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Entrepreneurial University Development Plan

Proposed measures based on the evaluation of the
entrepreneurial profile and technology transfer
capacity of five Romanian universities

ABOUT THIS DOCUMENT

This document presents a summary of evaluation findings and a set of support measures that are proposed to enhance the entrepreneurial profile and technology transfer capacity of universities in the North-West Region of Romania. The support measures proposed here are not limited to the universities that participated in the assessment, and may also be extended to other universities in the country, further to an in-depth discussion with relevant stakeholders and authorities.

These measures derive from an assessment that has been carried out in the North West region in the framework of the project "*Support for RIS3 Implementation in Romania*" (2016-2018) of the European Commission's Joint Research Centre (JRC) in collaboration with DG REGIO. The project has the overall objective to support the process of institutional capacity-building, strengthen collaborative decision-making processes and the innovative potential of key actors of the regional innovation ecosystems, in view of enhancing their RIS3 involvement. Among these actors, universities play a major role in RIS3 implementation and the transition to knowledge-driven development, through their education, research and "third mission" activities. In Romanian universities, while education and research are comparatively much better established, "third mission" activities, which include, among others, technology transfer and academic entrepreneurship, are at an earlier development stage and need further consolidation. In this context, the evaluation aimed to identify the most important needs and provide possible directions for support.

Out of the nine universities in the North West region that have been invited to participate in the evaluation (six public and three private), five (all public) submitted a self-evaluation report to the evaluator team in November 2017. The evaluation explored five key dimensions, which helped assess the current state-of-play, strengths and weaknesses in university entrepreneurship and technology transfer, and on that basis, propose a range of support actions:

- 1) Orientation and strategy;
- 2) People and organisational capacity;
- 3) Drivers and enablers;
- 4) Education, research and third stream activities; and
- 5) Innovation and impact.

In addition to this overall report, which provides a summary of evaluation findings and measures proposed for the respondent universities, the evaluator team has also prepared individual evaluation reports for each respondent university, in view of providing specific feedback. The overall report, together with the individual reports for each respondent university, will be presented to stakeholders in Cluj and policy-makers in Bucharest after a preliminary consultation with the JRC and international experts in Seville on 24 April 2018.

Summary of the evaluations for the respondent universities

1. Technical University of Cluj-Napoca

The evaluators found **support for TTE** especially in the following areas:

- The university's commitment to TTE is well documented in the vision, mission and values.
- The university has put a support structure in place (CTTC) with dedicated staff looking after TTE.
- Actions to improve University-Business Cooperation have been developed.
- An approach towards the development of an entrepreneurial culture has been developed.
- Education offer includes TTE and extra curricula activities.
- Research is well positioned with quality standards and capacity to attract funds.
- The university is an influencing stakeholder in the region and nation.

The evaluators see the following **key areas of improvement**:

- It seems that the university has not yet developed an own understanding of what it means for the institution to be an entrepreneurial university (a strategic concept that brings the idea of an entrepreneurial university to live for all stakeholders).
- The vision, mission and values need to be communicated broadly.
- An overview of income, expenditures and future investments for TTE is required.
- Recruitment and staff development policies are required to educate academic and support staff.
- The incentive and rewards system should be extended.

Overall, it can be recognised that TTE is still in its early stages of development. Compared to other universities in the early stages which provide a low performance across the criteria evaluated, the university performs very well in some aspects, while others are not at all developed.

2. Babeş-Bolyai University

The evaluators found **support for TTE** especially in the following areas:

- The university's commitment is well documented, e.g. in the University Charter, the Strategic Development Plan, the RDI Strategy etc.
- Various decisions have been made to promote TTE, and rules and policies have been implemented to support it.
- The university offers a variety of incentives and rewards that foster TTE among staff and students.
- A culture conducive to thinking and acting entrepreneurially has been established
- Two units exist that provide TTE support.
- The university offers a wide range of educational opportunities regarding entrepreneurship.

- UBB is an influential stakeholder, especially in the region.

