

Report on BAUHAUS4EU educational offerings

Version 1.0





Report on BAUHAUS4EU educational offerings

Work Package 3: Conceptual framework for
BAUHAUS4EU education & training formats

Deliverable: D 3.1

Delivery Date: 19/06/2026

Report Version: 1.0

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor the granting authority can be held responsible for them.



TABLE OF CONTENT

ALLIANCE AND CONSORTIUM	7
Executive Summary	10
1. Introduction	11
1.1 Rationale and objectives of the document	11
1.2 WP3 Context and Tasks	12
2. Methodology	14
2.1 Regulatory and Institutional Mapping	14
2.2 Course Mapping and Evaluation Framework	14
2.3 Mapping innovative pedagogies, tools and infrastructures	15
2.4 Conclusion	16
3. BAUHAUS4EU innovative educational offerings	17
3.1 Cornerstones of the B4EU educational offerings	17
3.1.1 Regional Innovation Smart Specialisation Strategies	17
3.1.2 Future Skills	18
3.1.4 Student-centred approach: innovative formats	19
3.1.5 International experiences	20
3.2 Features of B4EU education offerings	20
3.2.1 Mobility	20
3.2.2 Flexibility	20
3.2.3 Interdisciplinarity	21
3.2.4 Research- and challenge-based learning	21
3.2.5 Diversity and Inclusivity	21
3.3 Educational and Training Formats	21
3.3.1 Joint degrees	22
3.3.2 European BAUHAUS courses	23
3.3.3 Micro-credentials	24
3.4 Student-led Courses and Regional Living Labs	25
4. Review of the Existing Regulatory and Educational Landscape	27
4.1 Current state of the educational offerings	27
4.2 Structure of the educational offerings within the Alliance, Structure and Legal Context	28
4.2.1 Bachelor Programmes	28
4.2.2 Master Programmes	29
4.2.3 PhD programmes	30





4.2.4 Micro-credentials	30
4.2.5 General Conclusions	31
4.3 Analysis of the current offerings and identification of potential gaps	32
4.3.1 RIS3 Thematic Areas	32
4.3.2 Future Skills	34
4.4 Analysis of English-taught courses within the Alliance	38
4.4.1 Distribution of RIS3 Topics	38
4.4.2 Distribution of Future Skills	40
4.4.3 Cross-Pattern Insights	41
4.4.4 Strategic Gaps Identified	42
4.5 Analysis of overall educational offering within the Alliance	42
4.5.1 Institutional Profiles and Areas of Strength	43
4.5.2 Alliance-Level Thematic Convergence	45
4.5.3 Complementarity and Synergy Potential	46
4.5.4 Underrepresented Domains and Strategic Opportunities for Future Developments	46
4.6 Pedagogical landscape and implications for the Alliance	48
4.7 Strategic Conclusions	50
5. Recommendations for Future BAUHAUS4EU Educational Offerings	52
5.1 BAUHAUS4EU Course Catalogue: a Development Plan	52
5.1.1 RIS3 Priorities	52
5.1.2 Systematic Integration of Future Skills	53
5.1.3 Developing Educational Offerings for Stakeholders	53
5.1.4 Pedagogical Structuring of the Catalogue	53
5.1.5 Enhancing English-Taught Courses: Rebalancing RIS3 Coverage, Strengthening Future Skills and Enhancing Pedagogical Standards	53
5.2 Joint Degree Development	54
5.2.1 Leveraging Complementarities Across RIS3 Domains	55
5.2.2 Promoting Flexible and Modular Educational Architectures	55
5.3 Micro-credentials Development	56
5.4 Guidelines for the Implementation of Educational Offerings	57
5.4.1. Strategic Level: Vision, Positioning, and Feasibility	58
5.4.2. Academic Level: Curriculum Design and Pedagogical Coherence	58
5.4.3. Operational Level: Execution, Administration, and Quality Assurance	59
5.5 From Dissemination to a Capacity Building strategy	60
5.5.1 Principles and Approach	60
5.5.2 Key Instruments and Channels	61
5.5.3 Virtual Teaching and Learning Center (vTLC) as a core dissemination infrastructure	63
5.5.4 Governance, Sustainability and Impact	63
5.6 Risk Management and Mitigation	66





6. General Conclusions	69
6.1 Key Systemic Challenges and Constraints	69
6.2 Strategic Outlook and Future Directions	71
6.3 Final Conclusions	71
Appendix	72
Appendix 1: The three governance levels of implementation	72





ALLIANCE AND CONSORTIUM

BAUHAUS4EU – A European University for Resilient, Sustainable, Inclusive and Beautiful Regions

The BAUHAUS4EU Alliance brings together 10 member institutions and 67 associated partners from across Europe, forming a shared European campus and a vibrant learning community of 124,000 students and 10,000 staff. Guided by a common strategy, the partner institutions are committed to deepening their transnational cooperation through joint educational offers and to fostering a European identity rooted in the principle of unity in diversity.

Firmly anchored in the UN Sustainable Development Goals, the European Green Deal, and the New European Bauhaus initiative, the Alliance works hand in hand with regional ecosystems to bridge diverse territories, combine strengths, and transform challenges into opportunities for growth.

By enhancing employability, promoting lifelong learning, and empowering students and staff to tackle the defining issues of our time, BAUHAUS4EU is pioneering a new model of European higher education – one that strengthens regional ecosystems, sparks innovation, and builds a sustainable future for all.

Table 1 Full Partner universities in the BAUHAUS4EU Consortium

BUW	BAUHAUS-UNIVERSITAET WEIMAR	DE
BTH	BLEKINGE TEKNISKA HOGSKOLA	SE
UNIBG	UNIVERSITA' DEGLI STUDI DI BERGAMO	IT
UACEG	UNIVERSITET PO ARCHITEKTURA STROITELSTVO I GEODEZIJA (UASG)	BG
UEKAT	UNIWERSYTET EKONOMICZNY W KATOWICACH	PL
IPCB	INSTITUTO POLITÉCNICO DE CASTELO BRANCO	PT
UPJV	UNIVERSITE DE PICARDIE JULES VERNE	FR
ULL2	UNIVERSITE LUMIERE LYON 2	FR
POLIS	UNIVERSITETI POLIS SHPK	AL
UOM	UNIVERSITY OF MACEDONIA	EL



Document Overview

Project Acronym	BAUHAUS4EU
Project Name	A European University for Resilient, Sustainable, Inclusive and Beautiful Regions
Project No	101177259
Start Date	01/01/2025
End Date	31/12/2028
Contributing WP	WP3
WP-Lead	UNIVERSITA' DEGLI STUDI DI BERGAMO
Deliverable identifier	D 3.1 - BAUHAUS4EU educational offerings
Contractual Delivery Date: M18	Actual Delivery Date:
Nature: Deliverable	Version: 1.0
Dissemination level	PU

Version History

Version	Created/Modified	Comments
1.0	19.06.2026	First Version of D3.1



Abbreviations

CA	Consortium Agreement
D	Deliverables
EC	European Commission
EBCs	European BAUHAUS Courses
GA	Grant Agreement
IPC	Institutional Project Coordinator
MC(s)	Micro-credentials
MS(s)	Milestone(s)
PM(s)	Person Month(s)
QA	Quality Assurance
QRMP	Quality and Risk Management Plan
RIS3	Regional Innovation Smart Specialisation Strategies
RLL	Regional Living Labs
SLC	Student-led Courses
WP(s)	Work Package(s)

Executive Summary

This deliverable presents the results of Work Package 3 and establishes the conceptual framework for the development of BAUHAUS4EU educational offerings across the Alliance. It provides the strategic and analytical basis for designing innovative, flexible, and transnational educational formats aligned with the Alliance's mission and European higher education priorities.

The report begins by outlining the rationale, objectives, and methodological framework underpinning the analysis. It explains how the study combines regulatory and institutional mapping, course portfolio analysis, and the identification of innovative pedagogical approaches and infrastructures in order to assess the Alliance's readiness for joint educational development.

It then defines the conceptual foundations of BAUHAUS4EU educational offerings, identifying five key cornerstones: alignment with Regional Innovation Smart Specialisation Strategies (RIS3), integration of Future Skills, adoption of innovative pedagogies and infrastructures, student-centred learning approaches, and international learning experiences. These are complemented by core educational features such as mobility, flexibility, interdisciplinarity, challenge-based learning, and inclusivity.

Subsequently, the deliverable presents a status quo analysis of the Alliance's educational ecosystem, assessing institutional compatibility for joint degrees and micro-credentials, mapping current educational offerings, and identifying strategic strengths, complementarities, and gaps. The analysis shows strong potential for collaboration, particularly at Master's level, while also highlighting regulatory constraints and thematic imbalances in areas such as Artificial Intelligence, ICT, health-related domains, and selected transversal future skills.

Finally, the document formulates strategic recommendations for the future development of the BAUHAUS4EU educational offering, including the expansion of the European BAUHAUS Course Catalogue, the enhancement of English-taught and modular learning opportunities, the progressive development of joint degree programmes, and the implementation of shared governance and dissemination mechanisms. Overall, the deliverable provides an operational framework for guiding the creation of a coherent, innovative, and sustainable European educational ecosystem within the Alliance.



1. Introduction

This introductory chapter presents the conceptual foundations, objectives, and context of Deliverable D3.1 within the BAUHAUS4EU project. It situates the work developed in Work Package 3 (WP3) within the broader strategic landscape of European higher education, outlining how the Alliance seeks to design a coherent framework for innovative and collaborative education and training formats across partner institutions.

The chapter explains the rationale underpinning the Deliverable and its relevance to the evolving European higher education ecosystem, where universities are increasingly called upon to cooperate transnationally, respond to societal challenges, and equip learners with the skills required for sustainable and digital transitions. It also introduces the institutional and methodological context of WP3, highlighting how its three tasks collectively contributed to the development of a shared educational ecosystem within the BAUHAUS4EU Alliance.

In particular, the Deliverable summarises the results of three complementary analytical streams developed within WP3: the assessment of regulatory and institutional compatibility for joint programmes and micro-credentials, the mapping and analysis of the existing educational offering within the Alliance, and the identification of innovative pedagogical strategies and infrastructures supporting collaborative learning and teaching. By integrating these dimensions, the document establishes a strategic reference framework to guide the design and implementation of future BAUHAUS4EU educational formats.

The following sections present the purpose and scope of the Deliverable (Section 1.1), the objectives of the Work Package (Section 1.2) and the context in which WP3 operates within the BAUHAUS4EU project (Section 1.3).

1.1 Rationale and objectives of the document

The transformation of European higher education is taking place in a context defined by profound social, technological, and environmental change. The development of the European Education Area and the European Universities Initiative has accelerated efforts to strengthen cooperation among Higher Education Institutions (HEIs), encouraging the creation of transnational campuses, innovative teaching-learning pathways, and integrated educational ecosystems. Within this evolving landscape, universities are increasingly expected to rethink not only the content of their educational provision but also the structures, pedagogies, and institutional frameworks through which learning takes place.

European policy agendas emphasise the need for universities to actively contribute to addressing the green and digital transitions, to promote social inclusion, and to equip learners with the competences required for a rapidly changing labour market. In this context, educational innovation must be understood as a multidimensional process involving curriculum design, pedagogical approaches, digital infrastructures, and institutional collaboration. European University Alliances are therefore encouraged to experiment with new forms of transnational education capable of combining academic excellence with societal relevance.

Against this background, the BAUHAUS4EU Alliance aims to develop a shared European campus grounded in the principles of resilience, sustainability, inclusion, and beauty inspired by the New European Bauhaus initiative. Through collaboration among ten partner institutions and a wide network of associated regional stakeholders, the Alliance seeks to create innovative educational formats that integrate teaching and regional engagement while fostering a sense of European identity and collective responsibility.

Within this strategic vision, this Deliverable plays a key role in consolidating the analytical and conceptual work carried out in WP3. It provides a structured overview of the educational ecosystem of the Alliance, identifying the institutional conditions, pedagogical strategies, and thematic priorities that underpin the development of the joint educational offering. In doing so, it moves beyond the description of existing courses or programmes to establish a shared conceptual framework capable of guiding the design of future educational initiatives.

More specifically, the Deliverable pursues three main objectives. First, it analyses the regulatory, institutional, and academic environments of the Alliance member institutions in order to assess their compatibility for the development of joint programmes, European BAUHAUS Courses and micro-credentials. Second, it maps and evaluates the existing educational offering within the Alliance, identifying strengths, complementarities, and potential gaps in relation to strategic thematic areas such as Regional Innovation Smart Specialisation Strategies (RIS3) and the Future Skills framework. Third, it integrates innovative pedagogical approaches and learning infrastructures into this analytical framework, highlighting their role in supporting collaborative, flexible, and student-centred educational formats.

Through this integrated analysis, the Deliverable provides strategic guidance for the subsequent Work Packages responsible for implementing the Alliance's educational activities. By combining regulatory feasibility, thematic alignment, and pedagogical innovation into a coherent framework, it supports the development of innovative learning pathways within the BAUHAUS4EU ecosystem. In this respect, the document serves both as a diagnostic assessment of the current educational landscape of the Alliance and as a set of guiding principles for the future development of its joint educational initiatives.

1.2 WP3 Context and Tasks

Work Package 3 (WP3), entitled *Conceptual Framework for BAUHAUS4EU Education and Training Formats* (M1-M18) is led by UNIBG and aims to design the conceptual and methodological foundations for BAUHAUS4EU's educational offering, promoting joint, flexible, and innovative teaching-learning pathways across Alliance member institutions. The overall objective of WP3 is to create a common framework for the design of joint and flexible European curricula for all levels, capable of supporting the design of innovative formats that combine academic excellence, pedagogical innovation, and strong alignment with regional and societal needs. In particular, WP3 ensures that the educational activities and offerings developed within the Alliance are grounded in shared principles, compatible institutional structures, and evidence-based pedagogical approaches. To achieve these goals, the work package integrates theoretical, structural, and pedagogical dimensions to create a coherent strategy for higher education, lifelong learning, and professional training within the alliance. It is divided into three main tasks:

- Task 3.1 (POLIS) develops the framework for joint and flexible curricula;

- Task 3.2 (UACEG) maps and analyses existing educational and training offers within the Alliance;
- Task 3.3 (UNIBG) focuses on pooling innovative pedagogies, tools and infrastructures, identifying effective approaches to teaching, learning, and collaboration.

In view of the above, WP3 has conducted a thorough mapping of the educational profile of every institution, academic offering and pedagogical strategies, tools and infrastructures, in order to identify which skills the Alliance currently does not address sufficiently and needs to develop further in the future.

WP3's three tasks form an integrated analytical framework that combines institutional readiness, educational capacity, and pedagogical innovation. The outcomes of WP3 therefore provide the evidence-base required for the implementation of the educational activities developed in subsequent Work Packages, including micro-credentials (WP6), European BAUHAUS courses (WP7), and joint degree programmes (WP8).

Hence, this Deliverable consolidates the results produced across these tasks, bringing together regulatory analysis, educational mapping, and pedagogical innovation into a single conceptual framework. By doing so, it establishes the strategic foundation for the BAUHAUS4EU educational ecosystem and supports the transition from analytical assessment to the operational development of joint educational offers within the Alliance.

2. Methodology

This chapter describes the integrated methodological framework applied across WP3 (Tasks 3.1, 3.2 and 3.3) to design, assess, and consolidate the joint education ecosystem of the BAUHAUS4EU Alliance. According to the different tasks' purposes, the methodological design is conceived as an integrated framework that intertwines regulatory and institutional mapping, structured comparative analysis, AI-supported processes, and participatory validation, grounded in a robust literature review. Together, these components ensure an evidence-oriented approach, comparable across institutions and aligned with both strategic priorities (RIS3 and future skills) and regulatory feasibility. The process was guided by principles of co-construction, transparency, comparability, and long-term scalability, ensuring shared ownership across partner institutions and enabling future reuse and adaptation of the framework for joint curricula, micro-credentials, and teacher training activities within the Alliance.

2.1 Regulatory and Institutional Mapping

In order to develop the framework for joint and flexible curricula (Task 3.1) WP3 applied a structured, questionnaire-based methodology to assess the legal, institutional and academic compatibility of BAUHAUS4EU member institutions for joint degrees and micro-credentials. Two surveys were developed: one covering joint degree frameworks and one focusing on micro-credentials, especially on their regulatory framework. Their purpose was to capture comparable data on legal provisions, curriculum structures, quality assurance, student mobility, diploma regulations and institutional experience.

The questionnaires were designed through an iterative and collaborative process and refined through partner feedback. They were implemented via online forms, enabling each institution to submit a single validated response based on internal consultations with academic, legal, and administrative units. Responses were then translated into institutional matrices reflecting key dimensions such as legal compliance, programme approval procedures, assessment systems and micro-credential frameworks.

The data were analysed in two stages:

1. A descriptive mapping of national and institutional systems;
2. A readiness assessment using numerical coding (enablers, constraints, barriers).

Heat maps and network analysis were used to visualise institutional compatibility and identify clusters of institutions with high potential for joint educational offers. This methodology provided a robust evidence-based method for determining which institutional combinations are legally and operationally feasible for joint degrees and micro-credentials. Further details are provided in the MS6 Report (*Joint Education Framework*) published on the project website.

2.2 Course Mapping and Evaluation Framework

Task 3.2 focused on the systematic mapping and analysis of existing educational and training offers across the Alliance. Two evaluation matrices were developed: one for degree programme courses aligned with RIS3 thematic priorities and one for short training courses aligned with future skills. These matrices captured standardised data on course content, delivery mode, learning outcomes, target groups, accessibility and thematic relevance.

Data collection followed an iterative and collaborative approach. Partner institutions populated the matrices with pilot and consolidated course entries, and the tools were refined based on feedback from all contributors. In the selection of courses, particular attention was given to feasibility criteria. More specifically, courses were prioritised if they could be delivered online or in a hybrid format and were already available in English. The resulting datasets formed the core of the BAUHAUS4EU Course Catalogue and ensured consistency and comparability across institutions.

The analytical phase combined matrix-based aggregation, identification of gaps and AI-assisted classification. Existing Alliance courses were mapped to RIS3 and future skills through binary indicators, enabling the identification of thematic concentrations and gaps. In parallel, English-taught courses and full study programmes in each partner institution were analysed using AI-based semantic models and ISCED-RIS3 mappings, allowing the detection of additional strategic assets beyond the immediate catalogue. This multi-layered approach ensured that both current and potential educational capacities of the Alliance were systematically captured.

Internal documentation of the development of the published course catalogue MS7 (*Existing Education and Training Offer Available within the Alliance*) can be made available upon request.

2.3 Mapping innovative pedagogies, tools and infrastructures

Aimed at mapping and pooling innovative pedagogies, and tools and infrastructures (Task 3.3.), a systematic methodological approach was adopted to guarantee academic refinement, internal consistency, and cross-Alliance alignment. The methodology combined desk research, collaborative data collection, and qualitative analysis and mirrors New European Bauhaus principles¹, among which co-creation, interdisciplinarity, and sustainability.

The process was guided by core principles providing for shared responsibility through the active participation of all partners, standardised data collection across institutional boundaries as well as for the creation of a "pedagogical infrastructure" informing future curriculum design and micro-credentials.

