

**Mannheim**

**24th June 2013**



# LEHNKERING GmbH

## LEHNKERING GmbH, Duisburg

Employees: 2,000

### Road Logistics



Employees: 500

### Chemical Manufacturing



Employees: 800

### Distribution Logistics



Employees: 700

**The leading logistics services provider for companies in the chemical industry  
in the fields of transport, logistics and production services**

# LEHNKERING GmbH



- ➔ Founded in Duisburg in 1872
- ➔ About 410 trucks and 680 trailers (10 % market share in Germany)
- ➔ 6 tank cleaning stations with 14 cleaning lanes
- ➔ 20 hazardous goods warehouses with 328,000 pallet places (market leader in Europe)
- ➔ 128 synthesis, formulation and packaging facilities (market leader in Europe)



# Road Logistics



- ➔ Europe-wide transportation of liquid chemicals like acids, bases, dispersions, suspensions etc.
- ➔ Temperature-controlled transportation of food like liquid chocolate, fruit juices, oils, liquid sugar etc.
- ➔ Tank cleaning stations for chemicals and food (separate cleaning lanes)
- ➔ Additional services like driver training, truck washing, fuelling and repair work
- ➔ Latest safety and technical equipment

# Road Logistics

- LEHNERING Chemical Transport GmbH
- Laabs GmbH
- ▲ FoodTankers AB



# Chemical Manufacturing



- ➔ Synthesis, Formulation, Packaging, Raw Material Sourcing, Sample Services
- ➔ Agrochemicals (65 %) – Fine chemicals (35 %)
- ➔ Flexible, reliable and neutral handling of integrated, multi-stage production services for the chemical industry
- ➔ Cost-efficient outsourcing projects at our own premises
- ➔ Developing syntheses and formulations according to customer specifications
- ➔ Facilities in Germany and United States
- ➔ The subsidiary Schirm stands for quality, competence and reliability

