

ICSE STE(A)M Vision Policy Brief 1

Strengthening Teacher Education for Integrated STE(A)M

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Executive Summary

In Europe, the green and digital transitions, the rise of geopolitical uncertainty, the fast-paced development of artificial intelligence and the need to boost long-term competitiveness are reshaping the knowledge, skills and competences expected of citizens and the workforce. To meet these challenges, we need holistic approaches to teaching and learning that enable learners to apply knowledge across disciplines, solve complex real-world problems, think critically, collaborate effectively and act responsibly.

Governments across Europe are recognising this need through curriculum reforms giving emphasis on integrated STE(A)M approaches. However, teacher education is still in need of some serious reforms. Initial Teacher Education (ITE) and Continuing Professional Development (CPD) remain organised around specific subjects, leaving many teachers insufficiently prepared to design and implement integrated STE(A)M learning experiences. As a result, a growing gap is emerging between policy ambition and classroom reality.

This policy brief bases its findings on European policy developments, recent literature, and early evidence collected through the ICSE STE(A)M Vision project participating countries, while it focuses on identifying the key conditions required for effective STE(A)M teacher education. While national contexts have their differences, a set of common themes emerge: teacher education should be practice-oriented, support integrated STE(A)M approaches, foster collaboration within and beyond schools, and align with existing curriculum priorities rather than adding further demands to teachers' workload. Equally important are the conditions that enable implementation, including leadership support, collaboration time, appropriate resources, and sustained professional learning.

Based on these early findings, the brief highlights three priorities for policymakers:



Reform teacher education alongside curriculum reform by embedding STE(A)M approaches and the competences needed to implement them within both ITE and CPD.



Design teacher education that is practical, context-sensitive and collaborative, enabling teachers to confidently implement STE(A)M approaches in diverse educational settings.



Create the conditions for successful implementation by supporting teacher collaboration, shared school leadership, and sustained professional learning that enables STE(A)M to become part of everyday teaching practice.

This brief marks the first step in the ICSE STE(A)M Vision policy series. It explains why effective STE(A)M teacher education matters and identifies the key conditions for success. The following briefs will explore implementation experiences and present evidence-based policy recommendations to support sustainable system change across Europe.

Why STE(A)M Education Matters

The rapid evolution of technology, the green and digital transitions, and the need to sustain the EU's competitiveness are just some of the factors that make STE(A)M education an increasingly important policy issue. These increasingly interconnected challenges cannot be adequately understood or addressed through a single disciplinary perspective and education needs to enable learners to make meaningful connections across disciplines and apply knowledge to complex, real-world problems. Within this context, STE(A)M education can contribute to this by fostering interdisciplinary competences that are relevant not only to the economic prosperity and competitiveness of EU countries but also to the well-being of citizens as they navigate an increasingly complex and rapidly changing world.



The importance of skills and education in responding to these challenges is also reflected in recent EU policy initiatives. In the Competitiveness compass, it is highlighted that one of the ways to increase EU competitiveness is to promote skills and quality jobs, while with the Union of Skills is emphasised that high-quality education, training and lifelong learning are to fill the skills and labour gaps that interfere with the progress. At a global level, this link between skills, education and future economic opportunities is also illustrated by recent PISA (OECD, 2026)[1] estimates, which suggest that students from countries currently performing strongly in science may constitute an important share of the global talent pool of future science innovators, while this pool is likely to remain geographically diverse.

The emerging question, though, is what are the skills that are required to respond to the needs of a changing society?

Given their ever-evolving nature, global dynamics cannot be meaningfully understood and approached through a single perspective or framed within one single discipline. The twin green and digital transition is accelerating demand for talent that combines sustainability and digital expertise, from green professionals with tech skills to data scientists and AI specialists with sustainability competences. As highlighted in the Draghi Report, Europe's competitiveness and the success of the green and digital transitions depend on closing persistent skills shortages, equipping the workforce with broader mix of skills, including STE(A)M competences.



At the same time, AI is gradually transforming every sector of the economy, creating demand for citizens who can understand, critically use, and responsibly develop AI-enabled technologies. Recent PISA results (OECD, 2026) show a complex relationship between student performance and AI use, while highlighting the risk of a widening AI divide. In this context, ensuring that teachers have adequate support, training and resources is essential to help students develop the skills needed to navigate an increasingly AI-driven world.

