented by face-to-face opportunities for collaboration, including meetings at the 4EU+ Annual Meetings (November 2025 in Geneva), focused strategic meeting in Heidelberg (February 2025), which fostered in-depth dialogue and planning, as well as specific workshops and events related to Flagship 1 priorities, e.g., event at World Health Assembly (19.-23. May 2025, Geneva), 4EU+ Migration and Health Days (19.-20. June 2025, Prague), 1CORE Quarterly meetings (June 2024, September 2024, February 2025, July 2025).



3.2 Collaboration in education

Compatibility of Curricula

Six 4EU+ universities collaborated to align and compare their geography curricula to enhance short-term student mobility. The goal was to create a set of 13 “plug-in modules” that would be mutually recognized and easily integrated into each institution’s programme. These modules, offered in English and worth a minimum of 15 ECTS, enable students to study for 2–3 months abroad without delay in their academic progress. Two pilot semesters (2023/24 and 2024/25) tested the modules, and experiences were evaluated and shared with the Alliance’s Working Group Mobility. Key outcomes include a detailed manual for study coordinators, a streamlined recognition process, and improved inter-institutional cooperation. The process is now moving from piloting to implementation and serves as a blueprint for curriculum compatibility in other disciplines within 4EU+. A report in the form of a [flyer](#) was handed out to all universities involved.

Geneva Health Forum

To deepen 4EU+ collaboration with Global Health related institutions we participated in the *Geneva Health Forum (May 2025)* which aimed at connecting Flagship 1 with the **WHO and other stakeholders** e.g. the *Society of Refugee Healthcare Providers*.

4EU+ Migration and Health Days

Organized within the framework of the iCORE project, the [4EU+ Migration and Health Days](#) offered a vibrant platform for dialogue at the intersection of research, education, and societal impact. The first day featured an impressive lineup of speakers from across the 4EU+ Alliance and international organizations, setting the stage for in-depth discussions on migration and health. The second day spotlighted student-led workshops, where participants experienced research-based education in action—underscoring the Alliance’s commitment to co-creating knowledge and empowering future leaders. The full article is available at the [following link](#).

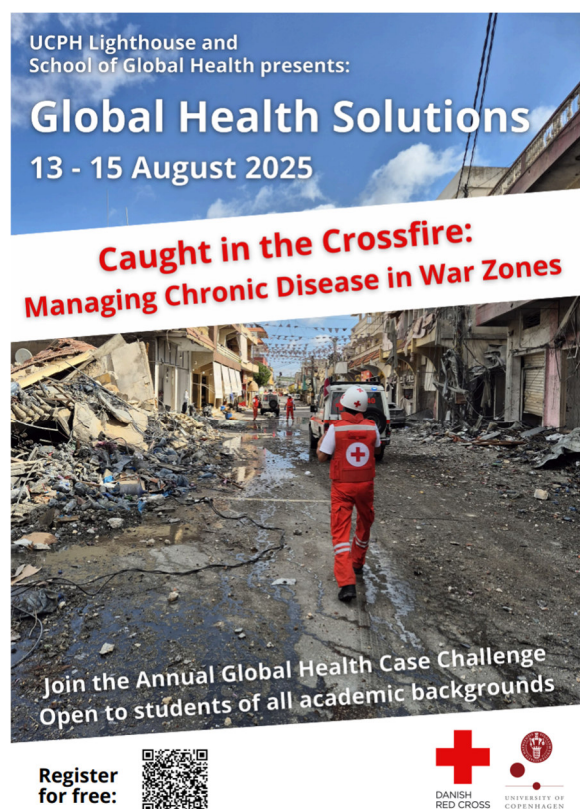


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Global Health Solutions

In August 2025 many students from the 4Eu+ universities supported by iCORE project participated in the summer school **"Global Health Solutions"** in Copenhagen, organised in collaboration with the *Danish Red Cross*. This event highlighted our strong engagement with challenge-based and experiential learning. It brought together students from various disciplines in interdisciplinary teams to collaboratively develop real-world solutions for **managing chronic diseases in conflict zones**. Core competencies such as design thinking, stakeholder mapping, team collaboration, and strategic pitching were cultivated in a high-pressure, intercultural setting.



Making Disability into a Resource for Individuals and Communities

In addition, a **Blended Intensive Programme (BIP)** in **Milan** (September 2025), titled **"Making Disability into a Resource for Individuals and Communities"**, continued this focus by immersing students in interdisciplinary challenge-based dialogues. The programme was structured into a virtual component with expert-led lectures, and a five-day in-person design sprint in Milan where students work in international teams to co-develop solutions to real-world challenges. A final plenary presentation and jury-led feedback session ensure that outcomes are reflected back into academic and societal practice—strengthening inclusive thinking and participatory methods across the 4EU+ universities.



Overview of educational activities in Academic Year 2024/2025:

Activity	Participating universities (leading in bold)	Type of the activity	Format	Physical mobility	Target group	EC TS
Urban Regulations and Political Memory: Towards Understanding Spatio-Temporal Aspects of Urban Development (UNREAD)	UW, CU, SU, UHD, UniMi	Joint Course	Blended	8 academics, 32 students	BA, MA, PhD	Yes
Summer School 4EU+ Against Cancer	SU, CU, UW	Joint Course	On campus	30 students	BA, MA	Yes
Global Health Solutions - Student Case Challenge (GHS)	UCPH, CU, UHD	Joint Course	On campus	5 academics, 37 students	BA, MA, PhD	No
SYNchrony in Caregiver-Child Interactions across Neurodiversity (SYNCC-IN)	UHD, UCPH, UniMi, UW	Joint Course	Virtual	N/A	BA, MA, PhD	Yes
Development of an integrated 4EU+ pharmacoepidemiology and pharmacovigilance educational program (DETERMINANT)	SU, CU, UCPH, UHD, UniGe, UniMi	Joint Programme - preparation	Virtual	N/A	MA	N/A
4EU+PharmacoEpi (advanced course):an integrated 4EU+	SU, CU, UCPH, UHD, UniMi	Joint Course	Blended	22 students	MA, PhD	Yes
Inclusive cities - regenerative resources (ICRR)	UCPH, SU, UHD, UniGe, UniMi, UW	Joint Course	Blended	N/A	WG members	N/A

Below, selected activities supported by the 1CORE project mainly through staff coordination and human resource support—are presented in more detail to illustrate the variety, goals, and impact of activities within the Flagship.

Urban Regulations and Political Memory: Towards Understanding Spatio-Temporal Aspects of Urban Development (UNREAD)

Key topics of the course, now in its fourth edition, were the driving forces of urban changes, development of smart cities and interdisciplinary methodologies of urban studies. The course, including a physical mobility held in Prague in March 2025, was developed as part of an educational project addressing changes in the conditions of the urban development of smart cities in Poland, Italy, Czechia and Germany, according to three dimensions: past (history), present (law) and future (geography). Emphasis was on integrated and interdisciplinary approach to help students understand the complexity of new urban centres where real estate development must coexist with environmental protection and with the history and heritage of the local community.



-  BA/MA/PhD, 29 students involved
-  Joint course, blended
-  UW, CU, SU, UHD, UniMi
-  02/10/2024-28/03/2025
-  <https://4euplus.eu/4EU-1131.html>

Summer School 4EU+ Against Cancer



The third edition of the 4EU+ Against Cancer Summer School, held at Sorbonne University in July 2025, provided students with a comprehensive overview of basic, translational, and clinical oncology research, as well as related fields such as bioinformatics, drug development, and cancer treatments. Its aim was to introduce students to the multiple components of complex and multidisciplinary research in oncology. In addition, brief information about general principles of science funding were presented. Participants attended lectures by international experts from 4EU+ universities, gained valuable insights into science funding, and built professional networks through interactions with peers and faculty.

-  BA/MA, 30 students involved
-  Event, on campus
-  SU, CU, UW, in cooperation with SIRIC Curamus (France), NICR (Czech Republic)
-  07-09/07/2025
-  <https://4euplus-againstcancer.icm.edu.pl/>

3.3 Research-based approach

The iCORE project strengthens the link between education and the creation of new knowledge, promoting a research-based approach that keeps learning responsive and forward-looking. In Flagship 1, we give particular attention also to the initiatives that bring new knowledge and findings and involve doctoral candidates who play a pivotal role in this process.

