



>> PERSPECTIVES_2012

THE FUTURE OF CHEMICAL AND PHARMACEUTICAL
PRODUCTION IN GERMANY

>> AN INSTITUTIONAL PERSPECTIVE.

THE ROLE OF CHEMICAL AND INDUSTRIAL PARKS IN ATTRACTING FDI

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ACHEMA PERSPECTIVES 2012

The role of chemical and industrial parks in attracting Foreign Direct Investment (FDI)

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ACHEMA

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STATEMENT

Chemical and industrial parks increase the attractiveness of Germany as an investment location and are effective drivers for modern industrial production.

GERMANY AS AN INVESTMENT LOCATION

- Best qualified employees in Europe
- High quality of training, networking with universities
- Lowest number of strike days in Europe
- Consensus-oriented, stable social partnership

- World's best infrastructure of all territorial states
(World Economic Forum Ranking 2011)
- Excellent logistic connections to all modes of transport plus an extensive pipeline network



GERMANY AS AN INVESTMENT LOCATION

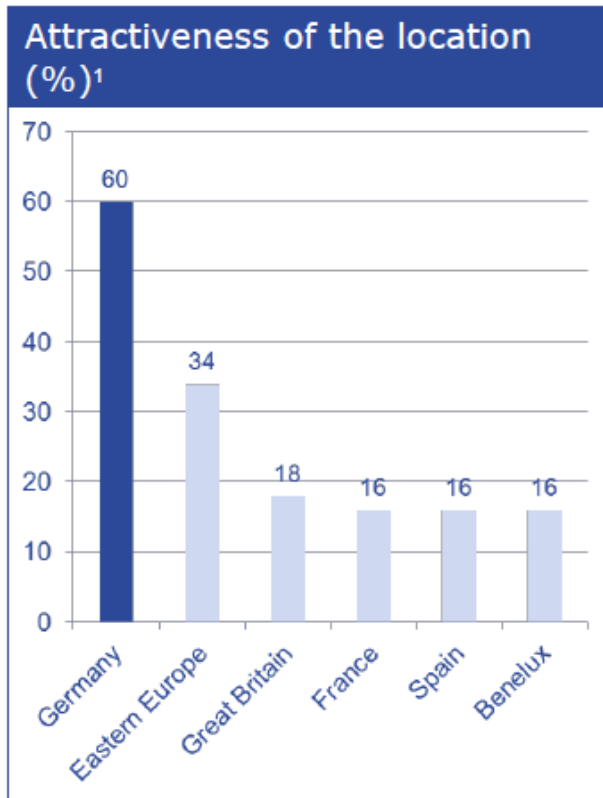
- Attractive home market and central location in Europe
- High expenditures for R&D (2.82% of GDP 2010)
- Foreign direct investments grow by 5% (2000-2009)
- Chemical industry is among the key segments for FDI (fourth-largest share of FDI projects)



INVESTING IN THE CHEMICAL INDUSTRY

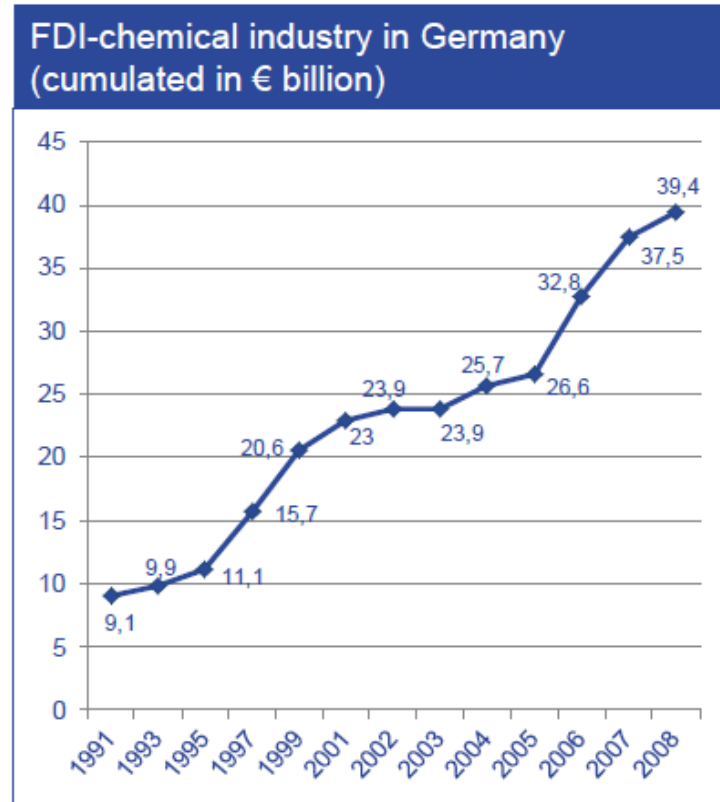
Germany as a location for industry: exceptionally attractive

