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About Kraków and Małopolska Region

Introduction

Małopolska Region is one of the most interesting and fastest developing locations for investment in the business services and IT sector in Europe. Kraków - the biggest city in Małopolska Region and the social and economic capital of the region - is a center of dynamic growth, firmly established on the global map of the most attractive locations for international business process outsourcing centers[1] (*BPO, business process outsourcing*), shared service centers (*SSC*) and research & development (*R&D*) centers.

It should be emphasized that Kraków was ranked among the top 10 most attractive cities in the world for business services outsourcing in the latest „Tholons Top Outsourcing Destinations 2013"[2] ranking. In 2013, the capital of Małopolska Region moved up from 11th (2012) to 10th position. Therefore, Kraków became the first city in the Central and Eastern Europe in Top 10 of the prestigious ranking. It should be added that the list is created on the basis of a wide range of criteria, including the number and quality of human resources, level of education of the employees available on the labor market, costs of running the activity, available infrastructure, investment risk and quality of life.

The strong position of Małopolska Region as an attractive location for foreign investors has been confirmed by the publication of The fDi Intelligence, entitled „*European Cities and Regions of the Future 2012/13*"[3] – a ranking of cities and regions which are most popular among investors and offer the best conditions for implementing new economic projects. One of many categories is the evaluation of regional strategies for attracting direct foreign investment. Małopolska Region was ranked number 1 among Eastern European regions in the field of the implementation of strategies for attracting foreign investment, and consequently placed among 25 European regions with the best strategies for attracting BIZ (17th position in the ranking of 110 compared cities). Among TOP 10 biggest European regions, Małopolska Region was ranked 10, being the only Polish region in this category[4].

[1] Business Process Outsourcing centers (BPO) – specialized companies or their organizational units, which take over the execution of selected non-production business processes, outsourced by other companies. Most of their income is generated from service outsourcing.

[2] *http://www.tholons.com/TholonsTop100/*

[3] *http://www.fdiintelligence.com/Locations/Europe/European-Cities-and-Regions-of-the-Future-2012-13*

[4] *http://www.outsourcingportal.pl*

Transport

One of the most important advantages of Małopolska Region as the location for business service centers and IT sector companies is its good accessibility. Numerous air, road and railway connections with European countries and major Polish cities increase employee mobility and facilitate access to offices around the world.

- The A4 motorway runs through Małopolska Region, linking the region with the Western European motorway network (e.g. trip from Kraków to Berlin takes about 6 hours).
- The trip to Warszawa is possible thanks to the fast InterCity railway connection (2.5 hours).
- The Kraków Airport is the biggest regional airport in Poland (second biggest in the country after the Warszawa Chopin Airport, both in the number of passengers and air operations). It is located 11 kilometres to the west of Kraków (15-minute railbus trip from the Kraków main railway station in the city center). The airport serves South and East Poland, an area inhabited by approximately 8 million people within a distance of 100 kilometres from Kraków. The Kraków Airport offers connections with over 60 cities in the world, including major European airport hubs. In 2012, the airport served 3.44 million passengers. The most popular connections are: London (11%), Warszawa (8%), Frankfurt (6%), Munich (6%) and Oslo (5%).

Figure 1. Kraków airline route map

Source: own work based on the information provided by the Kraków Airport (http://www.krakowairport.pl).

The quality of life

Kraków and Małopolska Region are one of the areas with the highest level and quality of life in Poland. The quality of life not only has an impact on the mental well-being of the current inhabitants, but it can also encourage people from other regions to relocate. According to Diagnoza Społeczna [a social diagnosis research] (2011)[5], the Małopolska Region is second and Kraków is third in Poland in the percentage of respondents satisfied with their place of residence, which is very valuable from the perspective of a future investor.

The major tourist attractions of Małopolska Region are its diverse natural environment resources, as well as the rich historic and cultural heritage of the region. There are six national parks located in the Małopolska Region. Every year, there are several dozen various cultural events of international importance taking place in Małopolska Region. It is also worth mentioning that eight out of thirteen objects in Poland which are included in the UNESCO World Heritage List are located in Małopolska Region.

There is a number of international schools functioning in the Kraków agglomeration, including the International School of Kraków, accredited by the Council of International Schools (CIS), as well as the New England Association of Colleges and Schools (NEACS). The schools guarantee high quality of education for children of foreigners - employees of foreign corporations. They are attended by students from over 25 countries.

[5] *http://www.diagnoza.com/pliki files/raporty reports/Diagnoza_raport_2011.pdf*

Business in Małopolska

Business Services Sector

Key facts concerning service centers in the Kraków agglomeration

There are 74 service centers, which belong to international corporations, operating in the Kraków agglomeration (BPO/ITO, SSC, R&D). Overall, they employ over 25,000 people. The numerous and globally renowned companies which opened their business services centers in Kraków include: Google, IBM, Shell, UBS, Capgemini, HSBC, State Street, Amway, Lufthansa and Motorola. There are also major outsourcing companies with Polish capital operating in the city, e.g. Ericpol.

Table 1. Top 15 service centers with foreign capital in the Kraków agglomeration

No.	Company	Type of center	Year of center establishment	Country of origin	Employment in the Kraków agglomeration	Activity (business processes)
1	Capgemini	BPO	2003	France	3200	F&A, IT, KPO, Procurement, CS (Customer service), HR
2	Shell	SSC	2006	United Kingdom Netherlands	1800	F&A, IT, CS, HR, Procurement,
3	State Street	-	2007	USA	1700	Financial Services
4	IBM BTO	BPO	2002	USA	1500	F&A, HR, IT
5	HSBC	SSC	2008	United Kingdom	1300	F&A, HR, IT, CS, FS, KPO
6	Sabre	BPO	2000	USA	1300	IT
7	Philip Morris International	BPO	2005	USA	1100	F&A, IT, HR
8	Motorola Solutions (two centers: R&D and SSC)	R&D, SSC	1998 (R&D) and 2007 (SSC)	USA	1000	R&D (the development center), F&A (in SSC)
9	UBS	SSC	2007	Switzerland	500-1000	Financial Services, IT, KPO, F&A, HR, CS, Procurement
10	Electrolux	SSC	2005	Sweden	500-1000	F&A, IT
11	CBB Call Center (UniCredit)	-	2001	Italy	500-1000	CS
12	Delphi Poland	R&D	2000	USA	500-1000	R&D
13	Airline Accounting Center (Lufthansa)	SSC	2003	Germany	500-1000	F&A
14	International Paper	SSC	2004	France	500-1000	IT, HR, CS, Procurement
15	Serco	BPO	2009	United Kingdom	500-1000	CS

Source: ABSL data.

Other companies which employ over 200 people in their centers in the Kraków agglomeration include: Alexander Mann Solutions, Aon Hewitt, Genpact, Nokia Siemens Networks, Capita, Cisco, Amway, Heineken, Luxoft.

Kraków is the number one city in Poland in terms of employment in service centers with foreign capital, far ahead of Warszawa and Wrocław. Almost 25% of the overall number of 110,000 employees of foreign service centers in Poland are employed in the business services sector in Kraków. Since 2008, there have been several dozen thousands of new jobs created in service centers in the Kraków agglomeration, out of which approximately 10,000 were created during the last 2.5 years.

An analysis of the structure of services provided by the centers has shown[6] that the business processes which are carried out in the highest number of centers in the Kraków agglomeration are IT services (32 centers), as well as financial and accountancy services (26). The next position on the list of processes is research and development activities, performed not only in the R&D centers, but also in certain units which provide more advanced ITO services.

It should also be noticed that Kraków holds first position in Poland as regards the number of service centers belonging to foreign financial sector institutions, as well as in terms of employment in such entities (8 centers with over 4,000 employees).

Table 2. Service centers belonging to foreign financial sector institutions in the Kraków agglomeration

Investor	Description of activity, examples of provided services
BNP Paribas	Settlement services, IT services
Brown Brothers Harriman	Corporate banking services, investment management, merger and acquisition advisory, wealth management, investment services, customer technical support.
Deutsche Bank	Deutsche Bank Shared Services Center.
Euroclear	Operational advisory in the field of post-sale services.
HSBC	Credit card management, customer service, financial operations, liability management, HR services, payment services.
State Street	Investment fund accounting services, company asset pricing (including securities), pricing of index funds and other derivatives, investment analyses, fund services.
UBS	Support for UBS branches in the following areas: data analysis, operational services, risk analysis, HR services. IT services: software development, quality control, production support, systems analysis and IT risk analysis.
UniCredit (CBB Call Center)	Financial, information and sales services for Bank Pekao S.A. customers

Source: ABSL report entitled *Business services* for the financial sector (2013).

It can be observed that the business services sector in Kraków has a significant level of maturity, however, it still has a potential for further growth of employment, based on the development of the already existing centers, as well as the on implementation of more advanced areas of activity. The plans of the centers, as well as the observation of the sector development allow to estimate cautiously that further several thousand employees will be employed in the Kraków agglomeration until the end of 2015.

[6] *It should be noted that the estimations concerning the number of centers providing particular services are based on minimum values. This means that the actual values can be higher. It is worth mentioning that in many of the centers, there are several types of services provided.*

Companies about themselves and their development opportunities in Kraków (Małopolska Region)

Capgemini already employs 3,200 people in Kraków, and our employees provide a wide range of services for several dozen global corporations, including accountancy and purchases, customer service, IT infrastructure management, insurance sector and capital market processes, marketing and legal assistance. Our center has a strategic role in the global map of the Group's operation as the so-called Value Center. Not only do we support the most advanced processes, or manage large global contracts. Many ideas, later translated to innovative solutions, are born in Kraków. The competences, knowledge and experience of our team are the fundament for building our future, as well as for rooting our presence in Kraków.

Marek Grodziński, Vice President, BPO Capgemini Center Director

During the seven years of its functioning, Shell Business Service Center in Kraków has become a strategic unit in the global network of six centers carrying out the most important business processes of the Royal Dutch Shell company - global petrochemical and gas industry giant. The center employs almost 1,800 people working in the following departments: Finance Operation, Customer Service, HR Services and - the latest - Supply & Distribution. Providing advanced processes, taking decisions and implementing innovative solutions are only some of the characteristic features of Shell Business Service Center in Kraków. Moreover, the knowledge, experience and commitment of our employees help us to be one of the best Shared Service Centers.

Piotr Dziwok, General Manager at Shell Business Service Center

In 2010, when Luxoft opened its center in Kraków, we were planning to hire 200 employees until the end of 2012. However, in November 2012 we already had 240 employees and we continued the recruitment process. Our Polish employees (in Kraków and Wroclaw) provide ITO services, especially for the investment banking industry leaders. In a couple of years, at the end of 2015, we are planning to give employment to 750 people in our Polish centers - in most cases to highly qualified software developers. The Kraków center will continue to play the leading role. The capital of Małopolska Region is an ideal location for business development, as has been proven by its inclusion in the top ten „Tholons Top outsourcing cities 2013" ranking of the most attractive cities for outsourcing sector investment in the world.

