



# Automotive Industry in **Hungary**



HUNGARIAN  
INVESTMENT AND  
TRADE AGENCY

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# 2012

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Dear Partners,

In the third millennium, we live in a period of broad international cooperation. Thanks to globalisation, the world is opening up for the economic players. The key issue for us is cross-border cooperation; therefore, we are strongly supporting the networking of Hungarian enterprises with their possible foreign partners. Hungary possesses diversified external trade connections and is not significantly affected by the global financial and economic crisis.

Established by the Hungarian Government, the Hungarian Investment and Trade Agency (HITA) commenced operation as of 1st January 2011. The task of the Agency is to intensify the external trade activity of Hungarian small and medium-sized enterprises (SMEs) and to encourage foreign companies to invest in Hungary.

HITA takes active part in the elaboration of the Hungarian external foreign trade strategy, also in the daily work of investment incentives and export development. According to government expectations the economy will grow over the next two years and the additional government initiatives offer further possibilities both for local SMEs and also for foreign investors. This procedure is supported by the regional and international network of HITA.

The brochure "Automotive Industry in Hungary" introduces the traditional history of the Hungarian automotive industry and its role within the manufacturing industry: there are more than 600 enterprises working within the sector, employing 100,000 people and producing more than 15 billion EUR revenue. About 92% of their products and services will be exported. Effective cooperation between higher education institutes and production facilities in the field of R&D and the qualification of engineers is essential in the automotive sector.

We rely on, that with the help of this publication and HITA associates, our partners will more readily identify possible suppliers, developers and other cooperating groups. We hope that the information listed in this brochure will contribute to our common future success.



**Ms. Erzsébet Dobos**  
President



HUNGARIAN  
INVESTMENT AND  
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# Chapter I.

## The 107-Year-old History of the Hungarian Automotive Industry

Along with many discoveries and inventions, Hungarians have contributed to the spread of the automobile across the world. One of the earliest examples of this was during the reign of King Matthias Corvinus in the 15th century, with the wheelwrights of Kocs in Komárom county and their construction of a horse-drawn vehicle with steel-spring suspension. This "cart of Kocs" as the Hungarians called it (kocsi szekér) soon became popular all over Europe and lent its name to the English word "coach".

Organised automobile manufacturing has been present in Hungary since 1905, when János Csonka, commissioned by the Hungarian Royal Post created his mail transport car in the training centre of Budapest University of Technology.

János Csonka and Donát Bánki constructed the first petrol vaporizer, (carburettor), which they patented in February 1893.

János Csonka was the first to utilise the use of aluminium in the manufacturing of engines, he also developed controlled inlet valves and high-voltage magneto ignition for petrol engines.

József Galamb with others together framed the concept of the famous Model-T Ford. His intention was to create a car that



"Cart of Kocs" in the XVI. century



Mail transport car of János Csonka



Carburettor of János Csonka and Donát Bánki



József Galamb and the Model-T Ford



Béla Barényi with the Mercedes-Benz 280SL



Ferenc Anisits the "the Diesel-Pope"



Ferenc Pavlics: The development of the Lunar Roving Vehicle for which he later received the NASA Award



Professor László Palkovics: The inventor of commercial vehicle electronic stability control.

would be cheap and simple to manufacture. In this model he applied technical innovations, such as the planetary gear and the removable cylinder head. In 1913, with his lead, the Ford Factory switched to serial production on its production lines. This resulted in the Model-T becoming the world's first mass produced affordable car. During its 20 year production, over 155 million units were manufactured.

Béla Barényi as a constructor for Daimler-Benz, established the basic methodologies of passive safety in vehicles. Thanks to his activity, we have a crash zone, a non-deforming passenger compartment, and the telescopic collapsing steering-column in modern cars. In the late forties, he introduced safety crash-tests to the automotive industry.

Dr. Ferenc Anisits played a hugely significant role in the development of the first eight-cylinder, direct-injection diesel engine and headed up the BMW Diesel Development Centre in Steyr, Austria. Under his leadership the electronically controlled diesel injection system was introduced in 1993, for which he was awarded Ernst Blicke Innovation Award in 1995

Ferenc Pavlics was a technical director for General Motors, later participating in the formation of the Lunar Roving Vehicle in the Apollo Space Programme.

László Palkovics is a Professor of Budapest University of Technology and Economics and the Centre of Competence. He is currently leading a 100-engineer R&D unit in Budapest, and coordinates the worldwide pre-development activities of Knorr-Bremse AG. In his engineering career to date, he has been involved in vehicle dynamics, controlled vehicle systems, modeling techniques, hybrid vehicle drives and safety systems.

He is also very active in technical higher education and the development of new generations of engineers for the future.

## Chapter II.

# A Retrospective Look at the History of Hungarian Commercial Vehicle Production

### Ikarus

The history of bus manufacturing started in 1895 as Imre Uhri's Blacksmith Workshop and Coach Factory. Buses were first built in 1925, with the Budapest Mátyásföld plant becoming the centre of Hungarian bus manufacturing from 1948.

Increased volume serial production was assured via the Csepel main units from 1949. The public vehicle programme promoted the manufacturing of increased capacity single-decker and articulated buses. Long distance coaches were fitted with Rába engines and Rába-developed running gear.

Between 1975 and 1990, 13,500 coaches were built annually, making Ikarus the largest bus manufacturing company in Europe.



Csepel D344 model



Type Ikarus 30

### Csepel Motor Works

The Csepel Motor Works was founded on the 1st November 1949. In February 1950, the Vehicle Development Institute (JÁFI) was established in Budapest. Due to military requirements, the all-wheel drive Csepel 344 was developed and became the most successful model of the factory. From 1975, the Csepel Factory primarily became a supplier of bus main units.



Rába Botond in the Transport Museum in Budapest

### Rába

The Hungarian Railway Carriage and Machine Works was established in 1896, primarily for the production of passenger carriages and restaurant cars for trains. In 1936, they started the production of the Rába Super, Rába Maros and Rába Speciál lorries, with a working load of 2.5 to 3.5 tonnes and 30-passenger Rába autobuses.

In the 2nd World War, the company developed an off-road, passenger carrying vehicle. This was the famous Botond all-wheel drive lorry, designed by Dezső Winkler.

In 1948, the production of running gears, steering gears and transmission units of the Steyr-licensed Csepel D-350 started.

Within the framework of the Public Road Programme adopted in 1966, a new engine factory was built in Győr, based on the acquisition of a MAN engine licence; production started in 1969.

In 1975, Rába purchased an American Steiger licence, and the production of high-performance agricultural tractors started.

Rába became a joint-stock company in 1992, and restructured into a holding in 1999. Since then, Rába Axle Ltd. and Rába Automotive Components Ltd. have been component manufacturers. Together with Daimler AG, Rába also supplies special purpose vehicles for the Hungarian Army.



