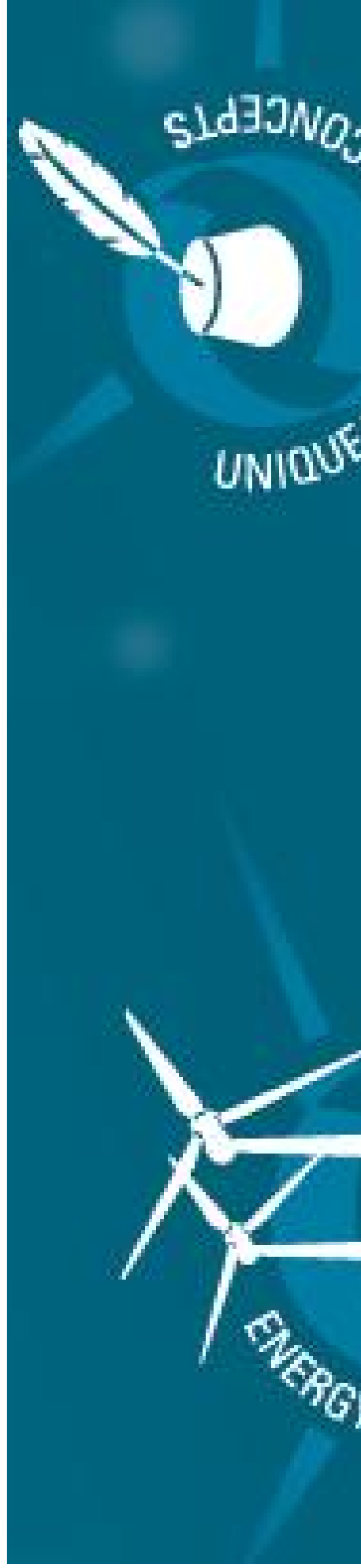




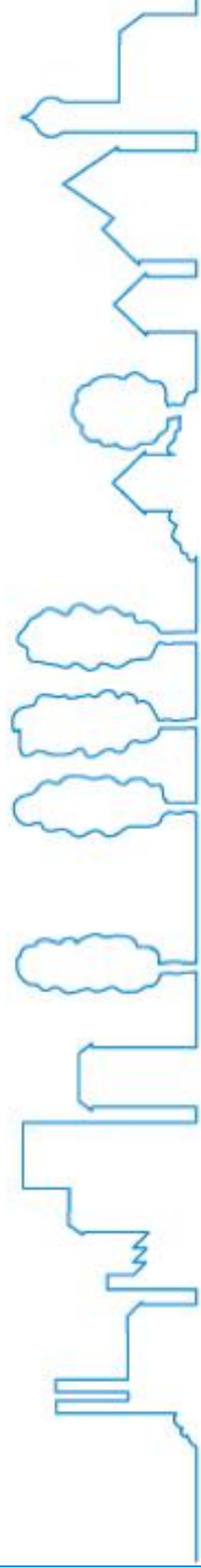
Chemical Parks as Regional Engines for Value Creation

ACHEMA, 17.06.2015



Presentation Outline

1. **Background: Integration of Cluster Management and Site Planning**
2. The Bavarian Approach: The Site Development Program
3. 4 International Case Studies



