

Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan (TAKE UP)

Training and Certifying Entrepreneurial Coaching in Pakistan

Report of the Visit to Athens University of Economics and Business (AUEB), Athens (Greece)

and

University of Saarland (UdS), Saarbrücken, (Germany)

March 19 to April 03, 2022



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Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan (TAKE-UP)

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Tour Report

Visit to

**Athens University of Economics and Business (AUEB), Athens
(Greece)**

and

University of Saarland (UdS), Saarbrücken, (Germany)

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PREAMBLE

COMSATS University Islamabad, is one of the four local partners of the European Union (EU) funded Erasmus+ Project entitled “Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan” (TAKE-UP). The European partners are Athens University of Economics and Business (AUEB), Athens, Greece and University of Saarland (UdS), Saarbrücken, Germany, whereas the other three local universities are Lahore University of Management Sciences, (Lahore), GC University, (Lahore), and the University of Gujrat, (Gujrat).

As provisioned in the project, under Work Package 1 and 2, a four member delegation from the Lahore Campus of COMSATS University Islamabad, visited the two partner European Universities for the purpose of developing “Cooperation for Innovation and the Exchange of Good Practices”. The delegation was comprised of:

Dr. Muhammad Ahmed Farooqui, PI and Coordinator of the TAKE-UP Project
Dr. Rana Nadir Idrees, HoD and Assistant Professor of Management Sciences
Dr. Syed Muhammad Imran Hassan Naqvi, Assistant Professor, Chemical Engg.
Mr. Ghulam Jilani, Sr. C.O. and Manager for TAKE-UP project

As per objectives of the project the activities during the planned visit included strategic planning for promoting entrepreneurial culture in Pakistani Universities, visits to Athens Center for Entrepreneurship and Innovation, gain hands-on experience on the operation of Fabrication Labs and attend workshops/meetings with faculty and officials relevant to the project. The delegation visited AUEB, Athens (Greece), from 20-26 March 2022 followed by a visit to UdS, Saarbrücken (Germany) from 27 March to 3 April 2022. Expenditures of these visits were met from the funds of the TAKE-UP project.

This report covers the summaries of the presentations, interactive sessions, visits to places and Labs, and other events that took place during the trip. The purpose of this report is to record the activities of the CUI delegation during this visit and make recommendations based of objectives of the TAKE-UP project.

Introduction

TAKE-UP project is joint project of six universities; two European and four Pakistani, funded by Erasmus+ Program of European Union. The project is meant to create and establish entrepreneurial culture in Pakistani universities so that the universities may be transformed into Entrepreneurial Universities. A brief of the TAKE-UP project is provided in **Annexure-A**.

This particular visit had two segments: In the first segment, the workshop sessions and related activities were held at the Athens Centre for Entrepreneurship and Innovation, Athens University of Economics and Business (AUEB), Athens (Greece), whereas for second segment, the activities were held at University de Saarland, (UdS) Saarbrucken (Germany). All the sessions and activities were predefined, and an itinerary developed by European Coordinators of the TAKE-UP Project was followed.

PART-A: Athens Segment of the Tour

The Athens segment was five days long, 21st to 25th March 2022 (excluding travel days), in which following activities were carried out.

1. Welcome by the Vice-Rector of International Affairs • Prof. Dr. Vasilios Papadakis
2. Welcome by the Director of the Cultural Unit of the German Embassy in Greece • Sonja Bohnet
3. Presentation of the Pakistani and the German University • Representatives of the German and the Pakistani Universities (Ali Baba) •
4. Discussion on the Coaching Manual
5. Presentation about Athens Centre for Entrepreneurship and Innovation (ACEin) • Dr. Angeliki Karagiannaki, Managing Director (ACEin)
6. Incubation Stages and Coaching Process • Mr. Andreas Zerkoulis, StartUp Teams Growth Specialist (ACEin)
7. Branding for Startups and the guidance process. The EUAccel Project • Ms.Mara Doukidi, StartUp Teams Growth Specialist (ACEin)
8. Building entrepreneurship networks all over Europe: The EUFORIA Project • Mr.Timoleon Farmakis, Researcher (ACEin)
9. The creation of a Technology-Transfer Office. The promotion of entrepreneurship in the Greek HEIs. • Dr. Erifili Chatzopoulou, Project Manager (ACEin)
10. The essence of coaching and how to guide startups into success • Ms. Elli Diakanastasi, Network Manager (ACEin)
11. The innovation competition and Open Innovation Programs • Ms.Marianna Galani, Project Manager (ACEin)
12. NBG and AUEB: Lessons learnt and knowledge transfer between public- private cooperation • Dr. Arsenis Spyros, Head of Business Development Innovation Unit.
13. The Astra project and the new European Universities Initiatives • Mr. Panourgias Papaioannou, Project Manager (ACEin)
14. The Inter-Departmental Entrepreneurial Assignment (IDEA) Project explained. Engaging the Youth: The Youth Entrepreneurship Summer Program. • Ms. Vasiliki Chronaki, Entrepreneurial Education Manager

15. The startup journey • ClioMuse,
16. Presentation of the visit in Saarbrücken, Discussion on the Entrepreneurial Manual • Ms. Theresa Zimmer and Ms. Aysenur Bilgin-Cabuk, Saarland University
17. Feedback and Open Discussion • Moderators: Ms. Vasiliki Chronaki and Mr. Panourgias Papaioannou.
18. Cultural evening: dinner at Myrtillo; A WWII historical Place. (Trifillias and Efstathiou Lampsas, Athina)

Daily Reports of Athens Segment

Day-1 (Saturday) 19th March

Travel from Lahore to Athens via Doha on Qatar Airlines. Arrival at Athens and local travel to hotel.

Day-2 (Sunday) 20th March

Meeting of CUI delegates for the review and finalization of the Presentations on Pakistan, Lahore and CUI in the context of TAKE-UP project. Visits to Acropolis and selected historical places of Athens in the evening.

Day-3 (Monday) 21st March

1. All the guests were welcomed by Ms. Vasiliki and Mr. Papaioannou at the Athens Center for Entrepreneurship & Innovation.
2. The session started with the introduction of the participants from COMSATS Univ, GCU, University of Gujrat, and LUMS.
3. Participants presented a brief introduction of their universities and Pakistan and about the current socioeconomic conditions of Pakistan.
4. Ms. Sonja from the Cultural unit of the German Embassy in Greece presented an overview of the historical, political, economic, and cultural relationships between Germany and Greece.
5. Mr. Papaioannou briefed the participants about the geography, religion, and culture of Greece.
6. Ms. Theresa from Saarland University presented the overall summary of TAKEUP project and different phases of the project along with its timelines.
7. Dr. Ammad and his team from GCU presented Module 1 of the Manual designed for the Entrepreneurial coaches.

