

## OP 3.4.1

### Regional development plans

**CENTRAL EUROPE Programme 2007 – 2013**

**PRIORITY 1: Facilitating innovation across Central Europe**

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<b>Authors</b>	«The John Paul II Hospital; PP6»
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<b>Summary</b>	To ensure sustainability of the project each partner will develop a Regional development plan in order to show how the project can get access to the target groups (see 2.1 Relevance) of the regions.

The John Paul II Hospital has been providing medical services for over 90 years. The Hospital has been undergoing changes over these years i.e. its profile has been defined, the infrastructure has been improved, novel and interesting projects have been implemented. Every effort made and all investments are focused on patient needs and fulfilling the criteria for the modern hospital of the 21<sup>st</sup> century. The Hospital has always been perceived as a reliable partner and for this reason it has obtained direct and indirect access to target groups in the InTraMed-C2C project.

Regional SWOT analysis presents the aspects describing target groups of InTraMed-C2C project:

## Hospitals

Regional	
<b>Strengths</b> <ul style="list-style-type: none"> <li>• personnel</li> <li>• equipment</li> <li>• specialist hospitals</li> <li>• variety of services</li> <li>• conferences</li> </ul>	<b>Weeknesses</b> <ul style="list-style-type: none"> <li>• lack of regulations</li> <li>• non uniform infrastructure</li> <li>• unawareness among employees</li> <li>• lack of employee incentive programs</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>• cooperation with clusters and R&amp;D institutions</li> <li>• hospital networks</li> <li>• external funds</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• cooperation with business regarding standardization of services</li> <li>• lack of procedures</li> <li>• differentiation in hospitals' development</li> </ul>

In the Malopolska province there are 42 hospitals. Nurses and midwives, physicians, maintenance staff, middle-level medical personnel and administration, accounting and technical personnel are the largest group of employees. The John Paul II Hospital in Krakow cooperates with the following healthcare institutions:

- University Hospital in Krakow – joint R&D projects
- 5th Military Hospital in Krakow – permanent partner in the field of service provision and medical activities
- Children's University Hospital in Krakow – joint R&D projects
- Rydygier Regional Specialist Hospital in Krakow – partnership in the Project „The Development of the Krakow Center for Research and Medical Technology” as part of the Regional Operational Programme for Malopolska 2007-2013
- Sniadecki Specialist Hospital in Nowy Sącz – cooperation between the Lung Ward in Nowy Sącz and the Ward of Chest Surgery in Krakow

Of the 42 hospitals 10 participate in research projects, which is almost 24%. It is noteworthy that the area of interest in these research projects ranges from innovative treatment methods to social issues. Among these institutions are:

- Dr. Josef Babinski Specialist Hospital
- St. Luke Regional Hospital in Tarnow
- Edward Szczeklik Specialist Hospital in Tarnow

- Mental Hospital in Andrychow
- Dr. Stefan Jasinski Regional Rehabilitation Hospital in Zakopane
- University Hospital in Krakow
- University Children's Hospital in Krakow
- The John Paul II Hospital in Krakow
- Beskid Spa Hospital
- Dr. Jan Gawlik Hospital in Sucha Beskidzka

## SME

Regional	
<b>Strengths</b> <ul style="list-style-type: none"> <li>• current trends</li> <li>• competitiveness</li> <li>• responsiveness</li> <li>• market niche</li> <li>• experience</li> <li>• goal orientation</li> <li>• staff experience</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• lack of research teams</li> <li>• susceptibility to changes</li> <li>• funds for PR instead of research</li> <li>• employee fluctuation</li> <li>• client procurement</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>• funds and public aid</li> <li>• cooperation with clusters and BRI</li> <li>• local support</li> <li>• promotion</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• absorption</li> <li>• variability</li> <li>• internal regulations</li> <li>• different formal regulations between business and others</li> </ul>

The John Paul II Hospital cooperates with numerous external companies. The cooperation between the Hospital and small/medium enterprises concerns mainly those aspects which are related to quality improvement of medical services. Projects are implemented mainly in the field of computer science, pharmacy, manufacturing and construction companies.

12 companies from life science sector have expressed being interested in cooperation in the project after the regional workshop. Moreover, the close cooperation with the Cluster LifeScience is a chance to get the access to the 22 companies operating in the medical sector. In this group there are companies from the following sectors:

- biotechnology
- cosmetology
- scientific research
- pharmacy
- IT software
- education and consulting
- molecular biology

## R&D

Regional	
<b>Strengths</b> <ul style="list-style-type: none"> <li>• personnel</li> <li>• equipment</li> <li>• study grants</li> <li>• access to knowledge</li> <li>• ongoing development</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• lack of cooperation with SME</li> <li>• lack of commercialization of research results</li> <li>• bureaucracy</li> <li>• lack of system for young scientists</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>• cluster, research consortia, BRI</li> <li>• exchange</li> <li>• external funds</li> <li>• niche products</li> <li>• international</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• lack of simplifications in regulations</li> <li>• unawareness</li> <li>• lack of influential media interest</li> </ul>

The John Paul II Hospital cooperates with the following R&D institutions:

- Jagiellonian University Medical College in Krakow
- Postgraduate Medical Education Center
- Institute of Nuclear Physics of the Polish Academy of Sciences
- Institute of Pharmacology of the Polish Academy of Sciences
- Institute of Applied Psychology of the Jagiellonian University
- AGH University of Science and Technology in Krakow
- Małopolska Center of Public Health
- Krakow Regional Chamber of Physicians
- Regional Sanitary Epidemiological Station in Krakow
- Polish Medical Society
- Polish Cardiac Society
- Main Statistical Office

Other R&D institutions from Malopolska which are significantly active in medical science:

- **University of Agriculture in Krakow** - Current educational offer comprises 45 main fields with 45 specializations, there are about 13 thousand students enrolled at all types of studies. The University offers also 32 postgraduate programmes for Master Diploma holders. The University has the following faculties:
- **Krakow University of Technology** - by realizing its goals the University of Technology works towards creating a national, European and global space for research and education:
- **AGH University of Science and Technology** - It serves the science, economy and society through educating students and the development of scientific and research staff, and conducting scientific research:
- **Scientific Consortium** – at the instigation of Anna Prokop-Staszecka MD, PhD Director of the John Paul II Hospital on 20 January 2011 the Hospital signed an

agreement with six teaching and research institutions. The aim of the agreement is broad scientific collaboration, sharing experience, infrastructure, equipment and scientific output of the Parties – especially in the context of postgraduate courses in Novel Methods of Medical Diagnosis and Therapy scheduled for the academic year 2011/2012. The following Parties signed the agreement:

- AGH University of science and technology in Krakow
- Henryk Niewodniczanski Institute of Nuclear Physics of the Polish Academy of Sciences
- Institute of Tuberculosis and Lung Diseases – Rabka-Zdroj Branch
- Institute of Zootechnics – National Research Institute
- Krakow University of Technology
- University of Agriculture in Krakow

The project is realized under the patronage of the Marshal's Office of Malopolska and Governor of Malopolska.

### Other relevant groups

Regional	
<b>Strenghts</b> <ul style="list-style-type: none"> <li>• awareness</li> <li>• promotion</li> <li>• decision-making and impact on the society</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• lack of strategy implementation and commercialization</li> <li>• bureaucracy</li> <li>• party's interests</li> <li>• lack of political continuity</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>• support from national institutions</li> <li>• external funds</li> <li>• adressing to all groups</li> <li>• cooperation with media</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• local initiatives may be ignored</li> <li>• distrust</li> <li>• lobbying</li> <li>• natural disaster</li> </ul>

### Local government

Support of local government is very important as it may serve as a basis for regional promotion of the IntTraMed-C2C project. The John Paul II Hospital in Krakow cooperates with the following government entities:

- Malopolska Province Marshal's Office
- Malopolska Province Office in Krakow
- Municipality of Krakow

### Business related institutions

The John Paul II Hospital in Krakow cooperates with the following business related institutions:

- **The Medicine of Poland Southern-East Cluster** – is formed by 45 partners from the Province of Malopolska, Silesia, Podkarpackie, Swietokrzyskie and Lubelskie. The group includes enterprises in the field of healthcare and medical tourism, research

institutes, manufacturers of medical equipment and software, spas, wellness centers, cosmetic centers, IT companies, consulting companies, tourist companies, marketing agencies, PR agencies and local government agencies.

- **The Interregional Cluster of Innovative Technologies „MINATECH“** – is the common initiative of the Province of Malopolska, Podkarpackie, Silesia and Swietokrzyskie regarding innovative technologies in the field of microtechnology, nanotechnology and biomedical engineering to concentrate the potential for accelerating the development of modern technologies and their implementation in everyday practice. Partners are local governments, universities, enterprises and business related institutions.
- **The Cluster LifeScience Krakow** – of 57 partners 30 represent companies in the field of life science (biotechnology, pharmacy, medicine, nutrition and environment), consulting firms and other local government entities.
- **The Medical Technology Transfer Center and the Technology Park Ltd.** – was established in 2007 by the John Paul II Hospital in Krakow having 100% of the share capital of the Center. The company was a response to demand formulated by the scientific and research circles and by industry in order to initiate and coordinate cooperation of both sectors. The strategic goal of the Center is to establish a technological and scientific basis i.e. Technology Park being part of the John Paul II Hospital in Krakow to facilitate knowledge and technology transfer between research institutes and industry.

The Center for Medical Technology Transfer Technology Park Ltd. has obtained external funds as part of the project “Innovations – Hospital – Business – implementation of comprehensive intellectual property management regulations at John Paul II Hospital in Krakow” supported by the Ministry of Science and Higher Education under the headline “Creator of innovation – academic innovation support”: The main goal of this project is the diagnosis of the intellectual property in the John Paul II Hospital and the implementation of comprehensive intellectual property management regulations. Another result of the project is presentation to researchers / clinicians, as well as PhD students the positive aspects of intellectual property protection and commercialization, which leads to the intensification of cooperation with the business. Provisions of the intellectual property management regulations relate to the intellectual property, particularly their protection and methods of commercialization. Implementation of the regulations will be foundation for the changes in this subject in other hospitals and R&D institutions.

