AUTOMOTIVE INDUSTRY
Automotive Industry in Slovakia

Automobile industry is a key industrial and economic sector in many of the Central and Eastern European countries. It has been an important source of foreign direct investment for this region for the past 20 years. Car producers have sought to take advantage of well-educated and highly productive labour force, relatively low wages, Slovakia’s strategic position for export to the East as well as advanced infrastructure base that closely links the country to the core of Europe.

Slovakia has become an important global automotive center producing the highest number of cars per capita in the world. This became possible thanks to the presence of major global automotive suppliers and especially three world-known car manufacturers: Volkswagen (Bratislava), PSA Peugeot Citroën (Trnava) and KIA Motors (Žilina).

The development of the automotive industry in Slovakia and integration into the important global automotive centres began in the early 1990s when the German company Volkswagen AG decided to start the car production near Bratislava. This important milestone helped to develop the economy after the loss of the former “Eastern Bloc” markets and the closure of armaments production in Slovakia. The creation of a supply chain started hand in hand with the arrival of Volkswagen, and thus further investments into the automotive industry rose in the supply sector. Slovakia had started a new path of development of industrial production, above all in the sectors of automotive and engineering.

The implementation of the second important wave of investments into the automotive industry took place in years 2003-2005 thanks to the arrival of other two world-known automotive companies: PSA Peugeot Citroen and KIA Motors, which built their plants in Trnava (PSA) and Žilina (KIA).

Car production in Slovakia increased so significantly after the implementation of production lines, that Slovakia became one of the 20 biggest car producers in the world. In 2012, the production in the Slovak automotive production and assembly plants reached 926,555 passenger cars. This is an increase of production by 44,9% (286,792 cars) in comparison with 2011. Slovakia is the world’s largest producer of cars per capita with production of 171 cars per 1000 inhabitants.

With slightly more than 5 million inhabitants, the country produced half of the entire production of the United Kingdom and more passenger cars than for example Italy, while the population of each of these countries exceeds 60 million citizens.

### Car production in Slovakia

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>926,555</td>
</tr>
<tr>
<td>2011</td>
<td>639,763</td>
</tr>
<tr>
<td>2010</td>
<td>561,933</td>
</tr>
<tr>
<td>2009</td>
<td>463,140</td>
</tr>
<tr>
<td>2008</td>
<td>575,776</td>
</tr>
<tr>
<td>2007</td>
<td>571,071</td>
</tr>
<tr>
<td>2006</td>
<td>295,380</td>
</tr>
<tr>
<td>2005</td>
<td>218,349</td>
</tr>
<tr>
<td>2004</td>
<td>223,542</td>
</tr>
<tr>
<td>2003</td>
<td>281,160</td>
</tr>
<tr>
<td>2002</td>
<td>225,442</td>
</tr>
<tr>
<td>2001</td>
<td>181,618</td>
</tr>
<tr>
<td>2000</td>
<td>180,803</td>
</tr>
<tr>
<td>1999</td>
<td>126,831</td>
</tr>
<tr>
<td>1998</td>
<td>125,856</td>
</tr>
<tr>
<td>1997</td>
<td>418,52</td>
</tr>
</tbody>
</table>

Source: Automotive Industry Association of the Slovak Republic (ZAP SR); The International Organization of Motor Vehicle Manufacturers (OICA)
The estimates of the Slovak carmakers for 2013 is the production of 930,000 cars, which means further increase of annual production by 0.4% even after the immense rise in 2012. This is a good sign for the Slovak economy.

Volkswagen has “positive expectations”¹ concerning its production volumes in 2013 after its factory in Bratislava doubled its production of cars to more than 400-thousand units and reached full capacity in the previous year. Its current production consists of SUVs (56%) and small town cars New Small Family (44%). Kia Slovakia plans to produce 300,000² and PSA around 230,000³ vehicles. Achieving the results of 2012 also this year will further strengthen Slovakia’s position as automotive leader in per capita terms.