The evaluators see the following **key areas of improvement**:

- It seems that the university has not yet developed an own understanding of what it means for the institution to be an entrepreneurial university (a strategic concept that brings the idea of an entrepreneurial university to live for all stakeholders). The Humboldtian type university with entrepreneurial elements has been stated, but no details have been presented.
- TTE is not yet owned by a wide range of people within the institution and no clear goals and deadlines have been defined on an operational level.
- The university lacks a financial planning instrument.
- The university does not include entrepreneurial skills in recruitment processes or staff promotion and development processes.
- A transparent overview of the support services provided.
- The university lacks a solid TTE monitoring and continuous improvement system.

Overall it can be recognised that TTE is still in its early stages of development at UBB. While many aspects of an entrepreneurial university have been put in place already, the evaluators often missed a strategic, evidence based approach that informs the further development of the respective aspect.

3. University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca

The evaluators found **support for TTE** especially in the following areas:

- The university has integrated TTE in its strategic plan for RDI for 2017 to 2020.
- A broader economic engagement mandate received acceptance and overtakes the former primarily TT focused approach.
- The university leaders promote entrepreneurial values and the university fosters an entrepreneurial culture.
- A variety of services is provided to support patenting and licensing, start-up support and advice.
- A large variety of educational offers exist. The offers are spread across many faculties.

The evaluators see the following **key areas of improvement**:

- It seems that the university has not yet developed an own understanding of what it means for the institution to be an entrepreneurial university (a strategic concept that brings the idea of an entrepreneurial university to live for all stakeholders).
- TTE is not yet owned by a wide range of people within the institution. It seems it is still the job of the TTO to promote it.
- A financial planning instrument is needed to provide a better overview for planning and management purposes.
- The TTO is not fully operating and thus limits the impacts made today. It is unclear if the services provided support students and staff all along the entrepreneurial journey.
- An incentive and rewards system in line with the broader economic engagement mandate is missing.

- A structured monitoring and continuous improvement system for TTE is missing.
- Staff with TTE skills and professional development programs is needed to foster TTE.
- Assess individual projects oriented towards farmers and industry to identify potential influence and impact, and build upon this.

Overall it can be recognised that TTE is still in its early stages of development at USAMVCN. While many aspects of an entrepreneurial university have been put in place already, the evaluators often missed a strategic, evidence-based approach that informs the further development of the respective aspect. Specific measures for stakeholders unique to this university (e.g. farmers, agricultural industry, specific government bodies) should be developed to enhance engagement, results and impact.

4. University of Art and Design in Cluj-Napoca

The evaluators found **support for TTE** especially in the following areas:

- The university's commitment to TTE is highlighted in the University Charta and the Strategic Plan (2016-2020)
- The university leadership recognises the differences between the "classical" TTE approach and the approach common in art and design. Acknowledging this different, the university critically reflects how it can extend its current approach.
- The university is currently working on a TTE strategy that will then influence many other aspects covered in the present evaluation
- The university recognises the important of culture development in the process of becoming and more entrepreneurial university. In this respect, evidence was found that university leaders promote entrepreneurial values.
- A large variety of educational offers (including two programmes dedicated to entrepreneurship) exist. The offers are spread across many faculties.

The evaluators see the following **key areas of improvement**:

- The university recognises a lack of funding to implement TTE. An entrepreneurial approach is required to acquire or generate further resources.
- TTE is not yet owned by a wide range of people within the institution. It will be essential for UAD to develop a change management process which enables to win over the hearts of the academic and non-academic staff on TTE.
- An overview of the support that staff and student can get along the entrepreneurship journey is required (even before support services are systemized)
- A cost-efficient incentive and rewards system is required as it will be instrumental to drive entrepreneurial activities and the development of an entrepreneurial culture
- A structured monitoring and continuous improvement system for TTE is required to better manage the change process.

Overall, it can be recognised that TTE is still in its very early stages of development at UAD, with the strategy towards TTE currently being developed. While a general strategy is important, the evaluators like emphasize on the fact that all measures discussed in this evaluation should also be managed in a strategic way, informed by evidence. Especially elements such as culture development, leadership values, and the definition of incentives and rewards, require a careful planning and execution.

