

*Krzysztof B. Matusiak\**

## **ELEMENTS OF THE INTEGRATED SUPPORT MODEL FOR INNOVATIVE ACADEMIC ENTREPRENEURSHIP**

### **1. INTRODUCTION**

The increasing economic importance of knowledge, creativity, innovativeness, entrepreneurship and technology transfer is reflected in particular expectations connected with the mechanisms that integrate academic institutions into the economic sphere and with the creation of multifunctional relations with the business community. Thus, the modern knowledge-based economy generates qualitatively new challenges for the world of academia. The need arises to strengthen the integration of the so called knowledge triangle: research, education and innovation as the sector of research and development is seen as the driving force of the knowledge-based economy<sup>1</sup>. For many centuries the academic community remained generally on the side lines of economic processes, cultivating their own traditions and values. Currently, however, it has an opportunity to play an important role in development processes. The driving forces of the knowledge-based economy – creativity, innovations and entrepreneurship – create change fostering conditions that make the university one of the most important links of the modern economy. Several decades ago individual academic institutions took on new challenges, which brought benefits to the institutions in question and above all provided the value added for the whole society. The measures to implement the idea of entrepreneurial university gain in importance in these circumstances. This direction arouses a lot of controversy as it requires a new definition of the role of the higher education institution in the economic environment, which in turn forces the introduction of a new organizational model and a shift in the attitudes of the academic community.

The model of the elite Humboldt university that dominated for the last 200 years, based on the unity of academic research and teaching, should be

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<sup>1</sup> K. B. Matusiak, *Budowa powiązań nauki z biznesem w gospodarce opartej na wiedzy: rola i miejsce uniwersytetu w procesach innowacyjnych*, Szkoła Główna Handlowa – Oficyna Wydawnicza, Warszawa 2010, p. 7.

nowadays enhanced by the third function – academic entrepreneurship. Educational measures taken on a large scale, skilfully synchronised with other forms of incubation of innovative entrepreneurship, are the key area of support for academic entrepreneurship<sup>2</sup>.

## 2. APPROACHES AND FORMS OF ACADEMIC ENTREPRENEURSHIP

The origins of the new approach to the function of academic centres are to be found at American universities after the Second World War. The pioneering organizational experiments of the Massachusetts Institute of Technology (MIT) and Stanford University in their relations with the business community introduced the new standards that laid the foundations for the search of a new model of academic institutions functioning. In the new approach, market facilitation of research results becomes at least as important as education and R&D activity. The transformation into international centres of entrepreneurship and technology transfer, while maintaining the highest level of research and teaching, becomes a challenge for higher education institutions in the era of globalisation<sup>3</sup>. The activity in the area of business education and practical support for business start-ups leads to the development of the network of university-affiliated firms that often create very modern clusters, competitive on a global scale. As early as in the mid 20<sup>th</sup> c., a number of, mostly American, universities undertook measures in this area by developing the often small, provincial universities and colleges into the top, highest ranked schools (e.g. Stanford University).

The entrepreneurial university aims at the integration with the economy in order to find its place in the dynamic reality of the creative knowledge-based economy. The question remains open to what extent the university should take on the new challenges and draw closer to the economy without losing the control over exercising its traditional functions and academic tradition developed over the ages. It does not mean, however, that the university should become a "commercial enterprise", a device to carry out tasks that guarantee profits. The transformation of the university is carried out in five complementary directions<sup>4</sup>: 1) entrepreneurial university management; 2) human resources for the innovative economy; 3) entrepreneurship of students and university graduates; 4) transfer and commercialisation of technology; 5) academic spin-off companies. The start-

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<sup>2</sup> J. Cieślak *et al.*, *Edukacja dla przedsiębiorczości akademickiej*, Polska Agencja Rozwoju Przedsiębiorczości, Poznań–Warszawa 2010, p. 30–40.