SEED4EU+ 2024

Project/Activity	Acronym	PI	Content	Participating universities (leading in bold)
Advanced photoluminescent platform for bacterial treatment	PHOBAT	Colombo, Alessia	Research	UniMi , CU, UW
G-AI-T Seed: AI-Driven Personalized Treatment for Cerebral Palsy in Europe	G-AI-T Seed	Armand, Stéphane	Research	UniGe , UHD, UCPH

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Title of the project	PI	Planned outputs	Participating universities
Exploring the role of cancer stemness and stromal interactions in therapeutic targeting of oncofetal chondroitin sulfate glycosaminoglycans in cancer	Hatina, Jiří	publication and/or presentation at an international conference, support for mobility, creation of a basis for cooperation	CU, UCPH, UW
Strengthening Urban Health Nexus: A Collaborative Research Symposium for Joint Proposal Development	Buriánková, Jitka	data collection for sociological research, analysis and recommendations	CU, UniGe, UniMi

New Initiatives - work in progress

This work-in-progress builds on the strong foundation of the 4EU+ Flagship 1 and aims to deepen its long-term cooperation. Addressing key urban challenges such as health, access and digitization, **InCities** brings together expertise from eight disciplines across six European universities. The initiative explores how cities can become more inclusive, liveable, and resilient in the face of rapid change. InCities is being developed as a **Marie Skłodowska-Curie Actions Doctoral Network**, focusing on interdisciplinary research and training for doctoral candidates. Through shared training, mobility, and collaboration across sectors, it will connect doctoral candidates and experts to address pressing societal questions.



3.4 Reflections and Highlights

We are proud of the vibrant and active community that has formed within Flagship 1, with members proactively seeking opportunities for collaboration and regularly engaging in flagship-wide meetings and initiatives. Our official contact with the World Health Organization marked an important milestone in May 2025 and was further developed in Prague at the successful conference organized within 1CORE project “*Migration and Health Days*” in June 2025. Opening doors for future cooperation at the global level, on 21-23 November 2025, the University of Geneva, an associated partner to 4EU+ 1CORE project, hosted a [Flagship 1 onsite meeting on “Migration and Health”](#). This event, marking the Flagship’s first collaboration with the World Health Organization, reflects Flagship 1’s commitment to addressing global societal challenges and strengthening the 4EU+ Alliance’s international impact.

Another major achievement was the successful completion of the “Compatibility of Curricula” report in Geography, providing a solid foundation for structured student mobility and joint programme development.



4 FLAGSHIP 2: EUROPEANNESS: MULTILINGUALISM, PLURALITIES, CITIZENSHIP

Flagship 2 is dedicated to the theme of Europeanness, explored through three main pathways: multilingualism, pluralities, and European citizenship. It brings together researchers and educators from the humanities and social sciences to study Europe from cultural, linguistic, legal, historical, and political perspectives. By connecting these different fields, Flagship 2 creates a broad and inclusive framework for understanding Europe and the many identities that shape it.

Flagship 2 aims to address key European challenges such as European citizenship, migration and integration, democratic participation, cultural and linguistic diversity. It also responds to global issues that directly affect Europe, including war, political division, climate change. By examining how Europeans respond to these concerns, Flagship 2's goal is to provide insights that would be essential for developing practical solutions to both regional and global crises.

The mission of Flagship 2 is to develop joint initiatives that deepen the understanding of what Europeanness means today. This involves exploring language interactions and multilingualism, cultural pluralities, governance, justice, and shared historical experiences. In the long term, Flagship 2 seeks to strengthen the 4EU+ Alliance by building a shared academic space that supports interdisciplinary cooperation, joint curricula, and in the future a joint European degree.

4.1. Flagship governance and community building

Flagship 2's work is planned collectively by the Program Committee, which includes representatives from each member university with the two co-coordinators, Kamila Miłkowska-Samul (University of Warsaw) and Morten Rasmussen (Copenhagen University), facilitating and supporting its activities.

The Program Committee has seen minor changes, welcoming Isabella Montersino (who, alongside Adeline Lionetto, represents Sorbonne University), Sophia Schwemmer for Heidelberg University, and Marco Giugni for the University of Geneva.

The program committee meets regularly online to discuss and decide on Flagship 2 activities. Smaller working group meetings are arranged when needed, such as for coordination between the two co-coordinators, onboarding new partners, etc.

For issues that require an urgent reaction or more detailed analysis collaboration takes place via email to ensure timely input from all partners.

In-person meetings were held during the Annual Meeting 2024 in Warsaw, which included not only a Flagship 2 session, but also a cross-flagship meeting.



4.2 Collaboration in education:

Given limited resources, Flagship 2 concentrated on a few key initiatives, specifically a working seminar for Ph.D. students and supporting the publication of a book. The working seminar in January 2025 at Sorbonne University involved six Ph.D. students from University of Copenhagen, University of Milan, Sorbonne, Charles University and University of Warsaw. The workshop, entitled *Methodologies of queer studies: crossing disciplinary boundaries*, built on the ongoing *Representing Same-Sex Desire* minigrant, led by principal investigator Josef Šebek from Charles University.

Flagship 2 enabled the creation of the publication of the volume *Challenges for Europeanness in an Age of Global Crises: Initiatives for a Responsible, Open and Progressive Europe in the 21st Century*, which emerged from the scholarly efforts of young researchers within the 4EU+ Alliance. Ph.D. candidates and early-career scholars addressed the challenges of Europeanness in their research and discussed their findings during a 1CORE Flagship 2 PhD workshop organized at the University of Warsaw on 10–11 June 2024. Building on these discussions and subsequent research, the volume edited by Kamila Miłkowska-Samul and Agata Bareja-Starzyńska from the University of Warsaw and published by Elipsa, a Polish academic publishing house, examines the evolving meaning of Europeanness in an age of profound uncertainty, including political turbulence, societal shifts, climate change, war, migration, and economic volatility.

In the following table, Flagship 2's joint educational in academic year 2024/2025 activities are listed, with selected initiatives presented in more detail below.

Activity	Participating universities (leading in bold)	Type of the activity	Format	Physical mobility	Target group	EC TS
The Texture of Hope: Dialogue in the Age of Conflicting Worldviews	CU, UCPH, UHD, UniGe, UniMi	Joint Course	On campus	9 academics, 14 students, 2 postdocs	PhD, Postdocs	N/A
Spring School "Narrating the Past in the Towns of Central Europe: Museums and Cultural Heritage (from the Middle Ages to the Present Days)"	UW, CU, SU	Joint Course	On campus	8 academics, 32 students	BA, MA, PhD	No
Queer pedagogies here and now: Teaching queer studies at the intersection of global and local challenges	CU, Assas, SU, UCPH, UniGe, UniMi, UW	Series of events	Blended	N/A	PhD	N/A



Upper Palatinate – A Triangle of Interests in Regional History of Late Middle Ages	CU, UCPH, UHD	Series of events	Blended	3 academics, 3 students	MA, PhD	No
Dimensions francophones (DF)	CU, UniMi, UW	Joint Course	On campus	3 academics, 7 students	BA, MA, PhD	Yes
Cooperation of researchers and teachers in the field of Old Norse Studies	CU, SU, UCPH	Joint Course	On campus	5 academics, 1 student	PhD	N/A
Europe as a discourse community: language, emotion, and argumentation (EDC)	UHD, SU, UniMi, UW	Joint Course,	Blended	3 academics, 11 students	MA, PhD	Yes
Cooperative Network Philotrans	UHD, Assas, CU, UCPH, UniGe, UniMi, UW	Joint Course	Blended	6 academics, 18 students	MA, PhD	Yes
Nomadic Subjects between Europe and Latin America: Life- and Memory-Writing	UW, CU, UHD	Joint Course	Blended	6 academics, 16 students	MA, PhD	Yes
History of European cooperation since 1919. MA-PhD Seminar (MAPS)	SU, CU, UniGe	Joint Course	Blended	3 academics, 11 students	MA	Yes
Migration Studies and New Societies (MIGRANS)	UniMi, CU, UW	Joint Programme	On campus	N/A	MA	Yes
Visual Literacy: Understanding Images across Europe – Past and Present	UW, CU, UniMi	Joint Course	Blended	8 academics, 29 students	BA	Yes
Under Eastern Eyes (UNES)	SU, CU, UW	Joint Course	Blended	N/A	MA, PhD	Yes
Peer to peer shadowing: A pilot project for foreign language and culture learning (SHADOW)	UniMi, SU, UW	Joint Course	Blended	10 students	BA, MA, PhD	Yes
Education for The European Teacher of the 21st Century (ENTENTE21)	SU, UHD, UniMi, UW	Joint Course	Blended	19 students	BA, MA	Yes



