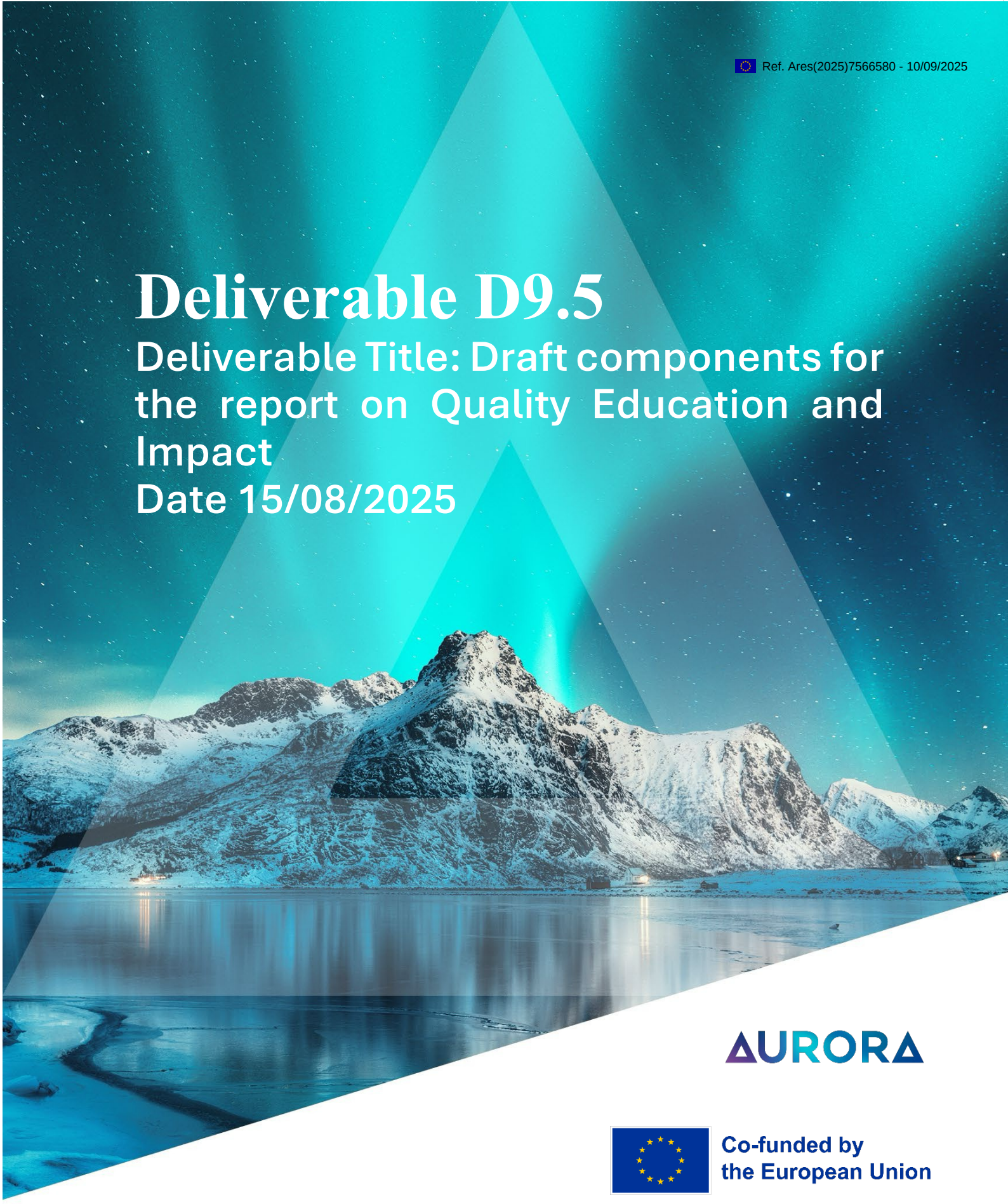
# Deliverable D9.5

## Deliverable Title: Draft components for the report on Quality Education and Impact

Date 15/08/2025



AURORA

Co-funded by the European Union

UNIVERSITY OF ICELAND

VU VRIJE UNIVERSITEIT AMSTERDAM

CBS COPENHAGEN BUSINESS SCHOOL

Palacký University Olomouc

UNIVERSITÄT DUISBURG ESSEN
Offen im Denken

universität innsbruck

UPEC UNIVERSITÉ PARIS-EST CRÉTEIL VAL DE MARNE
Connaissance - Action

UNIVERSITAT ROVIRA i VIRGILI

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

| Deliverable Number | D9.5 | | |
|---|---|---|---|
| Deliverable Name | Draft components for the report on Quality education and Impact | Lead Beneficiary | UNINA |
| Type | R – Document, report | | |
| Due Date (month) | M20 | Dissemination level | PU - Public |
| **Authors** | UNINA | Work Package No | WP9 |
| **Contributors**<br><br>(select relevant partners and associate partners | UNINA,<br>CBS | | |

## EXECUTIVE SUMMARY

This report presents the **Aurora Quality Education Assurance (QEA) Monitoring and Participatory Evaluation Framework**, developed within Work Package 9.2 (Quality teaching and societal impact). The framework is designed to assess not only the quality of Aurora's educational practices but also their societal impact, thereby aligning pedagogical innovations and governance with the Alliance's civic mission. The proposed approach rests on two interdependent pillars: (i) monitoring joint learning, mobility, and the *Aurorisation* of teaching practices; and (ii) evaluating collaborative activities and governance processes through a participatory approach. Together, these pillars combine systematic reporting with qualitative insights, enabling evidence-informed decision making and management through real-time learning, and deeper understanding of how educational practices contribute to quality teaching and societal impact.

Drawing on desk research, stakeholder consultations, interviews, and participant observation, the framework integrates multiple sources of evidence to reconstruct causal pathways (Theories of Change). Pilot case studies are developed on joint education practices identified within Alliance— that is, Internationalisation at Home, the Learning Outcomes for Impact on Society (LOUIS), and Social Entrepreneurship and Innovation (seismic). They provide concrete entry points for operationalising the M&E approach and illustrate how pedagogical innovation can translate into societal impact.

While challenges remain—particularly concerning uneven data availability, the incomplete rollout of the course catalogue, and different procedures featuring mobility among institutional members—the framework offers a robust architecture to strengthen institutional learning, accountability, and Aurora's capacity to deliver high-quality education with societal impact.

The next phase of WP 9.2 will focus on testing and refining the evaluative framework to ensure it is further shared and accepted throughout the Alliance. While continuing to enrich the monitoring system with updated evidence on joint learning and mobility, priority will be given to explore the Alliance's practices in civic engagement.

To this end, four field visits are planned, each including focus groups: two with Institutional Coordinators (ICs) and Work Package leaders to examine governance processes and stakeholder relations, and other two with external stakeholders to assess the Alliance's impact on society. These activities will build on the insights already collected, translating them into operational indicators, participatory procedures, and systematic reporting mechanisms that consolidate Aurora's capacity in delivering education with societal impact.

## Contents

## Introduction

Aurora is committed to advancing high-quality education that generates meaningful societal impact across its member institutions. Within this framework, the role of Work Package 9 (Aurora Governance) is to provide systematic evidence on how the Alliance is progressing toward its strategic goals. Work Package 9.2 (WP9.2) contributes to this effort by developing an evaluation system that not only assures quality but also highlights how educational activities and governance processes foster civic engagement, institutional cooperation, and transformative learning outcomes contributing to societal impact.

### I. Objectives of WP 9.2

Task Team 9.2 focuses on the development of a Quality Education Assurance (QEA) evaluation system geared towards assessing the societal impact of the Alliance. According to the Grant Agreement, the Monitoring and Evaluative is meant to address the following three thematic areas, namely,

- joint learning and mobility.
- AURORA governance and cooperation in teaching; and
- Civic engagement.

### II. Composition of the team

The team is led by the University of Naples Federico II (UNINA) and co-led by Copenhagen Business School (CBS). **Prof. Mita Marra** holds overall responsibility for the team, bringing extensive expertise in international program evaluation with a focus on policy, governance, and institutional development in regional development and innovation. As academic co-lead of the Social Entrepreneurship and Innovation (seizmic) activities, **Assistant Prof. Dr. Anne-Karen Hueske** focuses on evaluating learning outcomes and competency development, administering the SEIZMIC survey and facilitating feedback with educators. **Francesco Cotugno** (within UNINA) supports both data collection and analysis, ensuring methodological consistency across the team's activities.
Together, Marra, Hueske, and Cotugno constitute the core group of Task Team 9.2 and are the primary authors of this report. They are supported by additional members—academic staff, administrative staff, educational developers, and student representatives—who contribute as reviewers and facilitators of data collection and analysis, according to their functional expertise.
Table 1 lists all confirmed and invited members, including academic and administrative staff, educational developers, and, where relevant, student representatives. Participation is voluntary but entails a clear commitment to regular engagement and contribution to the objectives of TT9.2. The Task Team also works in close coordination with the Aurora Central Office's Programme Managers. While the core group has met regularly—online on a monthly basis and in person during Aurora biannual meetings—the full team has not yet convened, and the participation of some invited members remains pending.

**Table 1. List of proposed and to be confirmed components of the Task Team**

| University | Name | Email |
|---|---|---|
| UNINA | Marco Biondi | [redacted] |
| URV | Joan-Miquel Canals Bosch | [redacted] |
| URV | Jordi Serra Calvó | [redacted] |
| UIBK | Christine Faringer (no active participation) | [redacted] |
| CBS | Kai Hockerts | [redacted] |
| UPEC | Ilyas Kenadid | [redacted] |
| UPOL | Hana Maresova | [redacted] |
| UNINA | Ramon Rispoli | [redacted] |
| UPOL | Maxim Tomszek | [redacted] |

## III. Main objectives of the report

Building on the objectives of WP9.2, this report introduces the Aurora Quality Education Assurance (QEA) Monitoring and Participatory Evaluation Framework. The framework is designed to assess both the quality of educational practices and their societal impact, thereby aligning Aurora's pedagogical innovations with its broader mission.

Beyond illustrating the architecture and logic of the proposed monitoring and evaluation framework, the report also presents:

1. **key performance indicators (KPIs)** selected for monitoring the educational activities shared within the Alliance — including the Course Catalogue, staff and student mobility, and the process of *Aurorisation* of teaching and learning practices (such as procedures for mobility and micro-credentialling).
2. **The evaluative evidence** collected on collaborative educational activities developed throughout the Alliance. Emerging from the preliminary testing of the M&E system, this evidence was gathered through a participatory approach that values diverse perspectives across institutions and stakeholders and, in the next phase of work, will be further developed into operational indicators and reporting mechanisms to strengthen Aurora's institutional learning, accountability, and capacity to deliver high-quality education with societal impact.

While the monitoring system is inspired by the ENQA (European Association for Quality Assurance in Higher Education) principles and encourages their wider diffusion, it is not intended to replace the QA systems that each member institution already applies. Instead, it complements them by introducing a theory-driven and participatory evaluation approach, one that builds on a shared and plural vision of how educational activities across the Alliance should be designed and implemented to ensure not only compliance with quality standards but also verifiable societal benefits.

## IV. The development of the M&E system

The design of the proposed monitoring and evaluation system draws on an intensive data-gathering process carried out by the team. This process combined multiple sources and both **reporting and observational data** collection methods, including:

- **Desk analysis** of official and internal Aurora documentation;
- **Literature reviews** of higher education quality assurance, innovative pedagogies, and societal impact assessment;
- **Targeted stakeholder consultations** and in-depth interviews with key informants;
- **Participant observation** of collaborative learning initiatives, workshops, and biannual Aurora meetings.

The richness of this evidence enabled the team to move beyond a descriptive account of educational practices and to reconstruct a **provisional Theory of Change** (see Glossary later). This Theory of Change traces the causal pathways through which inputs and pedagogical designs generate intermediate learning outcomes and, ultimately, societal impact. In doing so, it has elicited a shared vision of what quality education means within Aurora — one that is grounded in practice, responsive to stakeholders, and aligned with the Alliance's societal mission.

## V. Preliminary conclusions

The preliminary testing of the framework highlights the added value of combining monitoring with participatory evaluation. Early evidence indicates that innovative pedagogies such as LOUIS and SEIZMIC are fostering competence-based, student-centred learning across Aurora, while new mobility formats and Internationalisation at Home are broadening access to quality education.

At the same time, significant challenges persist, including incomplete and inconsistent data collection, uneven adoption of credit recognition procedures, and cultural resistance to pedagogical innovation. Nevertheless, the evidence gathered affirms the potential of the proposed M&E framework to serve as a systematic tool for monitoring educational operations, assessing learning outcomes, and advancing the adoption of pedagogies that generate societal impact.

Overall, these preliminary conclusions suggest that Aurora's strength lies in its capacity to serve as a protected space for pedagogical experimentation. Its long-term transformative potential, however, will depend on scaling innovations, harmonising practices across institutions, and embedding societal impact more firmly into institutional QA processes.

## VI. Planning the next steps

The next stage focuses on further testing and refining this evaluative framework. Priority will be given to **civic engagement**, while continuing to feed the monitoring system with up-to-date information on joint learning and mobility.

To this end, four focus groups will be organized during upcoming field visits: one with IC and WP leaders to explore governance processes and stakeholder relations, and three with external stakeholders to assess how the Alliance generates impact on society.

The forthcoming focus groups that will be conducted in field visits in four institutional members will build on the insights already collected, translating them into **operational indicators**, **participatory procedures**, **and systematic reporting mechanisms** that consolidate Aurora's capacity to deliver high-quality education with societal impact. Table B summarizes the activities already implemented as well as those planned, together with their completed and expected outputs.

**Table B Timeline of the activities planned**

| Phase | Timeline | Activities | Output |
|---|---|---|---|
| 1. Team Set-up & Orientation | Sept–Oct 2025 | Final confirmation of members, Kick-off meeting, share TOR & calendar | Internal roadmap, work calendar, contact list |
| 2. Framework Alignment | Oct–Dec 2025 | Align QEA logic with EC Monitoring Framework, fine-tune thematic clusters | Mapping matrix, revised draft monitoring logic |
| 3. Development of Tools | Jan 2026 | Refinement of the Monitoring and Evaluation Framework, 2 focus group with ICs, WP and a sample of TT Leads | Drafted tools and methodological templates |
| 4. Field Visits & Focus Groups | Mar–June 2026 | Implement 4 field visits with at least 2 focus groups to reconstruct civic engagement and at least a field visit | Observational data, transcriptions, reports |
| 5. Data Analysis & Interim Evaluation | June–July 2026 | Analyse qualitative and quantitative data collected | Evaluation Brief n.1 (internal) |

| | | | |
|---|---|---|---|
| 6. Final Evaluation Drafting | Sept–Nov 2026 | Integrate findings, feedback loop with institutions and Central Office | Evaluation Report Year 1 |
| 7. Strategic Recommendations & Knowledge Management | Dec 2026 | Draft recommendations and contingency planning for Aurora-wide improvement | Final report, strategy memo |

## VII. The organization of the report

The report is structured into three main parts.

**Part I** introduces the design of the QEA Monitoring and Evaluation framework, outlining its participatory approach, conceptual underpinnings, operationalisation, methodology, and the strengths and limitations of the system.

**Part II** presents the preliminary testing of the framework in practice, with evidence drawn from mobility, cooperation in teaching, and pilot case studies (LOUIS, SEIZMIC, Internationalisation at Home), culminating in a draft Theory of Change.

**Part III** sets out the next steps and work plan, including revisions based on feedback, assessment of governance cooperation, reconstruction of civic engagement, and the implementation of field visits. The report concludes with reflexive observations and recommendations, highlighting risks and mitigation strategies to consolidate Aurora's role in delivering high-quality education with societal impact.

Preceding Part I, the **glossary** provides readers with a clear and accessible reference to the main technical terms, and conceptual categories used throughout the report. Its aim is to enhance readability, ensure consistency in terminology across sections, and make the framework understandable for both specialist and non-specialist audiences engaged in the Aurora Alliance.

