

ChemClust

Improving Innovation Capacity in
European Chemical Clusters

**Report about results of Pilot Project
„Chemical Parks as Knowledge Sites“**

**ChemClust Final Conference
22 November, Brussels**



Project Partners

- **Saxony-Anhalt**

isw GmbH

Industrial Park Zeitz

CeChemNet – network of chemical Parks

- **Usti**

Usti Region

Czech Association of Chemical Industry

- **NRW**

Ministry of Economy

Cluster stakeholders and Chemical Site Initiatives



Objectives

- Improvement of innovation capacity of chemical companies by developing chemical parks as knowledge sites
- Exchange of experience about best-practice solutions for the settlement of research infrastructure on chemical parks for the development of innovation services of SME
- Successful possibilities for the development and strengthening of innovation profiles of chemical parks alongside the value added chain
- Better integration of chemical parks into the regional innovation landscape in cooperation with regional R&D entities



Objectives

- Networking of innovation activities of chemical parks at European level by sharing research infrastructure or implementation of European research cooperation – development of joint innovation priorities
- Support of initiation and implementation of concrete activities for the development of „knowledge sites“ in the partner regions in the framework of joint cooperation process
- Development of recommendations for the shaping of regional economic promotion and innovation policy for the strengthening of chemical parks as active driver of innovation development (e.g. Voucher, Roadmap, Marketing, etc)



Thematic priorities Saxony-Anhalt

CeChemNet Innovation location Network

- Description of general concept
- Description of innovation profiles of chemical parks (Value Park: Polymer/Solar, Leuna: CBP, ibi, Bitterfeld: coatings, Zeitz, biomas, BASF biopolymers)
- Discussion of possibilities for further development under consideration of experiences of European partners and stronger international networking
- Discussion about chances of coal to chemistry
Development of new research infrastructure on chemical parks is planned



Pilot project innovative materials network IP Zeitz

- Example for implementation of concrete activities for the development of a „knowledge site in a selected chemical park
- Development of infrastructure for biomass gasification alongside the value added chain for innovative materials network
- Integration of activities in regional innovation landscape
- European networking and exchange of experience in this topic



Thematic priorities Usti Region

Development of chemical park Zaluzi as knowledge Site

- Support for the establishment of new Unipetrol research centre on Chemical Park Zaluzi
- Positioning of chemical park Zaluzi as basis for development of new chemical Cluster in Usti Region and important driver of innovation promotion
- Initiating exchange of experience between Chemical Park network CeChemNet and Chemical Park Zaluzi
- Integration of activities in regional innovation landscape and promotion of cooperation
- Identification of joint cooperation potential and transfer of experiences for the support of development of knowledge site Zaluzi



Thematic priorities Usti Region

Establishment of Chemical Cluster in Usti Region

- Support for the establishment of new chemical cluster in Usti Region
- Bringing together important regional stakeholders from public authorities, companies and research institutions
- Identification of thematic priorities for cluster activities in the joint interest of potential cluster members
- Facilitating exchange of experience on the basis of lessons learnt from chemical cluster Central Germany
- Initiating thematic discussion and networking of stakeholders, supporting the development of cluster application



Thematic priorities NRW

Development of chemical parks in NRW as knowledge sites

- Further development of cluster policy with focus on innovation support, description of best-practice (e.g. Cluster competitions)
- Promotion of innovation in the chemical cluster Chemie.NRW. and chemical park initiatives ChemSite and ChemCologne
- Identify areas of cooperation and disseminate information at European level
- Positioning of chemical parks in future EU 2020 strategy



