



In the Czech Republic, for the Czech Republic

Business to Society Report

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A company’s success is usually judged by two economic indicators – revenue and profit. In my personal view, this is not enough. I am convinced that a company is successful and socially beneficial if it does not look only at its economic prosperity but also at how it contributes to the society. And I firmly believe that this view is shared by almost eleven thousand of my colleagues from Siemens divisions and production plants, because we have been contributing to the development of the Czech

economy and society for more than one and a quarter of a century.

Almost all multinational companies publish their corporate social responsibility (CSR) reports indicating how much money was invested in their CSR programmes. Siemens takes a different approach to evaluating its contribution to the society through the Business to Society Report. It does not look only at the volume of investment; it looks at the value of Siemens activities in different fields: strengthening the economy, developing local jobs and skills, driving innovation, sustaining the environment, improving the quality of life and shaping the societal transformation.

Just like any other country, the Czech Republic has its plans, strategies, challenges and priorities. I am very proud of the extent and variety of the contribution of Siemens as a company and its employees: from our contribution to the GDP to the number of volunteer hours, from investments in the support of education to help people in need.

I want to thank all of our customers, partners, academic and non-profit organizations and primarily all of our employees because it is thanks to them that we can publish such interesting facts and projects in our report. And I want to thank all who decide to devote their time to reading this report.

Eduard Palíšek
CEO, Siemens Czech Republic



What is the Business to Society Report?

It is a way how to measure the positive impact of our activities in the Czech Republic using different methods.

The philosophy behind the Business to Society concept is based on the need to create long-term value for the societies where Siemens is active. The aim is not to count the investment in the production plants and offices; the objective is to measure positive economic and societal contribution of our activities in the Czech Republic.

The results of such analysis enable us to better understand our impact in the Czech Republic:

- How we contribute to economic prosperity and creation of new jobs,
- How we help to increase the qualification of the work force and support education;
- How we strengthen the innovation potential of the country;
- How we contribute to improvement of the environment and quality of life,
- What is our contribution to the overall societal transformation.

How is the Business to Society Report created? First we analyze a number of facts and data, such as strategic plans of the country and regions, economic, education, health and innovation indicators, as well as key pillars of the future country development. In the next phase we map

our company's impact on those areas. This helps us to realize what we do well and what we can do better.

The input that we get from the Business to Society Report helps us to focus on questions that are of key importance to our customers, suppliers, public services, communities and other stakeholders impacted by our activities.

The Czech version of the Business to Society Report looks at the Siemens contribution to the Czech Society also with regard to the UN Agenda 2030 for the Sustainable Development and the 17 Sustainable Development Goals it defines. Czech Business to Society Report therefore shows how Siemens contributes to the fulfillment of these goals in the Czech Republic.

“Full awareness of our responsibility towards the society and the future generations... That is what “Business to Society” means to me!”

Joe Kaeser, CEO Siemens AG

UN Sustainable Development Goals

Seventeen Sustainable Development Goals (SDGs) represent the development programme for the years 2015–2030. Siemens actively supports achievement of these goals through its activities worldwide as well as in the Czech Republic.

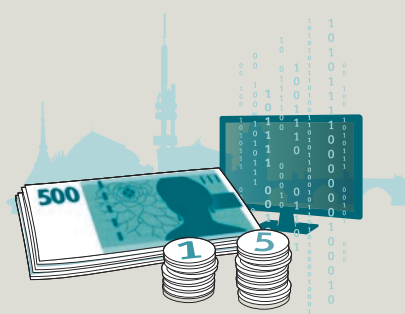
Sustainable Development Goals are the result of a three-year process of negotiations that started at the Rio de Janeiro UN Conference on sustainable development in 2012. All UN member states, representatives of NGOs, businesses (including Siemens), academia as well as citi-

zens from all over the world took part in formulating the goals. The sustainable development agenda was approved at the UN 2015 Summit in New York on September 25, 2015 in a document entitled: the 2030 Agenda for Sustainable Development.



What matters to the Czech Republic?

Just like the other countries where Siemens is active, the Czech Republic has its specific priorities, plans and societal needs. Today's approach of the Czech Republic to technological, societal and climate changes determines its long-term prosperity.



Strengthening the economy

The Czech Republic is a highly industrialized country where industry generates 38% of GVA and employs 31% of workforce. Although the Czech economy is highly dependent on industry, only 9.2% of industry is classified as being hi-tech.

The industry sector in the Czech Republic has been highly dependent on FDIs over the last two decades. However, they dropped from USD 4,322 million in 2008 to USD 984 million in 2016.

The Czech Republic has to focus on growth through development and innovation and increase the energy and material efficiency at the same time.

Three pillars of the country's economic development were defined: support of business, growth through education, development and innovation and an efficient use of resources.

The national strategy for implementing the Industry 4.0 concept was defined – the Industry 4.0 Initiative.



Developing local jobs and skills

Sustainable growth of the Czech economy is based on availability of skilled technicians. It is expected that there will be a lack of over 100,000 technicians in the upcoming years.

Despite the growing number of university students, the number of graduates of technical branches dropped from 8,000 in 2008 to 6,200 in 2015. The number of secondary school students who plan a career in the technical sector is lower than the OECD average: Czech Republic: 16.9%; OECD: 24.5%.

The number of Czech citizens working abroad increased twofold between 2006 and 2014. It is estimated that some 30% of young scientists who participated in international exchange programmes decide to pursue their scientific career abroad.

With 3.4% of GDP invested in education from the public budget, the Czech Republic is in one of the last positions in the OECD chart where the average makes 4.8% of GDP.



Driving innovation

Investments in research and development (GERD) grew significantly: from 1.5% in 2010 to almost 2% in 2015. Nevertheless, the figure is still below the EU average. Most investments in innovation come from industry: 59%. It is mostly the automotive, machine and electronic industry followed by IT and communications with 17%.

Two thirds of public support of research and innovation go into companies with more than 250 employees. It is the country's priority to support small and medium-sized enterprises.

The innovativeness indicator on the WEF Global Competitiveness Index is decreasing, from 27 in 2006 to 37 in 2016.

Increasing the ability to innovate and strengthening the economy through products and services with a high added value are the key priorities for the Czech Republic.



Environmental sustainability

The Czech landscape changed dramatically in the second half of the 20th century. Intensive agricultural use pursued without any respect for other functions of the environment caused accelerated outflow of water, extensive deterioration of farmland and decreased biodiversity.

Average temperature rose by 0.9 °C over the last 23 years; 20 hottest days in the history of the temperature measurement (since 1775) occurred after the year 2000.

Many locations in the Czech Republic suffer from water shortage. Keeping water in the landscape, protection of water and its effective use are the key for long-term sustainability. Cleaning and processing of wastewater must increase from the current 81%.

Due to the highly concentrated industry, the Czech Republic has high CO₂ emissions: 9.2 tonnes per capita per year (EU average: 6.4 t).

Decrease in energy and water consumption, decrease in waste and emissions creation from industry and agriculture are the long-term priorities of the Czech Republic.



Improving the quality of life

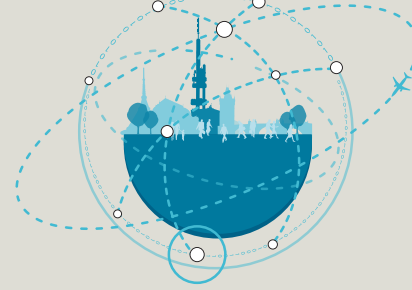
A total of 30% of the Czech population lives in cities with more than 300,000 inhabitants; over 46% live in towns with 10,000–100,000 inhabitants. Some 2.8 million persons commute to their work, school or other duties on the daily basis.

The quality of the Czech infrastructure is not even; many regions suffer from infrastructure insufficiencies. It is necessary to finalize the construction of the north-south highway connection, connect railway corridors with the neighbouring states and spread the broadband internet connection to rural areas.

Public spending on healthcare is 7.5% of GDP, i.e. 1.5% less than is the OECD average. The length of healthy life is increasing both for men and women and reaches 63.4 and 65 years respectively.

Some 55% of the Czech population is obese. Cardiovascular diseases are the most frequent cause of death (50% of women, 42% of men), followed by cancer (women: 22%, men: 27%).

Even though the air quality has improved, it still represents a fundamental problem. The average concentration of solid particles reached 20.1 µg/m³; in cities, it was 20.7 µg/m³.



Shaping the transformation

Work-life balance opportunities need to improve. Due to the lack of part-time jobs and limited access to child care, 15% of mothers of children aged 3-6 years are unemployed.

With 5.6% of persons aged 26 – 60 working part time, the Czech Republic is one of the countries with the lowest proportion of people working in this regime in the EU.

Some 14% of population is endangered by poverty and social exclusion, 9% by income poverty. The number of homeless persons is estimated at 40,000, one third being women.

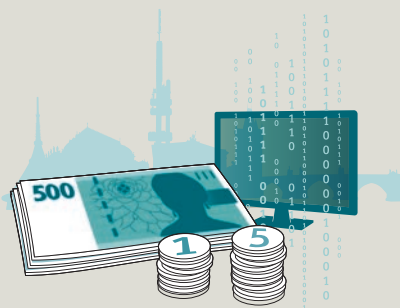
The gender gap in terms of wages is one of the largest within the EU, reaching 21% in the public sector and 23% in the private sector. Many single mothers are at risk of poverty.

In the Corruption Perception Index by Transparency International, the Czech Republic ranks in the 47th place. In the corporate ethics ranking (WEF), the Czech Republic dropped from the 52nd place in 2006 to the 76th place in 2016.



In the Czech Republic, for the Czech Republic

How Siemens contributes to the economic and social development of the country.



Strengthening the economy

Siemens global activities contribute CZK 31.8 billion to the gross domestic product (GDP) of the Czech Republic (2015). This represents 0.7% of GDP.