Amid geopolitical tensions and the resulting energy crisis, the strategic importance of these skills has become even more prominent. The need for energy resilience, energy independence, renewable energy infrastructure, and green technologies requires a highly skilled workforce and, among other factors, achieving these objectives ultimately depends on sustained investment in education and training systems capable of developing the required skills.

[1] OECD (2026), PISA 2025 Results (Volume I): Future-Ready Students, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/73451bc5-en>.

Not only economic and political but also moral, cultural and ethical factors can influence these issues and the related challenges while having an impact on social justice, sustainability and human rights. Addressing them requires the knowledge and skills to critically evaluate information while respecting the values of freedom and democracy and **STE(A)M can play a key role in developing informed, critical citizens who can actively participate in democratic society and make evidence-based decisions** (Hilton & Hilton, 2024)[2]. As it is also evident in the STEM Education Strategic plan, STE(A)M can contribute to citizenship by promoting equal opportunities, supporting social mobility and inclusion, preparing citizens to adapt to economic and technological change and enabling them to participate more in a knowledge-based society.

Education plays an important role as learners' critical and creative thinking skills and their capacity for engaging as active citizens can be further developed within its context. There is an emerged need to include social-political topics in the teaching and learning of integrated STE(A)M and more opportunities to advance students' ethical, political, and social reasoning alongside perhaps more traditional STEM-based argumentation (Steffensen, 2024)[3]. At the same time, STE(A)M education itself can be shaped by the integration of citizenship-oriented perspectives, influencing how students engage with and persist in the subject, potentially strengthening STEM perseverance (Nalipay, Huang, Jing, & King, 2024)[4].

Nonetheless, meeting all these expectations requires recognising the pressures currently experienced within the education system.

Schools face significant challenges, including shortages of STEM teachers and professionals (European Commission, 2025)[5], as well as systemic barriers such as fragmented governance, infrastructure inequality and limited curriculum flexibility (European Commission, 2026)[6]. This situation reinforces the relevance of STE(A)M education in addressing emerging skills needs.

Given the preventive and foundational role of education systems, efforts to address skills shortages and inequalities must begin early, at school level, where competences in STEM fields are first developed. With particular attention to STE(A)M Education, from the 2018 Recommendation of the Council of the European Union on Key Competences for Lifelong Learning to the more recent STEM Education Strategic Plan, the importance of this type of education has become increasingly prominent in educational policy.

The 2018 Recommendation emphasises the importance of embedding competence-oriented approaches in initial education and continuing professional development, enabling educational staff to adapt their practice and support the development of lifelong competences. It also identifies staff exchanges, peer learning, networks and communities of practice as forms of support for educational staff. More recently, the STEM Education Strategic Plan identifies teacher professional development as pivotal to strengthening STEM education, while recognising that teachers currently lack sufficient professional development support and highlighting the need for sustained investment in STEM teacher development. These policy developments point not only to increasing expectations for competence-oriented and interdisciplinary learning, but also to the need to ensure that teachers and schools have the conditions, preparation and ongoing support required to meet these expectations.

What is STE(A)M Education

ICSE STE(A)M VISION defines integrated STE(A)M as interdisciplinary teaching where at least two disciplines – from STEM disciplines and/or one other subjects are applied within real-world contexts.

[2] Hilton, A., & Hilton, G. (2024). The importance of STEM education to responsible citizenship within a democracy. In The contribution of mathematics to school STEM education: Current understandings (pp. 257–275). Springer. [1, 2, 3]

[3] Steffensen, L. (2024). Developing Responsible Citizenship Through Integrated STEM Education Activities. In: Anderson, J., Makar, K. (eds) The Contribution of Mathematics to School STEM Education. Springer, Singapore. https://doi.org/10.1007/978-981-97-2728-5_17

[4] Nalipay, Ma & Huang, Biyun & Jong, Morris & Chai, Ching & King, Ronnel. (2024). Promoting STEM learning perseverance through recognizing communal goals: understanding the impact of empathy and citizenship. International Journal of STEM Education. 11. 10.1186/s40594-024-00471-w.

[5] European Commission: Directorate-General for Education, Youth, Sport and Culture. (2025). Education and training monitor 2025: comparative report. Publications Office of the European Union. <https://data.europa.eu/doi/10.2766/2221794>.