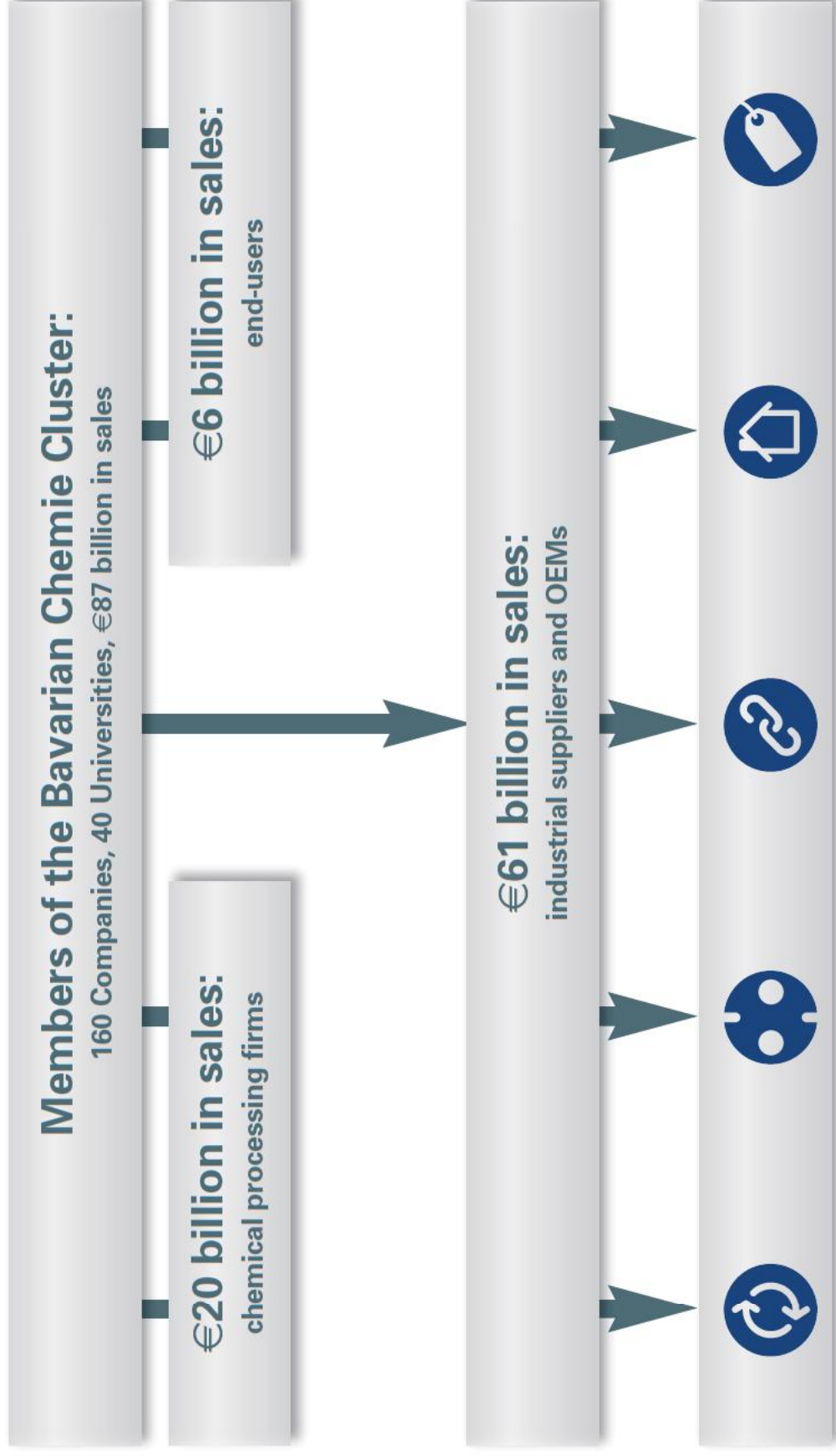
Chemie-Cluster Bayern

– among the best in Germany and Europe



Universität
Bayern e.V.







