

# Best Practices in the TAKE UP project

Joint Publication



Co-funded by the  
Erasmus+ Programme  
of the European Union

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## Key features

<b>Project Acronym</b>	TAKE-UP	
<b>Project title</b>	Transforming Academic Knowledge to develop Entrepreneurial Universities in Pakistan	
<b>Grant Agreement No.</b>	609957-EPP-1-DE-EPPKA2-CBHE-JP	
<b>Funding Scheme</b>	Erasmus+ Capacity Building in the field of Higher Education	
<b>Start date</b>	15 Jan 2020	
<b>End date</b>	14 Jan 2023	
<b>Website</b>	<a href="https://takeup.eu/">https://takeup.eu/</a>	
<b>Project Coordinator</b>	Saarland University, Germany	
<b>Collaborators</b>	<b>Program Countries</b> 1. UdS, Germany 2. AUEB, Greece	<b>Partner Countries</b> 1. Comsats, Pakistan 2. GCU, Pakistan 3. LUMS, Pakistan 4. UoG, Pakistan



## Foreword

It is with great pleasure that we present this comprehensive overview of the ERASMUS+ TAKE UP project, a transformative initiative aimed at fostering the entrepreneurial ecosystem of Pakistani universities through strategic collaboration with esteemed European partners.

Funded under the ERASMUS+ program, this project brings together a consortium of dedicated institutions committed to driving positive change in the entrepreneurial landscape. Saarland University (UDS), Athens University of Economics and Business (AUEB), COMSATS University Islamabad (CUI), Lahore University of Management Sciences (LUMS), Government College University Lahore (GCU), and University of Gujrat (UOG) have joined forces to deliver impactful outcomes.

This venture serves as a testament to the commitment and vision of our partner universities to propel positive change and innovation in the academic and entrepreneurial landscapes. As you delve into the following pages, you will gain insights into the project's objectives, milestones achieved, and the collaborative efforts of our esteemed partner universities. The commitment to sustainability, ongoing communication, and the sharing of knowledge and experiences are evident threads woven throughout the fabric of this initiative.

We express our gratitude to all the contributors, coordinators, and stakeholders involved in making the ERASMUS+ TAKE UP project a remarkable endeavor. This foreword serves as an invitation to explore the dynamic journey of entrepreneurial transformation captured within this report.

Warm regards,

**The TAKE UP Project Team**



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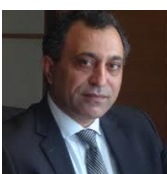
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## Overview of the Joint publication

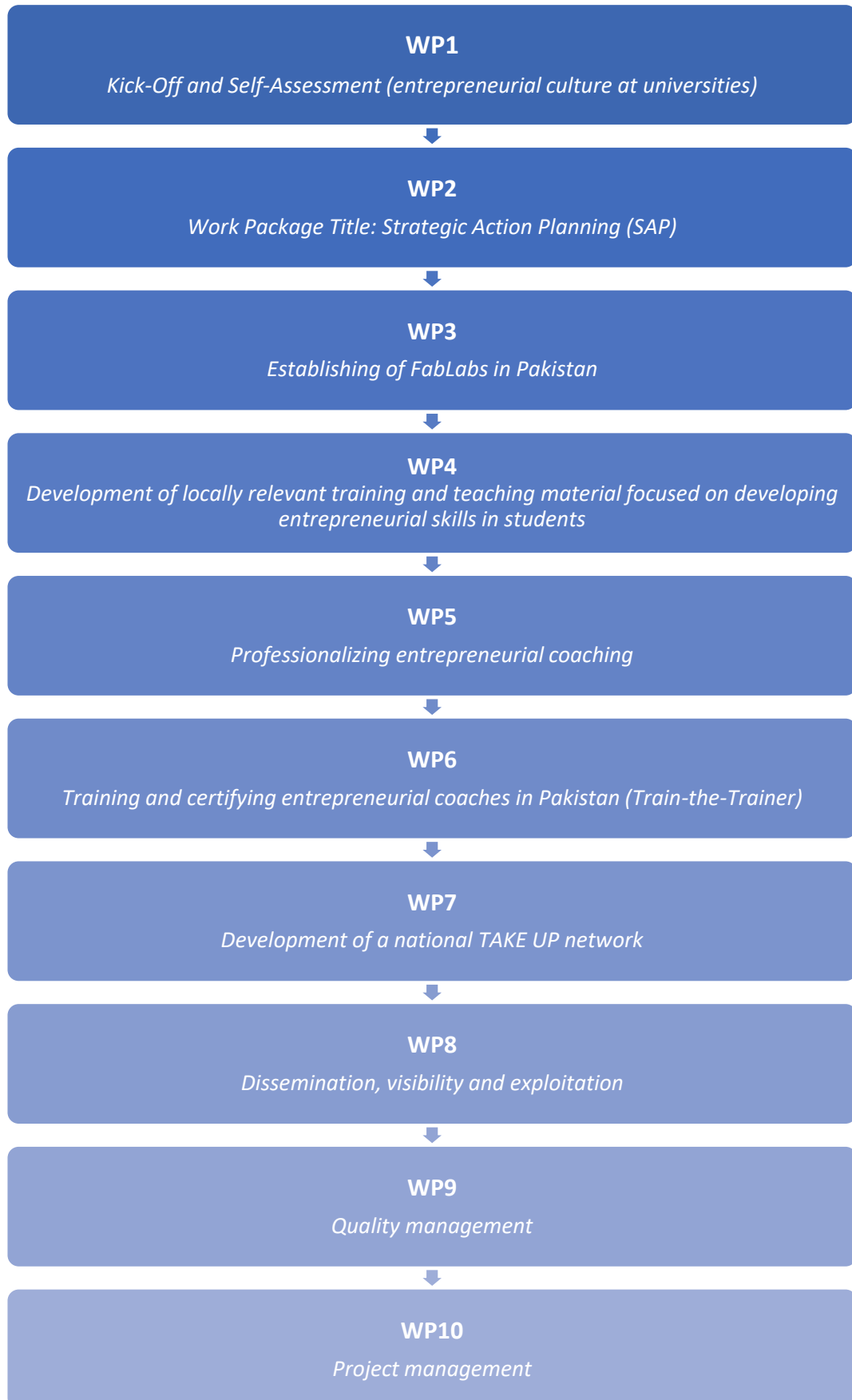
This joint publication offers a summary of the collaborative initiatives pursued by the partner universities mentioned above. The document encompasses the implementation of ten Work Packages in total and emphasizes activities conducted throughout the project, challenges encountered during its execution, lessons learned, as well as future activities planned to be sustained even after the project's conclusion. Numerous key achievements and significant progress become evident, underscoring the overall success and importance of the TAKE UP project. Particularly during the initial phases of the project, unanticipated challenges and obstacles emerged as a result of the COVID-19 pandemic, with a predominant impact on Work Packages 1-3. The commencement of the pandemic in March 2020 significantly influenced the TAKE UP project, introducing a range of disruptions and uncertainties. Main challenges that occurred due to COVID-19 included:

Due to travel restrictions and social distancing rules, many coordination and planning meetings for the project were conducted online. Additionally, all project activities and teaching materials were successfully transitioned to an online format, making them available to students despite the social distancing rules. Despite several challenges and obstacles due to COVID-19 in the initial stages of the TAKE UP project, partner universities displayed resilience and adaptability, emphasizing the importance of flexibility in addressing unexpected disruptions and ensuring the project's continued progress.

All further undertakings and developments of the TAKE UP project are specified per Work Package in the following chapters. These chapters of the joint publication present the specific activities undertaken and ongoing activities related to the objectives of each respective Work Package. Challenges encountered during the implementation of measures and the lessons learned due to these challenges are also separately outlined and explained for each Work Package. Subsequently, an outlook on plans for future activities is provided at the end of each chapter. These activities will continue to be carried out by the partner universities beyond the TAKE UP project to ensure the sustainability of the project. The report concludes with a final summary, including implications and conclusions for the entire TAKE UP project, along with an appendix containing additional information about the project and individual Work Packages.



## Work Package Overview



## Work Package 1: Kick-Off and Self-Assessment

### Objectives:

- To create a common ground for a well-founded collaboration between Pakistani and EU universities.
- Revealing specific challenges in terms of entrepreneurship.

### Achievements and Outcomes:

#### Tangible:

- 1 report of challenges and opportunities each for GCU, UoG, CUI and LUMS
- 1 Self-Assessment Tool
- 4 Completed Self assessments

#### Intangible:

- Enhance awareness of common regional challenges,
- Insights in recent entrepreneurial institutions and efforts
- Future trends

### Activities undertaken and ongoing activities

- **Project Kickoff Meeting:** All partner universities successfully organized and prepared for the project's kickoff meeting, which marked a pivotal starting point for collaborative efforts. They also developed the project's roadmap and collaboration terms and conditions in collaboration with university authorities, obtaining approval for the final draft of the agreement with UDS.
- **Resource Collaboration:** Collaborating with the National Incubation Center Lahore University of Management Sciences (NICL), all universities identified and engaged essential resources vital for the project's implementation. This included obtaining approval for the final draft of the agreement with UDS.
- **Self-Assessment Completion:** Each university, in collaboration with NICL, completed self-assessment questionnaires, contributing to a better understanding of the project's readiness and identifying areas for improvement. The universities also facilitated the development of a Self-Assessment Tool and provided training in basic project management skills.



Figure 1: Self-Assessment with HEInnovate

- Participant Coordination:** All partner universities actively coordinated and motivated potential participants for self-assessment, ensuring active involvement in this critical aspect of the project. They also conducted information sessions and meetings to provide students with more information about the project, offering guidance and addressing questions related to entrepreneurship and starting one's own business.
- Infrastructure Utilization:** Leveraging their existing entrepreneurial culture and expertise, universities engaged with NICL and other centers offering opportunities for entrepreneurship, including Makerspace facilities and academic and technical staff. Universities also provided support mechanisms for students and startups seeking funding opportunities.
- Project Staff Training:** Staff from all universities participated in online webinars to enhance their project management skills and financial documentation protocols, thereby increasing their capabilities for project management. The universities also conducted a seminar on intercultural skills and project management.

## Challenges faced & Lessons Learned

Challenges faced	Lessons learned
<p><b>Intercultural Skills</b></p> <p>Overcoming language barriers, especially with varying English proficiency, was a challenge. One-size-fits-all approaches did not address individual requirements adequately.</p>	<p><b>Customization is Key</b></p> <p>Tailoring intercultural training to the specific needs and backgrounds of participants is vital for its effectiveness. Additionally, addressing and combatting cultural stereotypes and biases were crucial for effective intercultural training.</p>
<p><b>Quality Board</b></p> <p>In the establishment of a quality board, challenges included developing effective processes for collecting, storing, and analyzing quality-related data to ensure adequate measurement of the impact and progress of the project.</p>	<p><b>Ongoing Evaluation &amp; Measurable Outcomes</b></p> <p>Continuous assessment and feedback are pivotal to understanding what works and what doesn't, enabling timely adjustments and improvements. It is crucial to establish clear metrics and evaluation methods to accurately measure the impact of training. Measuring outcomes provides valuable insights for continuous improvement. Providing templates, assessment questionnaires, and guidance facilitates the process and streamlines execution.</p>
<p><b>Project Implementation</b></p> <p>Implementation challenges mainly included securing resources, dealing with financial constraints, as well as fostering interdisciplinary collaboration among faculty.</p>	<p><b>Collaboration &amp; Meticulous Planning</b></p> <p>Close intra-institutional collaboration has yielded positive outcomes, due to maximizing available resources and expertise. Furthermore, partnering with external entities (e.g., NICL) for resource identification and self-assessment coordination was an important step to successfully dealing with resource constraints. Moreover, meticulous planning has proven to be essential for a successful project implementation. Developing a practical and implementable funding framework is crucial for the seamless execution of project activities.</p>

## Future Prospects

- Development of Self-Assessment Tool:**  
 The creation of the Self-Assessment Tool through a collaborative workshop indicates a commitment to continuous improvement. In the future, this tool can serve as a benchmark for partner universities to periodically evaluate their progress and adapt to changing circumstances. As institutions evolve, this tool will enable them to identify areas for enhancement and track their growth over time. The assessments conducted provide valuable insights into the strengths and weaknesses of each partner institution. Going forward, these assessments will guide tailored strategies for improvement. By addressing specific challenges identified in the assessments, universities can ensure that they are on a trajectory of continuous enhancement, ultimately elevating the quality of education and research they offer.
- Prioritizing Individual Goals:** Prioritization is essential for managing resources effectively and achieving meaningful outcomes. In the future, as universities work on individual goals, they will be better equipped to allocate resources efficiently and make tangible progress in areas critical to their development.
- Collaborations and Partnerships:** Discussions with partners and other institutions on exploring relevant initiatives for exchange training programs and future collaborations will continue. Efforts to collaborate with academic institutions for entrepreneurial initiatives will persist. Such collaborations are pivotal in promoting entrepreneurship and innovation within the academic community.

