



The Market of Ideas

12th ECRN Congress

Smart Specialisation:

National and local innovation systems – support for innovation in chemical industry

The frame for the national innovation system is provided by the “Smart Specialization Strategy of the Czech Republic”. One of the key parts of the strategy is a list of branches and industries that are perceived as significant and important at the national level. Along with automotive industry, machinery, electronics and IT, chemistry is one of the identified key industries that deserve focused support. Key industries are supported through operational programmes (OPs are tools for distribution of EU funds). Activities such as fostering of industrial research, product up-scaling, knowledge transfer from universities to the industry and commercialization of research results are supported on a national level. On the regional level, locally important industries are also supported. Chemistry has been identified as one of the three most important regional industry branches (in terms of contribution to regional exports, employment and research). The regional support measures focus on two key areas: providing human resources for important regional industries (including chemistry), and stimulating cooperation between business (mainly SMEs) and research (through “soft” tools and small grants).

Representatives at the Market of Ideas: **Miroslav Cingl (S3 manager, Ústí Region)**

Website: <http://www.kr-ustecky.cz/operacni-programy-a-metodiky-na-obdobi-2014-2020/d-1676580/p1=204658>

Interregional activities on bioeconomy: BIG-C (the Bio Innovation Growth mega Cluster)

BIG-C, the Bio Innovation Growth mega Cluster is the cross-border Smart Specialization initiative of the Belgian region of Flanders, The Netherlands and the German state of North Rhine-Westphalia. It aims at transforming Europe’s industrial mega-cluster into the global leader of biobased innovation growth and a pioneer of a resource efficient, circular economy. The mega-cluster, also known as Antwerpen-Rotterdam-Rhine-Ruhr (ARRR), has for decades been a powerhouse of industrial innovation in the chemistry sector. BIG-C proposes to join forces in moving towards renewable resources. By leveraging the ARRR in facing the upcoming transition towards the bio-economy, prosperity is secured and the most relevant societal challenges of industrial employment, raw material scarcity and climate change are addressed.

Representatives at the Market of Ideas: **Carolyn Lange and Dennis Herzberg (CLIB 2021, NRW)**

Websites: http://www.era-ib.net/sites/default/files/big_c_innovation_cluster.pdf

<http://www.be-basic.org/news-center/news/bio-innovation-growth-megacluster-big-c-launched-in-duesseldorf.html>

Cooperation possibilities with the Mazovian Chemical Cluster (The Plock Industrial and Technological Park)

The Mazovian Chemical Cluster was established in May 2014. The cluster aims to improve the competitiveness and growth potential of firms in the chemical industry through cooperation, exchange of knowledge and experience with R&D and cooperation with related companies (e.g. transport companies, logistics, recycling, training providers, engineering and design services, and IT) to achieve maximum business benefits for participants in the cluster. Currently Mazovian Chemical Cluster has 65 members and the number of members continues to grow.

Mazovia is also a participant in the European Regions for Cluster Excellence (ERICE) project on improving cluster management. Partners include Mazovia (Poland), Lombardy (Italy) and Malta. The partners work together to strengthen the links and cooperation among companies at a regional, national and international level, facilitate growth and the internationalisation of the cluster organisations. In this context, the Mazovia Development Agency Plc and the Mazovian Chemical Cluster also work closely together to establish a Cosmetic Group within the chemical cluster. The aim of the Cosmetics Group is to promote and support of innovation, build cooperation links across the region and promote the Mazovian cosmetic industry in the international setting.

Representatives at the Market of Ideas: **Piotr Popik & Lukasz Gorecki (ARMSA)**

Website: <http://www.armsa.pl/>

Project to promote science and technology education

The region has been implementing a project called: "Scientific and Technical Education of the Ústí Region" (CZ.1.07/1.1.00/44.0005). Total expenditures of the project are 146 million CZK. In total it will support 9300 students and 790 teaching staff. In 14 partner secondary schools 55 classrooms and labs will be upgraded. Five of these are focused on chemistry teaching. The pupils from the elementary schools and students from the secondary schools get acquainted, through excursions and fellowships, with the fields of study they could study in the future, directly in the companies. Cooperation of private and public sector is one of the priorities in the project. Visits in Spolechemie in Ústí nad Labem, Chempark Záluží, Ekocentrum VÚHU (Research Institute of Brown Coal), Chemical-Technological University in Prague, IQ park in Liberec etc. are a model example in the area of chemistry. Also the schools involved in the project invite experts for discussions and lectures at the schools and thereby not only familiarize the students with new trends and possibilities but also motivate them for further studies or jobs in the field. Teachers of elementary and secondary schools also benefit from the project, as they have a chance to share acquired know how and experiences. Moreover, they learn about new teaching aids and educational materials produced within other projects.

