

# CZECH FOCUS

The magazine of the Association for Foreign Investment and CzechInvest

Number 1/2012

Exploring **advanced**  
**technology** in the Czech Republic

**Better incentives** for investors  
Czech nanotechnology firms  
**take the world by storm**

The Association for Foreign Investment is a non-governmental, non-profit organisation representing a group of international and regional consultancies and other renowned firms supporting investments in the Czech Republic. The AFI focuses on foreign direct investment, development of the Czech business environment, export of investments and services and cooperation between companies and the research sphere.

The AFI cooperates with CzechInvest and other significant institutions. Since its establishment in 1996, the AFI and its members have assisted in the majority of successful investment projects (including Volkswagen, Toyota, Hyundai, DHL and Honeywell) and projects supporting improvement of the Czech investment and business environment.

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Please feel free to contact the AFI for more information.

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## Dear Readers,

The competitiveness of industry and industrial research depends strongly on the technical level of products and production itself. The Czech Republic has substantial innovation potential thanks to its industrial tradition and capacities in the areas of industrial and basic research. Even though the socialist era broke the direct link to developed markets with their competitive intensity, the Czech Republic has managed to use these conditions, especially with aid from European structural funds, which were in part prudently focused on renewed development of the research infrastructure. Not every new solution has to be better than that which came before it. Not even a qualitatively better solution will necessarily succeed if it is introduced to the wrong market at the wrong time. Also, excessive political interventions in the form of instructions as to how to design a new product instead of the prescribed parameters that the product should fulfil can be counterproductive. The symbiosis of ideas from general basic research with applied research based on contact with industry and awareness of the needs of the market leads to success. We can take as an example the automotive industry, which in the Czech Republic not only developed a network of production facilities, but also expanded its know-how through the activities of the research departments of manufacturers and independent branches of research and engineering service companies. Therefore, this sector is successful in the Czech Republic. However, it is far from unique in this regard, as you will see when reading this edition of Czech Focus.

*Jan Macek  
Vice-Dean for R&D, Faculty of Mechanical Engineering  
Head of the Josef Bozek Research Centre  
Czech Technical University in Prague*

## Eaton chooses the Czech Republic for its **European engineering centre**



Eaton is a global technology leader in diversified power management solutions that make electrical, hydraulic and mechanical power operate more efficiently, effectively, safely and sustainably. Besides its manufacturing plants in the Czech Republic, Eaton has decided to establish here a European engineering centre focusing on various fields of R&D activities and having an impact throughout the company. Eaton plans to create approximately 300 jobs for technically educated engineers. The Prosperity Programme, which is part of the Operational Programme Enterprise and Innovation, provided more than CZK 140 million for the construction and equipment of the energy-efficient building of the science and technology park in Roztoky u Prahy, in which Eaton's Czech branch has been located.

## AT&T expanding in **Brno**

AT&T has announced plans to expand its operations in Brno, Czech Republic, in 2012, thus creating between 200 and 400 new jobs. The company will hire for this IT centre top specialists focused on service assurance and delivery, application services and professional services. AT&T applied for financial aid for this project from European Union structural funds via the ICT and Business Support Service Programme, which is part of the Operational Programme Enterprise and Innovation.

## Red Hat plans to acquire new office building in **Brno**

The world's leading provider of open-source solutions, Red Hat, which employs nearly 400 people in the Czech Republic, is planning to acquire space in a new office building in Brno with potential capacity for up to 200 new employees. The new building, Forum Business Centre II, is expected to be completed by the end of 2012 and its owners, Professional Facility Management, plan to invest CZK 80 million in the project.

## Behr to build third plant in **West Bohemia**

The German automotive supplier Behr announced that it will establish a third plant in the Czech Republic. The company's other two Czech plants are located in Mnichovo Hradiste and Ostrava. Behr will start production of air-conditioning units in Ostrov nad Ohri at the end of 2013 and will initially create 150 new jobs, though that figure should exceed 1,000 by 2020.

## Lego expanding its activities in **Kladno**



The famous Danish producer of toy construction sets will expand its activities in Kladno, Czech Republic. With an investment exceeding CZK 1.5 billion and creation of more than 600 new jobs, this expansion was among the most important events of 2011. Lego also plans to expand its R&D centre in the Czech Republic. ■

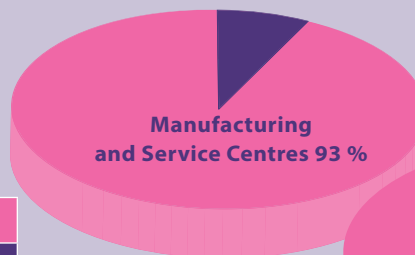
# Czech Republic attracting more **technology centres than ever before**

According to the National Competitiveness Strategy of the Czech Republic, CzechInvest actively focuses on attracting projects with higher value added. Applied research and development, mostly linked to already established manufacturing companies, is significantly accelerating the Czech Republic's development toward a "knowledge economy", in which a skilled and highly educated workforce is essential for success. The trend shows that besides production facilities and service centres, the Czech Republic's potential for attracting technology centres is rapidly increasing. ■

Type of activity	2006	2011
Technology Centres	13	64
Manufacturing and Service Centres	163	168
Total	176	232

Projects by type of activity in **2006**

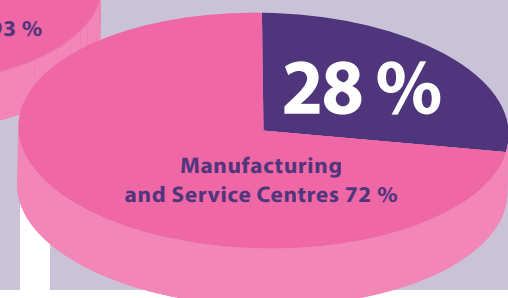
**Technology Centres 7 %**



**2011**

Projects by type of activity in **2011**

**Technology Centres 28 %**





## More successful **collaboration** between **firms & universities** in the Czech Republic

### Cooperation of the Year 2011 winners



**1<sup>st</sup> place:** Technology increasing the precision of milling machines

**Originators:** Czech Technical University in Prague, Mechanical Engineering Faculty, Research Centre for Mechanical Engineering Production Technology and TOS VARNSDORF

The output of this cooperative effort consists in the creation of a new and improved milling machine that can identify static deformations and changes of geometry and subsequently compensate for them in cooperation with the control system. This improvement is possible thanks to the additional metachronic device using modern computing and simulation methods.



**2<sup>nd</sup> place:** More durable and higher-quality pavement using Butacite® recycled waste material

**Originators:** Czech Technical University in Prague, Transportation Faculty, Institute of Transportation Systems and DuPont CZ

The output of this project is a technology for producing asphalt compounds which have a longer service life than conventional asphalt compounds, as they are more resistant to permanent deformations and are higher-quality in terms of their physical-mechanical parameters. These properties are achieved by adding Butacite®, a recycled waste material which does not have any other uses.



**2<sup>nd</sup> place:** Innovative material for restoring heritage sites pursuant to EU KEMASAN 590 standards

**Originators:** Institute of Chemical Technology in Prague, KEMA stavební materiály and MgA. Josef Červinka – restorer

This project is based on the current requirements for plastering protected heritage sites where Czech and European standards do not allow the use of Portland cement. It also fulfils the regulations required by the standard for the material's technical properties, has a long service life and features outstanding effectiveness of permanent drying.

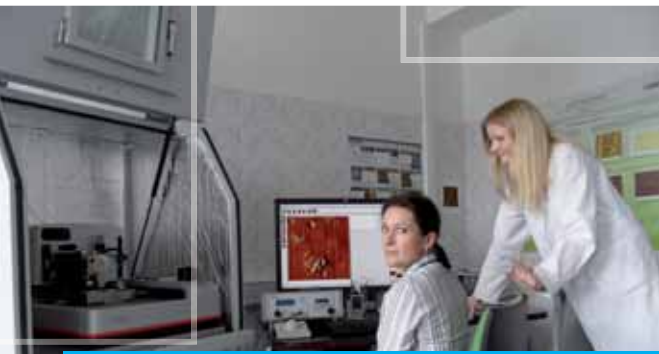


**3<sup>rd</sup> place:** Technology for producing new Arosantol fragrance

**Originators:** Institute of Chemical Technology in Prague, Faculty of Chemical Technology, Institute of Organic Technology and Aroma Praha

The output of this project is the launch of production of the new Arosantol synthetic fragrance, which is being employed to a significant extent on the global specialty-chemicals market. No major additional investments were needed for launching production. Students were directly involved in resolving particular industrial problems. Aroma Praha and the Institute of Chemical Technology have been engaged in uninterrupted cooperation for the past forty years. ■

More information is available at  
[www.spolupraceroke.cz](http://www.spolupraceroke.cz).



# SYNPO – Partnership in Science and Innovation

**Our motto is:** SYNPO, your partner today for the chemistry of tomorrow. This maxim reflects the tenet that everything we do is done in a collaborative partnership with a customer or academic partner who can provide expertise that we do not have. In all cases, however, our target is always the same: the successful commercialisation of the new technology that we intend to develop.

## So, who are we and what do we do?

SYNPO is a commercially-oriented, privately held R&D centre, which arose in 1992 from a government-owned research institute, specialising in research and development of coatings and resins. Our products are new technologies based on applied polymer science and new products, primarily coatings, adhesives, composites and various binders. Our strengths are our people and our systems that support, encourage and reward their initiative and creativity. SYNPO's clients are some of the world's biggest multinational chemical companies, which outsource their highly specialised and mission-oriented R&D projects to us. We also work with smaller Czech and European companies that have limited in-house R&D capabilities and benefit from the vast experience we have in these technical fields and market segments. The commercial nature of

our collaboration is reflected in the type of R&D agreements we typically sign with our clients. All intellectual property resulting from such work, which is carried out for and paid for by the client, becomes the client's exclusive and unrestricted property. SYNPO's reputation for ethical integrity and professional competency are critical to our success. All R&D is always risky. We cannot guarantee the full success of every project we undertake and this is why our reputation based on our past history is so critical. We have developed long-term trusting relationships with several key clients for whom we have been doing R&D for more than 15 years. This trust and reputation are by nature very personal. Therefore, we encourage direct and frequent communication between our technical staff and our clients. It is not only managers who communicate with our clients, but also often our chemists

and engineers, who present the results of their work. At the time of writing this article (May 2012), two of our young chemists are making a presentation to a major chemical company in North Carolina about a project on which they have been working for the past year. We encourage and support our young scientists to spend time abroad to acquire new skills. They go to universities or academic institutions as post-doctoral fellows or research associates, and they also sometimes go to some of our clients for several months to learn about specific new technologies on which they will subsequently be working at SYNPO. This is also the most effective and perhaps the only way to acquire full fluency in English, which we cannot do without. Why? Because English is not a foreign language in science and business. It is the only language the world uses.



