Enterpreneurial University as a Centre for Growth in Regional Innovativeness

1. The Lisbon Strategy and its relevance to the areas of research and higher education

Let me start the speech by a little digression: I am a 60-year old physicist who lived his best professional years in the time when no ordinary Polish citizen had influence on the future of its country. The decisions were taken by a centralised body in Warsaw and those on the level of geopolitics in Moscow. The only choice for somebody who disagreed with the state of affairs was to emigrate: either literally leave the country or withdraw into the domain of professional work. I went into conducting research. I worked in an industrial laboratory where my job was to deal with physics and in particular graphite and coal technology. The year 1989 changed my life. I began to have a growing influence on my and others' future. I am proud to have been in the years 1992-1993 the first chairman of the special Committee for the European Integration in the Polish Senate. Especially, that it was the time of negotiatiations on the Association Agreement. All I am engaged in nowadays has an important influence on the future of my town, region and country. I greeted the Polish accession to the European Union on the 1st May 2004 with my first independent book The Knowledge Society - an Opportunity for Poland. 1 In the publication, I expressed my opinion on the future of education and research in Europe within the context of the Communication of the European Commission (2003) The Role of the Universities in the Europe of Knowledge.2

Being an entrepreneur and organiser of higher education institutions, holding no public posts and living still in the same place, I can speak up on the issues that regard not only Poland but the whole of the European Union. That is exactly the substantial difference I see between now and the

Poland of 20 years ago. In my opinion, the above introduction has been indispensable since I am highly critical towards the European system of higher education. My strong criticism, however, is aimed to influence the change for the better, also with the view of making the R&D sector the most important tool for the development of the European Union.

The Lisbon Strategy was (and still is) necessary. The EU authorities accurately identify growing challenges facing Europe, both of internal and external character. In particular, ageing populations or loss of the impetus for development by most of the EU member states and also shifting the development centre of the world in the future to the Pacific region.

Naturally, the Lisbon Strategy has many aspects, still I choose to focus on the higher education and research areas, which, in my view, have the greatest impact on the future of both the whole Union and each of its citizens.

The major drawback of the Lisbon Strategy was to set a too short period of time for achieving the formulated goals. That type of mistake is typical of politicians whose outlook does not exceed the length of a few parliamentary terms of office. Social processes, institutional changes or influencing human reactions require much longer. The Strategy issued in 2000 that set the goals to be met by 2010 was from the very beginning a wishful-thinking type of document, even if the best instruments for attaining the objectives were to be employed.

From the perspective of 2006, it can be seen as highly probable that by 2010 the European economy and the R&D sector will not have become the world's point of reference. What is worse, the

American economy is developing much faster than the European one (at present, the GDP growth rate in the US is more than twice as high as in the EU) In addition, it is becoming obvious that the growth of China and India is not a passing but a long-term phenomenon. The R&D sector is exercising more and more influence on the economic development. In other words, the concept of the knowledge economy is no longer a slogan but a reality.

Undoubtedly, the transfer rate of achievements from the R&D sector into the economy is becoming of vital importance. In addition, the increasing competitiveness of 'new' developing national economies will increase the importance of the above rate even further. The European Union member states were to set the level of annual R&D investment at 3% GDP annually, yet, in fact, it will reach on average only 2.2% of their GDP in 2010.

The average statistics (as measured within 10-year periods) on the Nobel Prize in science is overwhelming. The number of Noble Prize winners from American universities is distinctly rising, while, as far as European universities are concerned, the tendency is the opposite (Fig. 1). The data looks hardly better even if the fact is taken into account that a few of the 'American' awards were given to Europeans who had been working in the US for a long time.

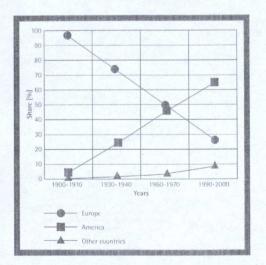


Fig. 1 Own study based on Nagroda Nobla [on-line]. Go to: www.nobel.se

After the Cook Committee report in 2005, the Commission in the Communication to the Council and the European Parliament issued a document entitled Common Actions for Growth and Employment. The Community Lisbon Programme, presenting the renewed and refocused Lisbon Strategy. In my view, what is missing in the agenda is a clear statement of the fact that to achieve the objectives a time span of at least 25 years is required, provided that the member states are fully involved in attaining them. On the whole, however, the changes introduced to the Strategy set it on the right course. In the first place, the Commission abandons the goal for Europe to become the point of reference in the world, which is at present an unrealistic task. What is more, the Commission accurately identifies growth and employment as priorities and points to supporting knowledge and innovation as the main tools for economic growth.

