# D4.1: Outline for NEXT STEAM Congress for Stakeholders

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## Technical References

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| **Project duration** | **36 Months** |

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| **Contributing beneficiaries** | |
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1 PU = Public
PP = Restricted to other programme participants (including the Commission Services)
RE = Restricted to a group specified by the consortium (including the Commission Services)
CO = Confidential, only for members of the consortium (including the Commission Services)

## Document history

| V | Date | Modifications | Author |
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| V1 | 28/03/2025 | First version | Sotoodeh Moghadasin |


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## Abstract of Deliverable

The first STEAM Congress for stakeholders, led by WITEC with the support of EHU, successfully fostered collaboration and enhanced best practices in STEAM education across Europe. Held from February 3-5, 2025, in Gothenburg, Sweden, this congress served as a platform to share cutting-edge knowledge on the STEAM approach at the European level. The key objectives included facilitating interdisciplinary learning, strengthening partnerships, and empowering young minds to drive future innovations in education.

Key takeaways from the congress included the positive energy generated by gathering all STEAMbrace partners, exchanging insights, and engaging in hands-on workshops and meaningful discussions. The event emphasized the importance of connecting, collaborating, and creating together, with the ultimate goal of shaping the future of STEAM education. Discussions underscored the transformative potential of interdisciplinary learning and how STEAMbrace laid the foundation for innovative educational experiences. The congress was not just an event—it marked the beginning of a movement to redefine learning and inspire the next generation of innovators. Additionally, the event highlighted how projects like STEAMbrace are bridging the gap between science, technology, engineering, arts, and mathematics while amplifying diverse voices in shaping the future of education. Finally, the congress facilitated valuable connections with experts across the STEAM field, strengthening collaborations for ongoing and future initiatives.

This deliverable outlines the planning process, the execution of the event, key highlights and insights gained, and the proposed outline for the next STEAM Congress, which will take place in the following year.

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# 1. Planning and Preparation

## 1.1 Objectives and Scope

- The primary objective of the congress was to bring together a diverse group of stakeholders, including STEAM educators, researchers, and industry representatives, to foster a collaborative network. By creating a strong and engaged community, the congress aimed to enhance the quality and accessibility of STEAM education through shared knowledge and best practices.
- A key focus of the discussions was on strategies for effectively engaging students in STEAM (Science, Technology, Engineering, Arts, and Mathematics) subjects, with special attention given to addressing gender disparities in these fields. Experts and practitioners shared insights on how to create inclusive learning environments that encourage participation from underrepresented groups, particularly young girls and women, ensuring equal opportunities in STEAM careers.
- Additionally, the congress served as a platform to present the findings and outcomes of the STEAMbrace project, an initiative dedicated to developing innovative educational methodologies. Attendees had the opportunity to review the project's approaches, provide feedback, and discuss ways to integrate these methodologies into existing educational systems. This exchange of ideas was essential for refining teaching strategies and ensuring their practical effectiveness.
- Another significant goal was to strengthen collaboration between formal education institutions (such as schools and universities) and non-formal education providers (including museums, science centers, and community organizations).

## 1.2 Organizational Steps

### 1.2.1 Program Development

A well-rounded, multi-disciplinary agenda was designed to cater to a diverse audience, including educators, researchers, industry representatives, and policymakers. The program was carefully structured to provide a balance between knowledge-sharing and interactive engagement. It featured:

- Plenary talks by leading experts to provide insights into current trends and future directions in STEAM education.

- Keynote Speeches: Prominent experts from academia, industry, and policymaking bodies delivered keynote presentations, offering valuable insights into emerging trends,


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challenges, and opportunities in STEAM education. These sessions aimed to inspire participants and set the stage for in-depth discussions throughout the congress.

- Panel discussions facilitated in-depth conversations on key challenges, such as gender inclusion, interdisciplinary collaboration, and emerging technologies in education.
- Workshops are designed to offer hands-on experiences and practical demonstrations of innovative teaching methodologies.
- Poster Sessions: Researchers and educators had the opportunity to present their latest studies, projects, and innovative approaches in STEAM education through poster presentations. This format encouraged direct engagement, networking, and feedback, allowing attendees to exchange ideas in an informal setting.
- Focus Groups on Activity Adaptation: It included 5-10 dedicated focus groups that explored the adaptation of STEAM activities based on various factors such as age, gender, country-specific education systems, and available equipment. These focus groups brought together educators and researchers to discuss:
- Networking sessions that encouraged meaningful interactions among participants, fostering potential collaborations and partnerships.

### 1.2.2 Logistics & Accessibility

To ensure a smooth and inclusive event experience, planning was carried out regarding the venue and overall accessibility. The Museum of World Culture/Svenska Mässan was chosen as the event location after carefully considering several critical factors that would guarantee the comfort, safety, and convenience of all attendees. These factors included:

- Accessibility for all attendees, including individuals with disabilities: The venue was selected for its features that ensure equal access for everyone. This included ramps, elevators, spacious hallways, and specially designed restrooms to accommodate individuals with mobility challenges. There was also clear signage and assistance for attendees with visual or hearing impairments.

- Adequate capacity to accommodate both large and small sessions: The venue provided a variety of spaces, from grand halls for keynotes and plenary sessions to more intimate


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rooms for workshops, discussions, and networking opportunities. This ensured that every session, regardless of size, could be comfortably held without overcrowding.

- Proximity to transportation hubs for ease of travel: The Museum of World Culture/Svenska Mässan's location was carefully selected for its proximity to major transportation hubs, including public transportation networks like buses, trains, and trams, making it convenient for attendees to travel from various parts of the city and beyond.

- Accommodation recommendations: The organizers collaborated with nearby hotels and lodging providers to offer discounted rates and personalized booking assistance, ensuring that participants had easy access to comfortable accommodations near the venue.

