

Selected Innovative Technology Parks and Technology Transfer Centers

Below we provide some informations about selected TTCs in Poland. Three of them are emerging ones: Warsaw, Poznan and Bialystok. One is well established: Cracow. A comprehensive Isit has been sent to Paolo by Joanna.

Wielkopolska Centre of Advanced Technologies in Poznan WCAT

Multidisciplinary Research Centre of Technology and Knowledge Transfer

In our opinion, this will be an exemplary TTC. This is because of:

- **Outstanding personalities of the key players,**
- **Collaboration of strong partners,**
- **Location: on the territory of the University Campus, and close to the Poznan Science and Technology Park with the group of incubators for innovative spin-off firms.**
- **Rapid economical growth of the region**

WIELKOPOLSKA REGION Poznan is the third largest university centre in Poland. The city of Poznan is classified as the third strongest centre of scientific research and education in Poland with the number of research workers reaching a 16 thousands, while the number of students - over 140 thousands.

WCAT in Poznan is the first centre integrating the whole scientific community in the Wielkopolska District basing on excellent research in the field of advanced technologies of (nano)materials and biomaterials.

Established in 2006 Consortium consist of 5 Poznan State Universities: Adam Mickiewicz University, University of Technology, University of Life Sciences, University of Medical Sciences, University of Economics and 4 Institutes of the Polish Academy of Sciences: Bioorganic Chemistry, Genetics of Plants, Genetics of Man, Molecular Physics; 2 R&D Institutes: Institute of Natural Fibers and Institute of Plants and Herbal Products; Poznan Science and Technology Park – Adam Mickiewicz University Foundation and City of Poznan.

Expected start of WCAT is year 2013.

Main objectives

- Create a multidisciplinary research centre combining the best experts in exact, natural and technical sciences who would work on design and development of unique (nano)materials and biomaterials of wide use.
- Integration of the Poznan scientific community of high intellectual potential to bring into a centre of high impact on the regional and international economy.

The aims of WCAT are: realization of original ideas in chemistry formulated in cooperation between the chemists specializing in synthesis and the recipients commissioning the target products of specific properties along with design and

development of technologies of their manufacturing and selection of the optimal products for their commercialization under conditions of Polish economy.

Advanced chemical technologies

- Design and development of original synthesis of chemicals and biochemicals (also agrochemicals) - fine chemicals and chemical specialties
- Synthesis of monomers and additives to polymer materials, modification of natural origin polymers and synthetic polymers
- New generation of bio- and nano- materials and their precursors
- Functional materials (bio-compatible and biodegradable with tailored properties)
 - thin films and surface coatings
 - materials for therapeutic and diagnostic application
 - agrochemicals
 - pharmaceuticals
- Polymer and carbon nanocomposites and composites in the areas of energy creation storage and fuel cell technologies
- Intelligent materials with tailored optoelectronic, mechanical and magnetic properties for application to electronic devices (organic electronics)

- Advanced technologies of their manufacturing for the needs of optoelectronics, ceramics, medicine, pharmacy, agriculture and many other areas
- Formulation of the technological backgrounds for a wide range of applications of bioorganic chemistry, molecular biology and biotechnology in health protection (in molecular and cellular therapy and medical diagnostics), agriculture and food industry
- (DNA tests in plant cultivation and animal breeding, food product and fodder additives, biodegradable packing materials, etc.)
- New technologies and biotechnologies for multicomponent products for agriculture

Industrial biotechnology

Conversion of plant biomass into new generation of biofuels and bulk & fine chemicals

- Novel microorganisms and enzymes for industrial bioprocesses
- Metabolic and genetic engineering for improvement of industrial microorganisms
- New robust strains resistant to stress under process conditions
- New bioreactors and technological devices for bioprocessing
- Bioprocess engineering , modeling and scale-up of biotechnological processes
- Innovative downstream processes for separation, purification and concentration of biological substances
- Development of new technologies for biosynthesis, biodegradation and biotransformation processes using microorganism, tissue cultures and enzymes

Medical Biotechnology with animal facility

- Analyses of cancer genetic background

- Development of molecular targeting and cellular therapies of cancer, cardiovascular and neurodegenerative diseases
- Construction of innovative genes encoding therapeutic anticancer proteins
- Preclinical research (GLP)
- Manufacture of biotherapeutics (GMP)

Projects in progress:

There is well-developed cooperation between research groups of all consortium members illustrating the really multidisciplinary character of WCAT in the future operational phase (after 2013), e.g. current projects realized by at least 3 WCAT Consortium Members and co-financed from European Regional Development Found carry out within the confines of Operational Programme Innovative Economy 2007-2013:

- Silsesquioxanes as nanofillers and modifiers of polymer compositions,
- Biotechnological tools for obtaining varieties of cereals of enhanced resistance to drought,
- Biotechnology conversion of glycerol to the polyols and dicarboxylic acids,
- New bioactive food products of programmed health promoting effects.
- New bioactive food with healthy properties programmed

Technology Transfer

Center will cooperate with the R&D centers of the Polish and European Concerns, but of key importance for the transfer and commercialization of the new technologies is localization in the neighborhood Poznan Science and Technology Park with the group of incubators for innovative spin-off firms. The incubators and the firms are the necessary link needed for effective transfer of the technologies of new materials to technology-industrial parks and high-tech industry.

Topics covered will include: determining socio-economic impact, site-selection, legal and governance issues, financing, project planning and construction, recruiting specialized staff, and strategic planning (upgrades, partnerships, technology transfer).

It responds to a number of developments in European research infrastructure (RI) management, including the ESFRI Roadmap, the ESFRI regional issues working group, the ECRI conferences and the European Research Area (ERA) Board.

- The principal aims of this proposal are to train a group of new RI-managers (with a particular emphasis on managers from the new member states) in a number
- of key practical areas relevant to establishing and managing RIs of pan-European and international importance, including both single-sited and distributed
- infrastructures in both the physical/natural and social sciences.

Poznan Science and Technology Park Main activities

- Research and development services
- Science – economy relations

- Business entrepreneurship, including supporting and giving space to innovative companies
- Consulting, information and training services for enterprises and intermediary institutions
- Cooperation and consultancy connected to construction of strategy and development documents on innovation policy, research results commercialization, parks activities (on local, regional and domestic level)
- Databases creation (companies and R&D institutions)

First in Poland High Technology Incubator „Materials and Biomaterials” and „Information and Communication Technologies” was already established in 1995.

Project objectives

- creation „entrepreneurship friendly” environment for young researchers
- creation facilities adapted for high technology spin offs /start ups
- decreasing financial risk of starting new business
- promotion entrepreneurship among young Researchers

Summary of project’s objectives:

- Integration of Wielkopolska scientific community in the field of advanced technologies –(nano)materials and biomaterials
- Multidisciplinary research in the field of chemistry, physics, biology, biotechnology and materials science focused on new technologies of materials and biomaterials
- Transfer of technology to industry and support of incubation process of knowledge based spin-off’s.

Science and future prospects

The design and work of the Centre of Advanced Technologies has every chance to realize its mission at the high international level on the basis of recent technologies in the fields of key importance for sustainable development of the region and the country.

Based on the presentation accessible on the internet by Prof. Bogdan Marciniak, Adam Mickiewicz University in Poznan, Poznan Science and Technology Park- Adam Mickiewicz University Foundation, June 16-17, 2010, http://erifid.eitplus.pl/index.php?option=com_rockdownloads.

Innovative Park Celestynow - Unipress, Institute of High Pressure Physics, Polish Academy of Sciences

We mention this Park, because we are partner in it.

It is a big challenge, since our institute is not very big but considerable resources need to be mobilized.

The main motivation is to accelerate commercialization of our technologies. In the past we were very successful in generating spin-offs, but at present times, it is necessary to have an infrastructure that will help to bridge “the valley of death”. We intend to develop advanced prototypes of technologies to the level, that they will attract investors.



In 2007 IHPP PAS started realization of the Innovative Park Unipress in Celestynow near Warsaw. The main initiator of this enterprise was Prof. Sylwester Porowski, Head of the Institute at that time. There are two projects from Regional Development Funds which will cover the expenses of building the first objects and launching first activities of the Park in 2015.

1. Main goals

Idea of the PARK is based on over 20 years lasting IHPP' experiences in commercialization of advanced technologies being the results of own research investigations.

The main aim of the project Park it is commercialization of technologies which were elaborated in Institute or in cooperation with Warsaw Technical University, Consortium of Shortwave Photonics or AGH University of Science and Technology. Park Infrastructure will be also available on the commercial bases for the companies active in the fields close to the main scope of the project.

Very attractive localization and Innovative Park area designed according to high European standards will be optimal for economical activity based on novel technologies.