The issues mentioned in the Communication that I found worth attention are the following:

- the recommendation for programmes supported by the Structural Funds and Cohesion Fund to target investment in knowledge, innovation and research capacities as well as improved education and vocational training;
- launching for the years 2007-2013 of not only the Seventh Framework Programme for Research, Technological Development and Demonstration (RTD) Activities but also but also the Competitiveness and Innovation Framework Programme.

The issue which I see as a drawback, and which made me laugh once, is a clear indication for increased cooperation between public research institutes and industry. I am deeply convinced of excellence of private research institutes also in the higher education and research areas. To illustrate the fact not only American examples can be recalled. Thus, instead of pleading, or insisting to intensify the cooperation between public research institutes and the economy, it may be better to launch financing mechanisms which would enforce efficiency and foster closer links with the economic environment on the part of public research units.

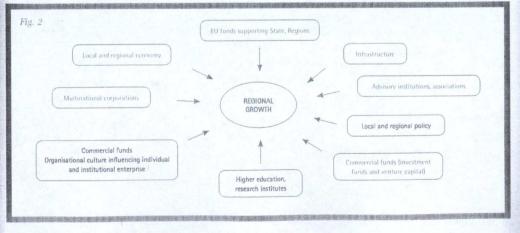
For the less developed countries, especially for the new members of the EU, Poland inclusive, the new concepts and priorities may pose a threat to be fulfilled when decisions are taken) since they entail targeting investment into the most developed regions with institutions of greatest potential at the expense of sustained growth. Undoubtedly, such activities would cause increased efficiency of the funds spent and further deepening of metropolisation process but at the same time a quick development of the regions in the new member states would be hindered. They would also find it difficult to develop potential enabling them to be competitive with the best. That is the reason why in the following part of my speech I shall focus on activities which allow launching distinct development mechanisms also in medium or weakly developed regions.

2. Who, what and how can provide a stimulus for the development of the region?

Literature on the subject mentions a number of institutions and other factors which determine the development of the region in a more or less decisive way. Fig.2 presents, in my view, the most important mechanisms and institutions. The selection is not a result of a theoretician's stance but reflects a longstanding experience of a person actively engaged in a multisector process of local and regional development.

I believe that the most important factor – individual entrepreneurship and innovativeness, is at the same time the most difficult one. Both entrepreneuship and innovativeness bring to more effective results if supported by backing institu-

tions; if local and regional authorities create enhancing atmosphere and launch mechanisms such as for, instance, special loans or tax relief. However, the key to success lies with the multiaspectual culture of entrepreneurship, built through many years or sometimes even many centuries: the climate that makes individual enterpreneur or a group of citizens (undertaking common initiative) into positive figures working for common good. What is needed to achieve long-term results (lasting for many generations) is an educational system that stimulates children and youth (starting from the first year of primary school) to develop the etrepreneurial and innovative approach. The remaining mechanisms and institutions of support presented in Fig. 2 sometimes play an important, vet secondary role. I claim, for instance, that the condition of the local economy, that is to say, mainly, the condition of the SMEs is more important than even largescale investment of multinational corporations. The corporations can provide a given region with an important stimulus for development enabling an increase in growth of local companies. Yet, as a matter of fact, such corporations quickly and easily move their production sites into new places where the profits are bigger or to be gained faster. The local authorities can also play a big part if they are able to grasp the ancillary nature of their role, which is to inspire and assist (e.g. by investing in infrustructure). As far as financial institutions and those of support are concerned, they should act in a fast and flexible way. Poland's first years as the EU member state are overshadowed by monstrous (it is difficult to find



a more appropriate word) red tape and the fact that it takes a long time for the institutions managing the EU programmes to take decisions. To a large extent bureaucratic procedures are not a requirement of the corresponding EU institutions but a result of 'creative handling' exercised by the rank and file of Polish administration, since civil servants want to protect themsleves from responsibility for wrong decisions.