## Glossary in Monitoring and Evaluation

| Term | Definition and References |
|---|---|
| **Causal Pathway or Theory of Change (ToC)** | A causal pathway refers to the sequence of events or mechanisms through which an intervention, program, or policy leads to a specific outcome. It is a key concept in theory-based evaluation as it helps clarify the causal relationships between activities, intermediate outcomes, and final impacts. A causal pathway is essential for understanding how and why an intervention produces certain effects and for designing effective evaluation strategies.<br><br>References:<br>- Funnell, S., & Rogers, P. (2011). *Purposeful program theory: Effective use of theories of change and logic models*. Jossey-Bass.<br>- Weiss, C. H. (1998). *Evaluation: Methods for studying programs and policies*. Pearson. |
| **Descriptor** | A descriptor is a term or description used to identify or define a concept, variable, or category in a classification system. In evaluation contexts, descriptors are used to clearly define the characteristics or attributes of specific indicators or metrics. They are essential for ensuring consistency in the interpretation of evaluation data.<br><br>References:<br>- Patton, M. Q. (2008). *Utilization-focused evaluation* (4th ed.). Sage Publications. |
| **Educational Quality Assurance** | Educational Quality Assurance (QA) refers to the systematic process of evaluating and improving the quality of education provided by an institution or system. It involves setting standards, monitoring performance, and ensuring that educational practices meet specific benchmarks or criteria. QA frameworks are often designed to support continuous improvement and accountability in educational institutions.<br><br>References:<br>- Harvey, L., & Green, D. (1993). *Defining quality. Assessment & Evaluation in Higher Education*, 18(1), 9-34.<br>- European Association for Quality Assurance in Higher Education (ENQA). (2015). *Standards and guidelines for quality assurance in the European Higher Education Area* (ESG). |
| **Evaluation** | Evaluation refers to the process of systematically assessing the design, implementation, and outcomes of a program, project, or policy. It seeks to determine the effectiveness, efficiency, and relevance of an initiative, often involving data collection, analysis, and interpretation. Evaluations can be formative (focused on improvement) or summative (focused on impact).<br><br>References:<br>- Scriven, M. (1991). *Evaluation thesaurus* (4th ed.). Sage Publications.<br>- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach*. (7th ed.). Sage Publications. |
| **Evaluation Approach** | An evaluation approach refers to the overarching framework or methodology used to conduct an evaluation. Common approaches include experimental evaluation, non-experimental evaluation, theory-based evaluation, and participatory evaluation. The approach chosen typically depends on the evaluation questions, the nature of the program, and the available resources.<br><br>References:<br>- Patton, M. Q. (2008). *Utilization-focused evaluation* (4th ed.). Sage |

| | |
|---|---|
| | Publications.<br>- Funnell, S., & Rogers, P. (2011). *Purposeful program theory: Effective use of theories of change and logic models*. Jossey-Bass. |
| **Indicator (Key Performance Indicator)** | An indicator, particularly a *key performance indicator* (KPI), is a measurable value used to assess the success or performance of an organization, project, or initiative. KPIs help track progress towards objectives and can be both quantitative (e.g., graduation rates) and qualitative (e.g., stakeholder satisfaction). In educational settings, KPIs are often used to measure aspects of teaching quality, student outcomes, and institutional performance.<br><br>References:<br>- Parmenter, D. (2015). *Key performance indicators: Developing, implementing, and using winning KPIs* (3rd ed.). Wiley.<br>- Bourne, M., & Neely, A. (2003). *Performance management: A framework for management control systems research*. International Journal of Operations & Production Management, 23(1), 56-74. |
| **Monitoring** | Monitoring refers to the continuous or periodic collection of data on key aspects of a program, project, or policy to track its progress and ensure that it is being implemented as planned. Unlike evaluation, which typically occurs at a later stage, monitoring is ongoing and is used to identify problems and make adjustments in real-time.<br><br>References:<br>- World Bank. (2004). *Monitoring and evaluation: Some tools, methods and approaches*. The World Bank.<br>- OECD. (2002). *Glossary of key terms in evaluation and results-based management*. OECD. |
| **Qualitative Methods of Data Collection** | Qualitative methods of data collection refer to non-numeric techniques used to gather in-depth insights into participants' experiences, beliefs, or behaviors. Common methods include interviews, focus groups, and participant observation. These methods are typically used to explore complex social phenomena, generate rich descriptive data, and identify underlying patterns or themes.<br><br>References:<br>- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications.<br>- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed.). Sage Publications. |
| **Theory-Based Evaluation** | Theory-based evaluation is an approach that focuses on understanding the causal mechanisms that lead to outcomes. It uses theories of change or logic models to explain how and why a program works. This evaluation approach emphasizes understanding the underlying processes and assumptions that drive program effects and aims to improve program design by testing these assumptions.<br><br>References:<br>- Funnell, S., & Rogers, P. (2011). *Purposeful program theory: Effective use of theories of change and logic models*. Jossey-Bass.<br>- Chen, H.-T. (2015). *Practical program evaluation: Theory-driven evaluation and the integrated evaluation framework* (2nd ed.). Sage Publications. |
| **Participatory Evaluation Approach** | A participatory evaluation approach involves stakeholders (e.g., program participants, community members, staff) in the evaluation process. This approach emphasizes collaboration between evaluators and stakeholders to ensure that the evaluation is relevant, culturally appropriate, and actionable. It seeks to empower stakeholders by |

involving them in decision-making and using their perspectives to guide the evaluation design and interpretation of findings.

# PART I

## 1. The design of the Quality Education Assurance (QEA) Monitoring and Evaluation (M&E) framework

The proposed monitoring and evaluation (M&E) framework for the Aurora 2030 programme is structured around two interdependent pillars:

(1) a **monitoring** system focused on joint learning and student mobility, and

(2) a **participatory evaluation** process centred on institutional cooperation and civic engagement.

This dual architecture supports both real-time tracking of implementation progress and the in-depth analysis of Aurora's qualitative transformations, as stylised in Figure 1.1. **Monitoring activities** rely on a combination of quantitative and qualitative indicators, including those related to the course catalogue (e.g., COIL/VE, BIPs, micro-credentials) and to physical and virtual mobility data for students and staff. These indicators draw from administrative records, institutional reports, and centralized databases across partner universities. The monitoring function serves not only to verify the extent of Aurora's educational offerings, but also to track accessibility, participation trends, and alignment with Aurora's strategic vision.

Complementing this, the **participatory evaluation** pillar aims to reconstruct the causal pathways linking Aurora's educational practices—particularly its innovative pedagogies—to broader societal impacts. It assesses how collaborative course design and transdisciplinary teaching foster civic engagement and knowledge co-creation across partner institutions and communities.

To this end, the evaluation approach leverages theory-based methods and is grounded in field research, including in-depth interviews, focus groups, and participant observation. This methodology allows for assessing the quality and inclusiveness of stakeholder engagement, the development of transversal competencies among learners, and the emergence of social innovation narratives.

Together, the two pillars create a robust architecture to achieve the aim of the QEA procedure, which is to understand both the performance and transformative potential of the Aurora Alliance in advancing quality education for societal impact.

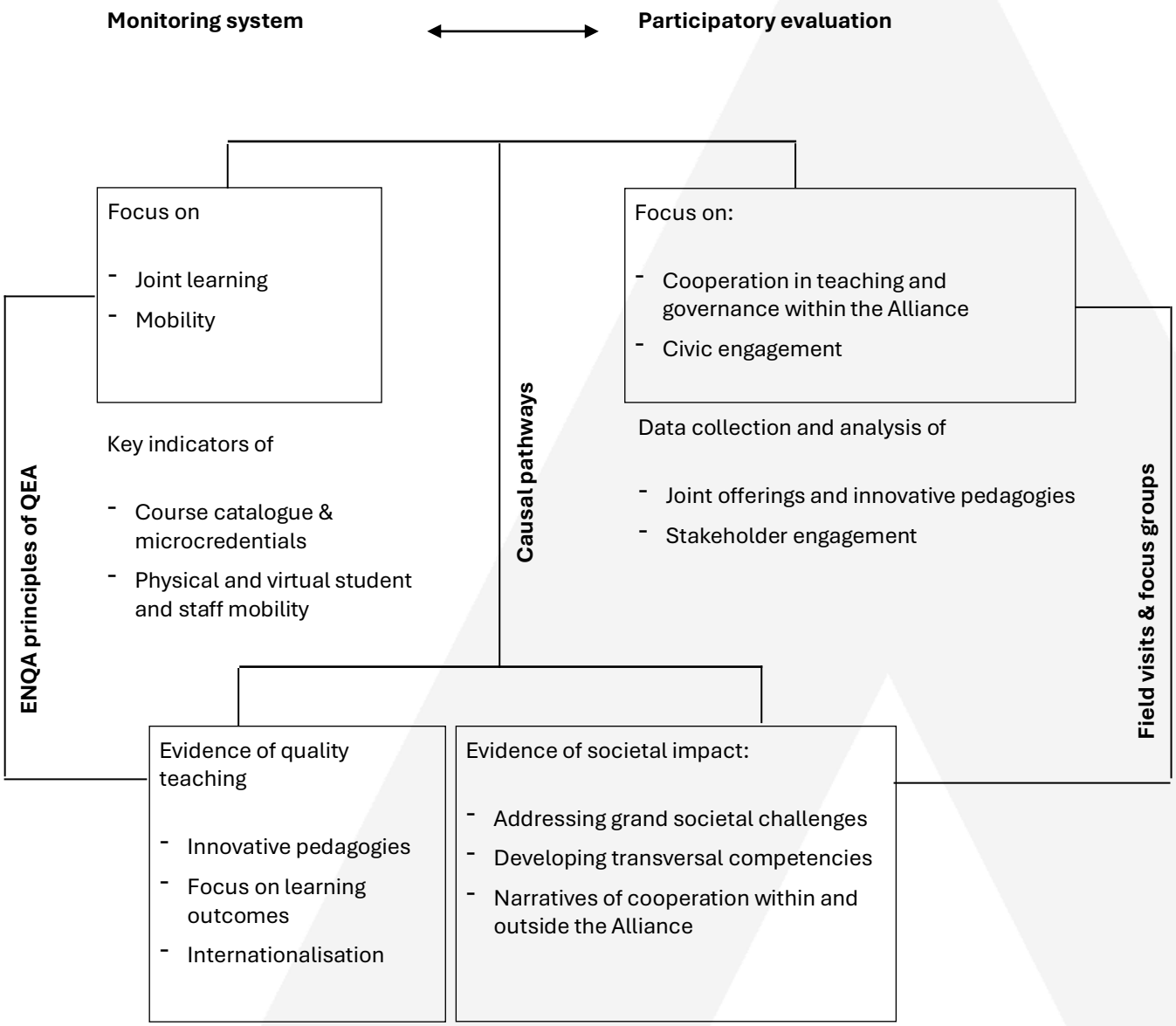



**Figure 1.1 - Stylized architecture of the M&E framework**

## 1.1 The participatory approach

Specifically, the proposed M&E framework relies on a theory-based approach with the aim of supporting and orienting a monitoring and evaluative system capable of assessing quality and the societal impact of education generated by Aurora.[1]

This approach foregrounds the importance of articulating the causal pathways that link institutional strategies and interventions with outputs, outcomes, and long-term societal change, while monitoring the quality of its key operations, specifically related to didactics.

[1]This approach draws on the seminal work of Funnell and Rogers (2011) and Carol Weiss (1997), whose contributions have been central in shaping the field of theory-based evaluation.

The theory-based approach allows for verifying **how, why, for whom and under what circumstances** Aurora delivers quality teaching for societal impact.

Specifically, through a theory-based approach, the analysis will reconstruct the causal pathways that connect Aurora activities to outcomes and impacts within social contexts at multiple scales. This approach allows for the reconstruction of a potential Theory of Change, an assumed causation process that links inputs, outputs, outcomes, and impacts of the *evaluand*.

This evaluation approach requires **field research** to gather opinions, perceptions, and factual descriptions from key informants directly involved in the design, and implementation of the Aurora educational activities (e.g. courses, joint teaching activities, interaction with stakeholders) both within and outside the Alliance. This approach unfolds as a highly participatory process as schematized in the following Figure 1.2:

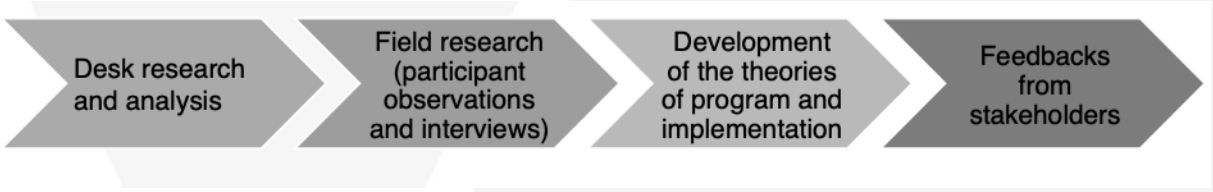



**Figure 1.2 Steps for developing a theory-based evaluation framework**

## 1.2 Pillars and components of the M&E framework linking QEA objectives and societal impact

In the proposed framework, **monitoring** is designed as an ongoing process to collect and analyse data that tracks both the implementation of activities and the achievement of targeted outputs and – possibly, early – outcomes. Its purpose is to provide timely, evidence-based insights that inform the implementation of educational activities, allowing for the identification of trends, gaps, and opportunities for improvement in the Alliance's educational delivery.

Monitoring indicators and descriptors draw from established standards of the European Association for Quality Assurance in Higher Education (ENQA), ensuring alignment with recognized quality assurance principles. Specifically, monitoring focuses on two core components of the Alliance's educational operations:

- The **Aurora Course Catalogue**, including jointly developed modules, Collaborative Online International Learning (COILs), Blended Intensive Programmes (BIPs), and micro-credentials; and
- **Student and staff mobility**, both physical and virtual, including flows between partners and the uptake of innovative mobility schemes.

These components – identified in the grant agreement as strategic to the Alliance's educational mission – offer measurable indicators or meaningful descriptors for assessing how effectively Aurora delivers joint learning experiences and enhances mobility across institutions.

The **evaluation** function adopts a more analytical, participatory, and formative stance. It is meant to go beyond compliance or performance tracking: its objective is to critically examine how and why the educational approaches, governance choices, and institutional collaborations fostered by the Alliance contribute to transformation in higher education and society at different scales. As such, this analysis addresses evaluative questions as follows:

- How are collaborative activities in teaching generate innovative pedagogies relevant to the evolving needs of students, stakeholders, and communities?
- Why do collaborative activities in teaching generate societal impact?
- Who are the main external stakeholders for what type of activities?
- How and why do stakeholders collaborate with the Alliance?
- What results are observable in terms of civic engagement?

Seeking to answer these questions, in the proposed M&E framework, the evaluation pillar is characterised by two main components:

- **Cooperation** within the Alliance, particularly in governance and teaching, as reflected in the development of shared pedagogical models and the implementation of joint educational initiatives oriented toward quality and high societal impact potential.
- **Civic engagement**, assessed through mapping the network and quality of interactions with external partners, including social actors, local institutions, and civil society organizations. This includes activities in public engagement, open science, and lifelong learning.

By linking cooperation in teaching with broader societal engagement, the proposed evaluative framework captures the Alliance's capacity to address critical challenges—such as inclusion, sustainability, and educational innovation—while simultaneously fostering the transformation of pedagogies and institutional governance across member universities. In this context, "cooperation" encompasses more than the co-design and delivery of joint courses; it also refers to deeper forms of institutional collaboration, including shared governance structures and co-creation processes with external stakeholders.

This evaluative framework rests on the premise that educational quality should not be assessed solely through internal performance indicators. Instead, it must also reflect the capacity of the Alliance and its partners to generate **external value**—namely, their contribution to social and civic transformation. The evaluation function is therefore designed to surface and reconstruct this external value as it is created through learning activities and stakeholder engagement. As mentioned earlier, this reconstruction will be guided by a participatory, theory-informed approach, culminating in the development of a **shared Theory of Change (ToC)**.

In the context of the Aurora Alliance, a ToC is a structured explanation of how joint educational strategies, governance cooperation, and civic engagement activities are expected to generate societal impact. It maps the causal pathways linking the Alliance's activities—such as joint courses, innovative mobility schemes, and stakeholder partnerships—to intermediate outcomes like enhanced transversal competences, inclusive learning opportunities, and strengthened institutional cooperation, and ultimately to long-term impacts on societal well-being and sustainability. The ToC makes explicit the assumptions about how change occurs within diverse institutional and national contexts, identifies the enabling conditions needed for success, and establishes indicators to track progress. It serves both as a planning tool—ensuring that interventions are logically connected to the Alliance's mission—and as an evaluative framework, allowing evidence to test and refine these pathways over time. A ToC, emerging from the participatory evaluation process, will illuminate how educational practices within the Alliance are expected to lead to broader societal impacts—offering a foundation for assessing the relevance, effectiveness, and transformative potential of Aurora's mission.

### 1.3 Operationalisation

To operationalise the M&E framework, for each pillar identified earlier, Table 1.1 illustrates their respective **components** alongside the **observational** and **reporting** data that will feed the system, in terms of what (qualitative or quantitative) indicators and /or descriptors will be monitored from what sources of data.

Developing meaningful indicators to assess **Quality Education Assurance** in relation to **Societal Impact** at the scale of a European University Alliance has proven particularly challenging. The main source of complexity lies in the heterogeneity of institutional and national regulations and procedures governing Quality Assurance in higher education. These differences limit the creation of shared tracking systems and hinder the comparability of data across partner universities.

**Table 1.1 Pillars, components, type of data, and their sources**

| Pillar | Component | Type of data | Data sourced through: |
|---|---|---|---|
| **Monitoring system** | **Joint learning** | Reporting data | **Administrative records on**:<br>No. of courses included in the Aurora catalogue<br>No. of credit automatically recognized |
| | **Mobility** | Reporting data | **Administrative records on**<br>- No. of students and staff in physical and virtual mobility (including descriptors of: Gender; Field of study; Study program; Country origin; Country destination)<br>- Number and % of faculties participating in the alliance's activities<br>- Automatic recognition of ECTS credits for students undertaking their mobility at a partner institution<br>- Use of European Student Card |

| | | | |
|---|---|---|---|
| **Evaluation** | **Aurora cooperation in teaching and governance** | Reporting and observational data | **Administrative records on**<br>- No. of joint courses developed within the Alliance<br><br>**Field visits** to understand active participation of students in governance and reform of HE system<br><br>**Focus groups** to discuss about the evaluation system and the evaluation results with ICs, ACO and VRE |
| | **Civic engagement** | Observational data | **Field visits** to understand what initiatives were organized with education institutions not involved in the Alliance and how interactions with civil society organisations and NGOs were conducted<br><br>**Field visits** to understand how collaborations with local authorities, private sector companies, and social enterprises occurred |

As part of our work, we initially proposed a comprehensive set of **Key Performance Indicators (KPIs)** to monitor and enhance the quality and inclusivity of mobility within the Alliance, in line with the European Commission's **Erasmus+** guidelines. Under the Erasmus+ framework, relevant indicators include:

- Whether the project explicitly addresses inclusion and diversity;
- The number of persons with fewer opportunities reached, including:
    - People with disabilities;
    - People with health problems;
    - People facing cultural or language-related barriers;
    - People facing barriers within education and training systems;
    - People experiencing social or economic exclusion;
    - People affected by discrimination;
    - People living in geographically remote or disadvantaged areas.

Although these indicators are highly relevant, systematically monitoring them presents significant obstacles. While systematic data collection has been carried out since the beginning of Aurora 2030—through the development of alliance-specific KPIs, the Barometer, and the collection of mobility data in line with both GDPR and EACEA requirements—these reporting systems remain in continuous adaptation, reflecting both the evolving requests from the European Commission and the outcomes of internal reporting exercises.