In comparison, car production data of neighbouring countries in 2012 were as follows: 1,171,774 Czech Republic; 215,440 Hungary; 540,000 Poland; 123,602 Austria and 69,687 Ukraine. The overall number of cars produced globally was 63,074,662 in 2012.⁴

The automotive industry is the key industry and driving force behind the development of the Slovak economy. Its sales of Eur 20.5 bn represented 30.6% of the total sales in the industry in 2012.

The sector also contributes significantly to the total exports of Slovakia in the amount of 26% (16.3 bn EUR). All three established automotive producers are listed among the most important exporters.

The number of employees working in the automotive sector, directly or indirectly, was about 72 thousand in 2011, which represents approximately 14% share of the total employment in Slovak industry. 2012 expectation was an increase to 74 thousand employees. In comparison, in 2002 there were 50,000 employees working in the automotive industry and in 1993 there were only 22,000 employees.

¹ http://ekonomika.sme.sk/c/6741739/bratislavsky-volkswagen-vlani-zdvojnasobil-vyrobu.html
⁴ Source: OICA

Sales in automotive industry (in bn. EUR)

Source: ZAP SR, Statistical Office of the Slovak Republic
Automotive industry

PSA Peugeot Citroën Slovakia
Established in: 2003
Production capacity: 300,000 vehicles/year
Production 2012: 215,000 vehicles (2011: 178,000 vehicles)
Sales 2012: € 1.94 bn
Exports as percentage of sales in 2012: 99%
Models: Peugeot 208, Citroen C3 Picasso
Number of employees 2012: 3,500
Plant of the PSA group is located in Trnava.

Kia Motors Slovakia
Established in: 2004 – first production plant of KIA vehicles in Europe
Production capacity: 300,000 vehicles/year
Sales 2012: € 3.92 bn
Exports as percentage of sales in 2012: 99%
Models: Kia Sportage, Kia Venga, Kia cee´d
Number of employees 2012: 3,739
KIA plant is situated in Teplička nad Váhom near Žilina together with motor production.

Volkswagen Slovakia
Established in: 1992
Production capacity: 400,000 vehicles/year
Production 2012: 419,888 vehicles (2011: 210,441 vehicles)
Sales 2012: € 6.59 bn
Exports as percentage of sales in 2012: 99%
Models: Volkswagen Touareg and Hybrid version, AUDI Q7 and Porsche Cayenne body-in-white, Volkswagen up!, ŠKODA Citigo, SEAT Mii
Number of employees 2012: 9,400
Volkswagen Slovakia plants are situated in the following localities: Bratislava (assembly plant), Martin (components production plant) and Košice (preparation of VW vehicles for the Russian market).

Automotive suppliers in Slovakia

Not only the three established automotive companies make the core of the Slovak automotive industry but also a high-quality supply chain companies, which operate close to the automotive plants. Supply chains represented by a wide range of suppliers Tier-1-3 also supply products to plants abroad.

The combination of three different cultures of car producers operating in Slovakia, the proximity of other automotive plants in Central Europe and three different main groups of suppliers have created a stable structure. The various types of suppliers are not divided only according to the level (Tier-1, Tier-2, Tier-3) but also according to functionality and specialization (e.g. technology suppliers, engineering and construction services suppliers, systemic suppliers with own R&D, cluster initiative etc.).

Currently, 274 production plants supplying automotive industry operate in Slovakia, of which 202 are located in the western part of the country, especially along the highway D1 from Bratislava to Žilina and highway R1 from Trnava to Banska Bystrica.

Source: Automotive industry association of the Slovak Republic (AIA SR), 2011
Suppliers were increasing amounts of production from 2002 until 2009 when the economic crisis led to cuts in the production volumes.

