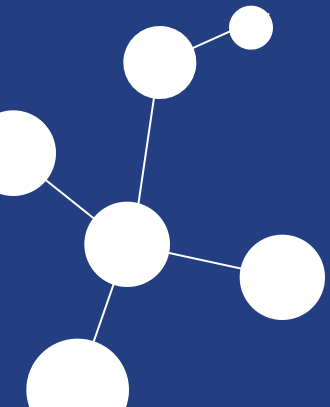


# EAST GERMANY SITE COOPERATION AS AN EXAMPLE FOR EXCELLENT ENGERGY AND ECO-EFFICENCY

ACHEMA – 17 JUNE 2015

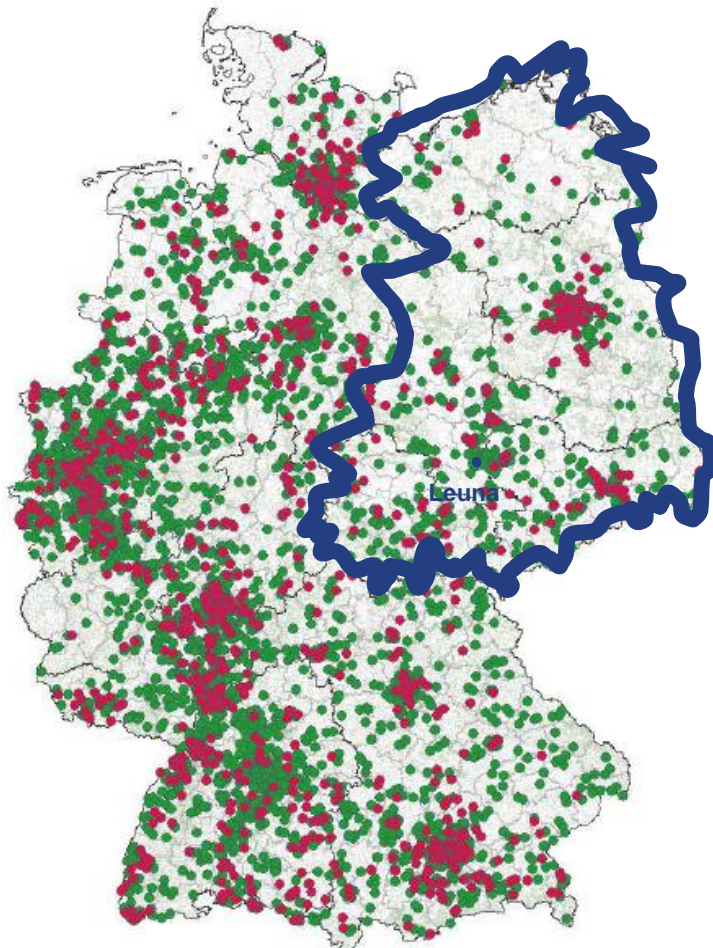
InfraLeuna GmbH

Dr. Christof Günther – Managing Director, CEO



# Chemical/Pharmaceutical companies in Germany