Day-4: (Tuesday) 22nd March

Session 1: *Presentation of Athens Center for Entrepreneurship and Innovation (ACEin) by Dr Angelliki Karagiannaki, Managing Director (ACEin)*

Miss Angelliki talked about the ACEin of Athens University of Business and Economics. She provided a brief overview of what they are doing. Following were the main points of her session:

1. She emphasized on the following three aspects:
 - a) Inspiration and entrepreneurial education
 - b) start-ups incubators and acceleration
 - c) open innovation and growth
2. She explained how they engaged high school students who were interested in acquiring business know-how and entrepreneurial skills.
3. She elaborated on her center's working on different inter-departmental entrepreneurial assignments.
4. She explained the industry focus in Greece of her center. Their center's startups focus is on agriculture, e-commerce, retail, food, logistics, data analytics type of industries.
5. She discussed the list and role of various industry partners, including multinational companies like Nestle and Ernst & Young (EY)) and innovation ecosystem partners in the success of her center.
6. She elaborated on six months incubation process from the idea to execution as follows:
 - a) Phase A: Call to Action
 - b) Phase B: Business Model Innovation and Designing
 - c) Phase C: From Vision to Execution
7. She explained the composition, structure and role of her center's team. They have 15 members team. Most of them are engineers, full-time faculty members, and are Ph.D. candidates.

Session 2: Incubation Stages and Coaching Process by Mr. Andreas Zerkoulis, StratUp Teams Growth specialist (ACEin)

The main highlights of his session are as follows:

1. ACEin provides 360-degree entrepreneurial support based on every team's needs. Mainly the center support undergraduate students/teams, Ph.D. and MS candidates, researchers, and startups.
2. They do three things for the teams:
 - a) They provide teams necessary education. It is a kind of compulsory part. Group discussions are mainly done. Team members attend the discussions and sessions in person on account of the practical nature of things to do.
 - b) They give appropriate direction through coaching. He regarded coaching as the most important thing for his center. They provide general guidelines to the teams for the path to be followed in order to achieve the set goals. They also keep them motivated to achieve their goals. The teams in startups have long-term vision and time comes when they do not know how to keep themselves

- motivated. Reading the books and stories of successful entrepreneurs can help to motivate them.
- c) They provide a big picture of the market through the mentoring type of training strategy also. Mentors provide insight into the market, feedback, and help with networking by connecting you with some colleagues.
 3. The first progress presentation is after 3 months and another one is after 6 months. The teams can discuss in these progress review presentations the problems they faced and the help they require for specific topics. These kinds of interactions are considered significant.
 4. She discussed the selection and acceleration processes in detail. The selection process of the individual depends upon some procedures/testing. They build teams by focusing on both the soft and hard skills of the individuals. Skills like the level of an individual's engagement are crucial. The passion in an individual to become an entrepreneur is the key to success. There are three stages of the acceleration process:
 - Stage 1: Formation
 - Stage 2: Validation
 - Stage 3: Grow

Session 3: Branding for Startups and the guiding process by Ms. Mara Doukidi, Creative and Marketing specialist, Ste. Ma Consulting, StartUp Teams Growth specialist (ACEin) The main points of her session are as follows:

1. She defined a brand as a sum total of identity and image where *identity* means 'who you really are' and *image* means 'how you want to be perceived'.
2. She also discussed developing a strong brand with the help of 3C's formula (1) consistency, (2) compelling, and (3) clarity.
3. She gave a number of exercises. She gave the concept of storytelling with 5Ws who, what, where, when, why, and how.
4. She discussed the concept of niche, competition map, is/is not adjectives for describing brand. An exercise was given to find 5 adjectives that describe a certain brand and 5 adjectives that are not related to your brand.
5. She discussed items of Checklist # 1 regarding brand strategy:
 - a) Your why
 - b) Mission
 - c) Vision
 - d) Target audience
 - e) Ideal client profile
 - f) Brand goals
 - g) Brand offers
 - h) Positioning
 - i) Core values
 - j) Brand voice

- k) Tagline
 - l) Messaging
6. Checklist # 2 was about brand identity that included mood board, main logo, alternative logo, colour palette, font printing, pattern/texture, brand guide, etc. She also discussed checklist # 3 regarding brand touchpoints. The questions regarding the protectability, upgradability, and transferability of the brand name/trademark/logo, copyrights, and patent rights were asked and answered.
 7. In the second part of her presentation, she elaborated on the internalization of entrepreneurship education and incubation- the start for the future program. She also discussed the three phases of startups with the timelines:
 - Phase 1: Entrepreneurial education
 - Phase 2: Start for future- Pre-Incubation sprint
 - Phase 3: Open incubators
 8. She also elaborated that they provide the team members with different challenge areas after doing necessary desk and field research.
 9. In the last, the concept of entrepreneurial universities was also discussed.

Day-5 (Wednesday) 23rd March

Session 1. Mr Timoleon Farmakis, (a researcher at ACEin) presented the details of the EUFORIA project, which is being financed by EIT Urban Mobility, a funding organization in Europe and supported by the region of Munich as a co-creation partner

1. The EdUcation Framework fOr Urban Resilience Innovation Activities (EUFORIA)), is about empowering entrepreneurial ecosystems by developing and implementing an education framework that ignites the creation of hubs in four cities (Aveiro, Athens, Varna, and Osijek), with universities as aggregators of relevant stakeholders.
2. Five Partners of EUFORIA are
 - a) ACEin-AUEB (Greece)
 - b) The Edge: R&BD (Bulgaria)
 - c) J.J. Strossmayer University in Osijek (Croatia)
 - d) University of Aveiro (Portugal)
 - e) Strascheg Center for Entrepreneurship (SCE) (Germany)
3. The project has four major components
 - a) Definition of relevant challenges for each region requires the engagement of relevant stakeholders and a co-creation, collaborative, framework able to properly “give a voice” to these stakeholders
 - b) Universities have a role in helping to create this collaborative framework, establishing bridges and communication
 - c) The process towards the definition of these relevant challenges is a driver force (the path is also a goal!)

- d) It is our responsibility (academia, research, business sector, government/city officials, and civil society) to see ahead these challenges, for each region, and move towards collaborative solutions

Session 2. A detailed presentation was given by Dr. Erifili Chatzopoulou, Project Manager at ACEin. on how the entrepreneurship is being promoted in Greek HEIs through creating a Technology-Transfer Office.

Session 3. Ms Elli Diakanastasi, Network Manager at ACEin, presented her ideas about the essence of coaching and how to guide startups into successes. She identified four pillars of an Entrepreneurship Centre:

1st Pillar	Developing an entrepreneurial mindset
2nd Pillar	Educational services
3rd Pillar	Provision of pre-incubation services
4th Pillar	Provision of incubation/acceleration services

Session 4. Ms. Marianna Galani, Project Manager (ACEin) explained in detail the concepts and aspects of “The Ennovation Competition and Open Innovation Programs.

1. *Ennovation* is a yearly University Competition on Entrepreneurship and Innovation with 8 months duration. The competition runs by a network of 20 universities in Greece and Cyprus under the coordination of Athens Center for Entrepreneurship and Innovation (ACEin) of the Athens University of Economics & Business.
2. The main objective of *Ennovation* is to accelerate innovative “University Born” ideas by providing the participants with the knowledge, skill set, tools and the confidence required in order to turn them into action.
3. *Ennovation* puts significant effort in supporting students pursuing either undergraduate studies and executive master’s or doctoral degrees and researchers who wish to turn their innovative entrepreneurial ideas or scientific research results into a sustainable business.
4. The program has three distinct streams:
 - a) The *Entrepreneurship Stream* that focuses on innovative ideas that address a specific market need or opportunity
 - b) The *Research Stream*, is specifically addressed to researchers and research teams wishing to take the outcome of their research efforts to the market
 - c) The *Young Entrepreneurship Stream* that is specifically addressed to very early stage innovative ideas

Day-6 (Thursday) 24th March

Session 1. Dr. Arsenis Spyros, Head of Business Development Innovation Unit presented about the Lessons learned and knowledge transfer between public-private cooperation he highlighted the role of his organization in the enhancement of entrepreneurship in Greece.