Wojciech Mach, Managing Director at Luxoft Polska

Remuneration in the sector

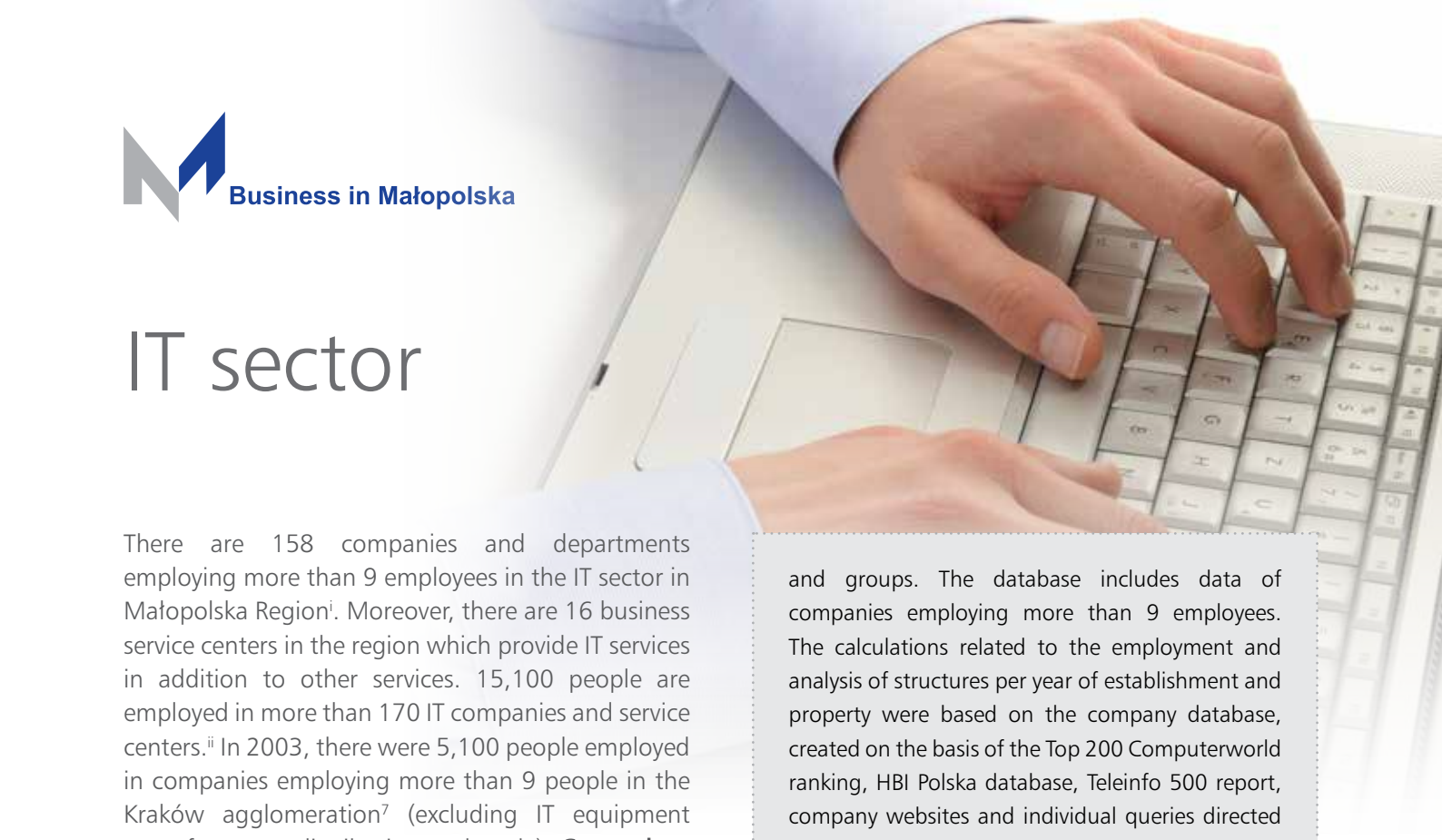
Remuneration in the business services sector depends on many factors. The salary ranges due to seniority and experience have been presented in the table below. However, employers frequently look for a combination of additional qualifications, e.g. knowledge of a rare language, team leading experience, or knowledge of particular programs. The less popular the required competencies are, the higher the remuneration the employee will expect. Another factor influencing salary rates is the availability of particular languages on the local market, depending much on the philology departments offered by the local universities. The employees also frequently take the employer brand into consideration. It sometimes turns out that they are likely to begin work for less money, if they see an opportunity for development in a large and prestigious organization.

Table 3. An average monthly gross salary in the business services sector in Kraków for employees with the knowledge of English

Financial and accounting processes: General Ledger (GL)	Min	Optimum	Max
Junior Accountant (1 – 2 years of experience)	2800	3500	4500
Accountant (2 – 3 years of experience)	4200	4800	5500
Senior Accountant (over 3 years of experience)	5000	6500	7000
Team Leader (team of 5 – 15 employees)	7000	8000	9500
Process Manager (team of up to 50 employees)	11000	14000	17000
Financial and accounting processes: Accounts Payable and Accounts Receivable (AP/AR)	**Min**	**Optimum**	**Max**
Junior Associate (0 – 1 year of experience)	2300	2700	3500
Accountant (1 – 2 years of experience)	2700	3500	4300
Senior Associate (over 2 years of experience)	4000	4300	5000
Team Leader (team of 5 – 15 employees)	6500	7000	8000
Process Manager (team of up to 50 employees)	9000	12000	15000
Sales	**Min**	**Optimum**	**Max**
Junior Specialist (no experience)	2700	3000	3500
Specialist (over 1 year of experience)	3000	3500	4000
Team Leader (team of 5 – 15 employees)	6000	7000	9000
Process Manager (team of up to 50 employees)	11000	13000	15000
Customer service processes	**Min**	**Optimum**	**Max**
Junior Specialist (no experience)	2300	3000	3500
Specialist (over 1 year of experience)	3000	3500	4000
Team Leader (team of 5 – 15 employees)	6000	7500	8000
Process Manager (team of up to 50 employees)	9000	12000	15000
IT processes / technical support	**Min**	**Optimum**	**Max**
1st Line Support (0 - 1 year of experience)	2800	3500	4500
2nd Line Support	4500	6000	8000
Team Leader (team of 5 – 15 employees)	7000	9000	11000
Process Manager (team of up to 50 employees)	12000	14000	17000
Purchases (order management)	**Min**	**Optimum**	**Max**
Junior Specialist (0 - 1 year of experience)	3000	3500	4000
Accountant (1 – 3 years of experience)	4500	5000	5500
Senior Specialist (over 3 years of experience)	5500	6500	8000
Team Leader (team of 5 – 15 employees)	7000	8500	10000
Process Manager (team of up to 50 employees)	10000	14000	16000
HR processes	**Min**	**Optimum**	**Max**
Junior Specialist (0 - 1 year of experience)	3000	3300	4000
Specialist (1 – 2 years of experience)	3800	4000	4500
Senior Specialist (over 2 years of experience)	4500	5000	6500
Team Leader (team of 5 – 15 employees)	6500	7500	9000
Process Manager (team of up to 50 employees)	9000	12000	14000

Source: HAYS Poland

Business in Małopolska



IT sector

There are 158 companies and departments employing more than 9 employees in the IT sector in Małopolska Region[i]. Moreover, there are 16 business service centers in the region which provide IT services in addition to other services. 15,100 people are employed in more than 170 IT companies and service centers.[ii] In 2003, there were 5,100 people employed in companies employing more than 9 people in the Kraków agglomeration[7] (excluding IT equipment manufacturers, distribution and trade). **Comparison between this number and the current level of employment shows an almost threefold increase of the IT sector during the last 10 years.**

In this report, the IT sector includes the following sections and groups of Polish Classification of Activities:

- section 62 (Activities connected with IT software and advisory and related activities),
- group 63.1 (Data processing, website management).

Also included in the IT sector are those service centers whose main areas of activity are ITO services, as well as the research and development centers whose main activity consists in developing software (including mobile) or IT systems. In practice, some of the ITO centers are classified in other sections of Polish Classification of Activity. As the Polish Classification of Activity fails to reflect IT sector divisions, there was a need to develop our own database, containing: companies included in sections 62 or 63.1 of the Polish Classification of Activity according to their main activity, research and development centers, as well as ITO centers, not included in the two above-mentioned sections and groups. The database includes data of companies employing more than 9 employees. The calculations related to the employment and analysis of structures per year of establishment and property were based on the company database, created on the basis of the Top 200 Computerworld ranking, HBI Polska database, Teleinfo 500 report, company websites and individual queries directed to the companies.

IT sector geography

A vast majority of IT sector companies in Małopolska Region operate in the Kraków agglomeration[iii]. 11,100 people are employed in IT sector companies, while a further 1,600 people perform IT processes in business service centers. Another two thousand people are employed in IT sector companies, or the BPO/SSC centers in Zabierzów which also provide IT services. There are 14,700 employees in the Kraków Metropolitan Area. The level of employment in IT companies[8] in Tarnów and Nowy Sącz exceeds 250.

Major employers

Overall, there are over 9,000 employees employed in the largest companies of the region. The biggest employer is ComArch, followed by two American software development centers: Sabre and Motorola Solutions, French Capgemini Infrastructure Services and then the Polish company, Ericpol.

[7] *Micek (2005).*

[8] *Applies to companies employing more than 9 employees.*

Table 4. The largest IT sector companies in Małopolska Region

No.	Company	Year of establishment	Country of capital origin	Employment in Małopolska Region	Activity
1	ComArch*	1993	Poland	2240	international integrator and creator of IT systems provides services for the most important sectors of economy: telecommunications, finances, banking and insurances, trade and services, IT infrastructure, public administration and utilities, as well as small and medium-sized company sector
2	Sabre Polska	2000	USA	1300	delivering solutions for tourist and airline industries
3	Motorola Solutions	1998	USA	820	software development center for the administration sector, uniformed services and companies
4	Ericpol**	1996	Poland	700	software development center - for designing and developing software for telecommunications and M2M, as well as for the companies basing their activities on modern technologies
5	Capgemini Infrastructure Services	2005	France	670	IT infrastructure management services
6	Grupa Onet.pl (together with DreamLab Onet.pl)	1996	Germany	600	web portal and a number of other internet-related projects; own software team
7	IBM Poland Software Lab	2005	USA	405	software development center; advanced technical support teams
8	Grupa Interia	1999	Poland	400	web portal management
9	Nokia Siemens Networks	2010	Finland	350	mobile network base station software solutions
10	HCL Poland	2007	India	320	ITO center
11	Luxoft	2010	Russia	250	software development center
12	Cisco	2012	USA	250	global support center
13	ATSI	1998	Austria	200	multimedia software based on large dispersed IT systems
14	NetArt	1997	Poland	200	domain registration, hosting services
15	it Works	2001	Poland	200	providing complex IT services in the outsourcing model
16	Vsoft	1996	Poland	200	creating dedicated software, as well as providing technological and business services for banks, insurance companies and financial institutions.
17	Antenna Software	2005	USA	200	software production center: creating, publishing and managing mobile applications and websites

Note: the table does not include IT company divisions and IT process outsourcing departments functioning in BPO/SSC centers

** At the end of 2012, Grupa Comarch employed 3759 employees.*

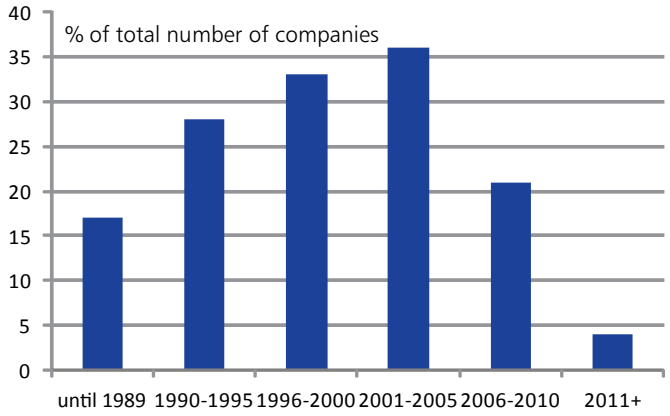
*** total employment in the entire company is more than 1750 people.*

Source: own work based on Top 200 Computerworld ranking, 500 and 1000 Teleinfo reports, company websites.

