WP2 Deliverable 2.1

Digital Guidebook on the CIVIS Challenge-Driven
Approach

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This report was produced for CIVIS by the Stream 1 team and many others From CIVIS:

- o **Thorsten Blenckner**
- o **Fanny Sbaraglia**
- o **Mike Osborne**
- o **Christian Möllmann**
- o **Enrique Martin Santamaria**
- o **Celine Reynaud**
- o **Pär Brännström**
- o **Johanna Diehl**
- o **Ulla Harmalla**
- o **Magnus Breitholtz**
- o **Maria Wilenius**

CIVIS
Europe's Civic University Alliance

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CIVIS, Europe's Civic University Alliance, is a European University Alliance gathering 11 member universities: Aix-Marseille Université (France), National and Kapodistrian University of Athens (Greece), University of Bucharest (Romania), Université libre de Bruxelles (Belgium), Universidad Autónoma de Madrid (Spain), Sapienza Università di Roma (Italia), Stockholm University (Sweden), Eberhard Karls Universität Tübingen (Germany), University of Glasgow (UK), Paris Lodron University of Salzburg (Austria) and University of Lausanne (Switzerland).

Selected by the European Commission as one of the first 17 European Universities pilots, it brings together around half a million students and more than 70 000 staff members, including 37 400 academics and researchers.

In 2022, CIVIS signed a partnership agreement with 6 strategic African partner universities: Université Hassan II de Casablanca (Morocco), University of Sfax (Tunisia), Université Cheikh Anta Diop de Dakar (Senegal), Makerere University (Uganda), University of the Witwatersrand (South Africa), Universidade Eduardo Mondlane (Mozambique).

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Executive Summary

CIVIS alliance, Europe's Civic University Alliance, was formed by 11 leading research higher education institutions across Europe. At the heart of CIVIS's mission is the integration of civic engagement and challenge-based education strategies, aiming to address multifaceted societal challenges and promote sustainable development aligned with the European Union's education and policy directives.

Strategic Educational Initiatives

CIVIS has successfully implemented innovative educational strategies that leverage civic engagement and challenge-based learning to prepare students comprehensively for the complexities of modern societal issues. By fostering an inter- and transdisciplinary approach, the alliance enhances student competencies in tackling the Sustainable Development Goals (SDGs) and equips them with critical thinking, problem-solving skills, and a robust sense of social responsibility. In order to further strengthen the development of civic engagement and challenge-based education this digital guidebook on the challenge-based approach, based on best practices and experience within CIVIS, will be available on the CIVIS Digital Campus platform. That also exemplifies our commitment to accessible and collaborative educational resources, promoting continuous learning and interaction among European educational institutions.

Research and Community Engagement

The alliance's educational initiatives are deeply intertwined with ongoing advanced research, focusing on real-world challenges such as climate change, biodiversity loss, and social inequalities. CIVIS universities collaborate extensively with local stakeholders organized in Open Labs, which inform teaching and public engagement, thereby reinforcing the link between academic pursuits and societal needs.

Global and Local Partnerships

CIVIS's strategy includes a significant international dimension, where partnerships with African universities are fundamental. These partnerships are structured to foster mutual learning and co-create solutions to global challenges, highlighting the alliance's role in enhancing European-African academic collaboration in the face of challenge-based education.

Future Outlook and Development

Looking forward, CIVIS is committed to expanding its challenge-based educational model and civic engagement strategies. The alliance plans to refine its methodologies and introduce more structured frameworks to enhance the effectiveness of its educational initiatives. By continuing to integrate biosphere and societal challenges and focusing on sustainable and inclusive practices, CIVIS aims to remain at the forefront of addressing global educational and societal challenges.

The ongoing success of CIVIS in implementing civic engagement and challenge-based education into educational practices exemplifies its fundamental role in transforming higher education to meet the demands of a rapidly evolving global society. Through sustained innovation and collaboration, CIVIS not only contributes to academic excellence but also significantly impacts societal advancement across Europe and beyond.

1. Introduction

Introduction

The launch of the European Universities Initiative by the European Commission (EC) marked a milestone in the history of European Higher Education. Based on an idea originating from a speech at the Sorbonne University in Paris by President Emmanuel Macron, the EC in 2018 launched the first call for European Universities. To date, we have 50 university alliances in Europe encompassing 430 higher education institutions devoted to high-quality, transnational education[1]. CIVIS alliance whole-heartedly seconds this ambition as expressed in the mission and vision statement approved by the CIVIS Board of Rectors in November 2021:

> **We offer higher education that helps students to acquire competence and knowledge in understanding and applying the scientific and evidence-led approach. We support them to become responsible, knowledgeable, and creative professionals and citizens interested in, and capable of, tackling key societal challenges in a rapidly changing world. Learning experiences in diverse settings will form citizens with European and global perspectives who will develop core transversal skills (reading/writing skills, critical thinking, digital and information literacy…).**

The Mission and Vision of CIVIS: A Detailed Exploration

Inspired by the mission and vision statement approved by the CIVIS Board of Rectors (see above), in a nutshell, CIVIS aims to

- Train people who have the capacity to think critically and also be self-critical

- Educate individuals who have clear ethical and democratic core values

- Prepare our students to be able to find and critically examine information, and once they have evaluated the information, base their decisions on evidence and not just ideology

- Create an environment where mutual respect is normal, and where the pursuit of creating a just society that works within the boundaries of the planet is one of our main tasks

With these four aims in mind and the ambition to tackle critical societal challenges in a rapidly changing world, CIVIS will address the 2030 Agenda and the 17 Sustainable Development Goals (SDGs).

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[1] [50 European Universities to cooperate across borders and disciplines | European Education Area (europa.eu)](europa.eu)

The world is enduring the highest number of conflicts since the UN was created, and today, about two billion people live in conflict-affected countries. The current global economic recovery is fragile and uneven, with high inflation and significant disruptions in supply chains. The situation will only worsen with climate change.

The latest Global Sustainable Development Report, released at the SDG Summit in New York in September 2023, also shows that we are far from reaching the goals. Out of 36 so-called "targets" evaluated in the report, only two will likely be achieved by 2030. Eight targets with fairly good development have deteriorated, not least in the wake of the pandemic. Strikingly, the targets that show the most incredible adversity are related to poverty, hunger, gender equality and education.

The group of 15 independent researchers writing the Global Sustainable Development Report (GSDR)[2] argues that we must get better at going from words to action. Although ambitions and commitments are necessary, many have yet to be translated into action and implemented on a visible scale. Global goals can only be achieved if all actors integrate them into central decision-making processes and financing mechanisms that prioritize achieving global goals and solid mechanisms for accountability. As with all other actors in society, academia is forced to consider these recommendations, not least to ensure that the next generation of students is provided with skills and knowledge that can help transform society into a sustainable society.

Many researchers agree that we have moved into a new epoch – the Anthropocene. This is an epoch in which human activities have become the controlling factor in many of the fundamental biogeophysical cycles that determine the behaviour of our planet. In this epoch, today's global challenges are multifaceted and encompass, for example, climate change, biodiversity loss, global health crises, inequality, and geopolitical tensions. These interconnected challenges form wicked problems (Rittel & Webber 1973) and have far-reaching consequences for current and future human generations and nature. This new Anthropocene epoch implies new challenges for higher education. The discipline-based approach used to frame our teaching and research needs revision.

Therefore, a civic engagement and multi- to transdisciplinary approach must be included in student education to equip them with the knowledge and skills required to address the above-mentioned issues effectively. In a wider concept, civic engagement in a higher education institution (HEI) involves a range of initiatives, actions and activities to engage and involve various communities, organizations, companies, governmental bodies and institutions external to academia to work together to make a difference in the life of cities, citizens and communities and to transform fundamental conceptions about what universities can offer individuals and society.

In CIVIS, challenge-based education is one expression of civic engagement and provides students with several dimensions. Firstly, it fosters a systematic understanding of global challenges and a sense of responsibility among students, encouraging them to become informed and engaged citizens. Secondly, it equips them with critical thinking and problem-solving skills as they grapple with complex issues that require innovative solutions. Thirdly, it prepares them for the job market by emphasising the importance of sustainability, ethics, and social responsibility. Fourthly, the world needs well-educated people to find solutions to address the global challenges now and in the future. This can empower the next generation to contribute meaningfully to a more sustainable and equitable world. This new epoch implies new challenges for higher education. The reductionist, only discipline-based approach that has

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[2] https://sdgs.un.org/gsdr

been used to frame our education and research needs augmentation. We need to be able to prepare our students to navigate the new Anthropocene landscape successfully.

No single discipline is sufficient to address these kinds of connected, global risks. we need to collaborate closely with the stakeholders involved in developing and implementing solutions. The challenge-based approach employed by CIVIS enhances the connection between higher education and the external world, better preparing students to tackle the complex 'wicked problems' that society faces. This holistic sentiment is expressed very well in the report "*College Learning for the New Global Century*" (National Leadership Council for Liberal Education & America's Promise, 2007):

1. ***In an era when knowledge is the key to the future**, all students need the scope and depth of learning that will enable them to understand and navigate the dramatic forces—physical, cultural, economic, and technological—that directly affect the quality, character, and perils of the world in which they live.*

2. ***In an economy where every industry—from the trades to advanced technology enterprises—is challenged to innovate or be displaced**, all students need the intellectual skills and capacities that enable them to get things done in the world at a high level of effectiveness.*

3. ***In a democracy that is diverse, globally engaged, and dependent on citizen responsibility**, all students need an informed concern for the larger good because nothing less will renew our fractured and diminished commons.*

4. ***In a world of daunting complexity**, all students need to practice integrating and applying their learning to challenging questions and real-world problems.*

5. ***In a period of relentless change**, all students need the kind of education that leads them to ask, "How do we get this done?" and "What is most worth doing?"*

Education that meets the goals mentioned above goes hand-in-hand with student-centred learning. From a pedagogical perspective, a challenge-based approach is based on the principle that the active participation of students in a real-world problem has benefits for their learning. The process includes the student understanding the complexity of the challenge and engaging with actors or communities involved, thereby analysing and developing a solution. This implies a redefinition of the roles of the teacher, the student and the classroom itself, which traditionally is understood as the physical space where knowledge occurs. Teaching experience and feedback from CIVIS students confirm the high demand for and satisfaction with relating individual learning processes to concrete, real-world issues and transdisciplinary approaches.

Objectives and Methodology

In line with the mission and vision outlined previously, CIVIS has formulated objectives accompanied by a comprehensive list of milestones and deliverables in its application for funding 2022-2026. This deliverable report is structured to specifically address five pertinent objectives of CIVIS in respective chapters where they are elaborated in detail:

1. Develop Civic Engagement and Challenge-Based Education Strategy: As detailed in the chapter "Civic Engagement – Definitions, Framework and Guidelines " this objective focuses on innovating educational strategies through civic engagement and challenge-based learning paradigms. It outlines the methodologies adopted and the anticipated impact on the educational landscape.

2. Establish Knowledge Co-Creation Teams involving the universities with local and global partners: Highlighted in "From Selected Case Studies to Good Practices," and "From Local to Global: Activities Plan" chapters, this objective involves forming collaborative teams comprising university experts and diverse global and local partners. The aim is to foster a co-creative environment for knowledge exchange and challenge-based learning.

3. Build Bridges Between the Academic World and Local Social, Economic, Political, and Cultural Stakeholders: As discussed in the chapter "Linking Hubs and Open Labs," this goal is centred on facilitating synergies between researchers and various local stakeholders via Open Labs. The focus is on establishing a mutually beneficial relationship that enhances both academic research and local community development.

4. Facilitate the Involvement of Global and Local Associated Partners in the Challenge-Based Agenda: The chapter "From Local to Global: Activities Plan" details this objective. It underscores the strategies implemented to integrate local and associated African partners into the challenge-based educational framework, promoting more inclusive and diverse learning approaches to problem-solving.

5. Set Up and Share Tools to Tackle Societal Challenges Creating New Opportunities: Each of the previously mentioned chapters includes tools and guidelines and is dedicated to this objective. It encapsulates the tools and methodologies developed and learned from the diverse and comprehensive CIVIS activities to confront societal challenges. The emphasis is on innovation, practical applicability, and the potential for these tools to open up new avenues for future challenge-based learning activities. The primary target group for these tools and guidelines is academic teachers, secondary higher educational networks, and the European Commission.

Each objective is integral to our overarching strategy to enhance the educational landscape while addressing contemporary societal challenges. Through this structured approach, CIVIS endeavours to make a tangible impact, fostering an environment of learning, innovation, and community engagement.

In the following, the methodology used to develop strategic and operational guidelines for each chapter is briefly outlined.

In the chapter on 'Civic engagement – Definitions, Framework and Guidelines' essential definitions are delineated alongside a comprehensive framework established as a strategic guideline for CIVIS. Building on this foundation, the chapter presents specific guidelines for developing challenge-based initiatives and educational programs for individual academics as well as other higher educational alliances and the European Commission.

The chapter titled 'From Selected Case Studies to Good Practices,' has its point of departure in a structured questionnaire that was developed and distributed to all CIVIS Hub coordinators and case study leaders. The purpose was to gather insights on best practices and challenges directly from academic course leaders involved in previous CIVIS educational offerings. Leveraging these valuable experiences, the chapter outlines operational guidelines for academics aspiring to develop educational programs within CIVIS or beyond CIVIS.

