

RESEARCH FOR BUSINESS

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ABSTRACT

Paper presents ton and business incubators, as supporting element for SME's growth. Beside the fache permanent process of research for business, its compulsory steps, the role of innovatiilities offered to SMEs, other benefits come from creating a business incubator, such as: developing innovative products, product design, prototyping, technological transfer and nevertheless, registration and exploitation of intellectual property rights, coming from the obtained products.

In order to be even more practical, we chose an example of a functional business incubator, ITA Pro-Energ, and showed the facilities that it offers to its eleven incubated SMEs, as well as their improvement on market position.

KEYWORDS: *incubator, technological transfer, business, sustainable, energy*

Introduction

The actual worldwide economic context forces SMEs, to adopt measures to enrich resistance to potential waves due to new arrangements of the actors involved - clients, suppliers, competitors, the state and government institutions.

Since the SME's are the providers for two third of working places, in Romania there is a permanent search for solutions in order to sustain them, by intensifying the contacts between Government, social partners, national bank and other factors (innovation and technological transfer network) that can contribute to defining a coherent politic for the field.

There are many factors that influence competitiveness, such as: material base, financial means, market information, skilled and competent staff, creative potential of human resources and expertise level of the company. Still, when you ask a manager about his business and the influencing factors, not many seem to realize that, somehow, not mentioning innovation, they leave out the most important instrument of development for their company.

Whether we are talking about developing new products or services or identification of the most efficient already existing methods of accomplishment, innovation brings added value to an organization. In the same time allows it to maintain or improve their market share.

Since innovation does not have the proper quotation in the life of a potential competitive company, we decided to emphasize its importance and that of those sustaining it, entities like Technological and Business Incubators.

Technological and business incubator "products and technologies for sustainable energy" ita – pro-energ

According to a definition of the European Committee, a Technological and Business Incubator is a place where, in a limited space, new created companies are concentrated. The incubators' objective is to increase, for these companies, the chances to grow up and survive time. This objective can be accomplished due to the supplying of modular spaces with common services (copiers, communication services, and computers) and an enrolment for specific services (production spaces having modern technology). The accent essentially is on local development and creation of new jobs, technological orientation coming second.

The Business Incubator represents a property initiative which assures a small office and/or manufacturing units for new or young companies. It usually assures a flexible work space for accessible prices, common services and direct affairs consulting, access to specialized assistance (such as support in R&D and risk capital) [5-9].

Business Incubators and Contractor Supporting Services help people to become independent due to their own small business. Contractors are persons who recognize the opportunities. Once an opportunity is identified, the contractor's action line will be drawn. In other words, Business Incubators promote an environment where the new business can develop.

Business Incubators transform an idea into an opportunity. Once the idea is moving, the contractor's way is open and it's time to look for the working instruments. These instruments include business analyses, management, marketing and technological support. They also include the business software, communication skills and presentation means.

The Incubation and Technological Transfer Program aim is to stimulate the sub-products (spin-off) and applications which develop the newest technologies in different research fields, all these in the actual context of R&D activities. One major objective is represented by the assurance that SMEs having no technologies now have opportunities to easily use advanced technologies. Another objective is to support the technologies' renewing and to help technology developers to learn from other sectors. Beside the spaces, the assistance includes affair's presentation inside a network dealing with business and technical consulting that promotes legislation in the field, marketing, engineering, design, relationships with financial institutions, access to universities' resources and new business opportunities in cooperation with other incubator's clients.

In order to become one of the selected potentially valuable businesses, assisted within an incubator, a company is submitted to a rigorous analysis. Its stages are: the analysis of the economic potential to be incubated; the selection of the incubated, depending on potential, interests, the activity field; incubation with a coherent and steady program of support / collaboration activities; making of the product in the phase of prototype; accreditation and technology transfer; consultation and logistic support; transfer from incubation to independent activity.

An example of well functioning business incubator is The Technological and Business Incubator "Products and Technologies for Sustainable Energy" (ITA Pro-Energ), build within "Transilvania" University of Brasov. It respects the Romanian G.D. no. 406/2003 and can assume obligations only to accomplish its goals and meaning. It's certified to work since February 2008, by the Romanian National Authority for Scientific Research (ANCS) and the Ministry of Education Research and Innovation (MECI).



Figura 1 ITA Pro-Energy Headquarters

ITA Pro-Energy is affiliated to: ARoTT – Romanian Agency for Technological Transfer; RENITT – The National Network for Innovation and Technological Transfer and an active participant in an international consortium that belongs to BISNET network, affiliated to the European Community.

It was created to initiate and develop innovative companies, based on advanced technologies in the field of Sustainable Energy, especially in: industrial processes' energy efficiency, renewable energy systems and buildings' energy performance.

The strategic goals are:

- Consolidation of relations between the university and the economic environment to increase economic competitiveness in the field of sustainable energy at level of Region 7, especially for SMEs.
- Increase of the rhythm of implementation of innovative results due to enforcement of loading advanced technologies for energy efficiency, for buildings' thermal rehabilitation and for developing renewable energy systems by the economic environment.
- Efficient use of economic and human existent potential inside the university and close geographic area, its orientation toward advanced technologies in the field of sustainable energy.
- Development of competence level and entrepreneurial spirit, especially for young people from the university, and support for physical implementation of innovative ideas, limiting in this way the intelligence exodus.