## Chapter III.

### Important Investments after the Change of the Regime

Within the framework of the work sharing procedures in Comecon countries, Hungary had become a leading bus manufacturer and exporter, with a significant supplier background.



Following the political changes in central and Eastern Europe, in order to try to solve domestic personal car ownership, the construction of assembly plants in the country was initiated. This was encouraged by the Government through favourable conditions.



#### First Opel Astra made in Szentgotthárd

The start of Opel Astra production in 1991 in Szentgotthárd enabled partial fulfilment of domestic personal car needs.

Suzuki and Audi followed Opel, with their suppliers also establishing a manufacturing base in Hungary.

Why did automotive investors choose Hungary? At that time, based on the former commercial vehicle manufacture and supply, there was a highly skilled workforce available, with a known automotive culture at a very competitive cost compared to Western Europe.

It is no accident, that both GM and Audi realised their first investments based on former RÁBA manufacturing plants. Also very important was the supporting government attitude and the local European manufacturing culture.

## Chapter IV.

### Settlement of OEM's in the Nineties: Audi, GM and Suzuki



#### General Motors Powertrain-Magyarország Kft.

GM invested DM 250 million to build an assembly plant in Szentgotthárd beginning in September 1990. Production started with an annual assembly of 13,000 Astra cars and 200,000 1.6 litre engines. In 1996, thanks to a new DM 257 million investment, the factory doubled its engine production capacity to 460,000 units per year. In 1998, a further investment project was launched: Opel invested DM 230 million to build a new gearbox factory with a capacity of 250,000 units per year.

September 2008 saw the start of the production of 1.6 and 1.8-liter EURO 5 standard petrol engines, with Opel announcing its latest investment in April 2011, the value of which is close to EUR 500 million, with the number of employees reaching 1,500 by the end of 2015. It is also worth noting that another important business unit is parts manufacture; there were more than 500,000 units of machined cylinder heads, engine blocks, crankshafts and piston-rods completed for other GM factories in South-America and Asia. The total investment of GM has now reached EUR 753 million in Hungary.

#### Magyar Suzuki Zrt.

Magyar Suzuki was established by the Suzuki Motor Corporation with a HUF 14 billion investment in 1991. The factory in Esztergom was built initially on a 350,000 square metre site; today manufacture of "Our Car" is carried out on 570,000 square metres. The first models produced were Swifts with 1.0 and 1.3 litre petrol engines. Thanks to continuous developments, the production grew to a record 280,000 units in 2008.



The 1.5 millionth Suzuki unit in the Esztergom plant, a Splash model produced in 2008

The two millionth car was manufactured on the 20th founding anniversary in 2011. The factory employs 3,500 employees and nearly 80 Hungarian suppliers. Together with its sales network and supplier companies, Magyar Suzuki has contributed to the realisation of more than 10,000 workplaces.

## Audi Hungaria Motor Kft.

**Audi AG selected Győr from 180 potential venues for its new engine production site in 1992. Beside the regions developed industrial culture and infrastructure, the qualified and cost favourable workforce, the flexible work-schedule and the tax-benefits delivered by the Hungarian Government, were very important in addition to the already existing RÁBA-workshop and its infrastructure. With a registered capital of DM 2 million the Hungarian enterprise was established; the manufacturing of 4-cylinder-5-valve-motors starting in August 1994. In May 2006, Audi AG made the decision to produce its 6-cylinder and 8-cylinder engines, as well as assembling the TT Coupe and TT Roadster cars at the Győr factory.**

In 1999, the company also established an Engine Development Centre which opened in June 2001. A3-type car production started in the second quarter of 2001.

In addition to opening the tool factory, the 10-millionth engine was completed in Győr, in 2005. In its 18-year success story, Audi has manufactured 20,500,000 engines and 530,000 vehicles, employing 7,500 employees, becoming one of the most important players in the Hungarian Economy. In 2010, Audi AG decided to enlarge its Győr plant with a EUR 900 million investment, creating a further 2,100 workplaces.



Audi TT Roadster on the manufacturing line



# Chapter V.

## TIER 1 Suppliers in Hungary

### Robert Bosch GmbH

**Bosch has been present in Hungary since 1899. After reorganisation of the regional commercial company in 1991, it has become the second biggest foreign industrial employer in Hungary. Companies belonging to Bosch-group can be found at several sites, in Budapest, Hatvan, Miskolc, Eger, Kecskemét and Szigetszentmiklós.**

Robert Bosch Elektronika Kft. in Hatvan was established in 1998. This factory is already the largest production site of the automotive division within the Bosch-group.

The Hatvan site produces different types of control units for automatic transmissions, ABS, airbags, electro-hydraulic servo steering, body electronics, on-board computers, ESP and complete dashboards.

In the business year 2010, the company had 11 subsidiaries in Hungary; the company's total turnover was HUF 401 billion, with Hungary contributing HUF 118 billion; this does not include the trade activities carried out within the group.

By the end of 2011, the Hungarian Bosch-group employed approximately 8,000 workers.

For many years, Bosch has significantly supported Hungarian higher education and the qualification of engineers.



The electronic components produced in Hatvan are making driving safer, cleaner and cheaper. All over the world, more than 15 million vehicles have been equipped with electronics produced by Bosch in Hatvan.

## Knorr-Bremse AG

Knorr-Bremse Fékrendszerek Kft. – Commercial Vehicles Systems – was established in 1989 in Kecskemét for the production of commercial vehicle braking systems. In 1995, the company opened its Research and Development Institute in Budapest. In the same year, the site of Knorr-Bremse Vasúti Járműrendszerek Hungária Kft. – Rail Vehicles Systems – started in Budapest. Since 2009, Knorr-Bremse Fékrendszerek Kft. has been cooperating with four members of the eight Centres of Competence (CoC's) of the parent company as a production plant: air treatment, valves, actuators and electronic systems are the main products. The first two competencies are more significant; enhancement of the electronic profile was favoured by the establishment of ABS valve-production in Hungary.

With this product portfolio, the Kecskemét plant is the second largest factory in Europe, in terms of the complexity of production, it is number one with its 2,000 item-numbers. At the end of 2011, the number of employees was 919. R&D expenditure of the company was 6.91% of the total sales, with sales at HUF 86.4 billion. On the 6th March 2012, the foundation stone of the new factory was laid, realising a greenfield investment to a value of HUF 5 billion in Kecskemét. The ultramodern factory will be completed with a development laboratory on a common 22,000 square metre site. The plant will create a further 110 new jobs. The investment will be completed by the end of 2013, with production up by 10%.



The new greenfield Knorr-Bremse factory in Kecskemét



ZF Hungária Kft.: the heat-treatment facility in Eger

## ZF AG

ZF Hungária Kft. launched its activity in Eger after ZF AG bought the former Csepel Motor Works local plant. ZF Eger became a strategic producer of commercial vehicle and bus transmissions. In the first year, the company reached a DM 10 million turnover with its 300 employees. Together with TNT, ZF Hungária established a modern logistics centre in the neighbourhood of its own plant. One of the ZF suppliers settled in the adjacent industrial park, another group were directly moved into ZF's own workshops. In 2002, the 100,000th 6S 300 transmission was produced and the company started the production of the automatic transmission prototype.