Likewise, we welcome young foreign scientists to our labs on internships. As a matter of fact, we always have several students doing their M.Sc. and Ph.D. theses in our laboratories. We formally have a joint R&D laboratory with the University of Pardubice, where these students work under the supervision of our senior scientists, some of whom have joint appointments at SYNPO and at the university. The head of our Analytical and Physical Chemistry Laboratories, Prof. Ing. Štěpán Podzimek, CSc., is also a professor of polymer chemistry at the University. We encourage our employees to publish and to make presentations at conferences. That's how we market ourselves and build our scientific reputation. Prof. Podzimek recently published a seminal book on the use of light scattering in polymer characterization (Light Scattering, Size Exclusion Chromatography and Asymmetric Flow Field Flow Fractionation, John Wiley, 2010). We also try to popularize the science and management of R&D. I wrote a book (in Czech) titled Myths and Reality in R&D (Alfa nakladatelství, 2008), in which I tried to summarise in an easy-to-read form some of the principles of successful commercially-oriented R&D. Prof. Podzimek's publication activity also

enables us to gain success to some of the most modern analytical instruments by getting these on loan free of charge from a supplier and, subsequently, publishing papers in which the capabilities of such equipment are clearly shown and explained. Getting instruments free of charge is great but it happens infrequently. When we have to invest in top-quality instruments, we do. We have recently invested significant funds in the establishment of the Czech Centre for Nanostructured Polymers and Polymers from Renewable Resources. We funded it at a 60% level and we thankfully acknowledge receipt of 40% funding from the Potential Programme administered by CzechInvest. We now have several teams in this centre working on projects ranging from development of new high-performance liners for liquid hydrogen tanks for a new generation of space launchers (funded by the European Space Agency) to a new process for making iron-free perovskite superparamagnetic nanoparticles for hyperthermal treatment of malignant tumours.

A key skill that allows us to successfully carry out these and similar mission-oriented projects is our ability to modify surfaces of various nanoparticles with proprietary modifiers (stabilisers, dispersants) that prevent these nanoparticles from reagglomerating. Thus, these fully dispersed (exfoliated) nanoparticles impart unique and attractive properties to "regular" binders such as acrylics, urethane, epoxies and polyesters. Recycling and use of renewable raw materials is another major initiative of the centre. There are a number of projects in this area. One such project is a novel method of recycling polyurethane foams using vegetable-based polyols. Such vegetable-based polyols can also be used to recycle PET (bottles) into new polyesters. We are even attempting to use tomato skins as a raw material for polymer synthesis. We are a member of several consortia, which work on international collaborative projects financed from EU funds. For example, one such project attempts to use tomato skins containing cutin (a waxy part of the skin) to isolate various functionalised fatty acids, which can subsequently be converted into polyesters.

We are also in the process of establishing a centre whose objective will be to develop commercial applications for the use of plasma in treating various surfaces and thus achieve properties not achievable with traditional coating techniques. Surfaces are very tricky. They are almost always different from the bulk of the matter. Wolfgang Pauli (Nobel Laureate, Physics, 1945) supposedly said that "God made

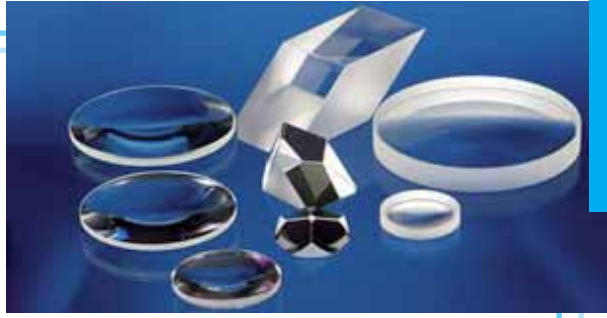
the bulk; surfaces were invented by the devil". We are just trying in our own humble way to understand how the devil actually did it and we all also know that "the devil is always in the details". Attention to those details is what makes us successful. All these R&D activities are supported by our fully accredited testing laboratories (EN ISO/IEC 17 025:2005), which also work directly with some of our clients, who need their products tested and approved for various specific applications, often in the automotive and construction industries. Our other relatively unique strength is our pilot plant. When we develop a new technology or a new product, we have the capability of making significant quantities of such products, say several tons for either application trials or in some cases, when it is a highly specialised product which is required in relatively small volumes, we actually make and sell the product commercially.

This pilot plant is also used to make resins, which can be converted into a finished product. We have a significant business in specialised and often custom-designed industrial coatings. This business is supported by our proprietary, fully computerised colour-matching system. All the technology that we use in coatings is based on our own development. We have for many years been conducting pre-competitive R&D in new coatings for members of the Czech Association of Coatings Manufacturers. SYNPO currently has 118 employees and in the past 11 years has never lost money. We have no loans and we fund all our investments and activities from our revenues. SYNPO's quality management system is certified by Lloyd's Register Quality Assurance under ISO 9001:2008 for research, manufacturing, analysis and testing of polymers and products made from such polymers.

We are always on the lookout for new clients who may find it advantageous to outsource some of their R&D to us or who need technical and business support to grow their businesses in Central Europe. More specific information about SYNPO's organisation and our specific capabilities can be found on our web site at [www.synpo.cz](http://www.synpo.cz). ■

Martin Navrátil  
Chairman  
Synpo





# The jewel of the Czech Republic: Meopta-optika

## Innovation and technical development within the company

### Company history

Meopta-optika is a company with a rich history in the optics industry in the Czech Republic. Soon after its establishment in 1933, the company, then known as Optikotechna, gained a priority position in the field not only in then Czechoslovakia, but throughout the region of Central Europe. Meopta-optika has maintained its leading position on the world market to the present day. From production of simple lenses and condensers, the company transitioned in the early years of its existence to manufacturing objective lenses, magnification instruments, binoculars, cameras and projectors. During the Second World War, its production of optical lenses was commanded to meet the needs of the German military. The company's development took off after the war, when Optikotechna was nationalised and renamed as Meopta. A full range of new products were designed and developed during that time and Meopta became one of the world's biggest manufacturers of magnification instruments and the only producer of cinema projectors in Central and Eastern Europe. The Meopta brand gained global renown especially in the 1970s and 1980s when production for

the militaries of the Warsaw Pact grew significantly, accounting for up to 75% of the company's turnover. By 1988 the volume of military production began to gradually stagnate and in 1990, following the collapse of the East Bloc, fell to practically nothing. Meopta was fully privatised in 1992 and remained the only optics manufacturer in Czechoslovakia. At the same time, the company became a stalwart supplier of components and complete assemblies for the world's biggest optics firms. In 2004 Meopta established a closer business partnership with the company TCI New York, which distributes Meopta-brand products on the American market. No long afterwards, TCI was renamed as Meopta U.S.A., Inc. Meopta gradually became a specialist in optical products of the highest quality for the industrial, military and consumer markets thanks to its own products and OEM products supplied to other global manufacturers which sell them under their own brands. In recent years, Meopta has focused primarily on improving its research and development capacities. Due to this effort, in 2009 the company received the second-place Investor of the Year award presented by CzechIn-

vest and AFI in the Greatest Innovation Potential category.

### Broad product portfolio and ambitious goals

Meopta's main objective at present is to become a respected global leader in the provision of innovative solutions intended for specific markets focused on display and lighting systems in consumer, industrial and military applications. The company is already a European leader in these fields, as it offers comprehensive innovative solutions, from initial design and prototype development to series production, measurement and testing.

### Innovation potential

Meopta has long been aware that in order to maintain its position among the leading global manufacturers, it is necessary to conduct its own research and development, thereby infusing its products with exceptional and specific value added. Thus for more than half a century the company has possessed its own specifically conceived research and development base, which is the main generator of innovative solutions for

Meopta's product portfolio can be divided into four basic areas...



#### Sports optics

Practically since its establishment, Meopta has been engaged in the manufac-

ture of high-quality sport optics characterised by original design, outstanding optical performance and an excellent price/performance ratio. These products include particularly rifle scopes, binoculars and scopes.



#### Industrial applications

Meopta also has extensive experi-

ence with development and production of precision optics and mechanical components, as well as opto-mechanical and opto-electronic subsystems and assemblies in the areas of, for example, semiconductor diagnostics, digital projection, medical technology, nanotechnology, optical elements for the aviation industry, laser applications, microscopes, etc.



#### Military applications

The company's military-optics programme dates back to 1937. Today Meopta is

respected as an elite optics manufacturer and is a supplier of OEM products for a number of leading global firms. Meopta's portfolio in this area includes, for example, troop systems, optical systems for armoured vehicles and tanks, etc.



#### Individual components

This category includes the most various types of

components: plan-convex, plan-concave, bi-convex, bi-concave and meniscal, as well as cemented doublets and multi-element cemented lens systems, etc.



products under the Meopta brand as well as for OEM products. In order to create the necessary research and development infrastructure, the Institute for Development of Optics and Precision Mechanics was established in 1953. Following a number of transformations, the institute is now the Development Division, an organisational unit within the company.

A project under the name "Modernisation of Meopta Research and Development" was completed in 2010. The project was supported with aid from the Potential Programme, which is part of the

Operational

Programme

Enterprise and

Innovation. Its

purpose was

to raise the company's research and development infrastructure to a new, qualitatively higher level. As mentioned previously, Meopta was awarded second place in the Investor of the Year 2009 competition for this project in the Greatest Innovation Potential category.

### The following objectives were achieved within the modernisation project:

- Construction of a modern facility with corresponding equipment and technology
- Significant expansion of the capacity of prototyping facilities
- Refurbishment of the machine park and expansion of the capabilities of the assembly facilities
- Construction of new laboratories for laser measurement and assembly of selected types of products requiring a defined class of cleanliness (clean laboratory for laser measurement,

laboratory for length and interferometric calibration, experimental analysis laboratory, environmental optics laboratory)

- Construction of new office facilities for designers and other development employees

### Cooperation with universities

Meopta has long strived to establish and develop cooperation with universities, science laboratories and other science-oriented institutions in the Czech Republic engaged in research and development in related fields. Such cooperation takes many forms

**"For more than half a century the company has possessed its own specifically conceived research and development base, which is the main generator of innovative solutions for products under the Meopta brand as well as for OEM products"**

and enables the company to stay on top of current developments in the field of optics and precision mechanics and to participate in the implementation of a number of research and development projects, most of which benefit from state aid. The company's long-time partners include Palacký University in Olomouc, Brno University of Technology, Czech Technical University in Prague and the Institute of Scientific Instruments of the Academy of Sciences of the Czech Republic in Brno.

Among other things, Meopta has prepared for students in select departments of the Natural Sciences Faculty at Palacký University in Olomouc a motivational programme offering assistance in the course of their studies (interest-free loans, stipends, practical experience). The company generally offers university students practical instruction, recommendation dissertation subjects, consultations and excursions. Meopta recently concluded an agreement on cooperation with the Joint Optics Laboratory of Palacký University and the Institute of Physics of

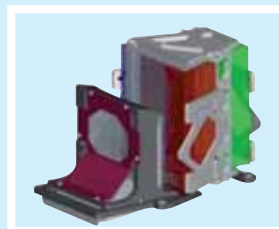
the Academy of Sciences. The agreement is aimed at enhancing existing cooperation in the areas of scientific and technological research, education and shared use of available laboratory capacities. Meopta is continually developing its own technical know-how through comprehensive activities leading to qualitative advances in the areas of production and measurement, as well as in the portfolio of new products for new segments of the market. The most interesting undertakings in this regard are the work of the Digital Optics Centre, particularly the processing of CaF<sub>2</sub> material for UV, and – in connection with Meopta's renewed involvement in manufacturing military technology

– processing of Ge material for infrared applications (optical instruments and systems for signal processing in the infrared band of the spectrum). Within the Aspherical Measurement Technology project, which received state aid, the development team focused on measuring aspherical surfaces (an aspherical lens in an optical assembly can replace two or more spherical lenses, thus reducing the overall dimensions and weight of the assembly). Of no less importance, the company is focusing on the technologically managed processes of making multi-layer structures in the area of providing high-tech systems and subsystems, such as various types of RGB assemblies for professional digital projection and for demanding individual users, as well as industrial subsystems in the area of diagnostics of microelectronic chips. ■

Jaroslav Indruch  
Development Division, Meopta-optika

## The latest development successes

### 6E 4K CB prism assembly



This product surpasses the competition thanks to the quality of its optical performance and over-

all image resolution, high contrast and high-fidelity image colour. It is a new colour-splitting prism assembly for DLP Cinema-projection comprising six prism elements, on which are applied original dichroic colour-splitting systems and highly effective multiple anti-reflex Crystal Bright layers. The system is intended for the new generation of 1.38" high-resolution DMD chips from Texas Instruments.

