Benchmarking Study of European Automotive Clusters

Stage 1 – Draft Report

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Automotive Sweden
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Contents

Terms of Reference

The terms of reference for the study were set out in a proposal document to Automotive Sweden.

The main objectives of the study were to:

- Benchmark West Sweden's automotive industry cluster against other key automotive regions and clusters in Europe.
- To determine the key factors for cluster success and the best practice among other cluster organisations/bodies
- To address the value of international clusters for SME's in the Automotive sector, with particular reference to Clusters Linked Over Europe (CLOE)

The research has been divided into 2 stages.

Stage 1:

The objective was to provide an overview of each of the regions/clusters selected for study.

Upon completion of Stage 1 a number of regions/clusters will be selected for much more in-depth analysis and appraisal in Stage 2.

This document sets out the research findings to date for Stage 1.

Progress to Date

To date we have completed the Stage 1 research on the following countries/regions.

- Austria, Czech Republic, Holland/The Netherlands, Hungary, Italy, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, and West Sweden.
- Germany is partially complete
- France, Spain, Turkey and the UK have yet to be completed and will follow by January 31st.

A full bibliography of sources and contacts will be provided upon completion.

Definition of a Cluster

For the purposes of this report a cluster is defined as a concentration of automotive activity/technology/expertise in a given region.

Research has shown that there is no recognised formal definition of a cluster. Different definitions and interpretations of the term are used across Europe and within the countries/regions studied.

It is clear that some regions have established formal cluster organisations to look after the interests of cluster members and to help with the cluster development. Where these exist we have clearly identified them and provided contact details.

For the succession states to the EU we have analysed the automotive activity within the country as a whole.

COUNTRY OVERVIEWS

Country	**Austria**
Region	**3 Automotive Clusters:** - Upper Austria Cluster - Styria - Vienna
Main city/cities	Linz, Graz, Vienna
Definition of Region/Location and size	**Automotive-Cluster Upper Austria (AC)** : - Based around Linz **AC Styria Autocluster GmbH** - Based around Graz **Automotive Cluster Vienna Region** - Based around Vienna, Lower Austria and Burgenland

Key Macro Economic data

Population: 8,184,691

Austria	2003	2004	2005(f)
GDP Growth	0.78	2.04	1.79
GDP Per head (US$)	31,439.61	35,729.85	39,513.73
Inflation average (%)	1.36	2.06	2.46

Cluster facts and figures

Upper Austria (founded 1998)

- 256 companies in the network
- Automotive sector turnover: €7.3bn
- 95,000 employees
- R&D: 3.8% of cluster turnover
- Export ratio: 60%

AC Styria (founded 1966)

- 185 companies - 40,000 employees

Automotive Cluster Vienna region (founded 2001)

- Founded by the economic development agency for Lower Austria and the Vienna Economic Promotion Fund as an inter-technology automotive cluster. Its mission is to promote trail-blazing, high growth technologies.
- The focus is on transport, telematics, logistics, micro-technology and nano-technology.

<table>
<tr><td>Affiliates in Austria</td><td>n/a</td></tr>
<tr><td>Vehicle Manufacturers</td><td>Details of the main vehicle manufacturers in this cluster:
5 vehicle manufacturers are located in Austria.

Passenger cars production in 2004:
<table>
<tr><th>Group</th><th>Marque</th><th>2004 Production</th></tr>
<tr><td>BMW</td><td>BMW</td><td>112,840</td></tr>
<tr><td>BMW Total</td><td></td><td>112,840</td></tr>
<tr><td>Daimler Chrysler</td><td>Chrysler</td><td>40,118</td></tr>
<tr><td></td><td>Jeep</td><td>23,957</td></tr>
<tr><td></td><td>Mercedes-Benz</td><td>31,996</td></tr>
<tr><td>Daimler Chrysler Total</td><td></td><td>96,071</td></tr>
<tr><td>GM</td><td>Saab</td><td>18,340</td></tr>
<tr><td>GM Total</td><td></td><td>18,340</td></tr>
<tr><td></td><td>Country Total</td><td>227,251</td></tr>
</table>

Commercial vehicles:
• MAN Production 2004: 18,820
• OAF Production 2004: 3,030</td></tr>
<tr><td>Supplier companies</td><td>The component sector in Austria is made up of a multitude of SME's mainly specialising in high value added components such as engines, transmissions, and related components.</td></tr>
</table>

	Examples of suppliers in this cluster include: - BMW Steyr (engines) - Fiat-GM Powertrain (engines and transmissions) - Georg Fischer - Hirtenberger - Magna Drivetrain **Note:** Output from BMW's engine plant and Opel's facility accounts for around 60% of all automotive components purchased by vehicle assemblers in Austria.
Technology clusters	**The Cluster Drive Technology:** 80 partner companies 27,000 employees Turnover €9.4bn - R&D in engine and drive technology, and in fuel cell technology **Member companies include:** - BMW - OMV - MAN Steyr - AVL List - TMS Produktionssysteme - Miba Sintermetall

	Website: **www.cdt.at** **Upper Austria's cluster specialises in:** • Engine/chassis • Interior/exterior • Electrical and electronics
Total investment in region/cluster	n/a
Links/association with other regions/clusters	**Automotive Cluster Vienna** International co-operation with Hungary, the Czech Republic and Slovakia
Summary of govt/regional support	Cluster funding available for projects that include at least 3 cluster partners and one SME Funding covers personnel and external service costs Funding available up to Max 25% of costs or €27,750 per company
Association name and contact	**Upper Austria Cluster** Automobil-Cluster Oberösterreich GmbH Hafenstrasse 47-51 A-4020 Linz E-Mail: automobil-cluster@clusterland.at Phone: +43-(0)732-79810-5102 Fax: +43-(0)732-79810-5080 Web: http://www.automobil-cluster.at/

	AC Styria Cluster Web: **www.acstyria.com** **Automotive Cluster Vienna** Web: www.acvt.at
Sources:	**www.automobil-cluster.at**

<table>
<tr><td>Country</td><td>Czech Republic</td></tr>
<tr><td>Region</td><td>Whole Country</td></tr>
<tr><td>Main city/cities</td><td>Mlada Boleslav, Kolin, Brno</td></tr>
<tr><td>Definition of Region/Location and size</td><td>The automotive industry is centred around two main regions; Mlada Boleslav and Kolin.
Skoda has its main operations in Mlada Boleslav and Toyota/PSA recently began production at their joint venture plant in Kolin,</td></tr>
<tr><td>Key Macro Economic data</td><td>Population: 10,241,138
<table>
<tr><th>Czech Republic</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>3.72</td><td>4.03</td><td>4.04</td></tr>
<tr><td>GDP Per head (US$)</td><td>8,849.84</td><td>10,473.14</td><td>12,611.47</td></tr>
<tr><td>Inflation average %</td><td>0.10</td><td>2.80</td><td>1.59</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>Cluster founded:
The AIA CR (Automotive Industry Association) was founded in 1989. Today it covers the whole automotive sector and has 153 companies as members
The automotive industry accounts for:
20% of manufacturing output</td></tr>
</table>