Daily activity consists of:

- Incubation activities for investments and business;
- Activities of technological transfer and entrepreneurial formatting;
- Promotion of inventions and innovations;
- Development of entrepreneurial spirit to the specialists community, researchers, teachers, designers, students and also the stimulation of private initiative;
- Attraction of private investment in the field of research-development, creating new jobs in small companies;
- Knowledge dissemination – organizing seminars, workshops, demonstrations;
- Consulting in business – analyses, offerings, partnerships assurance,

promotion etc.;

- Specialized assistance – investments at product level, increasing efficiency for time to market;
- Innovative ideas promotion by means of projects [5], training for projects editing, getting finances due to projects, partnerships assurance, promotion etc.;
- Expressing of strategies for cooperation with local, regional and national authorities;

• Assurance of collaboration relationships with the staff of "Transilvania" University of Brasov, ANCS and research departments from the University.

Following its goals and the very essence of a business incubator, ITA Pro-Energ offers its incubated SMEs all sorts of facilities, helping companies to start-up and evolve, preparing them for the most important confrontation, that with the real, competitive market.



Figure 2 Modular spaces with common services

Due to its activities, besides common spaces, provides:

- accomplishment and promoting of activities in the field of sustainable energy;
- partnerships building and financial incomes through grants;
- logistic support for incubated companies and partnerships created in the national industry;
- prototyping and micro-production in the sustainable energy's field;
- testing and homologation for products and materials in the sustainable energy field;
- presentation of products, systems and results at fairs, exhibitions, symposiums and / or publishing of pornographies and scientific paper works;
- promotion of offers and necessities of incubated companies, innovations, inventions and technological transfer requiring systems through its own network and also through partnerships, at national and international level;
- the support needed by SMEs to remain successful in the competitive environment;
- human resources improvement, training courses, dedicated software; a company's level mainly depends on the company's accessibility to competitive human resources.

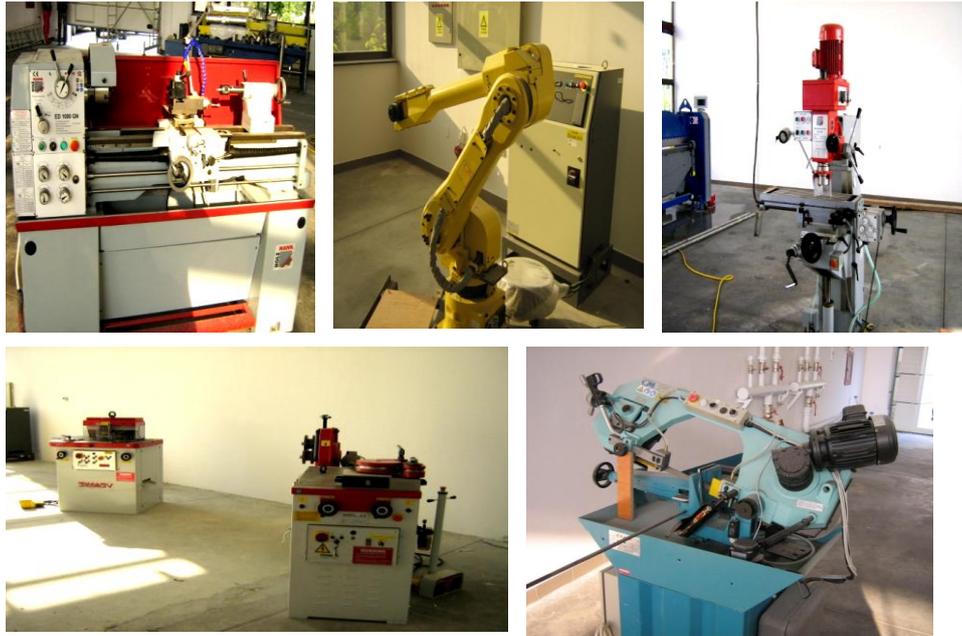


Figure 3 Logistic support offered, performing machineries with grate prototyping capabilities

In present time, there are 7 real incubated SMEs and 4 virtually incubated ones. They all benefit from the facilities offered by the incubator and beyond any reasonable doubt, have developed, proved themselves on the market already (although the time since incubation started is quite short) and most definitely will maintain their share market in the future, if not conquer more and more of the specific activity field layer.

As incubated companies and activities objects there are:

○ *S.C. ECO TECHNOLOGY S.R.L.*

Design, production, implementation of hydro-energetic systems.

○ *S.C. THERMOFIX S.R.L.*

Design, selling, putting in order, maintenance, equipments for alternative energy (solar panels, PV panels, heating pumps, afferent equipments).

Design, and execution buildings, civil and industrial installations.

○ *S.C. ORIENT EXPRES S.R.L.*

Design, selling, putting in order, maintenance for air and powders transfer equipments, equipments for alternative energy.

Design and execution of civil and industrial constructions and installations.