<sup>3</sup> K. B. Matusiak, *Rozwój systemów wsparcia przedsiębiorczości: przesłanki, polityka i instytucje*, Wydawnictwo Instytutu Technologii Eksploatacji – PIB, Radom–Łódź 2006, (dissertation), p. 73–77.

<sup>4</sup> K. B. Matusiak, *Budowa powiązań...*, p. 181–184.

ing point is the improvement of the mechanisms of university management and the preparation of professional, entrepreneurially-minded staff. It is difficult to effectively teach entrepreneurship under the conditions that are far from the rules of modern management. The ability to operate effectively in the knowledge-based economy requires an efficient system of communication and influencing the environment. It is possible through a wide participation of the university in networks connecting enterprises, public and social institutions, *etc.*

The last three directions concern **academic entrepreneurship**, in the broad sense of the phrase. In the face of a certain confusion of terms, the concept of academic entrepreneurship as well as the closely related terms such as spin-off/spin-out companies should be defined at the onset. Originally, a narrow approach to academic entrepreneurship, equated with setting up spin-off companies, dominated in the western literature<sup>5</sup>. The key element of this approach is the fact that there occurs commercialisation based on the elements of intellectual property created at the mother university and protected in various ways. That is when a particular build-up of the legal, organisational, technical and ethical issues occurs. The forms of economic activity of academics, however, where there is no issue of intellectual property, are not treated in the light of the aforementioned definition as manifestations of academic entrepreneurship.

Nowadays the trend to approach academic entrepreneurship in a more comprehensive manner is observed (Fig. 1). It springs from the critique of excessive concentration on the issue of the creation of spin-off companies while manifestations of entrepreneurial activity of academic staff can be seen in numerous areas of cooperation between the university and the economic practice, which results in the commercialisation of research results. These include various cooperative forms of technology transfer based on licence agreements, conducting industry-commissioned research, common deployment *etc.* Many universities have distinguished academics that combine organisational talents with a real passion for deployment and are duly respected by managements of companies. It is, among others, due to their activity and measures which are different from the traditional academic patterns that many interesting projects are implemented within the framework of the cooperation between the university and the industry. The activity of this leader type of the cooperative forms of technology transfer should be treated as an academic variant of corporational entrepreneurship. It ought to be supported in various ways including also dedicated training in the area of management of complex technological projects in cooperation with the industry.

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<sup>5</sup> According to the leading American researcher of academic entrepreneurship S. Shane, spin-offs are new companies created by the members of the academic community in order to commercialise the technology that constitutes an element of intellectual property created in the mother institution. S. S h a n e, *Academic Entrepreneurship*, Edward Elgar, Cheltenham 2004, p. 4.

