## **Final Scientific Report**

**KoEF Research Cooperation Project** 

Project Overview						
Project Title	Entrepreneurship Education in Burkina Faso					
Acronym						
Project Number	· ·	KOEF 10/2019				
Cooperating Countries	Burkina Faso, Austria					
Coordinating Institution						
Project Coordinator	University of applied Sciences FH JOANNEUM, Prof. (FH) Dr. Doris Kiendl					
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Partner Institution 1						
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No. of All Involved						
Institutions						
Austrian Institutions	1					
Partner Country	1					
Institutions						
Project Start	01.03.2020					
Duration in Months	31.10.2023					
Total Costs Applied (€)	51.10.2025					
тосы сосоструков (су						
No. of Team Members (including Coordinator)	Male: 4	Female:1		Total: 5		
Coordinating Institution (including Project Coordinator)	Male:1	Female:1		Total:2		
Partner Institution 1	Male:3	Female:0		Total:3		
(including Co-Coordinator)  Please insert lines for further partner	s					
Trease insert intes for futurer partitles						
Branch(es) of Science <sup>1</sup> (max. 3)	Branch Name Economics		Six-Digit Code 502054			
Contribution to SDGs <sup>2</sup> (max. 3)	Name of SDG		SDG Number			
(	Quality Education; Decent Work and Economic Growth; Industry,		4, 8, 9			
	Innovation and Infrast	ructure				

 $<sup>^{1}\,\</sup>underline{\text{http://www.statistik.at/kdb/downloads/pdf/OEFOS2012\_EN\_CTI\_20190903\_162012.pdf}}$ 

<sup>&</sup>lt;sup>2</sup> https://sustainabledevelopment.un.org/sdgs

### Content

1.	F	PROJECT OVERVIEW				
1.	1. ABSTRACTS					
2.	2. INTRODUCTION, OBJECTIVES AND OVERVIEW OF THE PROJECT					
3. FIN		NARRATIVE SUMMARY OF THE PROJECT: ACTIVITIES AND RESULTS, ELABORATION OF THE RESEAR NGS, METHODOLOGY USED, INNOVATIVE ASPECTS OF THE PROJECT				
	3.1. 1.2. 1.3.	LIST OF ALL RESEARCH STAYS	7			
4.	(	CONTRIBUTION TO THE SDGS AND IMPLEMENTATION OF GENDER AND DIVERSITY ISSUES	9			
5.	9	SUSTAINABILITY AND APPLICATION OF RESULTS	10			
	1.4.	STATUS OF PARTNERS AND PARTNER ORGANISATIONS, SCOPE FOR FOLLOW UP PROJECTS AND ACTIVITIES	10			
6.	F	PARTNERSHIP AND COOPERATION WITHIN THE PROJECT	10			
	1.5. 1.6.					
7.		REFLECTION ON PROJECT SUCCESS WITH SPECIAL REGARD TO PROJECT AIMS AND EXPECTED RESU 11	LTS			
8.	F	PUBLICATIONSFEHLER! TEXTMARKE NICHT DEFII	IIERT.			
9.	F	PICTURESFEHLER! TEXTMARKE NICHT DEFII	IIERT.			
10	. F	FURTHER COMMENTSFEHLER! TEXTMARKE NICHT DEFII	IIERT.			
11	. (	GLOSSARYFEHLER! TEXTMARKE NICHT DEFII	IIERT.			
12		ITFRATURE	. 12			

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### 1. Abstracts

# Please provide two brief abstracts (English and German) of the project (ca. 500 words

The project aimed to train faculty members of the Burkina Faso Institute of Technology (BIT) on how to educate students in entrepreneurial skills and to strengthen the entrepreneurial skills of lecturers in Burkina Faso in order to contribute to the economic development of the country. The project enabled the BIT teaching staff to guide students on how to generate creative ideas, on how to consider whether there is a market for products and services, on how to set up a business including financing, resources and compliance with the legal framework, and on how to market the products and services in order to achieve a sustainable business model.

Within the framework of the project lecturers from Burkina Faso carried out two study visits to FH JOANNEUM (FHJ) in 2021 and 2022. They were able to exchange good practices on entrepreneurship education with lecturers of FH JOANNEUM, get to know the start-up ecosystem in Graz and further develop their own teaching in Burkina Faso through the impressions they gained.