Started in 2010, for completion by the end of 2013, ZF will realise a strategic investment for a selection and capacity enlargement in Eger. After finishing the HUF 3 billion project, the plant will not only produce new types of gears, but 58 new workplaces will also be established.

## Chapter VI.

# The Expansion of Audi and GM Developments of Suzuki from 2010



## Audi

On the 23th September 2010, Audi announced the expansion of vehicle production in its Győr plant. With an investment of EUR 900 million, 1,800 new jobs will be created in Győr. Because of the growing demand for Audi-products, the need for new employees has been increased to 2,100.

As a result of the development, four different Audi models will be completely produced in Győr. The factory will cover the whole production activity, beginning with the bodywork, through paintwork until the assembly. Working at full capacity from 2013, Audi will have a major influence on the Hungarian Economy. After the expansion project, Audi – including its own headcount, suppliers and service providers – will ensure a livelihood for over 15,000.

From 2013 on, 125,000 cars will roll off the manufacturing line in Győr each year including the Audi TT Coupés, Roadsters, A3 Cabriolets and a further version of the A3.

Through the continuous factory enlargement and developments, Audi constantly needs skilled and quality workforces. For this reason, Audi has invested significant amounts into education and vocational training. Cooperating with Győr's more vocational schools, in the framework of dual education, annually, 100 students complete their practical studies at Audi.



Prime Minister Viktor Orbán laying the foundation stone for the expanded automotive production plant in Győr, on the 12th July 2011

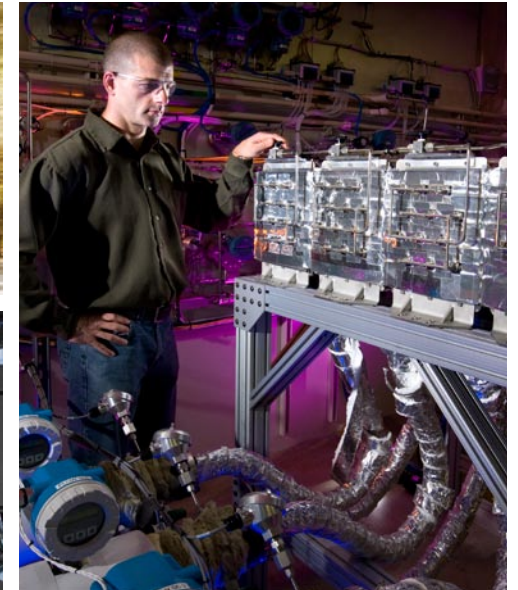
For students in higher education, Audi offers an internship programme under the title of "Audi Adventure". Audi's aim is to provide future, potential employees with competitive salaries, career and development opportunities even during their internship. Besides this, Audi has developed a comprehensive cooperation with the local Széchenyi István University, where the company has realised its own Internal Combustion Engines Department and an institutional organisation. Audi is also cooperating with the Budapest University of Technology and Economics.

The tool plant area practically doubled to 28,000 square metres in 2011. The expansion enables optimisation, capacity increase and technological improvement in every production area within the tool plant, including machinery and equipment construction, tool manufacturing, as well as the small series manufacturing of body parts. In connection with the expansion of the tool plant, the company is creating approximately 60 new jobs.

**In 2011, the Engine Development Centre celebrated its 10th anniversary. AUDI HUNGÁRIA MOTOR Kft. will add vehicle development to its development activities. In the coming years, the emphasis in this new area will shift to vehicle testing with a focus on manufacturing, thereby assisting the optimal entry of new vehicles in the manufacturing phase.**

## GM

On 14th April 2011, the foundation stone for a new Opel / Vauxhall engine plant in Szentgotthárd was laid. Starting production in late 2012, the plant will have a production capacity of 500,000 engines per year. With an investment of EUR 500 million, Opel will create 800 jobs. The new engine plant is located at an existing site that will be considerably expanded. The manufacturing programme will consist of families of small and medium petrol engines, and a family of medium-sized diesel engines. The new engine range will fulfil EURO 6 emission standards, add direct injection to the petrol powertrain, secure a low power to weight ratio, providing smoother running and substantially reduce fuel consumption and CO<sub>2</sub> emissions.



## Suzuki

Suzuki Hungary enlarged its production capacity to 300,000 units per year, with an investment of HUF 50 billion in 2007. The company introduced its new Swift model in 2010, with new models in preparation for the future.



New Swift model from 2010





## Chapter VII. Daimler has Started its Activity

**Daimler AG announced on the 18th June 2008, the establishment of a new car manufacturing plant, producing the new generation Mercedes A and B models in Kecskemét, Hungary.**

**The factory is one of the biggest greenfield investments in the history of Hungary, where the new generation A and B-class models of Mercedes will be produced at a rate of 100,000 cars a year.**

**Besides the 2,500 new employees, once at full capacity, it is estimated that it will create about 10,000 indirect jobs on the supply side.**

Once Mercedes decided to choose Hungary for its first Eastern European unit, three cities – Zalaegerszeg, Szikszó and Kecskemét – were trying to lure Daimler. Because of the ideal highway connection to Budapest, Kecskemét quickly became the sole contender for the project.

Daimler has chosen Hungary because the best conditions for its investment were here. This was especially true of infrastructure, logistics, workforce-skills and salary structures. Ahead of the lower cost quotes from rivals,

Plant opening:  
**Frank Klein, Viktor Orbán**  
and **Dr. Dieter Zetsche**



Hungary has also profited from its former economic and industrial politics, and positive experiences from previous automotive investments (Audi, Opel, Suzuki).

The factory's foundation stone was laid on 16th October 2009; in one year the production buildings were finished, with more than 80% of building commissions won by Hungarian enterprises.

A strategic cooperation in automotive training was created between Mercedes-Benz Manufacturing Hungary Kft. and Kecskemét College on the 5th November 2010.

According to one part of the agreement, after introducing a Specialisation in Vehicle Manufacturing in the Faculty of Mechanical Engineering, a Department of Motor Vehicles will be established very soon. The vehicle engineer qualification will be started in the autumn semester in 2012. Within the same framework, the Kecskemét College will introduce practice-oriented technical higher education, the so called dual-education.