Overview of activities

2011	
Feb	Agreement on methodology and thematic priorities within the ChemClust Working Group
March	Presentation of methodology and thematic priorities during ChemClust Workshop in Novara, Italy 2-3 March 2011 Start of pilot projects
May	Pilot Project Workshop – Chemical Park Zaluzi (Usti Region, CZ) 9-10 May 2011
Sep	Pilot Project Workshop in Zeitz, Saxony-Anhalt, Germany, 26-27 Sep 2011
Nov	Regional Stakeholder Meeting for the discussion about establishment of Chemical Cluster in Usti Region with support from experience from Central Germany chemical cluster, 9 November 2011 Presentation of activities during ChemClust Dissemination Conference and ChemClust Workshop in NRW on 14 November 2011 in Leverkusen
2012	
Feb	Development of roadmap for establishment of chemical cluster in Usti Region
March	Presentation of Results during ChemClust Workshop on 8 March in Warsaw
April	Development of innovation profile for CeChemNet Chemical Park
May	Start of construction of UniCRE Research and Education Center in Litvinov Finalisation of activities and development of recommendations



Involved Stakeholders

Saxony-Anhalt

- Cluster Chemistry Plastics Central Germany
- CeChemNet; Chemical Park Leuna, Chemical Park Bitterfeld, BASF Schwarzheide, Dow Olefinverbund GmbH
- Industrial Park Zeitz, IfN Forschungs- und Technologiezentrum GmbH
- Ministry of Science and Economy Saxony-Anhalt

Usti

- Usti Region
- SCHP – Czech Association of Chemical Industry
- UniCRE

NRW

- Ministry of Economy, Energy, Building, Housing and Transport North Rhine Westphalia
- ChemCologne, ChemSite



Achievements for Knowledge Site development in Saxony-Anhalt

- The Chemical Parks in Saxony-Anhalt and Central Germany have strengthened their efforts to improve innovation capacities in the framework of the CeChemNet Innovation Location Network
- Each Chemical Park has further developed its innovation profile in focusing on important R&D priorities alongside the value added chain of the located companies
- Furthermore the settlement of research infrastructure has been established as development instrument for chemical parks in order to provide additional innovation capacities for companies on the site (latest example is the Chemical Biotechnological Center in Leuna)
- The Industrial Park Zeitz has further developed a new biomass gasification process in the framework of the pilot project with the background of strengthening the industrial park as knowledge site



CeChemNet - Network of Innovation Sites

The Central German Chemical Triangle *Innovation and R & D*

Leuna



Fraunhofer
Chemical-
Biotechnological
Process Centre
(CBP)

Hydrogen
Technology
of Linde Group

Coal to chemicals
– utilisation of
domestic brown
coal

Bitterfeld-Wolfen



R & D in the fields of
fine chemicals,
pharmacy,
agrochemicals,
catalysts, OLED-
technology, functional
coating

Water treatment / ion
exchanger

Cooperation with
Fraunhofer Institute
for Factory Operation
and Automation IFF

ValuePark, Schkopau



Competence Centre for
synthetic rubber and
PET

Fraunhofer Pilot Plant
Centre for Polymer
Synthesis and Polymer
Processing (PAZ)

Technology Centre of
Fraunhofer Centre for
Silicon Photovoltaics
(CSP)