Below, selected activities which contributed the iCORE project objectives are presented in more detail to illustrate the variety, goals, and impact of activities within the flagship:

Migration Studies and New Societies (MIGRANS)

The master's degree in Migration Studies and New Societies (MSNS) is a unique joint programme, co-developed within the framework of the 4EU+ Alliance by the University of Milan, the Charles University, and the University of Warsaw. Its main objective is to provide students with an in-depth understanding of social and political opportunities and challenges posed by global and intra-EU migration. The programme equips students with competences and analytical tools for critically interpreting complex political and socio-economic phenomena and for assessing their normative, social, political, and anthropological implications. Graduates will be prepared to work with international and national governmental and non-governmental organisations on issues related to migration management and migrant integration, with a particular focus on the European context.

-  MA, 20 students per year
-  Joint programme, on campus
-  UniMi, CU, UW
-  2nd academic year – 2024/2025
-  <https://migrations.cdl.unimi.it/en>



Spring School "Narrating the Past in the Towns of Central Europe: Museums and Cultural Heritage (from the Middle Ages to the Present Days)"

The spring school, held in Warsaw in April 2025, brought together students, early-career researchers, and academics from disciplines such as history, museology, art history, and urban studies to explore how museums shape urban memory. As witnesses and narrators of the past, museums reveal the social, cultural, and architectural dynamics that have influenced the transformation of urban spaces over the centuries. Using Warsaw as a case study, the program examined topics such as the evolution of urban forms in Central Europe from the Middle Ages to the 21st century, the representation of cities in museums and historical collections, the emergence of urban history museums and their role in constructing local identities, and the museographic challenges of the 20th century in response to political and urban upheavals. The program combined lectures, workshops, and visits to museums and historical sites, offering an immersive learning environment and fostering interdisciplinary dialogue on history, memory, and urban heritage.

-  BA/MA/PhD, 36 students involved
-  Event, on campus
-  UW, CU, SU
-  28/04/2025-30/04/2025



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Cooperative Network Philotrans: Translate 4EU+



Philotrans has fostered a long-standing collaboration in both teaching and research. Within the framework of the 4EU+ Alliance, this academic network brings together researchers and lecturers from applied linguistics and translation studies to develop a shared educational offer for our students. The translation project *Translate4EU+* focuses on translating key documents of the 4EU+ Alliance from English into the respective partner languages, with the aim of strengthening the Alliance's institutional multilingualism. A major emphasis is placed on the use of AI-driven language technologies, both as practical tools and as objects of critical reflection. Last year's translation project also included a research component, forming the basis for a forthcoming joint publication.

-  MA, 18 students involved + 37 Ukrainian students online
-  Joint course, blended
-  UHD, Assas, CU, SU, UCPH, UniGe, UniMi, UW
-  07/10/2024-09/02/2025
-  <https://www.uni-heidelberg.de/fakultaeten/neuphil/iask/sued/internationales>

EducationN for The EuropeaN TEacher of the 21st Century (ENTENTE₂₁)

The ENTENTE₂₁ project explored the notion of “Europeanness” in education by addressing the question: what does it mean to train to become a 21st-century European teacher? Such a teacher must be able to understand and respect diverse cultural practices and values, which requires the development of intercultural, multilingual, and specific pedagogical competences. To foster these skills, the project internationalised Primary and Secondary Teacher Education programmes within the 4EU+ Alliance through blended and virtual mobility activities. These included preparatory and reflective blended modules, physical mobilities in primary and secondary schools or partner institutions – with placements taking place in Milan, Heidelberg, Warsaw, and at Sorbonne University – as well as project-based online exchanges. The training, open to both BA and MA students, focused on transversal skills such as multilingualism, critical thinking, and societal engagement. Participants were encouraged to reflect on different education systems, pedagogical practices, and the role of teachers in society, ultimately becoming ambassadors of Europeanness and raising awareness of the added value of European Teacher Education.

-  BA/MA, 34 students involved
-  Educational module, blended/virtual
-  SU, UHD, UniMi, UW
-  Summer semester 2024/2025
-  <https://hse-heidelberg.de/ueber-uns/projekte-und-foerderungen/education-european->



4.3 Advancing Synergies Between Education, Knowledge Creation, and Policy Engagement

Although not directly funded by iCORE but supported internally by 4EU+ universities, these activities significantly contribute to the project's broader objectives. Flagship 2 contributes to its objectives through complementary research-oriented initiatives. These efforts strengthen the link between education, research, and policy engagement, fostering interdisciplinary collaboration across the 4EU+ Alliance. The following section highlights selected activities that promote and consolidate research-based cooperation within the Alliance.

SEED4EU+ 2024

Project/Activity	Acronym	PI	Content	Participating universities (leading in bold)
EU Citizenship as Power Resource: Developing capabilities, social and education policies and transforming social rights on a European scale	POWERCIT	Mattei, Paola	Research	UniMi , UHD, UCPH, UniGe
Biblical OriGins in slavOnic texts - Systems for Language-modelled Observation and Verification	BogoSlov	Ruskov, Martin	Research	UniMi , CU, UHD, UW
Facilitating English-medium Education Discourse Through Accessible Corpus-based Tools – a Pilot Study	FEED_ACT	Walenta, Magdalena	Education	UW , UHD, UCPH, UniMi
UNDER EASTERN EYES. East European Writers Reimagining the West from the Great War to Present Times	UNES	Royer, Clara	Research	SU , CU, UW
Circulation of Materials and Resilience of Local Communities in the Northern Italy in Late Antiquity	CIRMAR	Tůmová, Helena	Research	CU , UniGe, UniMi



Minigrants 2025

Title of the project	PI	Planned outputs	Participating universities
Dual Antiplatelet Therapy for Shock Patients with Acute Myocardial Infarction - DAPT SHOCK AMI trial	Mořovská, Zuzana	DAPT-SHOCK-AMI study, its approval, international registry of patients included in the study, presentation at the European Congress of Cardiology, publication	CU, UHD, SU, UW
Seek and ye shall find: Molecular surveillance of bird schistosomes and swimmer's itch	Macháček, Tomáš	comprehensive training for collection and analysis using the e DNA-LAMP method, establishment of an international monitoring network	CU, UCPH, UW
Synthesis of Green-to-Red Fluorescent Materials	Kotora, Martin	a new class of azonium salts, synthesis, properties, design and development of a new class of efficient emitters with CPL properties	CU, UHD, UniGe
From Climate Change to Fiscal Innovation: Transforming the EU Budget for Sustainability with CBAM, Climate Tax and ETS	Večeř, Miroslava	2 articles submitted for publication (results, methodologies, recommendations based on analyses)	CU, UHD, UniMi
Youth, Governance, and Social Justice in Environmental Transition: An Ecocritical Framework in Comparative and Transdisciplinary Contexts	Soares Moura, Eva	critical thinking - 4EU+ portfolio, workshop at CU, workshop at UniGe, conference at CU, publications, dissemination	CU, UniMi, UW
CONSPIRO - Breathing Together for Cleaner Air	Hovorka, Jan	training of municipal and regional authority staff on how to use air quality data to lead public discussions.	CU, UHD, UCPH
Uncertain Worlds: Rethinking the Drake Equation and Earth's Uniqueness (DRAKE)	Toman, Jan	lectures, workshop, teaching materials (educational kit) and research report, publication	CU, SU, UCPH

Global Outreach at a Glance

Although not a direct part of the iCORE project, following initiative is coordinated by iCORE's Associated Partner, UniGe, which contributes through Flagship 2 in a shape through the META-UN project, which aims to foster sustained dialogue with the United Nations system on global governance, law, and multilateral cooperation.