## Impact of the activities

Activities Undertaken	Economic Impact	Ecological Impact	Social Impact
<b>Project Kickoff Meeting</b>	Enhanced collaboration and resource utilization	Negligible*	Improved communication and commitment to project objectives
<b>Resource Collaboration</b>	Efficient resource allocation and economic benefits	Negligible*	Strengthened partnerships and resource sharing

<b>Self-Assessment Completion</b>	Improved project readiness and skill enhancement	Reduced paper usage through online assessment	Skill enhancement and increased project readiness
<b>Participant Coordination</b>	Potential economic impact through increased entrepreneurship awareness	Negligible*	Empowered participants with knowledge about entrepreneurship
<b>Infrastructure Utilization</b>	Increased opportunities for entrepreneurship	Negligible*	Enhanced support mechanisms for students and startups

\*The negligible ecological impact implies that the activities are designed and executed in a way that minimizes environmental harm. The focus on online resources, webinars, and digital platforms contributes to resource efficiency and reduces the need for extensive physical resources.

## Work Package 2: Strategic Action Planning (SAP)

### Objectives:

- Creating vision for individual universities on which areas to focus their efforts in becoming entrepreneurial universities
- Employing project management tools (e.g., SMART, milestone elaboration)

### Achievements and Outcomes:

#### Tangible:

- 1 report of university specific Strategic Action Plan (1 per partner university) with at least four different areas (HEInnovate dimensions),
- participation of 16 (4 per university) senior management members involved in project as well as staff members of business incubation centers

#### Intangible:

- Create knowledge of fundamental project management strategies in terms of developing entrepreneurial culture and institutional integration to the project.
- detailed understanding enables teaching staff and entrepreneurship coaches to create new and creative approaches

## Activities undertaken and ongoing activities

### Activities Undertaken

- University-Specific Strategic Action Plans:** A major milestone achieved was the development of University-Specific Strategic Action Plans for each partner university. These action plans covered at least four different areas aligned with the HEInnovate dimensions. This extensive collaborative effort involved 16 senior management members, with four representatives from each university, demonstrating the commitment of all stakeholders to the project's objectives.
- Engagement of Business Incubation Centers:** The project emphasized the importance of involving staff members from business incubation centers to ensure a holistic approach to entrepreneurial culture development and institutional integration. This inclusivity helped incorporate diverse perspectives and expertise into the planning and implementation phases.
- Dissemination of Project Management Skills:** Despite the challenges presented by the pandemic, fundamental project management skills were disseminated, contributing to the development of an entrepreneurial culture and institutional integration. This empowerment of project participants facilitated their ability to navigate uncertainties and adapt to changing circumstances, especially in the remote working environment.

Strategic Action Plan

Objective	Output	Tasks	Measure of progress	Resources	Barriers/Interventions	Stakeholder	Responsible Person(s)	Time frame	
What do you want to achieve?	Which specific output do you want to create?	What do you need to accomplish your goal?	How do you know that you have made progress on each action?	What resources do you need?	What could be challenges?	Who are stakeholders in/outside of your university?	Who is responsible for carrying out each action?	Start Date	Completion Date

Figure 2: Template for Strategic Action Plans



## Ongoing Activities

- **Continual Improvement:** The project places a strong emphasis on continually evolving incubator programs and services. This adaptation is driven by the changing needs and challenges of startups and the broader entrepreneurial ecosystem. By staying responsive to these changes, the project aims to remain relevant and effective in its support.
- **Global Collaborations:** The project actively engages with the local entrepreneurial community, ecosystem partners, government agencies, and industry stakeholders to foster collaboration and promote the growth of startups. This ongoing effort connects startups to international markets, facilitating their growth and scaling.
- **Mentorship & Support:** The project's engagement with the alumni network ensures ongoing mentorship and support for current startups. Success stories from alumni are shared to inspire and motivate current participants, creating a network of support and encouragement.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Resistance to Change</b></p> <p>Overcoming resistance to change within the university system and among faculty members who might be accustomed to traditional teaching methods was a critical challenge. Adapting to new pedagogical approaches and</p>	<p><b>Clear &amp; Transparent Communication</b></p> <p>Clear and transparent communication is critical during times of fundamental change. Regular updates and open communication channels help maintain approval and alignment within existing university systems.</p>
<p><b>Balancing Diverse Interests &amp; Demands</b></p> <p>Involving various stakeholders, such as students, faculty, local businesses, and government bodies, in entrepreneurial initiatives required significant effort. Furthermore, the multifaceted demands of entrepreneurship mandate flexible, adaptive concepts, calling for ongoing adjustments and experienced experts in the relevant fields, which can pose a challenge to ensure.</p>	<p><b>Adaptability &amp; Collaborative Networking</b></p> <p>Adaptability is crucial for fostering effective cooperation among diverse stakeholders. Flexibility in conceptualization is necessary, allowing for customization based on varying situations, regulations, and needs.</p> <p>Events, conferences, and networking opportunities are essential to gather entrepreneurs, investors, mentors, and industry experts, promoting collaboration and knowledge sharing. Engaging established companies with startups through corporate innovation programs, and partnerships helps to meet the diverse needs of entrepreneurial education, and creates a mutually beneficial environment.</p>

## Future Prospects

- **Thorough Needs & Impact Assessment:**

The ongoing needs assessment aims to identify gaps in entrepreneurial education and infrastructure, ensuring that the project addresses the most critical areas. Additionally, regular assessment of the impact of entrepreneurial initiatives on students, faculty, and the local community will be conducted.

- **Existing Initiatives & long-term Sustainability:** An in-depth analysis of

existing entrepreneurial initiatives will be carried out to determine their effectiveness and areas requiring improvement. Moreover, developing long-term sustainability plans for entrepreneurial initiatives, including revenue-generating models and industry partnerships, is a priority.

- **Collaboration with EU Partners:** The project will maintain collaboration with EU partners to facilitate the exchange of knowledge and best practices.

- **Stakeholder Engagement:** Continuous engagement with all stakeholders, including faculty, students, local businesses, government bodies, and alumni, will be maintained to gather diverse viewpoints on entrepreneurial education. Organizing workshops, seminars, and focus groups will actively involve stakeholders in the vision creation process for entrepreneurship education and project management.
- **Curriculum Enhancement & Capacity Building Initiatives:** Entrepreneurship curricula will be continuously developed, enhanced, and upgraded to align with industrial needs and best practices. Additionally, capacity-building initiatives, including faculty development programs, will be intensified to enhance teaching methods related to entrepreneurial skills.

## Impact of the activities

<b>Activities Undertaken</b>	<b>Economic Impact</b>	<b>Ecological Impact</b>	<b>Social Impact</b>
<b>University-Specific Strategic Action Plans</b>	Economic growth through focused efforts on entrepreneurship	Negligible	Alignment of university efforts with entrepreneurial dimensions
<b>Engagement of Business Incubation Centers</b>	Economic impact through holistic approach to entrepreneurial culture	Negligible	Diverse perspectives incorporated, enhancing planning and implementation
<b>Dissemination of Project Management Skills</b>	Economic empowerment of project participants	Negligible	Improved adaptability to changing circumstances in a remote working environment
<b>Continual Improvement</b>	Economic growth through responsive incubator programs	Negligible	Ongoing relevance and effectiveness in supporting startups
<b>Global Collaborations</b>	Economic growth through fostering collaboration with stakeholders	Negligible	Facilitation of startup growth by connecting them to international markets

## Work Package 3: Establishing of FabLabs in Pakistan

### Objectives:

- To establish FabLabs at the partner universities that will assist entrepreneurial coaches in guiding students interested in starting up their own company
- Enable transforming of students' ideas into visible prototypes

### Achievements and Outcomes

#### Tangible:

- 1 list of purchase per university,
- 12 trained experts from Pakistan
- short course developed based on shared material
- Setup of 1 FabLab each at GCU, CUI and UoG
- FabLab at LUMS has been upgraded

#### Intangible:

- Having knowledge on how to use the machines and tools, and run a Fablab
- Visibility to and use by students and researchers interested in starting up their own company

### Activities undertaken and ongoing activities

#### Activities Undertaken

- **Collaboration of Partner Universities:** The use of FabLabs was introduced at entrepreneurial universities in Germany and Greece, fostering knowledge sharing. Collaborative meetings with university departments and various knowledge-sharing activities, including online sessions, focused on the installation of FabLab equipment, as well as integrating FabLabs into teaching and research.
- **Training & Skill Development:** Training sessions and skill development activities are a key component of the project.

Technicians and students are regularly trained on the FabLab equipment, ensuring that they can make the most of the available tools and machines. Training is provided on various aspects, including machine operation and design software. Technicians from the companies that manufactured the machines were included to ensure access to the latest updates for optimal usage.

- **Student & Community Engagement:** The project actively involves students in using equipment, with student groups undertaking hands-on projects, like

creating promotional gift items using laser marking and cutting machines. They receive training on equipment and design software. Additionally, community engagement was enhanced by inviting students and faculty to the FabLab, raising awareness about available resources and fostering opportunities for prototyping and innovation. This outreach aims to make resources more accessible to a wider audience.

### Ongoing Activities

- **Regular Technician Training:** Continual training for technicians ensures proficiency in operating and maintaining FabLab equipment.
- **Open House & Equipment Showcase:** Ongoing efforts invite students and faculty to explore the FabLab's capabilities for research and projects.

## Challenges faced & Lessons Learned

Challenges faced	Lessons learned
<p><b>Equipment Procurement and Import Restrictions</b></p> <p>One of the major challenges faced by the project was the need to independently procure equipment due to government import restrictions. This constraint significantly impacted progress across universities. Limited equipment availability and vendor hesitancy to participate in the tendering process added further complications, likely influenced by economic uncertainty and import-related issues.</p>	<p><b>Meticulous Planning, Real-Time Cost Estimates &amp; On-Site Delivery</b></p> <p>Thorough preparation including extensive research is crucial for a smooth execution of equipment procurement. Additionally, real-time cost estimates for duties and taxes at the time of delivery require improved financial planning and mitigate the impact of sudden cost changes. On-site delivery from the vendor, rather than remote delivery, leads to greater clarity on expenses and increases predictability of deliveries. Opting for local equipment purchases when possible enables increased efficiency and cost-effectiveness.</p>
<p><b>Setting Up FabLab Spaces</b></p> <p>Setting up of FabLab spaces had to meet safety standards. In addition, logistical challenges in the timely delivery and installation of machinery added complexity. Ensuring technical compatibility of course materials with FabLab equipment demanded adjustments and expert consultation.</p>	<p><b>Collaboration &amp; Knowledge Exchange</b></p> <p>Facilitating collaboration and knowledge exchange in utilizing established FabLab facilities underscored the importance of effective partnerships among institutions. Expert consulting for equipment procurement necessitated proficiency in specific FabLab technologies and the engagement of a skilled technical team. The pivotal role of capacity building and cultivating skilled human resources for FabLab operations became apparent, underscoring the imperative to invest in personnel skills and knowledge for sustained success.</p>