Zeitz



Competence
Centre for
industrial
utilization of
biomass

Centre for
material
utilization of
used oil

Schwarzheide



Service Centre
for process
optimisation

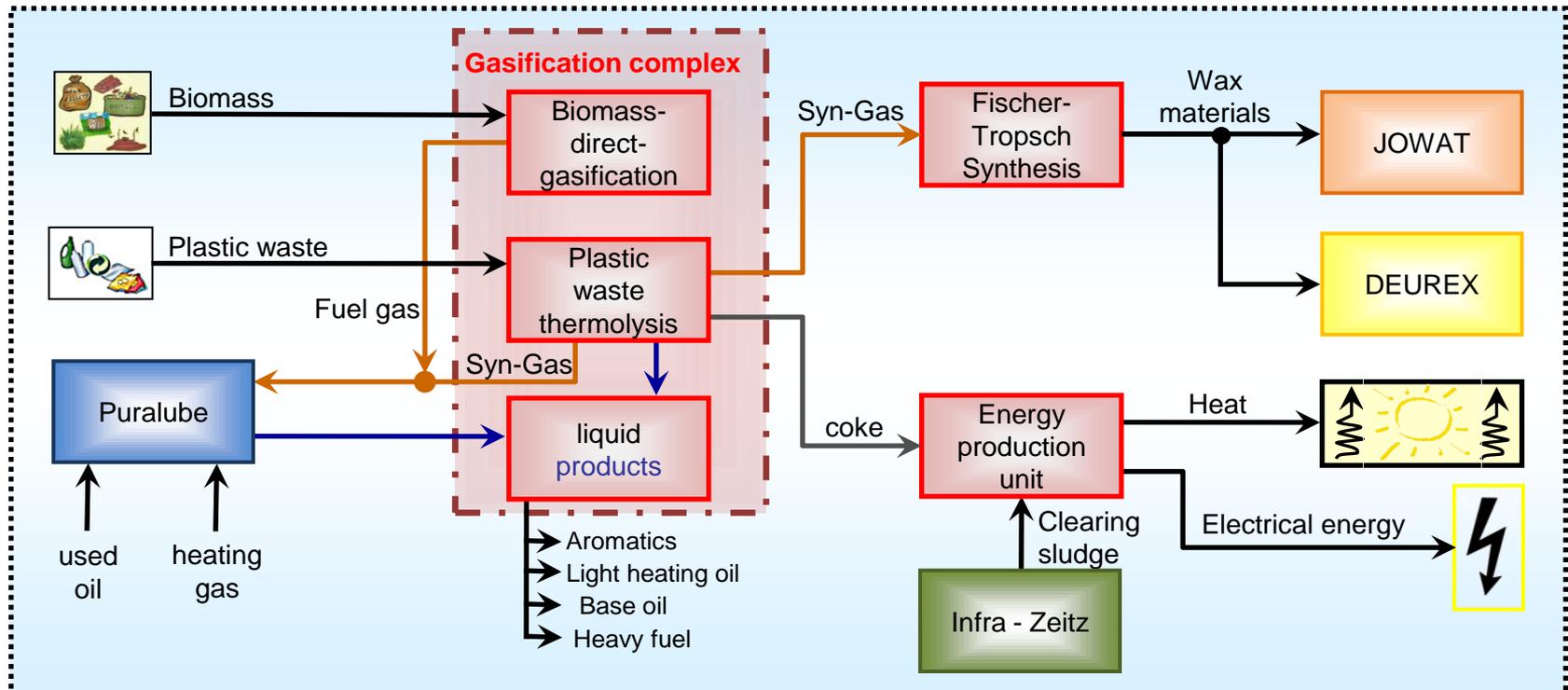
Technical
Centre for
alkoxylation
and product
development

Establishing an
Innovation

Centre for
biopolymers



Knowlede Site Industriepark Zeitz



Project Executing organisation

Industrial partners

- Biomassconversion GmbH
- KUG
- DEUREX
- Puralube
- Jowat
- Envirotherm

Scientific partners:

- HSCaustal – Zellerfeld
- HS Merseburg
- ifn FTZ GmbH

Recommendations for Saxony-Anhalt

- The success of knowledge site development relies on the cooperation between private (site operator and chemical companies) and public partners (Research Institutes such as Fraunhofer, Ministry of Economy, Municipal Districts, Technology Centres) by establishing innovative financing and partnership models – existing best-practice solutions should be transferred also to other chemical regions
- The knowledge site development in Saxony-Anhalt has been supported with broad public funding also from European Structural Funds, which consequently is an argument to allocate future innovation funding on chemical parks in order to maximise benefits of new infrastructure due to higher efficiency of available services and better proximity to enterprises especially SMEs
- The role of chemical parks as knowledge sites should be reflected in the shaping of future innovation and cluster policies, therefore a deeper discussion in the ongoing policy making process should be implemented