The implementation was performed in three interconnected phases. *Phase 1* established the conceptual foundation through a literature review of academic and policy studies as well as other Alliance and Universities' initiatives on innovative pedagogies, digital learning, and transformative teaching models in higher education. This resulted in the *Glossary of Innovative Pedagogical Strategies and Infrastructures* and provided the theoretical grounding for the mapping criteria and ensured conceptual alignment between literature-based definitions and institutional practices.

In *Phase 2*, based on the mentioned taxonomy, a collaborative matrix of innovative teaching pedagogies and infrastructures across partner institutions for desk-based data collection was devised. Qualitative analysis used inductive and deductive reasoning to identify innovation clusters. This resulted in the *BAUHAUS4EU Map* and the *Online Catalogue of Innovative Pedagogies, Tools and Infrastructures*, an open-access tool for dynamic visualisation and community building. A prototype of this has been developed in the next Phase and can be seen in the MS8 Report (*Innovative Pedagogies and Tools within the Alliance*).

Finally, *Phase 3* focused on the digitalisation of results into an interactive online map. This platform

¹ **European Union.** *New European Bauhaus*. https://new-european-bauhaus.europa.eu/index_en.

organises heterogeneous information into an intuitive interface for evidence-informed decision-making. By integrating this into the BAUHAUS4EU website, the mapping becomes a "living resource" that facilitates cross-institutional dialogue and the creation of new collaborations and is key to encouraging long-term innovation.

By combining institutional readiness, course availability and pedagogical strategy into a single framework, Task 3.3 transformed analytical results into operational planning tools, enabling the Alliance to move from mapping and evaluation to implementation-ready joint educational offers. Further details are provided in the MS8 Report published on the project website.

2.4 Conclusion

The combined methodologies of Tasks 3.1, 3.2 and 3.3 provide a coherent, evidence-based foundation for the development of joint educational offers within the BAUHAUS4EU Alliance. Task 3.1 ensured that all proposed initiatives are grounded in a clear understanding of regulatory, legal and institutional feasibility, while Task 3.2 established a systematic and data-driven overview of the Alliance's existing educational capacity and strategic alignment with RIS3 and future skills. Task 3.3 brought these two analytical layers together into an operational framework, translating regulatory readiness and course availability into a structured framework for joint programmes, micro-credentials and innovative learning pathways. Together, the three Tasks ensure that Deliverable D3.1 is not only strategically ambitious but also institutionally realistic, pedagogically coherent and ready for implementation.

3. BAUHAUS4EU innovative educational offerings

The following chapter presents the conceptual and operational framework underpinning the educational offering of the BAUHAUS4EU Alliance, outlining the strategic principles, pedagogical foundations, and implementation pathways that shape its transnational learning ecosystem. Building on the Alliance's commitment to innovation, inclusivity, and regional engagement, the framework articulates how educational formats are designed to respond to societal challenges, foster future-oriented competences, and strengthen European cooperation in higher education. It introduces the core cornerstones that guide curriculum development and pedagogical design, while also highlighting the structural features that characterise the BAUHAUS4EU educational provision, including flexibility, mobility, interdisciplinarity, and challenge-based learning. Finally, the chapter presents the main educational and training formats through which these principles are implemented, offering a structured overview of the Alliance's approach to developing coherent, innovative, and impactful learning opportunities across institutional and national boundaries.

3.1 Cornerstones of the B4EU educational offerings

The framework for BAUHAUS4EU's educational offerings, including joint degrees, courses, and innovative pedagogical tools, is built upon five mutually reinforcing cornerstones: Regional Innovation Smart Specialisation Strategies (RIS3), Future Skills, Innovative Pedagogies and Infrastructures, Student-centred approach and International Experiences. Together, they provide the strategic, methodological, and pedagogical foundations required for a coherent, future oriented, and transnational learning ecosystem within the Alliance.

3.1.1 Regional Innovation Smart Specialisation Strategies

Regional Innovation Smart Specialisation Strategies (RIS3) constitute a foundation of the BAUHAUS4EU educational model, ensuring that all joint academic offers are anchored in regional priorities, societal challenges, and innovation ecosystems. By aligning educational pathways with RIS3 thematic areas, see Figure 1, the framework ensures that curricula respond directly to the needs of European regions and their long term development demands.

How the framework rests on the RIS3 cornerstone:

- It guarantees regional relevance, ensuring that joint programmes contribute meaningfully to territorial development rather than isolated academic constructs.
- It supports evidence-based curriculum design, since courses and joint degrees are mapped against RIS3 areas identified through Milestones 6 and 7 analyses.
- It ensures that BAUHAUS4EU curricula contribute to strengthen regional innovation capacity, fostering collaboration with local stakeholders, industry, and public institutions.
- It provides a shared thematic structure that helps partners identify RIS3 complementarities and build coherent joint degrees drawing on institutional strengths.

Through the strategic integration of RIS3 priorities, the framework becomes outward-looking, mission-driven, and directly connected to real societal challenges.

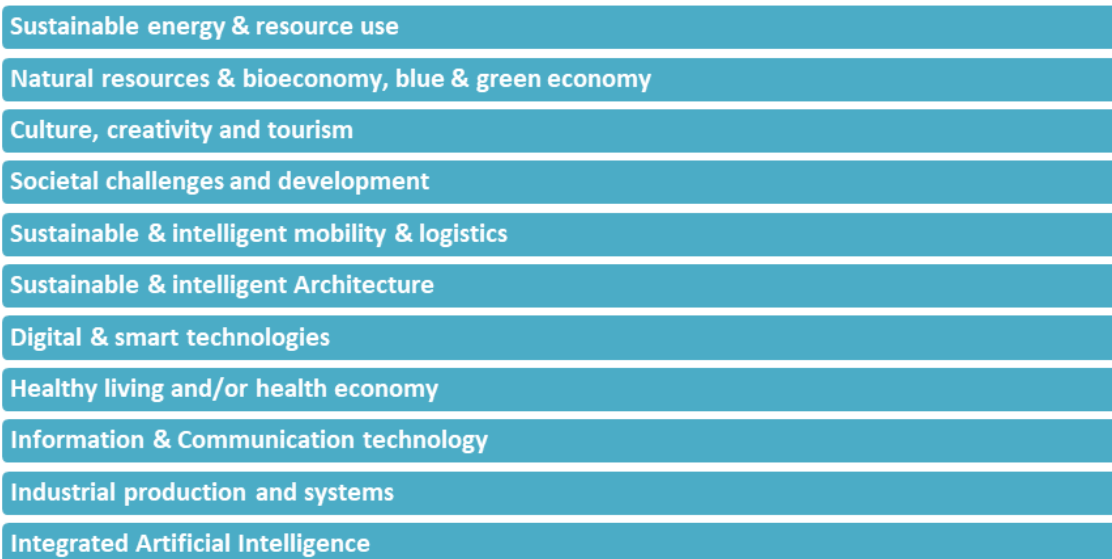


Figure 1 Regional Innovation Smart Specialisation Strategies (RIS3) thematic areas.

3.1.2 Future Skills

Future Skills form the second cornerstone, ensuring that all BAUHAUS4EU educational offerings equip learners with the competencies needed in a rapidly changing labour market and society. These skills, clustered into eight transversal categories described in Figure 2, provide the competence-based backbone of the framework.

How the framework rests on the Future Skills cornerstone:

- It embeds a competency-driven logic into curriculum development and assessment, ensuring relevance for both students and lifelong learners.
- It aligns pedagogical aims with European strategic agendas such as the European Skills Agenda and the New European Bauhaus.
- It supports the development of flexible learning pathways, short courses, micro-credentials, and challenge-based learning modules that can respond quickly to new skill demands.
- It ensures that joint programmes create well equipped graduates capable of navigating complexity, collaborating across cultures, and driving sustainable transformation.

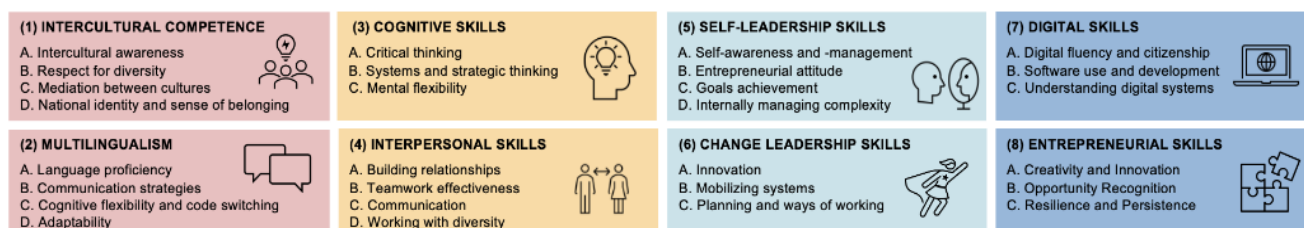


Figure 2 Future skills divided into eight categories and broken down into subskills.

Future Skills ensure that the framework cultivates the capacities required for future European professionals, innovators, and citizens.

3.1.3 Innovative pedagogies and infrastructure

The third cornerstone is the systematic integration of innovative pedagogical approaches, teaching methods, and learning infrastructures, as mapped in Milestone 8. These include active learning, experiential and challenge-based approaches, design thinking, digital and hybrid learning environments, VR/AR labs, HyFlex technologies, and collaborative teaching strategies.

How the framework rests on the “Innovative pedagogies and infrastructure” cornerstone:

- Innovative pedagogies provide the didactic engine of BAUHAUS4EU joint learning formats, ensuring learner-centred, participatory, and high impact teaching across institutions.
- They enable transdisciplinary and experiential learning, which is essential for tackling RIS3 related challenges and future skills development.
- Digital and hybrid infrastructures allow seamless cross border teaching, enabling virtual mobility, shared courses, and co-teaching models at scale.
- They create a shared pedagogical identity within the Alliance, promoting consistency in learning quality while respecting institutional diversity.
- The catalogue of innovative practices fosters capacity building, knowledge sharing, and methodological alignment among Alliance member institutions.

Through this cornerstone, the framework becomes modern, inclusive, flexible, and aligned with evolving European higher education principles.

3.1.4 Student-centred approach: innovative formats

Innovative pedagogies and infrastructures are student-centred, moving beyond traditional classroom structures and focusing on the learner’s experience. These innovative teaching methods and digital tools and infrastructures introduce dynamic, challenge-driven learning environments and enable students to take ownership of their learning thus significantly enriching students’ experience by including them with innovative teaching modalities and introducing dynamic, challenge-driven learning environments.

How the framework rests on the “Student-centred approach: innovative formats” cornerstone:

- Active student participation is prioritised through collaborative learning across partner institutions and engagement in real-world, challenge-based tasks leading to tangible learning outcomes.
- International and interdisciplinary teamwork supports the development of intercultural competences and key transversal skills relevant to complex societal and labour-market needs.
- Flexible mobility formats, including hybrid and blended learning, enhance accessibility, inclusiveness, and equitable participation in joint educational activities.
- These approaches contribute to a strong sense of belonging to a shared European learning community and reinforce cross-institutional cooperation.

Overall, student-centred design fosters deeper engagement and transformative learning experiences, preparing graduates for future societal and labour market demands.

3.1.5 International experiences

International experiences represent the fifth cornerstone, ensuring that BAUHAUS4EU educational formats truly embody the spirit of a European University. The educational offering integrates both physical mobility and internationalisation at home approaches, with the latter referring specifically to virtual courses. Mobility, whether physical, virtual or blended, together with intercultural collaboration, multilingualism, English-taught education, and shared learning environments, contributes to the development of a strong European identity and a vibrant cross border academic community.

How the framework rests on the International experiences cornerstone:

- Internationalisation provides the transnational dimension necessary for joint degrees and shared curricula.
- Mobility opportunities via courses and joint programmes enable students and staff to move smoothly across institutions, gaining first-hand international experience.
- It allows the Alliance to function as a shared European campus, where students may access complementary expertise, infrastructures, and pedagogical traditions from home.
- Joint learning experiences foster intercultural competence, collaboration skills, and European citizenship.
- It strengthens the attractiveness and global reputation of joint programmes, supporting long term sustainability.

This cornerstone ensures that the framework is not only academic but also cultural, social, and experiential.

3.2 Features of B4EU education offerings

This section outlines the core features of the B4EU educational offerings, highlighting the principles that underpin its design and implementation across the Alliance. It illustrates how mobility, flexibility, interdisciplinarity, research- and challenge-based learning, and inclusivity are structurally embedded within the framework. Together, these dimensions contribute to shaping a transnational, innovative, and accessible learning ecosystem aligned with regional and societal needs.

3.2.1 Mobility

The framework enables mobility by offering education open to all members and regional partners across the Alliance. Innovative pedagogies such as HyFlex, blended learning, virtual labs, and shared online platforms make it possible for students, staff and regional collaborators to participate in courses regardless of physical location. By embedding international experiences as a cornerstone, the framework creates a truly transnational learning environment where mobility - virtual, blended, or physical—becomes an integrated component of every learning pathway.

3.2.2 Flexibility

Flexibility is supported through the framework's competence based architecture (Future Skills), course electability in joint degree programmes, and a wide range of digital and hybrid instructional methods. Because the educational offering includes joint programmes, online, blended, micro-credentials, and short course formats, learners can tailor their pathways to personal needs,



professional duties, or regional priorities. The alignment with RIS3 ensures that flexible offerings remain relevant, while innovative teaching methods allow for asynchronous, synchronous, and experiential learning combinations.

3.2.3 Interdisciplinarity

Interdisciplinarity emerges naturally from the combination of RIS3 thematic areas (which often cut across traditional disciplines) and innovative pedagogical strategies such as project based learning, design thinking, and team based learning. The framework encourages joint curriculum development across institutions and departments, creating shared educational and challenge-based modules that integrate technology, culture, sustainability, social sciences, and regional development. This interconnected design enables students to explore complex topics from multiple perspectives and collaborate across fields and institutions.

3.2.4 Research- and challenge-based learning

Challenge based and research driven education is embedded in both the RIS3 and the pedagogical framework. Since RIS3 themes are directly tied to regional innovation needs, they provide authentic, real world challenges for students to analyse and co solve. Innovative methods, such as hackathons, living labs, experiential learning, problem based learning, and interdisciplinary team projects, create structured ways for learners to engage in research informed inquiry. This ensures that joint courses and degrees are not only theoretically grounded but actively contribute to solving societal and territorial challenges.

3.2.5 Diversity and Inclusivity

The framework explicitly includes intercultural competence, multilingualism, interpersonal skills, and self-leadership by implementing Future Skills and competencies essential for inclusive and diverse learning environments. Pedagogical innovation, combined with accessible digital infrastructures, supports the participation of students with varied backgrounds, schedules, and abilities. International experiences broaden exposure to cultural diversity, while flexible and hybrid teaching modalities lower barriers to entry. Together, the framework fosters an inclusive European educational offering where diversity is valued as a pedagogical resource rather than a barrier.

3.3 Educational and Training Formats

The conceptual framework connects the Alliance's pedagogical principles with the institutional realities of its members. The cornerstones and features of BAUHAUS4EU educational offerings were first established, followed by an analysis showing that the capacity to implement these ambitions varies across educational cycles and national regulatory environments. Together, these insights highlight both the potential and the constraints that shape the Alliance's ability to develop integrated programmes.

The framework proposes an adaptable approach for designing three main formats each with its own level of flexibility and feasibility: joint degrees, European BAUHAUS Courses (EBCs) and micro-credentials. Moreover, two new formats are currently under development and are presented in this chapter, namely Student-led Courses and Regional Living Labs. The framework also establishes a

shared reference structure to guide the design and implementation of these educational offers, with the aim of ensuring that all learning activities are aligned with strategic priorities, responsive to regional innovation needs, and consistent with European higher education principles.

3.3.1 Joint degrees

Joint degree programmes represent the most integrated form of academic cooperation within the Alliance. Their development requires aligned pedagogical intentions and robust administrative coordination, making a phased and well-structured approach essential. This section outlines the initial steps institutions should take to prepare for joint degree design, presents the Joint European Degree Label as a guiding framework for meeting shared European criteria, and highlights key challenges that must be addressed to ensure effective and sustainable implementation.

Initiation of joint degree programmes

Beyond academic interest, the development of joint degrees requires administrative and institutional alignment to support the creation of a structured pathway toward their design and implementation. Since this process can be demanding, early collaborative steps are essential for building mutual trust between academic and administrative teams and for preparing institutions for the more complex tasks involved in establishing a joint degree. In this context, the development of short-term joint educational offerings can serve as an initial step, which may include:

- Blended Intensive Programmes (BIPs), which combine physical and virtual mobility to address specific academic or societal challenges;
- Collaborative Online International Learning (COIL) initiatives, enabling structured virtual collaboration between students and staff across institutions;
- Other short-format joint modules, such as micro-credentials, hackathons and summer schools.

These formats can serve as valuable incubators for long-term cooperation, offering academic teams the opportunity to experiment with innovative methods and pedagogies that may later be integrated into jointly designed curricula. To progress toward a full joint degree, two internal discussions are essential within each institution. The first involves securing the agreement and active involvement of administrative units such as legal services, quality assurance, admissions and international relations to support the regulatory and operational aspects of a joint degree. The second concerns confirming the interest, commitment, and pedagogical compatibility of teaching teams across all Alliance member institutions.

Joint European Degree Label

When setting up joint educational offerings between European HEIs, it is important to consider that the Alliance operates in a dynamic political and institutional environment, where the development of European policies in this area continue to evolve. A clear example is the Joint European Degree Label initiative, led by the European Commission, which is still evolving. Based on the information currently available, the initiative is expected to be introduced from mid-2026 onward, and is largely grounded in the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and the European Approach for Quality Assurance of Joint Programmes (EA).

Although this Label will be a voluntary and non-regulatory distinction, it already provides valuable insight into the likely future of joint degrees within the European Higher Education Area. With this in

mind, any conceptual framework adopted by the Alliance must be sufficiently flexible to accommodate and align with future features that may emerge from the Joint European Degree Label.

In this sense, and drawing from the ESG, the ‘jointness’ of any given programme must not be assessed solely in terms of the number of institutions involved in its development. It must also be evaluated qualitatively; that is, the programme should also reflect a set of European criteria, already made available by the ESG on Quality Assurance in the European Higher Education Area (EHEA), such as genuine academic and institutional cooperation. This implies that joint efforts and shared responsibility must extend throughout the entire programme lifecycle, rather than being limited to mobility exchange periods, for example. These continuous efforts in terms of inter-institutional collaboration certainly might present a challenge to “business as usual” in many, if not all, of the partner institutions, since it requires an exercise of stepping out of solely national institutional frameworks to an Alliance-wide one. However, the Joint European Degree Label is expected to help remove unnecessary obstacles, thereby making collaboration more straightforward between partners.

Another important point is that the criteria present in the ESG, which may possibly also be included in the European Joint Degree Label, seem to greatly align with the BAUHAUS4EU core values. They include dimensions such as Inclusiveness, Environmental sustainability and Multilingualism. This could be interpreted as a positive indication for the Alliance, as its core values and collaborative approach already reflect the direction in which European joint degree initiatives are moving. This alignment strengthens the relevance of the Alliance’s efforts and places it in a strong position to adapt to and benefit from upcoming developments such as the Joint European Degree Label.