	• 25% of Czech exports • Supports 330 companies, including 16 vehicle manufacturers, 84 Tier I suppliers and 50 other service providers. **Employees:** 130,000
Affiliates in Slovenia	**Cluster affiliates in Czech Republic include:** CzechInvest: www.czechinvest.org
Vehicle Manufacturers	**Passenger Cars:** Skoda – (3 plants) TPCA – Will produce 300,000 units a year for the Peugeot and Citroen brands and 100,000 units for Toyota. *(An announcement in January 2006 stated that an additional 150,000 units would be produced at TPCA. Further details will follow.)* **Light commercials:** Skoda Production 2004: 1,072 **Trucks:** Tatra Production 2004: 1,710 Avia Production 2004: 563 **Passenger car production in 2004:**

Group	Marque	2004 Production
VW	Skoda	443,049
VW Total		443,049
	Country Total	443,049

Supplier companies	Over 280 supplier companies operate in the Czech Republic • The majority of suppliers are SME's with between 200-300 employees and are privately owned. • 67% are foreign owned • 45% of the top 100 European suppliers **Examples of suppliers in this cluster include:** Arvin Meritor Benteler Automotive Bosch Denso Eaton Johnson Controls Karosa Koito Peguform Bohemia Ricardo Saint Gobain Siemens Tokai Rica TRW Visteon Valeo
Technology clusters	The country has eight technical universities, 8,000 technical and science related graduates a year. The Josef Bozek Research Centre of Engine and Automotive Technology, is based at the Czech Technical University in Prague The main focus of research is petrol and diesel engines as well as alternative fuels

Total investment in region/cluster	n/a
R & D	According to the FDI magazine, the Czech Republic secured more automotive R&D projects than any other country in Europe between 2002-2004 The FDI magazine ranks the Czech Republic as the fourth most attractive automotive R&D location worldwide...
Links/association with other regions/clusters	NA
Summary of govt/regional support	Investment incentives are available for manufacturing in the form of: • Tax incentives • Job creation grants • Training grants • Site support Investment incentives for Technology Centres is available in the form of: • Subsidies for business activity • Subsidies for training and re-training
Cluster Association name and contact details	**AIA,** Opletalova 55, 11000 Praha 1 Tel: + 420 221 602 987 Fax: + 420 224 239 690 www.autosap.cz

Country	**Germany**
Region	**5 Automotive Clusters** - Baden-Württemberg - Bayern - Saxony - Thuringia - Saarland
Main city/cities	Various
Definition of Region/Location and size	Automotive Cluster Baden Württemberg - Based in the federal state of Baden Württemberg around Stuttgart, Karlsruhe, Heilbronn Bayern Innovation and Cooperation Initiative for the Automotive Suppliers Industry, BAIKA - Based in the federal state of Bayern around Munich, Regensburg Saxony Automotive Supplier Network - Based in the federal state of Saxony around Leipzig, Plauen, Zwickau, Dresden Automotive Supplier Thuringia (Automotive Thüringen e.V.) - Based in the federal state of Thuringia around Erfurt, Gotha, Bad Salzungen Netzwerk Atomotive Saarland - Based in the federal state of Saarland around Neukirchen, Saarbruecken,

<table>
<tr>
<td>Key Macro Economic data</td>
<td>Population:
82,431,390
<table>
<tr><th>Germany</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>-0.02</td><td>1.03</td><td>1.04</td></tr>
<tr><td>GDP Per head (US$)</td><td>29,191.28</td><td>32.664.49</td><td>35,588.83</td></tr>
<tr><td>Inflation average %</td><td>1.05</td><td>1.69</td><td>1.42</td></tr>
</table>
</td>
</tr>
<tr>
<td>Cluster facts and figures</td>
<td>Automotive Cluster Baden Württemberg

Generates more than a quarter of Germany’s annual automotive sales
Export rate: over 50%, € 26.5 billion in 2001, representing 21.5% of the total German exports
Automotive and engine manufacturer’s sales € 38 billion in 67 factories
194 direct suppliers generate sales of € 13 billion
Including manufacturers of special vehicles, distributors and indirect suppliers: more than 2000 enterprises and development partners operate in the region. In total these companies generate sales of more than €30 billion
Supporting electronics sector: approximately 1000 companies, 210,000 employees
Car manufacturers and suppliers employ more than 220,000 people (20% of total workforce in the region)

</td>
</tr>
</table>

Baika Bayern (founded in 1995)

- Estimated number of members: 672
- Some 1.000 plants in the automotive supplier industry in Bavaria
- It includes a “new” cluster: Upper Franconia (north Bavaria) with 150 components suppliers
- Sales of Bavarian-made vehicles & components in 2004: €71.271m (25.4% of national sales)
- Autom. employment: 211,645 employees (15.7% of workforce cf 13.3% for national figure)

Saxony Automotive Supplier Network (founded in 1998)

- Turnover €8,576m in 2002
- Employees: 64,346 in 2002
- 747 passenger car suppliers
  - 442 parts manufacturers
  - 193 service firms
  - 122 equipment manufacturers

Automotive Thuringia

- Turnover: €2.6m (2004)
- 94 members
- Employees: 7,900

Automotive Network Saarland

- Car production: 5.3m in 2002 (8% of total German car production)
- 245 potential members (suppliers)

Affiliates in Germany	*To follow*

Germany (continued)

Vehicle Manufacturers	The main vehicle manufacturers located within each cluster are as follows: **Baden Württemberg:** • Audi • Mercedes-Benz • Porsche **Baika – Bayern** • Audi, BMW, DaimlerChrysler, Ford, Honda, Isuzu, Opel, PSA, Porsche, Renault, Toyota, VW **Saxony** • Passenger Cars: o BMW Leipzig o Porsche Leizpig o VW Zwickau, Chemnitz and Dresden • Components: o Toyota Strassgraebchen Employees:370 o VW Stollberg 2 million diesel injection systems Employees: 200 • Buses o Neoplan Plan Production 2004: 270 units Employees: 350 **Thuringia** • Passenger Cars: o Opel Eisenach Production 2003: 175,000 Employees: 1,900

Thuringia (continued)

Components:

BMW Eisenach	Employees: 230
MB Koelleda	Production: 250,000 engines Employees: 500

German passenger car production in 2004 (national):

Group	Marque	2004 Production
BMW	BMW	760,746
Daimler Chrysler	Chrysler	35,596
	Maybach	566
	Mercedes-Benz	948,038
Daimler Chrysler Total		984,200
Ford	Ford	742,455
GM	Opel	575,315
Porsche*	Porsche	74,044
VW	Audi	751,923
	VW	1,011,787
VW Total		1,763,710
	Country Total	4,900,470

*includes Cayenne (partly assembled at VW Bratislava)

Supplier companies	**Examples of suppliers in this cluster include:** **Baden Württemberg** • Behr, Bosch, Eberspächer, Knecht, Mahle, ZF Friedrichshafen AG **Baika** • The Top 10 global Automotive Suppliers in BAIKA: Aisin Seiki, Bosch, Delphi Automotive Systems, Denso, Faurecia, Johnsons Controls, Lear, Magna International, TRW, Visteon • All Top 10 national Automotive Suppliers are in BAIKA: BASF, Bayer, Bosch, Continental, Mahle, Rheinmetall, ThyssenKrupp Automotive, ThyssenKrupp Steel-Group, Siemens VDO Automotive, ZF Friedrichshafen • Baika specialises in o Drive/powertrain o Chassis o Electric/electronic o Interior fittings o Body **Saxony** Autoliv. Behr, Brose, Federal Mogul, Halberg Guss, Hitachi, Johnson Controls, Philips, Takata, Tower, Siemens VDO **Saarland** Bosch, Eberspaecher, ZF
Technology clusters	To follow

