OP 3.3.6

Guideline and Toolkit (Core output)

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Summary	A Guideline and Toolkit for preparing the implementation phase of the IntraMED-C2C system will be generated. Target groups are clinics, clinical staff, R&D-institutions, SMEs, health care system institutions.

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1. General description

A Guideline and Toolkit for the preparation of the implementation phase of the IntraMED-C2C system will be generated. **This guideline and toolkit summarizes most of the activities done in work package 3.** These activities can mainly be split into two sections.

First section is a detailed analysis of the local, respectively regional situation with their key players like cluster initiatives, R&D-institutions, SMEs, health care system groups etc. as an analysis from existing data. These data are collected by desktop based work, published reports and other documents. This analysis includes also a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of the regional situation. Standard tools for this SWOT analysis will be used. The workshops of WP3 are discussions with experts for the preparation of the workshops in WP4, which include the target groups from clinics and SMEs. Therefore the involved persons and structures of the workshops from WP3 and WP4 are completely different.

Second section of activities within work package 3, which will be part of the Guideline and Toolkit as a core output, is a detailed concept development which includes an evaluation of clinics in every region as the main target group for the workshops. A description of access ways to these key persons in clinics and to the target groups are also included as well as the development of motivation schemes for the clinical staff. Finally the overall concept as an IntraMED-C2C framework will be described which also includes a database for matching innovative ideas with institutions for the realization of these ideas which are mainly SMEs and R&D institutions. The target group for the Guideline and Toolkit will be reached by the project website (downloadable output file) and other well-known instruments like email, workshops, personal contacts, conferences etc. which will be used by every project partner.

2. Concept of realization

In Top 1, ***General description***, the Guideline and toolkit is described as a comprehensive summary of the following outputs within ***Work package 3: Concept and design***:

3.1 Transregional analysis

3.1.1 Analyse key players

This report gives a territorial survey of key players active in addressed sectors of each project partner including a trans-national comparison. These key players may include cluster initiatives, health care groups etc.

3.1.2 Local and trans-national SWOT analysis

This analysis includes a local and trans-national SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats): focus on clinics, SMEs, R&D institutions a and other health care stakeholders.

3.1.3 Analyse existing approaches

Analyse existing approaches of innovation transfer from clinics to companies and R&D-institutions in order to learn lessons and integrate the results in IntraMED-C2C.

3.1.4 Cooperation with EU-Projects

Identify past and current EU-Projects dealing with innovation transfer in the medical sector, contact relevant project partners and match this know-how to IntraMED-C2C. Start a continuous cooperation with relevant groups.

3.2 Analysis state-of-the-art, other approaches

3.2.1 Regional workshops

The project partner will discuss with regional stakeholders the requirements for an innovation transfer system from clinics to companies and R&D-institutions in their region

3.2.2 Requirement-Report

The outcomes of the regional workshops will be discussed in the consortium and summarized in a report for the development of the innovation system.

3.3 Concept development

3.3.1 Evaluation of clinics in every region

Evaluation of clinics in the respected regions concerning the potential for inventions and innovations in medicine and medical technology

3.3.2 Description of access ways to the target groups

Access to the target groups (for detailed explanation see 2.1 Relevance) which are primarily medical doctors, but also R&D employees, technicians and nursing staff

3.3.3 Development of motivation schemes

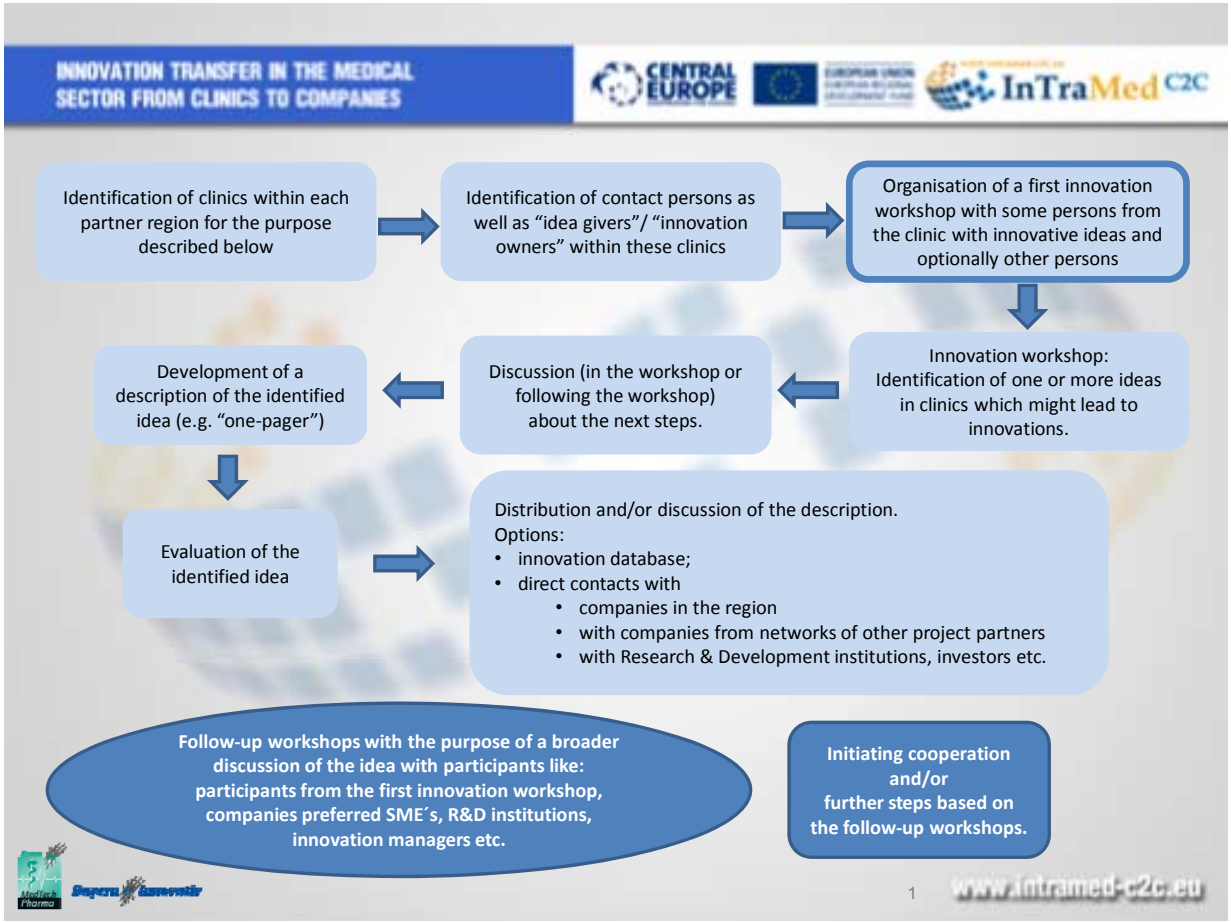
Development of motivation schemes (IPs for inventors, R&D projects, staff extension etc.) for their participation in the described workshops

Due to the complex situation in each partner region which is reflected and described in each report of the above outputs it was decided not to repeat and summarize these outputs again in the Guideline and toolkit but to provide a practical tool as a basis for the implementation process in ***Work package 4: Implementation***. This approach takes into account that a general and *easy-to-follow* guideline and toolkit is not realistic based on the results of the outputs in 3.1 – 3.3.

For this reason an extra workshop, with participation of all project partners, which was not planned in the application form was planned and performed in August 2011. Results from this workshop are included in the following description.

The following steps as a **Guideline & Toolkit** for a **workshop-based innovation transfer system** are based on the ***InTraMed-C2C Framework*** (output 3.3.4).