The Polish regions are still at an early stage when long-term development programmes are being launched. The time (since 1989) when simple elimination of rules hindering individual enterprise brought about results that exceeded all expectations and predictions is over. The 'easy' stage during which there was a lot of space rather than niches in the market and it was enough to organise a company or an institution along the lines of common sense to achieve extraordinary success is ending. We are about to enter a period when the competition on the local markets is already fierce. The companies or institutions that want to continue developing will need external assistance, not only for their own sake but of the whole local and regional community.

At this point one needs to mention a factor that will influence increasingly the region's level of development and its potential to compete, that is to say, the entire system of education and not exclusively institutions of higher education or research units in a given city or region. The vital element, still underestimated by local authorities, is to ensure that already pupils in primary school receive an appropriate system of instruction since, as far as attitudes are concerned, that early stage is formative for a prospective adult. Curiosity about the world, positive attitude to problem-solving, intellectual courage are traits that are at the core of the enterpreneurial and innovative approach. At present it can be estimated as highly probable that local communities with the most considerable investment in primary schools will receive highest added value in a few decades, provided they are able to avoid migration of young people from the region.

In the day of the knowledge economy development, higher education institutions, research units and institutions that support, mediate or transfer research results into the economy are ever stronger determinants of local and regional development.

In my opinion, among five major factors of regional growth, which are the following:

- · Individual entrepreneurship;
- · Innovation:
- · Education:
- · Research;
- · Transfer of knowledge and technologies.

Four are crucially dependant on the condition of higher education institutions and research units located in a given area or working for the sake of the city or region. Naturally, financial resources are also necessary, yet their function is of secondary importance. They are required when a research result or an innovation is already in existence and it needs to be exploited to bring added value. Local and regional authorities may have impact on the areas of research and higher education, yet not by direct control but through stimulation, inspiration, motivation and, last but not least, distinct and flexible investment supporting given initiatives.

3. European versus American R&D systems

The EU authorities, the governments of the member states and local authorities should analyse external experiences and apply the principle of best examples and solutions in their implementation of the Lisbon Strategy. The American system provides such an exemplary solution in the areas of higher education, research and application. It is impossible to present in such a brief speech a detailed description of the system's main features. Here are, however, the major elements.

The number of higer education institutions in the US and the European Union is comparable. In a majority of the EU member states public institutions of higher education are financed equally – the algorithm takes into account the number of students, teaching and research staff. The rule followed is to spread evenly ('democratically') budget funds, irrespective of quality of the academic work or other achievements. In the US, a majority of the higher education institutions are financed by student fees and only 50 of the

best universities are funded by the federal government. The percentage share of public funds allocated by the European Union and the US is similar (1.0 – 1.2%). A considerable difference is to be noticed with funds given by the economy or private institutions (e.g. foundations). In the US private funds for R&D are a few times larger that their European counterpart. Vital also is the rate at which the American universities and their environment (spin-off companies) are able to turn the research results into pragmatic application. On the whole, it can be stated that financial stablility puts to sleep the university authories and part of the faculty, too.

I believe that one of the chief causes of higher efficiency of American universities is the type of management that is applied there and a 'short' path of the academic career.

In most EU member states a principle of university autonomy applies and thus, it is the academic staff who elect the autorities in a given institution of higher education. Rectors or deans are very often distinguished scholars - 'academic stars' of their universities. In the US the post of the head of the university became professionalised. In other words, it is a normal occupation pursued by managers who have undergone preparation in the form of training and holding a number of posts. Eventually, the president of the universiity is chosen by the members of a trusteeship council, not working at the university. Collegial university bodies have only an advisory function. I have been observing both American and European systems of higher education for more than a decade and I find that managers administering universities are one of the most important advantages of the former.

The system in the US has only one academic qualification – doctoral, which allows the most gifted and industrious members of the faculty to gain much faster research and teaching independence; 'Professor' is only a post held at a university.

Another key element of organisational culture of American universities is the unwritten but fully applying principle that a doctorate is granted at a different higher education institution than the one where they graduated. Thus, there are no cases of academics who would not work at other universities apart from which their original one. High mobility of academics is a very important element of the American system.

The typical academic career involves moving after a few years to a more prestigious university until the so-called 'tenure' and eventually assuming a professor's post at a unit regarded by the academic as the most apt in terms of research opportunities, prestige and remuneration. The evaluation system enforces continual research activity and embraces not only publications but also exploitation of research results, the latter being regarded just as important as the former.