## Chemical production in East Germany



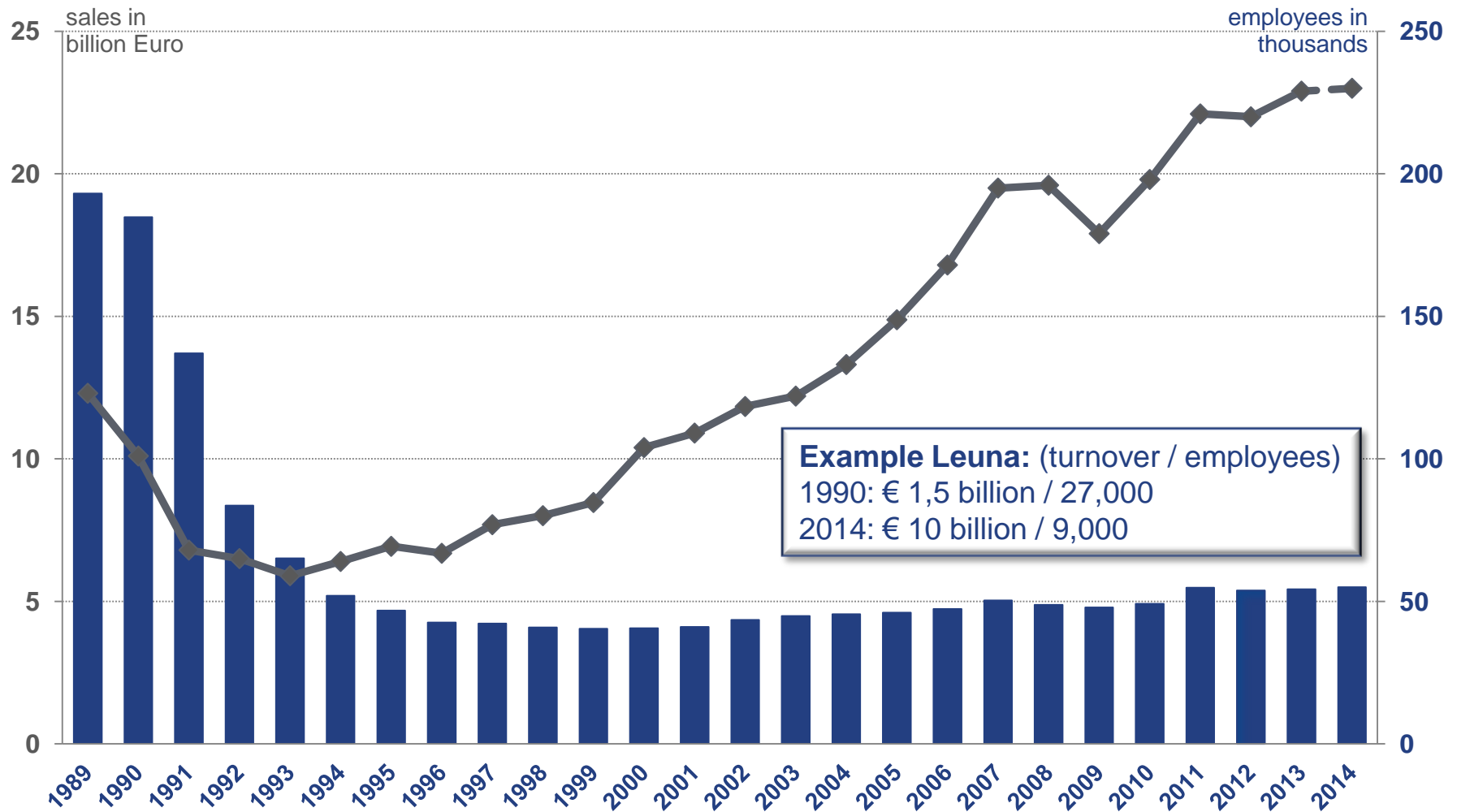
- 1/3 - Saxony-Anhalt > 110 plants (60 % basic chemicals)
- 1/3 - Berlin > 40 plants (90 % pharmaceuticals)
- 1/3 - Saxony, Brandenburg, Thuringia, Mecklenburg-Western Pomerania
- 95 % are small- and medium-sized enterprises