The VCP-Initiative

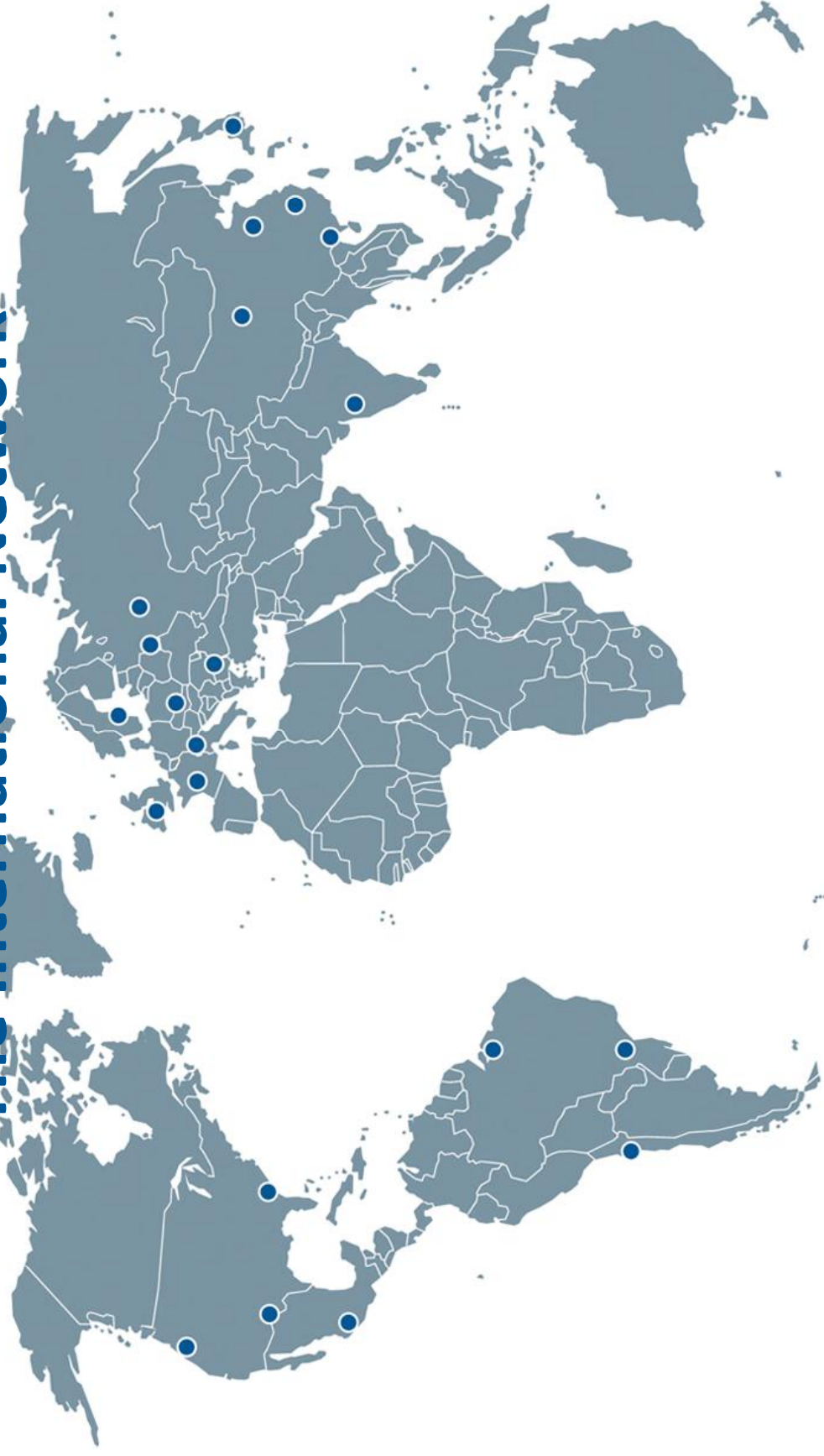


Value CreationPartnership
Solving today's problems ahead of tomorrow's

Most Promising Fields of Applications



The International Network





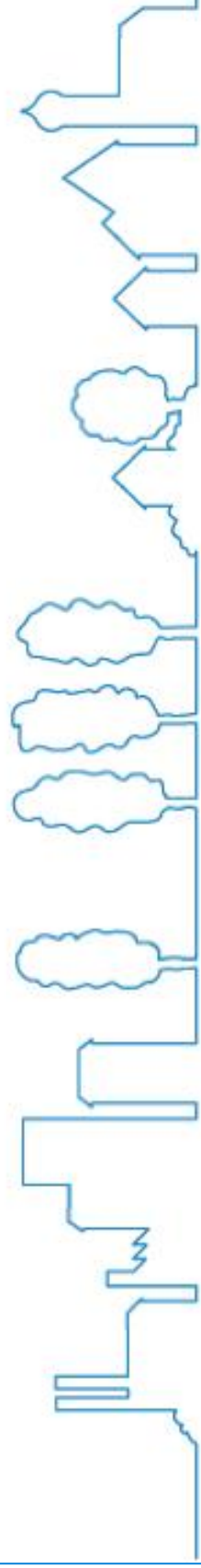
Mission: To create real win-win partnerships with international industrial sites by

- Identifying market opportunities
- Developing joint investment concepts
- Applying sustainable structural planning



Presentation Outline

1. Background: Integration of Cluster Management and Site Planning
2. **The Bavarian Approach: The Site Development Program**
3. 4 International Case Studies



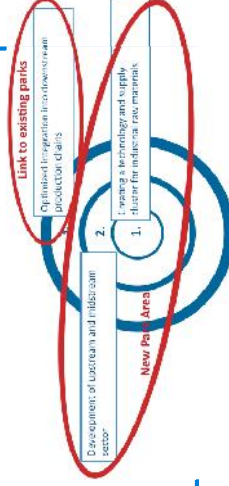
Tasks of the Bavarian Competence Center for Site Development

- Building up a network of industrial sites and industry clusters
- International cooperation in
 - capacity building,
 - cluster development,
 - building up trade and distribution hubs,
 - industry park and city planning



Major Services

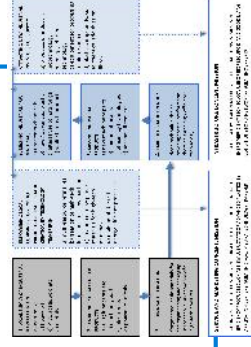
Development concepts and feasibility studies