4. The idea of the entrepreneurial university

The concept was introduced by B.R. Clark (1998) in Creating Entrepreneurial Universities: Pathways of Transformation.4 Clark, having researched structures and efficiency of many universities, found that challenges facing academia these days are best met by relatively small units with flexible organisational structures; units that have been established recently, often in small towns. Naturally, the term "entrepreneurial university" is not linked to basic educational programmes or is not the equivalent of a business school. It refers to university authorities reacting in an entrepreneurial way towards signals from the environment or needs of companies and public administration as well as social needs. They do not create a hierarchy of organisational structures with heads of institutes fixed for a few decades. Instead they form task groups for tackling particular tasks, not only operating at the junction of education and application but also research task groups. Flexibility of organisational structures, together with managers administering team work fosters higher internal mobility and efficiency of action. The entrepreneurial university is a unit bound to the closer and farther environment, embedded into the local community due to faculty members participating in local clubs, associations, initiatives.

The European university is in contrast to the entrepreneurial university. It is a kind of isolated "ivory tower institution" where academic life goes at its own pace without connection to the outside world. Undoubtedly, improving efficiency in big public universities is the most difficult as their existence is guaranteed by public funds rather than quality of research or teaching. With a high degree of university autonomy, with extensive powers of professors' collegial bodies, it is far from easy to introduce management methods based on powers and responsibility of one person.

To survive, a private higher education institution needs to prove its usefulness for students, partners, the environment and the market. Due to the lack of long-term financial security the authorities of private institutions are forced to undertake entrepreneurial activities, to adjust constantly to the needs of the environment. to introduce organisational culture of an institution that is self-learning, open to perpetual change. What makes private universities act fast is having no guarantee of survival, the lack of a secure and stable funding source, the necessity to compete for students and to find research niches that would be attractive to the economic environment. What further slows the public university actions is slow decision-making by collegial bodies; traditional evaluation methods of academic achievement (publications are decisively more important than application of research results or teaching achievements) and faculty employment stability after they have obtained a particular academic degree or/and a post at a university, irrespective of academic activity pursued by them. Naturally, a university, an entrepreneurial university inclusive, is not an economic corporation. The rules followed and efficient in economic conditions cannot be simply applied to activity of higher education institutions. The evaluation period of a team or an individual member of faculty must take much longer. Efficiency cannot be measured in a simplified way. Yet, in the times of multiplied competition on the markets where the university partners operate, one also cannot apply indiscriminately measures that were appropriate a hundred or fifty years ago. The idea of the entrepreneurial university is an attempt to develop a model of a high-

er education institution which would fit the present times. Undoubtedly, from the perspective of local and regional development, a city or a region is more in need of a private rather than public university. The latter, with its existence ensured by public funds, will not be as open to getting involved in local affairs or in speeding up its activity. I believe that less developed regions in particular but still, those that employ a strategy of quick development and competition with the best, are not able to attain the intended goal if in the area there are not at least a few universities that could be described as entrepreneurial. It is self-evident in fact that the strategy of quick development cannot be solely based on investment of multinational corporations or the reliance on possible cooperation with universities from all over the world. Only universities located in the area and organically bound to the city or region may form the continuously functioning centre of local and regional development; the universities whose management and staff are also emotionally involved in the development of the city and region in which they live, especially in Europe where mobility of the academic world is not high.

5. WSB-NLU case

The description that follows presents an attempt to establish a higher education institution whose mission and strategy is based on the model of the entrepreneurial university.

The Higher School of Business - National Louis University in Nowy Sacz (WSB-NLU) has been one of the first private higher education institutions founded at the beginning of the political and economic transformation. The School was started from scratch, without public assistance. either financial or organisational. It was a private initiative and the first attempt to create an exclusive school of higher education in a small town. The initiator and organisers did not apply traditional solutions of Polish public universities but modelled the School on the programmes and organisational culture of the American partner. They also introduced (out of necessity as there was a lack of a stable funding source) managerial administration of the institution. What at the

early stage appeared to pose a serious threat (the lack of money, own academic staff or academic experience on the part of organisers) turned out to be a source of success. It was a necessity for the organiser to act innovatively. Such was the efficiency of the actions that already after 5 years of its existence the School began to head rankings of the best private business schools in Poland. In 2002 we managed to accomplish the investment in modern infrastructure (approx. PLN 50 million, with PLN 3 million share of public funds). WSB-NLU was not designed to be a big unit (and is not). At present the number of students is 2, 000 persons studying full-time and 2, 000 part-time. Added to that, there should be 3.000 full-time students and thus the overall number will increase to 5,000.