In this context, the available data provide a valuable foundation, yet their uneven coverage and varying degrees of granularity across partner institutions still pose challenges for comparability and evaluability. For this reason, WP9.2 proposes a minimum set of indicators—presented in Table 1.2—designed to complement the Central Office's reporting system by generating first-hand observational evidence. This dual approach ensures that the monitoring framework can integrate systematic reporting with qualitative insights, thereby aligning institutional data collection with the broader objectives of quality assurance and societal impact assessment.

**Table 1.2 Proposed KPIs per component, data collection and analysis**

| Component | Indicator/descriptor | Data gathered by | Data analysed through |
|---|---|---|---|
| Student and staff mobility | - No. of missions of faculty and ERASMUS activities<br>- No. of students and staff in physical and virtual mobility (including descriptors of: Gender; Field of study; Study program; Country origin; Country destination)<br>- Number and % of faculties participating in the alliance's activities<br>- Automatic recognition of ECTS credits for students undertaking their mobility at a partner institution<br>- Use of European Student Card | **Reporting data:**<br>Central office compiles internal reporting and database<br><br>WP 9.2 updates the M&E and conducts the analysis | - Desk analysis<br>- Descriptive statistics |
| Course catalogue | - No. of courses offered in hybrid modes<br>- Disciplinary fields<br>- Courses offered by institution<br>- Language of instruction<br>- Evaluation of learning outcomes | **Reporting data**:<br>Central office compiles internal reporting and database<br><br>WP 9.2 updates the M&E and conducts the analysis | - Desk analysis<br>- Descriptive statistics<br>- Analysis of qualitative information gathered by end-of course questionnaires |
| Micro-credentials | Not applicable yet | Not applicable yet | Not applicable yet |
| Joint courses geared towards societal impact (e.g. LOUIS, seizmic activities, BEVI) | - Descriptions of design, organization, and delivery of joint courses<br>- No. of student/staff involved | **Observational data:**<br>WP 9.2 conducts field visits (e.g. opinions and perceptions of faculty, organizers, participants) and conducts the analysis | - In-depth interviewing<br>- Participant observation of a sample of join course offerings<br>- Interview coding<br>- Descriptive statistics of quantitative indicators |
| Civic engagement | - Type of initiative participated by external stakeholders<br>- No. of partners involved<br>- Nature of interaction<br>- Temporality (short vs. long term involvement)<br>- Mapping out the networks of stakeholders at different levels | **Observational data:**<br>WP 9.2 conducting field visits (e.g. opinions and perceptions of faculty, organizers, participants and conducts the analysis | - Focus groups<br>- In-depth interviewing<br>- Participant observation<br>- Interview coding<br>- Descriptive statistics of quantitative indicators |

## 1.4 Methodology

The designed M&E framework relies on the adoption of an abductive methodology, which combines deductive elements – from literature review and official document analysis – with inductive analysis, drawing on participatory observations, and consultations carried out with select key informants during **field visits**. The latter are meant to generate observational data, thereby reconstructing meaningful and relevant causal pathways or theories of change for reflexive discussion and future programming within the Alliance. For this purpose, the methodology adopted unfolds along with two parallel and mutually reinforcing phases.

### Phase 1: Review of official policy and programme documents and scholarly literature

The first phase of the analysis focuses on Aurora's official objectives, and procedures as articulated in its Programme Proposal, Progress Reports, and Deliverables; the structure of its Work Packages (WPs), GANTT charts, and internal coordination documents; as well as strategic documents such as the Aurora Competence Framework and guidelines supporting transversal skill development. This desk-based review helps reconstruct the Alliance's guiding principles and strategic objectives, and to understand how the concepts of quality education and societal impact have been framed and operationalised within the initiative.

This internal mapping is complemented by a content analysis of key European and international policy and academic sources, including:

- EU higher education policy documents—from the Bologna Process to the Renewed EU Agenda for Higher Education (2017) and the European Strategy for Universities.
- Reports and recommendations from ENQA, EUA, ESU, EUNIQ, the Bologna Follow-Up Group, and other relevant stakeholders.
- A scholarly literature review on quality education and assurance, competence-based learning and curriculum design, learning outcomes and assessment, and internationalisation practices such as blended mobility, COIL, and Virtual Exchange. This analysis enables the gathering of key theoretical and empirical insights into innovative pedagogies and their societal impact potential. This review encompasses relevant scientific articles drawing on the Scopus database, the so-called grey literature, including position papers, and policy recommendations, and the unstructured search of main peer-reviewed journals on higher education and pedagogical approaches.

### Phase 2: First-hand data collection and case study analysis feeding into the M&E

The second phase of the M&E design process relies on a mixed-methods approach. First, available reporting data on Aurora's innovative mobility schemes—such as BIPs and COILs—is collected and verified to feed into the monitoring system, while informing the qualitative inquiry for evaluation as well. Specifically, for the **monitoring system**, relevant indicators can be drawn from:

- centralized administrative data managed by the Aurora Central Office;
- institution-specific data used across the Alliance, aligned with quality assurance (QA) principles inspired by ENQA;

- survey data on social entrepreneurship and innovation competency development conducted within Aurora courses of WP 3.2 and 2.1; and
- evaluative discussions held within the Alliance and with external stakeholders.

However, as previously highlighted, several data limitations exist and pertain to:

- the current limited visibility and searchability of joint courses in the Aurora Course Catalogue.
- The inconsistent reporting of co-developed or co-taught modules across the Alliance.
- The challenges faced when attempting a systematic tracking of BIPs and COILs activities; and
- The absence of data on learning outcomes and credit recognition.

The monitoring system will be fully working provided that centralized databases are systematically updated while tracking tools are put in place alongside the complete rollout of the course catalogue and micro credentialling.

For the evaluation function, both internal and external stakeholder perceptions of educational quality and its relationship to societal impact are being used to co-construct a shared Theory of Change (ToC). While quantitative data on courses in social entrepreneurship has drawn on existing survey results, first-hand **reporting data** collection has relied on in-depth interviews with a purposive sample of joint course designers and selected participants of collaborative learning initiatives (both students, and faculty, see Table 1.3).

The selection of key informants for in-depth interviewing was guided by three main criteria:

- **Functional expertise**: potential interviewees were identified based on their specific skills and technical knowledge that they brought in relation to Aurora's educational innovations. For example, course designers or teaching coordinators who have directly implemented tools such as LOUIS or seizmic were selected because their expertise enabled them to provide detailed insights on pedagogical design, assessment methods, and learning outcomes.

- **Institutional knowledge**: key informants understand how Aurora's strategies and activities are embedded within universities' structures, policies, and decision-making processes. Interviewees such as Work Package leaders, or ICs were included because they could speak to the alignment between Aurora objectives and institutional practices.

- **Social legitimacy**: potential interviewees have the credibility, representativeness, or recognition within the broader Aurora community or among external stakeholders. This includes elected student representatives, leaders of stakeholder groups, or faculty members with recognised roles in governance. Their perspectives were essential for capturing how educational activities are perceived, accepted, and valued by those most affected.

Overall, 10 semi-structured interviews were conducted (2 in person and the remainder online). Table 1.3 presents the distribution of interviews by interviewee profile. While the interview

script contained a set of core questions posed to all informants, it was adapted to the specific profile of each interviewee (see script in Annex).

**Table 1.3 Interviews conducted by interviewee profile**

| Interviewee profile | No. of interviews conducted |
|---|---|
| Aurora TT leader | 3 |
| University faculty | 2 |
| Administrative staff | 2 |
| Student representatives | 3 |

All interviews were transcribed and coded using a dual approach: (i) conceptual categories drawn from the literature review on innovative pedagogies (see Part II), and (ii) empirical codes related to cooperative teaching and learning design and dimensions of societal impact.

In parallel, **observational data** were gathered through participant observation of three collaborative learning initiatives. This was not limited to documenting goals and pedagogy but extended to tracing the causal pathways through which instructional inputs led to intermediate learning outcomes and, ultimately, societal impact via challenge-based and results-oriented approaches. Field-research data were collected through fieldnotes (supported by recordings), as well as formal and informal interviews, generating rich first-hand insights. Table 1.4 lists all initiatives that were directly verified to date.

Participant observation combined purposive and convenience sampling. Activities were selected because they offered meaningful opportunities to observe the implementation of Aurora's pedagogical innovations in practice—for example, training sessions and workshops on teaching for societal impact through the **LOUIS** framework, as well as the **Inclusive Comprehensive Internationalisation (ICI) Final Conference**. These events, occurring within the data collection period, provided valuable occasions to capture how innovative practices are introduced, interpreted, and enacted across institutions.

**Table 1.4 Activities where participant observation has been conducted**

| Activity | Date and place | Observational and reporting data collected |
|---|---|---|
| Blended Intensive Program (BIP): "How to Increase Social Impact of your Teaching. Using LOUIS Competence Framework to Improve your Course" | Date: from 4 November 2024 to 8 November 2024<br><br>Place: Palacky University, Olomouc, Czechia | Ethnographic fieldnotes; Informal interviews |
| Workshop: "LOUIS. Ripensare la formazione universitaria: dagli obiettivi di apprendimento ai cambiamenti sociali | Date: 24-25 February 2025<br><br>Place: University of Naples "Federico II", Naples, Italy | Ethnographic fieldnotes; Informal interviews |

| | | |
|---|---|---|
| Final Conference of the "Inclusive Comprehensive Internationalisation (ICI)." | Date: 11-12 December 2024<br><br>Place: Universitat Rovira I Virgili, Tarragona, Spain | Ethnographic fieldnotes; Informal interviews |

Both interviews and participant observation enabled the team to test the working hypotheses underpinning the proposed M&E framework and, crucially, to gather first-hand insights into the adoption, diffusion, and implementation of Aurora's educational collaborations—processes that would otherwise have been difficult to capture. This exploratory phase was designed to generate preliminary evidence, identify key themes and actors, and refine the monitoring and evaluation framework. Rather than testing predefined tools, this intensive qualitative research phase allowed the team to develop indicators and evaluative insights that guided the design of the M&E architecture and logic, while also informing the subsequent stages of data collection and analysis.

Although the initial plan foresaw the organization of a first focus group, the team opted instead to conduct in-depth interviews. This choice reflected both practical considerations and the need to capture a broader range of perspectives at an early stage of inquiry.
This approach was also necessitated by the absence of a complete and structured course catalogue at the time of data collection. As a result, exploratory interviews provided an essential means of qualitatively documenting relevant practices and perspectives across the Alliance.

This exploratory phase has been crucial to identify three prominent learning initiatives as pilot case studies to examine more in depth in the proposed M&E framework, that is:

- the approach of Learning Outcomes in Universities for Impact on Society (known with the acronym of LOUIS);
- the seizmic activities; and
- the Internationalisation at Home strategy.

These initiatives provide strategic entry points for reconstructing **causal pathways** and drafting a preliminary **ToC** (see Section 2.3) to guide the further development of the M&E framework.

### 1.5 Field visits as a participatory evaluation tool

To advance this work, the team will conduct focus groups during field visits to refine the model and develop further qualitative evidence on causal pathways— *Narratives of Change*— that illustrate how Aurora promotes quality education with societal impact. As previously mentioned, the activities carried out so far—such as semi-structured interviews, desk research, and case study analysis (e.g., LOUIS and Internationalisation at Home)—have generated evaluative insights, summarised in Part II.
These insights provide a crucial starting point concerning cooperation in teaching for societal impact, while further areas of inquiry—such as internal governance mechanisms and civic engagement with external stakeholders—will be addressed in the next phase of WP9.2 (see Part 3).
Within the participatory approach underpinning the proposed evaluation system, field visits are conceived as a central instrument for examining how joint educational practices are

understood, implemented, and experienced across partner universities. They are designed not merely as observation exercises but as spaces for learning, and institutional dialogue. In the evaluation strategy, field visits connect joint quality teaching practices with the broader causal pathways linking institutional learning, staff development, and stakeholder engagement to long-term societal impact.
The implementation of four field visits to carry out focus groups and informal interviewing—is planned (see section 3.3). This approach is intended to ensure continuous engagement, peer learning, and responsiveness to institutional dynamics, thus reinforcing the formative purpose of Aurora's QEA evaluation system.

### 1.6 Strengths and limitations of the proposed M&E

As designed, the monitoring system provides a structured mechanism for verifying **observable progress** toward Aurora's strategic goals. Specifically, the system's indicators and descriptors will capture:

- the **status of implementation** of the course catalogue, including harmonization of mobility procedures, and micro-credentials; and
- the **number of students and staff** engaging in both physical and virtual mobility as a means of enhancing their learning experience.

However, as noted earlier, the effectiveness of this monitoring process is significantly constrained by **limited access to updated administrative data**. The incomplete and uneven availability of such data restricts the system's capacity to deliver timely, systematic, and comparable reporting across the Alliance.

Complementing this operational monitoring function, the **evaluative pillar** of the proposed M&E framework—based on the reconstruction of **causal pathways**—will enable a deeper examination of *how, why, for whom,* and *under what circumstances* collaboratively organised courses within Aurora foster cooperation in teaching and learning, with the potential to generate **societal impact**. As previously anticipated, further areas of inquiry—such as internal governance mechanisms and civic engagement with external stakeholders—will be addressed in the next phase of WP9.2 work plan (see Part 3).

Importantly, this evaluative approach is **not intended to estimate an average quantitative effect** of the Alliance, nor to produce causal inference in a strict statistical sense. Instead, it adopts an **exploratory and theory-building orientation**, focusing on reconstructing the processes through which change emerges, evolves, and translates into concrete outcomes (and, where possible, longer-term impacts) as a result of the Alliance's activities.

By tracing these pathways of change, the evaluation will provide a nuanced understanding of the mechanisms linking Aurora's educational innovations to its societal mission. The following section details the data collection procedures, the analysis of the pilot case studies, and the initial set of KPIs developed to measure Aurora's progress toward delivering quality education with societal impact.

Additional strengths and threats characterising the proposed M&E framework are highlighted in Section 4, discussing the results of the preliminary testing conducted on the grounds.

# PART II

## 2. Preliminary testing of the M&E at work: output and early outcomes assessed

In this section, the report presents the preliminary results of the M&E testing unfolding as monitoring and evaluation framework according to the architecture illustrated above.

### 2.1 Monitoring mobility: progress and challenges

Based on the administrative data gathered by Aurora Central Office, Figures 2.1 and 2.2 respectively show the distribution of student and staff exchanges across the Alliance for physical, virtual and blended internationalization activities during the 2023–2024 academic year. Although these initiatives have involved almost all institutional members, their representation likely underestimates the flows of exchanges that have occurred within the Alliance during the same academic year.