3.3.2 European BAUHAUS courses

European BAUHAUS Courses provide a flexible and scalable model for translating the Alliance’s values into concrete learning experiences. EBCs allow for collaborative teaching, innovative pedagogies and intercultural exchange without the regulatory complexity of joint programme accreditation. They therefore offer an effective way to establish BAUHAUS4EU cornerstones across institutions, address skill-related gaps, and pilot new forms of curricular cooperation. This subsection introduces the role and design principles of EBCs as a key intermediary component of the Alliance’s educational ecosystem.

EBCs are built on existing and standardised international course formats such as Blended Intensive Programmes (BIPs), Collaborative Online International Learning (COIL) and hackathons. Because these formats are already recognised and structurally defined, they provide a clear and stable template for collaboration.

Their fixed duration, established mobility components and predefined online/hybrid elements reduce the need for structural negotiation. This allows partner institutions to focus on other complex aspects of a joint educational offer: coordinating calendars, aligning content and co-teaching arrangements. They are particularly suitable for piloting cooperation, testing thematic synergies and developing staff experience with joint instructional design. Moreover, these formats can be embedded within existing curricula as components of other courses. EBCs must constitute credit-bearing learning activities that are formally recognised by the participating partner institutions. Blended Intensive Programmes (BIP) and Collaborative Online International Learning (COIL) formats should carry between 3 and 6 ECTS,



while short, intensive formats such as hackathons may be allocated 2 ECTS. COILs and Hackathons must be jointly developed and implemented by at least two BAUHAUS4EU member institutions, while BIPs must involve at least three Alliance member institutions. In addition, EBCs should follow a clearly articulated challenge-based learning approach aligned with the transformation themes of the New European Bauhaus, implement a coherent interdisciplinary teaching and learning design and address real-world transformation challenges while engaging with external and regional partners from industry, civil society or administration.

Once the format is chosen, the priority is to identify and bring together academics who share interest in the topic and in the project. This requires creating visible channels for idea sharing and structured opportunities for meeting and exploring complementarities. It is essential to prioritise strong internal communication to ensure broad dissemination of the EBCs, and then to support connection-building through facilitated matchmaking so that initial awareness can be transformed into concrete joint initiative. The same principle applies when engaging regional partners: once relevant actors and challenges have been identified, they must be connected with academics whose thematic interests align, ensuring that external challenges and expertise can meet and generate meaningful collaboration.

3.3.3 Micro-credentials

Micro-credentials (MCs) represent an agile and adaptable component of the BAUHAUS4EU educational framework, operating within a context of evolving national regulations and institutional practices. At the same time, they help bridge formal education and the rapidly evolving demands of the labour market.

Although most BAUHAUS4EU Alliance partners have experience designing and delivering micro-credentials, this educational format remains relatively under-explored, largely due to the absence of clear regulatory frameworks in most national contexts. However, this gap should not hinder the development of such initiatives. On the contrary, it creates an opportunity for the Alliance to adopt a flexible conceptual framework that enables innovation in the present while remaining adaptable to future national regulations that may emerge.

Regardless of how flexible this framework may be, it must remain aligned with the recommendations set out by the European Council in its Approach to micro-credentials for Lifelong Learning and Employability (2022/C243/02). The document explicitly cites the role of European University Alliances as a driving force of the cooperation between Member States in this regard. In this context, the European approach establishes that micro-credentials should meet the following principles²:

- **Quality-assured:** subject to both internal and external quality assurance procedures.
- **Transparent:** clearly defined, measurable and aligned with recognised standards, including the use of ECTS where appropriate.
- **Relevant:** responsive not only to learners' needs but also designed and delivered in collaboration with relevant regional stakeholders.

² **Council of the European Union. (2022, June 27).** *Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (2022/C 243/02).* Official Journal of the European Union. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02))

- **Based on a valid assessment:** with clearly articulated learning outcomes that can be reliably evaluated against predefined criteria.
- **Flexible and stackable:** enabling accumulation and integration across different learning pathways, including those originating in non-formal learning environments.
- **Recognised:** in accordance with the principles established under the European approach, ensuring their value across institutions and contexts.
- **Portable:** owned by the learner, and easily stored, accessed, and shared.
- **Learner-centred:** designed to meet the needs of specific target groups and focused on the acquisition of relevant competences.
- **Authentic:** verifiable and securely authenticated whenever required.
- **Widely accessible:** disseminated to diverse learner groups in ways that promote inclusiveness and support equitable access to education.

Within the BAUHAUS4EU conceptual framework, and in addition to the principles outlined in the EA, particular attention must be given to aligning Micro-Credentials with Future Skills. This alignment should also be tailored to the different target groups of the Alliance (e.g., Students, Lifelong learners, Academic Staff, Administrative Staff; and Regional Stakeholders). In this sense, the acquisition of Future Skills should be the ultimate learning outcome of Micro-Credentials, since these competences are fully aligned with the objective of capacity building and the reskilling of lifelong-learners, especially those in vulnerable groups.

With this in mind, the Micro-Credentials to be designed by BAUHAUS4EU partners should not form a mere collage of short-term courses, but rather a portfolio that reflects the Alliance's strategy for its educational offerings.

3.4 Student-led Courses and Regional Living Labs

To conclude this overview of the project's educational offer, two additional pedagogical initiatives currently under development should be noted. These formats will be implemented at the local level by each participating institution. While they are aligned in terms of thematic focus, they also follow a common framework established at Alliance level.

Student-led Courses

Student-Led Courses (SLCs) are interdisciplinary learning formats designed and delivered by students (bachelor, master and PhD) with the support of academic mentors. They follow a bottom-up approach and focus on sustainability and inclusion, empowering students as active change agents while contributing to green and inclusive campus transformation. SLCs must be formally recognised by the participating partner institutions with each course awarding 3 ECTS to participating students and need an academic mentor who supervises and guarantees for the students.

Regional Living Labs

Regional Living Labs (RLLs), by contrast, are place-based, experimental learning environments in which interdisciplinary academic teams and regional partners jointly identify regional challenges. Over the course of two semesters, students work hands-on with these actors to co-create solutions through collaborative experimentation and applied research, directly engaging local communities and

stakeholders. Each RLL will constitute a credit-bearing learning activity formally recognised within the respective BAUHAUS4EU partner institution, with a minimum allocation of 2 ECTS per project.

Common Framework

A common framework is essential despite the local implementation of these courses, as it ensures coherence and quality across the Alliance. It provides a shared set of principles, learning objectives and minimum standards, which guarantees that all formats meet comparable academic and pedagogical criteria. This framework is formally established and ensured through the evaluation grid used to assess project applications, which verifies compliance with these shared requirements. This is particularly important for ensuring transparency and trust between partner institutions. At the same time, a common framework strengthens the collective identity and visibility of the Alliance by aligning the courses with its strategic priorities, such as sustainability, inclusion and interdisciplinary collaboration. It also enables the systematic exchange of good practices, resources and methodologies between partners, fostering continuous improvement and innovation. Finally, the framework ensures that regional diversity becomes an added value. By combining shared guidelines with local flexibility, it allows institutions to address specific territorial challenges while contributing to common European objectives, thereby reinforcing both the local relevance and the transnational dimension of the educational offer.



4. Review of the Existing Regulatory and Educational Landscape

This chapter provides a comprehensive overview of the current educational environment within the Alliance, mapping institutional architectures, course structures, and strategic development pathways. Grounded in shared European higher education principles, the Alliance demonstrates a robust baseline for transnational cooperation, particularly within Master's-level programming. However, full integration remains a nuanced task, shaped by diverse national regulatory frameworks, varying administrative procedures, and systemic differences across educational cycles, including Bachelor degrees, PhD programs, and micro-credentials.

To move beyond aspirational cooperation toward operational readiness, this chapter establishes a diagnostic baseline through a detailed mapping of the BAUHAUS4EU Course Catalogue and broader institutional portfolios. It evaluates current and potential English-taught course offerings against two core strategic reference frameworks: the Regional Smart Specialization Strategies (RIS3) Thematic Areas and the transversal Future Skills framework. Through this analysis, the chapter identifies critical thematic strengths, while simultaneously highlighting strategic gaps. Ultimately, these insights lay the groundwork for joint curriculum design, resource optimization, and the co-creation of integrated, future-oriented educational pathways.

4.1 Current state of the educational offerings

The current state of the educational offerings within the Alliance reflects both structural convergence and persistent diversity shaped primarily by national regulatory environments.

The comparative analysis of institutional frameworks demonstrates that the Alliance member institutions operate within a broadly compatible academic system grounded in shared European higher education principles such as quality assurance, credit transparency, and outcome-oriented learning. At the same time, programme approval, accreditation, and diploma issuance continue to vary across jurisdictions, creating conditions in which collaboration is feasible but requires careful coordination.

Evidence gathered across the Alliance through a detailed questionnaire, available in the MS6 Report (*Joint Education Framework*), indicates that compatibility is not uniform across educational cycles. Instead, it follows a differentiated pattern in which certain levels, most notably Master's programmes, provide a more developed basis for integration, while other levels require more deliberate alignment. Many of the observed differences originate not from institutional reluctance but from externally imposed legal frameworks. This suggests that the primary challenge is systemic rather than institutional, reinforcing the need for coordinated governance mechanisms capable of bridging regulatory gaps at the Alliance level.

The Alliance benefits from a shared commitment to internationalisation and collaborative programme development. Existing experience with joint and double degrees, although unevenly distributed, provides institutional knowledge that can support future initiatives. Moreover, the methodological mapping underpinning the analysis offers a realistic understanding of both enabling conditions and



constraints, allowing the Alliance to move beyond aspirational cooperation toward operational readiness.

At the strategic level, the findings displayed in MS6 Report indicate a partnership that is structurally positioned to deepen academic integration, provided that regulatory procedures are progressively harmonised and that institutions adopt flexible implementation models. The overall picture is therefore one of cautious optimism: the foundations for joint educational offers are in place, yet their expansion will depend on sustained coordination, shared standards, and long-term institutional commitment.

4.2 Structure of the educational offerings within the Alliance, Structure and Legal Context

The educational architecture of the Alliance is characterised by a balance between harmonisation and institutional specificity. Across all cycles, the Alliance member institutions demonstrate adherence to core academic values, including rigorous admission processes, academic integrity, and structured progression pathways. Such common ground provides a stable platform for transnational cooperation, even as procedural differences remain visible in areas such as accreditation timelines, language policies, and administrative governance.

A defining feature of the Alliance is the coexistence of compatible academic structures with heterogeneous regulatory environments. While most institutions operate within similar credit systems and programme durations, national legislation continues to influence the pace and scope of curricular innovation. Differences in admissions policies, tuition arrangements, degree-awarding procedures, and academic calendars may complicate joint programme implementation, underscoring the importance of developing shared internal regulations wherever national law permits.

From an operational perspective, the design of joint programmes requires the presence of specialised cross-institutional teams capable of analysing legal, administrative, and socio-economic conditions whilst anticipating the needs for future competence. Such coordinated structures support programme development, foster collective ownership across the Alliance, strengthen institutional resilience and encourage the exchange of good practices.

Equally important is the establishment of sustainable governance mechanisms, long-term funding models, systematic evaluation frameworks and regular quality assessments. These elements are necessary to ensure that joint programmes remain responsive to regulatory, economic, and labour-market developments. These elements transform cooperation from a project-based activity into a strategic institutional function.

4.2.1 Bachelor Programmes

Bachelor-level provision across the Alliance reveals a solid yet evolving basis for collaboration. Academic calendars, semester structures, and core programme architectures display a degree of convergence that enables coordinated teaching schedules and facilitates student mobility. Such structural alignment represents an important precondition for joint programme delivery.

Nevertheless, variability emerges most clearly in accreditation procedures and administrative

approval cycles. In some national contexts, programme creation must align with multi-year evaluation frameworks, whereas others allow comparatively rapid modifications. This divergence does not constitute incompatibility but introduces asymmetry in institutional responsiveness. Consequently, collaborative initiatives must be planned according to the least flexible regulatory environments to ensure synchronised implementation.

Curricular flexibility is widely acknowledged across institutions, although the speed and scope of permissible adjustments differs. Some institutions can introduce modifications through internal governance bodies, while others require multi-layered approval processes involving external authorities. In the context of developing joint programmes, such disparities suggest that collaboration may be more readily pursued among partners operating under broadly compatible regulatory conditions. At the same time, joint educational offers within the Alliance may evolve in different forms, ranging from short-term blended formats such as BIPs, through co-supervision of Master's theses via regional labs and co-tutorship agreements for PhD researchers, up to the highest level of integration represented by joint programmes.

Experience with international provision of degree courses further supports the feasibility of Bachelor-level cooperation. While many partners have historically focused their cross-border programmes, collaboratively delivered, at postgraduate level, the accumulated expertise in managing such provision provides a transferable foundation. In addition, double degree programmes currently being implemented by some partner institutions should be monitored in order to obtain useful information and help the future design of joint programmes. The principal barriers identified, including administrative complexity, legal constraints, and concerns regarding financial sustainability are therefore operational rather than conceptual.

Overall, the Bachelor cycle may be regarded as structurally compatible and operating within a medium-to-high compatibility range rather than full alignment. Institutional willingness is evident, but regulatory conditions will continue to affect the pace of implementation. Strategic planning, adequate resource allocation, and policy support will be necessary to translate willingness into durable programme structures.

4.2.2 Master Programmes

Among all of the educational cycles, Master's degree programmes present a comparatively developed basis for integration. A dominant two-year, 120-ECTS model creates a shared academic baseline across most institutions, supporting opportunities for curricular alignment and joint delivery. Where shorter programmes exist, they typically coexist within compatible credit frameworks, allowing adaptable programme architectures.

Admission standards, progression rules, and thesis requirements demonstrate broad coherence, while the widespread use of English as a language of instruction supports accessibility for international cohorts. Collectively, these factors contribute to the development of transnational learning environments capable of attracting diverse student populations.

Quality assurance practices further contribute to institutional trust. The near-universal requirement for plagiarism detection and formal thesis evaluation signals a shared commitment to academic integrity, an essential condition for joint qualifications. Differences in intellectual property

arrangements or diploma formats may require bilateral agreements, but they do not undermine the overall compatibility.

Taken together, these elements position the Master's level as operationally well suited for the development of joint programmes. Continued coordination in accreditation, language policy, and mobility structures will remain necessary, nonetheless the structural and academic environment already supports deeper integration.

4.2.3 PhD programmes

Doctoral education within the Alliance reflects a nuanced interplay between convergence and autonomy. Core academic principles, including selective admissions, the requirement of a prior Master's qualification, and the emphasis on original research, are consistently upheld across institutions. This shared commitment to scholarly standards provides a credible basis for collaborative doctoral pathways.

The typical programme duration of three years, together with expectations regarding publications and conference participation, suggests a substantial alignment of academic standards across the alliance. At the same time, significant differences remain between programme-based doctoral studies with structured coursework and more individualised research-focused models. Mandatory anti-plagiarism measures reinforce a shared culture of research integrity.

At the same time, procedural differences remain visible. Admission control varies between doctoral schools, language requirements differ, and grading systems range from qualitative to quantitative models. These variations should be understood as manageable complexities rather than structural barriers within an increasingly cooperative European research space.

International experience at doctoral level is still developing. Only a limited number of institutions have implemented joint PhD programmes, although several participate in co-tutorship arrangements, signalling a gradual shift towards shared supervision models. The trajectory points therefore in the direction of a progressive harmonisation rather than immediate uniformity.

In strategic terms, doctoral collaboration appears achievable provided that partners prioritise coordination in recognition frameworks, supervision practices, and language policies.

4.2.4 Micro-credentials

Micro-credentials represent the most dynamic and yet least standardised component of the Alliance's educational portfolio. Regulatory frameworks remain diverse and frequently underdeveloped, reflecting the broader European transition toward more flexible learning pathways.

Despite the gaps, institutional initiatives demonstrate momentum towards compatibility and mutual recognition. A substantial proportion of the Alliance member institutions already deliver short learning experiences that function as micro-credentials, even when not formally labelled as such. This practical experimentation indicates that the Alliance possesses capacity to expand modular education formats aligned with lifelong learning agendas.

Compatibility levels can currently be described as low-to-moderate, influenced partly by limited

national regulation and varying degrees of institutional experience. Only two partners (BTH and UNIBG) have micro-credentials in their National Qualifications Framework. However, Alliance member institutions including UOM and IPCB indicate that legal regulations on this matter are expected to be introduced soon, which illustrates the dynamic regulatory environment that currently surrounds this type of educational format. This situation should not be interpreted as a structural impediment. The absence of rigid frameworks may create space for co-construction and innovation, provided that partners align learning outcomes with European and national qualification frameworks.

For micro-credentials, quality assurance emerges as a central issue. External assessment mechanisms remain uncommon, while internal processes are more prevalent, suggesting that future harmonisation should prioritise transparent approval procedures and shared standards. Micro-credentials therefore represent a flexible and scalable avenue for collaboration, capable of complementing traditional degrees while responding to evolving labour-market demands.

4.2.5 General Conclusions

The overall analysis indicates that the Alliance possesses sufficient structural and theoretical common ground to advance joint educational initiatives across all cycles. However, successful implementation will depend on the deliberate management of systemic differences rather than their elimination.

One of the most persistent challenges lies in the lack of alignment between national systems governing admissions, tuition, degree awarding, and legal requirements. Regulatory divergence therefore constitutes the primary constraint on deeper integration. Until deeper convergence is achieved, institutions are advised to prioritise partnerships with similarly regulated environments and gradually expand cooperation outward. Establishing common internal regulations, agreeing on key academic dates, and maintaining regular dialogue among legal and administrative representatives can reduce operational friction.

Accreditation processes require equally strategic attention. National approval procedures may persist for the foreseeable future, making it necessary to identify country-specific requirements at the programme design stage and to pursue parallel international accreditation where possible.

Differences in credit calculations or graduation requirements should be addressed through pragmatic solutions such as elective pools, compensatory coursework, or shared grade conversion scales. These mechanisms demonstrate that regulatory diversity can be navigated through structured institutional partnership.

Resource intensity constitutes another critical consideration. Joint programmes require substantial financial investment, specialised staff, and coordinated administrative processes. Securing external funding, leveraging digital tools, and sharing operational responsibilities across institutions may mitigate these pressures while reinforcing strategic commitment.

Cultural factors must also be acknowledged. Even with English widely adopted as the instructional language, differences in academic culture and everyday communication can affect the student experience. Structured intercultural preparation, mentoring schemes, and integration activities are therefore recommended to support inclusive learning environments.

Finally, the limited public understanding of joint degrees calls for proactive communication strategies, including stakeholder engagement and the promotion of graduate success stories, to strengthen credibility and recognition.

In conclusion, the pathway toward joint educational provision is realistic and strategically relevant. The Alliance stands at a stage where institutional diversity can be developed into a collaborative asset, provided that partners invest in shared governance, transparent standards, and sustainable operational models.

4.3 Analysis of the current offerings and identification of potential gaps

This section presents a structured analysis leading to the identification of gaps of the BAUHAUS4EU Course Catalogue, aimed at assessing the current alignment of its educational offerings with two strategic reference frameworks: RIS3 Thematic Areas and the Future Skills framework. Each Future Skill was further divided into sub-skills, allowing for a more thorough analysis. The latter serves as a diagnostic baseline to support evidence-based catalogue development and to guide member institutions in strengthening thematic balance and skills integration across the Alliance.

