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UNIVERZITA PARDUBICE
FAKULTA EKONOMICKO-SPRÁVNÍ

Internship programme at a foreign institution as part of doctoral study

Student of the Faculty of Economics and Administration, University of Pardubice:

Surname:	**YOUSSEF**		
Name:	**Abdelrahman Taha**	STAG ID:	E21874
Study programme / Specialization	Regional and Public Economics		
Year of study:	4th		

Institution (university/scientific-research workplace) where internship should take place:

Name of institution:	Greentech.training (research institution)
City and country:	Berlin, Germany
Workplace: (department):	Tanit research project
Responsible person:	Adjani Espinosa; Jerome Goerke
Position:	Managing Director
Phone:	+493033858480
E-mail:	tanit@greentech.training ; jerome.goerke@greentech.training

Description of planned tasks performed during internship:	• Analyse smart farming industry, needs, opportunities and challenges • Survey high and low performing smart cities in the smart farming industry • Develop a case study for enabling smart farming business model
Duration of internship:	09/2023 – 12/2023

	Comments:	Date:	Signature:
Student:	----------	29/09/2023	
Student's supervisor:	prof. Ing. Petr Hajek, Ph.D.	29.9.2023	
Head of institute:	RNDr. Ing. Oldrich Horak, Ph.D.	5.10.2023	
Chairman of advisory board	prof. Ing. Jan Stejskal, Ph.D.	10.10.23	

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Confirmation on completion of internship at a foreign institution as part of doctoral study

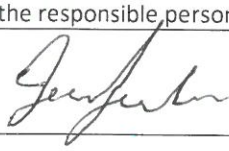
Trainee's surname:	**YOUSSEF**		
Trainee's name:	**Abdelrahman Taha**	STAG ID:	E21874
Name of institution:	Greentech.training		
City and country:	Berlin, Germany		
Workplace: (department):	Tanit research project		
Duration of internship:	from 04/09/2023 to 31/12/2023		
Description of activities completed during internship:	• Analysed smart farming industry, needs, opportunities, market, & challenges. • Run a literature review of smart cities studies in the smart farming dimension. • Developed initial business model projection based on business model canvas methodology/framework. • Designed a non-experimental survey study to assess farmers awareness, and other stakeholders' involvement, challenges, and practices they follow related to soil sustainability. • 30+ questions developed to collect input for the designed survey study. • Performed outreach activities for organizations and initiatives in the field of smart farming, sustainability, and regenerative agriculture		

Evaluation of the trainee by the responsible person:
(Please state your evaluation of the trainee below – e.g. level of scientific-research knowledge, demonstrated interest in a particular area of research, ability to complete assigned tasks and quality of work, communication skills, etc.)

The trainee has grasped and demonstrated a good understanding of key concepts in the field of smart farming.

He has followed a structured approach to assess the smart farming and regenerative agriculture industry, market trends and relevant research activities.

Further to the above, a suitable research methodology has been developed to conduct market research on soil sustainability practices, opportunities and challenges focusing on arid region.

Name and surname of the responsible person at the institution:	Date:	Stamp and signature of the responsible person:
Jerome Goerke	27.03.2024	

Gmail

Abdelrahman Youssef <abdelra.youssef@gmail.com>

Tanit Project

1 message

Tanit - tanit@greentech.training <tanit@greentech.training>
To: abdelra.youssef@gmail.com

Sun, Apr 28, 2024 at 9:17 AM

Dear Abdelrahman,

This is to inform you that we do not use stamps in our organization.

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Tanit - New Earth Solutions
An initiative from greentech.training
Represented by Jerome Goerke
UStG-Id.Nr.: DE253336600
Community Integrated Sustainability

Internship Activities Report

The internship took place between September 04th, 2023 and December 31st, 2023, through an organization based in Berlin. The internship aimed to research topics related to regenerative agriculture and sustainability, while developing use cases and a tool that can conceptualize the use of Artificial Intelligence (AI) and Machine Learning (ML) towards smart farming and sustainability.

During the internship, several activities were performed related to regenerative and sustainable agriculture focusing on soil degradation problems, how to sustain and revive degraded soil in arid region which suffer from water scarcity and salinity, how to leverage biofertilizers, water management, field design, crops mix into sustainable effective farming and investigating the whole ecosystem to develop an economic and sustainable business model around it.

The topic of regenerative and sustainable agriculture is contributing to smart farming and smart environment dimension which is at the core of smart cities development. For a city to be smart, it needs to excel in certain indicators within the dimensions of environment, sustainability, leveraging ICT technologies and adopting the circular economy principles, which were covered within the scope of the internship activities described above.

The first stage of the internship included a thorough analysis of the smart farming industry, including recent research studies "literature review" and industry reports covering the needs, opportunities, market trends, and challenges that are seen. This activity aimed to provide general insights into the current landscape of smart farming practices within urban environments and the challenges that are being faced specifically in Arid regions.

In parallel and as a second stage, as part of the economic and business model activities, an end-to-end business model was developed using the business model canvas methodology to document the different stakeholders involved in the industry and how can they all interact together for such new use cases leveraging biofertilizers, effective water and farming practices, and increasing the organic/bio produce.

While the third and last stage of the internship was to validate our assumptions and hypothesis further, hence a non-experimental survey study was designed to assess farmers' awareness, along with other stakeholders involved in the agriculture industry such as partners, governmental agencies, or business owners. The survey consisted of a set of ~30 questions covering areas related to the level of awareness of sustainable farming, what challenges are there, what type of farming and soil they observe, what practices related to soil sustainability and smart farming they follow. In addition, how open they are to use new technologies such as a mobile app leveraging AI to act as a consultant for more effective and sustainable farming.

The design of this survey study facilitated the collection of valuable data aimed at understanding the perceptions and practices surrounding sustainable and smart farming in an urban agricultural setting that feed into a smart city ecosystem. The outcomes of this research study will contribute to the final dissertation as it provides insights on what are the needs, challenges, and opportunities in the dimension of smart farming and smart environment as part of smart cities evolution and how best can this be measured in a smart city readiness and performance assessment.

Abdelrahman Taha Youssef; ID: ST64757
PhD study programme: Regional and Public Economics

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Udělení kreditů za absolvování zahraniční stáže v rámci doktorského studia

Student Fakulty ekonomicko-správní, Univerzity Pardubice:

Příjmení:	**YOUSSEF**		
Jméno:	**Abdelrahman Taha**	Osobní číslo v IS STAG:	E21874
Studijní program / příp. specializace	Regional and Public Economics		
Rok studia:	4.		

Instituce (univerzita/vědecko-výzkumné pracoviště), kde byla(y) stáž(e) vykonána(y):

Název instituce:	Greetech.training (research instituuion)
Město / Stát:	Berlin, Germany
Délka trvání stáže:	4. 9. 2023 – 31. 12. 2023

Název instituce:	
Město / Stát:	
Délka trvání stáže:	

Název instituce:	
Město / Stát:	
Délka trvání stáže:	

Přidělení kreditů za absolvovanou(né) stáž(e):

	Navrhovaný počet kreditů:	Stanovisko:	Datum:	Podpis:
Školitel doktoranda: prof. Ing. Petr Hájek, Ph.D.	30	doporučuji	29.4.2024	
Garant studijního programu: prof. Ing. Jan Stejskal, Ph.D.			30.4.2024	