



BeyondScale

Developing the Organisational Capacity of Higher Education Institutions using the HEInnovate platform to facilitate peer learning and a pan-European community of practice

Institutional Country Note

"Angel Kanchev" University of Ruse

June 2020



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

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

Template for the Institutional Country Note

Section 1 - Country's HE system and characteristics of the HEI

The national educational system of Bulgaria consists of 53 HEIs. They work in close collaboration with the Ministry of education. A specific moment for the Bulgarian HEIs is the way they are managed:

1/ The Rectors, Deans and Head of departments are **elected** by the academics in these units (University, Faculty, Department).

2/ The candidates for these elected positions are professors with at least a PhD and a habilitation. Also all of them are active lecturers during their mandates.

3/ These positions are elected (not appointed) and therefore their candidates prepare Mandate programs for four years. When preparing these documents, the candidates are expected to communicate with most of the academics and take into consideration their different expectations.

4/ These candidates are the most initiative academics, with vision for the development of their units (University, Faculty, Department). They are **academic entrepreneurs**.

5/ All academics recognize the elected candidates as the most responsible and initiative people. Therefore, the academics expect the approved candidates to act as real leaders – to have clear goals and vision, to initiate activities, to inspire people, to react to all kind of risks, to secure the academic community.

On the base of this description, the election of leaders is bottom-up approach, while the changes and improvements in the Bulgarian HEIs are possible in case of top-down approach – by involvement of the elected leaders. This management system encourages the HEIs to be more entrepreneurial. In case of elected candidates, then all management levels in one HEI have high level of **trust** of the academics. In time of changes and crises the Bulgarian academics follow only their trustful leaders.

"Angel Kanchev" University of Ruse is an autonomous state higher school, established in Ruse on 12.11.1945. There are eight faculties in the structure of the University:

- Agrarian and Industrial Faculty,
- Faculty of Mechanical and Manufacturing Engineering,
- Faculty of Electrical Engineering Electronics and Automation,
- Faculty of Transport,
- Faculty of Business and Management,
- Faculty of Natural Sciences and Education,
- Faculty of Law,
- Faculty of Public Health and Healthcare
- Branches of Ruse University in Silistra, Razgrad and Vidin
- Bulgarian and Romanian Inter-university Europa Centre.

The strategic priorities of the University are as follows:

- ✓ preparation of students for work in the conditions of strong competition on the labour market and expanding the scope of training;
- ✓ development of the intra-university system for quality control in education;
- ✓ development of the staff and research potential;
- ✓ implementation of a set of activities in the field of European integration and international relations;

- ✓ building up of a well-organised university system, flexible with respect to the external conditions, with modern facilities and information database.

Around 7 000 students and doctoral degree students study in 48 Bachelor degree programmes, 80 Master degree courses and 43 PhD courses. The teaching staff consists of 399 highly qualified full-time PhD lecturers, of whom 49 professors and 177 associate professors. Teams from "Angel Kanchev" University of Ruse participate in the implementation of over 250 multi-lateral and bi-lateral international agreements in the field of science and education, of which over 200 are under the Erasmus Programme. Furthermore, there are agreements with partners from about 40 countries from Europe, Asia and America under 20 international programmes for cooperation. Most of the expenses at the University of Ruse are covered by the state public funding. At the same time the strategic infrastructure (including the digital capacity) is funded under EU programs and Public-private partnerships.

In 2012 "Angel Kanchev" University of Ruse was accredited by NEAA with the high grade of 9.28. There are 20 professional fields which have been granted programme accreditation in the following areas of higher education:

- ❖ Educational Studies;
- ❖ Social, Economic and Law studies;
- ❖ Natural Sciences, Mathematics and Informatics;
- ❖ Technical Studies;
- ❖ Healthcare, Social Activities and Sports.

In 2019 the **5D ALLIANCE** consortium has been selected by an expert panel of European evaluators as a significant national research infrastructure complex to be implemented as a priority with no analogue in Bulgaria and in the Danube area. It is planned to build 7 interdisciplinary laboratories at the University of Ruse:

- Precise technologies for sustainable agriculture, clean and safe environment;
- Low carbon mobility and intelligent transport systems;
- Multimodal human-machine interfaces and 3D kinematics in technological systems for clean and safe environment;
- Digital energy systems for a clean and secure environment;
- Digital, layer-by-layer, energy-assisted innovative technologies;
- Development of innovative business and educational models for sustainable development, clean and safe environment;
- Integrated intelligent security management systems, incl. for energy and information security.

On April 22, 2020, the Bulgarian government approved the establishment of a new scientific institute at the University of Ruse "Angel Kanchev" - **Research Institute for Technologies and Innovations** to unite the research activities of the four engineering faculties of the university, as well as the other faculties.

