

## THE INNO-BROKER AS AN EXAMPLE OF AN INNOVATIVE PROJECT

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### **Abstract:**

An innovative project is a project whose objective is the search for novel, effective ways of solving problems which are encompassed by European Social Fund's (ESF) financing. The innovative project must be focused on research, dissemination and introduction of particular products to solve problems of individual target groups. In the framework of 3/POKL/PI/VIII/2012 call, Lublin Science and Technology Park JSC and Maria Curie Skłodowska University have been implementing the „INNO BROKER- a novel model of comprehensive approach to the needs of innovative companies” project which will run from 1<sup>st</sup> March 2013 to 31<sup>st</sup> August 2015. A strategy and model of educating inno-brokers, who will broker in Lublin macro-region, was devised in the framework of the project. The main tasks of inno-brokers include the acquisition of innovative technologies and solutions developed at universities in the region which can be applied in companies in the region and outside. In addition, brokers are to provide consulting services on innovation, identify research problems and find contractors to solve these. The Inno-broker project is an example of academic entrepreneurship, promoting the effects of education at universities and knowledge of active students and science-business cooperation in terms of satisfying the needs of innovative businesses. The objective of the paper is to present the Inno-broker innovative project. The idea and implementation of the project will be outlined. In addition, the features of the innovative project, its effects and inno-brokers' tasks and competencies will be described.

*Keywords: innovation, entrepreneurship, education, globalization*

# 1. THE ESSENCE OF AN INNOVATIVE PROJECT

An innovative project focuses on developing a novel product, solution or process. The project presupposes the existence of unsolved or partially solved issues of particular target groups due to the lack of specific tools or means. "The role of an innovative project is to search for new, improved means of action in order to solve particular problems. The innovative project aims at designing a way to solve a problem rather than solving the problem itself." (Wolińska, Dygoń, Siekiera, 2011, p. 16). The essence of an innovative project encompasses (Innovation ABC, p. 1):

- the final product- i.e. a model, tool, instrument, novel solution, approach to solving problems, a novel method of approach applied by and for the target group members. The final product constitutes the chief element, which makes up the key product of an innovative testing project. It must take shape of a particular form, e.g. a manual, an instruction, a guide, curriculum,
- target group- people, groups, circles who require new solutions to be developed. In case of innovative projects, the target group consists of recipients and users,
- empowerment- i.e. the principle of involving target group representatives, i.e. users and recipients, in the process of developing innovative solutions,
- dissemination- i.e. popularisation of information on project results and the final product among particular addressees. The objective of the dissemination is to facilitate and develop means for wider application of the product in practice by e.g. other entities,
- mainstreaming- i.e. introducing innovative projects' products into the mainstream of policies and practice,
- implementation in stages in case of innovative testing projects- such projects focus on research and development of a particular product, thus each project must be implemented in two stages.

In accordance with Human Capital Operational Programme, the objective of an innovative project is „the search for novel and more effective ways of solving problems encompassed in the European Social Fund (Guidelines for implementation of innovative and transnational cooperation projects in the framework of Human Capital Operational Programme, 2009, p. 14). Any project which conforms with "Guidelines for implementing innovative and transnational cooperation projects in the framework of Human Capital Operational Programme" will be considered as innovative. The guidelines dictate the fundamental project parameters in the following areas:

- scope- strictly defined subjects acknowledged by the Financing Institution, strategy analysis conducted by financing institutions, thematic networks and decision-making processes as regards the project, which constitute an element of the projects' quality management,
- time-frame- particular requirements as regards stages of implementation including minimum and maximum implementation period for stage I, dictated by testing and dissemination period's coordination in individual subjects,
- budget- pre-established and accepted increased expenditures connected with the project's implementation due to risks, the need for additional research and dissemination. Frequently, the budget includes non-standard costs which increase the cost of developing project's products (costs to results ratio).