In the chapter entitled 'Linking HUBS and Open Labs,' the narrative details meetings and a workshop involving local stakeholders from the Open Lab Council and academics from the five thematic CIVIS HUBS. Employing a bottom-up and co-creation methodology, these interactions aimed to devise mechanisms for identifying societal challenges. This strategic approach supports the construction of academic educational offerings tailored to address these challenges effectively through relevant content using the challenged-based approach.

In the chapter 'From Local to Global: Activities plan,' a short—and long-term activity plan was co-developed based on intensive discussions with CIVIS Alliance and the strategic African and Mediterranean partners.

All guidelines will be digitized and made available on the CIVIS Digital Campus platform, serving as a comprehensive and accessible digital guidebook. The guidelines range from strategic elements, such as the challenge-based educational framework, to operational aspects, such as best practices for organizing challenge-based courses, which are essential primarily for academic teachers but also for higher education alliances, and the educational strategies of the European Commission. Guidelines will be further developed in the CIVIS Work packages 3 and 4 in the near future.

A final conclusion and outlook chapter integrates the gained knowledge of the challenge-based approach and provides a future outlook. The combination of the different parts in the document outlines CIVIS' strategic path towards achieving the goals of delivering education that addresses contemporary societal challenges.

2. Civic Engagement

Definitions, Framework and Guidelines

Civic Engagement – Definitions, Framework and Guidelines

Based on the CIVIS objective, *Development of Civic Engagement and Challenge-Based Education Strategy,* it is essential to stress the importance of consistent terminology, especially when foundational terms have many interpretations. Therefore, each concept starts with a definition box (derived from the CIVIS 2.1 Milestone) followed by an explanation.

> **Civic Engagement** in a higher education institution (HEI) involves a range of initiatives, actions and activities to engage and involve various communities, organizations, companies, governmental bodies and institutions external to academia to work together to make a difference in the life of cities, citizens and communities and to transform fundamental conceptions about what universities can offer individuals and society.

Civic engagement has been defined variously, but in the context of higher education and research, Jacoby and Ehrlich (2009) write:

> "*There are probably as many definitions of civic engagement as there are scholars and practitioners concerned with it.*"

Defining the civic commitment of universities is a complex task because this type of university activity goes by several names, which sometimes leads to confusion. But University Civic Engagement, University Social Responsibility, University Regional Engagement (Duke, Osborne and Wilson 2013) and University Third Mission (Schuetze and Inman 2010) are, in fact, similar conceptions that respond to a single objective: the potential contribution of higher education to find solutions to tackle societal, environmental and economic problems in society. It also refers to policies that bring positive societal changes through teaching, research, social services and university management (Watson et al., 2011).

These initiatives worldwide include the Talloires Network of Engaged Universities and the University Social Responsibility Network. As Talloires Network explains:

"….. higher education institutions exist to serve and strengthen the society of which they are part. Through the learning, values and commitment of faculty, staff and students, our institutions create social capital, preparing students to contribute positively to local, national, and global communities. Universities have the responsibility to foster in faculty, staff, and students a sense of social responsibility and a commitment to the social good, which, we believe, is central to the success of a democratic and just society. The university should use the processes of education and research to respond to, serve and strengthen its communities for local and global citizenship. The university has a responsibility to participate actively in the democratic process and to empower those who are less privileged. Our institutions must strive to build a culture of reflection and action by faculty, staff and students that infuses all learning and inquiry." (https://talloiresnetwork.tufts.edu/)

According to the University Social Responsibility Network, "…universities have an obligation to work together to address the economic, social, cultural and environmental challenges in the world and to find solutions so as to make our world more just, inclusive, peaceful and sustainable." (https://www.usrnetwork.org/)

During CIVIS 1.0, the working group (Civic Engagement Task Force) investigated and analysed the situation of Alliance universities regarding civic engagement. The results showed that all Alliance universities offer, work on, and manage many different and diverse civic engagement actions. There is

a wide variety of programs and actions. Still, they all have the same objective: to initiate and support transformative initiatives that lead to the construction of a better society.

This group also generated a definition for Civic Engagement and a unified agreed-upon guidance document on University Civic Engagement - which identifies relevant practices in the Alliance universities, their opportunities in Civic Engagement and establishes a division of these practices according to four clusters (governance, external leadership, research and education). They also collaborated on the transnational project on Migration and Civic Engagement, identified the best replicable and wide-ranging projects for the CIVIS Label awards, and established the first roadmap for joint projects in Civic Engagement such as the CIVIS micro-programme "Civic Engagement".

The outcomes and resources resulting from CIVIS are comprehensively documented and accessible through the following links. These resources reflect the breadth and depth of the initiatives undertaken:

- CIVIS Handbook on Civic Engagement "Building our Civic Identity. Towards a socially responsible university: walking together to achieve a positive and transformative impact on society" – PDF
- Transnational project report on migration and civic engagement - PDF
- CIVIS Label awards https://civis.eu/en/news/initiatives-awarded-by-civis
- CIVIS micro-programme "Civic Engagement": https://civis.eu/en/civis-micro-programmes/micro-programme-civic-engagement

Each of these resources offers valuable insights into the various activities and their alignment with CIVIS's overarching goals, particularly in civic engagement and societal impact.

Transdisciplinarity

Transdisciplinarity is a process in which multiple researchers, educators and non-academic stakeholders (such as the general public, policymakers or end-users) collaborate to co-create and co-produce new knowledge.

Transdisciplinarity has gained increasing attention and is extensively discussed in contemporary academic literature. A notable contribution to this discourse is the discussion paper by Kaiser and Gluckman (2023), published by the International Science Council and Centre for Science Futures. This paper explores the interplay between science, diverse knowledge systems, and research methodologies, mainly focusing on their convergence within transdisciplinary research.

A seminal definition of transdisciplinarity, as posited by Jahn, Bergmann, and Keil (2012), encapsulates the essence of this approach:

"Transdisciplinarity is a critical and self-reflexive research approach that intertwines societal and scientific problems. Generating new knowledge is characterised by integrating diverse scientific and

extra-scientific insights. The overarching objective is dual-faceted, aiming to contribute to societal and scientific advancement. At its core, integration represents the cognitive operation of forging novel connections between distinct epistemic, social-organizational, and communicative entities that constitute the problem context."

This is a comprehensive, albeit somewhat academic, definition.
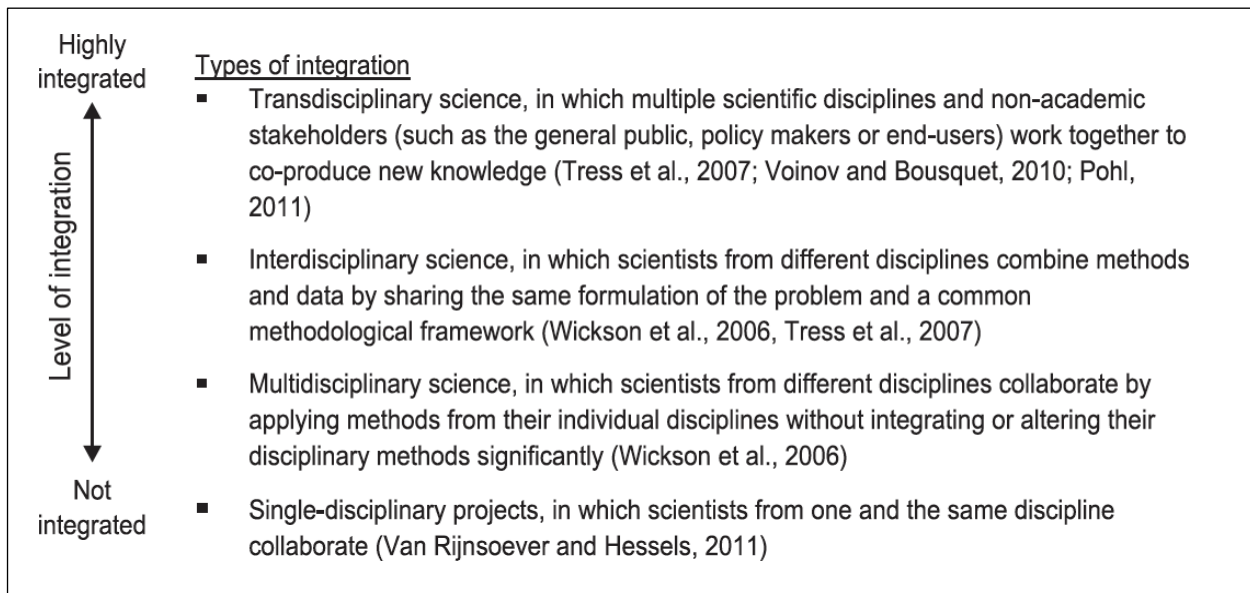
Figure 3. Definitions of multi-, inter-, and transdisciplinarity.

One of the clearest delineations between the different prefixes in front of "disciplinary" is (Bark, Kragt, & Robson, 2016) shown in Figure 3. They describe the various approaches along an axis of increasing integration, with transdisciplinary science at the apex of integration.

Challenge-based education: a pedagogical approach

Challenge-based education is a pedagogical approach founded on scholarship across and among academic disciplines. It leverages the experience and expertise of stakeholder groups to enable students to apply their learning to engage with real-world challenges.

In CIVIS, challenge-based education is an expression of civic engagement. This is also illustrated by the fact that collaboration in challenge-based education is highly important and expressed as a collaboration among students, among academics, among disciplines, and between the university and civil society. Although there are still no conclusive studies on the impact of this approach, the underlying assumption is hardly debatable: complex problems require plural responses, contradicting, feeding, and complementing each other. The more voices involved in the search for a solution and the more varied they are, the more likely it is that the challenge will be addressed in complexity.

Four years after its birth, CIVIS has a robust structure for exploring the potential of this approach. Any educational initiative in CIVIS must be coordinated by academics from at least three universities in the

alliance. CIVIS courses and programmes seek to include students from diverse backgrounds based on their characteristics and circumstances (e.g. socioeconomic status, race, ethnicity, disability, culture and language) and seek to address challenges through developing an interdisciplinary curriculum. Thanks to the Open Labs and a vast network of external stakeholders, there are bridges to link the academic world with the needs of civil society. Collaboration is the very core of the CIVIS educational approach.

However, it is essential to remember that challenge-based education is, above all, a pedagogical approach. It is based on the principle that the active participation of students in a real-world problem benefits their learning. To this end, they are confronted with a relevant challenge for which concrete action is demanded. The process involves the student understanding the nature of the challenge, engaging with actors or communities involved and, based on this, analysing, designing and developing a "solution", usually in the form of a project. One important note: learning is not measured in terms of the success of that solution in the real world but in terms of the knowledge and skills that the student has acquired during the process, which should be measurable through evaluation.

It is important to point this out because identifying the objectives of this approach, having the academic knowledge, and a structure that facilitates collaboration with external stakeholders does not mean that this approach will be applied in a classroom setting. If we aspire towards students not being mere receptacles of information but rather actors in the world they live in, it is necessary to create facilitating conditions. The same can be said of other features related to challenge-based education: transdisciplinarity, teamwork and communications skills, applied knowledge linked to real-world problems, self-reflection, and active and collaborative learning. In all cases, concrete questions arise:

- How do we select these challenges?
- How do we get international students to collaborate actively with each other?
- How do we get them to link their daily reality with the challenge?
- How do we achieve a reflexive approach to learning?
- How do we ensure collaboration with extra-academic actors? How do we guarantee scientific rigour in this whole process?

In this section, we provide a pedagogical framework to facilitate the implementation of challenge-based educational initiatives in CIVIS. This structure, which should be understood as a guide, promoting teaching and not as a limiting scheme, can be applied to different educational formats (for example, Blended Intensive Programs, micro-credentials and Semester-long courses) but has to be adapted according to the duration and type of format.

A CIVIS framework for the development of challenge-based initiatives

Choosing a challenge: two possible approaches

Before describing the different phases that structure a challenge-based initiative, it is crucial to raise the question of the very nature of the challenges. Two main scenarios are possible:

a)   A global challenge through local responses

The academic coordinators choose to work on one of the significant challenges we face as a society, for example, climate change, economic inequality, political instability, and technological disruptions. The aim is to identify challenges that have a global dimension but whose impact has local specificities.

Local stakeholders may be involved at various stages of the process but do not participate in the choice of the challenge, which the academic coordinators define. Students will work in groups to encourage the dialogue between disciplines and cultural backgrounds. The objective is for each group to work on projects to be applied in a different local context. At the course's end, the proposed projects will show the complexity of the analysed phenomenon and some ways to contribute to solving it.

b)   A local challenge through global responses

In this case, the course is organized around a specific challenge for which precise solutions are sought. For example, water pollution affects crops in a given community. This approach favours local stakeholders working with the academic coordinators from the challenge proposal, as they know the local needs and how to involve the actors in the territory. From an academic point of view, the challenge will serve as a pretext to show the different aspects (geographical, sanitary, anthropological, legal, etc) involved, allowing students from various disciplines to collaborate in the search for solutions. Students will work in international groups to put a variety of cultural and disciplinary backgrounds at the service of a local problem.

