Business Services in Warsaw

Report prepared for the City of Warsaw
by the Association of Business Service Leaders (ABSL)

in cooperation with JLL, Randstad and Randstad Sourceright

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WHY WARSAW?

Warsaw is Poland's main economic and business hub. The capital is also one of the most important and largest metropolises in Central and Eastern Europe, with tremendous investment potential. The city's modern economy features a significant knowledge-based services sector including business process outsourcing centers (BPO), shared services centers (SSC), IT centers, and research and development centers (R&D).

This report presents the most important information on the business services sector in Warsaw. It also discusses selected aspects of the local labor market, the office real estate market, time accessibility, quality of life and support available to investors from local authorities.

Source: Shutterstock

FIGURE 1
KEY FEATURES OF WARSAW AS AN ATTRACTIVE BUSINESS SERVICES LOCATION

The most important economic, educational and cultural location in Poland.

One of the three largest business services locations in Central and Eastern Europe – featuring a mature, continually developing sector.

The largest office market in Central and Eastern Europe.

The best-connected metropolis in Poland.

One of Poland's three top locations in terms of overall satisfaction of business services centers with a place for doing business (ABSL ranking).

Competitive operating and employment costs compared with the largest cities in the USA or Western and Northern Europe.

High quality of higher education.

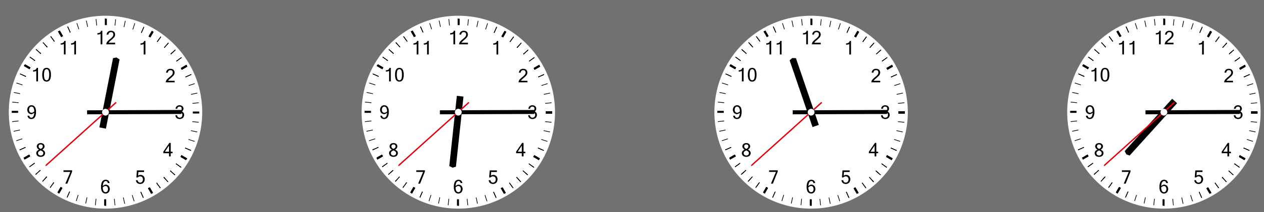
In the QS EECA University Rankings 2018, the University of Warsaw (the country's largest) came in 6th among 200 of the best universities in the Emerging Europe and Central Asia region.

The University of Warsaw is at the top of the Higher Education Perspectives Ranking 2018, which classifies the best Polish higher education institutions (equal top with Jagellionian University in Kraków). Warsaw University of Technology came in third among public universities. Kozminski University came in first among private universities in Poland.

3rd position in Europe

Warsaw's position in the "European cities and regions of the future 2018/19" (fDi Intelligence, Financial Times) ranking in the Business Friendliness category – following London and Dublin.

In the main group of cities of the future, Warsaw came in 11th (2nd in Eastern Europe). Warsaw also came first in the "Polish cities of the future 2017/18" ranking (fDi Intelligence).



WARSAW 12:14:38 | NEW YORK 06:14:38 | LONDON 11:14:38 | TOKYO 19:14:38

Source: ABSL own study

FIGURE 2
LOCATION OF WARSAW

Source: ABSL own study

TABLE 1
DISTANCES AND ANTICIPATED TRAVEL TIMES TO SELECTED CITIES

	Distance (in km)	Travel time		
		By car	By train	By plane
Berlin	520	5h 30min	6h 20min	1h 30min
Frankfurt am Main	890	10h 00min	10h 45min*	1h 45min
Amsterdam	1,100	11h 30min	13h 00min*	2h 00min
Moscow	1,150	14h 30min	19h 00min	2h 00min
Paris	1,370	15h 00min	14h 45min**	2h 30min
London	1,450	17h 00min	21h 00min***	2h 30min

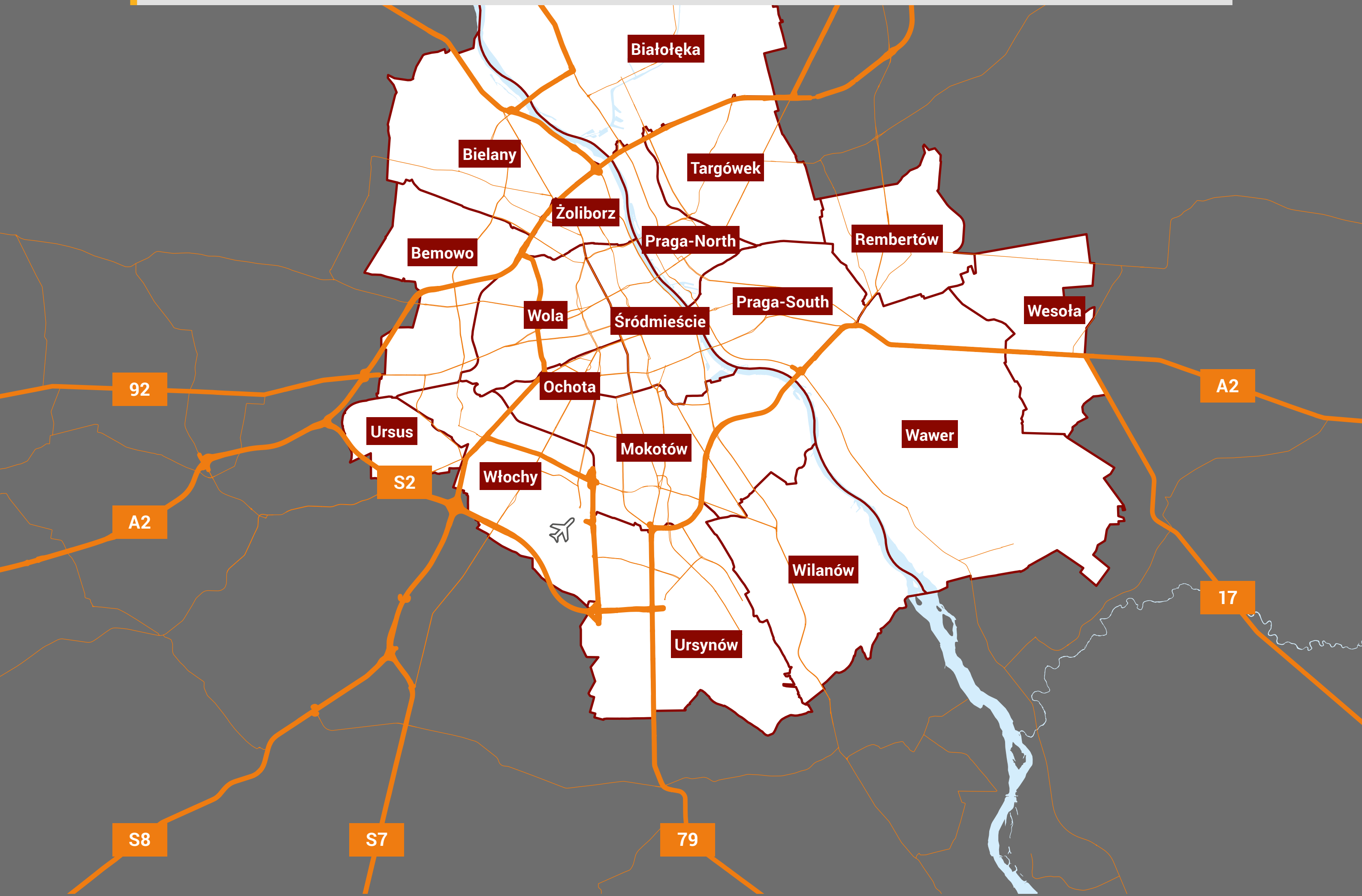
* One asterisk means one transfer required

Sources: Deutsche Bahn, Goeuro, Google Flights, Google Maps, PKP PLK

Warsaw is the leader in financing public transport in Poland. It spends a larger portion of its budget for that purpose than other large Polish cities. Per capita, Warsaw spends 80% more on public transport than the next city in the ranking.

Source: www.transport-publiczny.pl

FIGURE 3
OUTSIDE ACCESSIBILITY OF THE CITY



OUTSIDE ACCESSIBILITY OF THE CITY

Warsaw is located in the center of Poland, where the most important European roads (E30, E67 – Via Baltica, E77, E372) and railways (E20, E65, E75 – Rail Baltica) connect. Good access to road transport is provided by the A2 highway and the S7, S8 and S17 express roads. Warsaw is also a large rail hub for the following lines: No. 1 (to Katowice), No. 2 (to the Belarusian border), No. 3 (to the German border), No. 6 (to the Belarusian border), No. 7 (to the Ukrainian border), No. 8 (to Kraków), and No. 9 (to Gdańsk). Rail lines running from Poland's northern to southern and western to eastern borders cross in the city. Warsaw is home to Chopin Airport (WAW), which provides access to the most important global hubs (including London-Heathrow, Frankfurt am Main, Chicago-O'Hare, Paris-Charles de Gaulle, Beijing, Madrid, Amsterdam, Dubai, Hamad) and 51 cities around the world. It is Poland's largest airport. Also, 33 km from the city center there is another airport, Warsaw-Modlin (WMI), with connections to 10 European capitals. Numerous investments are currently underway, which will systematically expand the city's transport access.

	CHOPIN AIRPORT (WAW)	WARSAW-MODLIN (WMI)
Distance and travel time from city center	7 km / 20 min	33 km / 45 min
Number of destination countries	51	13
Number of air destinations	121	48
Total number of passengers	15.75 M (2017)	2.9 M (2017)
	18 M (2018*)	3.1 M (2018*)
Number of airlines	31	1
Selected airlines flying regular scheduled flights	LOT Polish Airlines, Wizz Air, Ryanair, Lufthansa, Emirates, Air France, British Airways, KLM	Ryanair

* forecast

TABLE 2
NUMBER OF DIRECT FLIGHTS OPERATED PER WEEK TO SELECTED DESTINATIONS AND FLIGHT TIMES

Frankfurt am Main	50	1h45min-1h55min
Amsterdam	43	2h05min-2h15min
Paris Charles de Gaulle	47	2h25min-2h35min
London Heathrow	40	2h40min-2h50min
London City*	12	2h45min

Brussels Charleroi	10	2h05min
Paris Beauvais	4	2h20min
London Stansted	23	2h30min
Madrid Barajas	4	3h35min

* from 7 January 2019

Source: www.lotnisko-chopina.pl, www.modlinairport.pl, Google Flights

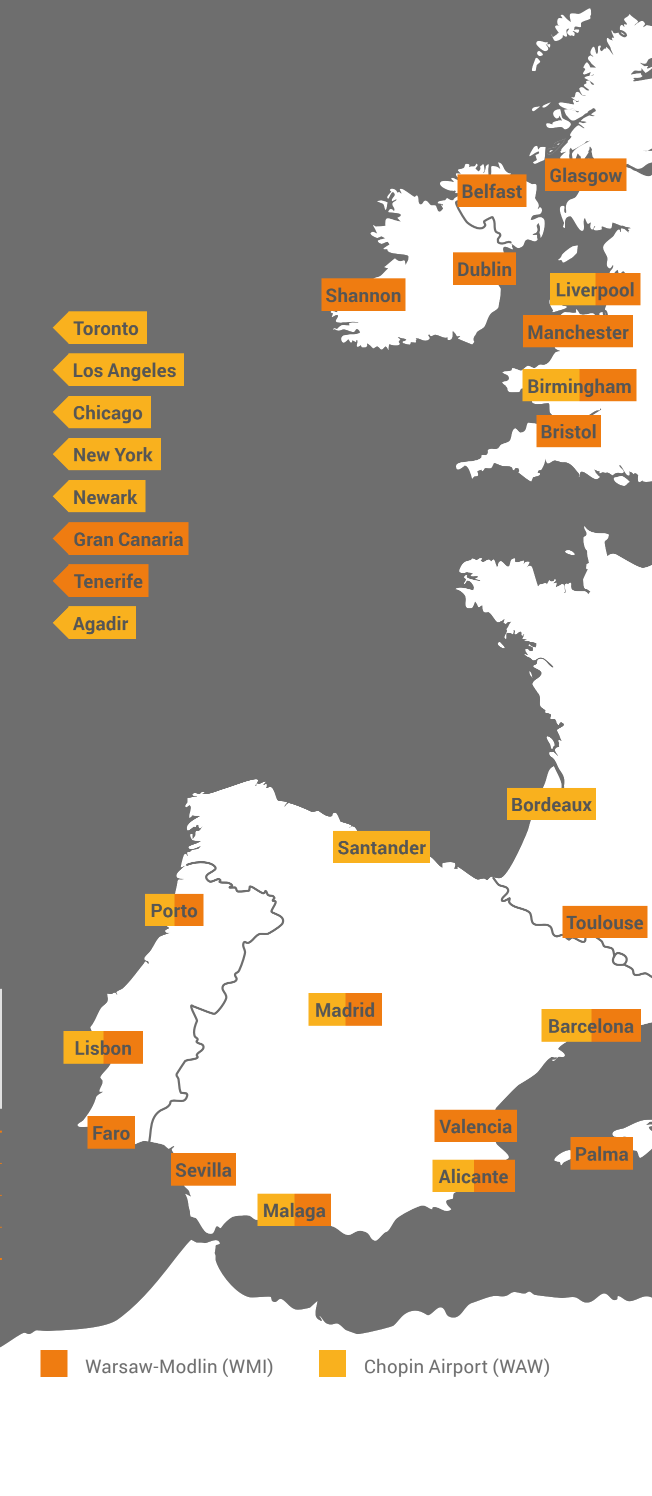
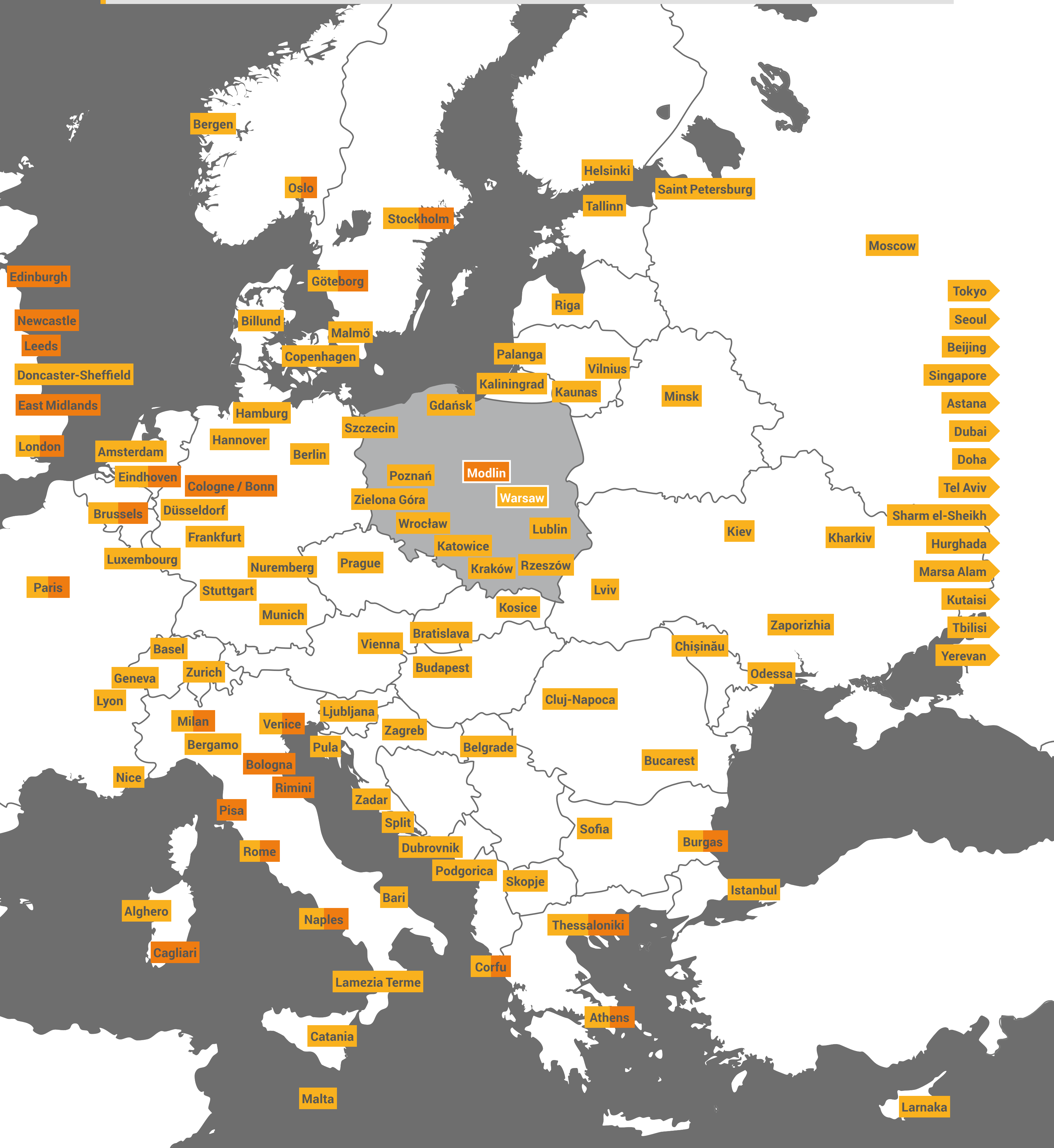


FIGURE 4
AIR TRANSPORT



2

BUSINESS SERVICES CENTERS IN WARSAW

Warsaw is in 2nd place in Poland and in Central and Eastern Europe in terms of employment in business services centers. To a large extent, the city's position as one of the major business services hubs in the region has been strengthened by an influx of globally recognized corporations which have decided to make investments in the city. Noticeable growth in the number of newly established business services centers in recent years, particularly those supporting global processes, and the positive experience of existing investors have contributed to transforming the business landscape of Warsaw, which has had a beneficial effect on its reputation as a business location. Today, Warsaw is a strong competence hub in many different areas of business services, consolidating its position on the European and global map of the sector.

Source: City of Warsaw

FIGURE 5
BUSINESS SERVICES SECTOR IN WARSAW – KEY INFORMATION (1)

55,000

Number of employees working in BPO, SSC, IT and R&D centers in Warsaw providing services in foreign languages (as of Q3 2018). This accounts for nearly 1/5 of the overall headcount in the business services sector in Poland.

215

Number of BPO, SSC, IT and R&D centers in Warsaw (Q3 2018). Foreign entities own 79% of Warsaw's centers.

27

Number of countries where the headquarters of companies with business services centers in Warsaw are located. More than 2/3 of centers are based in USA, Poland, UK and France.

22%

Headcount increase in business services centers in Warsaw from the beginning of 2017, meaning a total increase in the number of jobs by 10,000 people, which is the best result in Poland.

22

Number of business services centers established since the beginning of 2017. Company plans regarding employment in these investment projects assumed the creation of over 6,000 new jobs, of which half have already been generated.

65,000

Headcount at BPO, SSC, IT and R&D centers in Warsaw, forecast for the end of 2020.

240

Number of BPO, SSC, IT and R&D services centers operating in Warsaw, forecast for the end of 2020.

Source: ABSL own study

ABSL Chapter in Warsaw

Warsaw's ABSL chapter represents investors in the business services sector that operate in the capital. It supports ABSL members, supports and promotes the business services sector, organizes initiatives for the mutual exchange of knowledge and best practices, and launches initiatives to create a good investment atmosphere. ABSL's activities in the capital include regular meetings devoted to the sector's key issues, such as talent management, development of technology – including automation, robotics and artificial intelligence, management and building a strong brand. ABSL representatives also maintain an active dialogue with Warsaw's authorities on the opportunities for growth of the business services sector in the capital, and collaborate with universities.