- Dietary considerations: To accommodate a wide range of dietary preferences and restrictions, special meal options were made available for attendees, including vegetarian, vegan, and gluten-free meals. Catering staff were trained to handle dietary needs with care, and clear labels were provided for each meal to ensure that everyone could enjoy a safe and satisfying dining experience.

### 1.2.3 Speaker & Panelist Coordination

A crucial part of the event planning was identifying and inviting high-profile speakers and panelists who could offer valuable insights, expertise, and knowledge to the congress. The goal was to ensure that the discussions were not only informative but also forward-thinking, engaging, and reflective of the diverse aspects of STEAM (Science, Technology, Engineering, Arts, and Mathematics) education. Invitations were extended to several key individuals and organizations, including:

- Representatives from the European Commission: These individuals were invited to share their perspectives on STEAM policies and

initiatives at the EU level. They provided attendees with an understanding of how the European Commission is shaping the future of STEAM education across Europe, including new funding opportunities, strategic priorities, and



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collaborative projects that aim to improve the integration of science and arts in educational frameworks.

- Leaders from the STEAMbrace Project: These experts were invited to present the latest research findings from the STEAMbrace project, a pioneering initiative focused on the development of innovative educational methodologies. They shared valuable experiences and case studies on how STEAM concepts are being integrated into various educational settings, from primary schools to higher education. Their presentations explored how to foster creativity, critical thinking, and problem-solving skills among students through interdisciplinary learning.

- STEAM Alliance for Europe Representatives: These individuals shared ongoing efforts aimed at strengthening the collaboration between educational institutions and industry partners. The panelists discussed how the STEAM Alliance for Europe is working to bridge the gap between academia and industry, creating opportunities for students and educators to engage in real-world applications of STEAM concepts. They also emphasized the importance of aligning educational outcomes with the demands of the workforce and how industry leaders are involved in shaping the future of STEAM education.

Beyond the selection of distinguished speakers and panelists, substantial effort was placed on logistical and technical arrangements to ensure that the experience for all participants was seamless. These arrangements included:

- Presentation Setup: A dedicated technical team was responsible for ensuring that each speaker's presentation was set up properly. This included testing audiovisual equipment in advance, providing technical support during presentations, and ensuring that any special equipment or software required for presentations was available and functioning smoothly.

- Scheduling Coordination: The schedule for each speaker and panel was carefully organized to ensure that all sessions ran on time and that there was adequate time for Q&A, networking, and transitions between speakers. Coordination was


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also key in balancing the time slots of speakers with similar expertise to avoid overlaps, ensuring that every presentation had its focused audience.

### 1.2.4 Promotion & Outreach

To ensure the event attracted a broad and engaged audience, a comprehensive promotion and outreach strategy was designed and implemented. The primary goal was to maximize attendance and active participation, while also ensuring the event reached the diverse global community invested in STEAM (Science, Technology, Engineering, Arts, and Mathematics). Various communication channels and strategies were employed to spread awareness and encourage engagement, including:

- Social Media Outreach: A comprehensive social media strategy was implemented through platforms such as LinkedIn, Twitter, and Instagram, managed by WITEC and Contactica. Regular posts, event teasers, and countdowns were shared to keep followers engaged and informed. Event-specific hashtags, like #STEAM2025, were used to track conversations and spark discussions online.
- Email Outreach: We reached out to key stakeholders, including educators, policymakers, researchers, and industry professionals, through personalized emails. These messages included event highlights, registration details, and speaker information. Regular follow-ups reminded potential attendees of important deadlines, such as early-bird registration and call-for-papers submissions. To ensure relevance, emails were tailored to recipients' areas of expertise. Additionally, we invited organizations to participate, broadening our reach and engagement.
- Targeted Outreach for Diverse Representation: A key goal of our outreach efforts was to ensure the event included a diverse range of voices, with a particular focus on increasing the participation of women in STEAM fields. Special efforts were made to encourage their involvement, recognizing the barriers they often face in these disciplines. Outreach materials emphasized the importance of inclusivity and diversity in STEAM education, and financial assistance options were available to make participation more accessible.
- Participant Registration & Event Format: From the beginning of the planning process, we ensured that registration for the congress was completely free for all attendees, making participation as accessible as possible. Once registered, participants received confirmation of their attendance and were kept informed with updates leading up to the congress. This included details about the agenda, program schedule, and key sessions, ensuring they were well-prepared and could fully engage with the event's offerings.
- Initially, a hybrid format was considered to accommodate both in-person and virtual participation. However, as planning progressed, it became clear that the majority of participants could attend physically. Given this, we decided to focus our resources on enhancing the in-person experience rather than implementing a virtual component. This allowed us to allocate more efforts toward creating an engaging environment, facilitating


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meaningful networking opportunities, and ensuring smooth on-site logistics for all attendees.

### 1.2.5 Materials and Supplies

To support the interactive nature of the congress, careful planning went into ensuring that appropriate materials and supplies were available for all sessions, particularly workshops, hands-on activities, and focus groups. The following considerations were made:

- Workshop Equipment: Essential tools, including tables, chairs, papers, a pen, and access to electricity, were provided to facilitate hands-on learning.

- Educational Resources: Participants received printed and digital materials, including guides, research findings, activity templates, and instructional booklets to support discussions and future implementation in their educational settings.

### 1.2.6 Communication

Effective communication was a cornerstone of the congress planning process, ensuring that all partners remained aligned, challenges were addressed promptly, and the event was executed


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successfully. To facilitate smooth coordination and information exchange, several structured communication channels were established:

A. Regular Partner Meetings

WiTEC Sweden organized weekly meetings every Monday with all project partners. These meetings served as a platform for:

- Tracking progress on various aspects of the congress, including program development, speaker confirmations, logistics, and outreach.
- Identifying and addressing challenges in real-time, ensuring that any issues related to funding, scheduling, or resources were promptly resolved.
- Aligning efforts across partners, fostering a collaborative approach where each organization contributed its expertise to enhance the congress's success.

