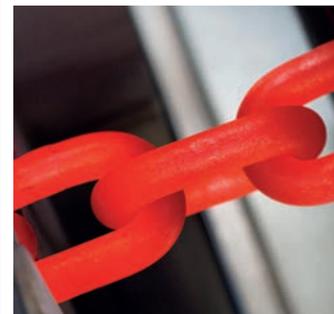
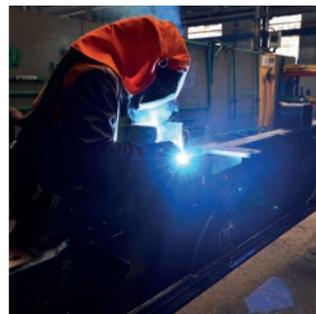


OLOMOUCKÝ KRAJ

INFORMATION ABOUT THE OLOMOUC REGION

For entrepreneurs



www.olkraj.cz



This booklet with Information about the Olomouc Region for Entrepreneurs contains not only selected characteristics for entrepreneurs from the Olomouc Region, but also a lot of useful information and statistical data from various areas and activity spheres. Here you will find useful data related to the population, transport accessibility, economy and education, as well as information on innovation and research centers in the Olomouc Region. The booklet also contains maps and tables.

The Olomouc Region is located in the north of Central Moravia and has a 104 km-long national border with Poland. With its area of 5 272 km² (as of 31. 12. 2019), it ranks eighth among 14 regions in the Czech Republic (covering 6.7 % of the total area of the Czech Republic), while the share of arable land is declining from year to year (38.8 %) and the share of non-agricultural land is increasing (47.4 %). The Olomouc Region borders the Republic of Poland in the north, neighbouring the Moravian-Silesian region in the east, the Zlín and South Moravian regions in the south and the Pardubice region in the west.

Why should you do business in the Olomouc region?

- our region has a great geographical location and is an important traffic junction
- it connects major cities to expressways, course of two transit corridors (included in the European TEN-T network)
- long tradition and high level of industrial production, dynamically developing service sector, tradition and background of quality construction companies, as well as construction development companies
- renowned university, as well as other tertiary education facilities with a wide range of fields on offer
- skilled workforce - high number of university-educated inhabitants
- high innovation potential of local companies, research centers, important high-tech-industries-oriented companies, high popula-



- tion share employed in research
- opportunities for investors (entrepreneurs) in the fields of nanotechnology, biotechnology, biomedicine and other related areas
- our region has a high foreign cooperation level; municipalities are using more and more information and communication technologies
- very good conditions for business service centers as well as the development of creative industries
- investments in modernizing smart technologies and new instrumentation
- quality production and administration facilities, a sufficient number of high-quality hotels in Olomouc as well as accommodation capacities in the region, important congress centers for organizing meetings in hotels
- a pleasant environment, rich historical and cultural traditions - important monuments in our region, wide attractiveness of natural activities

Basics about the Olomouc Region (as of 31. 12. 2018):

Population:	632 015 inhabitants
Area:	5 272 km ² (31. 12. 2019), 6,7 % of the Czech Republic territory; 14th place among regions
Population density:	120 inhabitants per km ²
Regional capital:	Olomouc
Number of municipalities:	402
Number of municipalities that are	
statutory cities:	3
cities:	30 (incl. statutory cities)
township:	12

Informations about the Olomouc Region

	Jeseník	Olomouc	Prostějov	Přerov	Šumperk
area (km ²)	719	1 608	777	854	1 313
number of municipalities	24	98	97	105	78
which have been granted city status	5	6	5	6	8
population	37 968	235 472	108 646	129 512	120 417
average age of the population	44,0	42,4	43,0	43,5	43,2

Source: CZSO, data as of 31. 12. 2019

Economic indicators (2018)

Macroeconomic indicators	Olomouc Region	CZ
Gross domestic product - GDP (mil. CZK)	248 499	5 323 556
Gross domestic product per inhabitant (CZK), current prices	392 855	500 973
Gross domestic product per employee (CZK)	798 670	982 547

Source: CZSO

Science and research

	Olomouc Region	CZ
Expenses on science and research (in mil. CZK)	4 156	102 754
Expenses on science and research (in mil. CZK) per 1000 inhabitants	6,57	9,65
Number of research and development workplaces	164	3 106
Number of R&D employees (natural persons)	5 158	113 447
Researchers (recalculated on the number of people)	1 835	41 198
in the business sector	941	21 150
in the government sector	50	7 879
in the higher education sector	841	12 001

Source: CZSO

Employment and wages in the Olomouc Region (data as of 31. 12. 2018)

By place of work- Individuals	Olomouc Region	CZ
Average gross monthly wage in total (CZK)	27 899	31 032
Agriculture, forestry, fishing	25 042	25 119
Industry	29 001	31 990
Construction	26 988	27 950
Wholesale and retail	25 072	28 953
Education	27 851	28 200
Health and social care	31 972	31 668
Average registered number of employees in the national economy by place of work (in thsnd. people)	231,7	4 220,1
Agriculture, forestry, fishing	7,9	98,5
Industry	79,7	1 278,2
Construction	12,2	210,5
Wholesale and retail	25,9	522,7
Education	20,8	328,9
Health and social care	20,2	323,4

Source: CZSO

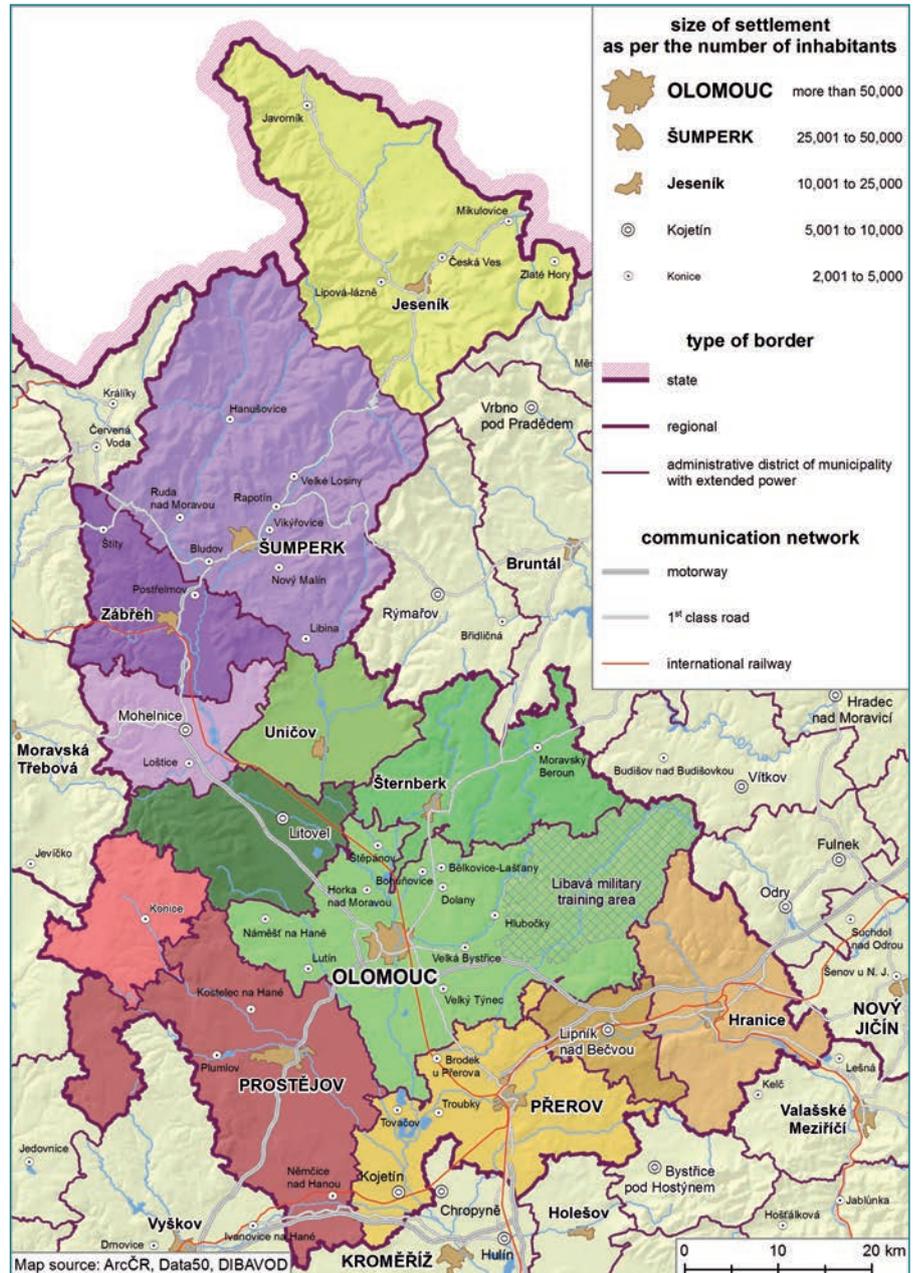
Geographical profile:

Geographically, the region is divided into a northern mountainous part, i.e. the Jeseníky Mountains with the highest mountain Praděd (1,492 m above sea level). The Haná-region is in the southern part of the region, with the region being divided by the Morava river, and on the surface of this river is the lowest point within the entire region (190 m above sea level) - near the town of Kojetín in the Přerov district. The river Odra, which is important from a European point of view and flows into the Baltic Sea near Štětín, also springs in the Olomouc Region.



Administrative structure:

The region is divided into 5 administration districts (Jeseník, Olomouc, Prostějov, Přerov, Šumperk). Together with the Zlín Region, the Olomouc Region represents a higher territorial statistical unit called the NUTS II Cohesion Region Central Moravia. The Olomouc Region encompasses the cadastral area of 402 municipalities, which in 2019 were divided into 768 sections. There are 13 administrative districts of municipalities with extended powers within the Olomouc Region and 20 administrative municipalities



districts of municipalities with an authorized municipal office. The largest district is Olomouc (1,608 km²), which is the 5th largest district in the Czech Republic. The largest

municipality in the Olomouc Region in terms of area is the Libavá military training area district of 235.5 km² (as of 31. 12. 2019), and the smallest area is the village of Strukov (0.5 km²).