The study is structured into two main components. The first examines the distribution of courses in relation to RIS3 Thematic Areas, focusing specifically on learning activities derived from degree programmes and therefore targeting students. The second examines the coverage of Future Skills across three distinct target groups: students, academic staff, and administrative staff. This dual structure reflects the different pedagogical logics and strategic purposes underpinning programme-based teaching and cross-target skills development.

Methodologically, the analysis is grounded in a systematic mapping process conducted through dedicated Excel matrices. All courses currently included in the catalogue were evaluated against predefined thematic areas and sub-skill-based categories using a binary scoring model (1=covered; 0=not covered). Aggregated scores were subsequently benchmarked against their respective maximum potential values, enabling comparative interpretation whilst preserving the relevance of absolute figures. As the BAUHAUS4EU Course Catalogue is still in its early stages of development, the results should be interpreted as indicative rather than definitive. Coverage patterns are expected to evolve as additional courses are integrated and as partner institutions expand their contributions. In this context, the present identification of gaps does not merely describe the current state but also provides a strategic foundation for future catalogue enrichment, supporting a more balanced alignment with regional smart specialisation priorities and long-term Alliance objectives.

4.3.1 RIS3 Thematic Areas

The first part of the identification of gaps focuses exclusively on the RIS3 Thematic Areas and is based on a catalogue composed of learning activities derived from degree programmes. These courses are based on teaching and learning initiatives provided by the Alliance partners for inclusion in the project's educational offer catalogue and do not represent the full range of courses delivered by the Alliance member institutions. The target group considered in this mapping exercise is limited to students. This approach differs from the Future Skills catalogue analysis, which was implemented using courses designed for a broader set of users, including students, academic staff, and administrative staff. This distinction is methodologically relevant, as the structure and pedagogical

objectives of degree-based teaching may produce different coverage patterns compared to cross-target and lifelong learning-oriented offerings.

The catalogue exhibits a differentiated alignment with the RIS3 Thematic Areas, with varying degrees of representation across the domains considered in the mapping exercise. The results are illustrated in Figure 3 below and summarised in Table 2 (in section 4.3.1).

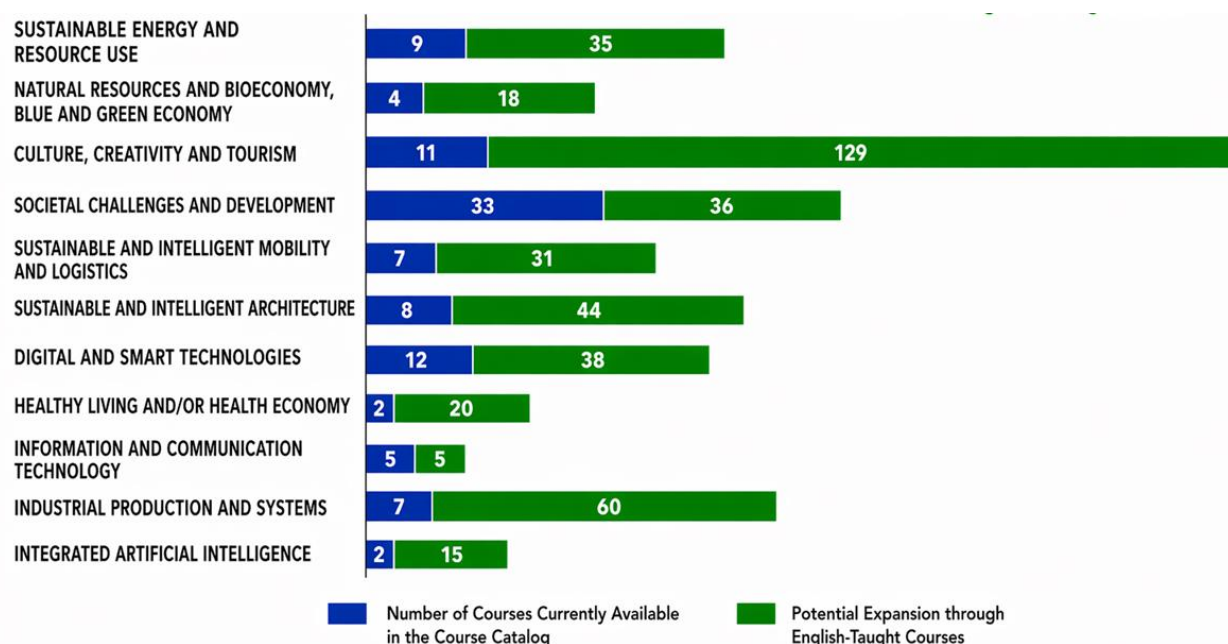


Figure 3 RIS3 thematic distribution of the course catalogue (blue) and the potential for expansion from the English-taught courses (green) not yet included in the BAUHAUS4EU Course Catalogue (cfr. Section 4.3).

Societal Challenges and Development constitute the most developed thematic area, with a score of 33 out of a total number of 56 courses. This indicates that a substantial share of the catalogue addresses topics related to social transformation, sustainability transitions, governance, and broader societal dynamics. Such a distribution suggests a strong orientation towards themes that are closely aligned with European policy priorities and regional innovation agendas.

A second tier of representation includes Digital & Smart Technologies, which includes 12 out of 56 total courses, and Culture, Creativity and Tourism, which includes 11 out of 56. These values point to a meaningful presence of courses engaging with digitally enabled innovation processes, as well as creative, cultural, and tourism-related dynamics. While not dominant, these thematic areas form a visible component of the catalogue's structure.

Moderate levels of coverage are observed for Sustainable Energy & Resource Use (9 out of 56), Sustainable & Intelligent Architecture (8 out of 56), and Sustainable & Intelligent Mobility & Logistics (7 out of 56). This suggests that sustainability-oriented technological and systemic perspectives are present, although less so than societal and cross-cutting innovation themes.

Further limited representation also characterises Industrial Production and Systems (7 out of 56), Information & Communication Technology (5 out of 56), and Natural Resources & Bioeconomy, Blue & Green Economy (4 out of 56). This indicates that, although these domains are not absent, their

relative contribution to the catalogue remains comparatively modest. This may highlight opportunities for strengthening connections with industrial innovation, technological infrastructures, and resource-based development trajectories.

Finally, Healthy Living and/or Health Economy and Integrated Artificial Intelligence emerge as the least represented thematic areas, each accounting for only 2 out of a total of 56 entries in the catalogue. Given the strategic relevance of health-related innovation and AI-driven transformation within RIS3 frameworks, these domains appear as particularly relevant candidates for future catalogue enrichment.

Overall, the distribution suggests that the current student catalogue is strongly anchored in societal and cross-disciplinary themes, while technology-intensive and sector-specific RIS3 domains remain under-represented in relation to their potential capacity. From a strategic perspective, encouraging member institutions to develop courses aligned with underrepresented thematic areas could enhance the catalogue's thematic balance and reinforce its coherence with regional smart specialisation priorities.

4.3.2 Future Skills

This section analyses the distribution of Future Skills within the BAUHAUS4EU Course Catalogue, with the aim of identifying strengths, imbalances, and areas for further development. In contrast to the RIS3 analysis, which focuses exclusively on student-oriented degree programmes, the Future Skills mapping adopts a broader perspective by examining courses designed for students, academic staff, and administrative staff. This reflects the transversal nature of Future Skills, which are relevant across teaching, learning, and organisational contexts within the Alliance.

The analysis is based on a structured classification of Future Skills into eight macro-categories, further divided into sub-skills, allowing for a detailed assessment of skill coverage. It also considers potential English-taught courses that, although not yet implemented within the Alliance, indicate directions for future expansion (analysed in detail in chapter 4.3). The results are presented in Figures 4-6 below and Table 3 (in Section 4.3.2) and should be interpreted as indicative of current trends, providing a foundation for strengthening the integration of key transversal competencies across the catalogue.

Students

The student-focused catalogue exhibits a heterogeneous distribution of Future Skills, with moderate representation across most macro-categories, as shown in the chart below.

Cognitive Skills clearly constitute the most developed area within the current student-oriented catalogue, followed by Interpersonal Skills and Change Leadership Skills. This distribution indicates that the catalogue already provides a relatively strong foundation for analytical abilities, problem-solving, collaboration, and adaptive capacities, which are central to contemporary higher education and innovation context.

Intercultural Competence and Entrepreneurial Skills display moderate coverage levels. Their presence suggests that the catalogue has begun to address key transversal dimensions linked to internationalisation, creativity, and opportunity-oriented thinking. However, their overall contribution remains uneven when considered against the total potential scoring capacity, indicating scope for

further consolidation.

By contrast, Multilingualism, Self-leadership Skills, and Digital Skills emerge as comparatively underrepresented categories. Given the structural importance of multilingual communication, self-regulation, and digital fluency within the European Higher Education Area, these domains represent priority areas for future catalogue development. In particular, Digital Skills coverage remains limited relative to potential capacity, despite the inclusion of courses with technological components. This may suggest that digital competencies are not yet systematically embedded or explicitly framed within the course learning outcomes.

Similarly, the modest representation of Multilingualism offers opportunities for strengthening linguistic, intercultural communication, and cross-context interaction capabilities. Self-leadership Skills also display relatively low coverage, highlighting the potential value of learning activities that support autonomy, resilience, self-management, and reflective practices.

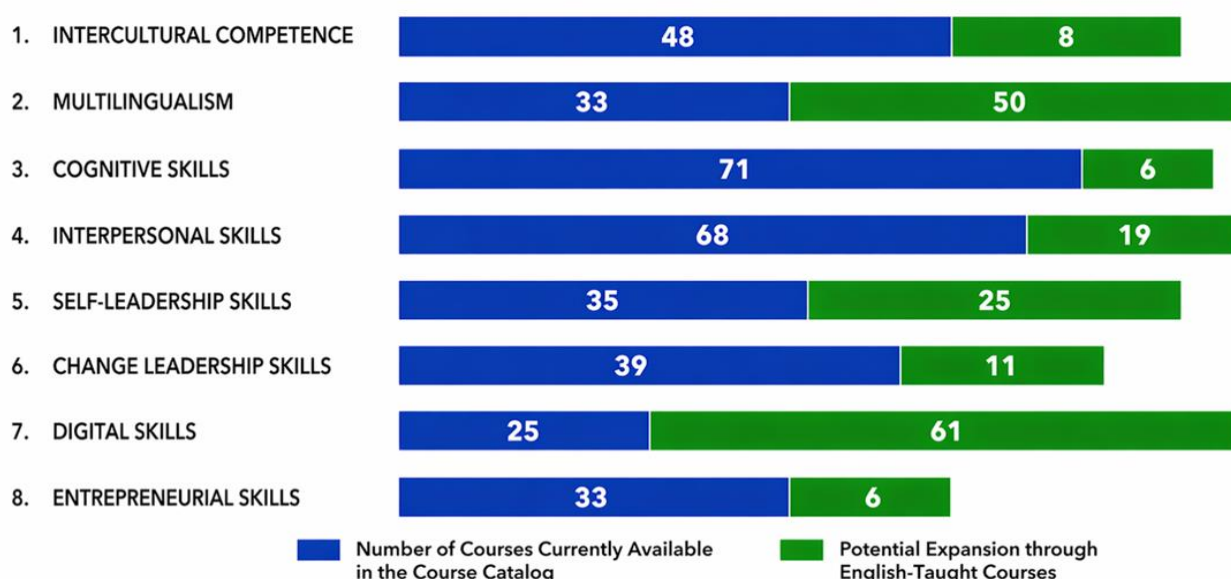


Figure 4 Future Skill Coverage – number of courses already in the Course Catalog targeting Students (blue) vs the potential for expansion from the English-taught courses (green) not yet included in the BAUHAUS4EU Course Catalogue (cfr. Section 4.3).

It is important to note that the catalogue also includes two additional courses offered by UEKAT, namely *Contemporary Approaches to Public Finance* and *Contemporary Challenges in Economic Theory of Investment*. As these courses are intended exclusively for PhD candidates, they however fall outside the scope of the analyses of Future Skills presented here.

From a strategic perspective, enhancing the balance across these Future Skills categories would further strengthen the catalogue's alignment with long-term Alliance objectives. The member institutions of the Alliance could contribute by expanding courses that explicitly integrate digital, multilingual, and self-leadership dimensions, including offerings delivered in languages other than English, thereby leveraging the Alliance's full educational diversity.

Academic Staff

The academic staff dataset indicates a structurally narrower skills distribution, reflecting the smaller number of courses currently aimed at this target group. Once again, specific patterns emerge from the data collected.

Digital Skills constitute the most developed area within the current academic staff catalogue, with a representation of 14 courses, followed by Change Leadership Skills, with 13 courses. Moreover, Cognitive Skills (12) and Interpersonal Skills (16) also display comparatively strong representation. This distribution indicates that the catalogue already supports competencies related to analytical capacity, collaboration, and operating within digitally mediated teaching and research environments.

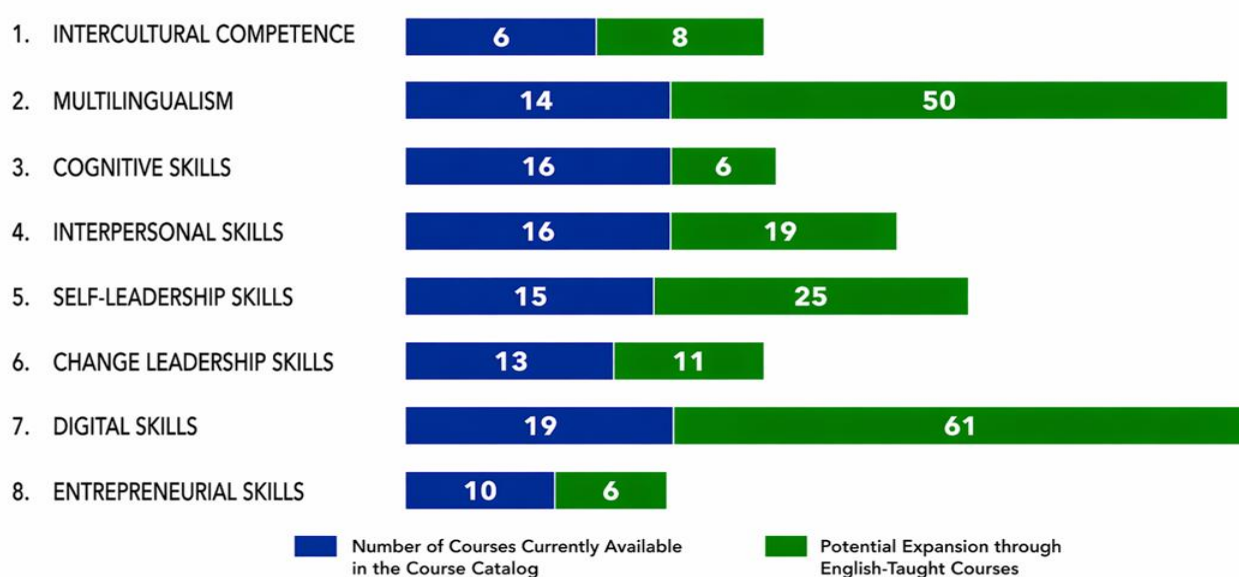


Figure 5 Future Skill Coverage – number of courses already in the Course Catalog targeting Academic Staff (blue) vs the potential for expansion from the English-taught courses (green) not yet included in the BAUHAUS4EU Course Catalogue (cfr. Section 4.3).

Self-Leadership Skills demonstrate a moderate level of coverage, suggesting that elements connected to autonomy, initiative, and innovation-oriented thinking are present but not yet fully developed.

By contrast, Multilingualism and Intercultural Competence emerge as comparatively less represented categories. Given the central role of academic staff in international collaboration, curriculum design, and student engagement across diverse cultural contexts, these domains represent important areas for potential enhancement.

Administrative Staff

The courses aimed at administrative staff reveal a different coverage profile, with stronger relative emphasis on operational and technology-related skills.

Interpersonal Skills constitute one of the most developed areas within the current administrative staff catalogue, alongside Digital Skills and Change Leadership Skills. This distribution suggests that the catalogue already reflects key operational and organisational competencies relevant to

administrative roles, particularly those associated with communication, coordination, and the use of digital tools.

Multilingualism, Cognitive Skills and Self-Leadership Skills display a comparable level of representation, indicating a moderate integration of language-related abilities, problem-solving capacities, and self-management competencies. Intercultural Competence and Entrepreneurial Skills appear to be underdeveloped with reference to their potential scoring capacity. These areas enhance critical capacity and key human competencies, strengthening intercultural communication, decision-making, self-regulation, and professional responsibility.

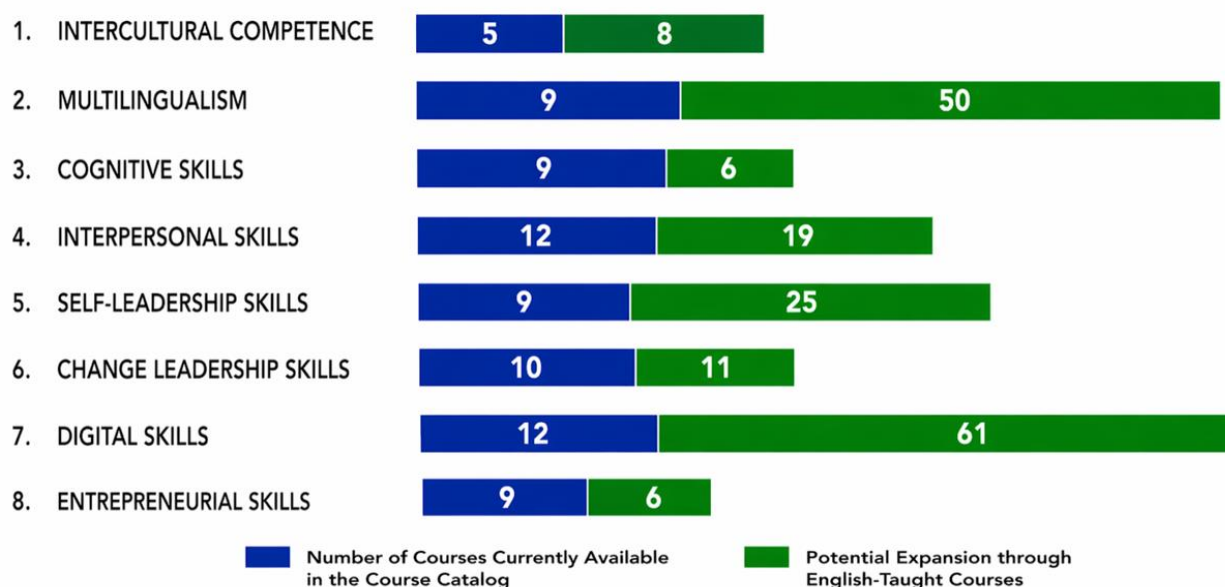


Figure 6 Future Skill Coverage – number of courses already in the Course Catalog targeting Administrative Staff (blue) vs the potential for expansion from the English-taught courses (green) not yet included in the BAUHAUS4EU Course Catalogue (cfr. Section 4.3).