## Future Prospects

- Skill Development & Entrepreneurship Promotion:** The project will host specialized workshops, establish a mentorship program, and organize collaborative projects with industries to enhance students' skills in advanced prototyping techniques, entrepreneurship, and real-world problem-solving.
- Innovation Competitions:** Pitching competitions, hackathons, and innovation challenges will encourage students to brainstorm, prototype, and present their innovative solutions, fostering creativity and entrepreneurship.
- Community Engagement:** Collaboration with local communities, schools, and colleges will include entrepreneurship awareness campaigns, guest lectures, and success story sessions featuring prominent entrepreneurs. These initiatives will inspire young minds to consider entrepreneurship as a viable career option and create knowledge-sharing opportunities.
- Accessibility and Equipment Expansion:** The Fab Lab will be open to students and faculty from non-partner universities, extending its benefits to a wider academic community. The project also plans to expand the equipment, including multilayer PCB manufacturing, fiber laser machines for metal cutting and engraving, and metal 3D printing technologies, further enhancing the Fab Lab's capabilities

## Impact of the activities

Activities Undertaken	Economic Impact	Ecological Impact	Social Impact
<b>University-Specific Strategic Action Plans</b>	Economic growth through focused efforts on entrepreneurship	Negligible	Alignment of university efforts with entrepreneurial dimensions
<b>Engagement of Business Incubation Centers</b>	Economic impact through holistic approach to entrepreneurial culture	Negligible	Diverse perspectives incorporated, enhancing planning and implementation

<b>Dissemination of Project Management Skills</b>	Economic empowerment of project participants	Negligible	Improved adaptability to changing circumstances in a remote working environment
<b>Continual Improvement</b>	Economic growth through responsive incubator programs	Negligible	Ongoing relevance and effectiveness in supporting startups
<b>Global Collaborations</b>	Economic growth through fostering collaboration with stakeholders	Negligible	Facilitation of startup growth by connecting them to international markets



## Work Package 4: Development of locally relevant training and teaching material focused on developing entrepreneurial skills in students

### Objectives:

- Improved training material for students and researchers interested in starting their own company
- Localized trainings that fit the environmental context of Pakistan
- Training material for mentors/coaches from the industry and for faculty members who are willing to mentor/coach student

### Achievements and Outcomes:

#### Tangible:

- at least 4 different training plans and contents for mentioned target groups to enhance entrepreneurial thinking (keeping WP4.2 in mind)
- 80 trained staff members (20 per university) in partner universities
- 160 trained staff members in non-partner universities

#### Intangible:

- Definition and focus on regional, entrepreneurial challenges across different idea development stages or target groups.
- Increase awareness of combining traditional teaching methods with digital solutions and understanding their benefits.

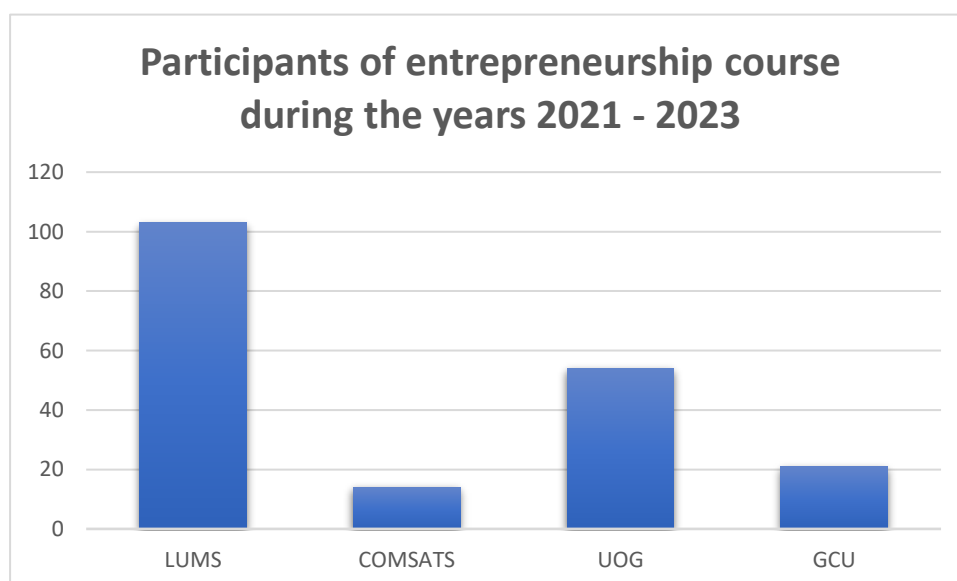


Figure 3 Participants of entrepreneurship course (Entrepreneurship 101). Total number: 192

## Activities undertaken and ongoing activities

### Activities Undertaken

- **Entrepreneurial Curriculum Development:** The development of a comprehensive curriculum was a key focus. This curriculum was designed to align with the educational goals and program requirements of Pakistani universities.
- **Collaborative Efforts:** Several meetings and webinars were organized, bringing together experts and department heads to develop training materials aimed at enhancing entrepreneurial skills in students.
- **Webinar on Entrepreneurship Teaching and Training:** A webinar, directed at all interested faculty members of partner universities, centered on entrepreneurship teaching and training frameworks to disseminate knowledge and insights to a broader audience. The objective was to inform relevant staff and promote the concept of the collaborative entrepreneurship course.
- **Launch of Entrepreneurial Teaching Course 101:** Plans for the launch of the first Entrepreneurial Teaching Course were discussed and laid out. The course successfully registered and implemented, demonstrating a commitment to providing high-quality entrepreneurship education. The launch of the entrepreneurship course on the Moodle platform engaged students with an interactive online introductory

session, providing hands-on learning experiences and generating excitement and engagement.

- **Certificate Distribution Ceremony:** A certificate distribution ceremony was organized to acknowledge and celebrate the achievements of students who completed the course.
- **Student Evaluation and Advisory Sessions:** Evaluation of students who completed the Pilot Course took place, and advisory sessions were conducted to guide the development of a TAKE UP Entrepreneurship Club. Business plans submitted by students were also reviewed. At each partner university, regular evaluations of the course are conducted, and improvements have been implemented based on the received feedback.

### Ongoing Activities

- **Comprehensive Curriculum Development:** The ongoing development of a comprehensive curriculum is aimed at continually enhancing the structure, learning objectives, and outcomes related to entrepreneurial skills. This curriculum remains aligned with the educational goals and program requirements of the universities.
- **Entrepreneurship Education:** Emphasizing Engaging Teaching, Continuous Learning,

and Real-world Application. The initiative prioritizes the development of materials with local relevance, incorporating in-person activities for an enriched learning experience. Experiential learning is a focus, encouraging students to apply entrepreneurial concepts through hands-on activities. Additionally, ongoing efforts involve the revision and production of course videos, incorporating local context and examples.

- **Multidisciplinary Collaboration:** Collaboration with colleagues from various disciplines continues to provide a multidisciplinary approach to entrepreneurship education. Insights from fields such as business, engineering, and

social sciences contribute to a holistic view of entrepreneurship. Moreover, identification, nomination, and involvement of relevant entrepreneurship experts continue to be a part of ongoing activities. These experts play a crucial role in the effectiveness of subsequent activities.

- **Assessment Tools and Feedback:** The development of assessment tools for measuring students' mastery of entrepreneurial skills and the collection of feedback from students remain ongoing. These activities support continuous refinement and improvement of teaching materials and activities based on student experiences and needs.

## Challenges faced & Lessons Learned

Challenges faced	Lessons learned
<p><b>Efficient Teaching Methods</b></p> <p>The challenges in education encompassed selecting effective teaching methods, balancing theory and practice, and adapting materials to local needs. Adapting online content for accessibility, such as adding subtitles, proved difficult. Furthermore, addressing diverse student backgrounds and prior knowledge was a significant hurdle, with some facing issues like content being too basic or comprehension difficulties due to accents in online sessions.</p>	<p><b>Online Tool Quality &amp; Feedback</b></p> <p>Ensuring the quality of online tools and feedback mechanisms is crucial for successful online sessions. This involves adapting to unforeseen changes, improving audio quality, and balancing content effectively. Utilizing online platforms and interactive tools enhances accessibility and engagement. Allocating specific budgets for advanced recording facilities in future projects is deemed essential. Additionally, implementing practical application of concepts has proven to be highly efficient in enhancing the overall learning experience.</p>
<p><b>Participant Dropouts</b></p> <p>Following the launch of the entrepreneurship course, universities introduced a fee to enhance commitment, but issues arose as students failed to share bank details for fee vouchers, leading to dropouts. Additionally, dropouts occurred due to reasons like job commitments, internships, and lack of engagement or motivation. Participants from other cities faced difficulties attending in-person sessions due to distance.</p>	<p><b>Planning, Informative Outreach &amp; Collaboration</b></p> <p>Initiating marketing well in advance and aligning course schedules with student availability are essential for better participation. Clear communication regarding fee payment, requirements, and team formation is crucial. Collaborating with experienced mentors from industry, helps addressing motivational challenges are key to student support.</p>

## Future Prospects

- Continuity of Entrepreneurial Course:** The primary goal is to ensure the ongoing availability of the Entrepreneurial Course, providing students with essential insights and practical skills for entrepreneurial success. The focus remains on engaging, practical, and locally relevant content that prepares students for entrepreneurship challenges.
- Educational Facilities and Resource Efficiency:** Plans include proposing state-of-the-art recording studios or classrooms in educational centers to enhance the quality of educational content. Furthermore, efficient resource utilization includes reusing the material across multiple student cohorts and integrating it into various courses and programs, ensuring long-term value for universities.
- Integration of Emerging Technologies:** The project aims to embrace emerging technologies, such as AI tools and digital

platforms, to enhance the delivery and interactivity of entrepreneurial training materials, better preparing students for evolving entrepreneurial landscapes.

- **Incorporation of Diverse Experiences:** Future plans involve inviting mentors and coaches from various universities to share their experiences. This enriches the learning process by providing students with diverse perspectives and practical insights from seasoned professionals.
- **Global Perspective and Collaborations:** To prepare students for a global business

environment, the scope of locally relevant materials will expand to include a global perspective. Collaboration with international partners will integrate diverse case studies and examples.

- **Training of Additional Coaches:** To maintain the quality and effectiveness of training programs, plans include the training of more trainers for the entrepreneurship course. These trainers play a crucial role in delivering material and guiding students, ensuring consistent high standards in entrepreneurial skills training.

## Impact of the activities

Activities	Economic Impact	Ecological Impact	Social Impact
<b>Curriculum Development</b>	Growth in economic skills through improved training materials	Negligible	Enhanced entrepreneurial skills and readiness of students
<b>Collaborative Efforts</b>	Economic growth through collaborative knowledge sharing	Negligible	Enhanced expertise and shared knowledge among experts and department heads
<b>Entrepreneurship Webinar</b>	Economic growth through disseminating knowledge	Negligible	Increased awareness and understanding of entrepreneurship teaching frameworks

<b>Course Launch and Pilot</b>	Economic growth through providing high-quality entrepreneurship education	Negligible	Acknowledgment and celebration of students' achievements
<b>Student Evaluation and Advisory</b>	Economic growth through continuous course improvement	Negligible	Evaluation, guidance, and improvement of the TAKE UP Entrepreneurship Club
<b>Ongoing and Future Activities</b>	Economic growth through continual enhancement of entrepreneurial skills	Limited ecological impact	Continuous improvement of entrepreneurial education structure and outcomes, preparation for evolving entrepreneurial landscapes, efficient resource utilization, and integration of diverse experiences

## Work Package 5: Professionalizing entrepreneurial coaching

### Objectives:

- Assessing competencies of entrepreneurial/business development coaches
- Creating selection assistance for promising entrepreneurial coaches
- Creating guidelines for entrepreneurial coaching that help with onboarding but also existing staff to improve their entrepreneurial coaching competencies

### Achievements and Outcomes:

#### Tangible:

- 1 Report on current entrepreneurial coaching in Pakistani HEIs with situational interview questions for personnel selection.
- 1 Digital guideline for general entrepreneurship coaching.
- Digital manual providing specific guidance in four thematic areas for entrepreneurship coaching

#### Intangible:

- Addressing coaching challenges in Pakistan, committing to personal growth, and refining personnel selection processes.
- Understanding the coaching process and its structured approach benefits.
- Providing science-related start-ups with comprehensive consulting in each participating Pakistani university's incubation center

## Activities undertaken and ongoing activities

### Activities Undertaken

- **Skype Meetings and Discussions:** Regular Skype meetings were conducted to brainstorm ideas, discuss the objectives of Work Package 5, and to ensure alignment with the project's mission and goals.
- **Preparation of Coaching Materials:** Extensive work has gone into the preparation of materials related to the introduction and planning of real coaching sessions. This includes distinguishing between formal and informal coaching, differentiating between teaching and coaching, and selecting coaches based on their expertise and coaching styles. Detailed materials on real coaching sessions, effective coaching, coaching techniques, and tools used for coaching have been prepared.
- **Review and Guidance:** A review and guidance process was conducted to ensure the quality and accuracy of materials. This

included a review of notes as well as guidance on the chapter related to Entrepreneurial Ethics.