# Chemical Manufacturing





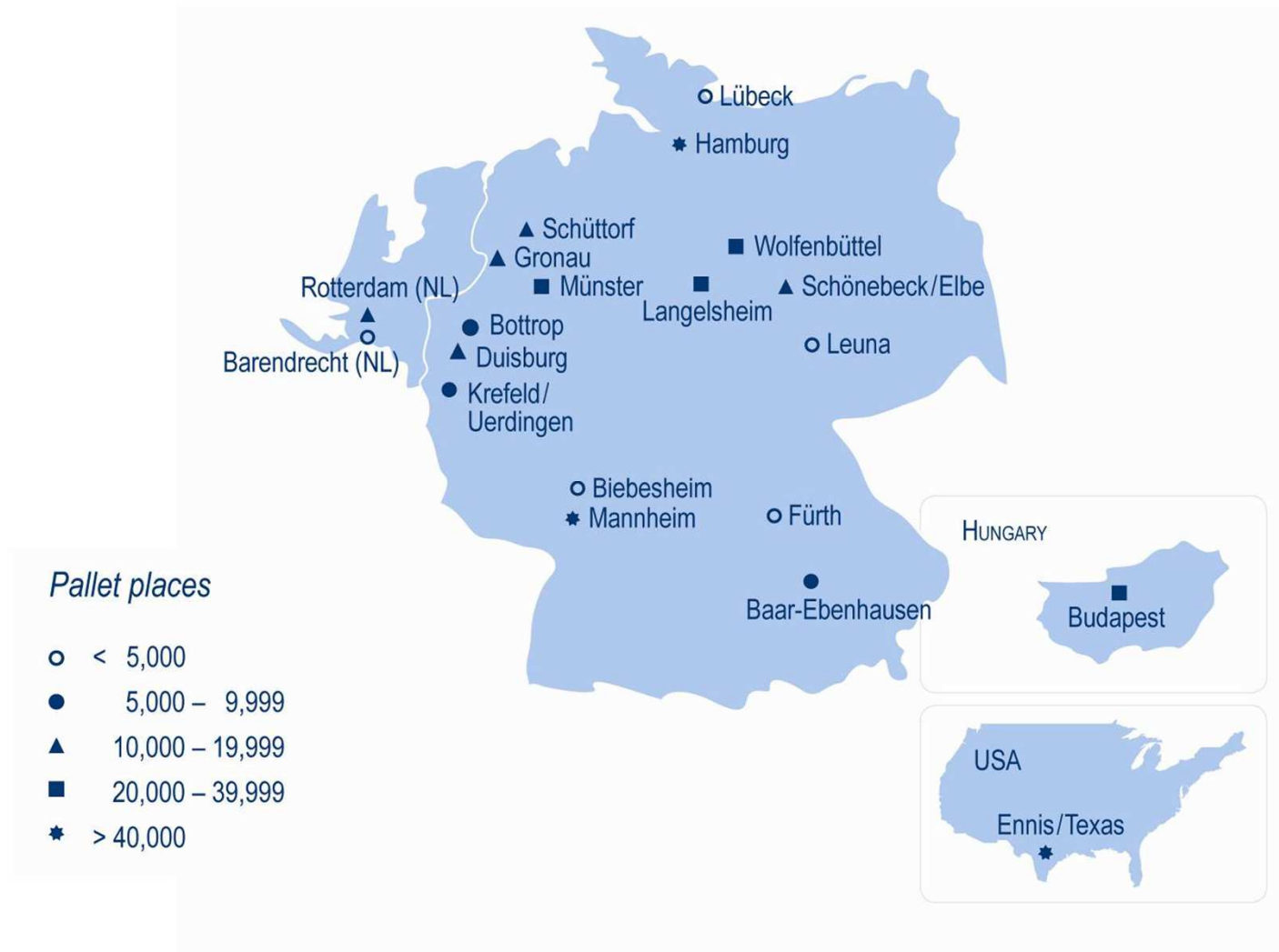
# Distribution Logistics



- ➔ Storing and handling nearly all classified packed dangerous goods in line with Seveso II regulations
- ➔ The warehouses are used for regional and Europe-wide distribution or as a production supply warehouse (raw materials & finished goods)
- ➔ Filling of chemical products from tanks, trailers and containers
- ➔ Value added services like packing, repacking and labelling
- ➔ Distribution in Europe via the System Alliance Network
- ➔ Import and export services at seaports



# Distribution Logistics



# LEHNKERING Group - Information Technology



- ➔ In-house developed software is used by all business units
- ➔ Tailor-made software provides flexibility for customers' needs
- ➔ Approx. 400 EDI interfaces established with customers' ERP-systems (normally SAP)
- ➔ Most process steps are scanner-supported
- ➔ High-level IT-availability through redundant server environments and multi-port firewalls
- ➔ Integrated IT solutions enable slim business processes and low-cost solutions

# LEHNKERING Group - QEHS Management System





# LEHNKERING Group - References and customers



# Warehouse logistics – Mannheim

**LEHNERING GmbH, Duisburg**

**Road  
Logistics**



**Chemical  
Manufacturing**



**Distribution  
Logistics**



 **LEHNERING**  
Logistics & Services

**Mannheim**

# Warehouse logistics – Mannheim

## Personnel and equipment

### Personnel (90)

- ➔ 27 white-collars
- ➔ 54 blue-collars
- ➔ 9 apprentice

### Equipment

- ➔ 5 warehouses around Mannheim within 50 km
- ➔ 19 fire compartments
- ➔ 3 fire compartments for temperature-controlled products (15°- 25° C)
- ➔ 2 fire compartments for temperature-controlled products (2°- 18° C)
- ➔ 46,000 pallet places (incl. outside warehouses)
- ➔ Narrow aisle shelf unit with inductively controlled narrow aisle lift trucks
- ➔ Covered railway sidings





# Warehouse logistics – Mannheim

## Capacities I

### Main warehouse Otto-Hahn-Straße 21 (30,000 pallet places)

#### 1990: Commissioning Mannheim I

- ➡ 7 fire compartments, ca. 8,200 pallet places (pp)