### 10x42 HD binoculars



These are the first binoculars from Meopta with fluorite glass in the objective lenses, which significantly reduces colour defects in

the objective lenses. Products with this glass bear the HD designation.

### NVS4 night-vision scope



This product is intended for use on military weapons.

It features 4x magnification, 10° field of

view, minimum 500 m personnel recognition with 3x10<sup>-3</sup> lx light level, and adjustable sighting-retical brightness. The newly developed MeoDrop-type coatings are applied to the external surfaces of the optics.

### S2 82 HD scope



Meopta's newest product, this top-quality monocular spotting scope

is intended for nature-lovers, birdwatchers and others who require excellent optical imaging of observed objects.

**meopta**



# Czech nanotechnology firms take the world by storm

**T**he field of nanotechnology has a long history in the Czech Republic. The first measurement of particles on the nano scale in the country occurred in the middle of the twentieth century. In 1949 Professor Armin Delong presented the world's first electron microscope and subsequently introduced it into production. At that time, only five countries were capable of manufacturing electron microscopes. The microscope was awarded a gold medal at the World's Fair in Brussels and today Professor Delong is globally recognised as the father of the electron microscope.

Today, primarily nanofibres hold a strong position in the Czech nanotechnology sector. Professor Oldřich Jirsák of the Technical University of Liberec holds more than forty patents relating to fibres and non-woven textiles. Companies in the United States, Great Britain, Australia and China manufacture products based on his patents. In 2004 Professor Jirsák and his team developed the world's first machine for industrial production of nanofibres. This machine, called Nanospider, was subsequently manufactured and marketed by the Liberec-based company Elmarco, which closely cooperated with the Technical University of Liberec in this endeavour. These machines are sold not only on the Czech market, but also in the United States and Japan, for example.

The strong position of nanofibres in the Czech Republic is primarily due to the Technical University of Liberec, which benefits from its outstanding workers and technical equipment. In recent decades, the Faculty of Textiles has focused on nanofibres and research thereof. The university's international standing is reinforced by a range of agreements on cooperation with foreign

partners, such as that concluded with Shinshu University in Japan in autumn 2011. One of the most recent milestones of the Czech nanofibre industry was the establishment of the company Nafigate, which last year commenced operation of the first global nanofibre portal. The NanoFibre Gateway is a platform which enables the inception of new projects and groups engaged in the development of modern applications using nanofibres. Within the Czech Accelerator 2011-2014 project, Nafigate spent several months in Singapore, where it gained valuable experience with the Asian market.

The absolute majority of domestic firms involved in nanotechnology are so-called "born global" companies. These are firms which in order to be successful must rapidly internationalise and find business partners abroad. TESCANA and Delong Instruments are examples of such companies. Both companies' electron microscopes and devices are present throughout the world and in use with, for example, the American National Aeronautics and Space Administration, the University of Tennessee and the Massachusetts Institute of Technology.

Perhaps the most important Czech company involved in the nanofibre industry and nanotechnology generally is Elmarco, which in 2007 introduced its Nanospider machine for industrial-scale production of nanofibres and subsequently became the world leader in this field. The company has branches in the United States and Japan, and has delivered machines to the Research Triangle Institute (USA), Kyoto Institute of Technology (Japan), Shinshu University (Japan), National University of Singapore (Singapore), King Saud University (Saudi Arabia) and Moscow State Textile University A.N. Kosygin (Russia), among others.

Advanced Materials-JTJ is another Czech nanotechnology firm that has achieved success abroad. In recent years the company has scored highly in domestic competitions and successfully presented its technology at international conferences and trade fairs around the world, including Nanotech 2012 in Japan. Photocatalytic coatings developed by the company and sold worldwide under the FN brand are intended for forming highly sanitary wall surfaces, removal of chemicals and allergens from the air, protection of buildings, self-cleaning facades and roofs, and treatment of wood and other materials. FN coatings are sold in, for example, Spain, Australia, Canada, the United States, Vietnam, Russia or South Africa. For its various successes and innovations, Advanced Materials-JTJ was nominated for the prestigious European Business Awards 2012-2013.

There are several start-up companies in the Czech Republic whose establishment was preceded by successful development of new technologies at local universities. Nanolron produces elementary iron nanoparticles which are uniquely important in groundwater-treatment processes. NANOPROTEX manufactures nanofibre membranes which won the prestigious ISPO Award in 2012. Both of the above-mentioned companies were established with assistance from the Technical University of Liberec. ■

Vojtěch Helikar  
Nanotechnology Sector Manager  
CzechInvest

# Czech Republic ready for R&D investments

The Czech Republic is pleased to introduce the Potential Programme, which helps companies to set up and increase capacities necessary for the implementation of research, development and innovation activities in the country. It is possible to obtain support for investments in the establishment or expansion of development centres (departments) in the Czech Republic aimed at research, development and innovation of products and technologies, including specific software and applications that form a part thereof. Such a centre should contribute to the introduction (implementation) of technologically new or innovative products, product lines, production processes and technologies. Of course, there must be the realistic expectation that the results of the given centre's work will actually be used in production. Supported activities include establishment or expansion of industrial research, development and innovation centres consisting in the acquisition of land, buildings, facilities and other equipment that is necessary and used for ensuring the activities of such centres.

## What are the basic provisions of Potential Programme?

- The minimum amount of investment in long-term assets used for the purpose of ensuring the activities of the project amounts to CZK 5 million (approx. 200.000 EUR), or CZK 10 million (approx. 400.000 EUR) in the case of large enterprises.
- The aid recipient is obligated to conduct the supported activity and retain supported assets for a period of at least five years (three years in the case of SMEs).
- Each applicant is authorised to submit only one project (i.e. one approved Registration Application) for one region. This provision is also applicable for related entities.

- The project must be implemented in the Czech Republic, outside the territory of Prague.
- The financial health of the applicant expressed by a rating evaluation cannot be lower than C+ (if the applicant is a newly created entity, the rating evaluation is conducted for the entity having a controlling interest in the applicant).
- Eligible costs must be expended in accordance with the goals of the programme and must directly relate to the implementation of the project. These costs must be expended no sooner than on the date of eligibility of the project (the date on which the aid provider or the mediating entity (CzechInvest) informs the applicant, in writing, that the project essentially fulfils the programme's conditions of eligibility).

The provisions stated above were valid for last two calls (II and III). The next call is expected in the autumn 2012 and the provisions are expected to be nearly identical. The last call was published on 4 January 2010. Receipt of electronic Registration Applications commenced on 26 February 2010 via the eAccount internet application and terminated on 30 September 2011. Receipt of Full Applications commenced on 27 April 2010 and terminated on November 30, 2011. The planned allocation for Call II is CZK 3 billion. (120.000.000 EUR) ■

For more information, see the websites at [www.czechinvest.org](http://www.czechinvest.org) or [www.mpo.cz](http://www.mpo.cz).

*Dominika Dlasková*  
Head of Unit for R&D Capacities Development, CzechInvest

# Good news for investors: The Czech Republic maintains a high degree of industrial property rights protection

The president of Coca-Cola once said that even if all of the company's buildings, machines, equipment, vehicles and other material assets were destroyed, it would not have a problem getting back on its feet as long as its trademark survived. We can surely agree that intellectual capital is one of the most important assets that a company can own, whether this concerns a large multinational corporation like Coca-Cola or a small local business.

Every day new products, brands, utility models, inventions and processes appear on the market and excel due to unceasing innovation and significant investments on the part of their originators. Not only the possibility of profit, but also the possibility to gain protection of their investments is what interest investors when entering a foreign market. Therefore, it is important for every investor entering the Czech Republic with, for example, an advanced technology to know that the Czech Republic has traditionally maintained a high degree of legal protection of intellectual property, whether this concerns industrial property rights, copyrights, know-how or trade secrets.

Penalties for breaking the rules in this area of law are clearly defined within the Czech Republic's framework of legal standards. Comprehensive system of judicial protection covers rapid intervention in the case of rights infringement in the form of preliminary measures, which must be adopted by the court within seven days, the obligation to pay compensation for damages or criminal responsibility. Protection is provided also via state authorities such as the Office for Protection of Competition and the Czech Commercial Inspectorate, whereas in recent years there has been a clear trend of increasing the amounts of awarded fines and more effective collection thereof. Nevertheless, the Industrial Property Office plays a central role in this area as, among other things, it maintains the relevant registries of the subjects of industrial property rights, i.e. patents, utility models, industrial designs and trade-

marks, and resolves certain disputes connected therewith. The high level of legal protection in this field is due in part to the fact that since 1990 the Czech Republic's legal regulations governing intellectual property have gradually been harmonised with European Union law. With the Czech Republic's accession to the EU in 2004, the regulations by which protection of intellectual property was uniformly implemented through the EU began to be applied in our country. Therefore, today in the Czech Republic, as in other EU countries, anyone who registers e.g. a "protected Community trademark" or "Community industrial design" can receive protection via the Office for Harmonisation in the Internal Market based in Alicante, Spain. The Czech Republic is a member of the most important international organisations in the area of protection of intellectual property, such as the World Industrial Property Organisation and the European Patent Organisation. The country is also a party to the Agreement on Trade-Related Aspects of Intellectual Property Rights administered by the World Trade Organisation. Thus, we can conclude that the system for protecting intellectual property rights in the Czech Republic is on a good level, which for every investor is a basic prerequisite for turning good ideas into commercial assets. ■



 MORE THAN JUST A LAW FIRM  
*Viktor Dušek*  
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Two years have passed since the moment when ČEZ Group began its Smart Region project in the North Bohemian city of Vrchlaví. The project is focused on verifying the functionalities of the Smart Grids concept, which includes an innovative distribution grid which can effectively integrate the activities of all connected users, centralised and local energy-production resources, consumers with the possibility of having an active role and new functions of the distribution grid.



# View to the future of power generation in the Czech Republic

## Objectives of the Smart Region project

The vision of the smart-grid concept consists in a reliable, automated and effectively managed distribution grid. The principle behind this is interactive two-way communication between the production resources, distribution grid and customers regarding the current needs of energy production and consumption.

Within the Smart Region project, ČEZ Group is deploying state-of-the-art technology in the distribution grid, testing the operation of smart electricity metres including interactive involvement of customers, and broadly using information technologies to manage the grid, while involving local production resources (co-generation units) and testing electro-mobility concepts.

The city of Vrchlaví was selected as the location of the pilot project due to its appropriate size. ČEZ Group planned the implementation of the Smart Region project for 2010-2015. The project is part of FUTUR/E/MOTION, a strategic initiative focused on testing new technologies which ČEZ Group considers to be promising for the future.

## Development of the Smart Region project in 2011

The preparatory conceptual phase was carried out in 2010 and the first half of 2011 in connection with implementing the Smart Region project. Within this phase ČEZ focused on formulating the overall technical concept, concluding the relevant contracts and preparing the project documentation.

"The preparatory part of the project was marked by emphasis on research and development, whereby we would develop cooperation with universities, research institutes and European institutions focused on supporting research and development," says Martin Machek, manager of the Smart Region project. Physical implementation and realisation of implementing works aimed at achieving the stipulated objectives of the project, primarily in the areas of distribution, smart metering, implementation of co-generation units and electro-mobility have been underway since mid-2011.

## Smart metering

In 2011, ČEZ began installing in Vrchlaví smart electricity meters which enable detailed monitoring of electricity consumption. ČEZ has replaced 4,600 electricity meters in Vrchlaví. These instruments will be actively used in the management of the distribution system.