The best of - from the Olomouc Region	
The highest point	Praděd, attitude 1491 m. Jeseníky mountain range
The lowest point	Water level of Morava river, attitude 190 m., Přerov District
The most populated municipality	Olomouc, 100 523 population, Olomouc District
The least populated municipality	Šléglov, 43 population, Šumperk District
Municipality with the highest average age	58.4 years Radkova Lhota, 198 population, Přerov District
Municipality with the lowest average age	35.0 years Hlušovice, 930 population, Olomouc District
The highest daily maximum temperature in 2018	35.2 °C on 9 August, Weather station Olomouc
The lowest daily minimum temperature in 2018	-14.9 °C on 1 March, Weather station Olomouc

Source: CZSO, *The statistical Yearbook of the Olomouc Region 2019*

TRAFFIC AVAILABILITY - ROAD, RAIL, AIR



area served. From a long-term perspective, the regional roads' technical status and capacity in the Olomouc Region is in poor technical condition. The Olomouc Region is trying to keep these roads in good condition.

Railway transport in Olomouc is part of five ČD lines, including a direct route to Prague. Thanks to a wide offer of express trains, which is a significant competitive advantage for visitors and investors, Olomouc has a comfortable connection to Prague. The railway lines are spread evenly across the region and in Přebor, there is an important railway junction and the intersection of two international railway corridors (II. and III. Transit corridor).

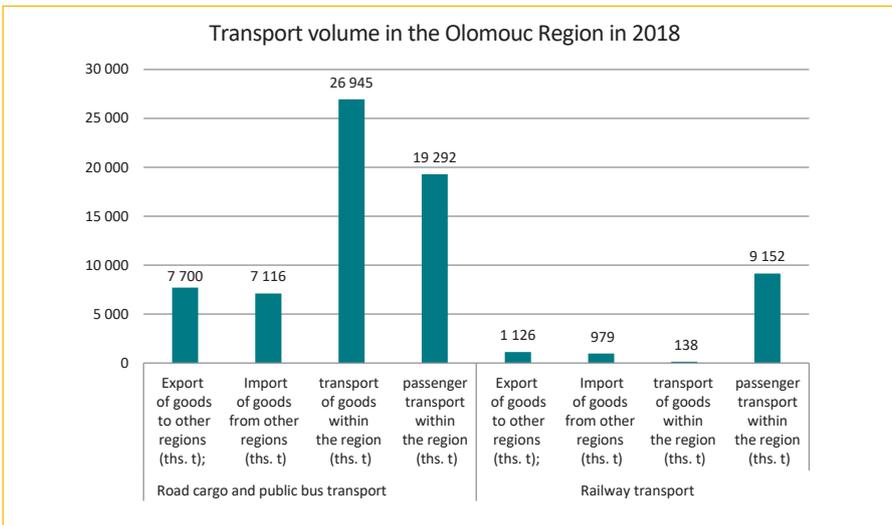
There is also a small transport aircraft airport near Olomouc, which has acquired the status of an international airport.

KIDSOK provides and organizes comprehensive public transport in the Olomouc Region, thus covering not only 402 municipalities in the entire Olomouc Region with its 131 tariff zones, but also its border areas with the Pardubice, South Moravian, Zlín and Moravian-Silesian regions.

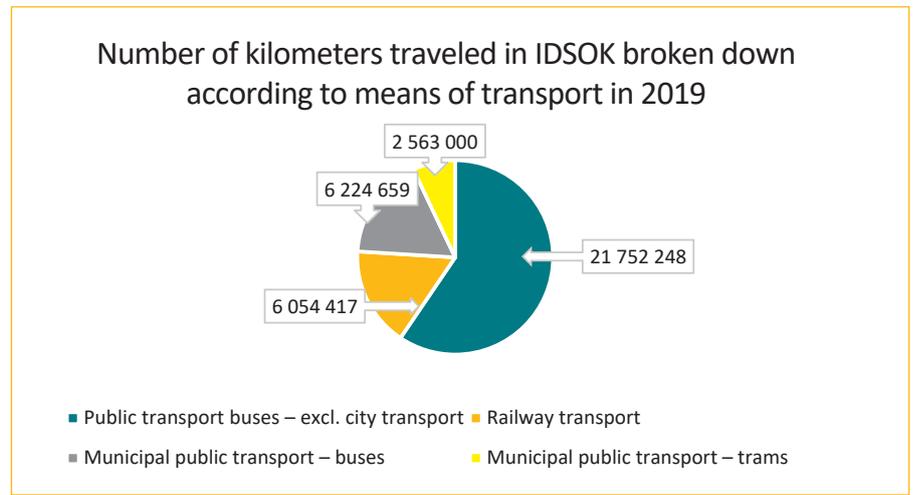
Business activities development is also influenced by available transport means. The Olomouc Region has a relatively well-established road network. Four motorways pass the region - D1, D46, D35 and D48. This region is accessible via 598 km of railway lines and 3,589 km of roads, 127km of which are motorways.

The Olomouc Region has a denser road network in the southern, flat part of the region, the districts of Šumperk and Jeseník have a very low road network density. Everything is closely related to the low population density in the





Source: CZSO



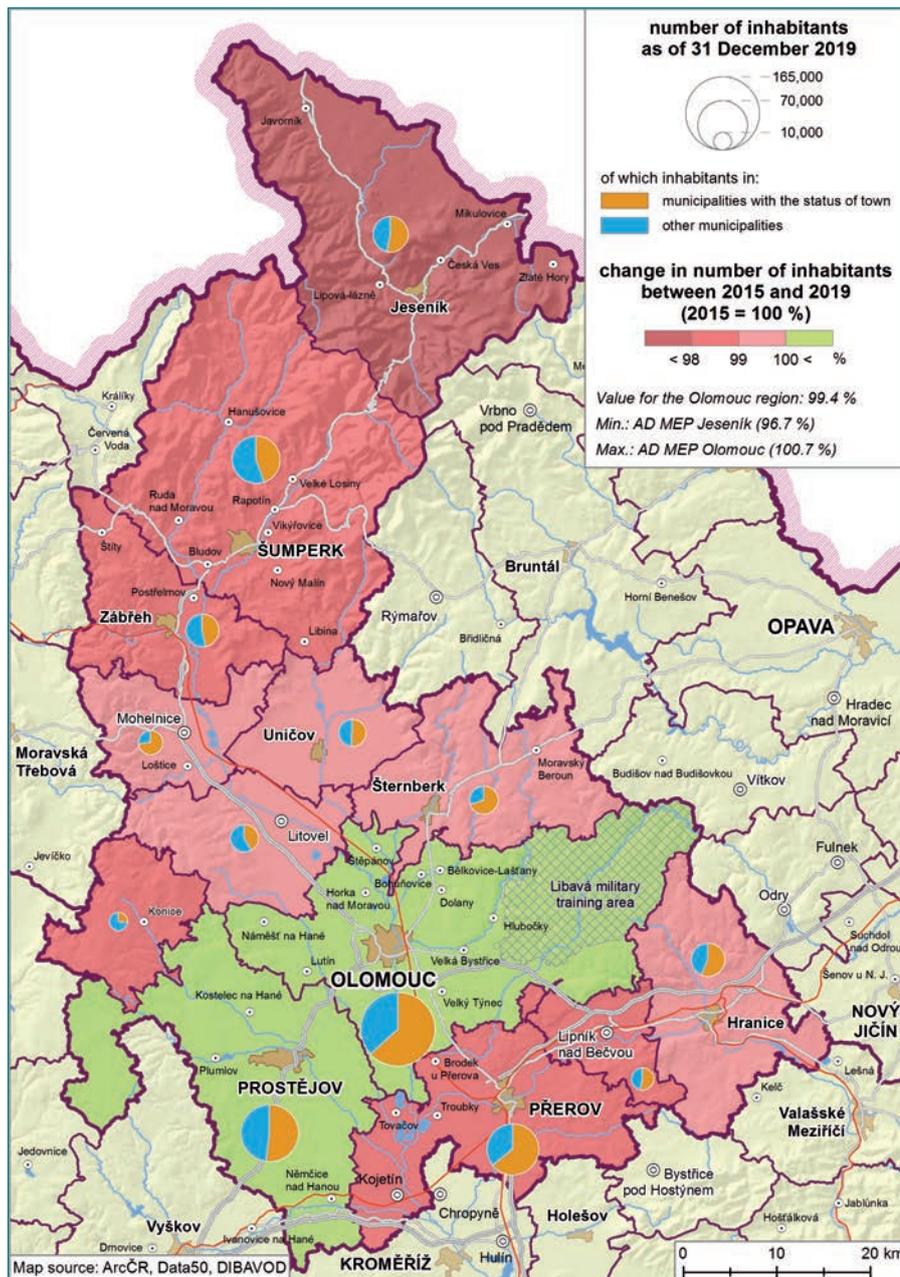
Source: KIDSOK Annual Report 2019

Most important road and railway routes passing through the Olomouc Region:

- D1 (Vyškov – Kroměříž) – Přerov – Lipník nad Bečvou – Běloutín – (Ostrava – Polsko)
- D46 (Vyškov) – Prostějov – Olomouc – and then via I/46 Olomouc – Horní Loděnice – (Opava - Polsko)
- D35 (Hradec Králové) – Mohelnice – Olomouc – Lipník nad Bečvou
- D48 Běloutín – (Palačov – Český Těšín – Polsko)
- I/55 Olomouc – Přerov – (Břeclav)
- I/44 Mohelnice – Šumperk – Jeseník – Mikulovice (dále na Polsko)
- II. Transit corridor (in CZ, this refers to the section from Petrovice u Karviné – Ostrava – Přerov – Břeclav)
- III. Transit corridor (in CZ, this refers to the section from Mosty u Jablunkova – Ostrava – Přerov – Praha – Cheb)

Source: CZSO, own processing

POPULATION IN THE OLOMOUC REGION



national average; the relatively highest number of births was in the Olomouc district (10.7 %), while the lowest number of babies were born in the Jeseník district (9.2 %). Out of the number of live births in 2019 in the Olomouc Region there were 3,286 boys and 3,073 girls, out of the total numbers of births there were 80 twins.