[6] European Commission: Directorate-General for Education, Youth, Sport and Culture, Allinson, R., Caturianas, D. and Stoy, L., Promoting STEM education in schools – Final report, Publications Office of the European Union, 2026, <https://data.europa.eu/doi/10.2766/0846653>

Originally defined as distinct subjects—Science, Technology, Engineering, and Mathematics—STEM has more recently evolved toward a more integrated and interdisciplinary approach, which has become increasingly prominent in policy and research. **Integrated STE(A)M education brings together science, technology, engineering, mathematics, and other subject areas within a unified learning framework.** Extending the objectives associated with STE(A)M education, advocates of integrated STE(A)M education argue that it prepares students for an evolving labour market by fostering transferable skills such as collaborative problem-solving, creativity, adaptability, and interdisciplinary thinking (European Commission, 2024)[7]. Rather than emphasising job-specific knowledge, this approach equips learners to navigate technological change through innovation, lifelong learning, and cross-disciplinary understanding (European Commission, 2024).

The “Science Education for Responsible Citizenship” report (European Commission, 2015)[8], along with later European policy documents, sets out a shared transformative vision for STE(A)M education. It is within this context, that **STE(A)M emerged referring to a broader, more integrated approach** to the traditional STEM fields, **with the “A” standing for “All,” including arts, humanities and sports, and is not limited to creative disciplines,** thus signalling a more inclusive and flexible understanding of interdisciplinary learning. The STE(A)M Education European Roadmap (2025, p15)[9] introduces what STE(A)M education entails:

“STE(A)M education purposefully selects standards, content areas and topics from at least two disciplines (one or more STEM subjects and at least one other subject) to create meaningful connections, embodying an interdisciplinary pedagogical approach that integrates these domains in teaching and learning”

This brief adopts the broader understanding also reflected in the ICSE STE(A)M Vision project, where integrated STE(A)M is understood as an interdisciplinary approach in which at least two disciplines—drawn from STEM and/or other subject areas—are purposefully brought together within real-world contexts. By integrating scientific inquiry, technological understanding, creativity, ethical reflection and problem-solving, STE(A)M education can also provide an important foundation for AI literacy, enabling learners to engage with artificial intelligence in an informed, critical and responsible manner.

Central to this process are education practitioners—the teachers, who play a key role in implementing STE(A)M in classrooms in a meaningful and inclusive manner, as well as pre-service teachers who are preparing to take on this role. However, their ability to do so depends on access to adequate support, tools, resources, and training and professional development opportunities.

[7] European Commission, Joint Research Centre, Pokropek, A., STEM competences, challenges, and measurements: a literature review, Editors: Mazzeo-Ortolani, G., Karpinski, Z., Biagi, F., Publications Office of the European Union, Luxembourg, 2024, <https://data.europa.eu/doi/10.2760/9390011>, JRC138618.

[8] European Commission: Directorate-General for Research and Innovation, Science education for responsible citizenship – Report to the European Commission of the expert group on science education, Publications Office, 2015, <https://data.europa.eu/doi/10.2777/12626>

[9] The SEER. (2025). The new STE(A)M Education European Roadmap. Published by European Schoolnet, August 2025.

The current gap: Teacher training is not yet ready for STE(A)M

Although there is a strong willingness to teach STE(A)M, several challenges can hinder its effective implementation, including poor time management, limited funding and resources, insufficient guidance, difficulties in integrating different subject areas, lack of assessment frameworks, challenges with adopting new technologies, increased need for leadership support and structural constraints within schools (Spyropoulou, Mathiopoulos & Kameas, 2025[10]; Teixeira, Rocha, & Martins, 2025[11]). Initial Teacher Education (ITE) research shows a gap between theory and teaching practice and a need for more experiential training with practical activities and real-life application of concepts (Olivato, Silva & Ferreira, 2025[12]).

Looking more closely at teacher preparation, teacher training poses several challenges for effective STE(A)M implementation. Teacher education is often fragmented and subject-based, which limits preparation for interdisciplinary teaching. In addition, both initial and ongoing training frequently provide insufficient opportunities to develop the skills needed to integrate subject areas effectively, leaving many teachers underprepared for STE(A)M approaches. Access to high-quality professional development can also vary depending on institutional and leadership support, resulting in unequal opportunities for teachers to build STE(A)M-related expertise.