Session 2. Mr. Panourgias Papaioannou, Project Manager (ACEin), presented the Astra project and the new European Universities Initiatives. He briefed the audience about the website DIGIBUDY, it is a platform to work on similar projects and track common challenges together. 36 months duration under Astra projects will help conduct in-depth study and field research, Develop and design comprehensive blended training programs, and organize a large-scale capacity building

Session 3. Ms. Vasiliki Chronaki, Entrepreneurial Education Manager presented The Inter-Departmental Entrepreneurial Assignment (IDEA) Project explained. Engaging the Youth: The Youth Entrepreneurship Summer Program. The core objectives of the program are to change the mindset of the students, to bring together students from different backgrounds to work as an entrepreneurial team, and to bring youngsters in contact with experts to create an entrepreneurial ecosystem.

Session 4. Two young startups presented their idea for starting a company. Their idea is to use human hair for plant fertilizer. They had conducted the market study and worked on the supply chain of raw material (hair) for the compost preparation.

Day-7: (Friday) 25th March

Session 1: *Video about some facts and figures of Greece by Mr. Panourgias Papaioannou.* The video contained information regarding Greece at its 200th Independence Day celebrations.

Session 2: *Presentation of the visit in Saarbrücken by Dr Theresa Zimmer, Saarland University and Ms Aysenur Bilgine-Cabuk, Saarland University*

Dr. Theresa gave a presentation on the upcoming visit to Saarbrücken, Germany. She provided an overview of the plan to visit Saarbrücken and covered following topics;

1. Basic understanding of what is where
2. Use of Metro instead of a taxi in Germany.
3. How to reach the hotel from Frankfurt?
4. What time does it take to be in Saarbrücken from Frankfurt?
5. Time required from the station/hotel to campus
6. The contact number of the focal person/presenter
7. Location of the Saarland University via Google Maps
8. The cost of the train ticket there in Germany
9. To get a European Covid screening test.
10. Visit to Luxemburg on Saturday and have Dinner on the same day at Saarland University.

Session 3: The role of the Higher education commission (HEC) of Pakistan in promoting the culture of entrepreneurship in Pakistan by Ms. Noshaba Awais, HEC Director

The main highlights of her session were as follows:

1. She provided us with a brief overview of the education system of Pakistan and the endeavors and initiatives of HEC for bringing a change in the culture not only in on-campus learning but also a change in the mindset to think of start-ups as another way to seek a job.
2. She stated that globally all the nations are currently engaged to promote the culture of entrepreneurship. She termed the movement of inculcating the culture of entrepreneurship as a paradigm shift in the whole echo systems of knowledge and education. She discussed that the university/campus was previously mandated only to create knowledge but not necessarily to bring the result of or the impact of knowledge to the layman. It is evident that now the universities are working on benefiting the layman.
3. Key points of her presentation are listed below, whereas, considering the importance of the information shared in this session, the actual PowerPoint Presentation is also attached with this report as **Annexure-B**.
 - 1) She presented HEC as an engine for the socio-economic development of Pakistan.
 - 2) She talked about quality, access, and relevance, the key challenges in higher education.
 - 3) She also discussed the core strategic aims and objectives of HEC
 - a) equitable access, quality, and standards
 - b) technology readiness,
 - c) research innovation and
 - d) leadership, governance, and management.
 - 4) She provided a brief higher education journey of Pakistan by comparing the years 2002 and 2020 on the parameters of gross enrolment of the students in universities, the number of universities established, female students' enrolment percentage, the number of publications, and the number of PhDs produced.
 - 5) She also provided information about the landscape of research grants by highlighting strategic research (targeted and basic research) and need-driven applied research (targeted and applied research). Research grants provided to the scholars/faculty are as follows;
 - a) National Research Program for Universities (NRPU) for unsolicited basic research
 - b) Technology Development Fund (TDF) for unsolicited applied research and
 - c) Local Challenge Fund (LCF), Grand Challenge Fund (GCF), and Technology Transfer Support Fund (TTSF) for need-driven applied research.
 - 6) She also described the objectives of the ORIC program and the role of HEC in it. The number of universities having an established office of Research, Innovation,

and Commercialisation (ORIC) is 76 out of 233. She also provided the last 3 years' performance depicting the progress of ORICs concerning the number of research proposals funded, joint research projects, contract research, patents filed, and patents granted. Over two-thirds of ORIC offices are in public sector universities and one-third are in private universities.

- 7) She also talked about the establishment of Business Incubations Centres (BICs). She said that 29 BICs are currently working in public sector universities in Pakistan. Private sector BICs are also working but the HEC of Pakistan is not allowed to extend support to private sector universities of Pakistan. Some facts and figures from the last three years about the progress of BICs are as follows;
 - 1298 start-ups incubated
 - 847 start-ups graduated
 - 300 start-ups are in incubation
 - PKR 1153 million revenue generated
- 8) She discussed innovation, commercialization, strategies, and future course by providing examples of different successful start-ups and the establishment of 8 new BICs.

Session 4: Feedback and Open Discussion by Moderators Miss Vasiliki Chronaki and Mr. Panourgias Papaioannou. The main points of their sessions are listed below:

1. Mr. Panourgias gave a farewell speech by discussing the presentations throughout the week on the following topics:
 - a) Pakistan, City, and the Campus
 - b) German-Greek relationship
 - c) Course manual discussions
 - d) Innovation and entrepreneurial setups in Athens
 - e) Opportunities to meet the start-ups
 - f) Meeting with the networking and technology transfer officers
 - g) Orientation of different programs run at European union levels
1. They gave a feedback form to fill out and submit online on the presentations given throughout the week.
2. In the end, they took an oral review of the week from the participants. Dr. Theresa also asked the following two questions:
 - a) What is the disease? (What are the problems and challenges students face when they want to start their own business? What are the different problems/challenges teachers face concerning start-ups?)
 - b) How can we adapt the concept to a broad, interdisciplinary audience?

Day-8 (Saturday) 26th March

Travel from Athens to Frankfurt via Lufthansa Air and by road travel to Saarbrücken, the home town of University of Saarland.