When we say "solution" or "response", we do not mean that students are expected to solve global challenges in a few hours of class time. The goal is for them to become aware of its complexity, reflect on their position, and develop an action contributing to its resolution. This action will often take the form of a project in which students have to apply the knowledge they have acquired and seek a positive impact on the context in which the challenge occurs. The options include technical solutions, community service initiatives, research projects, creative expressions, and awareness campaigns. How demanding these actions will depend on factors such as the complexity of the challenge itself, the course length and the students' profile and experience.

One last important note: challenge-based education does not exclude any academic discipline. This methodology is not defined by the disciplinary approach but by how the course is structured and how it involves students and external stakeholders. Challenges can be found in all disciplines, and the interdisciplinary nature of the CIVIS Hubs facilitates the identification of common grounds.

Guidelines for challenge-based education

The following will present guidelines for challenge-based education in three phases.

Phase 1: Explore

The first phase aims to familiarize the student with the challenge. It is an introductory stage that should mainly serve three purposes:

   a. Understanding the interdisciplinary character of the challenge
   b. Showing the global and local dimensions of the challenge will facilitate student engagement
   c. Creating interdisciplinary and international groups of students who will work together throughout the course on a response linked to the challenge

Each course's needs are different. The practical and theoretical sessions organized by teachers will vary depending on the course's objectives, the type of challenge, the academic focus of the teachers, and the student's experience level. However, some common questions may guide the activities and resources organized in this phase. For example: Why is it a relevant challenge? Which are the actors

involved? To what extent is it a global problem? What are the different local forms in which it manifests itself? What are the links between the challenge and the students' reality? Why should they feel engaged?

Upon completing this phase, the student groups will have developed a comprehensive and substantial "response" to serve as the foundation for their research throughout the course. This response is expected to encapsulate a well-considered and broad perspective, enabling a deep and thorough exploration of the subject matter in subsequent course stages.

Phase 2: Deepen

This phase is the scientific core of the course. The main objectives are:

a. Deepening the complexity of the problem through research, lectures, readings and other activities
b. Exploring the impact of the challenge on specific real-world situations in which concrete actors are involved
c. Analysing and designing the action to be implemented by each group

Theoretical classes and practical activities are organized to deepen the scientific challenge in an interdisciplinary context. Based on this, each group will focus on one aspect of the challenge and start working on an action to implement at the course's end.

Different degrees of involvement are possible regarding the role that external stakeholders can play in this phase. They will always depend on their interests and the nature of the challenge itself. Some possibilities are that they can intervene with lectures that show concrete examples and offer workshops that train students in working methodologies. They provide timely advice as the proposed action progresses.

To take advantage of the interdisciplinary and international character of the groups, they should have some freedom in deciding the type of response to the challenge. This is a very positive aspect, as at the end of the course, students will be able to look at the problem from different angles, both disciplinary and social, and there will be a wide variety of proposals. However, there is also a risk: in their research, the student will consult sources (books, academic articles, blogs, audio-visual material, interviews with concerned actors) that will not always be reliable. This is why, in a challenge-based format, the role of the teachers goes beyond the transmission of theoretical content; they are also responsible for guiding the students during the research process and the work on developing a response.

At the end of this phase, the groups will have designed an action to be implemented. This implies deciding, for example, the concrete situation they want to respond to, the format in which the action will develop, the intended impact, the actors involved, and how the group will be organized.

<u>Phase 3: Act</u>

The objectives of the last phase of the course are:

        a. Implementing the action
        b. Presenting it to the rest of the group and external stakeholders linked to the challenge
        c. Reflecting on one's learning throughout the course

Implementing an action within an authentic setting makes connecting the theoretical component with a concrete reality possible. The link with a local environment facilitates greater student involvement in the learning process and opens the possibility of having a real positive impact on the concerned community. However, it is essential to recall that, from a learning perspective, what matters is not the actual impact but the evidence that knowledge or skills previously defined by the teachers have been acquired. In other words, evaluation cannot depend on the success or failure of the implemented solutions; it must measure the student's academic performance.

A presentation in front of external stakeholders allows students to dialogue about their project with the actors involved in the challenge. Their feedback has excellent pedagogical value, as students benefit from the experience of civil society representatives who can frame the students' initiatives in a real-world setting. It is also helpful for the stakeholders, as some student initiatives can improve the situation.

Self-reflection is usually mentioned as an essential factor in learning: it consolidates the acquired knowledge and serves as possible evidence for evaluation. This is particularly important in the case of challenge-based education, as students are often unfamiliar with the challenge they will be working on. By comparing the different actions proposed by colleagues and reflecting on their journey since the beginning of the course, students will be able to reflect on questions such as their preconceptions of the challenge, the different disciplinary angles, the cultural particularities in approaching it, the actors involved, the possible solutions. The format of this practice can vary and may or may not be part of the evaluation, depending on the structure of the course.

Service-Learning

Service-Learning in higher education is an experiential educational method in which students engage in community service, reflect critically on this experience, and learn from it personally, socially and academically. The activities address human, social and environmental needs from the perspective of social justice and sustainable development and are focused on enriching learning in higher education, fostering civic responsibility and strengthening community engagement. Service-Learning is recognized within the European Credit Transfer and Accumulation System (ECTS).

The concept of Service-Learning in higher education is so widespread that it has its own journal (the <u>Journal of Service-Learning in Higher Education</u>), and many books and a vast body of literature and research have been published on the subject (see Salam *et al.* 2019).

In Europe, much has been done with the development of Service-Learning in Higher Education, but much remains to be done (Aramburuzabala, MacIlrath, & Opazo 2019), and CIVIS has a crucial role in promoting the use of this approach.

CIVIS has invested in service-learning, having developed joint training for lecturers at all CIVIS universities on "Service-Learning: Combining teaching with student civic engagement in practice-oriented courses" (PDF). A survey undertaken during CIVIS 1 by Work Package 3 found that most Alliance universities offer the Service-Learning approach. The CIVIS partners are effectively all engaged in the Service-Learning activity in one way or another, but we may not share a common definition of what it is.

CIVIS colleagues at the University of Tübingen developed an Open Education Resource for lecturers where they can find material for designing a Service-Learning course: https://lms-public.uni-tuebingen.de/ilias3/goto_pr01_fold_10275.html

In CIVIS, we use the definition of the European Association of Service-Learning in Higher Education (EASLHE) that is adapted to the European system, and it includes specific references to sustainable development and social justice, which characterizes the European concept of Service-Learning: (EASLHE 2021) https://www.eoslhe.eu/wp-content/uploads/2022/03/EASHLE-Policy-brief_SL-in-European-Higher-Education_web.pdf

3. From Selected Case Studies to Best Practices

From selected case studies to best practice – an analysis

Based on the CIVIS objective, *Establishment of Knowledge Co-Creation Teams involving the universities with local and global partners,* and to provide guidelines for academics to prepare and conduct educational offers in the CIVIS community and beyond, this chapter offers insights into the effective, comprehensive, and diverse challenge-based educational activities undertaken using the CIVIS framework.

Since the start of CIVIS2, 111 educational offers have been successfully provided to 3563 students, 2586 of whom are CIVIS visiting students, and 649 of whom have been successfully provided by CIVIS (from Airtable provided by David Touzot (AMU), Head of CIVIS Digital Unit on the 22 March 2024, link accessed again 1 June). This is a fantastic achievement of CIVIS2.
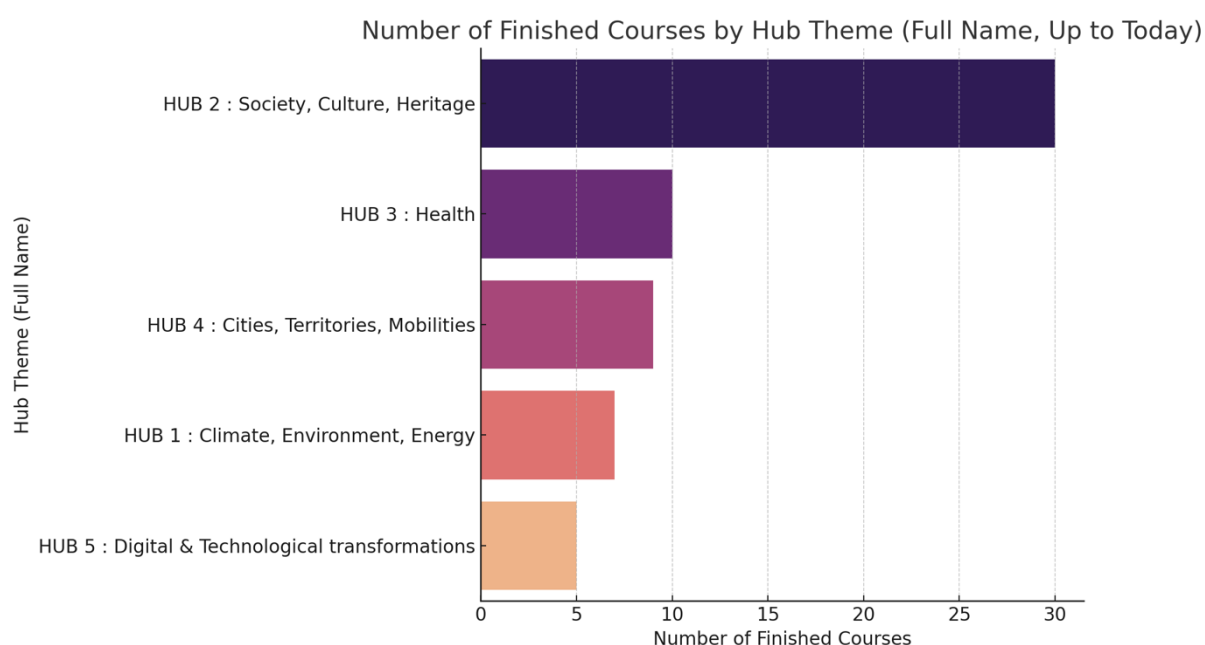

Fig. 1: Number of finished educational offers from CIVIS beginning of June 2024, given for the different CIVIS thematic Hubs.

Below some quotes from students and educational coordinators are provided involved in the CIVIS challenge-based offer (Quotes from focus group interviews with students and programme coordinators concerning CIVIS BIPs. Interviews were conducted by Lars Banzhaf and Ulrike Wegenkittl-Neumayer, Heads of Mobility Unit, and Anna-Karin Björling, Quality Officer of CIVIS, during July and September 2023):

Students

I really enjoyed it, and I have already recommended it to two other colleagues, that I know. So big fun, I will do it again.

We had to make everything from scratch like the sampling, the data analysis, to write the presentation, and to also give the presentation… And that was very, very amazing to me. It was my very, very first thing as a scientist, as a future scientist, and I really enjoyed, and I am going to participate to as many BIPs as I can, because I really like that experience. And I'm surely going to recommend these programs to everyone I know at my university.

So, it is also the opportunity to study abroad in a dynamic and international community. So you travel by learning more, and you will meet people from different part of the European Union area. And you have also the opportunity to have access to a new innovative tool for foreign language learning.

So, the highlight for me both the fact that you can, you have the opportunity to learn to have courses that are not available in your university, so you learn more and more, and also the fact that you can, you can travel, and you can meet different people and different teachers.

It was just interesting to meet other students from other countries. But there was no difference between the teaching of the different teachers who were from other countries. So the difference was just in the material of studying… Materials were the most beautiful part of the of the course. The possibility to learn multiple aspects.

I certainly have the feeling that we're a team somehow, and after the BIP the feeling increased. But don't know how to describe it. I mean, it's nice to know that you have people in other countries, especially in the European Union, that are willing to help you. I mean all the teachers offered to help us, if we ever needed it, to write letters for us, to give us advice and stuff like that. I certainly have a feeling that we are one somehow.

It was so interesting to meet people from other countries just to have, like, different conversations and spread information from different points of view. So I've loved it. And I would like to explore and to, travel, and to have the opportunity to work and study outside my country. So, yeah, I absolutely love the fact that I had the opportunity to do that for a week for this experience.

Programme Coordinators

During the workshop they, the students, may exchange experience and play roles, and so learn in different way. And I think it was important also for the relationship that we are creating among this group of colleagues which is trying to become a research group. So, we think that we will going to, hopefully, to publish a volume which collects all essays, from all the ones that has participated during these two years.

But I think this is a very good opportunity for students to be able to expand into a certain field that they might not have the chance otherwise.

All this investment is clearly worth the while to try the second time, because the second time we can capitalize what we have already learned in the organization of the first time, and then the second round of the BIP, we can go further and better on the academic level.

BIPs are a nice instrument. They are small scale. They can be simply structured. They can be quite concrete, specific in curriculum and objectives, and perhaps, most importantly, they can be the building blocks for the greater objectives, that we hear from our Hubs right now coming up, with joint master degrees and joint doctoral degrees and bachelors, etc. These are complex objectives. So, for me, the best way to arrive there is to go bottom up and BIPs are exactly this sort of instrument that allows us to go bottom up.

Some students are not ready to do this, so they have to really, really wish to follow this kind of intense program, because at least the physical part in, let's say 5 days, it is really intense, intensive. So, you need students that really wish to do that, they are ready to follow this thing.