Overall, the distribution highlights opportunities for further strengthening intercultural and innovation-oriented dimensions, which are increasingly relevant in the context of internationalised and digitally-mediated higher education environments. Targeted expansion of course offerings which address these areas could enhance the strategic balance of Future Skills for administrative staff across the alliance.

External Stakeholders

As of now, the available course catalogue does not yet include training programmes specifically addressed to external stakeholders. However, expanding the educational offer to incorporate dedicated training opportunities for stakeholders remains one of the Alliance's strategic objectives. In this perspective, it is worth noting that complementary initiatives are already in place, although not formally part of the course catalogue. In particular, Student-Led Courses represent an intermediate step between academic provision and stakeholder-oriented activities: they are bottom-up, interdisciplinary courses designed and delivered by students with academic support, addressing sustainability and inclusion challenges and fostering students' role as change agents.

In parallel, Regional Living Labs (RLL) already constitute concrete, place-based initiatives involving

external stakeholders. These experimental learning environments bring together students, academic staff, and regional partners to collaboratively address territorial challenges through co-creation and applied research over two semesters, thus directly engaging local ecosystems.

Currently, the BAUHAUS4EU Course Catalogue remains closed to external users. Access for regional stakeholders will be enabled during the second implementation phase, when a dedicated process will be established to address their specific needs. In this context, the educational offer targeting stakeholders will primarily consist of micro-credentials to be offered by the alliance, and other courses offered independently by alliance member institutions.

4.4 Analysis of English-taught courses within the Alliance

This section provides an analytical overview of the English-taught courses within the partner institutions of the Alliance. Only courses delivered in English were included in this mapping exercise; programmes offered in national languages were not considered. The focus on English-taught courses is strategic, as they can be regarded as implementation-ready within the Alliance context. Since they are already delivered in English, no translation is required, which significantly reduces barriers to cross-institutional access and enables faster deployment.

Many of these courses are structurally suitable for integration into the Alliance portfolio. In most cases, they would require only pedagogical adaptation for online or blended delivery. Some are already offered online but would need to be opened to a wider audience across partner institutions. This makes them a practical starting point for expanding the B4EU course catalogue and strengthening joint educational activities.

The mapping aims to identify courses capable of addressing thematic gaps, reinforcing the existing catalogue, and informing the development of future joint degree programmes. By aligning current English-taught offerings with RIS3 priorities and Future Skills categories, the analysis supports strategic curriculum planning and the targeted expansion of virtual collaboration. However, not all partner institutions are represented, as some do not currently offer courses in English.

4.4.1 Distribution of RIS3 Topics

The analysis of RIS3 topic distribution across the mapped courses reveals a clear imbalance in thematic emphasis. The most dominant category is “Culture, creativity and tourism”, with 129 courses, representing by far the largest share of the portfolio. This category significantly exceeds all other RIS3 areas.

The next most represented topics are “Industrial production and systems”, “Sustainable & intelligent Architecture”, and “Digital & smart technologies”. These topics show moderate prevalence but remain substantially below the level of the culture-related category. A second tier of representation includes the topics “Societal challenges and development”, “Sustainable energy & resource use”, and “Sustainable & intelligent mobility & logistics”. These categories demonstrate some alignment with sustainability-oriented priorities, but are not dominant.

At the lower end of the distribution are “Healthy living and/or health economy”, “Natural resources & bioeconomy”, and “Integrated Artificial Intelligence”. Particularly notable and surprising is the very low and limited number of courses mapped to “Information & Communication Technology”.

From a strategic perspective, the portfolio appears heavily skewed toward culture and creative domains. This may reflect broad tagging criteria, interdisciplinary interpretation of course content, or a structural tendency to use this category as a primary classification, directly reflecting the profiles of the Alliance member institutions. Meanwhile, “Digital & smart technologies” is present but not dominant, and “Integrated AI” appears comparatively underrepresented, suggesting a potential area for future strategic development. The extremely low representation of ICT may indicate either strict tagging criteria or the absorption of ICT-related content into broader digital categories. Overall, the RIS3 alignment appears imbalanced, with one topic significantly outweighing the others, highlighting the strength of the Alliance in the field of Culture, creativity and tourism.

Table 2 RIS3 themes coverage of the course catalogue and its potential for expansion within the English-taught courses.

RIS3 category	Current courses offered	English-taught courses which could be included
Sustainable energy & resource use	9	35
Natural resources & bioeconomy, blue & green economy	4	18
Culture, creativity and tourism	11	129
Societal challenges and development	33	36
Sustainable & intelligent mobility & logistics	7	31
Sustainable & intelligent Architecture	8	44
Digital & smart technologies	12	38
Healthy living and/or health economy	2	20
Information & Communication technology	5	5
Industrial production and systems	7	60
Integrated Artificial Intelligence	2	15

4.4.2 Distribution of Future Skills

The mapping of future skills shows a strong emphasis on digital and internationally oriented competencies. The most frequently represented skills are “Language proficiency”, “Digital fluency and citizenship”, “Entrepreneurial attitude”, “Understanding digital systems”, and “Software use and development”. These results indicate a clear prioritisation of digital foundations, international orientation, and entrepreneurial mindset development.

Moderately represented skills include “Communication”, “Communication strategies”, “Innovation”, “Intercultural awareness”, “Cognitive flexibility and code switching”, and “Building relationships”. These areas suggest some attention to interpersonal and adaptive competencies, though not at a dominant level.

However, several important future-oriented capabilities are weakly represented or nearly absent. Skills such as “Critical thinking”, “Systems and strategic thinking”, “Planning and ways of working”, “Mobilizing systems”, and “Self-awareness and management” appear only marginally in the mapping. Furthermore, several competencies are entirely absent, including “Opportunity recognition”, “Working with diversity”, “Goals achievement”, “Respect for diversity”, “Teamwork effectiveness”, “Mental flexibility”, “Adaptability”, “National identity and sense of belonging”, and “Resilience and persistence”.

Several factors may explain the absence of these competencies. First, many of them, such as adaptability, resilience, and working with diversity, have only recently gained prominence in educational and policy discourse. As a result, they may not yet be systematically embedded in existing curricula. Second, these competencies are often transversal and may be implicitly addressed within courses rather than explicitly labeled.

Table 3 Future Skill Coverage – Students, Academic Staff, Administrative Staff, the potential for expansion from the English-taught courses.

Skill Category	Students	Academic Staff	Admin. Staff	Potential Courses
Intercultural competence	48	6	5	8
Multilingualism	33	9	8	50
Cognitive skills	71	12	8	6
Interpersonal skills	68	16	12	19
Self-leadership skills	35	12	8	25
Change leadership skills	39	13	8	11
Digital skills	25	14	9	61
Entrepreneurial skills	33	10	5	6

Overall, this pattern suggests that while the course portfolio demonstrates strong technical and digital capacity, it places comparatively limited explicit emphasis on leadership, adaptability, diversity, and broader transformative competencies.

4.4.3 Cross-Pattern Insights

A cross-analysis of RIS3 topics and Future Skills highlights a strong emphasis on digital and internationally oriented competencies across the portfolio. Skills such as digital fluency, understanding digital systems, and software use and development are well represented, aligning with the presence of courses within the RIS3 category *Digital & Smart Technologies*.

At the same time, several transversal, systems-oriented, and leadership-related competencies remain comparatively underrepresented. Skills such as critical thinking, systems and strategic thinking, planning and ways of working, mobilizing systems, and self-awareness and management appear only marginally in the mapping. In addition, competencies related to adaptability, resilience, and working with diversity are either weakly represented or entirely absent.

This suggests that, while the portfolio demonstrates strong technical and digital capacity, it places comparatively limited explicit emphasis on leadership, adaptability, diversity, and broader transformative competences, including the capacity for systemic transformation.

This imbalance entails a number of strategic risks. First, a strong concentration on technical and digital skills, without a parallel development of systems-oriented and leadership competences, may limit the ability of learners to operate effectively in complex, multi-actor innovation ecosystems. In particular, the limited presence of skills such as systems thinking, adaptability, and resilience may reduce the capacity to address long-term societal challenges and to manage uncertainty and transformation processes.

Second, the weak integration of diversity-related and intercultural competencies may constrain the Alliance's potential to fully support inclusive innovation and collaboration across different regional and cultural contexts, which are central to European higher education and RIS3 frameworks.

Third, the marginal representation of strategic and change-oriented skills may hinder the development of profiles capable of acting as "change agents", thereby weakening the potential impact of the educational offer on regional ecosystems and stakeholder engagement. This is particularly relevant in light of future project phases aimed at targeting external stakeholders through tailored learning formats such as microcredentials.

Finally, the lack of explicit structuring around these transversal competences may result in their implicit rather than intentional acquisition, reducing their visibility, assessability, and overall effectiveness within the curriculum.

Overall, these patterns highlight the need for a more balanced integration of technical, cognitive, and transformative competences, ensuring that digital excellence is complemented by strong capabilities in leadership, systems thinking, adaptability, and inclusive innovation.

4.4.4 Strategic Gaps Identified

From a RIS3 perspective, the main gaps are observed in “Information and Communication Technology (ICT)”, “Integrated Artificial Intelligence”, and, to a lesser extent, in “Natural Resources and Bioeconomy” as well as health-related domains.

From a Future Skills perspective, the most significant gaps concern “critical thinking”, “systems and strategic thinking”, “planning and ways of working”, “mobilizing systems”, and “self-awareness and management”. In addition, competencies related to adaptability, resilience, and working with diversity are either weakly represented or entirely absent.

Overall, the analysis suggests a portfolio that is technically and digitally strong but strategically imbalanced. While it demonstrates solid foundations in digital and internationally oriented competencies, it offers comparatively limited explicit support for leadership, adaptability, diversity, and broader transformative competences. This highlights clear opportunities to strengthen both thematic diversification within RIS3 domains and the systematic integration of key future-oriented skills across the Alliance’s educational offer.

These gaps carry several important implications. First, the underrepresentation of ICT and Integrated Artificial Intelligence may limit the portfolio’s alignment with key technological drivers of regional innovation, thereby reducing its potential contribution to high-impact smart specialisation strategies. Second, the limited coverage of “critical thinking”, “systems and strategic thinking”, and “mobilizing systems” may constrain learners’ ability to operate effectively in complex, multi-actor environments and to address interconnected societal challenges.

Third, the weak representation of adaptability, resilience, and self-awareness and management may reduce learners’ capacity to cope with uncertainty, continuous change, and evolving professional contexts. Fourth, the marginal presence of diversity-related competences may limit the Alliance’s ability to fully support inclusive and collaborative practices across different cultural and regional settings. Finally, the limited emphasis on goal-setting and execution-related skills may affect the development of action-oriented profiles capable of translating knowledge into practice.

Taken together, these implications point to the need for a more balanced integration of technical, cognitive, and transversal competences, ensuring that digital and technical strengths are complemented by strong capabilities in systems thinking, adaptability, leadership, and inclusive innovation.

4.5 Analysis of overall educational offering within the Alliance

This section presents a comprehensive comparative analysis of the educational offerings of the member institutions within the BAUHAUS4EU Alliance. Unlike the previous section that focused solely on English-taught courses, the present section adopts a broader perspective by going beyond language barriers and considering the full programme portfolios of the institutions.

The analysis aims to establish a structured, alliance-wide understanding of the academic landscape across institutions, with particular attention to thematic strengths, complementarities, and development potential within the RIS3 framework. To ensure a more up-to-date and harmonised overview, partner institutions were invited to complete a structured RIS3-based self-assessment

matrix, complemented by qualitative descriptions of their educational profiles.

The objective of this analysis is twofold. First, it seeks to identify complementary strengths, differentiated competences, and potential academic synergies across the Alliance. Second, it aims to inform strategic reflections on curriculum development, mobility pathways, and collaborative programme design at Alliance level.

English-language offerings represent a crucial dimension for international cooperation; however, the educational ecosystems of the member institutions extend well beyond this subset. The Alliance institutions maintain extensive programme portfolios delivered in their respective national languages, reflecting deep-rooted disciplinary traditions and established academic capacities.

In this context, identified gaps should not be interpreted solely as a call for entirely new programme creation. Rather, a strategically coherent and resource-efficient approach may lie in the progressive internationalisation of existing educational assets. By adapting selected programmes or modules, including through online or blended formats and delivery in English and/or other Alliance languages the BAUHAUS4EU partners can enhance accessibility, foster cross-border participation, and strengthen academic integration while building upon established institutional strengths.

4.5.1 Institutional Profiles and Areas of Strength

The BAUHAUS4EU Alliance is characterised by a structurally diverse composition of higher education institutions. A key feature of the partnership is the coexistence of comprehensive, multi-disciplinary institutions and specialised institutions with focused academic missions, a configuration that significantly enhances the alliance's overall coherence and innovation potential.

Several partners operate as broad-based institutions with educational portfolios spanning multiple RIS3 domains. These institutions play a pivotal role in ensuring systemic coverage, facilitating interdisciplinary integration, and enabling flexible curriculum architectures.

UNIBG, UPJV, ULL2, and IPCB exemplify this comprehensive profile. Their educational offerings extend across technological, socio-economic, cultural, and sustainability-oriented domains, thereby contributing to the alliance's structural balance.

UNIBG demonstrates a strong capacity for interdisciplinary integration, combining digital technologies, industrial systems, logistics, and management-oriented disciplines with established educational pathways in literature and cultural heritage. This diversified academic structure enables cross-sectoral connections linking engineering, innovation, cultural assets, and socio-economic transformation.

UPJV similarly exhibits broad thematic alignment, supported by structured programmes spanning engineering, information & communication technology (ICT), industrial systems, health sciences, and cultural and creative disciplines.

ULL2 contributes to a distinctly multi-disciplinary humanities and social sciences perspective, enriched by expertise in urban studies, ICT, environmental systems, and societal challenges.

IPCB complements these profiles through its diversified strengths in renewable energy, environmental sustainability, bioeconomy, health sciences, and applied technological domains.

Collectively, these institutions function as interdisciplinary anchors within the alliance. Their diversified academic environments provide fertile ground for joint curricula, hybrid competence frameworks, and mobility schemes that require cross-domain integration.

Alongside the comprehensive institutions, the Alliance includes partners (BUW, BTH, POLIS, UACEG, UEKAT, and UOM) whose academic identity is more strongly centred on specific knowledge domains. These institutions contribute depth, disciplinary excellence, and distinctive methodological approaches that reinforce alliance-level specialisation.

BUW maintains a distinctive profile at the intersection of architecture, design, media, engineering, and digital technologies, embodying a systemic integration of creativity and technological innovation. BTH is a technical university and is recognised for dual excellence, combining academic education and research with societal and industrial impact. BTH focuses on three main profile areas: data- and technology-driven competitiveness, resilient and sustainable societies, and marine applications. Its key areas of strength are engineering sciences, computer science, software development, strategic sustainable development, spatial planning, industrial economics and management, and applied health technology.

POLIS and UACEG contribute specialised competence in architecture, spatial planning, heritage, construction, and infrastructure systems, domains that are central to the alliance's engagement with the urban environment and territorial transformation.

UEKAT contributes with a socio-economic and analytical dimension, with strengths in artificial intelligence, ICT, and a moderate competence in health economy, data-driven systems, and sustainable logistics.

UOM enhances this landscape through applied computer science, AI-related studies, and socio-economic disciplines, strengthening the alliance's capacity to address technological transitions from policy, management, and organisational perspectives.

These specialised institutions act as centres of thematic depth within the Alliance. Their focused expertise supports advanced curriculum development, domain-specific innovation, and the creation of high-value joint educational pathways.

The coexistence of comprehensive and specialised institutions constitutes a core structural asset of the BAUHAUS4EU Alliance. Rather than striving for uniformity, the partnership benefits from a differentiated knowledge ecosystem in which breadth and depth mutually reinforce one another. Comprehensive institutions ensure transversal integration and systemic flexibility, while specialised institutions provide disciplinary intensity and methodological innovation.

This configuration is particularly conducive to the development of joint degrees, stackable learning pathways, and distributed teaching models. It also enhances the Alliance's capacity to respond to evolving European priorities, as thematic reinforcement can be pursued through cooperation rather than institutional duplication.

4.5.2 Alliance-Level Thematic Convergence

At the collective level, several RIS3 domains emerge as areas of pronounced convergence. **Table 4** shows the individual strengths of the Alliance member institutions and their alignment with reference to RIS3 thematic areas resulting from a self-assessment conducted by each institution where 2 represents strong coverage, 1 limited coverage and 0 no coverage.

Table 4: Individual strengths of BAUHAUS4EU member institutions with reference to RIS3 Thematic Area.

	Sustainable energy & resource use	Natural resources & bioeconomy, blue & green economy	Culture, creativity and tourism	Societal challenges and development	Sustainable & intelligent mobility & logistics	Sustainable & intelligent Architecture	Digital & smart technologies	Healthy living and/or health economy	Information & Communication technology	Industrial production and systems	Integrated Artificial Intelligence
ULL2	2	1	2	2	1	2	2	2	2	2	2
UACEG	2	2	2	2	2	2	2	2	1	2	1
UOM	1	2	2	2	2	1	2	2	2	1	2
POLIS	2	2	2	2	2	2	2	1	2	1	2
BTH	2	2	1	2	2	2	2	2	2	2	2
UPJV	2	2	2	2	2	2	2	2	2	2	2
UEKAT	2	2	2	2	2	1	2	2	2	1	2
IPCB	2	2	2	2	1	2	2	2	2	2	1
UNIBG	2	1	2	2	2	2	2	2	2	2	2
BUW	2	2	2	2	2	2	2	1	2	1	2

2	Strong coverage
1	Limited coverage
0	No coverage

In summary, competences related to ICT constitute the most consistently represented dimension across the Alliance, reflecting the pervasive integration of digital technologies within contemporary higher education systems. This widespread coverage creates favourable conditions for mobility schemes, shared digital credentials, and cross-disciplinary learning pathways.

Similarly, Culture, Creativity, and Tourism represent a domain of high-density expertise. The Alliance benefits from complementary traditions encompassing creative industries, heritage studies, media, design, and cultural management. This thematic cluster aligns closely with the New European Bauhaus principles, offering fertile ground for joint degrees and innovative pedagogical formats that combine cultural, technological, and sustainability perspectives.

The domain of Societal Challenges and Development is likewise broadly represented. Multiple partners contribute through law, governance, sustainability, policy, management, and social sciences

programmes, collectively enabling the Alliance to address complex socio-economic transformations, inclusion, and resilience from a multidisciplinary standpoint.

Digital and Smart Technologies, closely linked to ICT and AI domains, also display strong collective representation. This reinforces the alliance's capacity to design educational activities centred on digital transformation, cyber-physical systems, and emerging technological paradigms.

The area of Healthy Living and Health Economy is also prominent, benefitting from the significant specialisation of UOM, BTH, UPJV and IPCB, complemented by the expertise of UNIBG, ULL2, UACEG and UEKAT. The resulting competence base supports interdisciplinary initiatives at the intersection of health, digitalisation, environment, and societal wellbeing.

4.5.3 Complementarity and Synergy Potential

While convergence is evident in several domains, the Alliance's strategic value lies equally in its internal complementarities. Certain RIS3 areas remain structurally concentrated among a smaller subset of partners, thereby offering clear opportunities for capacity building and collaborative curriculum development.