Representative at the Market of Ideas: **Hana Hejlová (Ústí Region)**

Websites: www.kr-ustecky.cz/o-projektu/d-1677204/p1=204522

Microbrewery

Gymnazium dr. Smejkal Ústí n. L. has been educating and preparing experts in chemistry for more than 60 years. Recently the school has witnessed that the pupils are no longer as interested in chemistry as, paradoxically, the employers and businesses are. Therefore, new initiatives have been launched to make the field of chemistry more attractive for both the students and the elementary school pupils. In the framework of a regional project on "The Promotion of Technical and Scientific Education", the school has built, among other things, a biotechnological laboratory. A mini brewery will be installed as a part of this school lab. Brewing is deeply rooted in the Czech culture and it has a long tradition. Such facility will enable the demonstration of a wide range of basic technological procedures, such as warming, cooling, plunging, mixing and filtration. Simultaneously, the brewery is going to produce small amounts of drink and the whole process of brewing is going to be environmentally friendly. All this can also be seen as a way to make chemistry more popular and to win the hearts of those who might be interested in studying it.

Representative at the Market of Ideas: **Josef Smejkal (Gymnazium dr. Smejkal Ústí n. L.)**

Website: www.gym-ul.cz

Project on sectoral agreements

Sector Agreements Project is a social dialogue tool to solve problems in long term human resources development. The project is carried out by Confederation of Industry of the Czech Republic under the partnership with Czech-Moravian Confederation of Trade Unions, and in co-operation with the Czech Chamber of Commerce. The objective of the project is to find effective solutions of long term's problems in the field of human resources development in the Czech Republic. Regional and National Sector/Industries Agreements will be concluded within the Project that will concentrate on solving key problems in human resources development.

Chemical industry has been selected as a key sector in the Region of Ústí nad Labem. The Project implementation team has now been working on the contents of the Sector Agreement in co-operation with employers, Representatives of the Region, education agencies and other partners. The basic objective of the Sector Agreement is two-fold, i.e. to create a background for further professional education in the sector, and to promote chemical industry as a strategic sector at the same time.

Representative at the Market of Ideas: **Kamila Hajdíková (NSK2)**

Website: <http://www.spcr.cz/probihajici-projekty/sektorove-dohody-reseni-rlz>

NANOFORCE's TRM: a tool supporting Nano R&D Commercialization & industrialization

NANOFORCE is an European funded project covering 8 regions within Central Europe and 7 Countries. Within NANOFORCE, a new Technology Rating Methodology (TRM) has been developed. This innovative IT tool aims to support the self-evaluation and improvement of the proposals as to lead to the birth and growth of start-ups and their successful funding. In particular, the tool will help proposers of innovative ideas providing them with a valuable insight and feedback on the quality of their proposal, easing the subsequent funding process. TRM closely works with the "Nanodeals Generator", a nanotechnology platform database which gather proposal within the Nanotechnology domain and supports the matching and connection of R&D with the funding provided by Risk Investors (Research-to-Business).

Representative at the Market of Ideas: **Paolo Manes (Federchimica)**

Websites: <http://www.nanoforceproject.eu/> & <http://www.nanoforceproject.eu/discover-your-talent/trm>
<http://www.nanoforceproject.eu/researchers-venture-capitalists-managers/submit-your-deal-proposal-or-select-it>

Cooperation of Faculty of Science of UJEP in Ústí nad Labem with region in nanotechnology field

J.E. Purkyně University in Ústí nad Labem cooperates in different fields with many institutions in the region. Faculty of Science (PřF) comprises of departments of Biology, Chemistry, Physics, Mathematics, Geography and Informatics, and the Material Centre of Ústí. Especially the departments of Biology, Physics and the Material Centre of Ústí are engaged in research and joint activities with several institutions in the nanotechnology field. Three examples will be presented at the Market of Ideas to illustrate the many analytical methods and instruments available at PřF UJEP, including a joint study on carbon particles together with Unipetrol and the Institute of Chemical Technology in Prague. Another project deals with polymer nanofibres produced by electrospinning in company Nanovia. Many physico-chemical properties of produced nanofibres and the electrospinning parameters were studied. The results are applicable especially in tissue engineering field. Recently launched cooperation with Preciosa on dealing with problems in adhesion of colors on the glass surfaces will also be presented.