We had this boom, you know, the withdrawal of students, the fact that we didn't understand how to encourage disadvantage students. What we promised. You know you encourage the disadvantage to this, but they are poor, and they cannot travel with that amount of money, and we had all kind of unknown issues of that and the pressure, for instance. To me, made me be reluctant in applying again because I was ready to apply to this new call in May.

The good thing in a BIP is that we have added the virtual part which I found very important, and then, as the previous colleague mentioned, we could focus during the physical part in the more practical things. In fact, I am geologists, so the training courses are taking place in the field, so it's a very important to cover all the theoretical apart before we meet.

In-depth analysis of selected CIVIS case studies

To derive guidelines, we conducted an in-depth analysis of the best exemplary practices of the CIVIS 1 and CIVIS 2 case studies. For this, all five CIVIS Hubs were requested to compile and provide contact information for the principal coordinators of each case study. Then, a structured questionnaire (Table 1) was developed and sent to all case study leaders within CIVIS to collect essential data for this analysis.

<u>Table 1</u>: The questionnaire form that was sent out to all case study coordinators.

Initiative title	
Initiative type	
Academic Coordinator(s)	
Wich HUB	
List the CIVIS Universities involved	
African partners Involved (yes/no, if yes list them)	
Link (if relevant)	

Q1. How was the project initiated, and by whom?	
Q2. How was the project plan set up? How did you incorporate the new ideas and needs from other participating universities? Who defined the challenge(s) in the initiative?	
Q3. What were the main outcomes of the initiative (please be specific and quantitative)? *	
Q4. What were the main factors that facilitate success and what were the obstacles? **	
Q5. What advice would you have for colleagues planning to launch a similar type of initiative?	
Q6. What are your next steps in implementation and further development?	

Table 2: A list of the 16 challenge-based case studies of CIVIS2 that have been analysed in-depth. The initiative title, initiative type, HUB responsibility, leading university (first), involved universities, and main coordinator are given. The CIVIS universities are listed with the following acronyms: the National Kapodistrian University of Athens (NKUA), Universidad Autónoma de Madrid (UAM), University of Glasgow (UoG), Université libre de Bruxelles (ULB), Universitatea din București (UB), Paris Lodron University Salzburg (PLUS), Sapienza Università di Roma (SUR) , Stockholm University (SU), University of Tübingen (UT)

Initiative title	Initiative type	Hub	Main organiser and List of CIVIS Universities	Main Coordinator
Civic engagement	Microprogramme		UT, UAM, UB, NKUA	Iris-Niki Nikolopoulos
Global awareness	Microprogramme		UB, UAM, UT	Alexandru-Mihai Carţiş
Environmental challenges facing the Danube River	BIP	1	UB and ULB, NKUA, AMU, PLUS,	Luminita Marutescu
Climate and energy - An interdisciplinary perspective	MOOC	1	SU (all except Lausanne and PLUS)	Alasdair Skelton
Transdisciplinary Studies of Climate, Environment and Energy	Master (planned 2025/2026	1	SU and all CIVIS universities	Alasdair Skelton
Summer school in environmental humanities	BIP	1	SUR, ULB, SU	Iolanda Plesica
Social Sciences Going Public – Research and Practice with, in and for the Society	BIP	2	UT, UB and NKUA	Gabriele Alex
Post Racial Transmodernities: Afro-European Relations, Mediterranean Trajectories & Intercultural Reciprocities	BIP	2	NKUA, AMU, UB, SU, UoG, UT, plus University of the Witwatersrand, Johannesburg (South Africa), Université Cheikh Anta Diop de Dakar (Senegal)	Mina Karavanta

CIVIS
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Museum University Forum	Network (in planning phase)	2	UT, AMU, NKUA, UB, UAM, SUR, SU, UoG	Thomas Thiemeyer
Making Visible the Invisibles Research on Inequalities and Injustices in Cities	BIP & International Conference	4	ULB, PLUS, UAM, AMU, UNIL, SUR, UT, UB, UoG, NKUA	Benjamin Wayens and Robin Lebrun
Co-creating urban futures - citizen participation in local governance	BIP	4	UoG, UT, ULB, UB, SUR	Ross Beveridge
Participatory tools for urban nature planning and management	BIP	4	UB, PLUS, UAM	Ioan-Christan Ioja
Flagship Doctoral Network	Doctoral network (in planning phase)	4	UAM, NKUA, UoG, ULB, UB, PLUS, SUR, plus Hassan II University of Casablanca	Carmen Hidalgo and Miguel Bernabe Crespo
NANOSUM: International Summer School on Nanosciences & Nanotechnologies	Summer school (2022) and summer school as BIP (2023)	5	AMU, SUR, UAM, UT, UB and UoG	Fabienne Michelini
PhD webinar series	PhD webinar	5	UAM, UoG, UB, PLUS, SU, SUR, ULB (first edition) / UB, AMU, UAM, ULB (second edition)	David Poveda
Equitable and Just Digital Society: Developing Interdisciplinary Skills and Knowledge	Postgraduate micro-program (in planning phase)	5	UoG, UT, SU, UAM, University of the Witwatersrand	Bridgette Wessels

The 16 challenge-based case studies selected for this analysis exhibit variation in several aspects: a) educational complexity, encompassing Blended Intensive Programmes (BIPs), Micro-programmes (or micro-credentials), flagship initiatives (such as Master's programmes), PhD networks, and summer schools; b) the nature of challenge-based science conducted within the hubs; and c) the diverse involvement of CIVIS universities (overview of all case studies see Table 2). A notable feature and a CIVIS requirement of all activities is the participation of at least three CIVIS universities, highlighting the collaborative essence of these initiatives. In the following part of this chapter, the analysis results will be summarized based on four criteria: a) activities that initiated the case study; b) positive outcomes of the case study; c) the main obstacles; and d) potential next steps.

Development and Launch of Educational Programs

Several initiatives emerged from CIVIS Hub meetings and gained particular traction following the first in-person meetings post-COVID, when ideas began to crystalise. The development of one MOOC, for example, provided an opportunity for teamwork amongst Council members. One of the BIPs was created following the CIVIS Educators Network Workshop, followed by online discussions.

Whilst face-to-face meetings were catalysts, other developments involved purely virtual exchanges. A major key was often an interest in developing provisions in a particular scientific field that was interdisciplinary and challenge-led.

The setting up of a forum that involved academic and non-academic partners was vital in one development, the CIVIS Museum University Forum, and is in line with ideas of knowledge co-production with communities.

The availability of seed funding was also critical, as were individuals with the desire to use these funds. An example is the funding for work with African partner universities in 2021 and the concomitant availability of some of that funding for African partner academics and students.

Some developments stemmed from previous collaborations in other activities, including professional associations that pre-date CIVIS.

Significant achievements of CIVIS case studies

A significant achievement within the CIVIS case studies has been fostering robust collaboration across various entities within CIVIS, including Hubs, units, and groups of scientists. This collaboration was characterized by a commendable level of openness, enthusiasm, and readiness for cooperative endeavours. Additionally, the initiative has stimulated substantial interest in exchanging experiences and best practices. This keen interest has been supported extensively by the CIVIS offices and specialists, encompassing innovative pedagogy and digital expertise. This collaborative atmosphere enhances the effectiveness of the CIVIS network and contributes to the broader objective of advancing challenge-based educational and scientific cooperation at a European level.

Furthermore, thriving for a common goal, such as transdisciplinary education on, for example, subjects like climate, environment, and energy, significantly amplifies CIVIS's contribution to addressing both global and local challenges, notably in devising solutions for climate change. A very good example was the Massive Open Online Course (MOOC) on this theme, as detailed in Table 2, which attracted a substantial number of students (1,573) and received an impressive student ranking (4.7 out of 5). The participation and subsequent endorsement of these courses by students serve as a powerful testament to the quality of education provided by CIVIS. These students, in their capacity as ambassadors for CIVIS, play a crucial role in disseminating information about its offerings and in attracting prospective students, thereby extending the reach and impact of CIVIS's educational initiatives.

Often, the ability to meet in person for a week and teach collaboratively created very good cooperation among the teachers of the CIVIS case studies. Teachers and students felt being part of a pioneer program was inspirational and would lead to the further development of scientific disciplines and their interdisciplinary collaboration. The CIVIS activities formed interdisciplinary research teams, advancing examination and method development. Sometimes, these collaborations emerge into true partnerships with regular meetings and joint projects.

Additionally, the success of the initiatives can be attributed to the shared attitude of the coordinators and lecturers, who embraced a "learning by doing" approach. This methodology, coupled with their personal dedication and a unified didactic and academic interest in the topic of civic engagement, has been a pivotal factor in achieving the desired outcomes. The coordinators' and lecturers' commitment to this practical and immersive educational style enhanced the learning experience and significantly contributed to successfully realizing the CIVIS objectives. This alignment of teaching philosophy and practice with the broader goals of civic engagement underscores the efficacy of the collaborative and experiential approach adopted within the CIVIS framework. It was essential to involve them as early as possible in the educational activities.

<u>Principal areas for development</u>

In addressing the developments within the CIVIS framework, it is constructive to consider the various opportunities for enhancement across several key areas, including financial resources, time management, legal and regulatory frameworks, infrastructure, information dissemination, and training.

Financial Opportunities

In advancing the digital education framework, there is a notable potential for enhancing the resources allocated to the digital platform for MOOCs. By augmenting these resources, we can significantly improve the platform's functionality and extend its reach, making digital learning more accessible and practical.

Another area of opportunity lies in revisiting the allocation of the mobility grant. A more comprehensive coverage of travel and accommodation costs for students participating in Blended Intensive Programmes (BIPs) or micro-programmes would be a step forward. This adjustment would promote inclusivity and encourage broader participation, ensuring that financial constraints do not hinder student involvement in these valuable educational experiences.

Further, clarifying the availability of funds and resources within CIVIS dedicated to administrative support and course or programme development is imperative. Such clarity would streamline processes and enhance the efficiency of program execution. This transparency in resource allocation is essential for the smooth operation and continuous improvement of educational programmes. Currently, CIVIS has started an incentives programme to ensure this clarity.

The role of academics in CIVIS activities is pivotal, and acknowledging and rewarding their additional contributions could significantly boost their visibility and participation. Recognition of their efforts would not only incentivize further involvement but also highlight their critical role in the success of CIVIS initiatives.

Moreover, a balanced distribution of funding between course development and networking-building activities presents an opportunity to enrich both the academic and collaborative facets of CIVIS. This balance is crucial for fostering an environment that supports educational excellence and cultivating solid and productive networks.

Lastly, addressing specific funding challenges in collaboration with African partners is essential for the fortification of these meaningful international partnerships. By tackling these challenges head-on and in collaboration, CIVIS can strengthen its global connections, enhance its international standing, and contribute more effectively to global educational advancement.

Time Management Innovations

In the pursuit of enhancing the learning experience, for example, within Blended Intensive Programmes (BIPs), a crucial aspect is allocating adequate student time for synchronous interaction.

Given the rich cultural and linguistic diversity inherent in these programmes, ensuring sufficient time for interaction enhances comprehension and fosters a more inclusive and engaging educational environment. Such consideration towards synchronous learning moments is vital in bridging cultural and linguistic gaps, thereby enriching the students' overall educational journey.

Another area that requires attention is adapting program schedules to better align with the varying academic calendars and teaching systems of different participating universities. This alignment is key to fostering smoother integration of educational activities across diverse educational landscapes. By synchronizing these schedules, we can facilitate a more seamless and cohesive educational experience for students, irrespective of their university's unique academic calendar or teaching system. This harmonization is essential in creating a unified yet flexible framework that accommodates the diverse operational timelines across the CIVIS universities.

Legal, Regulatory, and Infrastructure Enhancements

Collaborations within CIVIS, particularly with African partners, proactive agreement facilitation, and addressing visa-related challenges emerge as critical steps. These efforts would significantly strengthen these international partnerships, ensuring smoother collaborations and exchanges.

In the context of technological infrastructure, there is a notable opportunity to enhance the functionality and user-friendliness of the BIP application platform. By improving this platform, we can streamline the administrative processes, making them more efficient and accessible for administrators and students.

Furthermore, augmenting the capabilities of our digital platforms to support more innovative pedagogical approaches is essential in enriching our educational offerings. By embracing advanced technological solutions, we can foster a more dynamic and interactive learning environment. This advancement ensures that the CIVIS institutions remain at the forefront of pedagogical innovation, offering students the best possible challenge-based learning experiences.

Communication enhancements

In the pursuit of enhancing the impact and reach of the CIVIS Blended Intensive Programmes (BIPs) across the Alliance, a strategic focus on increasing publicity emerges as a critical initiative. By amplifying the visibility of these programmes, we can significantly raise awareness and boost participation. This increase in publicity is about reaching a wider audience and highlighting the unique benefits and opportunities these programmes offer. Enhanced awareness will inevitably lead to increased participation, thereby expanding the educational influence of CIVIS Alliance.

In parallel, the development of targeted strategies to effectively disseminate information to doctoral students and researchers is crucial. This approach is essential in fostering a more inclusive and interconnected academic community. By ensuring that doctoral students and researchers are well-informed about the opportunities within the CIVIS BIPs, we can encourage their active involvement, thereby enriching the programmes with their diverse perspectives and areas of expertise. Effective information dissemination can be achieved through various channels, including digital platforms, academic networks, and collaborative events, ensuring the information reaches its intended audience.