5. University of Oradea

The evaluators found **support for TTE** especially in the following areas:

- The university's commitment to TTE is well documented
- The commitment to TTE is broken down into measurable goals and actions and owned by a variety of people within the institution.
- The university leaders promote a culture conducive to TTE.
- An entrepreneurial culture has been developed through various projects, events, and communication activities
- A large variety of educational offers on entrepreneurship exist
- The university is active in research and aims to link it to the needs of society and business

The evaluators see the following **key areas of improvement**:

- It seems that the university has not yet developed an own understanding of what it means for the institution to be an entrepreneurial university (a strategic concept that brings the idea of an entrepreneurial university to live for all stakeholders).
- A financial planning instrument is needed to provide a better overview for planning and management purposes.
- The university's TTO (CNCG-TTC) seems to be a rather discipline-focused one with limited size, skills and experiences to fulfil all responsibilities in the broader TTE framework. Further support units (e.g. for entrepreneurship support) might be necessary.
- Recruitment and staff development policies are required to educate academic and support staff.
- An incentive and rewards system is missing
- While an extensive amount of research is performed, no financial income was reported (focus on the exploitation of value is required)
- The continuous improvement approach needs to be updated and requires more detailed measures.

Overall, it can be recognised that TTE is still in its early stages of development at UO. Compared to other universities in the early stages which provide a low performance across the criteria evaluated, UO performs better in some aspects, while others are not at all developed.

PROPOSED SUPPORT MEASURES

DIMENSION	OBSERVATION	PROPOSED MEASURE	TARGET GROUP
1. ORIENTATION AND STRATEGY			
1.1. Institutional Commitment	A strategic commitment to technology transfer and entrepreneurship (TTE) is often documented (e.g. in the vision, mission, strategic plan, RDI strategy), but the universities have not developed a strategic concept. It is not clear what it means for them to be an entrepreneurial university, or what is their approach. This missing understanding / concept makes it more difficult to develop a strategic approach to TTE with respect to aspects such as culture development, staff development, impact measurement etc.	Workshop to clarify the TTE orientation and strategy: <ul style="list-style-type: none"> • explore the current/desired entrepreneurial profile of the institution, in relation to various types of entrepreneurial universities (“the start-up university”, “the partnering university”, “the sustainable innovation university”), etc. • explain how to develop a dedicated entrepreneurship strategy on university level • showcase the different ways in which universities can improve their interaction with businesses • derive action plans for TTE for the different levels of the institution (whole institution, faculty/department, research groups) 	University leaders and managers, directors of central TTE centres, finance staff
	Universities have a limited view on TTE: In many universities, patenting and licensing has been developed with much less attention given to other forms, such as academic entrepreneurship, university-business cooperation and spin-off creation.		
1.2. Shared Goals	Most institutions have developed support units and a person at the top level of the university who is responsible for TTE or some aspects of TTE. Thus, TTE responsibility and activities are shared among different people within the institution. The strategic commitment to TTE, however, is often not broken down into measurable goals and single actions that are owned by a wide range of people within the institution. Especially roles and responsibilities in different		

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	faculties/departments are not clearly defined so that TTE is primarily driven by the top-level leadership and support units, and it did not yet find its way through the faculties to the departments and ultimately to the individual academics.	<ul style="list-style-type: none"> develop a financial planning tool for TTE 	
1.3. Financial planning	Some universities were able to highlight income generated from third parties, including grants and consultancy project. No university, however, was able to provide a good overview of income, expenditures and future investments on TTE which is responsible for the strategic planning of future TTE strategies and actions.	<p>Creation of an event to share experiences amongst universities with regards to the development of TTE</p> <p>Policy / government:</p> <ul style="list-style-type: none"> Clear recognition of the third mission in central higher education publications Creation of a public policy on TTE Creation of a “Entrepreneurial and Innovative University Index” (similar to the one that exists in Turkey) 	
2. PEOPLE AND ORGANISATIONAL CAPACITY			
2.1. Leadership	The universities were able to provide evidence of their leadership driving TTE (example stories). The universities, however, seem to lack an understanding of the core values that underlie entrepreneurship. These are especially important for leaders to communicate and are required in	<p>Workshop to clarify key TTE organisational features:</p> <ul style="list-style-type: none"> Explain entrepreneurial values and mind sets, and characteristics 	University leaders and managers, directors of central TTE centres, human resources staff

