

THE FUTURE
STARTS HERE...

Lublin

POLAND | 2020



Introduction



Lublin is a city with a rich history that dates back centuries, traces of which can still be found in the original architecture of the Old Town, the city's urban legends and local cuisine. Every year, tourists from Poland and abroad come to Lublin to take part in unforgettable cultural events and to learn about the traditions of this 700-year-old city. Based on this rich history and current experience, today we are creating a common future, working on Lublin's development strategy up to 2030.

Today, the tradition of old Lublin is intertwined with modernity, which can be seen in technologically advanced industrial plants, high-class office space and developing infrastructure, as well as in intelligent city management. Thanks to European funds, residents are benefitting from fully ecological urban transport, the fourth generation economy is developing, and successive stages of the smart city concept are being implemented. The construction of friendly, green spaces in neighbourhoods is also a priority.

On one hand, Lublin is a great place to live, but it is also an important economic, cultural and academic centre within Central and Eastern Europe. Our participatory projects have been recognised as good practice on a national scale, and the active participation of residents in shaping the city is increasing the quality of life.

Dr Krzysztof Żuk
Mayor of the City of Lublin

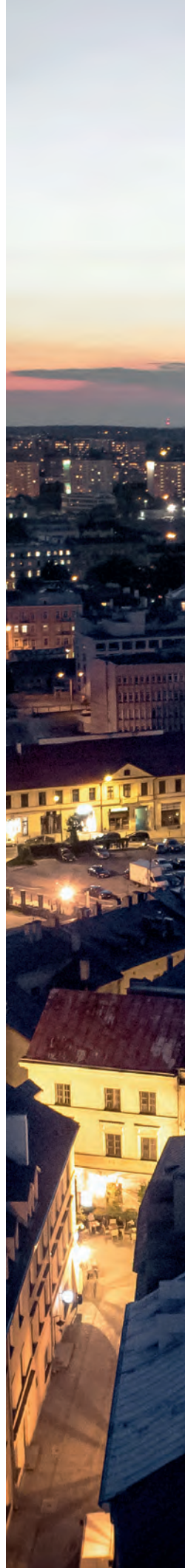




Photo: Marcin Tarkowski

Lublin ...

a city worth knowing

Lublin is the most rapidly developing city in Eastern Poland. The city has become synonymous with rapid progress and development in social and economic terms, which have allowed it to join the ranks of the most attractive places to live and do business in Poland. Lublin has also developed a strong position in Central and Eastern Europe.

International rankings place the city on an equal footing with Eastern European capitals such as Sofia, Zagreb and Vilnius. An example is the "Study on Perception of Business Friendliness" prepared by the Emerging Europe think tank, in which Lublin was ranked 5th in the categories of talent pool and support of local authorities, competing with 74 other cities in the region.



Photo: Marcin Tarkowski

Lublin, as the provincial capital, is the economic, cultural and academic centre of the region. The Lublin Functional Area brings together over 600,000 residents, from the city itself and the neighbouring districts, which form a prosperous metropolitan organism that is based networks of cooperation. Due to the airport and the intersection of national roads, which will soon become part of the cross-border road network, Lublin is an important transport hub.

Transport accessibility, modern offices and warehouse space attract investors and employees to Lublin, who find here a high standard of living, interesting jobs and high earnings. The fastest growing sectors of the Lublin economy are ICT, the automotive, machine and aerospace industries, as well as medicine and biotechnology.

For many years, an important advantage of Lublin has been its access to highly qualified staff, who come from among the graduates of the nine universities in Lublin, which offer nearly 200 areas of study. The attractiveness of local universities is a draw for foreign students, who in 2018/2019 constituted over 10% of all students in Lublin.

Student culture is a big part of local culture.

Lublin is a city with 700 years of history, built by a multicultural community. Its traditions and history are reflected today in regular events that attract hundreds of thousands of visitors every year. Lublin's modern sports facilities host athletes and fans during international tournaments, and concert halls are filled with audiences that come to see the biggest Polish and global stars. Lublin's extensive conference facilities host almost 2,000 business events a year.

Looking at today's image of Lublin, the prospects for its development in the coming years is very positive. Thanks to its extensive academic base, as well as effective cooperation between business, science and the local authorities, Lublin has the chance to become an important European technology R&D centre.

Lublin

in numbers



In Lublin alone, there are around 340,000 people, which makes it the 9th city in Poland in terms of population size. Almost twice as many people (610,000) live in the Lublin Functional Area, which consists of Lublin and 16 areas from 4 adjacent districts (Lublin, Lubartów, Łęczna and Świdnik). Thanks to cooperation between local governments, the region is increasingly better connected both by the city transport network and rail connections. This is conducive to better integration of the city with its suburbs and the economic development of new areas.

Lublin is a city of active and ambitious people. People aged 15-64 make up 60% of the population, and as much as 30% of the population are graduates. At 4.9%, unemployment has now reached its lowest level in 30 years. The labour market is characterised by low employee turnover, showing that local people are reluctant to migrate in search of work. One in five of the local population have only changed employer only once in their life, and one in three have worked in the same place all their life.

Currently, there are over 45,000 companies in the city, of which as many as 96% are micro enterprises employing less than 10 people. A smaller group (3%) are small businesses employing not more than 50 people. This means that the local economy is highly diverse.

BASIC INFORMATION ABOUT THE CITY AND THE PROVINCE

	LUBLIN	LUBLIN PROVINCE
Population	339,800	2.1 mln
Unemployment rate	4.9%	7.2%
Average monthly gross salary	4,708.40*	4,511.77*
	<small>*PLN</small>	<small>*PLN</small>
Number of registered companies according to REGON	46,209	184,297
Number of graduates	16,323	18,908
Number of higher education institutions	9	17
Number of general secondary schools	54	203
Number of primary schools	68	987
Number of kindergartens	197	590
Number of hospitals	19	45
Number of clinics	325	1,261

Source: Based on data from Central Statistical Office and Lublin City Hall, 2020



Location

Below are the distances that divide Lublin from major cities in Poland, the nearest international airports and selected capital cities in Europe.



THE NEAREST AIRPORTS

	DISTANCE
Świdnik (Airport Lublin)	14,4 km
Warsaw (Warsaw Chopin Airport)	177 km
Rzeszów (Rzeszów-Jasionka Airport)	159 km

THE LARGEST CITIES IN POLAND

	DISTANCE
Warsaw	171 km
Łódź	278 km
Kraków	309 km
Wrocław	458 km
Poznań	477 km
Gdańsk	583 km

SELECTED CITIES IN EUROPE

	DISTANCE
Mińsk	503 km
Wilno	605 km
Kijów	606 km
Bratysława	735 km
Berlin	738 km
Praga	787 km

Source: Lublin City Hall



Where and how to live?

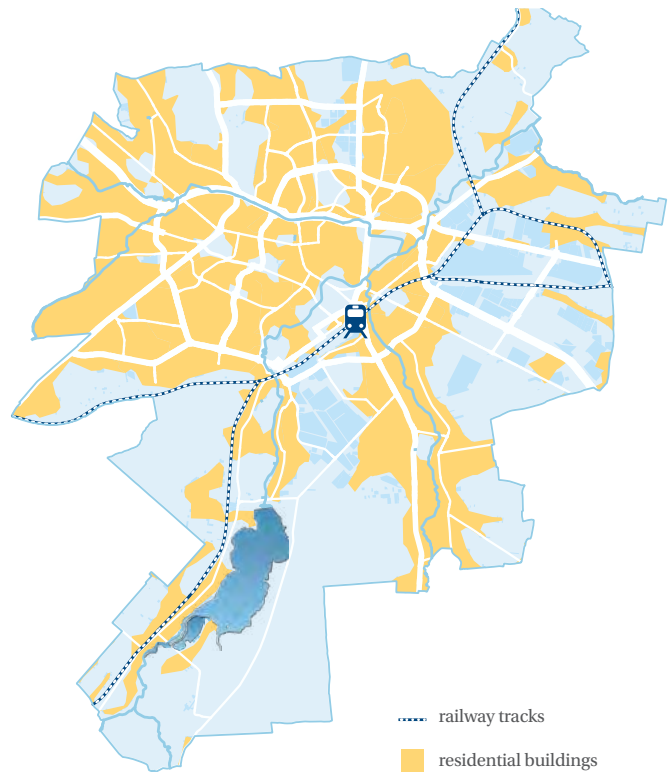
Based on Polish national bank data, the average offer price of a new-build apartment in Lublin in Q3 2019 was 5,933 PLN/m², while on the secondary market the average was 5,965 PLN/m². Over the past ten years, the availability of housing in Lublin (expressed in how many square metres can be bought for the average wage) has significantly improved. Lublin has one of the highest housing availability rates (housing stock per 1,000 inhabitants) among cities of a similar size. The number of apartments built in Lublin is very high. In 2017, developers commissioned 2,716 apartments, while the figure for 2018 was 2,889 and for 2019 it was 2,488.

In 2019, the construction of 2,750 apartments began in Lublin, and permits were issued for 3 229 apartments, or a building design was submitted.

In Lublin there are apartments at every price point. In addition to a large supply of apartments around the average price, there are also luxury apartments available for over 8,000 PLN/m². There are currently no housing locations in Lublin that are better or worse than each other.

Lublin as a pro-student city also has a wide range of dormitories. In total, there are several dozen student accommodation buildings in the city. Private dormitories offer a much higher standard than university dormitories. In total, there are approximately 7,500 places in private and public dormitories in Lublin.

LOCATION OF RESIDENTIAL BUILDINGS IN LUBLIN



Source: Colliers International



2,488

NUMBER OF APARTMENTS
COMPLETED IN 2019
IN LUBLIN

Photo: Marcin Tarkowski

Where and how to buy?