The combination of these initiatives – increasing publicity and developing effective dissemination strategies – is instrumental in enhancing the profile and accessibility of the CIVIS BIPs. Such efforts not only contribute to a more vibrant and participative educational environment within the Alliance but also reinforce the role of CIVIS as a leading consortium in fostering innovative and inclusive higher education in Europe.

Guidelines derived from the best practices of CIVIS challenge-based education

In the following, we list ten concrete guidelines for academics and course organisers on organising a challenge-based educational offer.

1. Be timely and attractive

Choosing a pressing theme for the CIVIS initiative, which addresses a global and local challenge, is crucial for successfully recruiting students and keeping their engagement and motivation. Also, breaking disciplinary barriers is essential, and here, CIVIS provides an excellent opportunity to escape from the academic "silos" and create truly inter- and transdisciplinary education initiatives. During the initiative, it is helpful to instruct students to clarify concepts and terms of each discipline involved before starting the collaborative work. If possible, from a learning perspective, it will also be helpful to include practical activities such as Open Labs, especially in physical activity, as well as provide enough time for the students to discover the natural and cultural local environment

2. Have a long planning horizon

To successfully plan an initiative, starting the planning process well before the event is crucial. For some initiatives, this may require up to 1-1.5 years of preparation, and for a master's program, even longer. It is essential to conduct thorough research to identify possible partners, including African partners, across all CIVIS universities and relevant disciplines and departments, which may differ from one's own. It is also helpful to establish contact with potential partners well before submitting the application to identify common research topics of interest. In addition, planning an initiative involves a lot of logistical aspects, such as writing applications, booking facilities, agreeing on a calendar for lecturers, and so on. Also, meeting colleagues who already offer micro-programmes or BIPs can be helpful in the planning phase to get insights into the practical aspects of such initiatives.

3. Be integrated and inclusive

Involving many of the CIVIS universities makes the initiative far stronger. It is crucial to include members of the Hub Council in the project. Sharing the project, considering improvement ideas, and addressing the needs of participating universities are fundamental for strengthening the project and ensuring its success. Likewise, it is also essential to involve practitioners (e.g., public and private companies, NGOs), experts, and citizens as early as possible in initiative planning and activities based on their articulate needs. This requires a structure for communication and dialogue with representative groups from communities as well as individual citizens that should be a function of Open Labs.

4. Build relations of trust

Beginning by pinpointing shared interests in teaching and research activities, foster a sense of unity and mutual value in the direction of the projects. Bridging the gap between successful teaching programs from partner universities, sparking optimism and inspiration for what can be achieved together. Key advice would be to use a combination of virtual and in-person meetings to build relationships and facilitate collaboration. Sharing a draft of the proposal and the proposed themes

with possible partners and integrating their comments and evaluation help the team build strong bonds of trust and collaboration and contribute to developing a shared project. Taking time to establish good relations and shared understanding. Creating an environment of mutual trust and respect. When planning meetings with the partner universities, you should gather all open questions and define the roles and responsibilities of each group member for the CIVIS activity.

5. Be well resourced

It's crucial to have a dedicated team at the local university as any project entails a significant management burden on top of the existing workload at the university. Include the local CIVIS office, which can be of great help. Establishing a coordinated team to manage the workload and distribute tasks effectively is essential. Besides human resources, financial resources are also necessary. External funding may be required to secure the initiative. Further, ensuring that the initiative becomes known all across the alliance, from the administrative units to the Board of Rectors, is crucial to ensure adequate support.

Developing a CIVIS Master programme like the one from HUB 1 is a long-term and resource-intensive commitment, both within universities and on the alliance level. The key to its success is starting early to request financial and human resources.

6. Be available and supportive

Interdisciplinary student teams require more robust guidance and feedback in the learning process. It takes time to clarify and fully understand the different terms and cultures of various research fields.

7. Have a dedicated in-house team

A solid local team is crucial, with an agreed-upon objective from the beginning. Stick to one semester for teaching to avoid timetabling issues. Ensure good relations with the constantly evolving CIVIS support in your institution. Student assistants and administrative staff can greatly help implement CIVIS initiatives successfully.

8. Prioritize regular communication

Communicating and sharing the workload amongst all partners is critical. Maintaining regular contact with participants and stakeholders is essential. Adapting to various perspectives is crucial.

9. Facilitate and "make things easy"

Carefully address and remove any administrative hurdles hindering student mobility, empowering students and reassuring all stakeholders of a smooth process. Make full use of the CIVIS infrastructure. Much support is available, especially for innovative pedagogy, using digital tools and taking on the challenges of multiple languages.

10. Have a positive impact in others' communities' lives: a civic engagement approach.

To introduce the concept of civic engagement as a way of understanding the university dimension. Commitment and responsibility should be on the agenda of university education in order to be able to contribute to transforming the world into a better world through good practices such as applied research, practices in development cooperation, service learning, promotion of volunteering, university policies for vulnerable groups, and open science. This could also be a spin-off for collaborative research linked to priority action areas in Horizon Europe.

Administrative and financial support structures within CIVIS

A great benefit of CIVIS 2 is the embedded CIVIS support structures within each university. Special focus has been put on developing four units: the Education Unit, the Mobility Unit, the Digital Unit, and the Communication Unit. The units function as an interface between the CIVIS organization and the universities, and all universities are represented within them. The purpose of the units is to facilitate the smooth implementation of various activities within each university, mostly related—indirectly or directly—to education.

In addition to administrative support, CIVIS also offers financial support for the development of educational content. This support is channelled either through incentives selected within the hubs (see below), independent calls on specific topics, or the development of BIPs that are entitled to direct EU funding.

Current initiatives and next steps to further boost challenge-based education

In the following, initiatives to boost the development of challenged-based education in the short and long term will be presented:

Current initiatives

CIVIS has dedicated €1 million as incentives for developing sophisticated, challenge-based educational content. This funding supports academic staff and their assistants in enhancing educational offerings that align with the objectives of the CIVIS2 project. For these, the following selection criteria have been developed, requesting that the proposals:

- Align with CIVIS2 pedagogical milestones and deliverables.
- Demonstrate sustainability and innovation, ensuring integration into partner universities' curricula.
- Collaboration should be initiated from at least three partner universities to ensure broad participation within the alliance.
- Undergo academic evaluation by the hub councils.

Preferential merit criteria will be given to educational offers that:

- Employ a challenge-based approach.
- Incorporate civic engagement.
- Feature multi/trans-disciplinary components.
- Facilitate interaction with African partners and Open Labs.
- Utilize innovative pedagogies.
- Include participation from more than four partner universities.

The Steering Committee (SC) is responsible for ensuring representation from all Hubs and participation from all CIVIS partner universities in the total of funded projects. They oversee compliance with all relevant milestones and deliverables. Funding decisions are made on an ongoing basis to allow for strategic adjustments.

The above incentive allocation process began in November 2023 and continues into 2024. The committee continuously engages with hub co-chairs or relevant Work Package leaders, adjusting strategies based on project proposals and overarching goals.

Challenge-based education in the future

Beyond the current project period, we envision that European universities and members from the global south will revolutionize the educational landscape by fully integrating challenge-based learning into their curricula, fostering an innovative and interactive environment that prepares students to tackle real-world problems. To achieve this, each university will create vibrant, inter and multidisciplinary platforms where students, faculty, and external stakeholders collaborate closely on pressing global challenges, following the CIVIS definition of challenge-based education. The activities will be transdisciplinary and student-centred and operate across university faculties, which will enhance learning outcomes and ensure that academic offerings are closely aligned with current and future job markets, driving economic growth and societal well-being across Europe.

To achieve this, universities must expand their networks, forming robust partnerships with a diverse range of stakeholders, including local communities, NGOs, government bodies, and international organizations. These collaborations will enrich the challenge-based projects with various perspectives and expertise, increasing their relevance and impact. Moreover, adopting digital tools (see here CIVIS deliverable D5.1 "The CIVIS Inter-University and Digital Campus") and virtual collaboration spaces will enable students to work effectively across borders, making education more accessible and inclusive. This shift will be supported by EU policies and funding streams prioritising educational innovation, ensuring that all European universities have the resources needed to transform their educational approaches and truly prepare students to be proactive, solution-oriented leaders in a rapidly changing world.

4. Linking Hubs and Open Labs

Linking Hubs and Open Labs – An introduction

This chapter is centred on the comprehensive challenge-based CIVIS activities on facilitating synergies between researchers (organized through CIVIS hubs) and various local stakeholders (organized via Open Labs). This interaction embodies the methodology that underpins the challenge-based concept in education, and by following the civic engagement principle by focusing on a mutually beneficial relationship that enhances both academic research and local community development, transforms pedagogical approaches by concentrating on 'real-life' multi-layered challenges, and is generally part of the CIVIS objective on building bridges between academia and local socio-economic, political, and cultural stakeholders. First, CIVIS Hubs and Open Labs will be described in detail before we focus on the bridging activities between them.

CIVIS HUBS

Hubs are challenge-based and interdisciplinary incubators of new collaborations and as such, the entities where most educational activities in CIVIS Alliance are being developed in collaboration with other bodies. It is not an overstatement to say that the Hubs are critical to the success of CIVIS. In addition to developing new collaborative education, they act as review committees and thus enforce academic quality and relevance to CIVIS activities within the context of various calls and contributions. At the inception of CIVIS 2, the larger community of the Hubs had already created numerous educational opportunities for students within CIVIS Alliance. Emphasizing their importance, each Hub is represented on the CIVIS Steering Committee. Each Hub is co-hosted by two Alliance universities, and co-chairs are leaders, with one or two Hub Coordinators providing administrative assistance.

Long-term, sustainable collaborations require organisational and financial nurturing. It takes time to build up joint education with international colleagues and to foster reciprocity and trustworthy relationships while at the same time assuring academic and pedagogic quality. In addition, academia has traditionally not valued contributions to education in comparison to research and not interdisciplinarity approaches in comparison to discipline-based. So, the challenges facing such collaborations are quite demanding.

In order to spark initiative and support our teachers and faculty to take on such joint missions, the SC launched a call for 1 MEUR (see previous chapter for more details). To date, the following projects have been reviewed and awarded funding:

- MA on Climate, Environment and Energy
- PhD/Doctoral Program in Intercultural Philosophy and Global Epistemologies
- PhD Program based on the Museum University Network
- MA/Msc in Paleolithic Archaeology
- MA in South European studies
- Doctoral Network on Cities, Spaces and Mobilities
- BA micro-program on Digital Transformations in Health and Wellbeing
- Post graduate MA program on Equitable and Just Digital Society

The CIVIS Master on Climate, Environment and Energy is a fantastic example of an innovative, international and co-created educational program. The program - *Transdisciplinary Studies in Climate, Environment and Energy* - is hosted by Stockholm University and all eleven CIVIS universities are involved in its creation. The plan is for all universities to be degree-awarding partners. Contributions from different organisations within society and from our six associated partners in Africa are foreseen.

A pilot of the program is planned to be launched in 2025, allowing it to be revised, developed, and improved for a larger intake of students in 2026.

The first semester is co-created and will hopefully be co-taught by members of all CIVIS universities. Students are planned to have exchange semesters in semesters 2 and 3, and during semester 4, they will write their thesis work. The current structure of semester 1 is described in the figure below.

Co-creation of semester 1

Climate, energy and environment – A transdisciplinary perspective 30 ECTS credits

3 ECTS	System thinking
9 ECTS	Climate, environment and energy A social science perspective
9 ECTS	Climate, environment and energy A humanities science perspective
6 ECTS	Climate, environment and energy A natural science perspective
3 ECTS	Creating knowledge through transdisciplinary methods

The CIVIS Master in Climate, Energy, and Environment is a great example of a collaboration that ticks all the boxes when it comes to co-creating education within Europe and beyond, together with and for the benefit of society. WP3 will report further information on the development of this CIVIS Master in the Deliverable 3.1 Catalogue of Hubs challenge-based educational activities, which is due in September 2026.

Figure 2. Hub names, themes and university hosts.

Open Labs

Conceived as open and participative spaces, the CIVIS Open Labs create a forum where university communities and local stakeholders can meet to develop solutions to the challenges facing their city and region. Through innovative thinking and the co-creation of projects, participants can launch creative and inclusive initiatives that positively impact the wider community. The Open Labs promote the participation of the students

and academics in the development of activities, fostering civic engagement inside the institution and acquiring transversal skills among student practices.

In CIVIS 2, Open Labs are expected to support the development of participatory research methodologies which link academic knowledge and local needs. Moreover, they are supposed to set up public engagement and dissemination projects and act as an educational facilitator in service-learning activities, hackathons and other skill-focused activities.

Each CIVIS Open Lab is managed by a local Open Lab Coordinator, the main contact point with the Alliance. Based on the Open Lab's maturity and practical anchoring in the university's institutional structure, the Open Lab Coordinators might work with a larger team of colleagues.