Also in 2011 and in cooperation with its partners, ČEZ installed approximately 320 smart meters for all types of energy – electricity, water and gas,

as well as radiator-mounted heating-cost indicators – in selected prefabricated buildings in Vrchlaví. These metres monitor the consumption of all types of energy by each user, including electricity, gas, cold and hot water, and heat. The occupants of these buildings also have the unique opportunity to monitor, and thus control, their household consumption via a web application.

Among other things, part of the Smart Region project comprises testing of the operation of electric vehicles and the required charging stations, as well as their impact on the distribution grid. In spring 2011, ČEZ handed over two electric vehicles – one to Vrchlaví City Hall and the other to the Krkonoše National Park Administration – for trial operation.

## Activities in the Smart Region project in 2012

ČEZ Group's focus within the Smart Region project in 2012 is to introduce into operation production resources necessary for testing smart grids. "This year we are launching co-generation units which will supply electricity to the distribution grid and provide heat to the city. One of them will have output of 1.6 MW and, among other things, will serve for initiating and testing island operation in a part of Vrchlaví," explains Martin Machek. Work will also continue on the distribution part of the project, primarily delivery and installation of conceptually new transformer stations and work focused on laying low-voltage cables including new automation technologies.

## Vrchlaví is part of the European Grid4EU project

In 2011 the Smart Region project also became part Grid4EU, a demonstration project with European significance. Together with five other major European distribution companies, renowned industrial partners and leading research institutions, ČEZ Group submitted the proposal of its Smart Region project to the 7th EU Framework Programme for Research, Technological Development and Demonstration. ČEZ and its partners emerged victorious against other strong competing projects and received from the European Commission a positive evaluation and recommendation for implementation and co-financing. Part of the costs of implementing the Smart Region project is thus co-financed from the aforementioned framework programme. ■

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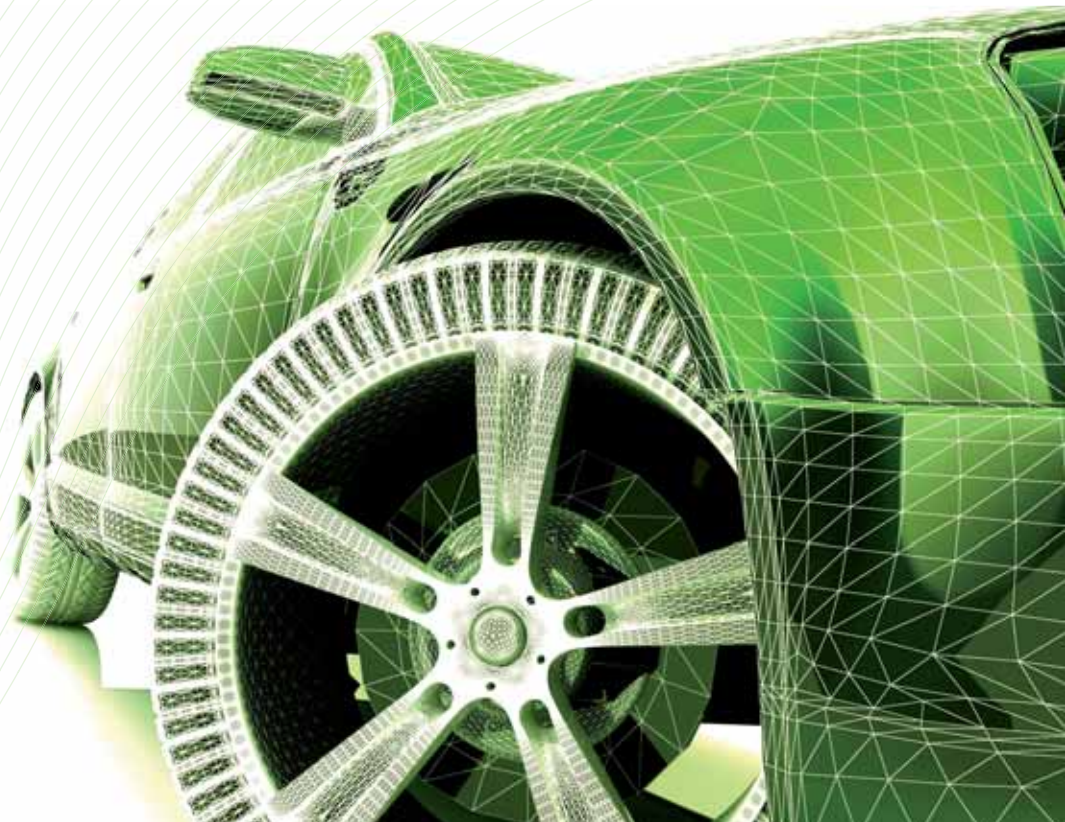


C T P a r k s   o f f e r   5   u n i q u e   p r o p e r t y   t y p e s



**G**reen mobility is one of the most hotly discussed topics in today's automotive world. It is no longer true that vehicles using alternative fuels are a matter only for a handful of enthusiasts. Carmakers around the world are vying to introduce new ecological models to the market and those without a "green" model are rapidly falling behind. The Czech Republic is significantly engaged in the trend of green mobility and CzechInvest is playing an important role in this regard.

Electromobility indisputably comprises the most attractive type of green mobility, as it promises extraordinarily strong potential for the future. A full range of successful business and research projects have been focused on electromobility, though recently larger and more ambitious projects have come to dominate the field. The most important of these in the Czech market include the long-awaited introduction of a new, clean electric vehicle by



# Green mobility enjoying strong growth in the Czech Republic

Škoda Auto (Volkswagen Group) at the beginning of 2012. Škoda Auto's fleet of test vehicles comprised ten Octavia Green E-line passenger cars featuring 180-cell lithium-ion batteries, power output of 26.5 kWh and range of 150 kilometres on a single charge, which fulfils the requirement of most people who commute to work in Europe. Škoda Auto developed these electric vehicles as part of its expansive strategy in the area of engines and fuels.

Another important event in the field of green mobility is the launch of Prague Electromobility, the first municipal project of its kind in the Czech Republic. Since last year the Prague city government has been supporting the development of electromobility in the capital. Thanks to this project, Prague now ranks among the world's major cities, such as London, Paris and Amsterdam, in the use of electromobility. A significant pilot project undertaken by ČEZ, the Czech Republic's leading energy company, focusing on infrastructure, smart grids and electric vehicles is successfully underway. Also successful is the production programme of Avia Ashok Leyland, which provides chassis for light-duty electric freight vehicles manufactured by the British company Smith Electric. However, important results in the field of electromobility are being achieved by teams of students at, for example, the Czech Technical University in Prague, Brno University of Technology and

the Technical University of Ostrava, which is cooperating with the company Kaipan on the development of an electric vehicle. A total of 120 electric vehicles and 170 charging stations were in operation in the Czech Republic at the end of January 2012 and their number is rising rapidly with each passing month. Besides electric vehicles, the field of green mobility covers other types of fuels and engines. The most prominent of these is CNG, which is enjoying strong growth in the Czech Republic. In recent years, the number of CNG vehicles has tripled and the necessary infrastructure has grown proportionately. There are nearly 3,500 CNG vehicles on Czech roads today and it is no coincidence that these include several hundred buses, which are produced in the Czech Republic by SOR Libchavy and Irisbus Iveco. Some government authorities and the Czech Postal Service are purchasing CNG vehicles for their fleets.

Another very widespread alternative fuel in the Czech Republic is LPG. Nearly 2,000 LPG vehicles can be found on the country's roads. Together with the 6,500 filling stations offering LPG, this figure represents a very well-developed market. Hydrogen fuels are represented primarily by the TriHyBus, which is operated as part of the municipal transport system in the city of Neratovice. Biofuels have also achieved a certain measure popularity recently,

with 245 biofuel-powered vehicles registered in the Czech Republic in 2011.

In light of all these developments in the sector, it is apparent that green mobility is, and will continue to be, an attractive field in the Czech Republic. "The development of green technologies brings new jobs, new markets and cleaner transport. CzechInvest's goal is to become a strategic player in this sector and to contribute to the improvement of communication between individual actors, such as vehicle manufacturers, infrastructure providers, component suppliers, municipal and state representatives and scientific institutions" says Miroslav Křížek, CEO of CzechInvest, which is also playing a significant role in the development of investments in the area of green mobility in the Czech Republic. The results of the agency's work include the embedding of support for green mobility in the national environmental strategy, development of electromobility in conjunction with ČEZ and mediation of investments in science and research. For example, the American company Eaton established its first European R&D centre at the science and technology park in Roztoky u Prahy, where it plans to create up to 300 jobs. ■

*Štěpán Rabiňák*  
Automotive Industry Sector Manager  
CzechInvest



## Levelling the playing field

*“With the amendment of the Investment Incentives Act, the Czech Republic has levelled the playing field in the competition for investments with other European countries. Technology centres newly supported by the act can now thoroughly use the Czech Republic’s potential for innovation.”*

**T**he Czech Republic is a small country with enormous potential. I strongly believe in this statement. We at the Association of Foreign Investment have been working for over 16 years to unlock this potential and move the Czech Republic to where it should be – to be an excellent place for global and local investments. Since our establishment in 1996, our members have played a role in almost all major foreign investments in the Czech Republic. At the same time it is fair to say that not a small part of the Czech Republic’s potential is still unlocked. To develop this potential nowadays costs far more than only our country’s high-quality and available workforce, rich cultural background and ever improving conditions for investments – we have to promote innovative entrepreneurship and improve conditions for science and research.

In terms of the investment environment, 2012 is a watershed year for the Czech Republic due to the recent amendment of the Investment Incentives Act, in the drafting of which AFI members significantly participated in conjunction with CzechInvest and the Ministry of Industry and Trade.

The amendment of the Investment Incentives Act corresponds to the interest of investors in using the advantages of the Czech Republic and its resources, which consist not only in the country’s high-quality infrastructure and workforce, but also in its outstanding research and development base.

Proof of this consists in the range of technology centres operated here by companies such as Bosch, Ericsson, Honeywell, Mercedes Benz and Siemens. In addition to these and a number of others, the industrial manufacturer Eaton Corporation will soon open an advanced innovation centre in the Czech Republic, which is one of only five such facilities operated by the company worldwide (see the News section for more information about Eaton’s project). Thanks to the amendment of the Investment Incentives Act, the Czech Republic, which is the cradle of international production of Škoda automobiles as well as industrial production of nanofibres and contact lenses, is now even better prepared for advanced innovative investments.