PART-B Saarbrucken Segment of the Tour

The Saarbrucken segment was also five days long, 27th March to 1st April, (excluding travel and excursion) during which following activities were carried out:

1. Welcome & structure of program by Theresa Zimmer and Dr. Nida Bajwa (Project coordinators)
2. Welcome address by Manfred Schmitt (President of Saarland University)
3. Welcome address Prof. Cornelius König (Vice President European and International Affairs)
4. Potentials of international networks - examples of international cooperation at Saarland University, by Johannes Abele (Director International Office)
5. Supporting start-ups at different stages during their entrepreneurial journey by Natalie Rau (Office for Knowledge and Technology Transfer of Saarland University)
6. Campus tour including Starter Center lead by Theresa Zimmer and Dr. Nida Bajwa
Moderated discussion and reflection about strategic action plans (WP2) by Theresa Zimmer
7. Knowledge exchange and collaboration: ZeMA – Introduction and guided tour by Attique Bashir (KI-trainer)
8. The internationalized institution: EUSMAT, European School of Materials by Flavio Soldera (Managing Director)
9. Entrepreneurial Teaching and Learning by Dr. Benedikt Schnellbacher (Digital Transformation and Business Creation)
10. Excursion to the World Cultural Heritage Site Völklingen Ironwork
11. Two examples of start-ups, incubated within Saarland University: Mondata, and Quantpi
12. Incubation of IT startups by Matthias Eßling (Max Planck Innovation and Saarland University Technology Transfer Joint Venture IT-Incubator)
13. Strategic digital transformation and capability by Ammar Alkassar (Chief Information Officer of Saarland U)
14. Moderated discussion about entrepreneurship course (WP4) by Theresa Zimmer
15. Visit of FabLab at HBK (established FabLab) and CoHub (new FabLab): Guided tour and practical exercises lead by Thorsten Müller (Technician and instructor at FabLab HBK)
16. CISPA, Helmholtz Center for Information Security by Marc Schickhaus (CISPA Incubator), Anne Weyland (Coordinator of new program: Entrepreneurial cybersecurity)
17. Introduction of European Institute for Advanced Behavioural Management by Prof. Bastian Popp (Business administration)
18. Review of the trip and way forward; moderation by Theresa
19. Next steps: Organization and Management of TAKE-UP by Theresa Zimmer and Dr. Nida Bajwa

Daily Reports of the Saarbrücken Segment of the Tour

Day-9 (Sunday) 27th March

Dr. Nida Bajwa (Project Coordinator) welcomed all the participants and after a brief introduction about the Saarland city and its strategic importance in the region, he introduced the COMSATS delegation with the members of the other international partner universities who were there for another project training activities.

The UdS team then took the delegation to a trip to Luxembourg- a business hub of Europe. On the way Dr. Nida provided useful information about the different sightseeing places and explained the strong economic measures which Luxemburg has taken to become a wealthy country.

The trip ended with a brief session about the coming week's activities at University of Saarland.

Day-10 (Monday) 28th March

Session 1: Welcome and structure of the program were discussed by Dr. Nida Bajwa

Session 2: Welcome address by Mr. Manfred Schmitt, President of Saarland University

Session 3: Welcome address by Prof. Cornelius, Vice President European and International Affairs, Saarland University.

Some of the key points discussed in the welcome addresses are as follows:

1. Recommendations for collaboration and exploration.
2. Collaboration with European Institute for advances behavioral management. The signing of MOU to collaborate for further studies.
3. Focus on increasing the employability of our students' Preparation for take-up projects.
4. Facilitating people to be in contact with each other.

Session 4: *Potential of International Networks-examples of international cooperation at Saarland University by Mr. Johannes Abele, Director of International Office.* Following were the main points in the presentation of Mr. Johannes Abele:

1. Internationalization is one of the means to enhance the quality of education. There are several exchange programs and research collaborations.
2. He shared the number of batches (43) and master programs (47) they are offering.
3. They described Saarland University as an international university with having supportive and welcoming environment. No tuition fee for bachelor's or master's programs. Leisure and cultural activities around the campus.

4. He told us about the application procedure for admissions.
5. He shared the website address www.uni-assist.de and highlighted the procedure of application service for international students.
6. He talked about the welcome center. The central consultation and services point for international scholars at Saarland university. More focus on international Ph.D. students, junior scientists, and academicians.
7. He discussed the international partnerships and exchange of under and graduate students with faculty and staff.
8. He discussed the funding opportunities such as Erasmus with learning mobility of individuals, Erasmus plus capacity building, DAAD, short-term grants for research, and the Alexander Von Humboldt Foundation.
9. In answer to the question, what is the structure of the international office? He said that they have a 10-member team and 400 partnerships worldwide. Most partnerships are student exchange partnerships.

Session 5: *Supporting start-ups at different stages during their entrepreneurial journey by Miss Nathalie Rau, office for knowledge and technology transfer of Saarland university.* The main points of her presentation were as follows;

1. She provided information regarding technology transfer at Saarland University, Saarland university campuses, and research institutions. She said Saarland university is a nominated entrepreneurial university. She discussed the role of KWT and WUT GmbH in business planning preparation, pitch training, financing issues, and recruiting advice.
2. She discussed the organizational chart and start-up infrastructure.
3. She discussed the science sparks 1 and 2, the history of science parks, and the vision.
4. She also discussed how we establish an entrepreneurial culture. She also discussed the founding of a start-up as a process that includes a stage of motivation, ideas stage, stage of preparation, founding stage, and the last stage of establishing.
5. She talked about the awareness, ideas, and qualifications of students, graduates, and scientists.
6. She discussed the certification of entrepreneurship and crash course for business start-ups.
7. She explained the concept of community and exchanged experiences by networking with the relevant stakeholders.
8. She elaborated on the funding programs with the help of Exist business start-up grant and Exist transfer of research.

Session 6: *Campus tour including visit to stater center lead by Dr. Nida Bajwa*

Session 7: *Moderated discussion and reflection about coaching material by Miss Theresa Zimmer.* She took the feedback of participants regarding two main questions

1. What problems do students face in starting the business. She termed these problems as disease.
2. How we may make the content adjusted to a larger audience

Day-11 (Tuesday) 29th March

Session 1. The session started with the presentation of Mr. Attique Bashir (KI-trainer) Knowledge exchange and collaboration: ZeMA – Introduction and guided tour. The three main objectives of ZeMA are: Research, Technology transfer and Networking

1. The financial model of ZeMA:
 - a) Twenty-five percent federal State
 - b) Twenty percent Industrial Projects
 - c) Fifty-five percent Publicly Funded Projects
2. The specialty of ZeMA is
 - a) Cooperative Research
 - b) Cooperation of UdS and HTW
 - c) Application-oriented research for national and international industries
 - d) Strengthen Saarland's science and technology base.
3. Following research, areas are available in ZeMA
 - a) Sensors and Actuators
 - b) Manufacturing processes and Automation
 - c) Assembly

Session 2. Mr. Flavio Soldera (Managing Director) The internationalized institution: EUSMAT, European School of Materials briefed the participants about the school of material science and engineering at Saarland University. The department offers Bachelor in materials science and engineering as well as Masters' and Doctorate degrees (Dr. ing/ Dr.rer.nat). The department also offers summer school to the undergraduate students. The focus of the summer school is to develop language skills, international experience, lifelong learning, development of technical skill and networking

At the end of the presentation, all the participants were taken for a tour of the material department to see the facilities available for the students.

Session 3. Mr. Dr. Benedikt Schnellbacher presented to the audience about Entrepreneurial Teaching and Learning. The center offers different courses for startups. Some of the courses offered in the center are as follows:

1. Digital Transformation and Business Creation: The course consists of Lectures (2 SWS) and tutorials (2 SWS)
2. Management of Digital Transformation: case studies (4 SWS)
3. Makers of tomorrow (Lectures 2 SWS)
4. Digital Entrepreneurship (4 SWS)
5. Additive Manufacturing (3D Printing)

Session 4. At 4:00 all the participants were taken to a visit to the World Cultural Heritage Site Völklingen Ironworks. It is 150 years old steel mill that is now converted in a museum and tourist site. The museum portrays the incipient stages and history of the industrial development of Germany.