Total investment in region/cluster	To follow
R & D	EU’s average for R&D expenditure in 2002: public 0.7%, private: 1.3 = 2% of GDP Germany’s average; public 0.7% 1.8% private = 2.5 % of GDP • Baden Württemberg’s average: Public: slightly over average, but private is very high with total expeditures in R&D: 3.7% of GDP • Baden Württemberg record 112 patents per 100.000 inhabitants (Germany: 58) • Baden Württemberg has 9 state and 3 private universities, 14 Max Planck institutes, 15 Frauenhofer Association, 9 Otto von Guericke Associations, 3 Hermann von Hemholts research centres and 250 centred of the Steinbeis Foundation
Links/association with other regions/clusters	**This cluster has links and/or associations with the following clusters/regions:** **Automotive Cluster Baden Württemberg** *Further information to follow* **Baika:** Upper Austria Slovenia Portugal Slovakia Czech Republic Cluster Berlin-Brandenburg (Germany) Holland Hungary Poland Bosnia Herzegovina Cluster Berlin-Brandenburg (Germany)

	Saxony • Saxony Mechanical Engineering Network Initiative • Saxony-Poland-Czech Cooperation www.polen-tschechien-kontakt.info • Slovakia • Austria **Automotive Thüringia** • Automotive Clusters in Germany: Saxony, Berlin Brandenburg, Rheinland-Pfalz, Mecklenburg, Nordrhein-Westfalen, BAIKA, MAHREG - Sachsen-Anhalt Automotive e.V. • International Automotive Clusters: Hungary, Upper-Austria, Slovenia, Slovakia, Holland
Summary of govt/regional support	*To follow*
Additional information	
Cluster Association name and contact details	**Autoland Baden Württemberg** Wirtschaftsministerium Baden-Württemberg Theodor-Heuss-Str. 4 D-70174 Stuttgart Tel. +49 (0)711 / 123 - 0 Fax +49 (0)711 / 123 - 2126 E-Mail: poststelle@wm.bwl.de Homepage: http://wm.baden-wuerttemberg.de

Bayern Innovativ
Gesellschaft für Innovation und Wissenstransfer mbH
Projektkoordination BAIKA, Gewerbemuseumsplatz 2, D-90403 Nürnberg
Tel.: +49 (0) 911-20671-0
Fax.: +49 (0) 911-20671-766
Email: baika@bayern-innovativ.de
Internet: http://www.baika.de

Saxony Automotive Supplier Network
RKW Sachsen GmbH, Project office Chemnitz, Annaberger Straße 240, D-09125 Chemnitz
Tel +49 371 53 47 344
Fax: +49 371 53 47 294
Email: info@amz-sachsen.de
Internet **:** http://www.amz-sachsen.de

Automotive Thüringen e.V.
Gewerbegebiet Kindel Am Künkelhof 4, D-99819 Hörselberg
Tel: +49 369 20 72 722
Email: office@automotive-thueringen.de
Internet **:** http://www automotive-thueringen.de

Netzwerk Atomotive Saarland
- c/o Forgis GmbH, ZIP - Zentrum für innovative Produktion, Altenkesseler Str. 17/D2, D-66115 Saarbrücken-Burbach

	Tel: +49-681-302-6142 Fax: +49-681-302-6132 Email: info@automotive.saarland.de Internet **: http://www.automotive.saarland.de**
Sources:	See above. Others include: European Monitoring Centre on Change: **www.eurofound.eu.int** Industrial Investment Council: **www.iic.de** Invest in Baravia: **www.invest-in-bavaria.com** Saarland Economic Promotion Corporation Saxony-Poland-Czech Cooperation: **www.polen-tschechien-kontakt.info** West East Industrial Districts: **www.west-east-id.net** World Markets Research Centre: **www.worldmarketsanalysis.com**

<table>
<tr><th>Country</th><th>The Netherlands</th></tr>
<tr><td>Region</td><td>Country coverage</td></tr>
<tr><td>Main city/cities</td><td>Born, Eindhoven</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
16,407,491
<table>
<tr><th>Holland</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>-0.88</td><td>1.43</td><td>NA</td></tr>
<tr><td>GDP Per head (US$)</td><td>31,775.23</td><td>35,845.56</td><td>NA</td></tr>
<tr><td>Inflation average (%)</td><td>2.11</td><td>1.20</td><td>NA</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>NEVAT is the Dutch Association of Subcontracting industries.
It has 280 members
NEVAT looks after the automotive subcontracting industry.

Holland Automotive is a market sector within NEVAT.
Holland Automotive has around 60 affiliate companies
It brings together Dutch suppliers of complete systems, subsystems, modules, and related</td></tr>
</table>

processes.

The remit of Holland Automotive is to:

- Strengthen the national and international competitive position of the Dutch automotive suppliers.
- Provide general and specific information on developments in the industry
- Actively work in the market
- Participate in national and international network of interest to the members including the Dutch Automotive Federations and the Automotive Technology Centre
- Facilitate a subcontractor network

Affiliates in The Netherlands

Cluster affiliates in The Netherlands include:

Not known

Cluster members include:

Not known

Vehicle Manufacturers

Details of the main vehicle manufacturers in this cluster:

3 main vehicle passenger car manufacturers

Group	Marque	2004 Production
Daimler Chrysler	Smart	72,378
Ford	Volvo	27,882*
Mitsubishi	Mitsubishi	49,000
	Country Total	149,260

	* Production moved to Belgium **Trucks:** DAF – production in 2004: 34,962 **Details of vehicle production in this cluster:** **Production in 2004:** 155,826 (total automotive sector) units
Supplier companies	Approximately 130 component suppliers operate are located in The Netherlands **Examples of suppliers in this cluster include:** • Akzo Nobel • DSM • Koni • Phillps • Polynorm
Technology clusters	n/a
Total investment in region/cluster	n/a
R & D	n/a
Links/association with other regions/clusters	• NEVAT is part of Orgalime, the European umbrella organisation for organisations in the metal and electronics industries. • NEVAT contributes to Dutch industrial policy

Summary of govt/regional support	n/a
Cluster Association name and contact details	NEVAT Boerhaavelaan 40 Postbus 190, 2700 AD Zoetermeer, The Netherlands. Telephone: +(31) 79 35 31 364 / 300 Fax: +(31) 79 35 31 365 E-Mail: info@nevat.nl Web Site: **www.nevat.nl** www.nevat.nl www.emcc.eurofond.eu

<table>
<tr><th>Country</th><th>Hungary</th></tr>
<tr><td>Region</td><td>Country coverage</td></tr>
<tr><td>Main city/cities</td><td>Gyor and Esztergom</td></tr>
<tr><td>Definition of Region/Location and size</td><td>Vehicle manufacturing is centred around Gyor and Esztergom</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
10,006,835
<table>
<tr><th>Hungary</th><th>2003</th><th>2004</th><th>2005(f)</th></tr>
<tr><td>GDP Growth</td><td>3.05</td><td>4.01</td><td>3.52</td></tr>
<tr><td>GDP per head (US$)</td><td>8199.25</td><td>9878.62</td><td>11822.43</td></tr>
<tr><td>Inflation average (%)</td><td>4.73</td><td>6.76</td><td>3.54</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>The Hungarian Automotive Sector in numbers
Production Value
– approx. HUF 9 billion in 2004
– accounts for 14% of total Industrial Production
Total number companies involved in the sector: 350 in 2004
Total number of employees: ~ 90.000 people
Export ratio: above 90 %</td></tr>
</table>