Until 2001 WSB-NLU was entirely focused on educating students. Since 2001 there has been a gradual increase in the amount of research conducted by the Faculty. The increase is gradual because of a conscious search for research niches (either totally new research areas or those not vet developed in Poland) and the highly limited financial resources for research. From the very beginning the School has been building strong links with the environment, the social as well as the economic. The substantial increase in external activity of the School (training, research and teaching innovations) started in 2004 after Poland's accession to the European Union. It seems that as far as the relations with the environment are concerned the breakthrough comes now in 2006.

In 2004 and 2005 the Institute of Advanced Management, a specialised unit of WSB-NLU, whose main goal is teaching and training of fee-paying persons (MBA and postgraduate programmes), submitted several applications to a number of training programmes financed by European funds – with success. In 2006 we are carrying out four big training and research programmes at the value of PLN 10 million, a sum that exceeds 50 % of revenue from tuition fees paid by students. Administrative handling of the projects is very arduous and bureaucratised. Yet, at present, it is virtually impossible to stay on the training market, especially, on the market of lifelong training programmes, without active participation in pro-

grammes financed by European funds. The programmes are addressed to all categories of enterprises and institutions and thus their impact on the market in question is profound.

The involvement, especially in big-scale programmes, allows us to train the personnel for handling future programmes as well as preparing new applications, all thanks to external funds. In two years there has been such an increase in the range of activity by the specialised units working on national and international programmes that the number of people employed in realisation of the projects has risen from 3 to 12 employees and 3 student volunteers.

At present WSB-NLU together with a listed company 'Optimus S.A.' (a computer producer established in Nowy Sacz at the same time as WSB) are about to enter the realisation phase of a big project, called preliminarily the Nowy Sacz Network of Innovation and Knowledge Transfer. The underlying principle of the project is to create a learning and innovative institution, whose organisational units, exceeding their time, will be focused on inventing new solutions rather than copying the existing ones. The Nowy Sacz Network together with partners gained will introduce new technologies or solutions as well as contribute to high-tech knowledge transfer due to the personnel trained to cater for the needs of the Network in WSB-NLU as well as access to new technologies and infrastructure needed for development.

The Initial Phase - Launching the Net

At this stage several groups (students, members of the Faculty and Optimus experts) will be bound to produce common effort. The project is to be funded by structural funds of the Integrated Operational Programme for Regional Development. The application has already been submitted under measure 2.6 of the Regional Innovation Strategies and Knowledge Transfer. During the initial phase, lasting 18 months, two modules launching the Net expansion will be created. Already at this stage the net cooperation and free information transfer, including the one collected during the knowledge project, will be taken into account.

Furthermore, effective modes of knowledge compilation and formulation as well as effective transfer of the knowledge to other groups in the project, yet located outside the Innovation Net will be elaborated upon. The central elements of the Nowy Sącz Network of Innovation and Knowledge Transfer will be a technological observatory and an innovation consulting centre.

The Technological Observatory will embrace high-tech experts, students of computer science, representatives of the WSB-NLU Faculty and technological partners. The observatory will collect knowledge on new technologies appearing on the market and new business solutions. It will collect and analyse business and technological know-how. The result transferred outside will be in the form of ready-to-use business solutions and innovative products elaborated within the Net, designed for the market. The Observatory will pass the acquired knowledge on technology and business solutions to the Innovation Consulting Centre, which in turn will implement the solutions directly with actors using its services.

The Innovation Consulting Centre will deal with need recognition among companies, organisations and local government units in the region. The recognition will be based on visits and direct observation of processes taking place on those sites. The solutions elaborated by the Innovation Consulting Centre will be transferred outside, to actors in the region, in the form of consulting services and assistance in introducing innovative changes.

The Centre will collect information about the market in the region, possibilities and needs of the enterprises on the local market and other institutions cooperating with the Innovation Net. The results of the Centre's activity are to be solutions that are applicable on the local market – consulting on innovation activity as well as ready-made products and solutions.