B. Internal Coordination within WiTEC

In addition to the broader partner meetings, WiTEC held two internal meetings per week with its core team members. These meetings focused on:

- Strategic planning and decision-making to refine event details and ensure a seamless experience for participants.
- Logistics management, including venue arrangements, travel accommodations, and accessibility considerations.
- Communication strategies ensure that information is effectively disseminated to all stakeholders, including attendees, speakers, and external collaborators.


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# 2. Congress Execution and Key Highlights

## 2.1 Day 1: Networking, Knowledge Exchange, and Innovative STEAM Practices- 3rd February 2025- The Museum of World Culture

The first day of the congress set the stage for an engaging and insightful event, bringing together educators, researchers, and industry leaders to discuss the latest trends in STEAM education.

The event was officially opened by WiTEC Sweden, which introduced the importance of STEAM education and outlined the vision of the STEAMbrace project. This was followed by addresses from representatives of the European Commission and EDELVIVES (STEAMbrace project leader), who provided an overview of the project's impact on youth education and its role in fostering interdisciplinary learning.

- Pre-Event Networking and Welcome: The doors opened at 14:30 at the Museum of World Culture, allowing participants to arrive, settle in, and begin networking.

- Coffee, tea, and sandwiches were provided as a refreshment break and informal networking opportunity, enabling attendees to connect before the official sessions began.

- Key Highlights from Day 1:
  The first day featured a rich program of keynote speeches, plenary talks, and discussions on emerging STEAM education trends. Key topics included:


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A. The role of artificial intelligence (AI) in education – Presented by Tiago Nascimento (Consulting and Training Network), this session explored how AI can help validate competencies and skills in STEAM through platforms like MICOO.
B. Digital electronics in the classroom – A session led by David Cuartielles (Arduino), focusing on how Arduino can enhance digital learning experiences.
C. Creative coding and performing arts – Delivered by Jasmina Maric (Chalmers University of Technology), this session highlighted how art and technology intersect to create engaging learning experiences.

D. STEAM education trends in Europe – A discussion led by Javier Portillo (EHU), analyzing key challenges and proposing actionable solutions to advance STEAM learning.
E. Case studies on non-formal STEAM education, including the Bilbao Gazte initiative, presented by Itxaso Erroteta (Bilbao Municipality), showcase successful programs for engaging students outside traditional classrooms.

- Session Tracker- Day 1

| Time | Session | Speaker(s) | Details |
|---|---|---|---|
| 14:30 – 15:30 | Welcoming the guests, coffee and sandwiches | Staff | Networking Opportunity |
| 15:30– 15:35 | Welcome and map | Sotoodeh Moghadasin (WiTEC) | Overview of the event |
| 15:35– 15:40 | WiTEC Opening | Anca Dumitrescu (WiTEC) | Introduction to WiTEC's role |
| 15:40– 15:45 | European Commission Opening | Jade Iafrate | |


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| Time | Session | Speaker(s) | Details |
|---|---|---|---|
| 15:45 – 15:55 | Introduction to STEAMbrace | Juancho Pons (EDELVIVES) | Overview of the STEAMbrace project |
| 15:55– 16:00 | Keynote | STEAMbrace Project Officer | Insights into European Projects |
| 16:00– 16:20 | Plenary Talk | Javier Portillo (EHU) | STEAM Education in Europe: Needs and Proposals for Action |
| 16:20– 16:35 | Keynote by City of Bilbao | Itxaso Erroteta (Bilbao Municipality) | Bilbao Gazte: STEAM in Non-Formal Education |
| 16:35– 16:50 | Keynote | Jasmina Maric, Chalmers University | Creative Coding and the Power of Performing Arts |
| 16:50– 17:10 | Creative Coding Performance | Girls aged 11-13 | Live demonstration of STEAM in action |
| 17:10– 17:25 | Poster Session | All Partners | Interactive discussions and research presentations |
| 17:25– 17:40 | Keynote | Tiago Nascimento (C4G) | How AI is Helping Validate Competencies and Skills in STEAM – MICOO Platform |


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| 17:40–18:15 | Keynote | Luis Antonio Martín Nuez (ACINV) | Infinite Energy |
| 18:15–18:30 | Keynote | David Cuartielles (Arduino) | Digital Electronics in the Classroom |

- Poster Sessions

An engaging poster session was held where participants interacted with cutting-edge research and innovative teaching methodologies. This provided an opportunity for educators, researchers, and industry leaders to exchange ideas in a dynamic and interactive format.

- End of Day 1 – Dinner and Informal Networking

The official sessions concluded at 19:00, with all speakers delivering their presentations on schedule.

WiTEC hosted a dinner for project partners and guest speakers to foster informal discussions and strengthen professional connections. This gathering provided a relaxed environment to reflect on the day's discussions and build collaborative relationships for future initiatives.

### 2.2 Day 2: Expert Panels, Workshops, and Discussions- 4th February, Svenska Mässan

The second day of the congress was packed with interactive sessions, hands-on workshops, and in-depth expert discussions, allowing participants to engage with STEAM methodologies practically and insightfully.

- Key Sessions Included:

**A.** Panel Discussion: Challenges for Women in STEAM

In this interactive panel, the experts discussed the barriers women encounter in STEAM, focusing on gender bias, unequal access to opportunities, and the lack of female role models in STEAM fields. The panel also discussed strategies to overcome these challenges, proposing


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mentorship programs, support networks, and gender-inclusive education policies to ensure gender equality in both education and careers.