3. Graphical overview of the steps for a Guideline & Toolkit for a workshop-based innovation transfer system



4. Identification of clinics within each partner region for the purpose described below

The term “clinic” includes:

- University hospitals
- Clinics with all supply levels
- Publicly owned
- Private non-profit
- Others

The identification process depends completely on the individual partner institutions:

LP, Bayern Innovativ GmbH / Forum MedTech Pharma e.V. , Nuremberg, DE

- Clinics are already part of the network from Forum MedTech Pharma. Therefore an easy access is possible.
- Other access ways: Hospitals are listed and described in the German Hospital index.
- Identification via internet search.

Clusterland Upper-Austria, Linz, AT

- Clinics are already part of the network of Clusterland Upper-Austria. Therefore an easy access is possible.

TIS, Techno Innovation South Tyrol Bozen, IT

- All seven public hospitals of the South Tyrol Province are already connected with TIS, as TIS has already performed some projects with the public health care of the South Tyrol, and therefore TIS has direct access to them.
- The same regarding two of the six private clinics, which are:
  - private clinic "Villa Melitta"
  - private clinic "Bonvicini"
- About the remaining four clinics, TIS has to consider that they are much small and their structure doesn’t allow to identify a specific group inside to be able to perform R&D projects in cooperation with external partners.

Marshal Office of Lower Silesian Voivodeship, Wroclaw, PL

In Lower Silesia region there are 38 public hospitals (27 has ownership with Lower Silesia Voivodeship Marshal Office), 29 private hospitals and 26 (public and private) long- term care.

There are hospital departments (from 256 Hospitals) concerning to the situation in whole Poland. There are some most specialized departments of hospitals in Lower Silesia.

Medical matter	Voivodeship Codes		
	2	Total	
Angiology [37]	19	99	19
Laboratory diagnosis [10]	17	35	49
Pediatric Cardiology [54]	11	65	17
Sports Medicine [56]	3	9	33
Forensic medicine [17]	1	5	20
Neuropathology [59]	7	27	26
Orthodontics [73]	2	3	67
Conservative dentistry with endodontics [77]	1	3	33
Pediatric Urology [35]	17	89	19
Public health [78]	20	97	21

Classification of hospitals:

Primary health care:

In Lower Silesia there are different primary care hospitals like:

University Hospitals	3
Health Ministry Hospitals	1
Voivodeship Hospitals	18
District Hospitals	15
Gminas Hospitals	3
Non public Hospitals	37

Secondary care

Long Term Units	28

Tertiary care

Non Public Health Care Units	1079

Involved in research projects: Mainly in research projects are involved primary care units/hospitals including University Hospitals and other Health care centers

- **Already existing innovation transfer facilities:**

Institute of Immunology and Experimental Therapy, Polish Academy of Sciences - Conducts research in the field of Immunology and Experimental Therapy

Institute of Biomedical Engineering and Instrumentation, Wrocław University of Technology – conducts research in fields related to Biomedical Engineering concerns various aspects of Biophysics, Biomedical Electronics, Biomedical Optics, Computer Simulations

Wroclaw Institute of Public Health – builds partnerships and creats an interface for entities implementing in the area of Lower Silesia, the tasks of public health.

National Institute of Public Health, National Institute of Hygiene - The mission of the National Institute of Public Health-National Institute of Hygiene is to protect the health of the population through a series of actions taken in the field of public health, including the work of scientific research and training. This refers to the monitoring of biological, chemical and physical risk factors in food, water and air facilities and to diseases and infections. PZH operates expert for the government, NGOs and civil society in the field of risk assessment and indication of how to avoid risks. The Institute also conducts research quality sera and vaccines.

The John Paul II Hospital, Krakow, PL

In the Malopolska province there are hospitals that provide basic medical care and hospitals that offer specialist services. Hospitals in Poland are classified according to geographical area and their ownership:

- community
- county or municipal in cities with county rights
- regional
- supraregional

There are also state-owned hospitals for instance military hospitals.

The present analysis is based on the data provided by stationary healthcare institutions in the Malopolska province for the year 2009 if not stated otherwise. Several healthcare institutions were not able to provide all numerical data.
In the Malopolska province there are 42 hospitals with a total of 14 111 beds. Twenty-two hospitals admit about 293 053 patients annually – the numbers for the remaining hospitals are not known. It may be however estimated that altogether about 0.5 mln patients are hospitalized annually. In Malopolska hospitals employ 24 928 people, among them in order of decreasing frequency nurses and midwives, physicians, maintenance staff, middle-level medical personnel and administration, accounting and technical personnel.

Primary health care level hospitals:

Total number: 4

The St. John of Jerusalem Hospital in Szczyrzyc, St. John Grande Hospital of the Merciful Brothers' Order in Krakow, Municipal Hospital Ltd. in Rabka-Zdrój, the Count Stanislaus Czartoryski Hospital

Participation in research projects: None

Secondary health care level hospitals:

Total number: 11

County Hospital in Chrzanow, Bl. Marta Wiecka County Hospital in Bochnia, County Hospital in Limanowa, Dr. Jozef Dietl Hospital in Krynica Zdroj, Sebastian Petrycy County Hospital, John Paul II County Hospital, Hospital in Brzesko, Hospital in Proszowice, County Hospital in Myślenice, Dr. Tytus Chalubinski County Hospital, St. Anna Hospital in Miechow

Participation in research projects: None

Tertiary health care level hospitals:

Total number: 11

Jedrzej Sniadecki Specialist Hospital in Nowy Sącz, St. Luke Regional Hospital in Tarnow, Ludwik Rydygier Regional Specialist Hospital Ltd.,Stefan Zeromski Specialist Hospital, Gabriel Narutowicz Municipal Specialist Hospital, Military Hospital in Krakow, St. Maximilian County Hospital, Dr. Jan Gawlik Hospital in Sucha Beskidzka, Franciszek Kszyształowicz County Hospital in Olkusz, Edward Szczeklik Specialist Hospital in Tarnow, John Paul II Specialist Podhale Hospital

Participation in research projects: 3 hospitals

Maximum health care level hospitals:

Total number: 1

University Hospital in Krakow

Participation in research projects: Yes

Specialist hospitals:

Total number: 15

Jozef Dietl Specialist Hospital, St. Louis Regional Specialist Children's Hospital in Krakow, Dr. Josef Babinski Specialist Hospital, Regional Eye Hospital in Krakow, Regional Lung Hospital in Jaroszowiec, Regional Mental Hospital in Andrychow, Dr. Stefan Jasinski Regional Rehabilitation Hospital in Zakopane, Dr. Olgierd Sokołowski Specialist Lung Hospital, University Children's Hospitla in Krakow, the John Paul II Hospital in Krakow, Beskid Spa Hospital, Military Spa and Rehabilitation Hospital in Krynica Zdroj, R. Czerwiakowski Hospital, UJASTEK Obstetric and Gynecological Hospital in Krakow

Participation in research projects: 6 hospitals

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.

Of the 42 hospitals 11 co-operate with the Jagiellonian University Medical College, Pediatric Institute in Krakow, Medical University in Wroclaw or Silesian Medical University.

In hospitals in Malopolska no innovation management system is used. It is a gap that should be eliminated as soon as possible in order to make optimal use of the potential of projects carried out in hospitals. This will have also a positive impact on medical technology transfer to industry, which is now on a very low level.

Hospitals in Malopolska have no patents. It is a result of time-consuming and expensive process of a new invention reporting. Intellectual property rights create costs which become an additional burden to hospitals and individual researchers. Despite numerous scientific achievements hospitals are not willing to apply for patents. However, a pioneering initiative of the John Paul II Hospital is noteworthy. As the first healthcare institution in Poland it decided to implement specific regulations. In January 2008 upon request of the hospital management the Center for Medical Technology Transfer Technology Park Ltd. prepared a comprehensive set of regulations regarding intellectual property management in the hospital setting out the rights and obligations of all concerned parties, especially intellectual property protection and commercialization process, including support for spin-off companies. The documentation was developed by hired lawyers with knowledge and experience in work for Polish research and

development institutions. The current regulations are based on Jagiellonian University acts and those implemented in hospitals in the USA and Great Britain. The process of implementing the Intellectual Property Management Regulation at John Paul II Hospital in Krakow will end in March 2011. 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”.