In 2019, 6,914 people (51.0 % men) died in the Olomouc Region, the most common cause of death being circulatory system diseases. A total of 81.5 % of deaths were over 65 years of age and 45.6 % of deaths were over 80 years of age. The Olomouc Region has the 4th oldest population in the Czech Republic; the average Olomouc Region population age has increased to 43.0 years. At the end of 2019, 98.8 thousand children aged 0-14 were living in the region. The number of inhabitants in productive age (15-64 years) figured at 402.3 thousand persons (63.6 %) at the end of 2019, and the number of seniors in the region was 130.9 thousand. The average age of the population in the Olomouc Region in 2019 increased to 43.0 years (the average age of men reaching 41.4 years and the average age of women 44.5 years). According to forecasts from the CZSO, the number of inhabitants in the Olomouc Region will have a dropping tendency in future, and in 2071 the population of the region is expected to decline to 506.6 thousand residents.

The Olomouc Region has the seventh largest population among the 14 regions in the Czech Republic with a population of 632.0 thousand (as of 31. 12. 2019), which is no less than since the establishment of the region. The largest proportion of residents with permanent residence is located in the four largest cities - Olomouc, Prostějov, Přerov and Šumperk (a third of the region's population). The Olomouc Region's average population density is 119.9 inhabitants/km². A year-on-year comparison revealed a drop in the number of inhabitants in cities: 1,014 persons, while the regional city of Olomouc witnessed

a slight rise in the number of inhabitants to 100,663 inhabitants (as of 31. 12. 2019). The most significant decrease in the number of inhabitants was in the Jeseník district, dropping by 362 people.

A natural increase (the difference between live births and deaths) reached a negative value of -555 people in 2019. On the other hand, the migration-related increase, expressing the difference between immigrants and emigrants, was positive in 2019 after 11 years, reaching 78 people. Between 2008 and 2018, the region lost 5.6 thousand inhabitants due to moving. The birth rate in the region in 2019 remains below the

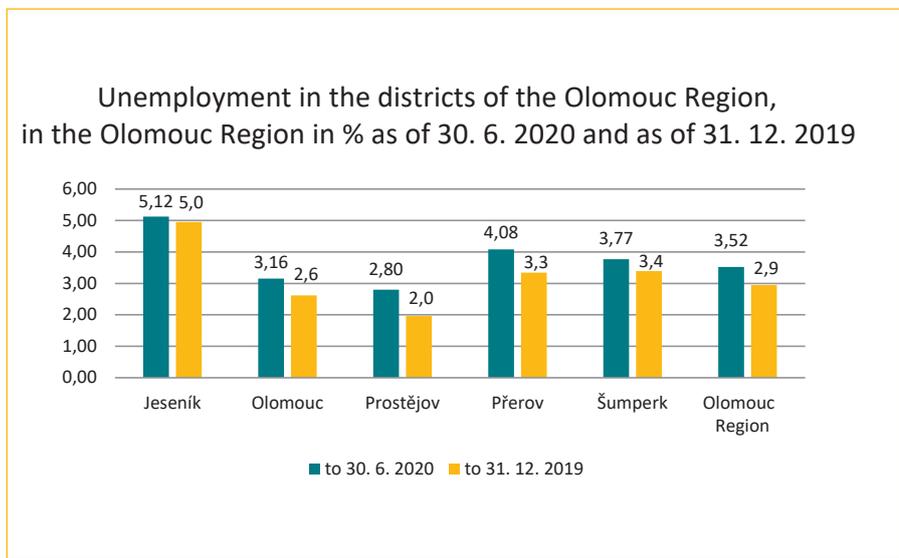
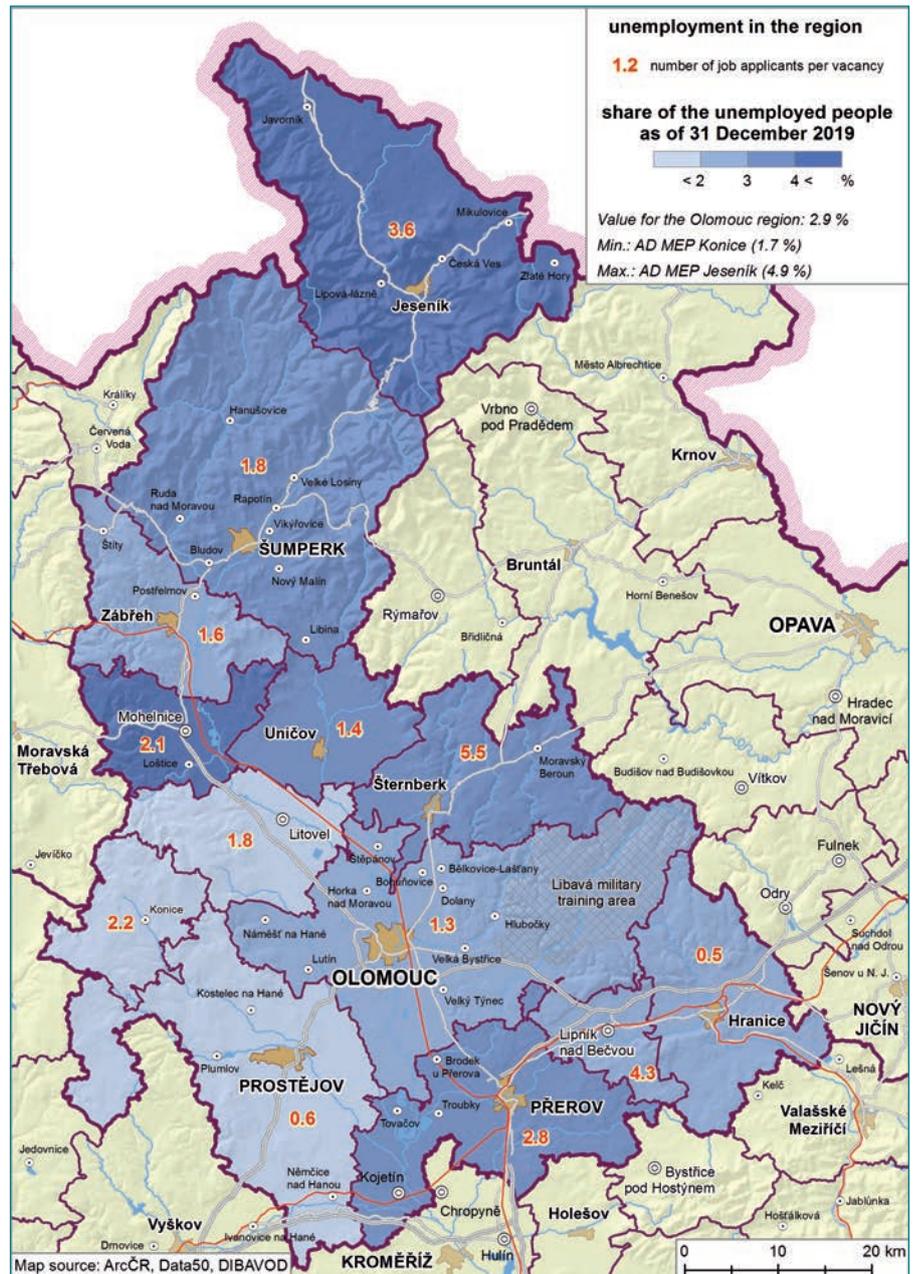


HUMAN RESOURCES DEVELOPMENT - LABOR MARKET, SOCIAL DEVELOPMENT

In 2019, 314 thousand economically active people were living in the region; their number decreased by 1.8 % in a year-on-year comparison. One of the reasons for this decline in the rate of economic activity is the current demographic development in the Olomouc Region, which shows a falling tendency.



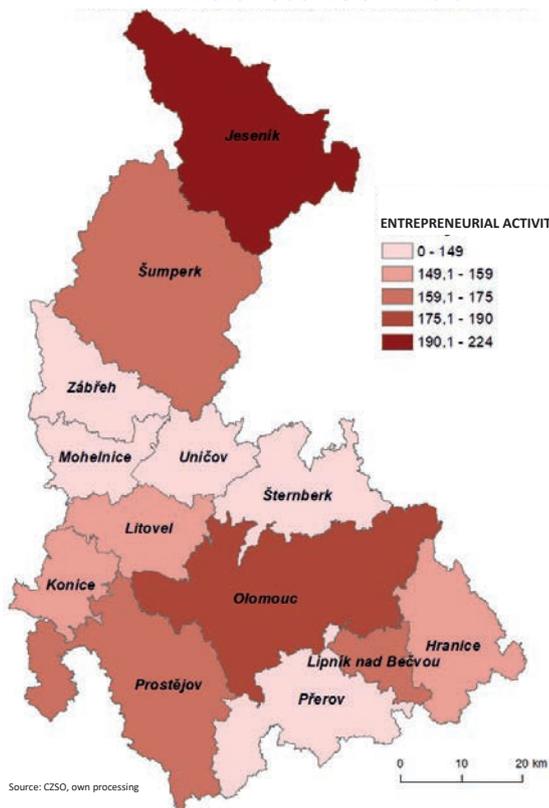
According to data of the Labour Office of the Czech Republic as of 31. 12. 2019, the share of unemployed people in the Olomouc Region was 2.9 %. At the Labour Office were registered 12.8 thousands job seekers, of which 6.4 thousands were women (49.6 %). A year-on-year comparison revealed a decrease by 2,000 in the total number of job seekers within the region. The district of Prostějov ranks 15th (2.0 %), while the district of Olomouc is in 37th place (2.6 %) in an inter-district comparison of unemployment rates in the Czech Republic. At the end of 2019, 2.2 thousand had been registered for more than 1 year as job seekers.



In 2019, a total of 5.3 thousand applicants (i.e. 41.5 % of the total) in the Olomouc Region were receiving unemployment benefits, with the average amount being 7,267 CZK. Benefits in the amount of 4.5 thousand CZK were granted to a total of 23.4 % of applicants, and 18.4 % of the applicants were entitled to receive monthly benefits of 10.5 thousand CZK.