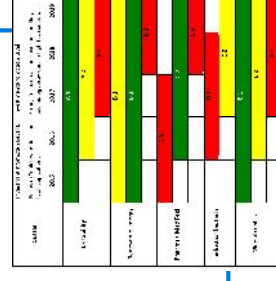
Master Planning



Value Chain analysis



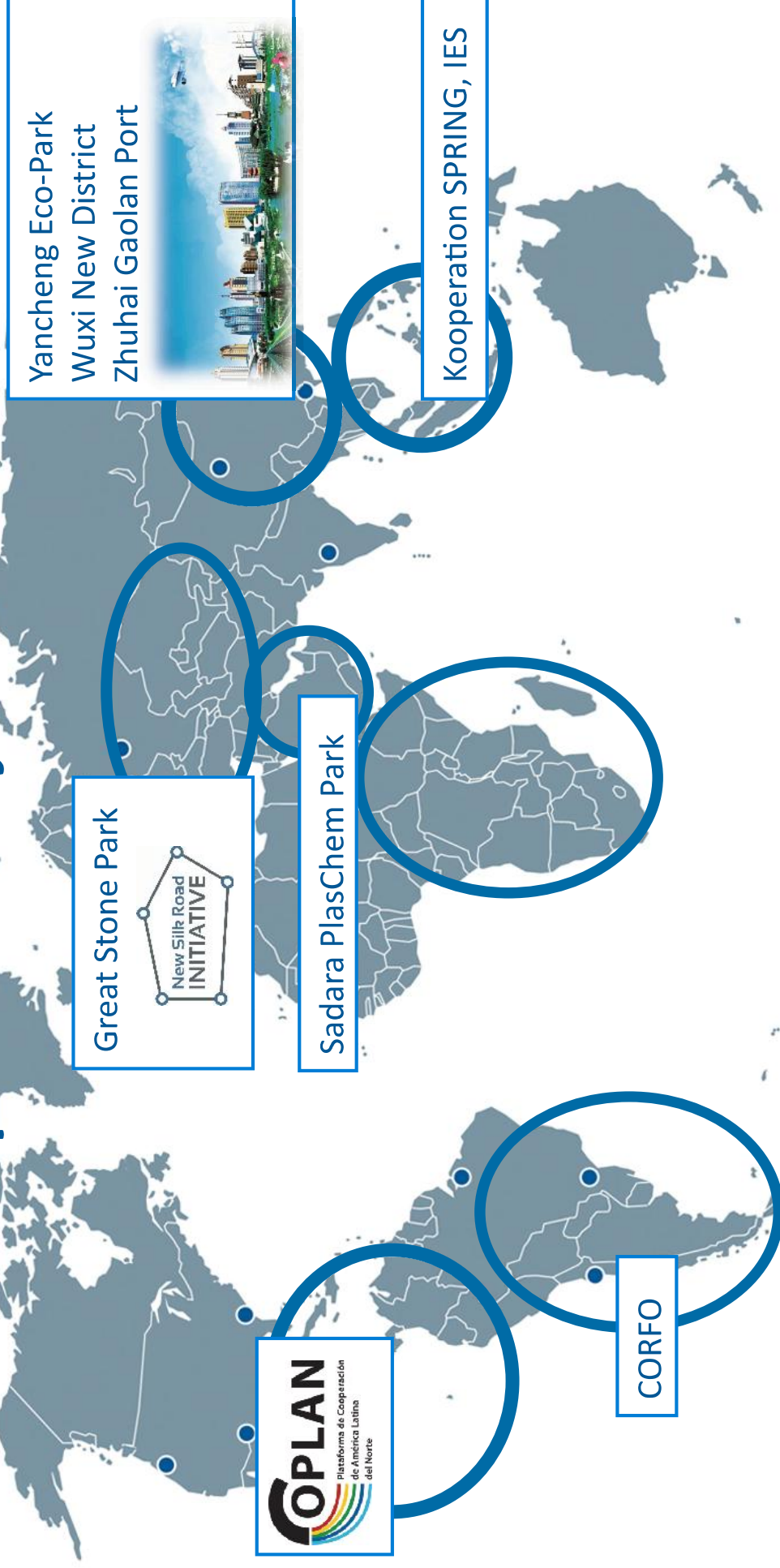
Investment Promotion Action Plans



Location



Cooperation Projects 2015-2016



Roadmap of Cooperation

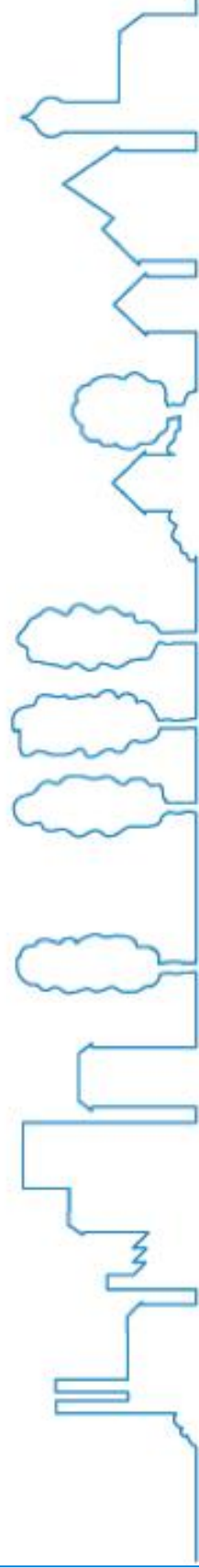
1. Setting up cooperation framework; implementing VCP with local partner
2. Gathering industrial technology needs from target sectors; organizing b2b-meetings and supporting negotiations
3. Analyzing crucial gaps in value chains and drafting strategies for new chemical production clusters
4. Discussing the results with park operators and starting joint initiatives within the SDP program