Investors in the area of R&D will now be able to draw tax relief for a period of ten years if they invest at least CZK 10 million (approx. EUR 400,000) and create a minimum of 40 new jobs. When investing more than CZK 200 million (approx. EUR 8 million) and employing at least 120 people, investors will receive a cash subsidy in the amount of 5%-7% of eligible costs. (For more information on the amendment, see the article by Jan Linhart in this section.) ■

Kamil Blažek  
Steering Committee Chairman  
Association for Foreign Investment



## Building up the Czech knowledge economy piece by piece

**T**he potential of Czech science is and has always been tremendous, especially in technical fields. However, the lack of financing and marketing know-how in research institutions has the consequence of insufficient output of high-quality results. Many ideas and inventions thus do not have the chance to cross the threshold of science facilities and to be successfully introduced to the market. Therefore, the Association for Foreign Investment is actively involved in this area and assists with its development. In cooperation with the American Chamber of Commerce, the Technology Agency of the Czech Republic and the Czech Innovation Initiative, the AFI organised the second annual edition of the Cooperation of the Year competition in 2011. This competition, which rewards cooperation between companies and the research sphere, has the objective of raising awareness of successful examples of the application of science and research findings in practice and stimulating such cooperation in the future. In addition to the next edition of Cooperation of the Year, the AFI is currently preparing an event called adVENTURE, whose aim is to bring representatives of innovative start-up projects together with business angels and people from venture-capital firms. CzechInvest and the Ministry of Industry and Trade are following a similar path. Examples of this are the recent amendment to the Investment Incentives Act and the newly established national seed fund, which is focused on supporting innovative inventions from the moment of their inception. It is simply necessary to support good ideas and thus we intend to continue in this effort at the AFI this year. We believe that this endeavour can be a tile in the mosaic of the Czech Republic’s future economy, which will be increasingly built on the knowledge of the country’s people and the experience of foreign experts. ■

Petr Hájek  
Supervisory Board Chairman  
Association for Foreign Investment

# Better incentives for investors

New rules for provision of investment incentives in the Czech Republic will come into force in early July 2012 in connection with the recently approved amendment to the Investment Incentives Act. The Czech government has substantially improved the conditions. Beyond its stable business environment, skilled workforce and high-quality infrastructure, the Czech Republic offers enticing investment incentives for foreign and domestic investors. Investment incentives will henceforth support investments in construction and expansion of manufacturing plants and will newly be made available for projects in the areas of centres of strategic services and technology centres.

## Main advantages

Corporate income-tax relief remains the primary benefit ensuing from investment incentives. A positive change in this regard is the extension of the period for drawing such tax relief from the current five years to ten years.

Another important new aspect is the introduction of the concept of strategic investments. This comprises a new instrument of support for large investment projects in that it enables provision of cash subsidy in the amount of 5%-7% of eligible costs. A basic condition for strategic investments is production volume in the minimal amount of CZK 500 million (approx. EUR 20 million) and creation of at least 500 new jobs. Conversely, in the case of technology centres, the minimum investment amount is CZK 200 million with creation of 120 jobs. This new concept thus supports primarily capital-intensive high-tech investments.

In addition, aid can be provided in select regions for job-creation, training and acquisition of land. The total value of investment incentives is stipulated according to the regional map of state-aid intensity. Thus the value of incentives can reach the maximum amount permitted by European Union regulations, which for most of the Czech Republic amounts to 40% of eligible costs. The Southwest region has a lower aid amount (30%), whereas it is not possible to receive any state aid in Prague. Pursuant to European regulations, it is necessary to submit an applica-

tion for investment incentives and to obtain confirmation of the preliminary confirmation on eligibility of the given project from the governmental agency CzechInvest prior to commencing implementation of the given investment.

## Investment incentives in the manufacturing industry

The minimum investment in construction or expansion of a manufacturing plant amounts to CZK 100 million (EUR 4 million) or, in selected regions, CZK 50 million (EUR 2 million). Half of the minimum investment amount must be invested in machinery and the same amount must be financed with the investor's own funding.

The total investment amount assessed for the purposes of incentives can reach, at most, double the value of machinery, which furthermore must be new. Investment incentives thus support primarily investments higher greater requirements for modern technologies.

## Investment incentives in the area of technology centres and centres of business support services

Thanks to the amendment, the investment-incentives system has been expanded to cover technology centres and centres of business support services.

The basic condition for technology centres is creation of 40 jobs and a minimum investment amount of CZK 10 million. For investments in the area of business support services centres, it is necessary to create 40 new jobs in the case of software-development centres or 100 jobs in the case of repair centres and shared-services centres. The condition of a minimum investment amount does not apply to business support services centres.

## Aid from EU funds

Beyond the framework of investment incentives, it is also possible in the Czech

Republic to obtain cash subsidies for investment projects and operating costs. Supported projects are primarily those in the area of research and development, including introduction of innovated products into production, as well as investments in the area of environmental protection. Unfortunately, however, the offer of such aid is currently limited because some programmes have already been exhausted, though new ones will be opened in 2014. Nevertheless, it is still possible to apply for certain types of aid.

## How to obtain maximum aid

The offer of investment incentives and subsidies is relatively broad, and it often happens that particular projects receive support from more than one programme. Especially large or complex projects can effectively use a combination of several types of aid and therefore require a deeper analysis of the available options. This includes not only verification of the actual aid programmes' existence, but also their usability in the future. Usability in this sense does not consist merely in the amount of aid available, but also requires a simulation of the possible impacts ensuing from various scenarios involving the development of the investor's economic situation. It can be stated that for an optimistic development scenario, a different combination of incentives and subsidies can be proposed than for a pessimistic scenario. The final decision is always up to the investor, who should base that decision on all available information. ■



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KPMG Czech Republic  
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# Commentaries on a new amendment to the Investment Incentives Act



**W**e consider investment incentives to be of fundamental importance for creating an investment environment comparable to that of other countries in Europe. As this involves legislative regulation giving all stakeholders certainty regarding the conditions under which incentives are provided by the state, investment incentives are a crucial element in assessing costs and they help investors to reach the decision to locate their investments in the Czech Republic. At Škoda Auto, incentives play an important role in the planning of selected investments in new production operations and products. In our opinion, they thus serve not only for attracting new investors to the country, but also increasingly for stabilising existing investors. It is our opinion that the latest form of incentives builds on the current European legislation and more attractive forms of incentives are not lacking. With regard to the amendment to the Investment Incentives Act, we consider it very beneficial that technology centres will be supported. Though such centres are investment intensive, they can properly employ the intellectual potential in the Czech Republic and, through proper combination with production, increase the competitiveness of companies. Besides the Investment Incentives Act itself, we also consider the existing willingness of the state to help investors in formulating and implementing their projects to be of considerable importance. The role of CzechInvest in this respect is irreplaceable. ■

*Jana Vodová  
External Affairs  
Škoda Auto*



**A**pplications for investment incentives are received by CzechInvest, a state contributory organisation subordinate to the Ministry of Industry and Trade. Support for the inflow of foreign investments is one of the priority areas on which CzechInvest focuses. Investments from abroad have a positive impact on the domestic labour market and employment, and contribute to the growth of exports, transfer of know-how and development of the knowledge economy. As a result, foreign investments also contribute to the growth of the Czech Republic's gross domestic product.

The amendment to Act No. 72/2000 Coll., on Investment Incentives, which was prepared by specialists from CzechInvest's and the Ministry of Industry and Trade, responds to the increasing competitive struggle among the countries of Central Europe for foreign direct investments. The neighbouring countries also provide investment incentives, and if the Czech Republic does not adequately respond, it will cease to be competitive in the area of attracting foreign investments.

At the same time, the adopted changes support projects with high value added. The period for drawing tax relief, which has been extended from five to ten years, enables the implementation of not only projects in the manufacturing industry, but also projects involving centres of business support services and technology centres. ■

*Miroslav Křížek  
CEO  
CzechInvest*

## Tax relief for research and development brings a range of advantages

**F**or the past seven years, the Income Taxes Act has made it possible to apply a special deductible item comprising research and development costs. Eligible costs are thus deducted twice – once as costs included in the operating result and again as a deductible item reducing the tax base. Unlike other, foreign programmes aimed at supporting research and development, there is no condition of ownership of the result of research and development. Therefore companies conducting research and development work for their customers can apply the deduction. Research and development is broadly defined; the presence of a considerable element of novelty and resolution of research or technical uncertainty is important. Research and development includes, for example, development of new and improved products, services and technologies including design and implementation works and related calculations, production of functional models and prototypes and testing thereof, trials of new and innovated products, development of certain software, medical and pharmaceutical research including clinical trials of drugs, vaccines and treatment methods, and patent and licensing work. It is not important if the objective of research and development activities is known to other entities if the result is materially or economically inaccessible or unusable, or if information about its existence was not made available at the given time. An important condition for using the deduct-

ible item is preparation of written documentation of the research and development project describing particularly the objectives and processes. Eligible research and development costs include especially personnel costs for employees involved in project implementation (including health-insurance and social-security costs), travel costs associated with the project, depreciation of assets used in direct connection with the project and other directly related operating costs, such as the costs of materials, supplies, energy, heating, gas and telecommunications charges. In the case of doubt, tax authorities can be requested to provide a binding judgment that the relevant costs can be included in the special deductible item for research and development. Furthermore, the deductible item for research and development can be combined with other forms of support, such as tax relief. It is thus a very interesting tool in many respects. ■



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# New CzechInvest supports the knowledge economy and investments in innovations

Interview with Miroslav Křížek, CEO of CzechInvest

This year CzechInvest is celebrating the 20th anniversary of its establishment. What would you say have been the most significant changes during the past two decades?

The situation today is of course completely different from that in which the agency was established. At the beginning of the 1990s it was necessary for the then Czechoslovak economy to transition to market principles, open up to the global market and to generally modernise. CzechInvest came into being on 1 November 1992 when its predecessor, the Federal Agency for Foreign Investment, was closed with the coming dissolution of Czechoslovakia. CzechInvest's starting position wasn't easy. Its primary task was to attract foreign investments. Of course, this was during the early stages of the process of transforming the Czech economy, which the public was rather wary of at that time. On the other hand, CzechInvest managed to bring in young and enthusiastic people at the start of its operations. And that is still true of the agency's staff today. The Industrial Zone Support Programme was gradually initiated at the level of local authorities and the government introduced the investment-incentives system, which won the country a good reputation abroad. CzechInvest offered consulting and contacts. In the mid-1990s, the agency opened its first foreign office. The more CzechInvest increased its scope of competences, the more expansive its palette of activities became. In 2004 it began to administer European Union structural funds and opened branch offices in all of the country's regional capitals. Over the course of its existence, CzechInvest has helped to mediate investment projects in the value of more than 715 billion crowns, which have given rise to nearly a quarter of a million jobs.

**How does the situation look today?**

Today the Czech economy is in the so-called innovation-driven economy phase. Attracting investors to the country with cheap labour is no longer enough. Rather, we want to provide a solid base for technologically advanced projects and for the knowledge economy and

investments in innovations. This is one of the areas in which we see assurance of the Czech economy's competitiveness in the future. Of course, the support we provide also covers Czech small and medium-sized enterprises and promotion of the Czech Republic's business and investment environment in the rest of the world. CzechInvest's services are newly focused primarily on supporting investment flows, for example in the form of establishing special economic zones. We want to make it easier to transfer the results of research and development to the commercial sphere. We also want to establish foreign incubators for domestic businesses and to function as an information centre for business. We will intensify our involvement in international initiatives and support for regional development, and we will administer new operational programmes focusing on business support. I've just outlined some of the aspects of the New CzechInvest strategy introduced last year, which we are gradually implementing.

**Can you describe some of those measures in more detail?**

For example, in the case of attracting sophisticated investments, we want to offer technologically demanding companies the most tangible means possible for setting up their investments, so we provide them with detailed sector information in the areas where the Czech Republic has strong potential. For example, we concluded with ČEZ a memorandum on cooperation for the development of electromobility, which is one of the areas where we want to create the best possible conditions for potential investments. We are also planning to establish, for example, sectoral E-platforms as tools for enhancing sectoral know-how.

I could also mention support for mergers and acquisitions, which we are undertak-

ing within the CzechLink project, which in future will involve 33 firms seeking strategic or investment partners. We are in the process of setting up a special online portal called Investment Gateway, which in the near future will systematically and comprehensively compile the offer of investment opportunities in the Czech Republic. Domestic companies that are interested in potentially obtaining foreign capital will have the opportunity to present themselves to foreign investors on this portal as possible targets for acquisition or capital entry.

Other measures include, for example, establishment of special economic zones, which have the purpose of contributing to the minimisation of differences between the regions, thus raising the profile of the less developed regions and making them more attractive for investors.