All eleven CIVIS Open labs are represented in the Open Lab Council, which works as a forum for interaction between the Open Labs. The Council of Open Labs is chaired by the university and is responsible for the presidency of the CIVIS Board of Rectors, which means that the chairmanship of the OL Council rotates every six months. As this rotation presents continuity challenges and as a common demand, an Open Lab officer was nominated in September 2022 to focus on the methodological support for the Open Lab coordinators.

There is a very large diversity of experience and vision among the Open Labs. Some were long-established before CIVIS, and others are just being formed. For some of the older Open Labs, the primary mission was to link research at the host university with local actors outside academia. Adding challenge-based education to the list of objectives is a substantial change in the DNA of these Open Labs.

Today, we can see that there is a thriving ecosystem among the partner universities with a diversity of

actors engaged in the Open Labs, including local authorities, academic partners as well as partners from the business environment and civil organisations.

That diversity comes from the history of each Open Lab, some pre-existing before CIVIS alliance and others were born with CIVIS. There is no "one size fits all" approach to Open Labs. The diversity of approaches to be implemented and interactions must be left to the individual Open Lab to pursue the best actions that fit the CIVIS strategy.

Linking Hubs and Open Labs

In developing projects, the Open Labs approach plays a crucial role as it facilitates and trains the knowledge exchange to address needs expressed by local stakeholders in each of the territories covered by the universities within CIVIS. In other words, CIVIS aims to develop mechanisms to identify societal challenges in a bottom-up approach and to construct an academic offering whose content and pedagogical tools best address these challenges. They are also a co-creation space in which stakeholders are recognised for their empirical knowledge and invited to play an active part in developing solutions. Hence, the increased focus on developing inter- and trans-disciplinarity approaches training staff and student in public engagement skills to make their research/academic work more accessible. To do so, CIVIS has set up processes to design challenged-based education projects that are used as guidelines for the whole Alliance.

The expectations placed on the Open Labs are significant, as they serve as a bridge between local stakeholders and the Hubs of the Alliance. While these expectations are clearly articulated in programmatic documents and the intentions of numerous Alliance stakeholders, there are various barriers and enablers to developing such dynamics. The European Universities Initiatives (EUI), indeed, have ushered in new levels of cooperation within the European Union. This initiative "aims to transform European cooperation (regulative dimension), create and disseminate a new model for European higher education based on a challenge-based approach (normative dimension), and serve as a means to reinforce and institutionalize European and global scripts for European higher education (cultural-cognitive dimension)" (Marques & Graf 2023). While the objectives of the Open Labs align with these goals of inter-university cooperation, few studies observe and document how this cooperative work unfolds on day-to-day work among universities. In this context, the development of Open Labs within CIVIS presents a particularly interesting experimental case to understand how local units can respond to and contribute to a transnational educational offering.

Collaborative learning capacity as facilitator to set up challenge-based education programs between Hubs and Open Labs

It is essential to comprehend how Open Labs operate and function to identify the barriers and enablers of their role as bottom-up and top-down intermediaries for challenges faced by local stakeholders. This understanding extends to the *meso* level (organizations), shedding light on the broader dynamics inherent in the development of European University Initiatives (EUI) at the *macro* level (the Alliance). According to Maassen, Stensaker & Rosso (2023), four factors influence the implementation of projects driven by EUI:

- *Organizational Coordination*: This involves providing internal coordination mechanisms (standards, rules, guidelines) and balancing academics and professional administrators in order to generate consistent performances over time;
- *Conflict Resolution Mechanisms*: These are practices for solving conflicts, seen as mechanisms for securing the persistence of an alliance;
- *Commitment of Members*: This is based on the rationale and engagement of each university within the Alliance.
- *Cultural Characteristics*: These are defined as the effective balance between integrating into a new alliance and preserving the historical institutional identity of the participating universities.

To adapt this framework for analysing the internal functioning of European University Initiatives (EUI), we incorporate specific elements related to Open Labs. Indeed, according to Versailles and Merindol (2022), Open Labs need to establish new models of governance at the local level to instil new dynamics of knowledge production based on collective strategies. This governance challenge is particularly significant within CIVIS Alliance because, on the one hand, Open Labs must develop management and governance models that allow them to establish themselves as community-based organizations[3] in each territory of CIVIS. On the other hand, they need to develop management and organizational models at the transnational level of the Alliance.

Therefore, this chapter aims to address the question: how do local Open Labs develop a collaborative governance model that enables them to contribute to the development of challenge-based education projects with globally focused transnational hubs?

To address this question, we posit that the development of a collaborative governance model among the Open Labs depends on their capacity for mutual learning. We believe that creating a model that facilitates cooperation, conflict resolution, and member engagements and incorporates the cultural characteristics of each Open Lab relies on a three-stream learning capacity:

- Challenges Stream: Where members exchange knowledge about their experiences and interactions to develop a collective education project framing.
- Policy Stream: Where members share knowledge on analyses, reasoning, education models, experiences, or pilot projects to develop the feasibility of new educational programs or alternative teaching projects.
- Politics Stream: Where members exchange knowledge about their values, relationships across different levels (local to global), aiming to foster systemic transformation in the academic development of the Alliance.

Based on this analytical framework, we hypothesize that the more the governance model of the Open Labs develops a learning capacity related to the politics stream, the more they will be able to develop challenge-based education projects. Conversely, the more the governance models of the Open Labs allow them a learning capacity related to the problem stream, the more they will engage in discussions related to project framing. As we will demonstrate, CIVIS Open Labs have been undergoing continuous

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[3] Idem, p. 7.

evolution since their establishment in 2018 and are consistently improving their governance models to gradually enhance their learning capacity.

To do so, we will test this hypothesis through a comprehensive qualitative analysis that relies on data triangulation: a literature review encompassing all written documents produced by the Open Labs since 2019 (reports, presentations, meeting minutes), semi-structured interviews conducted with Open Labs managers, Hubs chairs and coordinators in January and February 2023, and finally, participatory observations of meetings and collaborative sessions.

Experiencing the collaborative challenge-based learning (2020-2022)

As we will see, the period of the creation and development of the Open Labs is marked by particularly influential contextual elements. The Open Labs were officially launched in February 2020 in Madrid, approximately one year after the launch of CIVIS. However, they immediately had to adapt to the pandemic context, which significantly hindered the implementation of projects and the organization of in-person meetings. Some universities, such as Stockholm University had existing Open Labs before CIVIS started.

Indeed, the Open Labs began their journey when the institutional, decision-making frameworks, and reporting systems were already established within CIVIS. Their implementation was, therefore, relatively quickly framed by this system, leading to the establishment of a somewhat top-down approach in the development of the Open Labs within CIVIS: "The work package began with the establishment of the UAM Open Lab at the end of Month 5, which derived in the preparation of a formal methodology document of reference for the rest of Open Labs from the lessons learned."
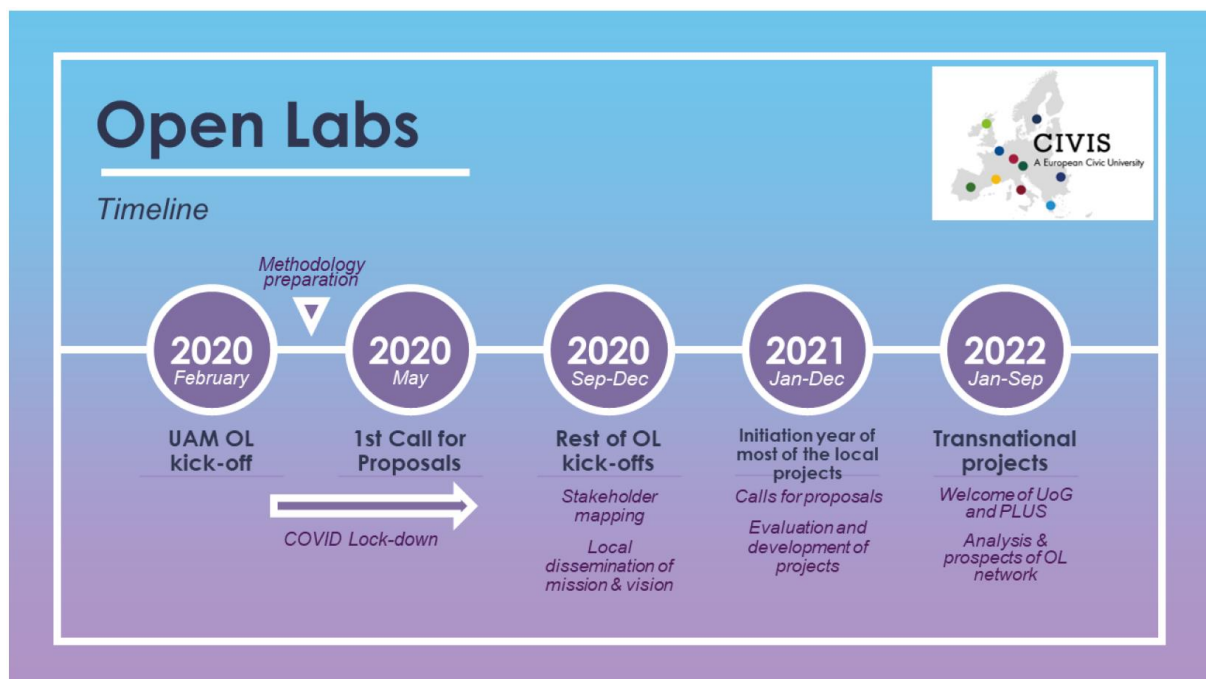
Starting from this top-down methodology, the Open Labs developed a working method that had to relatively quickly meet the requirements of CIVIS deliverables. This involved testing a working methodology with stakeholders in the SU and as well in the UAM Open Lab before sharing and disseminating this method across the various Open Labs of CIVIS.

Among the various tools mobilized to implement this methodology, the different Open Labs worked through various stages. Firstly, each Open Lab had to construct a map by identifying different categories of stakeholders (Schools, NGOs, policy-makers, universities, civil society organizations, industry, and the business environment). Secondly, all Open Labs in CIVIS 1 had to organize a call for projects to carry out initiatives with these stakeholders. The description of the call remained broad to be open to all stakeholders:

> *The grants consisted of a seed-funding amount between 1.000 and 5.000 € per project to cover the first costs and its use was limited to the aims of the Open Lab as a tool towards the consolidation of an engaged University. Typical duration of the projects was from 6 months to 18 months depending on the nature of the goals and the number of activities planned.*

Finally, the last stage of Open Labs development following the established methodology has been to undertake transnational initiatives such as "Migration and Civic Engagement" and "NaturaShare".
In the conclusion of the report that draws to a close these two years of experimentation, the Open Labs elaborate on various development perspectives, including enhancing the open, inclusive, and participatory nature of the Open Labs, better connecting with their local ecosystems, fostering more synergies, interactions, and exchanges at the European level, developing a digital space, a cross-cutting strategy within CIVIS, and seeking funding opportunities.

Based on this top-down development methodology of Open Labs over two years, we can distinguish five analytical elements of the analytical framework presented earlier. Firstly, constraints related to the institutional structures of CIVIS and its deliverables led the Open Labs to adopt a somewhat top-down organization, starting from a model experienced in Stockholm and deploying it to other cities within CIVIS. Given the two-year deadline by which the Open Labs had to complete their tasks and the pandemic context, this top-down management model proved effective in achieving objectives and implementing the initial milestones of inter-university cooperation within these organizations. However, this top-down approach hindered the development of a collaborative governance model.

Indeed, the top-down model restricts the capacity for cooperative management and conflict resolution among members. The timing and methodology allowed little room for more negotiated or analytical learning, and only learning about problems or project framing was possible within this scheme. The primary focus was on developing the methodology and the initial timeline rather than creating agile project management that incorporates the diversity of Open Labs. However, this is considered crucial in managing transnational projects, such as EUIs, as defined earlier. Ultimately, this top-down methodology impeded member engagement, as evidenced by the relatively high turnover of Open Labs managers in the Open Labs established at CIVIS universities during that period explained by the employment contracts linked to the EU fundings (Open Labs already established before CIVIS continued to operate according to their internal processes).

This methodology allowed the launch of the first experiences within CIVIS Open Labs, facilitating initial learning related to the issues to be addressed. In this context, the focus was on how to connect a European university with local stakeholders. This element is crucial because, in this initial period, the connections between Open Labs and Hubs are relatively underemphasized, and the development of teaching projects by Open Labs is almost absent from discussions. When the CIVIS 2 project begins in 2022, the links between Hubs, Open Labs, and challenge-based education became a priority, leading

to multiple tensions, misconceptions and misunderstandings. This is because the management of Open Labs, their objectives, and their practices are expected to change significantly.

Building a policy learning capacity (2022-2024)

In October 2022, CIVIS Alliance launched a second four-year program. This marks, on the one hand, a change in the objectives of the Open Labs and, on the other hand, a modification of the governance structures of CIVIS. Indeed, the Open Labs are called upon to develop "glocal" projects, which was not explicitly the case before, and faced with the establishment of an Open Labs Council with a rotating presidency every six months among its members. Coupled with some Open Labs rethinking their initial approach, the change in both objectives and governance created a challenging transition period between CIVIS1 and CIVIS2, which is only now starting to stabilise. This dual change in objectives and governance creates a challenging transition. Open Labs had to shift from a logic of problem streams centred on the exchange of experiences to a policy stream logic, which had not been the case before. Most Open Lab Managers faced a particularly uncomfortable period of uncertainty, as they felt that expectations were high at the Alliance level, but these did not match the reality of the organizational processes of the Open Labs and their new objectives.