The most considerable results of the project:

- preparing the intellectual property management regulations
  - developing 10 different templates of the contracts related to the intellectual property management
  - trainings for employees – 124 participants
  - meetings with entrepreneurs – 25 companies, 30 meetings
  - meeting in the John Paul II Hospital related to the regulations of the intellectual property and Center activities
  - consultations with patent attorney
  - organization of the information office for hospital's employees in subject mentioned above.
- **The Jagiellonian University Center for Innovation, Technology Transfer and Development of the Jagiellonian University** – based on a great intellectual potential of the University. The scope of activities is as follows:
  - Commercialization of research results



- Building an environment of cooperation between the sector of business and science
  - Promotion of innovation and related issues
  - Intellectual property management (patents, internal regulations)
- Excellent technical resources and experienced teams provide the milieu for undertaking unique tasks and projects.
- **The Krakow Technology Park** – the main actors are the Krakow University of Technology, AGH University of Science and Technology and the Jagiellonian University. The main goals are as follows:
    - Development of advanced technology industry making use of R&D potential of universities and research institutions in Krakow
    - Creating an economic, infrastructural and organizational environment for national and foreign investors who declare to use and develop R&D potential of Krakow, especially in the field of advanced technologies
  - **The Jagiellonian Center of Innovation Ltd.** – a university company established in 2004 which manages the LifeScience Park in Krakow. It aims at:
    - Improving cooperation between companies and institutions in the field of life science in the country and Malopolska Province
    - Providing services based on resources of the Jagiellonian University
    - Participating in capital investments (innovative projects and companies)
    - Promoting Krakow as a site for developing life science in the field of biotechnology, biomedicine, chemistry, pharmacology, biophysics, physics and environment
- The Jagiellonian Center of Innovation Ltd. has established a daughter company - **JCI Venture Ltd.** which serves as the seed capital fund for high risk projects in the field of life science in their first phase of development. The goal of the company is to establish 11 innovative entities which will use the model of R&D commercialization.
- **The Malopolska Agency for Regional Development S.A. (MARR)** – was established in 1993 to support entrepreneurship in the region. As an institution it underwent modification to become a Regional Funding Institution and since 2001 it has been responsible for promotion and management of EU resources. Since January 2010 the MARR has been implementing capital investment projects – MedFund. This capital fund is used for commercialization of scientific results in the field of medicine. It will support technology transfer from R&D entities to companies established with the help of MedFund. The Project is addressed to companies which apply modern solutions and manufacture products or provide specialist services in the field of medicine, pharmacy, rehabilitation, sports or leisure. The Project will end in December 2013.

## Other

The John Paul II Hospital in Krakow has a strong brand image in the mass media. The management team of the Hospital develop good relations and contact with TV, radio and press representatives.

The John Paul II Hospital had prepared media list which includes regional and national key actors in the media. The list was divided into formal category: local newspapers, medical magazines, electronic newsletters, web sites, radio and TV. 5 of them declared being interested in subject of InTraMed-C2C and guaranteed the opportunity to publish regular press releases free of charge. 3 of them declared being interested in subject of InTraMed -C2C and guaranteed the opportunity to publish chargeable press releases.

Apart from direct cooperation with various entities and indirect access to the mass media there are also other possibilities of reaching all those who are interested in cooperation in the InTraMed-C2C project:

- the contacts of the Medical Technology Transfer Center the Technology Park Ltd. The company was a response to demand formulated by the scientific and research circles and by industry in order to initiate and coordinate cooperation of both sectors. One of the main tasks of the Center is to support innovation and cooperation with industry, especially medical and pharmaceutical industry.
- the Hospital website informing about possibilities of cooperation between hospitals and SMEs, mutual benefits of such cooperation and development of both sectors
- the John Paul II Hospital in Krakow is an organizer of several annual conferences and symposia addressed to all target groups. The most important events are:
  - International Symposium „Prevention of Cardiovascular Disease”
  - Echocardiography Workshop
  - „Travel Safely” Conference
  - Malopolska Conference of Health Promoting Hospitals

Suming up all outputs and conclusions from the workshops related to the implementation of the goals in InTraMed-C2C project, there are following findings:

- the Hospital has obtained direct and indirect access to target groups in the InTraMed-C2C project;
- the Hospital is perceived as a reliable partner;
- well-developed cooperation network with SME, R&D institutions, other hospitals, related business institutions is conducive to the project promotion;
- significant difficulty in implementation of project's goals is lack of local and national policy related to the intellectual property;
- procedures involved with granting patents are extremely diuturnal – min. period for granting patents takes 2 years;
- lack of standardization in the protection of the innovative ideas of hospitals' employees;
- requirement for implementation of adequate regulations related to the intellectual property;
- promotion and spreading cooperation network with hospitals and R&D institutions by workshops with business representatives is essential;
- increasing awareness and knowledge of medical staff about the legal regulations related to the innovation;
- taking notice of the potential of the commercialization of the research results.