The highlight of the project was a joint conference in Koudougou on 22/23 February 2023. Numerous entrepreneurs from Burkina Faso met with lecturers from the BIT and FH JOANNEUM to discuss strategies and success models for cooperation between educational institutions and start-ups and to generate joint ideas for promoting student employability and strengthening the start-up ecosystem in Burkina Faso. Workshops with BIT students on design thinking and entrepreneurship for engineers rounded off the conference.

Das Projekt hatte zum Ziel, Lehrkräfte des Burkina Faso Institute of Technology (BIT) darin zu schulen, Studierende in unternehmerischen Fähigkeiten zu unterrichten. Das Projekt ermöglichte den Lehrkräften des BIT, ihre Studierenden in folgenden Bereichen anzuleiten: kreative Ideenentwicklung, Marktforschung für Produkte und Dienstleistungen, Unternehmensgründung einschließlich Finanzierung, Ressourcenbeschaffung und Einhaltung rechtlicher Rahmenbedingungen sowie Vermarktung von Produkten und Dienstleistungen, um ein nachhaltiges Geschäftsmodell zu erreichen.

Das finanzierte Projekt hatte zum Ziel, die unternehmerischen Fähigkeiten von Dozenten in Burkina Faso zu stärken, um so zur wirtschaftlichen Entwicklung des Landes beizutragen. Im Rahmen dieses Projekts führten Dozenten aus Burkina Faso 2021 und 2022 zwei Studienbesuche in Graz durch. Dort konnten sie bewährte Praktiken in der Entrepreneurship-Bildung mit Dozenten der FH JOANNEUM austauschen, das Start-up-Ökosystem in Graz kennenlernen und ihre eigene Lehre in Burkina Faso aufgrund der gewonnenen Eindrücke weiterentwickeln.

Der Höhepunkt des Projekts war eine gemeinsame Konferenz in Koudougou am 22./23. Februar 2023. Zahlreiche Unternehmer aus Burkina Faso trafen dort auf Dozenten des BIT und der FH JOANNEUM, um Strategien und Erfolgsmodelle für die Zusammenarbeit zwischen Bildungseinrichtungen und Startups zu diskutieren und gemeinsame Ideen zur Förderung der Beschäftigungsfähigkeit von Studierenden sowie zur Stärkung des Start-up-Ökosystems in Burkina Faso zu generieren. Workshops mit BIT-Studierenden zu Design Thinking und Unternehmertum für Ingenieure rundeten die Konferenz ab.

### 1. Introduction, objectives and overview of the project

In pursuit of enhancing entrepreneurial education in Burkina Faso, the project embarked with the primary objective of introducing Entrepreneurship Education to technical students. This was achieved through a comprehensive training program tailored for the faculty members of the Burkina Institute of Technology, with mentorship and guidance provided by FH JOANNEUM.

The project has successfully achieved the following scientific objectives:

- 1. Bringing Entrepreneurship Education to BIT: The project has effectively introduced entrepreneurship education to both students and faculty members of the BIT. It has adopted and validated good practices based on a hands-on approach, particularly emphasizing the "effectuation" model, which is suited for an entrepreneurial ecosystem in Burkina Faso. The project has enabled faculty members to teach students how to develop entrepreneurial mindsets, collect market information, allocate resources, and build networks for starting and sustaining businesses.
- 2. Knowledge Transfer on Innovative Teaching Methods: The project has successfully transferred innovative teaching methods, including Massive Open Online Courses (MOOCs) and practice-oriented entrepreneurial learning methods, from FH JOANNEUM to colleagues at BIT. This knowledge transfer enhances the teaching capabilities of BIT educators and expands the availability of digital learning resources in Burkina Faso.
- 3. Promoting Entrepreneurial Competencies: The project has developed an entrepreneurship program for educators at BIT based on global best practices and the European Entrepreneurship Competence Framework (EntreComp). This program is designed to cultivate entrepreneurial mindsets and behaviors among students, aligning with international standards for entrepreneurial competence.
- 4. Fostering Scientific Collaboration: The project has facilitated close collaboration between BIT and FH JOANNEUM, with plans for joint publications and future research projects. This collaboration strengthens scientific ties between Austria and Burkina Faso, promoting longterm interdisciplinary research opportunities.