In the Czech Republic, Siemens operates a sales organisation, seven production plants, six development centres, seven development departments in factories, and two shared service centres.

The value of goods and services purchased from Czech suppliers reached CZK 7 billion in 2016, representing 50% of the total purchasing volume.

In the fiscal year 2015/2016, Siemens exported goods and services worth CZK 10 billion from the Czech Republic.

Siemens will invest CZK 7 billion in the digitalization, modernization and efficiency-improvement programmes of its operations in the Czech Republic in the years 2017–2024.

Siemens paid almost CZK 300 million in income tax in the Czech Republic in 2016.



Developing local jobs and skills

Siemens organizations employ almost 11,000 people in the Czech Republic.

In total, 35,000 jobs are linked to Siemens activities in the Czech Republic. This represents 0.7% of the country's workforce.

Siemens will create 1,800 new jobs in the years 2017–2024, with 30% being highly skilled positions in development, management and other specialist areas.

Every year, Siemens invests CZK 44 million in the training and education of its employees. On average, each Siemens employee has 18 hours of training and education per year.

One hundred and sixty-four technical experts are taking part in the Siemens programme Expert Career@Siemens, and 16 have achieved full certification.

Over its 10-year existence, the Siemens education programme Totally Integrated Automation has hosted more than 20,000 automation specialists.



Driving innovation

More than 900 specialists work in six development centres and seven development departments in factories. Almost 10% of Siemens employees thus work in development.

In the autumn of 2017, Siemens opened a new development centre in Ostrava specialising in electric motors and generators. More than 100 specialists are expected to work there.

Siemens will invest CZK 7 billion in the development of its activities in the Czech Republic in the years 2017–2024. The investment will go mainly into digitalization and smart technologies.

Siemens supports nine renowned university professors from eight faculties of three universities through so-called "endowed chairs".

The winners of the 20th Werner von Siemens contest for young scientists and students in technical and natural -science fields are to be announced in 2018. Since the beginning of the competition, 319 students and teachers have been awarded CZK 9.3 million in prize money.

Siemens is one of the founding partners of the Testbed for Industry 4.0 at CIIRC (Czech Technical University). Testbed is a unique platform for open collaboration across industries and academia. SMEs can test their innovations there and verify their feasibility.



Environmental sustainability

Siemens has pledged to become CO₂ neutral by 2030.

From the beginning of 2018, 100% of the energy that Siemens buys for its own locations will be from renewable sources.

CO₂ emissions from Siemens' fleet of 650 cars decreased by 345 tonnes between 2014 and 2015 and reached an average of 110 g/km. A growing electromobility share and thoughtful engine selection will contribute to achieving the target average of 95 g/km.

An extensive energy-efficiency project carried out at the Mohelnice plant produced yearly CO₂ savings of almost 4,500 tonnes. Another energy-efficiency project is planned for the Letohrad plant (2018) and should save an additional 2,300 tonnes of CO₂ per year.

Thanks to small solar power station installed on the hall of the production site in Frenštát, the factory saves 22 t of CO₂ every year.

Siemens recycles 97% of the waste it creates.



Improving the quality of life

Thanks to Siemens solutions, the Pardubice Region will save CZK 71 million over the next 10 years. Using the energy performance contracting (EPC) method, Siemens will increase the energy efficiency of 17 specialized vocational schools, upper-secondary schools and social institutes.

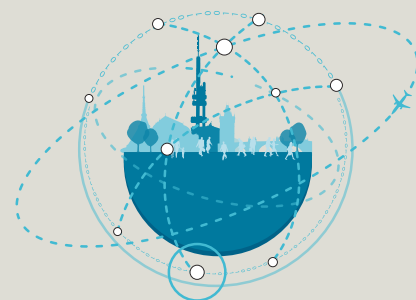
The Siemens trains that operate on the busiest line of the Prague metro – the C line – transport 500,000 passengers every day. All 22.4 kilometres of the C line are equipped with Siemens security and signalling installations. Siemens is also responsible for the maintenance of all of the metro trains on this line.

Seven Siemens Railjet trains (Viaggio Comfort) operated by Czech Railways (České dráhy) transport more than 1.5 million passengers every year.

Twelve Siemens mammography units provide Czech women with 450,000 scans per year.

More than 1,000 Siemens employees donated over 450 litres of blood in the last five years and potentially saved 3,000 lives.

Forty-two Siemens synchronous motors powered by 21 control modules move the 42 layers of the *Head of Franz Kafka* – an outstanding sculpture by artist David Černý.



Shaping the transformation

Benefits worth a quarter of a billion Czech korunas are provided to Siemens employees every year.

Forty percent of Siemens employees in the Czech Republic are women. Twelve percent of employees are 55 years of age or older. The average age is 39.

Siemens employs 197 disabled people.

Siemens Czech Republic's employees represent 46 nationalities (including Czech).

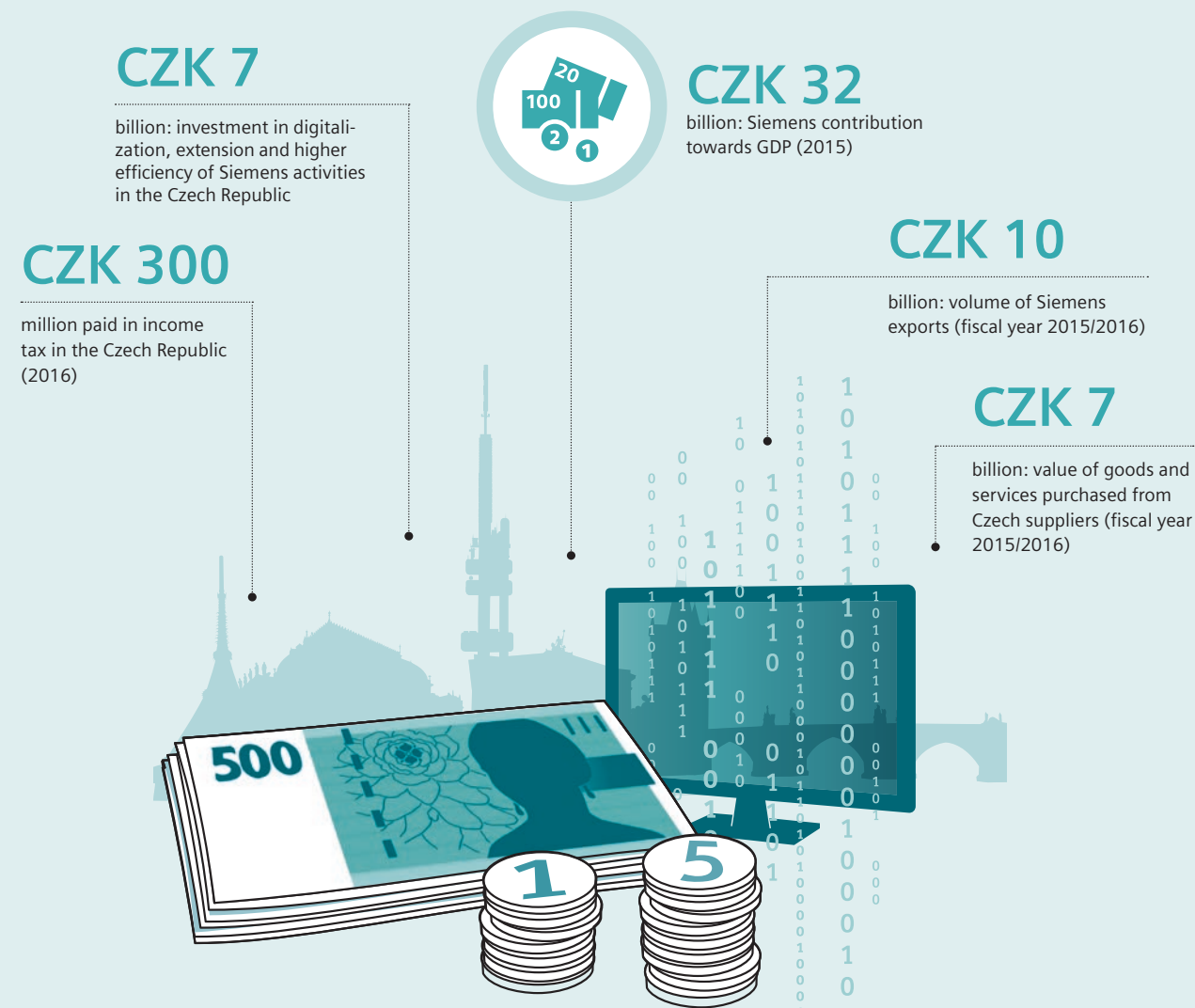
A total of 101 mothers and fathers on parental leave use the opportunity to stay in contact with their jobs during this time and work in some form of part-time employment.

Siemens employees have donated more than 8,500 volunteer working hours to 163 NGOs since 2012.

The Restart@Siemens programme for homeless people has had seven successful participants. More than 100 CVs have been processed, and offers have been made to more than 20 individuals.

Since 2004, the Siemens Aid Fund, which provides support for NGOs, has donated more than CZK 34 million to 400 projects.

Strengthening the economy



We Support Czech Economic Growth

For more than one and a quarter of a century Siemens has been an inseparable part of the Czech economy and society. Siemens activities in the Czech Republic comprise business organizations, 7 production sites, 6 development centres, 7 development departments and 2 shared services centres. It employs almost 11,000 employees.

Siemens global activities contribute to the creation of the Czech Republic's GDP with a total sum of CZK 31.8 billion (2015). That is approximately 0.7% of GDP.

A total of CZK 6.9 billion of gross added value (GVA) is created by wages, taxes and depreciations for all Siemens organizations in the Czech Republic. Indirectly, Siemens activities represent a share of GDP equalling CZK 9 billion thanks to the global demand for the goods and services that are completely or partly produced by companies in the Czech Republic.