What effective STE(A)M Teacher training needs

Early findings of the ICSE STE(A)M vision project research (ICSE STEAM Vision, Grant Agreement, p.7-8)[13] indicate that teachers need dedicated STE(A)M training in both ITE and CPD, as STE(A)M is rarely taught systematically and teachers are typically trained within single-subject structures and to work independently. Many teachers have limited or no experience of STE(A)M teaching and therefore require opportunities to first experience STE(A)M problems as learners in order to understand their relevance and application.

The findings also highlight the need for training that serves both beginning and experienced teachers, fits teachers' working conditions and is perceived as support rather than additional work. Training should focus on real-life contexts, particularly technology and sustainability, while addressing assessment and links to the curriculum. It should also support joint lesson design, team teaching, collaboration at school and network level, and the development of permanent support structures. Notably, teachers did not express a specific need for training on how to enhance girls' interest in STEM and STEM careers, which may indicate limited awareness of this issue. This highlights the importance of ensuring that equity, inclusion and gender considerations are nevertheless explicitly addressed within STE(A)M teacher training.

In addition to that, to effectively understand and implement STE(A)M, teachers require collaborative pedagogical and material support, as well as the autonomy and flexibility to adapt STE(A)M to suit their specific classroom and school contexts (Boice et al., 2024[14]). Teachers then need substantial training that builds their confidence and competence in designing and delivering interdisciplinary STE(A)M learning experiences and in approaches such as inquiry-based and project-based learning, collaborative teaching and co-teaching, and the facilitation of authentic, real-world learning experiences.

[10] Spyropoulou, N., Mathiopoulos, K., & Kameas, A. (2025). "We Believe in STEAM Education, but We Need Support": In-Service Teachers' Voices on the Realities of STEAM Implementation. *Education Sciences*, 15(10), 1300.
 [11] Teixeira, P. B., Rocha, H., & Martins, C. (2025). Challenges and potential in implementing STE(A)M in teachers' practices: a systematic review. *International Journal of Mathematical Education in Science and Technology*, 56(8), 1384–1400. <https://doi.org/10.1080/0020739X.2025.2496701>
 [12] Abra Olivato, Juliana & Castro Silva, José & Ferreira, Nadia. (2025). STEAM Integration in Initial Teacher Training: Authenticity in the Voices of Master's Students and Directors. ATEE Annual Conference 2025, Dublin, Ireland.
 [13] ICSE STE(A)M Vision Consortium. (2024). Grant Agreement No. 101249163. European Commission.
 [14] Boice KL, Alemdar M, Jackson JR, Kessler TC, Choi J, Grossman S and Usselman M (2024) Exploring teachers' understanding and implementation of STEAM: one size does not fit all. *Front. Educ.* 9:1401191. doi: 10.3389/educ.2024.1401191

STE(A)M teacher training should ensure a clear and comprehensive understanding of STE(A)M practices and provide meaningful, context-rich examples of how these approaches can be applied in educational settings and connected to real-world challenges.

Training programmes must offer structured guidance on the “how” and “what” of interdisciplinary pedagogical approaches, supported by concrete tools, illustrative examples, and comprehensive and adapted to each context assessment frameworks. Particular attention should be given to teachers’ capacity to assess interdisciplinary learning processes and outcomes. Training should also strengthen teachers’ capacity to implement inclusive and gender-responsive pedagogies and to address diverse learners’ needs within STE(A)M learning environments.

In addition, STE(A)M teacher training should be coherent with the broader strategic vision of STE(A)M education and address the systemic challenges that currently exist. All training initiatives must be aligned with national and regional curriculum standards and facilitate effective collaboration between teachers, schools, higher education institutions, and Continuing Professional Development (CPD) providers.

Moreover, training should also develop teachers’ digital, AI, and sustainability competences, enabling them to use emerging technologies critically, ethically, and pedagogically appropriately and to integrate sustainability challenges into interdisciplinary learning. Opportunities to collaborate with external partners, including industry, research organisations, and community stakeholders, can help teachers connect classroom learning with authentic contexts. Training should also promote reflective practice and support teachers’ contribution to wider school development and continuous improvement, while ensuring equitable access and actively supporting inclusion and diversity.

Eventually, the challenges and needs related to STE(A)M teacher training do not end once a training is designed and completed. Teachers continue to require support to implement what they have learned, meaning they need time, opportunities to apply it in practice, and continued guidance.