The University of Ruse has strategic importance for the Danube region:

- In 2018 the University of Ruse is the only Bulgarian university, which has hosted EU conference about HEInnovate, part of the closing ceremony of the Bulgarian presidency of the EU Council. During that conference the European Commission announced the eight dimension of HEInnovate platform – “Digital transformation and capability”, <https://heinnovate2018-bulgaria.eu/gallery/>
- In 2015 the First Vice-President of the European Commission (Frans Timmermans) participated an important meeting at Ruse University: https://ec.europa.eu/info/events/citizens-dialogues/citizens-dialogue-ruse-bulgaria-2015-jun-04_en

- In 2018 the University of Ruse is the only Bulgarian university, which hosted a top meeting between the presidents of Austria, Bulgaria and Romania. <https://business-review.eu/news/presidents-of-romania-bulgaria-and-austria-meeting-today-to-discuss-european-council-presidency-167893>

The digital infrastructure and capacity of the University of Ruse are with very high quality. In 2020, during the COVID-19 pandemic restrictions, the University of Ruse switched to on-line the entire organization (educational, research, administrative, etc.) very smoothly at www.meet.uni-ruse.bg.

The here proposed activities are:

- ✓ to organize seminars with academics to discuss how to prepare and support entrepreneurs using the HEInnovate platform (**inbound activity**).
- ✓ to organize seminars for information campaign among firms for knowledge transfer on the base of HEInnovate platform (**outbound activity**).

Section 2 - Activity 1 Organization of seminars to discuss how to prepare and support entrepreneurs

Subsection 2.1. Planned activities of the HEI for the BeyondScale project which use the HEInnovate platform

2.1.1 Proposed activity: description, rationale

The business environment in Bulgaria gives some new requirements towards the educational system. The universities are expected to produce students, who have both entrepreneurial and technological skills. Therefore, the University of Ruse is expected to give further input in this direction. This trend has been officially recognized by the European Commission in 2019 through the Strategic Innovation Agenda one more fundamental contribution of the universities to the society – to promote a new generation of entrepreneurs – students with both entrepreneurial and technological competences¹. On 13 Sep 2019 this expectation has been reminded by representatives of the DG Education and Culture during an international meeting in Brussels with experts in entrepreneurship from different EU educational institutions, including the University of Ruse “Angel Kanchev”.

For the academic community the idea to prepare and support entrepreneurs is not new. In 2019/2020 the following courses are provided:

- Disciplines such as *Business plan, Small business management, Entrepreneurship* at the Faculty of Business and management, Faculty of Transport and Faculty of Public Health and Healthcare.
- Bachelor programme *Transport technology and management* with knowledge, competences and skills both in business field and transport technology field.
- Bachelor programme *Industrial management* with knowledge, competences and skill both in business field and machine building and logistics fields.
- Master program in *Entrepreneurship and innovation* at the Faculty of Business and management.

The University of Ruse is already looking for opportunities to go further. Thanks to BeyondScale project it is possible to organize an **inbound activity – to organize seminars with academics to discuss how to prepare and support entrepreneurs using the HEInnovate platform**. Thanks to such seminars it will be possible to answer the increasing need on the labour market for specialists with the both mentioned skills – technological and entrepreneurial.

¹ European Commission, ANNEX to the Proposal for a Decision of the European Parliament and of Council on the Strategic Innovation Agenda of the European Institute of Innovation and Technology (EIT) 2021-2027: Boosting the Innovation Talent and Capacity of Europe, Brussels, 11.7.2019 COM (2019) 330 final.

2.1.2 Objectives & Outcomes

The most important objective of this activity is to improve collaboration among the professors. In many universities the professors prefer to prepare bachelors/masters only in one field, like engineers, doctors, IT specialists, managers, agronomists, etc. The concept of “new generation entrepreneurs” requires these specialists to have also several business disciplines, which is not acceptable for many professors. But the improved collaboration among professors from different faculties is a precondition for a mutual academic trust.

Thanks to the Bulgarian legislation system the Departments and Faculties have academic autonomy. Only in case the academics consider that “new generation entrepreneurs” could be done in a well-structured way, only then it would be possible to go for real transformation of the education. Therefore the role of this inbound activity within BeyondScale project is a mile stone for the development of the University of Ruse.

Also, many of the young Bulgarians from the region of Ruse University prefer to continue their education and career in the capital of Bulgaria or abroad and as a result there is a strong aging. It means, that the demographic decline leads to a shortage of students which in turn could lead to variety of regional problems, including a shortage to job positions at the University of Ruse. On the other hand, the digitalization of the economy makes not so important the physical placement of the IT specialists, because they are connected not by roads, but by internet. Therefore, the digital economy gives new opportunities for the remote regions and keep the population in the region.

Inbound, the improved education for creation of “new generation entrepreneurs” would keep the jobs of different professors, due to the opportunity to attract additional students. Therefore, there is a good supportive background for this inbound activity within the University of Ruse.