### Ongoing Activities

- **Assessment Report and Coaching Guidelines:** Contributions have been made in the production of an assessment report on entrepreneurial potential, and in the development of general coaching guidelines and diagnostic questionnaires. Feedback and questions have been provided to enhance these materials.
- **Coaching Manual Development:** The coaching manual is undergoing continuous improvement, with input from Heads of Departments and senior faculty members. Multiple reviews and updates have contributed to refining the manual.
- **Project Planning and Data Collection:** There is an ongoing review of relevant literature in areas like entrepreneurial

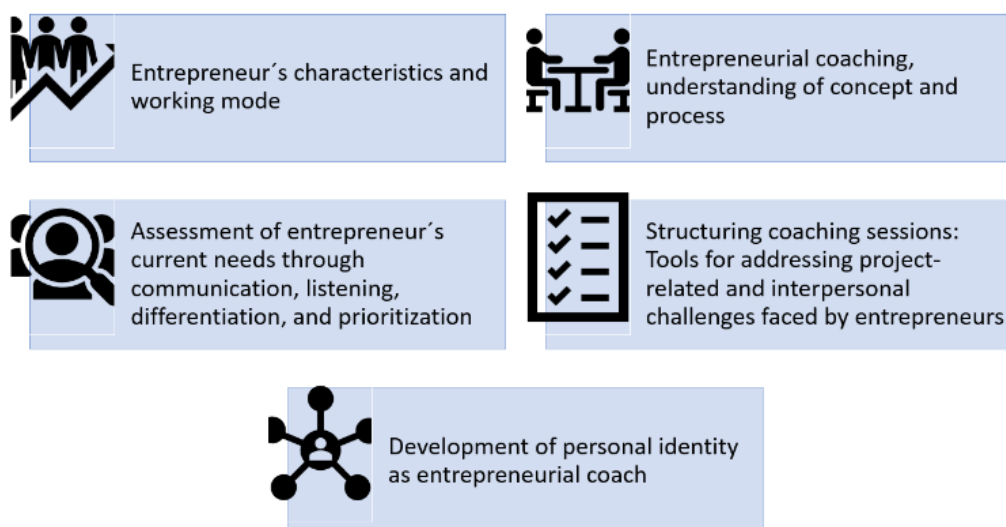


Figure 4: Modules of training for entrepreneurial coaches



coaching, education, and higher education in Pakistan to address gaps and stay updated. The design of data collection methods, instruments, and ethical considerations is an ongoing process to ensure robust data collection.

- **Dissemination and Presentation:** Preparations for sharing the report's findings with stakeholders, including HEIs, government bodies, and industry partners, are ongoing. This includes planning presentations and workshops for dissemination.
- **Feedback and Follow-Up:** The project maintains an ongoing feedback collection process from its partners and stakeholders, actively monitoring and tracking the implementation of changes based on the

report's findings. This involves conducting interviews, consistent email communication with the project team, and sharing feedback and insights from entrepreneurial experts

- **Entrepreneurial Coaching Training:** The process of selecting and training more faculty members as Entrepreneurial Coaches is ongoing. This professionalization of entrepreneurial coaching is progressing according to the established process. In addition, ongoing activities focus on improving entrepreneurial coaching competencies through research, curriculum development, industry engagement, peer learning, mentoring, coaching practices, and evaluation processes.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Resistance from Faculty</b></p> <p>Encountering resistance from Management Sciences faculty members reluctant to attend entrepreneurial coaching sessions posed a challenge. Many lacked familiarities with modern digital business trends, hindering coaching efforts in this rapidly evolving field. Motivating faculty members toward entrepreneurship demanded substantial efforts.</p>	<p><b>Specific Selection of Faculty Members</b></p> <p>The importance of a creative and result-oriented approach in the selection of faculty members with an entrepreneurial mindset for coaching roles. Not all faculty members claiming success in entrepreneurship will become effective entrepreneurial coaches.</p>
<p><b>Continuous Updating</b></p> <p>Staying relevant in the rapidly evolving field of entrepreneurship necessitated a commitment to continuous professional development, which proved challenging but crucial for ensuring high-quality coaching.</p>	<p><b>Flexibility &amp; Networking</b></p> <p>Regarding the rapidly changing entrepreneurial landscape, being adaptable and flexible in coaching approaches is vital. Entrepreneurship is not one-size-fits-all, and tailoring coaching to individual needs and staying current with evolving industry trends is crucial for success. Additionally, coaches must establish a robust network of industry professionals and fellow educators to gain a broader perspective on entrepreneurship and ensure qualified, up-to-date guidance.</p>

## Future Prospects

- **Expansion of Training Initiatives:** The plan includes training sessions for a new batch of coaches to uphold the high standard of entrepreneurial skills training. Additionally, ongoing workshops for faculty members, spanning partner and non-partner universities, aim to encourage educators to propagate coaching processes at their institutions, thereby expanding our reach.
- **Engaging the Business Community:** We aim to establish contact with the local business community to assess market needs and trends. This interaction will inform our education and coaching efforts, ensuring they align with real-world requirements.
- **Cross-University Interactions:** We will actively promote cross-university interactions among entrepreneurial experts and coaches to foster networking and collaboration. This initiative will contribute to a broader exchange of insights and best practices.
- **Continuous Feedback Mechanisms:** Staying responsive to evolving student needs and dynamic entrepreneurial landscapes is a priority. We will establish continuous feedback mechanisms

involving students, alumni, and industry partners. Their input will inform the regular adaptation and refinement of coaching guidelines and practices.

- **Repository Creation:** A key future plan involves creating a comprehensive repository containing contact information and profiles of domain-specific and general coaches at the university level. This repository will enhance the effectiveness of coach selection, coordination, and accessibility.

## Impact of the activities

<b>Activities Undertaken</b>	<b>Economic Impact</b>	<b>Ecological Impact</b>	<b>Social Impact</b>
<b>Preparation of Coaching Materials</b>	Efficient resource utilization in material preparation.	Digital preparation minimizes paper usage.	Detailed materials enhance the quality of coaching sessions.
<b>Review and Guidance</b>	Streamlining the review process optimizes resource use.	Digital review processes reduce the need for printed materials.	Ensures alignment with ethical standards and best practices.
<b>Assessment Report and Coaching Guidelines</b>	Efficient data collection methods optimize costs.	Digital dissemination minimizes environmental impact.	Continuous improvement based on feedback ensures relevance.
<b>Coaching Manual Development</b>	Continuous improvement ensures long-term value for universities.	Ongoing digital updates reduce waste and resource consumption.	Involving Heads of Departments enhances material quality.
<b>Project Planning and Data Collection</b>	Strategic planning optimizes project resources.	Ethical considerations ensure responsible and sustainable data collection.	Addressing gaps in literature fosters knowledge dissemination.
<b>Dissemination and Presentation</b>	Efficient sharing of findings reduces presentation costs.	Digital presentations minimize paper usage.	Widening stakeholder engagement through workshops.
<b>Feedback and Follow-Up</b>	Ongoing feedback processes streamline project implementation.	Digital communication reduces the need for physical meetings.	Involving stakeholders ensures continuous improvement.
<b>Entrepreneurial Coaching Training</b>	Training batches efficiently align with established processes.	Utilizing digital resources minimizes environmental impact.	Improving coaching competencies through diverse learning approaches.
<b>Engaging the Business Community</b>	Aligning education with market needs for economic relevance.	Ensuring coaching efforts align with real-world requirements.	Establishing connections with the local business community for collaborative learning.
<b>Cross-University Interactions</b>	Promoting cost-effective virtual interactions among experts.	Reducing travel-related carbon footprint through virtual collaboration.	Fostering networking and collaboration for a broader exchange of insights.
<b>Continuous Feedback Mechanisms</b>	Streamlining feedback mechanisms for efficient adaptation.	Reducing the need for physical feedback sessions through digital means.	Ensuring responsiveness to evolving student needs.
<b>Repository Creation</b>	Efficient coach selection, coordination, and accessibility.	Digital repository creation minimizes resource usage.	Enhancing the effectiveness of coach selection for improved coaching practices.

## Work Package 6: Training and certifying entrepreneurial coaches in Pakistan (Train-the-Trainer)

### Objectives:

- To train entrepreneurship coaches on different levels to provide a more profound consulting inside and outside the incubation centers
- Train the trainers to become trainers themselves so that different target groups are able to benefit from an entrepreneurial coaching and spread their knowledge

### Achievements and Outcomes:

#### Tangible:

- a 3-day training plan for pilot workshop
- Trained 80 staff members from partner universities, and 160 members from non-partner universities.
- Certified 16 entrepreneurship coaches with feedback on training effectiveness.
- Ensured up-to-date materials, along with ongoing coaching performance supervision.
- Published a guideline for the process of obtaining the TAKE-UP certificate for entrepreneurship coaching

#### Intangible:

- Trained coaches with approved material from European and Pakistani partners.
- Pilot tested with experience-based learning, noting improvements.
- Establish a foundation for coaching tailored to the current Pakistani context.
- Internationally recognized certificate boosts training materials' impact and sustainability.
- Start a network to train more trainers, promoting sustainable entrepreneurship coaching.

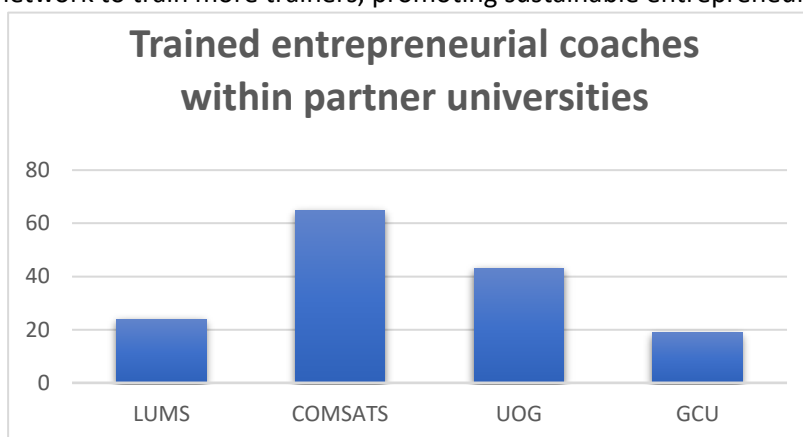


Figure 5 Trained entrepreneurial coaches within partner universities. Total number, including 2 pilot rounds (pilot 1: 13, pilot 2: 15): 179

## Activities undertaken and ongoing activities

- Collective Content Analysis:** The consortium, comprising subject matter experts and experienced coaches, collaboratively outlined and refined the coaching training program. This included editing and digitizing materials for clarity and consistency. Specific communication skill requirements for Pakistani entrepreneurial coaches were addressed, and a comprehensive revision of the coaching manual was conducted for improved flow and user experience.
- Collaborative Content Development:** Partners collaborated to create a coaching certification program, crafting organized course outlines and assigning modules based on university strengths. Training sessions focused on coaching techniques, entrepreneurship principles, and business development strategies, engaging faculty members through discussions and interactive activities.
- Certification Events:** Successful certification events for both new and master entrepreneurial coaches were held at each partner university.
- Evaluation and Feedback:** All partner universities developed and utilized post-training evaluation forms for continuous improvement and to gauge coaching effectiveness.
- Micro-Coaching Sessions:** Regularly, UDS provided online micro-coaching sessions where freshly trained coaches could seek support for questions, problems, or uncertainties. To maximize efficiency, predefined agendas were established.
- Log Sheets:** Log sheets were developed as a guide for entrepreneurial coaching sessions. They improved the efficiency and structure of individual coaching sessions, enhancing measurability and comparability. Based on the completed log sheets, UDS created a feedback document to further improve question techniques, implementation, and documentation of the coaching sessions. Coaches were required to complete a minimum of ten log sheets and submit them to their project instructor within a specified deadline to qualify for the coaching certificate.
- Mutual Supervision:** The freshly trained coaches were divided into teams to supervise each other in real-life coaching sessions with students. Subsequently, they provided constructive feedback to one another. For this purpose, UDS developed a guide to make the assessment structure and feedback as efficient as possible.