○ *S.C. JIRMAN ENGINEERING S.R.L.*

Design, execution and implementation of wood houses and components.

○ *S.C. ELETTRONIKA RESEARCH S.R.L.*

Design, execution and implementation of digital and analogical systems in telecommunications, personalized software, satellite telecommunications, research and develop DVBT2 apparatus and ATSC, control of intelligent mechanical systems for alternative energy.



Figure 4 Some innovative products

As virtual incubated companies there are:

- **S.C. REGAL AMESER S.R.L.**

Design, execution, implementation for wind energy systems.

- **S.C. IDTECH S.R.L.**

Design, execution, implementation for civil and industrial constructions and installations.

- **S.C. CAMIRO ENGINEERING S.R.L.**

Design, execution, implementation for mechanical couplings with industrial practicability.

- **S.C. TECHNOLOGICAL, INVENTION AND BUSINESS CENTRE S.A.**

Design, execution, implementation for hydro and wind energy equipments, PV panels, prototypes. Regional Center for IPR, agreed by OSIM and EPO, partner with IP Department in Transilvania University of Braşov.

Conclusions

The research for viable businesses is a risky and exhausting job, but has a huge final reward: economic success.

The existence of business incubators near universities, research institutes, R&D platforms, definitely stimulates entrepreneurial initiative, improves the innovative spirit, and contributes to regional technological development and economic growth.

Big companies have their own resources, but they are distant in assuming the risks that comes from a quick development of the innovative field. SMEs are more flexible and, interested in sustaining innovative activities but, they have no human, material or financial sufficient resources that are vital for innovative process's ignition.

Through their services, the business incubators are a real supporting instrument for new-born SMEs, hopping to evolve to the rank of recognized competitiveness elements on the market.

The wordy example to be followed, ITA Pro-Energ, offers today to its incubated

SMEs modern location, offices endowed with all needed facilities, training, consultancy (including on intellectual property rights), financial facilities, access to the micro-production and testing infrastructure, prototyping and micro-production workshop, modern manufacturing line for products in the field of sustainable energy, testing – homologations laboratory, material testing and characterizing laboratory,

What is not to be forgotten, since is very important for the entire economy, is the opportunity to technological transfer, TO/TR technologies or products. ITA Pro-Energy has directed its effort to perform this important operation especially in sustainable energy field, alternative solutions for heat pumps, wind turbines, PV panels.

References

1. Atti, G. *Cheia succesului în afaceri 500+*, Editura Bravox, Braşov, 1992.
2. Negoescu, Gh. *Risc şi certitudine în economia contemporană*, Editura Alter-Ego Cristian, Galaţi, 1995.
3. Piţurescu, I. *Incubatoare de afaceri, Parcuri ştiinţifice şi Tehnologice*, Editura Promotel, 2005.
4. Spica S., *Directory - Science Park and Innovation Center Association*, WEINDLER Buchverlag, Berlin, 2001.
5. Duff A., *Best Practice in Business Incubator Management*, Booragoon 6154, Western Australia, 2000.
6. Naum N., Bala G., Năstase G., “Centre de Inovare şi Afaceri”, În: *Revista de Inventică şi Economie*, nr.23, 1998.
7. Piţurescu I., *Contribuţii privind implementarea Incubatoarelor de Afaceri în industrie*, Teză de doctorat, Bucureşti, 2006.
8. Cosic, P., Dukic, G. Journal article reference. *Journal of MOTSP*, 2009, vol. 1, no.1, p. 1-5
9. Baric, G. “Article in conference proceedings”. *Proceedings of MOTSP 2009*, Sibenik, June 2009, p. 20-26.
10. Dubreta, N., a.o. *National parks in Croatia*, Publisher, City, 2009.
11. Săvescu, D. *Technological and Business Incubators, a good opportunity in regional development*. Proceedings of 1st International Conference, MOTSP, Sibenik, Croatia., 2009.
12. Săvescu, D. *Technological and business incubators, a good opportunity in developing the technological regional transfer*. The 2nd Conference on Sustainable Energy, Section 4, Braşov, 2008, CD-Rom,
13. Săvescu, D. *Some aspects regarding the relationship between SMEs and the innovation process*. The 2nd Conference on Sustainable Energy, Section 4, Braşov, 2008, CD-Rom
14. Săvescu, D. *Regarding on a new concept in product design*. Proceedings of Tehnonav, Ovidius University Press, Constanţa 2008, CD-Rom, pp. 688-691.
15. Săvescu, D. *Incubatoarele tehnologice şi de afaceri, motoare în dezvoltarea transferului tehnologic regional*. Simpozionul naţional cu participare internaţională „Durabilitatea şi Fiabilitatea Sistemelor Mecanice”, editia I, Tg. Jiu, 2008, pp. 395-402, (paper presented in plenary session).
16. **, *Ghid de lucru pentru intermediarii care sprijină transferul tehnologic la nivel local în România*, Sussex Technology Transfer Centre Ltd., 2006.
17. **, *Stimularea Cererii de Tehnologie*, Comisia Uniunii Europene, Program PHARE, 1996.