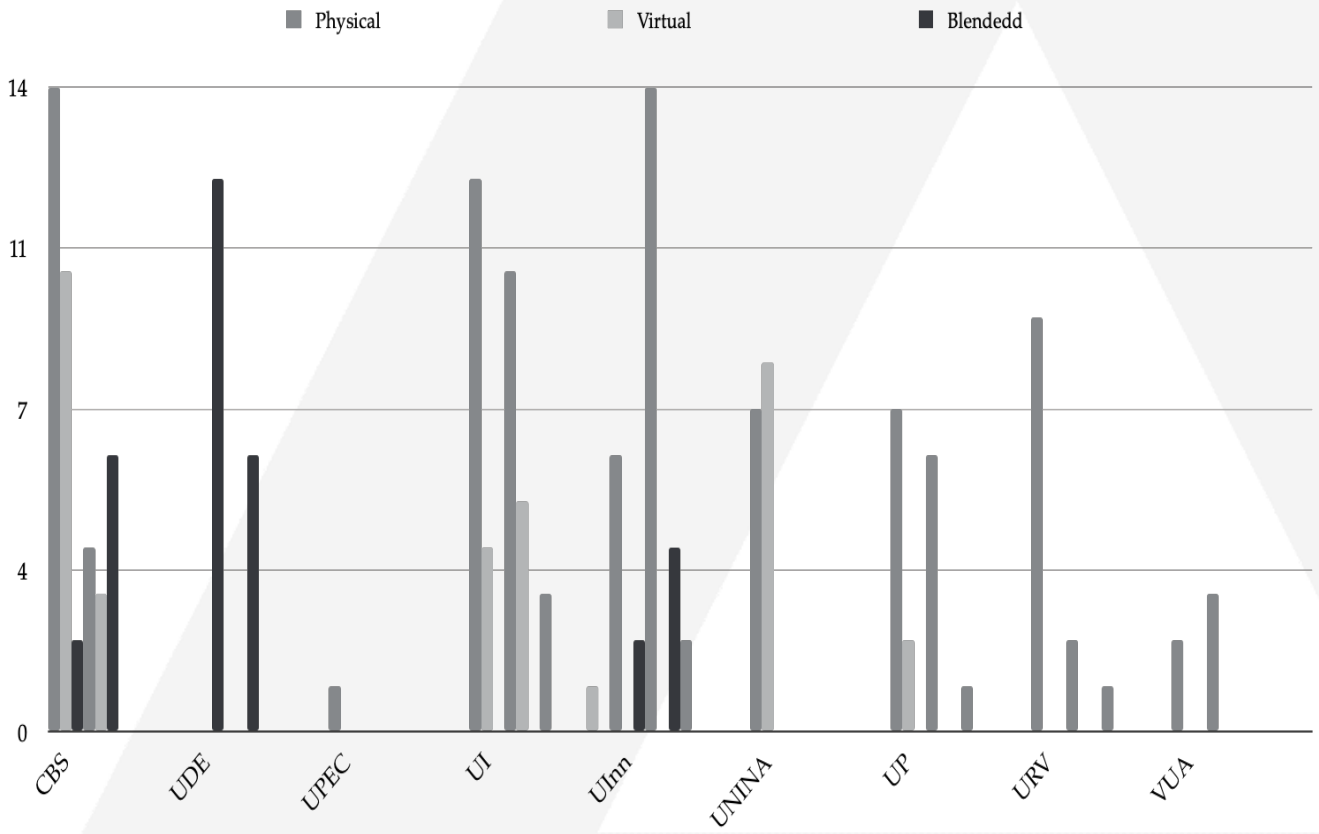


**Figure 2.1 Student mobility funded by the Aurora network, academic year 2023-2024**

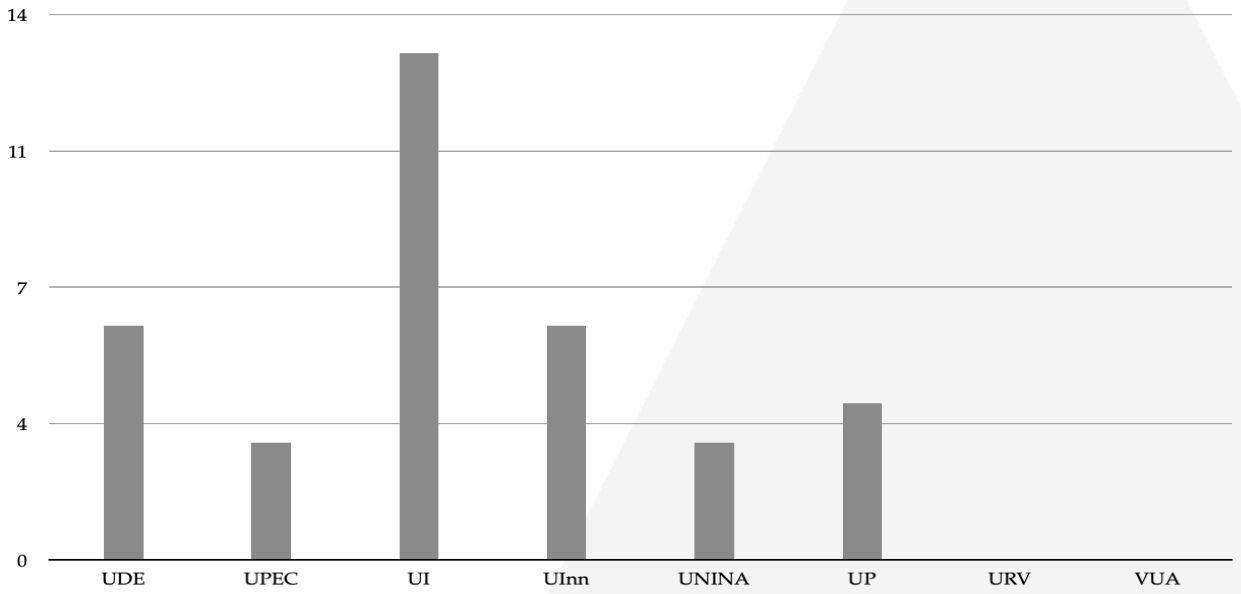



**Figure 2.2 Staff physical mobility funded by Aurora, academic year 2023-2024**

While further efforts are needed to strengthen data collection and coordination—particularly to improve the evaluability of learning outcomes, for example through end-of-course questionnaires that verify social entrepreneurship competences—significant progress has been achieved in the mutual recognition of ECTS credits for Aurora mobility. Nonetheless, interviews indicate that the administrative procedures for credit recognition are not yet uniformly adopted across all member institutions. Tables 2.1 and 2.2 illustrate the current state of adoption of ECTS credits and student cards. In particular, the creation of the European Student Card is a tool that has thus far facilated student mobility.

**Table 2.1 Implementation of ECTS credit recognition**

| Procedure of automatic recognition of ECTS credits | Institution | 2023-2024 | 2024-2025 |
|---|---|---|---|
| Has your alliance implemented an automatic recognition of ECTS credits for students undertaking their mobility at a partner institution? (YES/NO) | CBS | YES | |
| | UDE | NO | NO |
| | UPEC | Yes, for long-term mobility | |
| | UIce | YES | |
| | UInn | Yes/No* | Yes/No* |
| | UNINA | NO | |
| | UP | YES | |
| | URV | YES | |

**Table 2.2 Adoption of the European Student Card**

| Institutional member | European Student Card | Connected to Erasmus Without Paper and using its features (YES/NO) | 2023-2024 | 2024-2025 |
|---|---|---|---|---|
| CBS | In progress | In progress / LA available | | |
| UDE | NO | NO | No | No |
| UPEC | YES | YES | YES | YES |
| UI | NO | YES | | |
| UInn | Yes | Yes (through the Erasmus+Dashboard) | x | x |
| UNINA | NO | YES | | |
| UP | limited | yes | - | |
| URV | YES | YES | YES | |

### 2.1.1 Internationalisation (at Home)

Regarding internationalisation, Table 2.3 summarises the key definitions, issues, and challenges higher education faces in both traditional and innovative, hybrids formats.

**Table 2.3 Literature review on Internationalisation**

| Issues | Key Points | Key Authors / Sources |
|---|---|---|
| Definitions and Concepts | Clarifies key concepts: Internationalisation at Home (IaH), COIL, Virtual Exchange (VE). Highlights confusion in terminology and need for coherence. | Knight (2004), De Wit (2015, 2023), Beelen & Jones (2015), Leask (2009, 2015), O'Dowd & Beelen (2021) |
| Quality and Learning Outcomes | Focus on intentional design and internationalised learning outcomes. Stresses curriculum integration and student-centered outcomes. COIL and VE must be outcome-based and competence-oriented. | Leask (2015), Clifford (2014), De Wit (2015), Jones (2013), Haug (2022), Aerden (2015), Curaj et al. (2018) |

| | | |
|---|---|---|
| Benefits and Challenges of BIPs & VE | BIPs enhance flexibility and cooperation but face administrative, pedagogical, and emotional challenges. Emphasizes design for impactful collaboration and affective learning environment. | O'Dowd & Werner (2024), Graham (2006), Moore (1993), Vermunt & Verloop (1999), Haug (2022), Soulé et al. (2025), Boelens et al. (2017) |
| Equity and Inclusion | Explores socio-economic barriers to mobility. Argues for inclusive IaH integrated in the curriculum to avoid self-selection bias. Financial and social background matter for participation. | Allinson & Gabriels (2021), ESN (2022), EUROSTUDENT (2018), Erasmus+ Impact Study (2019), Van Mol & Perez-Encinas (2022) |

Still regarding internationalization, Table 2.4 highlights cultural, administrative, pedagogical, and financial challenges emerged from interviews with WP8 task team, student representatives, and mobility officers.

A major strength of Aurora lies in the work of WP8, which contributes to designing and managing innovative mobility formats, while sharing a culture in favour of internationalisation throughout the Alliance's partner institutions. In this regard, the experience of the Erasmus+ project Inclusive Comprehensive Internationalisation (ICI) has served as a model to standardise and assess inclusive internationalisation strategies. Yet, interviews warn that its rollout is still a slow and time-consuming process.

**Table 2.4 Key Challenges in Internationalisation based on in-depth interviewing**

| Category | Key Issues | Stakeholders affected |
|---|---|---|
| Strategic & Cultural Barriers | Lack of shared vision; uneven adoption of Intl. at Home; misconception of competition with mobility | Institutional leadership, WP8, policy developers |
| Administrative & Regulatory Barriers | Diverse regulations; misaligned Erasmus+ deadlines; high administrative burden for BIPs | Mobility coordinators, Erasmus+ officers, staff |
| Pedagogical & Faculty Engagement | Low incentives for COIL/BIP adoption; lack of recognition or staff development support | Faculty, educational developers, WP8 |
| Financial Constraints | Insufficient Erasmus+ funds; upfront payment required; rising student interest unmet | Students, mobility coordinators |
| Recognition & Credit Transfer | Manual credit recognition; no standard use of micro-credentials | Students, international offices |

| | | |
|---|---|---|
| Outreach & Student Engagement | Low awareness in large cities; socio-economic and commuting barriers; weak promotion in STEM | Students, student reps, faculty |
| Data & Monitoring | Lack of shared feedback tools; no socio-economic or demographic data collection | WP8, evaluators, institutional researchers |

Regarding specifically, COILs, and Virtual Exchanges that reframe internationalisation as a transversal and inclusive institutional goal—and specifically as part of "Internationalisation at Home" strategies – and BIPs, as innovative pedagogies and types of internationalisation. Table 2.5 tracks all BIP activities held in this second phase of the Aurora network, notably in the Academic year 2023-2024. Interviews support that these innovative formats have increasingly become attractive to both faculty and students.

**Table 2.5 Number of participants (student/staff) per BIPs in academic year 2023-2024**

| Host university | BIP Name | Student/staff | Semester | UICE | VU | UIBK | URV | UPOL | UNINA | UDE | UPEC | CBS | Total per BIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UICE | Spark Social: Your Knowledge Benefits the World | Student | Spring 2024 | 4 | 2 | 18 | 6 | 0 | 10 | 1 | 14 | 6 | 61 |
| UIBK | Fostering Community Building within Aurora | Staff | Fall 2023 | 5 | 1 | | 3 | 7 | | 2 | 2 | 1 | 21 |
| URV | Engaging your institution in Internationalisation at Home: examples and good practices | Staff | Spring 2023 | 5 | 3 | 0 | 5 | 1 | 0 | 3 | 0 | 0 | 17 |
| URV | Community Service-Learning and Third Mission: Local Service for Global Learning | Staff | Spring 2023 | 2 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| URV | Good Practices in Doctoral Supervision | Staff | Spring 2023 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |

Based on coordination with information provided by WP 8, data concerning Virtual Exchanges and COIL activities are still to be released. Collecting data on virtual exchange provides a challenge for the administration as students can easily participate in single sessions of online course without being registered.

## 2.2 Cooperation in teaching: quality and societal impact

Based on evidence gathered through participant observation and in-depth interviews, two pedagogical approaches have emerged as the most recurrent and widely accepted within the Aurora network, explicitly linking quality education to societal impact:

- the **Learning Outcomes for Impact on Society (LOUIS),** and
- the **Social Entrepreneurship and Innovation (seizmic)** activities;

### 2.2.1 LOUIS

In the first phase of Aurora, 17 courses piloted the LOUIS framework (Central Office database, 2025). Currently, 39 courses across several Aurora universities (UNINA, UPOL, UDE, VUA) have adopted LOUIS. Its diffusion has been strongest in institutions where it was first introduced, suggesting that the "bottom-up approach" of early adopters is beginning to yield tangible results, even though the framework has not yet spread evenly across all partners.

A significant step forward has been taken at the University of Innsbruck, where the Senate has mandated the inclusion of transversal learning outcomes in all course and programme curricula, recommending the use of LOUIS as the reference tool. This institutional rule has the potential to generate major transformational effects in the coming years, both within Innsbruck and across the Alliance. The uptake of LOUIS at Innsbruck reflects a synergy between national regulations—such as Austria's emphasis on innovative pedagogies—and Aurora's transnational framework, which enables the adoption and scaling of such innovations across member universities.

More broadly, Aurora has created a protected space for experimenting with pedagogical innovations like LOUIS—experiments that would have been difficult to implement in more traditional contexts due to faculty resistance.

The LOUIS framework itself is grounded in solid theoretical and policy foundations. The literature reviewed explicitly on LOUIS revolves around the assessment of transversal competencies presented in Tables 2.6, while Table 2.7 summarizes LOUIS main strengths and weaknesses.

Both the literature reviewed, and the interviews conducted to date converge on underscoring the relevance of competence-based pedagogy of the LOUIS approach. The latter is a timely response to the shifting demands placed on higher education, emphasising societal impact, transversal competencies, and learner-centred learning. Specifically interviews conducted with LOUIS course designers and organizers support that the future of LOUIS adoption within the Alliance depends on its capacity to remain adaptive, inclusive, and context sensitive. Organizers interviewed point out that enhancing student participation, aligning with European competence frameworks, and broadening the assessment of digital and entrepreneurial skills are all critical steps to ensuring that LOUIS supports high-quality learning outcomes across diverse institutional and cultural landscapes.

**Table 2.6 Assessing transversal competencies**

| Concept | Insights |
|---|---|
| Soft Skills Complexity | Soft skills (communication, creativity, leadership, etc.) are multidimensional and context-dependent (Gibb, 2014) |
| Theoretical Models | Assessment must consider cognitive, emotional, and social learning dimensions (Illeris, 2003; Kluger & De Nisi, 1996) |

| | |
|---|---|
| Evaluation Models | Curtis (2010) identifies four complementary models: holistic judgment, portfolio, workplace, standardized assessment |
| Operational Challenges | Definitional ambiguity, cultural variability, and contextual adaptability must guide tool design and interpretation |

**Table 2.7 Strengths and weaknesses of LOUIS**

| **Strengths** | **Weaknesses / Challenges** |
|---|---|
| Aligns with Bologna emphasis on learning outcomes and key competencies | Standardized assessments may be culturally insensitive or inappropriate for diverse educational backgrounds (Cedefop, 2010) |
| Promotes student reflection and peer assessment through rubrics | Student engagement in co-design of rubrics remains limited; stakeholder participation is uneven |
| Encourages holistic learning (cognitive, social, motivational) | Risk of "one-size-fits-all" frameworks that may not reflect diverse pedagogical traditions across contexts |
| Potential for integration of IT, entrepreneurship, and social competences (Guilland et al.) | Current framework may overlook essential digital and entrepreneurial skills relevant to 21st-century learning and work |

The LOUIS approach offers a compelling pedagogical model for aligning higher education with the demands of skills development of, *inter alia*, lifelong learning, civic engagement, and societal relevance. By shifting the focus from teacher-centred delivery to student-centred, outcome-based design, LOUIS enables:

- Greater alignment between learning outcomes, teaching strategies, and assessments.
- Convergence of teaching and assessment methods contributing to the Bologna process through the creation of a common language shared not only by teachers with students to increase transparency and motivation, but also amongst teachers from different departments or even institutions and national contexts.
- Transparent, competency-based evaluation that supports motivation and feedback.
- Development of transversal skills essential for navigating societal challenges.

Table 2.8 epitomises its key findings as emerged from interviews and participant observation sessions.

**Table 2.8 Key preliminary findings regarding LOUIS**

| Dimension | Key findings |
|---|---|
| **Alliance Cooperation in Teaching** | LOUIS is adopted across multiple Aurora institutions, including joint programs such as EURIDICE. It enables a shared pedagogical language and framework for cross-institutional course delivery and curricular alignment. |
| Pedagogical Innovation | LOUIS supports competence-based, student-centred education aligned with societal needs. It promotes transversal skills such as ethical reasoning, civic engagement, and intercultural competence. |
| Evidence of learning impact | Instructors reported improvements in clarity, motivation, and student performance. The tool helps redesign entire courses and programs using structured learning outcome rubrics and assessment descriptors. |
| Scalability and Challenges | Successful implementation depends on faculty engagement, institutional support, and training. Resistance exists due to traditional academic norms and lack of incentives or institutional alignment. |
| Future Potential | LOUIS is becoming a strategic curricular tool with potential applications in program design, accreditation, and quality assurance. It supports the development of a transnational campus based on shared learning outcomes. |

A key limitation concerns the framework's use for formal assessment. While LOUIS is valued by academic staff as a more flexible and student-friendly alternative to traditional rubrics—particularly in clarifying learning outcomes and transversal competences—some educators expressed reservations about applying it in practice for grading purposes. Specifically, concerns were raised about the framework's ability to accommodate the diverse educational backgrounds of students, especially in interdisciplinary settings. These observations suggest that while LOUIS enhances transparency and student understanding of learning objectives, its utility as an assessment tool may be constrained in heterogeneous classroom contexts. The challenge lies in balancing standardization with adaptability—particularly when addressing the complexity and diversity of interdisciplinary higher education.

### 2.2.2. seizmic activities

This section describes the seizmic activities, including their logic and results based on competency development surveys. Specifically, this section highlights how seizmic activities contribute to joint learning offers, cooperation, and civic engagement with the Aurora universities.

#### Logic and contribution to joint learning offers

The seizmic activities were developed with different partners of thethe Aurora universities and complemented by research-based insights (to identify and assess the seizmic competencies). The seizmic activities nurture Aurora's aim to equip the graduates with the skills and mindset to address societal challenges with social entrepreneurship and education.

The seizmic courses often use the seizmic APP, which is a free, web-based educational platform specifically designed to support the development of social business models, making it especially valuable in interdisciplinary university settings. The students work together in teams and develop their team project using the seizmic APP. Its structure guides students through a step-by-step process covering all critical elements of social entrepreneurship: from

problem identification and theory of change to financial strategy and impact assessment. A unique advantage of the seizmic APP lies in its integration of Sustainable Development Goals (SDGs) and its emphasis on team collaboration, enabling users from diverse academic backgrounds to work jointly on solutions to real-world problems. Educators benefit from a modular design that can be tailored to various teaching contexts and levels, while students are empowered to engage with complex societal challenges through a practical, interactive, and scalable tool.

Most of the seizmic courses are co-taught by educators from different Aurora partners or invite colleagues as guest speakers. Courses using the seizmic APP invite their students to the seizmic AWARD. Complementing the seizmicAPP, the seizmic AWARDS showcase and recognize the most innovative and impactful social business models developed using the app. Open year-round, the competition is accessible to any individual or team passionate about generating positive societal change, regardless of their entrepreneurial status. The awards culminate in an annual ceremony, celebrating projects that demonstrate exceptional creativity and societal relevance. Beyond recognition, participation provides opportunities for peer feedback, visibility, and growth within an international ecosystem of changemakers. This initiative not only incentivizes high-quality engagement with the app but also reinforces the broader mission of equipping learners with the competencies to lead social innovation across disciplines.