Representative at the Market of Ideas: **Zdeňka Kolská (University of J.E. Purkyně in Ústí nad Labem)**

Websites: <http://sci.ujep.cz/> & http://umc.ujep.cz/umc_projekty.html

HYPOS ("Hydrogen Power Storage & Solutions East Germany") project

Hydrogen Power Storage & Solutions East Germany (HYPOS) is one of ten East German projects in the framework of the "Zwanzig20 - Partnership for Innovation" programme funded by the Federal Ministry for Education and Research (BMBF). HYPOS will receive 45 million EUR in funding until 2020. The project's aim is to work on processes to store and use electricity made of renewable energies. It also seeks to speed up the innovation process in East Germany by supporting cross-regional and cross-disciplinary collaboration. HYPOS brings together the skills and capacities of actors in the energy, chemicals, and other sectors, and incorporates not only the resources of big players, but also the expertise of small and medium-sized companies (SMEs), universities or research institutions.

Representative at the Market of Ideas: **Stefan Basus (Clustermanagement Mitteldeutsches Cluster Chemie/Kunststoffe, Saxony- Anhalt)**

Website: <http://www.hypos-eastgermany.de/>

PARNET and PROTRANSFER, projects for cooperation of Faculty of Science of UJEP

Faculty of Science at J.E. Purkyně University in Ústí nad Labem cooperates in different fields with many institutions of the Ústí nad Labem region. The faculty is actively engaged in several projects. Examples presented in the Market of Ideas include two projects. PARNET is focused on development of NET of partners from region for our faculty. The project finished in August 2014. Numerous activities have been realized within the project framework, including many workshops for students and academic staff, seminars, student placements and practical training in different institutions etc. The second project, PROTRANSFER, continues activities in this field and it is concentrated on the transfer of knowledge and skills, technology and know-how between the university and companies.

Representative at the Market of Ideas: **Blanka Pohajdová (University of J.E. Purkyně in Ústí nad Labem)**

Websites: <http://parnet.ujep.cz/> & <http://pro-transfer.eu/>

Possibilities for Inter-Regional Cooperation in the Context of Marie Skłodowska-Curie Innovative Training Networks (Horizon 2020)

The general aim of the Marie Skłodowska-Curie Actions (MSCA) is to support researchers' development. One of the proposed actions in this framework is Innovative Training Networks (ITN) and development of European Training Networks. A group of regions, represented in the Market of Ideas by Mazovia, is planning for joint action to develop a project that will help young researchers interested in expanding their science experiences in wide-defined chemistry field and also willing to develop transferable skills (eg. communications, entrepreneurship, ethics, team skills, etc).

Representative at the Market of Ideas: **Kinga Czenczek (Mazovia)**

ECRN Project Council

The European Chemical Regions Network (ECRN) is committed to facilitating inter-regional collaboration. To improve the capability of chemical regions to stimulate regional chemical value creation processes, a new initiative, the ECRN Project Council, was launched in April 2014. The Council supports project development activities among the ECRN member regions and chemical institutions. It also enhances the capacity of regional players to apply for European funding and supports acceleration of technology transfer and cooperation between companies (incl. SMEs), research institutions, and other actors across chemical regions. Actors from non-ECRN regions are also welcome to join the activities. The ECRN Project Council is open for collaboration with partners from chemical clusters, regional innovation networks, associations, research centers or other institutions interested in joint projects and regional value creation. The Council operates under rotating chairmanship and builds on the activities of its members. Chemie-Cluster Bayern, a cluster organization from ECRN member region Bavaria, is entrusted to chair the Project Council for the first two-year period of operation (2014-2015).

Representative at the Market of Ideas: **Jörg Klein (Chemie-Cluster Bayern)**

Websites: <http://www.ecrn.net/abouttheecrn/projectcouncil.php>

<http://www.chemiecluster-bayern.de/ueber-uns/ecrn-project-council/>