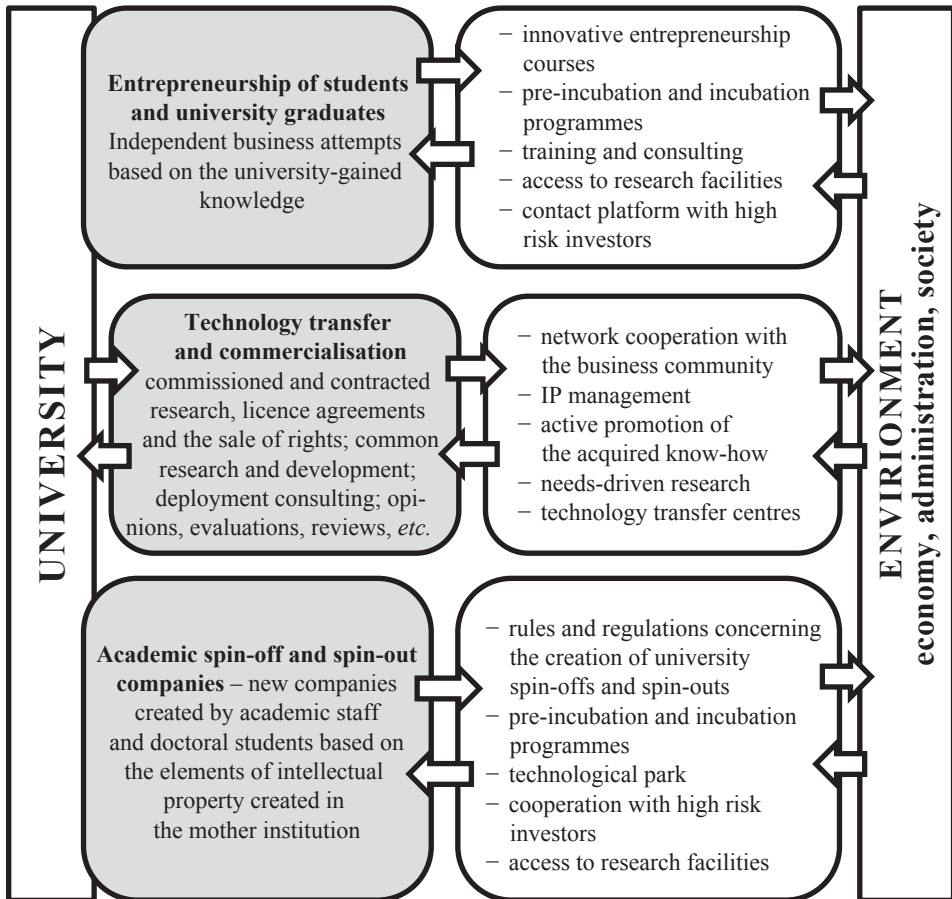


Fig. 1. Forms of academic entrepreneurship – the holistic approach

Source: the author's compilation.

Why do distinguished academics – leaders of deployment projects – rarely set up spin-off/spin-out companies and why do they decide against establishing a spin-off/spin-out company even if they are the authors of remarkable solutions protected by patents? Leaving aside the existing barriers of the formal and organisational nature, it should be noted that such forms of commercialisation of research results work out only in certain conditions. In other circumstances, cooperative forms will be more appropriate and these should be developed. Secondly, many distinguished academics-developers see their fundamental life mission in the field of academia and do not wish to abandon it by getting involved in running their own business. The choice made by this group of academics should be respected

by creating the conditions that foster cooperative forms of technology transfer. Treating them as manifestations of academic entrepreneurship is thoroughly justified due to the proactive, innovative and risky character of the measures taken<sup>6</sup>. Thus, the entrepreneurship of the academic staff is not solely realised in the creation of spin-off/spin-out companies. As a matter of fact, the leading western universities, even the ones boasting a large number of spin-off/spin-out companies, display a symbiosis of various forms of technology commercialisation.

On the other hand, academic entrepreneurship also encompasses various forms of support for business initiatives of students and university graduates. The idea of “Entrepreneurial University” or “Third Generation University” is materialised not only by the commercialisation of technologies developed in university labs but also by releasing into the market entrepreneurial (hence proactive, innovative and risk taking) graduates, some of whom will become real “creative destructors” in various sectors of industry.

The fact that the trend of entrepreneurship appears among the academic staff, on the one hand, and among students, on the other hand, creates significant implications as to the expected and reachable level of innovativeness. In the case of academics, it would be clearly recommended for the solutions implemented and technologies deployed to be novelties on the international scale. Applying a more realistic approach, it should be emphasised that in practice, from the economic perspective, the creative adaptation to the local conditions of the solutions already known and at least partially developed in other countries is very important.

The situation of companies set up by students and graduates is qualitatively different<sup>7</sup>. Thus, in practice, the level of innovativeness higher than the level of the companies that already operate on the market (local, regional) – resulting from applying in practice the business knowledge gained at university – is sufficient. In this case, innovations are understood as both technological and non-technological innovations (in the area of marketing, organisation, management, capturing new markets, *etc.*).