In terms of shopping, residents and tourists have at their disposal numerous shopping and entertainment centres, convenience shopping parks, outlet centres, specialised stores and discount stores.

Lublin has one of the highest saturation levels of retail space per 1,000 inhabitants in Poland, which at the end of 2019 stood at 1,139 m²/1,000 inhabitants.



Photo: Felicity Lublin

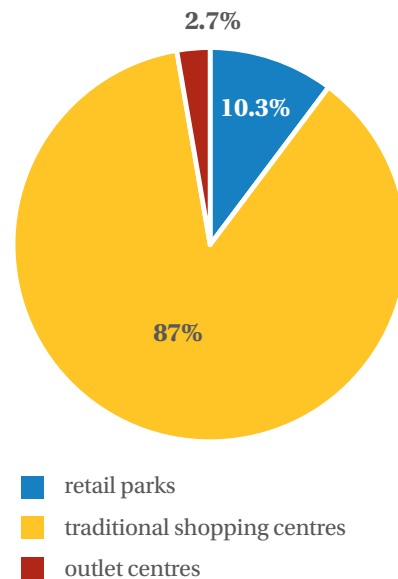
14



NUMBER OF SHOPPING CENTRES IN LUBLIN

There are currently 14 shopping centres in Lublin. The largest include Felicity Lublin with a 9-screen Cinema City cinema and the Fabryka Formy fitness club, Galeria Olimp with a Multikino cinema and Masters Bowling & Billiards as well as SKENDE Shopping Center with the only IKEA store in this region.

There are also formats from the DIY category, such as: Leroy Merlin, Bricoman and Jula and stores with home furnishings such as IKEA, Black Red White and Agata Meble. Food discount chains operate successfully in the region, including



Source: Colliers International



Galeria Olimp, photo: Marcin Tarkowski

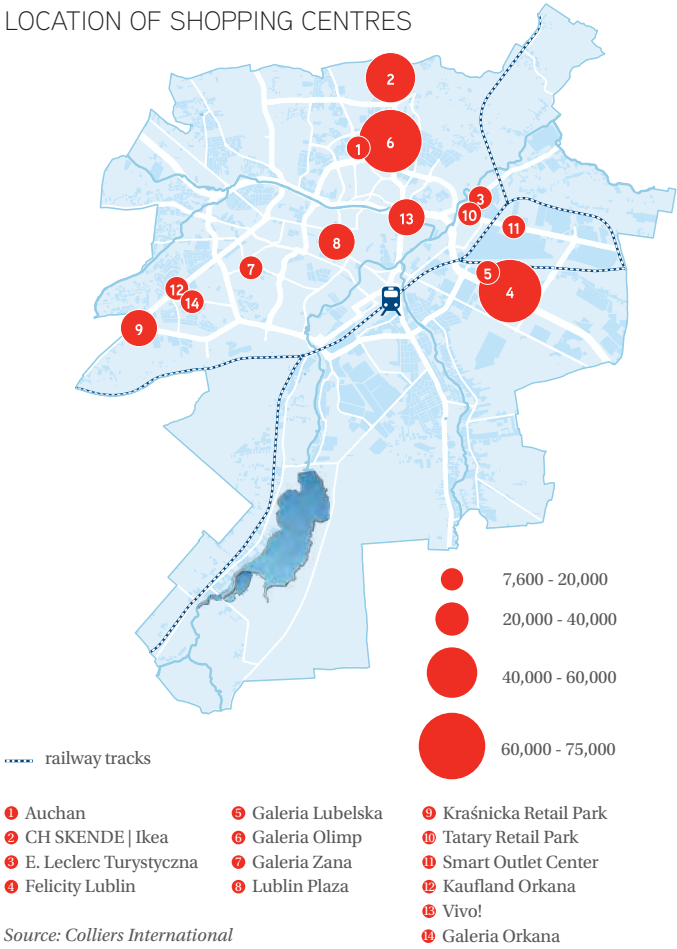
over 29 Biedronka stores, 12 Lidl stores and the Stokrotka chain, which originates from Lublin. The chain has 60 retail outlets in Lublin alone, and over 170 stores in various formats throughout the region.

Fashion enthusiasts will find a whole range of the most popular Polish and international fashion brands. These include LPP stores (Reserved, Mohito, House), Inditex (ZARA and Zara Home, Bershka, Stradivarius, Massimo Dutti), TK Maxx, H&M and C&A.

Those interested in consumer electronics have Media Markt, RTV Euro AGD and mediaexpert stores, and sports enthusiasts can visit Decathlon and Go Sport.

However, Lublin offers not only large-scale facilities, but also local bazaars and markets. Recently, the Zielony Rynek market opened in Konopnica near the edge of the city. Shoppers can find there products from local farms and orchards.

LOCATION OF SHOPPING CENTRES



Source: Colliers International

Where to eat?

Bars and restaurants in Lublin are centred mainly in the Old Town and the pedestrian zone of Krakowskie Przedmieście. In the summer, the city centre is decorated with illuminated restaurant gardens, and the surrounding squares are filled with stands selling slow food, sofas made from pallets and deckchairs. Cosy restaurants and cafes can also be found in Cultural Centre and the Meeting of Cultures Center. The student area of the city is a lively 24-hour zone where students go to eat.

Dishes from all around the world are available in Lublin. Local restaurants offer Polish, Jewish, Georgian, Italian, Middle Eastern, Vietnamese, Indian, Mexican and American cuisine. However, what makes Lublin special is its offering of regional dishes. Lublin stuffed dumplings with white cheese and buckwheat, forszmak, which is a local variation on goulash, and the famous onion soup, and other traditional dishes all reflect the history of the city and its inhabitants – Poles, Ukrainians and Jews, who for centuries formed the city's multicultural community.

It is these restaurants that are becoming Places of Inspiration, which is a competition in which bars and restaurants tell the story of the city through their interiors and the dishes they serve. Every two years 10 places are chosen.

Lublin's restaurants are also appreciated in Poland and throughout the world for their excellent food and unique atmosphere. The Gault&Millau restaurant guide includes reviews of twelve restaurants in Lublin. Meanwhile, the Kardamon restaurant was listed in the Poland 100 Best Restaurants 2019 ranking.

Lublin and the whole region is known for its alcoholic products. Meads, tinctures and vodkas are all produced there. Cider is also a regional



2PiEr, photo: Lublin City Hall

product. Every year Lublin hosts the Lublin Young Cider Festival to coincide with the first apple harvest of the season. As the area is also well known for its crops of cereals and hops, there are thriving breweries in Lublin and Zwierzyniec, which, based on many years of experience, brew varieties including Pilsner, Koźlak and Baltic porters. For several years, the Lublin region has also been a base for craft brewing. In Poniatowa, 50 km from Lublin, is Browar Zakładowy, which offers guests several craft brews at its own pub in the building of the Lublin Center for the Meeting of Cultures. In turn, Perłowa Pijalnia Piwa is a restaurant operating at the Perła Zakłady Lubelskie brewery.

Onion Flatbread

A culinary distinguishing feature of Lublin and the region. Jews from Lublin's Old Town were the first to bake it in the 19th century. It consists of leavened wheat bread, diced onion and poppy seeds. For decades, it has been available as a snack in local bakeries, but it can be increasingly found on restaurant tables as an accompaniment or as a main course served with local mature cheese or seasonal vegetables. Lublin is home to the Regional Onion Flatbread Museum, which hosts baking workshops.





908

NUMBER OF
GASTRONOMIC PREMISES
IN LUBLIN

Where to relax?

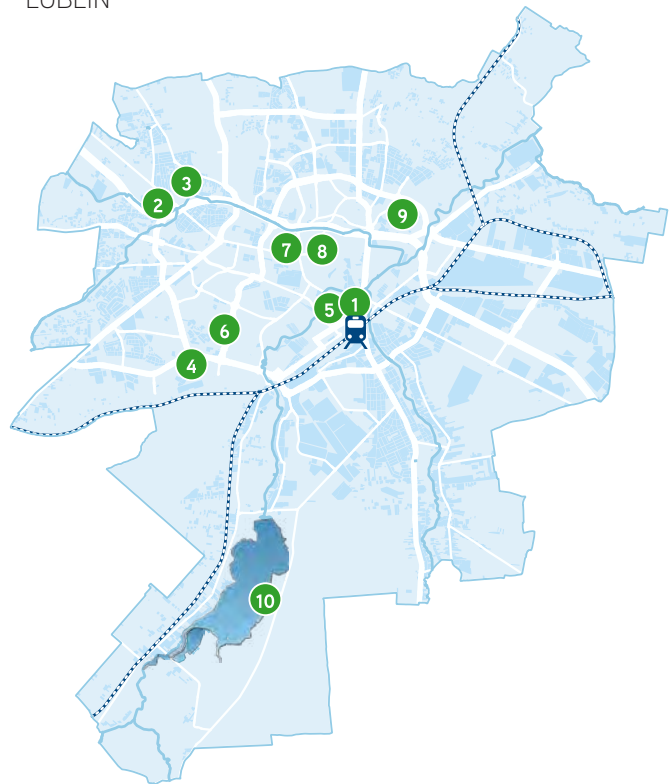
The Lublin region is famous for its upland terrain, which makes it an attractive place for active tourism. Nearby the historic town of Kazimierz Dolny are gorges, which are ideal for hiking and cycling trips. In winter, there are several ski slopes in the area, including in Rąblów, Batorz and Chrzanów. Summer is definitely the time to relax on lakes at the nearby Łęczyńsko-Włodawskie Lake District.

Saski Park, a green oasis between the busy streets of the city located in the heart of Lublin, enjoys unwavering popularity. Its play areas and well-kept greenery attract strollers, families with children and students between classes. On the stage, commonly called the Shell and located in the central part of the park, concerts and performances take place as well as outdoor film screenings.