BSC, Business Support Centre Ltd., Kranj, SL

In Gorenjska region there are hospitals that provide basic medical care and hospitals that offer specialist services. Four clinics are seated in Gorenjska region; several healthcare institutions were not able to provide all numerical data.

Primary health care institutions:

Community Healthcare Centre Network Gorenjska

Community Healthcare Centre Network (CHCN)of Gorenjska consists of 6 Centres located in the cities: Jesenice, Bled-Bohinj, Radovljica, Tržič, Kranj and Škofja Loka and the Stomatology Policlinic in Kranj.

CHCN provide primary health care services and selected specialists services (paediatrics and school-children medicine, general practice) and services of dental medicine on the primary level. General practitioners work also in retirement homes where they deal mostly with geriatric health care. Dental medicine surgeries are located in health care centres, health care stations, and also in elementary schools. They include also dental medicine specialists for orthodonty, dental prosthetics, oral diseases, children dental medicine, and parodonthology. Health care centres include outpatient units for gynaecology, child development, ophthalmology, respiratory medicine, diabetes, and units for occupational, traffic and sports medicine. Community healthcare centres include also mental health centres, health education, physiotherapy, physiatrics, home health care and home nursing, and emergency medicine service. In the ZDL unit Ljubljana-Bežigrad there is also an outpatient clinic for persons without health insurance, and in the ZDL unit Ljubljana-Center there is an outpatient clinic for prevention and treatment of the persons addicted to illegal substances. In health care centres it is possible to perform a number of medical tests, from the simplest laboratory test to the more sophisticated examinations, like ultrasound, x-ray, mammography, etc.

CHNC provide:

- treatment and rehabilitation of the ill and the injured
- treatment of oral and dental diseases, and rehabilitation
- home visits, home nursing, home treatment and rehabilitation, treatment and rehabilitation in retirement and nursing homes
- medical rehabilitation of children and adolescents with problems in mental and/or physical development
- basic diagnostic tests (laboratory, ultrasound, x-ray...) and physical therapy treatment
- prevention and screening of children, adolescents, adults, women, pregnant women (in accordance with the national programme), and athletes, with the aim of preserving and strengthening health, and detecting early signs of illnesses
- health-education activities for increasing awareness about healthy lifestyle
- continuous emergency medical assistance
- determining and managing temporary incapacity for work
- selected specialities: for respiratory disorders, cardiovascular disorders, ear, nose and throat disorders, eye disorders, diabetes, physical and rehabilitation medicine, mandibular orthopaedics (orthodonty), dental prosthetics, child and preventive dental medicine (pedonthology), oral and periodontal diseases (parodonthology), child psychiatry and developmental disorders.

Secondary health care institutions:

The Jesenice hospital

Hospital Jesenice is a public medical institution and is doing medical activities also on secondary level and other activities that are determined with an act of foundation. This is the second polyclinic in Slovenia. It has 288 beds.

Participation in research projects: yes

Hospital Jesenice owns its own research development unit that works within the hospital and its motivation scheme work in terms of administrative processes based on ARRS rules. ARRS is Research Agency of Slovenia that is responsible for promoting national research activities and their funding. Part of the projects they apply usually also include studying groups of patients, make some publication, organize trainings or educations or they are developing patents. But there is a lack of the patents in the unit and therefore sometimes don't have enough references to apply to tenders of the ARRS. The Agency defines the requirements for the projects leadership. The most important factors are assessments of

researchers in SICRIS (Slovenian Current Research Information System). SICRIS database includes estimations of publications and achievements of individual researchers.
The company is very interested to become a co-owner of the possible IP, because they can get more references of higher lever and can apply to the tenders of ARRS easier.
Collaboration with other hospitals, research institutes and different SME'S is not really developed well therefore the cooperation could be developed in the field of prevention as well as in the field of medical treatment (curative).

Hospital for Gynecology and Obstetrics Kranj

Hospital for Gynecology and Obstetrics in Kranj is a public medical institution, specialized for medical care of women and newborns and for medical care of women on primary level.
It is the fourth biggest maternity hospital in Slovenia. Its beginnings reach in the year 1955 and at that time the hospital was meant to all birthing mothers from surrounding municipalities. Soon the hospital got a reputation of good, professional and nice hospital.
It has been famous for births in hypnosis and for exterior turns at pregnant women with pelvic insertion of the fetus. It was the first in Slovenia that introduced amnioscopy, cardiotography and laparoscopy. In the year 1997 it has joined to Unicef program “Newborns-friendly maternity hospital”, and gained the title few year later. Today they are fulfilling all the conditions of the program “Ten steps to successful breast-feeding”.
Participation in research projects: none

Psychiatric Hospital Begunje

Psychiatric hospital Begunje presents regional hospital for the area of Gorenjska and does most of hospital services fort his area. Actually its gravitation area is wider because lots of hospital treatment in daily hospital is for patients from other parts of Slovenia. Hospital has around 8.000m2 of surface with 155 beds. The hospital also has accommodation capacities that enable daily treatment of 45 patients in day care.. The hospital diagnoses and heals the whole specter of mental illnesses and disturbances of adults. There are 8 hospice departments and 2 are mixed: department for treatment of alcohol addiction and department for behavior-cognitive psychotherapy. Annually hospital accepts around 1550 of patients and around 10.000 hospital visits.
Participation in research projects: Yes

<u>Tertiary health care institutions</u>

University Clinic of Respiratory and Allergic Diseases Golnik

University Clinic of Respiratory and Allergic Diseases Golnik is recognized as the leading Slovenian hospital for pulmonary and allergic diseases on tertiary level. By reintroducing

thoracic surgery, it aims to provide complete treatment for patients with pulmonary diseases. It is a top-level institution for the diagnosis and treatment of patients with pulmonary, allergic and other internal diseases. The hospital is also known for the implementation of modern and high-quality nursing care and education. As a tertiary and research institution they create new knowledge, particularly in the field of pulmonary and allergic diseases. Hospital Golnik today has 237 beds and with circa 1.000 patients annually.

Participation in research projects: Yes

The clinic applies for funding for research and studies from the EU as well as national agencies and the industry. Their cooperation with other technological networks is the most developed on the field of Information communication technology; they work with different companies on the field: src, mark&mark, infonet. Regarding that they are developing the project GO SOFT, which is the pilot project of IT technology. Additionally they collaborate well with Medical faculty University of Ljubljana and College of Nursing Jesenice. The clinic would be also interested to become a co-owner of a possible IP emerging from an innovative idea from within the clinic.

Mentioned hospitals, as seen, are cooperating with other institutions, research institutes and especially with College of nursing Jesenice and Medical faculty University of Ljubljana in order to provide product innovations. But product innovation evolving from ideas of clinical staff is rather limited. Innovation transfer from clinics to companies that leads to marketable products is currently on a very low level in the cited clinics.

Clinics practically don’t have a general innovation motivation scheme with defined rules and procedures, but the management plans to organize this field formally and provide it as a well known process.

The problem is that organizational culture of Slovenian hospitals is based on hierarchy, low inclusion of employees from management view and on the other side employees don’t even want to be that active (research in 14 hospital in 2007). Activities would have to be planned in direction of management responsibility to develop and encourage the culture of innovativeness and working of the organization on the basis of evidences (evidence based management) and on the other side the development of responsibility at employees for continuous accompaniment of their own work and inclusion in teams for improvement.

The benefit of the clinical staff regarding innovative ideas should be the overall national interest and therefore defined within legal framework on the national level. But in our country

there is no national legal framework that would regulate the benefit of the owner of the idea. The best motivation for clinical staff would be money or special prize, also trainings or needed education. In the clinics it is obvious that ideas of clinical staff are for the benefit of the institution and therefore the innovation becomes the clinic's ownership. Consequently staff is not that encouraged and they are becoming passive in a way.