#### 1998: Commissioning Mannheim II

- ➡ 6 fire compartments, ca. 6,300 pp

#### 2002: Commissioning Mannheim III

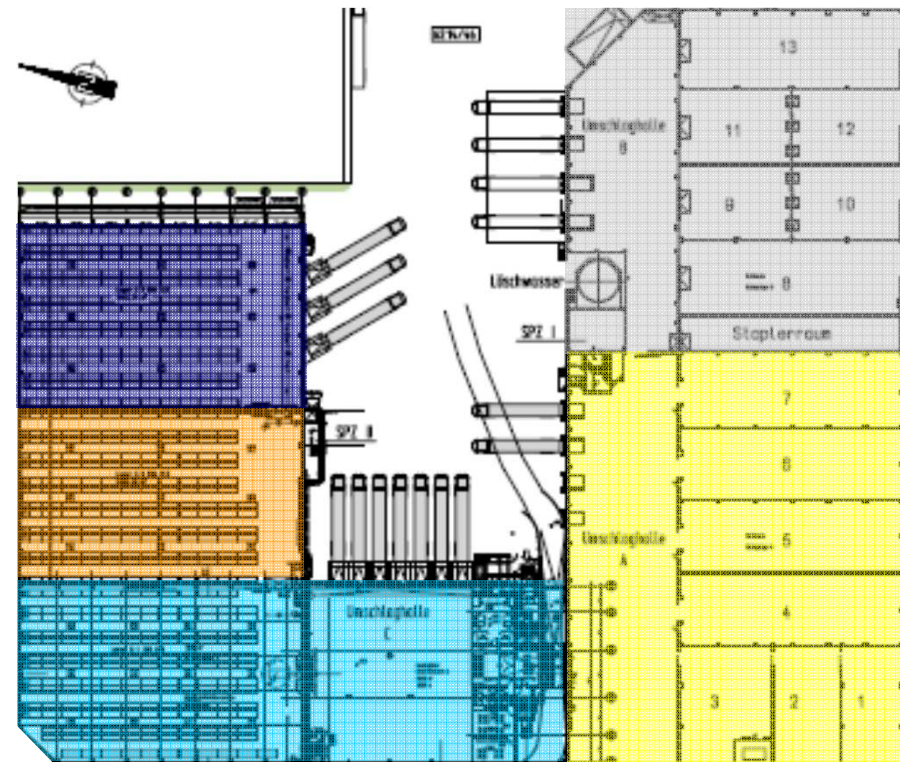
- ➡ 1 fire compartment, ca. 5,500 pp

#### 2007: Commissioning Mannheim IV

- ➡ 1 fire compartment, ca. 5,000 pp

#### 2009: Commissioning Mannheim V

- ➡ 1 fire compartment, ca. 5,000 pp



# Warehouse logistics – Mannheim

## Capacities II

### Warehouse Otto-Hahn-Straße 44 (2,000 pallet places)

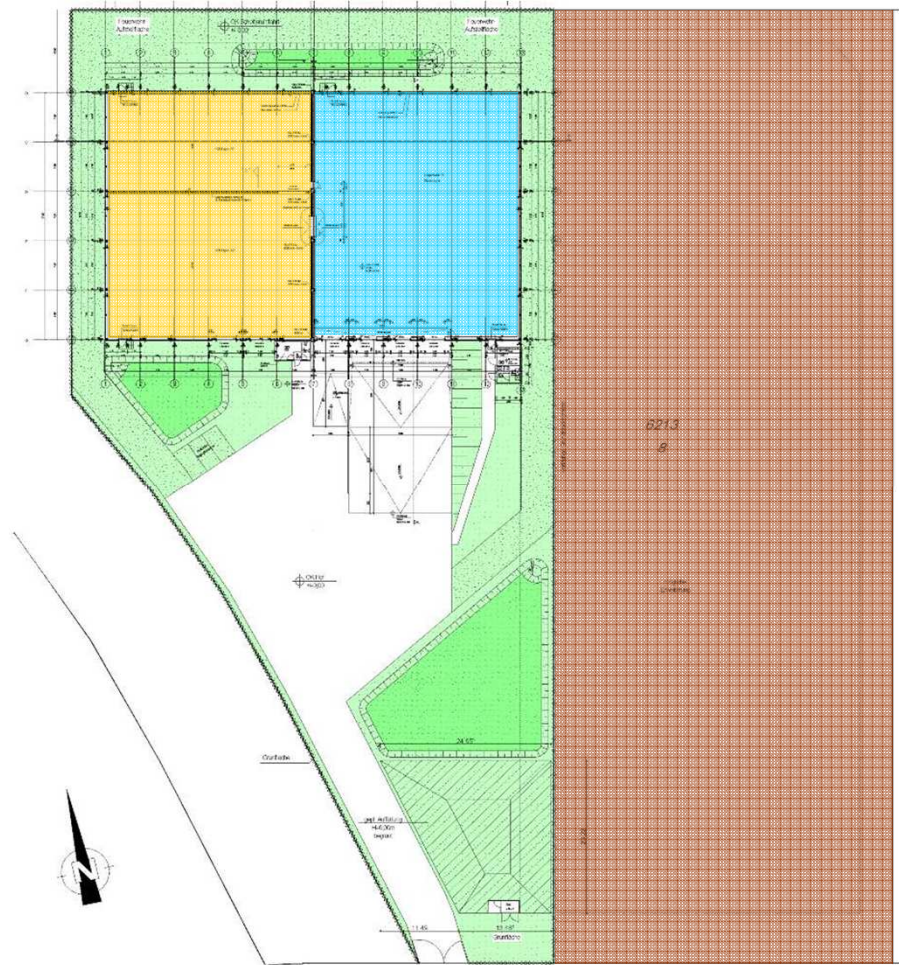
#### 2009: Commissioning Mannheim VI

- ➡ 2 temperature-controlled fire compartments (2°- 8° C + 2°- 18° C), ca. 1,000 pp
- ➡ 1 fire compartment for block storage, ca. 1,000 pp

#### Perspective

- ➡ Option to acquire adjacent plot (7,500 sqm)
- ➡ Additional 3 fire compartments à 5,000 pp = 15,000 pp

### Outside warehouses (14,000 pallet places)



# Warehouse logistics – Mannheim

## Authorizations

### Approved storage of dangerous goods classes (according to the Association of the Chemical Industry e. V. (VCI))

- ✓ 1 Explosive substances
- ✓ 2B Aerosols (aerosol cans)
- ✓ 3 Flammable liquids
- ✓ 4.1 Flammable solids
- ✓ 4.2 Pyrophoric or self-heating hazardous substances
- ✓ 4.3 Hazardous substances which emit flammable gases in contact with water
- ✓ 5.1 Oxidising substances
- ✓ 5.2 Organic peroxides and self-reactive hazardous substances
- ✓ 6.1 Very toxic hazardous substances
- ✓ 8 Corrosive substances
- ✓ 10 Combustible liquids neither in Storage Class 3
- ✓ 11 Combustible solids
- ✓ 12 Non-combustible liquids
- ✓ 13 Non-combustible solids



**Storing and handling nearly all classified packed dangerous goods**



# Warehouse logistics – Mannheim

## Safety technology

### Danger defense

- Autom. Ventilation system (5-times volume exchange per hour)
- Gas warning system coupled with ventilation system
- Autom. closing of the fire protection doors – in case of alarm