Roadmap of Cooperation

1. Setting up cooperation framework; implementing VCP with local partner
2. Gathering industrial technology needs from target sectors; organizing b2b-meetings and supporting negotiations
3. Analyzing crucial gaps in value chains and drafting strategies for new chemical production clusters
4. Discussing the results with park operators and starting joint initiatives within the SDP program
 - Creating a feasible site concept
 - Optimizing structural planning
 - Attracting and managing a powerful production cluster

Presentation Outline

1. Background: Integration of Cluster Management and Site Planning
2. The Bavarian Approach: The Site Development Program
3. **4 International Case Studies**



A Chemical Cradle for High-Tech Development: Gaolan Port in Guangdong, China



Overview

- Nr. 6 among the petrochemical parks in Guandong (30 km²)
- Petrochemical Park, maritime cluster, energy cluster and port logistics
- Tenants:



Site Development

Value Chain Strategy

- Building up a complete polyester value chain
- Propylene production and PU value chains
- Creating a cluster for lubricants and resins

Market Opportunities

- Key solutions for the local clusters of maritime industry, clean energy and gas treatment
- regional demand in aerospace and manufacturing

USP

Integration of oil and gas related value chains and clean-tech into one industrial base with a perfect geographical position

Priority Applications for Regional Markets

- Adhesives
- Sealants
- Specialty polymers
- Synthetic rubbers
- Lubricants
- Coatings



Building up Diversified Downstream Production: PlasChem Park / Sadara, Saudi-Arabia



Overview



Sadara is among the world's largest petrochemical complexes (20 bn \$); creation of 26 petrochemical plants from 2011-2015

Development of a chemical downstream and a conversion park, based on cracking Naphta and Ethane

Site Development

Value Chain Strategy

- Diversified chemical production of performance polymers and speciality chemicals in order to become a game changer of national petrochemical industry