**Are some of the agency's products aimed at supporting Czech businesses abroad?**

CzechInvest's effective assistance with developing innovative businesses abroad is demonstrated by the CzechAccelerator 2011-2014 project, which consists in a network of foreign technology accelerators intended mainly for highly innovative Czech firms. Following the successful pilot phase in Silicon Valley, we expanded the project to several new destinations. Residencies of participants selected in the second call of the project are currently ongoing. The third call has already been issued and the successful applicants will travel in June to one of the project's technologically advanced destinations in the United States, Singapore, Israel and Switzerland. So far, we have supported CzechAccelerator with the amount of roughly 6.8 million crowns, mostly within the Operational Programme Enterprise and Innovation. ■



# SMART REGION

Vrchlabí becomes first „energy-intelligent“ region in the Czech Republic

## FUTUR/E/MOTION

FUTUR/E/MOTION is a strategic initiative aimed at testing new technologies, that CEZ Group realises as a perspective in the future (e.g. distributed resources, e-mobility, smart grids. Part of the initiative is a pilot project called Smart Region implemented in Vrchlabí, project aims at testing the smart grid functionalities.

## SMART REGION

The concept of smart grids is based upon reliable, automated, and effectively controlled distribution grids. The principle is an interactive two-way communications between the production source, distribution grid and customers about the current needs of production and consumption of energy.

Pilot project Smart Region deploys the latest technology into a distribution grid; it tests the operation of smart energy meters, including the interactive involvement of customers. Within the pilot project IT technologies are used for the network management, local production resources (CHP units) deployed and e-mobility is being tested.

Vrchlabí is the site of an appropriate size for the implementation of the pilot project with the possibility of installing several units of combined heat and power production (cogeneration), appropriate characteristics of distribution grids and the potential use of electric vehicles in the area of the Krkonoše mountains.

The project is being realized in the years 2010–2015, in close collaboration of the CEZ Group and the city of Vrchlabí. The project costs are partly co-financed from the Seventh Framework Programme of the EU for Research, Technological Development and Demonstration activities.

## THE KEY OBJECTIVES OF THE PROJECT AND THE INVOLVEMENT OF CUSTOMERS

### SMART GRIDS

Grid modernisation – response to customers and producers needs

Two-way communication between distributor and customer

Integration of innovative functionalities into the grid (including EV charging stations)

### SMART CUSTOMERS

Smart Meters for near real time power consumption imaging

Multi-utility measurements in households

Consumption optimisation, efficiency and savings for customers

### SMART TECHNOLOGIES

Construction of EV recharging stations

Automation and monitoring of LV, MV components

Local grid supervision (SCADA) allowing the quick problem solving in case of malfunction

Testing the wireless IT technologies for remote data transfer

### SMART POWER GENERATION

Construction of local CHP plants

Electricity and heat supplies into grid and central heating system

Power generation units for testing island electricity system operation

Up to date information about progress of **Smart Region** project are displayed on [www.futuremotion.cz/smartgrids](http://www.futuremotion.cz/smartgrids).





# Prague, the capital of R&D in the Czech Republic



Prague is the capital of the Czech Republic. The city has always played an important role in the history of the country and Europe. Since the Middle Ages Prague has been famous as one of the most beautiful cities in the world and has been graced with adjectives such as “golden”, “hundredspired”, “the crown of the world”. The dominant features of the city’s architecture are reflected in the Vltava River: towers, church spires and cupolas, palaces and townhouses, along with the greenery of gardens, parks and islands. Prague was founded at the crossroads of ancient trade routes at a site where the most varied spiritual and cultural currents merged.

## Basic information and Prague’s economy

Nowadays, Prague is an important European city that attracts millions of visitors every year. It is a place where cultural, social and political events of international importance take place. Prague is home to 1.3 million people in the city proper and 1.9 million in the greater metropolitan area. The city ranks among the economically advanced regions of Europe and it is considered the best city in Central and Eastern Europe for doing business. Combining a very modern business environment and specialised business venues, while offering competitive production costs, it is easy to see why Prague is so popular with foreign investors. Prague’s per-capita GDP is far above the Czech national average, at €42,800, the fifth highest GDP per inhabitant of any region in the EU, ahead of Paris and just behind Hamburg. Prague generates 20% of all investments in the Czech Republic and over 20% of the entire country’s GDP. Prague’s economy is largely

based on the services sector and exports. Services account for 80% of employment in the region. Machinery and transportation equipment is by far the largest sector, making up 44% of total exports. General manufacturing, chemicals, raw materials and fuels are also important sectors. The Prague region’s educated population is one of the most important prerequisites for the existence of dynamic innovation. The level of attained education among the population in this region exceeds the average of the Czech Republic and we can say that education levels are continuing to rise. The positive trend in education is based primarily on the number of universities in the region.

## Research and development infrastructure

Prague is home to a large number of educational and scientific research centres. Approximately two-thirds of the Czech Republic’s public research institutions and many research and development companies are located in and

around the city. The local innovation infrastructure features four science and technical parks. Highly skilled people play a significant role in the city’s economy. One-third of economically active Czech citizens with university education work in Prague, while two-fifths of the country’s R&D workers and half of its scientists are employed in the capital. Twenty per cent of business expenditures are focused on research and development.

The large concentration of international companies and public-sector institutions contributes to Prague’s economic performance and strong macroeconomic position. The structure of the region’s economy is influenced by the local concentration of technology centres.

## Technology centres and business support services

The concentration of research and development capacities, innovative companies, universities, various research-oriented institutions amplifies the strong position of Prague

in the area of R&D, especially in terms of the number of awarded patents and registered utility models. Two-fifths of the nation's R&D expenditures are allocated in Prague. Five technology centres have been established in the aerospace and automotive industries with an investment amount of €23 million and creation of 554 jobs. The countries of origin of these investments are the Czech Republic (two projects of TC Inter-Informatics), France (Letov Letecká výroba, VALEO autoklimatizace) and the United Kingdom (Ricardo Prague).

Projects involving business support services centres have created nearly 9,000 jobs with roughly €292 million invested. The largest projects in this category were implemented by DHL Information Services and Exxon Mobil Business Support Centre Czechia. The reason for locating these services in the capital are particularly the city's sufficient qualified workforce, good transport infrastructure and development of outsourcing in Central and Eastern Europe.

Prague's economic performance, specific economic structure and innovation environment depend on the share of foreign direct investments and investments allocated to venture capital. The motivating factors of foreign investors are particularly strong social capital, sufficient purchasing power of the local population and a well-developed services sector, on which greater part of FDI is focused.

### Universities, research and development organisations

Commercialisation of research results generates significant income for the local research community. A part of the most important organisation, the Academy of Sciences of the Czech Republic, is the Institute of Organic Chemistry and Biochemistry, which generated annual revenues amounting to €40 million in the period from 2007 to 2009. The institute accounted for a large part of the positive economic results of the Academy of Sciences of the Czech Republic.

The region's future depends on the success of small and medium-sized enterprises.

A broad range of services is provided to start-up enterprises by, for example, the Aerospace Research and Test Institute, which hosts 16 innovative companies operating in the aerospace, automotive, transportation and defence industries.

The Biomedical Innovation Centre is a significant institute of the Academy of Sciences of the Czech Republic in field of R&D. This business incubator supports the competitiveness of start-ups in the area of biomedicine.

The Technology and Innovation Centre of the Czech Technical University in Prague contributes to technology transfer and supports technology-oriented companies particularly in the fields of mechanical engineering, electrical engineering and construction.

The centre is a member of the European network of business and innovation centres with the status of an EBN Business Innovation Centre.

The Technology Centre of the Academy of Sciences, which is involved in the Enterprise Europe Network, focuses on technology transfer and supports the creation and development of small, innovative companies.

The Innovation Centre and Business Incubator is a facility established with the intention of supporting companies in the initial stages of their development and promoting the growth of the business and economic environment in the Prague region. The centre focuses on entities involved with the ČKD group. The area in the immediate vicinity of Prague has optimal conditions for establishing BIOCEV AND ELI

### "Approximately two-thirds of the Czech Republic's public research institutions and many research and development companies are located in and around the city"

centres of excellence, which comprise unique and important new generation of large research facilities.

### R&D projects of the Czech Technical University

Of all the universities in Prague, the Czech Technical University (CTU) is the most active in the field of R&D. One of significant projects of the Faculty of Nuclear Science and Physical Engineering at CTU is VerifEyed software, which won the New York Next Idea competition in 2011. The work has been developed for ImageMetry.

VerifEyed is a high-tech application capable of revealing quickly and reliably whether a scanned document or photograph has been manipulated. In certain cases it can also identify whether a photo has been downloaded (and thus stolen) from the Internet. It can be used, for example, on various internet dating websites. Users are not only able to verify the authenticity of photos that they are interested in, but can also attach their own verified photos and thus increase their credibility and their chances of success. Some corporations use VerifEyed software to verify the integrity of communication with their clients. In other words, they use VerifEyed to prevent tampering with photos that are sent and documents that are scanned, or to trace scams based on analyses of documents and photographs.

Other companies try to reduce their costs and improve their competitiveness by simplifying

and speeding up communication with their clients, who can send scanned or photocopied documents by mail, or directly in a search engine, and on receipt VerifEyed verifies the authenticity of the transmitted documents. The Czech Technical University in Prague, especially Robert Theiner, Secretary of Department of Aerospace Engineering CTU, has been awarded numerous patents and utility models. We can take as an example an aircraft resembling the L-39 Albatros, a world-renowned Czech military trainer, but in the ultralight category of aircraft weighing less than 300 kg. The propulsion unit should provide the performance of a jet engine, but without the hot exhaust gases typical of a standard jet engine. Air flow will be accelerated by a blower powered by a high-performance motorcycle engine. No ultralight of this type is currently flying anywhere in the world.

Ultralight aircraft based on this new concept will offer the sensation of a jet engine and will differ from other ultralights by generating higher speeds than are currently available in this category. "We are able to think about this kind of engine only because of the availability of racing mo-

torbikes, which have been undergoing dynamic development. There are motorbikes with light high-performance engines which lend themselves to use in aircraft, though they cannot be used without reducing RPMs through a heavy and unreliable gearbox. However, when we construct a propulsion unit that is different from a propeller engine, we can make use of the high engine speed. The propulsion unit compresses a smaller flow area with greater acceleration," Theiner explains.

All participants have been dreaming about a project like this for more than ten years – they started working on it in their theses and dissertations, and have been thinking about implementing it. "Professor Jan Jerie and Professor Antonín Málek joined the project. They are very famous engineers and technicians specialising in jet propulsion units. Rather than considering our project totally unpromising, they started to intensively collaborate with us. This persuaded me that it was worthwhile to go for it," Theiner says. "In 2005 we started to develop a new propulsion unit at our Center for Aviation and Space Research. The unit has to be very light, because the whole airplane has a maximum weight of only 300 kg. If we manage this, it will be a world first for us." ■

*Blanka Miksová  
Directress, Office for Central Bohemia Region  
CzechInvest*

# How does the labour market look in the area of R&D in the Czech Republic?

Experience level	gross monthly income (EUR)
Graduate, entry level	1,000-1,200
0-3 years	1,000-1,800
3-5 years	1,800-2,400
6-7 years	2,400-3,200
8-12 years	3,200-4,800

The Czech Republic is known as a favourable destination for foreign investors, such as Honeywell, Siemens and Rockwell Automation, which have all successfully established R&D centres here. The results compiled by international consulting companies indicate that the Czech Republic is a very attractive location for foreign investors and is even more interesting for R&D projects. This constitutes a continually rising trend and confirms the fact that the inclination of investors to invest here is due to more than just the country's central location and legislation. Another highly important factor is the quality of Czech workers, who are highly valued for their theoretical experience gained in high-quality educational institutions, as well as their practical experience, flexibility, ability to improvise, availability and ever growing skills.