Wages paid to Siemens employees and employees of the companies in the supply chain help to finance personal consumption. The final demand contributes CZK 4.5 billion to GDP through the so-called induced effect.

Siemens solutions at customers create an indirect contribution to GDP in the amount of CZK 11.4 billion (indirect and induced effect).

The value of goods and services which Czech Siemens organizations bought from Czech suppliers exceeded CZK 7 billion in 2016. That represents 50% of all purchased goods and services.

Thanks to a strong position in industrial manufacturing, Siemens is an important exporter. In fiscal year 2015/2016, it exported goods and services worth CZK 10 billion from the Czech Republic.

Development of industry is essential for the growth of the Czech economy; it represents around 38% of GVA and places the Czech Republic among the most industrial countries in Europe. Siemens and its representatives intensively push for the implementation of Industry 4.0 principles into large, medium-sized and small companies in the Czech Republic. Siemens gives a lead in the area of Industry 4.0: it will invest CZK 7 billion in digitalization and modernization of its plants between 2017 and 2024.

Siemens is a reliable payer of income tax; in 2016 it paid almost CZK 300 million.



Digitalization: Basics of the Industry 4.0 Concept

The Industry 4.0 concept emerged few years ago and its core is digitalization, the propagation of high-speed Internet, the development of smart technologies, communications, and other topics.

The Industry 4.0 concept can be implemented with a Siemens solution called Digital Enterprise. The journey to a digital enterprise goes through the digitalization of all phases of the manufacturing process and smart data analysis. The result is increased productivity and efficiency, faster launching of new

products, energy-efficient operations, and economical production of large numbers of individualized products. These solutions are ready both for large companies and small and medium-sized enterprises, where they help significantly in increasing competitiveness on international markets.



The Automotive Industry – a Flagship for Digitalization

The Czech Republic is at the centre of European automotive industry. In 2016, there were almost 1.4 million cars manufactured in the Czech Republic. Almost half of Czech production belonged to ŠKODA AUTO, which produced 765,000 cars, almost 12% more than in the previous year.

A Siemens digital factory at ŠKODA AUTO

ŠKODA AUTO employs 30,000 people and the health and safety of its employees is a priority for the company. The digital factory solution Tecnomatix, from Siemens' PLM Software portfolio, enables the whole production line to be virtually planned and simulated and production areas arranged and optimized so that the workplace has the lowest possible

impact on the health of employees. The unified Teamcenter platform for product lifecycle management from Siemens allows for the administration and sharing of technical documentation and other data, from product design to engineering and production, and keeps them permanently up to date.

ŠKODA AUTO – a Siemens digital solution for the Kvasiny paint shop

ŠKODA AUTO is among the plants in the Czech Republic with the most highly developed digital enterprise concept and the greatest implementation of Industry 4.0 elements. The car factory is constantly improving its operations: it improved dryer operations in its Kvasiny plant, where a modern Heating Control System from Siemens enables fault-free drying of freshly painted bodywork.

Bodywork represents a very important aspect of every car, as it often plays a role in our deciding whether or not to buy a new one. In addition to the car's shape and colour, the quality of the finish (namely the paint) is important as well. Siemens proposed and realized the complete modernization of paint shop operations, which are maximized both economically and as regards energy efficiency. A control system provides a detailed overview of ongoing processes and thereby ensures their effective monitoring.

Seven Billion within Seven Years

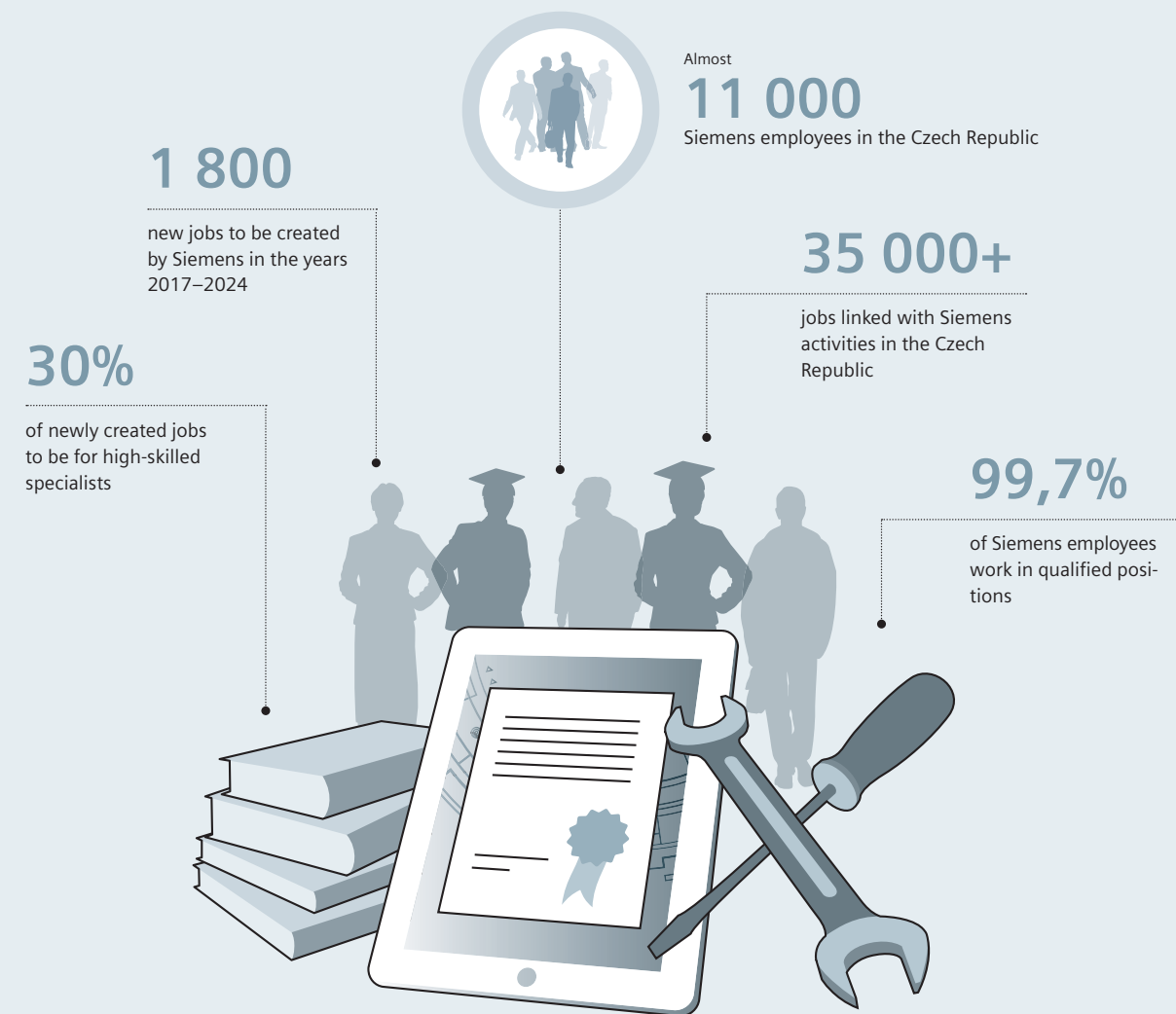
Between 2017 and 2024, Siemens Czech Republic will expand and modernize its plants and will increase the output from its other activities. It will invest seven billion korunas in total.

The greatest part of the investment will be shared by three plants that produce electromotors: Drásov, Frenštát pod Radhoštěm and Mohelnice, which will be expanded and modernized.

Siemens will also invest heavily into the expansion and digitalization of its production of low-voltage switching technology and electric circuit breakers in Letohrad and Trutnov as well as into the modernization of its steam-turbine plant in Brno and its busbar facility in Mohelnice.



Developing local jobs and skills



Qualified Employees Are the Basis of Prosperity

With the arrival of new technologies and digitalization, the demands for employee qualifications have been increasing. Qualified and motivated employees represent a crucial competitive advantage for the company. Siemens supports the broadening of qualifications of its employees, partners, customers and suppliers. Many of Siemens programmes focus on students of technical fields and natural science and on the cooperation with schools of all types.

Siemens organizations employ almost 11,000 people in the Czech Republic. A total of 99.7% of employees work in qualified positions, i.e. in those where at least 4 months of training are required.

The total number of jobs connected to Siemens activities in the Czech Republic is at 35,000. That corresponds to 0.7% of the total workforce (2015).

Thanks to Siemens technologies and solutions, there are about 10,000 jobs at Siemens suppliers and 10,000 jobs at customers (so-called indirect jobs). Around 5,000 jobs exist in companies whose products and services are bought by Siemens employees and employees of Siemens suppliers and customers.

Between 2017 and 2024, Siemens will create 1,800 new jobs, 30% of which will be highly qualified jobs in development, management and other specialized fields of activity.