On the other hand, active support for students’ activity in the area of business start-ups that does not require the application of the knowledge gained at university (e.g. simple trade, services rendered on a limited scale, *etc.*) should be

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<sup>6</sup> The evolution of the term “entrepreneurship” can be presented here. Originally, entrepreneurship was equated with setting up a new business. Nowadays this term encompasses entrepreneurial initiatives (proactive, innovative, risk taking measures) in the existing companies. In the literature this variant of entrepreneurship is called corporate entrepreneurship.

<sup>7</sup> According to the Report of the Expert Group of the European Commission *Entrepreneurship in higher education, especially within non-business studies*, Brussels 2008, p. 18 “[...] the concept of innovative spin-offs is not particularly relevant for businesses started by students, who do not have formal links with the university. It seems therefore more appropriate to speak of innovative, knowledge-based businesses launched by students and university graduates”.

avoided<sup>8</sup>. Students and university graduates ought to be encouraged not only to build a competitive advantage for their own companies based on the knowledge gained at university but also to get involved in ventures planned from the start as ambitious, dynamic, hence predicting a rapid growth in employment and turnover<sup>9</sup>.

Achievements of many universities, particularly American ones, in the area of technology commercialisation (spin-off/spin-out companies, technological cooperation with the industry) and releasing into the market entrepreneurial graduates that achieve spectacular success in business resulted in launching various initiatives that supported this type of processes on the level of the university, the region, the country as well as on the supranational level. It should be emphasised that there is no universal model or organisational pattern for the programme of academic entrepreneurship development. There is a wide diversity of strategies, methods and instruments of activation developed at particular universities. An effective programme is in itself a bridge between academia and the market. The measures need to have an individual character that reflects the features of the academic and economic environment as well as the local industrial and cultural traditions. At the same time, various programmes that provide support for initiatives of particular universities are implemented in many countries on the regional, national and supranational scale.

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<sup>8</sup> Without going into details, it can be said that Poland has reached the level of saturation with the number of small business entities similar to the more developed European countries. Yet there are not enough dynamic and innovative companies in this population hence the key role of academic entrepreneurship. There also exists an important argument of the social nature. If well-educated university graduates are to engage in simple forms of business, they will take away this possibility from unskilled people, the unemployed, *etc.*

<sup>9</sup> In the community of researchers and economic politicians dealing with the issue of a modern, dynamic segment of entrepreneurship, there is a growing number of supporters of the idea that entrepreneurship and generally success in business does not necessarily have to be connected with a high level of innovativeness, which was the key element of the concept of “creative destruction” presented by J. Schumpeter. As a result, the category of *ambitious entrepreneurship*, including *high-growth*, *high-potential*, was introduced into the discussion concerning entrepreneurship and economic politics. High dynamics may result from implementing technological innovations in the area of marketing, organisation and management as well as from entering boldly international markets, which is also treated as a particular manifestation of innovativeness. Undertakings in the so called creative sectors, where business meets culture, art, design, *etc.*, are a particular area of ambitious entrepreneurship. On the other hand, the category of ambitious entrepreneurship encompasses undertakings that are not based on innovations but initiated by people who are infected with the idea of building “something bigger” and carry it out effectively. It is worth, however, drawing attention to the obvious synergy between various growth factors. Building a dynamic business based on the leading technology is likely to succeed if it is accompanied by innovative measures in the area of marketing, organisation and by entering boldly international markets. Dynamic, non-innovative companies in turn usually face growth obstacles at a certain stage of development. They can be overcome by undertaking innovative measures in the area of technology or marketing.

### 3. STAGES OF SUPPORT FOR ACADEMIC ENTREPRENEURSHIP

The considerations so far indicate that the activation of academic entrepreneurship requires a comprehensive approach – from the promotion of ideas and the encouragement to think in the market-oriented way through education and the development of entrepreneurial competencies as well as instruments of support at the start-up stage and the verification of ideas to the acceleration of academic spin-off/spin-out companies into the European and global markets. It means the need to undertake measures in five separate, yet closely connected from the programme perspective, stages<sup>10</sup> (Fig. 2).