Source: CZSO, The statistical yearbook of Olomouc Region 2019, own processing

ENTREPRENEURIAL ACTIVITY IN ADMINISTRATIVE AREAS PERTAINING TO MUNICIPALITIES WITH EXTENDED POWERS IN THE OLOMOUC REGION IN 2019



Source: CZSO, own processing

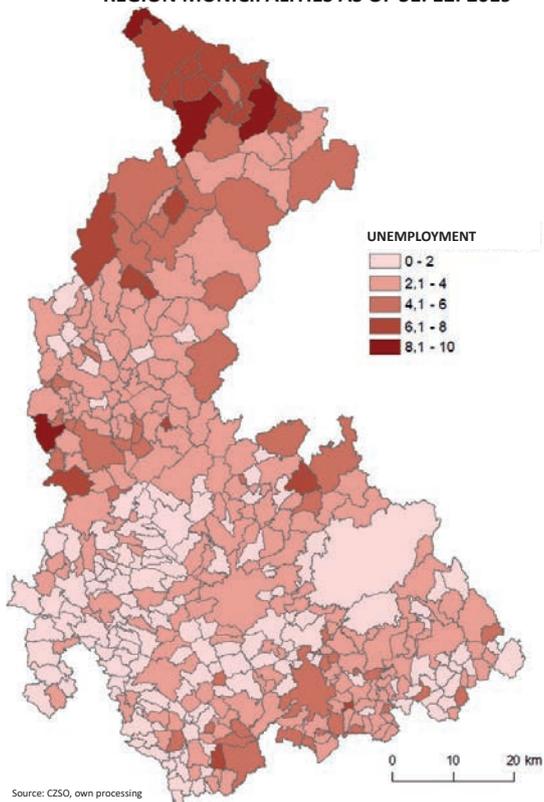
The **BUSINESS ACTIVITY RATE** indicates the number of natural persons engaged in business (self-employed people and agricultural entrepreneurs) recalculated to the total population of the given territory.



Source: CZSO

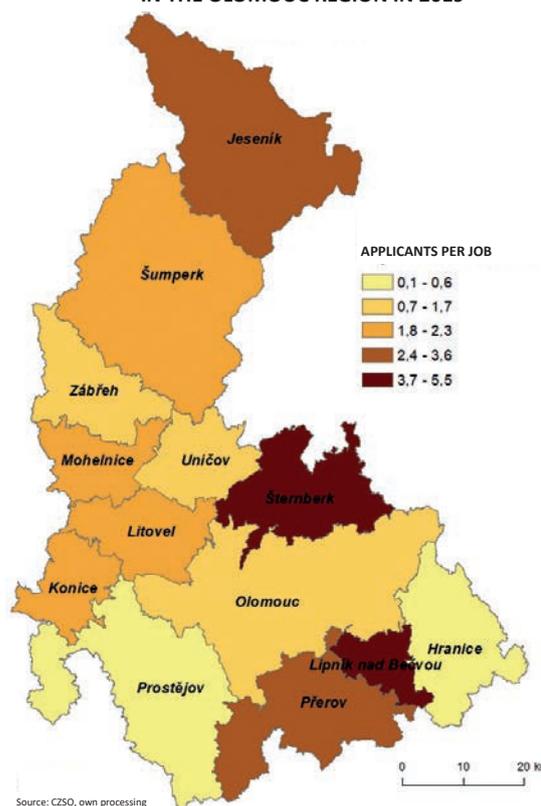
The average gross monthly wage assessed by the Czech Statistical Office reached 30,784 CZK in the Olomouc Region in 2019 (34,125 CZK in the Czech Republic), reaching the 4th lowest value in an interregional comparison. On the other hand, the year-on-year nominal growth was the third highest among all regions. The average number of registered employees, recalculated to full-time employees in the Olomouc Region, dropped by 0.2 % in a year-on-year comparison in 2019 to 225.0 thousand persons.

UNEMPLOYMENT BROKEN DOWN INTO OLOMOUC REGION MUNICIPALITIES AS OF 31. 12. 2019



Source: CZSO, own processing

APPLICANTS PER JOB VACANCY IN ADMINISTRATIVE AREAS PERTAINING TO MUNICIPALITIES WITH EXTENDED POWERS IN THE OLOMOUC REGION IN 2019



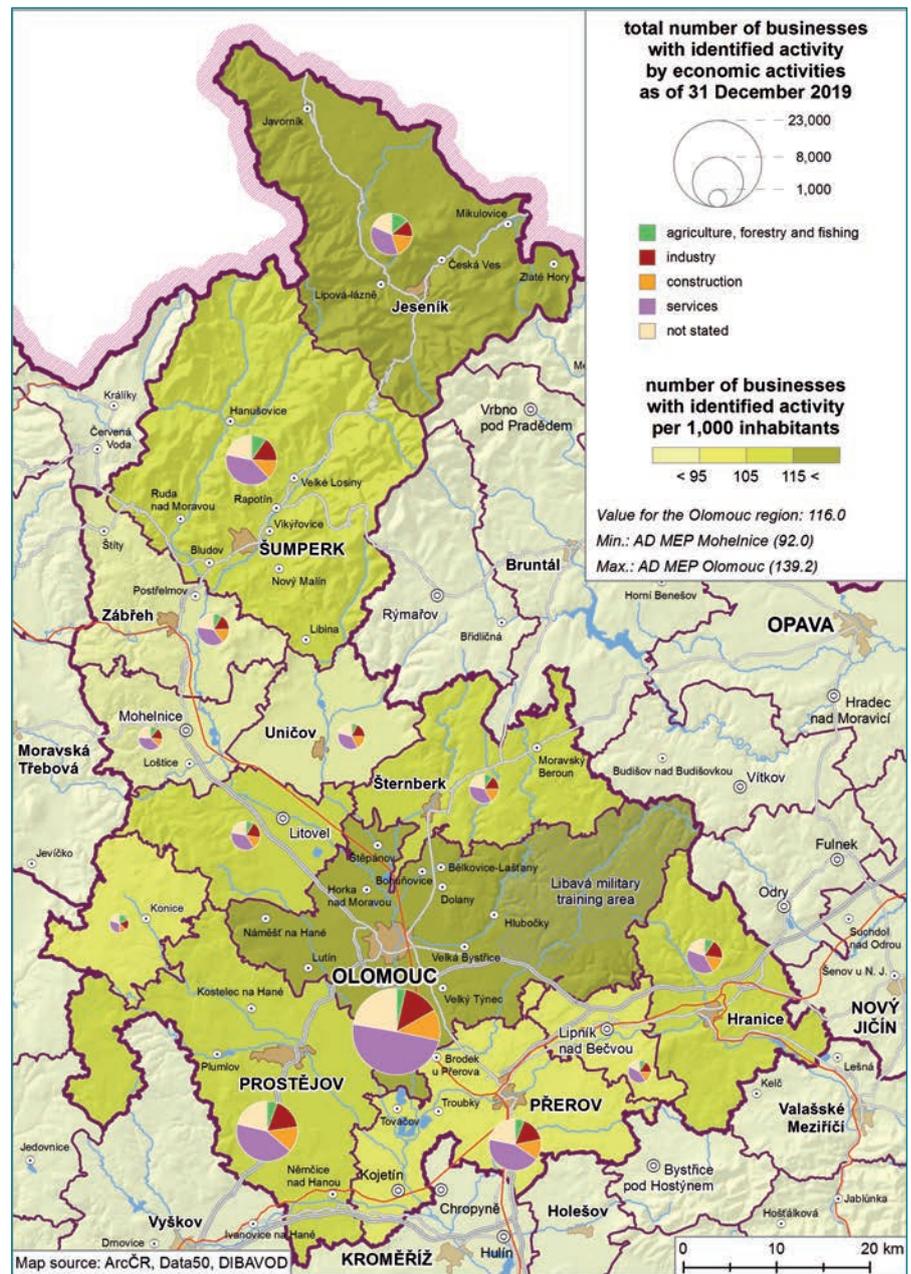
Source: CZSO, own processing

OLOMOUC REGION ECONOMY

In order to support the business environment in the Olomouc Region, the 5th updated booklet listing Significant Companies in the Olomouc Region was published in 2019, mapping more than 175 companies from our region. This booklet introduces companies from our region that use the latest technologies in their production and apply them in practice. Olomouc region companies are among top European and worldwide companies; the products of these companies are being exported to many countries around the world. The information is clearly broken down by industries. Those interested can download the publication from the Olomouc Region regional administration pages at www.olkraj.cz/regionalni-rozvoj-cl-96.html.

From an economic point of view, the Olomouc Region is an industrial area with a highly developed service sector. There are several traditional industrial enterprises operating in the Olomouc Region. Agricultural production consists of a number of food companies and, as far as other industrial branches are concerned, it has developed production of machinery and equipment, industry of optics and electrical equipment, production of metalworking, transport means and equipment and many others. The Olomouc region houses innovative companies operating in knowledge-intensive fields, such as nanotechnology and advanced materials, biomedicine and life sciences, or advanced agriculture and biotechnology.

In 2018, the gross domestic product (GDP) increased to 248.5 billion CZK (at current prices). In per capita figures, the Olomouc Region's gross domestic product increased to 392.9 thousand CZK (in terms of per capita, the regional GDP reached 78.4 % of the national average). As far as an interregional comparison is concerned, the regional gross domestic product was the 4th lowest in the Czech Republic, with Prague

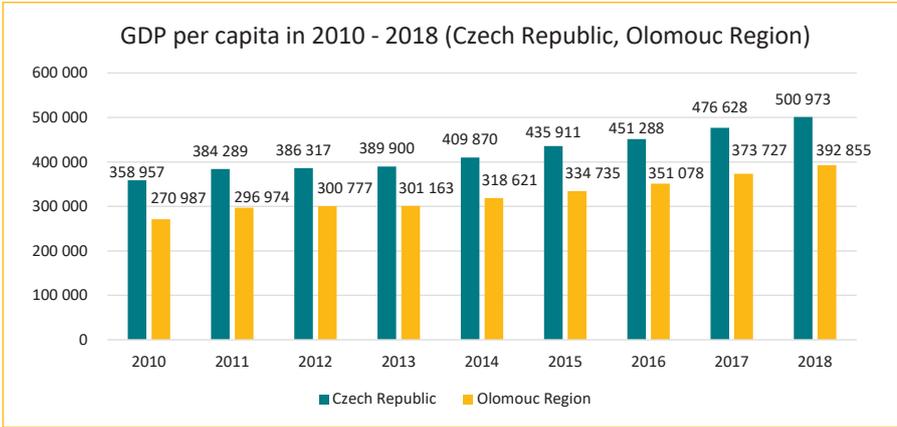


figuring at the opposite end (1,056.8 thousand CZK/inhabitant). Gross value added (GVA) in the Olomouc Region in 2018 was 223.5 billion CZK (4.7 % in the Czech Republic GVA share and the 8th highest in an interregional comparison). The difference between local budget revenues and expenditures in the Olomouc Region remained positive amounting to 758.4 mil. CZK.