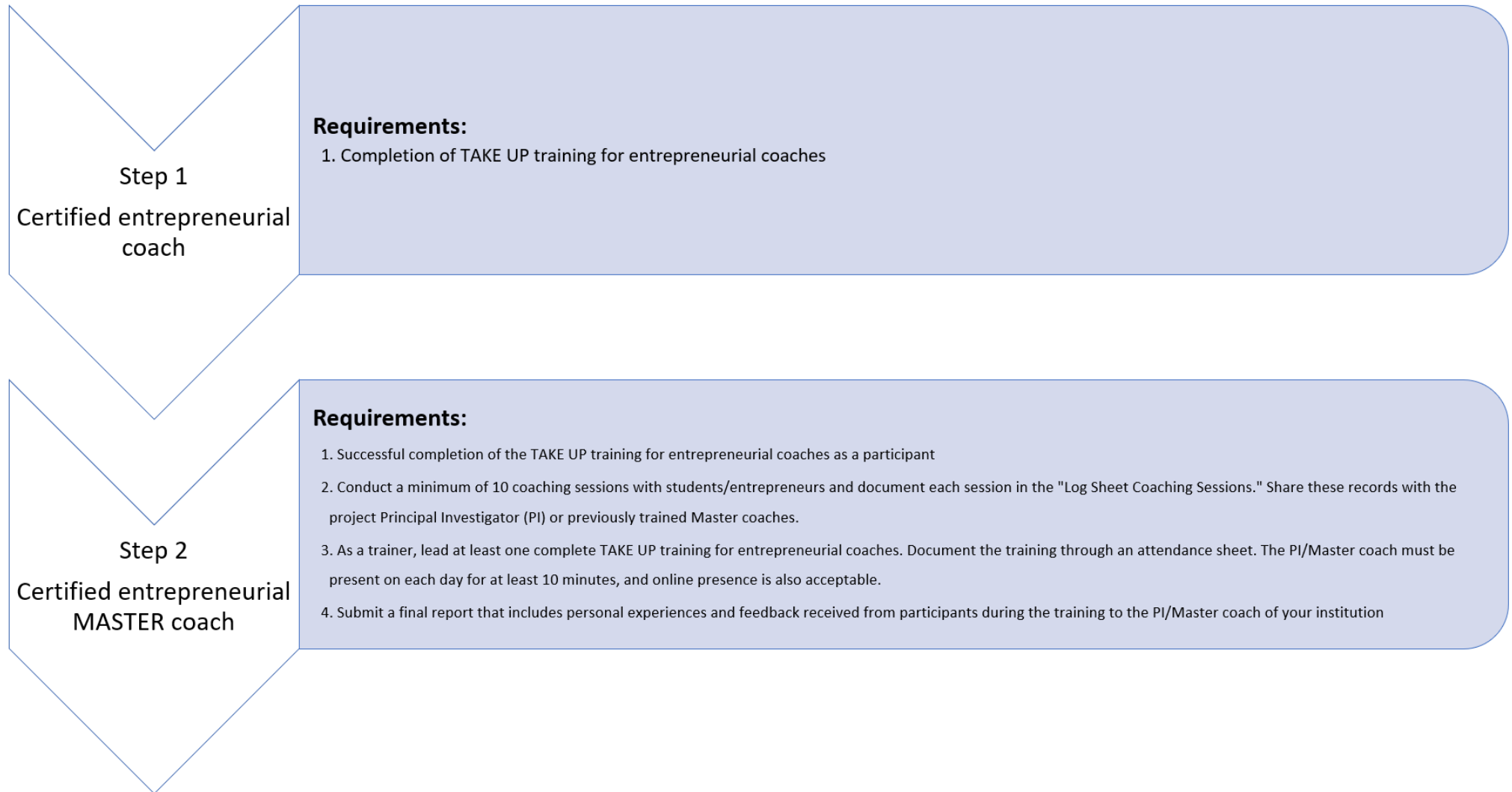


Figure 6: Certification process for becoming a TAKE UP entrepreneurial coach/MASTER coach

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Motivation &amp; Scheduling problems</b></p> <p>Sustaining motivation and engagement among trainee coaches posed a persistent challenge. Overcoming difficulties in motivating faculty members to become entrepreneurial coaches required fostering a coaching culture through continuous communication and mentorship. Managing training time and duration in accordance with participants' and trainers' availability demanded meticulous coordination.</p>	<p><b>Effective Participant Selection, Content Relevance &amp; Flexibility of Training Structure</b></p> <p>The success of the coaching program hinged on selecting participants with appropriate aspirations. Moreover, customizing training content to meet participant needs and aligning it with entrepreneurship expertise was vital. Maintaining motivation and engagement relied on ensuring value addition. Collaboration with diverse trainers and partners significantly boosted training productivity and participant motivation. Additionally, providing flexibility in training schedules and durations, including customized timeframes, facilitated better adaptability. The option of recording coaching sessions further contributed to flexible, continuous learning.</p>
<p><b>Alignment and Resources</b></p> <p>Ensuring alignment with project goals and objectives while managing limited resources such as budget and faculty time was a continuous challenge. Balancing the perceived value of master certification for experienced professionals with the effort required proved to be a complex task.</p>	<p><b>Optimizing Resource Allocation, Participant Compliance &amp; Process Efficiency</b></p> <p>Optimizing resource allocation, and prioritizing project alignment helped with managing limited resources and alignment struggles. Emphasizing the intrinsic value of master certification to experienced professionals, as well as simplifying log sheet forms for coaching sessions, improved compliance of participants, and enhanced documentation efficiency and quality.</p>



## Future Prospects

- **Continued Availability & Expansion of Trainer Base:** The partner universities are dedicated to ensuring the enduring sustainability of entrepreneurship coaching in Pakistan. They commit to making the "Train the Trainers" program accessible to Pakistani universities even beyond the conclusion of the EU-funded TAKE UP project. Ongoing efforts will involve providing training workshops to additional faculty members from both partner and non-partner universities, encouraging them to carry forward the coaching process within their respective institutions.
- **Advanced Training and Certifications:** Advanced training and certifications in entrepreneurship coaching, including specific coaching methodologies, leadership, and advanced entrepreneurship topics, will be pursued.
- **Incorporation of Innovative Tools:** The partners recognize the importance of technology in entrepreneurship and plans to integrate innovative tools and platforms

into coaching methods, exploring artificial intelligence, data analytics, and digital platforms for more effective coaching experiences.

- **Networking & Collaboration:** The partner universities are collaborating to establish a dynamic network of entrepreneurial coaches across Pakistan. This initiative aims to facilitate effective collaboration among departments, fostering the sharing of expertise, resources, and opportunities. Additionally, the universities plan to create a designated entrepreneurial team by gathering information about active and emerging coaches within various departments, with a focus on identifying their areas of expertise.
- **Newsletter Publication:** Publishing a biweekly or monthly newsletter, the aim is to share it within the university community network. This initiative seeks to enhance networking opportunities among entrepreneurial teams actively seeking appropriate resources and skills.

## Impact of the activities

<b>Activities</b>	<b>Economic Impact</b>	<b>Ecological Impact</b>	<b>Social Impact</b>
<b>Curriculum Development</b>	Efficient resource use in program creation.	Digital collaboration reduces waste and resource consumption.	Engaging faculty enhances coaching quality.
<b>Content Development</b>	Collaborative efforts optimize resource efficiency.	Digitization reduces paper usage and resource consumption.	Addressing local communication needs improves training.
<b>Certification Events</b>	Successful events enhance institutional image.	Digital certifications minimize paper usage.	Recognizing and certifying coaches enhances their status.
<b>Collaboration and Communication</b>	Facilitated local meetings reduce travel costs.	Digital collaboration minimizes carbon footprint.	Effective communication fosters a collaborative culture.
<b>Evaluation and Feedback</b>	Continuous improvement optimizes resource allocation.	Digital forms reduce paper usage.	Gauging effectiveness enhances coaching quality.
<b>Coaching Sessions</b>	Online sessions optimize resource use and accessibility.	Digital platforms reduce travel and resource consumption.	Providing support enhances coach competence.
<b>Documentation (Log Sheets)</b>	Digital documentation enhances efficiency and accessibility.	Reducing paper usage in session documentation.	Structured documentation improves coaching effectiveness.
<b>Continued Availability &amp; Expansion</b>	Efficient scaling ensures wider impact.	Digital workshops reduce environmental impact.	Expanding access fosters widespread coaching knowledge.
<b>Incorporation of Innovative Tools</b>	Technological integration optimizes coaching methods.	Exploring digital platforms reduces material waste.	Enhancing coaching experiences with innovative tools.
<b>Newsletter Publication</b>	Digital dissemination reduces publication costs.	Online sharing minimizes paper usage.	Networking opportunities improve access to resources

## Work Package 7: Development of a national TAKE UP network

### Objective:

- To establish the national TAKE UP network
- Comprising entrepreneurship coaches, entrepreneurs, industry representatives interested in mentoring young entrepreneurs on a national level
- Enable steady exchange and learning from each other

### Achievements and Outcomes:

#### Tangible:

- Established entrepreneurship network in Pakistan and beyond with at least 6 new partners.
- Developed a network website and promotional materials.
- Conducted two National Conferences
- Held more than five round tables in Pakistan with agendas, minutes, and media coverage.
- Published joint document with project's good practices and lessons learned.

#### Intangible:

- National integration and awareness for entrepreneurship in Pakistan, consolidating project visibility and sustainability.
- Heightened awareness for the role of entrepreneurial universities.
- Knowledge transfer to non-partner universities catalyzes changes in other HEIs.
- Networking with stakeholders drives changes in the HE sectors, fostering understanding.
- Increased project and network visibility, and sustainability.

## Activities undertaken and ongoing activities

- **Establishing Partnerships:** Partner universities actively identified and selected potential collaborators across academia, research institutions, business incubators, industry associations, and government bodies. The consortium engaged in networking initiatives, conducting outreach activities and seeking commitment for collaboration to enhance the TAKE UP entrepreneurship network. Collective efforts included crafting compelling value propositions and organizing events for knowledge sharing, skill development, and collaboration between mentors and mentees.
- **Enhancing Collaboration:** Established effective online and offline platforms for communication and collaboration among network members. Regularly updated the TAKE UP website and conducted specialized training sessions on Entrepreneurial Coaching for non-partner institutions.
- **Convening International Conferences:** The consortium jointly organized two international conferences centered on TAKE UP and Entrepreneurship, where partners and stakeholders shared insights, best practices, and fostered collaborations on a global scale. CUI hosted the first conference, while LUMS hosted the second one. The outcomes were disseminated to a broader audience, contributing to the conference's international impact.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Identification &amp; Onboarding of Partners</b></p> <p>Some partner universities faced challenges in identifying and engaging potential partners, necessitating extensive outreach, negotiations, and alignment of goals. Addressing logistical constraints, time limitations, and overcoming obstacles in geographical expansion were crucial during network expansion.</p>	<p><b>Remote Collaboration &amp; Strategic Relationship Building</b></p> <p>Clear and consistent communication proved vital, especially during remote collaborations and virtual event hosting. Utilizing digital tools and platforms are essential for effective communication, and to overcome timing issues and geographical hurdles. Additionally, crafting a well-defined vision and mission for the entrepreneurial network was crucial, aiding in the attraction of like-minded institutions and individuals. Additionally, building and nurturing relationships with potential members and partners were key to fostering trust and encouraging participation.</p>
<p><b>Limited Awareness</b></p> <p>Overcoming limited awareness and interest among potential participants, both within and outside the university, was a common challenge. This was compounded by constraints in securing necessary resources, including funding and dedicated staff.</p>	<p><b>Marketing, Evaluation &amp; Stories of Success</b></p> <p>Emphasizing the need for early marketing efforts and tailored content curation for coaching training helped in reaching a wider audience and allowed participants ample time to plan and enroll. Creating a clear feedback mechanism also facilitated effective modifications. Defining clear success metrics and regularly evaluating the network's impact helped in communicating achievements and benefits effectively. Sharing success stories and quantifiable impacts played a significant role in retaining existing members and attracting new ones.</p>

## Future Prospects

- Research and Collaboration Initiatives:** Initiating collaborative research projects on entrepreneurship-related topics to foster knowledge creation and dissemination is a key focus. The network aims to support joint research efforts and emerging entrepreneurs within the network, fostering their growth and success in the competitive business landscape.
- Strategic Initiatives for TAKE UP Project:** Dissemination, Partnerships, and Digital Expansion. Plans include a comprehensive dissemination campaign, pending funding availability, and the establishment of partnerships with non-partner universities for expanded Entrepreneurial Coaching workshops. The network seeks to broaden its impact by forming alliances with local businesses, industry associations, and venture capital firms, while concurrently
- publications, fostering a culture of innovation and shared learning.
- Incubation and Acceleration Programs:** Scaling up incubation and acceleration programs for startups and entrepreneurs is prioritized. These programs aim to provide essential support and resources to enhancing its digital presence through user-friendly web pages, engaging social media content, and targeted digital marketing strategies.
- Localization and Language Expansion:** Efforts to develop content and manuals in local or regional languages are underway to broaden the network's audience and support the development of smaller entrepreneurial ventures. This strategic move aims to promote inclusivity and empower a wider demographic of aspiring entrepreneurs, facilitating their growth and success within the ecosystem.