Evidence and data collection

Methodology

The brief draws on a **mixed-methods evidence base**, combining desk research on published academic literature, EU policy documents and frameworks, EU reports, outputs from other EU-funded projects in the STEM field and early findings of this project with a survey of ICSE STE(A)M Vision project partners to better understand and map the national and regional policy contexts in which the project operates. The desk review covered **published academic and policy sources available up to the brief's publication** and provided the contextual background for STE(A)M in education. The partner survey was conducted from 3 to 27 February 2026. The survey explored respondents' views on current national policy priorities, the project's relevance, and the broader policy environment, including trends, and opportunities for engagement in their national/regional context.

All partner organisations of the ICSE STE(A)M Vision project were invited to respond to the survey. **Eight responses were collected from partner organisations across five European countries**, namely Austria, Czechia, Germany, Netherlands and Portugal. The respondents presented a range of organisations and roles, including university research groups, teacher education institutions, and intermediary organisations with direct policy access. This policy brief was developed without direct involvement of external policy stakeholders. Their engagement will be incorporated into subsequent policy activities within the project.

Findings

The survey surfaces important variation in what enabling conditions look like in different systems. In Portugal, a formal curriculum autonomy and flexibility framework provides a policy hook that integrated STE(A)M approaches can support directly. In Austria, an existing national STEM pilot creates a ready-made partnership. In Czechia, a live curriculum revision process offers a time-sensitive window for evidence-based input. In Germany and the Netherlands, the federated or school-led nature of governance means that systemic change is slow but local innovation is possible.

This variation will shape how ICSE STE(A)M Vision engages in each context and how its eventual policy recommendations are framed, which is a theme to be developed in Policy Briefs 2 and 3.

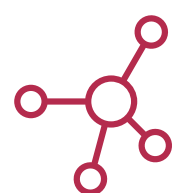


Policy Messages

The evidence presented in this brief, together with insights from the partner survey, points to a set of priorities for strengthening STE(A)M teacher education across Europe. While national contexts differ, the findings reveal a series of commonalities around the conditions needed for successful implementation. The following policy messages represent early recommendations and provide a foundation for the more detailed policy recommendations that will be developed in the next policy briefs. It is worth mentioning that these recommendations require national and regional governments to act in synergy, leveraging international networks for exchange over best practices, and involving schools in consultations to avoid creating implementation gaps during the revision of curricula.



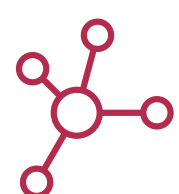
Embed integrated STE(A)M approaches more systematically in both initial teacher education (ITE) and continuing professional development (CDE), recognising that curriculum reform cannot succeed without corresponding reform of teacher preparation. In almost every country context described through the survey responses, there is an active or upcoming process of curriculum revision or reform into which STE(A)M integration is either being introduced or being contested. However, as curricula change, the demands on teachers change, and professional development systems are not currently designed to support the interdisciplinary competences required. The results revealed a unanimous selection (8 out of 8 responses) of curriculum alignment and a near-unanimous selection (7 out of 8 responses) of professional development frameworks as policy topics currently relevant in national or regional contexts, suggesting cross-national convergence on the most pressing policy areas. Overcoming hesitation to embedding interdisciplinary teaching and learning will require stronger evidence on its effectiveness, alongside attention to structural conditions and a clearer connection to real world-challenges.



Create the structural conditions for teacher collaboration and co-teaching, included within timetables, workload allocation, and school leadership expectations. School-level conditions are consistently flagged as the missing link between policy reform and classroom reality. Findings from the survey, also, highlighted the impact of school-level conditions, including workload, leadership and autonomy, pointing to an implementation layer of concern that sits below formal policy but is critical to any change in practice. For reforms to be effective, they need to be integrated into existing school routines in ways that do not create additional burden or extra work for staff.



Connect STE(A)M teacher training to real school settings and real-world challenges, using evidence from pilots and case studies as the basis for wider dissemination. Survey respondents have also highlighted the need for evidence from pilots and case studies. This suggests that stronger connections to real-world challenges are needed in both ITE and CPD, so that teachers can better prepare students to engage with complex societal issues and develop the skills required to respond to them through evidence-based practice.