Lublin is located on hilly terrain. Between the hills there are picturesque gorges, which have been turned into recreational space for the residents of neighbouring. The largest include Jan Paweł II Park, Rury Park and Kalinowszczyzna Gorge. The parks have modern play areas for children, outdoor gyms, dog runs, as well as bicycle paths and walkways.

People's Park is the largest green area in Lublin, which is currently undergoing revitalization. A water park, a canoe harbour on the Bystrzyca River and recreational infrastructure adapted to the needs of residents of all ages are being built.

LOCATION OF RECREATIONAL AREAS IN LUBLIN



..... railway tracks

- | | |
|-------------------------------|-------------------------|
| 1 Aqua Lublin | 6 Rury Park |
| 2 The Open Air Village Museum | 7 Saski Garden |
| 3 Botanic Garden | 8 Litewski Square |
| 4 Park of John Paul II | 9 Kalinowszczyzna Gorge |
| 5 Ludowy Park | 10 Zemborzycki Lagoon |

Source: Colliers International

Litewski Square

Lubliners enjoy spending afternoons on the restored Litewski Square by the fountain, which in the evenings turns into a water screen for a multimedia show.



Photo: Maciej Rukasz

Zemborzycki Lagoon

One of the most popular recreational areas in Lublin, which offers sailing, fishing and water skiing. Around the lagoon there are walkways and bicycle paths, partly running through meadows and forest.



Photo: Marcin Tarkowski

Botanic Garden

The garden was created at the Maria Curie-Skłodowska University in Lublin. Hundreds of species of trees and plants from around the world can be admired there. The complex has a winter garden, as well as a rosarium with 210 varieties of roses.



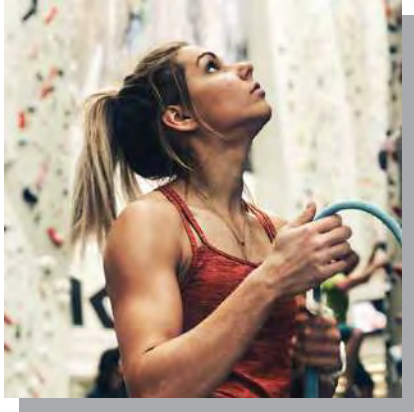
Photo: Shutterstock

Aqua Lublin

A modern swimming pool complex, including an Olympic pool and water attractions. The complex also features an ice rink, restaurant, sauna and gym.



Photo: Marcin Tarkowski

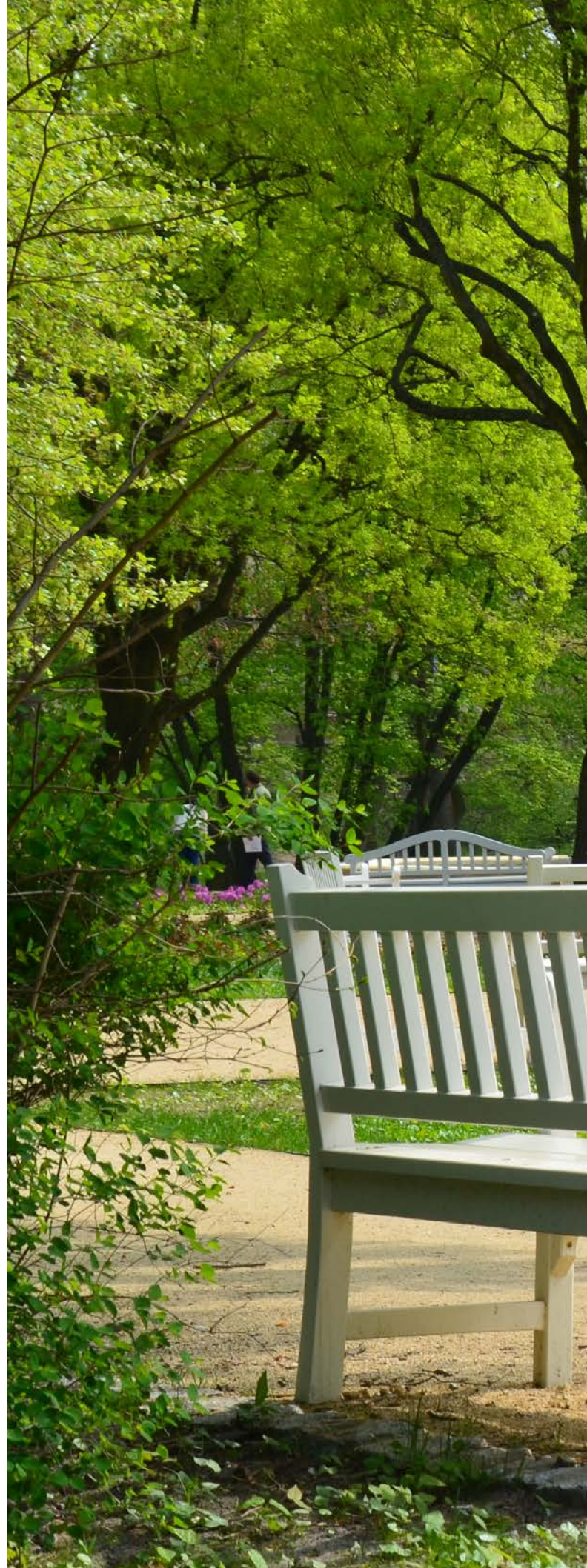


„I've lived in Lublin since I was born. Over the past 25 years I have seen how my city has changed and continues to change and develop.

I also like the fact that in Lublin something is happening all the time and the events that are organised are known all over Poland, and some even in Europe. My favourites include Culture Night and the Magicians' Carnival."

Aleksandra Mirosław

Timed Climbing World Champion
(2018 i 2019)





14%

SHARE OF GREENERY
IN TOTAL AREA OF THE CITY

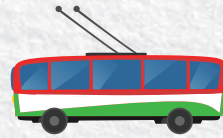
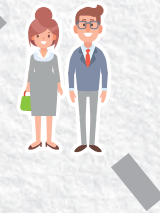
A day in life of a Lublin family 2025



19:00
Symphonic
music concert
Centre for the Meeting of Cultures



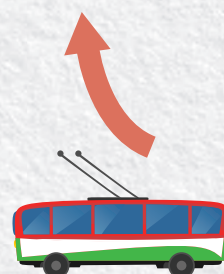
15:45
Aqua Lublin

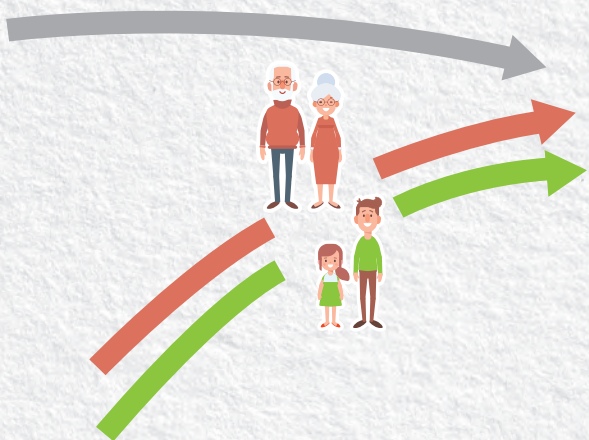


17:00
Onion Flatbread
baking works
Museum of Onion Flatbread



11:00
Workshops for seniors
The Open Air Village Museum in Lublin





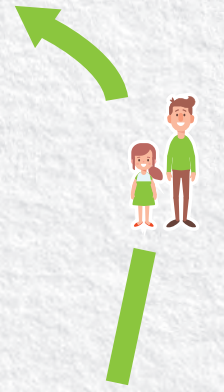
21:00
Multimedia show
Litewski Square



19:00
Magicians' Carnival



11:00
Saski Garden



Head shops
flatbread



11:30
Nadrzeczny Park





Where to study?

61,588

NUMBER OF STUDENTS IN LUBLIN

Lublin is a rapidly developing academic centre with nine universities operate (five public and four private). These are:

Public:

- Maria Curie-Skłodowska University in Lublin
- The John Paul II Catholic University of Lublin
- Lublin University of Technology
- University of Life Sciences in Lublin
- Medical University of Lublin

Private:

- University of Economics and Innovation in Lublin
- University College of Enterprise and Administration in Lublin
- Vincent Pol University in Lublin
- Higher School of Social Sciences in Lublin

Lublin's universities offer over 200 courses in humanities, social sciences, technology and natural and medical sciences.

Around 61,600 students from 96 countries around the world study at Lublin's universities, including around 6,300 foreign students and around 500 Erasmus+ students. The number of foreigners studying in Lublin is growing systematically, and the Maria Curie-Skłodowska University is the record holder in terms of foreign students. In Lublin, most foreign students come from Ukraine. The second largest group are students from Taiwan.

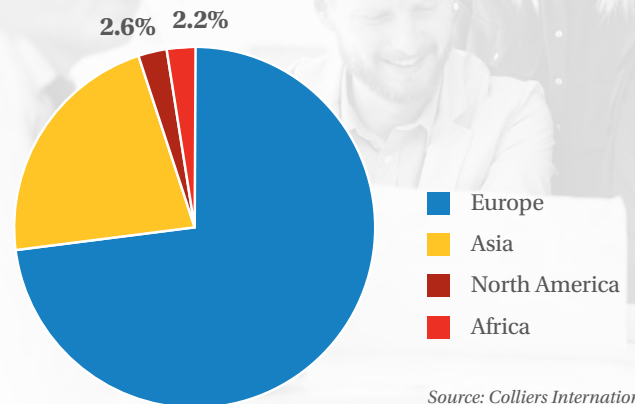
Students from all over the world choose Lublin because of the quality of life and high level of education. In addition to the extensive range of courses, which is extended every year, universities are expanding and modernising their infrastructure and research facilities. They also support students' academic and non-academic activities, and undertake campaigns aimed at graduates.