The history of the IT sector development in Małopolska Region

The market experience of companies in Małopolska Region is long and rich - a statistical company has been functioning on the market since 1998. More than half (56%) the companies were established before 2000.

Figure 3. Year of company establishment in Małopolska Region (n=139)



Note: Branches of IT companies are not included. The earliest stated date of establishment has been taken into consideration.

Country of capital origin

The majority of those employed (52%) work in Polish companies. Foreign companies[9] come from different countries - the biggest number of companies (15) being from USA (3,500 employees) - including the largest foreign entities: Sabre and Motorola Solutions. IBM and Google, giants of American economy, also operate in the region. German companies hire 5% of employees, while companies from other countries account for over 15%. Altogether, there are companies from 15 countries operating in the IT sector in Małopolska Region, including non-European countries (India, Canada, Japan, Brazil).

The structure presented confirms the results of the research[10] showing that the share of companies with foreign capital in the total number of employees working in the information and communication sector in the Małopolska Region in 2010 was highest among all economy branches and amounted to almost 50% of employees.

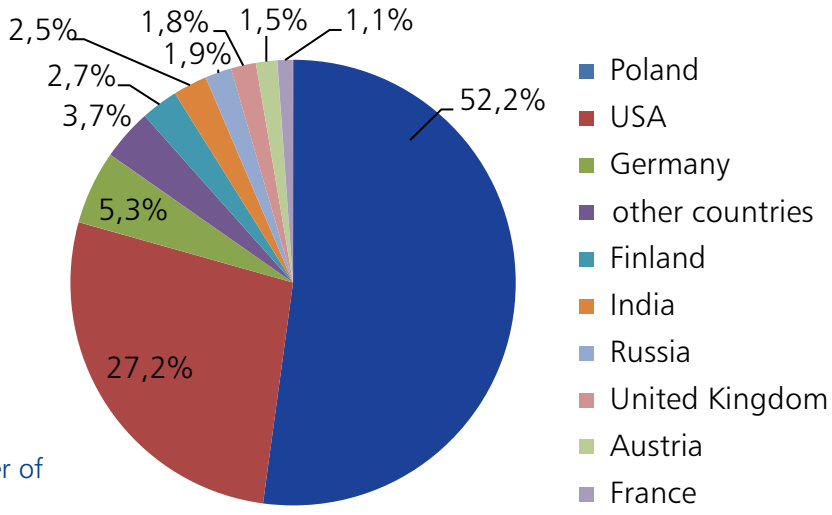
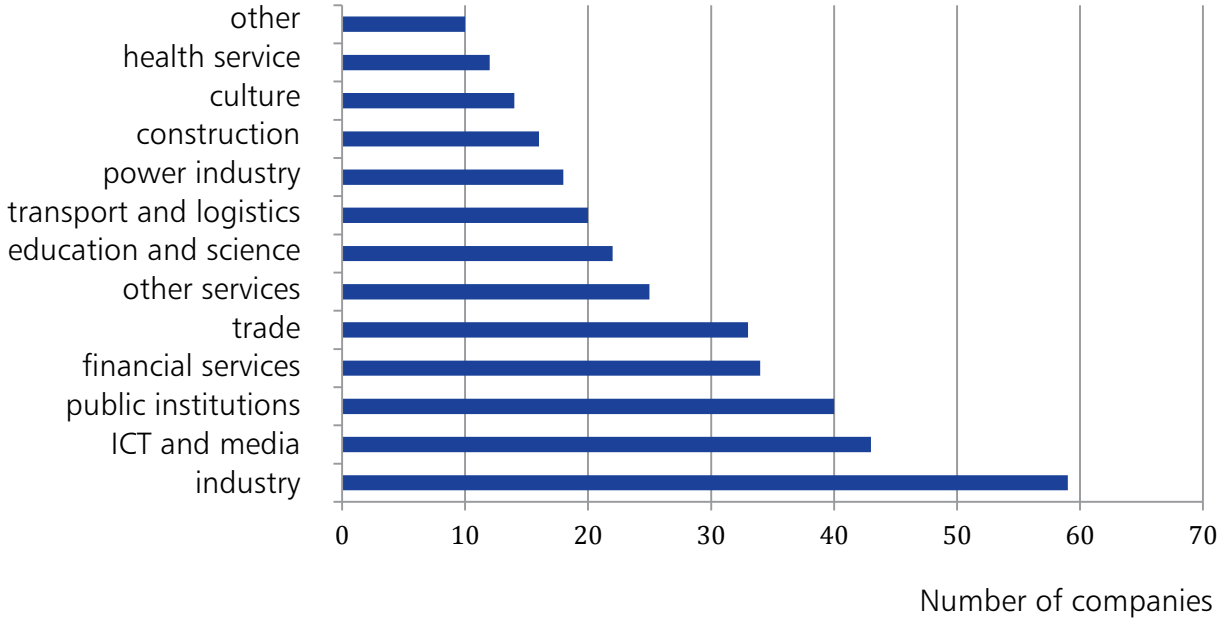


Figure 4.
Capital property structure per the number of employees (n=158 companies)

[9] *Companies where foreign owners possess at least 10% of shares are defined as companies with foreign capital.*

[10] *Domański et al. (2012).*

Figure 5. Customers per economy sector (n=106 companies)



Note: a company usually has customers from a number of industries, therefore the responses do not total to n=106

Source: company websites.

Most frequently, the customers of the Małopolska Region IT sector are industrial companies, followed by ICT companies[iv]. Trading companies, as well as administration and educational institutions, are an important customer group

For example, ComArch gained experience in telecommunications, finances, banking and insurances, trade and services, IT infrastructure, public administration, industry, health service, as well as in small and medium-sized enterprises. The biggest employer in Kraków in this industry operates globally in 39 companies and has 12 branches (including Dubai, Shanghai, London and Brussels), offering services in five continents. The software production and development centers function in Poland, Germany, Austria, Switzerland and France. More than 40% of ComArch sales are generated from export. More than 13% of company sales income is spent on research and development activities (EUR 24.9 million in the entire capital group in 2011)[11]. In 2012 ComArch continued its involvement in 11 projects co-financed within the Innovative Economy Operational Programme, as well as in several other research initiatives.

In 58 companies providing export services[v] (together with business service centers where IT services constitute a part of the activities) there are 10,000 employees, which corresponds to 2/3 of the total level of employment. One of the largest exporters in the ICT sector in Poland is Ericpol. As much as 98% of the company income in 2011 was generated from exporting services. Ericpol is also in the top 20 companies of The European 500 ranking of the fastest growing companies in Europe.

[11] *Company profile. ComArch (2013).*

Ericpol is an engineering company operating on the international ICT market for more than 20 years. It provides outsourcing and consulting services, as well as dedicated solutions in the fields of telecommunications, M2M (machine to machine) communication, UX (user experience), applications for medical, public, financial and banking sectors, as well as business solutions. Ericpol has 3 offices in Poland and 3 subsidiaries in Belarus, Ukraine and Sweden, which form together Grupa Ericpol, employing the total number of over 1,700 employees.[13]

One of fast-growing, relatively smaller, but very innovative companies is **Software Mind**.

For the implementation of its pioneering projects, Software Mind cooperates closely with scientific organizations. The company develops innovative ideas before they are universally applied in business, which provides a permanent competitive advantage for its customers. It was one of the first companies to apply the semantic data analysis for commercial purposes[14]*. The Software Mind team, together with Garlik and the University of Southampton, created the largest semantic database in the world to be applied for commercial purposes*[15]*.* The company also offers innovative Mobile CRM solutions. Software Mind has two research centers located in Sophia Antipolis in France and in Kraków in Poland.

Also small companies from Małopolska Region are highly innovative. The **Mobile Experts** team, consisting of a dozen or so employees, offers advanced mobile solutions, based on which complex ICT solutions are implemented. The company has a rich experience in research and development, which has been proven by the *„Innowator Małopolski" prize in 2008, awarded for the development of the mobile electronic signature solution, as well as by the nomination in the Mobile Trends Awards competition (2011) in the „Mobile application - communication and community" category, received for the NK-Mobile application for the Android platform*[16]*.* Several dozen IT companies in Kraków are involved in research and development activities.

Cooperation between the IT sector and universities

There are eight universities in Kraków offering full-time bachelor IT studies (The Jagiellonian University, AGH University of Science and Technology, Kraków University of Technology, Kraków University of Economics, Pedagogical University of Kraków, The School of Banking and Management in Kraków, Andrzej Frycz Modrzewski Krakow University, Higher School of Economics and Computer Science in Kraków). The other schools offering IT studies at this level in the region include: Higher School of Business - National-Louis University, State Higher Vocational School in Nowy Sącz, State Higher Vocational School in Tarnów, The University College of Tourism and Ecology in Sucha Beskidzka. The overall number of IT students in the academic year 2011/12 was 8,000 (including 7,200 students in Kraków). 3,000 students completed IT studies in the region in 2012.

The cooperation between the AGH University of Science and Technology and the IT sector is the most intensive and diversified. AGH has signed over 270 agreements with different enterprises[17], including almost all major IT companies in Kraków. In 2011 AGH made a profit of PLN 27 million, partly thanks to the cooperation with companies[18]. Almost 50% of the university income is generated from cooperation with business[19]. The AGH rector, professor Antoni Tajduś talks about the symbiosis of universities and IT companies and points to the fact that „it frequently happens that a diploma project is an attempt to solve a company problem"[20]. The cooperation between the science and the IT sector is facilitated by a team of advisors, including Prof. Janusz Filipiak, PhD. Eng.

[12] *In 2011 Ericpol was the leader of the TOP 200 Computerworld ranking of exporters.*

[13] *Ericpol will hire... (2013).*

[14] *Research and development... (2013).*

[15] *Ibid.*

[16] *Mobile Experts (2013).*

[17] *Skowrońska (2012).*

[18] *AGH: ICT is essential (2012).*

[19] *Skowrońska (2012).*

[20] *Ibid.*

Types of connections

There are very strong connections between the employees of companies in Małopolska Region and universities. First of all, a majority of these employees graduated from local universities or used to work for local companies.