- Explosion-proof electric installation



### Danger protection

- Fire detectors with straight connection to fire department
- Sprinkler system with AFFF-foam
- CO2 – firefighting equipment
- Rack sprinkling
- Warehouse sections F-90 firewalls and T 90 protecting fire doors

### Environmental protection

- Resistant floor coating
- Leakage blocking equipment
- Coated basins to collect firefighting water
- Additional automatic firefighting water detention system
- Loading areas fitted with leakage blocking equipment



# Warehouse logistics – Mannheim

## Certifications and audits

### QEHS Management System (Certifications)

- ✓ Quality management system ISO 9001
- ✓ Environmental management system ISO 14001
- ✓ SQAS (Safety & Quality Assessment System)  
by Cefic (The European Chemical Industry Council)
- ✓ HACCP (Hazard Analysis Critical Control Point)
- ✓ GSP (Good Storage Practice)

### Frequent internal and external audits through...

- Internal QEHS-department
- Public authorities (Accident inspection, occupational safety and health inspectorate, fire brigade)
- Customers
- Certifier (see above)



# Warehouse logistics – Mannheim

## Business models

### Business models used

- ➔ Distribution warehouse for finished goods – for domestic and international markets
- ➔ Pure warehouse function for hazardous substances with particularly high risk potential
- ➔ Raw materials warehouse with synchronized supplies for production purposes
- ➔ Complete outsourcing (raw materials and finished goods warehousing, dispatch)

### Special logistics requirements

- ➔ High level of picking intensity with increasingly small consignment lots
- ➔ Short order processing times with incoming and outgoing goods
- ➔ Covering high warehouse capacity fluctuations
- ➔ Efficient distribution networks – domestic and international markets
- ➔ High IT requirements
- ➔ Value added services