On the 6th and 7th of February 2025, **META-UN** the global outreach project of Flagship 2 was launched with the inaugural conference *The United Nations: Looking Towards the Future* From history to the current and future challenges of global governance and law, held at the *Palais des Nations*, the European headquarters of the United Nations. META-UN's aims are to create a lasting interphase with the UN system to engage in a sustained and constructive dialogue on (a) challenges to UN decision-making and international law; (b) contemporary challenges for global governance; (c) the history, historical heritage and archival preservation of the UN's eight decades of multilateral work.



The conference gathered close to forty academics (from law, political science, history and beyond), UN officials and other practitioners for an honest, open and multifaceted discussion about the current state of multilateralism and the United Nations, the long trajectories leading towards the present, and the many challenges and possibilities that are on the horizon. Without giving a detailed resume of the conference, there were three key takeaways from the conference.

- **Multilateralism under pressure:** The United Nations faces a crisis driven by both long-term systemic imbalances and new geopolitical tensions, leading to declining engagement, budget constraints, and weakened commitment to multilateral cooperation.
- **Resilience and global perspective:** Despite these challenges, the UN remains a diverse and historically grounded arena for global dialogue and contestation. Its decentralized and inclusive nature—reflecting voices from across the Global South—continues to provide resilience and opportunities for reform.

- A call for deeper dialogue: There is a growing recognition of the need for stronger collaboration among academia, civil society, and UN institutions to build a sustained, ethical, and knowledge-based dialogue on the future of global governance.

This dialogue, which META-UN will play its part in forging, needs each corner of the triangle to remain true to their own ethics and priorities - indeed, herein lies the potential. Accordingly, META-UN is set to launch several important education, research, engagement and policy-science initiatives in the coming years.



4.4 Reflections and Highlights

Flagship 2 advances the 4EU+ Alliance's mission by linking education, knowledge creation, and policy engagement around the theme of *Europeanness*. Through initiatives such as the PhD seminar *Methodologies of Queer Studies*, the volume *Challenges for Europeanness in an Age of Global Crises*, and the META-UN project launch in Geneva, it fosters interdisciplinary collaboration and dialogue on Europe's cultural, political, and global challenges.

Over the past months, Flagship 2 Programme Committee has engaged in multiple discussions to determine the most impactful directions for the coming year. The plan is establishing alliance-level networks in Digital Humanities and the European Citizenship Observatory, mapping ongoing activities across the eight universities. There is a strong sense that pooling resources in these areas can create a robust, collaborative networks and enhance knowledge and exchange.



5 FLAGSHIP 3: DIGITISATION - MODELLING - TRANSFORMATION

In Flagship 3, we use mathematical and computational methods to solve challenges related to both engineering and societal problems. Our goal is to contribute to solutions that aim not only to take technology to an unprecedented level, but also to support the transformation of society into the digital/AI age. This transformation will have a significant impact on issues such as quality of life through learning healthcare systems, Industry 4.0, and the digital transformation in society. It is also the key to tackling climate change and to using technology to achieve the EU's Green Deal targets. Students and the next generation of researchers are being trained in these technologies to be even better equipped to fulfil their societal responsibility as scientists. By pooling our expertise and ambitions, Flagship 3 aims to provide a broader platform with a greater variety of educational pathways and opportunities, thereby increasing the potential and opportunities for both our researchers and students.

5.1 Flagship governance and community building

Flagship 3 is co-led by Heidelberg University and the University of Copenhagen. The Flagship leads are Michael Winckler (UHD) and Fabien Pazuki (UCPH). Since November 2024, there have been some changes in the Program Committee (PC) as representatives have changed at some member universities. At Assas, Yackolley Amoussou-Guenou replaced Claudine Desrieux, and Etienne Pernot joined as a second PC member. At UniGe, Laurent Mocozet joined as a second PC member. At UW, Aleksy Schubert replaced Błażej Miasojedow. At UCPH, Eva Raimondos-Møller replaced Katja Sander Johannsen as a Flagship administrator. At SU, Gérard Biau and Glenn Roe are replaced by Andrea Pinna and Gaël Lejeune.

The Flagship holds monthly online PC meetings to discuss the progress and developments of the Flagship initiatives, as well as current topics. Individual onboarding meetings for new PC members, led by the Flagship leads and Flagship administration, are held when there are changes in the committee. Additionally, the Flagship sees in-person meetings as instrumental for community building and strategic development. To save resources and to enable all members to join, in-person Flagship meetings are scheduled during other in-person meetings, such as the Annual Meeting, when possible, and/or remote participation is made available. The Flagship met for a two-day strategic meeting/workshop in Heidelberg in July 2025. Another in-person meeting is scheduled for the Annual Meeting in Geneva.



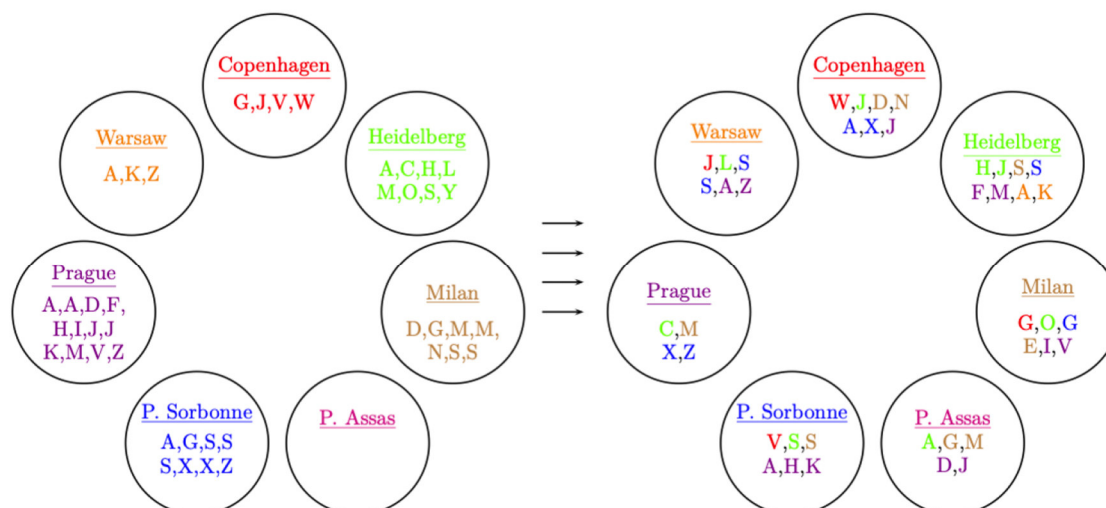


5.2 Collaboration in education

Our goal is to offer educational projects that span all levels of learning. With the BMST for Bachelor students, two Master's degree programs currently in development, and an annual Summer School for PhD and Master's students, Flagship 3 does indeed cover all levels of higher education. Our annual 'Integrative Think Tank (ITT)' connects advanced Master's students and PhD candidates with industry representatives, confronting them with real-world challenges and putting their research into practice on a societal level. Our MOOCs on 'Thinking AI' and 'Data Literacy' are aimed at students of all disciplines as well as the public, to empower individuals to make more informed decisions about their digital behavior.

For our course [Bachelor in Mathematics Student Tasks \(BMST\)](#), we had a new record of 42 students from Copenhagen (4), Heidelberg (8), Milan (7), Paris Sorbonne (8), Prague (12), and Warsaw (3). They were distributed among six topics at UCPH, UHD, UniMi, Assas, SU, CU, and UW. A separate report is available; a [student testimonial is available on Instagram](#). The Flagship Summer School 2025 "[Between Models and Reality: School on Machine Learning in Physics](#)" was held at UCPH under the scope of AIPHY (see below) with 60 PhD participants, 48 from 4EU+ members. The [MOOC on Data Literacy](#) has gained over 14,000 enrolments (currently over 22,000) since the last Flagship portfolio (7400) and retains its 4.6/5 star review and 99% user approval rate. A follow-up MOOC on 'GenAI Literacy' is currently being produced in cooperation with [OpenClassrooms](#).