Iwona Dudzińska
Vice President, ABSL
Citi Service Center Poland Head

ABSL member companies employ more than 30,000 people in the city. ABSL members present in Warsaw are:

Accenture / Amadeus / American Express / ASTEK / Atos / AVON / Billennium / bioMerieux / BNP Paribas / Bruker / Capgemini / Citibank / Coca-Cola / Colgate-Palmolive / CORE Services / Credit Suisse / Cybercom / Danone / Demant Technology Centre / Dentons / Diebold Nixdorf / DLA Piper / DSV International Shared Service / DXC Technology / Elekta AB / Elopak / EY / F5 Networks / Franke / GFT / Goldman Sachs / Google / Grant Thornton Frąckowiak / Hays / Hicron / IBM / intive / IT Kontrakt / J.P. Morgan / JCommerce / JLL / KMD / Leasing / Team Lingaro / Linklaters / Lionbridge / Luxoft / ManpowerGroup Solutions / Mercer / Mettler-Toledo / MicroStrategy / MMC Group Services / MoneyGram / Nordea / OEX / Orange / Pandora / Parker Hannifin / Procter & Gamble / PwC / ProService Finteco / Provident / Roche / Sage / Schneider Electric / Siemens / Sii / SIX Global Services / Sonova / Stanley Black & Decker / T-Mobile / Teleperformance Polska / UniCredit Business Integrated Solutions / VELUX / Westminster Bank / Wipro / Zoetis

REPORT CONCEPT AND METHODOLOGY

This report adopts a broad definition of the business services sector to include the activities of business process outsourcing centers (BPO), shared services centers (SSC), IT centers, and research and development centers (R&D). The results of the studies concern the activities of business services centers whose parent companies have their headquarters in Poland (Polish centers) and abroad (foreign centers). Each entity was assigned to one of the primary types (BPO, SSC, IT, R&D), taking into account the dominant profile of its operations.

Contact centers providing services to external customers were classified as BPOs. Entities providing IT solution outsourcing services (incl. maintaining systems, applications, infrastructure, and technical support) and/or creating and selling (implementing) software for external customers were classified as IT centers. Please note that in the analysis, no account was taken of companies that only provide services domestically in Polish for customers located in Poland. This restriction does not apply to IT and R&D centers that offer software development, which, as a rule, requires the "product" to be developed in English. It is worth clarifying that the analyses do not take into account shared services delivery at company headquarters, when the activities are not isolated in the form of separate units, or dedicated services centers.

FIGURE 6
BUSINESS SERVICES SECTOR IN WARSAW – KEY INFORMATION (2)

Fortune Global 500

30 Fortune Global 500 investors have business services centers (BPO, SSC, IT, R&D) in Warsaw. They employ 18,500 people.

Stable growth of the sector

An average of 11 new services centers per year have been launched in Warsaw in the last 10 years.

Strong position of BFSI

Banking, Financial Services, and Insurance (BFSI) centers employ 12,000 people in total in Warsaw, which accounts for 22% of employment in the business services sector in the city (8 percent more than in the country). Nine out of 13 of the 50 largest global banks (by asset value) who have their services centers in Poland are present in Warsaw.

Embeddedness of business services centers

The majority (70%) of new jobs created from the beginning of 2017 were generated by centers that already existed in the city and which had increased their activity. This attests to the degree to which they are embedded in Warsaw, and indirectly, to how satisfied investors are with their choice of location for their business services center.

Success stories of BPO, SSC, IT, R&D centers

A decisive majority (80%) of Warsaw business services centers have expanded both the scope and sophistication of their activities in recent years. These two factors have also been accompanied by an increase in employment.

A proven location for conducting business on a large scale

35 international investors employ more than 500 people in their business services centers in Warsaw.

Source: ABSL own study

Warsaw is one of the largest business services locations in Poland and Central and Eastern Europe. It is home to 215 services centers owned by 206 investors from 27 countries. More than 1/4 of Warsaw's services centers are owned by US companies (60). Polish businesses own 45 centers, UK businesses own 21 centers and French businesses 20. At least 10 centers belong to companies from Switzerland, Germany and Denmark.

Warsaw's services centers employ as many as 55,000 people (Q3 2018). A large majority of those employees (85%) work for entities with foreign capital. It is the second greatest share among the main business services locations in Poland (after Kraków). American companies generate 41% of the jobs, Polish companies 15%, British and French companies 10%, and companies from other countries 24%. It is worth adding that the share of employment in American centers is the highest among the main business services locations in Poland. Since the beginning of 2017, 10,000 new jobs have been created in business services centers in Warsaw. This is the highest absolute increase in employment in the sector in Poland.

The business services centers operating in Warsaw comprise: 82 IT centers, 80 shared services centers (SSCs), 40 business process outsourcing (BPO) centers and 13 research and development (R&D) centers. The largest share in the employment structure of the business services sector belongs to shared services centers (45%). The average employment level in business services centers in Warsaw is 255 people (the median = 110 people). It should be added that the 10 largest investors in Warsaw generate a total of nearly 30% of total employment in the sector. Considering the companies' plans for development and the entry of new investors, it can be anticipated that employment in the Warsaw sector will reach 65,000 by 2020.

TABLE 3
LARGEST EMPLOYERS IN THE BUSINESS SERVICES SECTOR IN WARSAW

Position:	
1	CITIBANK
2	ACCENTURE
3	GENERAL ELECTRIC
4	SAMSUNG
5	NATIONAL WESTMINSTER BANK
6	PROCTER & GAMBLE
7	LIONBRIDGE
8	DXC TECHNOLOGY
9	BNP PARIBAS
10	DSV

Example new investors:
AMADEUS
AMERICAN EXPRESS
ASTRAZENECA
DISCOVERY COMMUNICATIONS
J.P. MORGAN
JOHNSON & JOHNSON
MARSH & MCLENNAN COMPANIES
NORDEA
SAGE
STANDARD CHARTERED

Source: ABSL own study

TABLE 4
EXAMPLES OF BUSINESS SERVICES CENTERS IN WARSAW

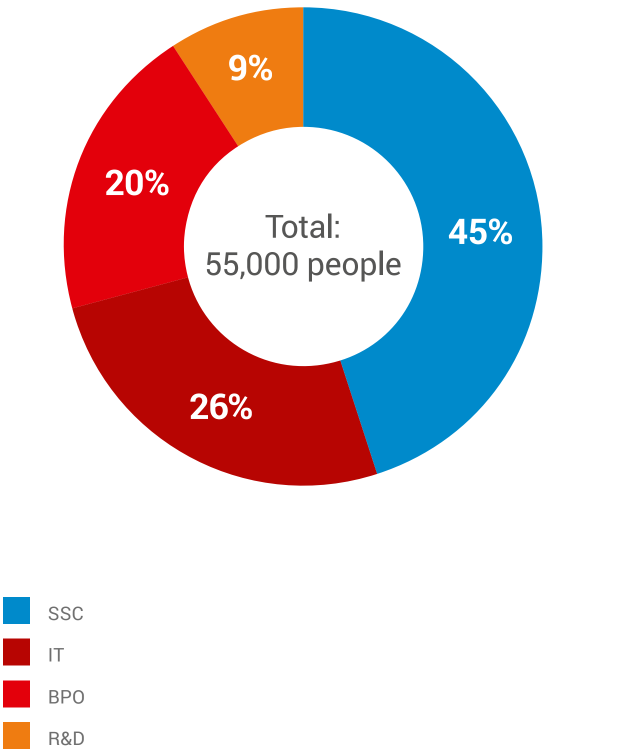
Name	Type of center	Year activities in Warsaw began	Parent company headquarters location	Employment range	Activity profile
Accenture	BPO	2006		2,000-2,500	Accenture Operations: finance and accounting, marketing, IT applications development and maintenance, social media monitoring, project management, business excellence and customer services.
BNP Paribas Securities Services	SSC	2012		500-1,000	Fund dealing, transfer agency, fund accounting and administration, depository fiduciary services together with services supporting private equity and real estate funds.
Citi Service Center	SSC	2005		3,500-4,000	Investor Services Operations (incl. securities and funds services), Anti-Money Laundering, Technology (Technology Infrastructure, Application Development and Support, Technology Control, Information Security, Testing and Parameterization of Systems), Citi Private Bank Business Services, Global ID Administration, Product Control, Finance (financial and tax reporting), Loan Operations, Credit Risk Management Services, Customer Acquisition Due Diligence, Legal Services.
Colgate-Palmolive	SSC	2008		250-500	Finance & Accounting, Logistics and Customer Service.
Credit Suisse	SSC	2016		500-1,000	Services in the areas of Investment and Private Banking, Banking Operations and Risk Management, Finance Accounting and Control, Legal and Compliance, Human Resources, IT Infrastructure and Technology Development.
Diebold Nixdorf	SSC	2007		500-1000	Customer Operations.
DSV International Shared Service	SSC	2012		500-1,000	Accounting Services, Claims Handling, Customs Administration, Operational Shared Services, Shipping, Data Analysis & Reporting, Finance, HR and IT.
DXC Technology	IT	2003		1,000-1,500	IT consulting, management consulting, cloud infrastructure, operations, managed services and outsourcing services.
General Electric	R&D	2000		1,500-2,000	Engineering Design Center (EDC): engineering works, software development, production and operation support, research & development.
Goldman Sachs	SSC	2012		500-1000	Corporate Treasury, Credit Risk Management and Advisory, Model Risk Management, Global Operations, Business Software Development, Platform / Infrastructure Engineering, DevOps Engineering.

Business services centers in Warsaw

Name	Type of center	Year activities in Warsaw began	Parent company headquarters location	Employment range	Activity profile
Lionbridge	BPO	2005		1,000-1,500	Global Translation, Localization and Marketing Services.
MoneyGram	SSC	2014		500-1,000	Information Technology, Sales & Marketing, Finance, Human Resources and Facilities, Talent Acquisition, Creative Services, Corporate Strategy & Communications, Compliance & Global Due Diligence, Global Customer Care, Agent and Partner Servicing.
National Westminster Bank	SSC	2007		1,000-1,500	Operations, Finance, Technology and Security.
Nordea	IT	2018		250-500	Business analysis, Development of IT applications and systems, Administration and maintenance of application systems, Management of IT projects and processes, IT planning and strategy.
Procter & Gamble	SSC / IT	2003 / 2013		1,000-1,500	European Planning Service Center (PSC) consolidates all planning activities required to coordinate Supply Chains: suppliers, production plants, warehouses, distribution centers, and transportation. Global Business Services (GBS) – global IT solutions for P&G: creating solutions and systems supporting products identification, supply chain planning, Business Intelligence and big data.
ProService Finteco	BPO	2001		500-1,000	Outsourcing of professional middle-office services and IT products supporting operational processes of Investment Fund Companies (TFI), banks and insurers.
Roche	IT	2004		250-500	Roche Global IT Solution Centre: providing innovation within the scope of constructing and maintaining IT systems for Roche branches around the world.
Samsung	R&D	2000		1,500-2,000	Samsung R&D Institute: human language technology, computer vision, big data, Internet of Things etc.
Schneider Electric	SSC	2009		250-500	HR Services, Finance & Accounting, Marketing Services, Customer Service.
Sii	IT	2006		500-1,000	IT and engineering services for customers in the following sectors: Banking, Finance, Insurance, Telecommunication, Pharma, Manufacturing, Energy and Public.
Stanley Black & Decker	SSC	2004		250-500	Finance & Accounting, IT, Sales, Marketing and Customer Service.
Zoetis	SSC	2012		<250	The Center provides financial, tax, accounting and analytical support to all Zoetis entities in Europe, Africa, Middle East and APAC regions.

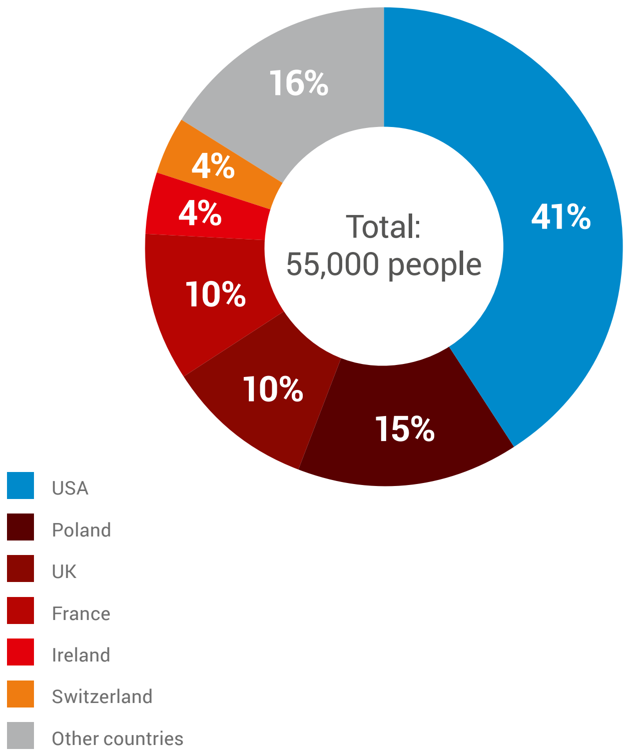
Source: ABSL own study

FIGURE 7
EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS IN WARSAW BY TYPE OF CENTER



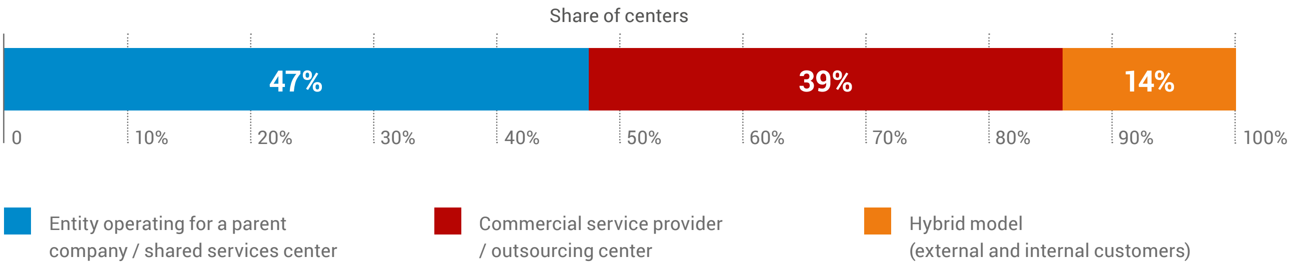
Source: ABSL own study

FIGURE 8
EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS IN WARSAW BY PARENT COMPANY HEADQUARTERS LOCATION



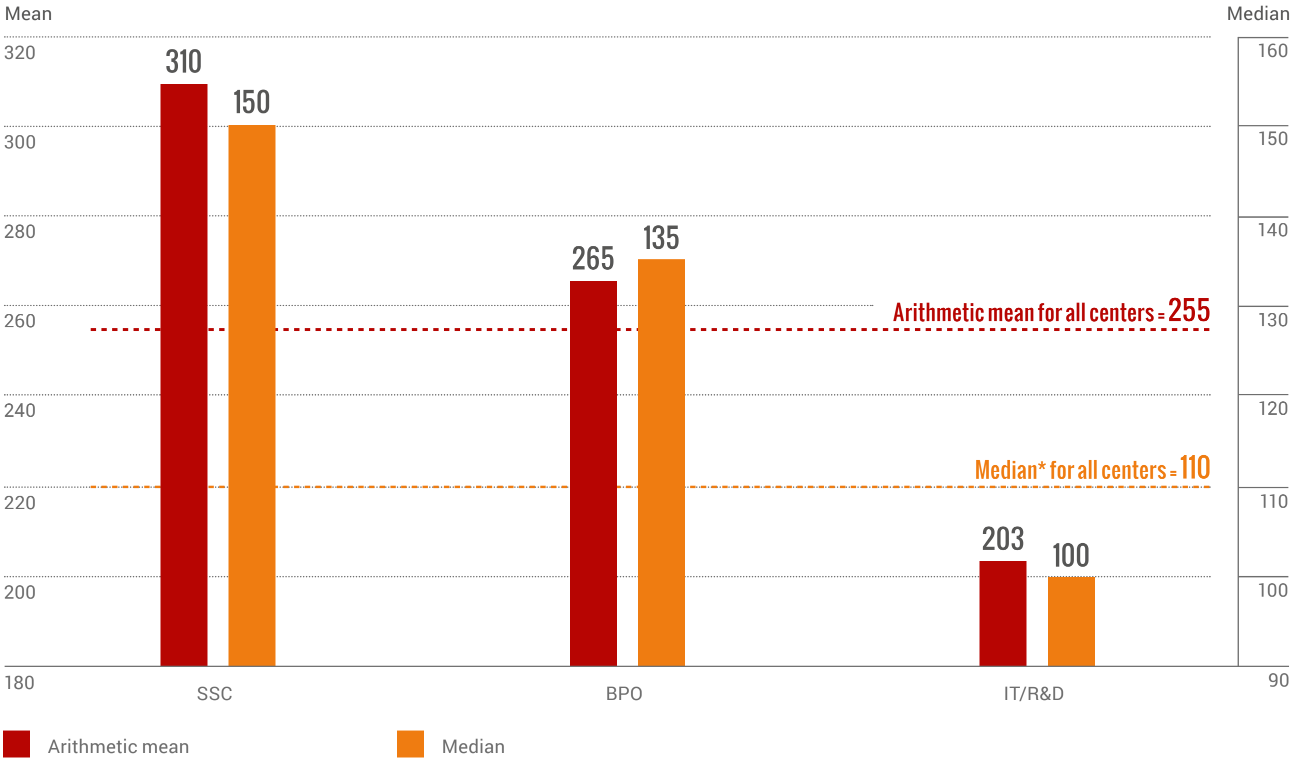
Source: ABSL own study

FIGURE 9
STRUCTURE OF EMPLOYMENT AT BUSINESS SERVICES CENTERS IN THE KATOWICE AGGLOMERATION BY TYPE OF ORGANIZATION



Source: ABSL own study

FIGURE 10
AVERAGE EMPLOYMENT BY TYPE OF CENTER



* The median value for the total number of centers in Warsaw indicates that half of them have more than 110 employees, while the other half have fewer than 110 employees.

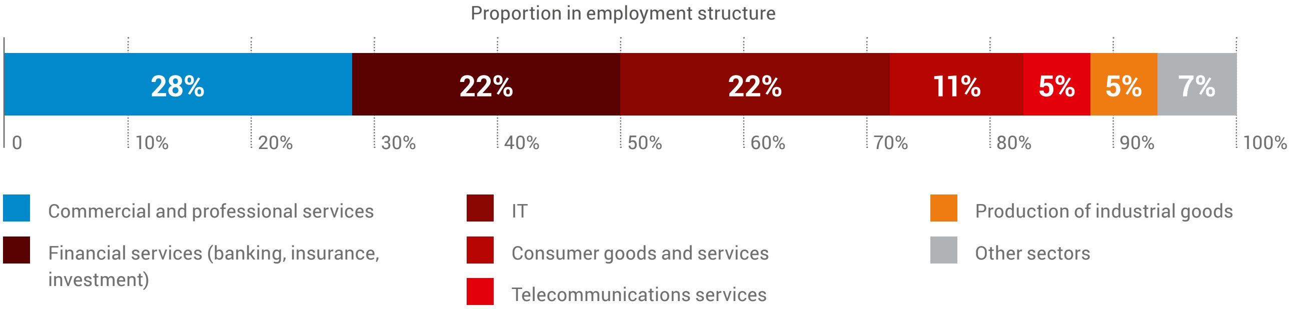
Source: ABSL own study

Warsaw has the largest number of services centers employing more than 500 people in Poland

An analysis of the employment structure in the sector by industry of the parent company of each business services center indicates that the majority of jobs were created by the commercial and professional services sector (28%), BFSI (22%) and the IT industry (22%). The fourth placed industry in terms of share in the employment structure of the business services sector in Warsaw is consumer goods and services (11%). All other sectors combined represent a 17% share of the employment structure.

It is worth highlighting the large share of employment in BFSI companies. This proportion is definitely higher in Warsaw than in other major business services locations in Poland. This is due to investments by such companies as: American Express, BNP Paribas Securities Services, Citibank, Credit Suisse, Deutsche Services, Elavon, Goldman Sachs, Hargreaves Lansdown, J.P. Morgan, MoneyGram, Nordea, Standard Chartered, UniCredit Business Integrated Solutions, and Westminster Bank, among others. In turn, the share of IT in the employment structure of the business services sector in Warsaw is the lowest among the major Polish business services locations (along with Poznań).