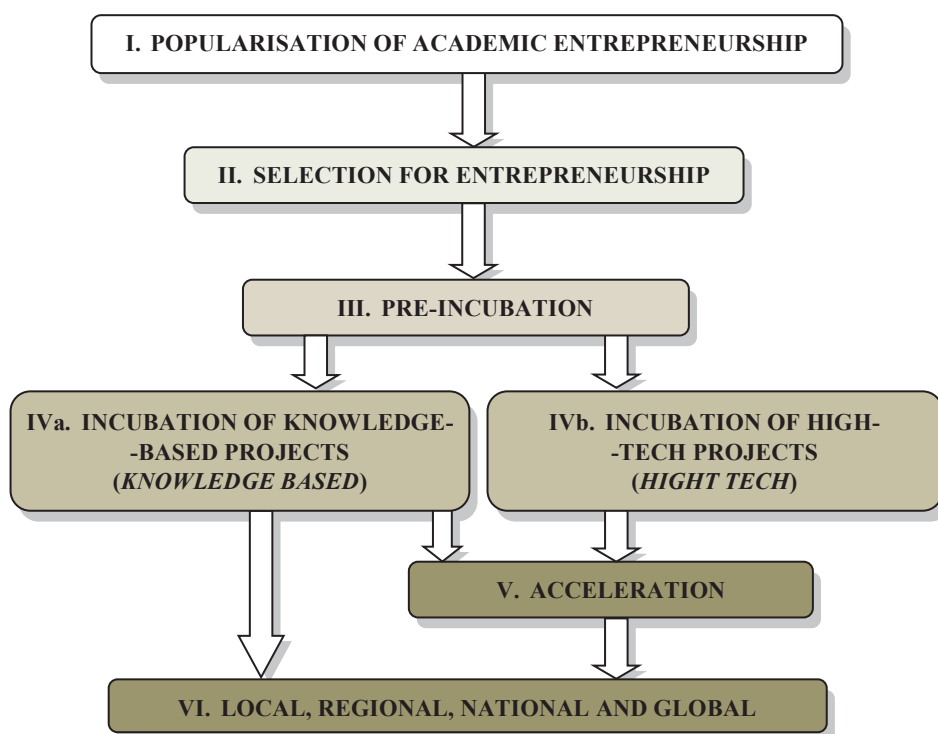


Fig. 2. Stages of support for academic entrepreneurship

Source: the author's compilation.

The first two stages “Popularisation of academic entrepreneurship” and “Selection for entrepreneurship” are mainly the domain of activity carried out by lecturers-animators of entrepreneurship. If entrepreneurship is the ability

<sup>10</sup> J. Cieślak *et al.*, *op. cit.*, p. 30–33.

of an individual to turn ideas into actions, it is a key ability for everybody and the main objective of education in the area of entrepreneurship on the university level should be the development of entrepreneurial capacities and mindsets.

The most inspired students with business ideas may proceed to the stage of pre-incubation, i.e. the “hatchery” of business concepts, where they can make use of consulting and advisory services, additional seminars, networking, *etc.* As the western experience shows, this type of support is provided by centres for entrepreneurship education or academic incubators, within the framework of promotional measures addressed to students and also on a larger scale to doctoral students, academics, as well as university graduates<sup>11</sup>.

The measures in this area, initially taken within the university, require at further stages external partners, such as incubators and technological parks or risk capital investors. The university needs to be prepared for these measures from the syllabus and organisational perspective. Particular stages of support should be coordinated, which requires the cooperation of university cells of academic entrepreneurship with the units beyond the university. The role of centres for innovations grows as the business concept and the entrepreneur (team) progress to subsequent stages. The role of social partners and public administration that take on the burden of creating support programmes and their management also increases.