Hays Czech Republic gladly monitors the continuing interest of candidates in companies operating in the field of R&D. This primarily concerns specialisation in the sectors of information technologies, mechanical engineering and industrial automation. Brno is currently the leading centre for recruitment of IT specialists. Besides the previously established and constantly developing R&D centres (e.g. Red Hat, Y-Soft, AVG, Honeywell), other companies focused on the areas of cloud computing (NetSuite) and business applications (FNZ, AirBank) have launched operations here. Thanks to links with universities, Brno's attractiveness for candidates from other locations and the possibility of long-term employment, there is a large number of qualified professionals here. In recent years this trend has had an impact on the growth of financial value and on arrangement of the benefits structure. Besides the traditionally high demand for IT specialists, Prague is a destination for leading international companies in the automotive sector, electrical engineering and other fields. MBTech, Ricardo, e4t and the newly arrived Eaton offer employment opportunities for graduates of technical universities as well as for a broad spectrum of experienced candidates.

A new trend consists in large investment projects financed by European funds which place emphasis on establishing centres of excellence in the areas of biotechnology, medical laser research and other fields. In light of the scope of projects and the expected involvement of international capacities, in the long-term perspective this involves opportunities to develop ties between the academic and commercial spheres and to raise awareness of these fields among students.

Total number of employees in R&D	75,000
R&D workers employed in the commercial sphere	33,000
Employees in university projects	22,215
Percentage of R&D workers with university education	44%
Percentage of R&D workers with a PhD degree	26%
Average salary of R&D workers (three year's experience, Prague)	EUR 1745,36/month
Number of students in technical fields in the Czech Republic	90,000

The following factors constitute the reasons for the growth of this field:

- Investors with technologically interesting projects are entering the Czech Republic, thus raising the sector's prestige.
- Prestigious projects are attractive not only for experienced candidates, but also for university graduates, of whom the Czech Republic has an abundance. There is a long tradition of technical education here. The result is that the ratio of the total number of graduates to the number of graduates with a technical education is one of the highest in the world. The system of university education strongly supports cooperation with the private sector.
- In the last three years we have recorded growth in the number of employees who have gone abroad, e.g. to France, the UK, Germany or Switzerland, after graduating from university in a technical field. These employees possess pertinent know-how and return to the Czech Republic in management positions requiring practical experience and strong language skills. According to the Engineering and IT Division of the consulting company Hays Czech Republic, we have an abundance of skilled managers in the area of R&D in the Czech Republic and the number of their future successors is also growing. We must also point out that potential employers are able to hire experienced, high-quality employees for a fraction of the costs common in, for example, Germany or Switzerland. Knowledge of the English language is of key importance for most foreign investors, while demand for German-speaking candidates is rising.

The system of university education focused on technical fields produces a sufficient number of graduates who are flexible in terms of the locations where they are employed. Therefore, they are more available now than in the past. Hays Czech Republic has the largest group of graduates and candidates for positions in R&D centres in the regions of Prague, Brno, Liberec, Ostrava and Mladá Boleslav.

The fact that the R&D field is continually growing is supported not only by the number of employees placed in such positions by our consultants, but also by feedback concerning employees, who fully meet the expectations of their employers and thus help them to build a strong foundation for their business. For more information, please visit [www.hays.cz](http://www.hays.cz)



**HAYS** Recruiting experts worldwide

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## How is the situation with cooperation between schools and companies in the Czech Republic?

As in other areas of life and business, basic problems arise in financing and mutual trust when it comes to cooperation between schools and companies. In their legitimate concerns regarding return on investment, companies are rather wary of starting any cooperation at all. In addition, schools often give priority to financially more attractive projects supported with aid from the state or from the European Union. The situation is exacerbated by mutual distrust and the worries inherent in complicated solutions. The joint search for suitable means of cooperation is thus a never-ending task. Despite these circumstances, there are many examples of successful cooperation between companies and schools in the Czech Republic, including the collaboration undertaken between

our company, Aroma Praha, and the Faculty of Organic Technology at the Institute of Chemical Technology in Prague. Last year we successfully introduced a technology for producing the Arosantol fragrance, which has found important uses in the global chemical-specialties market. No significant subsidised investment was needed for introducing this new product. In addition, students were directly involved in resolving specific industrial problems incurred in the course of the project, which marked an unbelievable forty years of uninterrupted cooperation between Aroma Praha and the Institute of Chemical Technology. ■

**3<sup>rd</sup>** Cooperation of the Year winners

Pavel Foret  
Managing Director, Aroma Praha

## How do you assess cooperation between schools and companies in the Czech Republic?

The Czech Republic is known for its long tradition of high-quality university education and thus has always been at the top of the most various industrial sectors. This is illustrated by the Czech Technical University (CTU), the oldest school of its kind in Central Europe, and a range of world-renowned companies with a long history. Today schools, students and companies are coming to the realisation that it is important to develop long-term cooperation, which can bring forth new ideas, original solutions and sometimes even a decisive competitive advantage. At DuPont, we are aware of the importance of cooperation with universities and we have focused on it for a number of years already. For example, we have been collaborating with the Institute of Chemical Technology in Prague since 2004 in the area of analysing products for protecting plant life. The results of this research have helped us in Europe, Africa and the Middle East. In the area of surface and transport-infrastructure construction, we have been cooperating with CTU since 2009 on the development and application of new materials and technologies. We received the Cooperation of the Year award for our

research in the use of waste materials from chemical production for improving the properties and durability of motorways. We are also engaged in long-term cooperation with Tomáš Baťa University in Zlín, where we are involved in the applied development of PVB film. In the Czech Republic we not only sell, but we also produce, and therefore a high level of graduates, especially in technical fields, is crucially important for us. This year we are striving to achieve their greater involvement through the Superfibres project, which gives students an opportunity to conceive a new industrial application for our materials and thus to become familiar with the current needs of the market. DuPont employs 9,500 scientists and engineers and we annually invest two billion dollars in research and development. Cooperation with the science and academic spheres is thus of key importance for us, and our experience in the Czech Republic shows that the country definitely has something to offer. ■

Soňa Krausová

Country Leader Czech Republic, Slovakia,  
Hungary & Finance Manager, DuPont CZ

**2<sup>nd</sup>** Cooperation  
of the Year winners

## What are the possibilities of obtaining aid for applied research in the Czech Republic?

The framework governing the provision of aid for research, development and innovation from the state budget in the Czech Republic is Act No. 130/2002 Coll., on Support for Research, Experimental Development and Innovation. Public funding is provided in two basic forms – specific and institutional. Specific aid is provided either based on the results of a public tender for a grant or programme project or on a public procurement order in the area of research and development for the needs of the provider, RDI programme projects, and on the basis of other procedures pertaining to projects of international cooperation in research and development, major infrastructure projects and specific university-based research. Institutional aid is provided for the long-term conceptual development of research organisations (public research institutes, universities, contributory organisations, business entities) on the basis of an evaluation of their achieved results, as well as for international cooperation involving the Czech Republic in the area of research, development and innovation (fees for participation in programmes, membership in organisations, etc.) and for operational programmes focusing on research, development and innovation. Institutions supporting research, development and innovation include the Technology Agency of the Czech Republic, whose primary task is to prepare and implement programmes involving applied research, experimental development and innovation, thus contributing to the improvement of the Czech Republic's competitiveness and economic growth. The Technology Agency's ALFA programme serves to achieve this objective, as it is focused on supporting applied-research and experimental-development projects whose results have strong potential for use in new products, production processes

and services. The ALFA programme is designed to cover a six-year period (2011-2016) during which a total of CZK 7.5 billion (approx. 300.000.000 EUR) should be disbursed. The second call was issued on 20 July 2011 (the results of the second public tender were announced on 6 January 2012). The last call of the ALFA programme will be issued this year. The minimum duration of project implementation within this programme is 24 months, whereas the maximum is 72 months.

The programme is focused on support for applied research and experimental development and is divided into three sub-programmes:

- progressive technologies, materials and systems
- energy sources and environmental protection
- sustainable transportation development

The Technology Agency of the Czech Republic provides aid to recipients who transfer their share of the provided aid to each of the other participants within the shortest possible period of time in accordance with a concluded Contract on Provision of Specific Aid. For the Technology Agency, a partner can be only a recipient with whom a Contract on Provision of Specific Aid has been concluded and all communication with the other participants is conducted via that recipient. The ALFA programme supports such projects that bring forth new and original results which are up to date and suitable for immediate implementation. More information on the ALFA programme is available at [www.tacr.cz](http://www.tacr.cz) ■

Ilona Havlíčková

PR and Event Manager, Technology Agency of the Czech Republic

## How long is the executive-search process for a general manager of an IT company (foreign investor) located in Prague or Brno?

According to our company's standards, the executive-search process takes six to eight weeks. In the case of specific requirements for a candidate and his or her experience, this process can take even longer. The whole process includes approximately five stages. The first stage is focused on the precise determination of the search strategy between the client and a representative of our company. This is one of the most important stages and the success of the entire process depends on it. The next three stages involve identifying suitable candidates on the current labour market and then proposing and subsequently presenting three to five selected candidates. The last stage consists in concluding an employment contract between the company and the successful candidate.

Whether the company is located in Prague or Brno does not play a significant role at this point. Most managers are willing to work anywhere in the Czech Republic. A far greater role in this case is played by the type of company and the conditions it is willing to offer the selected candidate. ■



  
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# A happy childhood in the Czech Republic

In the Czech Republic, it generally is not a problem for parents to find a preschool in which a language other than Czech is spoken to children. Naturally, the broadest offer comprises English preschools, which have the largest concentration especially in Prague and Brno, where they number in the dozens and their quality is high, given the relatively strong competition, though of course the price is also higher. Besides English, in a number of schools French, German, Spanish or Russian is spoken. Other larger Czech cities where international preschools operate include Ostrava, Olomouc and Plzeň. Preschools of this type are attended especially by children of non-Czech-speaking parents as well as children from mixed marriages and Czech children whose parents want to give them the possibility of enhanced language training at an early age.

## From preschool to secondary school

Preschools in the Czech Republic are not infrequently part of larger school facilities where children can continue their education. The most well-known schools of this type in Prague include, for example, the Prague British School, which opened in 1992 and currently has a student body of 800 children from 52 countries. Students range in age from three to 17 years. Other popular schools of this type in Prague are, for example, DINO Schools, which are distinguished from other schools particularly by their special school uniforms, and Park Lane

International School, part of which is a preschool called Nessie. Preschool children can continue their studies at, for example, the Riverside School or Prague International School. Preschool children of German-speaking parents can attend Deutsche Schule Prag, where they can study up to the age of 18. Parents in the country's other major cities can enrol their children in, for example, the International School of Brno or the International School of Olomouc which, however, operates only as an elementary school, i.e. only children from three to eleven years of age can attend. Conversely, children ranging in age from four to 19 can study at the First International School of Ostrava.

## Types of language preschools

From the perspective of Czechs, foreign-language preschools in the Czech Republic can be divided into two groups – preschools where Czech is spoken and English (or another language) is the second language and schools where English (or another tongue) is the primary language. At a number of schools, another language, such as French (e.g. at Cocoon Baby or Ciel Bleu), is used in addition to English. Some preschools are focused more on art and creativity (e.g. Neverland Preschool), while still others offer different activities such as yoga or swimming for children.