**The Mercedes plant in Kecskemét officially started on the 29th March 2012.**

## Chapter VIII.

### Significant Suppliers in Hungary

Supplier	Opening date	Location	Distance from Budapest (km)	Employees	Total annual turnover 2010 (million HUF)	Company profile	
Alpine	1999	Biatorbágy	21	1,600	64,697	Top-quality car audio and navigation systems	
BorgWarner	2000	Oroszlány	76	700	91,330	Turbochargers	
Continental	Continental Automotive Hungary Kft.	1990, 1993	Budapest, Veszprém	121	2,718	66,148	<b>Budapest:</b> Production of electronic control units, inertial & oil sensors; <b>Veszprém:</b> Production of sensors for the automotive industry; Development Centre (sensor & software)
	ContiTech Fluid Automotive Hungária Kft.	1995, 1999	Makó, Vác	201, 40	1,609	34,855	Production of heating and cooling hoses and fuel hoses for the automotive industry
	ContiTech Rubber Industrial Kft.	2004	Szeged	173	454	28,058	Production of rubber conveyor belt systems and hoses
	Phoenix Airspring Technology Kft.	2004	Nyíregyháza	236	198	NO DATA GIVEN	Production of air spring systems for the automotive industry
Delphi	Delphi Hungary Kft.	1991	Szombathely	228	1,207	61,320	Manufacturing of electronic valves and tubes and other electronic components
	Delphi Thermál Hungary Kft.	1999	Balassagyarmat	87	850	37,680	Machining and assembling air conditioning compressors
Denso	1997	Székesfehérvár	66	3,488	119,068	<b>Production of:</b> diesel common rail components; system control components (variable cam shaft timing, electronic throttle control units and various valves); spark plugs; and fuel injectors for gasoline engines	
Lear	1997	Gödöllő, Gyöngyös, Győr, Mór	30, 78, 122, 85	5,000	129,186	<b>Gödöllő &amp; Gyöngyös:</b> Production of electrical distribution systems; <b>Győr &amp; Mór:</b> Production of seating systems and seat covers	

Supplier	Opening date	Location	Distance from Budapest (km)	Employees	Total annual turnover 2010 (million HUF)	Company profile	
Michelin	1996	Budapest, Nyíregyháza	236	1,800	135,751	Tyres for classic cars, trucks and agricultural machines	
Robert Bosch	Robert Bosch Elektronika Kft.	1998	Hatvan	58	3,400	212,876	Automotive electronics components
	Robert Bosch Energy and Body Systems Kft.	2003	Miskolc	183	2,000	68,662	Electrical drives and starters
Sapa Profiles	2009	Székesfehérvár	66	1,100	73,517	Aluminium extrusions; structural parts, crush alloys, engine mounts, luggage covers for the automotive industry	
Schaeffler	LuK Savaria Kft.	1996	Szombathely	228	1,700	117,132	Clutch discs, clutch systems
	FAG Kft.	1999	Debrecen	231	1,200	24,591	Production and distribution of rolling bearings and rolling bearing components
Visteon	1991	Székesfehérvár	66	1,450	75,282	Manufacturing of ignition coils, starter motors, turbine fuel pumps, fuel delivery modules/senders, air fuel charging assemblies, washer reservoirs and fuel pressure regulators	
Zollner	1988, 2002	Vác, Szűgy	40, 91	2,685	68,218	Production and service of electrical, electromechanical and mechanical products and systems	

### Central Transdanubia

AFL	Kirchhoff
Ajkai Elektronika	Lé Beller
Albert Weber	Lear
Alcoa	Magyarmet
Asahi Glass	Michels
Benteler	Musashi
Borg Warner	Plasticor
Bourns	Plastimat
Bridgestone	Poppe+Pothoff
Continental Autom.	Rába
Denso	SCI Saamina
Diamond Electric	SCS
Euro Excedy	SEWS
Gedia	Suoftec
Gestamp	Toyo Seat
Hammerstein	U-Shin
Hankook	Valeo
ITW Siewer	Videoton
Johnson Controls	Visteon
Karsai Plast	Wescast

### Central Hungary

AVL	Hokushin	Siemens VDO
Cascade	Ibiden	Tauril
Clarifon	Lear	ThyssenKrupp
Continental Autom.	MGM	Toyo Seat
ContiTech Fluid	Michelin	Vogel Sitze
Draexmaier	Mono-Ipolyfabric	Webasto
EMT	NABI	W.E.T.
Excel Csepel	PEWÜ	Zollner
FESTO	Schwarz Müller	
GE Lighting	Semcon	

### Northern Hungary

Ada-Cast	Firth Rixson
Alkzo Nobel Coatings	Ganz Foundry
ARRK	Gibbs
Bosch	Hi-Lex
CSABAcast	Knaus Tabbert
Delphi	Kovács
Lear	Delta-Tech
Exir	Leoni
	Mitsuba
	Modine
	Prec-Cast
	Remy
	Saia-Burgess
	Salgallas
	Shinwa
	Stanley Electric
	Starter Battery
	Technoplast
	ZF

### Western Transdanubia

Arcelor	Györi Plast
Autoliv	Hirschler
B.O.S.	Kravtex
BPW Rába	Luk Savaria
Car-Inside	Magna Steyr
Dana	Nemak
Dekorsy	Rába
Delphi	Rehau
Edag	Rekard Produkt.
EMT	Rudolph Logistik
Erbsiöh	Semperform
Euro Exedy	Veritas
Euro Elzett	SMR
Federal Mogul	Vogel und Noot

### Southern Transdanubia

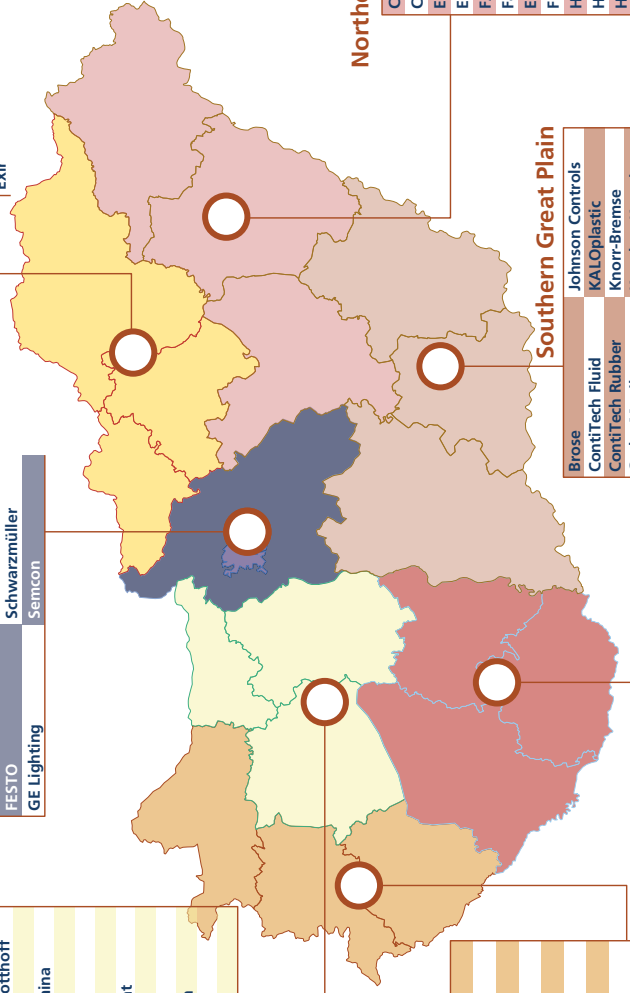
BHG
CabTec
Ratipur
Interplus

### Southern Great Plain

Brose	Johnson Controls
ContiTech Fluid	KALoplastics
ContiTech Rubber	Knorr-Bremse
Csaba-Metal	Kunplast-Karsai
Eckerle	Linamar
Emika	Magna Exteriors
EuroFit	Pata
Freudenberg	Phoenix Mecano
Hirschmann	ThyssenKrupp
HBPO	Zorge