## 2. Narrative summary of the project: activities and results, elaboration of the research findings, methodology used, innovative aspects of the project

The project run according to the plan, all four project phases and planned activities were completed.

The 1st Phase: Understanding Austrian Entrepreneurial Education and Ecosystem: "Train the Trainer" workshop and study visit of the BIT faculty members, Mr. Arnaud Valea, the Head of Electrical Engineering Department and Mr. Rachid Nabolle, the Head of IT Department to FH Joanneum (08.11.21 - 19.11.2021).

The study visit aimed to understand Austrian entrepreneurial education and ecosystem in order to implement good practical entrepreneurship teaching in Burkina Faso.

Faculty members of the BIT participated in workshop on entrepreneurship education organized by FH JOANNEUM and had meetings with faculty members of FH JOANNEUM.

"Train the Trainer" workshop covered two areas of learning:

Purpose and Content of Entrepreneurship Education;

Innovative Teaching Methods (flipped classroom, creative ideas workshops, Massive Open Online Courses – MOOCs, case competitions with pitches of students).

As a result of the joint work during the workshop, the participants gained a practical experience in the development of educational modules on the entrepreneurial and innovative tracks. Based on the results of the work, interdisciplinary modules of entrepreneurship with a high potential for innovation were developed. Institute of International Management and Entrepreneurship's members shared their experience of participating in the process of transformation and creation of new trends in educational, scientific, and innovative activities.

Field visits to the High-tech, start-up incubator - Science Park Graz and to the FH JOANNEUM Food Processing Lab (which is part of the new pilot facility established at the Institute of Applied Production Sciences) contributed to the better understanding how collaboration ties with enterprises of the real sector of the economy in the field of entrepreneurship, science and innovation have been developing as they work in close collaboration with the local companies and help students and young entrepreneurs transform their ideas into internationally successful businesses.

**2nd Phase: Pilot entrepreneurship training:** the researchers of the BIT conducted the first pilot phase of their entrepreneurship training with the students in Burkina Faso.

The BIT faculty members were able to create a networking platform with the local and regional companies and HEIs in order to increase their interest in a closer interaction and cooperation with the BIT students. They participated in the annual Collaborative Education 2022 conference at Ashesi University, Ghana (June, 13 - 17, 2022). The networking system set up by the BIT allowed to get in touch with the universities from USA (Brigham Young University), Niger (African Development Universialis), Uganda (Cavendish University), Benin (University of Abomey-Calavi), and Kenya (Moringa School). It allowed to have a broader vision on entrepreneurship and on the different methods used by universities to achieve their goals.

During the pilot entrepreneurship training the BIT students tried themselves as a technology entrepreneurs, were taught how to develop entrepreneurial thinking and received feedback from experts (the BIT members and business representatives). Students gained deep insight into the subject of startup development: generating product ideas, building a team, developing hypotheses and MVP. They tried to apply the received tools on a real project, presented the results at a pitch session and received recommendations for improving the project from experienced trainers. Students also learned how to develop soft skills (teamwork, participation in negotiations, promotion of new ideas etc.) and had the opportunity to assess the level of their soft skills and enhance them on the basis of an individual trajectory in order to develop entrepreneurial skills and focus on the needs of employers in the region.

In May 2022, Dr. Bojan Jovanovski, the project member, and Uta Stratmann, the Vice-President of Stern Stewart (Germany), delivered a presentation on the following topic: "Helpful Online Tools -"What they are good for and how to use them."

In June, 2022 the BIT researches conducted "the Sentiment Survey" among representatives of small and medium-sized businesses in Burkina Faso on how they perceive the economic situation in the country, whether they are ready to hire young professionals and launch startups, whether they use AI tools in their business activities.

During this phase, faculty members of FHJ, Dr. Doris Kiendl, the project coordinator, and Dr. Bojan

Jovanovski, the project member, were constantly in contact with the colleagues at the BIT to facilitate the implementation of the entrepreneurship education modules at the BIT.

At the end of the second phase of the project, researchers from FH JOANNEUM were supposed to conduct one week supporting visit to Burkina Institute of Technology. Due to the COVID-19 pandemic and related travel restrictions this subphase was transformed into online activities during which Dr. Bojan Jovanovski evaluated the results of the pilot phase and together with Dr. Doris Kiendl supported the further implementation of the project.