FIGURE 11
EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS IN WARSAW BY PARENT COMPANY INDUSTRY



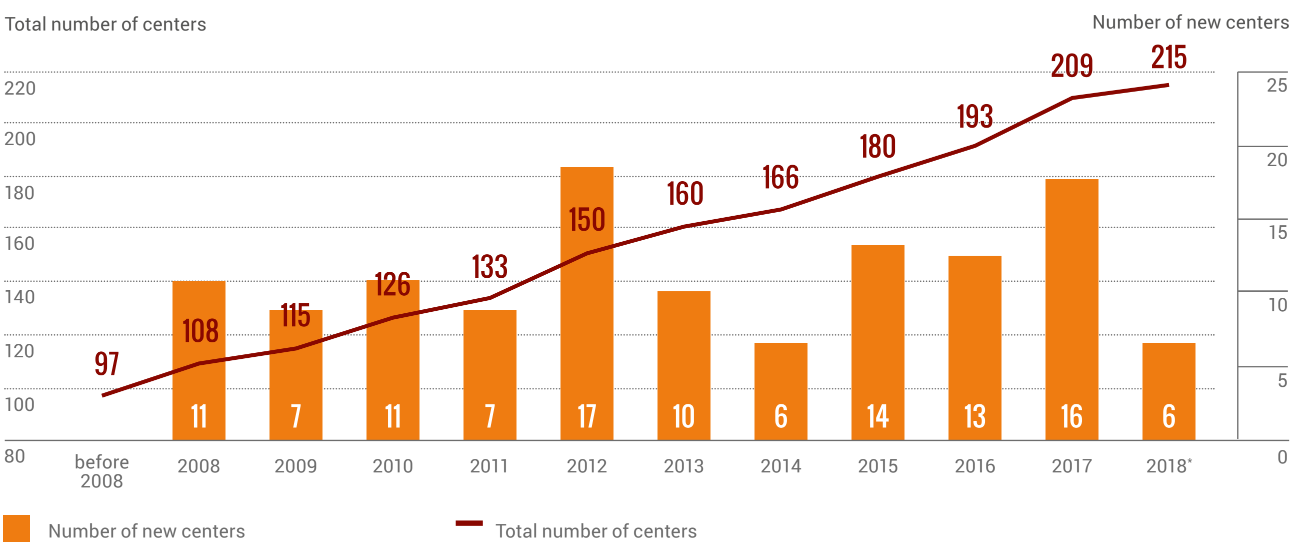
Source: ABSL own study

More than 1/4 of the business services centers now in Warsaw (55) were created in the last five years (since the beginning of 2014) and these provide 19% of the total number of jobs in the sector (as at Q3 2018). It is worth adding that 22 new centers were launched after 01.01.2017. These include Amadeus, Ascensia Diabetes Care, AstraZeneca (Integrated Finance Solutions), Bruker, Discovery Communications, Hargreaves Lansdown, J.P. Morgan, Johnson & Johnson, MMC Group Services, Nordea, Sage, SIX Global Services, Sonova, and Standard Chartered.

Most new investments are shared services centers (15 out of 22). The new investors are mainly companies from the USA, the UK and Scandinavian countries. The largest number of new centers was generated by Banking, Financial Services, and Insurance (BFSI), IT and the consumer goods and services sector (five each).

Assuming that the average for recent years is maintained, it can be estimated that at least 240 BPO, SSC, IT and R&D centers will be operating in Warsaw in 2020, employing a total of 65,000 people.

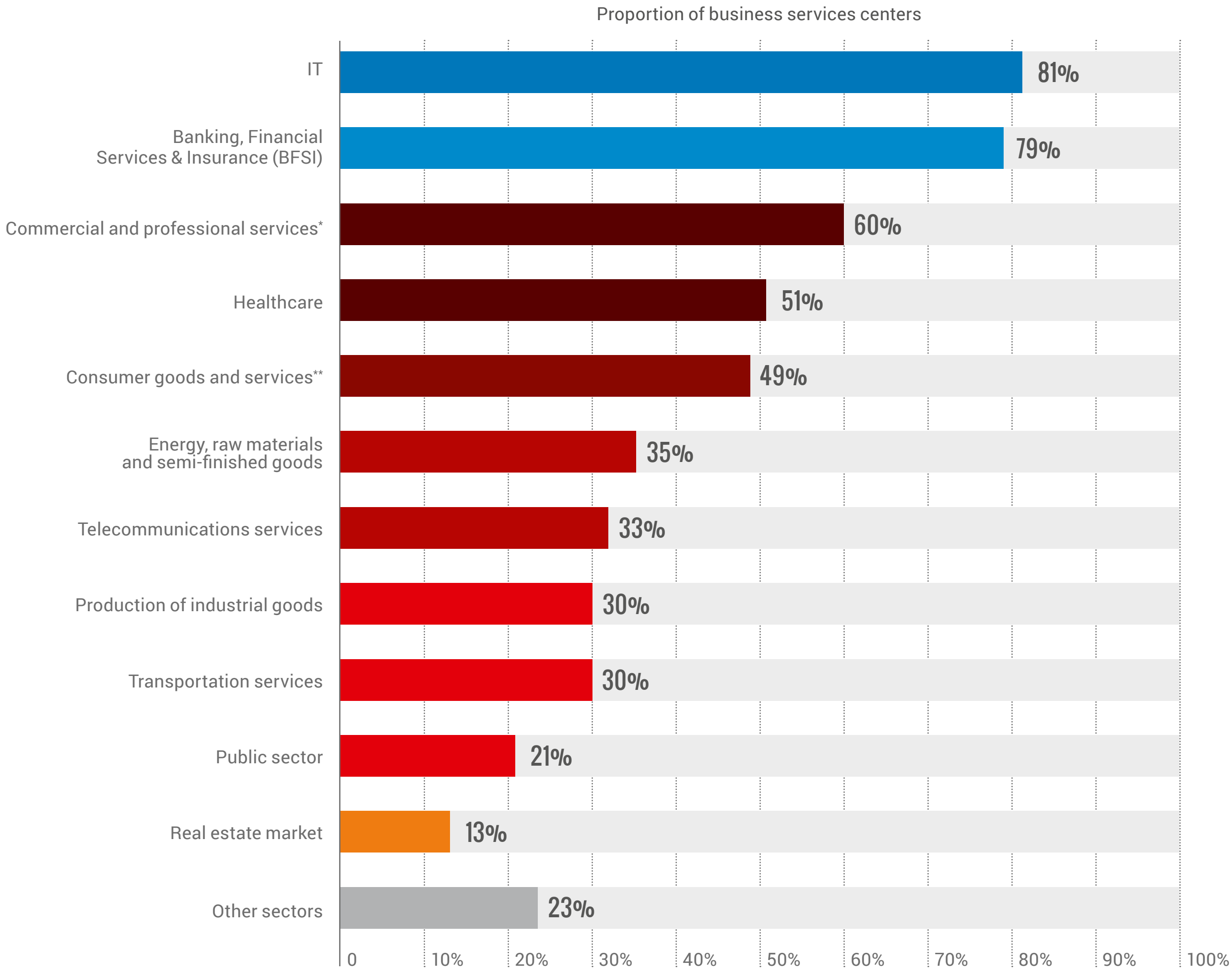
FIGURE 12
SERVICES CENTERS IN WARSAW BY THE YEAR ACTIVITIES BEGAN



* As at Q3 2018.

Source: ABSL own study

FIGURE 13
INDUSTRY STRUCTURE OF COMPANIES (EXTERNAL AND INTERNAL CUSTOMERS) SUPPORTED BY BUSINESS SERVICES CENTERS LOCATED IN WARSAW



Warsaw's services centers support a wide range of the business processes needed by customers representing various sectors of the economy. Some of the most frequently supported industries (for both external and internal customers) are: IT, BFSI, the commercial and professional services industry, as well as healthcare. Companies from each of the market segments mentioned are among the customers of more than 50% of the business services centers operating from Warsaw. It is worth noting that the proportion of Warsaw's centers that support the industries listed is much higher in comparison to national statistics. For IT, the difference is 38 percentage points. The share of Warsaw's centers that support BFSI customers is higher by 35 percentage points than for all centers in the country.

* e.g. business support, HR, legal, consulting, research services
** e.g. cars and car parts, food and beverages, media, sales, leisure

Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=61 companies employing 27,000 people in Warsaw)

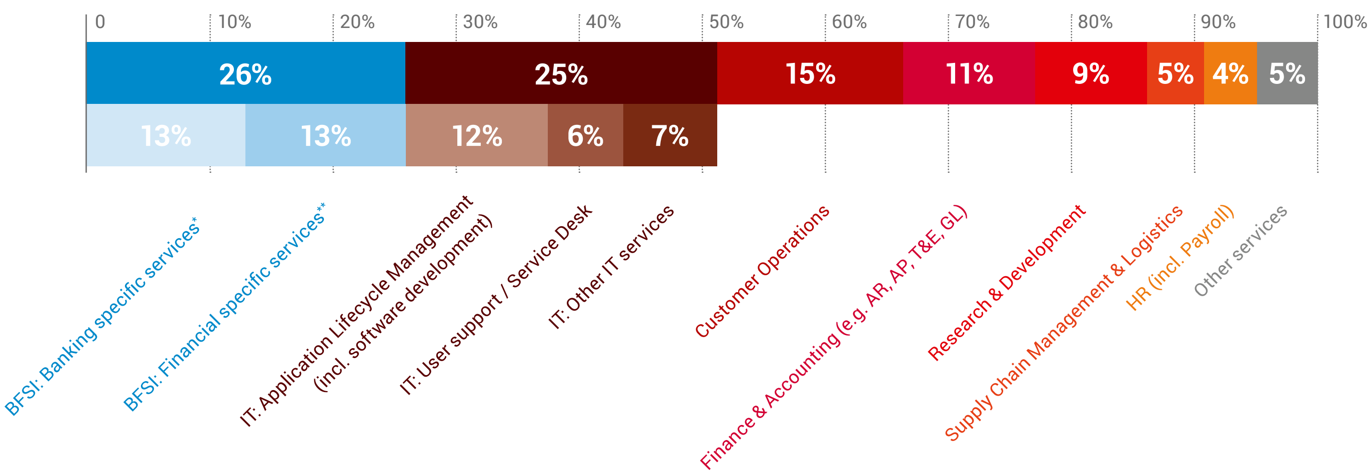
The structure of business services rendered at the centers in Warsaw is extremely varied. The wide range of processes supported is composed of several dozen categories and subcategories. It should be noted that a vast majority of the companies in question offer services in more than one business process category. The graph below shows the employment structure of business services centers by process categories supported. The list was based on responses from 55 services centers employing a total of 23,000 people in Warsaw.

It is worth noting that Banking, Financial Services & Insurance (BFSI) and IT combined generate more than half of all employment in the industry (51%). In third place in terms of its share in the employment structure are customer contact services, which account for 15% of the jobs in the sector. An important role in the employment structure is also played by finance and accounting (F&A) services, with an 11% share.

The employment structure of Warsaw's services centers is noticeably different from that characteristic of all centers in the country. The hierarchy of the particular categories of services is also different. It is worth noting that the highest share in Warsaw's employment structure is taken by BFSI (26%). This means 11 percentage points more than for all centers in Poland, and respectively, at least several percentage points more than for other major business services locations in Poland. The proportion of people employed in IT is lower by 5 percentage points in Warsaw than countrywide; however, it should be remembered that IT is the second largest service category in Warsaw's centers. It is worth highlighting that 3 percentage points fewer in comparison with the country as a whole were recorded for people employed in financial and accounting services, which are more often delivered by regional centers. Research and development services account for a 9% share in the employment structure of the business services sector in Warsaw, meaning 4 percentage points more than for the country as a whole. Along with Kraków and Wrocław, Warsaw is the most important R&D services location in Poland. This is due to the presence of two of the largest research and development centers in Poland: General Electric (Engineering Design Center, EDC) and Samsung (Samsung R&D Institute).

FIGURE 14

EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS BY PROCESS CATEGORY SUPPORTED

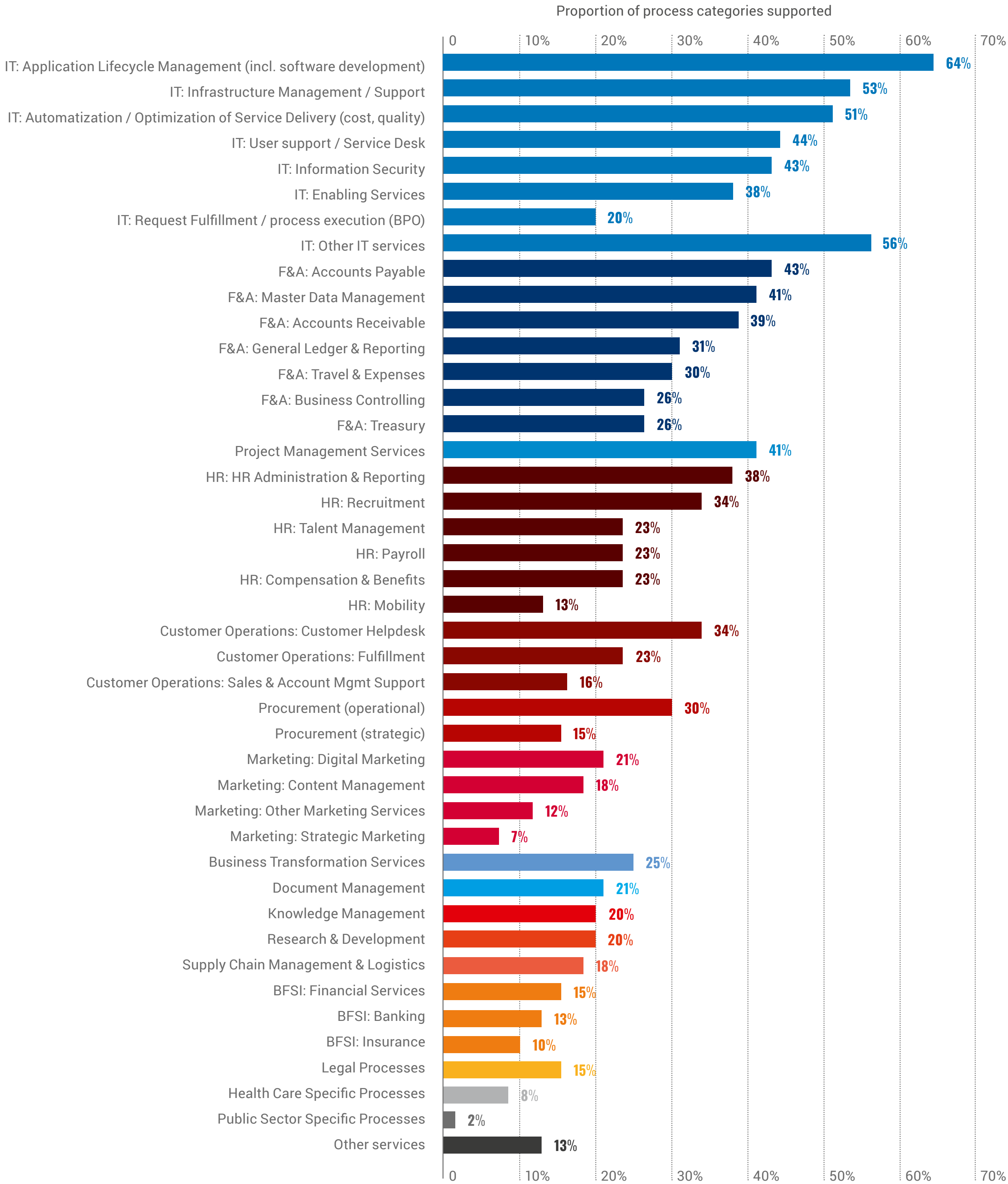


* e.g. corporate payments, loans, mortgage, fraud-risk management, deposits management etc.

** e.g. fund accounting, reference data administration, asset management, portfolio valuation, derivatives etc.

Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=55 companies employing 23,000 people in Warsaw)

FIGURE 15
PROCESS CATEGORIES SUPPORTED BY BUSINESS SERVICES CENTERS IN WARSAW

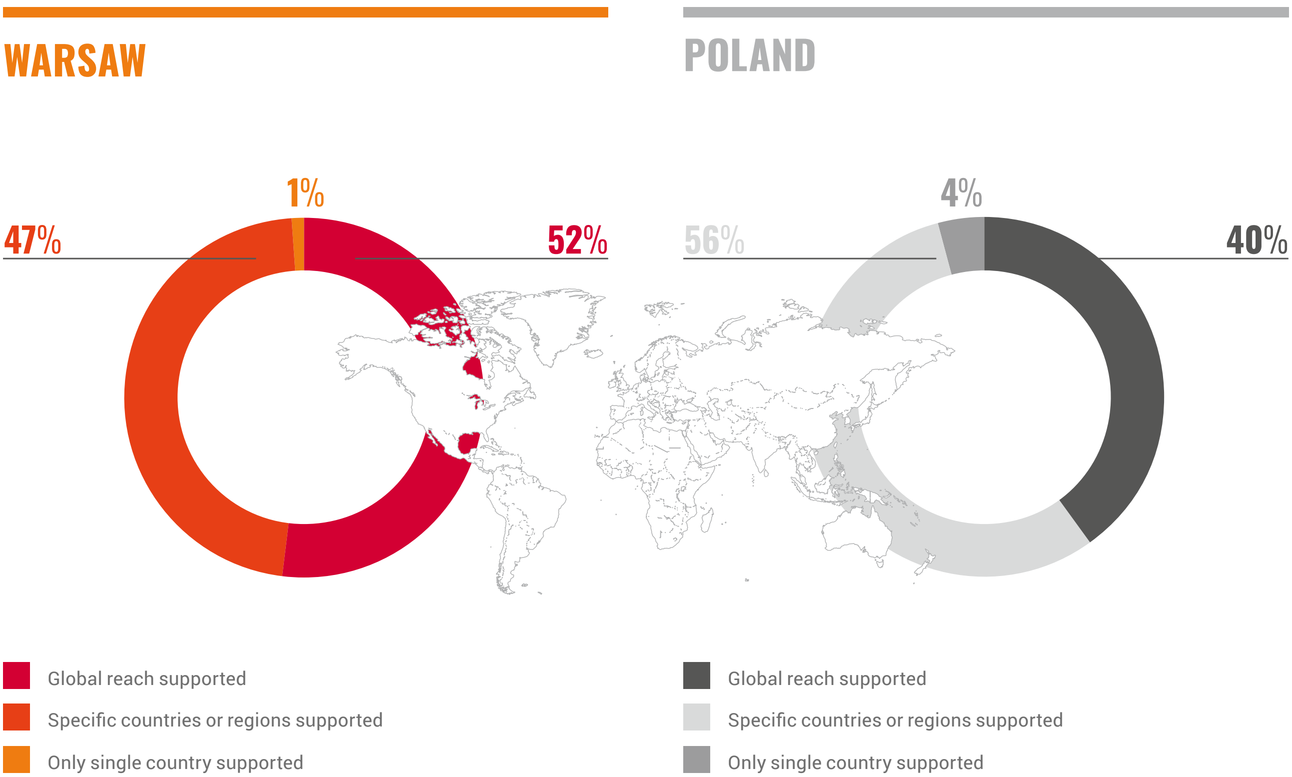


Source: ABSL own study

More than half of Warsaw's services centers (52%) operate globally, for customers (internal and external) in various parts of the world. This is definitely the highest share in comparison to other major business services locations in Poland. What is more, the proportion of centers working globally is higher by as much as 12 percentage points than for the country as a whole. Specific countries or regions are supported by 47% of Warsaw's centers. Only 1% of the companies support customers in a single country. Generally, it can be said that the centers in Warsaw deliver services with a broader geographic scope than all centers in Poland as a whole (including in other major business services locations).