Hospitals cooperate with different companies, but more in an opposite way; they check their new ideas if they work in practice. So in the future this would have to happen vice versa to reach the goals of this project.

In the future they strive for improvement and upgrade of certain fields of work such as:

Clinic Golnik:

- Systematic flow of additional patients – to make a cooperation and agreement with insurance to get more patients, also from foreign countries
- The field of telemedicine - medical information is transferred through interactive audiovisual media for the purpose of consulting and sometimes remote medical procedures or examinations.

Hospital Jesenice:

- Information technology: development of algorithms to provide better effect on the field of prevention
- Palliative care for patients with cancer
- Organisation of regional urgent medicine centre
- Development of the effective model for monitoring of patients with chronicle diseases after they leave a hospital
- Development of the model for effective care of elderly (geriatric health care)
- Etc.

In short, they wish to provide new innovative approaches that would provide better conditions of their own work and they strive for better inclusion in teams for improvement. All of the hospitals express their interest to implement the results of InTraMed-C2C project.

CVVI, Slavkov u Brna, CZ

National data

By the end of the year 2010 there were 189 hospitals with 62 219 beds in the Czech Republic.

The average bed-occupancy in 2010 was 253.8 days.

The distribution of the ownership was as follows:

- 19 hospitals were directly administrated by the Ministry of Health
- 24 hospitals were administrated by the respective region
- 17 hospitals were administrated by a municipality
- 121 hospitals were in private hands
- 3 hospitals were administrated by the Church institutions
- 5 hospitals were administrated by the Ministry of Defence and by the Ministry of Justice

Administrator	share of beds (%)	no. of hospitalized persons	
		absolute	percentage
Ministry of Health	27,6	597 030	27,7
Region	14,7	329 424	15,3
Municipality	6,4	137 431	6,4
Natural person, church or other legal entity	49	1 055 842	49
Other central bodies	2,3	35 366	1,6
Total	**100**	**2 155 093**	**100**

Source: Contemporary information of the Institute of Health Information and Statistics of the Czech Republic, online, available at: http://www.uzis.cz/en/fast-information/hospitals-czech-republic-2010

Regional Data

In the Central Bohemia Region there are twenty four hospitals with almost 5,800 beds and another 28 hospitals with approximately 10,300 beds are situated in Prague, which is the capital of the Czech Republic and due its size and resources is deemed as a stand-alone administrative unit equal to regions.

In the Czech Republic, there no longer exists the division of hospitals based on the care level as it used to exist in the past. So it is only possible to classify the hospitals in terms of their ownership (public/private) and in terms of their interconnectedness with medical universities (faculty hospitals and other “non-faculty” hospitals).

In the past, hospitals had for their disposal R&D laboratories and workshops which worked very well and had good results, however, after the transition to democracy in 1989, the R&D

departments were closed down and the hospitals have relied mostly on the foreign researchers' results ever since.

The exception can be seen in Faculty Hospitals which are interconnected with medical faculties and the conduct of research belongs to their mission, however, the results of their research work mainly comprise publications.

In general, given the criteria for the evaluation of clinics, many of the features are simply not present in the most of the Czech hospitals (competence centre, interdisciplinary centre, innovation management system). If any transfer of innovations occurs, it happens on ad hoc basis or on the basis of established personal relationships. Structured and rooted system of innovation transfer management is absent.

With regard to the R&D projects – these projects are conducted in the Faculty Hospitals and also in some of the other hospitals listed below, nevertheless, most of the research and inventions are still made in within the medical universities and specialized R&D institutions, not in within the hospitals as such.

Patents are not applied for since the costs of gaining a patent are very high and the duration of the patenting process is deemed too long.

Central Bohemia Region

Nr	Name of Clinic	Address	Contact
1	Mělnická zdravotní, a.s.	Nemocnice Mělník Pražská 528/29, 276 01 Mělník	315 639 101
2	Almeda a.s. - Městská nemocnice Neratovice	Alšova 462, 277 11 Neratovice	315 637 470 sorelova@almeda.cz
3	Českobrodská nemocnice, s.r.o.	Žižkova 282, 282 01 Český Brod	420321610811; nemcb@pphospitals.cz; vojtisek@medigroup.cz
4	Nemocnice Beroun	Prof. Veselého 493 266 01, Beroun	420 311 745 111 607 962 474 lvd@centrum.cz
5	Klinika Dr. Pírka, s.r.o.	Na Celně 885, 293 01 Mladá Boleslav III	dufkova@drpirek.cz 420 326 375 427
6	Mediterra - Sedlčany, s.r.o. - městská nemocnice	Tyršova 161, 264 01 Sedlčany	420 318 841 500 asistentka@mediterra-sedlcany.cz
7	Městská nemocnice Čáslav	Jeníkovská 348/17, 286 01 Čáslav-Nové Město	sekretariat.reditele@nemcaslav.cz 420 327 305 111
8	Městská nemocnice Městec Králové	Prez. Beneše 343, 289 03 Městec Králové	nemocnice@nemmk.cz; 420 325 643 271; reditel@nemmk.cz
9	Nemocnice Kutná Hora, s.r.o.	Vojtěšská 237/26, 284 01 Kutná Hora-Žižkov http://www.nemkh.cz	reditelstvi@nemkh.cz; 420 327 503 111 radka.susankova@nemkh.cz
10	Nemocnice Nymburk, a.s.	Boleslavská třída 425/9, 288 02 Nymburk	420 325 505 111
11	Nemocnice Rudolfa a Stefanie Benešov - nemocnice Středočeského kraje, a.s.	Máchova 400, 256 01 Benešov http://www.hospital-bn.cz	sekretariat@hospital-bn.cz 420 317 756 111 lenka.caplicka@hospital-bn.cz
12	Nemocnice Říčany, a.s.	Smiřických 315/58, 251 01	420 323 627 511;

		Říčany	hospital@nemocnice-ricany.cz
13	Nemocnice Slaný	Nemocnice Slaný Politických vězňů 576, 274 01 Slaný	420 314 575 111 reditelstvi@nemocniceslany.cz
14	Nemocnice Třebotov, a.s.	V Lesoparku 81, 252 26 Třebotov	420 257 899 941 sekretariat@nemocnice.trebotov.cz; marketa.petrakova@nemocnice.trebotov.cz
15	NH Hospital, a.s.	K nemocnici 1106/14, 268 01 Hořovice	Mgr. Jana Hrachová vedoucí oddělení kvality péče hrachova@nemocnice-horovice.cz 311 542 256
16	Oblastní nemocnice Kladno, a.s., nemocnice Středočeského kraje	Vančurova 1548, 272 01 Kladno	ústředna: 312 606 111 e-mail: info@nemocnicekladno.cz
17	Oblastní nemocnice Kolín - nemocnice Středočeského kraje, a.s.	Žižkova 146, 280 02 Kolín III	321 756 111 info@nemocnicekolin.cz
18	Oblastní nemocnice Mladá Boleslav, a.s., nemocnice Středočeského kraje	Oblastní nemocnice Mladá Boleslav, a.s., nemocnice Středočeského kraje tř. Václava Klementa 147, 293 01 Mladá Boleslav II	420326742111; sekretariat@onmb.cz
19	Oblastní nemocnice Příbram, a.s.	Oblastní nemocnice Příbram, a.s. Hradební 84, 261 01 Příbram I	420 318 641 111 ; reditelstvi@onp.cz
20	PP Hospitals, s.r.o. - Nemocnice Brandýs nad Labem	PP Hospitals, s.r.o. - Nemocnice Brandýs nad Labem Brázdimská 1000/3, 250 01 Brandýs nad Labem-Stará Boleslav	420 326 902 781 ; info@nembnl.com
21	RHG, spol. s r.o.	Tiché údolí 376, 252 63 Roztoky	nemocnice@rhg.cz; 420 220 911 032 ; sekretariat.roztoky@rhg.cz
22	Krajská nemocnice Středočeského kraje	Zborovská 11, Praha 5 - Smíchov, 15021	info@nemocnicekladno.cz
23	Privamed Healthia, s.r.o. - Masarykova nemocnice v Rakovníku	Dukelských hrdinů 200/II, Rakovník, 26929	nemocnice@nemorako.cz
24	RHG, spol. s r.o. - Nemocnice s poliklinikou v Kralupech nad Vltavou	Mostní 934, Kralupy nad Vltavou, 27801	matousek.v@seznam.cz