	• Main export market: European Union • Significant ratio of foreign ownership: above 80% • Position in the supply chain: 88% components, 12% modules and systems • Level of technology: 24% world class, 17% advanced tech, 58% other
Affiliates	**Numbers of automotive companies in cluster** Claims to be the first Automotive Cluster in the transition economies Cluster covers 250+ companies – inc 60 major suppliers **Cluster Founders include:** • Audi • Opel • Suzuki • LUK Savaria • Raba • Citibank • IKT West Transdanubian Regional Development Agency The cluster is supported by the ministry of economics.
Vehicle Manufacturers	**Details of the main vehicle manufacturers in this cluster:** • Audi and Suzuki passenger cars • Raba and Ikarus. Small volume trucks and buses **Details of vehicle production in this cluster:**

<table>
<tr>
<td></td>
<td>
Production in 2004:
<table>
<tr><th>Group</th><th>Marque</th><th>2004 Production</th></tr>
<tr><td>Suzuki</td><td>Subaru</td><td>8,500</td></tr>
<tr><td></td><td>Suzuki</td><td>93,421</td></tr>
<tr><td>Suzuki Total</td><td></td><td>101,921</td></tr>
<tr><td>VW</td><td>Audi (TT)</td><td>23,605</td></tr>
<tr><td></td><td>Country Total</td><td>125,526</td></tr>
</table>
Audi (engines) Production 1.2mn units 2004.(Petrol and diesel)
Opel (engines) Production 350,000 in 2004
</td>
</tr>
<tr>
<td>Supplier companies</td>
<td>
250 companies – 60 major suppliers, the balance are SME's

Examples of suppliers in this cluster include:

Bosch
Continental
Delphi Calsonic
Denso
Linamar
Raba

</td>
</tr>
<tr>
<td>Technology clusters</td>
<td>n/a</td>
</tr>
</table>

Total investment in region/cluster	**Examples of recent investments include:** ▪ Audi expansion ▪ Opel/Daewoo regional headquarters for CEE ▪ Suzuki expansion for car production ▪ Ortech new capacity for supplying Opel & Suzuki ▪ SEWS new capacity for the production of spare parts ▪ Toyo new capacity for the production of car seats ▪ Linamar new plant for producing diesel engine components ▪ Phoenix AG development for logistics center ▪ Porsche new logistics center ▪ Visteon product development centre for compressors ▪ Schwarzmüller new capacity for trailers ▪ Delphi-Calsonic expansion of compressor production ▪ Renault logistics centre ▪ Bosch expansion of production capacity **FDI in the region** • Approx. 10% of the total FDI in Hungary • Approx. 10 billion Euro in automotive sector
Links/association with other regions/clusters	**International contacts** • Automotive Cluster Vienna Region (ACVR) **www.acvr.at** • Oberösterreichische Tecnologie- und Marketinggessellschaft m.b.H (TMG) **www.tmg.at**

	- ACstyria Autocluster GmbH **www.acstyria.com** - Business and Innovation Centre - BIC Bratislava **www.bic.sk** - Automotive Cluster of Slovenia (ACS) **www.acs-giz.si** - Wirtschaftsförderung Region Stuttgart **www.region-stuttgart.de** - CESTEC **www.cestec.it** - Innovation Relay Centre (IRC) Lombardia **www.irclombardia.it**
Summary of govt/regional support	Support is provided by the ministry of Economics and various regional development agencies.
Association name and contact	**PANAC Coordination Office representing the Hungarian Automotive Industry** H-9027 Győr, Hédervári u. 25 Hungary Tel/Fax: +36-96-613-606 E-mail: rozsa.zoltan@panac.hu www.panac.hu (Hungarian only) **Association of the Hungarian Vehicle Component Manufacturers** H-1119 Budapest XI. Ker, Bartfai u. 5/B Tel + 36 1 203-8144 Majosz@mail.datanet.hu

<table>
<tr><th>Country</th><th>Italy</th></tr>
<tr><td>Region</td><td>Piedmont – Liguria – Val d’Aosta</td></tr>
<tr><td>Main city/cities</td><td>Turin</td></tr>
<tr><td>Definition of Region/Location and size</td><td>Piedmont, in north west Italy is a region that represents 32% of Italy’s GDP and 40% of exports.
Population: 4.3mn</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
58,103,033
<table>
<tr><th>Italy</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>0.35</td><td>0.97</td><td>na</td></tr>
<tr><td>GDP Per head (US$)</td><td>25,473.07</td><td>29,239.28</td><td>na</td></tr>
<tr><td>Inflation average (%)</td><td>2.67</td><td>2.21</td><td>na</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>The Piedmont region accounts for over 50% of Italy’s automotive production with Fiat at the heart of the cluster.
1,400 companies
75,000 employees</td></tr>
</table>

	Over 500 automotive component companies, mainly SME's turnover € 4.8bn per annum **Annual cluster turnover:** € 1.5bn **Employees:** Over 650,000 in the automotive sector.
Affiliates in Italy	**Cluster affiliates in Italy include:** ITP (Turin's inward investment body) with a particular interest in electronics, micro and nano technology. **Cluster members include:** • Motorola • GM Powertrain

Vehicle Manufacturers

Details of the main vehicle manufacturers in this cluster:

Passenger cars production 2004

Group	Marque	2004 Production
Fiat	Alfa Romeo	162,116
	Ferrari	4,954
	Fiat	514,553
	Lancia	110,565
	Maserati	5,151
Fiat Total		797,339
Ford	Ford (StreetKa)	8,562
GM	Opel (Astra cabrio and coupe)	13,395
Mitsubishi	Mitsubishi (Pajero Pinin	8,672
PSA	Peugeot (406 coupe - replacement made in France)	3,926
	Country Total	**831,894**

<table>
<tr>
<td></td>
<td>Light Commercial Vehicles production 2004
<table>
<tr><th>Manufacturer</th><th>Production 2004</th></tr>
<tr><td>Fiat</td><td>126,124</td></tr>
<tr><td>Iveco</td><td>51,930</td></tr>
<tr><td>Citroen</td><td>46,077</td></tr>
<tr><td>Peugeot</td><td>43,295</td></tr>
<tr><td>Piaggio</td><td>6,717</td></tr>
<tr><td>Bremach</td><td>280</td></tr>
<tr><td>Iveco Trucks</td><td>32,225</td></tr>
</table>
</td>
</tr>
<tr>
<td>Supplier companies</td>
<td>Examples of suppliers in this cluster include:

Brembo
Magnetti Marelli
Manuli Rubber
Pirelli
Teksid

In addition to the major Tier 1 suppliers, Italy hosts several hundred small and medium sized companies that are typically reliant on Fiat and function as Tier 2 and 3 companies.</td>
</tr>
<tr>
<td>Technology clusters</td>
<td>A Wireless cluster has been established around Turin to develop telematics applications for the automotive and other industries.</td>
</tr>
<tr>
<td>Total investment in region/cluster</td>
<td>Piedmont is Italy’s second largest region for foreign investment.
Inward investment represents 13% of the national total.</td>
</tr>
</table>