**B.** App Fair Presentation:

In this session, Ander Arce introduced the App Fair initiative, which has been running at the University of the Basque Country for the past decade. The session highlighted innovative educational applications designed to improve learning in STEAM subjects. The App Fair has become a pivotal showcase of technology-driven solutions that enhance interactive learning and competency validation.

**A.** Go Steam:

In this session, Lidia Pitzalis emphasized the importance of STEAM education in addressing the challenges of the future. She introduced the concept of STEAM Reference Schools, which act as models for innovative STEAM teaching practices. These schools are designed to foster interdisciplinary learning, encourage creative problem-solving, and provide students with the skills necessary to thrive in a rapidly evolving world. The session also highlighted the crucial role of teacher training in implementing these models.

**B.** A Comprehensive Approach to STEAM Educators' Competence Development:

Achilles Kameas presented a comprehensive approach to educator competence development in STEAM education. He discussed the necessity for continuous professional development for STEAM educators, focusing on interdisciplinary collaboration, critical thinking skills, and adaptation to new technologies.

**C.** The STEAME Approach:

Gregory Makrides explored the future of learning in his keynote, proposing the STEAME approach to education, which integrates the Arts into traditional STEAM education. He discussed how this approach can help students become creative problem-solvers while developing technical skills.

**D.** Advancing Girls and Women in STEAM:

Katalin Oborni focused on the advancement of girls and women in STEAM. Her keynote discussed the gender gap in STEAM fields and the need for targeted initiatives to empower girls in these subjects.

**E.** STEAM Reference Schools: Lidia Pitzalis discussed the STEAM Reference School Certification program that recognizes schools leading in STEAM education, offering four levels: Bronze, Silver, Gold, and Platinum. Schools are assessed in


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five key areas—teaching methodology, leadership, infrastructure, community involvement, and teacher training. This initiative fosters innovation and collaboration, empowering educators and inspiring students to embrace excellence. By building a global network, it aims to transform education and drive meaningful change worldwide.

**F.** General Discussion: Stories from Individuals Who Studied and Worked in STEAM:

During this general discussion, Adriana Cola, Sara Nozohouri, Linnea Jakobsson, and Kristina Svensson shared personal stories about their experiences in STEAM education and careers. They discussed the challenges and successes they encountered as they pursued their careers in Science, Technology, Engineering, Arts, and Mathematics, inspiring both young women and


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men considering careers in these fields. The session highlighted the importance of resilience, mentorship, and community support in achieving success in STEAM.

**G.** Workshops on Interdisciplinary STEAM Learning:

These hands-on workshops allowed participants to dive into cutting-edge STEAM practices:

1. Citrus Sparks: Energy with a Refreshing Aroma

Facilitated by Guida Dias (Externato Marista de Lisboa). Participants built a battery using copper, zinc, and orange juice, learning about energy generation and electrochemical principles.

2. Creating Immersive VR Experiences

Guided by António Beirós (Externato Marista de Lisboa). Attendees learned to create virtual reality environments compatible with VR headsets, exploring the transformative potential of VR technology.

3. Cirkids: Discovering Electrical Circuits

Facilitated by Silvia Cases (Academia de Inventores). Using a modular platform, participants explored electrical circuits through hands-on "plug-and-play" activities, promoting creativity and problem-solving.

4. 3D Pencils

Led by Raquel Flor (Academia de Inventores). Attendees used 3D pens to bring their ideas to life, combining art and technology in a creative 3D modeling experience.

5. World Cafe Workshop: Bridging the Gender Gap in STEAM with STEAMbrace

Facilitated by Aylar Hassanpouraghdam (ATRV). A discussion on gender inequality in STEAM, where strategies were created to promote inclusion and empower young women in education.

6. Magic Lanterns

Facilitated by Luis Antonio Martin Nuez (CEO of Academia de Inventores). Participants designed paper lanterns with conductive tape, LEDs, and batteries, applying electronics concepts to create functional objects.

7. Rockets

Led by Sol Martire (Academia de Inventores). The workshop focused on rocket science, allowing participants to build and test models using principles of physics and chemistry in an interactive way.

8. Gender Inclusiveness in education: Insights and practices from the nordics


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Facilitated by Ariunzaya Munkhbat (Stream IT). The workshop focused on increasing female participation in STEAM fields, with an overview of the STREAM IT Project and initiatives like mentorship, hackathons, and a talent-nurturing program for girls.

**G.** Focus Groups:

Each workshop leader facilitated a focus group discussion following their session, engaging participants to gather feedback. These discussions focused on adapting STEAM activities based on various factors such as age, gender, country, available equipment, and whether the setting was rural or non-rural.

Some of the feedback they got from the participants:

1. The content was well-received, particularly for its clarity and ease of understanding. However, some participants suggested that providing a written guide on the table would have been helpful, allowing groups to carry out the activity more independently.
2. Regarding applicability, feedback was overwhelmingly positive. Participants noted that the workshop enhanced their understanding of how batteries and cells function, making the session practical and insightful.
3. The workshops were engaging in terms of activities, but participants felt that they lacked sufficient contextualization about the project's objectives.
4. The necessity of educating parents on recognizing and avoiding unconscious biases that may influence children's career aspirations.
5. The importance of introducing STEAM subjects equally to all genders is to promote balanced participation from an early stage.
6. STEAM Awareness & Application: Participants in Sweden noted they engaged in hands-on STEAM projects primarily in primary school, with less emphasis in later years. They found activities like the "magic lantern" and "rockets" workshop particularly interesting and expressed interest in recreating them in school. However, access to affordable materials played a role in feasibility.
7. Gender and Inclusion Perspective: While some activities, like the rocket workshop, introduced discussions on gender (e.g., women in space and radiation studies), participants felt an overall lack of gender and inclusion contextualization. They suggested dedicating more space for these topics in future workshops.
8. Engagement & Learning Experience: While participants found the workshops enjoyable and informative, they desired more background information and context to better understand the activities. They had varying levels of prior


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knowledge—more familiarity with electricity-related topics but little exposure to materials like copper tape.