> *Polish IT specialists, programmers, analysts and managers have been highly valued by global corporations for a long time. Many of them were educated at the universities in Małopolska Region and began their professional careers in companies operating in the region.*
>
> Prof. Janusz Filipiak, PhD. Eng., CEO and founder of ComArch S.A.
>
> *Source: Bendyk, Kosieliński (2010).*

Secondly, a large part of the companies were established by the employees of Kraków universities - more than 4,000 people in Małopolska Region are hired in such companies. Strong informal relations and the resulting social capital form a suitable environment for the development of innovative technologies.

Finally, many managers of foreign companies graduated from universities in Kraków, or grew up in Małopolska Region. Following their residence in the USA and the experience of working in corporate structures in their youth, they return to Poland. Therefore, the decisions regarding locations are often taken or supported by people of Polish origin, frequently with family roots in Małopolska Region (e.g. Apriso), or managers who studied in Poland (Motorola). Without any doubt, this mechanism will be present in the capital of Małopolska Region and perhaps it will help to attract companies to invest in the southern part of the region[21].

> *The development of education level and learning facilities at the Department of Computer Science at the AGH University of Science and Technology meets our expectations and requirements*
>
> A representative of ComArch
>
> *Source: http://www.ki.agh.edu.pl/recommendations-both/pl*

[21] *Domański et al. (2013).*

In Kraków, there is a growing number of spin-off companies established by enterprise employees who decided to start their own business. Some of them have already achieved significant success and managed to employ several dozen or more employees (e.g. Software Mind, Soneta).

Forms of contact and cooperation

The most frequent form of contact between companies and universities are **internships and special apprenticeship programs** offered by enterprises for students who are obliged to undergo training programs. For example, Sabre offers the Kraków Holiday Internship Program for students. Following its completion, a majority of interns (Java or C++ programmers, quality engineers) are offered permanent job.

Guest lectures **given at the universities of Małopolska Region by the sector representatives are a common practice.** The companies provide lectures, trainings and workshops at universities or in their own premises. For example, the Department of Physics, Mathematics and Information Technology at the Kraków University of Technology joined the Sabre Academy programme. Sabre, a software developing company, 26th in the world in the field of innovations according to the InformationWeek magazine, offers workshops at the company's premises, following each of the five lectures on Agile, Java, C++ and software quality methodology.

Another example of the student competence development programme is *ComArch Skills Laboratory*, conducted by the largest employer in Małopolska Region. This educational project is intended for IT students, and its purpose is to develop knowledge and its purpose is to develop knowledge and practical skills of students in the field of IT technologies and modern solutions. The idea is to offer an opportunity to begin cooperation with the company for the best participants of *ComArch Skills Laboratory*. In the course of four different workshops related to billing systems, J2EE platform, data warehouse and reporting tools (*Business Intelligence*), the participants gain practical skills in creating applications and teamwork.

A more advanced and long-term form of cooperation consists in running **joint study programs, specialties or long-term programming courses**. In March 2013, the Professional Business Programming School in Nowy Sącz began to recruit. The initiative is held under the auspices of Microsoft and it was launched by the Institute of Computer Science at the Higher School of Business - National-Louis University and Multimedia City. The school offers education in the subject of programming advanced business IT systems, both desktop and online, in the programming Microsoft Visual Studio 2012 environment. The offer has been intended not only for university graduates with a degree in IT, but also for high school graduates. A special course lasts 10 months and the classes will be conducted by the lecturers of the Higher School of Business, as well as by Microsoft employees.

IT enterprises offer **grants for supporting the development of laboratories and selected subjects taught at universities**. For example, within the framework of Motorola Solutions Foundation grants, Motorola finances the organization of courses (such as Software Engineering, Mobile Device Programming) at the Institute of Computer Science at the Jagiellonian University.

ICT companies are also becoming **sponsors of training and research laboratories**. In June 2012, AGH and CISCO opened a new IPv6 laboratory, which is a part of the international network of training centers for research on modern internet protocols.

"The new laboratory will allow to train specialists from universities, public administration or telecommunications industry: both on site and using virtual access. The laboratory users will expand their knowledge about innovative IT and telecommunications technologies connected with the implementation of IPv6. With regard to technology and equipment, the laboratory at AGH is a precise copy of the laboratory managed by a French science and research network RENATER with its headquarters in Paris, and it will also be connected with twenty other similar centers around the world. The centers in Paris and Kraków are connected by the pan-European data transmission network GEANT, used by scientific and educational communities."

Professor Krzysztof Zieliński, head of the Department of Computer Science at AGH points out that

"The new IPv6 laboratory ideally complements the laboratory base of the Department of Computer Science and becomes an inherent part of didactics and research connected with the Internet of the Future. Its development is a consequence of the cooperation between CISCO and AGH and it consolidates the position of the Department of Computer Science as the leading unit educating specialists for the IT industry".

Dariusz Fabiszewski, General Director of CISCO Polska, adds:

"The IPv6 laboratory in Kraków enables to gain extensive knowledge about the new protocol, which will allow to ensure the continuity of the functioning of institutions and enterprises. The new laboratory creates an innovative environment for the scientific and academic sectors, and at the same time it enables the transfer of knowledge to the world of business."

Another form of cooperation is **numerous events and conferences organized by universities or research clubs**. Such meetings, which take place under the auspices of IT companies, are attended by hundreds of people. An example is the Research Club for NET Programmers, supported by IT companies, functioning within the framework of the Institute of Computer Science of the Higher School of Business - National-Louis University in Nowy Sącz. The club has been the organiser of a show called "The Power of Computer Science", which has been attended by over 1,000 people each time. The event is held under the auspices of the largest IT sector companies (Microsoft, Cisco, Motorola). Additionally, the members of the Research Club participate in visits at headquarters of well-known IT companies.

A good example of the cooperation between three interested groups (*stakeholders*), i.e. the IT sector, science and local government, is the system developed by the IBM Software Laboratory in cooperation with the city of Kraków, AGH and the Public Utility and Transportation Infrastructure Office in Kraków. This solution supports the management of damages to road infrastructure and is also the embodiment of the concept of intelligent city, widely promoted in Kraków. *"The system allows citizens to report damages to city infrastructure quickly. It is enough to send a photo taken with your mobile phone to the relevant email address and, based on the GPS information included in the photo, the system will automatically recognize the damage location and perform an initial classification of the notification. The system is constantly developed so that the inhabitants are able to verify quickly which damages in road infrastructure are currently being repaired in the neighbourhood. Enabling inhabitants to indicate the most inconvenient damages allows to prioritize notifications and repair the most inconvenient road damages in the first place."*[22]

[22] *Powęska (2013).*

Salaries in IT sector in Małopolska Region

Tabela 5. Salaries in IT sector in Małopolska Region

Work position	Min	Usually offered	Max
IT Manager/ Director/CIO	10 000	20 000	28 000
IT Administrator	5 000	8 000	12 000
Network Engineer	5 000	8 000	12 000
Database Administrator/ Analyst	8 000	10 000	14 000
Helpdesk Support (1st line)	3 000	4 000	5 000
System Security Engineer	8 000	10 000	15 000
Key Account Manager / BD Manager	6 500	12 000	20 000
Channel Sales Manager	9 000	16 000	21 000
Project Manager	8 000	12 000	18 000
Application Development Manager / R&D Manager	12 000	15 000	22 000
Systems Architect	12 000	14 000	18 000
Business Analyst	8 000	11 000	16 000
Developer HTML+CSS+JavaScript	4 000	8 000	12 000
.Net Developer	6 000	9 000	13 000
C++ Developer	5 000	8 000	13 000
Embedded Engineer	5 000	8 000	11 000
Mobile applications developer	6 000	9 000	14 000
Senior Developer / Team Leader	12 000	14 000	16 000
QA Specialist/Tester	5 000	8 000	13 000
SAP Consultant	8 000	14 000	20 000
CRM/ERP Consultant	7 000	11 000	17 000
Business Inteligence Consultant	9 000	13 000	16 000

Source: HAYS Poland

Forecasts and trends

The future of the IT sector in Małopolska Region is optimistic. The development of Kraków already has the characteristics of a self-propelling mechanism, and the snowball effect attracts new foreign investment. There are numerous recruitment processes taking place. For example, until the end of 2013 Ericpol is planning to hire another 200 people in Kraków and Łódź. Large companies may launch their activity in the Małopolska Region Information Technology Park, which will be a platform for cooperation and exchange of ideas and staff between the MSP sector and external investors.

From the geographical perspective, the IT sector will develop in Małopolska Region, within the Kraków Metropolitan Area and in Nowy Sącz. The development of IT sector companies will spread outside the capital of the region and depend on the availability of modern office space, and to a smaller degree on the migration of management staff and enterprise employees[23]. Nowy Sącz will owe the development of IT sector not only to the external investors, but also to the organic development of the existing small local companies. In the near future, MMC Brainville Technology Park will begin to operate in Nowy Sącz. It will be a location for many initiatives, including BCS Polska, an IT solution integrator, part of the international IBCS Group. According to Krzysztof Wnęk, the president of Multimedia City, *„in five years, Nowy Sącz will become the first choice selection for Polish enterpreneurs and scientist-practitioners, interested in the implementation of ICT projects"*[24]. The development of the sector in Nowy Sącz will be stimulated by a cooperation between many participants - different forms of cooperation with organizers in Nowy Sącz business incubator were undertaken by The Cluster of Multimedia

[23] *Domański et al. (2013).*

[24] *First choice park (2011).*

and Information Systems, Foundation of Academic Business Incubators, Polish Confederation of Private Employers Lewiatan and Interdisciplinary Center for Mathematical and Computational Modelling at the University of Warsaw[25]. Another development opportunity for Nowy Sącz is the Center for Research and Implementation, developed by Multimedia City and Higher School of Business - NLU.

An opportunity development for Kraków is the synergy of activities and support for the sector development within the framework of the following clusters: European Games Center and Information Technology Cluster[26]. It seems that in future there will be a closer coordination of activities between the major web portals functioning in Małopolska Region (Onet.pl, Interia.pl), the developing multimedia sector in Nowy Sącz and the game development companies in Kraków. Anoher opportunity for the development of new innovative companies can be the Deutsche Telekom technology incubator in Kraków, second after the one in Berlin, launched in April 2013. The Kraków center *„will support innovative companies from Central and Eastern Europe by offering them complex support in the areas of financing, providing working space, mentor and expert advice, as well as by providing access to Deutsche Telekom resources such as customer database, technical services and access to DT Group infrastructure"*[27].

Among 10 **key technologies** for the development of modern economy in Małopolska Region, the foresight research projects mention three ICT technologies: non-contact computer interface, intelligent systems and universal access to information (the technology which enables access to information via communication end devices cooperating transparently with computer networks which use media, data transmission protocols and data sources)[28]. **The concept of intelligent city, the beginning of which can already be seen through the activities of IBM, will definitely be implemented in Małopolska Region. In theory, the Małopolska Region Information Technology Park should become a location for implementing this concept.** Proper technology and laboratory equipment of the park is intended to shape the future of the cities in Małopolska Region.