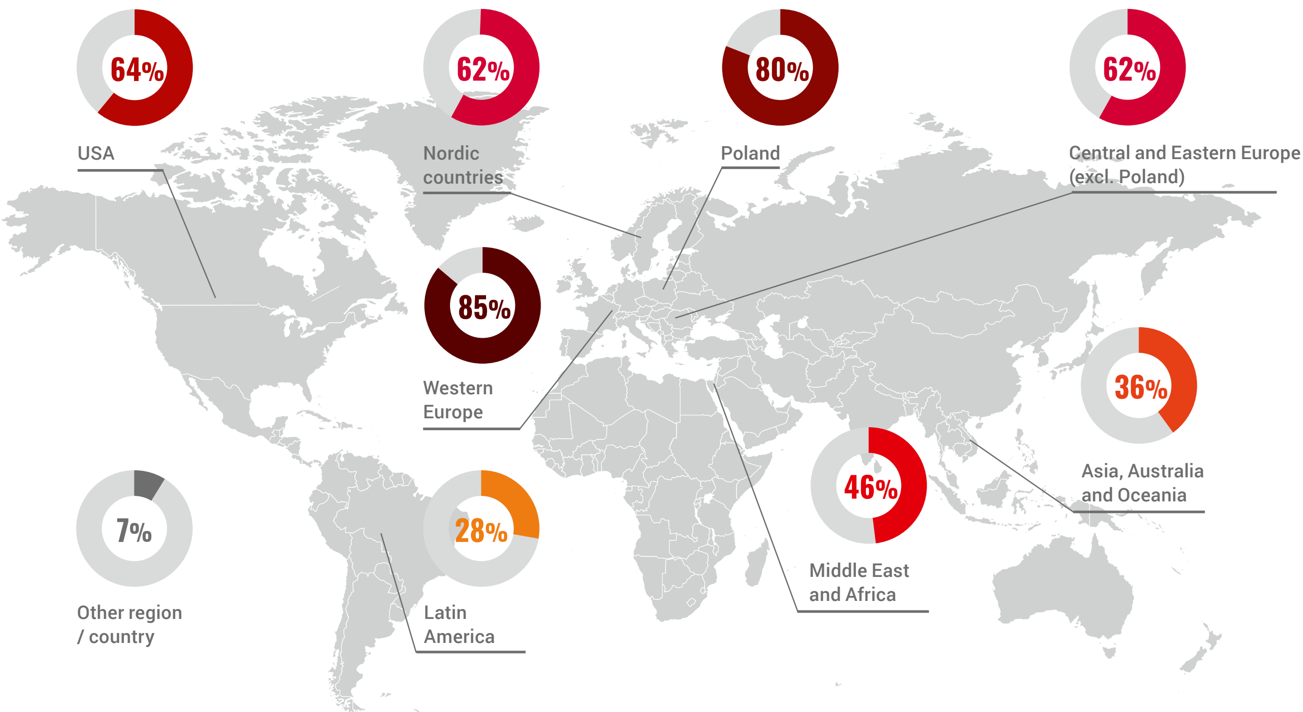
The largest number of centers in Warsaw are focused on serving customers in Western Europe (85%), and then Poland (80%) and the USA (64%). In comparison to the national structure, noticeably more centers support, among others, the USA (4 percentage points more) and also Asian or South American countries. Generally speaking, the main countries supported by Warsaw's centers are, the same as across Poland: Germany, the UK and the USA.

FIGURE 16
GEOGRAPHIC SCOPE OF SERVICES DELIVERED BY BUSINESS SERVICES CENTERS IN WARSAW AND POLAND



Source: ABSL own study

FIGURE 17
GEOGRAPHIC SCOPE OF SERVICES DELIVERED BY BUSINESS SERVICES CENTERS IN WARSAW



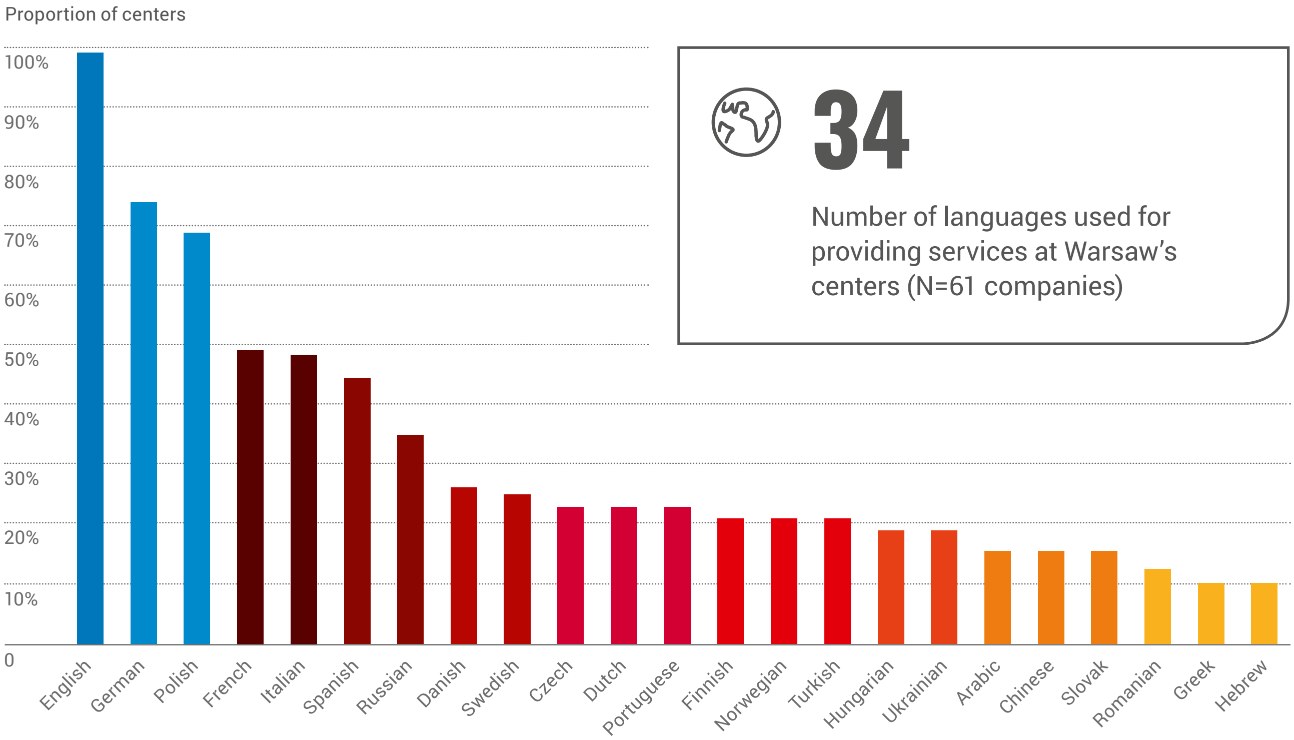
Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=61 companies employing 27,000 people in Warsaw)

FIGURE 18
MAIN COUNTRIES SUPPORTED BY CENTERS IN WARSAW

Generally speaking, the main countries supported by Warsaw's centers are, the same as across Poland: Germany, the UK and the USA.

Source: ABSL own study

FIGURE 19
LANGUAGES USED FOR SERVICE DELIVERY IN AT LEAST 10% OF CENTERS IN WARSAW



34

Number of languages used for providing services at Warsaw's centers (N=61 companies)

Virtually the full spectrum of languages used for the delivery of services from Poland is used in Warsaw's services centers.

32 **Highest number of languages used at a single business services center.**

8 **Average number of languages used at business services centers. Median = 5.**

35% **Proportion of business services centers using at least 10 languages to provide their services.**

Note: other languages not listed in the table include Belarusian, Croatian, Estonian, Japanese, Lithuanian, Hindi, Latvian, Serbian, Slovenian, Korean and Urdu.

Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=55 companies employing 23,000 people in Warsaw)

FIGURE 20
COMPANIES' PLANS CONCERNING THEIR OPERATIONS

87%
Proportion of companies that extended their scope of supported services in the past year (N=60 companies). 5 percentage points higher than in the nationwide survey (and highest among key business services locations in Poland)

87%
Proportion of companies that plan to increase their headcount in the period from Q1 2018 to Q1 2019 (N=61 companies). 4 percentage points higher than in the nationwide survey (and highest among key business services locations in Poland). No changes in the headcount in the period analyzed are expected by 8% of companies, and a reduced headcount – by 5% of companies.

77%
Proportion of business services centers that plan to expand their activities in the next year (N=61 companies). 3 percentage points higher than in the nationwide survey (and highest among key business services locations in Poland).

Source: ABSL own study based on responses from investors having business services centers in Warsaw.

FIGURE 21
FOREIGNERS EMPLOYED AT BUSINESS SERVICES CENTERS

100%
Proportion of business services centers employing foreigners (N=60 companies). 10 percentage points more than for the country as a whole, also more than for other business services locations in Poland.

15%
Total proportion of foreigners employed at business services centers analyzed by ABSL (N= 60 companies employing 26,000 people). 4.4 percentage points more than for the country as a whole. It can be estimated that slightly over 50% of the foreigners employed at business services centers in Warsaw work for the sector's largest companies with over 1,000 employees (N=60 companies).

12%
Average proportion of foreigners employed at business services centers in Warsaw analyzed by ABSL – 3 percentage points fewer than for the country as a whole. The proportion is 18% for companies with a headcount of over 1,000 vs 11% at smaller entities.

8,000
Number of foreigners employed at BPO, SSC, IT and R&D centers in Warsaw according to an ABSL estimate. Alternatively (more cautiously), one can assume that the total number of foreigners is in the 6,500-8,000 range.

55%
Maximum proportion of foreign employees in the employment structure of a single business services center in Warsaw (N=60 companies). However, it is worth noting that centers where at least 25% of the employees are foreigners are a small percentage of the entities analyzed (13%).

48%
Proportion of business services centers where foreigners represent at least 10% of all employees (N=60 companies). 10 percentage points more than for the country as a whole.

Source: ABSL own study

FIGURE 22
MAJOR COUNTRIES OF ORIGIN OF FOREIGNERS EMPLOYED AT BUSINESS SERVICES CENTERS IN WARSAW

Country	Rank	Country	Rank
Ukraine	1	Russia	6
Spain	2	Netherlands	7
India	3	Germany	8
Belarus	4	United Kingdom	9
Italy	5	France	10

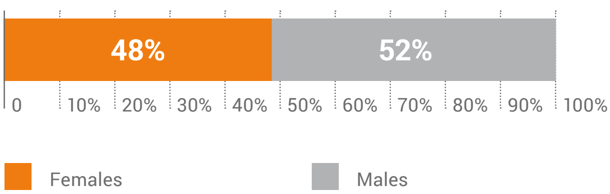
NB: How the ranking was constructed – respondents were asked to state the three countries of origin of the largest number of foreigners employed at the business centers represented by them. Countries mentioned in item 1 were given 3 pts. each, countries in item 2-2 pts. each, and countries in item 3-1 pt. each. The graph shows the countries in the order that reflects the total number of points received.

Source: ABSL own study based on the results of a survey addressed to business services centers (N=56 companies)

Ukraine is the country most frequently named as the country of origin of foreigners employed at Warsaw business services centers. The analysis reveals that Ukrainians are the largest group of foreigners at 46% of the companies that employ foreigners. Furthermore, 70% of all the companies surveyed list Ukrainians at the top of the three largest groups of foreigners. Spaniards come second in the list, and Indians third.

Looking at a nationwide breakdown of the countries of origin of employees of business services centers, we note that India ranks very high, having taken a spot on the podium from Italy. All in all, 29 countries were named in the top three countries of origin of foreigners in business services centers. Obviously, the number of all the countries of origin of foreign employees of business services centers in Poland is even higher.

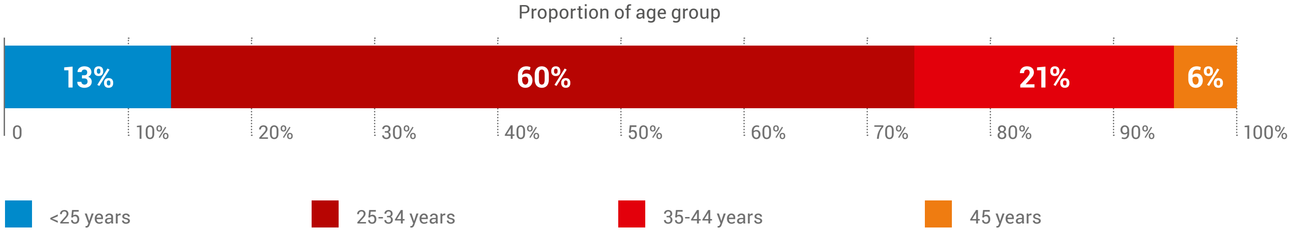
FIGURE 23
PROPORTION OF FEMALE EMPLOYEES



Proportion of female employees in the business services centers analyzed in Warsaw is 48% (4 percentage points lower than nationwide). For management, the average proportion of women is 38% (2 percentage points lower than nationwide).

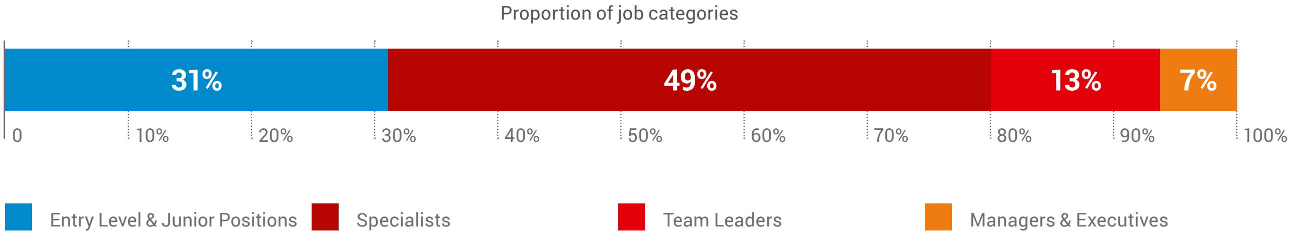
Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=57 companies employing 27,000 people in Warsaw)

FIGURE 24
EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS BY AGE OF EMPLOYEES



Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=55 companies employing 25,000 people in Warsaw)

FIGURE 25
EMPLOYMENT STRUCTURE OF BUSINESS SERVICES CENTERS IN POLAND BY JOB CATEGORY



It is worth noting that the proportion of specialist positions at Warsaw business services centers (49%) is 4 percentage points higher than the value for all centers surveyed in Poland and the highest (along with Kraków) of all major business services locations.

Source: ABSL own study based on responses from investors with business services centers in Warsaw (N=58 companies employing 25,000 people in Warsaw)

FIGURE 26
SKILLS OF EMPLOYEES MOST SOUGHT AFTER ON THE LOCAL JOB MARKET BY BUSINESS SERVICES CENTERS

TOP 1

Soft skills:
teamwork, problem solving, collaboration across geographies and functions, verbal communication skills.

TOP 2

Language skills:
in particular, English, German and French.

TOP 3

IT skills:
RPA/AI skills, programming (.Net, Java Script), SAP, cybersecurity, digital competence.

Source: ABSL own study based on responses from investors having business services centers in Warsaw

In the survey, representatives of business services centers from Warsaw (for which the city is the main location of their activities in Poland) were asked for their opinions on the features of Warsaw as a business services location.

All of the features analyzed were given a favorable rating, the highest being the availability of transportation and modern office space (4.0 on a scale from 1 to 5, where 5 is the highest rating).

FIGURE 27
ASSESSMENT OF WARSAW AS A LOCATION FOR DOING BUSINESS

Scale of 1 to 5, where 5 is the highest possible score

4.0 Availability of transportation (1st place in Poland*)

4.0 Availability of modern office space (2nd place in Poland*)

3.8 Quality of public transportation (2nd place in Poland*)

3.5 Cooperation with local universities

3.1 Availability of talent pool / highly qualified staff (2nd place in Poland*)

3.1 Cooperation with local authorities

7.6 / 10 pts.

Overall level of satisfaction with Warsaw as a location for conducting business.
The respondents rated their overall satisfaction with the location as a place to do business at 7.6 on a scale of 1 to 10, where 10 is the highest possible score. In this respect, Warsaw is in second place in Poland among the seven largest business services locations in Poland (behind Kraków and ahead of Wrocław).

3.5 / 10 pts.

Assessment of competition among BPO, SSC, IT and R&D centers on the local job market.
Warsaw companies from the sector assess the level of competition on the local job market as 3.5 on a scale from 1 to 10, where 1 means very strong competition. This means that competition among centers is noticeable, but should not be equated with drainage of the available pool of employees. It is worth adding that Warsaw (along with Poznań), in the opinion of investors, has the lowest pressure on entities currently operating in the sector among large business services locations in Poland.

* Because the study had to be based on a sufficiently large number of respondents, it only analyzes the scores for: Kraków, Warsaw, Wrocław, Tri-City, Katowice, Łódź and Poznań. It is worth remembering that the information presented reflected the subjective opinions of services center representatives.

Source: ABSL own study based on responses from 42 investors from the business services sector for which Warsaw is the main place of business in Poland

3

INVESTORS ABOUT THEMSELVES: SUCCESS STORIES

Among more than 200 companies with their service centers in Warsaw are numerous globally recognized businesses which are leaders in their field. Many leading Polish service providers for business have also invested in the city.

The experience of investors to date is having a great impact on the steady development of the business services sector in Warsaw. That's why several selected investment success stories are presented in this chapter, which describe the activities of particular centers and present their intentions for the future: BNP Paribas Securities Services, Citi Service Center, DSV International Shared Services, KMD, Procter & Gamble.

Source: Urząd m.st. Warszawy

BNP PARIBAS SECURITIES SERVICES

Is it possible to gather 1000 specialists with 31 nationalities in one place and successfully manage them in an international business environment? In BNP Securities Services Poland our answer is yes. Even more – such an environment enriches us a lot as a team and as individuals. Our organization, present in Warsaw since 2008, is a part of the BNP Paribas group, specializing in securities operations and investment funds for institutional investors and financial institutions. We are one of the five largest trust banks in the world with a global range of 95 markets on 5 continents.

After 10 years of presence here in Warsaw, we comprise two business lines: International Operations Centre (IOC) providing asset and fund services for a number of locations across Europe, and Custody & Clearing Services offering broker-dealers, global custodians and investment banks a full clearing, settlement and custody solution.

The services we offer include securities account management and transactions, investment funds accounting, calculating and confirming net asset value, cash and equity clearing and settlement services.We also control the compliance of the operations with investment policies and manage sale and purchase orders for investment funds participation units.

Through new technologies and the highest level of its services, BNP Securities Services Poland is a dynamically growing organization. Figures speak for themselves – that is why about 300 new hires join us every year. We offer them professional growth and an innovative approach, a fantastic atmosphere in a modern office in the heart of Warsaw and great benefits package plus lots of sport activities.

DSV

DSV International Shared Services Center (DSV ISSC) is part of DSV Group which is one of the world's leading transport and logistics companies based in Denmark with offices in over 80 countries.

DSV ISSC provides global services from locations in Warsaw and Manila. The company was set up in Warsaw in 2012 due to its high economic growth potential and pool of talents. In Warsaw office we currently employ over 900 employees. Our employees have different nationalities and provide services in more than 15 languages in such main areas as: Accounting Services, Claims Handling, Customs Administration, Operational Shared Services, Shipping, Data Analysis & Reporting, Finance, HR and IT.

Our goal is to provide effective world-class solutions to increase the efficiency of DSV on a global scale. We are constantly looking for opportunities to automate work as well as to ensure error-free and fast processing of delivered services. It sparked a focus on LEAN – a philosophy by which we constantly try to find ways that make us able to work smarter and keep increasing the quality.

DSV ISSC is constantly growing, extending the scope of its services by taking over new processes and adding new DSV countries. To embrace this growth, we plan to increase the number of our employees to 1,500 and relocate to a new, modern office in 2 years' time. We believe that thanks to all of these steps, DSV ISSC will become even more competitive and transparent, so that our services will be more and more beneficial for DSV.

KMD is a leading supplier of mission-critical software, solutions and IT services primarily to Denmark's public sector, but with a growing footprint in the private sector both domestically and in Sweden and Norway.

Our headquarter is in Copenhagen, with five offices across Denmark, Oslo, Stockholm, Warsaw and Bangalore.

Established in June 2014, KMD Poland now hires around 500 experts developing software and creating complete IT solutions. Since the beginning of our operation in Poland, we have opted for an attractive and friendly work environment in a highly reachable location with a strong focus on great corporate culture and employees' development.

We have a broad portfolio of products and services, based predominantly on our own software solutions. Our solutions are robust, reliable, flexible and capable of growing in step with future challenges. We have a proven track record of delivering solutions to highly regulated markets and industries with large transaction sizes and high volumes.

For 25 years of its growth in Poland, P&G has been serving the Polish consumers with one of the most diverse and innovative brand portfolios, making a difference in their everyday life. Poland is one of the world' major P&G investment, with 3 plants, a General Office, Global Business Service Center and a European Planning Service Center. Poland is also an important source of global innovation. P&G Poland is part of the Central Europe regional structure, providing products for around 80 million consumers in 9 countries (Poland, Latvia, Lithuania, Estonia, Hungary, Slovakia, Slovenia, Czech Republic).