3rd Phase: Development of BIT's EntreEdu Framework, the researchers of the BIT, Mr. Arnaud Valea, the Head of Electrical Engineering Department and Mr. Rachid Nabolle, the Head of IT Department, paid a second visit to FH JOANNEUM to deepen their experience in entrepreneurship education and to develop entrepreneurship education in Burkina Faso to ensure the sustainability of the project. The visit took place from October, 17 to October, 28, 2022.

During this phase, based on the best practices and challenges identified during the pilot phase, as well as a collaborative analysis of local opportunities, a customized entrepreneurship learning framework for the BIT was be developed.

In this stage, drawing from the identified best practices and challenges encountered during the pilot phase, and considering the collaborative analysis of local opportunities, a customized entrepreneurial education framework was developed specifically for BIT.

Taking into account the results obtained after the pilot phase of entrepreneurship training, some necessary adjustments were made to the concept of training teachers and the main idea of developing entrepreneurial skills among students. This educational framework would help to development the entrepreneurial skills among the youth of Burkina Faso, professional and cross-professional competencies, interdisciplinary communication, academic skills and leadership potential.

Field Visit to the Smart Production Lab of FH JOANNEUM Kapfenberg was undertaken. The Smart Production Lab, set up by the FH JOANNEUM Institute of Industrial Design, has close working links with industry. It is a teaching and research factory which focuses on applied research in the field of advanced manufacturing technologies. The field visit was important step as the LAB is focused on applied research in advanced manufacturing, demonstrating effective industry-academia collaboration. This provided practical insights for entrepreneurial education, showcased experiential learning models, and offered a glimpse into innovation and technology transfer processes.

The 4th Phase: Dissemination: the final phase of the project. During the last phase of the project, representatives from FH JOANNEUM Dr. Doris Kiendl and Dr. Bojan Jovanovski, assessed the impact of the project and put forward suggestions for its further development. During this stage, the BIT representatives and FH JOANNEUM team members collaborated on future joint research in the area of technology transfer and business modelling.

The dissemination conference in Burkina Faso took place from February, 22 to February, 23, 2023, with the aim of sharing the project's results and experiences with the government, other universities in West Africa, and stakeholders from civil society (Dr. Kiendl delivered a presentation on the achievements of the project; Mr. Nabolle together with Mr. Valea shared their experience of study visits to FH JOANNEUM). The Head of the BIT, Mr. Rodrigue Kabore, moderated the panel discussion on how entrepreneurship education can boost startups. The panel consisted of business leaders, representatives of educational institutions, NGOs, and policymakers.

The conference keynote speaker, Dr. Kossi Amessinou, professor of the Abomey-Calavi Polytechnic School of the University of Abomey (Benin), whose visit to the conference was supported by the OeAD, delivered a presentation on "Entrepreneurship in Africa's Internet Ecosystem: Challenges and Opportunities! How to create a viable business in Africa's Internet ecosystem?".

During the conference Dr. Kiendl hold a workshop for students on the topic "Design Thinking. What is it and where can it be used? How does it work?"; Dr. Jovanovski – on the topic "Entrepreneurship education for engineers. Why is it important? How it can be embedded in the teaching?" Workshops were addressed to the students of Computer Science and Electrical Engineering Departments.

The conference served the purpose of enabling more people in Burkina Faso to benefit from innovative teaching models and to learn about entrepreneurship and business modelling. Additionally, the conference contributed to the alignment of practice-based, student-centered, entrepreneurial education with the needs of industry and to the strengthening of intercultural competencies while completing a business education. It was focused on quality-oriented higher education development in an international entrepreneurship environment and deals with the topics of employability and quality in higher education for the development of new business solutions.

The conference also served as a platform for dialogue between the relevant stakeholders for exchanges of good practices and for the creation of sustainable networks between science and business. It addressed future trends in entrepreneurship education, skills needed for successful startups as well as the fostering of collaboration between West Africa and Europe.

The project's innovative aspects lie in its comprehensive and practical approach to entrepreneurship education, international collaboration, interdisciplinary learning, industry engagement, and experiential learning opportunities, all aimed at fostering entrepreneurship and contributing to the economic development of Burkina Faso.

#### 2.1. Research stays for the project

The 1st project phase involved a visit to FH JOANNEUM by Mr. Arnaud Valea, the Head of the Electrical Engineering Department of BIT, and Mr. Rachid Nabolle, the Head of the IT Department of BIT, as part of the "Train the Trainer" workshop and study tour. This visit took place from November 8th to November 19th, 2021, with the primary aim of gaining insights into Austrian entrepreneurial education and its ecosystem.