Faced with this discomfort and loss of reference points, the OLs had to gradually and sometimes implicitly reappropriate the central elements of the collaborative governance defined earlier (Organizational Coordination, Conflict Resolution Mechanisms, Commitment of Members, and Cultural Characteristics). They moved gradually from learning related to the Problem Stream to the Policy Stream and began to develop projects in their own ways. To achieve this, four elements were put in place:

- A monthly meeting schedule.
- A workshop focused on the vision and missions of the Open Labs (during the Global CIVIS Days in Tübingen in May 2023).
- A meeting to operationalize this vision, broken down into projects, services, and internal management (organized in Marseille in December 2023).
- The identification of an Open Lab Officer who acts as a liaison between various meetings and the rotating presidents of the OL Council.

In the longer term, these elements will promote the integration of coordination that plans and organizes collective work, decision-making mechanisms within the Council, distributed and time-planned tasks among members, and continuous management of activities carried out by the Open Labs. In other words, the Open Labs now have a more horizontal management approach that integrates the diversity of their practices, histories, and cultural contexts and implements activities that align to develop teaching projects in collaboration with the Hubs.

This demonstration aims to understand the context, albeit briefly explained, in which the Open Labs develop their activities within CIVIS and can gradually build teaching projects with the Hubs. The projects mentioned below are, therefore, initial experiences from which collective learning will need to be drawn.

Open Labs and Hubs dynamics

To understand the new dynamics within each Hub and between the Hubs, with each Open Lab and within the Hub Council, and to foster efficient exchanges and collaboration between Hubs and Open Labs, the Stream 1 management team needed to conduct a gap analysis, understand the needs for each group, identify existing good practice and expertise, and undertake some horizon scanning exercises to identify potential joint pilot projects.

Between January and March 2023, two members of the Stream 1 management team arranged individual interviews with the Chair, co-chair and coordinator of each Hub, and with each Open Lab Coordinator. Structured interviews were carried out to assess:

- The understanding of the goals and purposes of their Hub or Open Lab
- The structure and internal processes of each Hub or Open Labs
- Their understanding of the dynamics between Hubs and Open Labs, the potential benefits and barriers

The outcome of the interviews was then compiled and presented to Hubs and Open Labs colleagues in an Online "Meet and Greet" workshop in March 2023. The workshop was jointly organized with the Stream 3 management team. The detailed information can be found in the CIVIS Milestone 2.2.

The findings of the interviews showed that the structural and staffing changes that occurred during the transition between the construction phase and the consolidation phase caused some confusion for Hubs and Open Labs. On the operational front, there was a lack of understanding of how to access financial and human resources within the Alliance to move on from planning large educational activities such as joint Masters to actually delivering them in concrete terms. Furthermore, neither the Hubs nor the Open Labs had a clear understanding of possible collaborations and were operating in silos, even within their own institutions.

Interviews with Hubs showed various forms of governance, from collaborative and horizontal governance to strong top-down governance. Approach to meetings was also different: some Hubs met at regular intervals online and in person and seemed to have a clear sense of purpose around inter- and multi-disciplinary projects; others met infrequently and favoured interdisciplinary projects. Generally, Hubs worked in silos, with little interaction across the different themes. The disparity between Hubs came as no surprise since academic Hub Chairs had been given the freedom to create a structure for each Hub that would suit its topics and its members.

Interviews with Open Labs showed a greater disparity between each local Open Lab. First, in their structure, the Open Labs show a wide spectrum from newly set up to very well-established and pre-dating CIVIS. This also determines how well each Open Lab is rooted in its local and national ecosystem and how well it is resourced, with some Open Labs supported solely by CIVIS funds and others having well-established funding sources within their institutions and external stakeholders. Unsurprisingly, each Open Lab had adapted its strategy, profile and outlook on its ecosystem, which is a challenge to conceive a transnational project but represents a wealth of experiences, methodologies, and approaches to be shared across the Alliance's communities. At the time when the interviews took place, the Open Lab Council had not yet met, which seemed to add to the sense of disparity between the Open Labs. Under the construction phase of CIVIS, there was an Open Lab Work Package leader tasked with the strategy and general direction of the Open Labs; under the new phase, the Council must self-govern,

relying on a rotating Council Chair. With so many new Open Lab coordinators and such a range of vision, the new structure is not conducive to creating a shared vision.

Next steps

As we look ahead, the findings of our structured interviews and our experiences over the past year clearly show an enthusiastic need for greater clarity and cohesion within CIVIS Alliance, particularly between the Hubs and Open Labs. As we move into the next phase, we must address the challenges identified and work towards fostering more vital collaboration and alignment of goals across the Alliance. Documenting our past experiences will allow us to learn from each other and build upon our collaborative efforts.

To tackle the structural and staffing challenges we have encountered, we have already begun taking steps to provide more explicit guidance on accessing financial and human resources within the Alliance. We have also simplified objectives to increase engagement from each Open Lab, with the implementation of a Gantt Chart (ref) serving as a starting point. Moving forward, we aim to ensure equal participation from all Open Labs.

Similarly, the diverse structures and resources of the Open Labs highlight the need for a more unified approach. Establishing the Open Lab Council as a platform for shared decision-making and knowledge exchange will foster community and coherence among Open Labs. In addition to these steps, we will showcase the expertise and previous projects of the Open Labs through conferences (November 2024 @ULB), webinars (starting in Sept. 2024), and the CIVIS website. This visibility will demonstrate our capabilities to the broader community and attract interest and support for future endeavours.

Engaging with Hubs and prioritizing student-led projects aligning with CIVIS objectives will strengthen collaboration and drive meaningful outcomes. Moreover, dedicated efforts to document the evolving relationships between Open Labs and Hubs will provide valuable insights for future decision-making processes.

By taking these actions, we are poised to address existing challenges, foster collaboration, and enhance the effectiveness of the Alliance as we move forward together.

Further, the activities in the Open Labs will be reported by WP4 in the *Deliverable 4.1 List of supported intersectoral activities, including service-learning agreements.* The Deliverable 4.1 is due in September 2026.

5. From Local to Global: Activities Plan

From local to global: activities plan

Conception – addressing local to global intertwines through African-European strategic partnerships

Cross-scale interactions such as global-to-local and local-to-global represent complex social and ecological challenges that are deeply intertwined (Folke et al. 2016), impacting communities at various levels. For example, climate change or pandemics require localised adaptation and mitigation strategies to effectively manage their impacts at the community level. Conversely, local issues such as urban pollution or the Amazon deforestation can escalate, contributing to broader global environmental crises. This bidirectional influence highlights the need for inter- and transdisciplinary learning, understanding and solutions that consider both global impacts and local specifics.

A global-local approach to societal challenges, as proposed here, has methodical implications, too. It builds on the assumption that the collaboration of teachers, researchers, and learners from different local contexts, working on the same or similar challenges, can support them in reflecting and eventually overcoming the limitations of merely local accounts. Reversely, such collaboration may help to avoid the development of one-sidedly global solutions neglecting diverse local circumstances. Inter-local (inter-regional) academic collaboration, thus, has the potential to increase the significance of outputs across all academic missions (teaching, research, transfer).

Residing between the global and the local, the regional level acts as an intermediate level of geographical complexity abstracting from local specificities to a more general approach in coping with similar conditions or challenges, while deliberately moving beyond country borders.

Moreover, with its roots in Europe and the advancement of a European perspective on global-local challenges, CIVIS commits to European collaboration with Africa in particular and addresses the CIVIS objective of *Facilitating the Involvement of Global and Local Associated Partners in the Challenge-Based Agenda*. Our neighbouring continents not only face many grand societal challenges together. African-European partnership, informed by the complex historical and social relations of both continents, also appears to be a promising route to address many of those challenges. The potential of African-European cooperation on issues such as migration, energy supply, or health is a case in point. They not only led, for instance, to the European Commission's claim that "[w]e need to partner with Africa, our twin continent, to tackle together the challenges of the 21st century and to further our common interests and future" (EC 2020). They also underpin policy initiatives like the AU-EU Innovation Agenda, which links the joint development of approaches to key societal challenges to stepping up academic collaboration between Africa and Europe.

In alignment with the above-named objective, CIVIS and six leading universities in Africa have entered a strategic partnership: Université Hassan II de Casablanca (Morocco), Université Cheikh Anta Diop de Dakar (Senegal), University of the Witwatersrand, Johannesburg (South Africa), Makerere University (Uganda), Eduardo Mondlane University (Mozambique), and the University of Sfax (Tunisia). All of them signed a strategic partnership agreement with CIVIS in 2022. It lays the basis for joint educational, research, and outreach activities addressing global challenges in CIVIS' five thematic Hub areas while encouraging the development of African-European perspectives therein. Within CIVIS Hubs, each CIVIS member university and the strategic partner universities are represented. Moreover, African partner institutions participate in the CIVIS Steering Committee and Board of Rectors on a regular basis. A dedicated Global Partnerships Officer of CIVIS works together with institutional contact persons at each strategic partner to coordinate, facilitate and further strengthen the collaboration.

AFRICAN PARTNER UNIVERSITIES

- UCAD Université Cheikh Anta Diop de Dakar
- UH2C Université Hassan II de Casablanca
- UEM Universidade Eduardo Mondlane
- USF University of Sfax
- MAK Makerere University
- WITS University of the Witwatersrand
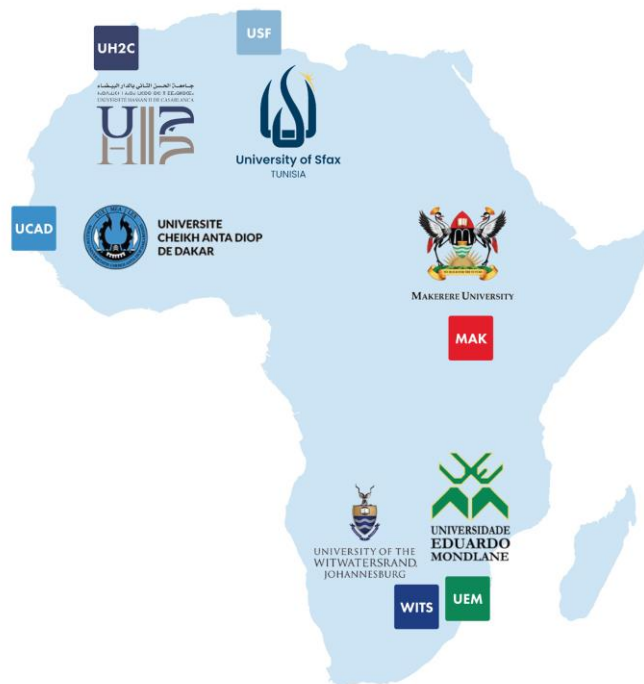
Plan for joint challenge-based actions with strategic partner universities

Based on experiences with the first joint activities 2022-24, CIVIS and its Strategic Partner Universities (in Africa (the following text termed as strategic partners) will further develop challenge-based activities across all academic missions – education, research, and transfer to society, including measures gearing joint activities to societal challenges. These activities will be complemented by transversal actions.

Education

Given the key role of educational offers in CIVIS' challenge-based approach, co-creating those jointly with the strategic partners may directly contribute to a focus on grand societal challenges that address their global (respectively non-European) dimensions. While the same applies to the strategic partners, cooperation in this field has the potential to widen and diversify our partner's educational offerings and exchange opportunities especially for Master and PhD students.

CIVIS and the strategic partners agreed to collaborate on challenge-based education in both short—and long-term educational offers, as outlined below.

Short-term programmes – Blended Intensive Programmes

Current status

Short-term Blended Intensive Programmes (BIP) are currently the core format of CIVIS educational offers (see also Chapter 3). The CIVIS approach to BIP was recently mentioned as an example of a European University using this funding format innovatively (European Commission, 2022, 'Blended mobility implementation guide for Erasmus+ higher education mobility KA131').

With the inclusion of strategic partners, CIVIS seeks to take the BIP strategy to the next level and open it up to students and faculty from African partner universities. The inclusion of these universities is currently tested in a pilot phase with the following features:

- Most CIVIS member institutions have successfully applied for Erasmus+ ICM funding in 2022 and 2023 to enable staff and student exchange with strategic partners.
- From the 2nd Call (2023) onwards, each call for proposals encourages the inclusion of members/co-lecturers from strategic partners;
- Since 2023, seven BIPs included at least one co-lecturer from a strategic partner.
- Those seven and eight BIPs (a total of 15) were opened to student applications from selected strategic partners. About 80 students applied for about 30 Erasmus+ ICM scholarships, enabling their participation in the physical part of the programme.
- Since 2024, another seven BIPs have been opened to students.
- From March 2024 onwards, these BIPs will be implemented, including co-lecturers and/or students from strategic partners.