The entrepreneurial role of the Rector, Academic Council, Deans and Heads of departments is fundamental for this inbound activity and it is possible to measure their joint success by simple indicators:

- Number of representatives of the academic community (professors/lecturers, students, administrative staff) who answer the statements of the www.heinnovate.eu
- Number of participants from different faculties in the seminars to discuss how to prepare and support entrepreneurs using the HEInnovate platform.
- Number of web-based disciplines to support entrepreneurship, accessible from the students at the University of Ruse. In this terms we have to discuss what is the digital transformation and capacity of the University of Ruse to support entrepreneurs, too.

Because of the COVID-19 the entire education at the University of Ruse have been digitalized. The digital transformation has become an important factor to keep the digital capability of the university to attract students. Therefore, this inbound activity is based on integration of different efforts, which in accordance to HEInnovate could be mostly in these dimensions: **“Preparing and supporting entrepreneurs”** and **“Digital transformation and capability”**.

We may estimate if the academics have become more entrepreneurial by measuring these results:

- How many of the courses are uploaded at <https://e-learning.uni-ruse.bg> , using the digital infrastructure of the university?
- How many of the courses has a grading system to estimate the skills and competences of the students to be entrepreneurial, rather just to estimate the level of their memorized knowledge?
- How much the professors integrate in their topics the role of internal entrepreneurship for the development of the business organizations?

Other measure indicators could be added, too, such as “number of students attending education in entrepreneurship on bachelor, master and PhD level”.

2.1.3 Timing of the planned activities

The achievement of these outcomes could be results of proper time planning within BeyondScale project, for example:

30.05.2020 – to create positive attitude among key academic leaders that HEInnovate platform could help them to improve the activity of their academic units.

30.07.2020 – first draft of Agenda for the proposed inbound seminars with much wider audience.

30.09.2020 – invitation sent to all potential participants.

30.11.2020 – inbound seminars done.

30.12.2020 – summery of the outcomes from all inbound seminars.

30.05.2021 – second round of inbound seminars.

30.06.2021 – summery of the second round of inbound seminars.

2.1.4 Barriers, challenges & opportunities

Possible barriers:

- *Conservatism in some professors and new students, who reject the education in “new generation entrepreneurs”.* This source of risk could be mitigated by inviting these pessimists to answer the statements of the www.heinnovate.eu dimensions and thus they to become aware about the global trends.
- *Lack of written principles at the University of Ruse, especially to design education for “new generation entrepreneurs”.* This source of risk could be mitigated by regular giving a special time for the Department Leaders and the Director for accreditation at the university to discuss during the inbound seminars how to administrate the new improvements.

Possible challenge:

- *To convince the students and professors about benefits of the “new generation entrepreneurs”.* During the inbound seminars they will be invited to share their points of view on how the students will be employed (or having their own start-ups) in the global environment of Artificial intellect and automated production.

Possible opportunities:

- *To rise the mutual trusts among the professors from both educational fields (business and all kind of technologies).* If this outcome happens thanks to the BeyondScale inbound seminars, then the University of Ruse could proceed with the design of some disciplines and bachelor programmes for “new generation entrepreneurs”.
- Satisfaction of the needs of the regional employers.
- To use the Ruse University digital infrastructure (educational, administrative, etc.) in benefits to this entire process.
- To increase the level of entrepreneurial way of teaching the students.
- To keep the good financial indicators of the university.
- To keep the jobs for the academics from the university.

Subsection 2.2 Applying the HEInnovate platform to support this activity

The HEInnovate toolbox is well recognised by the Rector body of the University of Ruse as a good instrument to direct and synchronise the academic activities. Thanks to its application the academics from different management levels (university, faculty, department, centres, etc.) could better organize their inbound activity, searching for better collaboration among them. The questions for the self-assessment on www.heinnovate.eu are also in Bulgarian, which makes possible to attract many academic managers to fulfil it.

Because of the COVID-19 crises it was possible to approach these academic managers only by the well-organized digital infrastructure of the University of Ruse.

2.2.1 Deploying the toolbox for self-assessment

The deployment of the self-assessment toolbox at the University of Ruse has been organised in the next phases:

Phase 1: Preparation of a questionnaire and selecting the proper academics to fulfil it (March and April 2020):

A/ Preparation of a questionnaire.

In April 2020 the BeyondScale team of the University of Ruse has designed a questionnaire with two parts:

Part 1 – guidelines how to register at heinnovate.eu and answer all questions in the eight dimensions

Part 2 – questions with answers (six closed and one open) for a feedback about heinnovate.eu

B/ At the same phase the Rector body has decided to ask the **key academic leaders** to fulfill this questionnaire. They are:

- Members of the Rector body,
- Deans and director of branches
- Vice-deans,
- Director of Centers at the University of Ruse
- Department leaders (selected by the Deans)

The idea behind is that these leaders (all of them are also active lecturers) are expected to manage the entrepreneurial processes in their educational units and therefore they must be well informed about the global educational trends. The tool for self-assessment at www.heinnovate.eu has variety of statements to help these leaders to understand if their management programs are in line with the new trends. The tool for self-assessment could help them to decide: what to keep, what to change, what to reject, what to introduce in their management system. Therefore, only academic leaders with decision taking power have been invited to fulfil this questionnaire in order to create a decision taking environment in the University of Ruse.