Day-12 (Wednesday): 30th March

Session 1: *Two examples of start-ups incubated within Saarland University: Delfasys, Escra*

Session 1(a): DELFA Systems GmbH-2022 by Steffen Ha, Smart Material Specialist

Some of the key points discussed in Mr. Steffen Hau's presentation on the start-up of Delfa incubated within Saarland University are as follow

1. He provided a brief introduction of himself.
2. He talked about sensors and actuators with their particular limitations. Some are heavy, noisy, expensive, bulky, high-power consumption, and limited feedback. He discussed the merits of the sensors if they are lightweight, silent, have low-cost material, have a flat design, with low power consumption and sensor-less position feedback.
3. Regarding the limitations and advantages of sensors and actuators, he stressed the need for novel sensors and actuators/next-generation sensors and actuators
4. He discussed the product portfolio like pressure and displacement, force sensors, and power electronics and its application like the use of force sensors in automation, industrial handling, joining process, and force measurement.
5. He also explained the concept of force measurement in his slides in terms of questioning the following:
 - a) component reliability picked
 - b) right component picked
 - c) getting pickup force correct and
 - d) gripping structure needs maintenance
6. He provided examples of fore sensors and industrial automation.
7. He gave us the year-wise road map of his product as follows:
 - a) Manufacturing process, material development, system design, and customer and vendor contract of the product during 2020-21
 - b) Foundation of Delfa Systems GmbH during 2022-23 with prototype in the application, development project with customer and product launch and product customer and
 - c) From 2023-to 24, they will start mass production of the product titled ItinKubator.
8. He also discussed the support structure for the product of Exist Phases, university, knowledge, and technology transfer (KWT), IT incubators, and labor office.

9. He also said that he had to face challenges like licensing his start-up and talking to the clients about his product.

Session 1(b): Start-up Kopply by Janine Wagner

Janine Wagner founded the start-up Kopply together with her husband Björn. Following were the main points in her online interaction with the audience on her start-up incubated within Saarland University:

1. She provided information about kopply her app for providing services as follows: For makers, entrepreneurs, influencers, and all those who want to become one. Kopply is an app that allows you to create a professional online presence in just a few minutes. No matter where you are. Share your Kopplys via a link or QR code, your customers can save the pages and contact you. Kopply connects and brings you one step closer to your customers. Manage your contacts in Kopply and make sure your data is always up to date - from your smartphone. Would you say, you just need some kind of digital extension to your business card? Then you don't need a website, you need Kopply! Combine your photo, short description, video, pdf, and contact information on a mobile-optimized page. Everything on Kopply is designed to motivate visitors to interact and generate leads for you.
2. She described the journey of her start-up. She studied media informatics in Saarbrücken and then worked as a programmer for a credit card processor. Her husband introduced her to the topic of founding and start-ups. Her husband is one of those people who sees room for improvement everywhere and constantly comes up with new ideas. It probably jumped over to her at some point and she got an idea that there are other ways of life than the ones she knew before. So, they quit their jobs to experience more and see the world and ended up founding Kopply.
3. She launched her project in June 2020, just in time for the pandemic, which meant that they had to adapt their sales strategy and asked themselves how best to use that time for themselves. That led to a complete overhaul of the product and a second launch in the fall of that year.
4. She talked about the advantages of a digital business card, her drive to start a business, and tips that she would give to prospective founders
5. They help freelancers to better represent themselves and stay in touch with their clients by providing a combination of a digital business card and a personal landing page
6. She described her attributes of personality to be very curious and enthusiastic.
7. She discussed different phases in her particularly challenging start-up foundation.
8. She provided some tips for those who are just start
9. She also discussed what were her reasons for starting a business that she could pass on to others. The main reason for her personally was freedom.
10. In answering a question about how is she promoting Kaplan, she said that they are planning to do campaigns. They intend to include people who are doing

amazing stuff. They are visiting big cities. They are interviewing people and creating web pages.

11. In answering another question what is the structure of her start-up? She said that she and her husband have the same pay. They have to control the other people. They do some personality tests to hire them. They have internship programs. They have advisors. They are working as teams. They give 3 months to train and after 6 months, they expect to get results. They have to be careful with their resources.
12. In answering the question would they share their revenue-generating model, she said that they spent so much time dealing with the customers. Soon they would go back to a subscription model. They have to increase their product prices otherwise they do not value our products.
13. In answer to the question do you have a feedback mechanism for your customers to improve your business? She said that they do not have it yet. Customers can write on her Instagram, there is no need to worry about it.

Session 2: Presentation on the topic of Strategic digital transformation and capability by Mr. Ammar Alkassar, Chief information officer of Saarland

Mr. Ammar is a state commissioner for strategy and chief digital officer. He is located in US. He gave a presentation on **Strategic digital transformation and capability**. The main points of his presentation were as follows;

1. He provided a brief introduction of himself. He said that there are a lot of benefits to organizing such an event. He started as a student to promote cyber security. After doing his master's, he started his Ph.D. He had served as an associate professor. He delivered a lot of lectures, supervised master theses, and conducted a lot of research. He then became an entrepreneur and started a cyber security company. He is heading now 3rd largest cyber security company in Europe.
2. It is not an easy thing to operate such a company as we need to put some ideas at the governmental level. He said that all big organizations have a strong appearance with respect to research. The real question is how we can turn this asset into real value
3. What are the areas we should focus on?
4. What are the guidelines we should follow to have a good position in this competitive environment? As you are under pressure to become competitive. Goods and services are coming from neighboring countries and we have to provide services through physical and electronic means.
5. New technology has changed the way of business models. We need an economic system supported by technologies.
6. We need to do whatever we can to be number 1. You need to have the capability to address the needs of the public in your area.
7. In the second part of her presentation, he discussed the following points:

8. We have more digitalization; we still lack in answering the question of whether cyber security is addressed in a sufficient way. Cyber security technology will enable cyber attackers.
9. Cyber security will help to avoid massive cyber attackers. Army examples include gun machines and jets/planes.
10. Seeing our infrastructure, our services, cyber security technology aspect is important. Now we have to think about the challenges we are facing and what we can do/solution
11. The world has changed. we need to be # 1 and not 2. If you are working in uncertainty. You will be at the losing end. For example, if you write a research paper with the same technology/technique that will not help you. Just think of it.
12. It does not make sense if you start from zero. Start from your strong areas/strengths. What are the stronger things you have?
13. We think that artificial intelligence (AI) is going to change the world same as the internet has changed the world in form last 20 years. We in Germany have AI facilities. We have a lot of automobile industries. We put it with the AI (smart products and smart machines)
14. His third part of the presentation includes the following points
15. Just build things you already have. Instead of focusing on a lot of other things, focusing on a couple of things is important. It is also important in a governmental context and the private sector is already doing it
16. You need to focus. Some people are generating ideas continuously. But if people are the same, they lose the capability of innovativeness. We need to make a system that ideas should come on a consistent basis with innovation
17. You need to be open. You need to be transparent. You need to have a transparent government. A government that focuses on real targets, not processes. People should be independent of what they do and what they achieve.
18. In answer to a question about the legal framework of cyber security at the global level, he said that it is a hot topic and it will take 15-20 years to reach for creating the legal framework.
19. In a question about the cybersecurity, he said that malware and ransomware are the biggest and most challenging threats to Germany and Europe. It is still not clear whether the cyber-attacks are considered as a war or a technology challenge.
20. Regarding growth in emerging technologies, he explained two types of developments (1) step by step development where risk is low and (2) disruptive technologies, you are at risk. You need to have a nationwide strategy that how much resources you are putting in step by step or disruptive technologies. In disruptive technologies, you think of what are the results, what is the result on any other day.
21. In Germany, the cyber agency works for the ministry of defense. The idea is to think in a strategic way what are the hot spots, to have a real intelligence system to handle malware, how malware acts, and such types of projects are required. We have to put themes for very smart people. Most data are coming from intelligence agencies. So, it

is difficult to share. Government companies can provide private solutions to doing things. We can have less formal collaboration to change and have knowledge for having future ways of doing things. We have a lot of running material from social media. A lot can be done at the governmental level.