9. Future Improvements & Impact: To ensure a lasting impact, participants suggested piloting key initiatives, creating an online collaboration platform, and involving policymakers and businesses. They also recommended follow-up sessions to track progress and refine strategies.

- Session Tracker – Day 2:

| Time | Session | Speaker(s) | Details |
|---|---|---|---|
| 9:00 – 9:30 | Welcoming the Guests | WiTEC Staff | Opening and Networking |


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| 9:30–9:40 | Opening Note | Sotoodeh Moghadasin (WiTEC) | What happened and what's coming up! |
| 9:40–9:50 | Keynote | Lidia Pitzalis (EDE) | Go STEAM |
| 9:50–10:00 | Keynote | Ander Arce (EHU) | A Decade of Innovation: The Educational App Fair at the University of the Basque Country (2015-2024) |
| 10:00–10:45 | Panel Discussion | Jasmina Maric, Achilles Kameas, Gregory Makrides, Jade Iafrate Facilitator: Pia Ulvenblad | Obstacles Women Encounter in STEAM Projects |
| 10:45_11:00 | Break | - | Refreshments and Networking |
| 11:00_11:15 | Keynote | Lidia Pitzalis (EDE) | STEAM Reference Schools |
| 11:15_11:30 | Keynote | Achilles Kameas (SpiceE) | A Comprehensive Approach to STEAM Educators' Competence Development |
| 11:30_12:15 | General Discussion | Adriana Cola, Sara Nozohouri, Linnea Jakobsson, Kristina Svensson Facilitator: Sotoodeh Moghadasin | Stories from Individuals Who Studied and Worked in STEAM |
| 12:15_13:15 | Lunch | - | Networking Opportunity |

| Time | Session | Speaker(s) | Details |
|---|---|---|---|
| 13:15_13:45 | Keynote | Gregory Makrides (Steami) | Re-thinking and Facilitating Learning in the Future: The STEAME Approach |
| 13:45_ | Keynote | Katalin Oborni (STREAM | Advancing Girls and Women in |


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| 14:00 | | IT) | STEAM |
| 14:00_ 14:05 | Introduction to the Workshops | Sotoodeh Moghadasin (WiTEC) | Overview of workshop themes and objectives |
| 14:00 15:00 | Workshops | All Workshop Facilitators | - |
| 15:00– 15:15 | Break | - | Refreshments and Networking |
| 15:15– 15:45 | Focus Group | Workshop Facilitators | - |
| 15:45_ 16:00 | Closing the Day | Sotoodeh Moghadasin (WiTEC) | Wrap-up and thank-you notes |

### 2.3 Day 3: Conclusions and Closing Remarks- 4th February, Svenska Mässan

On the final day, workshop facilitators presented the main takeaways from focus group discussions, highlighting key themes:

- STEAM education should be inclusive, accessible, and creative, ensuring all students feel engaged.
- Gender disparity in STEAM careers remains an issue; more female role models and support networks are needed.
- STEAM methodologies should integrate real-world applications to make learning more relevant for students.
- The congress concluded with final remarks emphasizing the importance of collaboration between educators, researchers, and industry professionals in shaping the future of STEAM education.

- Session Tracker- Day 3

| Time | Session | Speaker(s) | Details |
|---|---|---|---|


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|---|---|---|---|
| 9:00 – 9:30 | Welcoming the Guests | WiTEC Staff | Opening and Networking |
| 9:30–9:35 | Opening Note | Sotoodeh Moghadasin (WiTEC) | What happened and what's coming up! |
| 9:35–9:45 | Feedback on workshops | Sol Martire- ACINV | - |
| 9:45–9:55 | Feedback on workshops | Luis Antonio Martín Nuez- ACINV | - |
| 9:55–10:05 | Feedback on workshops | Silvia Cases-ACINV | - |
| 10:05_10:15 | Feedback on workshops | Raquel Flor- ACINV | - |
| 10:15_10:25 | Feedback on workshops | Guida Dias- MPT | - |
| 10:25_10:45 | Break | - | - |
| 10:45_10:50 | Feedback on workshops | Antonio Beirós-MTP | - |
| 10:50_11:00 | Feedback on workshops | Aylar Hassanpour-ATRV | - |
| 11:00_11:10 | Feedback on workshops | Ariunzaya Munkhbat-STREAM IT | - |
| 11:10_11:20 | Closing note talk | Juancho Pons/EDE and Anca Dumitrescu/ WITEC | - |
| 11:20_11:30 | Celebrating the Congress | - | - |


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## 2.4. Congress in Pictures




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## 2.5. Congress Video

Here is the YouTube channel link with the video of the congress:

[1st European STEAM Congress Recap: Innovating for Equality]

# 3. Participant & Speaker Infographics

## 3.1. Participants Infographics

Through the registration link, we gathered some information from participants to better understand the event's reach and diversity. However, due to GDPR, we were unable to collect all the details we initially planned. Additionally, to ensure a smooth and user-friendly registration process, many questions were kept optional. As a result, some participants chose not to answer