"Natural Resources and Bioeconomy", for instance, remains primarily anchored by IPCB and UACEG, with other partners contributing with partial or emerging coverage. This configuration suggests potential for alliance-level initiatives focused on circular bioeconomy, sustainable materials, and resource governance, themes that resonate strongly with European sustainability agendas.

"Integrated Artificial Intelligence" represents another domain where strengths coexist with asymmetries. Although several partners maintain advanced AI programmes, institutional diffusion is uneven. This context is conducive to the development of shared foundational AI modules and cross-sectoral AI applications, facilitating knowledge transfer and curriculum harmonisation.

"Industrial Production and Systems" benefits significantly from UPJV's and UNIBG's contributions. Their combined expertise offers a solid basis for alliance-wide educational pathways addressing digitalised industry, production systems, and sustainable manufacturing paradigms.

4.5.4 Underrepresented Domains and Strategic Opportunities for Future Developments

The identification of comparatively underrepresented RIS3 domains within the BAUHAUS4EU Alliance should not be interpreted as a structural weakness, but rather as a strategic diagnostic tool that highlights areas for future cooperation, curriculum innovation, and capacity-building activities. In the context of European University Alliances, asymmetries in thematic coverage are both expected and desirable, as they create the conditions for meaningful complementarities, knowledge circulation, and joint programme development.

"Natural Resources, Bioeconomy, Blue and Green Economy" is a domain that remains relatively concentrated across the partnership, i.e., it is present only in a limited number of Alliance member institutions. While selected partners, most notably IPCB and UACEG, demonstrate strong institutional anchoring in environmental sustainability, renewable resources, and bioeconomy-related themes, other institutions report only moderate or limited curricular integration. This uneven distribution of

expertise presents a clear opportunity for alliance-level academic development. Strengthening educational activities in this area would align closely with European policy priorities related to the Green Deal, circular economy strategies, sustainable materials, and resource-efficient production systems. Collaborative curriculum design, shared modules, and interdisciplinary minors could enable partners with emerging interests to benefit from the specialised capacities already present within the alliance, thereby enhancing systemic coherence without duplicating institutional profiles.

A second domain characterised by differentiated institutional intensity is “Integrated Artificial Intelligence”. Although the Alliance includes partners with advanced AI-oriented programmes and strong digital ecosystems, AI-specific degrees and structured curricula are not evenly distributed. Within BAUHAUS4EU, this configuration creates favourable conditions for the development of shared educational infrastructures. Rather than pursuing parallel programme expansion at each institution, the Alliance may generate greater European added value by establishing joint AI curriculum frameworks, foundational competence modules, and domain-specific AI applications. Such an approach would support both horizontal knowledge transfer and vertical integration, embedding AI literacy across diverse disciplinary contexts including health, industrial systems, mobility, heritage, and sustainability transitions.

The domain of “Industrial Production and Systems” similarly reveals opportunities for strategic reinforcement. While the presence of BTH, UPJV and UNIBG significantly strengthens alliance-level capacity in industrial engineering, production systems, and logistics-related disciplines, coverage remains less pronounced in other institutions. In light of European priorities concerning digitalised industry, resilient value chains, and sustainable manufacturing paradigms, this domain represents a critical interface between technological innovation and socio-economic transformation. Alliance-level initiatives could therefore focus on modular programme architectures, mobility pathways, and interdisciplinary integration linking industrial systems with digital technologies, sustainability, and governance perspectives. Such strategies would allow partners with limited industrial profiles to access high-value learning environments while preserving institutional diversity.

Importantly, the recognition of underrepresented domains also provides a framework for strategic specialisation within the Alliance. European University Alliances are not intended to function as homogeneous entities, but as integrated ecosystems in which institutional differentiation enhances collective capacity. From this perspective, thematic asymmetries can serve as drivers of innovation, encouraging co-creation of curricula, cross-institutional teaching models, and distributed knowledge networks. The Alliance can thus prioritise targeted reinforcement where European policy trajectories, regional innovation needs, and partner expertise intersect most strongly.

In operational terms, addressing underrepresented domains may involve the development of joint micro-credentials, or other formats defined by stackable learning modules, blended intensive programmes, and co-supervised academic pathways. These mechanisms enable scalable collaboration while minimising administrative complexity and resource duplication. Moreover, they facilitate agile responses to evolving technological and societal challenges, reinforcing the alliance’s long-term adaptability.

4.6 Pedagogical landscape and implications for the Alliance

Beyond the thematic distribution of educational programmes and institutional complementarities identified in the previous sections, the analysis also provides insights into the pedagogical landscape relevant to teaching and learning practices across the BAUHAUS4EU Alliance. While the preceding sections examined the structural configuration of educational provision across institutions, the findings also highlight the pedagogical dynamics that may underpin these educational activities. Taken together, the results suggest that the Alliance operates within a learning environment shaped by the coexistence of established academic teaching traditions and an increasing diversity of innovative pedagogical approaches.

Across partner institutions, teaching continues to rely on established instructional formats such as lectures, seminars and tutorials, which remain fundamental to the organisation of higher education. These methods ensure the systematic transmission of disciplinary knowledge, support the development of analytical reasoning and provide the conceptual foundations required for advanced academic study. In this sense, traditional teaching formats continue to function as an important structural element of academic programmes within the Alliance.

At the same time, the mapping of courses and educational formats across BAUHAUS4EU points to broader developments in higher education that emphasise more interactive, collaborative and learner-centred approaches. This transition reflects wider developments within the European Higher Education Area, where pedagogical innovation is increasingly recognised as an important driver of educational quality, student engagement and institutional cooperation.

One of the key pedagogical tendencies highlighted in the analysis is the growing relevance of active learning methodologies. In many contemporary higher education contexts, students are encouraged to participate actively in the learning process rather than acting solely as recipients of information. Teaching methods such as case study analysis, structured debates, collaborative group projects and peer learning activities allow students to analyse complex issues collectively and to develop arguments based on evidence and discussion. These approaches contribute to the development of analytical thinking, communication skills and collaborative competences.

Closely related to these practices is the increasing importance of problem- and project-based learning models, particularly in subject areas connected with sustainability, technological innovation and societal transformation. In these pedagogical formats, students work individually or in interdisciplinary teams to address complex questions reflecting real world contexts. By encouraging learners to design solutions, integrate knowledge from multiple disciplines and present results in structured ways, these approaches support the development of key transversal competences associated with the Future Skills framework, including critical thinking, problem solving capacity and innovation oriented mindsets.

Another important dimension of the pedagogical landscape relevant to the Alliance concerns experiential learning approaches. Educational activities such as simulations, design thinking workshops, hackathons and challenge-based learning environments create opportunities for students to experiment with ideas, test alternative solutions and reflect on the outcomes of their actions. Through these experiential formats, theoretical knowledge can become more closely connected to practical contexts, enabling learners to better understand complex societal or technological challenges. Such pedagogical approaches are particularly relevant for educational activities linked to

RIS3 priorities, which frequently require interdisciplinary collaboration and engagement with innovation ecosystems.

The analysis also points to the growing importance of digitally supported pedagogical environments. Blended and hybrid teaching models represent an increasingly significant direction in contemporary higher education and are relevant for the educational development of the Alliance. Learning management systems, shared digital workspaces and multimedia teaching resources expand the accessibility and flexibility of courses while enabling continuous interaction between instructors and students. In addition, emerging infrastructures such as smart classrooms, hybrid learning laboratories and immersive digital environments may contribute to the development of flexible teaching models capable of supporting cross institutional participation within the Alliance.

Such technological infrastructures can also facilitate new forms of collaboration and mobility. Hybrid learning environments, virtual classrooms and shared digital platforms create opportunities for students and academic staff from different Alliance member institutions to participate in joint learning activities without requiring permanent physical mobility. In this sense, digital pedagogies can contribute to the emergence of a transnational learning ecosystem in which knowledge, teaching resources and infrastructures may be shared across institutional and geographical boundaries.

Taken together, these developments illustrate the emergence of a pedagogical landscape relevant to the BAUHAUS4EU Alliance that combines traditional academic instruction with a broad range of innovative learning approaches. Rather than replacing established teaching models, these approaches can complement and extend them, enabling member institutions to respond more effectively to evolving educational, technological and societal challenges.

From a strategic perspective, the pedagogical approaches considered in this analysis reinforce the Alliance's potential capacity to align its educational activities with both RIS3 priorities and the Future Skills framework. Active, experiential and digitally supported learning environments can enable students to engage with complex societal challenges while simultaneously developing transversal competences such as analytical reasoning, intercultural collaboration, digital literacy and entrepreneurial thinking.

These pedagogical approaches are particularly relevant for strengthening underrepresented Future Skills identified in the analysis, including critical thinking, systems thinking, adaptability, and collaborative competences.

The pedagogical landscape discussed in this section reflects the coexistence of multiple teaching approaches that support different forms of learning and student engagement. Based on the analytical framework applied in this study, these pedagogical approaches can be grouped into several broad categories reflecting both established academic pedagogies and emerging innovative learning models.

Table 5 summarises the main categories of pedagogical approaches relevant for educational activities within the BAUHAUS4EU Alliance, together with illustrative examples of teaching methods and their potential contribution to learning outcomes.

Table 5: Categories of pedagogical approaches relevant for educational activities within the BAUHAUS4EU Alliance.

Category of pedagogical approach	Examples of teaching methods	Pedagogical contribution
Traditional methods	Lectures, seminars, tutorials, guided discussions	Provide the conceptual foundations of disciplinary knowledge and support the development of analytical reasoning
Active learning methods	Case study analysis, group discussions, peer learning, team-based learning	Encourage student engagement, collaborative learning and critical reflection
Digital and online methods	Blended learning, synchronous and asynchronous online teaching, learning management systems, multimedia learning resources	Expand accessibility of education and enable flexible and hybrid learning environments
Innovative and experiential methods	Design thinking workshops, simulations, service learning, hackathons, challenge-based learning	Connect theoretical knowledge with real-world contexts and develop creativity, adaptability and problem-solving skills
Other contemporary and hybrid methods	Challenge-based learning, interdisciplinary project studios, immersive digital environments such as virtual or augmented reality learning	Integrate academic knowledge with practical experience and support transdisciplinary learning

Taken together, the pedagogical approaches discussed in this section provide important insights into the educational potential of the BAUHAUS4EU ecosystem. The following section synthesises the strategic implications of this analysis and outlines the key conclusions for the future development of joint educational initiatives within the Alliance.

4.7 Strategic Conclusions

The BAUHAUS4EU Alliance displays a highly complementary and resilient educational ecosystem characterised by strong digital foundations, robust engagement with cultural and societal domains, and growing capacities in sustainability, industrial systems, and health-related areas.



Overall, the Alliance is well positioned to develop joint educational programmes, mobility schemes, and innovative pedagogical models that leverage both convergence and complementarity. This multidimensional competence base constitutes a significant source of European added value, supporting the Alliance's capacity to contribute meaningfully to the objectives of European initiatives.

At the same time, these structural strengths should be interpreted in light of the strategic gaps identified in Section 4.3, particularly the limited explicit integration of systems-oriented, diversity-related, and adaptive competences.

This positioning provides a solid foundation for the next phase of development, in which the Alliance can move from mapping and alignment toward the co-creation of integrated, future-oriented educational pathways.



5. Recommendations for Future BAUHAUS4EU Educational Offerings

This chapter outlines the strategic development plan for the educational offering of BAUHAUS4EU, turning the Alliance's conceptual framework into concrete implementation pathways. It focuses on the progressive construction of an integrated educational ecosystem through the enhancement of the Course Catalogue, the development of joint degrees and micro-credentials, and the definition of shared guidelines for implementation. Particular attention is given to the alignment of the educational provision with RIS3 priorities, Future Skills, innovative pedagogies, and the needs of diverse target groups, including students, staff, and regional stakeholders. The chapter also addresses dissemination as a capacity-building process, highlighting the role of shared infrastructures, Communities of Practice, and the Virtual Teaching and Learning Center in supporting long-term institutional transformation. Finally, it identifies key risks and mitigation strategies to ensure that BAUHAUS4EU educational initiatives remain coherent, sustainable, inclusive, and responsive to European higher education priorities.

5.1 BAUHAUS4EU Course Catalogue: a Development Plan

The further development of a BAUHAUS4EU Course Catalogue should represent a foundational step towards a more integrated and strategically aligned educational ecosystem within the Alliance, while significantly facilitating student mobility across partner institutions. By providing a transparent, structured, and harmonised overview of learning opportunities, the catalogue should support the identification, comparison, and recognition of courses offered within the Alliance. It should evolve beyond a descriptive repository into a structured and scalable framework encompassing courses, micro-credentials, and flexible learning modules designed to address the needs of multiple target groups.

5.1.1 RIS3 Priorities

With regard to the RIS3 priorities of our regions, the current catalogue is strongly anchored in societal and cross-disciplinary themes, while technology-intensive and sector-specific domains remain underrepresented.

Partner institutions, drawing from their educational offers, should help the Alliance to fill the gaps in the underrepresented RIS3 domains, particularly ICT, Integrated Artificial Intelligence, Digital and smart technologies, Bioeconomy and health-related fields.

Moreover, partner institutions should establish a common monitoring framework to periodically assess how courses are distributed across RIS3 domains and to identify areas requiring further development. Such a framework would help the Alliance maintain a balanced and representative catalogue over time. In parallel, course tagging and classification practices should be harmonised through shared definitions and procedures, ensuring greater transparency, comparability and reliability of catalogue data.

5.1.2 Systematic Integration of Future Skills

Future Skills are another core component of the course catalogue. For students, some key competences remain insufficiently represented or not explicitly embedded in course design. For example, institutions should prioritise the integration of Multilingualism, Self-leadership skills, and Digital skills in the educational and training offering targeted at students, and they should make sure that digital competences are explicitly articulated in learning outcomes rather than implicitly embedded. Transversal modules or micro-credentials focusing on Future Skills should also be introduced, and course design should be aligned with measurable competence frameworks.

The development of staff competences is essential for supporting transnational education. For academic staff, it is recommended that multilingual and intercultural competences are reinforced, and that pedagogical innovation and international teaching practices are supported.

For administrative staff, it is essential that intercultural, innovation-oriented skills and capacities related to digitally mediated education are enhanced, and that joint training initiatives and communities of practice across the Alliance are promoted.

5.1.3 Developing Educational Offerings for Stakeholders

The current analysis indicates that structured educational provision targeting external stakeholders is not yet present within the Alliance's portfolio. This represents a significant gap that should be addressed in future developments. Expanding the educational offering to include stakeholders such as industry professionals, public institutions, and the wider society will be important to strengthen the Alliance's engagement with its surrounding ecosystems and to enhance the societal relevance of its educational activities.

5.1.4 Pedagogical Structuring of the Catalogue

The catalogue should not only organise content thematically but also reflect a consistent pedagogical approach. It is therefore recommended that traditional teaching formats are combined with active learning methodologies, problem- and project-based learning, and experiential learning approaches.

Explicit alignment between pedagogical methods and intended learning outcomes should be encouraged, and learner-centred approaches across catalogue offerings should be promoted.

Lastly, it should be ensured that courses contribute to the development of transversal competences alongside disciplinary knowledge.

5.1.5 Enhancing English-Taught Courses: Rebalancing RIS3 Coverage, Strengthening Future Skills and Enhancing Pedagogical Standards

The expansion and strategic reorientation of English-taught courses is essential to enhance the Alliance's international dimension and to enable the development of joint educational programmes. The current portfolio is disproportionately focused towards cultural and creative domains, with limited representation of key technological areas. Given the analysis already provided in Chapter 4, it is recommended that English-taught courses in the following areas are expanded:

- Information & Communication Technology;

- Integrated Artificial Intelligence;
- Digital and smart technologies;
- Bioeconomy and health.

Overconcentration in single thematic categories should be reduced through a more balanced programme design in order to avoid overlapping and juxtapositions which could hinder the development of a more comprehensive Course Catalogue. Moreover, classification criteria should be clarified to better capture technological content, a core component of the RIS3 that this Alliance aims to tackle.

For Future Skills, while technically strongly represented, the current offering lacks explicit emphasis on several key competences. A systematical integration of the following future skills is therefore essential:

- Critical thinking and systems thinking;
- Leadership and self-management;
- Adaptability and resilience;
- Diversity, inclusion, and teamwork;
- Goal-setting and execution.

Moreover, these competences should be explicitly embedded in learning outcomes and assessment methods. Another area for future development should be that of interdisciplinary courses combining technical expertise with transversal skills.

English-taught courses should reflect advanced pedagogical standards aligned with international education. Therefore, the main recommendations include:

- Strengthen learner-centred and interactive teaching approaches;
- Promote collaborative international learning environments, intercultural group work, problem-based and project-based learning;
- Ensure alignment between pedagogy and the development of global and transversal competences;
- Integrate digital tools to support cross-institutional participation.

By bridging these gaps in subject matter, competence building, and instructional design, the Alliance will successfully cultivate a truly comprehensive and globally competitive educational ecosystem.

5.2 Joint Degree Development

The Alliance's educational ecosystem is marked by strong complementarities across institutions. These should be strategically leveraged to support the development of joint educational initiatives. Because Joint Degrees represent a key strategic objective, the Alliance must purposefully design these programmes around shared thematic priorities and complementary strengths. By building initially upon the existing educational offering, the Alliance can immediately enhance its value across all participating institutions. To ensure long-term sustainability and foster a more dynamic educational process, these curricula should feature modular structures that allow for flexible partner participation.

Furthermore, true integration requires the promotion of co-supervision, joint teaching, and embedded mobility windows. This collaborative approach not only strengthens inter-institutional ties but also guarantees a smoother, more seamless mobility process that places student needs firmly at the center of attention. Finally, ensuring alignment with European frameworks and recognition mechanisms is essential; specifically, aligning with the upcoming European Degree Label will provide a distinct mark of excellence that significantly elevates the global appeal of the Alliance's educational portfolio.

By institutionalizing these flexible, collaborative pathways, the Alliance will not only streamline academic cooperation but also deliver a truly integrated, student-centered international experience.

5.2.1 Leveraging Complementarities Across RIS3 Domains

Several domains are currently concentrated within specific institutions, creating opportunities for collaboration. Exploiting this concentration will guarantee an educational offering which already draws upon courses and curriculums of proven quality.

Specific recommendations are related to the following areas:

- Bioeconomy and Sustainability, where alliance-level initiatives on circular economy, sustainable materials, and resource governance should be developed, and knowledge transfer from leading institutions to partners with emerging capacities should be promoted.
- Artificial Intelligence, where shared foundational modules and cross-sectoral applications should be established and horizontal and vertical integration of AI across disciplines should be promoted.
- Industrial Systems, where joint educational pathways addressing digitalised industry and sustainable manufacturing should be developed and technological, environmental, and governance perspectives should be integrated.

By systematically pooling these localized strengths into shared educational pathways, the Alliance will transform individual institutional expertise into a powerful, collective competitive advantage.

5.2.2 Promoting Flexible and Modular Educational Architectures

Flexible formats are essential for scalable collaboration. Therefore, it would be ideal to

- Develop joint micro-credentials, stackable modules, Blended Intensive Programmes (BIPs), and modular joint pathways leading to full degrees. This would allow for a more dynamic educational offering and would allow all students to participate in the courses providing accessibility also to those who would find it difficult to move from their home country.
- Facilitate credit recognition and transferability across institutions;
- Reduce administrative complexity through harmonised frameworks to simplify and speed up procedures, making the administrative burden less predominant as of now.