Session 3: *Incubation of IT start-ups by Mr. Matthias Essling, Max Planck innovation and Saarland University technology transfer joint-venture IT-incubator*

The main points of her session were as follows

1. He is a manager of IT-Inkubator GmbH (<http://www.it-inkubator.de>) in Saarbrücken (Germany) founded by Max-Planck Innovation GmbH and Universität des Saarlandes Wissens- und Technologietransfer GmbH. They unlock the economic potential of inventions in information technology, which emerge from the research facilities of the University of Saarland and the Max Planck Institutes.
2. Focus on business informatics and innovation management.
3. He provided us with successful start-ups from the incubation center like Innoshine, Playcare, ESCRA, and SoulTable.
4. There are three phases of the incubation process (1) preparation phase (max 2-3 months), (2) acceleration phase (product development, business plan development, and workshops on leadership and sales), and (3) funding phase
5. According to him, ITI offers infrastructure and expertise to support entrepreneurial mindset and innovation by doing the following three things:
 - a) Office spaces with the possibility to use specialized facilities and environments, if needed, for development and
 - b) Access to shared resources such as Accounting, software development, marketing, legal counselling.
 - c) Secure financing for the incubation period of 9-12 months

Session 4: *Moderated discussion about entrepreneurial course (WP4) by Moderatos Miss Vasiliki Chronaki and Miss Theresa Zimmer. At the end an exercise was also conducted by her to generate ideas to support students who want to start a business across the following three phases.*

Phase 1: Students heard about entrepreneurship as a career option and have basic ideas

Phase 2: Students have a business idea, but that idea is not yet elaborated

Phase 3: Students have an elaborated idea

Day-13 (Thursday) 31st March

1. The participants visited the FabLab at HBK (established FabLab) and CoHub (new FabLab): for a guided tour and practical exercises. Mr. Thorsten Müller (Technician and instructor at FabLab HBK) briefed the participants about the different facilities available at the Fab Lab. It is a multi-purpose lab for performing different tasks.

2. Fabrication Lab (FabLab) consists of four different areas related to product development namely, 3D Printing, Wood work, Metal work, and Ceramics
Those who want to use the Fab Lab facilities must attend 5 basic training sessions (Not lengthy) for the safe and secure use of the equipment in the lab.
3. Mr. Marc Schickhaus (CISPA Incubator) and Mr. Anne Weyland (Coordinator of the new program: Entrepreneurial cybersecurity) from CISPA, Helmholtz Center for Information Security presented an overview of their center.
4. The center has 350+ staff members (260+ research and support) and is ranked #1 worldwide by CS ranking.org with 350+ publications since 2019. The mission of CISPA is to “Start your company while studying cybersecurity”

Day-14 (Friday): 1st April

Session 1: *MIGRIS: An example program to support migrant entrepreneurs by Miss. Sera Bebakus (FITT-Institute for technology transfer).* Key points discussed in the presentation are as follows:

1. Institute for technology transfer (FITT) is a larger supplier of diversity training in Germany
2. Free initial consulting sessions for immigrants and refugees.
3. Non-profit and non-governmental organization
4. She discussed that they have highly motivated and experienced immigrants and refugees and 70% were already entrepreneurs in their home countries

Session 2: *European Institute for Advanced Behavioural Management by Ms. Julia Senni, Program Manager.* Following are the main points of the presentation

1. She introduced us to the MBA program in European Management. She highlighted the characteristics of the MBA like excellent quality content, internationality, flexibility, a great learning environment, and high learning focus. She described the degree as tailor-made European management for practitioners, academics, and international students.
2. She provided key facts about the program, such as the required number of years to complete the MBA and the benefits of doing an MBA.
3. She informed us about the European institute of advanced behavioral management (EIABM). It is the business section of Europa-institute. She discussed the four-member team of EIABM
4. She discussed the students' countries of origin for the academic year 2021/22
5. She also shared the hard copy of the said MBA program for further information and guidance.

Session 3: *Review of the trip and way forward by Miss Theresa Zimmer*

Based on discussions throughout the visit regarding the tasks of the TAKE-UP project the short and long term targets were set. These targets will be shared separately by Ms Theresa shortly after the workshop session.

Day-15 (Saturday): 2nd April

Free Day for personal activities

Day 16 (Sunday): 3rd April

Travel from Saarbrücken to Frankfurt (by Road) and to Lahore via Doha on Qatar Airways. Arrival at Lahore on 04 April (Monday) 8:00 AM.

RECOMMENDATIONS

1. A detailed proposal is recommended to be developed for funding from HEC for the establishment of a state-of-the-art Business Incubation Center at CUI Lahore campus. HEC has allocated sufficient funds for this purpose, and it will not be a very challenging task to secure funding for the BIC. It is strongly recommended that a small committee may be constituted at CUI Lahore Campus to develop the proposal. More details about the TORs, scope, format and eligibility criteria are available at HEC website.
2. Given that Start-ups in Germany are also facing regulatory/licensing issues, it is recommended to develop business licensing guidelines. The guidelines may include the scope and SOPs for obtaining consents/approvals, registration/licensing process, mechanism of record keeping and other legal/codal formalities.
3. As part of the Entrepreneurial ecosystem, Alumni and faculty with relevant competency knowledge and experience can be incentivized to mentor the young entrepreneurs and their start-ups. These mentors may further link up the entrepreneurs with experts (including professionals like accountants, lawyers, bankers, engineers, Traders, etc.) to help the start-ups in the initial stages.
4. From the platform of BIC, a panel of financiers/donors (such as commercial banks, large business houses, venture capitalists, national and international donor agencies, NGO, etc.) to allow pre-screened start-ups to gain an opportunity to pitch their business plan to this panel. This can help in mitigating the financing risk for start-ups and attract the patronage of prestigious organizations for the process. Naturally, this will require concentrated efforts and financial resources for providing seed funding to selected few start-ups.
5. Collaborations and partnerships with HEIs having a mature incubator setup like ITU, LUMS, and IBA can be recommended to be established to learn from their experiences. This will allow the exchange of knowledge and experiences of such HEIs for a better and swift learning effect.