The supply sector thanks to foreign investors is building up a modern visage with the elements of the latest technologies in production, new culture, networks, development of innovative activities etc.. Among the key suppliers in the supply sector are listed Continental, Johnson Controls, INA, Mobis, Magneti Marelli, Getrag Ford, Valeo, ZF SACHS, ArvinMeritor, Visteon, Faurecia, Lear and many others.
### Structure of the supply network in Slovakia

#### Car manufacturers

#### Tier-1 System suppliers
With their own established production or assembly and JIT capacities (seat systems, interior systems, gearboxes) + local engineering and development centres (e.g. Johnson Controls International)

#### Suppliers of the chain Tier-2
With their own established local production or assembly and JIT capacities (Suppliers of modules or components) or with their own established development (e.g. HBPO, Brose)

#### Suppliers of the chain Tier-3
(Suppliers of parts and components, unprocessed material such as metal parts, plastics, aluminum parts)

#### Integrated suppliers of engineering services
(e.g. EDAG, Car Technology)

#### Small engineering companies, university science departments, research institutes of SAS
(specialized services, design, Rapid Prototyping, etc.)

#### Consulting services
(Project management, TQM, production systems, optimisation.) (e.g. IPA Slovakia)

#### Suppliers of software services
(e.g. Technodat CAE Systems)

#### Clusters
(e.g.: Automotive cluster – West Slovakia, Plastic cluster and others)

#### Technology suppliers
(automation, robotics, etc.)

#### Local research-development
Automotive industry

**Textiles, Covers**
- Heiland Slowakej, Trim Leader, Tomatex, Eybl, Sklotex, Krasplat

**Seats**
- Johnson Controls, Faurecia, Coba Automotive, Treves

**Cable bundles, Electronics**
- Delphi, Leoni, Schut, Siemens, Denisart Technology, SE Bornetze, Yazaki, Kromber-Schubert, Hefra, Wabash, Prysmian Kablo, Mikem Ltd., Molex, TRW

**Airbags**
- Coba Automotive

**Auto Batteries**
- Akutrade, Akuma Slovakia

**Bumpers**
- Matador Automotive, Plastic Omnium, HBPO, Plasmet

**Air-conditioning**
- Visteon, Molpir

**Engine, Engine parts and components**
- Hyundai Mobis, Pankl, Miba Sinter, Nemak, Edscha AG, Glader Tribometal

**Steering wheels and parts**
- Atdool

**Interior modules, Dashboards**
- Leer, Sai Automotive, SAS Automotive, Grupo Antolin, Polimoon, Treves, Tramico Slovakia

**Exhaust systems**
- Tower Automotive, Miba Slovakia

**Interior and exterior mirrors**
- Magna

**Tyres, Discs, Valves, Balance weights**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Seals and Silentblocks**
- SaarGummi, Contitech, ZF Boge Elastmetal, I.G. Gasket, Rubena, Coba Automotive

**Doors, Reinforcements**
- Brose Slovakia, Dura Automotive Systems, Matador Automotive, Dong Wong, Visteon

**Springs, Holders, Brackets**
- PSL, FFS, LLEMI Slovakia

**Brakes, Brake covers, Brake cylinders**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Headlights, Interior lights, Signal lights**
- Heila Slovakia, Osram, HBPO, Služba Nitra VD

**Cable bundles, Electronics**
- Delphi, Leoni, Schut, Siemens, Denisart Technology, SE Bornetze, Yazaki, Kromber-Schubert, Hefra, Wabash, Prysmian Kablo, Mikem Ltd., Molex, TRW

**Steering Systems Slovakia**
- Edscha Daschsysteme, Slovakia

**Body and Body stampings**
- Comex-TT, Tower Automotive, Matador Automotive, Creamer, Huhn Press, Motokom, Clamason, US Steel Košice