Research laboratories, student research clubs, academic career offices and knowledge and technology transfer centres all operate at universities, including:

- Knowledge Transfer Centre of the Medical University of Lublin
- Centre of Innovation and Technology Transfer at the Lublin University of Technology
- UMCS Centre for Knowledge and Technology Transfer
- ECOTECH-COMPLEX at UMCS
- Catholic University of Lublin Knowledge Transfer Centre
- Lublin Science and Technology Park

Number of higher education institutions	9
Number of students	61,588
Number of foreign students	6,352
Number of graduates	16,323
Number of foreigners graduates	1,288

ORIGIN OF FOREIGN STUDENTS



Source: Colliers International



The John Paul II Catholic University of Lublin, photo: Marcin Tarkowski

Lublin is an academic centres that can boast of a high rate of innovation and scientific effectiveness among its universities according to a report of the Polish Economic Institute. The report states that the city occupies:

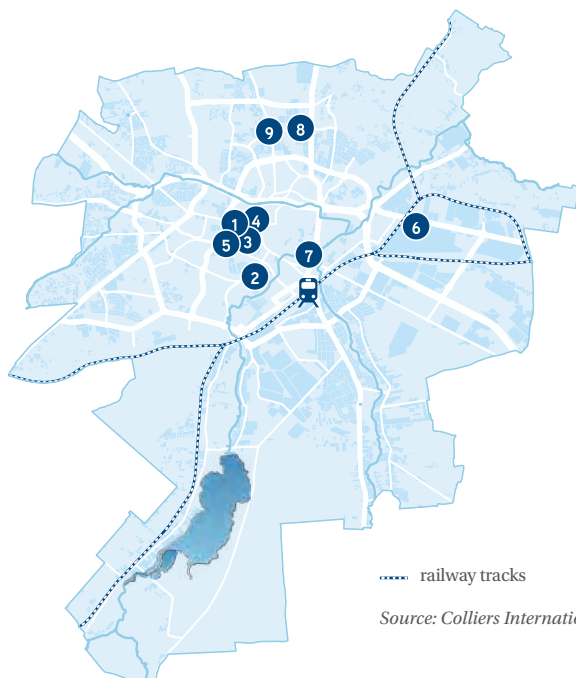
1st place in Poland for the internationalisation of universities – foreign students account for over 10% all local students, equal with Warsaw, **5th place** among 26 Polish academic centres in the report’s Academicity of Cities Index, which was based on the criteria of the Perspectives ranking, **5th place** in the Innovativeness category,

4th place in the Scientific Potential category, **5th place** in the Scientific Effectiveness category, **6th place** in the Scientific Effectiveness category.

Scientists with many years of professional experience are returning to Lublin, for whom the city is becoming an attractive place for further development due to the modern research infrastructure and equipment of the city’s laboratories, but also due to easier access to financing for scientific research and its commercialisation.

Theoreticians, practitioners, visiting professors and PhD students from around the world work at the Medical University and hospitals in Lublin. They come to the city as part of bilateral agreements or cooperation networks. They include oncologists and surgeons, ophthalmologists, cardiologists and gynaecologists. For example, the rapid development of the Chair and Department of Biochemistry and Molecular Biology of the Medical University is achieved through cooperation with the Catholic University of Lueven in Belgium and the University of Turku in Finland.

LOCATION OF UNIVERSITIES IN LUBLIN



----- railway tracks

Source: Colliers International

- ❶ The John Paul II Catholic University of Lublin
- ❷ Lublin University of Technology
- ❸ Maria Curie-Skłodowska University in Lublin
- ❹ Medical University of Lublin
- ❺ University of Life Sciences in Lublin
- ❻ University of Economics and Innovation in Lublin
- ❼ Higher School of Social Sciences in Lublin
- ❽ University College of Enterprise and Administration in Lublin
- ❾ Vincent Pol University in Lublin

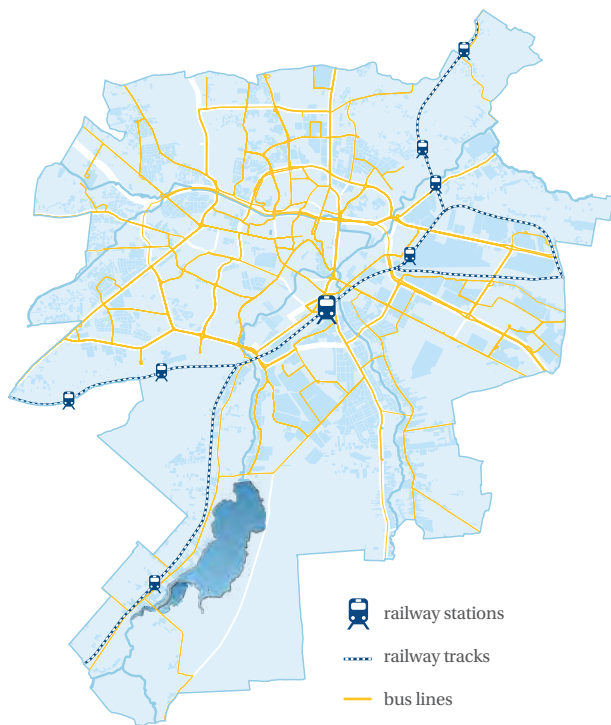
How to travel around Lublin?

Public transport in Lublin is extremely extensive and covers neighbouring districts. Lublin is one of three cities in Poland that in addition to regular buses also has a network of trolleybuses. The 'buses with belts' are a characteristic feature of the city. At the same time, trolleybuses are part of the city's policy of low-emission public transport. This trend has taken root in the minds of city administrators. Lublin is approaching a zero-emission rate of 50% through further investments in ecological transport. Currently, the public transport fleet consists of 227 buses, 124 trolleybuses and 1 electric bus. A large part of the rolling stock meets European EURO 5 and 6 emission standards. Interestingly, some city buses are supported by asynchronous motors and photovoltaic panels installed on the roofs. Plans include expanding the fleet to include all-electric vehicles, introducing fast-charging chargers, creating an electronic agglomeration communication ticket system and further developing the trolleybus network. The low-carbon trend in Lublin has been noticed by the Polish Alternative Fuels Association. The organisation named Lublin as host of the inaugural New Mobility Congress, which took place in September 2019 as part of the Sustainable Transport Week.

Shared mobility

Internal mobility is also based on the idea of sharing. This trend in Lublin started in 2014 when the Lublin City Bike scheme officially started, which at that time had 40 bike stations and 400 bikes. The initiative quickly adapted and is now used by a lot of local people. As a result, additional locations have been added to the Lublin City Bike scheme several times. Currently, there are 96 bike stations and 951 bikes.

PUBLIC TRANSPORT NETWORK IN LUBLIN



Source: Colliers International

As a result of the change in people's transport behaviour towards shared solutions, private mobility service providers have also started operating in Lublin. In mid-2018, blinke.city started operating in Lublin, offering the rental of 38 electric scooters by the minute. At the end of 2018, the car sharing system PANEK began to operate in Lublin (the second city after Warsaw) with a fleet of 100 hybrid vehicles. The change in the perception of the inhabitants themselves and the city's activities towards electromobility has caused this system to develop rapidly. In 2019, Volt and blinke.city expanded their offer with an electric scooter rental system. The total number of these vehicles is now 300.



Lublin City Bike

- 1,000 bikes and 100 bike stations in Lublin and Świdnik



Short-hire vehicles

- hybrid cars
- electric motorcycles
- vans
- electric scooters



Electric vehicle charging stations

- 7 stations already operating
- 2 50 kW stations and 4 22 kW stations
- by the end of 2020, 12 more are planned



Park&Ride

- the first Park & Ride was created at the Choiny bus terminus
- there are plans for a further 3 points on the outskirts of the city up to the end of 2021, there will also be high-power chargers for electric buses



Dynamic Passenger Information System

- 66 displays at bus stops throughout the city, which provide real-time information about the arrival of buses and trolleybuses
- The displays have gained a new function – in 2019, information about the state of air quality in the city started to appear on displays



Lublin Airport, photo: Marcin Tarkowski



Lublin also supports private vehicle electromobility in the form of infrastructure for electric vehicles. The existing infrastructure is in 7 different locations, and construction is planned in 12 more.

It is worth mentioning that the city is developing infrastructure for the entire transport system based on modern IT solutions. In 2015, construction of the Traffic Management System in Lublin was completed. The system currently covers 85 intersections in the city, which is about 60% of all intersections. The system consists of many subsystems such as the event management system, setting priority for public transport vehicles and the traffic light control system. Thanks to this initiative, travelling in the city is safer, more efficient and smoother. Public transport is equipped to a large extent with smart infrastructure. The Internal Public Transport Management System operates in the city, which is correlated with the Dynamic Passenger

Information System, thanks to which users in real time at 66 stops can track information about the arrival time of a bus or trolleybus. Since 2019, this system also displays information on the state of air quality in the city.

Transport accessibility

Transport accessibility is increasing in Lublin. The city is surrounded by a ring road constituting partly of the S12/S17/S19 expressways, and Lublin Airport is only 15 km from the city center and 5 km from the Lublin subzone of the Special Economic Zone. The airport serves flights to Warsaw twice a day, as well as to the UK, Ireland, Norway, Belgium, the Netherlands, Ukraine, Israel, and seasonally to Turkey and Bulgaria. From June 2020, flights to Germany will also be launched. In 2019, Lublin Airport serviced 4,389 flights, with a total number of passengers of 357,366.

The expressway to Warsaw (S17) is at the final stage of construction, which will mean the capital can be reached in less than 2 hours. In addition, Lublin is located on the Via Carpathia cross-border route, specifically on the S19 national section, which connects Lublin with Białystok and Rzeszów. The fast train connection with Warsaw is also being modernised.