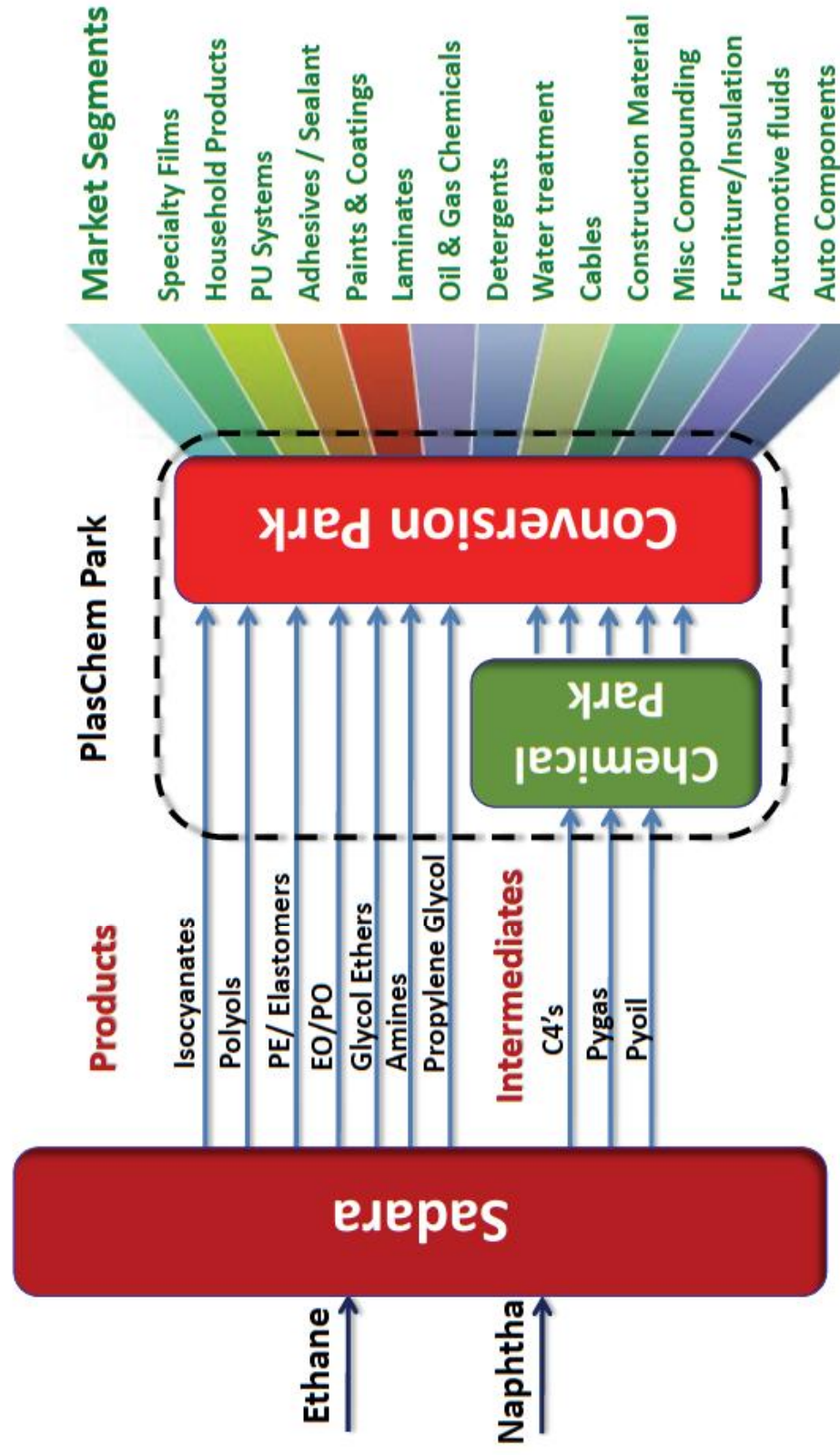
Market Opportunities

- Basic products for new national value chains in construction, detergents, packaging, household, automotive and process industry

USP

First national production base for diversified set of chemical products with optimized market access and perfect supply structure

Priority Applications for Regional Markets



Source: Sadara 2013

Creating Hubs for Chemical Trade Roads:

The New Silk Road Parks



New Silk Road
INITIATIVE

we connect optimized sites for industry and investment



**Chemie
Cluster Bayern**



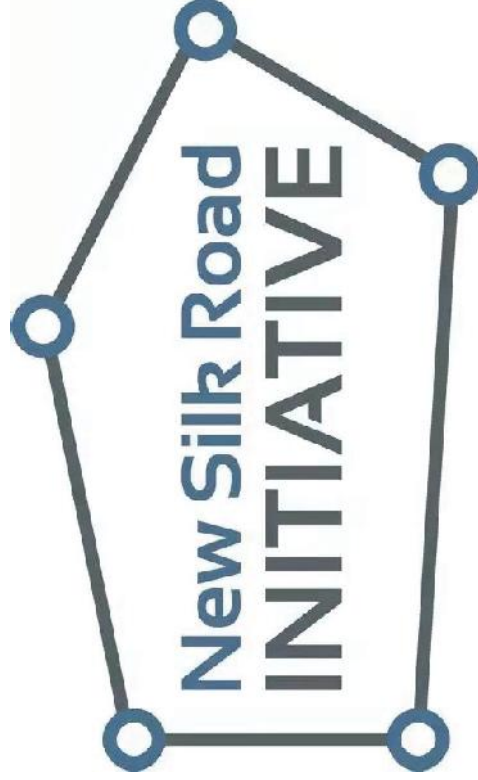
**GREAT
STONE**
Industrial Park



KAUNAS
free economic zone

Chemie-Cluster Bayern GmbH Hansastr. 26 D-80686 Munich www.chemiecluster-bayern.de info@chemiecluster-bayern.de	Great Stone Industrial Park K.Zetkin 51a – 9 floor BY-220004 Minsk www.industrialpark.by welcome@industrialpark.by	The People's Government of Jiaoshan County No. 118 North Tang Gong Road CN-314199 Jiaoshan County Zhejiang Province eg.jiaoshan.gov.cn yangyi0714@hotmail.com	Kaunas Free Economic Zone Management Company Terminalo st.3 – Biruliskiu k. LT-54469 Kaunas Region Lithuania www.ftz.lt info@ftz.lt
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Overview