The Capital city of Prague

Nr	Name	Address	Contact
25	Nemocnice Na Homolce	Roentgenova 37/2, 150 00 Praha-Motol http://www.homolka.cz	420 257 271 111, FAX: +420 257 210 689, E-mail: hospital@homolka.cz
26	CLINICUM, a.s.	Sokolovská 810/304, 190 00 Praha-Vysočany http://www.clinicum.cz	420 266 006 211 420 284 819 295 sekretariat@clinicum.cz
27	Fakultní nemocnice Královské Vinohrady	Šrobárova 1150/50, 100 00 Praha-Vinohrady http://www.fnkv.cz	420 267 161 111, 420 267 312 664 fnkvred@fnkv.cz
28	Fakultní nemocnice Na Bulovce	Budínova 67/2, 180 00 Praha-Libeň http://www.fnb.cz	420 266 081 111, 420 266 082 910 info@fnb.cz
29	Fakultní nemocnice v Motole	V úvalu 84/1, 150 00 Praha-Motol http://www.fnmotol.cz	420 224 431 111 FAX: +420 224 431 005 E-mail: reditelstvi@fnmotol.cz

30	Fakultní Thomayerova nemocnice s poliklinikou	Thomayerova 800/5, 140 00 Praha-Krč http://www.ftn.cz	420 261 081 111 FAX: +420 261 082 579 E-mail: info@ftn.cz
31	Nemocnice Milosrdných sester sv. Karla Boromejského v Praze	Vlašská 336/36, 118 00 Praha-Malá Strana http://www.nmskb.cz	nmskb@nmskb.cz; +420 257 197 111
32	Nemocnice Na Františku	Nemocnice Na Františku Na Františku 847/8, 110 00 Praha-Staré Město http://www.nnfp.cz	info@nnfp.cz kozak@nnfp.cz sekretariat@nnfp.cz
33	Nemocnice sv. Alžběty, spol. s r.o.	Na slupi 448/6, 128 00 Praha-Nové Město http://www.nemalzbeta.cz	sekretariat@pha.nemalzbeta.cz
34	SDI, s.r.o.	Kubelíkova 1250/16, 130 00 Praha-Žižkov	sdihts@volny.cz mindruch@seznam.cz
35	Ústřední vojenská nemocnice Praha	Ústřední vojenská nemocnice Praha U vojenské nemocnice 1200/1, 162 00 Praha-Břevnov http://www.uvn.cz	miroslav.ryska@uvn.cz
36	Všeobecná fakultní nemocnice v Praze	U nemocnice 499/2, 128 00 Praha-Nové Město http://www.vfn.cz	vfn@vfn.cz jan.briza@vfn.cz
37	Západočeská nemocnice, a.s.	Veletržní 200/24, 170 00 Praha-Holešovice	420 220 397 301

Budapest University of Technology and Economics, Budapest, HU

Evaluation of clinics in Central-Hungarian Region (CHR):

Data of existing clinics in Central-Hungarian Region:

- 40 inpatient care institutes (hospitals and clinics),
- the greatest Hungarian medical university (i.e. Semmelweis University),
- 9 national institutes,
- 17 larger and 13 smaller hospitals and policlinic

There are 40 inpatient care institute (hospitals and clinics) in our region. The greatest Hungarian university, 9 national institutes, 17 larger and 13 smaller hospitals care the third of the Hungarian population regularly, but clinics of the university and the national institutes are responsible caring greater population.

In case of handling innovation there is the following situation: we have 5-6 institutes with excellent practice of innovation, but the rest is in the other side. Some from the first group:

- ✓ In Semmelweis University (SE) there is a dedicated unit called Semmelweis Innovations, which is responsible to search, support innovations in medical field. It coordinates the Hungarian SMCs in order to make common applications to several program calls in Europe.

- ✓ Most of the national institutes keep close to international scientific forums and events. In result of it firms all over the world taking part in those forums and events as well can joint to innovations come from the institutional scientific research. E.g. National Institute of Neurosurgery has the following fields of research:
  - o In neurovascular therapy: using instruments leaded into the blood-vessel in cerebrum
  - o Minimal invasive therapy: correction the degenerative backbone diseases using minimal invasive techniques
  - o Neuro-pacemaker therapy: therapy for chronic pain using implanted or outer stimulators

  In "Gottsegen György" National Institute for Cardiology:
  - o Developing new instruments and its controlling software corresponding the care: measuring and transmitting vital parameters, handling emergency situation
  - o Visualisation of information: displays using in operating rooms controlled by head and hand moving or voice, displaying the patient's vital parameters measured during operation in chronological order
  - o Identification: trailing devices and persons using RFID technology
- ✓ Bethesda Children Hospital:
  - o Hospital management: VoIP communication in the hospital, video-conferencing between the two departments settled in different geographical place
  - o Hospital-wide Wi-Fi service supporting patient administration inside the bed using mobile devices
  - o On-line services: special internet services solve connection between children patients and their parents;
- ✓ We have to mention some hospitals which have innovation practice too: Semmelweis University Heart Center, Uzsoki Hospital, Szt. Imre Hospital, Szt. István and Szt. László Hospital.

Other hospitals and clinics are less active in innovation handling. "Innovation" means for them to buy a new device instead of thinking about new methods and development of existing instruments. This is the majority. One of the motivation interviews shows that doctors exercise medicine proceedings of inquiry in their rest time because of the financial benefit. In summary handling innovation is not a leading problem in the Hungarian health sector. Hospitals and clinics fight for survival, they are waiting for a structural reform.

University of Debrecen, Knowledge and Technology Transfer Office, HU

Number of clinics, hospitals and health care institutions in the Észak-Alföld Region

Clinics, hospitals and health care institutions at the Észak-Alföld Region					
County	**City**	**Name**	**Type of institution**	**Mode of medical attendance**	**Number of beds**
Jász-Nagykun-Szolnok	Karcag	Kátai Gábor Hospital	Hospital	Outpatient clinical practice, hospitalized healthcare	>440
Jász-Nagykun-Szolnok	Szolnok	Hetényi Géza Hospital	Hospital	Outpat. Clin. pract., hosp. healthcare	1040 active, 241 chronic
Jász-Nagykun-Szolnok	Szolnok	MÁV Hospital and Surgery	Hospital	Outpat. clin. pract. hosp. healthcare	290
Jász-Nagykun-Szolnok	Mezőtúr	Mezőtúr Municipal Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	169
Jász-Nagykun-Szolnok	Jászberény	Szent Erzsébet Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	200 active, 67 chronic, 15 nursing
Szabolcs-Szatmár-Bereg	Nyíregyháza	Jósa András Hospital	Hospital	Outpatient clinical practice, hosp. healthcare	1869
Szabolcs-Szatmár-Bereg	Mátészalka	Regional Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	440
Szabolcs-Szatmár-Bereg	Kisvárda	Felső-Szabolcsi Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	378 active, 221 chronic
Szabolcs-Szatmár-Bereg	Fehérgyarmat	Szatmár-Beregi Hospital	Hospital	Outpatient clinical practice, hosp. healthcare	470
Szabolcs-Szatmár-Bereg	Nagykálló	Sántha Kálmán Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	530
Hajdú-Bihar	Berettyóújfalu	Gróf Tisza István Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	645
Hajdú-Bihar	Debrecen	Kenézy Gyula Hospital	Hospital	Outpat. clin. pract., hosp. healthcare	844
Hajdú-Bihar	Debrecen	Univ. of Debrecen Medical and Health Science Center	University Clinic	Outpatient clinical practice, hosp. healthcare	1400

Red colour marks priority hospitals in the region.