Lublin is intensifying efforts to integrate various modes of transport and combine them freely in order to provide users with convenient and high quality transport services. The flagship project is the construction of the Integrated Intermodal Metropolitan Station, which aims to eliminate the problem of the current distance between the train and bus stations. The metropolitan station is to concentrate rail and bus transport in one part of the city. It is to be equipped with infrastructure for electric cars, P&R and K&R car parks, and thus be a real hub.



170 km

LENGTH OF
BICYCLE PATHS IN LUBLIN



Photo: Shutterstock

Health in Lublin

Lublin is an international medical services centre. Over 30% of all health sector facilities from the entire Lublin Province operate in the city. Scientific research is also conducted in cooperation with partners from around the world.

Patients come to Lublin from Poland and abroad to be treated by experts – mostly graduates of the Medical University of Lublin. Many of them are specialists who have gained their knowledge and experience abroad. They include outstanding neurosurgeons and neurologists, cardiologists, oncologists, surgeons, orthopaedists and ophthalmologists.

The first branch of the European School for Advanced Studies in Ophthalmology in Europe and the second in the world was opened in Lublin. The headquarters is based in Lugano in Switzerland and it is recognised as a world leader in ophthalmology.

The General Ophthalmology Clinic for Rare Ophthalmic Diseases and the Paediatric Oncology, Haematology and Transplantology Clinic of the Medical University of Lublin have been included in the European Reference Network (ESR) as unique expert centres in Poland.

The only centre in Europe and the second centre in the world offering experimental stem cell therapy for patients with cerebral palsy is in Lublin. Patients from all over Poland benefit from the help of specialists treating rare vascular diseases. One of the public hospitals is a leading centre in Poland that specialises in the treatment of congenital vascular lesions.

Cooperation within the Lublin Medicine Cluster supports the development of this sector. The cluster currently has over 140 members, including universities, 10 public and private hospitals, and around 110 technology and healthcare companies. Cluster members work



together to provide high-quality health and medical services. The cluster is also a space for the development of scientific research, innovation and its commercialisation, the development of entrepreneurship and the internationalisation of enterprises, as well as the development of inbound health tourism to Lublin.

Lublin has twice been a meeting place for experts from around the world as part of the international health conference 'Health and Medical Tourism Summit Eastern Europe 2018' and 'Health Tourism Forum – Lublin 2019'.

Facilities in Lublin accept patients from Ukraine, the UK and other European countries, as well as from Israel, the USA and Arab countries. They most often take advantage of dentistry, orthopaedics, gynaecology and obstetrics, aesthetic medicine, plastic surgery and diagnostics.



Photo: Marta Zgierska

Following global trends, scientists and companies from the cluster are working on innovative solutions in fields that include diagnostics, telemedicine, telecare and medical robotics. Often these are self-learning systems that use artificial intelligence (AI).

The city is implementing new technologies aimed at improving the quality of medical and care services. Since September 2019, several hundred older people from Lublin have been under constant care, thanks to telebands and the help of the 24-hour Telecare Center, as part of a pilot program. The initiative is part of the Lublin Zone 60+ program, the main goal of which is to improve the quality of life of seniors.



„Lublin is a city where we are successfully developing international cooperation. Thanks to the Medical University, we are one of the strongest centres of medicine education in Poland.

That is why in Lublin the first European branch of the European School for Advanced Studies in Ophthalmology from Lugano in Switzerland was established, which is recognised as the world leader in ophthalmology.

It is a tribute to the experts whose knowledge is used by specialists and patients from around the world. "

Prof. Robert Rejdak
President of the Association of Polish Ophthalmologists

Head of the General Ophthalmology Clinic of the Medical University in Lublin

Lublin is...

a city of work

Lublin is one of the most attractive Polish cities for potential domestic and foreign investors, which can be seen in the high places in rankings such as “Polish cities of the future 2019/2020” (fDI Magazine) and “Research on the perception of cities’ friendliness for business” (Emerging Europe). The advantages of Lublin include very well qualified staff, the high quality of life, the support of local authorities and the investment climate.



Office market

48



NUMBER OF MODERN OFFICE BUILDINGS IN LUBLIN

Lublin appeared on the Polish office map at the beginning of the 21st century thanks to the development of Zana street, which is a business centre with modern office buildings. The city's development strategy, in which modern office space is a basic condition for development, has highlighted the need for greater access to land to build office buildings. The adaptation of local spatial development plans and the creation of new areas allowed the construction of office buildings on Szeligowskiego and Nałęczowska streets. Noteworthy is the fact that in addition to creating business enclaves, a completely new plan was adopted for the district behind the Sugar Factory, thanks to which Lublin could double today's office space by 2025.

Lublin is the seventh largest office market in Poland in terms of supply and has the largest amount of modern office space in the eastern part of the country. The total resources of modern office space at the end of 2019 amounted to 191,233 m² (across 48 modern office buildings).

Currently, approximately 22,000 m² of modern office space is under active construction in Lublin across 3 projects: G7 Inter Office (9,000 m²), CZ Office Park D - phase I (8,500 m²) and Wojciechowska 9 (4,500 m²). At the planning stage, with an expected date of commissioning in 2021-2023, there are currently approx. 29,000 m².

The demand for office space in Lublin in 2019 amounted to almost 9,000 m². New contracts dominated, which constituted 88% of the total transaction volume. Contract renegotiations accounted for 11% and expansions just 1%. The largest transactions signed in the Lublin market in 2019 include the record-breaking Santander Bank Polska contract in CZ Office

10 LARGEST OFFICE BUILDINGS IN LUBLIN

BUILDING ADDRESS	OFFICE SPACE (M ²)
CZ Office Park A <i>Nałęczowska 14</i>	20,000
Spokojna 2 <i>Spokojna 2</i>	18,520
Gray Office Park A <i>Tomasza Zana 32</i>	13,000
Gray Office Park D <i>Wallenroda 4D</i>	8,700
Gray Office Park C <i>Wallenroda 4C</i>	7,000
W9A <i>Wojciechowska 9A</i>	6,000
Zana 39 (Centrum Zana) <i>Tomasza Zana 39</i>	5,450
G5 Inwestycje <i>Gęsia 5</i>	5,400
Rupes <i>Żwirki i Wigury 3</i>	4,840
JPBC Business Center <i>Jana Pawła II 17</i>	4,700

Source: Colliers International

Park A (4,700 m²), renegotiations and expansion of Predica in Gray Office (1,000 m²), the new Strabag contract in Point75 (920 m²) and the new Lingaro contract in CZ Office Park A (650 m²). The average size of lease transactions was around 690 m².



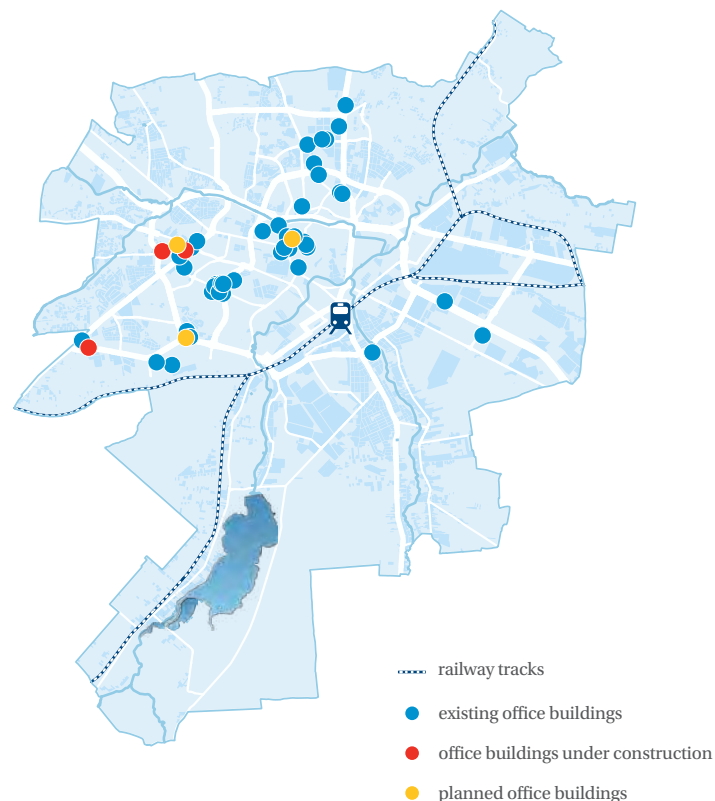
Spokojna 2, photo: Marcin Tarkowski

SELECTED TENANTS IN LUBLIN

TENANT	BUILDING
Sollers Consulting	Spokojna 2
Generali	Nord Office Park
Santander Bank Polska	CZ Office Park A
Onet	Rupes
Billennium	G5 Inwestycje
Strabag	Point 75
Team International	MakroChem
PKO BP	Gray Office Park B

Source: Colliers International

LOCATION OF OFFICE BUILDINGS IN LUBLIN



Source: Colliers International

At the end of 2019, the vacancy rate fell by 6.1 p.p. compared to Q4 2018 and amounted to 9.3%, which translated into 17,700 m² of available space.

Lublin is a competitive market compared to other regional cities due to favourable lease terms. Rents for office space have remained at a similar level for several quarters. In modern class-A projects, tenants have to pay between EUR 10-13.5/m²/month. Rates in older buildings are EUR 9-10.5/m²/month.



A characteristic feature of the Lublin office market is the fact that it is largely dominated by local developers. Tenants are dominated by companies from the modern business services and IT sectors, which results from their rapid growth and, consequently, increased demand for additional space. The BFSI sector is also clearly visible in the tenant structure, as exemplified by the record transaction of Santander Bank Polska in CZ Office Park A.