R & D	Piedmont is the top Italian region for private investment in R&D It accounts for 25% of Italian private sector R&D It has over 200 public and private research centres and 6 science and technology parks for R&D
Links/association with other regions/clusters	**This cluster has links and/or associations with the following clusters/regions:** • Network of Innovation Relay Centres (established by the EU) to promote transnational co-operation for developing and exploiting innovation, technology and research results. • ACE (Automotive Clusters in Europe)
Summary of govt/regional support	NA
Cluster Association name and contact details	**IRC Alps** Camera di Commercio di Torino, Via San Francesco da Paola 24, 10123 Torino, Italy Tel: + 39 011 57 16325 www.to.camcom.it

<table>
<tr><th>Country</th><th>Poland</th></tr>
<tr><td>Region</td><td>Country coverage</td></tr>
<tr><td>Main city/cities</td><td>Warsaw, Poznan</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
38,557,984
<table>
<tr><th>Poland</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>3.70</td><td>5.30</td><td>4.50</td></tr>
<tr><td>GDP Per head (US$)</td><td>5440.66</td><td>6279.65</td><td>7923.65</td></tr>
<tr><td>Inflation average (%)</td><td>0.79</td><td>3.58</td><td>2.18</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>A Lower Silesia cluster has recently been formed to look after the interests of the automotive industry in the region.
An AUTO FORUM has been formed to act as the conference for automotive industry suppliers and to facilitate networking between members.
The Auto Forum Club was founded in 2004 to create a co-operation platform for car manufacturing companies.
Annual cluster turnover: € NA</td></tr>
</table>

Employees: NA

Affiliates in Slovenia

Cluster affiliates in Poland include:

n/a

Cluster members include:

n/a

Vehicle Manufacturers

Details of the main vehicle manufacturers in this cluster:

7 manufacturers produce in Poland – 3 major producers: Fiat, GM and VW

Passenger cars:

Group	Marque	2004 Production
Fiat	Fiat	307,150
GM	Opel	116,600
	Country Total	423,750*

excludes VW commercial vehicles

Light Commercial Vehicles:

VW	Production 2004:	59,314
Fiat	Production 2004:	13,457
Andoria	Production 2004:	2,457

	Trucks: **Buses:** Volvo Star Production 2004: 544 Jeicz Production 2004: 12
Supplier companies	Poland’s supplier industry is not as well developed as other central European nations. The government has offered significant tax incentives in recent years which has attracted investment in the sector by multinationals. **Examples of suppliers in this cluster include:** • Autoliv • Bosch • Bridgestone-Firestone • Goodyear • Delphi • Faurecia • Fiat-GM Powertrain • Isuzu Motors • Lear • Michelin • Toyota Motor Manufacturing Poland (engines and transmissions)
Technology clusters	n/a
Total investment in	In 2003 FDI in the automotive sector amounted to US$ 6,584mn.

region/cluster	The main foreign investors are: Fiat, Daewoo, GM, Fiat-GM Powertrain, Volkswagen and Delphi Automotive systems.
R & D	n/a
Links/association with other regions/clusters	**This cluster has links and/or associations with the following clusters/regions:** • Partner with IRC (Innovation Relay Centre Network) • Bayern Innovativ & Baika
Summary of govt/regional support	According to the Law on Financial Support for Investment of 20 March 2002 financial support for new investment projects can be granted to investors who satisfy one or more of the following conditions: • Invest a minimum of € 10 million • Invest a minimum of € 500.000, where the investment involves the development or modernisation of an enterprise and provides a minimum of 100 jobs for five years • Create at least 20 new jobs for a minimum of 5 years • Introduce technological innovations • Make investments which improve the natural environment • Invest within an industrial or technology park The maximum aid in the automotive sector granted in favour of projects involving over € 5 million of aid is equal to 30% of the corresponding regional aid intensity For small and medium-sized enterprises the maximum aid is increased by an additional 15 %

Cluster Association name and contact details	

<table>
<tr><th>Country</th><th>Portugal</th></tr>
<tr><td>Region</td><td>Between Braga and Setabul</td></tr>
<tr><td>Main city/cities</td><td>Braga: Oporto, Ovar and Mangualde
Setabul; Lisbon, Palmela and Azumbuja</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
10,566,212
<table>
<tr><th>Portugal</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>-1.14</td><td>0.99</td><td>na</td></tr>
<tr><td>GDP Per head (US$)</td><td>14,167.44</td><td>16,096.17</td><td>na</td></tr>
<tr><td>Inflation average (%)</td><td>3.40</td><td>2.40</td><td>na</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>
No formal clusters have been identified in Portugal as in other countries studied.
The region between Barca and Setabul is the main automotive region and various regional development agencies actively promote their own regions to potential investors.
The two main trade associations are active in promoting the sector and liasing with the regions.
</td></tr>
</table>

Affiliates in Portugal

Cluster affiliates in Portugal include:

ACAP – the vehicle manufacturers association

AFIA, Portugese Association of Automotive Suppliers

Cluster members include:

- See below

Vehicle Manufacturers

Details of the main vehicle manufacturers in this cluster:

9 vehicle manufactures produce vehicles in Portugal

Details of vehicle production in this cluster:

Passenger cars:

Group	**Marque**	**2004 Production**
Ford	Ford	35,497
GM	Opel	66,400
PSA	Citroën	30,300
	Peugeot	21,000
PSA Total		51,300
VW	Seat	21,580
	VW	38,583
VW Total		60,163
	Country Total	213,360

	Light Commercial Vehicles: Citroen Production 2004: 8,789 Isuzu Production 2004: 10 Mitsubishi Production 2004: 6,239 Opel Production 2004: 46,382 Peugeot Production 2004: 9,532 Toyota Production 2004: 2,659 **Production in 2004:** 286,971 (total Industry)
Supplier companies	In 2002, AFIA, the components industry association reported that 160 companies were active in the sector in Portugal. Turnover was stated as €4.122 bn Employees: 37,500 broken down by size of company as follows: • 78% - 4000 + (employees) • 9% - 500 – 4000 • 12% - 250 - 500 Export ratio: 64% **Examples of suppliers in this cluster include:** • Continental • Delphi • Faurecia • Lear • Valeo

	• Visteon
Technology clusters	The **Centre for Excellence and Innovation in the Auto Industry (CEIIA**) supports the development of technical know-how and strategic competence of companies active in the automotive sector. It identifies potential business, technological and financial synergies.
Total investment in region/cluster	Under the INAUTO programme, more than €7mn has been invested in creating the technological, research and structure for a fully developed automotive cluster in Portugal. INAUTO is a programme within CEIIA, created to promote cohesive practices and policies between Public Policy and the industry.
R & D	n/a
Links/association with other regions/clusters	This cluster has links and/or associations with the following clusters/regions: A cross border platform for the automotive industry covering Northern Portugal and the Northern Spanish region of Galicia Other associations include: • CLEPA European Association of Automotive Suppliers • AFAC Argentina • SINDIPECAS Brazil • ACMA India • JAPIA Japan • INA Mexico • AMICA Morocco • MEMA/OESA USA

Summary of govt/regional support	n/a
Cluster Association name and contact details	**AFIA** Rua do Crasto, 190 4150 – 241 Porto Portugal Tel: + 351 226 172 668 Fax: + 351 226 101 877 **www.afia-afia.pt**