As a challenge-based, blended course integrated into the local study programs, BMST contributes to all tasks of iCORE WP2 as well as to iCORE T3.1 and T3.4. By targeting bachelor students, it raises awareness for the Alliance and its educational projects at the earliest study stage. The PhD Summer School at UCPH employed a mix of input, exercises, and project work, a combination which participants appreciated, as the feedback shows. While including Master students – and possibly motivating them to consider a PhD – its focus was on PhD students, therefore directly contributing to iCORE T3.3, among other tasks (T2.1, T2.3, T3.4). The MOOC on Data Literacy and the MOOC in development on GenAI Literacy have the advantage of being almost completely sustainable – pending the future need for updates – and greatly expand the reach of the Flagship and the Alliance. To varying extents, they are relevant for all tasks in iCORE WP4, but especially for T4.4 and T4.5.



Overview of educational activities in Academic Year 2024/2025:

Activity	Participating universities (leading in bold)	Type of the activity	Format	Physical mobility	Target group	ECTS
FabLab Hub	UniGE , SU, UCPH, UHD	Joint Course	Blended	10 academics, 1 student	BA, MA, PhD, staff, public	No
Master Degree Program in Artificial Intelligence Technologies and Applications (MasterAI)	UniMi , Assas, CU, SU, UCPH, UHD, UniGe, UW	Preparation of Joint Programme	On campus	9 academics	MA	N/A
Joint master degree in Mathematics and applications	CU , SU, UHD, UW	Preparation of Joint Programme	On campus	N/A	MA	N/A
Between Models and Reality - Ph.D. school on Machine Learning in Physics Research (Flagship 3 Summer School)	UCPH , Assas, CU, SU, UHD, UniGe, UniMi, UW	Joint Course	On campus	48 students	PhD	Yes
ResearCh rOad triP in chemIstry: an outLook from bacheLOr's to masTer's (COPILOT)	SU , CU, UCPH, UHD	Joint Course	Blended	5 academics, 28 students	BA, MA	Yes
Extension of competences and knowledge-based education of natural hazards and environmental change	CU , UHD, UniMi	Joint Course	On campus	1 academic, 3 students	BA, MA, PhD	No
Integrative Think Tank (ITT)	UHD , Assas, CU, SU, UCPH, UniGe, UniMi, UW	Joint Course	On campus	8 academics, 21 students	MA, PhD	Yes
Bachelor in Mathematics Student Task (BMTS)	UCPH , Assas, CU, SU, UHD, UniMi, UW	Joint Course	Blended	42 students	BA	Yes

Deep learning in Life Science - phase 2 (DeepLife 2.0)	UHD, CU, SU, UniMi, UW	Joint Course	Blended	6 academics, 55 students	MA	Yes
The VIRTual Immersive Education for CHEMistry and Chemical Engineering, third Edition (VIRTChem)	UniMi, CU, SU	Joint Course	Blended	30 students	MA	Yes
Concurrent collection and analysis of large data sets of cosmic rays using time correlation in physics undergraduate laboratories	UniMi, CU, SU	Joint Course	Hybrid	N/A	BA, MA	Yes
Meet-EU: bridging the gap between research and education	SU, CU, UHD, UniMi, UW	Joint Course	Blended	Academics, 47 students	MA	Yes

Below, selected activities which contributed the iCORE project objectives are presented in more detail to illustrate the variety, goals, and impact of activities within the flagship:

The VIRTual Immersive Education for CHEMistry and Chemical Engineering, third Edition (VIRTChem)

The project is based on an innovative training course in the field of chemistry and industrial chemistry thanks to the use of different types of virtual reality (VR) pieces of software for an immersive experience within the reproduction of chemistry laboratories, an industrial chemistry plant and investigation of structure of molecules. During virtual exercises, specifically prepared according to educational goals, students will collect information and data that will require their interpretation, analysis, and discussion in working teams to promote not only their learning but also their soft skills and critical thinking. Thanks to the VIRTChem project students have the chance to experience an immersive 3D reality while being part of a stimulating international network.

 MA, 30 students involved

 Joint course, blended

 UniMi, CU, SU

 12/2024-05/2025

 <https://4euplus.eu/4EU-12.html?newsID=19252>



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Integrative Think Tank 2025 (ITT)

The Integrative Think Tank (ITT) 2025, the third edition of the five-day challenge workshop held in Heidelberg at Mathematikon and SAP AppHaus, focused on transforming real-world industrial challenges into potential research projects. Throughout the event, interdisciplinary teams collaborated closely with experts from partner companies to address complex R&D topics, particularly in mathematics, computer science, machine learning, and quantum physics. The workshop aimed to generate innovative ideas and translate them into structured outlines for future Master's and PhD theses, creating a foundation for long-term collaboration between universities and industry in advancing cutting-edge research.



-  MA/PhD, 21 students involved
-  Event, on campus
-  UHD, Assas, CU, SU, UCPH, UniGe, UniMi, UW, INOVA+, SAP
-  29/06/2025-04/07/2025
-  <https://www.mathcomp.uni-heidelberg.de/itt->

Between Models and Reality - Ph.D. school on Machine Learning in Physics Research (Flagship 3 Summer School)



The project, now in its sixth edition, focused on the application of Machine Learning in physics research and on the related challenges and solutions. It took place at the Niels Bohr Institute in Copenhagen and was organized in collaboration with the 4EU+ Alliance and the AI-Physics Marie Curie network. Participants engaged with topics including Bayesian neural networks, uncertainty quantification, generative and representation learning, fast machine learning, and physics-informed neural networks. Collaboration among students was encouraged through joint projects, culminating in a friendly Kaggle-like competition to apply and test their Machine Learning skills.

-  PhD, 48 4EU+ students involved
-  Event, on campus
-  UCPH, Assas, CU, SU, UHD, UniGe, UniMi, UW, AI-Physics Marie Curie Ph.D. network
-  02/06/2025-06/06/2025
-  <https://indico.nbi.ku.dk/event/2153/overview>

Bachelor in Mathematics Student Task (BMST)

The fourth iteration of BMST was successfully carried out during the academic year 2024-2025. Local mentors (at least one mentor per 4EU+ partner), proposed a topic in mathematics and formed a transversal group of interested bachelor students coming from the universities within the alliance. The groups worked intensively on a specific topic for eight weeks and produced a report, took part in a final on-site seminar, and sometimes helped create wiki pages or program relevant codes. This project brings together students from different member universities at an early stage of their academic careers to work independently, albeit with supervising instructors, and in an international team.

-  BA, 42 students involved
-  Joint course, blended
-  UCPH, Assas, CU, SU, UHD, UniMi, UW
-  01/02/2025-31/05/2025
-  <https://4euplus.eu/4EU-578.html?>



I really loved this unique format — it was original and encouraged us to be more independent, to do a bit of our own research. It also made me even more motivated to continue my studies after my master's with a PhD.

Discovering another university was an amazing experience too; it opened up my perspective and made me dream bigger. And of course, this international project was a wonderful opportunity to meet students from other European countries, make new friends, and explore the city together.

Sophia, a third-year mathematics student at Sorbonne University

5.3 Bridging Education and Knowledge Creation

While the heart of iCORE project lies in education, its strength is grounded in knowledge creation and innovation. Advancing discovery not only enriches teaching but also ensures that learning remains dynamic and future oriented. PhD candidates in particular play a key role at the interface of learning and inquiry, shaping new directions while contributing to the training of the next generation. Flagship 3 therefore not only fosters excellence in education but also cultivates environments and initiatives that strengthen this vital continuum across the Alliance.