The potential of Lublin is increasingly recognised by developers, which is confirmed by subsequent projects planned in the city. We expect further market development and growing interest from tenants in the coming years.

Labour market - office sector

From the perspective of the local labour market, companies in the BPO/SSC/IT sectors, due to the provision of a diverse range of services, are very desirable employers. They offer good career opportunities, the opportunity to work in an often international environment, and the opportunity to use and develop foreign language skills.

The availability of qualified staff and recruiting from the city's strong academic community, from students and graduates, is particularly attractive to companies in these sectors. Every year, the labour market is constantly fed by new people with good knowledge of foreign languages and unique skills. Over 90% of students at Lublin universities speak English, and a large part also know German, Russian and Ukrainian. Therefore, it is natural to locate in Lublin centres belonging to organisations

with international capital that can employ these well-trained people.

Today, we are increasingly noticing that Lublin is becoming a destination city when employees look for opportunities for professional development. Specialists often decide to relocate and plan to settle in the city. The more so that salaries, especially in the IT industry or in highly specialised positions in the manufacturing industry, do not differ significantly from those offered in other cities, and at the same time the cost of living in Lublin and the surrounding area is usually lower.

Kinga Rogala Gutowska
Branch Manager Professionals
in Randstad Lublin & Rzeszów



Photo: Sollers

MONTHLY GROSS SALARY IN PLN – OFFICE MARKET

F&A AP/AR	MIN	OPT	MAX
Junior accountant	3,200	3,500	4,200
Accountant	4,000	4,500	5,500
Senior accountant	5,500	6,000	6,500
Team leader (5-15 ppl)	7,500	8,500	10,000
Manager (up to 50 ppl)	9,500	11,000	14,000
F&A GL			
Junior accountant	3,500	4,000	4,500
Accountant	4,000	5,000	6,000
Senior accountant	5,500	7,000	8,000
Team leader (5-15 ppl)	8,000	9,000	10,000
Manager (up to 50 ppl)	10,000	12,000	15,000
IT			
1st line support	4,000	5,000	6,500
2nd line support	4,600	5,500	7,000
3rd line support	7,000	8,000	9,500
IT Admin	6,500	8,000	10,000
Network/Security	7,500	9,000	12,000
Business/Sys Analyst	7,000	9,500	12,000
Developer	8,000	10,000	13,000
Tester	6,500	8,000	11,000
Team leader (5-15 ppl)	9,000	12,000	16,000
Project Manager (up to 50)	11,500	15,000	19,000
CUSTOMER SERVICE			
Junior Specialist	3,300	3,800	4,100
Specialist	3,600	4,000	5,000
Senior Specialist	5,000	6,500	7,000
Team leader (5-15 ppl)	7,000	8,500	9,500
Manager (up to 50 ppl)	8,000	9,500	13,000
R&D			
Laboratory specialist	4,000	5,000	6,000
Technologist	4,500	6,000	7,000
Design Engineer	6,000	7,000	8,000
Product Development	6,500	7,000	8,500
Senior Product Development	7,000	8,000	9,000
Quality Engineer	5,500	7,500	8,500
R&D Manager	10,000	11,500	15,000

F&A - Finance&Accounting, **AP**-Accounts Payable, **AR**-Accounts Receivable, **GL** -General Ledger, **R&D** - Research&Development, **ppl** - people, **MIN** - minimum, **OPT** - the most frequently offered remuneration for a given position, **MAX** - maximum.



*Photo: "Centrum Zana Holding"
Spółka z ograniczoną odpowiedzialnością
Spółka Komandytowa*

IT sector

Lublin is one of the largest IT centres in the country and one of the most promising Polish cities in terms of locating IT businesses. It has one of the best developed IT ecosystems in Poland in the form of the Lublin IT Upland (LWIT), which supports the constantly growing pool of IT talents and the possibilities of locating companies in modern office buildings. The Lublin IT Upland project implemented by the Lublin City Hall is an initiative aimed at highlighting the potential and creating a favourable climate for the development of the IT industry in Lublin.

The concept of the Lublin IT Upland project is based on the triple helix consisting of cooperation between public authorities, academia and business in order to increase the competitiveness of each sector.

The main specialisations of companies are: business solutions, IT outsourcing, dedicated IT systems, mobile applications, web application/consulting, IoT solutions, dedicated IT systems, IT for medicine, web design/marketing and e-commerce.

Currently, over 6,000 employees are employed in the IT industry in small, medium and large companies. There are opportunities for career development in this sector for university students in Lublin studying programs that have been created in cooperation with IT companies and that meet the needs of this industry. Thanks to this, the IT sector in Lublin is constantly supported by a pool of talent trained and ready to start working in the profession. The short distance from Ukraine is also an opportunity to gain qualified employees from that market.

Many companies from the Lublin IT industry create solutions in technologies for Microsoft. Leading programming languages include Java and C#, NET, JavaScript and Typescript, and there has been an increase in Python.

One of the largest IT conferences of the Lublin IT Upland, attracting over 2,000 people from around the Lublin Province, is Check IT. The event is

organised annually by the Department of Strategy and Entrepreneurship at Lublin City Hall in partnership with Lublin universities and IT specialists. The aim of the conference is to promote the IT industry among young people, broaden the knowledge and interests of participants in new technologies, and encourage students to study IT majors at Lublin universities.

Another proprietary project of Lublin City Hall is the event IT High School Student, organised together with Lublin IT companies. During workshops led by specialists from the IT industry, over 1,000 students have the opportunity to broaden their knowledge about the Lublin IT sector. The event is irrefutable proof of the perfect integration of the Lublin IT ecosystem and the CSR policy of the companies co-creating this initiative.



Data Art

We are a company from the IT industry present on the global market, including in Poland, Ukraine and the United States. The Lublin team of specialists deals with the implementation and support of IT systems according to the individual needs of customers. Years of experience and the acquisition of specialised knowledge have enabled us to become reliable technology advisors.

The choice of Lublin as the location of our branch was determined by human capital, meaning graduates of technical and linguistic faculties of local universities, but also the presence of the airport, the involvement of the City authorities in business and the rapid development of the Lublin IT industry. In retrospect, we can see other factors favouring the development of the company – the high quality of life and Lublin's unparalleled friendliness towards foreigners.

Julia i Jarosław Diatczykowie
Management
DataArt Poland Sp. z o.o.

BPO

Lublin is one of the most promising Polish cities in terms of BPO. The modern business services sector, alongside food processing, automotive, the machine industry and logistics, is a key branch of Lublin's economy. The rapid development of this sector is due to the specifics of the market itself, the changing world of technology and the Lublin Development Strategy adopted and implemented consistently by City Hall.

Over 5,000 people work in service centers in Lublin, the vast majority of whom are employees of companies with foreign capital. Globally recognised

companies with centres in Lublin include Genpact, Orange and Capgemini. Other companies in the city include PKO BP, PhlexGlobal, RTV Euro AGD, OEX Voice CC, Pekao Factoring, Generali, Warta, Quad Graphics, Poltel and EOS KSI.

Over the past 3 years, we have seen a steady 10% increase in employment in the BPO/SSC industry in Lublin. This trend is expected to continue, which means that an estimated 8,000 employees will be employed in this sector by 2025. Confirmation of this is the fact that the city has educated staff for BPO/SSC companies. Every year, nine Lublin universities supply the labour market with nearly 16,000 graduates.

The constant number of language and economics students means that the supply of employees in Lublin will be the main driver of maintaining employment growth in the sector, and also its acceleration.

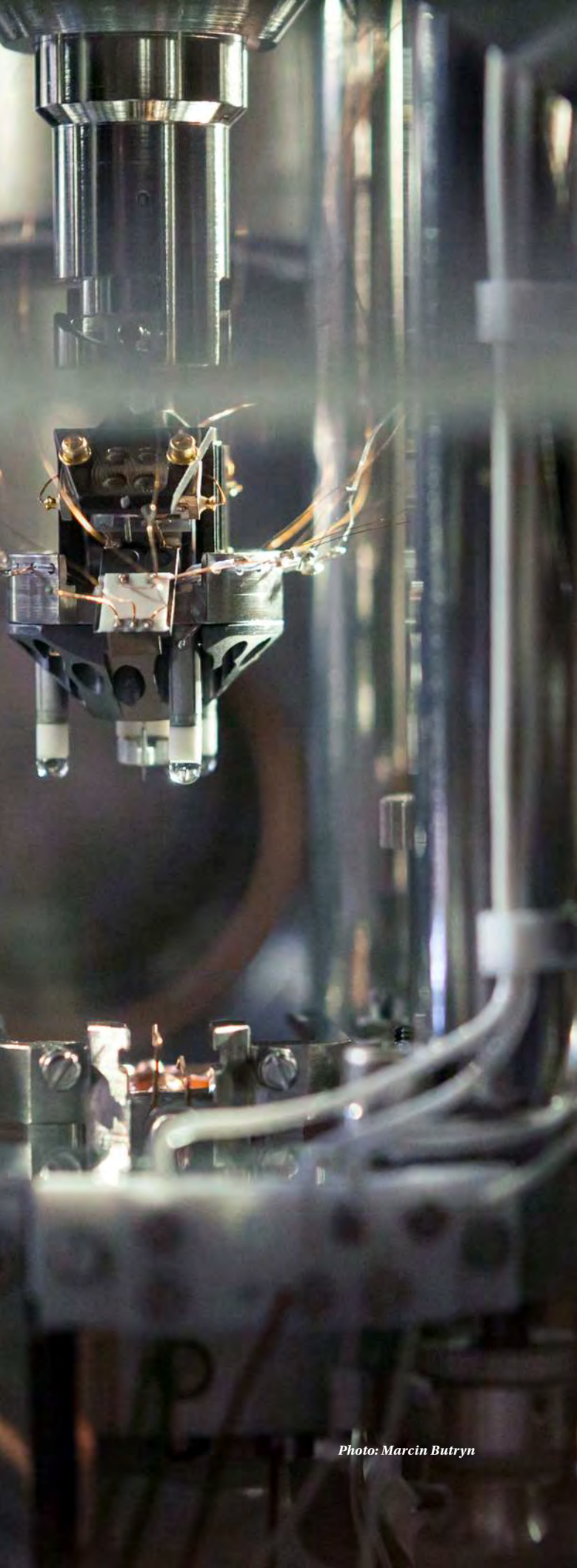
SELECTED BPO/SSC SERVICE CENTRES IN LUBLIN