In the third phase, dedicated to the development of the BIT's EntreEdu Framework, Mr. Arnaud Valea and Mr. Rachid Nabolle, representing researchers from BIT, undertook a visit to FH JOANNEUM that served the dual purpose of deepening their expertise in entrepreneurship education and engaging in a scientific analysis for the future advancement of entrepreneurship education in Burkina Faso, ensuring the long-term sustainability of the project. The visit was conducted from October 17th to October 28th, 2022.

#### 2.2. List of all research stays

08.11.2021 - 19.11.2021 - BIT representatives to FH JOANNEUM 17.10.2022 - 28.10.2022 - BIT representatives to FH JOANNEUM

#### 2.3. Reports of all research stays of project members

### Reports are done by Mr. Arnaud Valea, Mr. Rachid Nabolle **Description of the Goals of the Research Visits**

Burkina Faso is a country in West Africa with a population of about 21,764,894. Almost 41% of inhabitants of Burkina Faso live below the poverty line. Burkina Faso not yet achieved the targets set in the sustainable development goals and the national economic and social plan. So an implementation of entrepreneurship education in Burkina Faso can be a good way to enhance economy.

The study visit aims to understand Austrian entrepreneurial education and ecosystem in order to implement good practical entrepreneurship teaching in Burkina. Faculty members of BIT participated at workshops on entrepreneurship education. BIT researchers had meetings with faculty members of FH JOANNEUM.

#### **Study Visit Activities**

From the two study visits, BIT researchers covered these activities below:

Participate to workshop organized by FHJ members: This workshop is about companies case study where students should work in group and provide Solutions. So there was an one hour Questions & Answers (Q&A) session where students ask questions to the relating companies before to start working to find solutions. After that there was a final event for solutions pitches and presentations where members of the jury committee decided the best solutions to be implemented.

A visit to Dr.-Ing Simon BERNER: during that visit we visited the Laboratory of food analysis. We discussed about his ongoing project and current situation in Burkina Faso.

We got an exchange of Entrepreneurship teaching methods with FHJ members. Also an attendance to student-Teacher Answer & Question session. It was an open and free discussion.

We attended a workshop of the Science Park the High tech incubator. This group of consultants assists many start-ups in the development of new technologies. They provide all the help (presentation, business plan, search for partners, financing...) for free in the hope to have a commission return when the project will take off. They presented us the start-up they were being assisting in the field of Science and Technologies.

Also we got a large presentation of the Joanneum racing team. They are being participating to competition on which they build a race car for course competition. In that competition, students of other departments are involved in bringing solution in their concerns.

We have visited the Smart Production Lab of FHJ at Kapfenberg. The attrative part of this Laboratory is that It works in synergy with industries. They teach to student what industries are using and even using the same technologies of industries for their practice.

We had meetings with FHJ professors and spoke about Project management and learning tools.

During the study visit we noticed good methods of entrepreneurship education.

The first point is the involvement of local companies in which students are in contact with entrepreneurs and can work on solving business challenges.

Secondly, teachers are developing an entrepreneurial skill of working with others. The students are always working in groups of different nationalities and they understand each other very well when presenting.

Thirdly, they learn another skill which is the responding of clients need. Being in contact with the final user allow the updating and the quality of service.

### Proposal of specific learning activities for BIT students

From our first and second study visit we got some ideas that can be implemented at Bukina Institute of Technology. We divide our actions in two parts: regular actions and irregular actions.

#### **Regular Actions**

We expect to rise the creativity competence of students by involving them in some competition (Hackaton) and reasearch gates.

In addition, we underline an important ressource for students in Burkina that's motivation & perseverance & self confident. We expect to hold some regular speech and meetings with entrepreneur to encourage and give some recommendations regarding their research. (Ongoing topic with the career service)

### **Irregular Actions**

We Plan to make a networking with our local companies and rise their interest about concrete problem solving by our student.

Secondly we want to affect Entrepreneurial skill to all of our curricula based on the EntreComp conceptual model (Bacigalupo, M., Kampylis, P., Punie, Y., Van den Brande, G. (2016). EntreComp: The Entrepreneurship Competence Framework. Luxembourg: Publication Office of the European Union; EUR 27939 EN; doi:10.2791/593884).