Cooperation goes beyond student teams and educator teams in seizmic courses or using the seizmic APP but also includes joint Aurora task teams, which meet on a regular basis to develop innovative teaching formats and facilitate joined research. The mobility of Aurora at the international offices of Aurora partner universities work together to facilitate new courses, enable the recognition of courses and mobility of students and staff, explores new teaching formats and new funding sources, e.g., Blended Intensive Learning (BIP).

The academics and teaching coordinators work together in a task team related to understand the impact of teaching and learning of the students: the seizmic competency survey. Driven by Aurora's aim to nurture skills and mindsets to address societal challenges with social entrepreneurship and education, the task team reviewed research to identify twelve competencies and developed a scale to measure these via an online questionnaire.

The seizmic competencies can be used by individual educators as a tool to develop syllabi and learning objectives. Via an online survey before a course or a teaching intervention, the seizmic survey evaluates self-perceived competencies of incoming students. By comparing with the results of the seizmic survey at the end of the semester with the data collected at the start, educators can also assess the perceived competencies outcome, in other words how the perceived competency level has changed during that course.
The seizmic survey results can contribute to diagnose best practices and areas in need of improvement. The seizmic survey can evaluate innovative educational formats (e.g., service learning, hackathons) in terms of sharpening seizmic competencies. Comparing the seizmic survey results of different courses provides insights on how each course contributes to the perceived competency development.

Seizmic competencies provides the starting point for reflection on aimed for and achieved perceived competency development. So, educators, educational developers, and academic leaders of study programs (study boards/program directors/deans of education) can reflect on:

- which competencies are addressed in the course/study program?
- what is the (perceived) competency level of the incoming students?
- what is the (perceived) competency level developed during the course or of different courses?

The seizmic survey results can be used as a benchmark to examine how competencies have developed over time across different courses (see Table 2.9).

**Table 2.9 seizmic competencies**

| Competency definition (based on Hueske and Hockerts, 2023) | | Example references for competencies (based on Hueske and Hockerts, 2023) |
|---|---|---|
| Analytical competency to understand societal problems | Ability to use systems thinking and critical thinking in problem formulation related to complex and interconnected societal issues. | (Lans et al., 2014; Miller et al., 2012; Pless et al., 2011) |
| Impact assessment competency | Ability to measure and evaluate the societal impact generated by an activity. | (Hinderer and Kuckertz, 2022; Kickul et al., 2012; Miller et al., 2012, p. 353) |
| Normative competency | Ability to identify ethical aspects in a work context and articulate your own values clearly. | (Hockerts, 2017; Lans et al., 2014; Pless et al., 2011; Tiwari et al., 2017) |
| Impact commitment competency | Ability to commit to a collective purpose to create significant societal impact. | (Bacq and Alt, 2018; Brändle et al., 2018; Dickel and Eckardt, 2021; McMullen and Bergman, 2017) |
| Problem-solving competency | Ability to creatively design impactful solutions to societal issues. | (Chang et al., 2014a; Miller et al., 2012; Pache and Chowdhury, 2012) |
| Opportunity identification competency | Ability to generate economic revenue for innovative solutions to societal problems. | (Chang et al., 2014a; Duncan-Horner et al., 2022) |
| Future thinking competency | Ability to craft and evaluate multiple scenarios of the future appreciating the impact of short-term decisions on a long-term scale. | (Foucrier and Wiek, 2019; Lans et al., 2014) |
| Action competency under uncertainty | Ability to take action in an unpredictable context with a high likelihood that outcomes will differ from expectations. | (Capella-Peris et al., 2020; Chang et al., 2014b) |
| Perspective-taking competency | Ability to understand another person's point of view. | (Bacq and Alt, 2018; Miller et al., 2012) |

| | | |
|---|---|---|
| Participatory competency | Ability to develop collaborative relations with stakeholders in a democratic, participatory, and inclusive manner. | (Ashby et al., 2009; Lans et al., 2014; Orhei et al., 2015; Pache and Chowdhury, 2012; Ploum et al., 2018a) |
| Tensions management competency | Ability to balance tensions arising from conflicting beliefs, values, and interests among stakeholders. | (Lans et al., 2014; Miller et al., 2012; Ploum et al., 2018b; Smith et al., 2012; Zhu et al., 2016) |
| Innovation diffusion competency | Ability to let others copy and exploit your social innovation. | (Duncan-Horner et al., 2022; Foucrier and Wiek, 2019; Kickul et al., 2012; Miller et al., 2012) |

The seizmic activities comprehend seizmic courses often taught with the seizmic APP. Furthermore, seizmic courses and other courses are evaluated via the seizmic survey to measure the seizmic competency development. Each of the seizmic activities contributes to the thematic areas: joint learning offer and student mobility, alliance cooperation, and civic engagement. The seizmic activities are based on the rational that students develop the competencies to address societal challenges with social entrepreneurship and innovation, by analysing societal problems and developing innovative solutions while collaborating in diverse teams. It follows the idea of student-centred learning as the students select the social problem they want to work on. The education is guided by experiential learning as students work on real-world problems, participate in field trips or talk to experts, potential customers and beneficiaries.

The seizmic courses offered by Aurora partners are open for students from different study programs to learn and work together. The seizmic courses are often short-term courses, which bring together students from various Aurora partners and study programs. Thanks to the mobility grants, students can learn at other Aurora partners or experience internationalisation at home by attending an Aurora course at their home university and studying with students and being taught by educators from different disciplines and nationalities. Furthermore, the mobility grants or online teaching is used to co-teach courses to bring in educators with a variety of backgrounds.
Beyond the joint learning of Aurora students and taught by Aurora educators, the seizmic courses also implement innovative student-centred experiential learning in diverse teams considering nationality, home university and study program. In most of the seizmic courses the students choose a real-world social problem. They analyse the social issues with des research but also with interviewing experts, customers and beneficiaries. Based on this in-depth knowledge they develop a solution.

The seizmic competencies are derived from a systematic literature review (see Table 14). The seizmic competency survey was validated over sample samples with about 3000 students. The competencies guided the development of new Aurora courses and influence also courses beyond Aurora. For example, the CBS Summer Aurora courses (Introduction to Social Entrepreneurship and Social Entrepreneurship and Business Model Innovation) were developed based on the seizmic competencies. The results of 2023 seizmic survey showed that the students perceived a significant competency development for 10 out of 12 competencies. For one of these competencies the students reported a high level at the start of

the course, which might explain why this competency didn't significantly increase, for the other competency, there were significant results during the 2024 survey (see Fig. 2.3 left side). Inspired by these courses a non-elective core-course in a study program at CBS was adapted to aim for the seizmic competencies. Similar the hackathon Food systems in the Anthropocene at UNINA was first offered as seizmic course at UNINA, but meanwhile the course format is also used for teaching students in Ecuador. Also, non-social entrepreneurship courses use the seizmic survey, e.g., Business Responses to Climate Change (CBS). This course is targeted at impact competencies. The results showed that the students perceived a significant competency development for this dimension but not for the entrepreneurship or engagement. Comparing seizmic survey of Aurora Social Entrepreneurship students with those of other CBS summer courses showed that the students perceived a higher seizmic competency development compared to other courses (see Fig. 2.3).

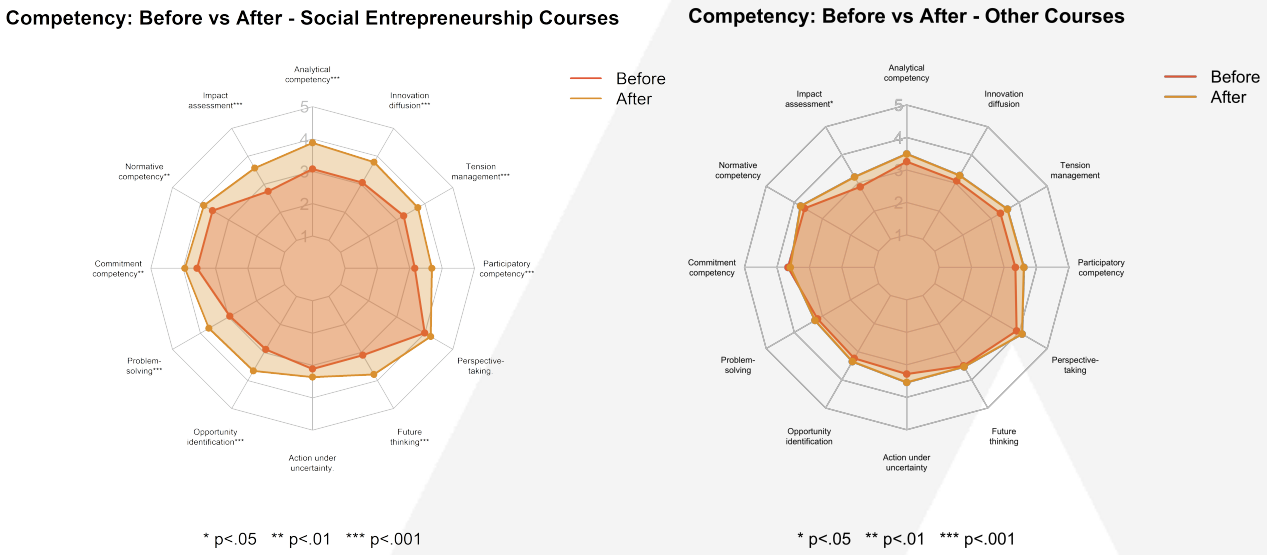



**Figure 2.3 Results of 2024 seizmic survey for CBS Summer Aurora Social Entrepreneurship courses, compared with learners' perceived competency development in other CBS summer courses.**

Due to their course format seizmic courses tend to be taught in smaller groups and in intensive bloc courses. This makes the data collection for the seizmic survey more difficult as the results from the beginning of the course to the end of the course needs to be matched, which requires meaningful response rates at the beginning and at the end of the course. Often the response rate at the end of the course is small, which makes is difficult received meaningful results. Furthermore, not all Aurora partners offer seizmic courses on a regular basis. The seizmic activities are regularly presented and disseminated, especially the seizmic survey during Aurora related events, at education and research conferences. This attracted additional interested users. In addition, we reached out bilateral to attract educators for the survey. At UPEC, an administrator is acting as ambassador to find users for the survey. We stay in touch to repeat the seizmic survey for the courses of previous years. For example, seizmic courses at CBS; UNINA and Iceland are now regularly using the seizmic survey.

For a reaching a scale, Aurora, education or research conferences, having personal contact with educators but also having an ambassador at each partners seem to be a good strategy but it still takes time.

### Civic engagement

The seizmic competencies correspond to the skills and mindsets to address societal challenges with skills and mindsets to address societal challenges. These competencies are needed to enable civic engagement. The impact competencies (analytical competency to understand societal problems, impact assessment competency, normative competency, impact commitment competency) describe abilities to understand wicked societal problems and commit to find a solution. The entrepreneurship dimension of the seizmic competencies (problem-solving competency, opportunity identification competency, future thinking competency, and action competency under uncertainty) encompass the abilities to develop and implement financially viable solutions to societal issues. Finally, the engagement competencies secure commitment from stakeholders (perspective-taking competency, participatory competency, tensions management competency, and innovation diffusion competency).
The seizmic survey provides students with the opportunity to reflect which competencies they have and which ones they want to develop. It also provides educators and educational developers with feedback on the perceived competency development of their learners.
In most of the seizmic courses, the students work on group projects driven by student-centered learning. They often can decide which societal problem they want to address. So, they analyze social issues and develop solutions leveraging the diversity of the group.

### Trends

The courses are well received by the students and many Aurora partners have established seizmic courses offered on a regular basis. The seizmic survey and APP attract more users. Student appreciate the international and interdisciplinary offer to complement the education at their home institution.

### Barriers

The innovative teaching of the seizmic activities is hampered by several barriers. There are practical and administrative issues. For example, the lecturing times of different Aurora partners deviate, so some courses might overlap with others or with the examination period which makes participation challenging. Danish legislation was not allowing online components. As the legislation was changed, CBS could start introducing BIPs. URV faces issues with recognizing summer university courses. Also, Danish law requires to balance incoming and outgoing students, which requires to establish all sending partners to also offer opportunities to receive CBS students. The Aurora partners grant 3-6 ECTS, 5-10 ECTS or 7,5 ECTS per course. This makes it difficult for students taking single courses to meet exact 30 ECTS at the end of the semester, which requires “little courses” to fill the gaps. For example, CBS is offering 2,5 ECTS micro-credentials which can bridge the gap to 7,5 ECTS, if a 5 ECTS course was taken.
Not all Aurora partners regularly offer the seizmic courses, e.g. due to the resource allocation and the structure of the educational offer. However, the task team is in negotiations to enlarge the offer.

The seizmic survey tends to be limited to seizmic courses. Only few educators use it as evaluation tool for non-social entrepreneurship courses.

**Table 2.9 Key preliminary findings regarding seizmic**

| Dimension | Key findings |
|---|---|
| **Alliance Cooperation in Teaching** | Seizmic courses are offered by most of the Aurora partners, several have been established on a regular basis. The majority of the educators uses the seizmic app to let their students develop their projects. Many of the courses are taught be educators from different Aurora partners. |
| Pedagogical Innovation | The seizmic courses use experiential learning. |
| Evidence of learning impact | The seizmic competency can be evaluted via the seizmic survey to measure the perceived competency development of the students. This allows comparison of different cohorts to monitor course development and comparison of different courses, |
| Scalability and Challenges | Successful implementation depends on faculty engagement, institutional support, and training. Resistance exists due to lack of incentives. |
| Future Potential | The seizmic activities are used within Aurora and beyond the alliance to foster education towards enabling skills and mindsets to address societal challenges with social entrepreneurship and innovation. |

## 2.3 Drafting preliminary causal pathways or ToC

Here a provisional draft of a Theory of Change (ToC) has integrated the three case studies of Aurora's educational cooperation: LOUIS, seizmic activities, and Internationalization at Home. It articulates how these specific activities interact to achieve transformative change in higher education quality and societal impact.

### Vision / Long-Term Impact

Aurora envisions a European inter-university campus that equips students with the competences, values, and mindsets to address complex societal challenges – whether related to climate change, inequality, health, or democracy. Its ultimate goal is to strengthen the societal impact and inclusiveness of higher education through pedagogical innovation, stakeholder engagement, and equitable internationalisation. This vision is anchored in the belief that education is both a public good and a catalyst for social innovation. Accordingly, Aurora seeks to align the institutional mission of higher education with the evolving demands of society by equipping graduates with transversal skills, ethical awareness, intercultural competencies, and the capacity to act as engaged citizens, social entrepreneurs, and reflective professionals.

### Strategic objectives

To realise this vision, three interdependent strategic objectives have been identified:

- Pedagogical Innovation: Promote high-quality teaching and learning through student-centred, competence-based approaches.
- Transdisciplinary Empowerment: Foster learning environments that bridge disciplines, academic knowledge, and societal engagement.
- Equitable Internationalization: Redefine international mobility to be accessible, inclusive, and impactful for diverse student populations and institutional contexts.

These objectives guide the design and implementation of Aurora's activities and tools, ensuring coherence between vision and action.

### Inputs

The ToC is supported by the Aurora Alliance infrastructure of institutional partnerships, financial instruments (e.g., Erasmus+, BIP funding), and pedagogical resources—including the LOUIS descriptors, and the seizmic competency, APP and survey. These inputs reflect both top-down strategic alignment and bottom-up engagement from faculty, students, and administrators. Crucially, the success of this transformation depends not only on resources but also on cultural and institutional commitment. Leadership buy-in, peer learning mechanisms, and recognition systems for teaching innovation are essential for sustaining momentum.

### Activities / Interventions

Aurora's transformative logic is operationalised through three complementary pillars:

1. LOUIS (Learning Outcomes in Universities for Impact on Society): A structured approach to curriculum design that aligns learning outcomes, assessments, and teaching strategies around transversal competences. LOUIS enables faculty to shift from content transmission to student-driven learning and from traditional assessment to reflective, impact-oriented evaluation.
2. Seizmic: A suite of short-term, interdisciplinary, and practice-oriented courses that engage students in real-world societal problem-solving. The seizmic APP and survey foster collaborative learning, ethical reasoning, and entrepreneurial thinking across disciplines and institutions.
3. Internationalization at Home and Innovative Mobility: Through formats such as Blended Intensive Programs (BIPs), COIL, and Virtual Exchange, Aurora expands the notion of internationalization beyond physical mobility. These formats democratize access to cross-border learning and contribute to curricular innovation and institutional convergence.

Each pillar integrates pedagogical practice and institutional design meant to foster innovation and cooperation across institutional, disciplinary, and national boundaries, as schematized in the following Table 2.10.

**Table 2.10 Case studies**

| Case studies | Key Activities |
|---|---|
| LOUIS | Design and implement outcome-based, student-centred courses using the LOUIS descriptors; training of educators; curriculum redesign at course/program level |
| seizmic activities | Deliver short-term, interdisciplinary courses using the seizmic APP; promote civic engagement and social entrepreneurship; apply seizmic competency survey |
| Internationalization at Home | Implement COIL, virtual exchanges, and BIPs; develop inclusive mobility strategies; introduce micro-credentials and support ECTS recognition |

## Outputs

The early outputs of this logic model include:

- A growing number of "Aurorised" courses that embed SDGs, transversal competences, and joint delivery methods.
- Increased faculty training and peer-to-peer pedagogical collaboration.
- Uptake of seizmic courses and growing use of the LOUIS framework across diverse programs and courses.
- Initial implementation of micro-credentials and harmonized BIP guidelines to facilitate recognition and scaling.

These outputs indicate a gradual institutionalization of new teaching cultures and quality standards.