Phase 2: Participation in the survey (May 2020):

On 04 May 2020, the Vice-rector in research of the University of Ruse organized the usual Monday meeting with all Vice-deans in science and research, using a virtual room at <https://meet.uni-ruse.bg/b/wzg-c23-upx>. The questionnaire had been sent to each participant and it was presented during this meeting. Each vice-dean has been asked:

- To fulfil the questionnaire within the next 48 hours.
- To ask their Deans and the other Vice-deans to fulfil the questionnaire within the next 96 hours.
- Each Dean to send the questionnaire to some of their Department leaders, who also to answer within the 96 hours time limit.

The Vice-rector also asked the leaders of key units also to fulfill this questionnaire within the next 48 hours:

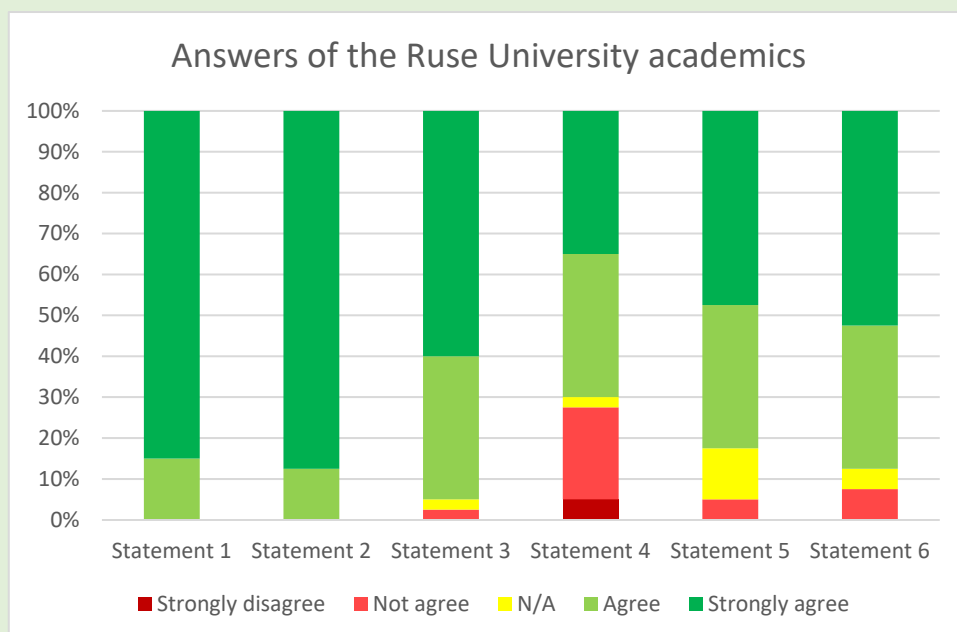
- Director of the Research and Development Sector,
- Director of the Center for Technology Transfer,
- Director of the Entrepreneurship Center.

Phase 3. Findings

In total 40 academic leaders from different management levels have sent their answers (Tabl.1):

Table 1. Answers of academics involved in key management jobs/positions at the University of Ruse

Statements, number of the answers	Strongly disagree	Not agree	N/A	Agree	Strongly agree
1: Every single question in www.heinnovate.eu is clear, easy to understand:	0	0	0	6	34
2: The questions from all eight dimensions give clear understanding about what the University of Ruse is expected to do.	0	0	0	5	35
3: The questions from all eight dimensions give clear understanding about what I am expected to do.	0	1	1	14	24
4: There is a need for additional questions, based on the different job/ position of the answering person.	2	9	1	14	14
5: It is better to have some basic questions, which to be answered by all people.	0	2	5	14	19
6: It is better to have some specific questions, which to be answered by specific group of answering people, for example representatives of: high education, public authorities, business, secondary schools, NGO-s, etc.	0	3	2	14	21
7. If you have any proposals how to use the heinnovate.eu for improvement of the inbound and outbound activities of the University of Ruse, please, write them here:	Look bellow this table.				



This is the list of their additional written comments:

- In the beginning of each semester all academics to fulfil the statements at www.heinnovate.eu .
- The www.heinnovate.eu to become more popular among students, PhD students, would-be-entrepreneurs.
- The www.heinnovate.eu to be used to improve the collaboration of the university with the secondary schools.

- The www.heinnovate.eu to be used to stimulate professors to use more entrepreneurial didactical way of teaching.
- On the base of heinnovate.eu to be defined some KPI (key performance indicator), which to be annually analyzed.
- The values of the answers from 1 to 5 at www.heinnovate.eu are not clear.
- The HEInnovate platform can be used for the improvement of the educational plans in the engineer faculties with disciplines, related to the entrepreneurial profile of the university.
- The Heads of department to organize seminars with all lecturers from their units with a purpose to discuss the www.heinnovate.eu statements and search for better integrated activities in the department.