6. Given the new reality that emerged post-Covid and the accelerated pace of digital disruption in the industry and public service delivery, a robust and fully equipped Technology Hub supported with multidimensional Fabrication Lab is also recommended to be established and Lahore Campus.
7. A strong and fully empowered project office of BIC should be established to take this whole activity forward with a SMART set of goals, under the supervision and guidance of an experienced manager. A dedicated marketing team, fully equipped with IT tools, branding strategies for BIC is also recommended.
8. Head of Business Development Innovation Unit Mr. Dr. Arsenis Spyros from the National Bank of Greece presented the role of his organization in the enhancement of entrepreneurship in Greece. A similar activity can also be done in the CUI campus by inviting the concerned heads of the major banks so that the students can get a clear view of the opportunities available in terms of funding for their startups. The banks can also be pursued to introduce some special incentives and schemes for the students of CUI.
9. DIGIBUDY, which is a platform to work on similar projects and track common challenges together. A similar platform can be developed by the MS and Computer Science department in CUI, where the startups can interact with each other and the platform could be used to develop and design comprehensive blended training programs and organize a large-scale capacity building activities.
10. Youth Entrepreneurship Summer Program is recommended to be initiated in the CUI with the help of MS and other Engineering departments to change the mindset of the students and to bring together students from different backgrounds to work as an entrepreneurial team. This can be done by inviting successful entrepreneurs so that the students can interact and gain knowledge and improve their decision making skills as entrepreneur.
11. Establishment of a fabrication lab is already in progress in CUI Lahore Campus, under the technical and financial support of TAKE-UP project. It is an essential component for the entrepreneurs for the product development. Its scope can be further enhanced by adding some more facilities like ceramics, metal shops, and state-of-the-art computer labs for the startup students.
12. The CISPA initiative of Saarland University is an innovative idea in Pakistani context. The CISPA model provides a comprehensive and holistic treatment of the pressing grand cybersecurity and privacy research challenges that societies around the globe are facing in the age of digitalization. CISPA's Technology Transfer method provides support to researchers in transferring research results into novel business models or existing corporations whenever and however desired. This model can be replicated in Pakistan with required modifications as per local needs and limitations.

Transforming Academic Knowledge to develop Entrepreneurial Universities in Pakistan (TAKE-UP)

The Joint Project - TAKE-UP was conceived in February 2019, through intensive interactions amongst Universities in Pakistan and Europe to seek funding through EU Erasmus+ Program. A 2-member expert team from University of Saarland (UdS) Germany visited CUI-Lahore Campus. The project was submitted by UdS as Coordinator. As a pre-requisite for submission of the Project, a joint Letter of Mandate (LoM) agreed by all partner universities, and it was signed on behalf of CUI by the Rector. The project stands approved since August 2019 for Erasmus+ funding of Euro one million, to take a formal kick-off in early March 2020. This is first ever Capacity Building in Higher Education (CBHE) Project CUI will take part under Erasmus+ Program. The Project is of high importance of national stand point and is directly linked with Prime Minister's Kamyab Nonawan Program launched this year.

2. The TAKE-UP Project will provide CUI and other 3 partner universities (viz. GCU, UoG and LUMS), a technical and financial assistance of more than 592,000 Euros (= Rs. 101 million) through two EU universities in Germany (UdS) and AUEB= Athens University of Business and Economics in Greece. CUI's share in this project is estimated to be equivalent to Rs. 27.00 million.

3. The Project also involve some non-academic partners like Lahore Chamber of Commerce & Industry and the Saar.iSeV of Germany as both will provide a platform for undertaking entrepreneurial activities from regional perspectives as well as support to increase project's visibility and its links to the industry. The Project in-built utilization of their facilities for meetings and round table as well their participation in the meetings to provide feedback to project.

4. **Major Objective :** "Transforming CUI into an Entrepreneurial University" and other supporting objectives that may include but are not limited to following points:

- 1) Trainings / Capacity Building of students, faculty and SSBC & Cubator staff
- 2) Establishment/ uplifting of CUI incubation facilities to foster entrepreneurial eco-system.
- 3) Cross University and cross campus collaborations to boost the start-up activities.
- 4) Knowledge sharing/brain storming activities between students and faculties from all Universities to boost innovation, entrepreneurship eco-system.
- 5) Building a strong pipeline of ideas/ Final Year Projects for business incubation.
- 6) Meet up sessions may be arranged between Industry and academia for contribution towards University policy development
- 7) All stake holders including Private sector to be brought on board for creation of enabling environment to boost knowledge economy
- 8) Faculty FYP supervisors / departments may be facilitated to search out industry problems for development of their students Final Year Projects.
- 9) Activities/ Efforts to be made to Motivate and reach out to industry for identifying their problems by close liaison with industry and design its solution through pool of entrepreneurial students. Alumni can play a vital role.
- 10) Expansion of SSBC program to all r campuses of CUI.
- 11) Expansion of CUBATOR 1ne program to other campuses

5. **Out-come:** The Joint implementation of this Project over a period of 3 years shall be enabling CUI and partner Pakistani Universities to develop as Innovative Entrepreneurial Universities for promoting a cultur of entrepreneurship by training the faculty /staff to

motivate graduating students and researchers for their business ideas and sustainable job creating businesses/employment in Pakistan besides achieving a number of supportive

6. *The **Key activities of the projects** have been well-defined in the form of Ten (10) different work packages for the partners to undertake individually or collectively (Annex-A) with some specific deliverables/outcomes within given time-lines, aimed at achieving following:*

- 1) Assessment of the entrepreneurial culture at each partner HEI in Pakistan and the development of strategic action plans for each HEI;
- 2) Creation of localized training material for entrepreneurial coaches and academic staff, irrespective of their association directly with BIC or teaching entrepreneurship.
- 3) Establishment of FabLabs at Pakistani partner universities (GCU, CUI and UoG) to improve entrepreneurial spirit of students and researchers. *A FabLab, equipped properly under this project shall enable young entrepreneurs to be guided through visualization and rapid prototyping to keep them engaged in their ideas to materialize.*
- 4) To run a train-the-trainer program to improve the skillset of entrepreneurial coaches and create a multiplier effect
- 5) To establish a TAKE-UP network to share project results and increase capacity of non-partner HEIs.
- 6) Adding value to the modernization and internationalization agenda of universities by creating a diverse and heterogeneous group of partners in Pakistan matching them with EU partners that will be delivering on the needs of these partners.

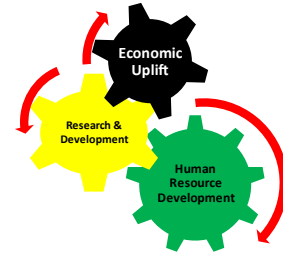
7. The Role of CUI in the project has been defined as to undertake activities in different work packages (WPs), transforming *CUI into an Entrepreneurial University* through:

- 1) Participation in Workshops, Self-Assessment, Feedback—**WP1**
- 2) Participation in Workshop, reflecting and discussing best practices, development of SAP, giving feedback on interests for internship, sending participants for internship- **WP-2**
- 3) Preparation and installation of equipment and startup of FabLab with cost of equipment of Euro 60,000/= - **WP3**
- 4) screening material, creating material, participating in the activities, implementation of developed material- **WP4**
- 5) Participation in Workshops, taking charge for the development of the IT-related guidelines in one of the workshops and allocating space and material for the workshops concerning the IT-related guideline- **WP5**
- 6) co-work- package leader, trainee scouting, feedback on training plans, participate in capacity building trainings, supervision and train the trainer sessions, revision and feedback on WP - **WP6**
- 7) *Work-package leader:* Establishment of the TAKE-UP network, organizing training workshops for non-partner universities, joint publication for best practices to transform Pakistani universities into entrepreneurial universities as well as giving feedback and developing network identity, developing website for incubated startups- **WP7**
- 8) co-work package leader: developing the dissemination plan and participating in dissemination actions- **WP8**
- 9) joining quality board, agreeing on feedback mechanisms, giving feedback on contingency plan- **WP9**
- 10) to join the management board, members of the management board are in charge to participate in video-conferences and support the interactive use of the project management tool by updating contents and checking deadlines- **WP10**