PROPOSED SUPPORT MEASURES

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	both management and administration for the institution to act entrepreneurially	of entrepreneurs, and how these relate to university leaders and academics	
2.2. Staff Profile	<p>In line with the responses to standard 1.2, universities were able to provide information on the key staff driving TTE, often limited to the support units that have been created. In this respect, several universities mentioned that they are understaffed with respect to implementing the TTE vision and strategy.</p> <p>No university had any recruitment or staff development and promotion policies that foster TTE. This can be regarded as a key factor that limits a bottom-up approach / movement (academics driving the topic in addition to the leaderships top-down approach).</p>	<ul style="list-style-type: none"> • Explain how to design recruiting and staff development practice that promotes TTE • Conduct a study (survey) to identify the needs and wants of staff and students regarding incentives and rewards. Follow up workshop to present the results and discuss the implementation. • Explain the diversity of incentives and rewards that can be used to foster TTE 	
2.3. Incentives and rewards	While some universities were not able to report any incentives and rewards with respect to TTE, others highlighted decisions on the distribution of profits, or incentives for publications. Overall, however, no university had a profound incentive and rewards system on TTE. The incentives and rewards were either limited to monetary aspects, or to more research than TTE-related incentives and rewards.	<p>Policy / government:</p> <ul style="list-style-type: none"> • Evaluation of a policy to incentivise and reward universities and individual academics (see also standard 5.1, “Continuous improvement”). 	

3. DRIVERS AND ENABLERS

PROPOSED SUPPORT MEASURES

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3.1 Entrepreneurial culture	<p>Most universities highlighted communication activities and events to showcase the development of an entrepreneurial culture. The development of a student entrepreneurship society was another aspect mentioned. One university also highlighted the reduction of “over-bureaucratisation and the overlapping of responsibilities”. No university highlighted adaptations to the physical environment to foster a TTE culture (e.g. collaboration spaces).</p> <p>Overall, the universities have taken various steps to translate their organisational commitment towards TTE into actions that foster the development of an entrepreneurial culture. It would be worthwhile to explore how these activities can be better structured around a strategic concept (see standard 1.1). Communication, events and the development of the right environment (physically and non-physically) would then be linked strategically with this overall strategic concept in order to create a more efficient culture development.</p>	<p>Workshop to clarify the main TTE drivers and enablers:</p> <ul style="list-style-type: none"> • Explain how to develop a target culture as the reference point for the development of any communication activities, events, etc. • Conduct a study (survey) to identify the current culture present in the universities (gap analysis). • Explain the process to evaluate the commercialisation potential of research projects and technologies • Develop an overview of the services provided, to identify service gaps and to identify potential external service providers that can enrich the service portfolio 	<p>University managers and communication staff Directors and staff of central TTE centres Directors / core staff of support units</p>
3.2. Internal support structures	<p>Most universities have developed centralised offices / units to support TTE, e.g. with respect to patenting and licensing, or R&D marketing. Key challenges that were highlighted included the understaffing of these offices due to limited funds and the struggle to identify research results that could</p>		

PROPOSED SUPPORT MEASURES

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	<p>be transferred (evaluation of the commercialisation potential)</p> <p>No university provided a complete picture of the services that the institution provides along the entrepreneurial journey. This overview, however, is essential to identify synergies when multiple units support TTE, to identify gaps in the service offering, and to promote TTE among staff and students (showing that they are working in the right environment). Thus, the development of such an overview is regarded as a key development action.</p>	<ul style="list-style-type: none"> Develop mentoring and coaching services Identify free service offerings (online and office) that can enrich the service offering along the entrepreneurial journey <p>Policy / government:</p> <ul style="list-style-type: none"> Evaluation of opportunities to support the development of entrepreneurship centres and TT offices. Regionally centralised service centres that serve various universities might be an options Review of the national legal framework for public universities 	
3.3. External support services and service alignment	Two universities stated collaborations with external parties (incubators, science parks). Overall, however, the universities are currently not very well connected with services that are offered outside of the university (offline in the city and region, or online). Linking external services to complete the internal service portfolio, however, might provide a solution to address the limitations in funding and staff that were reported.		
4. EDUCATION, RESEARCH AND 'THIRD MISSION'			
4.1. Education	The universities provide various curricular and extra-curricular courses on entrepreneurship and innovation. In addition, practice-based approaches to teaching and learning are highlighted.	Workshop on developing TTE competences:	Entrepreneurship teachers Research directors, TTO managers