Recognise and formally embed interdisciplinary teacher competences within ITE and CPD frameworks, rather than treating STE(A)M capability as an optional add-on. From the ITE stage onwards, teacher education should also cultivate a professional identity in which teachers see themselves and are recognised as competent STE(A)M practitioners. This identity should be continuously strengthened through CPD, enabling teachers to maintain, deepen and evolve their interdisciplinary competences throughout their careers

Implication on teacher training design

Curriculum reform is moving faster than teacher training reform. Governments are revising curricula to include interdisciplinary and STE(A)M approaches, but ITE and CPD remain largely organised around subject silos. Rather than a failure of will, it reflects genuine structural constraints (assessment systems, teacher labour markets, timetabling, HEI programme structures). But the consequence is a growing implementation gap between policy ambition and classroom reality. The survey data revealed the strong demand for teacher training modules and evidence from pilots suggesting that what practitioners and policymakers are looking for is practical, context-tested material and not abstract frameworks.

The early insights from the survey point to three design principles for effective STE(A)M teacher training:

- o **Connected to practice and context-sensitive:** teacher training must be rooted in real classroom and school contexts, not delivered as a generic model. The diversity of national settings, for example from Austria's existing STEM pilot practices to Czechia's live curriculum verification, reinforces that one-size-fits-all approaches are unlikely to be effective or acceptable.
- o **Collaborative and cross-institutional:** the gap between ITE, CPD, and school reality cannot be closed by any single institution. Effective STE(A)M teacher training requires genuine collaboration between teacher education faculties, schools, and in many cases industry or informal learning partners.
- o **Aligned with, not added on top of, existing priorities:** a consistent theme across national contexts is that teacher workload and policy complexity are already significant barriers. STE(A)M training that is perceived as an additional burden is unlikely to achieve uptake. Effective design must demonstrate how it helps teachers meet existing curriculum expectations, not how it adds new expectations on top.

These design principles will inform the development and piloting of the ICSE STE(A)M Vision teacher education programme and provide a basis for further evidence generation throughout the project.



Looking Ahead

Europe's increasing focus on competitiveness, the twin transition, geopolitical tensions leading to energy-related issues, and social justice, human rights, and citizenship create new challenges and opportunities. Addressing these developments requires the skills needed to respond effectively, thrive in a changing environment, and maximise and retain the benefits of these transformations. In this context, **STE(A)M education can play a crucial role in equipping learners with the knowledge and skills needed to observe, recognise and work towards addressing the issues, cope with them and grow in the process.**

At the heart of it, educators need to be trained on how to incorporate the STE(A)M approach into their context. While this has come into effect, **there are still diverse challenges to overcome and needs to be met.** From the macro-level, where teacher training is often fragmented and factors like limited funding and teachers' workload not allowing them to implement what they learned, to the micro-level, like poor infrastructure at school level and limited leadership support in some cases, there is still a lot to be done for a systemised STE(A)M training where educators are consistently supported, resources are aligned, and STE(A)M practices can be sustainably embedded into everyday teaching and learning. At the same time, teachers' identity and recognition as STE(A)M experts need to be cultivated and promoted via ITE/CPD and throughout the teachers' teaching career.

This policy brief stresses the importance of STE(A)M teacher training both in ITE and CPD and what effective training entails. It draws on primary data collection and secondary research, gathering on the one hand early insights from national contexts across the ICSE STE(A)M Vision consortium and synthesising existing data and sources on the present landscape with a focus on STE(A)M skills, approach, education and training. The picture that emerges is one of genuine policy momentum, as, for example, curriculum reform is under way in different countries, alongside a persistent implementation gap between formal policy and classroom reality. STE(A)M training is needed, it needs to be systematised, it requires alignment with the current environment, school requirements and needs, enabling pre-service and in-service educators to build capacity and eventually implement it in their own contexts.

Progressively, the ICSE STE(A)M Vision project with **the next two policy briefs will examine how this gap is being addressed in practice (Policy Brief 2) and what systemic policy changes are needed to make STE(A)M teacher education sustainable at European scale (Policy Brief 3).** Additionally, further evidence will be collected through partner surveys and, potentially, consultations with relevant policy stakeholders to inform the upcoming briefs. Findings from the development, piloting, and assessment of the STE(A)M Programme will be translated into evidence-based policy recommendations and integrated into the policy briefs. These recommendations will also be discussed in regional meetings and presented at European policy seminars and through the Scientix Ministries of Education STEM Working Group.