Modern Park's Infrastructure, tailored for established companies and with the access to professional services will provide the place where science can meet business with profit for innovative growth of Polish economy.

2. Technical infrastructure



The Park will be located about 35 km from the centre of Warsaw. On 6 ha area there will be 20 objects build for future companies willing to join the Innovative Park Celestynow.

The existing buildings including modernistic villa and Laboratory for Pressure Forming of Engineering Materials will become the functional part of Parks' Infrastructure.

In 2007 the architecture plan was elaborated. There are planned five laboratories and also the space for production, conference rooms, offices for business companies and advisory services. Technical Infrastructure includes availability of all kinds of media as well as the comfortable access by car.

3. Function

The main goal it is to foster launching and organizing of new enterprises using novel technologies by:

- taking part in establishment of new companies as partner and co-investor,
- renting spaces for laboratories, production and offices,
- offering open access to financial and legal services,
- helping in receiving P&P Funds ,
- helping in promotion and market examination.

Thanks to research investigations ready for application, Institute of High Pressure Physics PAS helped to establish 6 Spin-offs so far and there is now about 10 ready technologies which can be a base for next 10 spin-offs.

The following criteria will be applied for the selection of new technologies, that be developed in the Park until the application stage:

- intellectual value assessment and particularly very high level of technological solutions,
- stage of research advancement and it's commercialization value,
- analysis of potential risk and definition of end-users,
- motivation and determination on success of inventors,
- necessary scale for support of the project,

Technologies which will be chosen should have very advanced faze of laboratory investigation and they need to be developed to the industry technology faze. The key technological solutions are patented.

All this enterprises are focused on application results, which will change commercial potential of IHPP PAS in the future.

Text by Jerzy Masiak, translated by Joanna Sobczyk

Bialystok's Science and Technology Park

We mention this park, because it is in a relatively less developed region of Poland (North – East). However, the local community is very united, and ambitious. Contrary to the two above listed, the park is much more industry oriented. It is expected, that the initiatives settled there will be able to contribute to its economical growth relatively soon, and be able to cover the mantainance costs. This and innovative character are the main ideas.

Bialystok's Science and Technology Park was established to foster development of local innovative companies and build the entrepreneurial spirit and attitude between students, graduates and scientific workers. Thanks to modern infrastructure, easy accessible economical and legal knowledge and worldwide connections, **BSATP'S** supports development of enterprises based on novel technologies and helps to find investors. Another purpose it is strengthening intellectual potential of the city and region by ending the exodus of well educated young people as well as launching the cooperation between companies and academic scientific centers.

The President of Bialystok. **Tadeusz Truskolaski** , associated professor, was the main initiator of establishing Bialystok's Science and Technology Park. And that is why on **28th July 2006** the intentional letter was signed by main regional authorities and high education institution's representatives as well as representatives of Regional Development Founds. The present Director is Mrs Jolanta Koszelew.

Technological Incubator and Technology Center build up the Infrastructure of Bialystok's Science and Technology Park .

Technology Incubator and BSATP Administration will be the heart of the currently constructed Bialystok's Science and Technology Park. It is going to serve the purpose of administration and BSATP development related logistics centre as well as give support in establishment and development of high-tech companies through preferential offers of already equipped office and commercial space.

Incubator helps young entrepreneurs at the beginning of their career, offering them economical rental of offices and meeting spaces. Soon the offer will include also advisory services and focused trainings. Entering the Incubator is possible after an official approval of an application form which is done by the main authorities of the Park's administration. The assessment has on purpose the directions of future development of whole the establishment. Preferred are the most innovative sectors like for example: IT, biotechnology, pharmacology and nanotechnology. Innovativeness and commercial potential of enterprise, as well as activity in preferable fields of science, cooperation with universities, neighbors and also positive influence on natural environment and local or regional economy are the most important for the assessment of application merits. There are a lot of benefits from entering the Incubator; the society build by creative, open-minded and smart people and also can be a source of valuable contacts and new projects.

Technology Center it is a place where thanks to advanced R&D infrastructure and legal and advisory services, the science and business can meet.

Technology Centre will serve the function of executing tasks related to high-tech services and manufacture provided by the Park's residents, as well as the task resulted in reference to the Park's residents participation in research and science programmes. The Centre's technology and commerce part will house technology hall, laboratory rooms and open space area for office rooms to rent.