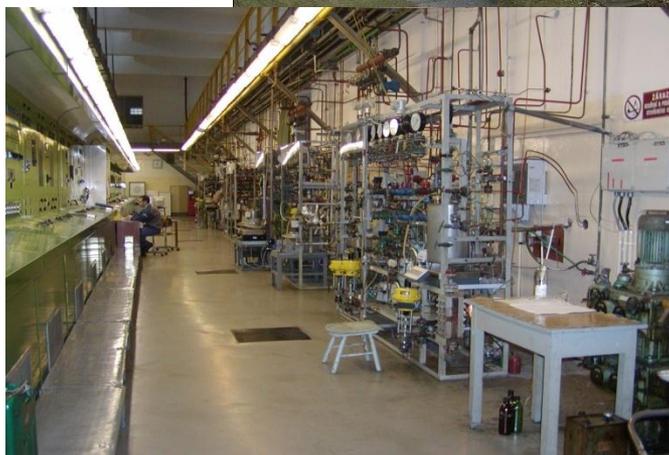


Achievements for Usti Region

- The Usti Region has further developed the discussion with regional stakeholders from companies and research institutions to establish a new chemical cluster or cooperation network
- With the help of the experiences from the Chemical Clusters in Central Germany and NRW the Czech stakeholders have identified topics of common interest (e.g. Human Resource Development, Education, Infrastructure and Logistics, Legislation and R&D Cooperation) and discussed about potential structures and financing, these results have been integrated into a Road Map for cluster development.
- Unipetrol is developing the new research centre UniCRE at the chemical Park in Zaluzi following the same “knowledge site” approach, which has been described in the ChemClust Pilot project, Opening should start full operation in 2014



Building of new UniCRE Research Center



Recommendations for Usti Region

- Usti region should continue to develop the thematic discussion and cooperation among the regional stakeholders for further networking in close cooperation with the Czech Chemical Industry Association. Potential Funding from Czech Invest should be assessed in view of developing a new project.
- New Cluster development has to identify leading organisation and driver of cooperation and create an added value for participating companies also taking into consideration the existing competition. A special focus should be given to the creation of a culture of trust and mutual cooperation is important for cluster development and is a long-term process
- The establishment of the UniCRE Research centre should benefit from the experiences of knowledge site development at the chemical parks in Central Germany – especially in view of developing finance and partnership models
- Within the process of the establishment of the Research centre it is interesting to identify topics of common interest to promote cooperation and share the usage of existing research infrastructure across borders



Achievements for NRW

- Chemical Parks in NRW have facilitated the development of R&D topics for example in the Evonik Science to Business center is implementing projects on Nanotronics, Biotechnology and Energy Efficiency and Climate Protection
- For this purpose ChemSite facilitates networking between Universities, Research institutes, small and large companies
- ChemCologne has set up a Cooperation Platform which includes products, processes, services, demands etc. of each member to enable new cooperation and offer new contacts for potential investors
- ChemCologne cooperation day with regional universities to bring together chemical companies and students in order to facilitate recruitment
- The State Cluster Chemie NRW has organised funding competition in the framework of the CheK.NRW programme to select a number of innovation projects



Recommendations NRW

- The promotion of innovation development and R&D cooperation should be further progressed by the Chemical Park Initiatives in NRW ChemSite and ChemCologne, especially the role of private research entities of larger companies should be strengthened in view of offering research services also to external SME
- Chemical Park Initiatives and Chemical Cluster together with NRW Invest will combine their efforts to attract international investors for settling in NRW, the specific strengths in innovation and R&D should be actively promoted in this respect



General Recommendations

- The development of innovation profiles for chemical and industrial parks is an interesting tool for the strengthening of innovation capacities and identification of cooperation topics at regional, national and European level,
- Increased transparency about available infrastructure and competence is important to facilitate cooperation, Similar innovation priorities in the regions are the basis for European cooperation and synergies
- The settlement of research infrastructure on chemical sites is an active strategy to offer R&D services to companies with focus on SME, which directly improves attractiveness for the settlement of new companies on the site. Similar approaches have been identified in several European regions



General Recommendations

- The development of knowledge sites is depending on innovative financing and partnership solutions in view of Public-Private Partnerships, it is important to have a high commitment from the industry and an active contribution from R&D entities and support from Public Authorities
- The concept of knowledge sites should be actively integrated in the future innovation and cluster policy at European level – especially in the Regional Innovation Strategies (smart specialisation in the framework of EU 2020 Innovation Union)
- The allocation of future innovation funding on chemical parks can results in higher impact and better usage of existing R&D infrastructure under better involvement of SMEs



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