● Chemical companies  
● Pharmaceutical companies

source: NORDOSTCHEMIE

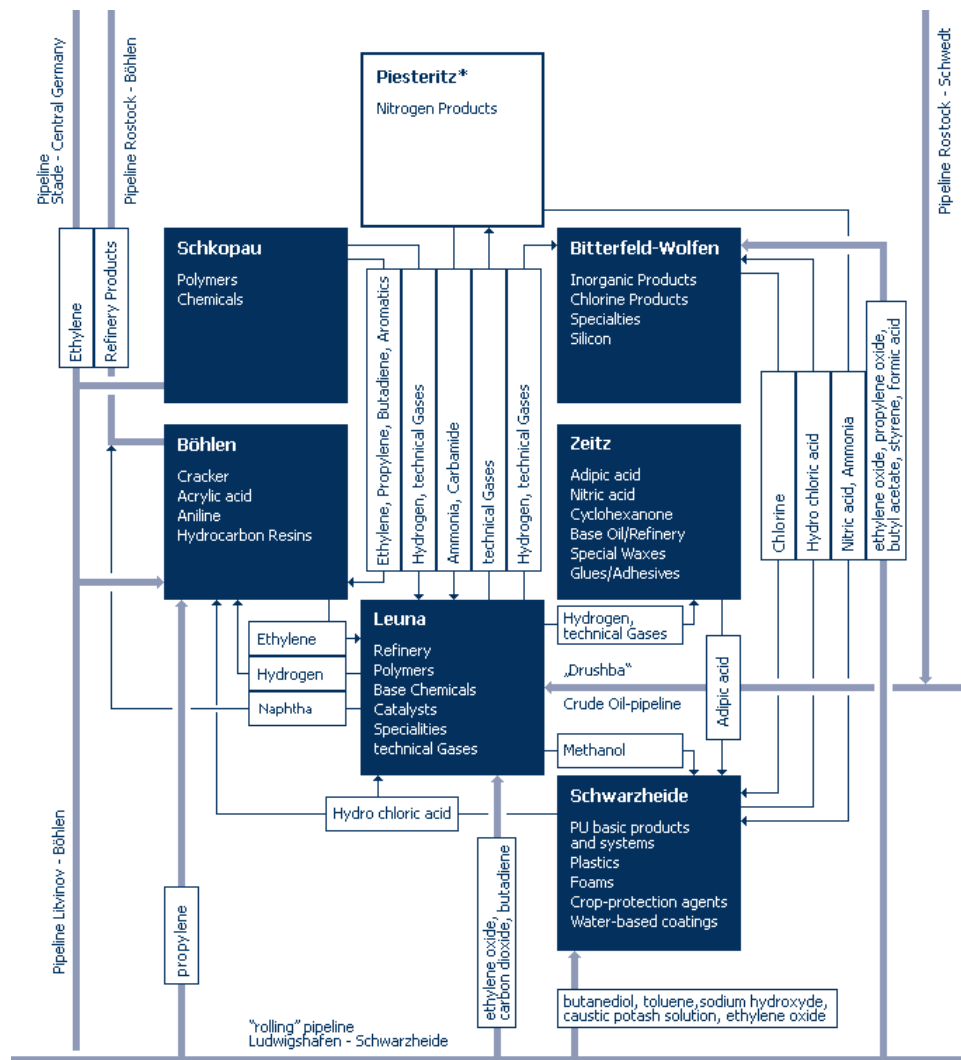
# Sucess story: chemical industry in East Germany