The starting point for the development of academic entrepreneurship is the offer of a basic lecture course for students during the first years of their studies (e.g. “Introduction to entrepreneurship”) as well as information and promotion campaigns for the academic community concerning the attractiveness of the life and career path connected with running your own business. The objective is the dissemination of basic knowledge and information that relate to setting up and developing a company as well as innovative processes and technology commercialisation in the context of the universal economic knowledge concerning the functioning of the economy and the development trends. The lecture aims at stimulating students’ interest in the entrepreneurial career path and providing basic knowledge and skills, though it does not have to necessarily lead to the decision of engaging in business activity. Information materials that encourage creativity, thinking about your own company and further possibilities to develop entrepreneurial competencies supplement the lecture in the curriculum offer of the university and the cooperating innovation centres. The attractive form of presenting the knowledge about entrepreneurship is important to encourage some students to start up their own businesses as an option of post-studies career and, in a wider perspective, as an idea for life. These students (the candidates for innovative entrepreneurs) can be offered access to more advanced forms of assistance and support at further stages. The measures at this stage are taken by departments of entrepreneurship and innovation or more frequently by specialised centres for entrepreneurship.

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<sup>11</sup> K. B. Matusiak, *Budowa powiązań...*, p. 225–229.



The next stage encompasses the measures that allow to select out of the academic community people with entrepreneurial predispositions who are provided by the university with an advanced educational offer. A dedicated offer for the selected group of students, also doctoral students and young academics, interested in enhancing their knowledge in the area of entrepreneurship is created and encompasses various specialised measures such as:

- advanced lecture (e.g. “setting up your own business”),
- seminars and specialised workshops (e.g. “creativity and methods of creative thinking”, “protection of intellectual property”, “market analysis”, “financing new undertakings”, “entrepreneurial marketing”, *etc.*),

Encouraged by entrepreneurship classes, the most active students will want to develop their interests, gain knowledge, experience and contacts necessary to start up a business. The western experience as well as our own national experience indicates that there is the possibility to apply a wide range of methods and measures. The rapprochement towards practice should be initiated in the course of studies through inviting entrepreneurs as guest lecturers or through visits in innovative companies. Also cyclical meetings with entrepreneurs – who are often recent university graduates themselves, yet they can already boast successes in running their own innovative companies. Issuing a call for business plan competition within the university or department to select the members for the next stage of support is frequently the element that closes this stage.

The broadening of the target group by doctoral students and academics is an important element. The commercialisation of research results and the cooperation with the sector of enterprises requires proactive, risk-taking, entrepreneurial orientation from the faculty staff.

The pre-incubation is the stage of applied education in the area of entrepreneurship that encompasses work on preparations of business projects for launching a new company into the market. The business ideas selected in business plan competitions are assessed and improved from the perspective of market prospects. The offered services should enable the appropriate formation of competencies of the future entrepreneur and maturing of business ideas. At the stage of pre-incubation, the business idea matures and the future entrepreneur is formed. The analysed measures are carried out in pre-incubators and academic incubators of entrepreneurship created specially for this purpose. This stage is generally separated from the didactic activity and dominated by (depending on individual needs) various forms of research, consulting, training and information support. The advisory support of a specialist mentor within the framework of mentor programmes and assistance in funding acquisition is an effective form of support. The place for the company on the premises of the academic incubator is often an element of pre-incubation programmes.

The pre-incubation constitutes a form of transition from didactic programmes in the area of entrepreneurship to the advanced forms of support for new business ideas.

The measures and the offered assistance encompass the preparations for setting up a new business and an attempt at initial assessment of its market success. The interest in pre-incubation emerged worldwide in the 1990's and led to the enhancement of the didactic process by the opportunity to prepare for practical operation in the market and the verification of the knowledge and skills in the company. Thus, pre-incubators are a form of support for students and academics that prepares for the actual market activity. The academic community can be seen as the right breeding ground for realisation of pre-incubation projects due to the continuously developed and disseminated knowledge. Pre-incubation programmes within the university framework create special opportunities for supporting new business ideas through:

- consulting, training and information offer,
- access to university laboratories and research equipment, assistance in building a prototype, experiments and technical trials,
- assistance in providing protection for intellectual property, acquiring certificates that allow market access,
- mentor programmes – advisory support of the specialist mentor,
- conducting technical and market analyses on a sector scale,
- access to data bases of researchers and inventors, ideas, patents and technologies,
- assessment of market and commercial potential of the idea and funding acquisition.