There were 143,478 economic entities registered in the Olomouc Region (as of 31. 12. 2019), more than a third of all entities in the region was based in Olomouc, Prostějov and Přerov. From the perspective of municipalities with extended powers, the most entities

were in the Olomouc Region (44.7 thousand) and, conversely, the lowest rate was in the SO ORP Konice (2.1 thousand).

In 2019, the largest employer based in the Olomouc Region was the Olomouc University Hospital, followed by the Palacký University in Olomouc (more than 4,000 employees) and HELLA AUTOTECHNIK NOVA, s.r.o. (over 2,000 employees). As of 31. 12. 2019, the Olomouc Region harboured the headquarters of 102 large enterprises with more than 250 employees, 612 medium-sized enterprises within the 50 - 249 employee-span, and 2,364 small enterprises with 10-49 employees.

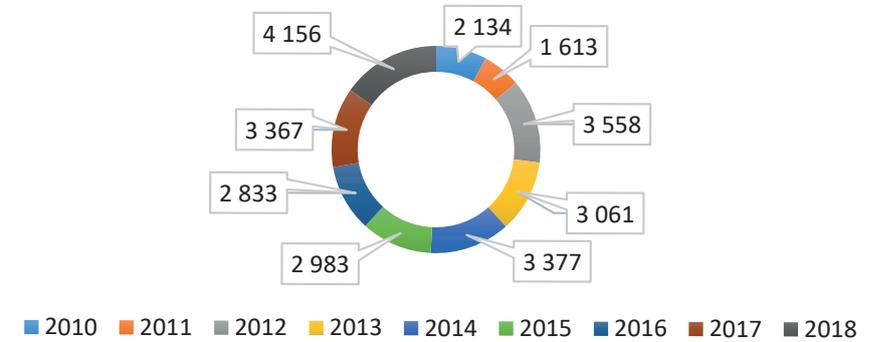


Source: CZSO, own processing

Science and research in the Olomouc Region

In 2018, 4.2 billion CZK were spent on science and research (R&D) within the region; the share of the region in total expenditures in the Czech Republic was 4.0 % (6th highest share in the Czech Republic). The share of R&D expenditures in the Olomouc Region related to the regional GDP in 2018 was 1.67 % in total (5th highest share in the Czech Republic). In 2018, a total of 57 % of all R&D expenditure was spent in the business sector (2.4 billion CZK), with the higher education sector consuming (1.7 billion CZK), i.e. 40.6 % of all regional expenditures. The share of R&D expenditures in the higher education sector in the region has been the highest in the Czech Republic for 13 years in a row now.

Expenses on science and research (in mil. CZK) in the years 2010 - 2018



Source: CZSO

A total of 3,341 employees in the Olomouc Region in 2018 were engaged in research and development. In the business sector, 1,813 employees were employed in the Olomouc Region,

941 of which were researchers (i.e. 51.9 %). There were 841 researchers among the 1,408 employees in the university sector.



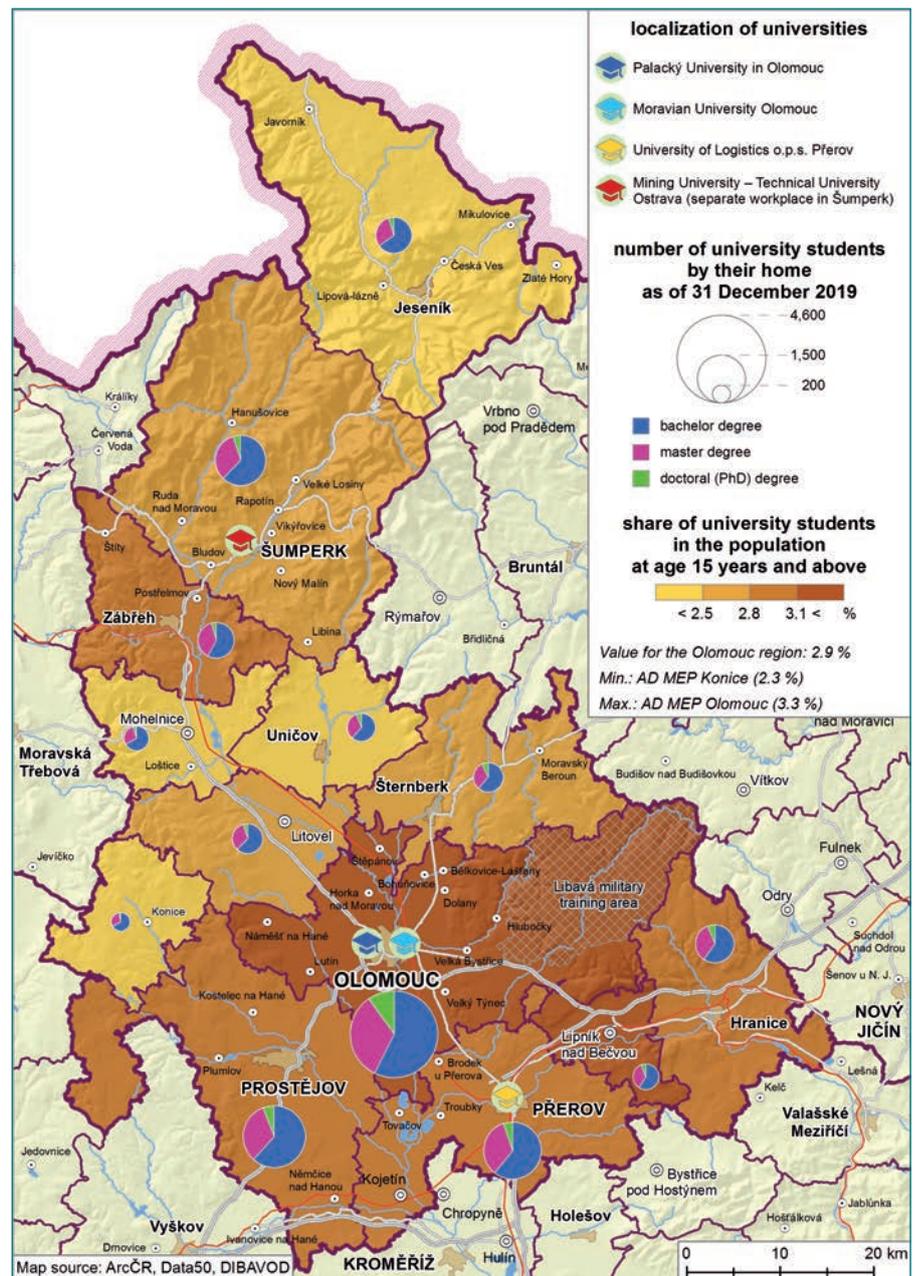
EDUCATION AND EDUCATIONAL STRUCTURE IN THE OLOMOUC

The Olomouc Region has a vast network of kindergartens, primary schools, secondary and higher vocational schools of all founders. The Olomouc Region is the dominant founder of secondary schools, supporting and taking into account the labour market requirements and adapting the structure and number of programmes opened to respond to these requirements. Consequently, education is one of the Olomouc Region's main priorities. Another advantage is the British International School Olomouc (iSchool) in Olomouc, which is based on the British education model and has been running in Olomouc since 2006.

Every year, the Olomouc Region population's educational structure is constantly increasing. In 2019, the number of university degree inhabitants was 84.4 thousand, while the number of inhabitants with secondary education without an A-level exam was higher (195.4 thousand persons) than that of people with an A-level exam (170.5 thousand persons). 15 % of the population (82.4 thousand people) have merely basic education. One fifth of the region's workforce has acquired a university degree (20.6%), another third has completed their studies with a high school diploma (35.3%), and two-fifths of the region's economically active population (39.3 %) had secondary education without a high school diploma.

Status of the educational system in the Olomouc Region in the school year of 2018/2019:

377 kindergartens → 272 primary schools (156 schools with 1st - 9th grade; 115 schools with first elementary level only; 1 school with only the second grade) → 19 grammar schools (14 founded by the region, 3 by municipalities, 2 by congregation) → 63 secondary vocational schools and secondary schools (50 established by the region, 13 by private users) → 8 higher vocational schools → 1 conservatory → 50 special needs schools (14 of these are kindergartens, 21 primary and 15 secondary schools) → 748 school



catering facilities → 28 art elementary schools → 17 leisure activities facilities for → 11 children's homes → 1 pedagogical-psychological counselling → 6 special pedagogical centers → 1 SCHOLA education → 6 language schools.

The founder of all the above-mentioned schools and school facilities was the Olomouc Region, municipalities, private individuals and the church.

In the school year of 2018/2019, a total of 92 secondary schools of various founders provided secondary education in the Olomouc Region. Out of these, 68 schools were established by the region, 18 by private individuals, 2

by the church, 3 by municipalities, and 1 by the Ministry of Education, Youth and Sports. The other 2 secondary schools were not providing education in the given school year.

In 2018/2019, the Olomouc Region was the founder of 14 grammar schools out of a total number of 19, with municipalities covering 3 and congregations 2. Three grammar schools operated by the region were bilingual - Czech-English, Czech-French, Czech-Spanish, 2 grammar schools established by the region specialized in sports training and two grammar schools taught selected subjects in a foreign language.

There are three universities based in the Olomouc Region. The most important university is the Palacký University in Olomouc (UPOL), and there are also two private universities in the region: Moravská vysoká škola o.p.s. (Moravian University) (MVŠO) and Vysoká škola logistiky o.p.s. (VŠLG), i.e. The Logistics University.

PALACKÝ UNIVERSITY IN OLOMOUC (UPOL)

Based in: *Olomouc*
Web: www.upol.cz



Univerzita Palackého v Olomouci

A university with a long tradition, founded in the 16th century. At present, it represents a modern educational institution providing a broad range of study fields and rich scientific activity. There are approximately 22,000 students studying in its eight faculties in 749 study programs. Today, UPOL houses several fundamental research-oriented research teams bringing results that often have the potential to enter the application sphere. Fundamental research in the field of optics, nanomaterials, biotechnology and biomedicine at UPOL reaches world standards. As far as UPOL is concerned, there are three science centers as well as a science and technology park.



MORAVSKÁ VYSOKÁ ŠKOLA O.P.S. (MVŠO)

Based in: *Olomouc*
Web: www.mvso.cz

MVŠO

MORAVSKÁ VYSOKÁ ŠKOLA OLOMOUC ➔

Private university providing economic (managerial-economic) education. The MVŠO expertise profile covers innovating and managing small and medium-sized enterprises (SMEs) including a sustainable economic system of the region. Student internships are greatly emphasized, which is reflected in the mandatory number of hours in internships in companies.