Country	**Romania**

Region	Country coverage
Main city/cities	Arges, Dolj, Timiş
Definition of Region/Location and size	**Arges** (Dacia and Aro) - Located in the south of Romania - Employment: 15,000 people employed in the vehicle manufacturing sector - Population: 600,000 **Dolj** (Daewoo) - Located in the south of Romania - Roughly 3,000 people employed in the vehicle manufacturing sector - Population: 700,000 **Timişoara** (Continental AG and other) - Located in the west of Romania - Roughly 1,000 people employed in the component manufacturing sector - Population: 659 512
Key Macro Economic data	• **Population:** 22,329,977 • From 1991-2002 automotive industry employment has decreased from 125,000 to 83,000. • As a percentage of the total workforce in the industry, employment in the sector has increased from 3.6 % to 4.3 %. • The number of enterprises in the automotive sector has increased from 39 to 376. • Production in 2002 compared with 1991 fell from: 84,000 cars (town and off-road) to 66,000; 2,226 buses and vans to seven; 75 trolleybuses to nine; and 7,592 trucks to 440 • Romania is a net importer of vehicles 53,700 units (Imports: 73,100 – Exports: 19,400).

Vehicle Manufacturers

Details of vehicle production in this cluster:

- 3 main vehicle producers: Dacia (owned by Renault), Daewoo Romania (owned by the Romanian Government licensing agreement with GM) and Aro (owned by Cross Lander).
- DACIA and DAEWOO manufacture passenger cars and light commercial vehicles.

ARO manufactures cross-country vehicles and light commercial vehicles.

1. Main motor vehicle manufacturers

Group	Marque	2004 Production
Renault-Nissan	Dacia	64,963
	Country Total	64,963

2. Production by types of vehicle (2004)

Type	Units produced (2004)
Passenger cars	98,997
Light commercial vehicles	22,946
Commercial Vehicles > 7t	242
Buses	0
TOTAL	**122,185**

Supplier companies

Supplier industry structure (2002)

- According to Global Insight, the component manufacturing industry is highly vertically integrated and thus a majority of the components are made by original equipment manufacturers.

Type	Number of active firms	Number of employees
Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	29	2,432
Manufacture of parts and accessories for motor vehicles and their engines	286	38,160
Manufacture of electrical equipment for engines and vehicles	45	15,383
TOTAL	**360**	**55,975**

Technology clusters

- **Bucharest region**
    - The main technology cluster can be found around Bucharest.
    - One of the main industrial centres and transportation hubs of the Balkan region.
    - As the most important city in Romania, Bucharest has a broad range of educational facilities.

	- **Timisoara, capital of Timis County** - The economic centre of the "Five West Romanian Region" (2 million inhabitants) - One of the most important business, cultural and scientific centers of Romania. - The level of training-education in Timisoara is higher than in the rest of the country. - 8 universities in the region (44 faculties) teaching about 47,000 students. - Automotive component suppliers include Continental AG and TRW Automotive. - Software industry represented by for example Siemens Automotive - Telecommunication industry represented by for example Alcatel
Total investment in region/cluster	**Investment in the Romania in total** - According to CIA World Factbook the gross fixed investments in the country amounted to 23% of the GDP in 2004, which corresponds to roughly €33 billion. **FDI in the region and Romania** - In 2004 total FDI in Romania amounted to €4 billion. - The value of total FDI in Arges county amounted to €740 million during 1991-2004. - For Bucharest the amount was around €4.9 billion during 1991-2004. - Large individual investments made in the automotive industry include: - Renault (Dacia) EUR 700 million with 300 more million over the next two years - Continental (tyres) EUR 220 million - Montupet (cylinder heads and other aluminium parts for Dacia) €120 million.
R & D	**R&D spending and activities** - For the country as a whole, R&D spending stands for less than 1 % of GDP.

Links/association with other regions/clusters	• ACAROM-CES: projects using national or European financing programs (FP6; LEONARDO; etc) in order to develop the automotive industry. • The partnership network of CLOE (“Clusters linked over Europe”): focuses on the management of industry clusters in several European regions in Germany, Austria, France, Sweden, Estonia and Romania, of which Timisoara region is part.
Summary of govt/regional support	**Summary of government/regional support for companies in the region** • The Romanian government decreased the tax for corporate profits from 25% to 16% in the beginning of 2005. • Companies are given tax exemptions when locating their business in the newly established industrial parks.
Cluster Association name and contact details	*No information available*

Country	**Russia**
Region	Samara region around Moscow
Main city/cities	Samara and Togliatti
Definition of Region/Location and size	**Definition and location of region** The Samara region, part of the Volga district, 600 miles southeast of Moscow. The cities of **Size of region** • Population of the Samara region: 3.3 million • The estimated annual turnover of the Russian automotive industry is $6.5 billion. • Most of the industry is centred to the Samara region and its neighbouring regions.
Key Macro Economic data	• **Population:** 143,420,309 • About 60% of the annual turnover of the automotive industry is generated by car manufacturers, 25% by truck manufacturers and 15% by bus manufacturers. • The Samara region is one of the best regions in Russia in terms of living standards and FDI. • In terms of trade flows, the automotive industry is the third most important industry after mineral products and chemical products. • In the city of Togliatti, 17% of the 700,000 inhabitants are employed by AvtoVAZ.
Cluster facts and figures	There is no formal cluster
Affiliates in Russia	**Cluster affiliates include:** No information available

Cluster members include: No information available

Vehicle Manufacturers

Details of the main vehicle manufacturers in this cluster:

Company	Location	No of units/year 2004
Avtotor (cars)	Kaliningrad	14,525
AvtoVAZ (cars)	Togliatti	776,010
Ford ZAO (cars)	Vsevolozshk (St. Petersburg)	29,703
Ford ZAO (cars)	Volga	65,873
GAZ (trucks, minibuses, SUVs)	Nizhniy Novgorod	137,362
GM-AvtoVAZ (cars)	Togliatti	58,025
Izhmash (cars)	Izhevsk	82,687
Renault – Avtoframos (cars)	Moscow	517
TagAZ – Hyundai	Rostov	30,000
UAZ (SUVs)	Ulyanovsk	31,141
Total		**1.2 million**

Details of vehicle production in this cluster:

- Automotive industry is vertically integrated. OEMs produce 70% of the components in-house.
- The anticipated increased importance of the suppliers has attracted many global automotive suppliers to the region. Some 30 large suppliers are headquartered in the Samara region. AvtoVAZ has about 200 suppliers.
- Roughly 1.2 million vehicle units were produced in Russia in 2004. 830,000 of them were produced in Togliatti.

Supplier companies	**Examples of suppliers in this cluster include:** *Information to follow*
Technology clusters	• 59 research institutions in the Samara region. 71% special R&D institutions, 17% research departments of universities, 12% R&D departments of firms. • There are 25,400 researchers in the region. • AvtoVAZ Department of Development, cooperation between AvtoVAZ, GAZ and the world's auto industry. Located in Avtograd, Togliatti. • Other important research institutions are the Samara Aerospace University, R&D Centre Infotrans, OAO Motorostroitel, OAO Aviaagregat, CSKB and OAO SKMB.
Total investment in region/cluster	Total investment is estimated at $0.96 billion in 2001. **FDI in the region** • FDI $0.16 billion in 2004. • According to regional authorities, the automotive and spare parts industries have become a catalyst for a rise in foreign investment in Samara Region. • The presence of GM-AvtoVAZ in Samara Region has produced a multiplicator effect in terms of FDI. • Russia has not experienced any significant influx of FDI into its automotive industry, while FDI was the most important force that transformed the passenger car industry in the rest of the Eastern Europe.