Then before a beginning of a module, the teacher will be informed about the Entrepreneurial skill that he has to raise in addition to the course objectives.

## 3. Contribution to the SDGs and implementation of gender and diversity issues

The project addressed the following of the Sustainable Development Goals:

#### **Quality Education**

Successful entrepreneurial activities require an understanding of the market potential of products and services. Moreover, entrepreneurs need skills such as the ability to present themselves and their entrepreneurial ideas, to develop creative solutions, to form teams, to manage resources, to identify customers and suppliers, and to estimate the future needs of their target groups. This brought benefits not only to the individuals but also to society as a whole. (Polenakovik, Stankovska, A. Penaluna, K. Penaluna, Jovanovski, 2019)

The project contributed to enhancing the quality of education in Burkina Faso by training faculty members of the BIT on how to educate students in entrepreneurial skills. Through the project, faculty members of the BIT were able to conduct entrepreneurship training with their students. Moreover, faculty members of the BIT had been able to share their knowledge and experience on entrepreneurship education with other faculty members in Burkina Faso, thus disseminating the new innovative concepts of entrepreneurship education. Through scientific publication and third-mission initiatives, such as a dissemination conference at the end of the project, even more universities and other educational institutions in Burkina Faso and beyond had benefited from this project.

The project also introduced participants to innovative teaching methods, including the use of MOOCs, which added another dimension of quality enhancement in education in the target country.

### No Poverty

Almost 40% of the population in Burkina Faso is living below the poverty line. Most people in Burkina Faso live from agriculture, and there is a shortage of employment opportunities, especially in the cities. The project served as a modest contribution to fighting poverty, as it led to the development of entrepreneurial skills among the youth in Burkina Faso. Through this project, young individuals were inspired and equipped with skills to start their own businesses.

#### **Decent Work and Economic Growth**

While Burkina Faso has made significant progress in the last decades in improving the living conditions of its population, there are still considerable deficiencies in the work conditions and prospects for employment and job satisfaction.

The project contributed to the Sustainable Development Goal of achieving decent work conditions in Burkina Faso by equipping the youth with additional skills. These additional skills offered twofold benefits for the graduates of the BIT. First, the graduates of the BIT have acquired the necessary skills to start their own businesses. Secondly, the graduates of the BIT have developed "intrapreneurial" skills, meaning they have been capable of implementing innovation in companies even as employees.

### Industry, Innovation, and Infrastructure

The project addressed the Sustainable Development Goal of Innovation through innovative methods of education and by triggering creative business ideas among the students in the BIT. Since the two faculties of Computer Science and Electrical Engineering of the BIT have been involved in the project, there was a high probability that the students and faculty members of the BIT would come up with innovative business solutions in the IT sector through this project.

### 4. Sustainability and application of results

One of the outcomes of the cooperation project is that Burkina Institute of Technology, as a young university, has been able to receive support for its further development, creating long-term partnership with FH JOANNEUM. This partnership is aimed to result with continuous joint research and technical assistance projects. In the frame of this project, the partners discussed the possibilities for joint project applications in different national and EU funded programs.

The increased competences particularly in entrepreneurial education, but also in development of competence based student curricula has influenced the future development of the BIT.

The primary outcomes of the project largely revolved around enhancing staff capabilities and developing a system for the implementation and ongoing enhancement of Entrepreneurial Education. During the project lifecycle the results were applied in the 2nd Phase.

## Status of partners and partner organisations, scope for follow up projects and activities

Follow-up joint research and technical assistance projects between the BIT and FH JOANNEUM were discussed during the final conference. The project contributed to creating entrepreneurial mind-set and behavior among the BIT students and initiated a long-term scientific collaboration between the two institutions and thus between Austria and Burkina Faso. The student and staff exchanges are continued. In December 2022 between the BIT and FH JOANNEUM the Erasmus+ Inter-Institutional Agreement was signed; in February 2023 FH JOANNEUM, together with the BIT, submitted a proposal for the Erasmus+ International Credit Mobility 2023 Call and received the positive results enabling to undertake student and staff/teaching mobilities between two University. In January 2024, a researcher from FH JOANNEUM is set to visit the BIT, with the purpose of investigating potential involvement in a Erasmus+ Capacity Building Project Call 2024. This visit aims to foster collaboration in proposal development and deepen the cooperative efforts.