Most important outcome: Thanks to the statements in the HEInnovate platform the involved academic leaders became aware that it is time for some changes in their units. This step is very important, because in the autumn'2020 (later in the spring '2021) much more participants are expected to participate the BeyondScale inbound seminars to discuss how the HEInnovate platform could help them to create "new generation entrepreneurs".

2.2.2 Role of BeyondScale buddies

The role of the buddy has been mostly on getting some comments on the achieved findings. We got support from from Dr. Ben Jongbloed and Andrea Kottmann, both from the University of Twente, Nederland, (CHEPS), as well as from Dr Emer Bhrádaigh from Dublin City University (DCU).

2.2.3 Further development of HEInnovate platform with regard to this activity

The statements in Table 1 give good support to www.heinnovate.eu and they outline some proposals for the further development of the HEInnovate platform:

- It is better to have some basic questions, which to be answered by **all users**.
- It is better to have some specific questions, which to be answered by **specific groups** of users, for example:
 - The representatives of academic community have their specific point of view, because of their specific jobs.
 - The representatives of public authorities (Mayer, Municipality council, Local agencies, national authorities) have totally different point of view, compared to the academics'. They have different duties and therefore there should be some statements in HEInnovate platform to show how the public authorities should impact on the entrepreneurial universities.
 - The business representatives are focused on keeping their companies and their point of view towards the academic activities is different. There should be some specific statements in the HEInnovate platform to show how the businessmen should impact on the entrepreneurial universities.
 - Other stakeholders interested in "Entrepreneurial university".

These expectations towards the HEInnovate platforms (identified thanks to BeyondScale), are quite expected, because many academics have a good understanding that the development of a university is not a single process, but it is a result of the level of **integration** of the university with the stakeholders. If the authorities and companies are passive, then the academic community is not capable to good levels of "Entrepreneurial university".

Because of the COVID-19 crises, the University of Ruse organized in 2020 the fulfilment of www.heinnovate.eu by virtual rooms, using the digital infrastructure. The advantage is that people have time to answer and think more carefully about the new environment of the educational sector.

In contrast, in 2014 the University of Ruse organized the fulfilment of [heinnovate.eu](http://www.heinnovate.eu) by inviting the academics to be together, by groups of 10-15 people, in a computer room; each time there was a moderator in the computer room to guide them. The advantage was that people had the opportunity to share their comments face-to-face, to compete in their promises for the better development of the structures they managed.

The further deployment of the HEInnovate tool could be blended:

- Participants will be asked to fulfil the statements in www.heinnovate.eu before the seminars
- During the seminars to discuss with them specific dimensions.

Subsection 2.3 Conclusion for this activity

The use of www.heinnovate.eu has been very important for the here planned inbound activity. It has shown that within BeyondScale project we can provoke positive attitude among key academic leaders that HEInnovate platform could help them to improve the activity of their academic units. The statements in Table 1 give good understanding how the HEInnovate platform could be technically improved. The expectations of the asked academics are related to adding some additional questions, which to reflect the specific job/position of the answering person.

The involved academics are from all levels:

- Department/Laboratories/Centres – these are the academic places where the professors/lecturers organize the education in terms of content, didactical approaches, teaching materials, etc. These units are the ones to begin the improvements towards creation of “new generation entrepreneurs”. The Department councils are the places where the educational programs/disciplines are created and get the **first** administrative approval.
- Deans are responsible to manage the Faculty Council – the place where the new educational programs/disciplines get administrative approval on the **second** level.
- Rectors level with the Academic Council – this is the place where the new educational programs/disciplines get administrative approval on the **third** level.

The BeyondScale project has managed to engage in the first inbound seminar some key academic leaders from all three levels to make sure that each of these three administrative levels will approve the new educational programs/disciplines for creation of “new generation entrepreneurs”. Thus, thanks to the fulfilment of the HEInnovate platform within the BeyondScale project all involved academic leaders declared that the collaboration among them is the key factor for the further progress of the University of Ruse.

All of them confirmed that the HEInnovate dimensions had given them good understanding about the global educational trends. They asked for time to reconsider what really to undertake within their units and together with other units in reaction to these trends. Development could be done in face-to-face communication, but the COVID-19 put the entire academic community in physical social isolation for too long period of time. Therefore, the academic leaders commented that they would initiate appropriate changes after the COVID-19 period, when the academics will be allowed to have face-to-face seminars and physical social interaction.

More or less the fulfilment of the HEInnovate platform has provoked them to consider:

- the didactical approach for teaching students
- the online teaching materials at www.e-learning.uni-ruse.bg
- the virtual rooms for teaching, examination, seminars at <https://meet.uni-ruse.bg> .
- the online documentation at <http://uni-ruse.bg>

- the level of collaboration with academics from other units.
- the level of their collaboration with the stakeholders

In periods of physical social isolations, perhaps we will need a “survival university”, rather than “entrepreneurial university”. Such topics also to be discussed during the upcoming inbound seminars within the BeyondScale project at the University of Ruse in the autumn’2020 and spring’2021, after the COVID-19 physical social isolation.