### Northern Great Plain

Caroflex
Carrier Transcold
Eagle Oktawa
Eismann
FAG (Schaeffler)
Faurecia
Euroszol
F.Segura
Hajdu Autó
Haldex
Hübner
Isringhausen
Jász-Plasztik
Lé Beller
Michelin
Nief
Phoenix



Location of the bigger automotive suppliers in Hungary

## Chapter IX. Why does it Make Sense to Invest in Hungary?

- Whether you are a producer, or supplier looking for a cost-effective manufacturing base, competitive component and part suppliers, or locations for logistics and **R&D centres, Hungary** has plenty to offer.
- Hungary lies along the Eastern border of the **EU** and is within the Schengen zone. The country's strategic position, highly developed logistics, utilities infrastructure and traditional role as a trading post makes it important as a regional distribution centre and a service hub for the **CEE region**.
- Four trans-European motorways run through **Hungary**, more than in any of the neighbouring countries. Most countries in the **Balkans** can only be reached through **Hungary**.
- As a member of the **European Union, Hungary** has fully harmonised its legal system, adopting European safety and quality regulations related to automotive manufacturing. **Hungary** also compares favourably when it comes to data security and enforcement of intellectual property rights.
- Highly skilled and flexible human capital at a competitive cost: companies can expect a 30–50% cost saving compared to **Western Europe** and the **US**.
- The Hungarian labour force also rates highly in international comparisons for innovation and creativity, due to the country's renowned standards of schooling and tertiary education. Education of natural sciences in Hungary is world-famous; no other country has created relatively so many **Nobel-prize winners**, as **Hungary** has done.
- In the past few years, the practice-oriented, **"dual-form"** of qualification has started both at secondary and also the higher education-level.
- From the **world's top TIER 1** suppliers following companies are present in Hungary: Asahi Glass, Autoliv, Benteler, BorgWarner, Bosch, Bridgestone, Brose, Continental, Dana, Delphi, Denso, Faurecia, Federal Mogul, Gedia, Hammerstein, Hankook Tires, Johnson Controls, Knorr-Bremse, Lear, Linamar, Magna, Michelin, Nemak, Schaeffler, Sumitomo, Valeo, Webasto, ZF Group.



- **Renault-Nissan, General Motors, Porsche** and **DAF/PACCAR** have chosen **Hungary** as a location for parts centres supplying not only the Central and Eastern European markets but also Ukraine, Russia and the Balkans.
- **Hungary** is the regional leader in the production of petrol engines.
- **Hungary** has a globally recognised academic and university infrastructure. Increasingly, automotive-related R&D activity is carried out in top universities, while leading global manufacturers, like **Audi, Bosch, Knorr-Bremse, Magna-Steyr** and **ThyssenKrupp**, have established **R&D** centres in Hungary.



**Hungary  
in the heart  
of Europe**



- Hungary took significant steps to promote the industry in fulfilling requirements for globalisation. As a result, and because of cost-effective reasons, the **OEM's** and **TIER1** suppliers are outsourcing even more, non-strategic activities to their lower-level suppliers. To make the **Hungarian SMEs** suitable for these procedures, **Hungary** has made significant efforts in the conscious development of Hungarian automotive supply companies. This means the enhancement of innovation and **R&D** potential at lower-supplier level, with further development of connections to universities and colleges and help in the reception of high-skilled workforces at company level.

## Chapter X.

# Incentives for Manufacturing Projects

**Incentive packages may consist of the following elements:**

### 1. Subsidy based on individual Government decision

*above EUR 10 M and no EU funds available, or above EUR 25 M*

**Type:** cash, non-refundable, post-financed

**Amount of subsidy:** decided individually by the Hungarian Government

**Conditions:** min. 50 new jobs (25 in preferred regions)

**Application:** "request list" containing core investment data shall be submitted to HITA, official subsidy offer of the Hungarian Government within a short deadline.

**Incentive Provider:** Hungarian Government

### 2. EU co-financed tenders

*below EUR 25 M*

As a member of the European Union Hungary has access to EU funds for a number of development goals, like asset acquisition, infrastructural development, new construction, renovation, service development, job creation, and financing human resources costs.

The relevant tenders are concluded in the frame of New Széchenyi Plan in the forms of both refundable and non-refundable incentives. As the specific calls for tenders have different conditions and aid intensities, as well as they might be available only at a limited period of time, we kindly suggest you to contact HITA for details.



### 3. Development tax allowance

**Type:** tax allowance for post-investment period

**Amount of subsidy:** exemption for 80% of the corporate tax payable for 10 years following installation. For up to HUF 500 M turnover, the corporate tax rate is 10%, above HUF 500 M the tax rate is 19%.

**Conditions:** investment volume min. HUF 3 BN (EUR 10 M), min. 150 new jobs OR HUF 1 BN (EUR 3.3 M) investment volume and 75 new jobs in preferred regions

**Application:** depending on investment volume request or application needs to be submitted

**Incentive Provider:** Ministry for National Economy

### 4. Training subsidy

**Type:** cash subsidy, non-refundable

**Amount of subsidy:** 25-90% of eligible training costs, max. EUR 1 M (HUF 300 M) if job creation is between 50-500, max. EUR 2 M (HUF 600 M) if job creation >500

**Conditions:** min. 50 new jobs

**Application:** letter of intent needs to be submitted to HITA

**Incentive Provider:** Ministry for National Economy

### 5. Job-creation subsidies

#### Option 1

**Type:** cash subsidy, non-refundable

**Amount of subsidy:** HUF 340 M (EUR 1.1 M) per project

**Conditions:** cash subsidy based on individual Government decision is granted; in preferred or most preferred locations; min. 500 new jobs.