This cooperation aligns with the priorities of both FH JOANNEUM and the Burkina Institute of Technology, suggesting that this collaborative effort is likely to persist.

## 5. Partnership and cooperation within the project

The project involved significant collaboration between FH JOANNEUM and the Burkina Institute of Technology. This collaboration included institutions' exchanges, shared workshops, and study visits which aimed to enhance entrepreneurial education in Burkina Faso. The partnership focused on

knowledge transfer, development of educational modules, and the creation of a sustainable entrepreneurial education framework at BIT. The project also facilitated ongoing scientific collaboration and discussions about future joint research and technical assistance projects.

The involvement of Dr. Amessinou, a professor from the University of Abomey in Benin, as a keynote speaker at the dissemination conference in Burkina Faso and the discussion of topics relevant to entrepreneurship in Africa's internet ecosystem certainly facilitated opportunities for extending the partnership network to include institutions from Benin.

FH JOANNEUM is considering inviting this university to join in the application for the Erasmus+ Capacity Building project proposal within 2024 call. This collaboration could enhance the scope and impact of the project, bringing in diverse perspectives and expertise in Africa.

#### 5.1. Reflection on the project environment

The project presented a dynamic and multifaceted environment, it was marked by a strong multicultural collaboration between FH JOANNEUM and the BIT, reflecting a rich exchange of cultural and educational practices. The project's emphasis on entrepreneurial education encouraged an interdisciplinary approach, engaging departments such as Electrical Engineering and IT, and fostering a comprehensive learning experience essential for entrepreneurship. Active engagement with both local and international academic and entrepreneurial communities was evident through study visits, workshops, and a final conference. This environment was adaptable, navigating various challenges including potential impacts of the COVID-19 pandemic and differences in educational systems. The project's future-oriented vision focused on sustainability and long-term collaboration, aligning with broader goals like contributing to Sustainable Development Goals, particularly in education, economic growth, and innovation, thus creating an environment that transcended academic outcomes to encompass social and economic impacts.

#### 5.2. Response to challenges and difficulties, unexpected outcomes

The team encountered some challenges typical of international collaborative projects, including coordinating across different time zones, some cultural and language barriers. The COVID-19 pandemic, with its travel restrictions and impact on in-person meetings and workshops, was a significant challenge, necessitating a shift to virtual platforms for collaboration and training: at the end of the second phase of the project, researchers from FH JOANNEUM were supposed to conduct one week supporting visit to Burkina Institute of Technology. Due to the COVID-19 pandemic this subphase was transformed into online activities during which Dr. Bojan Jovanovski evaluated the results of the pilot phase and together with Dr. Doris Kiendl supported the further implementation of the project.

## 6. Reflection on project success with special regard to project aims and expected results

The project was largely successful in achieving its aims and expected results.

The primary aim of the project was to introduce and enhance entrepreneurial education at the BIT, with an emphasis on equipping faculty members with the skills and knowledge necessary to educate students in entrepreneurship. This goal was effectively met through various activities, including workshops, faculty exchanges, and the development of educational modules based on innovative and hands-on teaching methods.

Key successes include:

The successful transfer of knowledge and teaching methods from FH JOANNEUM to the BIT, which not only enhanced the teaching capabilities at BIT but also expanded the availability of digital learning resources in Burkina Faso.

The development of an entrepreneurship program for BIT educators, aligned with global best practices and the European Entrepreneurship Competence Framework, aimed at fostering entrepreneurial mindsets and behaviors among students.

The project facilitated scientific collaboration and future project planning between BIT and FH JOANNEUM, strengthening ties between Austria and Burkina Faso and promoting long-term interdisciplinary research opportunities.

Furthermore, the project's alignment with Sustainable Development Goals, particularly in promoting quality education, decent work, and economic growth, and industry innovation, underscores its broader impact. The project's ability to adapt to challenges, such as the COVID-19 pandemic, by modifying some of its activities to virtual platforms, also speaks to its success in achieving its aims despite unforeseen difficulties.

In conclusion, the project not only achieved its direct objectives of enhancing entrepreneurial education at BIT but also contributed to the wider goals of educational improvement and economic development in Burkina Faso, marking it as a successful endeavor.

### 7. Literature

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