- Network of three industry parks in Lithuania, Belarus and China
- Participating industry parks:



Site Development

Value Chain Strategy

- Joint system of matching supply and distribution chains, industrial match-making
- applying „industry 4.0“-strategies for business incubators

Market Opportunities

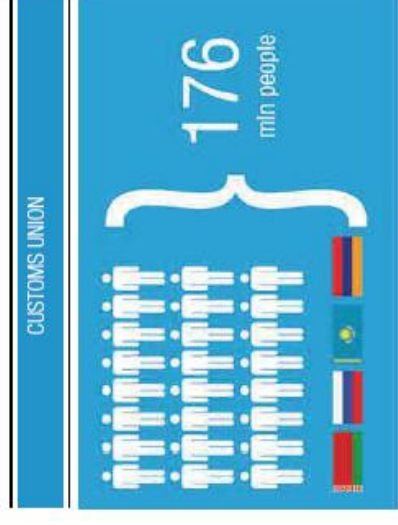
- Production and distribution of chemical intermediaries for EU value chains (e.g. textiles)
- Logistics and service industry

USP

Supporting global business development of local companies; set-up and joint operation of international technology and trade platforms

Priority Applications for Regional Markets

- Electronics
- New materials
- Chemical intermediaries
- Biotechnology, pharmaceuticals
- Engineering, equipment



Dynamic Development of a Chemical Fiber Site:

Industry Center Obernburg, Germany



Overview



- Site:
 - actually in use: 176 hectares
 - expansion areas: ca. 60 hectares
 - ca. 50 hectares
- Energy supply & Utilities
 - Capacity Power Plant: ca. 120 MW
 - Heat & steam: 280 t/h
 - Water: ca. 10 Mio. m³
- Companies on site: 35
- Production: > 125.000 t/a
Fibers, polymers, medical products, metal powder, coatings, geotextiles, drainage systems
- Sales: > EUR 500 Mio.
- Staff: ca. 2.800

Site Development

Value Chain Strategy

- Creation as a chemical fiber plant in 1923, „Europe's most flexible, most efficient and most competitive chemical fiber site“

Market Opportunities

- Various industrial applications for fibers in the automotive industry, construction sector, medical applications and engineering

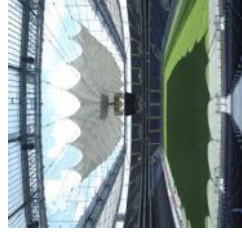
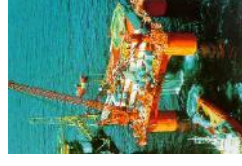
USP

Full-service site operator with a very deep technological intergation, including own technologies in fibers spinning systems, chemical plants etc.

Priority Applications for Regional Markets

regional supply and technology hub
for fibers, membranes, coatings,
powders and engineering
components in areas such as

- Textiles
- Automotive
- Construction
- Medical applications
- Engineering sector



Summary / Lessons learned

1. Developing a complete set of site offers and services from the scratch means wasting money.
2. Better strategy: Creating a nucleus for industrial development by a well-balanced concept of sustainable planning, cluster management and targeted investment promotion.
3. Define a USP based on supply, logistics / infrastructure, „Verbund“-strategies and specific services.
4. The geographical condition is NOT a USP, but just a framework condition. Strategic market access is more important.

THANK YOU FOR YOUR ATTENTION!