Higher Education Commission

Serving as an Engine for the Socio-Economic Development of Pakistan

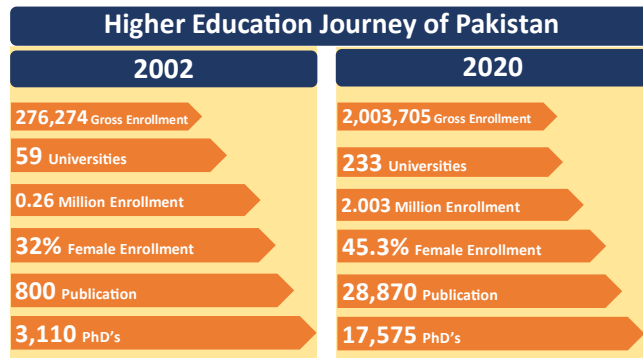


Core Strategic Aims and objectives of HEC

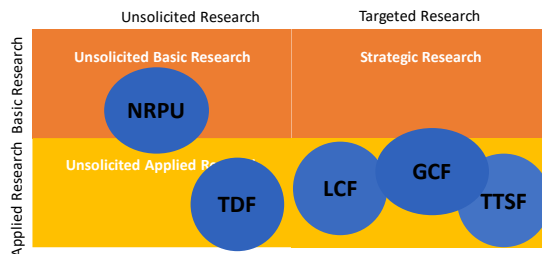
Equitable Access, Quality & Standards	Technology Readiness	Research & Innovation	Leadership, Governance & Management
<ul style="list-style-type: none"> Enhancing Nation wide Equitable Access Quality & Standards consistent with Global HE Standards Create a Critical Mass of qualified Human Resources Qualified Faculty with Advanced Degrees 	<ul style="list-style-type: none"> Nation wide availability and use of ICTs Provide necessary Scientific Equipment and Technology resources for High Quality Research Provide PERIN3 Facilities through Global high speed connectivity Digital research and instructional Resources for faculty and students 	<ul style="list-style-type: none"> Universities, Industry & Government nexus Knowledge Economy Critical National Problems and solutions Discovery of new knowledge, competences and skills in Engineering specializations Solve critical national problems and create solution 	<ul style="list-style-type: none"> Improve Management and Governance of UETs to offer UG and Grad interdisciplinary, rigorous and relevant engineering programs Merit based selection of key university leaders, faculty and students Strategic planning, institutional development and improving academic quality of all programs offered at universities.

Key Challenges in Higher Education

Quality	Access	Relevance
<ul style="list-style-type: none"> Standard of Education, Faculty & Research 	<ul style="list-style-type: none"> Enrollment in higher education 	<ul style="list-style-type: none"> Addressing the needs for Socio-Economic Development of Pakistan



Landscape of Research Grants



Objectives of the ORIC Program

- Support HEIs into becoming centers of Innovation, High-Impact Applied Research & Commercialization
- Enhance Research Quality, Competitiveness and Promote Innovation & Commercialization at HEIs

HEC's Role

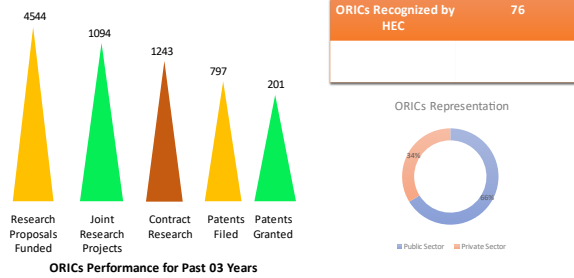
- Notifying New ORICs at HEIs that are complying with HEC's ORIC Policy
- Provide Support through Capacity Building Programs for ORIC Management
- Providing Performance Overhead to ORICs through HEC Sponsored Competitive Research Grants



ORIC Responsibilities

- Support, Advise & Monitor Quality of Research at HEI
- Institutional Collaborations with Government, Industry & Communities
- Ethical Institutional Review Board (IRB)
- Develop, Protect, Build & Market IP through IP Policy
- Liaison with AS&RB

Progress of Offices of Research, Innovation & Commercialization (ORICs)



Establishment of Business Incubation Centers (BICs)

Objectives of the BIC Program

- Fostering Entrepreneurial Spirit at HEIs and Encouraging Students & Faculty to Create New Enterprises
- Support the Development of Innovation Ecosystem at HEIs

HEC's Role

- Establishing New BICs at HEIs that are complying with HEC's BIC Policy and Providing 2-years Funding
- Provide Support through Capacity Building Programs for BIC Management
- Remodeling of Established BICs through Seed Funding Programs (such as ISF) and Other Initiatives

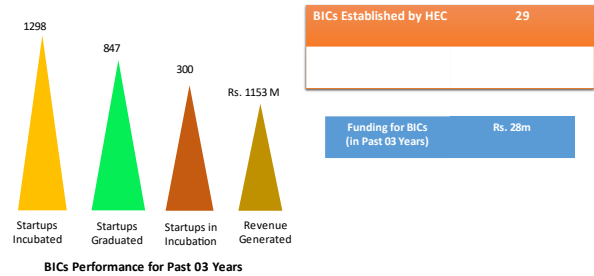


BICs Responsibilities

- Provide Guidance, Mentoring, Business Strategies to Startups
- Helping Startups to Protect their IP
- Providing Access to Labs, Libraries, ICT-Facilities, Technical Workforce, and Funding Opportunities for Startups
- Enhancing Competitiveness and Societal Relevance of HEIs
- Forging Connections with Industrial and Government Organizations



Progress of Business Incubation Centers (BICs)



Innovation & Commercialization:

Strategies and Future Course of Action

Uplift of Research, Innovation, Commercialization & Entrepreneurial Ecosystem:

- Establishment of 08 New BICs in 2021-22 at Public Sector HEIs, having Functional ORICs – **Individual BIC Grant Up To Rs. 24m**
- Establishment and Recognition of New ORICs in Accordance with HEC's ORIC Policy 2021
- Development of ORIC and BIC Automation Platform under HEDP to consolidate RIC activities on single online portal.
- Technology Innovation Support Centers (TISCs) being established in collaboration with IPO Pakistan and WIPO Pakistan to facilitate IP Rights
- **Launching Innovation Seed Fund (ISF) Program under HEDP for Promotion of Innovation & Entrepreneurship:**
 - 15 grants to be awarded annually with individual grant value of USD 35,000
- Strengthening Entrepreneurial Culture, involving extensive capacity building of ORICs and BICs



Questions & Feedback

Selected Photographs of visit to ACEIn, Athens University of Economics and Business, Athens (Greece). March 20-26, 2022



Selected photographs of visit to University of Saarland, Saarbrücken, (Germany). 26th March to 1st April, 2022