Ultimately, embracing these agile formats and streamlined processes will dismantle traditional barriers to mobility, ensuring that the Alliance's educational portfolio is both universally accessible and scalable for the future.

5.3 Micro-credentials Development

Following the definition given by the European Council on a European Approach to micro-credentials, this educational format can be defined as “the record of the learning outcomes that a learner has acquired following a small volume of learning” and that are “designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs”³. Furthermore, it is clear from this same document that, in order to provide learners with these “specific knowledge, skills and competences”, micro-credentials are also characterised by being flexible and modular educational structures. These characteristics also enable the BAUHAUS4EU Alliance to collaborate more effectively while lowering the barriers to initial engagement between partners. Joint efforts in developing or adapting smaller learning modules can gradually evolve into broader forms of collaboration, while also promoting adaptable learning pathways that respond to a rapidly changing educational landscape.

Some Alliance members already offer short courses and other education formats that respect the principles of microcredentials, even without the respective designation. Thus, there are already solid foundations for the creation of a shared microcredential system, even in national contexts where legal regulations are under development or are still non-existent. To further implement the offering, a coordinated and pragmatic approach from the Alliance is necessary.

To this end, the BAUHAUS4EU Alliance will pursue the development of micro-credentials within the following framework:

- **Alignment with Future Skills:** Micro-credentials within the Alliance should not be treated as isolated building blocks, but as part of a broader, more forward-looking learning ecosystem. The real value lies in designing learning opportunities that are not only innovative, but also clearly shaped by Future Skills competences. By weaving these skills into the core of each micro-credential, the Alliance ensures that the offer stays relevant and meaningful for its main target groups, rather than quickly becoming outdated. In this way, micro-credentials go beyond the logic of fragmented, short-term certification, establishing themselves as strategic instruments integrated into learning pathways geared towards future demands, both in higher education and in the job market.
- **Modular learning pathways:** Partner institutions will work together to create and offer micro-credentials, mainly as short, independent learning experiences. These can be combined into larger learning pathways, as stated in subsection 5.3.2, such as joint degrees. This builds on what is already being done and helps include these options in formal qualifications, aligned with the principle of stackability present in the European Approach on this matter.
- **Alignment with European and national qualifications frameworks:** All micro-credentials designed within the BAUHAUS4EU framework must have clear learning outcomes and, when possible, match the European Qualifications Framework (EQF). This makes it easier to compare and trust these credentials across different institutions and countries.
- **Facilitating recognition and transferability:** For micro-credentials to work well in the Alliance, institutions need to recognize each other's learning outcomes, which means lowering barriers

³ Council of the European Union. (2022). *Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (2022/C 243/02)*. Official Journal of the European Union, C 243, 10–25. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02))

to recognition based on the principle of mutual trust within the partners that make up the Alliance. Additionally, and in accordance with the EA, recognition should follow standard procedures used for the recognition of foreign qualifications and periods of study abroad.

- **Flexible and inclusive delivery formats:** The development of micro-credentials must take into account the demand for more blended, online, and short-term intensive courses to meet the needs of different learners and support lifelong learning, upskilling, and reskilling.
- **Alignment with target groups:** Micro-credentials should be designed and implemented to meet the needs of the four main target groups of the Alliance:
 - **Students:** will benefit from flexible, modular, and internationally accessible learning opportunities.
 - **Academic and administrative staff:** will gain from capacity-building, innovative teaching, and being actively involved in designing and delivering micro-credentials.
 - **Regional stakeholders:** such as industry, public authorities, and civil society, will see learning outcomes tailored to the challenges of the labor market and regional innovation, in alignment with industry, public authorities, and civil society.

Alignment at all these levels is key to making micro-credentials widely used, and a relevant tool to bridge existing gaps between academia and the labour market.

- **Harmonisation of frameworks and administrative procedures:** Since governance and approval processes differ, the Alliance will look for common solutions based on good practices and the European approach on micro-credentials. This means making procedures simpler whenever possible and supporting digital credentials that work across systems (e.g., Europass).

The fact that there are not yet full regulatory frameworks in all of the countries where partner institutions are based should not stop progress. As highlighted by the European Approach, European University Alliances should serve as drivers for the establishment of a strong micro-credential system within the EHEA that incentivises a more flexible and inclusive higher education pathway.

5.4 Guidelines for the Implementation of Educational Offerings

Building upon the identification of thematic areas and skills which ought to be prioritised, the activation and implementation of educational offerings within the BAUHAUS4EU Alliance should follow a coordinated and structured approach. This process should remain sufficiently flexible to accommodate different types of provision (EBC Courses, micro-credentials, and joint degree programmes) while ensuring consistency, quality, and alignment with both European frameworks and Alliance priorities.

The process can be articulated across three complementary governance levels, namely strategic, academic and operational, each of which contributes to different phases of programme development. The following sections explain better the different phases and a visual representation of them is to be found in the Appendix section (Appendix 1).

5.4.1. Strategic Level: Vision, Positioning, and Feasibility

At a strategic level, the Alliance member institutions governing bodies (e.g. governing boards, academic senates, etc.) play a central role in defining the overall direction and ensuring the long-term sustainability of educational initiatives. This level is primarily concerned with the early phases of programme activation, including the identification of the educational proposal and its feasibility.

The starting point involves defining the concept and purpose of the programme, including its educational objectives, target learners, and expected contribution to the Alliance's mission. Particular attention should be given to the definition of the cultural and professional profiles addressed by the programme, including the knowledge domains, competences, and professional roles it aims to support.

This initial definition should be grounded in a thorough context analysis. Proposed educational offerings should demonstrate clear alignment with Alliance priorities, including RIS3 domains, Future Skills, and emerging sectors, as well as with broader European policy agendas. At the same time, they should respond to stakeholder needs, including labour market demands, industry expectations, and societal challenges.

Alongside this strategic positioning, governing bodies should assess the overall feasibility of the initiative. This includes verifying its compatibility with institutional regulations, degree-awarding capacities, and internal approval procedures across partner institutions. Consideration should also be given to national accreditation frameworks, legal conditions for joint provision, and the recognition of qualifications. Drawing on previous experiences, existing data, and earlier analyses can support informed decision-making at this stage and help anticipate potential constraints. Ensuring clarity on degree ownership and long-term sustainability is essential before proceeding to the detailed design phase.

5.4.2. Academic Level: Curriculum Design and Pedagogical Coherence

At the academic level, further and new joint academic committees will be established as responsible for translating the strategic vision into a coherent educational framework. This includes the definition of educational profiles, learning outcomes, and the overall structure of the study programme.

The development of educational profiles should reflect a balanced integration of disciplinary knowledge, transversal competences, and professional skills. These profiles should then be made operational through clearly defined learning outcomes, which are measurable and aligned with the European Qualifications Framework and relevant national frameworks. Learning outcomes play a central role in guiding teaching methods, assessment strategies, and student evaluation processes, ensuring coherence across partner institutions.

Building on this foundation, the study programme should be designed in a way that reflects both the type of educational offering and the level of integration among partners. In the case of joint degrees, this involves defining a shared curriculum structure, including credit distribution, mobility pathways, language(s) of instruction, and joint approaches to teaching, supervision, and assessment. Jointness

has to go beyond coordination and extend to genuine co-design, co-delivery, and co-evaluation of the programme.

For collaborative courses within the BAUHAUS4EU offering, the focus should be on modularity, interdisciplinarity, and flexible integration into existing programmes. Micro-credentials, in turn, should be designed as modular and stackable units, supporting targeted skills development and potential integration into broader learning pathways.

Across all formats, particular attention should be paid to pedagogical coherence. Programme design should combine established academic teaching traditions with more innovative, learner-centred approaches. The integration of active learning, problem- and project-based learning, and experiential formats can support the development of transversal competences and enhance student engagement. At the same time, the use of digital and hybrid learning environments can facilitate collaboration across institutions and enable more flexible forms of participation.

5.4.3. Operational Level: Execution, Administration, and Quality Assurance

At the operational level, programme management offices and coordination units will be established as responsible for translating academic design into concrete implementation. This includes managing administrative procedures, supporting student mobility, and ensuring the smooth functioning of programmes across institutional contexts.

Key aspects of this phase include the organisation of admissions and enrolment procedures, the management of student records, and the coordination of mobility arrangements. Financial aspects, such as tuition fees and funding models, should also be clearly defined and aligned across partner institutions where possible.

Certification and recognition represent another crucial dimension. Programmes should ensure the proper issuance of certificates or diplomas, the recognition of credits in accordance with the ECTS system, and, where applicable, compatibility with emerging European instruments such as the European Degree Label. Particular attention should be given to ensuring transparency and portability of qualifications across national systems.

Quality assurance should be embedded throughout the implementation process. Educational offerings should comply with internal quality assurance systems aligned with the European Standards and Guidelines, as well as with external evaluation procedures. In the case of joint programmes, the European Approach for Quality Assurance of Joint Programmes provides an important reference framework. Continuous monitoring and evaluation mechanisms can further support the improvement and long-term sustainability of programmes.

5.5 From Dissemination to a Capacity Building strategy

This section presents the dissemination strategy as the outcome of a dedicated reflective and design phase within WP3 (in particular Task 3.3.3), grounded in survey findings and collective exchanges across the Alliance, and aimed at moving from isolated outputs to a structured, sustainable, and process-oriented approach to knowledge sharing, both within partner institutions and across the BAUHAUS4EU Alliance.

5.5.1 Principles and Approach

The dissemination strategy is framed in alignment with key EU policy priorities, notably those regarding the European Education Area (EEA) and the European Universities Initiative (EUI), where innovation serves as a guiding principle for transforming higher education systems. In this context, dissemination adopts a process-oriented, multi-level, and embedded approach, where knowledge sharing is not treated as a one-off activity but as a continuous and supported process integrated into everyday teaching and institutional practices.

A key distinction emerging from the analysis concerns dissemination within partner institutions and dissemination across the Alliance, which require complementary but differentiated strategies. At the institutional level, dissemination is primarily driven by situated practices, such as internal workshops, staff training, and teaching and learning communities, ensuring that pedagogical innovation becomes part of daily academic work. At the Alliance level, dissemination aligns with the transnational cooperation logic promoted by the EUI, relying on structured, coordinated, and scalable mechanisms, enabling knowledge exchange, comparability, and transfer across institutions.

Dissemination is therefore conceived as a relational and participatory process, grounded in Communities of Practice and peer exchange, and supported by both synchronous and asynchronous formats. This approach aligns closely with the EU's focus on collaborative knowledge ecosystems, open innovation and the circulation of good practices across borders. As noted in the Letta Report (2024)⁴, the growing complexities of today's challenges have led to discussions around a possible "fifth freedom" within the Single Market: the free movement of knowledge and innovation. This perspective reflects the need to strengthen knowledge flows in order to enhance Europe's capacity to respond effectively to ongoing transitions in many areas.

Seen from this angle, the EUI and the dissemination of its practices plays a practical role in turning knowledge sharing into a more seamless process, by supporting the continuous exchange, reuse of practices and connections between people and institutions. From this perspective, WP3, through the design of a dissemination strategy, acts as an enabling driver of the identity of BAUHAUS4EU, helping the Alliance to evolve into a well-connected innovation-driven ecosystem, rather than a set of parallel project-based activities.

⁴ Enrico Letta (2024), *Much more than a market – Speed, Security, Solidarity: Empowering the Single Market to deliver a sustainable future and prosperity for all EU citizens*, European Council. Available at: <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>

In this sense, it is important to address a key conceptual clarification between what is understood as “dissemination” and “capacity building”, because while interdependent, these terms fulfil different functions within the Alliance:

- Dissemination: refers to the circulation and transferability of knowledge within the Alliance, which includes the identification and reuse of practices and tools, ensuring that innovation easily circulates and takes root sustainably in the day to day of partner institutions. Moreover, it is not to be understood as a one-off communication, but a mutual ongoing process of enrichment.
- Capacity building: refers to the development of institutional and organisational capabilities that enable its actors to adopt and sustain innovative practices brought by the Alliance. It is, therefore, concerned with embedding change and enabling long-term transformation.

This conceptual distinction has an operational relevance, since dissemination ensures the flow of knowledge and good practices, while capacity building ensures its adoption and institutionalisation. They are, therefore, mutually reinforcing dimensions and must be deemed essential for systemic and long-term impact of the Alliance’s values and objectives.

Key pillars of the strategy for dissemination are the *BAUHAUS4EU Course Catalogue* and the *Online Catalogue of Innovative Pedagogical Strategies, Tools and Infrastructures*, conceived not as stand-alone repositories but as supporting infrastructures that enable users to explore, compare, and reuse practices, while identifying peers and institutions working on similar approaches.

Complementary pillars include:

- standardised formats (e.g. practice cards) to enhance transferability;
- multi-channel dissemination formats (online and in-person);
- community of Practice dynamics, fostering continuous interaction, co-creation, and mutual learning across the Alliance.

5.5.2 Key Instruments and Channels

Dissemination is implemented through a multi-channel and multi-layered ecosystem, combining digital infrastructures, relational formats, and institutional practices. As previously stated, it is not a singular event but rather a multi-dimensional strategy designed to transition from isolated outputs to sustainable, long-term educational practices. The Alliance aims to integrate institutional efforts, collective infrastructure, and peer-driven co-creation to foster a robust Community of Practice. In order to achieve this, the dissemination process will work on two levels and will take advantage of different resources.

At the institutional level, key instruments include:

- Internal workshops, staff training and faculty development courses supporting situated, practice-based learning. This will function as guidance for those involved in Alliance processes, helping to bring together their experience and ideas with the ones of the partners in an in-presence exchange.
- Shared digital or hybrid spaces for knowledge and practice exchange. This will allow a

continuous and fruitful exchange of good practices and difficulties encountered when putting practices into action. A hybrid or digital space complements the in-presence exchange, securing a regular contribution from each partner for the development of good practices.

- Clear, ready-to-use materials enabling immediate uptake in teaching contexts. This will lower the barrier to innovation, providing fixed and scalable material which can be used directly by professors to integrate BAUHAUS4EU pedagogical practices to their already existing curricula without the need for extensive modifications.
- Contact persons, designated by each partner institution, responsible for coordinating local activities, ensuring alignment with the BAUHAUS4EU pedagogical framework, and facilitating communication between the partner institution and the responsible unit for the educational offerings of the Alliance. This role is essential to monitoring, supporting continuity, and the progressive development of shared pedagogical strategies and tools.

At the Alliance level, dissemination will be structured through:

- Shared tools and infrastructures, such as the Catalogue of Practices, interactive maps, and databases of practices. This will be achieved through the development of a shared matrix or interface to report innovative pedagogical tools and practices across partner institutions, supported by designated institutional coordinators who will guarantee dissemination.
- Standardised formats (e.g. practice cards including problem, method, tools, outcomes, and contact person), supporting comparability and reuse. This will once again favour a smooth transition from the existing didactic offering to its implementation as a result of the adoption of standardised formats. A contact person will also help those in need by providing advice and suggestions for a better and seamless transition.
- Multi-channel dissemination, including webinars, newsletters, online training initiatives, and shared platforms, ensuring accessibility and continuity which will be complemented by the in-person and synchronous formats.
- In-person and synchronous formats, such as Staff Weeks and cross-WP events, to provide high-value moments for exchange, alignment, and integration thus allowing for exchange opportunities complementing the multi-channel dissemination.
- Teaching and Learning Communities of Practice could be established taking advantage of workshops, staff weeks, talks, podcasts, and recurring BAUHAUS4EU webinars to make good practices visible and foster continuous exchange. This could have a dedicated hub on the website which would allow more visibility and an easier access to it.

Across both levels, dissemination will be further strengthened by peer-learning and co-creation mechanisms, including BIPs, COIL, hackathons, joint labs, and collaborative course design, which enable experimentation and adaptation of innovative pedagogies (e.g. HyFlex, virtual labs, challenge-based learning). This represents a core component of the Alliance goals and will be integrated in all its didactic offering, securing quality oriented programmes also addressing the need for innovation of the educational system.

Importantly, the survey conducted in Task 3.3.3 shows that relational formats (e.g. workshops, peer exchange, live sessions) are consistently preferred over static repositories, however, given the nature

of the Alliance, while these formats will be prioritised, digital tools will help provide continuity and will function as enabling infrastructures rather than as isolated solutions.

5.5.3 Virtual Teaching and Learning Center (vTLC) as a core dissemination infrastructure

A central component of the dissemination ecosystem will be the progressive establishment of a BAUHAUS4EU Virtual Teaching and Learning Center (vTLC), conceived as a shared digital and relational infrastructure supporting knowledge exchange, professional development, and pedagogical innovation across the Alliance.

This direction is consistent with recent recommendations promoted by the European University Association (EUA)⁵, which increasingly identifies Teaching and Learning Centers as key infrastructures for supporting pedagogical innovation, staff development, and institutional transformation in European higher education.

The BAUHAUS4EU vTLC will not function as a static repository, but rather as an enabling environment integrating tools, resources, infrastructures, and collaborative formats that support continuous interaction among educators, researchers, and institutional actors. It will connect existing dissemination instruments, such as the Online Catalogue of Innovative Pedagogical Strategies, Tools and Infrastructures, the BAUHAUS4EU Course Catalogue, and Communities of Practice, within a coherent and accessible ecosystem.

Through the vTLC, dissemination activities will be supported by:

- curated collections of pedagogical resources and practice cards;
- synchronous and asynchronous learning opportunities (e.g. webinars, workshops, micro-training modules);
- shared spaces for peer exchange, mentoring, and collaborative experimentation;
- tools supporting the adaptation and reuse of pedagogical strategies across institutional contexts.

In this sense, the vTLC will act as a connecting infrastructure, ensuring continuity between individual dissemination activities and long-term capacity-building processes.

5.5.4 Governance, Sustainability and Impact

The dissemination strategy for BAUHAUS4EU exploits a sophisticated, multi-level governance framework that bridges the gap between inter-institutional strategy and intra-institutional action. This structure relies on a constant dialogue between Alliance-level coordinators, Task and Work Package leads, and other specific institutional actors. By facilitating a flow of knowledge that moves from central coordination to institutional implementation, the framework ensures that while the Alliance remains aligned in its vision, it allows for the necessary contextual adaptation required by diverse academic environments. Hence, the following activities are considered essential to reach the aforementioned goals.

⁵ See: https://www.eua.eu/publications/reports/development-and-strategic-benefits-of-learning-and-teaching-centres.html?utm_source=chatgpt.com

At the Alliance level, governance supports:

- Coordination of dissemination activities across WPs; in order to avoid overlapping and to assure continuity and cohesion between the different activities of the WPs.
- Integration through cross-WP events and Staff Weeks. Initiatives like Workshops, Forums and Staff Weeks serve as melting pots for ideas, moving beyond simple updates to true collaborative integration.
- Development of shared tools and standards. Setting standards ensures that the "BAUHAUS4EU brand" of innovation remains consistent regardless of which partner is leading the charge. Moreover, a quality standard assures recognisability on the market and trustworthiness.

Alliance initiatives must however be adopted at an institutional level. This would certify and justify the value and efforts of the Alliance.