The Technological Observatory and the Innovation Consulting Centre will have a common area of activity due to which a simple, two-directional channel of knowledge transfer will be created between the two units.

Long-term activity - a further 25 or more years

The aim of the project's initial phase is to create a complex development plan of the Nowy Sącz Network of Innovation and Knowledge Transfer for the next 25 years as well as modules launching the process of the Net building. After the period of funding the project from the Integrated Operational Programme for Regional Development, the Nowy Sacz Net will have stable grounds for realisation of the ideas elaborated earlier, all assuming long-term functioning of the Net, such as the development of the Net, technologies, solutions and the region. WSB-NLU will ensure the knowledge transfer between existing teams and individuals joining them, e.g., students or representatives of new partners.

In the long run the project will begin to take on supraregional meaning due to the range of its activity and the level of innovation planned and carried out in the long-term.

It is assumed that at the first stage the Net will act mainly within the IT area. However, the structure of the institution is designed to allow fast expansion of its activity areas or their change.

It is planned that the Net will develop activity within the following:

- · Education (studies) and training:
- Applied research centres (focused on spin-off type of activity);
- Technological park (innovation, application, production) by companies set up or moving onto the premises of the park;
- IT incubator of enterprises and ideas, especially for students and the Faculty of WSB-NLU:
- A site for various initiatives which exceed basic activity areas of the WSB-NLU departments or tasks of companies within the Net;
- Centre for local and regional development having impact on the development of the local economy in Nowy Sacz and the whole administrative area (powiat).

New organisational units are to be created also within WSB-NLU:

- · IT Incubator of student enterprise;
- Centre for mobile technologies (preparing software for mobile telephony, PDA, GPS, etc.);
- Multimedia centre (preparing software for multimedia and computer games; conducting research on Internet TV and radio);
- Business assistance centre in IT technologies (net laboratory, configuration and administration of servers, hosting, collocations, organisation of information processing for external users, creating business e-platforms, consulting);

- Education assistance centre (software for education, educational portals, specialised workshop carried out under the auspices of the renowned Polish and international companies that are highly estimated on the market;
- · Innovation and creativeness centre;
- Internet laboratory.

At the moment possible development scenarios of the Nowy Sacz Net are being elaborated. All of them presume the Net to be a long-term project. In Poland there is no initiative of the type and in the world there are a few dozen only, out of which not all can fully use the potential of synergy between technological companies and higher education institutions.

The major goal of the WSB-NLU and Optimus project is to create a true entrepreneurial university, deeply embedded in the local and regional environment, fast and flexible in adjusting to the needs of the region. The undeniable strength of the project is the possibility to use two easily-identifi-

able brands 'WSB-NLU' and 'Optimus S.A.' which though local are widely known in the whole country, and both being, in a way, legends of the first ten years of the economic transformation in Poland.

Recapitulation

Analysis of European projects realisation and some experience in carrying out the project of the Nowy Sacz Network of Innovation and Knowledge Transfer demonstrates how important it is for the European Commission to elaborate quick and efficient mechanisms of support towards such initiatives. The system should assist individual and institutional enterprise as it is the only way to fulfil the main assumptions of the Lisbon Strategy. The key to success is a fast selection of applications and flexible support that enables making changes during the realisation phase (only then it is possible to build an organisation open to change).

ABSTRACT

The introduction presents the evaluation of the Lisbon's Strategy in its realisation and then correction. Particular attention was paid to European education which falls way behind the American counterpart. Moreover, it seems justified to enforce actions that work towards development of knowledge and innovation as described in the Lisbon's Strategy. Regional development depends on many factors; however, the author assumes that the most important ones are individual enterprise, innovation of the economy, education of the resident population, scientific research as well as efficient knowledge and technology transfer from theory to economic practice.

The most important factors that influence the effectiveness of the best American universities are enumerated. Furthermore, a claim is made that the entrepreneurial university would be the optimal solution in the European conditions. That type of university is not very big, well-organized and ready for changes. It is efficiently managed and firmly connected with the environment.

WSB-NLU in Nowy Sącz and 'Optimus', a listed company, introduced the project of the Net of Innovation and Knowledge Transfer in the Nowy Sącz region, based on the concept of the entrepreneurial university mentioned above.

Endnotes

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