## Structural transformation of chemical industry in East Germany



source: NORDOSTCHEMIE

# Site cooperation in Central German Chemical Triangle

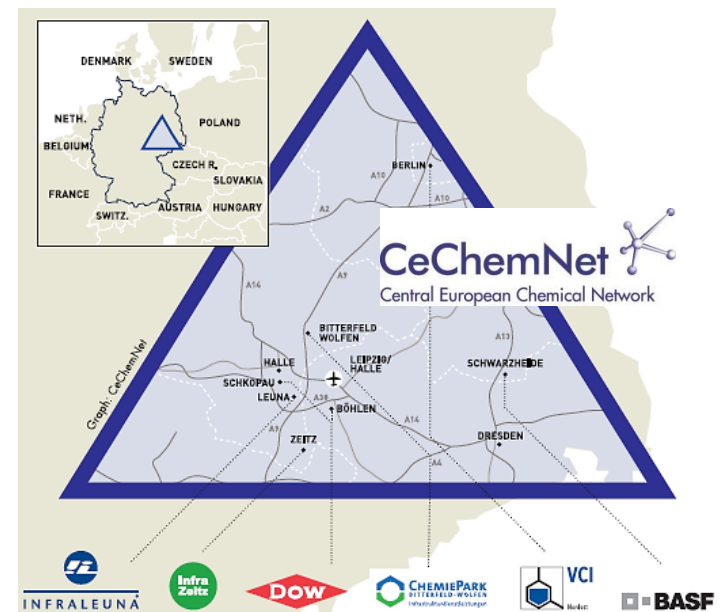


source: NORDOSTCHEMIE

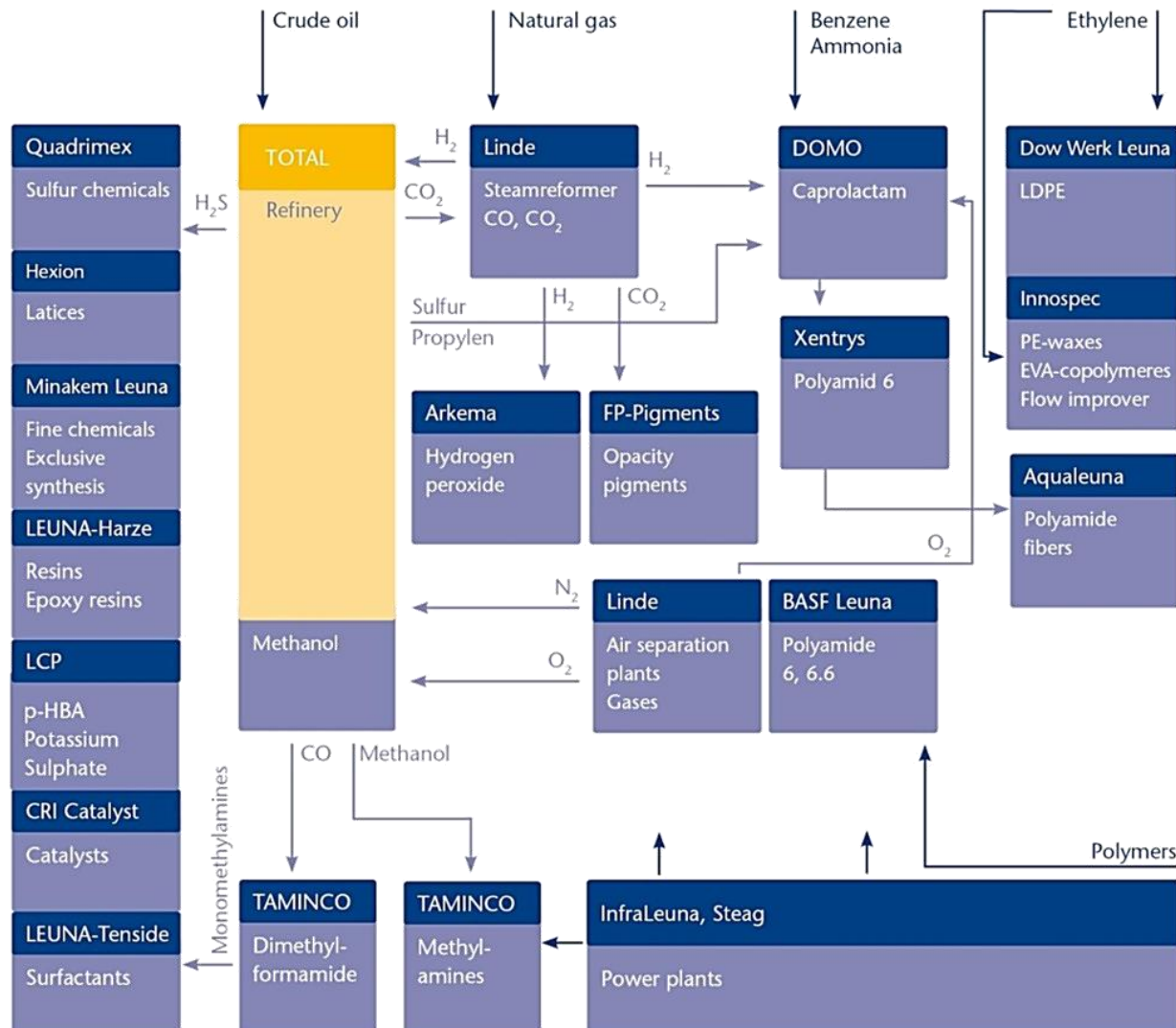
## Feedstock in Central German Chemical Triangle creates synergies