COMPANY	EMPLOYMENT	BUSINESS DESCRIPTION
Genpact	±250	The centre provides international clients with business process management (BPO) services in finance and accounting (F&A), supply and procurement chain, customer service and building bank backoffice facilities.
Orange (Orange Accounting Center)	±250	The centre provides financial and accounting services for companies belonging to the Orange Polska group.
Orange (Orange Customer Service)	>1000	The Lublin centre provides comprehensive telephone service to individual and business clients of Orange Polska. Is the largest branch of a company providing this type of services in Poland.
PKO BP	>800	Retail Customer Service Centre of PKO BP bank. The unit provides comprehensive telephone and email service for the customers of PKO BP bank and companies of the Capital Group in Poland and abroad.
Warta	>250	Warta 24 plus Alarm Centre provides customer contact services to one of the largest insurers in Poland.
OEX Voice	±300	Multilingual customer service, comprehensive implementation of business processes for companies operating in Poland and on foreign markets.
Concentrix	±500	Contact service with a German-speaking customer.

Lublin is...

a city of industry

Lublin is a region with many years of industrial tradition. For decades, the food, automotive and aviation industries as well as the chemical and biotechnology industries have been developing in the region, not to mention producers of building materials.



The city has the Lublin Sub-Zone of the EURO-MIELEC Special Economic Zone, which today boasts 70 investors. Almost everything is produced there: aluminium profiles, windows, doors, blinds, roofs and covers for terraces and gardens, equipment for shops and warehouses, disinfectants, parts for aircraft and spacecraft, precision tools, medical equipment, microbiological substrates, convection heaters, leather products, agricultural machinery, packaging, electric motors, elevators, industrial washing machines, laminate tubes and many other products.

Contemporary Lublin is a strong centre for the automotive and machine industry, with companies in the area producing tractors, trailers, cars, as well as fuel systems, engines, springs and smaller parts for vehicles. In order to develop the automotive and machinery industry and related industries, as well as to increase innovation and competitiveness in the region, the Automotive and Machine Upland Cluster was established.



232,000 m²

SUPPLY OF MODERN WAREHOUSE SPACE

Warehouse space

Lublin has developed rapidly in recent years in terms of modern warehouse space. The first facility of this type - Logistics Center Melgiewska - was completed in Q2 2011. Since then, developers have been successively delivering new projects to the market or expanding existing ones. Lublin's potential has also been noticed by international developers already operating in Poland, such as Panattoni Europe, MLP Group and Goodman, which have located their investments there.

At the end of 2019, total supply reached approx. 232,000 m², of which 43,000 m² was delivered last year. 53,100 m² were under construction as part of another Panattoni project - Panattoni Park Lublin III.

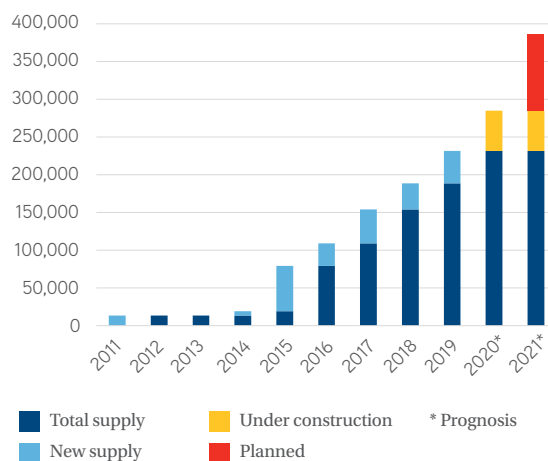
The economic development of the city and the improving road infrastructure in the region mean that tenants are interested in this location. This is confirmed by the fact that, as at the end of December 2019, all existing warehouse space in the Lublin market was leased. However, space under construction within Panattoni Park Lublin III is still available. Aware of the potential of the market, investors are securing land for further warehouse investments. MLP Lublin II is being prepared (51,500 m²), and further stages of the Panattoni Park Lublin II project (60,000 m²) are also planned. This means that in the coming years the total level of supply in Lublin of modern warehouse space may reach the level of approx. 400,000 m².

Its geographical location means that it plays an important role in the national and international communication system. This couple with the associated rapid increase in the quality of road infrastructure, is increasing the potential of the Lublin modern warehouse space market and is conducive to further development.

SELECTED, EXISTING WAREHOUSES IN LUBLIN

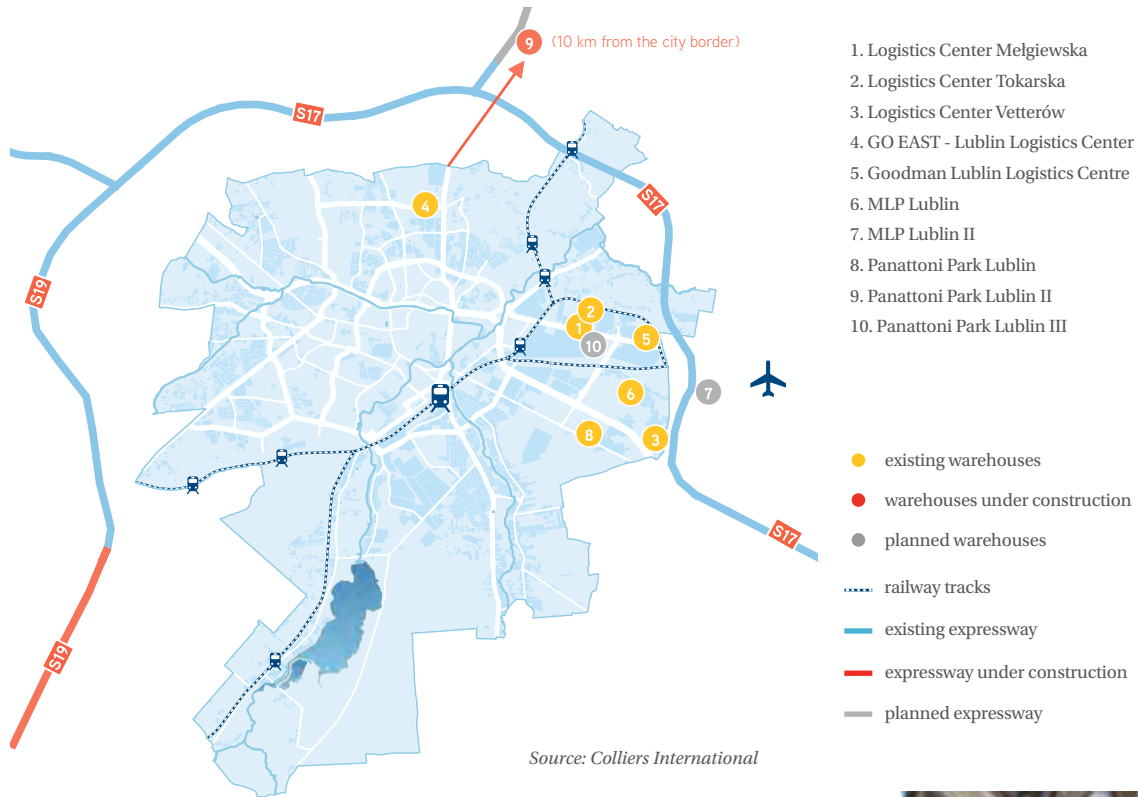
NAME DEVELOPER	AREA (M ²)
Panattoni Park Lublin <i>Panattoni Europe</i>	70,200
MLP Lublin <i>MLP Group</i>	45,400
Goodman Lublin Logistics Centre <i>Goodman</i>	33,400
Panattoni Park Lublin II <i>Panattoni Europe</i>	25,300

EVOLUTION OF SUPPLY IN LUBLIN (M²)



Source: Colliers International

LOCATION OF WAREHOUSE SPACE



1. Logistics Center Melgiewska
2. Logistics Center Tokarska
3. Logistics Center Vetterów
4. GO EAST - Lublin Logistics Center
5. Goodman Lublin Logistics Centre
6. MLP Lublin
7. MLP Lublin II
8. Panattoni Park Lublin
9. Panattoni Park Lublin II (10 km from the city border)
10. Panattoni Park Lublin III

- existing warehouses
- warehouses under construction
- planned warehouses
- ⋯ railway tracks
- existing expressway
- expressway under construction
- planned expressway



Lubella

We are a Lublin producer of cereal products, the leader in the production of pasta and one of the leading producers of breakfast cereals, with almost 140 years of history.

On the one hand, the city provides us with proximity to raw material suppliers, while on the other there are great opportunities for cooperation with universities in research and development.

Having production in Lublin – the capital of the agricultural region – means that we can cooperate very well with suppliers. Close relations with farmers mean that they can adapt cereal crops, including

new species, to our needs. Close contacts with the scientific community are equally important. We use the the research results of local universities, while supporting them by providing materials and the chance for them to check their results in practice. Graduates from Lublin universities constitute a significant group of our employees, especially in the technical department and the quality assurance department, thanks to which we can control our products and guarantee their highest quality.

Piotr Romańczuk
Vice President, Logistic Director, Lubella Sp. z o.o.