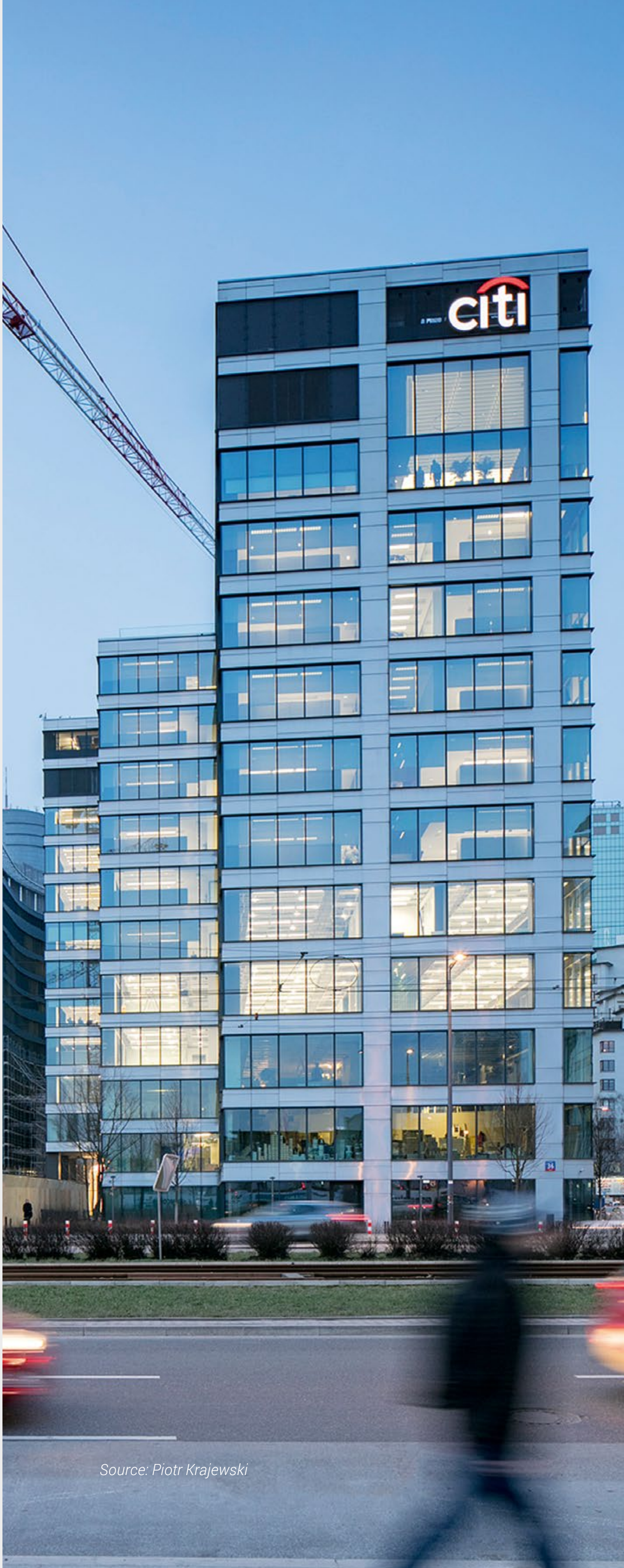
P&G Global Business Services Center (GBS) is localized in Warsaw. With its 300 top experts, Polish GBS supports P&G businesses all over the world, is one of the biggest global services hubs for the company. It specializes in creating solutions and systems supporting products identification, supply chain planning, Business Intelligence and big data. P&G cooperates with local Polish entrepreneurs and top global experts creating new to the world solutions through partnerships.

P&G European Planning Service Center in Warsaw, with more than 800 employees, is responsible for the end to end management of supply chain operations from raw material supply to shipment of finished goods across 100 countries resulting in greater efficiencies and faster deliveries to retailers and ultimately, consumers.

Poland is also home to three state-of-the-art manufacturing centers, exporting to more than 70 countries.

Citi has been investing in Poland for many years. In its Generation Park headquarters in Warsaw, designed in accordance with the Citi Works methodology, the local team provides highly specialized services to Citi customers in 96 countries worldwide. When Citi's shared services center (CSC Poland) began its operations in Poland in 2005, it had a headcount of 57. Today, CSC Poland has 4,300+ employees, of whom 1,800 work in the new location with an area of 24,000+ sq m. One in ten employees is a foreigner, and in addition to English, as many as 29 foreign languages can be heard in its hallways, including Bulgarian, Norwegian, Portuguese, Arabic and Chinese. It is that diversity that is a distinctive feature of CSC Poland. The international atmosphere in the organization is the product of the employees themselves and of the nature of the work they perform.

Citi Service Center Poland is currently one of the largest Citi teams of its kind in the EMEA Region. With a presence in Poland for the past thirteen years, it is among the leaders in the BPO sector in Poland. Its several thousand employees perform dozens of types of professional services, from AML to IT to MSS (Markets & Securities Services) to significantly more complex offerings. The Center offers a range of positions for both students and recent graduates, as well as specialists who want to pursue a career in a large multinational organization. The majority are entry-level positions. The team's young age is reflected in the statistics, with millennials making up 80 percent of its staff. To address that age group's needs, the Citi Works system was introduced, which combines modern technologies and co-working with the stability of an employment contract. The Prosta office in Warsaw offers employees arrangements that allow increased flexibility and work in different time slots and at different locations.



Source: Piotr Krajewski

4

THE LABOR MARKET

In Warsaw, employers can count on being able to find highly qualified personnel. The highest number of employees in the business services sector graduate from the University of Warsaw or the Warsaw School of Economics. Many candidates are also fluent in one or more foreign languages. Companies continue to willingly offer additional bonuses to employees who can function in more than one foreign language. This is due to the constant need for such people on the market. At the end of 2017, the largest growth in remuneration in Warsaw business services centers was seen in the field of banking. This was due to, among other factors, the number of new jobs being created in that area.

Chapter content development: **Randstad Polska and Randstad Sourceright**

Randstad Polska is the largest personnel consulting and temporary staffing agency on the Polish market. By combining our passion for people with the power of today's technologies, we support people and organizations in realizing their true potential.

Randstad Sourceright is a global talent solutions leader, driving the talent acquisition and human capital management strategies for the world's most successful employers. We continuously build and evolve solutions across recruitment process outsourcing (RPO), managed services programs (MSP), and integrated talent.

Source: Urząd m.st. Warszawy

FIGURE 28
BASIC DEMOGRAPHIC INFORMATION ON WARSAW

	CITY OF WARSAW	MAZOWIECKIE PROVINCE
Population (total)	1,764,615	5,384,617
Working age population	1,030,060	3,235,640
Working and mobile age populationm*	680,804	2,081,313

* age range contained within the working age bracket and comprising persons (aged 18-44) who are able to move to a different position or place of work, or can re-train

Source: Central Statistical Office (December 2017)

FIGURE 29
EDUCATIONAL POTENTIAL OF WARSAW

	CITY OF WARSAW
Number of students*	195,381
Number of graduates**	53,044
Number of universities***	63

* winter semester academic year 2017/2018 as at 15 April 2018
** persons who completed their studies in the period from 1 October 2016 to 30 September 2017
*** including universities outside Warsaw that have units running faculties in Warsaw

Source: Information Processing Center – State Research Institute: data from the POL-on information system on higher education

FIGURE 30
NUMBER OF STUDENTS IN THE LARGEST UNIVERSITIES IN WARSAW

Public universities

Students	University
38,776	UNIVERSITY OF WARSAW
22,469	WARSAW UNIVERSITY OF TECHNOLOGY
15,435	WARSAW UNIVERSITY OF LIFE SCIENCES
12,653	WARSAW SCHOOL OF ECONOMICS
9,763	CARDINAL STEFAN WYSZYNSKI UNIVERSITY IN WARSAW
9,331	MEDICAL UNIVERSITY OF WARSAW
5,488	JAROSLAW DABROWSKI MILITARY UNIVERSITY OF TECHNOLOGY
5,350	MARIA GRZEGORZEWSKA UNIVERSITY

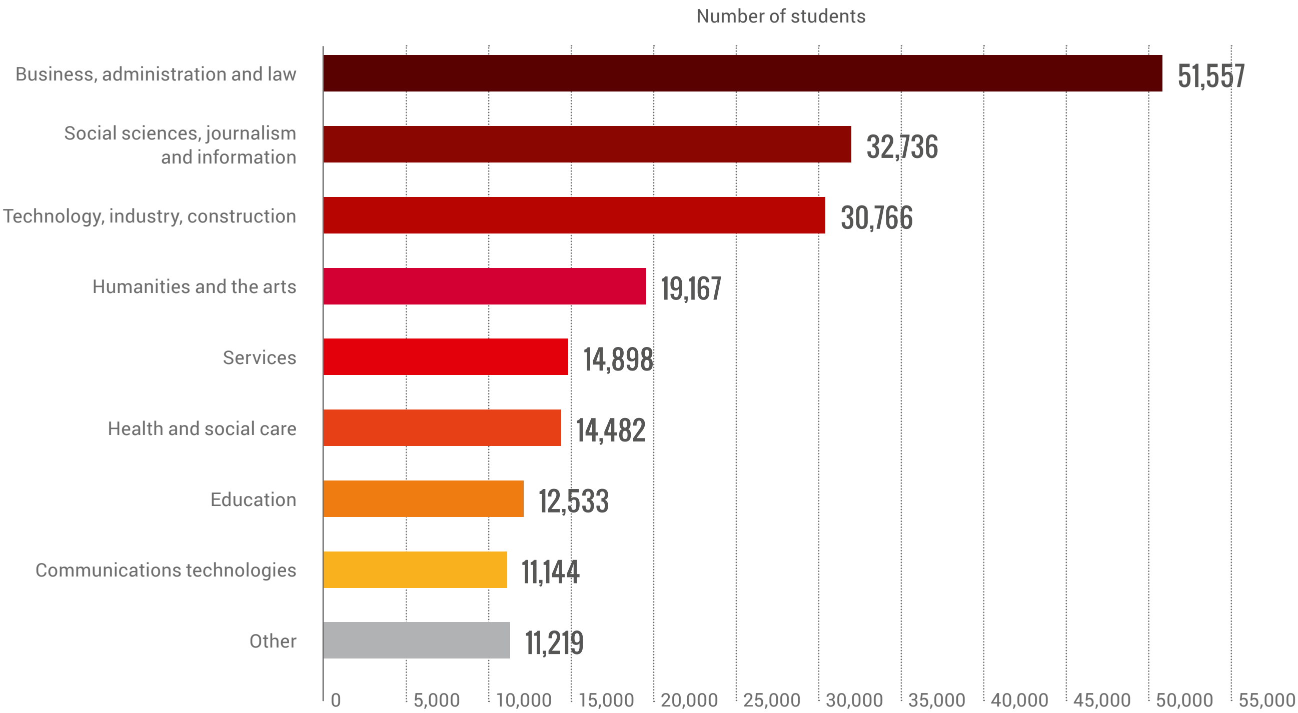
Private universities:

Students	University
6,599	SWPS UNIVERSITY OF SOCIAL SCIENCES AND HUMANITIES
5,374	KOZMINSKI UNIVERSITY
4,859	UNIVERSITY OF FINANCE AND MANAGEMENT
4,842	UNIVERSITY OF SOCIAL SCIENCES
3,685	VISTULA UNIVERSITY
3,629	WARSAW MANAGEMENT UNIVERSITY
3,574	POLISH-JAPANESE ACADEMY OF INFORMATION TECHNOLOGY
3,298	HELENA CHODKOWSKA UNIVERSITY OF TECHNOLOGY AND ECONOMICS
3,040	LAZARSKI UNIVERSITY
2,552	UNIVERSITY OF ECOLOGY AND MANAGEMENT
2,433	WARSAW SCHOOL OF INFORMATION TECHNOLOGY (WIT)
1,935	COLLEGE OF REHABILITATION IN WARSAW

Note: only persons studying in Warsaw are taken into account.

Source: Information Processing Center – State Research Institute: data from the POL-on information system on higher education; academic year 2017/2018

FIGURE 31
NUMBER OF STUDENTS BY STREAM (ISCED)



Source: Information Processing Center – State Research Institute: data from the POL-on information system on higher education; academic year 2017/2018

FIGURE 32
FOREIGNERS: STUDENTS AND GRADUATES

Foreign students* **18,634**

Foreign graduates** **3,327**

* winter semester academic year 2017/2018 as at 15 April 2018
** persons who completed their studies in the period from 1 October 2016 to 30 September 2017

Source: Information Processing Center – State Research Institute: data from the POL-on information system on higher education; academic year 2017/2018

FIGURE 33
FOREIGNERS: STUDENTS BY COUNTRY

1 Ukraine **9,462**

2 Belarus **2,384**

3 India **830**

Source: Information Processing Center – State Research Institute: data from the POL-on information system on higher education; academic year 2017/2018

TABLE 5
UNIVERSITIES FROM WHICH BUSINESS SERVICES SECTOR EMPLOYEES IN WARSAW GRADUATED

	Share of employees
University of Warsaw	33.80%
Warsaw School of Economics	30.70%
Warsaw University of Technology	19.30%
Kozminski University	5.50%
Warsaw University of Life Sciences	3.30%

Source: Randstad on the basis of LinkedIn data (N=10,783)
Data were analyzed on the education of 10,783 current employees of Warsaw business services sector companies having a profile on LinkedIn. For each of the 62 companies analyzed, the 5 universities with the largest number of graduates among its employees in Warsaw were selected.

Among employees in the business services sector in Warsaw, the largest group comprises graduates of the University of Warsaw and the Warsaw School of Economics. Other leading schools that turn out Warsaw business services sector employees are the Warsaw University of Technology, Kozminski University, and the Warsaw University of Life Sciences.

TABLE 6
NUMBER OF POTENTIAL CANDIDATES WITH SELECTED FOREIGN LANGUAGES

The table was prepared on the basis of the knowledge of foreign languages declared on the LinkedIn portal (total number of users in Warsaw – 458,651).

	Warsaw
Elementary	25,607
Limited Working	10,889
Professional Working	4,162
Full Professional	2,440
Native or Bilingual	920
Elementary	10,311
Limited Working	4,590
Professional Working	2,379
Full Professional	1,685
Native or Bilingual	1,349
Elementary	9,508
Limited Working	3,800
Professional Working	1,878
Full Professional	1,153
Native or Bilingual	872
Elementary	4,041
Limited Working	1,571
Professional Working	997
Full Professional	582
Native or Bilingual	633
Elementary	1,347
Limited Working	450
Professional Working	251
Full Professional	122
Native or Bilingual	265

Source: Randstad on the basis of LinkedIn data

TABLE 7
AVAILABILITY OF POTENTIAL EMPLOYEES IN WARSAW BY SPECIALIZATION

Availability of potential employees (in a three-month period)

F&A: GL

	15	25	50
Junior Accountant (1-2 years' experience)	easily	easily	moderately difficult
Accountant (2-3 years' experience)	easily	easily	moderately difficult
Senior Accountant (over 3 years' experience)	easily	moderately difficult	difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

F&A: AP / AR

	15	25	50
Junior Accountant (1-2 years' experience)	easily	easily	easily
Accountant (2-3 years' experience)	easily	easily	moderately difficult
Senior Accountant (over 3 years' experience)	easily	easily	moderately difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

Banking

	15	25	50
Junior Fund Accountant (up to 1 years' experience)	easily	easily	moderately difficult
Fund Accountant (1-3 years' experience)	easily	easily	moderately difficult
Senior Fund Accountant (over 3 years' experience)	easily	moderately difficult	difficult
AML/KYC Junior Analyst (up to 1 years' experience)	easily	easily	easily
AML/KYC Analyst (1-3 years' experience)	easily	easily	moderately difficult
AML/KYC Senior Analyst (3-5 years' experience)	easily	moderately difficult	difficult
Junior Analyst (Product Control, Reporting, Business Analysis / up to 1 years' experience)	easily	moderately difficult	difficult
Analyst (Product Control, Reporting, Business Analysis / 1-3 years' experience)	easily	moderately difficult	difficult
Senior Analyst (Product Control, Reporting, Business Analysis / over 3 years' experience)	easily	moderately difficult	difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

Customer Service

	15	25	50
Junior Specialist (bez experience)	easily	easily	easily
Specialist (over 1 years' experience)	easily	easily	moderately difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	moderately difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

HR processes

	15	25	50
Junior Specialist (up to 1 years' experience)	easily	easily	moderately difficult
Specialist (1-2 years' experience)	easily	easily	moderately difficult
Senior Specialist (over 2 years' experience)	easily	moderately difficult	difficult
Junior Payroll Specialist (up to 1 years' experience)	easily	easily	moderately difficult
Payroll Specialist (1-3 years' experience)	easily	easily	moderately difficult
Senior Payroll Specialist (over 3 years' experience)	easily	moderately difficult	difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

IT

	15	25	50
1st Line Support (2 years' experience)	easily	easily	easily
2nd Line Support (2 years' experience)	easily	moderately difficult	moderately difficult
3rd Line Support (2 years' experience)	easily	moderately difficult	difficult
IT Administration (3 years' experience)	easily	easily	moderately difficult
Network / Security (3 years' experience)	easily	moderately difficult	difficult
Business / System Analyst (3 years' experience)	easily	moderately difficult	moderately difficult
Developer (3 years' experience)	easily	moderately difficult	difficult
Tester (3 years' experience)	easily	moderately difficult	difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Project Manager (team of up to 50 people)	easily	moderately difficult	difficult

Procurement / Order Management

	15	25	50
Junior Specialist (up to 1 years' experience)	easily	easily	moderately difficult
Specialist (1-3 years' experience)	easily	easily	moderately difficult
Senior Specialist (over 3 years' experience)	easily	moderately difficult	difficult
Team Leader (team of 5-15 people)	easily	moderately difficult	difficult
Manager (team of up to 50 people)	easily	moderately difficult	difficult

- talent recruited easily
- moderately difficult
- difficult

Source: Randstad Polska i Randstad Sourceright

TABLE 8

GROSS MONTHLY SALARY (IN EUR) AT BPO/SSC/IT/R&D CENTERS IN WARSAW FOR EMPLOYEES WHO SPEAK ENGLISH

The pay tables are based on an analysis of the remuneration offered in the recruitment processes in the business services sector in Poland carried out by Randstad. Data from Q3 and Q4 2018.