University pre-incubation programmes encompass:

- promotion campaigns connected with entrepreneurship classes,
- university business plan competitions,
- training and consulting services for potential academic entrepreneurs,
- centres for academic creativity,
- creating a network of external contacts with incubators and technological parks, risk capital investors and alumni associations.

In the presented concept, the incubation starts at the moment of setting up a company by a student or an academic. In the case of projects that make use of the knowledge gained in the course of studies but are less technologically advanced, academic entrepreneurship incubator, which often operates in the virtual format (without providing premises to the incubated companies), steps in. *High-tech* companies are transferred to the technological incubator where, apart from the office space, they gain access to specialist equipment, laboratories, *etc.* As the undertaking progresses, if the need arises, further development of technological business is carried out on the premises of the technological park associated with the university.

The incubation encompasses various forms of support at the start-up stage as well as the market verification and consists of a comprehensive set of measures supporting the entrepreneur as well as the process of creating a new business from

the concept to its market stability<sup>12</sup>. The effectiveness of entrepreneurial initiatives, their intensity and range depend not only on the entrepreneur but also on the environment and the character of the economic system. The creation and the development of business are strongly dependent on the features of the local environment (innovative environment) in which the entrepreneur operates. The incubator creates optimal conditions for new enterprises. The premises combined with an offer of services that support the growth of start-up companies form the foundations of each incubator. Supporting the growth of start-up innovative companies encompasses:

- providing the appropriate space for business activity according to the company's needs,
- information and assistance in meeting formal requirements in the area of registering and running a business,
- reduction of start-up costs by access to common incubator infrastructure (computers, photocopying, the front office), preferential rent, *etc.*,
- access to training and consulting services packages,
- assistance in acquiring financing,
- assistance in entering international markets;
- generating the innovative environment (effects of synergy).

The measures in this area are carried out in academic and technological incubators that can be organised in the form of: 1) university units managed by a higher education institution and 2) non-university units that are, however, strongly affiliated with the higher education institutions and the academic community.

This stage ought to be completed within 2–5 years at the latest by the achievement of sustainable competitiveness, at least on the regional market.

Incubation programmes should be directed to two target groups:

- 1) students and university graduates that make use of the knowledge gained in the course of studies in their business attempts;
- 2) academic staff and doctoral students that make business attempts based on the results of the conducted research.

The acceleration is a proposal extended at the last stage to dynamic companies whose scale of activity exceeds the capacity of the incubator and is realised in technological parks. They are the place where the concentration of companies based on knowledge and R&D activity as well as support services combined with the venture capital causes effects of synergy and leads to the creation of the innovative environment. The modern business needs a dynamic environment that fosters the development of innovative competencies. The technological park first of all stimulates and manages the transfer of knowledge and technology between academia, companies and markets. It also adds value to companies through

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<sup>12</sup> The detailed description of incubation methods can be found in the publication of I. K o - w a l c z y k *et al.*, *Metody inkubacji projektów biznesowych*, Polska Agencja Rozwoju Przedsiębiorczości, Gdańsk–Szczecin–Torino 2011.

the provision of high quality services and high standard premises. In the proposed integrated model, parks operating within or near universities offer assistance in carrying out the dynamic strategy of the company that allows to build a competitive advantage on the national and global scale. The key elements of support usually encompass the measures in the area of:

- entering new markets, promotion and development of international contacts,
- providing an offer of specialised proinnovative services,
- creating a network of contacts and lending credence to the company,
- acquiring the capital for the company's growth,
- offering the possibility to conduct your own research and development activities.