## Intermediate outcomes

As the model matures, it generates deeper transformations:

- Participation in Aurora enables universities to establish a safe space for the experimentation of innovative pedagogical approaches, that would otherwise be significantly more difficult to introduce within traditional institutional frameworks, and new types of collaborative educational initiatives, including joint degree programmes and shared courses.
- Students demonstrate higher levels of critical thinking, intercultural competence, ethical awareness, social entrepreneurship skills, and civic engagement.
- Curricula increasingly integrate societal challenges and co-designed pedagogies.
- Mobility patterns become more inclusive, targeting underrepresented disciplines, institutions, and socio-economic groups.
- Faculty adopt shared frameworks for assessing and recognising learning outcomes across borders, while shifting towards competence-based learning.
- Institutions develop improved systems for micro-credentialing, feedback collection, and stakeholder engagement.
- Tool developed within Aurora as LOUIS and seizmic contribute to the development of a common language for teaching and learning transversal skills and foster

convergence revitalizing the implementation of Bologna tools and giving new impetus to their full adoption and streamlining within the European Education Area.
- Enable diverse and inclusive mobility opportunities by designing flexible formats—virtual, hybrid, and physical—that expand access to high-quality international experiences for a broader range of students, beyond traditional mobility schemes.
- Leverage complementary institutional strengths to respond to skills gaps through transnational lifelong learning initiatives, including the development of micro-credentials for reskilling and upskilling
- Develop and deploy cross-institutional collaboration frameworks, such as shared digital infrastructures, to enhance the integration and operational efficiency of alliances
- identify and raise awareness of persistent legal and administrative barriers, especially those related to joint programme creation, quality assurance alignment, research infrastructure sharing, digital system interoperability, and the mobility of academic and administrative staff.

These observable outcomes signal a progressive shift toward a socially embedded model of higher education.

### Key assumptions

The effectiveness of this ToC rests on several assumptions:

- Faculty are motivated, incentivised and supported to adopt innovative teaching methods.
- Institutional policies evolve to recognise and reward pedagogical innovation.
- Students value transversal skills and seek learning experiences with real-world relevance.
- Legal and administrative systems accommodate mobility, credit recognition, and micro-credentials.

The present evaluative research has offered evidence on whether, why, and how these assumptions hold. It has highlighted both the program and implementation features and dynamics that can support a successful transition toward the network's long-term goals.

### Risks and barriers

However, persistent risks could derail progress:

- Cultural resistance among faculty, particularly those nearing retirement or unaccustomed to student-centred teaching.
- Regulatory mismatches between national systems, hindering credit portability and joint program accreditation.
- Funding constraints, which limit access to mobility or innovative course delivery.
- Fragmentation in data and feedback, making it difficult to assess student outcomes or program impact systematically.

Addressing these risks requires coordinated governance, resource mobilisation, and stakeholder communication strategies.

### Impact

If the above conditions are met, the long-term impact of Aurora's approach (see Figure 2.3) can be articulated as follows:

- Aurora graduates will demonstrate higher levels of civic engagement, ethical reasoning, and social innovation and entrepreneurship competences;
- Participating institutions will evolve toward transdisciplinary, socially responsive, and inclusive models of education;
- Aurora becomes a reference model for European Universities aiming to embed societal impact and equity into higher education
- System-wide progress in recognizing pedagogical innovation in academic career advancement and institutional development.

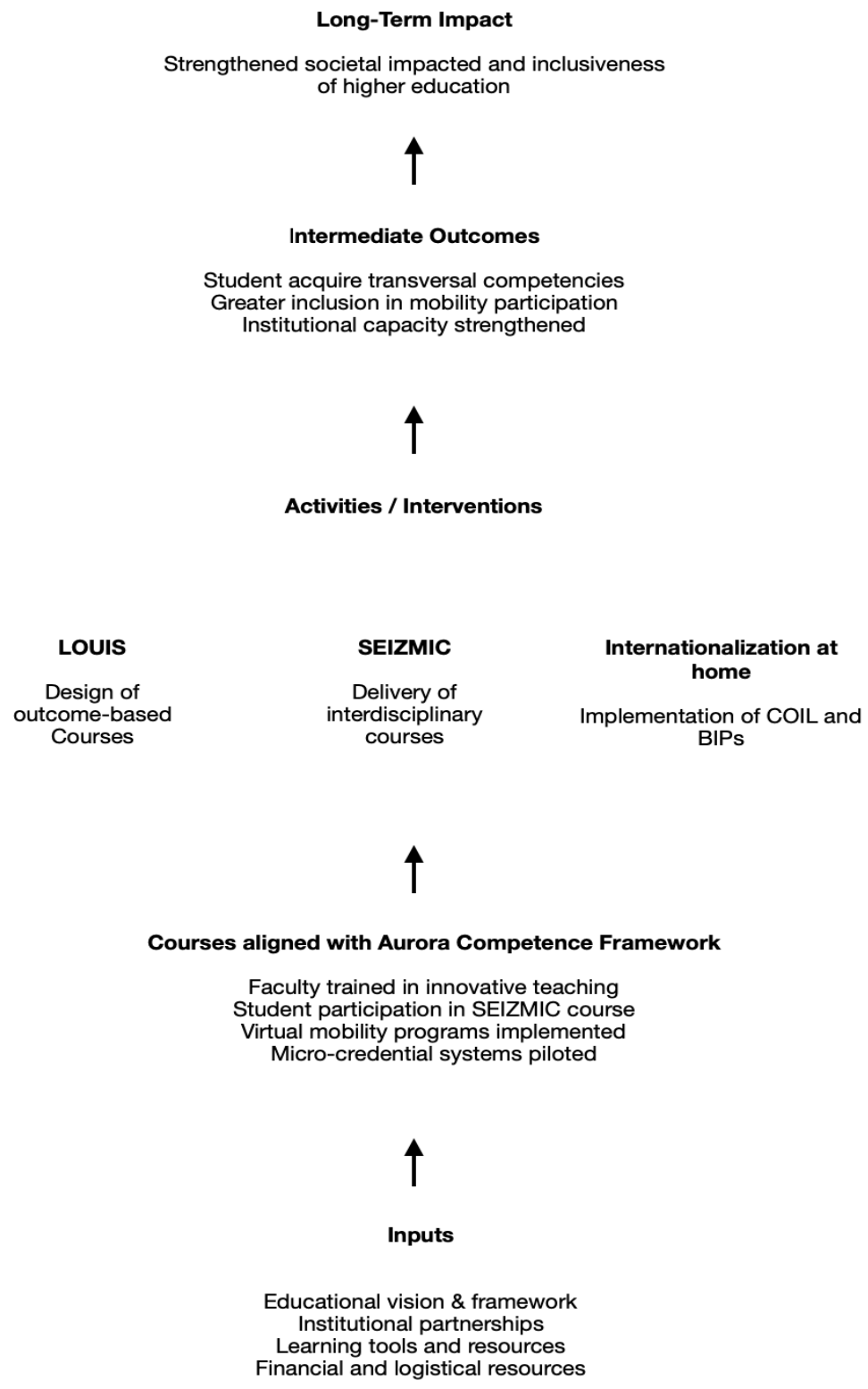



**Figure 2.4 Provisional ToC for quality teaching and societal impact**

# PART III

## 3. Next steps: detailing the work plan

### 3.1 Revising the system based on internal feedback

As the report circulates, the team will gather insights and feedback to modify and integrate the system. The team plans to send the report to all Institutional Coordinators (ICs) and mailing Task Team (TT) Leaders to understand their reactions and enhance the use of the evaluative information thus far generated.

To ensure both depth and balance in stakeholder participation, we propose to organise two separate focus groups in January 2026. The first will bring together Institutional Coordinators and selected WP leaders with a more strategic role in governance. This group will be tasked with reflecting on Aurora's shared values and the principles that should underpin a common vision of quality education across Aurora. The aim is to elicit a consensus on the normative foundations of quality, focusing on issues such as transparency, inclusiveness, subsidiarity, and the link between quality assurance and societal impact.

The second focus group will engage WP leaders and task team leaders who are directly responsible for implementing Aurora initiatives on joint learning, mobility, and civic engagement. Here, the discussion will focus on the operational dimension: how shared values can be translated into practices, what barriers and enablers exist in implementation, and how the draft monitoring and evaluation framework developed by WP9.2 can be improved to support the daily work of task teams.

This two-tiered structure addresses potential power asymmetries by creating more homogeneous groups, allowing for open dialogue in each setting. At the same time, it ensures complementarity: the strategic group articulates a shared vision and principles, while the operational group provides grounded feedback on feasibility, priorities, and indicators. The findings from both sessions will then be synthesised into a consolidated output, forming the basis for refining Aurora's Monitoring and Evaluation Framework and advancing towards a commonly shared understanding of quality education with societal impact.

From a methodological perspective, both focus groups will follow a rigorous design to ensure validity, comparability, and replicability. Pre-reading material will be distributed in advance, including a short summary of Aurora's emerging principles of quality education and an executive summary of the draft monitoring and evaluation framework. Data collection will combine audio recordings (with consent), structured notetaking, and the use of collaborative boards to capture group reflections. Each session will be facilitated by a moderator, supported by a co-moderator for timekeeping and a rapporteur to document proceedings.

**Data analysis** will proceed through systematic transcription and thematic coding, identifying points of consensus, areas of divergence, and concrete recommendations. To ensure reliability, findings will be subject to member checking at the end of each session and later triangulated with survey data and insights from field visits. In this way, the focus groups are designed not as isolated consultations but as integral components of the participatory

monitoring framework, feeding directly into the refinement of Aurora's Monitoring and Evaluation Framework.

### 3.2 Assessing cooperation in governance within the Alliance

To further develop the reconstruction of causal pathways, the evaluation team including the core group and the other members who will volunteers to facilitate data collection will conduct additional interviews and organise a focus group with Institutional Coordinators (ICs), Aurora Champions, and selected external stakeholders by May 2026. This activity is designed to gather feedback on how governance cooperation is enacted and perceived across different institutional and national contexts within the Alliance. As previously outlined, this phase of the evaluation aims to deepen the development of robust narratives of change, with particular attention devoted to the governance dimension of the Aurora Alliance, including not only the formal decision-making structures but also the relational dynamics that shape the implementation of joint educational strategies.

The focus group will be structured around a series of guiding questions intended to reconstruct the Alliance's logic of intervention from the perspective of those directly engaged in governance. These questions include:

- What definitions and objectives have shaped the development of the project so far?
- What was originally envisioned at the start of this collaborative effort?
- What concrete activities have been implemented, and which objectives have been achieved?
- To what extent were you aware of ongoing initiatives and their results? Did they align with your expectations? Why or why not?
- Are there, in your view, any areas or priorities that should be revised or reoriented?

To answer these questions, the focus group will foster a reflexive and open dialogue. Its purpose is to clarify how cooperation in governance contributes—or at times fails to contribute—to the overarching mission of the Alliance. The resulting insights will directly inform the refinement of causal narratives and enhance the monitoring and evaluation (M&E) framework, ensuring it remains context-sensitive and grounded in the lived experiences of the actors involved.

These qualitative insights that will be gathered through the focus group will be informed and triangulated with existing empirical data—such as records on mobility activities, joint teaching and cooperation initiatives, and ongoing or planned projects—to identify potential gaps or inconsistencies between intentions, actions, and outcomes.

### 3.3 Reconstructing Civic Engagement

Civic engagement is another foundational dimension of Aurora 's societal mission. Across partner institutions, various initiatives already demonstrate a strong commitment to engaging with local communities—ranging from open lectures and citizen science to service-learning

and community-based challenges. However, the ways in which civic engagement is conceptualised and operationalised remain diverse and context-dependent.

Developing a coherent M&E framework for this dimension requires a shared understanding of what constitutes civic engagement and how it contributes to the Alliance's broader societal impact. This effort also involves distinguishing civic engagement from closely related domains—such as regional and stakeholder engagement. According to the European Commission's monitoring framework, civic engagement refers to citizens' active participation in the activities of European University Alliances. This engagement emphasises contributions to the public good—through dialogue events, volunteerism, lifelong learning, open science, and service-based education—rather than economic outcomes alone.

The proposed M&E approach adopts an inclusive and flexible framework that recognizes both citizen-oriented and stakeholder-focused dimensions as complementary components of civic engagement. This perspective will allow the evaluation to assess not only the breadth of initiatives, but also their relevance, effectiveness, and contributions to societal transformation. Table 14 outlines the proposed action plan to move from this conceptual framework to the practical development and implementation of the Monitoring and Evaluation system for Civic Engagement.

**Table 3.1 Action plan for assessing "Cooperation in governance and Civic Engagement"**

| Step | Description | Timeline | Tools / Outputs |
|---|---|---|---|
| **1. Define Scope & Dimensions** | Refine the conceptual boundaries between civic engagement, stakeholder engagement, and regional cooperation within the Alliance. | October 2025 | Internal memo + revised conceptual map |
| **2. Collect Existing Practices** | Map Aurora initiatives involving citizens (e.g. open lectures, community challenges, service learning, citizen science). | November–December 2025 | Practice mapping table (qualitative inventory) |
| **3. Launch CE Monitoring Questionnaire** | Distribute the civic engagement section of the Commission's monitoring survey across partner institutions to establish a baseline. | January–February 2026 | Aggregated results report |
| **4. Conduct Focus Groups** | 4 tructured focus groups across different types of stakeholders (students, local citizens, academic staff involved in engagement activities). | March–May 2026 | Thematic analysis (with consented recordings + transcripts) |
| **5. Select Case Studies** | Identify 2–3 emblematic civic engagement initiatives across Aurora to explore deeper causal pathways. | March 2026 | Case study fiches |
| **6. Reconstruct Causal Pathways** | Analyse findings to articulate how civic engagement activities contribute to Aurora's societal mission. | May–June 2026 | Narrative of Change + draft ToC map |
| **7. Propose KPIs** | Develop qualitative and quantitative indicators aligned with the EU definitions and project goals. | June 2026 | Proposed KPIs table (for piloting) |

## 3.4 Field Visits

As highlighted in section 1.5, field visits are meant to conduct focus groups to gather first-hand data and are not intended to replace or duplicate the work of institutional, national, or European QA bodies.

The team will conduct field visits to share Aurora values and practices of quality teaching for societal impact and to gather qualitative and context-sensitive information directly from the

main actors involved—students, faculty, administrators, and stakeholders—thereby capturing perspectives and practices that would otherwise remain fragmented or unrecorded.

For time and budget constraints, field visits will be conducted only in four universities selected on the basis of the following criteria: (i) geographical balance, (ii) institutional diversity (in terms of size, historical tenure, disciplinary focus), and (iii) the existence of internal QA frameworks aligned with ENQA principles. This purposive sampling allows for a meaningful cross-section of practices and contexts within the alliance.

In line with these selection criteria, the following institutions are proposed for field visits:

1. **University of Naples Federico II (UNINA)** – As a large-scale university located in Southern Europe, UNINA embodies the characteristics of a comprehensive "mega-university," distinguished by its broad disciplinary scope, high student enrolment, and historical traditions alongside contemporary challenges related to mass education and inclusive access.
2. **CBS/Copenhagen** – Positioned as a specialist institution in Northern Europe, marked by its emphasis on research-intensive education and academic excellence through specialization.
3. **Palacký University Olomouc** – Situated in Eastern Europe, Palacký University presents a mid-sized institutional profile in a post-socialist academic context. Its development reflects a synthesis of historical legacy and modern transformation, engaging with European integration processes.
4. **University of Iceland** – Unique in its geographical location and socio-cultural context, it is characterized by its peripheral positioning, small scale, and strong interdependence with continental European networks.

At the same time, we recognise the importance of representing the entire Alliance. To address this, insights from the field visits will be triangulated with data collected through other channels—including Aurora's central reporting system, desk research, and targeted interviews with institutional coordinators and task team leaders from the universities not directly visited. This combined approach ensures that while in-depth, participatory data are generated in the four sample institutions, the findings will remain representative of the broader Alliance context.

Prior to each field visit, the team will prepare and share the agenda including the focus group script two weeks before the meetings. This package serves as a structured orientation for the visiting team, allowing them to understand the institutional context, internal QA mechanisms, and thematic priorities of the host university. It typically includes a summary of the QA system, key institutional data, descriptions of educational innovations (e.g. micro-credentials, mobility strategies), a draft agenda, and a list of expected participants. Pre-visit documentation ensures transparency, alignment of expectations, and methodological consistency across visits and we will circulate this package at least two weeks prior to the visit. Each visit will last approximately **two full working days** and will involve mixed teams including members of Task Team 9.2; Student representatives; institutional representatives; and teaching staff.

Figure 3.1 sets the timeline for field visits to be conducted in the four selected universities between February and May 2026.

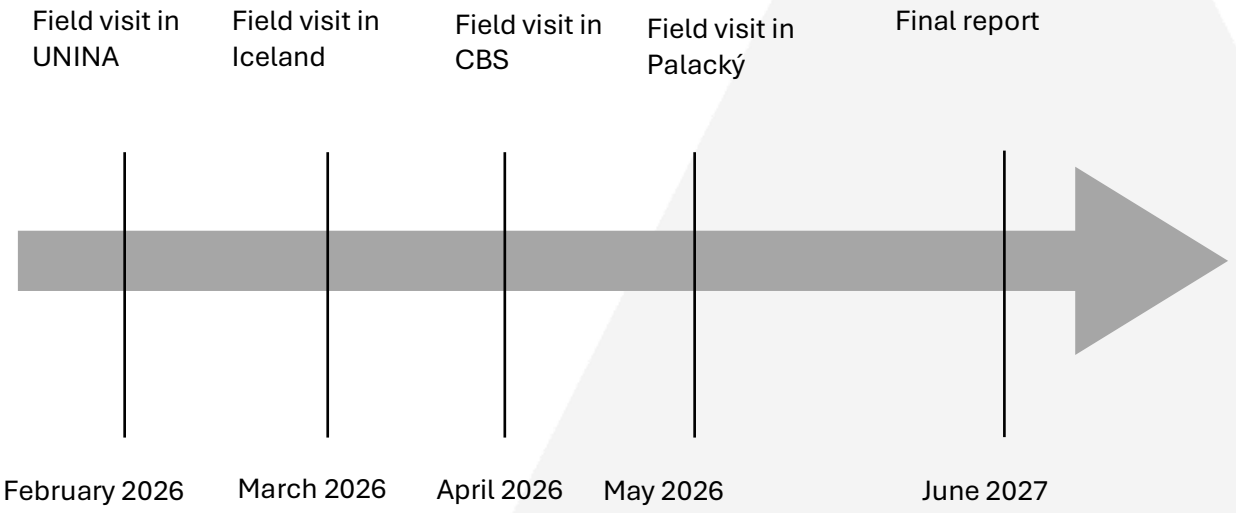



**Figure 3.1 Timeline for field visits**

The field visits will involve structured activities including:

- Presentations by the host institution on its QA system and educational strategies;
- Thematic sessions on joint learning offers and mobility, including course catalogues, micro-credentials, and Aurora pedagogical tools;
- Dedicated discussions on inclusivity, civic engagement, and sustainability;
- Campus tours and direct interactions with students and staff;
- Observation sessions such as QA-related meetings and classroom shadowing;
- Group reflection to identify strengths, gaps, and recommendations;
- Testimonials and open dialogues with faculty, administrative staff, and student representatives.