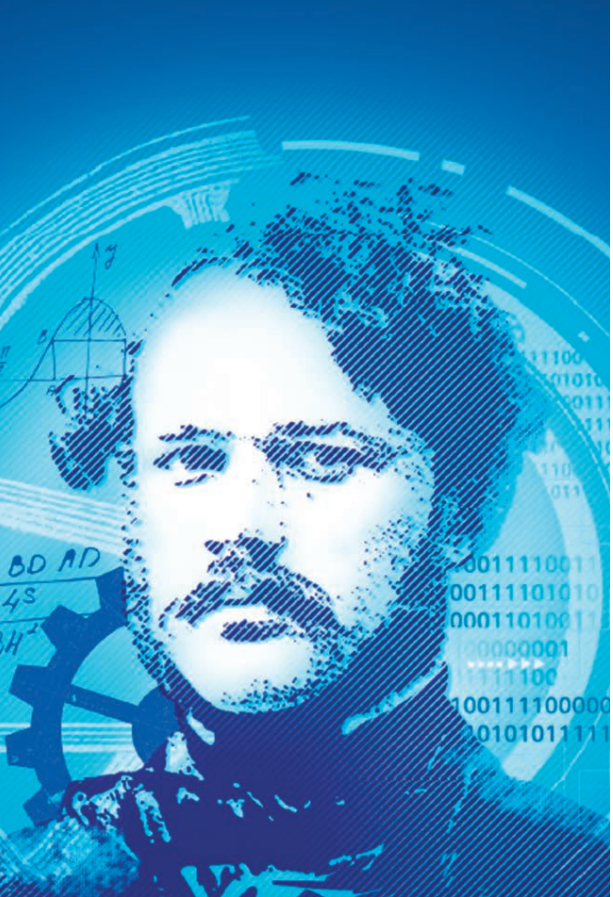
Every year Siemens invests CZK 44 million in education and training of its employees; 18 hours of training are allotted to each employee per year. The unique programme Expert Career@Siemens for technical experts offers the possibility of career growth based on the broadening of one's professional competences. The programme has more than 160 participants and 16 people have already been certified within this programme.

For two decades, the Werner von Siemens awards have been awarded to students of technical fields and of natural science, young scientists and pedagogues. The awards represent one of the most important independent activities of this kind in the Czech Republic. Many renowned academic and state institutions are long-term partners of this competition.

Siemens considers support of technical education and cooperation with schools to be of utmost importance. Since 2017 Siemens has been supporting 9 university professors who enable direct contact of students with the latest technologies and practices. In Brno and Ostrava there are Siemens student offices in operation where students can participate in specific projects led by experts from among Siemens employees. The long tradition of cooperation with secondary schools and vocational schools is successful in all plants.

The programme of specialized automation seminars entitled Totally Integrated Automation has been organized by Siemens already for 10 years. During this period, it has been attended by around 25,000 specialists, mainly from small and medium-sized enterprises.





Cena Wernera von Siemense v číslech:

- 319 oceněných studentů a pedagogů
- 7 kategorií
- rozděleno 9 280 000 Kč

Werner von Siemens Award

Research and innovations represent the investment in the future. The Werner von Siemens award is a way to motivate young Czech talents to study and research in the field of technology and natural science. With its extent, amount of financial prizes and tradition, this competition is among the most significant independent initiatives of its kind in the Czech Republic.

The purpose of the Werner von Siemens Award is to motivate young talents and strengthen their positive attitude towards science on the one hand and to contribute to increased prestige of professors without whom no great student scientific results would be possible on the other hand.

Since 1998 Siemens has awarded more than 300 students and professors for their innovative contribution to the Czech society. Students and young scientists are awarded in 7 categories:

- the most significant outcome of basic research
- the most significant outcome of development/innovation

- the best pedagogical worker
- the best graduate thesis
- the best dissertation
- the best dissertation written by woman
- award for overcoming obstacles in study

Between 1998 and 2017 almost CZK 9.3 million was distributed among the winners. The juries for individual categories include representatives of 15 Czech leading technical universities and the Czech Academy of Sciences.

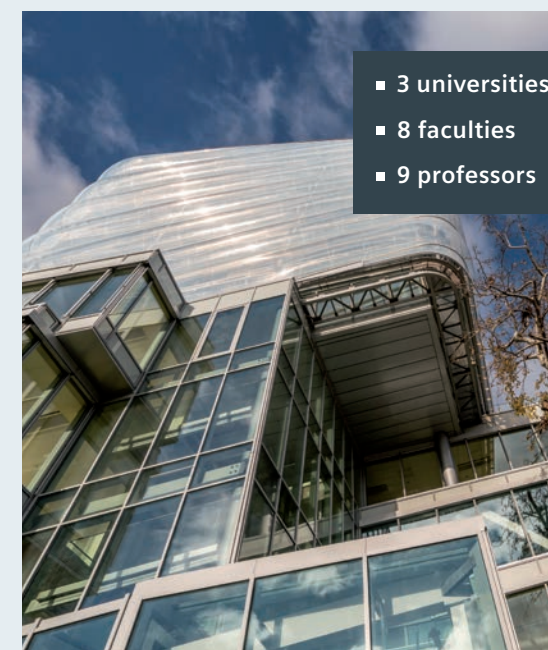


Supporting Czech University Professors

Since 2016, Siemens Czech Republic has supported nine professors from important Czech technical universities in order to deepen students' knowledge in technological areas.

Thanks to this cooperation, students and their professors have access to the latest technologies, strategies and concepts. There are Siemens projects in which the students can take part and utilize their theoretical knowledge in practice. This university-support concept, known as "endowed chairs", is widespread in the United States and Western Europe.

The Czech Technical University in Prague, the Brno University of Technology and the Technical University of Ostrava take part in Siemens' programme for supporting university professors. All three universities can cooperate with any Siemens factory or division.



- 3 universities
- 8 faculties
- 9 professors

A sufficient number of young technicians who have a passion for their job and want to learn new things is crucial for the Czech Republic. That is why Siemens supports young students and makes it possible for them to get to know the production process and experience the joy of the realization of their own technical solutions.

Supporting Secondary and Vocational Schools

Secondary and vocational schools play an irreplaceable role in the preparation of technicians. That is why Siemens supports not only these organizations but also individual students on a long-term basis.

Siemens' electromotor plant in Mohelnice cooperates intensively with the town's Technical and Agricultural Secondary School (SŠTZ). In addition to helping with equipment, the school takes part in Siemens' scholarship programme. Students who would like develop their technical abilities and start

working for Siemens after finishing their studies can register for the scholarship programme. Around 40 students from technical secondary schools in Mohelnice are participating in the scholarship programme. Siemens is also ready to support talented students during their university studies.

Other Siemens plants also support secondary schools, and the company is a sponsor of CNC programming competitions.

"The benefits for our school are the material help, the students' contact with the company's environment, and the support given to students with regard to their individual development and the development of their key and technical competences. It is a motivational space for their future job performance. Another important aspect is their becoming familiar with the atmosphere of a well-functioning and well-established company."

Mgr. Jiří Ženožička
Headmaster
SŠTZ Mohelnice



Student Offices

Student Offices is a unique Siemens project that allows university students to gain hands-on experience in fields in which they already have very good theoretical knowledge while they are studying.

Siemens has opened two student offices – in Brno and in Ostrava. Students work on concrete technological tasks with the support of a Siemens employee who is their mentor. In Ostrava, students from the Technical University of Ostrava work on projects for the electromotor production plant based in Frenštát pod Radhoštěm; in the Brno office, they participate in the implementation of projects for the company's steam-turbine subsidiary, Industrial Turbomachinery, and for the electromotor production plant in Drásov.

The students also have the opportunity to write their bachelor's, master's or dissertation thesis. After participating in Student Office projects, they have a very high chance of getting a full-time job in the company.



Driving innovation



Innovation Increases Added Value

The ability to innovate is the basis of long-term success. Siemens therefore makes an extraordinary effort to keep the largest proportion of innovation potential in the Czech Republic. In addition to its development centres and the development departments in its plants, Siemens participated intensively in the building of a unique lab: Testbed for Industry 4.0 (CIIRC).

More than 900 development specialists, almost 10% of Siemens' Czech workforce, work in the company's six development centres and seven development departments.

Each of the plants has its own development department and together, these departments employ 450 experts.

Siemens Corporate Technology has two centres in the Czech Republic – in Prague and Brno – where 300 specialists work. The Siemens Mobility division has three development centres in the Czech Republic (Prague, Brno and Plzeň) which employ more than 160 experts.

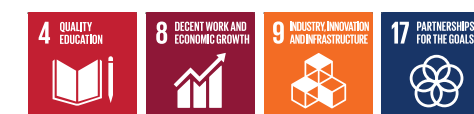
An entirely new centre for the development of electric motors and generators for the Industry 4.0 concept, which will employ up to 100 specialists, was opened in 2017 in Ostrava. It is a unique project within the Siemens Group, the only similar one being in China.

In May 2017, the group's first digital electric motor was manufactured at the Siemens plant in Frenštát. This motor has its own IP address and can be included in IoT schemes.

Between 2017 and 2024, Siemens will invest CZK 7 billion into the development of its activities in the Czech Republic. A large part of this investment will be aimed at digitalizing plants and implementing smart technologies.

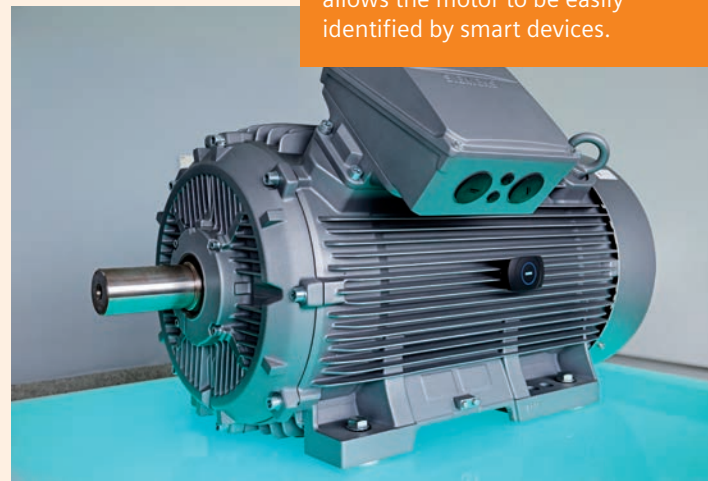
Increasing the innovation potential of small and medium-sized enterprises is a key point in the Innovation Strategy of the Czech Republic. Siemens is the main partner of a unique testing lab, Testbed for Industry 4.0, where SMEs that do not have their own development centres for digitalization can test their ideas and prototypes. Siemens is also a partner of the National Centre for Industry 4.0.