Planned activities:

- By the end of 2024, CIVIS (Global Partnerships Officer and the Mobility Unit) will conduct an evaluation of the pilot phase focusing not only on the manageability of the strategic partner inclusion but also on the academic value added for the participants. Academics, students, mobility managers involved in CIVIS universities, and strategic partners will be included in this evaluation. Based on the results, the CIVIS will develop scenarios and related recommendations on continuing with the co-creation of BIP for deliberation and decision by the CIVIS governance (including strategic partners). Likely scenarios could imply to:
  o Continue, widen, and streamline the inclusion of strategic partners
  o Embed the option of co-creating BIPs in a general call for mobility between CIVIS member universities and strategic partners
  o Link the student participation to the participation of members and strategic partners in the co-design of the BIP.
  The funding mechanisms (Erasmus+ ICM) will certainly constitute the most important aspect in this context, given its high complexity and constraints.
- The implementation of the chosen scenario is planned to take place by the end of 2025

Long-term educational programmes

Through CIVIS Hubs, CIVIS is developing challenge-based, long-term educational programmes - from micro-programmes to full degree programmes, from Bachelor to PhD level until 2027. CIVIS and strategic partners agreed to include the latter in those educational offers. Three non-exclusive approaches to co-creating such offers can be distinguished:

Informal co-creation (light approach):

- Co-teaching of faculty members from strategic partners in selected seminars/lectures (online/in-person; single/regular)
- Opening of selected contents to students from strategic partners on the basis of existing exchange formats (semester exchange; short-term exchange and participation in selected courses [e.g., PhD

students participating in selected workshops of a CIVIS PhD programme; participation in online-course elements)

Formal co-creation of selected programme contents (medium approach):

- Integration of shared seminars/modules/course elements in the curriculum of both CIVIS programmes and similar programmes at strategic partner universities, e.g., through COIL (Cooperative Online International Learning, see e.g. Gow 2023, using UofG as a case study)
- If necessary, low-key mutual recognition of those seminars/modules

Joint programme (full approach):

- Jointly delivered programme, with studies in 2+ countries (joint/multiple degrees)
- Formal participation of strategic partner(s) in the programme consortium (associated/full membership)

The choice of approach(s) will differ among programmes and certainly depend on several factors. Apart from the academic matchmaking of suitable faculty and curricula itself, challenges occur with comparatively higher regulatory hurdles for implementing joint educational offers, comparatively longer, more expensive, and demanding travels (also due to visa requirements), and constraints in available management capacities and funding.

However, the level and intensity of co-creation and integration of strategic partners could also be planned in consecutive steps, starting with less challenging, lower-cost approaches and eventually leading to more formal, comprehensive types of collaboration. Moreover, since the programmes themselves are often restricted in terms of institutional participation, not all strategic partners will participate in all CIVIS programmes, at least not to the same extent.

Several funding mechanisms exist and need to be explored for their use in joint educational offers with strategic partners:

- Erasmus Mundus Joint Master (EMJM): The far-reaching integration of African institution(s) is here possible, in principle.
- Local funding opportunities: Several CIVIS members have funding mechanisms in place that enable faculty or student exchanges with strategic partners (see the dataset "Funding opportunities for CIVIS and Strategic Partners").
- Erasmus+ International Credit Mobility (ICM): Bilateral mobility schemes for exchanging faculty and staff could be applied for and implemented on specific programmes.
- Erasmus+ Capacity Building for Higher Education: This and other EU programmes supporting curriculum development and innovation could be explored and applied to implement, e.g., COIL formats.

Current status:

- CIVIS Hubs has added collaboration with strategic partners as a criterion for designing study programmes.
- Meanwhile, with the support from CIVIS Hub Councils, programme design teams of all five CIVIS Hubs have reached out to strategic partners to advance the collaboration. For instance, the Hub1 Master on Climate, Environment, Energy is advanced in this regard by planning the integration of UH2C in an Erasmus Mundus application (full approach). The ART-W study programme of Hub2 is already collaborating with Wits in the inclusion of students (light approach) and is exploring ways to intensify the integration. For some programmes this step is still pending.

- By October 2024, CIVIS will integrate the strategic partners and introduce all study programme teams to further develop their focus on societal challenges. Guidelines and support materials will be developed for this purpose.
- With the support of CIVIS Units and Officers, and the strategic partners, successful approved study programmes will have a specific collaboration plan by 2025.

Promoting 'Global Education' through strategic partnerships

Education on global social challenges is closely intertwined with/cross-fertilises with the 'Global Education' approach in Educational Sciences. Our partnerships provide an ideal ground for advancing this approach, both for its development at the individual member institutions on the one hand and as an approach applied in CIVIS educational offers on the other. Our vision is to develop CIVIS and its partners into a concrete case and example of a "global education partnership."

Planned activities:

- Mapping of 'Global Education' landscape at CIVIS institutions (European/African)
- Promote joint research on 'Global Education'
- Provide training for faculty on 'Global Education'
- Include related insights and approaches in CIVIS educational offers

Challenge-based research with African partners

CIVIS and its partners aim to unlock the potential of joint, challenge-based research and its training. This constitutes a priority for the strategic partners, who may thus be catalysts for the further development of the CIVIS approach to fostering challenge-based research.

Supporting networking and partner searches

Jointly, we aim to develop our African-European partner network into a resource for researchers in our academic communities who seek to address societal challenges and look for partners in Africa or Europe. CIVIS should become one of the first addresses to consider or turn to in this respect. This aspect gains particular importance regarding the challenge-based research of many research funding programmes, notably at the EU level, many of them inviting or even requiring consortia with partners from the Global South or Africa.

Current status:

- CIVIS bodies and the strategic partners already collaborate to support research partner searches on a case-by-case basis.
- The RIS4CIVIS project has produced databases with researchers in CIVIS member universities and their fields of expertise, which members from the strategic partners can use.

Planned activities:

- CIVIS will develop a database with contacts and joint activities as a resource for partner searches by June 2024.
- Based on first experiences in the context of a CIVIS Call, the CIVIS Coordination Office will explore the introduction of a partner search tool and process by December 2024.
- The CIVIS website will be expanded and contain a resource section for researchers seeking partners or advice, including contacts for receiving support, by October 2024

Seed-funding provision

Current status:

- CIVIS has launched a first Call for Joint Pilot Projects of African partners and CIVIS members in 2022. The majority of the 13 funded projects had a research dimension and all focus on societal challenges.
- Based on this positive experience, the recommendations from the successful applicants, and the RIS4CIVIS final report, CIVIS launched its first Call for Applications, 'Seed-funding for research and African-European collaboration,' in early 2024. The call not only called for proposals addressing societal challenges but also strongly encouraged the formation of African-European teams. With 30 of the 32 applications including members from SPU and CIVIS member universities, this objective was fulfilled.

Planned activities:

- The CIVIS Coordination Office will evaluate the experience with this Call as a basis for a recommendation to the CIVIS governance on whether and how to continue with such a Call.
- CIVIS will explore the continuation of seed-funding provision by January 2025.

Collaboration with strategic partners in Open Labs

Our strategic partners not only share CIVIS' commitment to a socially engaged academy. They also have a long track record in local engagement with non-academic stakeholders and usually developed platforms similar to CIVIS' Open Labs. CIVIS and its strategic partners thus agreed to explore and develop the collaboration on Open Labs to account better for the 'glocal' nature of many societal challenges dealt with in local civic engagement projects, i.e., challenges in which the 'local' and the 'global' are interlinked.

At least two approaches seem possible and promising: First, to explore and exchange best-practice examples for civic engagement and potentials for cross-fertilisation between African and European CIVIS universities in this realm; second, to develop transcontinental innovation partnerships between Open Labs and the civic engagement platforms at strategic partner institutions, through which

expertise, capacities, and resources are shared or jointly developed. Those partnerships can either relate projects and actors working on the same or similar societal challenges or imply the joint development of institutional forms and strategies to improve or develop models for social service learning, local challenge-oriented research, and collaboration with local societal stakeholders.

Planned activities:

- Mapping of platforms and projects at strategic partner institutions similar or equal to Open Labs (by July 2024)
- Development of collaboration formats between CIVIS' Open Labs Council and strategic partners (by December 2024)
- Exploring third-party funded project for enabling joint meetings, exchanges of OL staff

Transversal actions

Challenged-based mobility

In December 2023, CIVIS launched the call 'Mobility between CIVIS member and strategic partner universities', which seeks to promote academic exchange with a focus on societal challenges.

By the end of 2024, CIVIS will evaluate the outcomes of this Call and develop a recommendation on how to proceed with it. This could imply continuing in the current, open framework or developing it into a more targeted mechanism, e.g., the focus on promoting doctoral/postdoctoral research-oriented mobility with a challenge orientation.

Conference on challenge-oriented research, transfer, and education

CIVIS and its strategic partners are planning a joint academic conference in 2025, in which addressing societal challenges will play a key role. A Task Force is currently elaborating on a concept for this.

6. Conclusions and Outlook

Conclusions and Outlook

CIVIS's commitment to advancing civic engagement and challenge-based education within higher education institutions reflects a transformative vision for academia's role in society. By embracing civic engagement, CIVIS universities actively contribute to societal, environmental, and economic problem-solving, thereby positioning themselves as catalysts for social good and sustainable development.

Furthermore, CIVIS' integration of challenge-based education underlines the pedagogical shift towards active learning, where students engage directly with real-world issues, reflecting a holistic educational ethos that prioritizes societal needs alongside academic rigor. This approach not only prepares students to handle complex global challenges by fostering transdisciplinary collaboration but also enhances their civic consciousness and societal engagement.

The structured frameworks and guidelines developed for implementing these strategies within CIVIS alliance, such as the innovative educational formats and the explicit focus on collaboration across disciplines and with external stakeholders, underscore the strategic intent to cultivate an educated, engaged, and socially responsible student body. These efforts are crucial for nurturing a generation of leaders equipped to navigate and shape an increasingly interconnected and complex world, emphasizing the imperative for HEIs to lead in societal transformation through education, research, and direct community engagement. Through such initiatives, CIVIS is setting a commendable example of how universities can extend their impact beyond traditional academic boundaries to achieve a significant and positive societal impact.

The best practices from the CIVIS case studies of educational offers provide compelling evidence for the effectiveness of challenge-based educational strategies within the European higher education framework. Through CIVIS educational initiatives have successfully fostered interdisciplinary collaboration and global-local partnerships, facilitating an enriching learning environment for a substantial number of students across various thematic CIVIS Hubs. This approach not only enhances academic offerings but also equips students with the skills and perspectives necessary to tackle contemporary global challenges.

Moreover, the positive feedback from students and program coordinators underscores the significant impact of these educational models in fostering practical and scientific engagement. The blend of theory and application in the CIVIS challenge-based framework serves as a blueprint for future educational initiatives aiming to integrate academic rigor with real-world relevance. By continuing to expand and refine these educational strategies, CIVIS is poised to further contribute to the development of an informed, engaged, and capable student body, ready to contribute positively to their communities and the broader global landscape.

The synergy between CIVIS Hubs and Open Labs is a foundation of a transformative educational landscape that integrates challenge-based learning with civic engagement and has proven instrumental in fostering innovative pedagogical approaches by addressing real-life, multi-layered challenges, thereby enhancing academic research and community development. These initiatives underscore the effectiveness of collaborative, participatory methodologies that link

academic insights with local needs, cultivating a fertile ground for transdisciplinary education and public engagement.

Moving forward, the evolution of Open Labs into dynamic forums for co-creation and the expansion of educational opportunities by the Hubs set a robust foundation for a more interconnected and responsive educational framework within CIVIS Alliance. By continuously refining their governance models and learning capacities, the Open Labs are poised to significantly contribute to the development of focused, challenge-based education projects. This adaptive approach not only aligns with the broader goals of the European Universities Initiatives but also serves as a model for future endeavours in higher education, where local responsiveness and transnational collaboration merge to meet the evolving demands of society. Thus, the sustained integration and mutual enhancement of Hubs and Open Labs are essential for realizing the full potential of the CIVIS mission.

The strategic partnerships between CIVIS and the six African universities represent a proactive approach to tackling global and local challenges through enhanced cooperation in education, research, and societal engagement. These collaborations leverage diverse perspectives and expertise to address complex issues, such as climate change, health, and migration, ensuring that solutions are inclusive and effective. By fostering a robust network of inter-regional academic collaborations, these partnerships not only enhance educational and research outcomes but also strengthen the global community's capacity to respond to pressing societal challenges collaboratively. This integrated approach of CIVIS and its activity plan will further strengthen cross-continental educational partnerships and collaboration applying the challenge-based approach to foster sustainable development and address transdisciplinary challenges.

The vision of CIVIS alliance is to offer higher education that helps students to acquire competence and knowledge understanding and applying the scientific and evidence-led approach. In a rapidly changing world that is facing numerous societal challenges, students also need to be able to find and critically examine information, and once they have evaluated the information, base their decisions on evidence and not just ideology. CIVIS alliance believes that this is done by creating an environment where mutual respect is normal, and where the pursuit of creating a just society, with clear ethical and democratic core values and that works within the boundaries of the planet.

CIVIS's strategic alignment with European educational objectives demonstrates a proactive commitment to enhance the quality and reach of higher education through innovative practices that emphasize civic engagement, challenge-based learning, and international collaboration. The sustained success and expansion of such programs within the CIVIS framework will undoubtedly continue to serve as a vital component of Europe's educational and societal advancement.

7. References

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