The Eastern German Automotive Cluster
- a Japanese Supplier Perspective

Gert Herrmann
Part 1: Automotive Clusters
Part 2: Trends in the Automotive Industry
Part 3: Eastern German Automotive Cluster
Part 4: Video Session “Chemnitz”
Part 1:

Automotive Clusters
Characteristics of an Automotive Cluster

An Automotive Cluster represents a high concentration of OEMs and suppliers who have set up a network of co-operation within a relatively small area.
Traditional Automotive Clusters in Western Germany

Four big clusters close to headquarter of OEMs

“Cologne Area“

“Stuttgart Area“

“Wolfsburg Area“

“Munich Area“
New Automotive clusters in Eastern Germany

New clusters close to OEM’s production sites
The Automotive Industry in Eastern Germany before 1990

An underdeveloped activity

- production of 217,000 cars per year
- 26 production facilities
- 2 brands
The Automotive Industry in Eastern Germany in 2004

Strong development within 14 years
The Automotive Industry in Eastern Germany in 2004

The Automotive Cluster in Saxony
Part 2:

Trends in the Automotive industry
Vision of world-wide growth in the Automotive industry

- car production including SUVs and LCVs

<table>
<thead>
<tr>
<th>Region</th>
<th>1999</th>
<th>2003</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAFTA</td>
<td>14.8</td>
<td>16.6</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>1.8% p.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>18.8</td>
<td>20.5</td>
<td>20.9</td>
</tr>
<tr>
<td></td>
<td>0.9% p.a.</td>
<td></td>
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</tr>
<tr>
<td>World</td>
<td>52.5</td>
<td>58.6</td>
<td>67.0</td>
</tr>
<tr>
<td></td>
<td>2.6% p.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South America</td>
<td>2.2</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6% p.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far East</td>
<td>16.8</td>
<td>19.8</td>
<td>24.9</td>
</tr>
<tr>
<td></td>
<td>3.9% p.a.</td>
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</tbody>
</table>

Source: AT Kearney
Sales growth forecast of the supplier industry

Strong growth in emerging markets and major markets Europe, USA and Japan

North America
- 2002: 145
- 2015: 212
- Growth: +46%

Europe Union
- 2002: 131
- 2015: 239
- Growth: +82%

China
- 2002: 7,9
- 2015: 33,9
- Growth: +329%

Japan
- 2002: 75
- 2015: 98
- Growth: +32%

India
- 2002: 1,6
- 2015: 8,4
- Growth: +425%

South Korea
- 2002: 16,9
- 2015: 23,8
- Growth: +26%

South America
- 2002: 12,1
- 2015: 31,8
- Growth: +161%

RoW
- 2002: 25,7
- 2015: 52,8
- Growth: -105%
One trend is to relocate production to “low-wage countries”

A recent study from Ernst & Young states

Soon, one in two western European suppliers will be operating in eastern Europe or China. Just under 40 percent are already running their own production plants there and 16 percent are planning to relocate.

Source: E & Y
One trend is to remain in the home country

50% of German suppliers do not plan to shift production to “low-wage countries”
Reasons to keep production in Germany

Other factors of attractiveness besides costs

- Employee qualifications
- Flexibility of labor force
- Working attitudes
- Employee motivation
- Proximity to attractive sales markets
- Proximity to manufacturers (OEMs)
- Regional infrastructure
- Political framework

Source: E & Y
Part 3:

Eastern German Automotive Clusters
– Example Saxony
The Automotive Cluster Saxony

Plenty of activities
Growth driven by highly sophisticated products
Growth driven by highly sophisticated production processes

- Laser processing machine
- High-power diode laser
- Machine systems for laser hardening
- Assembly plant for precision components
- Filling system gas generator
Success factor industrial structure

Numerous existing co-operations in the automotive sector with companies from:

- motor industry
- mechanical engineering
- production engineering
- metal processing industry
- electrical industry
- textile industry
- plastics industry
Success factor employee qualification and motivation

- over 40,000 high qualified and motivated specialists and automotive sector executives in the area, thereof 13% with a matriculation standard and 60% specialists, mostly in the metal processing sector

- more than 10,000 high potentials graduating from 4 regional universities or colleges each year

- standard working time is 40 hours per week in full shifts

- low downtimes as well as self-certifications below German average
Success factor employee education

- Four universities and colleges with more than 25,000 students in the area:
  - University of Technology Chemnitz with nearly 20 affiliated institutes,
  - University of Applied Sciences Mittweida,
  - University of Technology Mining College Freiberg,
  - University of Applied Sciences Zwickau

- Fraunhofer Institute for Machine Tools and Forming Technology

- many research institutes with focus on automotive sector

- Technology Center Chemnitz – largest and most successful technology center in East Germany
Success factor Logistics

Proximity to European OEMs

* In Klammern: Die Zahl von Produktionsanlagen eines einzelnen Herstellers in der Region > 1

Quelle: Automotive News Europe; AMZ Sachsen - Verbundinitiative “AutoMobilZulieferer Sachsen”
Success factor Logistics

Good traffic connections
Political framework

Good financial conditions

<table>
<thead>
<tr>
<th>EU law</th>
<th>2004 - 2006</th>
<th>2007 -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines on national regional aid</td>
<td>Legal security for cash grant system and regional subsidy levels determined until end of 2006</td>
<td>Due to EU enlargement under discussion</td>
</tr>
<tr>
<td>EU framework for large projects &gt; €50 m large c. &gt; €25 m SMEs</td>
<td>New general framework regulations</td>
<td></td>
</tr>
<tr>
<td>German law</td>
<td>Projects need to be completed until 2006</td>
<td></td>
</tr>
<tr>
<td>Investment allowance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment grant</td>
<td>Current framework, modified slightly each year (state regulations)</td>
<td>Lower subsidy levels due to EU enlargement</td>
</tr>
</tbody>
</table>
Political framework

Good financial conditions

Incentives

Reducing investment costs
- Cash incentives
- Reduced interest loans
- State/federal guarantees
  - Investment allowance
  - Investment grant

Reducing operating costs
- Labor-related incentives
- Wage subsidies
- Training support
- R&D incentives
- R&D loans
- R&D VC

up to 35% of investment costs + x% of operating costs
Japanese participation in Saxony’s Automotive Cluster

Togo Scherdel GmbH

NAGANO KEIKI CO., LTD.

TD Deutsche Klimakompressor GmbH (TDDK)
Part 4:

Video Session

“Chemnitz”
Recent Developments in the Automotive Supplier Industry in Japan and the EU
日本とEUにおける自動車サプライヤー産業の発展