**Application:** letter of intent needs to be submitted to HITA

**Incentive Provider:** Ministry for National Economy

#### Option 2

**Type:** cash subsidy, non-refundable, only for SMEs

**Amount of subsidy:** HUF 1.2-2.2 M (EUR 4,000-7,300) per new job

**Conditions:** min. 2 new jobs

**Application:** February - March every year, through the relevant regional labour office

**Incentive Provider:** Ministry for National Economy

### 6. Other, personal-type subsidies

**Types:** salary-subsidy, START programme, START EXTRA programme, START PLUS programme, traffic and lodging subsidy, aggregated-transport, labour-market services

**Incentive Provider:** according to the location of investment the competent local-government authorities

**For further information please contact:**

Mrs. Györgyi SOMFALVI-PETÉNYI

Head of Incentives Department, HITA

Phone: +36-1-872-6515,

E-mail: investment@hita.hu

## Chapter XI. R&D Activity at TIER 1 Supplier Level

### Bosch

In 2000, Bosch Budapest Research Centre was established and it has been growing dynamically, where currently 600 development engineers are working. In the Engineering Centre, the development of auto-electronic control units, ABS and ESP is carried out besides the hardware and software development. In 2007, the development of reversing and parking radars commenced and from 2008, the development of modern board tools and high detailed, multifunction displays, which better helps the orientation of the driver.

Bosch AG made the decision to develop new R&D investments in Hungary, and laid the foundation-stone of the new Budapest Centre, being built from a budget of HUF 6 billion. It provides the base for the 350 employees, working in the fields of development, marketing and administration of Robert Bosch Kft. and Bosch Rexroth Kft. The first stage of the development in Budapest will be finished by spring 2013, while the second stage of the project for the Budapest Development Centre will start this year and finish in 2015.



Foundation stone of the new Budapest Centre with its own R&D institute laid in October, 2011.



Knorr-Bremse R&D Institute in Budapest

## Knorr-Bremse

Company R&D activity started in Hungary in 1995, and Knorr-Bremse established the first multinational R&D Institute in the country. Today the Knorr-Bremse R&D Institute in Budapest is increasingly gaining a system-responsibility in the concern's development activities.

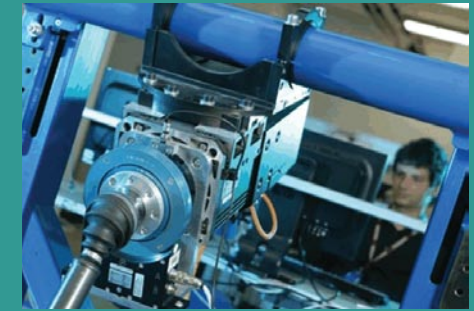
Within the framework of this procedure, the Institute is enlarging its activity with new competencies – engineering calculations, simulations and system analysis –, meanwhile the preliminary development activity that precedes product-development, is also growing. Hungarian engineers are contributing in the development of most modern electronic and pneumatic systems in commercial vehicles. Good results in R&D activities have also originated from the excellent and diversified cooperation with technical higher education institutes, which also covers the education and the common R&D projects. Significant technical higher education partners are the Budapest University of Technology and Economics, University of Szeged, University of Miskolc and Kecskemét College. From connections with Academic Partners, relations with MTA-SZTAKI and KFKI are very strong, with the companies also cooperating with SMEs active in the R&D-field.

Knorr-Bremse, alongside the traditional developments in electronic braking systems and suspensions – ABS, EBS, ESP, EAC, ELC – is also looking at new areas in the field of vehicle electronics, and is actively taking part in the development of driver-assistance systems, adaptive cruise control and lane-departure warning control systems.

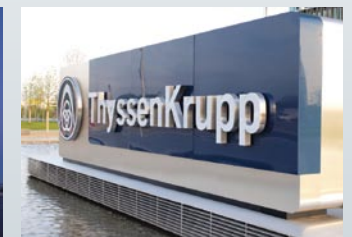
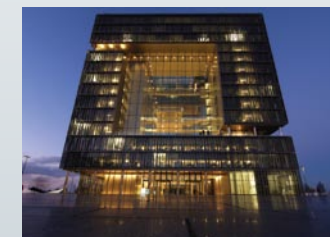
## ThyssenKrupp

ThyssenKrupp Presta established its own R&D Institute based on the infrastructure of Budapest University of Technology and Economics in 1997. Nowadays the fluently growing development team consists of more than 200 highly qualified engineers, physicists and mathematicians in the field of development of new generation electronic steering-systems.

The enlarged R&D Institute working in the XI district in Budapest since its beginning, has developed electronic steering devices such as complex mechatronic systems, realised system and software development, the development of electromotors and sensors and also test activity. Significant cooperation was established with Budapest University of Technology and Economics, with the University also providing reinforcement to the R&D Institute.



ThyssenKrupp Presta electronic test bench in the Budapest Development Institute



# Chapter XII.

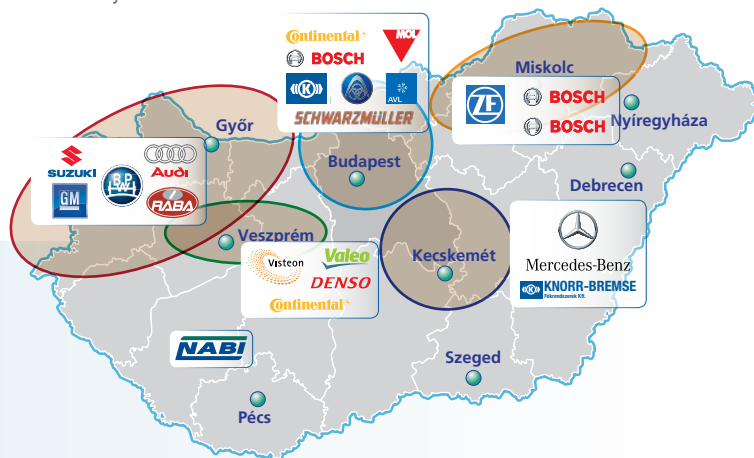
## Universities, Colleges and their Cooperation

Hungarian higher education institutes taking part in the engineering qualifications are stable and quantifiable partners for the automotive manufacturers and their suppliers. Their task on one side is to assure the industrial needs with highly skilled, linguistically fluent engineers that are also familiar with quality-assurance and management information systems.

The other very important aspect is that besides the assurance of basic education they also take part in the innovation and R&D activity of industrial partners and fulfil the companies development needs. To aid effective cooperation, the universities and colleges established Knowledge Centres. Such Knowledge Centres are the Vehicle Industry Regional University Knowledge Centre (JRET) at Széchenyi István University in Győr, the Advanced Vehicles and Vehicle Control Knowledge Centre (EJIT) at the Budapest University of Technology and Economics, also the Vehicle Industry Knowledge Centre (JIT) at Kecskemét College. The task of knowledge centres is to address the industrial needs to their establishing universities and colleges, as well as presenting the higher education institutes competencies to the potential procuring parties. Nowadays the higher education institutes active in vehicle engineering qualifications and innovation, have split the tasks based on regional and enterprise competencies between each other.

All the institutes primarily concentrate on the knowledge base developed together with the associated companies. On this basis, the local university in Győr principally concentrates on internal combustion engines, University of Pannonia in Veszprém on fuels and lubricants, Budapest University of Technology and Economics on electronics and mechatronics, Miskolc University on the driveline systems and Kecskemét College on the material sciences and vehicle assembly.