SEED4EU+ 2024

Project/Activity	Acronym	PI	Content	Participating universities (leading in bold)
Dark Connections: Sorbonne, Milano, Geneva	DaCoSMiG	Cirelli, Marco	Research	SU , UniGe, UniMi
Deep learning in Life Science - phase 2	DeepLife 2.0	Herrmann, Carl	Education	UHD , CU, SU, UniMi, UW
Understanding the Spatial Organization of p53 in response to DNA damage through Single Particle Tracking	P53SPT	Miné-Hattab, Judith	Research	SU , UCPH, UniMi



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ResearCh rOad triP in chemIstry: an outLook from bacheLOr's to masTer's	COPILLOT	Sachon, Emmanuelle	Research	SU, CU, UHD, UCPH
Efficient magnetic resonance research through advanced numerical modeling and optimization	INGREDIENT	Bonhomme, Christian	Research	SU, CU, UW

Minigrants 2025

Title of the project	PI	Planned outputs	Participating universities
Europe: the Laboratory for a Digital State	Handrlica, Jakub	interuniversity knowledge exchange - digital state, lectures, round table for the public, publications	CU, UCPH, UniGe, UniMi
EUMATBIO-X: European Mathematical Biology Exchange	Brejcha, Jindřich	two-semester hybrid seminar + intensive workshop	CU, UHD, SU, UniMi, UW
On the Fringe of Science: A Citation Network Analysis of Astrology and Science	Joseph, Jacques	pilot study for an astronomical journal, 2 UHD and UW workshops, 2 lessons at CU, difference dataset	CU, UHD, UW

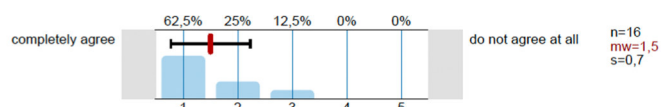
Other Flagship 3 initiatives

Knowledge creation initiatives in Flagship 3 range from small-scale bilateral lab visits to EU proposals like [AIPHY](#), which was launched in late 2024. In 2025, a collaboration between the interdisciplinary [MIRALab](#) in Geneva and Assas/EFREI was initiated. Participants of the lab visit discussed several common research topics and the possibility of preparing an EU proposal together. The AIPHY network welcomed its PhD students in late 2024 and launched its first training activities in 2025. The Summer School (see above) as well as the [Integrative Think Tank \(ITT\)](#) were organized under AIPHY, but open to all PhD and advanced Master students at the Alliance universities, as well as qualified externals, given capacity.

This year's ITT took place in Heidelberg with partner companies SAP and INOVA+. While INOVA+ is part of the AIPHY network as an industry partner, SAP, the world's largest vendor of enterprise resource planning software, is a close partner of UHD. The ITT is a challenge workshop during which participants work in groups to translate challenges from the industry's R&D departments into research questions that can be tackled academically. Ideally, co-supervised thesis projects should emerge. This way, a bilateral tech transfer between university and industry takes place. This year, several potential projects were identified, and discussions with the companies are ongoing. The course evaluation shows that participants appreciated the exposure to real-world problems and research atmosphere, in particular. 87.5% of respondents

agreed or strongly agreed that they believe they will benefit from what they have learned. A separate report is available; [a social media post](#) documents this year's edition.

8.1) I believe I will benefit in practice from what I have learned and experienced.

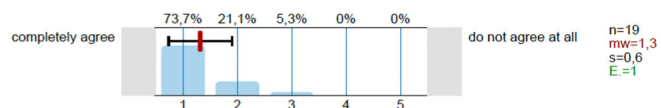


Screenshot from the ITT 2025 course evaluation

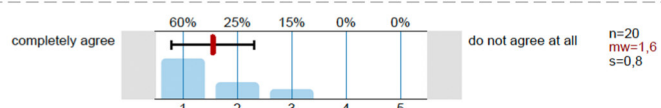


Flagship 3 also hosted its iCORE T3.3 PhD Workshop in Heidelberg, as the [“2nd Sorbonne-Heidelberg Workshop on AI in medicine: Machine Learning for multi-modal data”](#). At the workshop, a diverse group of researchers – both in seniority and topical focus – gathered to discuss their current work and recent developments in the field(s). Other formats used at the workshop include keynotes by invited expert speakers, hands-on methodology sessions, and round-table discussions. A special focus was also put on social activities, to encourage networking and to allow the participants to truly experience Heidelberg as a city. In the course evaluation, 94,8% of respondents agree that insightful discussions emerged, and 85% agree that the exchange between junior and senior researchers was an important aspect of the event. A full report has been submitted as iCORE WP3 deliverable. [A social media post](#) documents the workshop. The [workshop proceedings](#) have been published via UHD.

2.6) Vivid and insightful discussions emerged both inside and outside the course room.



2.7) The exchange between junior and senior researchers was an important aspect of the event.



Screenshot from the PhD Workshop course evaluation



5.4 Reflections and Highlights

As the in-person events listed above already constitute the highlights of this year, we briefly summarize other new or ongoing initiatives. The [DeepLife](#) course ran in its second edition after two successful SEED4EU+ proposals. It was also successful in the BIP call and will run as such next year. The [MAT-BIO seminar](#) was successful in the CU minigrant call and hosted a [workshop](#) near Prague in September 2025 with speakers and students from all five participating partners. The FabLab at UHD, which is part of the FabLab Hub project and is situated at UHD's Startup Hub, had its [soft opening](#). A [staff training took place](#) at the SU FabLab to train a Heidelberg colleague. Under the umbrella of iCORE project, Working Group Mobility organized two Curriculum Comparison Workshops which took place for the double degree Master's programs in development. In January 2025, the project team for the Master's in AI met in Milan to discuss possible study plans. In May 2025, the project team for the Master's in Mathematics and Applications met in Prague for the same purpose. The initiative was supported by the "joint study programmes task force" organized within iCORE project aiming to provide full support to deepen the collaboration towards joint study programmes.



6 FLAGSHIP 4: ENVIRONMENTAL TRANSITIONS

Increasingly at the forefront of public concern and debate, environmental change, climate issues, and ecological transition are topics that must be addressed by the various scientific fields and experts in these disciplines in order to better understand the phenomena and their contributing factors, and to find solutions. Flagship 4 Environmental Transitions addresses the many environmental challenges facing society by bringing together a wide range of disciplines, enabling a cross-disciplinary approach and interdisciplinary work, with the aim of extending education, research and knowledge of this topic to a large number of students.

The Flagship 4 pursues the following topics:

- Research in the life, earth, chemical, environmental sciences, biology of organisms, ecology, biodiversity, evolutionary biology, environmental protection and policy, geoscience, crop science, economic and social sciences;
- Construct an inspiring, multidisciplinary environment for students, with shared expertise in: academics, teaching-through-research, resources and infrastructures, including well-tailored exchange semesters, summer schools, short intense joint courses;
- Contribute to the environmental education of society, in Europe and across the globe, including suggestions and solutions that would address complex relationships of society, economy and the environment and the communication of these solutions to a diverse audience.

As the European population is being affected by these changes and environmental challenges in their daily lives, as well as in their housing, agriculture, mobility, and lifestyle, Flagship 4 aims to study these transformations through education and high-quality research to contribute to finding sustainable solutions that take into account the population, their economy, and their environment. One of FG4's priorities is also to educate the population on these issues and to create a community that can work together to reflect on and research environmental solutions for today and tomorrow.

With the goal of raising awareness about environmental transition and contributing to addressing environmental challenges, the mission of Flagship 4 is to encourage, facilitate and support teaching, educational, and research initiatives on this topic, to offer students new opportunities in a dynamic framework, in multiple disciplines, to increase exchanges between member universities of the 4EU+ Alliance and across Europe, and to develop high-quality research, in order to support the education of future specialists and researchers.



6.1 Flagship governance and community building

The composition of the Flagship Programme Committee is still the same and include two representatives of each university (professor or associate professor) and 1 representative of the local office or of local administration involved in 4EU+ iCORE project. This year, the Flagship 4 community has evolved to include Professor Rosa Lehmann, Junior Professor of “Innovation and Sustainability in Ibero-America” who represents Heidelberg University. Representing the University of Copenhagen are Associate Professor Rasmus Kjølner from the Department of Biology, Professor Ole Mertz from the Department of Geosciences and Natural Resource Management Support and Ole Henckel, UCPH Education. For the University of Warsaw, Professor Katarzyna Roguz is now part of FG4. And Panthéon-Assas University is represented by Professor Etienne Maclouf and Professor Sara Brimo.