**Windows – glass**
- RF Ltd., Izolex

**Fuel tanks**
- Plastik Omnium, Plasmet, Inergy Automotive Systems

**Interior and exterior mirrors**
- Magna

**Springs, Holders, Brackets**
- PSL, FFS, LLEMI Slovakia

**Ropes, Handles, Gear shifters**
- Kuster, Kongsberg Driveline Systems

**Seals and Silentblocks**
- SaarGummi, Contitech, ZF Boge Elastmetal, I.G. Gasket, Rubena, Coba Automotive

**Doors, Reinforcements**
- Brose Slovakia, Dura Automotive Systems, Matador Automotive, Dong Wong, Visteon

**Springs, Holders, Brackets**
- PSL, FFS, LLEMI Slovakia

**Brakes, Brake covers, Brake cylinders**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Tyres, Discs, Valves, Balance weights**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Bearings**
- Kinex, Ina, ZVL Auto

**Airbags**
- Coba Automotive

**Auto Batteries**
- Akutrade, Akuma Slovakia

**Bumpers**
- Matador Automotive, Plastic Omnium, HBPO, Plasmet

**Air-conditioning**
- Visteon, Molpir

**Engine, Engine parts and components**
- Hyundai Mobis, Pankl, Miba Sinter, Nemak, Edscha AG, Glader Tribometal

**Steering wheels and parts**
- Atdool

**Interior modules, Dashboards**
- Leer, Sai Automotive, SAS Automotive, Grupo Antolin, Polimoon, Treves, Tramico Slovakia

**Exhaust systems**
- Tower Automotive, Miba Slovakia

**Interior and exterior mirrors**
- Magna

**Springs, Holders, Brackets**
- PSL, FFS, LLEMI Slovakia

**Ropes, Handles, Gear shifters**
- Kuster, Kongsberg Driveline Systems

**Seals and Silentblocks**
- SaarGummi, Contitech, ZF Boge Elastmetal, I.G. Gasket, Rubena, Coba Automotive

**Doors, Reinforcements**
- Brose Slovakia, Dura Automotive Systems, Matador Automotive, Dong Wong, Visteon

**Springs, Holders, Brackets**
- PSL, FFS, LLEMI Slovakia

**Brakes, Brake covers, Brake cylinders**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Tyres, Discs, Valves, Balance weights**
- VAP Prešov, Knott, Fragokov Export, Huhn Press

**Bearings**
- Kinex, Ina, ZVL Auto
The most important companies in the Slovak automotive industry per sales (2012)

<table>
<thead>
<tr>
<th>Company</th>
<th>Locality</th>
<th>Sales (in thousands Euro)</th>
<th>Change (in %)</th>
<th>Export share in sales (in %)</th>
<th>Average number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2012</td>
<td>2011</td>
<td>2012/11</td>
<td></td>
</tr>
<tr>
<td>Volkswagen Slovakia, a.s.</td>
<td>Bratislava</td>
<td>6 587 443</td>
<td>5 192 936</td>
<td>26,9</td>
<td>99,7</td>
</tr>
<tr>
<td>Kia Motors Slovakia, s.r.o.</td>
<td>Žilina</td>
<td>3 919 126</td>
<td>3 328 383</td>
<td>17,7</td>
<td>98,7</td>
</tr>
<tr>
<td>PSA Slovakia, s.r.o.</td>
<td>Trnava</td>
<td>1 936 214</td>
<td>1 642 432</td>
<td>17,9</td>
<td>95</td>
</tr>
<tr>
<td>Mobis Slovakia, s.r.o.,</td>
<td>Gbeľany</td>
<td>951 931</td>
<td>788 270</td>
<td>20,8</td>
<td>12</td>
</tr>
<tr>
<td>Johnson Controls International, s.r.o.</td>
<td>Bratislava</td>
<td>640 384</td>
<td>483 417</td>
<td>32,5</td>
<td>36</td>
</tr>
<tr>
<td>SAS Automotive, s.r.o.</td>
<td>Bratislava</td>
<td>576 742</td>
<td>419 835</td>
<td>37,4</td>
<td>1</td>
</tr>
<tr>
<td>Faurecia Slovakia, s.r.o.</td>
<td>Bratislava</td>
<td>441 547</td>
<td>296 077</td>
<td>49,1</td>
<td>20</td>
</tr>
<tr>
<td>INA Kysuce, a.s.</td>
<td>K.N.Mesto</td>
<td>395 740</td>
<td>374 562</td>
<td>5,7</td>
<td>96,6</td>
</tr>
<tr>
<td>INA Skalica, a.s.</td>
<td>Skalica</td>
<td>374 154</td>
<td>341 425</td>
<td>9,6</td>
<td>98,5</td>
</tr>
<tr>
<td>Getrag Ford Transmissions Slovakia, s.r.o.</td>
<td>Kechnec</td>
<td>316 775</td>
<td>360 473</td>
<td>-12,1</td>
<td>0</td>
</tr>
<tr>
<td>Halla Visteon Slovakia, s.r.o.</td>
<td>Ilava</td>
<td>258 903</td>
<td>200 882</td>
<td>28,9</td>
<td>48,2</td>
</tr>
</tbody>
</table>