### Regional Competencies in the Hungarian Automotive Industry



	Primary competence	Secondary competence
Budapest University of Technology and Economics	<ul style="list-style-type: none"> <li>Vehicle technology</li> <li>Electronics and Software</li> </ul>	<ul style="list-style-type: none"> <li>Logistics</li> <li>Production technologies</li> </ul>
Kecskemét College	<ul style="list-style-type: none"> <li>Material technology</li> <li>Production</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle technology</li> <li>Alternative drives</li> </ul>
University of Miskolc	<ul style="list-style-type: none"> <li>Vehicle drive system</li> <li>Mechatronics</li> </ul>	<ul style="list-style-type: none"> <li>Logistics</li> <li>Material sciences</li> </ul>
Óbuda University	<ul style="list-style-type: none"> <li>Vehicle technology</li> <li>Electronics</li> </ul>	<ul style="list-style-type: none"> <li>Software</li> </ul>
University of Pannonia (Veszprém)	<ul style="list-style-type: none"> <li>Mechanronics</li> <li>Fuels and lubricants</li> </ul>	<ul style="list-style-type: none"> <li>Informatics</li> </ul>
Széchenyi István University (Győr)	<ul style="list-style-type: none"> <li>Engine technology</li> <li>Manufacturing and machining</li> </ul>	<ul style="list-style-type: none"> <li>Mechatronics</li> </ul>

### Primary and secondary higher education competencies in Hungary

Detailed fields of co-operation between higher education institutions and enterprises

#### Field of Education

- Common elaboration of curriculum fulfilling the requirements of the industry
- Special further education forms based on the profile of the institution
- Training of teachers from other institutes
- Exchange of education personnel

#### Infrastructure and finance

- Co-ordinated application for local and EU calls for community support
- Common programmes and structures for supporting the R&D activities and culture of SMEs
- Joint establishment of spin-off and start-up companies
- Common usage of the infrastructure for education and research

#### Common development of capabilities

- Common strategy development based on the foresight of the automotive industry
- Joint accreditation process
- Cross-institutional processes for R&D, basic research, knowledge management
- Establishment of a "virtual" R&D institute
- Commonly run PhD programmes
- Joint marketing of the engineering profession
- Discussion platform for the organizations of the automotive companies (or directly)
- Regular exchange of experience and best practice sharing

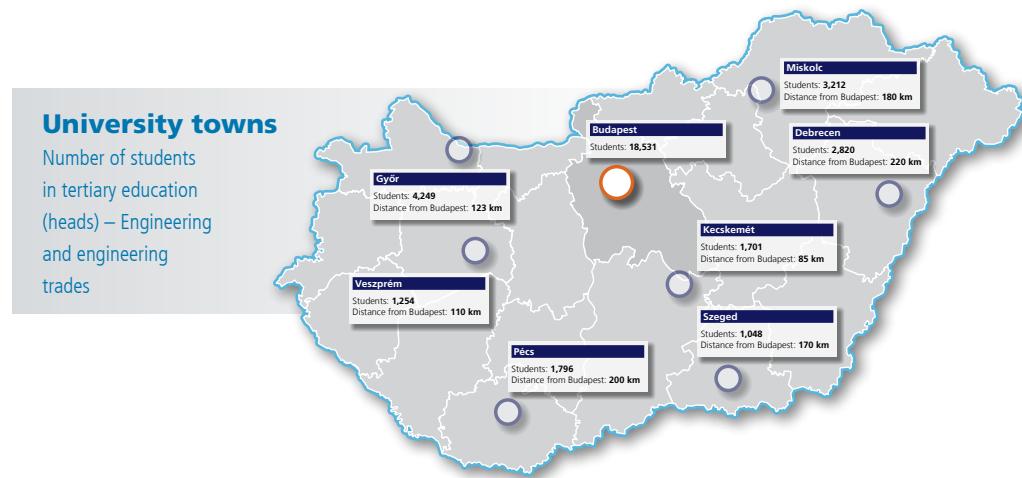
### Cooperation in Dual Education

Dual or practice-oriented dual training was introduced because of the high expectations of automotive manufacturers and their suppliers for highly trained automotive professionals who meet their requirements. Currently, dual education has been introduced in two institutions, in Kecskemét College and in Széchenyi István University, Győr.



Within the framework of Dual Education, the students are receiving the greater part of practical education on the company side; the student partakes in high-level theoretical education in the higher education institution, then the practical-oriented relevancies will be transmitted by the industrial partner. As a result, the student will receive much deeper technical knowledge.

Practice oriented / dual type education differs in two significant areas from the traditional approach. The structure of educational semesters are different: as in the traditional system, a 5-week examination period follows the 15-week term, and each year's final semesters are followed by the summer holiday; in the practice-oriented / dual type education, in each semester the ten-week term is followed by a 5-week practise, then finally a 4-week examination period. The traditional summer holiday will significantly be shortened, because the summer examination period is again followed by a 6-week practice. Only after that will the student have a 4-week summer holiday. The student spends a significant amount of time at the company with the same status as all other employees; they also receives a financial allowance: this is the second substantive difference. Dual-type education is a joint activity of Kecskemét College with Mercedes-Benz and Knorr-Bremse, alongside this, the Széchenyi István University, Győr, Audi, BPW, LuK, Magna Steyr and Opel are offering places for practical education for the students.



The advantage to these enterprises is that they receive potential future employees with a much deeper technical and practical knowledge that they are immediately able to apply in production plants, after completing their final examinations. Higher education institutions benefit by access to the latest technical knowledge, which will be promptly integrated into the educational materials and all the expectations of industrial companies relating to education and the required knowledge-level of students, will be known.

## Chapter XIII. Professional Associations, NGO's, Clusters

### Association of Hungarian Automotive Industry (AHAI)

**AHAI** was founded in 1998, today with its 14 ordinary and 6 supporting members it represents the most important automotive enterprises, inter alia the 4 Hungarian **OEM's, Audi Hungária Motor Kft., Magyar Suzuki Zrt., Mercedes-Benz Manufacturing Hungary Kft. and Opel Szentgottárd Autóipari Kft.** Further members are representing the **TIER 1-2** suppliers.

The main purpose of the Association is to provide a framework for the cooperation of economic and professional organisations involved in the motor vehicle industry. During its activity the association explores, co-ordinates and represents the interests of vehicle and automotive system producers resident in **Hungary**, represents the members at domestic and international organisations and maintains relations and exchanges information with domestic and international fellow organisations.



### Association of the Hungarian Vehicle Component Manufacturers (MAJOSZ)

**MAJOSZ** was established in 1993 with 22 members, today the number of member companies is over 200. Since 2000, **MAJOSZ** has been a member of **CLEPA**, which is an "umbrella" organisation that represents the general interests of the motor equipment and parts industry internationally. Its target is to represent domestic part and component manufacturers reflecting their joint technical, economic and social interests. The day-to-day work of the association splits into three areas: representation of interests; competitive development; networking information technology.