Since the mid 1990s:

- > 600 businesses settled
- > € 17 billion have been invested
- > 30,000 jobs have been created
- chemical park area: 5,500 hectare



## Good breeding ground for innovations and excellent local conditions



- Many research institutions (universities and third-party) intensified cooperation in R&D

- 2 Universities
- 4 Universities of Applied Sciences
- 3 Fraunhofer-Centres
- 1 Helmholtz Centre

- Chemical parks: best conditions for chemicals production
  - feedstock integration
  - energy integration
  - comprehensive supporting services



# The chemical site Leuna is energy-intensive

The chemical site Leuna is a large-scale energy consumer:

- Power demand corresponds to approx. 60 % of all households in Saxony-Anhalt
- Demand in natural gas corresponds to approx. 235,000 detached houses
- Demand in steam corresponds to approx. 405,000 households

Energy costs in basic chemicals production often make a share of > 30 % production costs

Chemical products compete on the international market → energy costs at Leuna have to be internationally competitive!



# Sustainable commitment to protecting the environment



2010/2011



Utilisation of waste water as cooling water and various constructional optimizations of gas turbines

→ CO<sub>2</sub>-savings: 2,666 t CO<sub>2</sub>/a

→ Winner Special Price of Environmental Alliance 2012



2012/2013

Starting up a new thermal compressor for optimization of steam usage

→ CO<sub>2</sub>-savings: 8,300 t CO<sub>2</sub>/a

# Sustainable commitment to protecting the environment



2014

Starting up a new medium-pressure steam supply system to substitute gasturbines by waste incineration

→ CO<sub>2</sub>-saving: 215,000 t CO<sub>2</sub>/a

„The project of InfraLeuna is a good example for how to plan and implement a climate-friendly and resource-saving, safe and cost efficient local energy supply. We need many more such initiatives. Leuna demonstrates how it works!“

Franzjosef Schafhausen, head of department climate policy, Europe and International affairs of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (08 October 2014, Leuna).



# Sustainable commitment to protecting the environment



2014



Starting up a new membrane system for cooling water conditioning  
→ saving water makeup  
(660,000 m<sup>3</sup>/a)

→ Finalist Special Price of Environmental Alliance 2014



April 2015



INITIATIVE  
ENERGIEEFFIZIENZ  
NETZWERKE

Establishment of the first Energy-efficiency Network in Central Germany → Exchange of best practice among 15 industrial partners to save energy and reduce CO<sub>2</sub>-emissions

# Excellent site energy- and eco-efficiency forms the base for growth at the site

Latest developments at the chemical site Leuna between 2014 – 2016:

- FP-Pigments GmbH: Installation of a second production line
- TOTAL Raffinerie Mitteldeutschland GmbH: Shut-Down and restoration of regenerator and reactor dome FCC (approx. € 35 million)
- Minakem Leuna GmbH: Speciality chemicals production plant (€ 10 million)
- Investment of InfraLeuna GmbH → 2014/15: € 60 million
  - Installation of a central control station
  - Connections for steam supply system
  - Reconstruction of the Central waste water treatment plant (ZAB)
- Global Bioenergies GmbH: Installation of an industrial pilot plant (€ 4,4 million)
- Domo Caproleuna GmbH: Investment in Nylon-film production
- Leuna-Harze GmbH: Construction of a hardener Plant
- CRI Catalyst Leuna GmbH: Construction of a hazardous materials warehouse
- Quadrimex Sulfur Chemicals GmbH & Co. KG: Installation of a new plant for the production of a  $\text{Na}_2\text{S}$  solid and modernisations (approx. € 8 million)



Dr. Christof Günther  
Managing Director, CEO  
InfraLeuna GmbH  
Am Haupttor, Bau 4310  
D-06237 Leuna  
Tel.: +49 3461 43 3000  
[c.guenther@infraleuna.de](mailto:c.guenther@infraleuna.de)

Many thanks, ladies and gentlemen, for your kind attention.