Source: Trend TOP v priemysle, September 2013; ETREND; Slovak Information and Marketing Company;

Companies with highest investment in the Slovak automotive industry (2012)

<table>
<thead>
<tr>
<th>Company</th>
<th>Locality</th>
<th>Investments (in thousands Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Volkswagen Slovakia, a.s.</td>
<td>Bratislava</td>
<td>354 535</td>
</tr>
<tr>
<td>Kia Motors Slovakia, s.r.o.</td>
<td>Žilina</td>
<td>120 959</td>
</tr>
<tr>
<td>Continental Matador Rubber, s.r.o.</td>
<td>Púchov</td>
<td>72 199</td>
</tr>
<tr>
<td>INA Kysuce, a.s.</td>
<td>K.N.Mesto</td>
<td>57 247</td>
</tr>
<tr>
<td>INA Skalica, a.s.</td>
<td>Skalica</td>
<td>37 146</td>
</tr>
<tr>
<td>PCA Slovakia, s.r.o.</td>
<td>Trnava</td>
<td>37 146</td>
</tr>
</tbody>
</table>

Source: Trend Špeciál Top 200, June 2013

Salary overview in the Slovak automotive industry (2013)

<table>
<thead>
<tr>
<th>Post</th>
<th>Average gross salary (EUR)</th>
<th>Post</th>
<th>Average gross salary (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-electrician</td>
<td>1,114</td>
<td>Operator of machines and devices</td>
<td>894</td>
</tr>
<tr>
<td>Auto-tinsmith</td>
<td>1,661</td>
<td>Repairer</td>
<td>931</td>
</tr>
<tr>
<td>Auto-mechanic</td>
<td>779*</td>
<td>Tyre service worker</td>
<td>763*</td>
</tr>
<tr>
<td>Electro-mechanic</td>
<td>1,373</td>
<td>Receiving technician</td>
<td>902*</td>
</tr>
<tr>
<td>Maintenance engineer</td>
<td>1,765</td>
<td>Procedural engineer</td>
<td>1,374</td>
</tr>
<tr>
<td>Constructor</td>
<td>1,520</td>
<td>Technologist</td>
<td>1,432</td>
</tr>
<tr>
<td>Quality supervisor</td>
<td>1,316</td>
<td>Maintenance man</td>
<td>937</td>
</tr>
<tr>
<td>Painter</td>
<td>1,485</td>
<td>Service manager</td>
<td>2,486</td>
</tr>
<tr>
<td>Mechanic</td>
<td>880</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Trexima Bratislava, average brutto salaries per month in the automotive industry (January-June 2013); * - information wages in automotive industry are missing; general wages of the respective occupation in Slovakia were used
R&D in the Slovak automotive industry

Some of the companies in the industry enlarge their activities also in research and development, which is a great contribution to automotive companies, but to suppliers as well, since they can react more flexibly to customers’ demands. Another advantage of established automotive R&D in plants is the support of production and assembly processes, their optimisation, and development of new technologies and products. Continually developing co-operation with Slovak universities and research centres is also of great significance. The support of innovation is becoming of key importance in Slovakia, not only in the field of the automotive industry, but also for other sectors of industry such as electrical engineering, ICT, chemical industry, etc.