Within Business Incubator Media 3.0, an initiative launched in Nowy Sącz, the technologies and multimedia application areas with the highest development potential have been identified. They include: mobile technologies, computer animation, computer games used in education, business and entertainment, internet, e-marketing, e-advertising and e-learning[29]. From the point of view of the industry profile, the following areas will be developed in Małopolska Region: game development, business software[30] and security-related services[31]. The large companies specialized in creating software and built-in systems (Motorola Solutions, Ericpol, Nokia Siemens Networks) are also developing fast.

[25] *First choice park (2011).*

[26] *Domański et al. (2013).*

[27] *Jaślan (2013).*

[28] *Bendyk, Kosieliński (2010).*

[29] *Investment areas (2013).*

[30] *In Małopolska Region there are currently at least 45 companies - each with more than 9 employees, - involved in manufacturing and implementing business software.*

[31] *Many small and medium-sized companies offer systems which are unique at least on the national level (including ICT security solutions). There are currently at least 15 companies in Małopolska Region functioning in this field.*

Human resources

One of the most important factors deciding about the investment location is the quality of the available resources, i.e. the level of education of the region inhabitants and their knowledge of foreign languages. This is mostly influenced by the number of universities and the level of education which they offer. In this respect, Małopolska Region is a very attractive region for potential investors.

Higher education

In 2011, there were 208,311 students at universities in Małopolska Region, whereas 54,978 graduated from universities. The most important academic center in the Małopolska Region, and also one of the most prestigious in the country, is Kraków. During this period, there were 22 universities with 184,493 students, including 47,271 graduates. These facts put Kraków and the region on the second position in Poland, right behind Warszawa. The comparison between Kraków and other major cities in Poland with reference to the number of students and graduates has been presented below.

Apart from Kraków, the Małopolska Region also includes the following subregions: Kraków (including Bochnia), Nowy Sącz, Oświęcim and Tarnów. They are also locations of universities, with several thousand students currently studying there. Almost 8,000 students graduated from them in 2011.

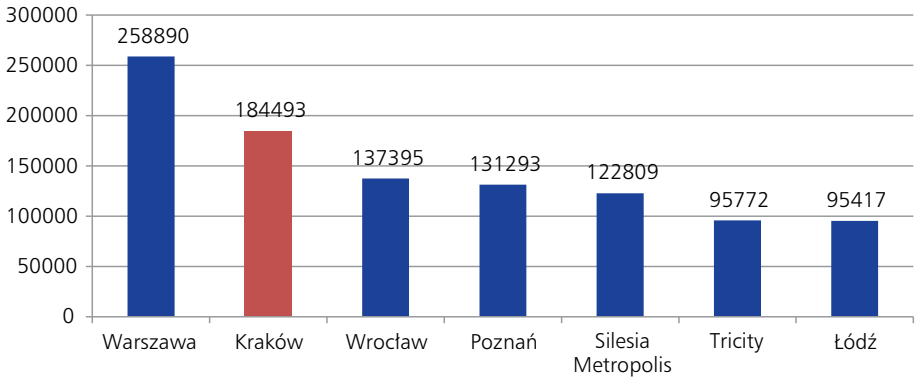


Figure 6.
Number of university students in 2011. (own work based on the Main Statistical Office data)

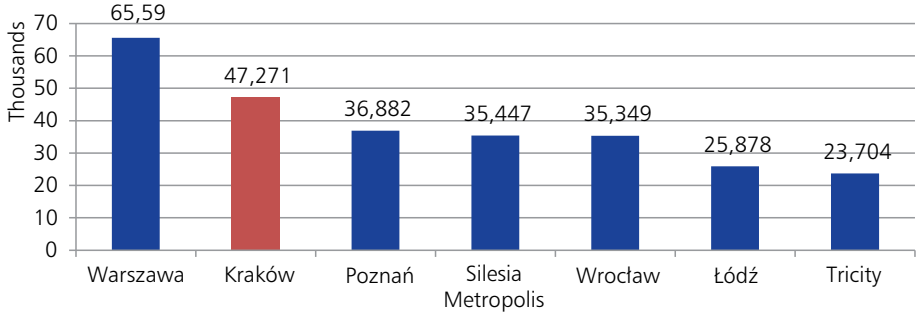


Figure 7.
Number of university graduates in 2011. (own work based on the Main Statistical Office data)

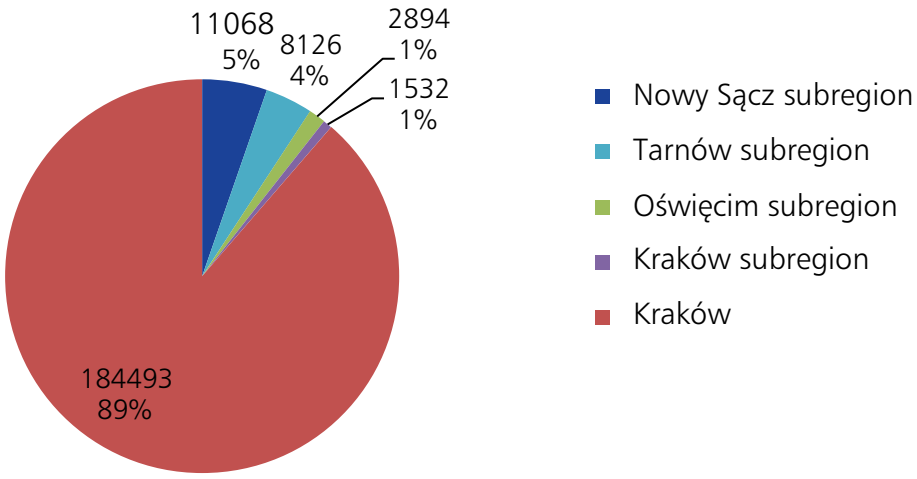


Figure 8.
Number of students in the Małopolska Region subregions in 2011 (own work based on the Main Statistical Office data)

Key subjects

The investors are interested not only in the number of people with a university degree. The subject of the completed studies is also important. From the perspective of the business services sector, the key subjects are: economy and administration, engineering and technical, as well as IT studies. Also from this point of view, the Małopolska Region offers a strong base of potential candidates. In 2011, there were respectively 35,000, 18,000 and 7,000 students of economy and administration, engineering and technical, and IT subjects (including respectively 85%, 97% and 90% in Kraków). It is worth mentioning that the number of students of engineering and technical subjects in Kraków, i.e. 18,831, is the highest of all Polish cities and it even exceeds the result achieved in Warszawa.

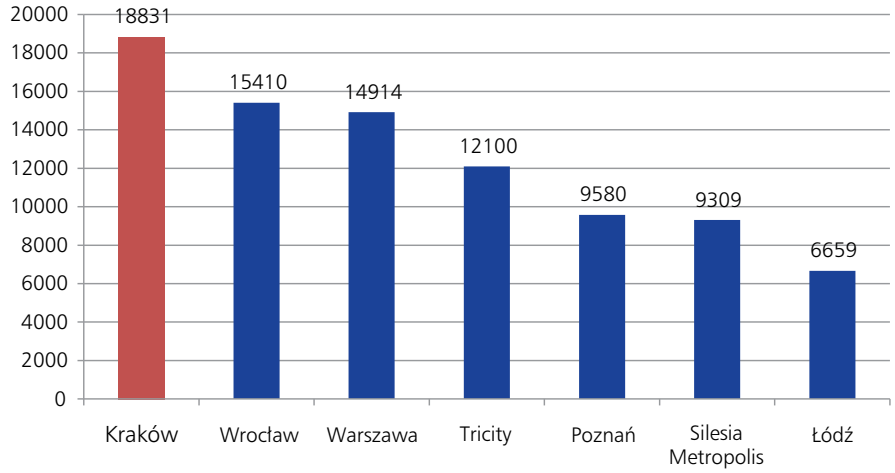


Figure 9.
Students of engineering and technical subjects in major Polish cities in 2011 (own work based on the Main Statistical Office data)

In 2011, the universities in Małopolska Region also had many graduates of key subjects from the point of view of the business services sector. The economic studies were completed by 13,400 students, 4,500 got a degree in engineering and 1,700 in IT. The number of graduates from engineering and technical subjects was again the highest of all Polish regions.

Major universities

The largest and most prestigious university in the Małopolska Region is the Jagiellonian University. In 2012, it was ranked first in the University ranking prepared by the „Perspektywy" monthly magazine. It is also the oldest university in Poland (1364) and the second oldest in Central and Eastern Europe. There are currently 45,498 students at the Jagiellonian University, and with doctoral and post-graduate students, the number increases to 51,202. The university also cooperates with business in many areas. For instance, it is worth mentioning the Jagiellonian Center of Innovation. One of the projects developed under this initiative is Life Science Park - a set of buildings intended for laboratory rental and offering services for life science industry companies. The center provides an opportunity for entrepreneurs to order the execution of research projects with the use of university scientific resources. An interesting example of the cooperation between the university and entrepreneurs are also Business Academies, i.e. trainings conducted by representatives of the partner companies in cooperation with the University of Economics in Kraków. The trainers are employees of departments whose scope of executed tasks is related to the study subjects of the training participants, whereas the topics reflect the actual business problems. The list of companies cooperating with the University of Economics in the academic year 2012/13 included e.g. State Street, Comarch and Deloitte.

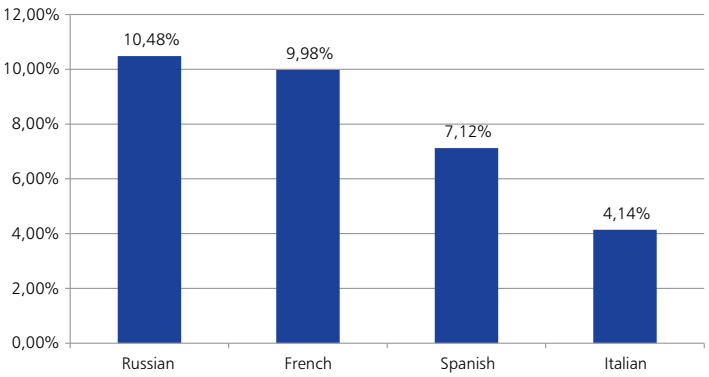
There are also numerous universities of technology in Małopolska Region. The most important of them is the Stanisław Staszic AGH University of Science and Technology. There are almost 40,000 students in 54 degree courses and over 200 specializations. It should also be mentioned that the Jagiellonian University, AGH University of Science and Technology and seven other universities in Małopolska Region established the „Study in Kraków" consortium in 2008. Its goal is to promote the internationalization of universities functioning in the region. The activities undertaken within this project include inviting foreign lecturers to give lectures in Kraków, supporting the inter-university exchange and increasing the number of degree courses which can be completed in foreign languages. A visible effect of the consortium's activities is the doubling of the number of foreign students at the universities in Kraków in 2008-2012.

There are also other universities worth mentioning outside Kraków, e.g. the Higher School of Business in Nowy Sącz, which has been repeatedly ranked first in the ranking of non-public schools drawn up by the „Wprost" magazine. Additionally, thanks to the cooperation with the National-Louis University in Chicago, the students in Nowy Sącz also have an opportunity to obtain the American Master of Science in Management diploma.