The project's innovation is proven by its implementation in accordance with the guidelines for the innovative approach and project's life-cycle stages. The approach may be manifested in three overlapping areas or independently (Wolińska, Dygoń, Siekiera, 2011, pp. 46-48). The areas of project's innovation may touch upon the following:

- project participant- the project may address: 1) new, non-standard target groups (persons or institutions) who have not yet benefited from the support or benefited in a limited manner; 2) well-known and widely supported groups. In this case, the project offers modification of the previous support forms exclusively; 3) the project offers active support addressing the previously passively-supported groups,
- a problem whose remediation or solution is foreseen in the project- the project can address a problem which: 1) has not been identified, 2) has been identified but is considered non-significant in the national policy; a negligible issue, 3) has been identified, no intervention measures have been undertaken, 4) has been identified and studied, intervention measures exist but are sparse and insufficient and do not tackle the issue comprehensively. The measures are ineffective, thus insufficient,

- the new form of support or adapting the existing form to local, regional or national conditions may apply to: 1) implementation of novel, unidentified instruments and means (support forms). In the course of the project's preparation, the development of a new instrument and its testing must be planned; 2) application of instruments originating from practice i.e. these can be known and apply to other target groups and problems; 3) revision and perfecting of the existing methods in order to improve and widen their application to issues of the same target group.

Innovative projects may be of disseminative and testing type (Innovation ABC, 2009). The former focus on dissemination and inclusion of solutions developed in the framework of other initiatives into the mainstream of policies and practice. Such projects pertain to actions which aim at providing information on products and their advantages to the widest possible group of users, recipients and decision-makers in order to ensure the inclusion. Such actions are not equivalent with promotion per se, but rather, constitute surgically targeted information and educational actions addressing particular target groups. The actions pre-suppose active and conscious participation of recipients.

The implementation of an innovative testing project requires a novel idea to be tested. Representatives of target groups use the novel solution and assess its potential in the course of the tests. A report documenting benefits obtained from the application of the solution is developed. One of the significant features of the innovative testing project is the fact of its two-stage implementation. Stage I consists of the preparation which requires an analysis and diagnosis of the problem to be made and rules of implementation to be devised. The rules must take into account the specific aspects of a joint project. The stage is concluded with the development of an initial version of the innovative product and a strategy for project's further implementation. If the strategy is approved by the Thematic Network and financing institution, the next stage is launched, although formally, the period of strategy evaluation and coordination ought to be included in Stage II.

Stage II encompasses testing of the developed product or an analysis and evaluation of effects of the product's application (fulfilment of expectations vs. innovative aspect of the solution). If results of the analysis fail to satisfy and improvement of the innovative product is feasible, the ultimate perfecting of the product on the basis of tests and efficiency of application ought to be carried out. Eventually, if results of the project are satisfactory, it ought to be followed by disseminative and popularising actions. Each applicant must strive to include the novel solutions developed in the framework of the project into the mainstream of policies and practice.

## **2. THE INNO-BROKER PROJECT**

Lublin Science and Technology Park JSC and Maria Curie Skłodowska University have been jointly implementing the project titled „A novel model of comprehensive approach to the needs of innovative companies- INNO BROKER-“. The project was developed in the framework of 3/POKL/PI/VIII/2012 call and will run from 1<sup>st</sup> March 2013 to 31<sup>st</sup> August 2015 in Lublin macro-region.

The main objective of the project is “boosting the efficiency of actions aiming at enhancing business science cooperation as regards satisfying the needs of innovative companies in Lublin region by developing and implementing a new INNO-BROKER model until August 2015” (Dąbrowska, 2014, pp. 2).

The project is to diagnose and satisfy the needs of innovative companies. Innovation of the solution is manifested in the comprehensive character of inno-brokers' services. Brokers, familiar with the needs of businesses and current innovations on the market (offer of universities, sources and mechanisms of financing, legal protection of innovations, etc.), will provide advice and counseling in the field of companies' audits, establishing cooperation with a suitable university/ R&D institution and obtaining funds for financing innovations.

Moreover, swiftness, high quality and comprehensive character of the services provided in terms of technology transfer constitute added value of the project. Due to the fact that it is the company and its requirements who stimulate innovation, the inno-brokers' approach differs from the contemporary one. Up to present, it was universities and R&D institutions who were considered as the origin of innovation. The approach was based on the fact that innovative ideas developed at universities could be directly transferred into business. In addition, it was presupposed that knowledge transfer

infrastructure was the sole lacking element. However, the needs of companies remain to be satisfied or they are satisfied without the participation of universities and R&D institutions. Such approach hindered commercialization and limited companies' innovations.