Additionally, expanding international partnerships with foreign universities is emphasized for the purpose of study and employee mobility and the transfer of know-how and cooperation in education and science and research. At the same time, applied research referring to the Olomouc Region is being reinforced, which is reflected in specific innovative solutions via cooperating with companies.

VYSOKÁ ŠKOLA LOGISTIKY O.P.S. (VŠLG)

Based in: *Přerov*
Web: www.vslg.cz



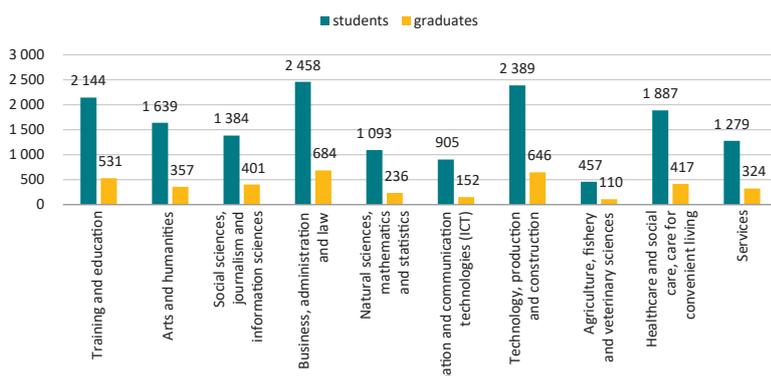
Vysoká škola logistiky o.p.s.

VŠLG is a private non-university type of technical university providing three tertiary education levels (Bc., Ing., PhD.) in the unique Logistics study program. The education system combines technical and technological disciplines with selected managerial and economic subjects and expertise in the field of informatics. VŠLG is an occupationally oriented university, focusing mainly on applied research in cooperation with companies. With regard to the focus of VŠLG and its cooperating companies, this refers to industrial research and experimental development, covering especially a critical survey aimed at improving existing procedures or services, or using existing knowledge to improve procedures or services.



Companies from the Olomouc Region are also cooperating in the field of research and development with other Czech universities and colleges, whose study or research focus contains subjects not provided in the Olomouc Region, which frequently related to universities with technically oriented subjects, especially in Brno. (Brno University of Technology, Masaryk University) and Ostrava (University of Mining - Technical University of Ostrava, while the Faculty of Mechanical Engineering also having a branch in Šumperk, where the Center for Bachelor's Studies was established in 2002).

Students and graduates of public and private universities with Czech citizenship broken down according to the field of education in the Olomouc Region in 2018



Source: CZSO, own processing

BUSINESS REAL ESTATE AND INVESTMENT SUPPORT IN THE OLOMOUC REGION

Smart localization and investment support

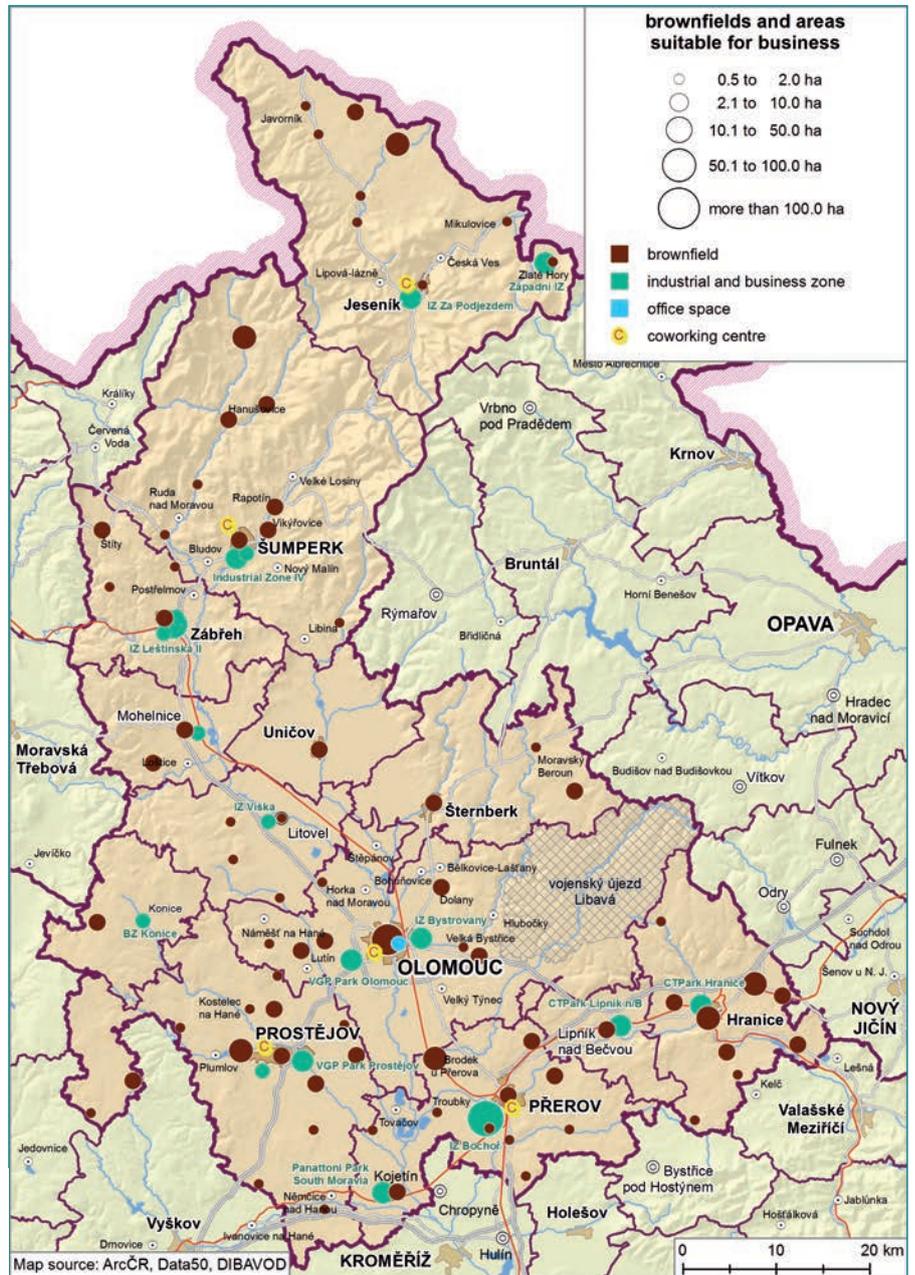
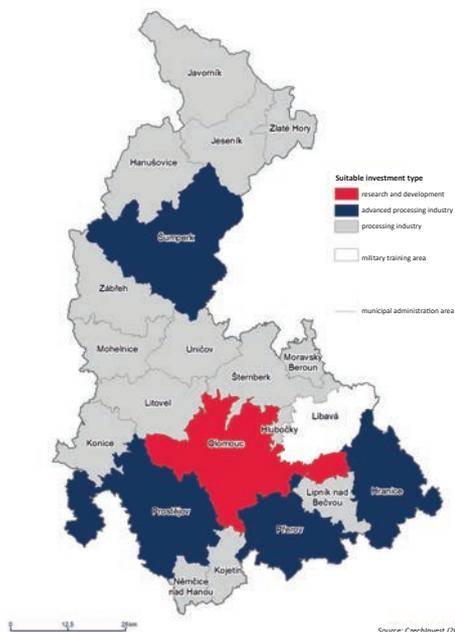
Within the region, assistance in finding a suitable location for domestic and foreign companies is provided by CzechInvest. This agency keeps an extensive business real estate and brownfield database staying in touch Regional Administration of the Olomouc Region and local governments. They are jointly developing the business environment, providing investors with information on the conditions for entrepreneurship in the region.



CzechInvest offers opportunities to support new investments in the region via so-called investment incentives, the granting of which is approved by the government. The specific form of support differs according to the type of investment project for:

- Processing industry
- Technology Centers (R&D)
- Strategic Services Centers

OLOMOUC REGION
Investment allocation

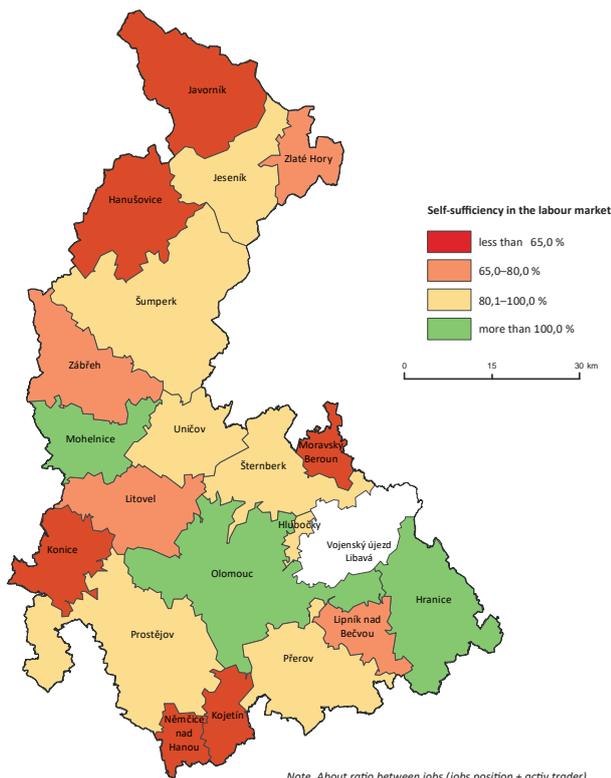


The conditions for granting support differ within individual territories in the region. The regional impact of an investment project and its suitability for the given area are also assessed. Each region has its so-called Investment location map reflecting the territorial specifics at a municipality level with an authorized municipal office (POÚ) and determining the type of suitable investment. The initial data are regularly updated by CzechInvest as part of a pre-construction condition survey, which consists in mapping the business environment in detail.

The so-called self-sufficiency Index in the labour market, which is monitored by the CzechInvest agency for each authorized municipal office's (POÚ) territory of the PO, serves to help in deciding on more detailed localization within the region.

The ideal case is a value of about 100 %, which means that the inhabitants of the region have enough job opportunities or are entrepreneurial individuals, and therefore do not have to go to work.