R & D	**R&D spending and activities** • 6 billion RRU annually • 45 % of the R&D spending are funded by firms, 35 % by government funds and 5 % by foreign investment. • 95 % of the research is carried out by the companies. • The IBRD has allocated $17 million to reform the educational system in the Samara region.
Links/association with other regions/clusters	n/a
Summary of govt/regional support	***National level*** • On a national level, the support to the automotive industry is considered quite weak among foreign investors. • In 2002, the Russian government increased the import duties on vehicles over 7 years old to stem the flow of imported cars that directly compete with AvtoVAZ. • The publication of the Automotive Development Concept in 2002, outlining the strategy for Russian Automotive Industry until 2010 is considered an abstract document (a form of protectionism) and of little value to foreign manufacturers. ***Regional level*** • The "Law on Investment in the Samara Oblast" allows the regional government to give tax breaks and other forms of government support to investors (including foreign) for up to 5 years. • Establishment of an industrial park outside Togliatti with the aim to attract international manufacturers of high-tech automotive components.

Cluster Association name and contact details	*To follow*

<table>
<tr><th>Country</th><th>Slovakia</th></tr>
<tr><td>Region</td><td>Country coverage</td></tr>
<tr><td>Main city/cities</td><td>Bratislava</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
5,431,363
<table>
<tr><th>Slovakia</th><th>2003</th><th>2004</th><th>2005</th></tr>
<tr><td>GDP Growth</td><td>4.46</td><td>5.50</td><td>4.96</td></tr>
<tr><td>GDP Per head (US$)</td><td>6071.53</td><td>7630.11</td><td>9097.68</td></tr>
<tr><td>Inflation average</td><td>8.50</td><td>7.50</td><td>2.48</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>

Slovakia will be the world’s largest per capita automotive producer by 2007 when new capacity comes on stream (see below)
The Automotive Industry is the key driver of the Slovak economy
Total automotive industry output in 2003: SK 278.8 billion (€7.15 billion) in 2003.
Estimate for 2010: €15 – 20 billion and 100,000 new jobs
</td></tr>
<tr><td>Affiliates in Slovakia</td><td>

Automotive Industry Association of the Slovak Republic (AIA SR)

Cluster Members</td></tr>
</table>

<table>
<tr><td></td><td>See Below</td></tr>
<tr><td>Vehicle Manufacturers</td><td>Details of the main vehicle manufacturers in this cluster:

12 auto manufacturing plants within the Visegrad Four region by 2006.
In a 500 km radius of Bratislava 14 OEMs (excluding the Germans) will operate by 2007.

The main vehicle manufactures are:
<table>
<tr><th>Group</th><th>Marque</th><th>2004 Production</th></tr>
<tr><td>VW</td><td>Seat</td><td>20,499</td></tr>
<tr><td></td><td>VW</td><td>160,979</td></tr>
<tr><td>VW Total</td><td></td><td>181,478</td></tr>
<tr><td></td><td>Country Total</td><td>181,478</td></tr>
</table>

Hyundai Kia Motors and PSA will establish plants by 2007
PSA and Kia will each have enough capacity to produce 300,000 cars per annum.
The sector has 54,700 employees
</td></tr>
<tr><td>Supplier companies</td><td>There are more than 260 automotive suppliers and subcontractors.

Examples of suppliers in this cluster include:
The top ten suppliers in Slovakia include:
Bosch, Delphi, Johnson Controls, Visteon, Lear, Magna, Valeo, TRW Automotive, US Steel and Dana

Over 50 (fifty) Tier 1 and Tier 2 automotive suppliers in Slovakia, supplying clients all over
</td></tr>
</table>

	Europe and beyond **Other big names include:** • Dura, Johns Manville, Taylor-Wharton, Harsco, Teleflex Automotive, Tower Automotive, Molex, US Steel Kosice, Plastic Omnium, 3M and Haden • Getrag Ford Transmission intends to start production of Ford gear boxes in 2007 **Components sector turnover 2003:** SKK 104,777.7m
Technology clusters	NA
Total investment in region/cluster	• Investment in the automotive industry in 2003: SKK 21.096 • Kia Motors, an affiliate of the South Korean carmaker Hyundai Motor Co will invest $ 1.1 billion to build its first European plant in Silina • Future potential investors include Mazda, Honda, Toyota and Bridgestone.
R & D	n/a
Links/association with other regions/clusters	To follow
Summary of govt/regional support	• State Aid approval limited to 15% of eligible costs • The Slovakian Government has budgeted invested of SKK 3.824 bn in 2005 for KIA/Hyundai and PSA investments in Slovakia.

Association name and contact	**Automotive Industry Association of the Slovak Republic** Sabinovska 6 821 02 Bratislava 2 Slovak Republic Tel +421 2 48247951 Fax +421 2 48247952 Email: **zapsr@zapsr.sk** www.zapsr.sk
Sources:	**www.zapsr.sk** **www.euro-innovation.org** **www.irc-slovakia.sk**

<table>
<tr><td>Country</td><td>Slovenia</td></tr>
<tr><td>Region</td><td>Country coverage</td></tr>
<tr><td>Main city/cities</td><td>Ljubljana</td></tr>
<tr><td>Definition of Region/Location and size</td><td>The Automotive Cluster of Slovenia (ACS) covers the whole country.</td></tr>
<tr><td>Key Macro Economic data</td><td>Population:
2,011,070
<table>
<tr><th>Slovenia</th><th>2003</th><th>2004</th><th>2005(F)</th></tr>
<tr><td>GDP Growth</td><td>2.52</td><td>4.57</td><td>3.90</td></tr>
<tr><td>GDP Per head (US$)</td><td>13,899.22</td><td>16,110.29</td><td>18,339.69</td></tr>
<tr><td>Inflation average (%)</td><td>5.57</td><td>3.60</td><td>3.08</td></tr>
</table></td></tr>
<tr><td>Cluster facts and figures</td><td>Cluster founded: 2001
Annual cluster turnover: €2 billion
80% of turnover comes from export. Together with car production, it represents approx. 6% of GDP.</td></tr>
</table>

	Employees: 16,800 with 2.000 researchers - In 2003, ACS comprised 22 companies and 5 research institutions and faculties Today, ACS has 50 members, of which 43 are companies and 7 are R&D institutions
Affiliates in Slovenia	**Cluster affiliates in Slovenia include:** - Plastehnik (Tool making and Plastics association) - Micro Electronics cluster **Cluster members include:** - Iskra - Magna Steyr - Prevent - Revoz-Renault - Saturnus - Sava Tires - Scania - Volvo
Vehicle Manufacturers	**Details of the main vehicle manufacturers in this cluster:** Renault is the only vehicle manufacturer in Slovenia. (Revoz Renault) **Details of vehicle production in this cluster:** Passenger cars at Renault’s Novo Mesto plant