Expenditures on R&D - production of motor vehicles (in ths. EUR)

![Chart showing expenditures on R&D in the automotive industry in Slovakia from 2008 to 2012.]

Source: Statistical Office of the Slovak Republic

E-Mobility in Slovakia

Among the important activities of modern automotive industry development can be listed not only the construction of the latest automotive plants with the latest technologies, but also the first initiatives in the development of e-Mobility in Slovakia. Building an electrical infrastructure for electric cars in Slovakia was initiated by Východoslovenská energetika, member of the RWE group, and Západoslovenská energetika, member of the E.On group. Research and development activities in the field of electric vehicles took place at following Slovak universities: The Technical University in Košice, The Slovak University of Technology in Bratislava and University of Žilina.

E-mobility development is at its beginning in Slovakia. Infrastructure for electric cars is secured by Východoslovenská energetika, a member of the RWE group, and Západoslovenská energetika, a member of the E.On group. In Slovakia, first charging stations are in Košice and Bratislava. Activities have been recorded not only in infrastructure building but also in the field of research and development - mainly at universities.

Projects in the field of e-mobility implemented up to this time:

- The Slovak University of Technology in Bratislava: co-operation of two faculties and Západoslovenská energetika, member of E.On group, project: Student Electric Formula
The Slovak University of Technology in Bratislava – design and development of special hybrid vehicles

The Technical University in Košice, Faculty of Engineering – Students Project ICAR 2010 – design prototype studies of a vehicle
The Technical University in Košice, Faculty of Electrotechnics and Informatics – participation in a competition of student electric cars 3. Bosch Electromobile Race in Hungary

University of Žilina – project Edison – electric car

Secondary vocational automotive school in Košice – project: Student Electric Vehicle

Activities of established automotive plants:

Volkswagen Slovakia produces Volkswagen Touareg Hybrid in Slovakia. Moreover, a decision of Volkswagen AG headquarters on the location of production of electric car models Up! and Space Up! was made in 2011.

PSA Peugeot Citroen began with sale of electric cars in 2010 in Slovakia: Peugeot iOn and Citroen C-Zero.

Activities in the field of projects:

Association Automotive Cluster–West Slovakia deals with the AUTOCLUSTERS; activities focus on networking, support of the cooperation of automobile organisations in Europe, strategy-making and policies.

Company E.On launched the project “VIBRATE” with objective to build electric stations between Vienna and Bratislava and to implement standardized infrastructure of charging stations between these two cities.

Co-operation with educational institutions

Slovak secondary vocational schools and universities have wide-ranging co-operation with automobile companies. This co-operation has been realized by establishing new educational centers, laboratories and preparation of educational study courses that shall simulate real manufacturing conditions.

Education in automobile specialisation at universities

The Slovak University of Technology in Bratislava (www.stuba.sk)
Faculty of Mechanical Engineering:
Study programs: Automobiles, Ships, and Combustion Engines; Mechatronics; Process Engineering; Mechanical Engineering Production and Quality Management; Applied Mechanics; Automation and Informatics of Machines and Processes; Automated Production Systems...

Faculty of Electrical Engineering and Information technology:
Study program: Automobile Electronics

Faculty of Architecture:
Study program: Products Design; Interior Design
Academy of Fine Arts and Design in Bratislava (www.vsvu.sk)
Study program: Industrial Design

The Technical University of Košice (www.tuke.sk)
Faculty of Mechanical Engineering:
Study program: Automotive Production
Faculty of Electrical Engineering and Informatics:
Study programs: Electronics; Informational and Managing Systems in Mechatronics; Automotive Electronics; Automotive Mechatronics 
Faculty of Arts:
Study program: Design

University of Alexander Dubček of Trenčín in Trenčín (www.tnuni.sk)
Faculty of Mechatronics:
Study program: Mechatronics of road vehicles