Summery chart of hospitals and clinics of Észak-Alföld Region

County	**Number of hospitals**	**Number of clinics/clinical departments**
Hajdú-Bihar County (county seat: Debrecen)	2	1 university hospital with 18 clinical departments
Szabolcs-Szatmár-Bereg County (county seat: Nyíregyháza)	5	-
Jász-Nagykun-Szolnok County (county seat: Szolnok)	5	-
Total	12	1

In Debrecen there is one university hospital with 18 clinical departments. Usually there is no research and no innovation/motivation scheme or system at the hospitals. The main activity of traditional hospitals is patient care and there is no time, budget and capacity for executing R&D&I projects.

However, University of Debrecen is a rapidly developing knowledge center of Region Észak-Alföld, Hungary. The University's mission is to become a research university with entrepreneurship, to support innovation based on market needs and to play a key role in the economic growth of the region.

Ever since its establishment in 1918 the Medical and Health Science Center of the University of Debrecen (UD MHSC) has been striving to become an internationally recognized Centre of Medical Education, Biomedical Research and Patient Care. In line with the mission statement of the University, UD MHSC is dedicated to serving the health care needs of the population of Eastern-Hungary and to providing research and teaching programs that ensure delivery of the highest quality health care to our community.
Scientific work is done at the departments for basic sciences and laboratories of clinical departments. The faculty members of this medical school publish about 600 scientific papers in international scientific journals per year. According to scientometric data the UD MHSC is among the 4 best ones of the more than 80 Hungarian research institutions and universities. Many of the scientists could reach international recognition exploiting the possibilities provided by internal and international collaborations. Internationally acknowledged research areas are cell biology, immunology, experimental and clinical oncology, hematology, neurobiology and neurology, physiology. The scientific exchange program involves numerous foreign universities and large proportion of our staff is actively involved in programs that make use of foreign connections (Belgium, France, Germany, Italy, Japan, the UK and the USA are the most important partners).
The UDMHSC is also one of the largest hospitals in Hungary. There are 49 departments, among those 18 different clinical departments with more than 1800 beds serving 62 000 inpatients and 670 000 outpatients yearly. It is not only the best-equipped institution in the area, but also represents the most important health care facility for day-to-day medical care in this region. This includes, beside other services, an adult haemodialysis center, open-heart surgery facilities and a kidney transplantation unit.

The Kenézy Gyula county hospital (with approx. 1400 beds) is strongly affiliated with the UD MHSC and plays an important role in teaching the practical aspects of medicine. The Department of Obstetrics and Gynecology of UDMHSC has been an official reference center

of the WHO for many years. There is also a close contact between the University and other health institutions of its district. A Teaching Hospital Network of 10 hospitals can be found in nearby counties.

It is also of importance that the UD MHSC can rely upon the collaboration with the Nuclear Research Institute of the Hungarian Academy of Sciences in Debrecen. They coordinate the work that is related to the use of their cyclotron with respect to diagnostic and therapeutic procedures (e.g., Positron Emission Tomography).

Medical Valley EMN e.V., Erlangen, DE

Northern Bavaria provides a very dense clinical infrastructure from basic medical services on to maximum care as well as hospitals providing specialized healthcare for selected disease patterns. A total number of 104 clinics with 27.000 beds and more than 1 Mio stationary patients per year are located in this region. 87 of these clinics with a total of 22.000 beds and 809.000 stationary patients per year are directly situated in the Medical Valley that covers a huge part of Northern Bavaria.

Primary health care level hospitals:

Total number: 10

Hospitals: Gesundheitszentrum Treuchtlingen, Hassberg Kliniken Haus Ebern, Hassberg Kliniken Haus Hofheim, Helios Klinik Volkach, Internistische Klinik Dr. Steger AG, Klinik fränkische Schweiz gGmbH, Kreiskrankenhaus Hemau, Kreiskrankenhaus Parsberg, St. Johannes Klinik Auerbach and Krankenhaus Nabburg

Location: Mostly situated in the economic center of rural areas.

Objective: Serving the basic needs for health care of the located population.

Research projects: One primary health care level hospital is involved in actual research projects.

Secondary health care level hospitals:

Total number: 42

Hospitals: Clinic Neuendettelsau, Geomed-Klinik, Gesundheitsportal Karlstadt, Hassberg Kliniken Haus Hassfurt, Helmut-G.-Walther-Klinikum Lichten-fels, Juraklinik Scheßlitz, Klinik Bad-Windsheim/Uffenheim, Klinik Hallerwiese, Klinik Kitzinger Land, Klinik Neustadt a.d. Aisch, Kliniken Nordoberpfalz AG - Eschenbach i.d. Opf., Kliniken Nordoberpfalz AG – Kemnath, Klinikum Fichtelgebirge - Haus Marktredwitz, Krankenhäuser Nürnberger Land – Altdorf, Krankenhäuser Nürnberger Land - Lauf/Hersbruck, Krankenhaus Burglengenfeld, Krankenhaus Ober-viechtach, Krankenhaus Markt Werneck, Krankenhaus Neustadt,

Kreisklinik Weißenburg, Krankenhaus Rothenburg o.d.Tauber, Krankenhaus Rummelsberg, Kreisklinik Gunzenhausen, Kreisklinik Roth, Kreiskrankenhaus Dinkelsbühl-Feuchtwangen, Kreiskranken-haus St. Anna Höchstadt a.d. Aisch, Main-Klinik Ochsenfurt, Missionsärztliche Klinik Würzburg Gemeinnützige Gesellschaft mbH, Rhön-Saale-Klinik Bad Neustadt a.d. Saale, Rotkreuzklinik Würzburg gGmbH, Sana Klinik Pegnitz GmbH, St. Anna Krankenhaus Sulzbach-Rosenberg, St. Josef Schweinfurt, Stadtkrankenhaus Schwabach, Steigerwaldklinik Burgebrach, Klinikum Fichtelgebirge - Haus Selb, Kliniken Hochfranken - Klinik Naila, Kliniken Hochfranken - Klinik Münchberg, Kliniken Nordoberpfalz AG – Tirschenreuth, 310 Klinik, Capio Hofgartenklinik, Kliniken Nordoberpfalz AG - Waldsassen

Location: Mostly situated in the economic center of rural areas.

Objective: Providing the basic medical services for the regional population.

Research projects: One secondary health care level hospital is involved in actual research projects.

Tertiary health care level hospitals:

Total number: 20

Hospitals: Frankenwaldklinik GmbH, Juliusspital, Klinik Hohe Warte, Kliniken Dr. Erler, Kliniken Nordoberpfalz AG - Weiden, Neustadt, Vohenstrauß, Klinikum Ansbach, Klinikum Bayreuth, Klinikum Coburg, Klinikum Fürth, Klinikum Forchheim der Vereinigten Pfründnerstiftung, Klinikum Kulmbach, Klinikum Neumarkt, Klinikum St. Marien Amberg, Krankenhaus Martha-Maria Nürnberg, Leopoldina-Krankenhaus, St. Elisabeth-Krankenhaus, St. Theresien-Krankenhaus Nürnberg, Wald-krankenhaus St. Marien

Location: Mostly situated in district capitals and large cities.

Objective: Serving a high level of health care in diagnosis and therapy and also providing specialized medical services according to the regional needs.

Research projects: 55 % of tertiary health care level hospitals are involved in actual research projects.