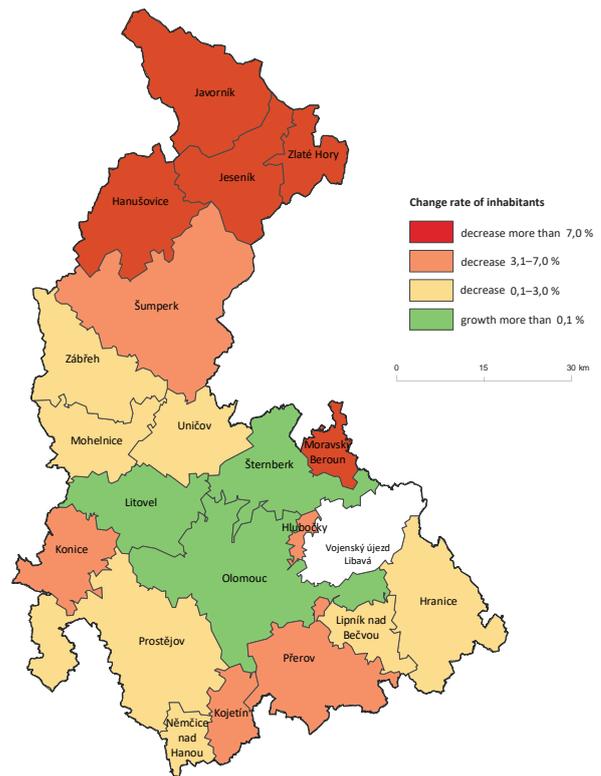
SELF-SUFFICIENCY IN THE LABOUR MARKET
administrative districts of Olomouc Region



Note: About ratio between jobs (jobs position + activ trader) in administrative areas of municipality with authorization municipal office and inhabitants at age 20 to 64.

Source: CzechInvest (2020)

CHANGE RATE OF INHABITANTS BETWEEN THE YEARS 2010 AND 2019
administrative area of Olomouc Region



Source: CzechInvest (2020)

INNOVATION/RESEARCH INFRASTRUCTURE IN THE REGION

The Olomouc Region can be considered a region with a high innovation potential and quality innovation or a research infrastructure in fields connected especially to the most important regional research institution, the Palacký University in Olomouc. You can also find other subjects

where major innovative companies in the region and other research institutions are active.

One of the Olomouc Region priorities is further economic development based on innovation, application of research and development results in practice. In order to provide for such

development, measures are taken to help the overall development of the innovation environment within the region. The RIS3 strategy of the Olomouc region is being implemented (approved by the Olomouc Regional Council) within the context of implementation National RIS3 strategy.

Mostly companies that innovate, carry out research and development and apply the results of research and development within their activities play a key role for developing the innovation environment in the region. As far as further entities are concerned, there are research institutions operating in the region, participating in developing the innovation environment:

These include educational institutions, public administration or specialized institutions focusing on business support, cooperation between research and business, etc.

The Olomouc Region intends to provide space and opportunities for this cooperation, connect key



innovation environment actors, motivate actors in the innovation environment to actually innovate, research and develop, and support the offer of specialized services for entrepreneurs and research institutions.

For this purpose, a specialized institution has been set up in the region - the Association of the Innovation Center of the Olomouc Region (ICOK, Czech abbrev. Of: Inovační centrum Olomouckého kraje). Discussion of key stakeholders on the topic of innovation support, or rather the development of the innovation environment in the region, is also taking place on the premises of the Olomouc Region Regional Innovation Council, an advisory body of the Olomouc Regional Council.

HANÁ REGIONAL CENTER FOR BIOTECHNOLOGY AND AGRICULTURAL RESEARCH

Based in: *Olomouc*

Web: www.cr-hana.eu

E-mail: crh@upol.cz

The CRH is a joint workplace of the Faculty of Science of the Palacký University and the Olomouc-based Institute of Experimental Botany of the Academy of Sciences of the Czech Republic and the Research Institute of Plant Production. CRH employs more than 130 researchers, and about one-fifth of these are foreigners. They focus on protein biotechnology, bioenergetics, chemical biology, plant biotechnology, plant cell biology, plant genetics and genomics, plant genetic resources and metabolomics.

REGIONAL CENTER FOR ADVANCED TECHNOLOGIES AND MATERIALS (RCPTM)

Based in: *Olomouc*

Web: www.rcptm.cz

E-mail: rcptm@upol.cz

This top scientific center focuses on nanoparticles and nanotechnologies. Experts are primarily engaged in developing nanomaterials and

chemicals that may be applied in medicine, biotechnology, food and other industries, as well as in environmental protection. The science center employs about a hundred scientists, a quarter of whom are foreigners. They are engaged in chemistry, materials and optical research.

INSTITUTE OF MOLECULAR AND TRANSLATIONAL MEDICINE (UMTM)

Based in: *Olomouc*

Web: www.imtm.cz

E-mail: reception@imtm.upol.cz

It represents a technological infrastructure and platform for molecular-oriented basic and translational biomedical research. Researchers are working on understanding the molecular basis of cancer and infectious diseases better. The research focuses on identifying new biomarkers and therapeutic targets, the evaluation of the biological activity of small molecules using high-throughput screening tests, and preclinical development. The Palacký University was the initiator of its establishment and setup - in cooperation with the Olomouc University Hospital, the University of Chemical Technology in Prague, the Institute of Organic Chemistry

and Biochemistry of the Academy of Sciences of the Czech Republic, as well as entities from the application sphere - the BIOMEDREG project.

OLOMOUC UNIVERSITY HOSPITAL (FNOL)/ NATIONAL TELEMEDICINE CENTER (NTMC)

Based in: *Olomouc*

Web: www.fnol.cz, <https://ntmc.fnol.cz/>

E-mail: info@fnol.cz

The FNOL is one of the organizations managed by the Ministry of Education, Youth and Sports from the list of research organizations. The FNOL houses the NTMC treatment center, established as a coordination and educational center in the field of eHealth, or telemedicine. The goal of NTMC is unifying activities in the field of eHealth under one organizational umbrella structure, searching and exploring new directions and procedures in the field, verifying and implementing these innovations and principles in practice and, last but not least, developing and using modern methods in undergraduate and postgraduate education. NTMC cooperates with partners from university institutes, medical facilities, technology companies and other relevant entities.





AGRITEC, RESEARCH BREEDING AND SERVICES

Based in: Šumperk

Web: <https://www.agritec.cz/cs>

E-mail: info@agritec.cz

It focuses on applied and basic research in agriculture, environment and food, plant breeding, propagating and selling seeds, chemical plant protection products, substrates, feed, providing services in the field of biochemistry, chemical analysis, laboratory and field testing of preparations, excipients and varieties. The research focuses on researching genetic resources of legumes, flax and hemp, genetic-breeding methods of legumes, flax and rapeseed, biotechnology of legumes, flax and rapeseed, growing technologies of peas, beans, lupines, flax, hemp, cumin, integrated protection of legumes and flax. Agritec Plant Research s.r.o. is another research organization

HYDRAULIC RESEARCH CENTER

Based in: Lutín

Web: <http://www.sigmagroup.cz/skupina-sigma/struktura-skupiny/tuzemske-centrum-hydraulickeho-vyzkumu-spol-s>
E-mail: chv@sigma.cz

In 2010, SIGMA GROUP initiated the establishment of the CENTRUM HYDRAULICKÉHO VÝZKUMU spol. s.r.o. (Hydraulic Research Center), which has the status of a research organization under EU law. This organization's objective is to provide hydrostatic and hydrodynamic machines and pumping technology for scientific and academic institutions, university students and practitioners participating in basic research and the development in the field of fluid hydraulics.

AGROVÝZKUM RAPOTÍN

Based in: Rapotín

Web: <https://www.vuchs.cz/main/agrovyzkum/>

E-mail: info@agritec.cz

Agrovýzkum Rapotín s.r.o. was founded in 2002. Its research focuses on sustainably managing agricultural and forest land, on protecting waters against agricultural pollution and conserving biodiversity at a local level, developing and improving breeding practices while relying on genetic variability in cattle populations and technological provision of cattle breeding with regard to animal welfare, nutrition and feeding of farm animals with regard to their development, health, economy and composition of feed rations, animal production for slaughter and production of meat and milk in nature close to the system of ruminant breeding.

SCIENCE AND TECHNOLOGY PARK OF THE PALACKÝ UNIVERSITY IN OLOMOUC

Based in: Olomouc

Web: www.vtpup.cz

E-mail: recepce@vtpup.cz

The VTP UP is the UPOL's innovation and technology transfer center. It connects companies with UPOL, making new technologies available. It provides support for developing innovative companies, launching spin-offs and start-ups focussing on using the UPOL's potential. It strengthens cooperation in applying the results of science and research in the commercial

sphere and transfers the needs of the commercial sphere to UPOL's scientific research workplaces. The VTP UP also operates specialized 3D printing and numerical calculations facilities, providing for co-working on the university campus in Olomouc - breeders, networking, education activities, competitions, a growing student community and entrepreneur community - i.e. the UP Business Club, a conference on the successful journey to becoming a successful entrepreneur and the UP Business Camp, as well as the best Business plan award called Podnikatelská hlava.

BALUO APPLICATION CENTER

Based in: Olomouc

Web: www.acbaluo.cz

E-mail: info@acbaluo.cz

A science and technology park specializing in the support of a healthy lifestyle, prevention of diseases of civilization and optimizing physical activity.



OLOMOUC REGION-BASED RESEARCH AND DEVELOPMENT IN THE CORPORATE SECTOR

Research and development is carried out in Olomouc Region-based companies to a significant extent. The companies engaged in significant research and development activities/infrastructure include:

- *Precheza a.s. in Přerov* (formerly called "České technologické centrum pro anorganický pigment a.s."), i.e.: Czech Technology Center for Inorganic Pigment), focusing on the development and research of all pigmented and non-pigmented

application areas of oxides and sulphates of titanium, iron and calcium.

- *Meopta - optika, s.r.o.* (Přerov), this company develops and designs work within its Meopta R&D center, carrying out measurements and analyses of optical parameters, providing for technical consultations as well as for the production of functional samples and prototypes for both internal needs and external customers.

- *HELLA AUTOTECHNIK NOVA s.r.o.* (Mohelnice)

- *Technology center of the multinational Olympus company, namely Olympus Surgical Technologies Europe - Olympus Medical Products Czech, spol. s.r.o. in Přerov* specializing in the development and production of endoscopes.