The Flagship 4 met online around five times this year and met at the 4EU+ Annual meeting. This collaboration in meetings must be combined with email exchanges between FG4 members throughout the year.

6.2 Collaboration in education

FG4’s collaboration in the field of education has taken shape this year through the continuation and support of existing educational programmes and activities, as well as the development of new opportunities. Among FG4’s educational offer are several joint study programmes that were developed thanks to the structural changes enabled across the 4EU+ Alliance by the iCORE project, and through the work of individuals funded via iCORE.

In particular, FG4 focused on consolidating two Erasmus Mundus Joint Master programmes: MERGED (Global Environment and Development) and M3EP (European Environmental Economics & Management). Although these projects are at different stages of implementation, both continue to develop, and FG4 contributes actively to their progress and sustainability. To ensure their long-term continuation beyond the scope of iCORE, both programmes have applied for Erasmus Mundus funding and are now being monitored by FG4, though no longer as part of the iCORE project—where only their preparation and design took place.

Furthermore, FG4 first developed a learning pathway in biodiversity. To foster collaboration and ensure its sustainability, this pathway is now being shaped into the joint programme aiming to apply for Erasmus Mundus Joint Master’s programme in Quantitative Biodiversity (QuBiD). The programme brings together six European universities—five from the 4EU+ Alliance—to design an innovative joint master addressing global challenges in biodiversity through advanced data analysis and modelling, strengthening Europe’s capacity in biodiversity research and conservation.



Overview of educational activities in Academic Year 2024/2025:

Activity	Participating universities (leading in bold)	Type of the activity	Format	Physical mobility	Target group	EC TS
Biodiversity, sustainability in the agro-food system (MICROBS)	UniMi , CU, SU, UCPH, UW	Joint Course	Blended	21 students	BA, MA	Yes
Cryosphere Remote Sensing and hazardS monitoring in environmental Transitions (CREST)	CU , UHD, UniMi	Joint Course	On campus	6 academics, 10 students	BA, MA, PhD	Yes
Uncertain Worlds: Rethinking the Drake Equation and Earth's Uniqueness (DRAKE)	CU , SU, UCPH	Shared Course	Blended	3 academics, 4 students	BA, MA	No
Microplastics: From Environmental Impact to Policy, Innovation, and Public Awareness (MIRACLE)	UniGe , SU, UCPH, UniMi	Joint Course	On campus	6 academics, 20 students	BA, MA, PhD	No
Practical course on analysing the diversity of microbial eukaryotes in environments	CU , SU, UW	Joint Course	On campus	10 academics, 12 students	MA, PhD	Yes
Summer school "From fungal morphology to genotype"	UW , CU, UCPH, UHD	Joint Course	On campus	4 academics, 22 students	BA, MA, PhD	Yes
Collegio futuro: a college for designers of a sustainable European future	UHD , CU, SU, UniMi, UW	Joint Course	Blended	8 academics, 22 students	MA, PhD	Yes
Erasmus Mundus Joint Masters in European Environmental Economics and Policy (M3EP)	UCPH , CU, UHD, UniMi, UW	Joint Programme	On campus	6 academics	MA	Yes



Below, selected activities which contributed the iCORE project objectives are presented in more detail to illustrate the variety, goals, and impact of activities within the flagship:

Collegio futuro: a college for designers of a sustainable European future



The third edition of the Collegio Futuro, a joint educational project of the 4EU+ member universities, aimed to foster collaboration and systemic thinking to address urgent environmental, economic, and societal challenges. The training was open to young researchers, doctoral candidates, and advanced master's degree students, who worked in multidisciplinary groups to develop solutions for hands-on environmental issues with the goal of practicing policy brief drafting. The program focused on topics including just transition, adaptation of historic cities to climate change, ecosystem restoration on marginal land, and sustainable aquaculture. Participants had an opportunity to examine the chosen problem from different perspectives and engaged in discussions with the practitioners from environmental, legal, and heritage institutions. The physical part of the program took place in Heidelberg.

 MA/PhD, 22 students involved

 Joint course, blended

 UHD, CU, SU, UniMi, UW

 12/02/2025-30/04/2025

 <https://www.hce.uni-heidelberg.de/en/educational-offer/collegio-futuro>

Collegio futuro is a project that focuses on challenge-based teaching, research-based teaching, and creating an environment that encourages doctoral studies by facilitating dialogue with leading researchers (workshops and summer schools). Reaching the sustainable development goals of the United Nations and coping with major planetary problems, such as climate change and biodiversity loss, requires a socio-economic transformation that ensures sustainable development. Conceptualizing this process demands an integration of perspectives from different research disciplines and needs creative and open-minded experts who do not hesitate to step out of their comfort zone and collaborate in an interdisciplinary manner. Collegio futuro seeks to foster these skills essential for tackling our urgent environmental, economic, and societal challenges. It is designed for doctoral researchers from all disciplines (natural and life sciences, economic and social sciences, or humanities) who are enthusiastic about enhancing their science communication skills, are motivated to engage in interdisciplinary discussions, and intend to broaden their knowledge beyond their own research area.

Summer school "From fungal morphology to genotype"

The project brought together research and education with a focus on fungal diversity. Its main aim was to train students in using both traditional and innovative approaches to fungal research. Participants engaged in group projects that combined fieldwork, microscopy, and molecular techniques, including DNA sequencing using nanopore technology. During the week, participants recorded over 435 fungal observations and collected over 600 specimens, which were deposited in the University of Warsaw herbarium. Participants sequenced selected molecular markers for over 100 specimens on-site using nanopore technology. This hand-on experience in molecular barcoding in the field makes this course unique in global scale. Since 2020, the Summer School has been regularly held as a 4EU+ joint initiative. The latest Summer School took place in Białowieża Primeval Forest, Poland.



-  BA/MA/PhD, 24 students involved
-  Event, on campus
-  UW, CU, UCPH, UHD, University of South Bohemia
-  20/09/2025-27/09/2025
-  <https://ibe.biol.uw.edu.pl/dla-studentow/lista>, <https://doi.org/10.15468/qbg56j>

Biodiversity, sustainability in the agro-food system (MICROBS)

The project aimed to create a dynamic, multidisciplinary curriculum offering specific microcredentials to students at partner universities. The topics addressed were biodiversity and sustainability of food systems and their implications for society. The biodiversity of crops, animals, pests, microbes, and other elements contributing to food production was presented as a valuable component in the global push towards circular and sustainable — more efficient, resilient, and less wasteful — agro-food farming systems. The blended course was structured into three blocks: remote teaching, practical activities/visits in one of the partner universities and remote preparation of presentation on a covered topic.



-  BA/MA, 27 students involved
-  Joint course, blended
-  UniMi, CU, SU, UCPH, UW
-  04/2025-07/2025
-  <https://science.fsv.cuni.cz/en/project/european-research-council-executive>

6.3 Building Networks and Shared Expertise Across 4EU+

One of FG4's major collaborative projects is the Shared Catalogue of Expertise, which aims to gather information on skills, areas of expertise and knowledge. This initiative poses a real challenge in terms of data collection, particularly in obtaining this information from all universities and experts and then keeping it up to date in the future. The FG4 continues to support opportunities emerging through Alliance 4EU+ calls for applications such as SEED4EU+ or Charles Mini-grants. As part of the evaluation of FG4's educational and academic activities, a SWOT analysis was carried out. It highlighted positive aspects such as increased mobility and enhanced academic attractiveness within the Alliance. However, barriers remain that limit the use of external opportunities. The analysis pointed to the need for improved organisation, communication, shared policies, and effective tools to support the development of new initiatives. In education, collaboration between universities has become more structured, showing good results in mobility and the creation of international programmes, even though some structural barriers persist—such as issues of coordination, recognition of qualifications and credits, and cultural or linguistic differences. Overall, the analysis confirmed both the progress made and the potential for further development to ensure the long-term sustainability of these efforts.