F&A: GL	Min	Most frequently offered	Max
Junior Accountant (1-2 years' experience)	1,160	1,280	1,440
Accountant (2-3 years' experience)	1,510	1,810	1,970
Senior Accountant (over 3 years' experience)	1,860	1,970	2,200
Team Leader (team of 5-15 people)	2,320	2,900	3,480
Manager (team of up to 50 people)	3,480	4,180	5,340

F&A: AP / AR	Min	Most frequently offered	Max
Junior Accountant (1-2 years' experience)	1,040	1,210	1,350
Accountant (2-3 years' experience)	1,350	1,390	1,620
Senior Accountant (over 3 years' experience)	1,530	1,620	1,970
Team Leader (team of 5-15 people)	1,970	2,320	2,780
Manager (team of up to 50 people)	3,250	3,710	4,640

Banking	Min	Most frequently offered	Max
Junior Fund Accountant (up to 1 years' experience)	1,040	1,210	1,390
Fund Accountant (1-3 years' experience)	1,280	1,620	1,860
Senior Fund Accountant (over 3 years' experience)	1,620	1,970	2,200
AML/KYC Junior Analyst (up to 1 years' experience)	950	1,070	1,180
AML/KYC Analyst (1-3 years' experience)	1,250	1,510	1,740
AML/KYC Senior Analyst (3-5 years' experience)	1,620	1,860	2,200
Junior Analyst (Product Control, Reporting, Business Analysis / up to 1 years' experience)	1,230	1,350	1,510
Analyst (Product Control, Reporting, Business Analysis / 1-3 years' experience)	1,390	1,740	1,970
Senior Analyst (Product Control, Reporting, Business Analysis / over 3 years' experience)	1,860	2,200	2,550
Team Leader (team of 5-15 people)	2,320	2,900	3,600
Manager (team of up to 50 people)	3,480	4,410	5,800

Customer Service	Min	Most frequently offered	Max
Junior Specialist (without experience)	860	930	1,160
Specialist (over 1 years' experience)	1,000	1,280	1,390
Team Leader (team of 5-15 people)	1,620	1,860	2,320
Manager (team of up to 50 people)	2,090	2,670	3,710

HR processes

	Min	Most frequently offered	Max
Junior Specialist (up to 1 years' experience)	930	1,020	1,090
Specialist (1-2 years' experience)	1,110	1,280	1,390
Senior Specialist (over 2 years' experience)	1,440	1,530	1,860
Junior Payroll Specialist (up to 1 years' experience)	1,110	1,210	1,280
Payroll Specialist (1-3 years' experience)	1,350	1,670	1,970
Senior Payroll Specialist (over 3 years' experience)	1,860	2,090	2,440
Team Leader (team of 5-15 people)	2,320	3,020	3,480
Manager (team of up to 50 people)	3,250	3,940	4,870

IT

	Min	Most frequently offered	Max
1st Line Support (2 years' experience)	1,040	1,280	1,620
2nd Line Support (2 years' experience)	1,390	1,740	1,860
3rd Line Support (2 years' experience)	1,970	2,440	3,020
IT Administration (3 years' experience)	1,860	2,670	3,250
Network / Security (3 years' experience)	2,550	3,020	3,710
Business / System Analyst (3 years' experience)	2,320	3,020	3,710
Developer (3 years' experience)	2,670	3,360	3,710
Tester (3 years' experience)	1,740	2,320	3,250
Team Leader (team of 5-15 people)	2,320	3,020	4,290
Project Manager (team of up to 50 people)	3,130	3,920	5,100

Procurement / Order Management

	Min	Most frequently offered	Max
Junior Specialist (up to 1 years' experience)	1,110	1,320	1,440
Specialist (1-3 years' experience)	1,440	1,620	1,860
Senior Specialist (over 3 years' experience)	1,970	2,090	2,550
Team Leader (team of 5-15 people)	2,780	3,480	3,940
Manager (team of up to 50 people)	3,710	4,410	5,800

R&D

	Min	Most frequently offered	Max
Laboratory Specialist (over 2 years' experience)	1,090	1,210	1,440
Technologist (over 2 years' experience)	1,280	1,740	2,200
Design Engineer (2-4 years' experience)	1,510	1,740	1,970
Senior Design Engineer (over 4 years' experience)	1,740	2,200	2,670
Product Development / NPI Engineer (2-4 years' experience)	1,740	1,970	2,200
Senior Product Development / NPI Engineer (over 4 years' experience)	2,200	2,670	3,360
Quality Engineer (2-4 years' experience)	1,320	1,670	1,900
Senior Quality Engineer (over 4 years' experience)	1,740	1,970	2,200
R&D Manager (team of up to 50 people)	3,250	3,940	4,870

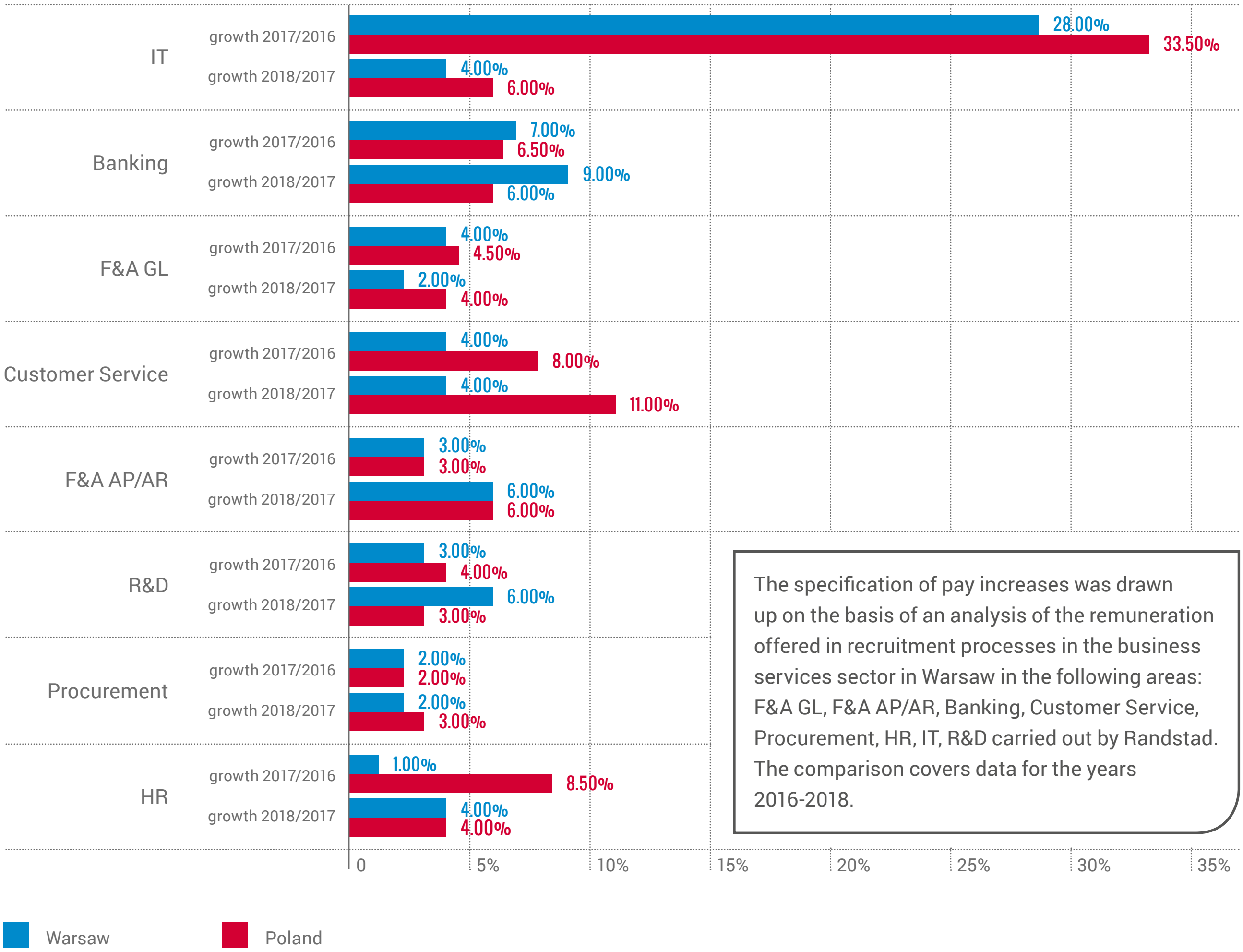
Source: Randstad Polska i Randstad Sourceright

TABLE 9
GROSS MONTHLY LANGUAGE BONUS [EUR]

Spread of rates for specialist positions:	min	max
Spanish / Portuguese / Russian / Italian	70	190
French	120	230
German	160	280
Scandinavian languages / Finnish language	190	460

Source: Randstad Polska and Randstad Sourceright

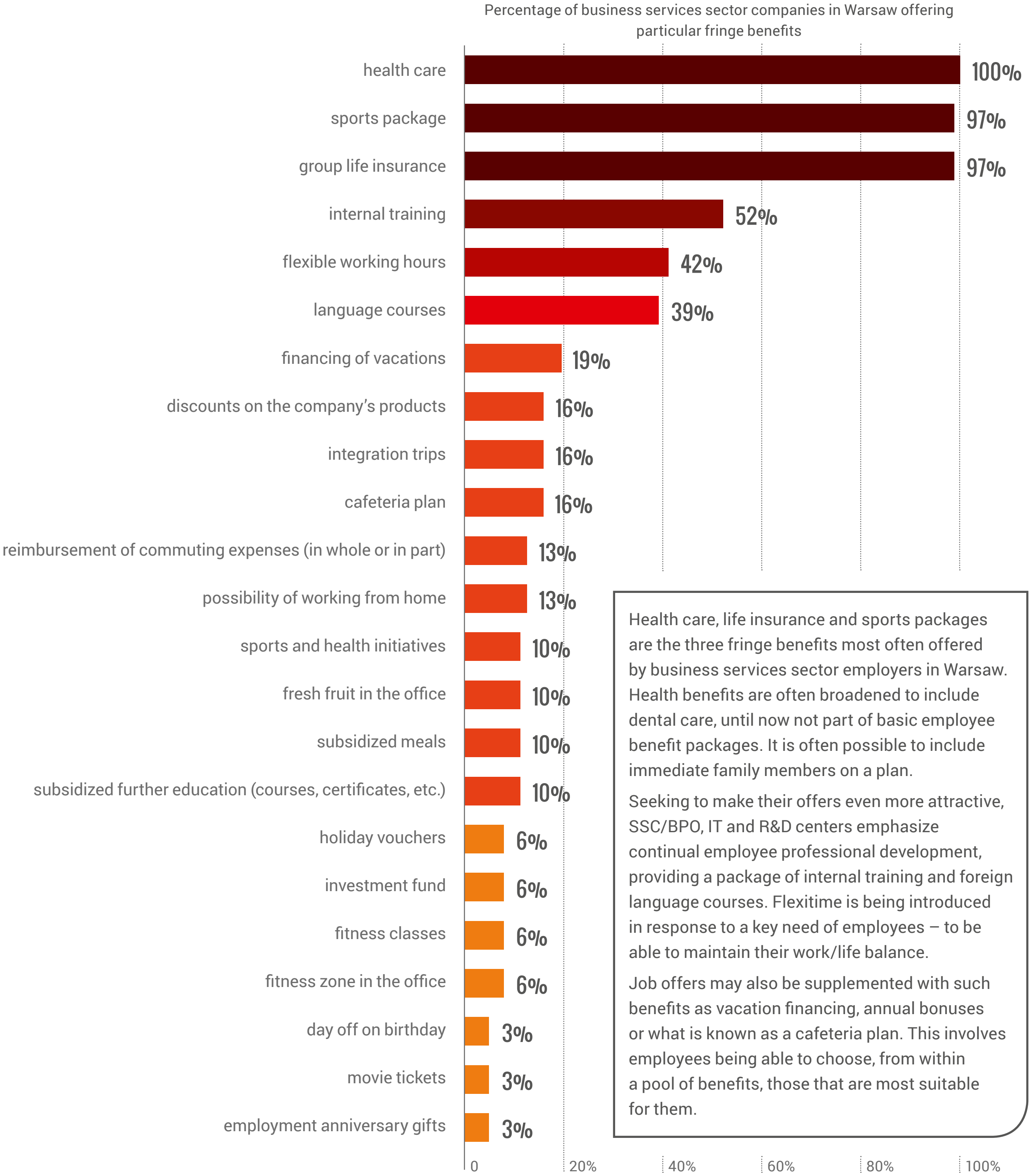
FIGURE 34
PAY INCREASE IN SELECTED CATEGORIES OF SERVICES IN WARSAW



The specification of pay increases was drawn up on the basis of an analysis of the remuneration offered in recruitment processes in the business services sector in Warsaw in the following areas: F&A GL, F&A AP/AR, Banking, Customer Service, Procurement, HR, IT, R&D carried out by Randstad. The comparison covers data for the years 2016-2018.

Source: Randstad Polska i Randstad Sourceright

FIGURE 35
BENEFITS



Health care, life insurance and sports packages are the three fringe benefits most often offered by business services sector employers in Warsaw. Health benefits are often broadened to include dental care, until now not part of basic employee benefit packages. It is often possible to include immediate family members on a plan.

Seeking to make their offers even more attractive, SSC/BPO, IT and R&D centers emphasize continual employee professional development, providing a package of internal training and foreign language courses. Flexitime is being introduced in response to a key need of employees – to be able to maintain their work/life balance.

Job offers may also be supplemented with such benefits as vacation financing, annual bonuses or what is known as a cafeteria plan. This involves employees being able to choose, from within a pool of benefits, those that are most suitable for them.

Source: Analysis of the fringe benefits most frequently offered by 31 companies in the business services sector in Warsaw.

WARSAW TALENT TRENDS 2018

Warsaw is a rapidly developing business hub and among Europe's top business friendly locations. Poland's capital is home to many international organizations and attracts a wide range of companies, because of its strategic location and highly skilled talent.

Being the capital, Warsaw is still more expensive than other growing economic hubs in Poland, but the gap has now narrowed. At the same time, Warsaw offers access to a very well-educated workforce with a diversified skill set, which acts as magnet for global companies. Key differentiators of Warsaw compared to other locations within Poland are: the size of the labor pool; potential to source candidates from a variety of traditional, international organizations, headquartered in Warsaw and the ease of expanding the scope of processes moving up the value chain.

During a time of intense competition for skills, many companies are taking a closer look at their talent attraction and retention strategies. To keep candidates and employees engaged and interested in their organizations, HR & business leaders understand that a strong employer brand is essential. Defining one of a company's brand pillars to focus on creating an experiential difference that lifts the organization above competitors as an employer of choice, is a key for success in engaging the right talent.

Recognized as an important component of employer branding, the candidate experience is seen by nearly everyone as something that needs improvement. Based on Randstad Sourceright's Q2 2018 Talent Trend Quarterly Outlook, 40% of Human Resource leaders in Poland say they are providing tools, guides and communications to enhance the candidate experience. Warsaw-based organizations are increasing investments in the area and are focusing more on tools to help them improve candidate experience and their recruitment results overall. Randstad notes that a growing number of organizations plan to enhance candidate experience further, focusing on talent communities, conducting feedback surveys and involving the use of external consultants.

Talent's expectations of employers are continually increasing. New investors, especially from the financial services industry arriving to the Warsaw market, put additional pressure on companies to constantly evolve their employer value proposition (EVP) to stay aligned with talent needs.

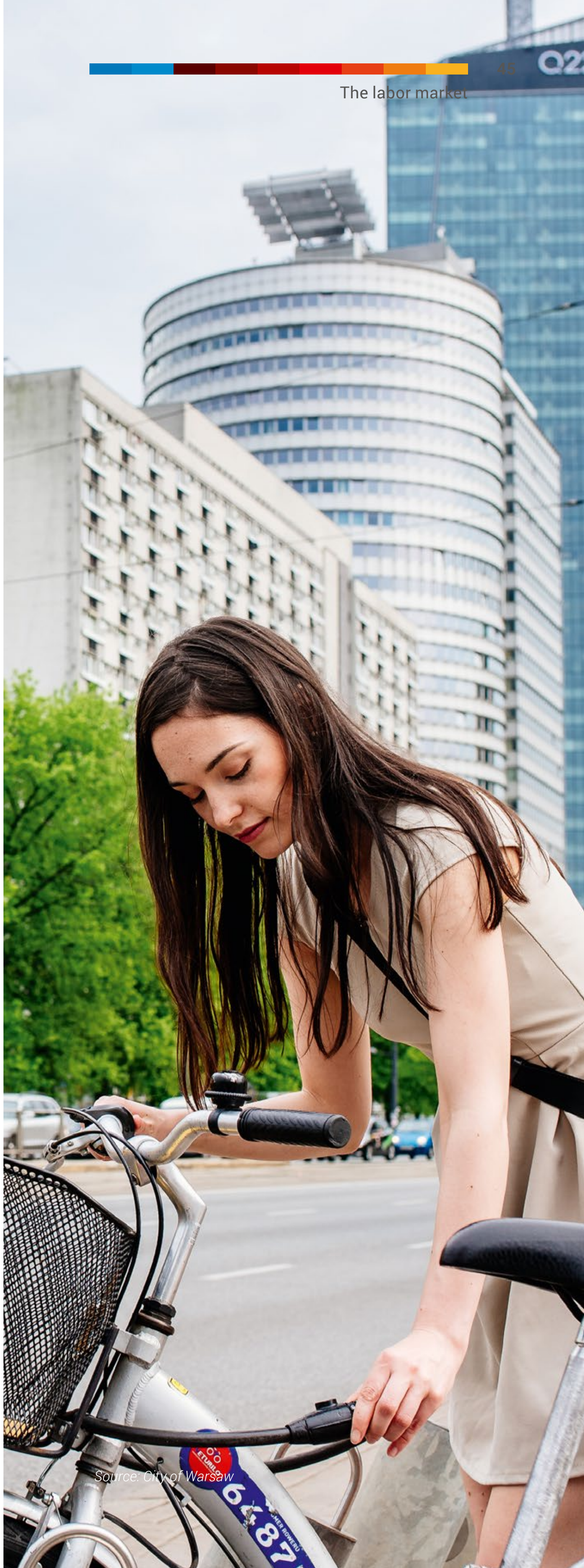
As competition in Warsaw is constantly growing, Randstad notes a tendency towards a better mix of employment benefits, offered by organizations in Warsaw. Examples include medical care, life insurance, sport packages, annual bonus, but also internal and external training, such as language courses.

At the same time, organizations also focus on better overall employment conditions that aim to improve work–life balance and employee well-being. A number of companies in Warsaw have answered the market need by offering flexible working hours and working from home options. The extent of this offer depends on the business model and the security strategy. In most cases flexible working hours means, in practice, the possibility of working from 8-10 am and the possibility of working from home is usually once per month. Companies pay a lot of attention to addressing work-life balance needs; in Warsaw, as a big city, the matter of commuting is especially important. Some companies have changed their locations for the city center, recently, to be better accessible, and at the same time look after the office itself in terms of adjusting it to social and business needs.

Randstad notes that companies are reaching out to students more, even at the beginning of their University years. The focus is shifting from hiring for the best skillset to hiring well-educated employees and developing them.

Another growing trend is the usage of smart technologies, powered by AI, machine learning and analytics. According to Randstad's Talent Trends report, 38% of Polish talent leaders say AI and automation have a positive impact on their businesses. An impressive 64% say smart technologies will have the same or greater influence on their business this year. Organizations in Warsaw follow the trend, too and have started investing in smart technologies such as chatbots, interview auto schedulling or digital interviewing to improve recruitment results.

As a last note, as the market changes and new talent trends develop, Warsaw, together with Krakow, will continue to be one of the top most attractive locations for the business services sector, but the competition from other locations both within Poland and CEE region is becoming stronger.


Source: City of Warsaw

EMPLOYEES ABOUT ITS WORK IN WARSAW

Paul Donaghy, Ireland

Head of Depositary & Fiduciary Services Operations
BNP Paribas Securities Services

I joined BNP Paribas Security Services Poland in September 2013. I came to Warsaw directly from Ireland. It must have been destiny, since my Christian name is John Paul. My goal was to continue to expand my international work experience after previously working in Australia for an extended period. Even today people ask me why. After 5 years in Warsaw my answer is still the same. Firstly, here are huge professional opportunities and business challenges. Since arrival I have been lucky enough to manage the growth of my team from 7 to 93 staff. Secondly, in Warsaw, an open and modern city, I've found my second home. Poland is very similar to Ireland in many ways. I always feel at home here. Luckily the one thing Poland and Ireland do not share is the Irish weather!

Fabio Scacciatelli, Italy

Leader for Financial Services in CEE Region, IBM Services
IBM Polska

My first day in Warsaw was back in March 2007. It was a frosty minus 25 degrees, snow everywhere and I dreaded the prospect of a 6-month project. During my first month, the time passed extremely slowly, and I longed to be back in Rome. The snow slowly melted and as it did, I grew to love Warsaw. At this point, my 6 months became an odyssey, still to be completed 11 years later. My Warsaw became an international community, continuously transforming. However, it has always maintained a superb balance between business and family needs. Parks, theatres, offices and museums: my city always remembers the past but also keeps a close eye on the future.

Julie Pedersen, Denmark

Developer, MSc in Mathematics
KMD

Working in an international environment is exciting and people are very friendly. Warsaw is a great city to live in. There are many things to see here and a rich cultural life.

I was surprised how many green areas and beautiful parks there are in the city.

The public transportation is very good, and I find it easy to get around – there are even city bikes for rent. I enjoy eating out at the many restaurants and cafés and being used to the prices in Copenhagen the food here is more than affordable.

Jack Orr, Scotland

Compliance Officer
Citi Service Center Poland

Warsaw is a fantastic city to live in which only continues to improve. The city is full of green spaces but is also changing at a rapid pace, with new business and residential developments everywhere. I love living in Warsaw because everything is here: great outdoor& indoor public spaces and sports facilities, fantastic restaurants and shopping, awesome cultural events, museums and an incredible but tragic history of the city to learn about. For me it's great to be part of such a multicultural company as Citi, as in my role I also get to meet and work with people from all over the world who have come to live and work in Poland.

Christian Carstensson Olesen, Denmark

Manager, Operational Shared Services
DSV ISSC

I moved to Warsaw in 2014. I had no reservations when I accepted the new position at DSV ISSC in Warsaw. I had already been in Warsaw six times in connection to my work for DSV in Denmark, so I knew I would like the city and my new colleagues. Moving to Warsaw and experiencing the growth of DSV ISSC has been a great journey and propelled my career to the next level. Warsaw is a wonderful place to work and live in and I am sure our continuous growth will create more opportunities in the future.

5

WARSAW OFFICE MARKET

Continuing its position from 2017, Poland is still perceived as a safe haven for investors. Warsaw's stellar 2017 performance was further boosted by strong market fundamentals in 2018. As a result, Warsaw is cementing its place as the centre for business and office activity in the CEE region. This acts as a powerful lure for both investors and occupiers and has resulted in optimistic forecasts for the next few quarters. Warsaw's star shines brightly and 2018 is set for fantastic results. This is reflected in booming demand, developer activity a falling vacancy rate across the city.