To ensure consistency, reliability, and traceability of the data collected, the following tools will be used:

- Field Visit Protocols outlining the objectives, agenda, and roles;
- Structured Observation Grids for documenting practices, strategies, and stakeholder responses;
- Focus Group Templates for collecting comparable insights across visits;
- Reflective Diaries and post-visit evaluation forms for participants;
- Audio recordings and transcripts (where consented) of testimonials and group discussions;
- Digital repositories to archive materials, photos, reports, and insights.

These tools are crucial because they allow:

- Data Collection by using comparable templates across visits to identify patterns and extract insights across institutions.
- Enhanced Validity and Reliability: structured observational instruments and reflective documentation help mitigate bias and support triangulation with quantitative KPIs.
- Alignment with Established QA Practices: These tools build on widely accepted external evaluation practices—such as those used by accrediting bodies (ENQA, ESG, EUA)—while being adapted to the transnational context of Aurora.
- Adaptive Learning and Continuous Improvement: Reflective diaries and focus group feedback support iterative refinement of the monitoring framework, consistent with theory-based and formative evaluation paradigms.

## 4.Reflexive conclusions and recommendations

The Aurora Monitoring and Evaluation (M&E) framework benefits from a **robust dual-pillar design**, combining a monitoring system aligned with ENQA standards and an evaluative component grounded in causal pathway analysis. Its participatory approach—engaging coordinators, champions, faculty, and external stakeholders—ensures contextual relevance and shared ownership, while the use of pilot initiatives such as LOUIS, seizmic activities, and Internationalisation at Home provides a concrete base for theory-building. The explicit integration of societal impact and civic engagement further distinguishes Aurora from conventional quality assurance systems.

However, the system's potential is hampered by potentially **weaknesses**, notably the limited availability and inconsistent reporting of key administrative data, the partial implementation of the Aurora Course Catalogue, and GDPR-related constraints on inclusion metrics. These gaps hinder the comparability of data across institutions and the establishment of a solid quantitative baseline, while variations in national and institutional QA practices add further complexity.

The next phase presents **opportunities** to strengthen the framework: leveraging shared digital tools for real-time data collection, harmonising QA protocols across partners for joint courses, deepening stakeholder engagement in civic and regional activities, and scaling the case study approach to other collaborative initiatives.

Yet, **threats** remain institutional fragmentation, resource constraints, stakeholder's lack of participation, shifting EU policy agendas, and restrictive interpretations of GDPR could undermine progress. Addressing these risks will require a fully operational course catalogue, ECTS automatic recognition, compliant but effective methods for inclusion data, and resource allocation.

By embedding these mitigation strategies into its Theory of Change, Aurora can turn its M&E system into both a **learning tool** and a **driver of strategic alignment**, ensuring that quality education and societal impact remain at the core of its mission. The final table that follows summarises the risks that can hamper the proposed M&E framework, while identifying potential mitigations strategies.

| Risk | Recommendations |
|---|---|
| Data Gaps & Inconsistent Reporting | Develop a shared M&E protocol with standardised definitions, timelines, and data formats; assign clear responsibilities to the Central Office and institutional M&E focal points. |
| Partial Course Catalogue Implementation | Prioritise full rollout with mandatory data entry protocols; introduce incentives for timely updates; integrate mobility tracking functions directly into the catalogue. |
| GDPR Constraints on Inclusion Data | Design anonymised, aggregated data collection methods that comply with GDPR while enabling inclusion monitoring. |
| Institutional Fragmentation | Use peer-learning visits and workshops to harmonise QA practices; build cross-institutional M&E working groups. |
| Resource Constraints | Advocate for dedicated M&E funding in the next project phase; consider pooling resources for shared evaluators or digital tools. |
| Stakeholder's lack of participation | Rotate engagement roles among staff; provide recognition for contributions; streamline participation processes to reduce administrative load. |
| Policy Changes | Maintain active policy monitoring; adapt indicators to evolving EU frameworks; build flexibility into the M&E system to adjust quickly to new requirements. |

## Annex 1. Interview scripts

### Interview Script for exploring LOUIS offerings

PART 1: LOUIS RATIONALE

- How can LOUIS increase the societal impact of teaching? What do you mean by societal impact? (Within the Aurora Education Vision, LOUIS can equip students to meet societal challenges, how and what does it mean?)
- What is the added value of LOUIS compared to other existing frameworks?
- Follow-up: How can LOUIS help moving from an input, teaching based approach to a more learning and student-centered approach?

PART 2: LOUIS IMPLEMENTATION – TEACHER LEVEL

- How can teachers concretely tailor the rubrics to their specific courses and contexts?
- Follow-up: How would you respond to teachers that say the sub-competencies are too generic and biased towards some disciplines?
- Follow-up: For the assessment, what would you respond to teachers that say the structure is too rigid and it is not fit to assess students from diverse background, for instance? Or that it risks oversimplifying a complex process that might thwart the teacher and student agency in the learning process?
- How can teachers incorporate LOUIS in their specific courses and the development of general academic and interpersonal competences without "sacrifying" subject-related knowledge?

PART 3: LOUIS IMPLEMENTATION – PROGRAM LEVEL

- How was the response to LOUIS in the first AURORA project? * Do you know if it was implemented in any course or at the program level? Did you notice some progress and how is it evolving in this second round?
- In Olomouc the institutional dimension and notably the resistance from faculty was a key subject of discussion. You talked about a multi-layered strategy to scale up LOUIS, could you talk about the strategy and how louis could overcome resistance?
- On a broader dimension another issue that was raised many times is the current paradigm where high quality research is not incentivized contrarily to research, time and supporting systems are missing and the neoliberal landscape relies on rankings etc where education is homogenized. Do you think we could convey a message to the

Commission saying that this paradigm hinders the aurora education vision of matching academic excellence with societal impact?

### Interview Script for exploring Internationalisation

PART 1

*Mobility and Exchange: Assumptions and guiding principle, strategy and obstacles*

- How do WP8 aim to enable mobility and exchange opportunities and what are the key assumptions and guiding principles behind your approach to mobility and internationalization?
- How do you build upon the work done in the previous phase of Aurora? *E.g.* How do you draw from previous lessons on identified obstacles? What type of obstacles to mobility do you still meet?
- *Follow up*: Have you detected challenges for traditional mobilities like semester or year-long student exchange (*E.g.* budget limitations; staff resources for administering both the increasing complicated Erasmus+ program; disciplinary obstacles like professional, statutory regulation for subjects; accessibility of these program to underrepresented groups)? How do you address those challenges?
- *Short mobility*: how do you aim to foster short mobility? Have you met challenges in organizing short-term and blended mobilities such as BIPs? What are those challenges, and did you identify (and/or implemented) possible solutions?
- Diversity and Inclusion
- Do you address inclusivity and equity in your mobility and internationalization on strategy? If so, how (*E.g.* Do you collect diversity data? Do you map good data collection practices around the alliance? Do you have a strategy to reach out to underrepresented groups or more generally a strategy for inclusive internationalization?

PART 2

*Internationalization at Home*

- How would you define Internationalization at Home, and could you outline your related strategy in Aurora?
- What criteria or standards guide the development of VE and COIL activities?
- Do you believe activities (e.g. COIL and VE) can foster skills or competencies in students?
- Which one and how (any example)?
- What are, according to you, the main benefits and challenges of IaH in HE?
- *Follow up:* How do you think issues of equity and inclusion like foreign language competence, digitalization, structural gaps in educational systems etc. can be addressed?

Do you meet any specific technical, institutional, or cultural barriers that stand out in the implementation of Internationalization at Home strategy and practices?
Could you share an example of a successful VE or COIL initiative and what made it work?
Have you observed any resistance to these approaches from students or faculty, and how have you addressed it?

Looking ahead, what do you see as the key opportunities for VE and COIL initiatives within the broader Aurora strategy?
How can Aurora further support the institutionalization of VE and COIL, for instance through policy frameworks or resource allocation?

PART 3

- Quality, Impact and Stakeholder engagement
- Beyond increasing the number of mobility opportunities, do you seek to ensure the quality of internationalization and mobilities? If so, what do you mean by it and how would you strive for it?
- Do you think that the mobility and interna9onaliza9on can have a long-term societal impact? If so, how and towards whom?
- How do you collaborate with stakeholders to design and implement these initiatives?
- *Follow up:* What feedback have you received from students and faculty, and how has it influenced your approach?

## References


Adam, S. (2004). *Using learning outcomes: A consideration of the nature, role, application and implications for European education of employing "learning outcomes" at the local, national and international levels*. UK Bologna Seminar, 1–2 July, HeriotWatt University, Edinburgh, Scotland.

Allinson K., Gabriels W.,(2021). Maybe it will be different abroad; student and staff perspectives on diversity and inclusion in student exchanges. *SIEM Research Report*, siem-project.eu

Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). *Trends in global higher education: Tracking an academic revolution*. Report for the UNESCO 2009 World Conference on Higher Education.

Andrade, H. L. (2019). A critical review of research on student self-assessment. *Frontiers in Education, 4*, 87. https://doi.org/10.3389/feduc.2019.00087

Armenakis, A. A., Harris, S. G., & Mossholder, K. W. (1993). *Creating readiness for organizational change*. *Human Relations, 46*(6), 681–703. https://doi.org/10.1177/001872679304600601

Asonitou, S. (2021). Impediments and pressures to incorporate soft skills in higher education accounting studies. *Accounting Education*. https://doi.org/10.1080/09639284.2021.1960871

Bacq, S., & Alt, E. (2018). Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing, 33*(3), 333–350. https://doi.org/10.1016/j.jbusvent.2018.01.004

Barnett, R. (1992) The idea of quality: Voicing the educational. *Higher Education Quarterly*, 46(1), pp. 3-19.

Bearman, M., Chandir, H., Mahoney, P., & Partridge, E. (2024). Sustaining teaching and learning innovations: A scoping review. *Higher Education Research & Development, 43*(7), 1495–1510. https://doi.org/10.1080/07294360.2024.2364096

Biggs, J. & Tang C., (2011). *Teaching for Quality Learning at University*. McGraw Hill Education

Bologna Working Group on Qualifications Frameworks (2005), *A Framework for Qualifications of the European Higher Education Area*, Ministry of Science, Technology and Innovation, Copenhagen.

Bloom, B. S. (Ed.). (1956). *Taxonomy of Educational Objectives. Handbook I: Cognitive Domain*. New York, NY: McKay.

Bourne, M., & Neely, A. (2003). *Performance management: A framework for management control systems research*. International Journal of Operations & Production Management, 23(1), 56-74.

Brändle, L., Berger, E. S. C., Golla, S., & Kuckertz, A. (2018). I am what I am – How nascent entrepreneurs' social identity affects their entrepreneurial selfefficacy. *Journal of Business Venturing Insights, 9*, 17–23. https://doi.org/10.1016/j.jbvi.2017.12.001

Bui, H. T. M. (2015). From passive to active: The impact of the flipped classroom through social learning platforms on higher education students' learning experiences. *Journal of Hospitality, Leisure, Sport & Tourism Education, 18*, 33–38. https://doi.org/10.1016/j.jhlste.2015.02.002

Cano, E. (2015). Las rúbricas como instrumento de evaluación de competencias en Educación Superior: ¿Uso o abuso? *Revista de Currículum y Formación del Profesorado, 19*, 265–280.

Capella Peris, C., Gil Gómez, J., Martí Puig, M., & Ruíz Bernardo, P. (2020). Development and validation of a scale to assess social entrepreneurship competency in higher education. *Journal of Social Entrepreneurship, 11*(1), 23–39. https://doi.org/10.1080/19420676.2018.1545686

Cedefop. (2009). *The shift to learning outcomes: Policies and practices in Europe*. Luxembourg: Publications Office.

Cedefop. (2010). *Learning outcomes approaches in VET curricula: A comparative analysis of nine European countries*. Luxembourg: Publications Office.

Cedefop. (2016). *Application of learning outcomes approaches across Europe: A comparative study* (Cedefop reference series; No. 105). Luxembourg: Publications Office.

Cedefop. (2017). *ESCO handbook: European Skills, Competences, Qualifications and Occupations*. European Commission.

Chang, J. Y. C., Benamraoui, A., & Rieple, A. (2014a). Learning by doing as an approach to teaching social entrepreneurship. *Innovations in Education and Teaching International, 51*(5), 459–471. https://doi.org/10.1080/14703297.2013.78525

Chang, J. Y. C., Benamraoui, A., & Rieple, A. (2014b). Stimulating learning about social entrepreneurship through income generation projects. *International Journal of Entrepreneurial Behavior & Research, 20*(5), 417–437. https://doi.org/10.1108/IJEBR1020120111

Coimbra Group Executive Board (2018). Coimbra Group Statement on European Universities Networks. https://www.coimbra-group.eu/category/policy-papers/.

Coimbra Group Executive Board (2021). Coimbra Group Statement on the rolling out of the European Universities Initiative after the pilot phase 7th June 2021. https://www.coimbragroup.eu/category/policy-papers/.

Council of the European Union. (2017). *Council Recommendation of 20 November 2017 on tracking graduates* (2017/C 423/01). Official Journal of the European Union, C423, . https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017H1209%2801%29

Council of the European Union (2018). Council conclusions on moving towards a vision of a European Education Area. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018XG0607%2801%29.

Council of the European Union (2019). Council Resolution on further developing the European Education Area to support future oriented education and training systems. https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019G1118%2801%29.

Council of the European Union (2021a). Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021G0226(01).

Council of the European Union (2021b). Council conclusions on the European Universities initiative – Bridging higher education, research, innovation and society: Paving the way for a new di- mension in European higher education. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021XG0610%2802%29.

Council of the European Union. (2022). *Council conclusions on the European Universities initiative—bridging higher education, research, innovation and society*. Official Journal of the European Union.

Coryn, C. L. S., Noakes, L. A., Westine, C. D., & Schröter, D. C. (2011). A systematic review of theorydriven evaluation practice from 1990 to 2009. *American Journal of Evaluation, 32*(2), 199–226. https://doi.org/10.1177/1098214010389321

Craciun, D., & Orosz, K. (2020). *Benefits and costs of transnational collaborative partnerships in higher education*(EENEE Analytical Report No. 36). European Expert Network on Economics of Education (EENEE).

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications

Curtis, D. (2004). The assessment of generic skills. In J. Gibb (Ed.), *Generic Skills in Vocational Education and Training: Research Readings* (pp. 136–156). Adelaide, AU: National Centre for Vocational Education Research.

Curtis, D. (2010). *Defining, assessing and measuring generic competencies*. Adelaide: University of South Australia.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed.). Sage Publications

Dickel, P., & Eckardt, G. (2021). Who wants to be a social entrepreneur? The role of gender and sustainability orientation. *Journal of Small Business Management, 59*(1), 196–218. https://doi.org/10.1080/00472778.2019.1704489

Directorate General for Education, Youth, Sport and Culture (European Commission). (2025). *Report on the outcomes and transformational potential of the European Universities initiative* (Grumbinaitė, I., Colus, F., & Buitrago Carvajal, H.). Publications Office of the European Union. https://doi.org/10.2766/32313

Duncan Horner, E. M., Farrelly, M. A., & Rogers, B. C. (2022). Understanding the social entrepreneur: A new intentions model for advancing equity, social justice and sustainability. *Journal of Entrepreneurship in Emerging Economies, 14*(3), 361–391. https://doi.org/10.1108/JEEE1020200359

Egodawatle, G. (2010). A rubric to self assess and peer assess mathematical problem solving tasks of college students. *Acta Didactica Napocensia, 3*, 75–88.

European Association for Quality Assurance in Higher Education (ENQA). (2015). *Standards and guidelines for quality assurance in the European Higher Education Area* (ESG).

Erasmus Student Network (2022). *For more inclusive & engaging Erasmus+ mobilities*.

European Commission. (2017, May 30). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a renewed EU agenda for higher education* (COM (2017) 247 final) [Communication]. European Commission

European Commission. (2019a). *Commission staff working document: Accompanying the document Communication on Achieving the European Education Area by 2025*. SWD(2019) 25 final.

European Commission. (2019b). *Erasmus+ higher education impact study*. Publications Office of the European Union. https://op.europa.eu/en/publication-detail/-/publication/96e6f2ea-f56e-11e9-8c1f-01aa75ed71a1

European Commission (2022a). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions on a European strategy for universities*. https://education.ec.europa.eu/document/commission-communication-on-a-european-strategy-for-universities.

European Commission, Directorate-General for Education, Youth, Sport and Culture. (2022b). *Blended Intensive Programmes (BIP) handbook*. Publications Office of the European Union. https://data.europa.eu/doi/10.2766/86714

European Commission / EACEA / Eurydice. (2024). *The European Higher Education Area in 2024: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.