Section 3 - Seminars for information campaign among firms for knowledge transfer on the base of HEInnovate platform

Subsection 3.1. Planned activities of the HEI for the BeyondScale project which use the HEInnovate platform

3.1.1 Proposed activity: description, rationale

In the period of 2010 - 2020 the University of Ruse has managed to undertake variety of **outbound** activities. Some of them have focused on the improved university-business collaboration. Each faculty/branch has developed partnerships with firms for different purposes – applied research, student traineeships, invitation of entrepreneurs to lectures to share their experience with the students, etc.

On the other hand, the financial support from the Bulgarian government to HEIs has been recently changed. The Ministry of education expects more of the researched activity to be directly paid by the firms with direct contracts between the companies and the universities. It also means that the HEIs have to use some marketing approaches towards the business partners to offer them their scientific competences for commercial purposes.

Thus, the commercialisation of the science becomes the third fundamental goal of every HEI, next to their educational and research activities. Not every faculty member has the capacity to trade the research findings. Not every firm is ready to pay for general research and most of the businessmen prefer to give financial support only for that research activity, which could have a measurable effect on company growth.

There is a need of a facilitator (knowledge broker) between the researchers and businessmen, which gives some new opportunities for the research and development relations. The Research & Development Sector (R&DS) of "Angel Kanchev" University of Ruse was founded in 1965. Its main objective is to organise and support administratively and financially the research, development and implementation activities of the University. The R&D Sector has been delegated rights for establishing business contacts with state and private organisations and companies on behalf of the University. The whole work of the R&DS is based on self-financing and self-support under full financial and personnel independence.

At present R&DS is the main unit for business contacts of the University with state and private organizations and firms. Within the framework of R&DS, groups of highly qualified lecturers, doctoral students, students and technicians perform, on a contractual basis, fundamental scientific research, as well as development, implementation and consulting activities

The region where the University of Ruse is situated, is dominated by firms owned by some multinational companies. They have their R&D activity in the headquarters (abroad) which disable their local managers of Ruse region to search for deep R&D collaboration with the scientists from the University of Ruse. On the other hand, there are small firms in this region, owned by local people; these small firms need R&D to meet the challenges from the Artificial intellect and Automation of the

production process. These small firms don't have financial capacity to buy high quality laboratory equipment and therefore they are in a position to look for scientific partnership with the scientists from the University of Ruse for knowledge transfer.

The here proposed outbound activity is to organize some seminars for information campaign among firms for knowledge transfer on the base of HEInnovate platform. It is a long-term initiative to develop the so called external entrepreneurial ecosystem. A key moment in BeyondScale is to explain how www.heinnovate.eu could improve the outbound activities of this university towards commercialization of the research, because it is expected to involve researchers and students in the above mentioned knowledge transfer.

3.1.2 Objectives & Outcomes

The most important objective of this activity is the improved university-business collaboration for commercialization of the applied research. There are many small and medium enterprises in the region, which don't have their own departments for research and development and they need to outsource part of these activities.

On the other hand, the digitalization of the economy makes easier the communication between these entrepreneurs and the research community of the University of Ruse and gives new opportunities for the remote regions to keep the firms in the less populated areas, too.

The contracts for knowledge transfer would bring extra funding to the laboratories and keep the jobs of different researchers. Therefore, this outbound activity has initial strong approval from the academics and it is necessary to empower the right communication channels among the involved researchers and the businessmen.

The entrepreneurial role of the Vice-Rector in research, the Director of Research & Development Sector and the Director of the Director of the Center for Technology Transfer is fundamental for the success of this outbound activity and it is possible to measure their joint success by simple indicators:

- Number of businessmen who answer the statements of the www.heinnovate.eu
- Number of businessmen, who participate the BeyondScale seminars at the University of Ruse to discuss the knowledge transfer on the base of HEInnovate platform statements.
- Number of web-based documents at <https://uni-ruse.bg> to facilitate these seminars (the digital transformation and capacity of the University of Ruse to support the university-business collaboration in terms of knowledge transfer).

This outbound activity is based on integration of different efforts, which in accordance to HEInnovate could be mostly in these dimensions: **“Knowledge Exchange and Collaboration”** and **“Digital transformation and capability”**.

3.1.3 Timing of the planned activities

The achievement of these outcomes could be results of proper time planning:

30.05.2020 – to create positive attitude among key businessmen that HEInnovate platform could help them to improve the knowledge transfer between them and the University of Ruse

30.07.2020 – first draft of Agenda for the proposed outbound seminars with much wider audience.

30.09.2020 – invitation sent to all potential participants.

30.11.2020 – outbound seminars done.

30.12.2020 – summery of the outcomes from all outbound seminars.

30.05.2021 – second round of outbound seminars.

30.06.2021 – summery of the second round of the outbound seminars.