The acceleration of innovative entrepreneurship is effective only in the creative environment combined with close cooperation and interactions with the world of academia. The main role of each park is to stimulate the expansion of innovative companies through access to facilities and specialist services packages, office, commercial and production space as well as developed investment land.

The measures in the area of internationalisation are so important that very often the ability to operate in the international context is the condition for innovation implementation. For many business ideas in the area of high tech, local markets and often the national market as well are definitely too small (small demand) for effective construction of a business model. In order to be profitable, a technological business needs to achieve the appropriate scale effect. This requirement arises, among others, from the need to finance further research and development activities. In this context, the threat of becoming enclosed within local/domestic markets, the so called specific country capture, is often mentioned. It leads to the so called deal killers of good production and technological ideas with a large development potential. Modern technological parks make overcoming these limitations possible<sup>13</sup>.

#### 4. CONCLUSION

The development of the entrepreneurial university means the inclusion of entrepreneurship classes into the didactic offer. According to the Bologna Process, entrepreneurial capacities and mindsets become the key competency of a university graduate in the sense far exceeding the creation of new business undertakings. It also entails shaping entrepreneurial mindsets necessary for effective

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<sup>13</sup> J. Cieślak, *Internacjonalizacja młodych innowacyjnych firm*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2011, and i d e m, *Wsparcie internacjonalizacji młodych innowacyjnych firm przez instytucje otoczenia biznesu*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2011.

functioning of the cadre of professionals in companies (corporate entrepreneurship, intraentrepreneurship), in public institutions as well as in the activity of social organisations (social entrepreneurship). For over 50 years in the USA and for 20–30 years at European universities there have been offers of classes and special educational programmes in this field. The offer that was initially addressed to business schools and departments of economics is consequently expanded onto all universities, technical, medical, agricultural, science, art departments, *etc.* At hundreds of universities single courses have evolved into a multi-stage systems of support encompassing: lectures, courses and training in the educational offer, pre-incubation programmes with consulting and mentoring as well as opportunities for the development of academic companies in incubators and technological parks.

There is a close correlation and synergy between teaching and the more advanced forms of support for academic entrepreneurship. The international experience indicates that implementing costly support programmes such as incubators or technological parks does not always bring satisfactory results due to the limited stream of attractive innovations and well-prepared candidates for innovative entrepreneurs. Educational activities, usually low-budget, can change the state of affairs in a major way. The most active students covered by the entrepreneurship training are not only inspired but also prepared to make use of services provided by pre-incubators, technological incubators and parks. The cooperation of lecturers and university innovation centres staff is particularly important at the point where didactics and the incubation of entrepreneurship meets. It means the need to integrate various links of entrepreneurship support. At the same time, effective implementation of educational programmes in the area of entrepreneurship on the whole university scale requires the introduction of specific organisational solutions.

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#### **ELEMENTY ZINTEGROWANEGO MODELU WSPARCIA INNOWACYJNEJ PRZEDSIĘBIORCZOŚCI AKADEMICKIEJ**

Przedstawiony artykuł poświęcony jest tendencjom rozwoju przedsiębiorczości akademickiej. W pierwszej jego części omówiono pojęcie oraz formy przedsiębiorczości akademickiej. Rozwój tej postaci przedsiębiorczości jest konsekwencją przekształceń uczelni wyższych oraz jej dopasowania do wyzwań współczesnego rozwoju gospodarczego. W drugiej części skoncentrowano się na wybranych zagadnieniach związanych ze wsparciem przedsiębiorczości akademickiej, a w szczególności: etapach działań wspierających inicjatywy przedsiębiorcze, czynnikach i modelach wsparcia przedsiębiorstw. Omówiono także kontekst międzynarodowy podejmowania innowacji i jego wpływ na postawy przedsiębiorcze w środowisku akademickim.