Knowledge of foreign languages

The data concerning the knowledge of foreign languages among students in Kraków are optimistic. The „Human Capital Balance" research shows that 92% of them declare the knowledge of English and 40% declare the knowledge of German. It is also worth mentioning that 42% and 13% of students respectively declare the knowledge of these languages at a good or very good level.

Figure 10. The knowledge of other main European languages among students in Kraków (own work on the basis of „Human Capital Balance", n = 4199)



A very good method of learning a foreign language is foreign residence. The universities in Małopolska Region participate in the Erasmus programme, which allows their students to complete part of their studies in a foreign country. In the academic year 2010/2011, 1689 students used this opportunity. The most popular destination was Western Europe: most students chose Spain, then Germany, France and Italy.

Apart from that, it should be added that at the Jagiellonian University it is possible to study rare languages such as Arabic, Hebrew, Japanese, Bulgarian, Serbian or Croatian. For instance in the 2011/2012 academic year, there were 71 students of Arabic, 30 students of Turkish and 45 students of Japanese philology. Such a wide offer of language studies in Poland is still a rarity and there are just 2 or 3 universities with this kind of offer in Poland.

Table 6. Knowledge of rare languages among university graduates in Kraków and Małopolska (B1, B2, C1 and C2 level of fluency)

Ukrainian	3,12%	Turkish	0,31%
Czech	1,29%	Greek	0,29%
Slovakian	0,93%	Japanese	0,29%
Portuguese	0,79%	Norwegian	0,19%
Dutch	0,64%	Lithuanian	0,19%
Hungarian	0,55%	Chinese	0,14%
Swedish	0,50%	Danish	0,11%
Arabic	0,45%	Finnish	0,03%
Romanian	0,39%	Latvian	0,02%

Source: HAYS Poland (n=25,000)

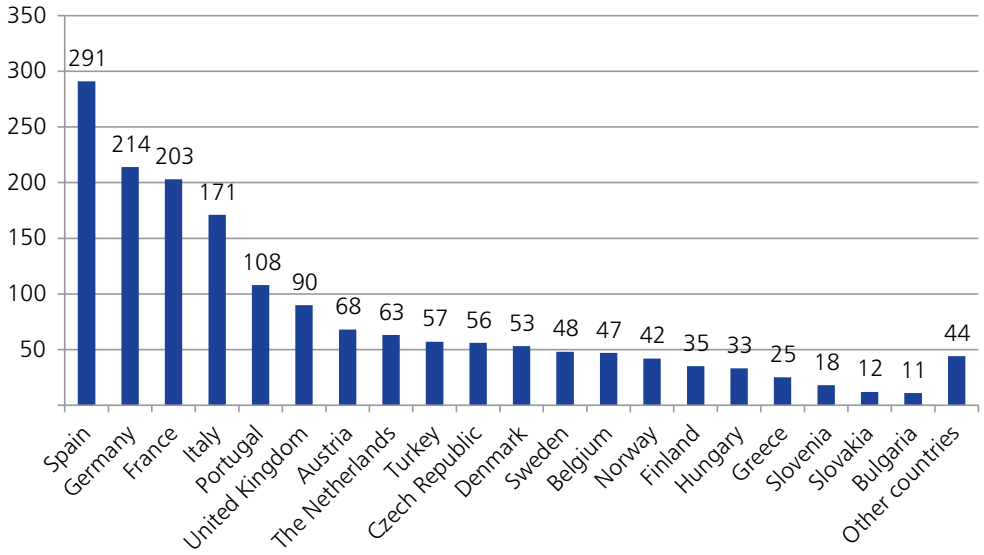


Figure 11. Number of university students in Małopolska Region who took part in the Erasmus programme in 20120/2011 (own work on the basis of FRSE data)

Considering the potential range of candidates for business service centers investment, we must not forget about the current employees of this sector. The ABSL data indicate that Kraków, with approximately 25,000 employees in service centers with foreign capital, is the largest business services center in Poland. The service centers operating in the region serve business processes in over 30 languages, and the main European languages are used in a majority of them. Moreover, language centers in Kraków offer less popular language courses, such as Finnish, Dutch, Norwegian or Flemish. Kraków is also immensely popular with foreigners. Many of them, especially from Italy and Spain, come to Kraków especially to start work for a local company.

Business in Małopolska

The office market in Małopolska Region

Mainly due to the leading role of Kraków, Małopolska Region is the largest office space market in Poland outside Warszawa. The total office space resources in the region are estimated to be over 560,000 metres^2.

With the resources at the level of approximately 550,000 metres^2, Kraków is one of the main locations for the business services sector companies in Poland. It has been estimated that approximately 45% of the entire office space resources in the city is used by the companies in this industry, which is one of the biggest co-efficients among the largest Polish cities.

The capital of Małopolska Region fulfils all requirements related to the quality and availability of offices for service centers, which usually need large and flexible floor areas, two independent energy supply sources and technical specification at the level of A or B+ office buildings.

The office availability is one of the criteria taken into account by the companies in the sector while selecting a particular city. Both the surface required in order to begin operating and the target office are considered.

The observation of the market shows that business service centers tend to consider locating their offices in smaller Polish towns more frequently. Therefore, smaller towns of Małopolska Region, such as Tarnów or Nowy Sącz, have a chance to attract shared service centers or outsourcing companies.

Tarnów

The office space availability in Tarnów remains limited. There are mainly small offices located in tenement houses or buildings which were built several decades ago and have been adapted for offices. However, these buildings fail to meet the requirements of business services sector companies. One of few modern office buildings in the town is the headquarters of Karpacka Spółka Gazownictwa.

The only building offering office space of considerable quality is Krakus, which offers the total area of 2,500 m^2, out of which 1,200 - 1,500 m^2 is currently used as offices. The entire office space in the building is currently rented, however, the owner has determined the base office rental rate at the level of approximately PLN 35-60/m^2 per month (EUR 8.75-16/m^2 per month). The higher limit is applicable for agreements for an indefinite period of time with one month period of notice.

In March 2013, the construction of an office building at ul. Szkotnik 21, intended for rental, was initiated. The office building, constructed by a local company Czakram, will have the surface of 900 m^2 located on three floors. The office building is to be available for leaseholders in February 2014.

Nowy Sącz

Another town in Małopolska Region with the perspective of office market development is Nowy Sącz. There is a number of office buildings in the town, which can be considered as B class. The first one of them is an office building with the area of approximately 1,300 m^2 at ul. Magazynowa. It was built in 2007. Another office building offering a relatively high standard of finish is the office building constructed by PetPol. The building was completed in 2012 and offers approximately 4,000 m^2 for renting. It was located at ul. Węgierska 146a, relatively far from the town center. According to the latest information, the office building is currently put up for sale.

The majority of available offices in Nowy Sącz are small areas divided into rooms, located in tenement houses and low quality buildings adapted for offices. The office rent amounts to approximately PLN 20-25/m^2 per month (approximately EUR 5-6/m^2 per month).

Kraków

The total office space resources in Kraków exceed 550,000 m^2 and the majority of the office space meets technical and functional requirements of leaseholders from the business services sector. The city is characterized by a strong dynamics of the office market development in the last couple of years, in response to the expansion of companies already operating in the city, or those which are beginning to operate here.

Due to the historic topography of Kraków, the office market has developed particularly in the following areas:

- **North West zone** - the advantage of this location is without any doubt the close neighbourhood of the Kraków University of Technology campus. The office buildings in this area include Newton, Galileo, Edison, as well as the headquarters of BNP Paribas Fortis in the Avatar building and Jasnogórska 11 built by MIX Nieruchomości. Farther to the north west in Zabierzów, outside the city limits, there is the largest office park in Małopolska Region - Kraków Business Park, headquarters of such companies as Shell, Amway or UBS.
- **North East zone**, part of the city, especially along ul. Lublańska and Jana Pawła II. The largest office buildings in the area are Rondo Business Park, Vinci and the already mentioned Quattro Business Park, which will eventually consist of 4 buildings.
- **South zone**, and especially the district of Kamieńskiego, Puszkarska, Na Dołach and Dekerta streets, are becoming increasingly attractive for office developers and leaseholders.
- **The center**, due to its historic character, is not considered as a major location for offices. However, there are many renovated tenement houses in this district intended for office purposes, with the areas not exceeding 4,500 m^2. The exception are two modern office investments: Centrum Biurowe Lubicz I&II and Cracovia Business Center.
- **South and West zone** - in this area Buma has carried out the Green Office - a set of buildings located near the headquarters of Motorola Solutions. The three completed buildings (21,400 m^2) were rented to Motorola, whereas the other two were sold to Azora Europe fund.

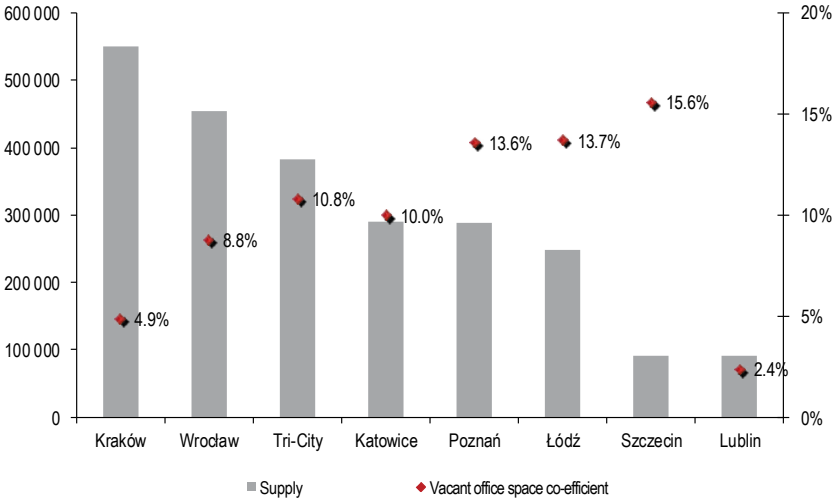


Figure 12. Kraków in comparison with other regional office centers in Poland outside Warszawa - Supply (m^2) and vacant office space co-efficient

Source: Jones Lang LaSalle

Office space supply

At the moment Kraków is one of the fastest developing cities in terms of office space. Currently, there is approximately 83,000 m^2 of modern office space under construction, the majority of which is intended for use as early as in 2014. In 2013, there will be a relatively low amount of new offices on the market (approximately 30,000 m^2).

High construction activity confirms the big dynamics of the rental market, which influenced the decisions of developers to begin new office investments.