- Significant increase in the share of FDI in the chemical sector



Evaluation of locations by U.S. companies and investors

Source: AmCham Business Barometer, 2011



Source: VCI, Publication: Chemical Industry in Figures, 2010

INVESTING IN THE CHEMICAL INDUSTRY

Advantage: logistical network

- Good connections of chemical sites to all modes of transport (freeways, rail freight, navigable waterways)
- Supplemented by connections to the pipeline network



Source: Germany Trade & Invest, 2009

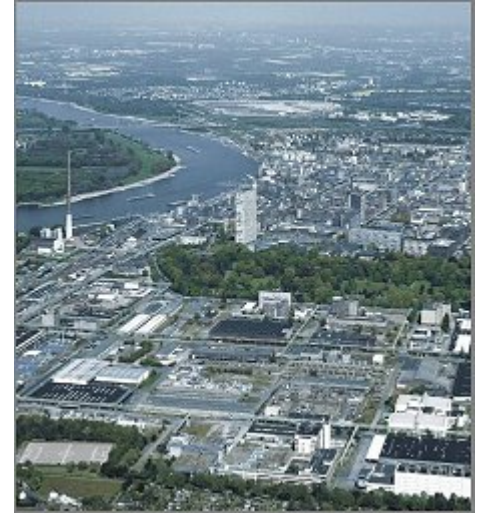
THE MODEL OF THE CHEMICAL AND INDUSTRIAL PARKS

New business model has proved successful

- Approx. 60 sites in Germany
- More than 1,000 companies
- More than 250,000 employees

The chemical park / industrial park model

- Chemical park operators as site managers
- Central services for companies
- Manufacturing companies can concentrate on their core business



THE MODEL OF THE CHEMICAL AND INDUSTRIAL PARKS

Attractive for companies along the entire value chain

- Chemical and industrial parks offer optimal conditions for a variety of industries

Raw material producers

- Basic products (organic/inorganic)
- Fine/specialty chemicals
- Polymers

Processors/refiners

- Plastics
- Pharmaceutical intermediates
- Mixed products (e.g. paints, surfactants)

Producers of end products

- Plastics
- Pharmaceuticals
- Paints/coatings
- Fibers
- Detergents/cleaning agents/cosmetics

Chemicals-related processing industry

- Paper industry
- Automotive components supply industry
- Oil refining
- Aluminium industry
- Metal machining
- Glass industry

Producers of goods based on renewable raw materials/biotechnology

- Biofuels
- Bio intermediates
- Biopolymers

Source: VCI professional association chemical parks, 2009.

THE MODEL OF THE CHEMICAL AND INDUSTRIAL PARKS

Demands made by investors on chemical and industrial sites

- Comprehensive range of services of the chemical industrial parks – tailor-made



Source: VCI professional association chemical parks, 2009

CHEMICAL AND INDUSTRIAL PARKS & FDI

Requirements specification: Factors of relevance for FDI from the viewpoint of the investors

- Raw material costs, availability, reliability of raw material supply
- Market/region
- Reliable planning framework
- Running costs (production, supply chain)
- Investment costs
- Timeframe till start-up
- Process and plant safety
- Suitability for approval, acceptance by politicians and the general public
- Availability of skilled staff
- Attractive living environment for employees and delegates
 - e.g. adequate housing, schools, culture

CHEMICAL AND INDUSTRIAL PARKS & FDI

Advantages of chemical parks at a glance:

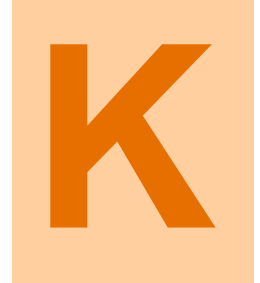
K	Know-How
I	Individual Support
S	Supply
S	Synergies & Efficiency