Siemens also supports SMEs by acting as a supplier; products and services in the area of automation and drives and low-voltage solutions for small and medium-sized enterprises represent about 18% of sales in these branches.





A Simotics IQ 1LE5 digital motor from the Frenštát plant. The “smart motor” concept allows cloud analysis of data from the motor, and the Data-Matrix code allows the motor to be easily identified by smart devices.



Wayguard DLX – a revolutionary solution for railway crossings, developed 100% in the Czech Republic

Research and Development – the Basics of Success and Prosperity

Almost 10% of Siemens employees in the Czech Republic work in development. In the Czech Republic development unit, Siemens Corporate Technology has two development centres and the rolling stock division controls three others. All of the development centres supply specific solutions for the company’s global projects, and their employees cooperate closely with Siemens development centres all over the world.

An entirely new development centre dedicated to research and development related to electromotors and generators was established in Ostrava in 2017. Siemens development centres are situated in Prague, Brno, Ostrava and Plzeň and thereby offer highly qualified jobs to specialists from all over the Czech Republic.

Siemens’ seven production sites in the Czech Republic each have their own development centre. Thanks to the knowledge, experience and qualification of Czech developers, product development takes place largely in the plants themselves.

Corporate Technology development centres
With each project, developers go through a complex process, from the original proposal through software and hardware to serial production. They have the best technological equipment available. The uniqueness and importance of all team members is crucial to this process, and that is why they have a free hand when working. Interesting projects originate in the Czech development centres that have the potential to improve people’s everyday lives.

Rolling stock development centres
The Czech Republic is home to the third largest development centre for the rolling stock, which

participates in the development of modern vehicles for many countries and metropolises around the world. Czech specialists secure the development and construction of the rolling stock for railways and urban public transportation systems. They deal with both conventional and high-speed (350 km/h) railway technology. Thanks to their knowledge, there are metros in Bangkok and Warsaw, and in Riyadh there is even a driverless metro.

Electromotors and generators development centre
The task of the electromotors and generators development centre is to provide highly specialized development services not only to the Siemens

plants in the Czech Republic which manufacture these products (Drásov, Frenštát, Mohelnice), but also to other development centres belonging to the Siemens concern. The centre cooperates closely with the Technical University of Ostrava and will offer jobs to one hundred specialists.

- 900+ development specialists
- 6 development centres
- 7 development departments in plants

Testbed for Industry 4.0

We bring digitalization to small and medium-sized enterprises

Siemens is the main partner of a unique lab called Testbed for Industry 4.0 that was opened in the new building of Czech Technical University in Prague in the Czech Institute of Informatics, Robotics and Cybernetics in September 2017. Testbed is part of the National Centre for Industry 4.0 where Siemens is a founding member.

Testbed for Industry 4.0 is a unique lab where small and medium-sized enterprises can test the latest technologies including the digital twin methods and advantages of virtual commissioning that will help them with the digitalization process at their factories.

Specifically, there is a production line available where components are manufactured using the additive production, machining, robotic handling, smart conveyor systems, human-and-robot cooperation, automated warehouses and other equipment.

Thanks to the flexible fusion of the universal production equipment and the sophisticated Simatic control system, there is a possibility to use the same means to execute different operations, optimally arranged according to the needs. The production line is partly real and partly virtual.

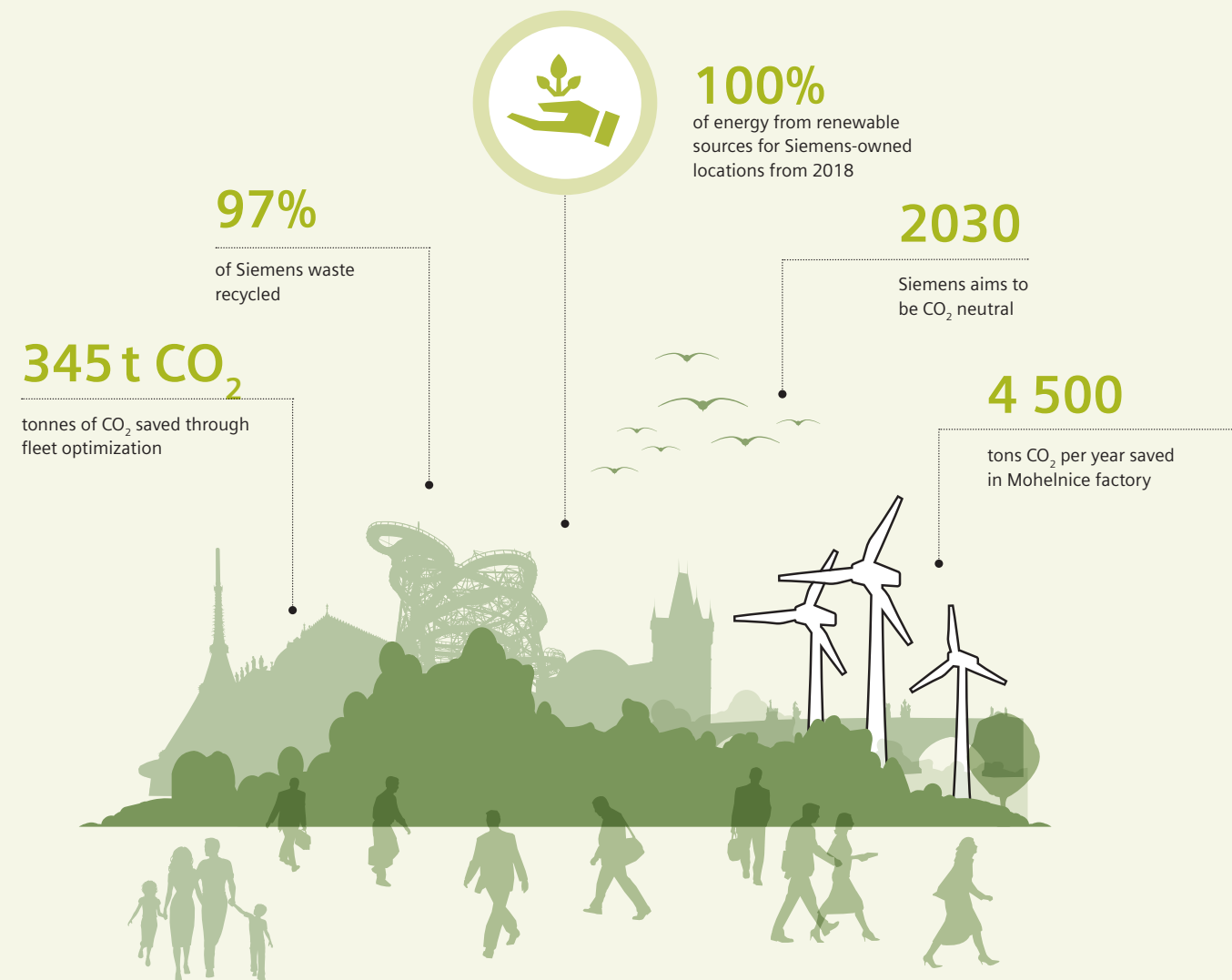
Simulation programs from the Siemens PLM Software family make it possible to create and commission a manufacturing technology basically of any size with engagement of machines, robots and equipment in a small space. The Simatic S7-1518F control system which controls the entire production line can control both real and virtual equipment.



Testbed is ready to serve not only industrial enterprises but also for educational and scientific research purposes.



Environmental sustainability



A Healthy Environment for Future Generations

Reducing the energy demands, water consumption and waste and greenhouse gas production of industrial companies and in agriculture is among the long-term priorities of the Czech Republic, one of many countries that actively support programmes to mitigate climate change.

Climate change and its impact on life on Earth are also considered crucial issues by Siemens. In 2015, as the first industrial group to do so, it started a programme to make all of its activities CO₂ neutral by 2030. Siemens Czech Republic also contributes to this pledge in the following ways: by purchasing electricity from renewable sources, by lowering the energy demands of its activities, and by adopting measures in the operation of its company cars.

From the beginning of the calendar year 2018, 100% of the energy purchased by Siemens for its own consumption will come from renewable sources. We will thus save 31,621 tonnes of CO₂ per year.

An extensive energy efficiency project implemented in the Mohelnice electromotor plant has achieved annual savings of almost 4,500 tonnes of CO₂. Improvements were made primarily in the existing heating and air-conditioning systems, the water system, the lighting system and other electrical equipment. Thanks to the installation of a small rooftop solar power facility and a solar facility for pre-heating water, the Frenštát plant will save 22 tonnes of CO₂ per year. Improvements made to the Letohrad plant will save an additional 2,300 tonnes of CO₂ per year.

Between 2014 and 2015, the total CO₂ emissions of 700 company cars were reduced by 345 tonnes and amounted to an average value of 110 g/km. Thanks to a higher degree of electromobility and careful selection of company car models, the average CO₂ value will drop to 95 g/km by 2020.

Waste management is also important – Siemens recycles 97% of the waste it produces.

Siemens technologies and solutions also contribute to improving the environment at its customers. For instance, power-plant retrofits dramatically decrease emissions, while water management solutions can reduce water loss by up to 30%.



Dlouhé stráně Hydro Power Plant

The ČEZ company's Dlouhé stráně hydro power plant is situated on the Divoká Desná River near the municipality of Loučná.

It is designed as an underground facility, the technological process of which is secured by two reverse turbine systems, each with a capacity of 325 MW. The input of the reverse turbine is 312 MW in pumping mode and the output in turbine mode is up to 325 MW. In addition to an administrative building with a control room on the surface, there is also an outgoing feeder with an encased 400 kV substation, workshops and warehouses, garages, a wastewater treatment plant, and a water treatment plant. The plant can reach full turbine output 90 seconds after receiving an order from central control in Prague.