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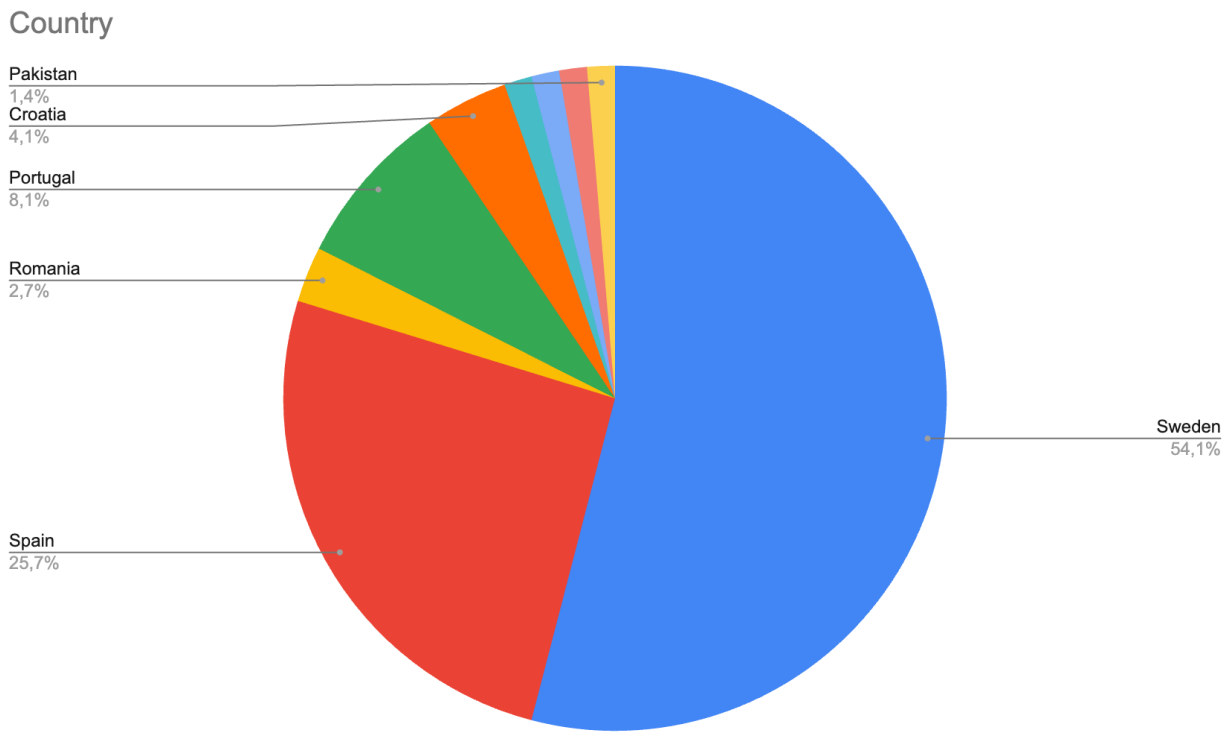
all questions, meaning the numbers presented in certain categories may not fully reflect the actual distribution.

The infographics illustrate:

- Gender distribution:

  Based on available data, approximately 50.53% of participants were women. However, since we did not directly ask participants about their gender, this figure is an estimate and may not be entirely accurate.

- Geographical distribution:




54.1% of the participants were from Sweden, with the remaining attendees coming from various European and international locations.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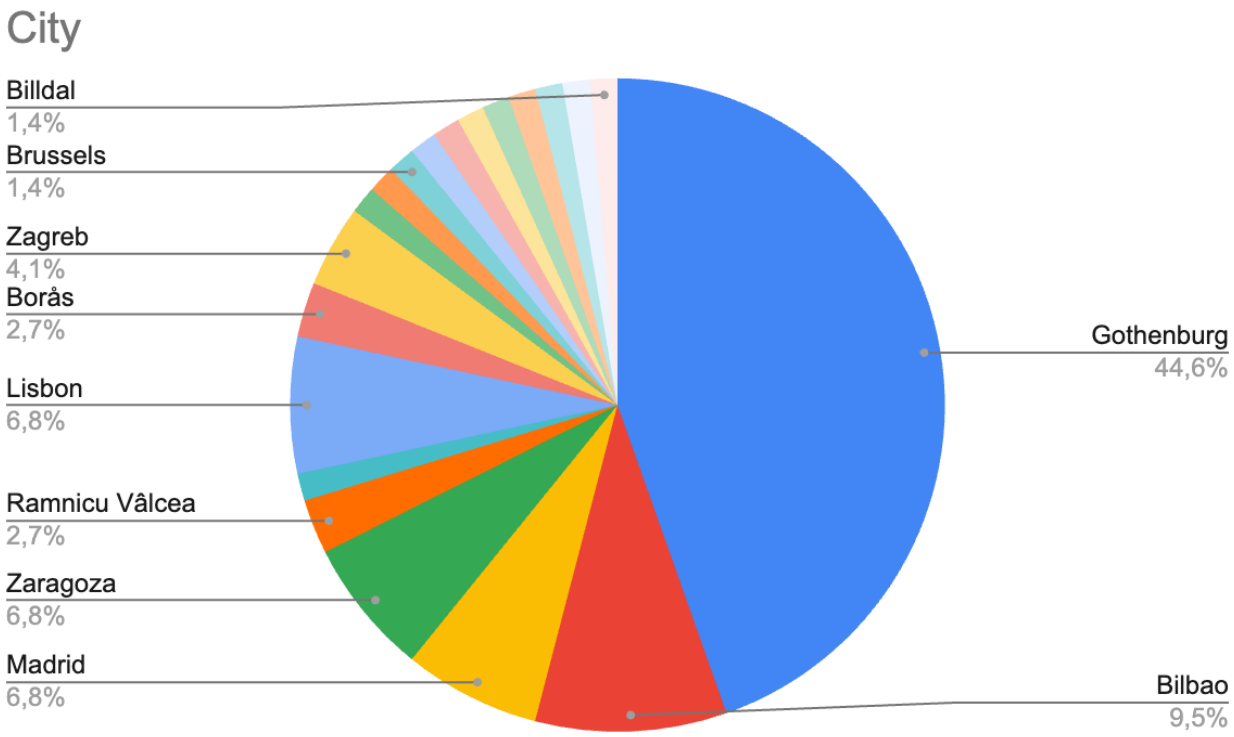
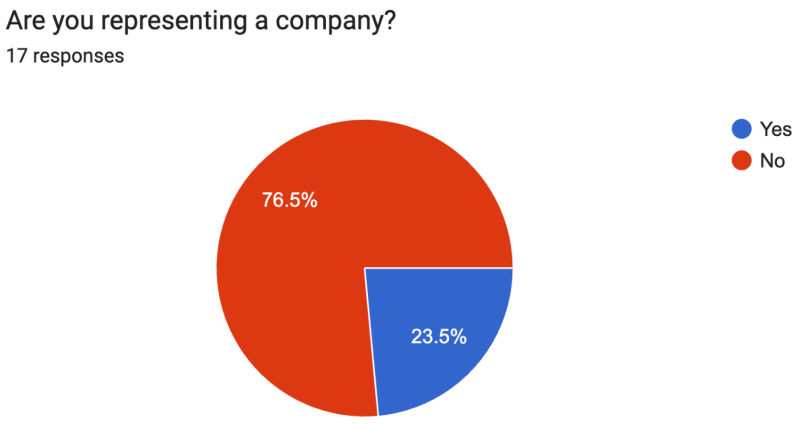