Table 7. Selected statistics related to the office space market in Kraków

Basic statistics	2012	Year-to-year change	Forecast for the next 12 months
Gross demand* (m^2) annual data	107 150	+16 590	⇨
Net demand (m^2) annual data	79 900	+15 100	⇨
Vacant office space (m^2)	27 040	-12 960	⇩
Vacant office space co-efficient (%)	4,9	-3.5 p.p.	⇩
Handed over for use (m^2) annual data	48 200	+3 490	⇩
Highest rents (EUR / m^2 per month)	13.5-14.5	0%	⇨

**-gross demand = net demand + agreement extensions*

Source: Jones Lang LaSalle

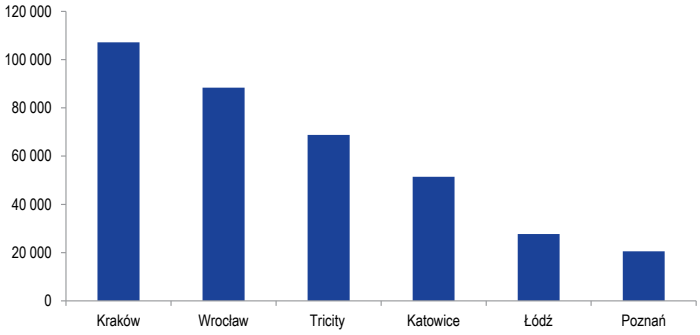
In spite of the dynamic increase of office space supply in 2006-2008, a majority of the office buildings delivered to the market at that time had been rented on the basis of pre-let agreements when the building had been under construction, or even prior to that. The result was a very low level of vacant space, which in practice translated to the lack of office space available instantly. At the end of 2008, the market conditions worsened, which was reflected by a diminishing demand for office space and decreasing rental fee amounts. Additionally, the number of office buildings, whose construction had started before the Lehman Brothers bank collapse, was significant.

As a result of the combination of a high number of office buildings handed over for use and a limited office space demand, there was an increase in the co-efficient of vacant buildings. Its highest value was recorded at the end of 2012 (12%). Since then, we have been observing a downward trend and already in the fourth quarter of 2012, the vacant space co-efficient decreased to 4.9%. A limited number of new office investments to be handed over for use this year, combined with a high level of demand, should result in further downward pressures for the co-efficient of vacant buildings in the next few months.

Demand

In 2012, over 107,000 m^2 of modern office space was rented in Kraków. This amounts to approximately 30% of total demand generated in all major cities in Poland (outside Warszawa). It is worth noticing that over 79,900 m^2 are transactions related to new office space, 40% of which was based on pre-let agreements. The highest new rental agreements in 2012 were concluded by the following companies: Delphi (pre-let agreement, 8,400 m^2 in Enterprise Park B), Alma (pre-let agreement, 5,000 m^2 in Alma Tower), confidential company from the financial sector (pre-let agreement, 4,800 m^2 in Bonarka4Business C) and Motorola Solutions (pre-let agreement, 4,500 m^2 in Green Office C).

Figure 13. Gross demand (m^2) for office space in 2012 - Kraków in comparison with other cities



Source: Jones Lang LaSalle

Year	Office building	Leaseholder	Rental agreement amount (m^2)	Type of agreement
2011	KBP	Shell	16100	extension
2012	CB Kazimierz	State Street	12615	extension
2010	Quattro BP	CapGemini	10000	pre-let
2011	Buma Square	Sabre	8900	extension + expansion
2012	Enterprise Park B	Delphi	8400	pre-let
2010	Green Office	Motorola	8317	pre-let
2011	Bonarka4Business B	State Street	6720	new
2010	Galileo	IBM	5300	extension
2012	Newton	IBM	5000	extension
2012	Alma Tower	Alma	5000	pre-let

Source: Jones Lang LaSalle

Table 8.
The highest rental agreements (above 5,000 m^2) concluded in Kraków in 2010-2013

Rental fees

Currently, the rental fees for best office space in Kraków are at the level of EUR 13.5 - 14.5 /m²/. The rental costs in the capital of Małopolska Region are comparable to the ones recorded in Wrocław and Warszawa (outside the city center).

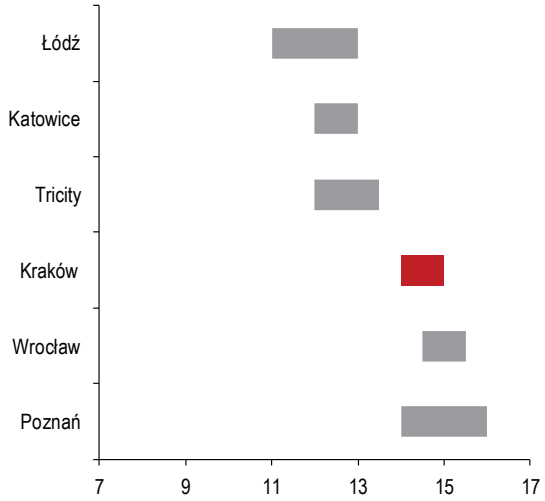
Additionally, in negotiations over the rental agreements, leaseholders are encouraged with rental-free periods (between 3-6 months for a five-year rental agreement) and / or financial contributions for office space finishing, depending on the standard offered by the lessor. The „open space" areas with wiring systems and raised floors are already a standard in new office buildings erected in Kraków.

We think that developers will be less willing to offer a wide range of incentives for leaseholders, due to the improvement of the market conditions. This concerns mostly such leaseholders who have secured their buildings with rental agreements to a significant degree. In our opinion, the tightening of the incentive policy will result in a slight increase of effective rents.

Summary:

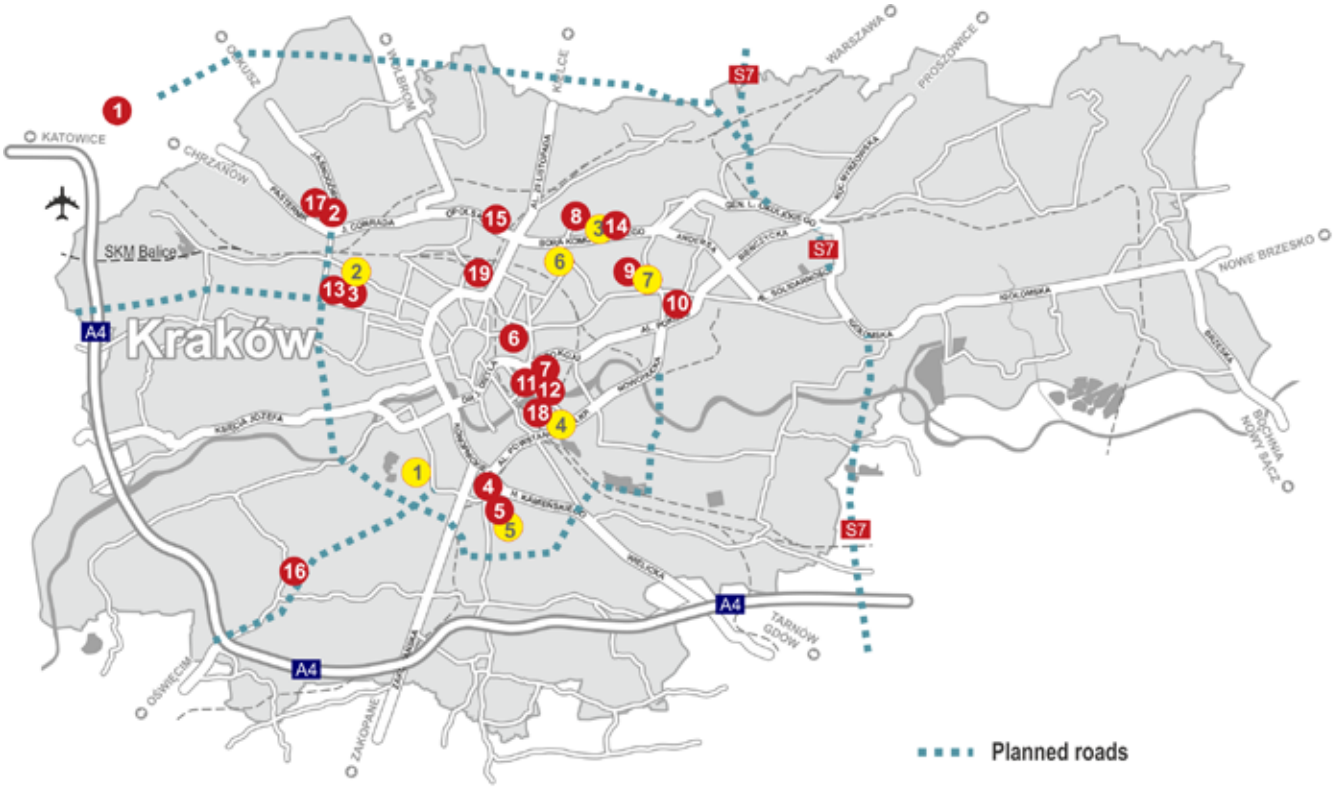
Modern office buildings in the Małopolska Region are concentrated mostly in Kraków, whose resources exceed 550,000 m² of modern office space. The city is the monopolist in the region in terms of office space supply. Also the queries from potential leaseholders have been focused on Kraków so far.

Figure 14. The highest rents in the largest office centers in Poland outside Warszawa (EUR/m² per month)



Source: Jones Lang LaSalle

Figure 15. The location of largest modern office buildings in the Kraków agglomeration



Major Existing Office Buildings

1. Kraków Business Park Zabierzów
2. Centrum Biurowe Euromarket
3. Komplex Biurowy GTC (Galileo, Newton, Edison)
4. Buma Square Business Park
5. Bonarka 4 Business A&B&C
6. Centrum Biurowe Lubicz I&II
7. Cracovia Business Centre
8. Rondo Business Park
9. Kompleks Biurowy w ramach krakowskiej Specjalnej Strefy Ekonomicznej, w tym Centrum Biznesu i Innowacji Copernicus
10. Centrum Biurowe Azbud
11. Centrum Biurowe Kazimierz
12. Diamante Plaza
13. Avatar
14. Quattro Business Park I&II
15. Vinci
16. Green Office A&B&C
17. Jasnogórska / Mix
18. Enterprise Park A&B
19. Fronton

Major Office Buildings Under Construction

1. Kapelanka I&II
2. Pascal
3. Quattro Business Park III
4. Orange Business Park - Amsterdam
5. Bonarka 4 Business D
6. Alma Tower
7. Nautilus

Source: Jones Lang LaSalle

Business in Małopolska

Public support for investment in the business services and IT sectors in Małopolska Region

Investment incentives

The Polish investment incentive policy gives special preferences for the business services sector as one of the priority industries. Apart from the traditional investment support instruments, there has been an increase in the significance of instruments intended for co-financing research and development activities (B+R).

Investment incentives for the business services sector:

- tax reliefs in Special Economic Zones (CIT tax exemption)
- direct budget subsidies for new investment / employment (between PLN 3,200 and 15,600 per one workplace)
- support for B+R activity (e.g. Applied Research Programme) - subsidies up to 65% of B+R costs.

The sector is one of the **priority sectors** of the economic policy.

Special Economic Zone Kraków Technology Park

Special Economic Zones (SSE) are dedicated areas in the territory of Poland where investors take advantage of corporate income tax exemptions.

The exemption is available for the investors who received permits for conducting activity in SSE. The permit defines the minimum level of investment and employment, as well as the maximum level of public aid and the scope of activities which can be performed. The exemption is usually applicable from the moment of incurring first expenses and only for the activities conducted in accordance with the subject-matter scope defined therein (activities not included in the scope can be performed, however, without the right to exemption).

Not all areas of activity can be subject to exemption in SSE - for example, the activities which require obtaining a licence, as well as financial services, are excluded.