Chapter content preparation: JLL

JLL is a leading professional services firm that specializes in real estate and investment management. A Fortune 500 company, JLL helps real estate owners, occupiers and investors achieve their business ambitions. At the end of 2017, JLL had nearly 300 corporate offices, operations in over 80 countries and a global workforce of 82,000. More at: **www.jll.pl**

Source: City of Warsaw

FIGURE 36
WARSAW OFFICE MARKET IN NUMBERS

5,400,000 sq m	Existing modern office stock.
700,000 sq m	Office space under construction.
11.1%	Vacancy rate (and falling).
820,000 sq m	Demand for offices in 2017.
18,600 sq m	Largest deal in 2017 by Citi Service Center Poland.
425,000 sq m	Demand for offices in H1 2018.
14,800 sq m	Largest deal in H1 2018 by the Polish Financial Supervision Authority.
360,000 sq m	Record breaking net absorption in 2017.
17-23 €	Prime headline rents in central areas of Warsaw (per sq m per month).
11-15 €	Prime headline rents in non-central areas of Warsaw (per sq m per month).

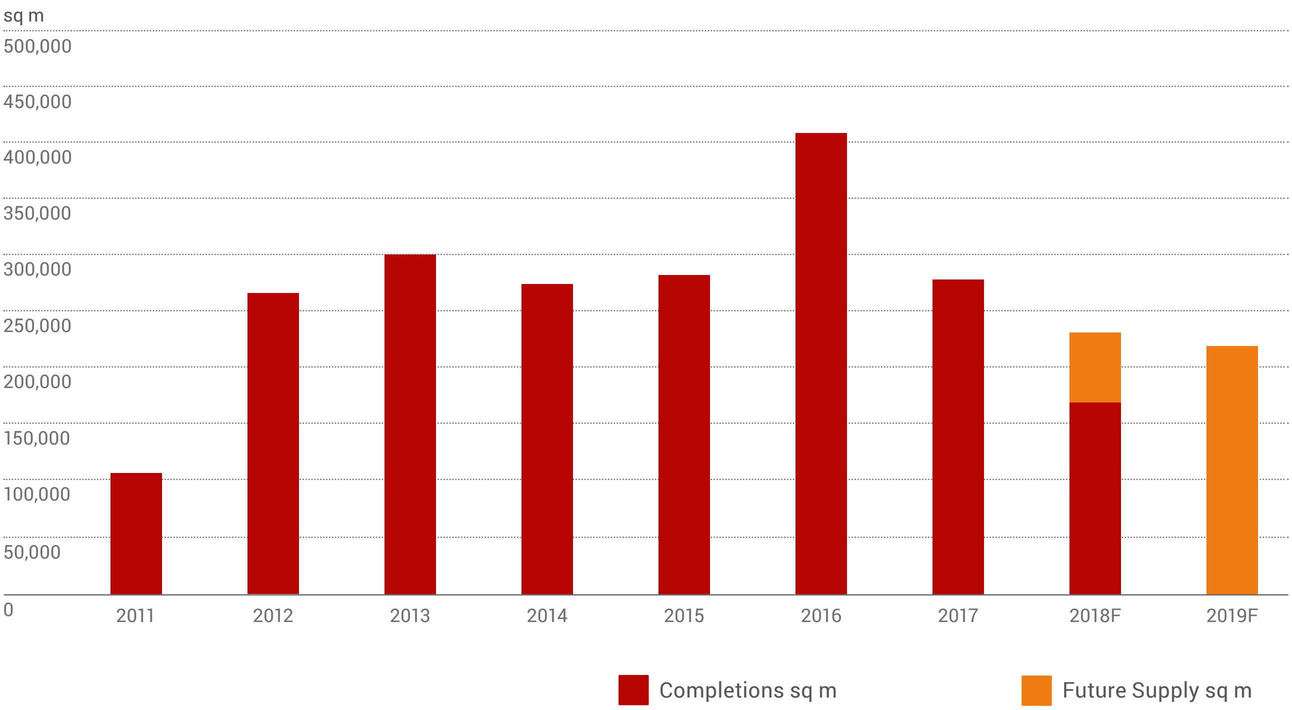
Source: JLL, H1 2018

Warsaw is most definitely a thriving business hub and a regional leader in terms of economic growth and office market maturity. The development of the office market is constant and robust and seeing also a qualitative change. This shift is a result of the changing labor market and growing awareness of commercial developers and their willingness to create an open and attractive space not only for white-collar workers but also for the residents of Warsaw. Moreover, the increasing popularity of mixed-use projects is adding to diversity across the market and is a great example of placemaking efforts in the commercial real estate sector.

All that results in a versatile market that caters to the needs of all types of companies. Whether it is a global giant looking for a state-of-the-art office in a prestigious location, a mid-scale corporation focusing on the best commute for employees, a small firm seeking a location next to its key clients, a start-up or a freelancer looking for the synergy effect resulting from being in a co-working environment, there is a place for everybody in Warsaw.

Hence, the fierce growth of the office supply in Warsaw. Currently, modern office stock in the capital exceeds 5,400,000 sq m and a further 700,000 sq m is under construction across the city. The pipeline is quite extensive, however, as Warsaw is one of the most absorptive markets in Europe, that volume will not affect the balance between supply and demand. A strong pipeline doesn't necessarily translate into oversupply every time. On the contrary, Warsaw proves, year after year, that its booming demand and absorption of new space is more than enough to balance the supply side of the market.

FIGURE 37
OFFICE COMPLETIONS, FUTURE SUPPLY

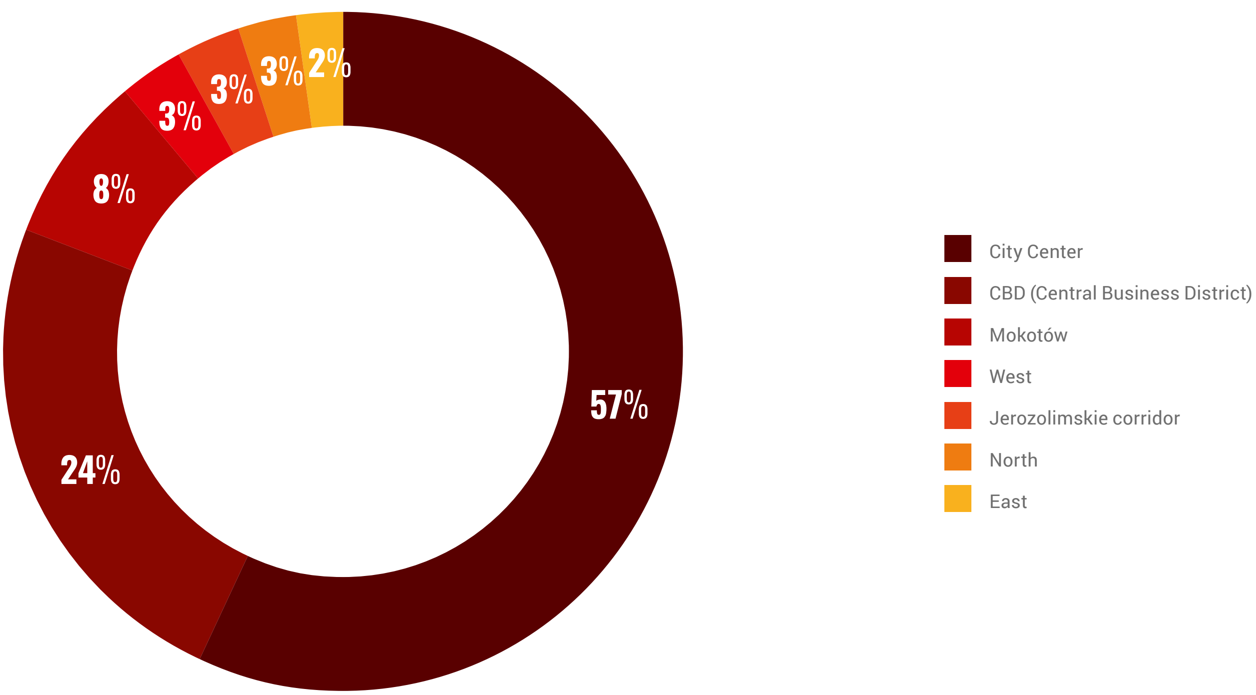


Source: JLL, H1 2018, F = forecast

The new supply volume in H1 2018 totalled almost 174,000 sq m and the vacancy rate still is on a declining curve with further falls forecast for the remainder of 2018 and the whole of 2019 (as the new supply volume for these years is contracting, while demand for offices remains robust). What's important is that the overwhelming majority of offices under construction are located in the central areas of Warsaw (80%). This is a result of booming interest in the area of Daszyńskiego roundabout, which is a natural extension of the CBD of Warsaw and in mid-term perspective will be home to a number of new tower developments for not only for office functions but also hotel and residential. Furthermore, that location gives companies a competitive edge while recruiting and retaining best talent.

The largest developments under construction in Warsaw comprise Varso (developed by HB Reavis; one of the buildings will be a 310 m high tower – the highest building in the EU), the Warsaw Hub (developed by Ghelamco Poland; three towers – one of which will be a hotel), Mennica Legacy (developed by Golub GetHouse; comprising an office tower and a smaller building) and Generation Park (developed by Skanska Property Poland; an office tower and a smaller building). Worth noting are also the aforementioned mixed-use developments such as ArtN (former metal rolling mill), Elektrownia Powiśle (former power plant) and Centrum Praskie Koneser (former vodka factory). It is also important to underline that such a heavy focus on the central areas of Warsaw may result in a possible shortage of new space in non-central locations in the mid-term perspective.

FIGURE 38
CONSTRUCTION ACTIVITY IN WARSAW'S OFFICE DISTRICTS



Source: JLL, H1 2018

Robust developer activity is underpinned by constantly increasing demand for office space. Warsaw's office market is on a winning streak and the forecasts are as optimistic as ever. Occupier activity began to surge in 2015 and that trend is continuing. H1 2018 also has been extremely successful and the whole year is set for a fantastic result. Driving Warsaw's office market are three sources of demand: newcomers which have decided to open offices in the city (e.g. J.P. Morgan taking 15,600 sq m in Atrium Garden in the CBD and CIC signing for 13,500 sq m in Varso in the CBD); expansions by companies already operating in Warsaw (e.g. AstraZeneca, which almost tripled its office space in Postępu 14, Mokotów); and tenants relocating from non-modern developments to new ones (e.g. the Polish Financial Supervision Authority moving to Piękna 2.0).

Warsaw's excellent performance is made possible by companies from a very wide variety of sectors being active on the market. With vast, incessant interest in letting office space coming from companies from the business services sector, consulting and banking sectors, as well as flexible space operators (21.5% of the total demand volume in central areas in H1 2018).

Firms representing the business services sector have started to play a major role in the office market recently, especially with large, high-profile entries to Warsaw. One of the key factors for that shift include the availability of a large, highly-skilled talent pool, of students and Warsaw's reputation as a major business hub with a high quality of life (Warsaw was one of the two Polish cities included in the "Quality of living ranking 2018" by Mercer). In 2017 alone these companies were responsible for more than 100,000 sq m of demand for office space in Warsaw.

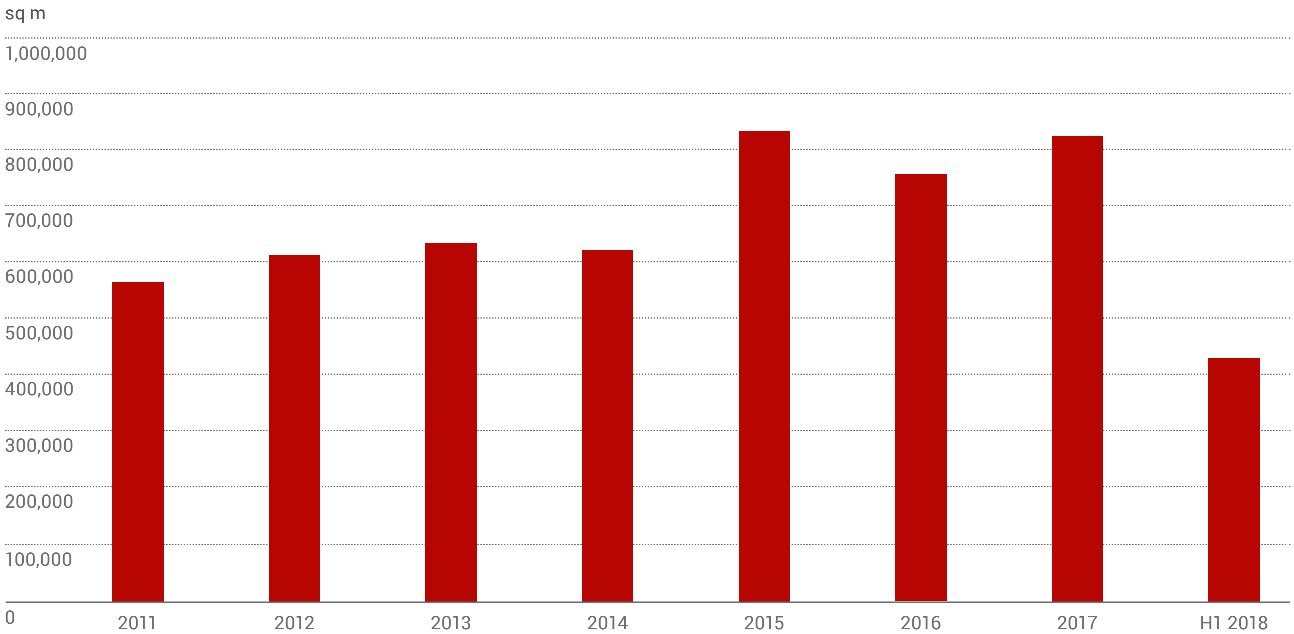
Another major contributor to demand for offices are flexible space operators, an extremely dynamic industry and one of the hottest trends in Warsaw. It changes the office market in the city and adds to the diversity of options available for companies and individuals looking for the office that best suits their needs. Some of the major international flexible space operators that only recently decided to enter Warsaw market are Wework, Spaces and Cambridge Innovation Center, while entities that already have a large footprint in the capital are Regus, Business Link, Brain Embassy, Inoffice, Cityspace and others.

Looking at the popularity of the office districts in Warsaw, central zones are invariably on the top, but when the zones are considered separately, Mokotów is snapping at the City Center's heels. Central districts are favoured by newcomers which are able to pay a premium in order to gain an advantage in recruitment processes, the best access to transport (both public and private), a wide range of amenities and the largest choice of new, best-in-class offices.

The vacancy rate in Warsaw has been falling and by the end of H1 2018 it had dropped by 2.8 pp, to the level of 11.1%, compared to the same period in 2017. The vacancy rate in Central zones now stands at 7.9%, which is the lowest since 2012 and is forecast to decrease further. The index in Non-Central zones equals 13.1% and may drop in the mid-term perspective as result of limited planned and under construction supply here.

Prime headline rents remained stable in H1 2018, except City Centre West zone. Due to the high demand and low vacancy rate there (which is way below the city average), the rents increased. In central Warsaw prime rents are currently quoted at €17.0 to €23.0 / sq m / month, while prime assets located in the best non-central areas lease for €11.0 to €15.0 / sq m / month. Warsaw has reached the bottom of the rental cycle and some rental pressures may be experienced along with increasing labor and construction costs

FIGURE 39
OFFICE DEMAND IN WARSAW 2011-H1 2018



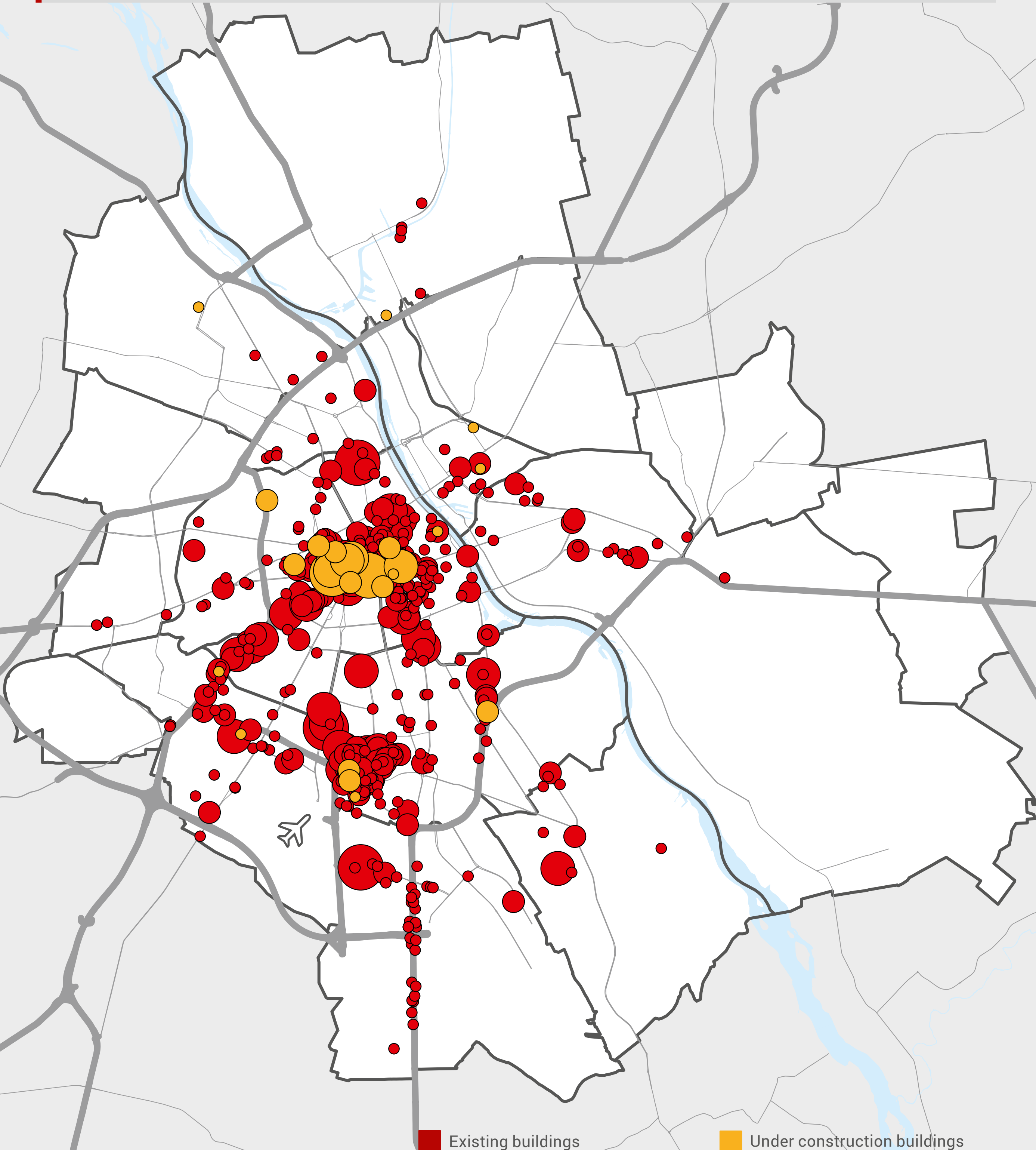
Source: JLL, H1 2018

TABLE 10
LARGEST UNDER CONSTRUCTION DEVELOPMENTS

	Developer	Office space (sq m)
VARSO	HB Reavis	100,000
THE WARSAW HUB	Ghelamco Poland	80,000
MENNICA LEGACY	Golub GetHouse	60,000
GENERATION PARK Y&Z	Skanska Property Poland	60,000
SPINNAKER	Ghelamco Poland	55,000
SKYLINER	Karimpol	40,000
ARTN	Capital Park	37,000
WIDOK TOWER	S+B Gruppe	32,000
DSV HQ	DSV	30,000
BROWARY WARSZAWSKIE	Echo Investment	28,000