University of Žilina in Žilina (www.uniza.sk)
Faculty of Operation and Economics of Transport and Communications:
Study programs: Road Transport; Railway Transport; Air Transport; Professional pilot; Transport Engineering
Faculty of Mechanical Engineering:
Study programs: Transport devices; Vehicles and Engines

Education in automotive specialisation on secondary vocational schools

Pilot centres
Pilot centre is an existing school, in which the proficiency of educational activities is guaranteed by ZAP SR (Automotive Industry Association of the Slovak Republic) and the professional growth of lecturers by State Institute of Professional Education and Lecturer centres.

Objectives of the project Pilot centre
- increase in preparation quality of new graduates, requalification of recorded unemployed, lifelong education of pedagogues, lifelong education of technologists from practice,
- establishment of the centre for professional lifelong education,
- promotion of education according to the existing needs of the work market,

List of pilot centres:

<table>
<thead>
<tr>
<th>Name of the centre</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot centre Bratislava</td>
<td>SOU strojárske (Machinery Apprentice School), J. Jonáša 5, Bratislava</td>
</tr>
<tr>
<td>Pilot centre Senec</td>
<td>ZŠŠ Senec (Integrated High School Senec), Kysucká 14, Senec</td>
</tr>
<tr>
<td>Pilot centre Trnava</td>
<td>SOU strojárske (Machinery Apprentice School), Coburgova 39, Trnava</td>
</tr>
<tr>
<td>Satellite pilot centre Galanta</td>
<td>ZŠŠ obchodu a služieb (Integrated High School for Transportation and Services), Z. Kodálya 765, Galanta</td>
</tr>
<tr>
<td>Pilot centre Nové Zámky</td>
<td>ZŠŠ dopravy a služieb (Integrated High School for Transportation and Services), Jesenského 1, Nové Zámky</td>
</tr>
<tr>
<td>Satellite pilot centre Nitra</td>
<td>SPV Nitra (Apprentice School – Centre of Practical Education Nitra), Ďurčanského 2, Nitra</td>
</tr>
<tr>
<td>Satellite pilot centre Zlaté Moravce</td>
<td>ZŠŠ Zlaté Moravce (Integrated High School Zlaté Moravce), SNP 2, Zlaté Moravce</td>
</tr>
<tr>
<td>Pilot centre Trenčín</td>
<td>SOU J. Ribaya (Apprentice School J. Ribaya), Partizánska cesta 76, Bánovce nad Bebravou</td>
</tr>
<tr>
<td>Pilot centre Banská Bystrica</td>
<td>SSŠ Banská Bystrica (Vocational Integrated School Banská Bystrica), Školská 7, Banská Bystrica</td>
</tr>
</tbody>
</table>

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Development opportunities for Slovak automotive industry

Opportunities for development

- Support and development of supply base of local companies with the aim to build up own research and development
- Support of education and development of the gifted in technical sciences
- Implementation of Lean principles
- Costs reduction, processes optimisation
- Development of innovative activities in plants
- Support of project networking, participating in research projects FP7
- Development of e-mobility strategy
- Cluster initiative development

Main development trends in Slovak automotive industry

- Employment growth
- State of the art production technologies
- Combination of various types of production systems (Production System PSA, KIA WAY, VW Production System, other production systems of supply enterprises)
- Regional development
- Educational development
- Support of research and development; establishment of R&D centres and laboratories
- Impact on local suppliers
- Development of project networking
- Entrenchment of cluster and network initiative

Useful links

- Automotive Industry Association of the Slovak Republic – [www.zapsr.sk](http://www.zapsr.sk)
- Internet Portal for Slovak Automotive Suppliers – [www.ipdap.sk](http://www.ipdap.sk)
- Automotive Cluster – Western Slovakia - [www.autoklaster.sk](http://www.autoklaster.sk)
- The International Organization of Motor Vehicle Manufacturers – [www.oica.net](http://www.oica.net)
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