Maximum health care level hospitals:

Total number: 4

Hospitals: Klinikum Nürnberg, Sozialstiftung Bamberg, Universitätsklinikum Erlangen, Universitätsklinikum Würzburg

Location: Situated in economic centers.

Objective: Providing maximum health care level and a highly diverse medical and technical equipment.

Research projects: 75 % of maximum health care level hospitals are involved in actual research projects.

Special hospitals:

Total number: 28

Hospitals: BKH Parsberg, Bezirksklinik Hochstadt, Bezirksklinikum Ansbach, Bezirksklinikum Obermain, Bezirkskrankenhaus Bayreuth, Cnopf`sche Kinderklinik, EuromedClinic, Fachklinik Heiligenfeld, Fachklinik Herzogenaurach, Frankenalb-Klinik Engelthal, Herz- und Gefäßklinik, Kiliani-Klinik, Klinik für Handchirurgie, Schön Klinik Bad Staffelstein, Klinikum am Europakanal Erlangen, Krankenhaus für Psychiatrie, Psychotherapie und Psychosomatische Medizin Schloss Werneck, Maximilians Augenklinik, Neurologische Klinik Bad Neustadt an der Saale, Orthopädische Klinik König-Ludwig-Haus, Orthopädisches Krankenhaus Schloss Werneck, Privatklinik Wirsberg, PsoriSol Hautklinik GmbH, Psychosomatische Klinik Bad Neustadt, Rangauklinik Ansbach, Thoraxzentrum Bezirk Unterfranken, Bezirksklinik Rehau, Klinik am Ziegelberg

Objective: Highly specialized hospitals providing solutions for different disease patterns, i.e. mental illness, cardiac, dermatological or pulmonary diseases, eye complaints, etc.

Research projects: 43 % of special hospitals are involved in actual research projects.

5. Identification of contact persons as well as “idea givers”/ “innovation owners” within these clinics

LP, Bayern Innovativ GmbH / Forum MedTech Pharma e.V. , Nuremberg, DE

Most of the relevant contact persons are already part of the network Forum MedTech Pharma/ Bayern Innovativ

- Medical and nursing directors, CEO`s (if existing), leading managers of the medical device and of the quality departments are the persons to address for finding the most innovative departments/persons in a hospital. Initial contact via e-mail and telephone is commonly accepted.

Clusterland Upper-Austria, Linz, AT

Doctors:

- ☐ Benefit from existing contacts to medical directors! -> they advise us in-house (intern)
- ☐ Address increased to doctors in GC-cooperation-projects
- ☐ Address to doctors in training via their association
- ☐ Medical specialists of general practitioners (family doctors) could also give idea inputs!

Nursing staff:

- ☐ Introduce IntraMED-C2C in meetings? Effort must be clarified.
- ☐ Good possibility in meetings of GESPAG-care-directors
- ☐ In clerical hospitals: could comprehensive meetings also be possible
- ☐ Homecare-sector (e.g. mobile home-care) could be interesting

Hospital engineers:

- ☐ Use hospital engineers conferences for presentation and sensibilisation of InTraMED-C2C
- ☐ Also presentation at GESPAG-conferences of the technical leaders (TBL-Tagungen)
- ☐ Implicate also the Austrian association of hospital engineers: „ÖVKT“
- ☐ Maybe contact the TÜV testing-engineers -> ideas/problems exist there

Other clinical staff:

- ☐ Profit from innovation potential of hygiene specialists
- ☐ Also inform computing and IT engineers in hospitals
- ☐ Activate quality management departments

- ☐ Is improvement-management already implemented in upper austrian clinics or are CIP-Processes implemented
- ☐ Contact human resources departments to receive insertion in employee-magazines or e-mails

TIS, Techno Innovation South Tyrol Bozen, IT

Via direct contacts, telephone, E-Mailing.

Marshal Office of Lower Silesian Voivodeship, Wroclaw, PL

- Lower Silesian Voivodeship Marshal Office has a direct access to clinics regarding innovations. Lower Silesian Voivodeship Marshal Office have ownership relations with 27 hospitals. As a regional authority Lower Silesian Voivodeship Marshal Office has partnership relations with other units such as:
  - Lower Silesian Chamber of Physicians and Dentists
  - Lower Silesian Center for Public Health
- These institutions have a coordination role in medical sector by publication list, research project involvements, generated IPs. The members of these organizations, in cooperation with the university hospital, will be responsible for monitoring feedback from internal and external audiences related to the innovation function. They will also be responsible for evaluation of the effectiveness of the information function.

Already existing contacts:

The best contacts with the Health Policy Department already exist with hospitals involved in e-Health Project which are managed by Marshal Office:

Hospitals involved in e-Health Project: http://www.dolnoslaskieezdrowie.pl/?cat=3

1. Dolnośląskie Centrum Transplantacji Komórkowych z Krajowym Bankiem Dawców Szpiku (DCTK z KBDSz)
2. Niepubliczny Zakład Opieki Zdrowotnej Strzelińskie Centrum Medyczne
3. Powiatowe Centrum Zdrowia w Kamiennej Górze Sp. z o.o. Niepubliczny Zakład Opieki Zdrowotnej Szpital Powiatowy
4. Powiatowy Zespół Szpitali z siedzibą w Oleśnicy
5. Samodzielny Publiczny Szpital Kliniczny nr 1 we Wrocławiu
6. Samodzielny Publiczny Zakład Opieki Zdrowotnej Szpital Wojewódzki w Jeleniej Górze
7. Samodzielny Publiczny Zespół Opieki Zdrowotnej w Świdnicy
8. Specjalistyczne Centrum Medyczne w Polanicy -Zdroju Samodzielny Publiczny Zakład Opieki Zdrowotnej
9. Wielospecjalistyczny Szpital – Szpital – Samodzielny Publiczny Zespół Opieki Zdrowotnej w Zgorzelcu
10. Wojewódzki Szpital dla Nerwowo i Psychicznie Chorych w Bolesławcu
11. Wojewódzki Szpital Specjalistyczny im. J. Gromkowskiego
12. Wojewódzki Szpital Specjalistyczny we Wrocławiu Ośrodek Badawczo-Rozwojowy
13. Wojewódzki Szpital Specjalistyczny w Legnicy

14. Wojewódzki Zespół Specjalistycznej Opieki Zdrowotnej
15. Wrocławskie Centrum Zdrowia Samodzielny Publiczny Zakład Opieki Zdrowotnej
16. Zespół Opieki Zdrowotnej w Głogowie
17. Zespół Opieki Zdrowotnej w Oławie
18. Zespół Opieki Zdrowotnej w Złotoryi

The John Paul II Hospital, Krakow, PL

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

BSC, Business Support Centre Ltd., Kranj, SL

Within the project mainly **the clinics** in the Gorenjska region will be involved, due to the direct personal contacts:

Primary health care institutions:

Community Healthcare Centre Network Gorenjska consists of 6 Centres located in the cities:

- Jesenice,
- Bled-Bohinj,
- Radovljica,
- Tržič,
- Kranj
- Škofja Loka
- and the Stomatology Policlinic in Kranj.

Secondary health care institutions:

- The Jesenice hospital
- Hospital for Gynecology and Obstetrics Kranj
- Psychiatric Hospital Begunje

Tertiary health care institutions:

- University Clinic of Respiratory and Allergic Diseases Golnik

CVVI, Slavkov u Brna, CZ

CVVI external team consist of various experts who are working in Health and Social care and are currently or were employed in institutions such:

a. Faculty hospital Motol (biggest Czech hospital)
b. Central Military Hospital Prague
c. Academy of Sciences Czech republic

Established contacts:

The General Faculty Hospital in Prague:

· MUDr. Jan Bříza, CSc., MBA

Deputy director, deputy for science, research and education

· Ing. Kateřina Tylová

Department of European grants

Nemocnice Hořovice NH hospital a.s.:

· Mgr. Jana Hrachová

Director of the department of care quality and education

Five hospitals of the Central Bohemia Region – hospitals run by the region situated in Příbram, Kladno, Kolín, Mladá Boleslav and Benešov

· Ing. Jaroslav Pokorný

Deputy for economic management of the Central Bohemia regional hospitals

Budapest University of Technology and Economics, Budapest, HU

In motivation interviews and other meetings we asked medical doctors and management's members about their practice of innovation in the institutes. After knowing project details, aims and benefits usually the proper person was introduced by the hospital management, who is in leading position to handle innovations in the hospital.