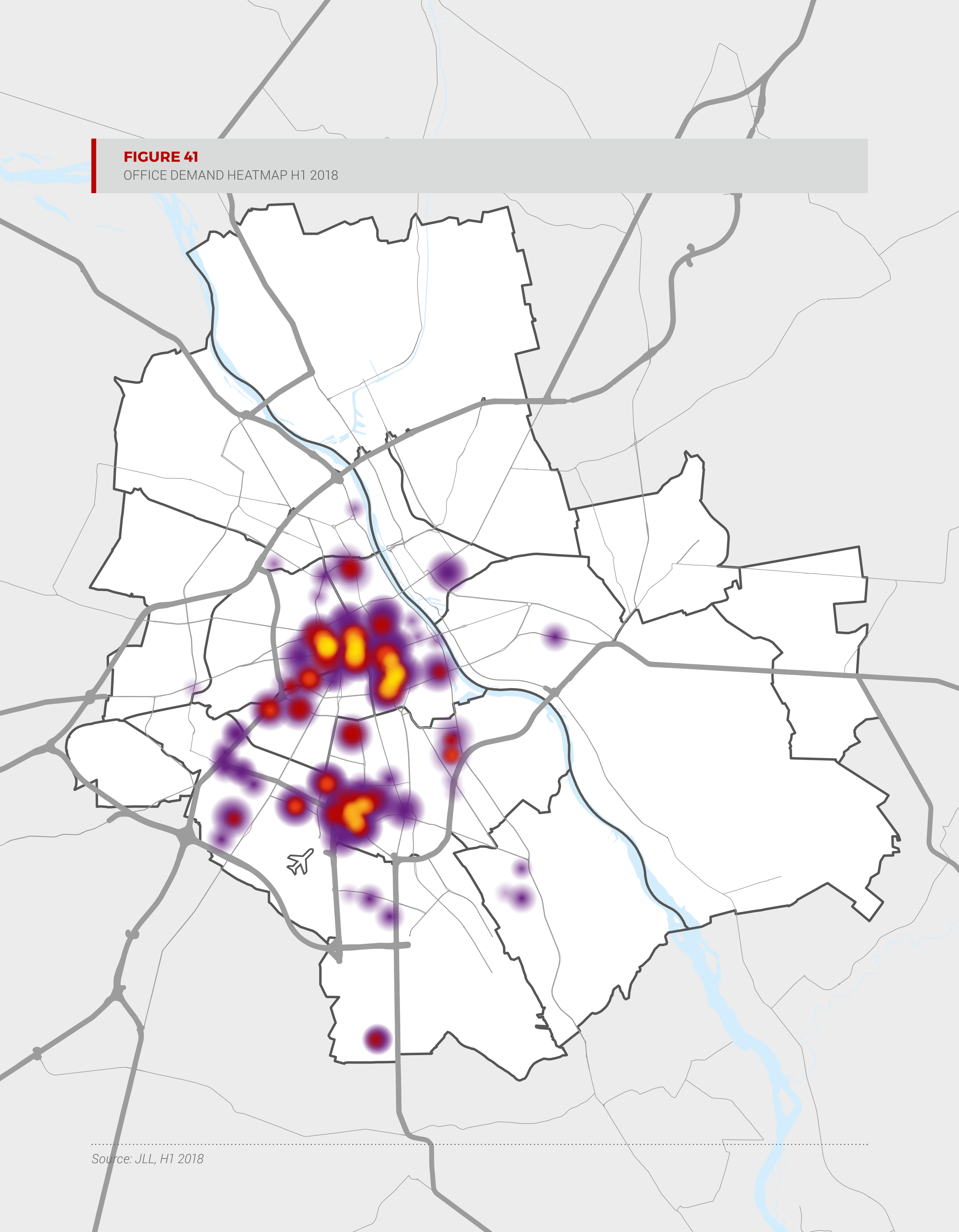
Source: JLL, H1 2018

FIGURE 40
EXISTING AND UNDER CONSTRUCTION BUILDINGS



Source: JLL, H1 2018

FIGURE 41
OFFICE DEMAND HEATMAP H1 2018



Source: JLL, H1 2018

6

TIME ACCESSIBILITY OF WARSAW CENTERS

Warsaw is the best-connected city in Poland. It is situated at the crossing of important European road and rail routes, and has convenient access to two international airports.

This section of the report provides information on time accessibility of Warsaw for people commuting by car or using public transport. It shows the area from which one can reach one of the city's main business services locations from within 60 to 90 minutes, as well as the number of people living within that area. For the purpose of the analysis, the fast-growing business distract around Rondo Daszyńskiego in the Wola district has been used as a reference point. The information provided, though, is representative of the whole city center.

Source: City of Warsaw

INTERNAL ACCESSIBILITY – INDIVIDUAL TRANSPORT

The agglomeration of business services centers in Warsaw's Wola district is easily accessible by car. Within 60 minutes, 2.6 million people can drive there, including 1 million people of working and mobile age (18-44). Within reach of that zone outside Warsaw live 840,000 people, including 325,000 aged 18-44. The area from which one can get to work within an hour covers 2,700 km^2 and extends 90 km to the east-west and 75 km north-south. It covers 14 counties, 53 municipalities and 25 towns. From studies conducted by JLL (*Destination Wola – the new business heart of Warsaw*, 2017) it turns out that a decisive majority of business services center employees in Wola live within that zone.

Within 90 minutes, 3.5 million people can reach Wola, including 1.7 from outside of Warsaw – of which 1.3 million and 650,000, respectively, are aged 18-44. This is almost 10% of the population of Poland. The area bounded by a time of 90 minutes covers 10,200 km^2, extending 175 km east-west and 130 km north-south. It covers 27 counties, 136 municipalities and 49 towns. The A2 highway and the S8 express road play an important role in speeding up commuting times from around Warsaw.

TABLE 11
POPULATION AROUND WARSAW
– INDIVIDUAL TRANSPORT

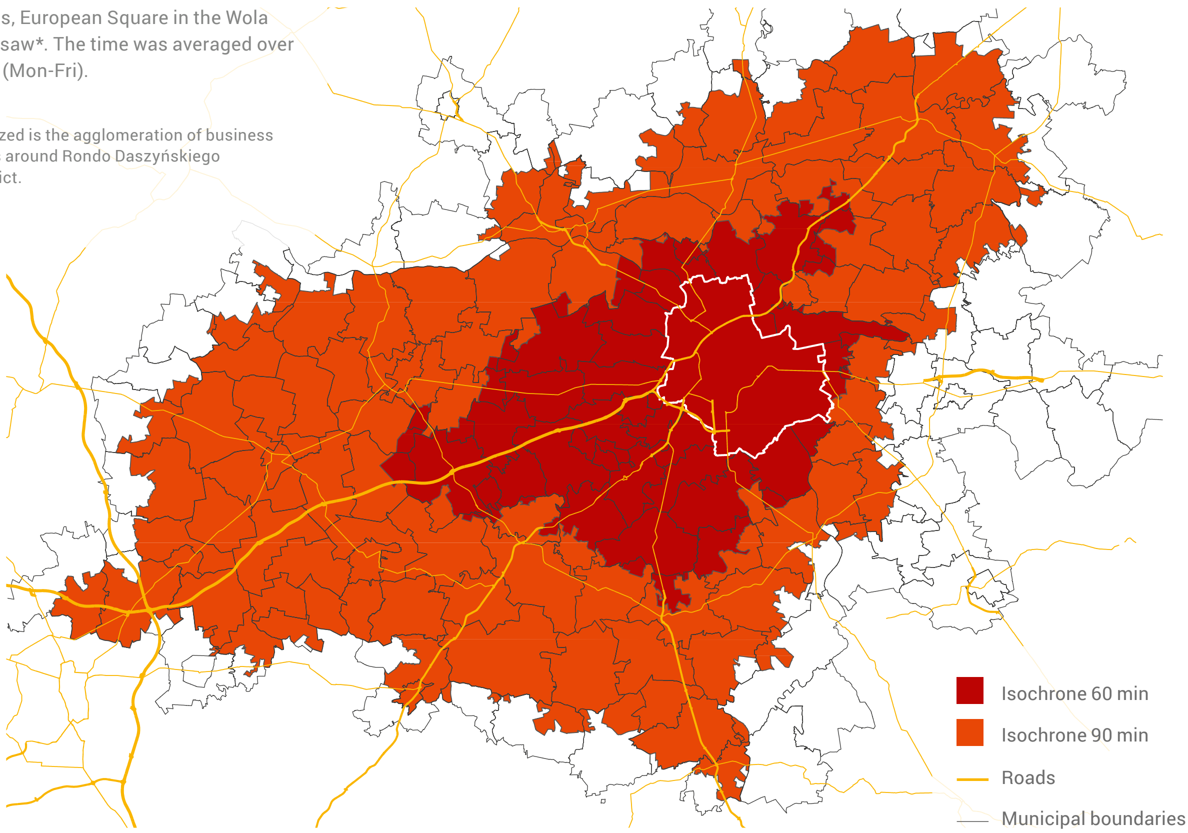
Zone	Total	<18 years	18-44	45-65	>65
60 min	2,603,586	487,713	1,003,866	528,963	583,026
90 min	3,458,458	653,109	1,331,892	721,188	752,240

Source: ABSL own study

Method

Travel time was defined for the morning rush hour (7:00-9:00) measured from the center of a village or town to the center chosen for the analysis, European Square in the Wola district of Warsaw*. The time was averaged over 5 days a week (Mon-Fri).

* The area analyzed is the agglomeration of business services centers around Rondo Daszyńskiego in the Wola district.



INTERNAL ACCESSIBILITY – PUBLIC TRANSPORT

One can travel to the agglomeration of business services centers in Wola within one hour from any part of Warsaw using public transport (rail, subway, streetcar, bus). In this way, within 60 minutes a total of 2.5 million people can get there, including 975,000 people of working and mobile age (18-44), and from outside Warsaw 760,000 people, including 295,000 aged 18-44. The area from which one can get to work by public transport within an hour covers 1,400 km^2 and extends 93 km to the east-west and 61 km north-south, referring to the rail lines around the capital. This area covers 11 counties, 41 municipalities and 24 towns. From studies conducted by JLL (*Destination Wola – the new business heart of Warsaw*, 2017) it turns out that a decisive majority of business services center employees in Wola live within that zone.

A total of 3 million people can reach Wola by public transport within 90 minutes, including 1.2 million people of working and mobile age (18-44). Outside of Warsaw, 1.2 million people live in that area, including 480,000 aged 18-44. The area bounded by a time of 90 minutes for public transport covers 3,200 km^2, extending 134 km east-west and 120 km north-south, also referring to the rail lines and main roads around Warsaw. This area covers 23 counties, 83 municipalities and 41 towns.

TABLE 12
POPULATION AROUND WARSAW – PUBLIC TRANSPORT

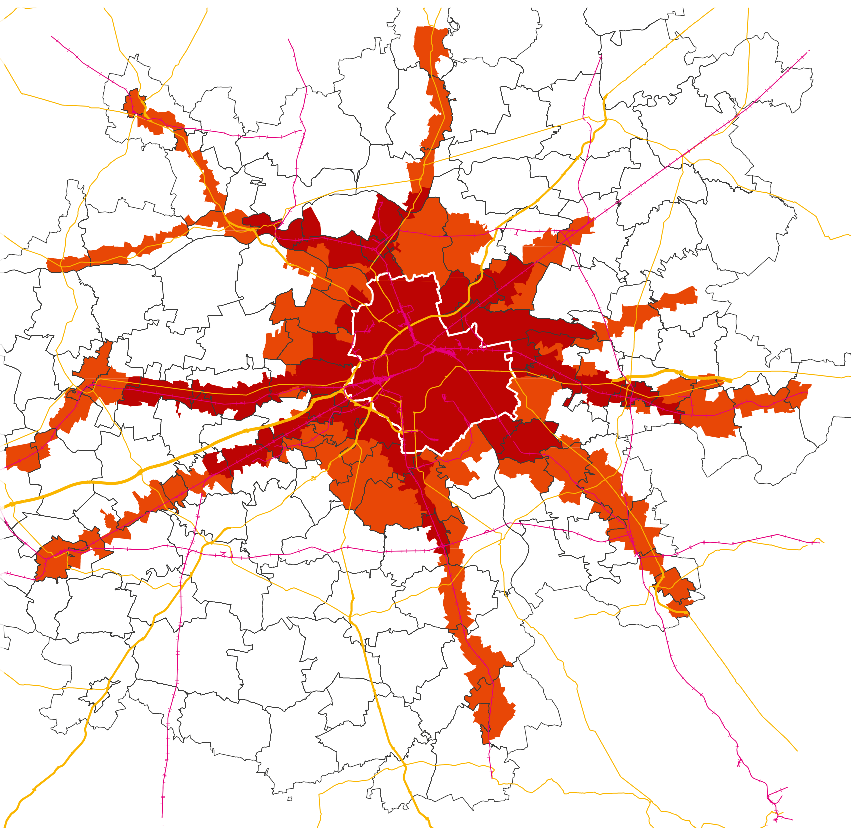
Zone	Total	<18 years	18-44	45-65	>65
60 min	2,527,022	468,143	976,550	510,609	571,698
90 min	3,006,623	565,768	1,159,375	618,384	663,068

Source: ABSL own study

Method

Travel time was defined for the morning rush hour (7:00-9:00) measured from the center of a village or town to the center chosen for the analysis, European Square in the Wola district of Warsaw*. The schedule of weekday travel times and time to reach a station (max. 15 minutes) were taken into account. In transport organized by ZTM in Warsaw, account was taken of all bus, streetcar, subway and rail lines with up to 2 transfers. In rail transport, account was taken of direct connections arriving at Warsaw Central and Warsaw Śródmieście stations. In bus transport, account was taken of direct connection to stops located near the Central Railway Station.

* The area analyzed is the agglomeration of business services centers around Rondo Daszyńskiego in the Wola district.



Isochrone 60 min
Isochrone 90 min
Roads
Railways
Municipal boundaries

1,000,000

the number of people aged 18-44 who can reach the center of Warsaw within 1 hour

10%

of all inhabitants of Poland can reach the center of Warsaw within 90 minutes

SAMPLE INVESTMENTS IN TRANSPORT INFRASTRUCTURE

EXPANSION OF THE RAIL NETWORK

Renovation work is currently under way on line No. 447 connecting Warsaw with Grodzisk Mazowiecki. Once it is completed, travel time from Grodzisk to Warsaw Śródmieście station will be shortened by 5 minutes. This means that travel time to Warsaw will be shortened for 173,000 people, including for almost 90,000 people by a minimum of 4 minutes. The first stage has already been completed. The entire investment will be completed before the end of 2018.

Source: http://grodzisk-warszawa.pl

EXTENSION OF THE 2ND SUBWAY LINE

In Warsaw, the extension of the 2nd subway line is under way. Two new sections – to the west and to the east – will be added to the existing line running through the city center. On each of these, 3 new stations will be built. The completion is planned for 2019. Thanks to this investment, an additional 130,000 residents of Warsaw living within 1 km of a new station will be able to use the subway.

Source: www.metro.waw.pl,
https://um-warszawa.maps.arcgis.com,
www.mapa.um.warszawa.pl

DEVELOPMENT OF TRANSPORT IN WARSAW:

» developing the “Veturilo” bicycle rental system, already one of the most developed in Europe, and constantly growing: (368 bike stations, over 5,300 bikes and about 700,000 active users (www.veturilo.waw.pl),

» expanding and modernizing the road system,

» building new streetcar lines and renovating old lines; purchasing modern streetcars,

» purchasing more than 130 new eco-friendly electric buses,

» building bike paths along the banks of the Vistula as part of the city’s bike path system,

» building new “Park and Ride” facilities.

7

QUALITY OF LIFE AND BUSINESS SUPPORT

As Poland's largest city, Warsaw is an attractive place to live. This is shown not only by the results of various comparative rankings of cities, but primarily in the opinions of residents on the quality of life in the capital. Furthermore, Warsaw ranks first among the top 5 largest Polish cities in terms of green areas (which cover more than 20% of its surface).

In Warsaw, the business infrastructure is very well developed. 95 hotels operate here, as well as many conference centers. It is in Warsaw that the country's largest cultural events are organized, home to world-class performers. The quality of the urban infrastructure used every day by inhabitants and tourists is improving year on year. It is worth adding that Warsaw has excellent internal transport in accordance with the principles of sustainable development.

Source: City of Warsaw

FIGURE 42

SELECTED INFORMATION ON CULTURAL FACILITIES AND HOTEL AND CONFERENCE FACILITIES IN WARSAW

Cinemas / Cinema screening rooms	28 / 153
Museums (incl. branches)	66
Theaters	27
Art galleries and dealers	46
Cultural events	8,402
Facilities with conference backup	97
Hotels by category	95
CATEGORIES OF HOTELS: ★★★★★	15
★★★★	18
★★★	42
★★	16

Source: ABSL own study based on: GUS (2017), Booking.com (2018)

High quality of life

According to the ranking of the quality of life in Polish cities prepared by the opinion-forming weekly Polityka, Warsaw occupies the second place. The city is best rated in terms of work, communication and the environment.

Source: www.rankingmiast.polityka.pl

1st place – most green areas

According to data from the Central Statistical Office, among Poland's five largest cities, Warsaw has the most green areas – woods, parks, greenbelts and green estates. These cover more than 20% of the city.

High quality rolling stock in public transport

Passengers in Warsaw are served by 1,830 buses. All of these are low-floor vehicles, and 82% of them are equipped with air conditioning. Warsaw also has 729 streetcar wagons, 450 subway wagons and 166 air-conditioned Rapid Rail Network vehicles.

Good access to preschools

According to the Central Statistical Office, there are 702 preschools in Warsaw with 68,000 places – more than the number of children aged 3-5 living in the city (57,000).

A safe city

Warsaw ranks seventh among the safest capitals in Europe and the world.

It is also the safest city in Poland (*Europolis – a safe and open city*).

Bike-friendly city

Warsaw has 537 km of bike paths – 3 km per 10,000 inhabitants. In the last 6 years, the bike path network has been expanded by 80%. The "Veturilo" bike system currently has more than 700,000 users.

Warsaw – event city

The largest cultural events in Poland are held in Warsaw. This is because the city has so many venues. These include: Torwar Hall, PGE National Stadium, Palladium Theatre, Służewiec Racetrack.

Source: GUS, www.veturilo.waw.pl, www.ztm.waw.pl, https://safearound.com/danger-rankings/cities/

PGE National Stadium

PGE National Stadium is one of the most modern multipurpose facilities in Europe, and the largest stadium in Poland. It has seats for 58,000 sports fans or 73,000 concert-goers. Various types of events are held here: football, auto shows, concerts and business events. The stadium is near a railway station, subway station, numerous streetcar and bus stops, and a Veturilo bike station.

8

INVESTOR SUPPORT

The Capital City of Warsaw as within its structure an Economic Development Department dealing with, among others, support for investors. The Department provides exhaustive information on developing the business services sector in the city.

Another important aspect of its work is post-investment care for businesses that decided to invest in Warsaw. It coordinates urban initiatives supporting cooperation between business, science and local authorities.

More information for investors can be obtained by contacting the Economic Development Department: investinwarsaw@um.warszawa.pl

Source: City of Warsaw

INVESTOR SERVICES IN WARSAW – STEP-BY-STEP

INFORMATION ACTIVITIES:

- obtaining essential data and providing industry knowledge,
- a Warsaw information package.

SUPPORT IN LOCATING OFFICE PREMISES:

- access to information on local real estate,
- support in the choice of location,
- cooperating with real estate agencies.

POST-INVESTMENT CARE:

- follow-up meetings, support for ongoing activities by providing industry information,
- engaging in joint activities to develop the business services sector,
- coordination of projects between investors and colleges and universities,
- cooperation with companies in corporate social responsibility (CSR) projects.

RECRUITMENT ACTIVITIES:

- cooperating with university career offices,
- cooperating with HR agencies,
- coordinating joint initiatives with universities.

SUPPORT FOR INVESTORS:

- an individual approach,
- assistance at every stage of an investment, including by organizing reference visits,
- administrative support, supplying essential information.

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FIGURE 43
POLAND – COUNTRY OVERVIEW

SELECTED ECONOMIC INDICATORS

GDP Growth

4.6% (2017)
4.6% (2018)*

GDP per capita (2017)

12,100 €

Unemployment rate (August 2018)

5.8%

Inflation (August 2018)

2.0%

EUR/PLN (average)

4.26 (2017)

USD/PLN (average)

3.78 (2017)

Poland has the ninth-largest economy in the European Union in terms of nominal GDP (466 billion euros in 2017 and has been a leader in economic growth in the EU in the past ten years. One of the most important branches contributing to the growth of Poland's economy is the business services sector. The industry's impressive growth in recent years enabled Poland to strengthen its standing among the world's most important locations for investments into (BPO, SSC, IT and R&D) business services centers.

Language: Polish

Currency: złoty (PLN)

Number of cities with over 100,000 residents: 39

Number of direct foreign investments in 2017: 335 (1st place in EU)

POLAND IN INTERNATIONAL ORGANIZATIONS

EU (2004), NATO (1999), OECD (1996), WTO (1995), UN (1945) and others

* Forecast

Source: Central Statistical Office of Poland, National Bank of Poland

www.absl.pl