The current solution differs from the previous approach in the way the business science cooperation is managed as well. The inno-broker takes over mediation between the parties replacing the in-situ structure responsible for commercialization. The company, along with its needs, constitute the starting point of the inno-broker's services. The project is to enhance business science cooperation, all in accordance with the theme of innovative testing projects". As a consequence, gaining novel and innovative technologies developed at universities in Lublin region and finding buyers among regional and national businesses have become the inno-brokers' fundamental tasks.

The Project will indirectly contribute the boosting Lublin macro-region's innovation by developed brokering. "The project was developed as a direct consequence of the low business science cooperation level in Lublin region. Analyses indicate that merely 1,2% of companies in Lublin region cooperate with innovation centers and 3% with universities. Approximately 13,6% of companies in the region introduce innovations in their production and in the region. The region's share in national R&D expenditures amounts to a mere 3,3%. Consequently, Lublin region ranks last but one in national innovation rankings".(About inno-broker project, 2013, pp. 1)

An online platform utilising intelligent search algorithms was developed in the framework of the INNO-BROKER project. The platform constitutes a tool bringing science and business together. Logging into the platform offers insight into the particulars of Lublin scientists' findings and allows innovative solutions with potential for implementation to be searched. The platform features an offer of research services provided by both R&D institutions and individual university faculty members. Moreover, research equipment available at Lublin universities and research institutes is inventoried along with its description and potential application. In addition, a start-up zone was developed. The zone offers opportunities of supporting novel ideas by offering assistance in transferring these to business.

The Inno-broker project was launched in 2013 and will be completed in 2015. Activities of the project form a two-stage process.

Stage I- preparation- encompassed (Dąbrowska, 2014, pp. 4-11):

1. Research and analysis (March-June 2013) of conditions and barriers in business-science cooperation (focus studies) and defining companies' needs and psycho-social barriers of cooperation.
2. Development of a preliminary version of the product (May-October 2013) as a result of teamwork (panel discussions). The teams designed models of the Inno-broker solution, especially in terms of information exchange.

Stage II encompasses the following:

3. Testing of the preliminary version of the product (January 2013-February 2015) consisting of:
  - recruitment of candidates for the position of Inno-brokers,
  - inno-brokers' training,
  - selection of 4 best candidates,
  - introduction of the developed model, implementation of Inno-brokers' tasks, developing contacts, conducting knowledge transfers, signing framework cooperation agreements between universities and businesses,
  - launch of the online platform.
4. Analysis of actual effects of the product's implementation (November-December 2014) consisting of:
  - five panel discussions with recipients and users present,
  - accumulation of data from the testing phase (opinions of users, recipients, observers, experts, surveys in order to evaluate strengths and weaknesses of the model), discussion on possible modifications.
5. External evaluation consisting of:
  - product's evaluation and comparison of the model with the previous approach as regards efficiency,
  - report supplied by a professional consulting company.
6. Final version of the product (May-August 2015) encompassing:

- development of the final version of the product,
- dissemination of the model and its inclusion into the mainstream of policies.

### 3. INNO-BROKER

In accordance with the project's intent, the trained inno-brokers will be employed in the structures of Lublin Science and Technology Park JSC and incorporated into the system of serving the innovative companies' needs. Inno-brokers will avail themselves of the infrastructure, contacts and experience of the Science Park and institutions cooperating with it.

Inno-brokers' general scope of duties includes: assessment of innovative needs, assistance in identification and establishing cooperation with R&D institutions, preparation of project proposals for external financing and project's accounting. While providing comprehensive services, the inno-brokers can use external experts specialising in e.g. business plan development, feasibility studies, technology audits.

Inno-brokers' offer encompasses comprehensive approach to innovation requirements of companies and R&D institutions. The offer includes: (Inno-broker offer, 2013, pp. 1)

- technology audits assessing companies' potential for the introduction of product, process and marketing innovations,
- search for novel technologies in order to enhance companies' competitiveness,
- search for international partners or buyers of innovative products,
- applying for EU and national grants in the framework of research programmes and managing the applications,
- providing information on possible national and EU financing opportunities,
- assistance in IPR.