Further companies also carrying out significant development capacities include *EXCALIBUR ARMY spol. s.r.o., FARMAK a.s., and others.*

OTHER IMPORTANT INNOVATION ENVIRONMENT ACTORS

PUBLIC ADMINISTRATION

Public administration in the field of innovation support, or rather the development of support for enhancing the innovation environment in the region, is mainly done by the Olomouc Region, which deals with the support of these activities in the region within the activities to support the regional development.

Targeting these activities is mainly laid down by the Development Strategy of the Territorial District of the Olomouc Region (see for more details on <https://www.olkraj.cz/strategie-rozvoje-uzemniho-obvodu-olomouckeho-kraje-cl-537.html>) and also the RIS3 strategy of the Olomouc Region. There are funds in the budget of the Olomouc Region allocated annually to support these activities. In addition to the Olomouc Region, larger cities within the region are also involved in supporting innovation.

OLOMOUC REGION INNOVATION CENTER (ICOK)

Based in: *Olomouc*

Web: www.inovaceok.cz

The interest association of legal entities, which was established in 2011 under the name OK4Inovace, restarted its activities in 2019, including a change in its business name in order to further develop and improve its activities. It was established to support the development of innovation and innovation environment in the region.

The initiator of this founding was the Olomouc Region and currently, in addition to the Olomouc Region, the Palacký University in Olomouc is also a member of the association. The main vision of the innovation center is to have an open regional innovation ecosystem responding flexibly and naturally to the development of human knowledge and the market, with the Olomouc region as a location favouring innovation and responsible business in all respects having the innovation ecosystem as an integral part of socio-economic development and general prosperity of the Olomouc region. The ICOK is the Olomouc Region's partner implementing the Smart Accelerator project within the Olomouc Region II project and, in partnership with the Olomouc Region, it is implementing the RIS3 strategy of the Olomouc Region.

ICOK'S MAIN MISSION

- helping people in developing sustainable and growing businesses
- supporting research and development in the Olomouc region and its application in practice
- striving to increase investment in research and development and in public interest, which especially refers to the segment of companies of all sizes and specializations
- making the Olomouc Region more attractive and a suitable place for investors and qualified workers
- creating and keeping up partnerships between companies

and investors, between the public, private, academic and non-governmental non-profit sectors wherever innovation is concerned.

CZECHINVEST – REGIONAL OLOMOUC REGION OFFICE

Based in: *Olomouc*

Web: www.czechinvest.org

E-mail: olomouc@czechinvest.org

CzechInvest plays a key role in supporting business and investments comprehensively. It provides information on CzechInvest agency services and consultations for entrepreneurs, including the option of state, regional and international financial support, assistance with placing investment plans of both domestic and foreign companies, cooperation with local government, schools and other regional institutions in finding opportunities to develop the business environment.

CHAMBERS OF COMMERCE

The region houses the Regional Chamber of Commerce of the Olomouc Region (hereinafter "KHK OK") with its registered office in Olomouc and individual district chambers of commerce in district towns, supporting business and the business environment in this region and protecting the interests of their members. More information is available at www.khkok.cz (KHK OK), www.ohk.jesenik.com (Jeseník), www.khol.cz (Olomouc), www.ohkpv.cz (Prostějov), www.hkprerov.cz (Přerov) and www.ohk-sumperk.cz (Šumperk).

CONFEDERATION OF INDUSTRY AND TRANSPORT, REGIONAL OFFICE FOR THE OLOMOUC AND ZLÍN

Based in: Olomouc

Web: www.spcr.cz

E-mail: spcr@spcr.cz

The Confederation of Industry and Transport of the Czech Republic is a non-governmental voluntary non-political organization, associating employers and entrepreneurs in the Czech Republic. Its mission consists in influencing the economic and social policy of the Czech government in order to provide for optimal conditions for dynamically developing business in the Czech Republic. The Confederation of Industry and Transport of the Czech Republic operates throughout the Czech Republic via its regional offices in individual regions.

ASSOCIATION OF SMALL AND MEDIUM-SIZED ENTERPRISES AND SELF-EMPLOYED PEOPLE

Web: www.amsp.cz

The AMSP CR-Association of Small and Medium-Sized Enterprises and Self-Employed People of the Czech Republic is the main representative of the widest business segment in the Czech Republic. It covers small and medium-sized enterprises (SMEs), self-employed people and associations, guilds and associations representing specific professional interests. It is a place for commenting and supporting export policy, research, development and innovation, financing, subsidies and education.

AGENCY FOR BUSINESS AND INNOVATION, REGIONAL REPRESENTATION FOR OR

Based in: Olomouc

Web: www.agentura-api.org

This Agency (API) acts as an intermediate. Using this position, it performs specific implementation activities subsidizing thus supported activities of the OP EIC. The operational program is aimed at increasing the enterprises' innovative performance, at using the results of industrial research and experimental development and the development of business and the competitiveness of small and medium-sized enterprises. Certain specific activities are also suitable for large enterprises, business groups, research organizations, innovation infrastructure entities, public benefit companies, non-profit organizations or state administration and self-government bodies, as well as for organizations founded and established by them.

CLUSTERS IN THE OLOMOUC REGION

There are clusters figuring among the important stakeholders within the region, representing the industry focus of companies that cooperate with each other. There is also cooperation going on between the corporate sector and research organizations, and activities of a research/innovation nature are being developed.

CZECH OPTICAL CLUSTER

Based in: Olomouc

Web: www.optickyklastr.cz



It was established to enhance the conditions for developing the optical industry in the Czech Republic (emphasising the Olomouc region) via cooperation between companies, the public sector and the education sector within the entire value chain of optics, optomechanics, photonics, optoelectronics and fine mechanics, including production related to these areas, plus technologies and services within the supply and customer sphere in three areas: imaging and consumer optics, military optics, lighting technology. Some of the cluster's four main activities include research, development and innovation.

OLOMOUC INNOVATION CLUSTER

Based in: Olomouc

Web: www.o-k-i.cz



One of the cluster's objectives is to raise young people's awareness of entrepreneurship and support start-ups. It cooperates with partners on regional events such as seminars, trainings, business competitions and conferences. The cluster furthermore focuses on projects (preparing and implementing innovation and research projects), cooperating (connecting the academic and business sphere), innovating (innovation management and research & development projects) and implementing (providing for the transfer of scientific results into practice).

MEDCHEMBIO

Based in: Olomouc

Web: www.medchembio.cz



The MedChemBio cluster intends to assist in further developing medicinal chemistry and chemical biology. This cluster's specific objective is establishing a platform for exchanging information, promoting medicinal chemistry and chemical biology in society and developing specific projects at the interface between science and industry, developing small and medium-sized enterprises in the field of new drug development and new diagnostic approaches.

CREA HYDRO & ENERGY, Z.S.

Based in: Brno, provozovna Olomouc

Web: www.creacz.com



The CREA Hydro & Energy, z.s. cluster is a cluster of companies, research institutions and universities operating in the field of technologies for water management works, water and waste management and renewable energy sources. Cluster members are jointly participating in research, development and innovation of products, promoting this area, presenting and implementing projects in the world.

SPECIALIZATION DOMAINS (FIELDS) IN THE OLOMOUC REGION

Support for developing innovation environment in the Olomouc Region is carried out in accordance with the RIS3 strategy for the Olomouc Region (Regional Annex to the National RIS3 Strategy for the Olomouc Region, further information is available on <https://www.olkraj.cz/ris3-strategie-cl-3882.html>).

Within this strategy, the so-called specialization domains were identified, where our region is described as significant in terms of the tremendous scope of the application sphere (companies) and the research sphere. Below, you will find the hitherto identified specialization domains of our region:

Mechanical engineering and electrical industry	Main products: automotive, machining tools, technical ceramics, magnetic soft ferrite products, powder metallurgy, diamond tools, electric motors and alternators, white goods and more.
Optics and fine mechanics, optoelectronics	Products from the entire value chain of optics, optomechanics, photonics, optoelectronics and fine mechanics, including related production of observation and aiming devices for day and night vision, lighting and imaging systems for industrial applications, lighting technology for the automotive industry, digital projection, semiconductor industry, modern optical elements and technologies, medical diagnostic devices. Export markets: EU, Switzerland, USA, Israel, Asia.
Industrial chemistry	Chemical production. Export markets EU, USA.
Pumping and water management technology	Pumping equipment, fluid transport systems, water management equipment, membrane technologies, wastewater treatment plants.
Biomedicine, Life Science and Health Care	This particularly includes health services, pharmacy, biotechnology, chemical and biological analyses in the SVP, SLP or SKP mode, specific analysis methods for drugs and pharmaceutical products, bioinformatics and health informatics, and more. The key research, development and educational capacities within the region are also concentrated in this area (Palacký University in Olomouc, University Hospital in Olomouc and others).
Software development	Information technology, and especially software development, is a young component within creative industries. In the Olomouc Region, this sector is developing dynamically. This sector is very characteristic of having a higher share of small businesses and micro-enterprises.
An emerging field Advanced agricultural technologies for sustainable development	Development and production of modern agrochemicals, breeding of new varieties with increased resistance, or providing for the use of plants as a platform for producing various substances, using new substances in tissue cultures, developing and producing new substances and products for protecting and improving skin properties and dental hygiene, using plant derivatives and extracts with antimicrobial, protective, antioxidant and detoxifying effects (e.g. biotechnology, breeding) - Haná area, linked to research at the Palacký University in Olomouc and other research organizations and research departments of companies.
An emerging field New materials and technologies	Groundwater, wastewater and surface water treatment; environmental technologies, technologies for protecting cultural monuments, advanced separation methods in food and biotechnologies, advanced chemical analyses with SVP / GMP certification, nanotechnologies for protecting the authenticity of liquid products, new methods for antimicrobial surface protection based on nano/biotechnologies, antimicrobial materials for cosmetic applications, food supplements, medicine, advanced diagnostics using nanotechnologies, nanomaterials for applications in construction and energy, sustainable energy sources, developing new types of magnets based on nanomaterials.

The relevance of these fields in terms of identifying them as regional specialization domains is being continuously evaluated, new fields may “emerge”, or may become another specialization of the region.



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ArcČR - map base distributed by ARCDATA PRAHA, s.r.o.

CZSO - Czech Statistical Office

Olomouc Region - own database and survey of the Olomouc Region

CzechInvest Agency - map materials

MŠMT - The Ministry of Education, Youth and Sports (MEYS)



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