European Council, *European Council meeting (14 December 2017) – Conclusions*, EUCO 19/1/17 REV 1, 14 December 2017, https://www.consilium.europa.eu/media/32204/14-final-conclusions-rev1-en.pdf

European Higher Education Area. (2020). *Rome communiqué – Annex 3: Recommendations to National Authorities for the Enhancement of Higher Education Learning and Teaching in the EHEA*. https://www.ehea.info/page-ministerial-conference-rome-2020

European Council. (2018, May 22). Council recommendation on key competences for lifelong learning. *EURLex*. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)&from=RO

European Ministers of Education. (1999). *The Bologna Declaration of 19 June 1999: Joint declaration of the European Ministers of Education*. Retrieved from http://www.ehea.info/

European Ministers of Education. (2018, May 25). *Paris Communiqué* [Ministerial communiqué]. European Higher Education Area (EHEA).

European Union. (2020). *EUROGRADUATE pilot study*. Publications Office of the European Union. https://op.europa.eu/en/publication-detail/-/publication/08b6c0e2-4417-11eb-b59f-01aa75ed71a1/language-en

Eurydice. (2020). *Mobility scoreboard: Higher education background report 2018/19*. Publications Office of the European Union. https://op.europa.eu/en/publication-detail/-/publication/2e8bd88d-3f32-11eb-b27b-01aa75ed71a1/language-en

Foote, M. Q. (2016). *Long-term engagement in pedagogical change: Staff perspectives and enablers*. *Teaching and Learning Quarterly*, 22(3), 30–50.

Foucrier, T., & Wiek, A. (2019). A process oriented framework of competencies for sustainability entrepreneurship. *Sustainability, 11*(24). https://doi.org/10.3390/su11247250

Frambach, R. T., & Schillewaert, N. (2002). *Organizational innovation adoption: A multi-level framework of determinants and opportunities for future research*. *Journal of Business Research, 55*(2), 163–176. https://doi.org/10.1016/S0148-2963(00)00152-1

Fuchs, L., Cuevas-Garcia, C. and Bombaerts, G., 'The societal role of universities and their alliances: the case of the EuroTeQ Engineering University', *Tertiary Education Management*, Vol. 29, 2023, pp. 263–277, https://doi.org/10.1007/s11233-023-09126-x

Funnell, S. C., & Rogers, P. J. (2011). *Purposeful program theory: Effective use of theories of change and logic models*. JosseyBass.

Giangrande, N., White, R. M., East, M., Jackson, R., Clarke, T., Coste, M. S., ... Penha Lopes, G. (2019). Competency framework to assess and activate education for sustainable development: Addressing the UN Sustainable Development Goals 4.7 challenge. *Sustainability, 11*, 2832. https://doi.org/10.3390/su11082832

Gibb, S. (2014). Soft skills assessment: Theory development and the research agenda. *International Journal of Lifelong Education, 33*(4), 455–471.

Godonoga, A., & Sporn, B. (2023). The conceptualisation of socially responsible universities in higher education research: A systematic literature review. *Studies in Higher Education, 48*(3), 445–459. https://doi.org/10.1080/03075079.2022.2145462

Gonzalez, J., & Wagenaar, R. (Eds.). (2008). *Universities' contribution to the Bologna Process: An introduction* (2nd ed.). Bilbao, Spain: Universidad Deusto.

Guerra, R., & Costa, E. (2021). Institutional challenges in the sustainable implementation of pedagogical innovation. *Higher Education Quarterly, 75*(4), 561–575. https://doi.org/10.1111/hequ.12279

Hart, J., Noack, M., Plaimauer, C., & Bjørnavold, J. (2021). *Towards a structured and consistent terminology on transversal skills and competences: 3rd report to ESCO Member States Working Group*. [Rapporto interno ESCO].

Harvey, L. and Green, D. (1993) Defining quality. *Assessment and Evaluation in Higher Education*, 18(1), pp. 9-34.

Harvey, L. and Williams, J. (2010) Fifteen years of quality in higher education, *Quality in Higher Education*, 16(1), pp. 3-36.

Harvey L., (2024) Extended Editorial: Defining quality thirty years on: quality, standards, assurance, culture and epistemology, *Quality in Higher Education*, 30:2, 145-184, DOI: 10.1080/13538322.2024.2355026

Haug, G. (2022). *Designing impactful collaboration in COIL projects*. In F. Hunter, R. Ammigan, H. de Wit, J. Gregersen-Hermans, E. Jones, & A. C. Murphy (Eds.), *Internationalisation in higher education: Responding to new opportunities and challenges. Ten years of research by the Centre for Higher Education Internationalisation (CHEI)* (pp. 215–217). Milan: Università Cattolica del Sacro Cuore.

Herl, H., O'Neil, H., Chung, G., Bianchi, C., Wang, S.L., Mayer, R., Lee, C., Choi, A., Suen, T., & Tu, A. (1999). *Final report for validation of problem solving measures* (CSE Technical Report No. 501). Los Angeles, CA: Center for the Study of Evaluation and National Center for Research in Evaluation, Standards and Student Testing.

Higher Level Group on the Modernisation of Higher Education. (2013). *Report to the European Commission on improving the quality of teaching and learning in Europe's higher education institutions*. European Union.

Hinderer, S., & Kuckertz, A. (2022). The bioeconomy transformation as an external enabler of sustainable entrepreneurship. *Business Strategy and the Environment, 31*(7). https://doi.org/10.1002/bse.305

Hortigüela Alcalá, D., Palacios Picos, A., & López Pasto, V. (2019). The impact of formative and shared or co assessment on the acquisition of transversal competences in higher education. *Assessment & Evaluation in Higher Education, 44*, 933–945. https://doi.org/10.1080/02602938.2019.1654091

Illeris, K. (2003). Towards a contemporary and comprehensive theory of learning. *International Journal of Lifelong Education, 22*(4), 396–406.

Isusi Fagoga, R., & Garcia Aracil, A. (2020). Assessing master students' competencies using rubrics: Lessons learned from future secondary education teachers. *Sustainability, 12*, 9826. https://doi.org/10.3390/su12239826

Jungblut, J., Vukasovic, M., & Stensaker, B. (2015). Student perspectives on quality in higher education. *European Journal of Higher Education*. https://doi.org/10.1080/21568235.2014.998693

Klemenčič, M., Pupinis, M., & Kirdulytė, G. (2020). Mapping and analysis of student-centred learning and teaching practices: Usable knowledge to support more inclusive, high quality higher education. *NESET report*. Luxembourg: Publications Office of the European Union. https://doi.org/10.2766/67668

Klemenčič, M. (2015). Student involvement in university quality enhancement. In J. Huisman, H. de Boer, D. D. Dill, & M. Souto Otero (Eds.), *The Palgrave international handbook of higher education policy and governance* (pp. 225–242). Palgrave Macmillan. https://doi.org/10.1007/978-1-137-45617-5_13

Kechagias, K. (2011). *Teaching and assessing soft skills*. Measuring and Assessing Soft Skills Report (MASS project), Thessaloniki.

Kickul, J., Gundry, L., Mitra, P., & Berçot, L. (2018). Designing with purpose: Advocating innovation, impact, sustainability, and scale in social entrepreneurship education. *Entrepreneurship Education and Pedagogy, 1*(2), 205–221. https://doi.org/10.1177/2515127418772177

Kluger, A., & De Nisi, A. (1996). The effects of feedback interventions on performance: A historical review, a metaanalysis, and a preliminary feedback intervention theory. *Psychological Bulletin, 119*, 254–284.

Krause, K.-L. (2012) Addressing the wicked problem of quality in higher education: theoretical approaches and implications, Higher Education Research & Development, 31(3), pp. 285-297.

Hueske, A.-K., Hockerts, K., (2023). Social entrepreneurship competencies: a critical review and future research, in: 9th EMES International Research Conference on Social Enterprise. Frankfurt a.M.

Laguna Sánchez, P., Abad, P., de la Fuente Cabrero, C., & Calero, R. (2020). A university training programme for acquiring entrepreneurial and transversal employability skills: A students' assessment. *Sustainability, 12*, 796. https://doi.org/10.3390/su12020796

Lán, T., Blok, V., & Wesselink, R. (2014). Learning apart and together: Towards an integrated competence framework for sustainable entrepreneurship in higher education. *Journal of Cleaner Production, 62*, 37–47. https://doi.org/10.1016/j.jclepro.2013.03.036

Larsen, V. (2013). Transversal knowledge formations in professional bachelor education employing problem-based learning (PBL). *Journal of Problem-Based Learning in Higher Education, 1*, 53–71.

López Pastor, V., & Sicilia Camacho, A. (2017). Formative and shared assessment in higher education: Lessons learned and challenges for the future. *Assessment & Evaluation in Higher Education, 42*, 77–97. https://doi.org/10.1080/02602938.2016.1160205

Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*. Klagenfurt: Beltz. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-395173

M. A. S., SáezGambín, D., GonzálezGeraldo, J. L., & GarcíaRomero, D. (2022). Transversal competences and employability of university students: Converging towards servicelearning. *Education Sciences, 12*(4), 265. https://doi.org/10.3390/educsci12040265

McCowan, T., de Gayardon, A., Morley, L., & Wangenge-Ouma, G. (2022). *Transforming higher education for sustainable development: A global review of sustainability initiatives in higher education*. UNESCO International Institute for Educational Planning (IIEP). https://unesdoc.unesco.org/ark:/48223/pf0000381322

McCurry, D., & Bryce, J. (1997). *The schoolbased key competencies levels assessment project* (Final report). Canberra, AU: Department of Employment, Education, Training and Youth Affairs.

McCurry, D., & Bryce, J. (2000). *Victorian Board of Studies: Key competencies levels assessment trial* (Working Paper No. 2). Melbourne, AU: Victorian Curriculum and Assessment Authority.

McMullen, J. S., & Bergman, B. J. (2017). Social entrepreneurship and the development paradox of prosocial motivation: A cautionary tale. *Strategic Entrepreneurship Journal, 11*(3), 243–270. https://doi.org/10.1002/sej.1263

Miller, T. L., Wesley, C. L., & Williams, D. E. (2012). Educating the minds of caring hearts: Comparing the views of practitioners and educators on the importance of social entrepreneurship competencies. *Academy of Management Learning & Education, 11*(3), 349–370. https://doi.org/10.5465/amle.2011.0017

Monteiro, S., Almeida, L. S., Gomes, C., & Sinval, J. (2020). Employability profiles of higher education graduates: A person oriented approach. *Studies in Higher Education*.

OECD. (2019). *Conceptual Learning Framework: Transformative Competences for 2030*. OECD. https://www.oecd.org/education/2030%20project/teaching%20and%20learning/learning/transformative%20competencies/Transformative_Competencies_for_2030_concept_note.pdf

OECD. (2002). *Glossary of key terms in evaluation and results-based management*. OECD.

Orhei, L. E., Nandram, S. S., & Vinke, J. (2015). Social entrepreneurship competence: Evidence from founders of social enterprises in Romania. *International Journal of Entrepreneurship and Small Business, 25*(1), 80–105. https://doi.org/10.1504/IJESB.2015.068780

Parpala, A., & Lindblom-Ylänne, S. (2007). University teachers' conceptions of good teaching in the units of high quality education. *Studies in Educational Evaluation, 33*(4), 355–370. https://doi.org/10.1016/j.stueduc.2007.07.009

Panadero, E., Alonso Tapia, J., & Reche, E. (2013). Rubrics vs self assessment scripts effect on self regulation, performance and self efficacy in pre service teachers. *Studies in Educational Evaluation, 39*, 125–132. https://doi.org/10.1016/j.stueduc.2013.07.002

Pache, A. C., & Chowdhury, I. (2012). Social entrepreneurs as institutionally embedded entrepreneurs: Toward a new model of social entrepreneurship education. *Academy of Management Learning & Education, 11*(3). https://doi.org/10.5465/amle.2011.0019

Parmenter, D. (2015). *Key performance indicators: Developing, implementing, and using winning KPIs* (3rd ed.). Wiley

Patton, M. Q. (2008). *Utilization-focused evaluation* (4th ed.). Sage Publications

Pinheiro, R., Wangenge Ouma, G., Balbachevsky, E., & Cai, Y. (2015). The role of higher education in society and the changing institutionalized features in higher education. In J. Huisman, H. de Boer, D. D. Dill, & M. Souto Otero (Eds.), *The Palgrave international handbook of higher education policy and governance* (pp. 225–242). Palgrave Macmillan. https://doi.org/10.1007/978-1-137-45617-5_13

Pless, N. M., Maak, T., & Stahl, G. K. (2011). Developing responsible global leaders through international service learning programs: The Ulysses experience. *Academy of Management Learning & Education, 10*(2), 237–260. https://doi.org/10.5465/AMLE.2011.62798932

Ploum, L., Blok, V., Lans, T., & Omta, O. (2018a). Exploring the relation between individual moral antecedents and entrepreneurial opportunity recognition for sustainable development. *Journal of Cleaner Production, 172*, 1582–1591. https://doi.org/10.1016/j.jclepro.2017.10.296

Ploum, L., Blok, V., Lans, T., & Omta, O. (2018b). Toward a validated competence framework for sustainable entrepreneurship. *Organization & Environment, 31*(2), 113–132. https://doi.org/10.1177/1086026617697039

Quardokus Fisher, K. M., & Koretsky, M. D. (2021). *Scaling faculty-driven educational innovation: Champions and collaborative networks*. *Active Learning in Higher Education, 22*(1), 15–32. https://doi.org/10.1177/146978742094238

Rogers, P. J., & Woolcock, M. (2023). *Process and implementation evaluations: A primer* (CID Faculty Working Paper No. 433). Center for International Development at Harvard University.

Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach*. (7th ed.). Sage Publications

Sala, A., Punie, Y., Garkov, V., & Cabrera Giráldez, M. (2020). *LifeComp: The European framework for personal, social and learningtolearn key competence* (EUR 30246 EN). Luxembourg: Publications Office of the EU. https://doi.org/10.2760/922681

Scriven, M. (1991). *Evaluation thesaurus* (4th ed.). Sage Publications.
Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach*. (7th ed.). Sage Publications

Sidhu, R., & Gage, W. H. (2021). Enhancing the odds of adopting elearning or communityfocused experiential learning as a teaching practice amongst university faculty. *Heliyon, 7*, e06704. https://doi.org/10.1016/j.heliyon.2021.e06704

Soulé, M. V., Parmaxi, A., & Nicolaou, A. (2025). Internationalization at home in higher education: A systematic review of teaching and learning practices. *Journal of Applied Research in Higher Education, 17*(7), 29–60. https://doi.org/10.1108/JARHE-10-2023-0484

Smith, W. K., Besharov, M. L., Wessels, A. K., & Chertok, M. (2012). A paradoxical leadership model for social entrepreneurs: Challenges, leadership skills, and pedagogical tools for managing social and commercial demands. *Academy of Management Learning & Education, 11*(3), 463–478. https://doi.org/10.5465/amle.2011.0021

Soulé, M. V., de Wit, H., & Gaisch, M. (2023). Internationalisation at home in higher education: A systematic review of teaching and learning practices. *Higher Education*. https://doi.org/10.1007/s10734-023-01084-5

Stanley, J. (2015). Learning outcomes: From policy discourse to practice. *European Journal of Education, 50*, 404–419. https://doi.org/10.1111/ejed.12146

Stepanyan, K., Treleaven, L., & Fisher, K. M. Q. (2013). *Adapting innovations for sustainable impact in educational settings*. *Distance Education, 34*(2), 139–156. https://doi.org/10.1080/01587919.2013.793641

Stern, E., Stame, N., Mayne, J., Forss, K., Davies, R., & Befani, B. (2012, April). *Broadening the range of designs and methods for impact evaluations* (DFID Working Paper No. 38). Department for International Development.

Teixeira, P., & Klemenčič, M. (2021). Valuing the civic role of university education in an age of competition and rapid change. In H. van't Land et al. (Eds.), *The Promise of Higher Education*. https://doi.org/10.1007/978-3-030-67245-4_23

Thomas, S., Heinrich, G., et al. (2009). *What farmers want: Collective capacity for sustainable entrepreneurship*. International Journal of Agricultural Sustainability, 7(2), 130–146. https://doi.org/10.3763/ijas.2009.0439

Troper, J., & Smith, C. (1997). Workplace readiness portfolios. In H. O'Neil (Ed.), *Workforce readiness: Competencies and assessment* (pp. 357–382). Mahwah, NJ: Lawrence Erlbaum.

Tiwari, P., Bhat, A. K., & Tikoria, J. (2017). The role of emotional intelligence and self efficacy on social entrepreneurial attitudes and intentions. *Journal of Social Entrepreneurship, 8*(2), 165–185. https://doi.org/10.1080/19420676.2017.1371628

UNESCO (1998) *World Declaration on Higher Education for the Twenty-First Century: Vision and Action and Framework for Priority Action for Change and Development in Higher Education*. Available at: http://www.unesco.org/education/educprog/wche/declaration_eng.htm

United Nations. (2015). *About the Sustainable Development Goals*. Retrieved 30 September 2020, from https://www.un.org/sustainabledevelopment/sustainable-development-goals/

Weinert, F. E. (2001). Concept of competence: A conceptual clarification. In D. S. Rychen & L. H. Salganik (Eds.), *Defining and selecting key competencies* (pp. 45–65). Göttingen: Hogrefe & Huber.

Weiss, C. H. (1998). *Evaluation: Methods for studying programs and policies*. Pearson

World Bank. (2004). *Monitoring and evaluation: Some tools, methods and approaches*. The World Bank

Zenkienė, L. (2020). *Institutional work of quality in higher education: A study of crossborder joint programmes* [Doctoral dissertation, Ghent University, Faculty of Political and Social Sciences]. Ghent University Library. https://lib.ugent.be/catalog/pug01:8673328