There would be possibility to rent office space for mature, well operating companies but the most important strategically object it is Centre for Data Processing with high quality safety for processed data and high computing power of processors. There are four laboratories fully equipped with the novel devices for: Medical Imaging, Physical and Chemical Analysis of Materials and Products, Electromagnetic Compatibility, Computer Graphics and Interactive Art.

With the open access to that infrastructure BSATP'S will support commercialization of research investigation results, initiates and facilitates technology transfer. Companies dealing with innovative fields of science can become the residents of the Technological Center.

Application procedure is similar to that of Incubator one and the most important for application merit assessment are innovative character of enterprise, development potential, activity in preferable fields of science, positive influence on strengthening of local economy as well as cooperation with academic environment and following horizontal policy of European Union (equal chance policy, environmental protection, informative society, competitiveness, energetic efficiency, employment)

Web site: www.bpnt.bialystok.pl,

e-mail: bpnt@bpnt.bialystok.pl

BSATP'S LOCATION:

Bialystok's Science and Technology Park is located in the southern part of the city, within the borders of "Dojlidy" neighbourhood, in the area of Borsuczka, Żurawia and Myśliwska Streets in Białystok.

BSATP is located directly next to already adapted and developed commercial property and the subzone area of Suwałki Special Economic Zone.

Such direct proximity of the Zone and Białystok's Science and Technology Park will allow to create in the south-western part of the city a separate area that will serve the

role of a centre – science and industry neighborhood, generating dynamic activity and development of the research, manufacture and services sectors based on highly specialized technologies and innovative solutions.

BSATP'S MISSION AND FOUNDING OBJECTIVE

The mission and objective for the foundation of BSATP has been economic development of the City of Białystok and its region – Podlasie – through promotion of new technologies, innovation and competition culture among entrepreneurs and institutions functioning in the knowledge-based conditions through:

Stimulation and managing spread of knowledge and technology among higher education institutions, research and development entities, enterprises and markets, support for establishment and development of enterprises whose main area of activity is knowledge-related through incubator programmes and spin-offs, providing high quality services and high standard buildings and area.

BSATP – TASKS AND FUNCTIONS

Incubating companies which have just started their activities and supporting innovative companies, stimulating cooperation of enterprises and the research and development circles, rental of offices, manufacture, commercial and laboratory space for developing enterprises and research and science entities, management of the investment area, attracting investors.

The overall result and ultimate goal of BSATP activity is building and development of modern infrastructure for high-tech entrepreneurs. Such outcome of the investments will help to boost economy and increase the competitive aspect of the City and region. Particular emphasis will be placed on students' enterprises, considered numerous high schools institutions in the City and the potential of their graduates.

PREFERRED LINES OF BUSINESS IN THE PARK:

biotechnology and pharmacy,
medical instruments manufacture, precision and optical instruments,
materials technologies,
nanotechnologies and telecommunications engineering,
electronics and electrotechnology,
chemical products manufacture,
machines and appliances manufacture.

Text from BSATP translated by Joanna Sobczyk, partly from BSATP website

Centre for Innovation, Technology Transfer and University Development in Cracow

We have selected this CTT because of its maturity and transparent structure. On the web apge there are about 50 deals, many of them nano-deals. But the centre, besides colleacting “deals” and seeking collaboration with industry, carries out a broad palette of actions promoting collaboration and applying for research funds.

CITTRU (Centrum Innowacji, Transferu Technologii i Rozwoju Uniwersytetu Jagiellońskiego) <http://www.cittru.uj.edu.pl/> is situated in Cracow, Poland and is the institution established at the Jagiellonian University in **2003**. It's main purpose is to support science development by strengthening cooperation and communication between academic institutions and potential partners and stakeholders.

CITTRU supports development of science by:

- building portfolio of technologies and ideas,
- setting up strong relationships with the business world,
- managing large and small projects and applying for external funds,
- bridging a gap between science and society and shaping public engagement.

Duties and activities: intellectual property management protection, knowledge transfer, education oriented on science promotion (The School of Science Promotion), activating new initiatives designed to present science in an accessible and popular manner (NIMB – popular science magazine, “Projektor Jagiellonski” – a book of scientific projects described clearly and without professional jargon).

Future: We are going to focus on widening intellectual property portfolio and commercialization of new technologies, continuing best practices or launching new initiatives regarding science promotion and supporting the University by applying for funds for its development (particularly from new EU Financial Framework 2014-2020).

Text from CITTRU