3.1.4 Barriers, challenges & opportunities

Possible barriers:

- *Scepticism in many professors and researchers and businessmen about HEInnovate tool.* The participants of the here proposed BeyondScale outbound seminars could not recognize the HEInnovate platform as a useful instrument for establishment of direct contracts for knowledge transfer. This source of risk could be mitigated by careful explanation of the purpose of the eight dimensions in the www.heinnovate.eu

Possible challenge:

- *The Public-private partnership to be recognized as a form of university-business collaboration.* There is a good experience of a few small businessmen with different laboratories at the University of Ruse on public-private partnership, which has to be shared with other businessmen and research leaders during the BeyondScale seminars. In case of careful preparation of the seminars the managers would recognize the HEInnovate tool as a good instrument to form their approach towards the research community at the University of Ruse. The University of Ruse has accreditation in 21 PhD programs which is an excellent background for scientific diversity. Thus, the BeyondScale seminars could be a cradle for initiating of knowledge transfer.

Possible opportunities:

- Discussing the HEInnovate platform during the BeyondScale outbound seminars the participants (businessmen and researchers) to identify how to increase the level of knowledge transfer.
- These outbound seminars to improve the HR policy at the university towards the researchers.
- These outbound seminars to give ideas how to keep the good financial indicators of the university through commercialization of the research activities.

Subsection 3.2 Applying the HEInnovate platform to support this activity

The HEInnovate toolbox is not popular among the business representatives. Only part of them have fulfilled the seven dimension in 2014 when the University of Ruse was part of the initiative of the European Commission, DG Education and Culture and the OECD LEED Forum, with the support of the Bulgarian Ministry of Education and Science to monitor five Bulgarian universities by the www.heinnovate.eu platform.

The statements for the self-assessment on www.heinnovate.eu are also in Bulgarian, which makes possible to attract different entrepreneurs to fulfil it. Because of the COVID-19 crises it was possible to approach the business representatives only by the well-organized digital infrastructure of the University of Ruse.

3.2.1 Deploying the toolbox for self-assessment

The deployment of the self-assessment toolbox for the business representatives has been done in a similar way, as described in Section 2.2:

Phase 1: Preparation of a questionnaire and selection of proper businessmen to fulfil it (April and May 2020):

A/ Preparation of a questionnaire suitable for the businessmen. After careful analyses the BeyondScale team has decided to use one and the same questionnaire for businessmen and the academics. It contains the same parts, as described in 2.2, because it is important to receive a feedback in one and the same direction.

B/ The University of Ruse has decided to identify “most adequate businessmen” for this survey on the base of the next criteria:

- ✓ To be a manager in a small firm with local ownership.
- ✓ To know quite well the activity of at least one faculty/laboratory.

- ✓ To search for opportunities to keep long term university-business relations.

On the base of these criteria we have outlined the next type of “most adequate businessmen” to answer the questionnaire:

- Managers, who are alumni of the University of Ruse (bachelor, master or PhD degree)
- Managers, who have active cooperation with the University of Ruse (a faculty/laboratory).
- Managers, who are also professors at the University of Ruse, because they are a kind of bridge between the academics and entrepreneurs.

The idea behind is that these managers have already positive attitude towards the University of Ruse and they can develop university-business collaboration with friendly negotiations, explaining their perspective for partnership and thus to give the initial support for the *Leaders* of the research units/laboratories to approach other businessmen, too. On the other hand, the tool for self-assessment at www.heinnovate.eu has variety of statements which to help these initial managers to understand that every firm could have a good perspective only in case of well design university-business cooperation. This tool for self-assessment could help them decide:

- Which joint activities to keep/reject in the time.
- What to change in their interaction with the researchers.
- What are the opportunities to enlarge this business-university cooperation.

Therefore, only managers with decision taking power for knowledge transfer have been invited to fulfil this questionnaire.

Phase 2: Participation in the survey (May 2020):

On 04 May 2020, as already explained in 2.2, the Vice-rector in research of the University of Ruse organized the usual Monday meeting with all Vice-deans in science and research, using a virtual room at <https://meet.uni-ruse.bg/b/wzg-c23-upx> . Each Vice-dean has been asked to find one or two businessmen to fulfil the questionnaire, using the criteria “most adequate businessmen”, described in the previous phase. It means that in total the answering managers should be ten or more.

Phase 3. Findings

In total 10 managers identified as “most adequate businessmen” have sent their answers (Tabl.2):