CHEMICAL AND INDUSTRIAL PARKS & FDI

Know-how:

Specialists ensure optimal conditions

- Industry-specific services from the site-operators
 - Focusing ensures that operators are competent and experienced contact partners
- Research & Development
 - Networking with universities in research collaborations and clusters
 - High innovation potential
- Training
 - Chemical park operators provide qualified staff for their customers
- Quality of site
 - Local community is accustomed to industry
 - Permanent contact with neighborhood by the chemical park operator



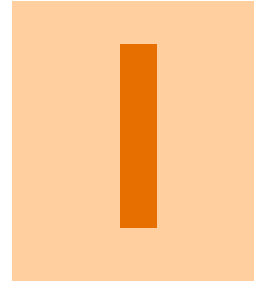
CHEMICAL AND INDUSTRIAL PARKS & FDI

Individual support:

Broad portfolio of tailor-made services

Examples:

- Support with authorizations / permits
 - Basic permit is already available in chemical and industrial parks
 - Competent support with the necessary permits and authorizations (authorities)
 - Support with the communication of projects locally
- Adapting the site to the requirements of the companies



CHEMICAL AND INDUSTRIAL PARKS & FDI

Supply:



Supporting the manufacturing companies

- Assumption of energy supply tasks
- Centralized and specialized waste disposal in state-of-the-art facilities
- Making infrastructure and logistic services available
- Guarantee of site safety
- Maintenance services for production facilities

CHEMICAL AND INDUSTRIAL PARKS & FDI

Synergies & Efficiency:

Advantages through integration in the network structure

- Energy network
- Integrated compound
- Production network
- Reliability of supply
- Use of by-products



CHEMICAL AND INDUSTRIAL PARKS & FDI

Conclusion

Chemical and industrial parks ...

- enable manufacturing companies to concentrate on their core businesses
- reduce investment costs compared with “greenfield sites”
- provide various cost-saving options and cooperation potential through integrated structure
- offer state-of-the-art infrastructure, service and maintenance tasks

CHEMICAL AND INDUSTRIAL PARKS: ADDED VALUE

Influencing possibilities of chemical and industrial parks:

- Raw material costs, availability, reliability of raw material supply
- Market / region
- Reliable planning framework ✓
- Running costs (production, supply chain) ✓
- Investment costs ✓
- Timeframe till start-up ✓
- Process and plant safety ✓
- Suitability for approval, acceptance by politicians and the general public ✓
- Availability of skilled staff ✓
- Attractive living environment for employees and delegates ✓
 - e.g. adequate housing, schools, culture

EXAMPLES OF SUCCESS

- **Toho Tenax Europe GmbH**
 - Site: Oberbruch industrial park
 - Industry: Carbon fiber production
 - Reasons for deciding on the site: excellent infrastructure, energy supply on site, qualified staff, proximity to research
 - Jobs: 59
 - Investment: EUR 51 million
 - Production start-up: 2010
- **NKT Cables**
 - Site: CHEMPARK Leverkusen
 - Industry: Cable production
 - Reasons for deciding on the site: good logistics, excellent infrastructure
 - Jobs: 600
 - Investment : EUR 120 million
 - Production start-up: 2010

COOPERATION AGREEMENTS

Chemical park operators take an active role in acquiring foreign investment

- Information events abroad in cooperation with
 - banks
 - tax consultants
 - economic development offices
 - ...
- Practical know-how and contacts facilitate investment
- Cooperation with partners such as Germany Trade & Invest, NRW.invest, banks, local *Chambers of Commerce*
- Cooperation with foreign partners
 - Example CHEMPARK: Cooperation with Nanjing Chemical Industry Park (NCIP) in China (exchange of experience and information, cooperation in events and activities, expansion of the customer network, exchange of employees)

CONCLUSIONS

Chemical and industrial parks increase the attractiveness of Germany as an investment location and are effective drivers for modern industrial production. They are:

- **efficient** thanks to the integrated structure in terms of energy, raw materials and products
- **competent** thanks to their high level of specialization
- **innovative** thanks to their proximity to research and the high qualifications of the employees
- **internationally competitive** thanks to the comparatively low costs and the pooling of services

→ The model has proved successful in practice and serves as an international role model (e.g. in BRIC nations).

→ Chemical and industrial parks have the potential to further increase the share of FDI in Germany in the coming years.