<table>
<tr>
<td></td>
<td>**Production in 2004:**
<table>
<tr><th>Group</th><th>Marque</th><th>2004 Production</th></tr>
<tr><td>Renault-Nissan</td><td>Renault</td><td>131,761</td></tr>
<tr><td></td><td>**Country Total**</td><td>**131,761**</td></tr>
</table>
</td>
</tr>
<tr>
<td>**Supplier companies**</td>
<td>Slovenia has a small supplier base

Examples of suppliers in this cluster include:

• Cimos : Braking systems and engine components
• Goodyear-Sava: Tyres
• Prevent: Car seas, interiors</td>
</tr>
<tr>
<td>**Technology clusters**</td>
<td>None known</td>
</tr>
<tr>
<td>**Total investment in region/cluster**</td>
<td>In 2003, SIT 260m</td>
</tr>
<tr>
<td>**R & D**</td>
<td>n/a</td>
</tr>
<tr>
<td>**Links/association with other regions/clusters**</td>
<td>**This cluster has links and/or associations with the following clusters/regions:**

• ACS and NAPAK are forming a common engineering centre for technology transfer.
• CLEPA</td>
</tr>
</table>

	- NAPAK in Moscow. - Serbian Auto Cluster - Slovenian Automotive Component Manufacturers Association (referred to as the Klub)
Summary of govt/regional support	Development incentives for the cluster form the Ministry of Economic Affairs totalled SIT 100mn in 2003
Cluster Association name and contact details	ACS, Automotive Cluster of Slovenia Dimiceva 9 1000 Ljubljana Tel: +386 1 2351 735 Fax: + 386 1 2361733 Email: info@acs-giz.si Website: www.acs-giz.si

Country	**Sweden**
Region	West Sweden: includes Västra Götaland (Fyrbodal, Skaraborg, Sjuhärad and Gothenburg), and parts of Värmland
Main city/cities	Gothenburg, Trollhattan, Skövde
Definition of Region/Location and size	The West Sweden region includes the regions of Västra Götaland (Fyrbodal, Skaraborg, Sjuhärad and Gothenburg), and parts of Värmland. **Size of region** • Population: 1.6 million • The automotive industry consists of around 210 companies. Those companies employ 53,000 people.
Key Macro Economic data	• **Population:** 9,001,774 • In 2004, the automotive industry in Sweden employed 140,000 people, 67,500 among the OEMs, 72,500 among the suppliers. • In total the automotive industry accounts for 9% of total private sector employment. • In 2004, exports accounted for 14% of total Swedish exports. • In 2004, the automotive industry accounted for 21% of total Swedish industry machinery and equipment investment. • 95% of the trucks and 85% of the private cars produced in Sweden exported. In addition, a significant volume of components for trucks and buses are also exported. This makes the industry the greatest export business in Sweden.
Cluster facts and	**No information available**

<table>
<tr><td>figures</td><td></td></tr>
<tr><td>Affiliates in Sweden</td><td><i>No information available</i></td></tr>
<tr><td>Vehicle Manufacturers</td><td>

300,000 vehicles are produced each year in Sweden.
There are 13 OEMs in West Sweden, which is equivalent to about 6% of the total number of companies (210).
About 30% of the companies are owned by foreign investors. In terms of employees, foreign-owned companies represent 60% of the industry.

Vehicle manufacturer employment:
<table>
<tr><th>Company</th><th>Location</th><th>No of employees</th></tr>
<tr><td>Volvo Cars Corporation</td><td>Göteborg</td><td>12,700</td></tr>
<tr><td>SAAB Automobile AB</td><td>Trollhättan</td><td>6,200</td></tr>
<tr><td>Volvo Trucks AB</td><td>Göteborg</td><td>3,500</td></tr>
<tr><td>Volvo Powertrain Corp</td><td>Skövde</td><td>2,730</td></tr>
<tr><td>Volvo Car Corporation Engine</td><td>Skövde</td><td>2,000</td></tr>
</table>
Passenger car production in 2004:
<table>
<tr><th>Group</th><th>Marque</th><th>2004 Production</th></tr>
<tr><td>Ford</td><td>Volvo</td><td>233,336</td></tr>
<tr><td>GM</td><td>Saab</td><td>102,019</td></tr>
<tr><td></td><td>Country Total</td><td>335,355</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td></tr>
<tr><td>Supplier companies</td><td><i>Supplier structure</i>
<table>
<tr><th>Type of Company</th><th>No of companies</th><th>No of employees</th></tr>
<tr><td>Tier 1/2/3-suppliers</td><td>122</td><td>14 300</td></tr>
<tr><td>Non-automotive related products</td><td>52</td><td>3 700</td></tr>
<tr><td>Consultants</td><td>23</td><td>3 700</td></tr>
</table>
Examples of the main automotive suppliers in Sweden include:
Autoliv Sverige, Finnveden, Lear and SKF</td></tr>
<tr><td>Technology clusters</td><td>
Göteborg is the biggest cluster in the region consisting of Lindholmen Science Park, Göteborg University and Chalmers.
Innovatum (science park in Trollhättan)
Universities in Karlstad, Skövde and Trollhättan/Uddevalla.
Several other research institutes related to the automotive industry are located in the region.
</td></tr>
<tr><td>Total investment in region/cluster</td><td>The total investment in West Sweden (all industries) amounted to 85 billion SEK in 2003.

FDI in the region

Net FDI to Sweden amounted to 93.6 billion SEK in 2004.
Figure for regional FDI not available.
According to UNCTAD, Sweden’s position is declining in terms of FDI. In 1995, Sweden was ranked number 24. However, in 2004, Sweden had made a serious plunge to number 93.
</td></tr>
</table>

R & D

R&D spending and activities

- The vehicle industry accounted for 27 % of the total industry R&D spendings in 2003.
- 30 % of the people employed in R&D were found in the automotive industry.

Public spending on R&D

Project	**Total amount**
Trollhättan-package	860 million over four years
AutoComRegion	200 million
The vehicle research program	100 million
Green car	1 670 million
Emissionresearchprogram	140 – 205 million
IVSS-program	640 million
TOTAL	***3 610 – 3 675 million SEK***

Private spending on R&D

- ABVolvo: 6,7 billion SEK (cars, trucks, buses, construction equipment)
- SAAB Automobile: 3,9 billion SEK
- Information from Volvo Cars not available.
- General Motors will open its tenth research center in Trollhättan. The company will double its research budget in Sweden from 50 to 100 million SEK up to year 2008.

<table>
<tr><td></td><td></td></tr>
<tr><td>Links/association with other regions/clusters</td><td>Cars 21, Biofuels for transport, EU transportation research, FP6 and The European Road Transport Research Advisory Council (ERTRAC)</td></tr>
<tr><td>Summary of govt/regional support</td><td>Summary of government/regional support for companies in the region
<table>
<tr><th>Project</th><th>Amount</th></tr>
<tr><td>Trollhättan-package</td><td>400 million over four years</td></tr>
<tr><td>The vehicle research program</td><td>50 million</td></tr>
<tr><td>Emission research program</td><td>100-150 million</td></tr>
<tr><td>IVSS-program</td><td>370 million</td></tr>
<tr><td>Green car</td><td>500 million</td></tr>
<tr><td><i>TOTAL</i></td><td><i>1 420 – 1 470 million</i></td></tr>
</table></td></tr>
<tr><td>Cluster Association name and contact details</td><td>Automotive Sweden
Norra Hamngatan 14
SE-411 14 Gothenburg
Tel: +46 31 61 24 29
www.automotivesweden.se</td></tr>
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