**Diversified customer structure = variety of business models**





# Warehouse logistics – Mannheim

## Ratios



### Operating ratios 2012

- ✓ **Average utilisation warehouse:** 43,500 pallet places  
-> approx. 95 %
- ✓ **Incoming goods:** 95,279 tons
- ✓ **Outgoing goods:** 96,367 tons
- ✓ **Performed orders:** 116,903
- ✓ **Delivery note lines:** 390,055
- ✓ **Distribution orders:** 49,289



### Quality ratios 2012

- ✓ **Error-free storage:** 99,8 %
- ✓ **In time delivery:** 97,1 %
- ✓ **Error-free distribution:** 99,9 %

**High volume and service level managed with highest quality and safety requirements**

# Warehouse logistics – Mannheim

## Case study BTC (Subsidiary of BASF)

### 1. Deeply integrated IT systems by EDI

#### ➤ Goods receipt (own production and 3rd party suppliers)

SAP → CargoWare: purchase order  
CargoWare → SAP: confirmation of goods receipts

#### ➤ Goods issue

SAP → CargoWare: picking order  
SAP → CargoWare: transport order  
CargoWare → SAP: goods issue confirmation

### 2. High picking intensity

- Approx. 200 picking orders per day in average
- High variability → +/- 80 %
- Next year: Increase to 300 picking orders per day  
(Warehouse centralization in Mannheim and Münster for BTC Europe)

### 3. Value added services

- Repacking (creating new articles)
- GHS labeling (Globally Harmonised System of classification and labeling of chemicals)
- Taking samples and sample distribution

**High integration within the supply chain of our customer**

**BTC**  
Chemical Distribution

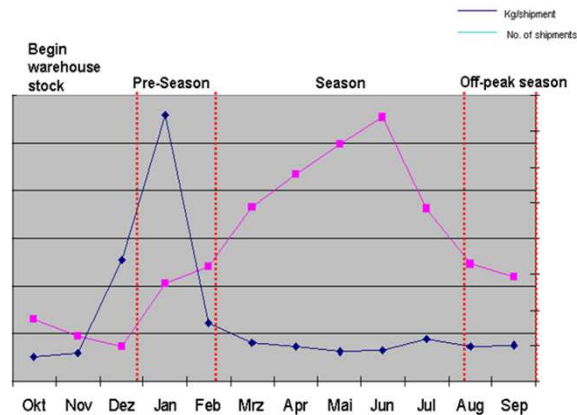
- Collaboration since 1998
- Average stock: 6.000 pallet places
- European distribution center
- German domestic distribution by System Alliance network (LEHNKERING is shareholder)



# Warehouse logistics – Mannheim

## Case study Scotts

### 1. Dealing with seasonality



### 2. High delivery quality

- Temperature-controlled transports
- Delivery in time-slots (DIY markets)
- Electronic despatch advise (DESADV) and time slot booking
- Delivery on single item pallets / in single item layers

### 3. Value added services

- Display building and packing
- Advertising materials storage and distribution
- Returns management

**High integration within the supply chain of our customer**



- Collaboration since 1992
- Take-over the complete distribution and warehousing in Mannheim for total Germany in 2002
- Dedicated Scotts warehouse (up to 9,500 pallet places)





# Warehouse logistics – Mannheim

## Case study Huntsman

### 1. Storing and handling of fast moving items

- Complete article range (1,200 Stock keeping units) → approx. 7,500 pallet places
- Fast moving inventory with 12 times turnover

### 2. Temperature-controlled warehousing – different temperature level

- For hazardous goods between 02° and 08° C
- For hazardous goods between 02° and 18° C

### 3. Close interaction of both IT systems and additional wide range of administrative processes within Huntsman SAP

- Goods issue, picking orders, delivery notes, stock comparison report
- Goods receipt / issue postings
- Issue of shipment orders and documents
- Inventory management
- Creating shipments and shipment costs documents
- Shipment consolidation

### 4. Administration and steering of Huntsman transport suppliers

- Transfer of delivery notes and transport / customs documents to transport suppliers
- Transport volume planning with transport suppliers

**High integration within the supply chain of our customer**

**HUNTSMAN**

- Collaboration since 2009
- Mannheim is used as central warehouse for Europe, Africa, Middle East and India



**Thanks for your attention!**