Local dissemination is therefore supported via:

- Local dissemination structures which translate Alliance goals into the specific linguistic and organizational "dialects" of each partner institution.
- Integration into teaching and learning practices. In this way, the project ensures that innovation becomes a lived experience for both staff and students rather than a peripheral administrative exercise.
- Adaptation to specific organisational contexts that assure a constant attention to each target group and tailored-made innovation practices.

These dissemination practices need however to be backed up by a thorough plan for the sustainability of the Alliance. This represents a structural necessity in order to move beyond the initial funding.

Sustainability is supported through:

- Incentives and recognition mechanisms (e.g. replication grants, career recognition of teaching innovation). By introducing replication grants and formalising career recognition for pedagogical innovation, the Alliance acknowledges the labor involved in transformation.
- Continuous updating of the Catalogue and shared resources. The former and the latter are designed as "living" entities, subjected to continuous updates to remain relevant to evolving academic needs.
- Provision of time, resources, and institutional legitimacy to support staff engagement. This is crucial as institutional recognition and allocation of resources guarantees continuity and validates the position of the Alliance at institutional level.

The strategy strengthens BAUHAUS4EU as a transnational Community of Practice in teaching and learning, fostering continuous exchange, co-creation, and iterative improvement. It also ensures that dissemination is directly linked to implementation, supporting the uptake of innovative pedagogies in joint courses, micro-credentials, and future programmes.

Overall, the approach enables a shift:

- from isolated outputs to sustainable dissemination processes;

- from static resources to relational and practice-based learning ecosystems.

Within the governance and sustainability framework of BAUHAUS4EU dissemination, the Virtual Teaching and Learning Center (vTLC) is envisioned as a strategic structure supporting the long-term development of pedagogical innovation across the Alliance.

The mission of the vTLC is to:

- support the continuous professional development of academic staff involved in BAUHAUS4EU educational initiatives;
- strengthen the capacity of institutions to adopt, adapt, and sustain innovative pedagogical approaches;
- monitor and foster the implementation of innovative infrastructures and their employment in teaching and learning programs;
- foster transnational Communities of Practice, enabling collaboration beyond individual projects and funding cycles;
- ensure the progressive institutionalisation of dissemination and capacity-building processes across the Alliance.

The vTLC will operate through a distributed governance model, where Alliance-level coordination ensures strategic alignment, while institutional representatives, including designated local reference persons, support contextual implementation and participation.

This structure will contribute to the sustainability of dissemination processes by embedding pedagogical innovation into institutional routines, rather than limiting it to project-based experimentation.

5.5.4 Key cross-cutting recommendations

Six key cross-cutting recommendations emerge to reinforce the strategic orientation and long-term sustainability of dissemination practices across the Alliance:

- Dissemination appears most effective when it is situated and embedded within existing institutional structures, rather than conceived as an external or parallel activity. Integrating dissemination into everyday teaching, learning, and organisational practices increases both participation and sustainability.
- Interactive and collaborative formats (e.g. particularly workshops, peer-learning activities, and Communities of Practice) are consistently perceived as more valuable than static repositories or one-directional communication tools. This highlights the importance of dissemination as a social process of dialogue, rather than merely a transfer of information.
- Catalogues, maps, and digital repositories are recognised as important enabling infrastructures, especially for visibility, accessibility, and knowledge sharing. However, participants emphasised that such tools are most effective when combined with opportunities for interaction, experimentation, and contextual adaptation.
- The relational dimension emerged as a central element of the dissemination strategy. Staff Weeks, synchronous exchanges, mobility experiences, and peer-to-peer encounters were identified as particularly impactful in fostering trust, mutual learning, and the circulation of innovative pedagogical practices across institutional and disciplinary boundaries.

- Continuity and institutional recognition were identified as essential conditions for meaningful engagement. Effective dissemination requires dedicated time, organisational support, recognition within academic workloads, and adequate human and financial resources in order to move beyond episodic participation.
- A strong willingness to engage in future collaborative dissemination activities emerged across partner institutions, including interest in training initiatives, co-design processes, shared experimentation, and the development of sustainable Alliance-wide structures to support pedagogical innovation over time.

5.6 Risk Management and Mitigation

The implementation of BAUHAUS4EU educational offerings requires a structured and proactive approach to operational risk management. Given the diversity of educational formats and institutional contexts within the Alliance, specific risks may emerge during the design and implementation phases. This section identifies key operational risks associated with the main educational formats and defines targeted mitigation measures to support effective, coordinated, and scalable implementation.

The focus is placed on ensuring the coherence of the BAUHAUS4EU Course Catalogue, the effective delivery of European BAUHAUS Courses (EBCs), the development of robust and recognisable micro-credentials, and the consistent adoption of innovative pedagogies and digital infrastructures. Particular attention is given to maintaining alignment with RIS3 priorities, strengthening the integration of Future Skills, and ensuring quality and comparability across institutions.

To address these risks, the Alliance adopts a set of practical mitigation strategies, including standardisation of processes, strengthened coordination mechanisms, targeted capacity-building, and continuous monitoring. These measures aim to reduce implementation barriers while preserving the flexibility required in a transnational educational environment.

In this context, **Table 6** (on the following page) summarises the main operational risks and corresponding mitigation measures across the key areas of the BAUHAUS4EU educational framework.

By integrating risk management into the early stages of design and implementation, the BAUHAUS4EU Alliance adopts a proactive approach that enhances the resilience and effectiveness of its educational framework. This structured anticipation of risks, combined with targeted mitigation measures, supports the development of a coherent, innovative, and sustainable European educational ecosystem.

Table 6: Risks and Mitigation Measures by Area

Area	Risk	Potential Impact	Mitigation Strategy
BAUHAUS4EU Course Catalogue	Imbalanced RIS3 coverage	Weak alignment with regional priorities	Periodic catalogue reviews and targeted course development in underrepresented areas
	Limited integration of Future Skills	Skills gaps in graduates	Introduce minimum requirements for Future Skills integration in all courses
	Uneven partner contributions	Reduced diversity and collaboration	Encourage participation through internal coordination and incentives
	Lack of standardisation	Inconsistent quality and comparability	Develop standardised templates for course descriptions and learning outcomes
European BAUHAUS Courses (EBCs)	Coordination difficulties between institutions	Delays and inefficiencies in implementation	Establish structured matchmaking and coordination mechanisms
	Misaligned academic calendars	Reduced student participation	Align planning cycles and introduce flexible scheduling solutions
	Low engagement of staff/stakeholders	Limited innovation and impact	Strengthen internal communication and stakeholder involvement
	Variability in pedagogical quality	Uneven learning experience	Provide shared pedagogical guidelines and support tools
Micro-credentials	Lack of regulatory clarity	Barriers to implementation and recognition	Align with European frameworks and maintain flexibility for national adaptation
	Limited recognition/portability	Reduced attractiveness for learners	Define common principles for recognition and ECTS use
	Fragmentation of offerings	Lack of coherent learning pathways	Develop structured and stackable learning pathways
	Weak labour market alignment	Reduced relevance and impact	Co-design courses with stakeholders and industry
Innovative Pedagogies & Infrastructure	Uneven adoption across institutions	Inconsistent teaching quality	Promote shared pedagogical frameworks and best practices

	Insufficient digital infrastructure	Limited access and scalability	Invest in interoperable digital platforms (e.g. vTLC)
	Lack of staff training	Ineffective implementation of innovation	Provide continuous training and capacity-building programmes
	Superficial adoption of innovation	Low pedagogical impact	Monitor and evaluate learning outcomes and teaching effectiveness
Cross-cutting Governance	Weak coordination mechanisms	Fragmented implementation	Establish clear governance structures and regular coordination
	Lack of monitoring tools	Limited ability to track progress	Implement KPIs and monitoring systems
	Resource constraints	Delayed or incomplete implementation	Secure funding and share resources across partners
	Limited long-term sustainability	Risk of project-based outcomes only	Integrate initiatives into institutional strategies

6. General Conclusions

This deliverable has established the conceptual and analytical foundations for the development of the BAUHAUS4EU educational ecosystem. By combining regulatory mapping, course portfolio analysis, and the identification of innovative pedagogical approaches, it provides a comprehensive framework to guide the design and implementation of joint, flexible, and transnational educational offerings across the Alliance.

The findings demonstrate that the BAUHAUS4EU Alliance is structurally well-positioned to advance towards deeper academic integration. Partner institutions share a common commitment to European higher education principles, including quality assurance, credit transparency, and outcome-based learning. At the same time, the analysis highlights the importance of managing diversity in regulatory frameworks, institutional practices, and pedagogical approaches as an inherent characteristic of transnational cooperation.

Overall, the results point to a transition from a phase of analytical mapping and conceptual alignment towards one of operational implementation and strategic consolidation.

6.1 Key Systemic Challenges and Constraints

Despite the strong foundations identified, the BAUHAUS4EU Alliance operates within a complex and evolving European higher education landscape characterised by structural, regulatory, and organisational constraints. These challenges do not undermine the feasibility of the Alliance's educational ambitions, but they do shape the conditions under which implementation can occur and influence its pace and scope.

A primary constraint lies in the persistence of heterogeneous national regulatory frameworks, which continue to govern programme accreditation, degree structures, and administrative procedures. While partner institutions share common European higher education principles, these differences introduce structural complexity that requires careful alignment and coordination.

In addition, the development of transnational educational offerings is inherently dependent on institutional coordination across diverse systems. Variations in academic calendars, governance structures, and internal processes reflect the diversity of the Alliance and may affect the synchronisation of activities and the efficiency of collaborative implementation.

From a strategic perspective, the analysis also highlights imbalances in thematic and skills coverage. Certain RIS3 domains, particularly in technology-intensive areas such as Artificial Intelligence, ICT, and health-related fields, remain less developed within the current educational portfolio. Similarly, while Future Skills are broadly integrated, competencies related to systems thinking, adaptability, resilience, and diversity are not yet consistently embedded across learning activities.

Furthermore, the effective deployment of innovative pedagogies and digital learning environments depends on varying levels of institutional readiness. Differences in digital infrastructure, staff capacity, and pedagogical maturity may influence the consistency and scalability of innovative teaching approaches across the Alliance.

Finally, the long-term success of the BAUHAUS4EU educational structure is closely linked to issues

of recognition, stakeholder engagement, and sustainability. Ensuring that joint educational offerings are widely recognised, effectively connected to regional ecosystems, and embedded within institutional strategies remains a key challenge for the future development of the Alliance.

Taken together, these constraints reflect the broader reality of transnational cooperation in higher education. They underline the importance of sustained coordination, strategic alignment, and institutional commitment in transforming the Alliance's strong potential into a fully operational and sustainable European educational ecosystem.

The work carried out by WP3 provides a detailed understanding of the training programmes offered within the Alliance and has allowed the identification of several elements conducive to the implementation of student-centered educational activities. After identifying the specific points at the different institutions, priorities for the foundations for building a programme within the Alliance were considered. The themes presented in RIS3, in particular, constitute a cornerstone for the development of a joint programme. This programme is multifaceted, taking into account, among other things, the future skills to be developed by the students of the Alliance, as well as innovative methods and infrastructure for creating a programme. Furthermore, the programme must allow each student to participate, whether through a short (and intensive) programme, a mobility programme, or by obtaining a joint degree.

A strong overall compatibility between the Alliance member institutions has been highlighted through shared values, quality standards and credit systems. Nevertheless, this convergence may be limited by heterogeneous national legal constraints, which represent an important risk to consider. Developing a common educational offer is particularly challenging given the differences in academic calendars, accreditation systems and admission criteria. It appears that the development of joint programmes will require more time and effort for bachelor's degrees and micro-credentials compared to master's programmes. Moreover, ensuring long-term sustainability requires stable funding, as well as strong strategic alignment and effective governance. Cultural complexity may also affect the student experience if not properly addressed; the challenge is therefore to transform it into an asset and a source of enrichment for students. Finally, while the potential for cooperation is undeniable, it depends on progressive harmonisation, coordinated governance, and sustained institutional commitment. These elements are essential for the success of this ambitious project.

One of the Alliance goals is to create a transnational, innovative, and inclusive educational ecosystem by developing its European Course Catalogue, strengthening underrepresented RIS3 domains and systematically integrating future skills for both students and staff. English-taught courses and joint degrees will play a key role in promoting internationalisation and academic collaboration. Pedagogical innovation, focused on active, hybrid, and modular approaches, will be supported by an online catalogue for sharing best practices and tools among institutions. A multi-level governance framework (strategic, academic, and operational) will ensure quality, qualification recognition, and adaptability. The Alliance will position itself as a model of future-oriented higher education, addressing societal challenges and preparing learners for an interconnected world.

6.2 Strategic Outlook and Future Directions

Looking ahead, the BAUHAUS4EU Alliance is well-positioned to capitalise on its strengths and progressively develop a coherent and innovative European educational ecosystem. The framework established in this deliverable provides a solid basis for the expansion of joint educational formats, including European BAUHAUS Courses, micro-credentials, and, in the longer term, joint degree programmes. In this context, flexible and modular approaches will play a key role in enabling gradual integration while accommodating institutional diversity.

Future developments should focus on strengthening the balance of the educational portfolio, particularly by expanding offerings in underrepresented RIS3 domains and enhancing the systematic integration of Future Skills. This will contribute to aligning the Alliance's educational activities with regional innovation priorities and evolving labour market demands.

The continued development of digital and hybrid learning infrastructures, including the Virtual Teaching and Learning Center (vTLC), will be essential for supporting transnational collaboration, virtual mobility, and scalable educational delivery. At the same time, investment in staff training and pedagogical innovation will be required to ensure the effective use of these tools.

The evolving European policy landscape, including initiatives such as the Joint European Degree Label and the European approach to micro-credentials, represents both an opportunity and a driver for further integration. By aligning its framework with these developments, the Alliance can strengthen its position within the European Higher Education Area.

Finally, increasing the involvement of regional stakeholders and expanding lifelong learning opportunities will enhance the societal relevance and impact of BAUHAUS4EU educational offerings, reinforcing the connection between higher education, innovation ecosystems, and regional development.

6.3 Final Conclusions

In conclusion, this deliverable demonstrates that the BAUHAUS4EU Alliance has the necessary foundations to develop a coherent, innovative, and transnational educational ecosystem. The combination of institutional compatibility, thematic complementarities, and a shared commitment to innovation provides a strong basis for collaboration. While regulatory diversity and operational complexity remain important challenges, they can be effectively managed through coordinated governance, flexible implementation models, and sustained institutional engagement.

The transition from analysis to implementation represents a critical next step. By building on the conceptual framework and strategic recommendations outlined in this report, the Alliance can progressively move towards the realisation of joint educational offerings that are flexible, inclusive, and aligned with European priorities.

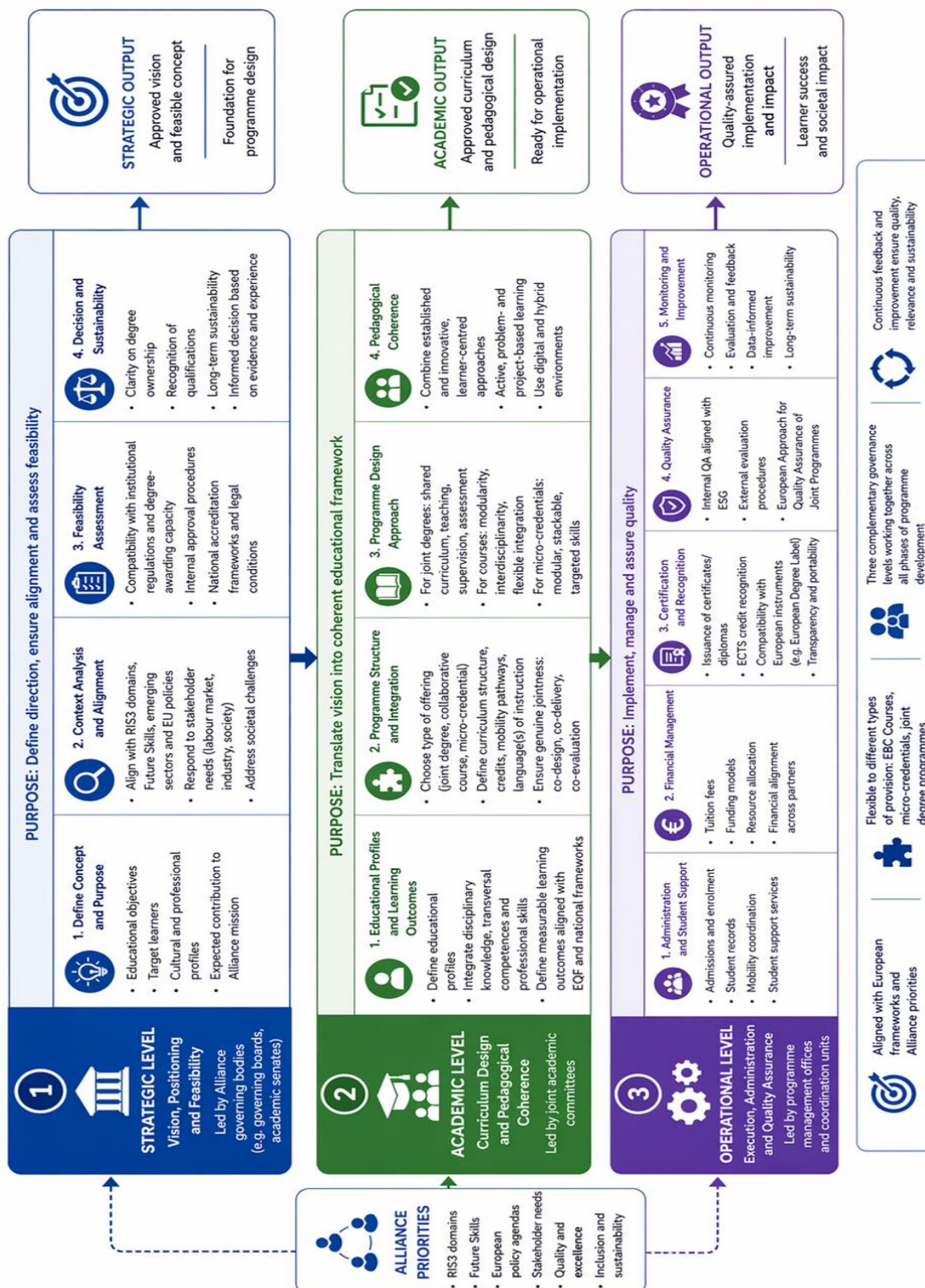
Ultimately, BAUHAUS4EU has the potential to act as a model for European University Alliances, contributing to the transformation of higher education through integrated, challenge-based, and future-oriented learning pathways. In doing so, it supports the broader objectives of the European Education Area, fostering a new generation of learners equipped to address complex societal challenges and drive sustainable innovation across Europe.

Appendix

Appendix 1: The three governance levels of implementation

5.4 GUIDELINES FOR THE IMPLEMENTATION OF EDUCATIONAL OFFERINGS

A three-level governance framework for coordinated, quality-assured and future-oriented education





Blekinge Institute
of Technology



UNIVERSITÀ
DEGLI STUDI
DI BERGAMO



University
of Economics
in Katowice



**Co-funded by
the European Union**

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor the granting authority can be held responsible for them