University of Debrecen, Knowledge and Technology Transfer Office, HU

The **Knowledge and Technology Transfer Office of the University of Debrecen** (UD TTO) was set up in 2005. At the beginning of its operation the office was dealing with technology transfer only in the fields of biotechnology, nanotechnology, innovative drug development and functional food development. For now it **provides innovation and**

technology transfer services as well as **IP rights-related services** in every substantial scientific field which are in focus of the research activity of University of Debrecen (UD).

Based on the experiences of the TTO it was found out that most of the innovative project ideas and new product or service development proposals originate from the Medical and Health Science Center of the university and its clinical departments. From nine spin-off companies five were established to develop medical project ideas. 80% of the patent applications managed by the UD TTO cover medical inventions. Overall, there is a **high innovation potential** in the clinics of UD MHSC which can be exploited by strengthening cooperation between the medical stakeholders of the region.

Ongoing cooperation with clinics:

University of Debrecen Medical and Health Science Center (UD MHSC) has numerous clinical departments. The most innovative ones were indentified based on research project involvements and generated IP: 1st Department of Medicine; Clinical Department of Rheumatology, Otorhinolaryngology and Head & Neck Surgery, Pediatrics, Neurology, Cardiology, Orthopedics, Optometry, Urology, Radiology, BioMedical Laboratory and Imaging Science, Operative Technics and Surgical Research, Prosthetic Dentistry, Faculty of Dentistry.

The TTO has good relation with the management of UD MHSC. The Center has one president and three vice presidents (vice president for clinical affairs, vice president for education and further training, vice president for scientific affairs). The TTO is seated on the campus of the UD MHSC which is in the direct neighborhood of clinical buildings. This is favorable because it is very essential to be near to the clinical staff and to encourage them to develop, innovate and communicate.
TTO provides its services free of charge for the staff of all the departments and institutions of the UD MHSC and for the other two centers of UD as well.

Medical Valley EMN e.V., Erlangen, DE

All analysed hospitals provide a quality management that deals with innovation from clinical staff. The kind of involvement of the clinical staff in the clinical innovation management is rather different. The most common systems are:

- continuous improvement process (system can contain patient inquiries, employee suggestion scheme, evaluation systems for quality of care and hygiene, etc.)

- quality circles
- quality conferences
- staff appraisals

What became obvious during the evaluation is that in most implemented systems the focus is set on process innovation. Product innovation evolving from ideas of clinical staff is rather limited. Innovation transfer from clinics to companies that leads to marketable products is currently on a very low level in the regional clinics.

Direct access to cluster partners:

Management Board: The Management Board of Medical Valley EMN e.V. is composed of decision makers from associations, academia, healthcare and politics, respectively of following institutions:

- Friedrich-Alexander-University Erlangen-Nuremberg
- ***University Hospital Erlangen***
- ***Nuremberg Hospital***
- City of Erlangen
- City of Forchheim
- Chamber of Commerce Nuremberg for Middle Franconia

Members: The Medical Valley EMN e.V. is organized as association and currently has more than 90 members from industry (global players, SMEs – research driven, OEM, etc.), research & education (universities, off-campus research institutes) and health care. The contact to the members is always on decision maker/management-level. A minimum of once a year a general meeting takes place where members are informed on new evolvements. Additionally member visits are planned.

The representatives of the management board and the member institutions have already been informed on IntraMED-C2C and will be regularly updated.

6. Organisation of a first innovation workshop with some persons from the clinic with innovative ideas and optionally other persons

"Other persons" might include: other persons from the clinic like from (continuous) quality improve department, management, technology transfer department, international affairs, clinical research groups etc. as well as external persons (companies, professional service providers involved in innovation management for moderation etc.).

After the identification of clinics and contact persons, the next step is the organisation of a first innovation workshop. To motivate and convince the identified persons for participation in such a workshop is a big challenge and high obstacle for each project partner as organiser and moderator of the workshop.

Therefore the project partners organised in August 2011 an extra project meeting in order to discuss this topic in detail and to provide solutions applicable for each partner for the organisation of the first innovation workshop.

As a main result of this project meeting an **argument list for pilot innovation workshops** was developed **in order to make the benefit of such workshops more transparent and visible**. Each project partner can use one or more arguments of list for his own purpose depending on the actual situation in the preparation phase of the workshop:

- Access of new suppliers for the hospital due to the company/ SME network of project partners.
- High level suppliers can be accessed by the hospitals due to filtering function of each project partner.
- InTraMed is taking care of the needs of the hospitals/ of the target groups; the ideas of the hospital staff are taken serious and are promoted (appreciation).
- The international aspect of the project could be beneficial, at least for some central European countries.
- Already existing structures of the hospital are supported by the project.

- The identification of any kind of success story within the InTraMed consortium can be used by all partners (only with the permission of success story actors) for promotion purposes. The results can be a positive marketing tool.
- Sharing information on new product launches (from companies in the network of our project partners).
- TTO Debrecen might evaluate ideas from project partners; highlighting of knock-out factors.
- A patent and/or Know-how transfer from clinical ideas could result in license fees, new products, better processes etc.; hospital outsourcing factor: benefit of saving time and money for receiving a product.
- Hospital critical incidence reporting: negative incidents are reported in-house and analyzed; this could be the initial point of developing new ideas (within the InTraMed project) to solve the problems; one example which describes this idea: open innovation portal of the “KnowMore” project (only in german): http://wiki.projekt-knowmore.de/02_Projekt_KnowMore)
- At the end of the project InTraMed-C2C can offer hospitals an excellent business model for their individual innovation transfer system.
- Reputation of innovative hospitals can be promoted by InTraMed.
- University hospital professors can publish their ideas (from the workshops) in scientific journals (please protect the ideas first before publishing).

No claim is made to completeness of this list; therefore it can updated and extended at any time.

An example for a workshop could be based on the scheme of Fig. 1.

7. Innovation workshop: Identification of one or more ideas in clinics which might lead to innovations.

Examples for ideas will be visible in workpackage 4: Implementation, „4.2.1 Pilot innovation workshops“ and/or in the database of workpackage 3: “3.3.5 Database”.

8. Discussion (in the workshop or following the workshop) about the next steps. This might include a selection of one or more ideas from the previous workshop

This topic will be part of the activities in workpackage 4: Pilot action, e.g. “4.2.3 Follow-up meetings” and/or “4.2.4 IP evaluation”.

9. Development of a description of the identified idea like a “one-pager”

“One-pager” might include: basic information and/or the result of an internal or external evaluation:

- Abstract;

- Description;
- Pictures;
- IP protection status (basic idea, patent pending, patent, utility model etc.);
- market potential;
- application description;
- national/ international application/ market potential;
- investment volume;
- cooperation partner (already existing and/or looking for).

“One-pager” might be similar to start-up company presentations to investors.

10. Evaluation of the identified idea (if not yet done during development of the “one-pager”)

11. Distribution and/or discussion of the description: innovation database (which is preferably developed in the project or in other external databases); direct contacts with companies in the region/ with companies from networks of other project partners/ with Research & Development institutions, investors etc.

NDA´s should be considered depending of the status of the innovation (idea protected? Patent pending etc.).

12. Follow-up workshops with the purpose of a broader discussion of this idea with participants like: participants from the first innovation workshop, companies preferred SME´s, R&D institutions, innovation managers etc.

13. Initiating cooperation and/or further steps based on the follow-up workshops.