## Impact of the Activities

<b>Activities</b>	<b>Economic Impact</b>	<b>Ecological Impact</b>	<b>Social Impact</b>
<b>Establishing Partnerships</b>	Efficient use of resources reduces travel costs, contributing to economic sustainability.	Virtual collaboration reduces the need for physical meetings, lowering carbon footprint.	Enhanced collaboration fosters knowledge sharing and skill development.
<b>Enhancing Collaboration</b>	Online platforms reduce the need for physical meetings, saving on travel expenses.	Digital networking minimizes carbon footprint.	Improved communication and collaboration benefit network members.
<b>Convening International Conferences</b>	Joint organization optimizes resource use, contributing to cost-effectiveness.	Digital campaigns reduce paper usage, promoting ecological sustainability.	Global insights and collaborations contribute to the international impact of the conferences.
<b>Incubation and Acceleration Programs</b>	Scaling up programs supports startups and entrepreneurs, minimizing resource inefficiencies.	Encouraging startups and entrepreneurs within the programs to adopt environmentally friendly practices in their operations, products, or services.	Provides essential support and resources to emerging entrepreneurs, fostering growth.
<b>Strategic Initiatives for TAKE UP Project</b>	Comprehensive dissemination campaigns and digital expansion minimize resource usage, contributing to economic efficiency.	Digital strategies reduce paper consumption, contributing to ecological sustainability.	Establishment of partnerships and digital presence enhance the impact of Entrepreneurial Coaching workshops.

## Work Package 8: Dissemination, visibility and exploitation

### Objective:

- To develop a dissemination plan
- To publish a coherent project identity for a sustainable impact and enhanced national as well as international exposure of the project

### Achievements and Outcomes:

#### Tangible:

- a comprehensive plan and guideline for the project dissemination
- a minimum of two conducted dissemination actions comprising of at least one national (or international) event and at least one kind of material publication (whether through social media, website or in printed media)

#### Intangible:

- setting the starting point to create awareness for the project and enhance the project impact
- create awareness for the project and enhance the project impact

### Activities undertaken and ongoing activities

- **Effective Communication Channels:** Partner universities maintained effective and timely communication between each other through methods like E-mail and Skype meetings. Documents were shared in the Google drive folder among the designated folders to be accessible to everyone.
- **Dissemination and Social Media Marketing:** Dissemination and Social Media Marketing for TAKE UP Project: Establishing a Dissemination Board, creating marketing posts, and managing the TAKE UP Facebook page were integral efforts. Content covered aspects like the Entrepreneurship Course Curriculum, Online Entrepreneurship Course, Coaches Manual, and FabLabs. Partner universities actively utilized their online platforms, with AUEB employing its English website and social media channels for project-related news. The goal was to showcase project impact, promote coaching opportunities, and generate interest for the upcoming TAKE UP conference, fostering collaboration opportunities.
- **Strategic Networking and Student Engagement:** Universities actively



participated in industry events, conferences, and meetings to cultivate connections within entrepreneurial networks. Faculty members played a key role in mentoring students interested in entrepreneurship and facilitating their integration into these networks. The focus on student involvement extended to startup incubators, accelerators, and internships within network organizations.

Additionally, efforts were made to enhance the visibility of the entrepreneurial network through presentations at conferences and knowledge-sharing sessions. Individual universities, such as CUI and GCU, implemented specific plans for post-completion marketing, including the dissemination of key project components and promoting student engagement in startup opportunities.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Dissemination Plan Development &amp; Lack of Experience</b></p> <p>The partner universities faced challenges in creating a dissemination plan that represented a cohesive project identity, conducive to the national and international expansion of a suitable network. Uncertainties arose in selecting appropriate dissemination channels due to a lack of experience with social media channels and online marketing strategies.</p>	<p><b>Dissemination Personnel &amp; Social Media Strategy</b></p> <p>Designating a skilled individual in the project to handle regular updates on the website and to ensure effective dissemination of project news through various electronic and social media channels can significantly enhance visibility and engagement, as discovered during this project's course. Developing comprehensive plans for media, content, and social media activities can facilitate efficient time management, resource allocation, and targeted engagement with the desired audience, contributing to a more effective dissemination process.</p>
<p><b>Administrative Barriers</b></p> <p>The partners in Pakistan encountered several administrative processes that hindered external partnerships and funding opportunities, affecting the effective utilization of entrepreneurial networks.</p>	<p><b>Interdisciplinary Collaboration &amp; Continuity</b></p> <p>The project successfully encouraged cross-disciplinary collaboration and ensured sustained momentum and long-term impact of entrepreneurial network activities. To achieve this, the project fostered a culture of collaboration, provided adequate resources, and established mechanisms for continuous support and funding.</p>

## Future Prospects

- Joint Publication and Dissemination Plan:** The consortium plans to publish a joint publication on its website and execute a comprehensive dissemination plan to enhance visibility and outreach across the network.
- Global Network Expansion:** Exploring opportunities to expand the network's influence globally through collaborations with international institutions, incubators, and accelerators is part of the future plan, which aims to provide young entrepreneurs with a diverse and global perspective on entrepreneurship.
- Boosting Visibility:** Initiatives include strengthening social media presence through regular updates and engaging with stakeholders. Additionally, prioritizing an enhanced website user experience and organizing virtual conferences aims to broaden the audience reach and amplify the impact of the consortium's objectives and activities.
- Localization Initiatives:** Localization initiatives are being considered, including the translation of social media content and project materials into local and regional languages, aiming to expand the project's reach and connect with a more diverse audience effectively.

## Impact of the activities

Activities	Economic Impact	Ecological Impact	Social Impact
<b>Development of a dissemination plan</b>	Increased efficiency and reduced communication costs.	Reduced reliance on traditional print media, leading to lower paper consumption and waste.	Enhanced collaboration, knowledge sharing, and engagement.
<b>Effective Communication Channels</b>	Utilization of online communication and document sharing among partner universities improved efficiency and reduced communication costs.	Decreased need for physical documentation, contributing to less paper usage and environmental impact.	Enhanced collaboration and knowledge sharing.
<b>Dissemination and Social Media Marketing</b>	The establishment of the online platforms such as Facebook and website increased visibility attracting potential collaborators with minimal costs.	Reduced reliance on traditional print media, lowering the ecological footprint associated with printing.	Fostering collaboration opportunities and engagement.

<b>Strategic Networking and Student Engagement:</b>	Actively participated in industry events, conferences, and meetings facilitated potential partnerships and collaborations and lead to Improved future planning and resource allocation.	Encouraged digital communication, reducing the need for physical travel and associated environmental impact.	Facilitated student integration into entrepreneurial networks enhanced the mentorship opportunities for students, fostering entrepreneurship.
<b>Joint Publication and Boosting Visibility</b>	Increased outreach and collaboration opportunities. This initiative leads to increased economic opportunities through collaborations with other institutions and organizations	Enhanced digital presence reduces the need for physical materials, contributing to a more sustainable project lifecycle.	Broadened audience reach and diverse engagement.

## Work Package 9: Quality management

### Objectives:

- To ensure the quality of project impacts and outcomes.
- To maintain the transparency of the project
- To continuously improve the project based on the evaluations and feedback

### Achievements and Outcomes:

#### Tangible:

- a quality board comprising of internal and external members for regular monitoring through video-conferences.
- 1 comprehensive quality plan
- developed and regularly completed evaluation questionnaires
- 1 Interim and 1 Final evaluation Reports

#### Intangible:

- Ensured project impact and outcome quality.
- Facilitated ongoing improvement using feedback from questionnaires and Evaluation Reports.
- Fostered transparency through regular, comprehensive evaluation questionnaires.
- Utilized evaluation findings for strategic decision-making, enhancing project impact and outcomes.

### Activities undertaken and ongoing activities

- **Comprehensive Quality Management:** A thorough quality management plan, including a contingency plan for unforeseen difficulties, was prepared by the consortium. An external Quality Board was established to oversee project deliverables, contribute to quality management, performance evaluation, and team assessment. Regular feedback from the Quality Board was incorporated for continuous improvement, culminating in two interim evaluation reports that facilitated effective project monitoring and assessment.
- **Feedback Mechanisms:** Regular feedback mechanisms were put in place across partner universities to address specific activities or issues. Meetings and email communications were used to report and resolve challenges encountered during the project.
- **Faculty Engagement and Training Enhancement:** Organized sessions for faculty members to gather feedback on training sessions, formats, schedules, and methodologies, contributing to the refinement and enhancement of training programs.

- Review Using Logical Framework:** The members of the Quality Boards used the logical framework matrix to review project deliverables, ensuring alignment with predefined indicators related to outreach, digitalization, sustainability, and entrepreneurship.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Quality Board Members</b></p> <p>Identifying suitable Quality Board members and organizing a structured Quality Board with a strong understanding of entrepreneurship and project scope was challenging, affecting comprehensive quality management.</p>	<p><b>Clarity in Roles &amp; Responsibilities</b></p> <p>Defining clear roles and responsibilities for Quality Assurance Board members facilitated efficient oversight and effective recommendations for continuous improvement, fostering a more streamlined quality management process. This also led to greater awareness of the project's vision and objectives, and motivated active engagement among Quality Board members.</p>
<p><b>Diversity in Understanding and Expectations</b></p> <p>Varied backgrounds among participants from partner universities led to differences in understanding and expectations, necessitating efforts to align perspectives.</p>	<p><b>Clarity in Roles &amp; Responsibilities</b></p> <p>The consortium fostered effective communication channels, conducted comprehensive orientation sessions for the Work Packages, and implemented effective feedback systems to ensure a unified vision across the consortium.</p>

## Future Prospects

- Expanded Collaborative Efforts:** There is a vision to expand collaborations with a broader spectrum of partners to enrich entrepreneurial opportunities and cultivate an inclusive and supportive ecosystem for aspiring entrepreneurs and startups.
- Sustained Senior Faculty Involvement:** The partners plan to include the continuous participation of senior faculty members in various project events and training sessions, fostering an environment for continuous learning and promoting the exchange of knowledge among participants.
- Adaptive Pricing Strategies:** The partner universities are planning to explore adaptable pricing strategies for the Entrepreneurship 101 course, accommodating diverse economic

conditions across different regions in Pakistan, thereby promoting accessibility and fostering increased participation among potential beneficiaries.

- **Consistent Content Development and Dissemination:** The plan involves a commitment to ongoing content creation

and dissemination, with regular updates and the sharing of relevant content and videos, emphasizing the necessity of sustained communication to uphold project goals and encourage ongoing engagement with stakeholders.