During its reconstruction between the years 2006 and 2008, Siemens executed the replacement of the mechanical distributors on turbo generators TG1 and TG2 along with the direct-distribution distributors; it replaced and adjusted the low-voltage distributors and the operating circuits of high-voltage distributors in relation to the control system; and it put sensors into operation. All work was executed during normal operations.

The existence of the plant and its function in the power grid have led to a substantial decrease in the demand for coal-fired power; therefore, this hydroelectric facility is of significant environmental importance.



Not a Single Drop Wasted!

Clean water for the 1.3 million citizens of Prague

Water is the most valuable resource on Earth, as it is vital to all of us. Water treatment and wastewater treatment are fundamental for the Czech Republic. Siemens' smart solutions for water management are being used by many municipalities in the Czech Republic, e.g. Tábor, Pardubice, Domažlice and Strakonice.

The wastewater treatment plant in Prague-Troja treats 110 million cubic metres of water every year. A Siemens Simatic PCS 7 control system is at the heart of the plant, and 165 flow metres

are utilized in the various treatment processes. Thanks to the modernization and increased capacity of the plant, clean water can be delivered to the 1.3 million citizens of Prague, and the plant will be ready for an increase of 300,000 in the number of inhabitants.

Current wastewater treatment regimens are highly effective in removing dissolved materials and biodegradable organic pollution, but they are ineffective when it comes to removing nitrogen compounds. The modernization will facilitate the elimination of organic nitrogen compounds and Prague will begin to fulfil its environmental limits for nitrogen compounds in wastewater.

- Clean water for the 1.3 million citizens of Prague
- Control system and 165 flow metres
- Ready for other 300,000 inhabitants



Converting Waste into Energy and Heat

SAKO waste incinerator

Reconstruction of the SAKO municipal waste incinerator in Brno was performed by a consortium of the companies Siemens and CNIM. Siemens provided the control system, the electrical portion, the generator, and the steam condensation turbine with a capacity of 22.7 MWe, which was developed and manufactured at Siemens' plant in Brno.



- Turbine capacity: 22.7 MWe
- Production of heat and energy: covers the yearly needs of a town with 30,000 inhabitants

Thanks to the reconstruction, Brno has an environmentally friendly incinerator that meets strict emission limits, resulting in better air quality, and improves the city's waste management regime. Thanks to the operation of a new separating line, the incinerator also plays a role in increasing the material use of waste from the whole Brno region, thereby contributing to the fulfilment of the Czech Waste Management Plan.

Brno's incinerator produces heat and electricity. In the summer months it is the main source of heat in Brno. Every year the incinerator creates so much energy from waste that it would cover the yearly consumption of a town with 30,000 inhabitants.



Complete Renovation of the Prunéřov Power Plant

The complete refurbishment of the ČEZ company's Prunéřov power plant II (2010–2016) was the biggest project in recent years for Siemens.

Thanks to the refurbishment, the power plant now operates with greater efficiency; the capacity of the refurbished blocks has been increased from the original 3 x 200 MW to 3 x 250 MW. Within the framework of the project, as a turnkey contract, Siemens delivered the design, supply, installation and refurbishment of the complete electrical portion, i.e. its output, consumption, control system and field instrumentation.

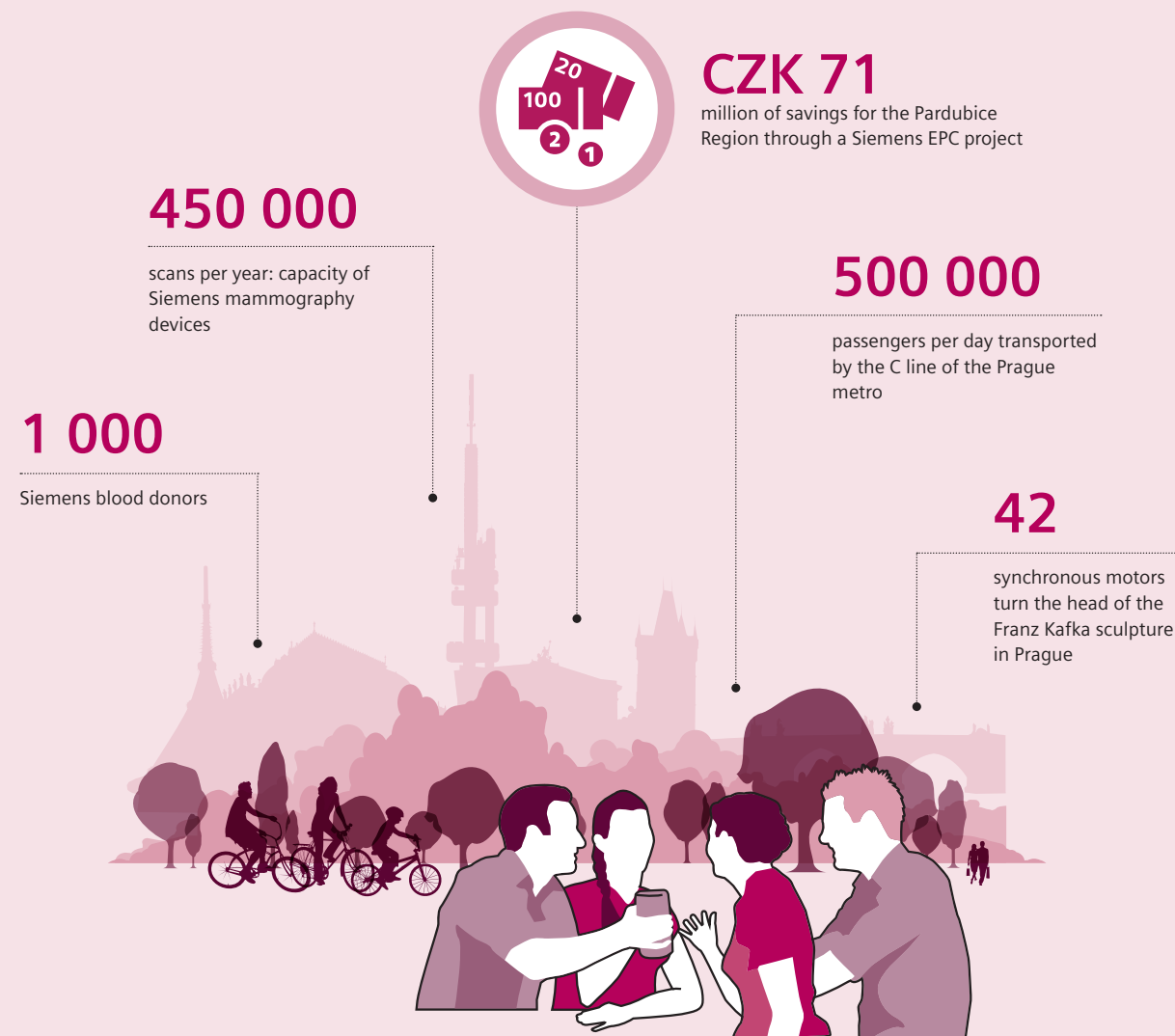
Cleaner air thanks to modernization
For the inhabitants of the Ústí Region, air quality and health were the most

important issues. After the modernization of the Prunéřov power plant, there was a sharp reduction in the emissions of harmful substances. The air quality improved significantly and the health burden of the Ústí Region's inhabitants was reduced.

Snížení emisí:	
SO _x	57 %
NO _x	59 %
TZL	39 %
CO ₂	31 %



Improving the quality of life



A Better Life in Smart Cities and Municipalities

Thanks to the newest technologies, people can transform existing cities into places where it will be better to live and work. The smart city has optimized infrastructure and maximizes its efficiency and the services that it provides for its citizens. It uses digital interconnections between individual systems, and the resulting data makes it possible to react and improve city services in real time.

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Thanks to Siemens smart solutions, the Pardubice Region will save CZK 71 million over the next 10 years. With the EPC method, Siemens will increase the energy efficiency of 17 specialized schools, upper-secondary schools and social institutes. EPC is an abbreviation for energy performance contracting, which means that Siemens makes the initial investment and the customer repays it from its energy savings.

The basis of a well-functioning infrastructure is public transport: the Siemens trains that operate on the busiest line of the Prague metro – the C line – transport 500,000 passengers every day. All 22.4 kilometres of this line is equipped with Siemens security and signalling installations. The company is also in charge of the maintenance of all of the trains on this line. Seven Siemens Railjet (Viaggio Comfort) train units in Czech Railways (České dráhy) colours transport more than 1.5 million passengers every year.

Lighting systems make driving safer and illuminate places of interest, but they also mean great energy and financial burdens on cities, towns and municipalities. Smart solutions use flexible lighting that can be set according to the current traffic situation, the weather, the time of day, and other parameters, thus creating energy savings of more than 50%.

Quality of life is influenced by the availability of high-quality healthcare services. Siemens imaging technologies and diagnostic solutions contribute to quick and reliable diagnoses, for which appropriate treatment can begin almost immediately. Thanks to 12 Siemens mammography units, more than 450,000 screenings a year are available for Czech women. Siemens diagnostic devices perform more than 100,000 tests for vitamin D deficiency, which is suffered by a large number of inhabitants. And highly sensitive tests for troponin, offered by around 80 facilities, can confirm or rule out heart attack within one hour.

Siemens employees also contribute to a higher quality of life in the Czech Republic; in the last five years, over 1,000 Siemens employees donated more than 450 litres of blood, which potentially saved 3,000 lives.

Local cultural events are important for the development of communities, and this is why Siemens provides support for some of them in the regions where it operates: Frenštát Cultural Summer and Horečky Fest, both in Frenštát pod Radhoštěm, and Mohelnický dostavník and the Fingers Up festival in Mohelnice.