- Affiliation breakdown: 76.5% of participants represented companies, while the remaining participants joined the congress independently.




## 3.2. Speaker Infographics



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A. Speakers and Facilitators of the Sessions:

- Of the 21 speakers and facilitators in the congress program, 13 were women, reflecting the gender distribution among session contributors.
- Among our speakers and facilitators, we had a diverse representation from various sectors, including academia, industry, and policymakers, ensuring a broad range of perspectives throughout the congress program.

B. Workshop and Focus Group Leaders:

Out of the 9 workshop and focus group leaders, 7 were women, highlighting the gender distribution in these interactive session roles.

### 3.3. Partner Contributions

The congress benefited from the active participation of various project partners, each bringing valuable insights and expertise to the discussions. Key contributions included:

- EHU (University of the Basque Country): They played a key role by presenting findings from the App Fair initiative, examples from the City of Bilbao. Additionally, they were involved in the selection of session topics and speakers, ensuring a diverse and engaging program for attendees. Poster creation for the congress also featured contributions from EHU, showcasing cutting-edge research and educational technologies.

- ACINV (Academia de Inventores): They were involved in content and speaker selection, ensuring that the program included engaging and innovative topics. Additionally, Academia de Inventores played a key role in creating workshops and activities that encouraged interactive learning, as well as generating focus group ideas to promote further discussions on non-formal STEAM education approaches.

- EDE(EDELVIVES): EDELVIVES, as the STEAMbrace Project Leader, played a pivotal role in shaping the congress content. They contributed to content and speaker selection, ensuring the program effectively showcased the project's impact on youth education and interdisciplinary learning. Additionally, as the project leader, EDELVIVES coordinated all


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work packages and tasks efficiently, ensuring smooth collaboration among all partners and the successful execution of the congress.

- C4G (Consulting and Training Network): Explored the growing role of artificial intelligence in education, emphasizing ethical and practical applications.
- MPT(Maristas Lisboa): They played a key role in creating workshops and activities that encouraged interactive learning, as well as generating focus group ideas to promote further discussions on non-formal STEAM education approaches.
- CTA (Contactica): CTA played a crucial role in the marketing, promotion, and communication tasks for the congress. They were responsible for crafting and executing the communication strategy, ensuring the event reached a wide and relevant audience. Through targeted outreach, they worked to increase awareness of the congress and its key objectives, managing the promotion across various channels, including social media, email, and partner networks.

- ATRV(Asociatia de Tineret Raise your Voice): They played a key role in creating workshops and activities that encouraged interactive learning, as well as generating focus group ideas to promote further discussions on non-formal STEAM education approaches.

- EFZG (Faculty of Economics and Business, University of Zagreb): EFZG contributed to the congress by creating posters showcasing sister projects in the STEAM field. These posters highlighted the innovative work and impact of related initiatives, providing participants with valuable insights into ongoing projects that complement the goals of the congress.

- AIJU(ASOCIACION DE INVESTIGACION DE LA INDUSTRIA DEL JUGUETE CONEXAS Y AFINES): AIJU contributed to the congress by creating posters that highlighted their work in the STEAM field. These posters provided valuable information about AIJU's innovative


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projects and research, fostering a deeper understanding of their contributions to the field of STEAM education.

- STEAM Alliance for Europe in the congress:

1. Bilbao Municipality from Spain
2. Chalmers University of Technology from Sweden
3. Arduino from Spain and Sweden
4. SpicE project from Greece
5. STEAMI Academy from Greece and Poland
6. STREAM IT from Hungary


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## 4. Lessons Learned and Key Takeaways

- The Importance of Non-Formal Education – The event underscored the value of non-traditional STEAM learning approaches, such as informal learning environments and community-based initiatives. These methods, which have shown great success, should be integrated into mainstream education systems to complement formal education and provide students with a broader range of learning experiences.
- Need for More Cross-Sector Collaboration – The event highlighted the positive outcomes of exchanging ideas and collaborating across sectors. The discussions between educators, researchers, policymakers, and industry professionals were immensely valuable, reinforcing the idea that STEAM education benefits from interdisciplinary approaches. Future events should further enhance these interactions to foster collaboration and knowledge-sharing.
- Gender Balance in STEAM Must be Prioritized – One of the key takeaways was the need to continue supporting female students and educators in overcoming barriers to entering and thriving in STEAM fields. There should be more targeted initiatives aimed at improving gender equality in STEAM to ensure a balanced representation of women.
- Challenges with School Participation – A significant challenge encountered was the lack of cooperation from schools in bringing students to participate in workshops, activities, and focus groups. This impacted the diversity and quality of engagement during the sessions, particularly those designed for students aged 11-18. Strengthening relationships with educational institutions and finding ways to overcome logistical barriers should be a priority for future events.
- Event Duration and Structure – While the event was successful, it was noted that holding the congress over two full days rather than a mix of one full day and two half days could have enhanced the overall experience. A longer, continuous format would have provided


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more time for in-depth discussions, networking, and hands-on activities, allowing participants to engage more thoroughly with the content and one another.