PROPOSED SUPPORT MEASURES

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	<p>The reports indicate that entrepreneurship is taught in the business / economics faculties, but it has only found its way into a very limited number of other faculties or departments.</p> <p>The courses presented did not outline highly engaging entrepreneurship education courses. Therefore, one might assume that entrepreneurship is still taught in the traditional lecturer-centric approach.</p> <p>No university presented a list of entrepreneurial competences that the institution aims to enhance (missing strategic approach).</p>	<ul style="list-style-type: none"> • Explain entrepreneurial teachers competences, the development of learning outcomes and pedagogical approaches • Explain how to create and communicate engaging and practice-oriented entrepreneurship courses • Explain how to develop a research agenda that meets the needs of industry • Explain Science-to-Business Marketing 	
4.2. Research	<p>The universities provided extensive evidence on their research activities. Some universities highlighted the linkage of their research to the needs of business and society, however, often information on the exact needs identification process was missing.</p> <p>Overall, the question arises if the difficulties that the universities have in transferring research results to industry are based on a lack of TT capacities and skills, or rather on the limited relevance for business partners.</p>	<p>Good practice sharing event on entrepreneurship education approaches</p> <p>Policy / government:</p> <ul style="list-style-type: none"> • Development of a governmental strategy for the development of 	

PROPOSED SUPPORT MEASURES

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4.3. Third mission activities	<p>Most universities provided information on their third mission activities, including consulting, contract research, patenting, or exhibitions and other forms of dissemination (in the case of the arts and design university).</p> <p>Reviewing the numbers, however, it seems that there is lots of potential to extend the third mission activities in the future if the universities are able to create market offerings (based on their competences, capacities and research results), that are aligned with industry needs.</p>	<p>entrepreneurial skills and entrepreneurship education in general</p> <ul style="list-style-type: none"> • Financing of research internships abroad • Financial and logistic support for the accreditation of laboratories • Development of support schemes to attract companies to build relationships with universities (small scale projects fund) • Development of an incubation scheme to enable start-up and spin-off creation • Development of a programme to support doctoral students in their engagement (similar to the Italian “Doctor Startupper” programme or the German EXIST programmes) • Regional entrepreneurial competitions 	

PROPOSED SUPPORT MEASURES

DIMENSION	OBSERVATION	PROPOSED MEASURE	TARGET GROUP
5. INNOVATION AND IMPACT			
5.1. Continuous Improvement	Selected universities have shown a series of indicators that are monitored. Overall, however, it can be recognised that universities do not have a profound quality assurance and improvement system regarding TTE in place (indicators and continuous improvement process). Given recent developments in the field, the indicators available today need to be integrated in the current systems.	Workshop on impact: <ul style="list-style-type: none"> Highlight the diversity of indicators that exist today, Explain how to collect information and how to design a process which ensures that the information is used to advance the institution's performance. 	University managers and quality assurance staff
5.2. Influence on the entrepreneurial ecosystem	Two out of the five universities evaluated have shown a certain influence on their ecosystem, especially locally and regionally. Overall, however, there seem to opportunities for improvement to link the universities better with their ecosystem.	Policy / government: <ul style="list-style-type: none"> Review and adaptation of the current performance indicators that universities have to report to the government (success should however not only measured in economic terms) 	
5.3. Impact	Except one university, no universities presented significant evidence on their impact (impact cases).	<ul style="list-style-type: none"> Support for the creation of a network of entrepreneurial universities in Romania (broader than TT) 	

Other measures that could be discussed:

Open debates, focus groups, discussions, study visits to other universities ...

About the evaluators



Prof. Dr. Thorsten Kliewe is an international expert on the topics of entrepreneurial and engaged universities, collaborative innovation and change management in higher education institutions. He is passionate about fostering the interaction between academia and business to create economic and social impact.

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