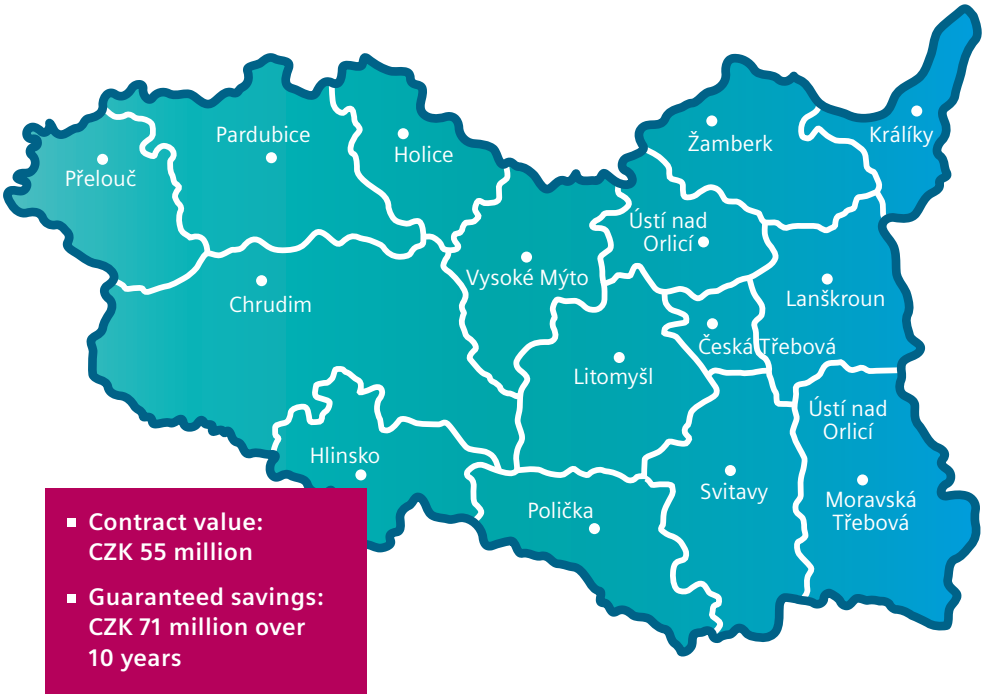
Although Siemens products are not primarily developed for use in art, the sculptor David Černý uses motors and controllers in his sculptures. Forty-two synchronous Siemens motors powered by 21 motor modules move the 42 layers of the *Head of Franz Kafka*, a unique sculpture situated in the centre of the Czech capital.



Seventy-one Million in Savings for the Pardubice Region

After winning a tender procedure, Siemens delivered smart building solutions to 17 public facilities – specialized schools, upper-secondary schools and social institutes – in a number of municipalities in the Pardubice Region.

Investments of CZK 55 million will be paid from the savings that will be generated from the effective operation of 13 new boiler rooms, three cogeneration units, 2,900 light fixtures and 3,300 heating devices. Part of the energy will be newly generated from photovoltaic panels, and water will be saved through the use of 2,200 faucet aerators and 480 toilet water savers. The smart use of resources is controlled by seven energy-consumption control systems, and all 17 facilities are connected to the Siemens Advantage Navigator monitoring system.



Half a Million Passengers a Day

The Prague metro’s C line

The Prague metro’s C line is 22.4 kilometres long and with its latest extension has 20 stops. This busiest transport route, which is used by over half a million passengers a day according to transport research, is served by 53 M1-type five-car trainsets constructed by Siemens.

Trainsets comprising five cars are made up of two driving units and three centre trailers. The cars have a lifetime of at least 30 years and are energy efficient. Another advantage is their low weight, which minimizes wear on the line, e.g. when travelling through the Nusle Bridge or from Nádraží Holešovice to Ládví. Siemens also handles the maintenance of all of the cars on this line.

The metro represents the backbone of Prague’s public transportation system and deals reliably with the daily flow of passengers. Automatic control systems from Siemens play a significant role in the metro’s reliability and ensure its safe and uninterrupted operation.



- 500,000 passengers a day
- 22,4 km, 20 stops
- 53 trainsets

The availability of modern healthcare services is the basis for a high quality of life all over the world. In the Czech Republic, dozens of medical facilities use Siemens solutions and offer reliable diagnostic services to their patients.

Heart Attack Diagnosis within One Hour

Around 5,000 people die of heart attack every year in the Czech Republic.

Troponin is a unique biomarker for diagnosing acute heart attack, because it is released only from damaged heart cells of which it is a structural part. If there are patients with chest pain and their EKG is inconclusive, it helps doctors decide whether the problem is acute and immediate intervention is necessary.

The highly sensitive methods employed by Siemens diagnostic devices, which can detect very low concentrations of troponin in the blood with a high level of accuracy, can shorten the deci-

sion-making time regarding what to do next with a patient suspected of heart attack down to one hour after admission. We help doctors make the right decision and bring safety and peace of mind to the patient via quick diagnosis.



In the Czech Republic there are more than 80 medical facilities that are equipped with Siemens technologies for immunoanalysis.

Early Diagnosis = a Higher Chance of Recovery

Breast cancer is second only to skin cancer as the most malignant tumorous disease among women.

Currently, more than 6,500 women are diagnosed with this disease annually, and some 2,000 die of it in the Czech Republic every year.

Since 2002, nationwide screening for breast cancer has taken place in the Czech Republic, thanks to which many cases of the disease are discovered at an early stage and hope for recovery is thereby considerably higher.

Siemens has installed 18 mammography units

in the Czech Republic, 12 of which are fully digital and 6 analogue, with a total capacity of more than 450,000 screenings a year. Siemens’ modern mammography devices are equipped with unique software technology that makes it possible to achieve accurate imaging with minimum exposure to radiation.



Vitamin D Deficiency: a Silent Threat

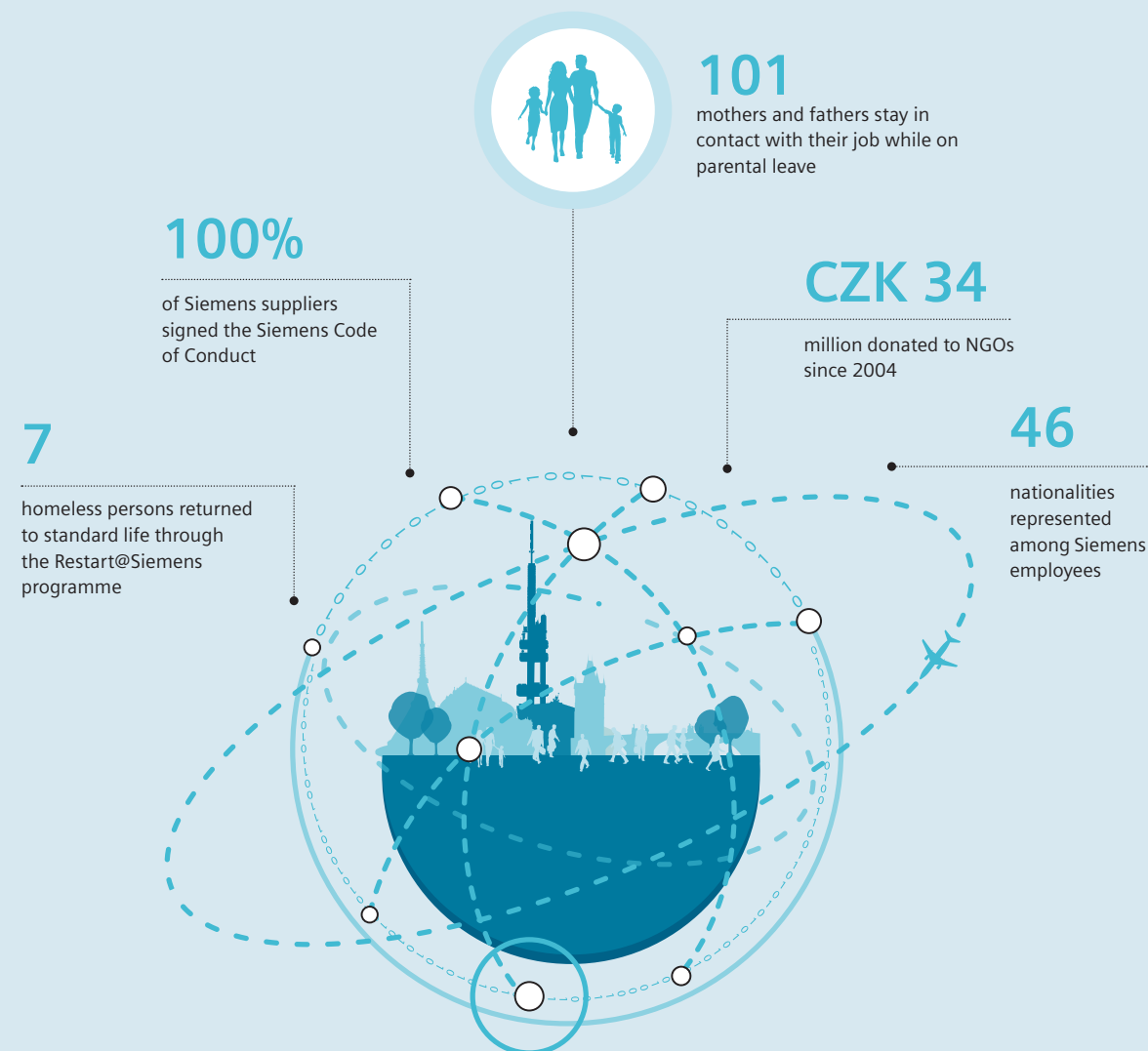
It is estimated that almost ¾ of Czechs suffer from a lack of vitamin D.

The majority of vitamin D is produced by sunlight hitting the skin; only a small amount is acquired through food. Vitamin D is vital for the creation and maintenance of strong, healthy bones. In recent years, vitamin D has become an indicator of human health, and many publications have cited vitamin D deficiency as being connected to serious illnesses like cancer, cardiovascular disease, diabetes and autoimmune diseases.