The FG4 is also preparing to launch a Student Climate Network, which will connect students with different profiles from several universities in the Alliance. Earlier this year, an event in Heidelberg served as a networking hub for this initiative and addressed how universities and cities can cooperate to achieve the United Nations Sustainable Development Goals (SDGs). The panel discussion, “From Advocacy to Action: How can Universities and Cities Work Together to Achieve UN Sustainable Development Goals?”—held on 15 May 2025 as part of the iCORE project—brought together academics, policymakers, students, and engaged citizens to exchange ideas and open new perspectives. Moreover, the event built on the topic of the PhD course *Collegio futuro* “Adaptation of Cities to Climate Change” and contributed to the consolidation of the “4EU+ Student Climate Action Network.” By organizing this event, the Flagship “Environmental Transitions” advanced its mission in addressing crucial questions in the socio-economic transition to sustainability, which requires science that can identify development pathways that are just, fair, and politically acceptable without transgressing planetary boundaries.



Panel discussion (credit: Florian Freundt):



Roundtable discussion (credit: Florian Freundt):



The introductory keynote speeches were given by **Prof. Dr. Géraldine Pflieger** (University of Geneva; co-coordinator 4EU+Flagship 4) on "Cities at the forefront of climate action" and **Prof. Dr. Natasha de Vere** (University of Copenhagen) on "The importance of urban green spaces for the health and well-being of people and biodiversity". Thereafter, short inputs given by **Prof. Dr. Ulrike Gerhard** (University of Heidelberg; co-coordinator 4EU+Flagship 1) and Mr. **Christian Hübel** (Head of the Department for Democracy and Strategy in the City of Mannheim) led on to the expert panel discussion. Another highlight was a lively discussion with the audience in the final part of the event. Following the public panel discussion, a roundtable discussion with guest speakers and interested academics focused on exploring the prospects of establishing regular events involving 4EU+ universities and their local cities, focusing on climate change and biodiversity loss.

Event website: <https://www.hce.uni-heidelberg.de/en/from-advocacy-to-action>

Video on YouTube: https://youtu.be/C_iiF5Nids8

Complementary initiatives

Within the framework of the 1CORE project, FG4 places strong emphasis on advancing education closely linked to research and innovation, with the aim of developing an attractive research-based educational offer. Complementary initiatives implemented across the 4EU+ Alliance—such as SEED4EU+, Charles Mini-grants, and 4EU+ Visiting Professorships—further support this objective by fostering collaborative, research-oriented educational activities and strengthening the integration of academic communities across partner universities. Although these initiatives are implemented outside the direct 1CORE funding framework, they play an important role in reinforcing research-based education and collaboration within the Alliance.

The following tables provide an overview of selected projects contributing to the development and consolidation of research-based education within the 4EU+ Alliance.

SEED4EU+ 2024

Project/Activity	Acronym	PI	Content	Participating universities (leading in bold)
Cryosphere remote sensing and hazards monitoring in environmental transitions	CREST	Brodský, Lukáš	Research	CU, UHD, UniMi
Actionable economic valuation research integrated with novel spatial environmental monitoring	CONCERNING	Zagorska, Katarzyna	Research	UW , CU, UCPH, UW
An arbopathogen preparedness network to identify and track emerging vector-borne pathogens in a time of climate change	ARBO-WATCH	Canuti, Marta	Research	UCPH , UniMi, UW



Microplastics: From Environmental Impact to Policy, Innovation, and Public Awareness	MIRACLE	Slaveykova, Vera	Education	UniGe, UCPH, UniMi
Enhancing biodiversity and nature contributions to people across 4EU+ cities	green4you	Losapio, Gianalberto	Research	UniMi, CU, UHD, SU, UCPH, UW

Minigrants 2025

Title of the project	PI	Planned outputs	Participating universities
Dual Antiplatelet Therapy for Shock Patients with Acute Myocardial Infarction - DAPT SHOCK AMI trial	Mořovská, Zuzana	DAPT-SHOCK-AMI study, its approval, international registry of patients included in the study, presentation at the European Congress of Cardiology, publication	CU, UHD, SU, UW
Seek and ye shall find: Molecular surveillance of bird schistosomes and swimmer's itch	Macháček, Tomáš	comprehensive training for collection and analysis using the e DNA-LAMP method, establishment of an international monitoring network	CU, UCPH, UW
Synthesis of Green-to-Red Fluorescent Materials	Kotora, Martin	a new class of azonium salts, synthesis, properties, design and development of a new class of efficient emitters with CPL properties	CU, UHD, UniGe
From Climate Change to Fiscal Innovation: Transforming the EU Budget for Sustainability with CBAM, Climate Tax and ETS	Večeř, Miroslava	2 articles submitted for publication (results, methodologies, recommendations based on analyses)	CU, UHD, UniMi
Youth, Governance, and Social Justice in Environmental Transition: An Ecocritical Framework in Comparative and Transdisciplinary Contexts	Soares Moura, Eva	critical thinking - 4EU+ portfolio, workshop at CU, workshop at UniGe, conference at CU, publications, dissemination	CU, UniMi, UW
CONSPIRO - Breathing Together for Cleaner Air	Hovorka, Jan	training of municipal and regional authority staff on how to use air quality data to lead public discussions.	CU, UHD, UCPH

Uncertain Worlds: Rethinking the Drake Equation and Earth's Uniqueness (DRAKE)	Toman, Jan	lectures, workshop, teaching materials (educational kit) and research report, publication	CU, SU, UCPH
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6.4 Reflections and Highlights

During the past year, FG4 continued to strengthen cooperation within the 4EU+ Alliance through a diverse range of educational and capacity-building activities. Collaborative teaching formats, such as joint and shared courses, summer schools, and blended learning pathways, have proven effective in engaging both students and academic staff across partner universities.

Flagship 4 also made significant progress in community building by enhancing dialogue between universities, local authorities, and civil society on sustainability topics. Initiatives such as the 4EU+ Student Climate Network and thematic events on climate adaptation and sustainable urban development have reinforced the Flagship's role in connecting academic learning with real-world challenges. These achievements underline the growing maturity and collaborative spirit of FG4 and its contribution to the overall mission of the 4EU+ Alliance.



7 CONCLUSION

The third Annual Portfolio of Flagships' Activities demonstrates the growing maturity, cohesion, and impact of the 4EU+ Alliance in advancing the vision of a comprehensive, research-intensive European university. Over the 2024–2025 reporting period, the four Flagships continued to act as dynamic laboratories for integration between education, research, and innovation, translating the 1CORE project's objectives into tangible institutional and academic progress.

Across all thematic areas—urban health and demographic change, Europeanness, digital transformation, and environmental transitions—the Flagships have reinforced collaborative structures, built sustainable networks, and delivered innovative educational formats. These efforts are supported by an expanding community of academics, students, and administrative professionals who embody the Alliance's shared values of openness, interdisciplinarity, and excellence.

Notably, the Flagships have shown that joint course development, blended mobility, and research-based teaching can be successfully mainstreamed into university systems, paving the way for the future implementation of joint degrees and structured doctoral networks. The growing portfolio of SEED4EU+ and mini-grant projects demonstrates the Alliance's ability to generate new knowledge, strengthen research-education linkages, and address societal challenges through collective expertise.

Beyond the immediate outputs, the progress achieved under WP3 of the 1CORE project confirms the strategic role of human and organizational capacity-building in enabling long-term transformation. Through shared governance, transparent coordination, and sustained engagement with external partners—including cities, civil society, and global institutions—the 4EU+ Alliance is shaping an interconnected academic ecosystem that contributes to Europe's competitiveness, resilience, and social cohesion.

Looking ahead, the consolidation of the Flagship structures, the continuation of joint programmes, and the integration of cross-Flagship initiatives will be critical to ensuring sustainability beyond the 1CORE funding period. Building on the achievements detailed in this report, the Alliance is well positioned to deepen its transnational cooperation, expand its global reach, and serve as a model for the European higher education and research landscape of the future.