## Impact of the activities

Activity Undertaken	Economic Impact	Ecological Impact	Social Impact
<b>Comprehensive Quality Management</b>	Implementation of a quality management plan contributes to sustainable economic practices and resource efficiency.	Alignment with predefined indicators related to sustainability promotes long-term environmental preservation.	Collaborative oversight and regular feedback loops foster a supportive environment for continuous learning and knowledge exchange.
<b>Feedback Mechanisms</b>	Continuous improvement through feedback loops enhances the efficiency of project activities, positively influencing economic sustainability.	Cultivation of a culture of continuous improvement aligns with ecological sustainability goals.	Regular feedback sessions create a supportive environment, promoting knowledge exchange among participants.
<b>Faculty Engagement and Training Enhancement</b>	Training sessions for faculty members contribute to the enhancement of skills, potentially leading to economic growth and sustainability.	Promotion of continuous learning and refinement of training programs align with ecological considerations.	Organized sessions foster a supportive environment, promoting the exchange of knowledge among participants.

<p><b>Review Using Logical Framework</b></p>	<p>Utilization of the logical framework matrix ensures alignment with predefined indicators, contributing to sustainable economic outcomes.</p>	<p>Alignment with predefined indicators related to sustainability ensures a commitment to ecological considerations.</p>	<p>Collaborative review enhances team assessment and performance evaluation, positively impacting social interactions among team member</p>
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## Work Package 10: Project management

### Objectives:

- Ensure timely on budget and on target completion of all activities
- To ensure a sustainable project management

### Achievements and Outcomes:

#### Tangible:

- installed an account in a digital project management tool, SLACK
- set up management board with one main person responsible from each partner
- reporting templates, regularly reports, conducted financial audits

#### Intangible:

- a smooth project implementation, mitigated organizational problems enhance the substantial focus, ensured fluent communication between the project partners
- awareness for importance of on-time and in-budget project execution

### Activities undertaken and ongoing activities

- **Effective Project Coordination:** Regular biweekly meetings among project coordinators facilitated discussions on project activities, addressed challenges, and assessed administrative and financial aspects. Partner universities actively engaged in collaborative issue resolution, fostering constructive discussions with both internal and external teams. The unified coordination and documentation efforts ensured streamlined communication, supported by templates and questionnaires, enhancing overall project efficiency.
- **Effective Communication Channels:** Effective communication was maintained between partner universities, ensuring that all partners were informed and updated on project progress. Utilization of various communication channels such as Slack, Skype, and WhatsApp, along with virtual meetings, ensured smooth and active communication among project partners and coordinators.
- **Unified Coordination and Documentation:** Partner universities collectively coordinated project activities, contributing to efficient collaboration and communication by preparing templates and questionnaires as needed. The collaborative effort ensured streamlined documentation and support wherever required.
- **Agile Resource Management:** All partner universities employed continuous evaluation of resource requirements and



task priorities, ensuring adaptability to changing conditions and consistent on-time achievement of project milestones. Financial transparency and accountability were maintained through rigorous

financial planning and documentation, adhering to regulations and meticulously recording all financial activities throughout the project's lifecycle.

## Challenges faced & Lessons learned

Challenges faced	Lessons learned
<p><b>Transparency &amp; Communication Enhancement</b></p> <p>Transparency and efficient communication among project stakeholders from diverse academic backgrounds were challenging and demanded the implementation of efficient communication channels and regular progress reports.</p>	<p><b>Proactive Communication &amp; Organization</b></p> <p>The consortium organized biweekly meetings and adopted a robust communication framework to ensure transparent information flow and active stakeholder engagement. Implementing regular and well-organized interdisciplinary meetings significantly contributed to the project's success. The consortium acknowledged the importance of active participation and consistent communication in achieving project goal and foster effective teamwork.</p>
<p><b>Lack of Accountability &amp; Unclear Responsibilities</b></p> <p>Balancing teaching, research, and project management responsibilities posed a challenge. Unclear task allocation among partners hindered accountability and the focused execution of specific responsibilities.</p>	<p><b>Transparent Task Allocation</b></p> <p>The consortium ensured efficient resource allocation for the TAKE UP project by employing effective scheduling tools and dedicating specific time. Transparent ownership assignment through careful planning and negotiation of task allocation enhanced accountability and improved execution. The consortium promoted collaborative problem-solving, fostering an environment of open discussions and negotiation for practical issue resolution.</p>

## Future Prospects

- Enhanced Communication and Stakeholder Alignment:** The consortium remains committed to prioritizing transparent and effective communication, ensuring that all stakeholders are well-informed and aligned through regular

status updates, progress reports, and prompt issue resolution. This commitment to open communication fosters better collaboration and understanding not only for the present project but also for future endeavors.

- **Adaptation to Changing Project Dynamics:**

The entrepreneurship training coaches are poised to stay agile and responsive, prepared to adapt to changing circumstances and challenges as they arise. This flexibility ensures that the partners can pivot when necessary to effectively achieve the goals, ensuring that the outputs created in this project continue to benefit even after its completion.

- **Contingency Plan Monitoring and Risk Management:**

With predefined actions ready to mitigate potential impacts, the project's resilience and continuity are assured. The consortium maintains a proactive approach to contingency planning, continuously monitoring and adjusting these plans to enhance risk management and ensure the project's smooth progress.

- **Expansion and Inclusivity:**

The future plans revolve around nurturing a more dynamic and impactful ecosystem for innovation and entrepreneurship within the

university. This encompasses expanding the program's reach, engaging students from diverse backgrounds and disciplines, promoting inclusivity, and fostering creativity.

- **Innovation Center Establishment:**

Continuing to act as dedicated innovation centers, the FabLabs established in each partner university remain essential physical and virtual hubs for entrepreneurial activities. These cutting-edge labs offer state-of-the-art facilities, valuable mentorship resources, and collaborative spaces, ensuring sustainable and enduring impacts in the long run.

- **Alumni Network Creation:**

Some partner universities further plan to create an extensive alumni network that connects successful entrepreneurs with current students, providing valuable mentorship and networking opportunities. This initiative aims to enhance the entrepreneurial ecosystem and support the professional development of students.

## Impact of the activities

<b>Activity Undertaken</b>	<b>Economic Impact</b>	<b>Ecological Impact</b>	<b>Social Impact</b>
<b>Operational Efficiency and Cost Reduction</b>	Improved efficiency, cost reduction through effective coordination and agile resource management.	Minimal ecological impact, primarily administrative processes.	Enhanced collaboration and transparency.
<b>Digital Communication for Sustainability</b>	Cost-effective communication, reduced travel expenses using various channels like Slack and Skype.	Minimal ecological impact, leveraging digital communication tools.	Facilitated smooth communication among stakeholders.
<b>Stakeholder Alignment and Improved Decision-Making</b>	Enhanced communication strategies, improved decision-making, and adaptation to changing project dynamics.	Negligible ecological impact, primarily strategic planning.	Better collaboration and understanding among stakeholders.
<b>Proactive Risk Mitigation and Continuity</b>	Proactive risk mitigation, reduced financial losses through contingency plan monitoring and adjustments.	Minimal ecological impact, focusing on preventive measures.	Ensured project continuity and resilience.
<b>Diverse and Inclusive Entrepreneurial Ecosystem</b>	Economic growth through engaging a diverse student population and sustaining entrepreneurial activities.	Minimal ecological impact, primarily in program expansion.	Enhanced inclusivity, diversity, and creativity in the ecosystem.
<b>Professional Development through Alumni Networks</b>	Economic growth through enhanced professional development opportunities and improved networking.	Minimal ecological impact, focusing on networking initiatives.	Improved networking and mentorship opportunities for students.
<b>Sustainable Impact and Innovation</b>	Innovation centers ensuring sustainable impacts and enduring economic growth.	Minimal ecological impact, mainly in infrastructure development.	Sustained impacts on innovation and entrepreneurship.

## Key sustainable project outcomes

### FabLabs

The TAKE UP project has successfully integrated FABLABs into participating institutions in Pakistan, providing a sustainable solution for fostering an entrepreneurial culture. This achievement signifies a significant step toward cultivating entrepreneurship within academia.

#### Sustainability Initiatives:

- **Academic Integration:** Consortium universities aim to create a sustainable academic environment, focusing on preparing students for market and industry engagement through hands-on experience and innovative solutions. By involving students in FabLab projects and encouraging them to formulate product-oriented Final Year Projects, they align academic requirements with practical, entrepreneurial skills. This fosters innovation and real-world application, positioning FABLABs as integral components of academic projects for sustained student engagement.
- **Startup Support and Entrepreneurial Ecosystem:** FABLABs are envisioned as hubs supporting startups, encouraging students to leverage these facilities for prototyping and visualization, fostering a dynamic entrepreneurial ecosystem. This inclusive approach contributes to the sustainability of labs by supporting a

vibrant entrepreneurial culture. Additionally, they plan to add more equipment, including a desktop CNC machine.

- **Video Documentation:** For sustainable outcomes, the partner universities will create videos of the successful projects. This will make it easier for students running similar projects in the future to learn from past experiences, leveraging videos for sustainable project outcomes and lasting impact. ensuring the sustainability of these initiatives in the long run.
- **Financial Sustainability:** The partners aim to ensure a sustainable financial model for the FABLABs by introducing fees for specific services, involving departments in financing, and integrating work packages for nominal cost services. The future vision includes diversifying FABLABs beyond academic boundaries by opening access to industry and generate revenue through industry collaboration. This strategic approach ensures long-term viability, supporting FABLABs' contributions to academic and entrepreneurial endeavors.

#### Future outlook:

- **International Collaboration and Knowledge Exchange:** Partner universities are poised for global collaboration, registering with international bodies like the International Fab Lab Association and the FabLab

Network of MIT. This commitment reflects dedication to global participation and knowledge exchange, including participation in the Annual FabLab Conference, such as FAB24 in Mexico in 2024. The goal is to facilitate knowledge exchange, expose participants to best practices, and nurture a global perspective within the academic community.

- Continuous Learning Culture and Faculty Development: Consortium universities are dedicated to ongoing learning through global Fab Lab courses, faculty training, and student involvement, ensuring up-to-date, globally aligned education. The focus on registering for Fab Lab Courses and conducting child training sessions aims to foster a dynamic learning environment, empowering both students and faculty.

## Entrepreneurship course

### Sustainability initiatives:

- Building on TAKE-UP's focus on digital infrastructure, the successful creation of an e-learning course for students is a sustainable outcome. Localized digital training materials are created, focusing on adapting content to local challenges and digital delivery formats.
- The collaboratively created digital Entrepreneurship course has been uploaded to the Moodle platform in Urdu with subtitles in English, enhancing accessibility for all students and hence making it sustainable in long-run. Crafted by the consortium, it serves as a lasting educational asset, meeting immediate needs and contributing to skill development.
- Recognizing the challenge of convincing teachers due to remuneration concerns, COMSATS is taking a sustainable approach by engaging trained coaches from WP 6 to teach voluntarily.

### Future outlook

- Future plans include reaching out to external stakeholders and other universities after consolidating internal efforts.
- The partners aim to expand the reach of the entrepreneurship course by sharing it with a larger student audience by adopting a hybrid model, blending online and in-person elements for future course offerings. This forward-looking approach aims to enhance the learning experience.
- To incorporate it into undergraduate curricula in Pakistan, the concept will be presented to the HEC, given their mandate to make entrepreneurship courses mandatory. This effort aims to contribute to a lasting impact on the educational system of Pakistan.
- GCU is planning to set up a dedicated Entrepreneurship department, indicating a long-term commitment to fostering entrepreneurial education.

## Entrepreneurial coaching

### Sustainability initiatives:

- Both the digital Entrepreneurship coaching guideline and manual, are available in an e-guideline format, ensuring the sustainability. The e-learning material exemplifies TAKE-UP's enduring impact, offering a scalable model for long-term educational sustainability.
- The coaching aspect in WP5 focuses on empowering coaches who, having undergone training, are envisioned to play a pivotal role in sustaining and expanding the entrepreneurial coaching initiative. This empowerment strategy contributes to the long-term impact of the project.
- To enhance sustainability, there is a strategic focus on engaging external partners for coaching activities. Collaborating with external entities brings diverse perspectives, expertise, and resources, enriching the coaching ecosystem.