Every year in the Czech Republic, Siemens devices test around 100,000 samples for vitamin D deficiency. To ensure the highest possible quality and reliability, Siemens takes part in the European Centre for Disease Prevention and Control’s Standardization and Certification Programme for Vitamin D, which gives doctors and their patients the most accurate information about vitamin D levels.



Shaping the transformation



Changes for a Better Future

The changes that we are witnessing nowadays are not only technological but also societal. A company has to start with itself and its employees to support these changes. Today, employees expect much more from their employers than only a fair wage; they expect a good work-life balance and the possibility to take care of their family or support the local community. Equally important is cooperation with civil society and other partners who are participating in the transformation.

Every year, Siemens offers benefits worth a quarter of a billion Czech korunas to its employees. In 2017, Siemens implemented a unique pilot project called Benefit Bar, which allows employees to choose their benefits according to their needs and preferences – from financial benefits through sports and cultural activities to additional days off.

Forty percent of Siemens employees in the Czech Republic are women. They appreciate flexibility the most as it gives them the opportunity to take care of their families. In Prague and Ostrava, Siemens offers the possibility to place children from 18 months of age in company-supported kindergartens. When it is possible, Siemens accepts home office.

It is very important for the parents of young children to stay in contact with their jobs. Siemens supports mothers and fathers in this aim, and 101 employees use the opportunity to work part-time while being on a maternity or parental leave.

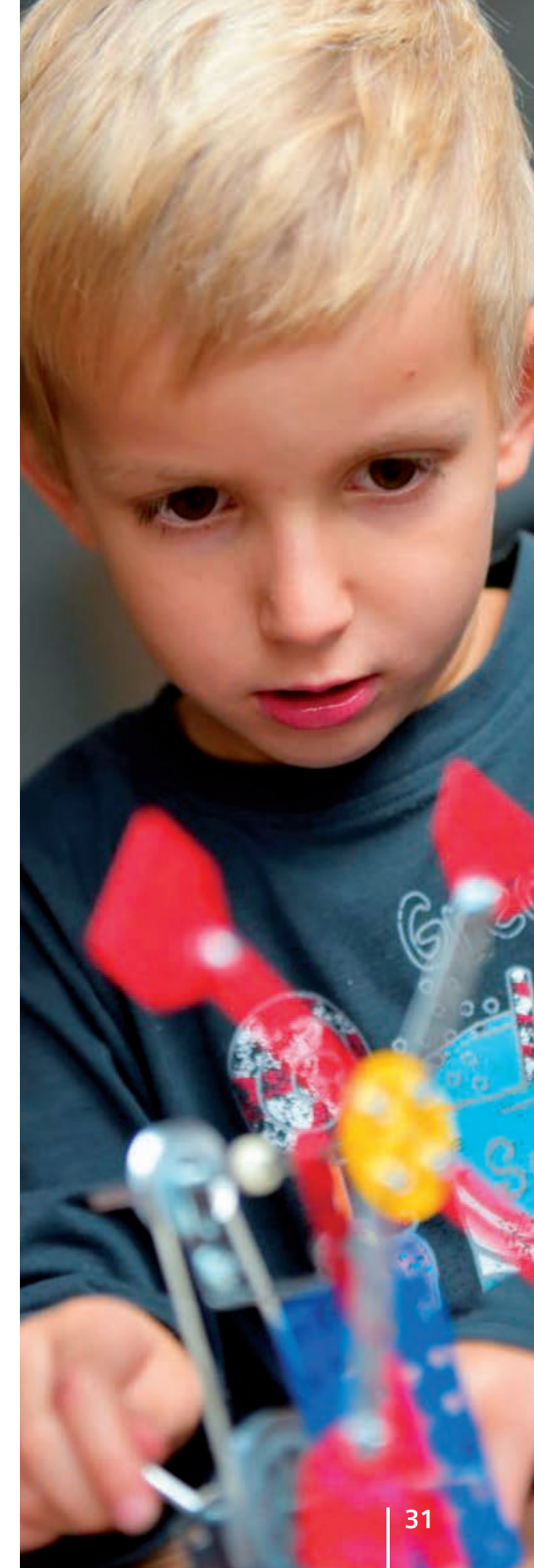
Siemens has created a unique programme to help homeless people: Restart@Siemens. Those who are having difficulties through no fault of their own and are determined to start again can apply for the programme. Siemens offers a one-year contract and pays for their

accommodation during this period. If both sides are satisfied after one year, Siemens offers a standard employment contract. The programme is administered in cooperation with the NGOs The Salvation Army, Charity and Naděje, whose social workers offer counselling to the participants.

Since 2012, Siemens employees have done more than 8,500 hours of voluntary work for 163 NGOs. Employees can volunteer in their working hours, and in some factories blue-collar workers can also take part.

Siemens employs almost 200 disabled people who cover the complete spectrum of job positions – from blue-collar to management. In 2004, the first sheltered workshop integrated into the manufacturing process in the Czech Republic was opened in the Siemens plant in Mohelnice, and almost thirty people with various types of disability work there.

Business ethics is crucial to Siemens. Every employee must attend compliance training, and terms and conditions are entirely obligatory for 100% of the company's suppliers. Siemens specialists share their experience in compliance and business ethics with small and medium-sized enterprises and with university students.



Restart@Siemens

A programme for homeless people

Since the question of poverty is becoming more and more acute in the Czech Republic, Siemens has created a programme called Restart@Siemens to provide help to people who are having difficulties through no fault of their own. Together with its partner NGOs, Siemens selects individuals for whom it looks for suitable jobs in one of its factories or business units.

The participants are offered a one-year contract and Siemens pays for their accommodation during this period. If both sides are satisfied after one year, Siemens offers a standard employment contract. Its partner NGOs provide social counselling and Siemens employees volunteer their time to help with the participants' integration into work and their new community.

"What are my plans for the future? I know that exactly! Never to get into the situation again that I faced only a year ago! I am very proud of everything I have achieved. And it was mostly thanks to the help of my colleagues and the

company, because I would definitely not have achieved those things on my own."

Lenka V., a participant in the Restart@Siemens programme



*NADĚJE



- 40 000+ osob bez domova
- 100+ žádostí
- 7 účastníků, včetně 3 maminek s 5 dětmi

Volunteering

Volunteering is a cornerstone of corporate social responsibility at Siemens. Every year, employees can devote up to two working days to volunteering.

The corporate Volunteering Day has been organized since 2012 and employees can visit chosen NGOs near their workplace. The range of activities is very wide – from manual jobs like wall painting, cleaning or garden improvements, over crafting of aids for visually- or hearing-impaired children to meeting elderly people or children with mental or physical handicaps and accompanying them on a walk. Expert volunteering is part of employees' development programmes.

Over the last 6 years of existence of this project, more than 1,000 Siemens employees have dedicated their whole day of work to help those who need it. More than 160 NGOs asked for help with some activities and were provided with this help. Every year, also members of the top management including the Czech CEO take part in the Volunteering Day.



Stodůlka and IN školka – Siemens Corporate Kindergartens

Adequate preschool facilities and toddler-care – these are problematic areas in many regions of the Czech Republic.

The lack of adequate facilities forces mothers to maximize their parental leave so as to be able to stay at home with their children. Siemens helps its employees by financing company kindergartens in Prague and Ostrava. The kindergarten in Prague was opened in February 2011 and almost 155 children have attended it during its six years of operation. The corporate kindergarten in Ostrava was opened in September 2014 and more than 50 children have attended it to date. Both kindergartens are bilingual (Czech and English) and accept children from the age of 18 months.

Facts and figures:

- More than 200 children
- Two kindergartens
- In existence for more than six years
- Children from 18 months of age



Siemens Aid Fund – We Help the Helpers

The unique Siemens Aid Fund was created in 2004 with the aim of supporting non-governmental organisations that help those who cannot help themselves.

Each month, the Siemens Aid Fund donates up to CZK 100,000 to one or more projects that help NGOs improve their services. Since its founding, the Siemens Aid Fund has supported more than 400 projects with more than CZK 27 million. The charitable projects which receive donations are chosen by a multi-member committee consisting of experts, NGO representatives and Siemens employees. Since 2012, NGOs have also had the opportunity to apply for donations in regional rounds that are financed by the plants in Brno, Frenštát, Mohelnice and Trutnov. These support the NGOs in their regions.

The donations are directed towards social, educational and environmental projects. Thanks to donations from the Siemens Aid Fund, the organization Tamtam was able to buy new equipment and toys for hearing-impaired children; the therapeutic workshop Eliáš could buy a new pottery kiln; the NGO Nadání a dovednosti was able to prepare a series of excursions and workshops for young people from children's homes to learn about the job market; and Nedoklubko had the means to support research into the causes of premature birth.

- 3 000+ přihlášek
- 400+ podpořených projektů
- 27 milionů korun rozděleno mezi neziskové organizace v ČR

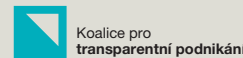


Business Ethics

Ethics, transparency and fighting against corruption are exceptionally important for Siemens not only on the global level, but also in every country where Siemens does business, including the Czech Republic. Siemens is a founding member of the Coalition for Transparent Business and a member of the Czech Compliance Association.

One hundred percent of our employees have attended ethics and compliance training, and the same percentage of our suppliers has signed our Code of Conduct. Random checks take place at our suppliers to make sure all the rules are being adhered to.

Siemens conducts regular communications on business, corruption and transparency, and not only with its employees and suppliers. Siemens' specialists regularly present company procedures in this field at events for small and medium-sized enterprises and at universities.



- 100 % of our employees attended compliance training
- 100 % of our suppliers signed our Code of Conduct

“At Siemens we believe that how we do business is just as important as how much business we do. We have been enforcing this philosophy in the Czech Republic for more than one and a quarter centuries.”

Eduard Palíšek
CEO Siemens ČR

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- PISA
- Others

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