## Fees and prices

It is necessary to take into consideration certain fees at every preschool. The prices of

preschools vary and can range from thousands to hundreds of thousand of crowns per year depending on the capacity of the given preschool and its equipment, trained personnel and location, as well as frequency of attendance and other services (such as transport and school buses). Depending on the preschool, tuition is paid on a monthly, quarterly or half-yearly basis or, by agreement, on each day of attendance (for example, irregularly during the week, only in the afternoon or in the morning). Most preschools are open on weekdays from 8:00 a.m. to 5:00 p.m., though preschools open from 7.30 a.m. to 6.00 p.m., overnight or on weekends are not uncommon. Children can be kept at some preschools for only an hour or two.

## Beautiful locations in a natural environment

Preschools are located in large villas or family houses near forests or large parks. A popular location where preschool facilities are concentrated in Prague is in the vicinity of Stromovka Park. Popular preschools in Prague include, for example, Bumble Bee, which opened in 1995, Maxik Language Preschool, which has several locations around Prague, Our Submarine and English Garden School. German-speaking children in Prague can attend KIDS Company, for example, while Happy Child, among others, serves the early-education needs of French-speaking children. ■



Name of preschool	Location	Language	Website
Bumble Bee	Prague 5, Prague 6	EN	www.bumblebee.cz
Ciel Bleu	Prague 1	EN, FR	www.modrenebe.cz
COCOON Baby	Prague 7	EN, CZ, FR	www.cocoonbaby.cz
Deutsche Schule Prag	Prague 5	GE	www.dsp-praha.org
DINO PRESCHOOL	Prague 10	EN	www.dinoskola.cz
English Garden School	Prague 4	EN	www.englishgarden.cz
Euftrat English Preschool	Pilsen	EN, CZ	www.anglickaskolka.com
Happy Child	Prague 2	EN, FR	www.happychild.cz
International School of Brno	Brno	EN	www.isob.cz
International School of Olomouc	Olomouc	EN	www.ischool.cz
KIDS Company	Prague 10	GE, CZ	www.kidscompany-praha.eu
Language Preschool Slunečnice	Brno	EN	www.skolka-slunecnice.cz
Monty Preschool	Ostrava	EN, CZ	www.montyskolka.cz
Nessie English Preschool	Prague 5	EN	www.nessie.cz
Neverland Preschool	Prague 6	EN, CZ	www.neverland.cz
Orangery Park	Prague 6	EN, CZ	www.orangerypark.cz
Our Submarine	Prague 6	EN	www.oursubmarine.cz
Prague International School	Prague 6	EN	www.isp.cz
Riverside Early Years School	Prague 6	EN	www.riversideschool.cz
Skřivánek Smarties	Prague 4	EN, CZ	www.skrivanek.cz
The Prague British School	Prague 4	EN	www.pbschool.cz



## Klára Varna: It's amazing to watch children play

**K**lára Varna is the director of the Cocoon Baby preschool, which she established together with her husband, Erwan, near the centre of Prague in 2009. The preschool is attended by children of various nationalities. Cocoon Baby is characterized by its family atmosphere, helpful and flexible approach and the unwavering enthusiasm of its founders.

### When and how did you establish your preschool and how is it unique?

When we moved to Prague in 2008 and were looking for a day-care centre for our

then two-year-old daughter, we found that it wouldn't be easy. It was not easy to find a pleasant place with a garden in the city centre and for some parents it is inconvenient and time-consuming to take their children to the edge of Prague 5. Therefore, my husband and I changed our plans and our specialisation, and we began to look for suitable premises for our own preschool close to the centre. Due to the obligation to fulfil strict hygienic standards and expensive renovations, the Cocoon Baby day-care centre opened the

following year, in August 2009, in Letná. We tried to create a warm home environment for children aged 1 to 4 years, flexible opening hours and attendance possibilities for parents, whether they are already back at work or want once to bring their children once a week or by appointment. An advantage is definitely the multi-lingual aspect of our facility: we speak Czech, English, French and Hungarian. However, this is not for the purpose of conducting "language courses for toddlers", but rather so that we can communicate with children and their parents in their native language. Our experience shows that children automatically learn other

languages which they hear around them. All of our employees are educated in the field of healthcare or pedagogy and have experience abroad as well as a sense of humour! Capacity is 20 children and five adults.

### What kind of services does your preschool offer?

Parents can choose time programme when their children will attend and how many times per week. Or regularly use hourly child-minding. We also offer child-minding at night and outside our regular opening hours. The most important thing for us is that children feel as safe here as they do at home and have the most fun possible. During the day we sing, exercise, dance, paint, learn age-appropriate skills, go to the garden and, mainly, play all the time. Cocoon guarantees a well-rounded day according to each child's rhythm. We rely on the exchange of opinions with parents and, for us, accepting a child means accepting the whole family.

### What kinds of children attend Cocoon?

We accept children from the age of ten months and we do not have any skill conditions for acceptance, such as walking, the ability to eat unassisted or use the toilet, even though we train children in these areas. Children from various countries, as well as Czech children, attend our preschool. It is amazing to watch them play; at this age they excel at friendship regardless of their age or the language they speak. And how the time flies; we have younger siblings of children who outgrew us. We try to stay in contact with the children who come to us, so we organise "preschool" class reunions, so every year we see how the children have grown and changed.

### How and when can parents enrol their children with you?

Children can enrol their children in Cocoon throughout the year. We are open year-round except for Czech national holidays and the week between Christmas and New Year's Day. ■

#### Contact:

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E-mail: [contact@cocoonbaby.cz](mailto:contact@cocoonbaby.cz)  
Telephone: 220 514 919



Takaaki Yamamoto,  
CEO of AMCON Europe

"I love **Czech steak tartare**"

**W**hat do you like the most about living in the Czech Republic?  
Drinking beer on nicely designed wooden terraces which suddenly appear all over the country in the summer.

**What was the most surprising thing for you?**  
The fact that the name of the Czech company Škoda means "a pity" in Czech.

**What's your favourite Czech food?**  
Steak tartare.

**What would you recommend to visit in the Czech Republic?**  
In Prague mainly Vyšehrad, Letná park, the

clubs Futurum and DOX, Kino Aero cinema and the Plzeň brewery.

**About my company...**

AMCON Europe s.r.o. is a subsidiary of the Japanese company AMCON Inc. of Yokohama, Japan. We started operations in the Czech Republic in October 2011. At our first European factory located on the outskirts of Prague, we produce the VOLUTE dewatering press, a special machine for solid-liquid separation, used mainly in the water-treatment process. With its unique, patented technology, AMCON continues to provide both the private and public sectors with reliable solutions. ■



Carlos Garcia Perez,  
Operations Manager at  
Informática El Corte Inglés

"The **quality of life in Prague** is excellent!"

**W**hat do you like the most about living in the Czech Republic?  
The first thing I love about the Czech Republic is that my family loves being here. I live in Prague with my wife, two kids and one dog, and we feel it is a family-friendly city with a lot of activities that we can do together. It is worth mentioning that we are in the geographical centre of the Czech Republic and therefore of Europe. This means that we can comfortably travel to a lot of wonderful places in a very short time.

**What was the most surprising thing for you?**  
The excellent quality of life that you enjoy in Prague compared to other major European cities.

**What's your favourite Czech food?**  
I think the Czechs are true masters of making soup. I love the dršťková polévka, but I will not give more details about its ingredients so we do not discourage people to try it. Roasted ribs and Czech goulash are also a must. Czech beer is simply the best.

**What would you recommend to visit in the Czech Republic?**

I love Kutná Hora. I love the many well-kept castles and palaces around the country. I love the green areas in Prague. Petřín, Vyšehrad... the river with its pedestrian walks and bicycle lanes.

**About my company...**

Informática El Corte Inglés is the IT services and consulting company of El Corte Inglés Group, which is one of the largest private companies in Spain with activities in many business areas. The group's turnover was more than 16.4 billion euros last year. Informática El Corte Inglés operates in 20 countries worldwide providing ICT services based on five distinctive elements: quality, specialisation, service, innovation and guarantee. Our services relate to outsourcing, ERP, CRM, BI, e-business, cloud solutions, mobility, etc. We have been developing our activities in the Czech Republic for over a year and a half. More information can be found on our website at [www.informaticaelcorteingles.com](http://www.informaticaelcorteingles.com). ■



Paul Deverell,  
Business Director at CTP

"I like **Czech beer**"

**W**hat do you like the most about living in the Czech Republic?  
I like the location, which is very central within Europe.

For weekends you have many choices within easy reach. Mountains, countryside and cities in Germany and Austria are only a short drive away. Or you can stay in the Czech countryside and find a nice bike trail to ride.

**What was the most surprising thing for you?**  
How difficult the language is!

**What's your favourite Czech food?**  
Roasted duck with red cabbage and dumplings, washed down with a very good Czech beer (which most of them are). My favourites are Gambrinus and Kozel!

**What would you recommend to visit in the Czech Republic?**

Closer to Prague, I like Štiřín and stopping for a Kozel at the Velké Popovice brewery on the way. Further away from the capital, I think Český Krumlov is a beautiful medieval town.

**About my company...**

CTP is the largest developer of manufacturing, logistics and office properties in the Czech Republic. CTP owns and operates a portfolio of 200 properties, 1.8 million m2 of built-up spaces with around 380 tenants including companies such as Honeywell, DHL, Tyco, Bridgestone, Schenker, Acer, ABB and others. The CTPark Network consists of large-scale business parks at the most strategic locations in cities including Brno, Ostrava, Plzeň and Teplice. Our office parks, including Spielberk Office Centre Brno and IQ Ostrava, are home to companies including GE Money Bank, AVG, SAP, Tieto, Logica, Monster and Infosys. ■

# CZECHINVEST THE GATE FOR FOREIGN INVESTMENT TO THE CZECH REPUBLIC

As a subordinate agency of the Ministry of Industry and Trade, CzechInvest's primary objective consists in strengthening the competitiveness of the Czech economy through support for small and medium-sized enterprises, business infrastructure and innovation, and revitalising Czech industry.

CzechInvest offers a broad spectrum of services, which it unceasingly strives to improve and adapt to economic demand. The agency aids the inflow of foreign direct investments to the Czech Republic and endeavours to maximally contribute to the creation of a favourable business environment in the country. In recent years, CzechInvest has focused increasingly on the area of business support services as well as technologically demanding projects requiring a high degree of knowledge and skills and with high value-added. Besides innovation and applied research and development, key sectors also include IT and software development, shared services, life sciences, clean technologies, electronics and electrical engineering, nanotechnology, aviation, aerospace and the automotive industry. The agency serves as an intermediary for facilitating communication between the state, companies and the European Union. It covers the entire area of business support from EU resources as well as from the state budget, and carries out activities connected with the preparation, introduction and administration of projects. At the same time, CzechInvest promotes the Czech Republic abroad as a location suitable for place-



ment of mobile investments. It is the exclusive organisation which may submit applications for investment incentives to the governing bodies. Furthermore, it supports Czech firms which are interested in becoming involved in the supply chains of multinational companies. Through its services and development programmes, CzechInvest contributes to the development of domestic companies, Czech and foreign investors, and the business environment as a whole. The agency also offers aftercare services and strives to maximally satisfy the demand for business properties. In order to be closer to its clients, CzechInvest has offices in thirteen regional capitals of the Czech Republic and seven foreign offices.

CzechInvest holds investors and their project in high regard in the Czech Republic. Therefore, CzechInvest recognises and values their benefit for the Czech Republic in several competitions: Investor of the Year, Business Property of the Year and Entrepreneurial Project of the Year. More information about CzechInvest is available at [www.czechinvest.org](http://www.czechinvest.org).

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# Your Czech e-guide



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