During the course of the year, it organises 20 professional programmes, these are conferences, technical presentations, business meetings, supplier-conferences.

## Great Hungarian Plain Industry Development Cluster (AIPA Cluster)

**AIPA** and its **Cluster** was established because of the decision of **Daimler-Benz AG** to develop a new **Mercedes-Benz** factory in Kecskemét. This decision created a great opportunity to realise a comprehensive **“Economic Development Programme”**. **Mercedes-Benz** can act as a catalyst in this process, and help to develop a friendlier region and town.

Developing the **“Economic Development Programme”** and the management of the cluster(s) are **AIPA’s** main tasks. Cooperating with other local clusters (Hírös Supplier’s Cluster, 3P Cluster), **AIPA** is coordinating their activity as an umbrella organisation. The key role of **AIPA** is to develop the **Hungarian SMEs** working in the fields of the automotive industry, machine industry and service activity, in order to ensure their ability to supply as required. This is a joint venture with the city of Kecskemét, Kecskemét College, the Chamber of Commerce and Industry of Bács-Kiskun County, and the National Association of Entrepreneurs and Employers.



## North Hungarian Automotive Cluster (NOHAC)

**NOHAC** was established at the end of 2006 with the intention to associate the automotive suppliers of the North Hungarian Region in order to increase their competitiveness, profitability and innovativeness. Today the number of members is 50; most of them are metalworking and plastic-moulding companies and some are active in the field of engineering, accreditation, logistics and services.

**NOHAC’s mission** is, helped by other clusters and scientific and trade development institutes, to enhance co-operation among members to promote the exchange of information, to support innovation, best practices and joint investments in order to increase the competitiveness of **SME’s** and attract the settlement of new automotive ventures in the region.

## Hungarian Vehicle Engineering Cluster (HVEC)

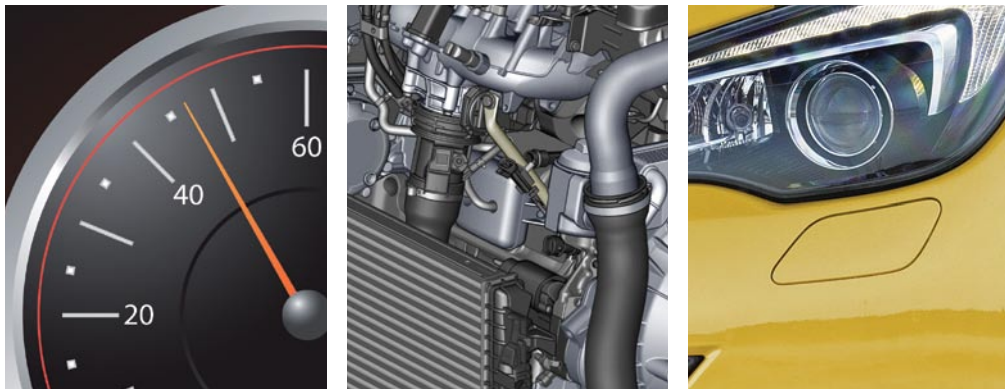
The **Hungarian Vehicle Engineering Cluster (HVEC)** was founded in January 2009 by six Hungarian engineering **SMEs**, all with large experience in international projects. **HVEC** aims to co-ordinate the activities of Hungarian engineering companies operating in the field of vehicle or vehicle part development. The organisation intends to assist them by joint marketing operations in targeted countries, support the know-how transfer among employees and run a knowledge database for members. It has been established to implement joint innovation projects as well as to support individual inventors and help to establish new companies and spin-offs.

**HVEC** would help with complex solutions, services for companies which are already engaged or wish to be active in **R&D** activities in the field of vehicle development. The project covers vehicle-related development in a broad sense: passenger cars but also including trucks, buses, airplanes, boats and new mobility solutions. It co-operates with research centres, universities, intermediaries in the field of innovation and economic development, clusters and networks. The organisation is hosting and supporting all the activities of the Automotive Living Lab Győr.

## Chapter XIV.

# In Focus, the Department of Supplier Programmes of Hungarian Investment and Trade Agency

The Department of Supplier Programmes of HITA operates as a link between the Investment Promotion Directorate and the Business Development Directorate. The Investment Promotion Directorate provides information regarding Hungarian salaries, taxation and benefits, region-dependant different level subsidy options, development tax allowances and job-creation subsidies, in the interest of encouraging foreign companies to invest in Hungary.



The task of the Business Development Directorate is primarily to support the foreign trade activity of Hungarian **SMEs** with regard to the sectors and target markets specified in the **Foreign Trade Strategy**, supported by professional diplomats working in the foreign trade network.

We are jointly selecting the optimum suppliers by means of a targeted partner-search to technological solutions applied by companies already settled in **Hungary** or multi and transnational companies wishing to export from the country.

The main aim of the **Department of Supplier Programmes** working inside the Investment Promotion Directorate of **HITA** is to expand the competitiveness of Hungarian SMEs. Prominent sectors in the Hungarian supply industry are the vehicle industry and electronics. Our main task is to provide for Hungarian **SMEs** as great a role as possible in the supply chain of automotive **OEMs** and their **TIER1** suppliers.



Very important in the sector is the value-added activity, for which the enterprises have to continuously reproduce the required technical level. This target is reached by suppliers-development training, domestic and international business meetings, organisation of collective attendance at exhibitions associated with conferences. One of our most important goals is to put the **Hungarian** SMEs as high as possible in the supply pyramid of companies settled to **Hungary**.

Promotion of networking suppliers is very important for us, for that reason we are closely cooperating with the sector determining **NGOs**, like **MAJOSZ, MGSZ, NOHAC, MaJák, Hírös Klaszter** and **AIPA**.

# Hungarian Investment and Trade Agency at your disposal

HITA is the Hungarian Government's Investment and Trade Development Agency and operates under the supervision of the Ministry for National Economy. Through its extensive network of contacts in both the public and private sectors, HITA provides foreign investors free of charge with high-quality support for key decision-making processes and a wealth of supplementary services.

## Project preparation

- In-depth, tailored information on the local economy and business climate, corporate taxation and the legal environment, as well as sector-specific overviews
- Site visits, meetings with local, regional and government bodies and introductions to local suppliers, service providers and experts
- Information on available incentives

## Implementation

- Site selection assistance, coordination of license procedures
- Finalization of incentives agreements
- Recruitment assistance

## After care

- Intermediary role for future developments between government bodies and companies operating in Hungary
- Support and generation of reinvestments

*Please contact us for free-of-charge, personal assistance:*

## Investment Promotion Directorate

[investment@hita.hu](mailto:investment@hita.hu)

Contact:

### Hungarian Investment and Trade Agency

H-1055 Budapest,  
Honvéd u. 20.  
Telephone: +36 1 872 6520  
Fax: +36 1 872 6699  
Email: [info@hita.hu](mailto:info@hita.hu),  
Web: [www.hita.hu](http://www.hita.hu)



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