The exemption limit is calculated on the basis of investment expenditures or 2-year centers costs. The exemption limit for large companies operating in the Special Economic Zone managed by the Kraków Technology Park amounts to 50% (share in qualified costs). The investor is fully exempt from paying the CIT tax resulting from conducting the activity determined in the permit until using up the limit, or until the end of the functioning of SSE (currently set for 2020).

The availability and attractiveness of this incentive for the business services sector and IT companies depends on the supply for relevant office space, located in the areas included in the SSE. If required, it is possible to include the area selected by the investor within the zone, after meeting certain conditions.

More information can be found on the Special Economic Zone website: *http://www.sse.krakow.pl*

Government subsidies

The Program to Promote Investments of High Importance for the Polish Economy offers subsidies for investment and/or creating new work places.

Conditions for receiving a subsidy

- Advanced Business Services Centers: creating at least 250 new workplaces, investment expenditures at the level of at least PLN 2 million (in practice, at least two times the subsidy amount),
- Research and Development Centers (R&D): minimum 35 new workplaces for employees with a university degree and minimum PLN 3 million of capital costs.

The amount of support per single workplace ranges between PLN 3,200 and PLN 15,600 and depends on the evaluation of the following factors:

- number of created workplaces.
- quality of created workplaces, i.e. number of workplaces for employees with a university degree.
- type and advancement level of the performed processes.
- investment location.
- involvement in the development of local environment, e.g. cooperation with universities, investor brand, process uniqueness, etc.

As a rule, the program support cannot be combined with other forms of support, including especially the EU funding support and exemptions available in the area of SSE, with certain exceptions (including for projects with the level of employment over 500 employees, or if the subsidy does not exceed PLN 3 million/10% of the total aid amount).

The subsidies are granted by the Minister of Economy, whereas the applications are submitted to the Polish Information and Foreign Investment Agency. Receiving support depends on obtaining the approval of the European Commission (unless the subsidy is combined with permission for activity in a SSE).

Co-financing of R&D activities

Co-financing of R&D activities is increasingly more significant in Polish economic policy and it plays more important role for investment incentives, both domestic and co-financed by EU.

Among domestic programmes, it is the Applied Research Programme, carried out by the National Centre for Research and Development (NCBiR), which might be interesting for the sector, and especially for service providers operating in the financial industry.

The programme allows to obtain co-financing up to the amount of 65% (for large enterprises) of costs of research and development projects. The condition to obtain co-financing is establishing cooperation between an entrepreneur and a scientific unit in order to develop new solutions enabling to achieve pre-defined practical goals.

The subject matter of the R&D activity can be various processes, however the key element is to achieve an innovative effect, allowing for a significant service improvement. The following factors can help classify a particular type of activity as research and development: number of staff with PhD degree or higher, cooperation with universities in the field of research or incurring a particular type of costs.

Business in Małopolska

Information on investor service and business support institutions in Małopolska Region

INVESTOR SERVICE IN MAŁOPOLSKA REGION

BUSINESS IN MAŁOPOLSKA CENTER

The center is a specialized unit created in order to provide complex service for investors interested in launching or developing their activity in Małopolska Region. The center offers advisory services, information regarding the office space and the functioning of special economic zones. The center was established in 2008 by the Małopolska Regional Development Agency, the Małopolska Region, Kraków Technology Park and Małopolska Industry Parks (since 2012).

Contact details

Business in Małopolska Center
al. Jana Pawła II 41 L , 31-864 Kraków, Poland
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fax no.: +48 12 620 91 66,
contact@businessinmalopolska.com
www.businessinmalopolska.com

INVESTOR SERVICE CENTER (Kraków City Hall)

The scope of services:

- Information service for domestic and foreign investors
- Monitoring the course of the investment process on behalf of the serviced investors.
- Preparing meetings and visits for companies interested in investing in Kraków.
- Cooperation with the substantial organizational units of the Kraków City Hall and municipal organizational units taking part in the investment process.
- Preparing the city's investment offer.
- Animating cooperation between science and business.
- Coordinating cooperation with business self-government units, organizations supporting the city's economic development, as well as domestic and foreign economic organizations.

Contact details

Investor Service Center
ul. Bracka 1, 31-005 Kraków, Poland
phone no. (0048) 12 616 6002,
fax no. (0048) 12 616 6001,
e-mail: coi@um.krakow.pl

BUSINESS ENVIRONMENT INSTITUTIONS IN THE MAŁOPOLSKA REGION

Małopolska Agencja Rozwoju Regionalnego SA

(Małopolska Regional Development Agency)

www.marr.pl

Małopolska Regional Development Agency (MARR) is the leading regional institution working on regional development. MARR specializes in providing services for enterprises, ensuring complex know-how, as well as modern financial solutions. It provides services in the field of obtaining EU funding and helps to invest in Małopolska Region in an efficient way.

The company is an official partner of the Polish Information and Foreign Investment Agency (PAIiIZ). As a beneficiary of EU subsidies, it implements domestic and regional operational programmes. Being the Regional Financing Institution, MARR participates in granting subsidies for activities related to pro-innovative investment; together with the Polish Agency for Enterprise Development, it supports the development of business support institutions, as well as activities undertaken to create non-bank sources of financing, clusters, networks, partnerships and company consortia.

Krakowski Park Technologiczny – Specjalna Strefa Ekonomiczna

(Krakow Technology Park – Special Economic Zone)

www.sse.krakow.pl

Związek Liderów Sektora Usług Biznesowych w Polsce (ABSL)

– oddział w Krakowie

(Association of Business Service Leaders in Poland (ABSL) - Regional Chapter in Kraków)

www.absl.pl

ABSL Regional Chapter in Kraków is a local activity group consisting of investors representing the business services sector. Among the priorities of the Chapter in Kraków are supporting association members in their local activities, as well as exchanging knowledge and best practices for creating a friendly climate for investmentFor this purpose, the companies associated in the ABSL Regional Chapter in Kraków work together to increase the business attractiveness of Małopolska Region in the eyes of potential investors, and to develop new solutions in the field of cooperation with the local government and universities. More information concerning ABSL local initiatives is available at: *www.absl.pl*

British-Polish Chamber of Commerce

www.bpcc.org.pl

American Chamber of Commerce

www.amcham.pl

ASPIRE - Association of IT & Business Process Services Companies

www.aspire.org.pl

NordicHouse

www.nordichouse.pl

Life Science Cluster Kraków

http:///lifescience.pl

Its role is to enable the cooperation network of companies and organizations with market potential in the medical, cosmetics, biotechnological sectors, as well as to facilitate scientific cooperation with the global LifeScience market for them.

Małopolska Information Technology Cluster (MKTI)

http://www.klaster.krakow.pl

The main goal of MKTI is to establish a modern information technology environment in the region of fields of research, implementation and education of resources, ensuring mutual transfers of knowledge, measures and technologies.

Izba Przemysłowo-Handlowa w Krakowie

The Kraków Chamber of Commerce and Industry

www.iph.krakow.pl

The Tarnow Industrial Cluster

http://www.tkp.com.pl

The main goal of the Tarnow Industrial Cluster (TKP) is to create an attractive investment area, friendly for running economic activities, characterized by good location, modern infrastructure and low technology background costs.

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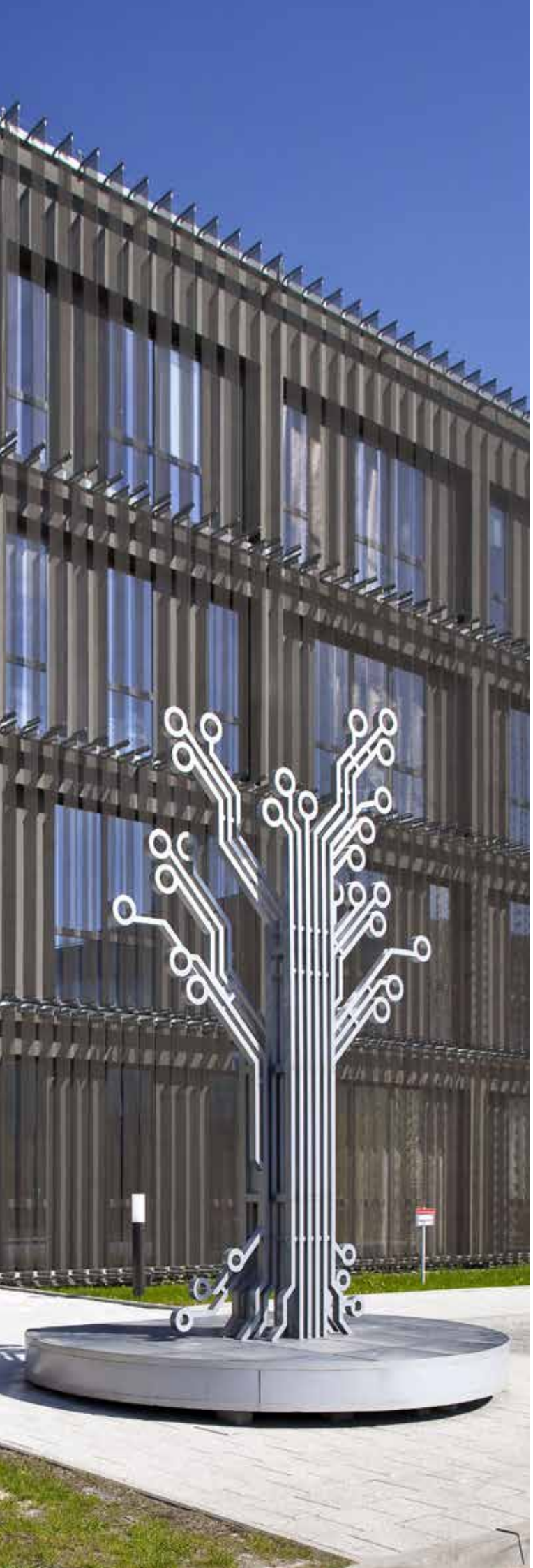

Endnotes

[i] According to the Local Data Bank of the Main Statistical Office, at the end of 2012 there were 4,609 business entities functioning in section 62 of the Polish Classification of Activity (*Activities connected with IT software and advisory and related activities*) in Małopolska Region , including: 1,165 companies and 3,444 sole traders.

[ii] According to the Local Data Bank of the Main Statistical Office, the employment in the J section Information and communication (ICT sector, multimedia and publishing activity, in short: information and communication sector) amounted to 17,200 people in 2011, which gives Małopolska Region the second position in the country.

[iii] As of 31st December 2012, there were over 2,800 entities classified in section 62 of the Polish Classification of Activity (Activities connected with IT software and advisory and related activities) functioning in Kraków, whereas further 500 companies operated in the communes belonging to the Kraków Metropolitan Area, most of them (over 50) in Wieliczka, Zabierzów and Zielonki. There are few companies in the other major towns of the region: 132 in Tarnów and 114 in Nowy Sącz. More than 50 business entities of section 62 of the Polish Classification of Activity are registered in Chrzanów and Olkusz.

[iv] Apart from the IT activities, the ICT sector also includes telecommunications services.

[v] It includes the companies where at least 10% of income is generated from export.