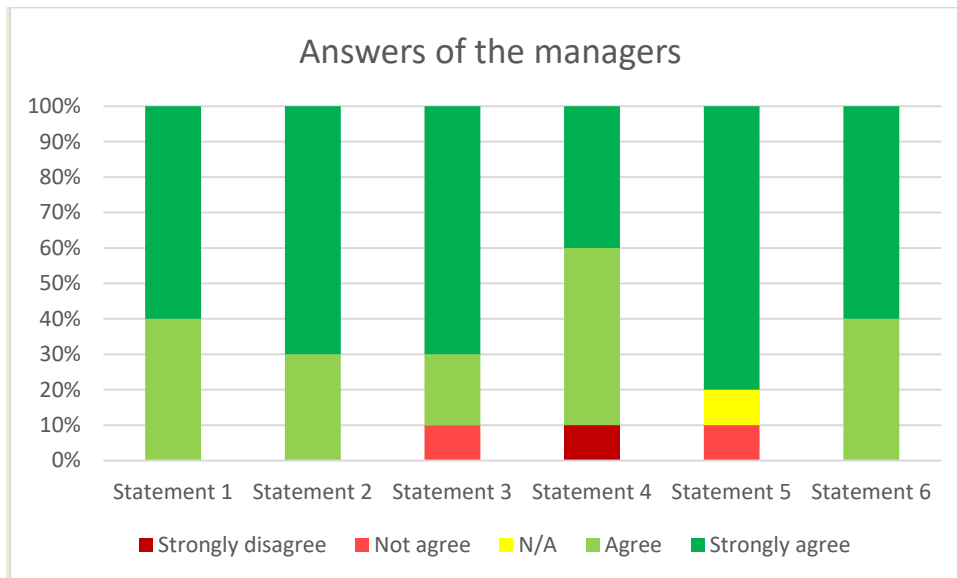
Table 2. Answers of managers identified as “most adequate businessmen”

Statements, number of the answers	Strongly disagree	Not agree	N/A	Agree	Strongly agree
1: Every single question in www.heinnovate.eu is clear, easy to understand:	0	0	0	4	6
2: The questions from all eight dimensions give clear understanding about what the University of Ruse is expected to do.	0	0	0	3	7
3: The questions from all eight dimensions give clear understanding about what I am expected to do.	0	1	0	2	7
4: There is a need for additional questions, based on the different job/ position of the answering person.	1	0	0	5	4
5: It is better to have some basic questions, which to be answered by all people.	0	1	1	0	8
6: It is better to have some specific questions, which to be answered by specific group of answering people, for example representatives of: high	0	0	0	4	6

education, public authorities, business, secondary schools, NGO-s, etc.					
7. If you have any proposals how to use the heinnovate.eu for improvement of the inbound and outbound activities of the University of Ruse, please, write them here:	Look bellow the table.				

This is the list of the answers about Statement 7:

- The HEInnovate platform needs improvement, which to allow the business representatives to point out their job/position in the firm.



Most important outcome: There are managers in the outbound environment of the University of Ruse who are positive for university-business collaboration and the managers have additional information about the opportunities from the here proposed outbound activity in benefit to their firms. They have become aware of these opportunities for knowledge transfer thanks to their fulfilment of the www.heinnovate.eu platform within the BeyondScale project.

It is quite important to approach much more managers during the upcoming seminars within BeyondScale project and discuss with them how the HEInnovate platform could help them for the knowledge transfer with the University of Ruse.

3.2.2 Role of BeyondScale buddies

The role of the buddy has been mostly on getting some comments on the achieved findings. We have received from Dr. Teresa Pereira from IPVC (POLYTECHNIC INSTITUTE OF VIANA DO CASTELO) information about their experience in development of the business-university relations, especially for commercial purposes.

It would be highly appreciated if during the outbound activities we manage to attract BeyondScale partners to share their experience with the local Bulgarian businessmen.

3.2.3 Further development of HEInnovate platform with regard to this activity

The statements in Table 2 support the statements in Table 1 about the usefulness of the www.heinnovate.eu for self-assessment and confirm the same findings for the possible development of the HEInnovate platform:

- It is better to have some basic questions, which to be answered by **all users**.

- It is better to have some specific questions, which to be answered by a **specific group** of users, for example representatives of: high education, public authorities, business, secondary schools, NGO-s, etc.

Please, refer to the text under Section 2.2.3, because it is the same point of view.

Subsection 3.3 Conclusion for this activity

- The usage of the HEInnovate platform has been very important for the here planned outbound activity – to organize some seminars for information campaign among firms for knowledge transfer on the base of HEInnovate platform. The managers were reminded about the global trends, and more precisely – any further corporate development is possible in case of well-designed university-business cooperation.
- These managers have identified the University of Ruse as a reliable partner and therefore they have easily agreed to answer the statements in the HEInnovate platform within the BeyondScale project.
- The statements in Table 2 give good understanding how the HEInnovate platform could be methodologically improved. The expectations of the managers are the same as the expectations of the academics: to have better identification of the person who answers the questions and to have some questions which to be specific to the job/position of the answering person.

The organizations of the here proposed outbound seminars with more businessmen in face-to-face environment would be more fruitful, because then they would better describe how the HEInnovate platform helps them to identify the University of Ruse as a good partner for knowledge transfer. More or less, the first 10 businessmen shared, that thanks to the fulfilment of the statements at the HEInnovate platform they became aware about the global trends in business-university collaboration and they consider Ruse University to be their partner. During the face-to-face outbound seminars they could share how the HEInnovate platform has influenced their attitude about the knowledge transfer with the University of Ruse. Thus, the dimensions at the HEInnovate platform could be recognized as a kind of guiding lights for them in the period after COVID-19.