### Future outlook:

- COMSATS expressed a strong commitment to continuing the initiative by bringing master coaches on board. The identification of 60 individuals in the pipeline signifies a focus on expansion and sustainability.
- The partners further plan to explore commercialization avenues, such as consultancy services. This incentive aligns

with sustaining the initiative beyond the project's duration.

## Certification driven train-the-trainer programs

### Sustainability initiatives:

- The project's training materials are meticulously crafted to address local challenges and are designed in digital formats. This approach ensures long-term relevance and engagement, emphasizing a commitment to high-quality resources.
- The consortium prioritizes accessibility, extending training materials to collaborating institutions. The certification-driven train-the-trainer program implemented by TAKE-UP serves as a sustainable strategy for capacity building, highlighting the multiplier effect in disseminating expertise. Notably, certifications feature the Erasmus+ logo, incentivizing participants with an internationally recognized certificate. This enhances credibility and fosters wider participation, contributing to long-term program sustainability.
- Despite challenges, the project is determined to persist with Incubation Center management teams. This resilience underscores the importance of these teams in nurturing entrepreneurial initiatives and maintaining a supportive ecosystem.

**Future outlook:**

- Looking ahead, the consortium, leveraging collective collaboration, will endorse and promote each other, contributing to their visibility and impact in the realm of entrepreneurial education.
- Future plans include the ongoing maintenance of master coaches. This commitment ensures the retention of experienced professionals who play a crucial role in the success and continuity of the entrepreneurial coaching initiative.

## Networking & collaboration

**Sustainability initiatives:**

- Networking established during the project will persist through continuous collaboration both within partner and non-partner institutions and external stakeholders, creating a sustainable knowledge-sharing network.
- This network will facilitate ongoing exchange on emerging challenges, trends, and innovations, encouraging the participation of international experts, investors, and start-ups.

**Future outlook:**

- Looking ahead, joint initiatives for collaboration are planned, involving non-partner universities in coaching sessions.
- These collaborative efforts aim to expand the network and foster knowledge exchange, strengthening connections and

creating a more extensive ecosystem for entrepreneurial development.

- Partners expressed that anyone they network with will become part of this network. For instance, in their engagements with banks, they aim to integrate these connections into the network for collaborative projects.
- The partners will continue to communicate ongoing activities within the network. As an example, GCU mentioned their MOU with NIC, intending to include it as part of the network.
- The consortium will sustain this network through the established WhatsApp group as the designated communication channel for future communications and ongoing discussions.

## Project website and TAKE UP network

**Sustainability initiatives:**

- Website Duration: The project website is designed to remain active for five years post-project conclusion, providing an extended period of accessibility. This timeframe allows partners to assess the ongoing need and consider potential extensions to maintain its relevance.
- Backup Personnel for Maintenance: To ensure uninterrupted operation, Dr. Imran Hasan from COMSATS, will continue maintaining the website and promptly report any encountered challenges.

Additionally, a designated individual from LUMS and COMSATS will serve as a backup for website maintenance, guaranteeing continuity.

- Ongoing Feature Development: COMSATS commits to actively introducing new features to the website over time. This approach ensures the platform's continuous improvement, adaptability, and relevance beyond the initial project period.

#### **Future outlook:**

- Expanded Website Purposes: The project website's future outlook includes serving as a lasting repository for the entrepreneurship course. It will also act as a platform for universities to share and update reports on the number of students taught, ensuring ongoing utility and relevance.
- Training of Coaches Showcase: The website will be a medium to showcase information on coach training activities, presenting names and pictures of certified coaches. Regular updates on entrepreneurship courses and training sessions will be featured, enhancing the visibility and recognition of coaches.
- Collaboration with Universities: A forward-looking initiative involves expanding

collaboration with additional universities in Pakistan, such as Lahore Garrison University, Gujranwala University, and UET. The website will be a central hub for posting updates on various rounds of entrepreneurship coaching programs, fostering coordination among future coaches.

- Continuous Improvement and Adaptation: A commitment to continuous improvement is embedded in the future plans for the website. Adaptability to emerging needs, technologies, and educational trends will be prioritized to ensure sustained impact
- Monitoring and Reporting Mechanisms: Dr. Imran Hasan will play a pivotal role in monitoring and reporting website challenges. Regular assessments and feedback mechanisms will be implemented, allowing for adjustments to maintain effectiveness and address evolving requirements.
- Community Engagement and Legacy Building: The future plans emphasize active community engagement through the website as a knowledge-sharing platform. Integration of alumni networks and sharing success stories will contribute to building a lasting legacy for the project



## Recommendations for Future Projects / Building upon TAKE-UP Findings:

The TAKE-UP project has laid a solid foundation for advancing entrepreneurial culture in Pakistani Higher Education Institutions (HEIs). As we reflect on our achievements, it is essential to outline how future projects can leverage our results for the formulation of additional research. By identifying gaps and envisioning new initiatives, we can ensure a seamless continuation of the momentum generated by TAKE-UP.

### 1. Global collaboration Seamless Transition from Assessment to Strategy Development:

'TAKE-UP' has demonstrated the value of international collaboration, playing a crucial role in modernizing Higher Education Institutions (HEIs) in Pakistan. The project's results extend beyond local relevance, offering insights into the entrepreneurial ecosystem for program countries. Future projects can build upon 'TAKE-UP's institutional assessments, updating them for evolving landscapes. Emphasis is on developing robust measurement tools to assess long-term impacts on student entrepreneurship, startup success, and community engagement.

### 2. Tailored Training Material Evolution:

'TAKE-UP's development of targeted training materials for diverse groups offers a model for future projects. Involving experts from academia and business ensures the creation of pertinent content, aligned with the digital preferences of students. These materials can serve as a foundation for evolving and enhancing future training programs. The opportunity exists to broaden their scope to address emerging trends and technological advancements in the dynamic Pakistani business environment.

### 3. Scaling FabLabs and Innovating Resource-Effective Approaches:

'TAKE-UP's FabLab initiative, particularly in institutions lacking facilities, sets the groundwork for future projects. Scaling this effort across more Higher Education Institutions (HEIs) is feasible by refining resource-effective approaches. New projects can expedite FabLab integration into the entrepreneurial ecosystem, emphasizing

collaboration between institutions. Future initiatives should conduct comprehensive assessments of FabLabs' long-term impact, evaluating startup success and engaging policymakers for mainstream curriculum integration. Holistic student involvement beyond FabLab projects is encouraged, promoting interdisciplinary projects and fostering innovation across academic disciplines.

### 4. Certification-Driven Train-the-Trainer Programs:

'TAKE-UP's certification-driven train-the-trainer program is a successful strategy for capacity building, emphasizing the multiplier effect in disseminating expertise. This program established a cadre of proficient entrepreneurial coaches. Future projects can enhance and expand this initiative, reaching a wider audience and incorporating emerging best practices. The certification, established as a mark of quality, can further solidify as a recognized standard in the Pakistani entrepreneurial education landscape.

### 5. Sustainable Knowledge Sharing Networks:

TAKE-UP's sustainable knowledge-sharing network, extending beyond the project, sets a template for future initiatives. This initiated network serves as a launchpad for potential dynamic spaces for ongoing learning, idea exchange, and collaborative problem-solving. New projects can benefit from continuous exchange on challenges and innovations, with active participation from international experts enriching discussions and offering a global perspective.

### 6. Evaluation of E-Learning Effectiveness:

TAKE-UP has set a precedent for effective and tech-relevant entrepreneurship education through its sustainable e-learning course. Valuable lessons from this success can guide future projects, with the course's assessment offering insights for refining resources and ensuring continuous improvement. Future initiatives can leverage these insights to create impactful and cutting-edge educational programs that foster ongoing skill development and address the evolving needs of students in entrepreneurship education.

## Overall Summary

In summary, the TAKE UP project has effectively addressed the diverse landscape of Pakistani universities, emphasizing the need for thorough assessment in planning the transformation of the entrepreneurial culture. We take pride in achieving all major objectives, establishing a collaborative network within partner universities, and collectively enhancing expertise in fostering entrepreneurial environments.

The key to sustainability lies in promoting project outcomes and identifying suitable partners for future collaborations. Sharing project materials, including open-source concepts like entrepreneurship courses and coach training, highlights our commitment to widespread knowledge dissemination.

The equipment of FabLabs serves not only as visible representations of our project's success to external stakeholders but also as symbolic reminders to partners to continue their impactful work. Notably, we've created a standardized coaching framework, ensuring quality support for entrepreneurs. The use of the TAKE UP manual and adherence to certification processes are crucial elements that can significantly influence the entrepreneurial support landscape at Pakistani universities.

As we conclude the project, our focus remains on maintaining enhanced project management skills and continuing strategic planning. The partnerships forged among TAKE UP partners are identified as pivotal for the future, forming the core resource team essential for nurturing entrepreneurship at Pakistani universities. The TAKE UP project lays a foundation for a sustainable and entrepreneurial future, leaving a lasting impact on the higher education landscape in Pakistan.

## Attachments

### Planned activities as defined in the project proposal

#### WP 1

- *Engaging senior management involved in the project, lay out the roadmap, and agree on collaboration terms*
- *Training on intercultural skills and project management basics*
- *Setup of quality board and management*
- *Development of questionnaires, assessments, tools, guidelines*
- *Gathering data, analysis and creating a report*
- *Feedback and evaluation from all partners for all partners*

#### WP2

- *Defining working groups and key individuals*
- *Presentation of activities, European universities and associated partners*
- *Dialogue on theoretical and practical background of entrepreneurial activities, comparison of academic and economical working strategies*
- *Setting SMART goals and development of SAP for each partner university*
- *Development of common milestones for the overall project*
- *Extended exposure to entrepreneurial universities and business incubators in the EU (job shadowing via internships)*

#### WP 3

- *Study visit of 3 members per partner university to UDS (at least 1 technician per university), who will be in charge of FabLabs*
- *Requirement analysis workshop and site-visit (1 member of UDS at Pakistani institutions)*
- *Development of short courses on how to use equipment (and initial virtual supervision)*
- *Supervision, guidance and troubleshooting for technical staff (virtual meeting)*
- *Installation of equipment and startup of FabLab*
- *On-site training on proper usage of FabLabs*

#### WP 4

- *Generate teaching/training material for different target groups who are involved in sensitizing, motivating, developing and mentoring entrepreneurial ideas from within and outside universities.*
- *Digital transformation of generated material*
- *Course implementation*

#### WP 5

- *Task analysis to assess current situation of entrepreneurial coaches across Pakistan*
- *Psychometric description of successful coaches*
- *Assessing competencies (e.g., finances, business model analysis, networking)*
- *Collecting direct observations of coaching situations that produce successful results*
- *Collecting challenges faced by entrepreneurial coaches*

- *Developing an evidence-based guideline for entrepreneurship coaching (general and domain-specific)*

#### WP 6

- *Develop training plans and implement a trainee scouting (workshop to define contents of training, videos of coaching situations, digitalizing of training materials)*
- *Implement pilot capacity building training: Train first batch of entrepreneurship coaches to function as an example and pass on their knowledge*
- *Conducting micro-coaching and an internal workshop for supervision*
- *Creating the certification process*
- *Train the trainers: Conduct workshop to train the trainers for their assignment to train further coaches*

#### WP 7

- *Establishment of TAKE UP network and, and identification of institutions/individuals interested in joining the network*
- *Building the network identity and public presence (e.g., website, logo, promotional materials)*
- *Organizing training workshops for non-partner universities*
- *National conferences to disseminate knowledge*
- *Round table methodology (encourage exchange)*
- *Joint publication on best practices*

#### WP 8

- *Putting together of a coherent dissemination plan consisting of different channels for dissemination to express project identity*
  - *network website and other web-based tools (e.g., social media)*
  - *organization of events*
  - *participation in external events (national and international)*

#### WP 9

- *Setting up a quality board (minimum of one member from each institution)*
- *Regular communication (project management tool, virtual meetings)*
- *Quality management by external experts (yearly reports and quality plan)*
- *Developing feedback mechanisms*
- *Designing a contingency plan to identify risks with alternative measures*

#### WP 10

- *Name project manager (coordinator) and management board (regular communication through digital project management tool (e.g., Trello))*
- *Establish mechanism of regular reporting (coordinator drafts and submits regular reports)*
- *External financial audit*