Inno-brokers represent intelligent specialisations of Lublin Voivodeship: bioeconomy, medical and health-oriented services, low emission energy, IT and automation. Each of the brokers specialises in providing services to businesses and university faculty members representing particular fields of study (Table 1). In the field of bioeconomy, the broker provides services in (Inno-broker offer, 2013, pp. 2):

- planning basic and applied research and establishing interdisciplinary research teams tackling particular research problems comprehensively,
- developing compositions, assessing influence of production technologies and introducing new pharmaceuticals and cosmetics to market,
- application of systems biology, novel molecular biology and bio-IT methods and technologies in analyses,
- search for new bioactive compounds along with examination of their features and possible application in treatment and as food.

**Table 1:** Business and science clients of inno-brokers

| Field                                | Addressee   |
|--------------------------------------|---|
| bioeconomy                           | Clients representing biotechnology and biological and chemical sciences, biophysics, processing and food industries, bio-resources processing, molecular biology, renewable energy, genetics, cosmetics and pharmaceuticals industries, dietetics and food sciences, functional and special purpose foods, medical analysis, quality management systems and project management methodologies.       |
| medical and health-oriented services | Clients representing pharmacy, medical and related sciences, biology, chemistry, health sciences, processing and food industries, cosmetics industry, laboratory diagnostics, microbiology, technologies for chemicals and drugs synthesis, genetics, toxicology, pharmacology, pharmacognosy, physical therapy, rehabilitation, dietetics, radiology, pharmaceuticals' and probiotics' production. |
| Low-emission energy                  | Clients representing biomedical and materials engineering, mechanical engineering including vehicles, mechatronics, process and production engineering, computer design, forming processes, polymer processes, electronics and electrical engineering, architecture and civil engineering, renewable energy.  |
| IT and automation                    | Clients representing communications, media, social media, IT and ICT, automation and robotics, marketing, public relations, modern education, culture and arts- especially visual arts, film, design and fashion.   |

Source: own study

- developing and optimising processes with the use of analytical methods in the field of life sciences;
- implementation of certified methodologies of project management, especially the interdisciplinary ones.

In the field of medical and health-oriented services, the broker can offer services in:

- synthesis of new chemical compounds and drugs and assistance in clinical research,
- introduction and registration of new drugs and their distribution,
- developing new compositions of food supplements,
- comprehensive evaluation of pharmaceutical and chemical products' quality,
- biological and pharmacological research of active compounds and homogenous mixtures,
- development of herbal medicines;
- isolation of active compounds from plants with the application of modern extraction methods;
- study of isolated natural compounds' structures by means of spectral analysis and coupled techniques;
- matching medical science faculty members with pharmaceutical companies possessing R&D centres;
- optimisation of processes in pharmacies along with the development and implementation of novel and efficient ideas of their operation. Efficient management of medicine inventory along with the application of marketing instruments.

The inno-broker's support for businesses representing low-emission energy encompasses:

- implementation of renewable energy technologies (solar and geothermal systems, photovoltaic panels, wind turbines) and their integration with existing infrastructure of the client;
- enhancing companies' energy efficiency as a result of implementing energy-saving technologies and advanced control systems;
- design of novel devices/ products with the use of 3D design and rapid prototyping technologies (3D printing, advanced prototyping);
- establishment of interdisciplinary project teams in the field of biomedical engineering;
- development of engines running on alternative fuels and infrastructure for vehicles' refueling, including CNG and hydrogen;
- implementing electrical vehicles technologies and infrastructure for charging such vehicles with the application of renewable energy sources;
- researching intelligent materials used in modern civil engineering.

The inno-broker specialising in IT and automation provides services encompassing:

- development of modern external and internal communication systems as well as visual communication systems;
- development of communication strategies both in traditional and new media, including social media;
- searching for new applications of innovative solutions in the fields connected with ICT, automation and robotics;
- establishing contacts with designers and artists appreciating novel style and functionality;
- development of modern designs for devices, machines and products;
- design of smart houses with advanced home automation;
- establishing lasting relations between businesses, scientists and designers, establishing interdisciplinary teams of regional, national and international character.

Inno-brokers arrange the transfer of ordered knowledge to the economy.

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