### 4.1. Conclusion

The event provided valuable insights into the strengths and challenges of STEAM education, highlighting key areas for improvement and future focus. Emphasizing non-formal education, fostering cross-sector collaboration, and prioritizing gender balance are crucial steps toward creating a more inclusive and effective learning environment. Additionally, addressing logistical barriers to school participation and refining the event's structure will enhance the impact of future congresses.

All of these lessons learned will be invaluable for the planning and execution of the second congress in Romania. By applying these insights, we can refine the structure, improve collaboration, and ensure broader participation, ultimately enhancing the overall impact of the event. One key improvement would be establish connections with schools earlier, before the year they are expected to participate, so that they can adjust their schedules accordingly. This


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will allow for better coordination and ensure clearer expectations regarding the presence of schools and students at the congress.

By implementing these strategies, we can create a more engaging and effective event, maximizing the benefits for all participants and stakeholders involved.

# 5. Outline for the Next STEAM Congress for Stakeholders

## 5.1 Objectives and Strategic Focus

Building on the success of the first congress, the 2nd STEAM Congress for Stakeholders will aim to further strengthen the network of STEAM educators, researchers, policymakers, and industry representatives. The congress will focus on:

✓ Reviewing the outcomes of the STEAM Week pilot and discussing insights gained from monitoring the STEAM training activities.



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✓ Advancing STEAM methodologies through expert presentations and interactive workshops.

✓ Strengthening the STEAM Alliance for Europe, with discussions on policy recommendations, educational strategies, and future initiatives.

✓ Expanding participation, aiming for a larger, more diverse audience, and increasing industry engagement.

✓ Ensuring long-term sustainability, exploring effective self-financing strategies such as registration fees and sponsorships.

### 5.2 Structure and Program Design

A. According to the grant agreement, the second congress is supposed to take place in Bucharest. However, for several reasons, we believe this location might need to be reconsidered:

- Our partners from ATRV do not live in Bucharest, which could make it challenging for them to manage logistics and communication effectively from a distance.
- Hosting the congress in Bucharest may result in higher costs for ATRV.
- ATRV has strong connections with many schools in their city. One of the challenges we faced during the first congress in Gothenburg was the absence of children and schools at the workshops, which impacted their quality. Organizing student participation from another city requires significant effort, logistical planning, and additional costs.

Given these factors, we may need to explore alternative locations that better align with our objectives and resources.

B. Regarding the duration of the congress, the grant agreement initially suggests a three-day congress. However, the expert from the European Commission, based on feedback from the project's first yearly report, suggested that a three-day event might be too long and less efficient. Therefore, it may need to be shortened


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to two days. Since the task for organizing the second congress has not yet begun, ATRV can discuss this matter further during the planning phase.

C. The expected participation includes 300 stakeholders, with at least 100 attending in person.

❖ The congress will feature a multi-disciplinary program, including:

A. 4 plenary sessions from STEAMbrace, presenting:

- Results from the STEAM Week pilot implementation (Task 5.3).
- Insights from monitoring STEAM training activities (Task 5.5).

B. 8 keynote speeches from leading experts on advances in STEAM education and innovative teaching methods.

C. 4 general discussion panels, focusing on:

- Next steps for the STEAM Alliance for Europe.
- Selection of organizers for the next STEAM contest, STEAM week, and STEAM congress.

D. >9 interactive workshops, with sessions designed for different stakeholder groups, including:

- Education staff (e.g., teachers, curriculum developers).
- STEAM-related academia (e.g., researchers, university faculty).
- Creative and Cultural Industries (CCI).


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- Civil society organizations (CSOs) and governmental bodies (GOBs).

E. Poster sessions showcasing innovative STEAM projects, research initiatives, and sister projects.
F. Networking opportunities, including coffee breaks and informal discussion spaces, to foster collaboration.

### 5.3 Logistics and Planning Considerations

To ensure a seamless and impactful event, the following aspects will be carefully planned:

- Hybrid Event Format: The congress will be accessible both in-person and online, ensuring broad participation.
- Free Registration: All participants will be able to attend the event free of charge, with an easy-to-use registration process.
- Speaker & Participant Support: The 8 keynote speakers and 5 coordinators from sister projects will have travel and accommodation expenses covered by the project.
- Accessibility & Inclusivity: The event venue and program will be designed to accommodate diverse needs, including considerations for disabilities and dietary restrictions.

### 5.4 Promotion and Outreach Strategy

As part of Task 8.1, CTA will lead the promotion of the congress, ensuring maximum visibility among stakeholders through:

- Targeted outreach campaigns, using social media, newsletters, and direct engagement with relevant networks.
- Collaboration with key partners, including European institutions, universities, and STEAM organizations.
- Pre-event webinars and discussions to generate interest and encourage participation.

### 5.5 Evaluating the Success of the Congress

To assess the impact and effectiveness of the event, attendee feedback will be systematically collected through:

- Surveys and questionnaires were distributed to participants post-event.
- Panel and workshop feedback sessions to gather qualitative insights.
- Engagement metrics from online participation and networking sessions.


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