Labour market - industrial sector

The Lublin region is an emerging warehouse market with enormous potential, which has seen strong development over the past two years. This is helped by constantly improving communication infrastructure: especially the road connection with Warsaw, but also the connection with Rzeszów, which is being built. We forecast that infrastructure changes will contribute to further growth of the sector. There is a network of flight connections from the airport in Świdnik near Lublin, as well as a partially completed railway connection to Warsaw. The rapid development of the sector means that there is now increased demand for

employees in warehouse and logistics centres. A challenge last year, as in other regions of the country, was increasing pay due to wage pressure, strong competition for a shrinking number of candidates and the large increase in the minimum wage. At the same time, Lublin, due to its proximity to the eastern border of the European Union, attracts employees from countries such as Ukraine and Belarus.

Agnieszka Braunberger

Senior Branch Manager Staffing in Randstad
Lublin & Rzeszów



MONTHLY GROSS SALARY IN PLN – INDUSTRIAL MARKET

PRODUCTION	MIN	OPT	MAX
Manager	8,000	10,000	12,000
Team leader	4,500	5,500	6,500
Specialist	2,600	2,900	3,500
Foreman	4,500	5,500	6,500
Blue collar worker	2,600	2,900	3,500
LOGISTICS			
Manager	7,000	8,000	9,500
Specialist	4,500	5,000	6,500
Blue collar worker	3,000	3,500	4,000
QUALITY			
Manager	7,000	9,000	11,000
Specialist	4,500	5,500	6,500
Blue collar worker	2,600	2,900	3,500
WAREHOUSE			
Manager	6,500	7,500	9,000
Specialist	3,000	3,500	4,000
Blue collar worker	3,000	7,000	7,000

MIN - minimum, OPT - the most frequently offered remuneration for a given position, MAX - maximum.

Source: Randstad

Lublin is... a touristic city

The hotel market in Lublin is growing intensively. In 2012, only 1,025 places in 14 hotels were available in the city. The majority were 3-star hotels, and four-star hotels were limited to the Grand Hotel Lublinianka and Hotel Europa. The situation began to change as investors and tourists became more interested in the city. In 2014, the 5-star Hotel Alter located in the Old Town was opened. In October 2019, the hotel market in Lublin offered guests a total of over 3,000 beds in 32 hotels.

Most newly built hotels in the city received 3 stars. In 2012, there were 7 such hotels; today this number is 22, which translates into about 2,200 beds. However, the whole accommodation picture can be obtained only after adding uncategorised sites – apartments, private flats for short-term rent, hostels, guesthouses and beds in student houses.

An interesting hotel in Lublin is Arche. This is the first condo hotel in the city in which private investors can purchase a segment and profit from its rental.



Hotel Alter, photo: Marcin Tarkowski



Hotel IBB Grand Hotel Lublinianka, photo: Marcin Tarkowski

HOTELS IN LUBLIN BY STARS RATING

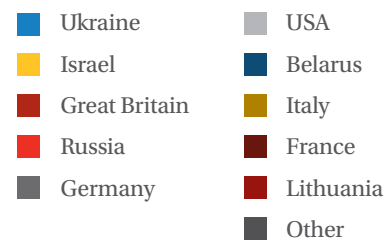
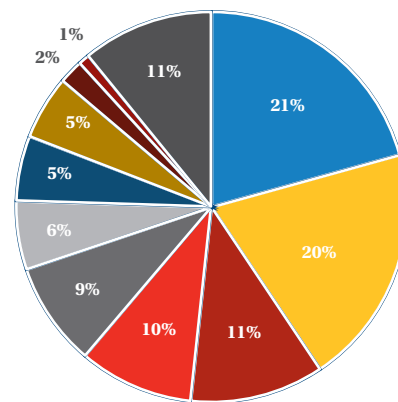
NUMBER OF STARS	NUMBER OF HOTELS
★★★★★	1
★★★★	5
★★★	22
★★	2
★	2

NUMBER OF TOURISTS IN LUBLIN

	TOTAL	INCLUDING FOREIGN
2013	295,158	77,202
2014	326,421	82,664
2015	347,609	87,383
2016	400,243	102,050
2017	499,221	115,489
2018	539,465	120,154

Source: Lublin City Hall

ORIGIN OF FOREIGN TOURISTS



Source: Colliers International

Conference space

In 2018, as much as 69% of business meetings had a conference and congress character, which puts Lublin in 2nd place among Polish cities next to Wrocław, Łódź and the Masuria region, and just behind Kraków.

Based on the report from 2019, 'Meetings and Events Industry in Poland' by the Poland Convention Bureau, in 2018 in Lublin 1,828 meetings and events took place in which 446,000 people took part. These comprised:

- 1,267 congresses and conferences (69%)
- 510 corporate / incentive events (28%)
- 51 trade fair events/exhibitions (3%)

Along with the increase in the number of hotel facilities, the banquet, exhibition and conference market has also grown. At the end of 2019, almost 34,000 m² of conference space in about 170 rooms were available in the city.

The most important business events in 2019:

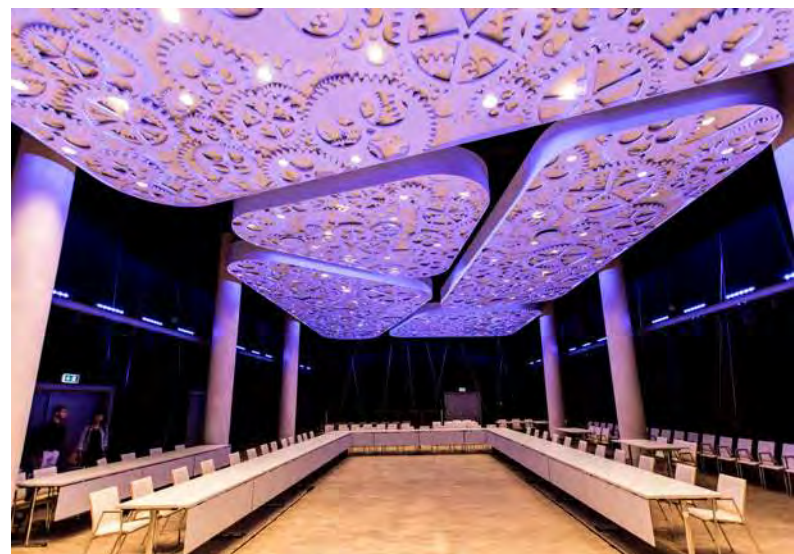
- 1st Congress of New Mobility
- Eastern Europe Initiatives Congress with the Lub-Invest conference
- International Health Tourism Forum 2019
- Scientific Congress of the Polish Diabetes Association
- 2019 RSA Central and Eastern Europe Conference
- First Lublin Tourism Forum

The most important cultural events in 2019:

- Magicians' Carnival and Urban Highline Festival
- Jagiellonian Fair
- Culture Night
- European Festival of Taste
- East of Culture - Different Sounds Art'n'Music Festival
- Theatre Confrontations festival
- Falkon Fantasy Festival



Congress of New Mobility, photo: Lublin City Hall



Lublin Conference Centre, photo: Lublin City Hall



Centre for the Meeting of Cultures and Lublin Conference Centre, photo: Marcin Tarkowski

SELECTED FACILITIES OFFERING CONFERENCE SPACE IN LUBLIN

NAME	CAPACITY OF CONFERENCE	AREA OF CONFERENCE	NUMBER OF MEETING ROOMS	NUMBER OF PARKING SPACE
Lublin Fair	8,420	11,282	7	600
Centre of the Meeting of Cultures	2,003	3,402	23	250
Etiuda Exhibition and Conference Centre	1,515	1,570	8	200
Lublin Conference Centre	1,425	2,418	11	45
Lublin Science and Technology Park	620	834	5	150
Arena Lublin	1,133 + 15,300 (seats in the spectacle space)	1,372	7	1,040
Lublin Airport	50	53	1	362
The Henryk Wieniawski Lublin Philharmonic / Lublin Musical Theatre	1,192	1,463	2	-

Source: Lublin City Hall

Lublin is... a city of high-tech

Innovation is one of Lublin's hallmarks. Universities with their scientific and research base are one of the strongest assets of the city enabling the development of IT specialists and business services based on knowledge and modern technologies as well as the advanced industry sector.

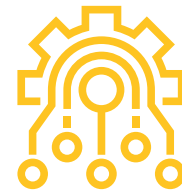
High-tech is a industry that uses advanced methods and state-of-the-art manufacturing equipment.

In Lublin, it occurs in the following industries:

- **computers**
- **electronics**
- **pharmaceuticals and cosmetics**
- **biotechnology**
- **food- tech**
- **nanotechnology**
- **chemical industry**
- **material engineering**
- **medicine**
- **medical robotics**
- **aviation and space technology.**

HIGH-TECH

Total number of high-tech students	11,198 <small>18.2% of the total number of students</small>
Number of high-tech foreign students	885



18.2%

PERCENTAGE OF
HIGH-TECH STUDENTS
IN LUBLIN

REGISTERED PATENTS AND R&D EXPENDITURES

	2017	2018
Number of applications for inventions made by entities based in Lublin	176	217
Number of patents granted to entities based in Lublin	131	121

Source: Lublin City Hall



SDS Optic

SDS Optic is a research company that has created the innovative inProbe technology platform for detecting breast cancer in women. It allows painless examination and, what is important in diagnostics, numerical results can be obtained in real time. The device uses optoelectronics technology

The SDS Optic team consists of specialists in physics, biology, engineering and medicine. Acquiring the best experts is a challenge for research companies around the world. We strive to attract the best, most promising

graduates and students from Lublin's universities, offering them internships during which they can acquire specific and valuable skills. We also look for highly qualified staff among people who left years ago to study sciences abroad. We can convince those who are not sure to come back because of the unique atmosphere and quality of life in Lublin.

Marcin Staniszewski MSc Eng.
Co-founder, CEO, SDS Optic

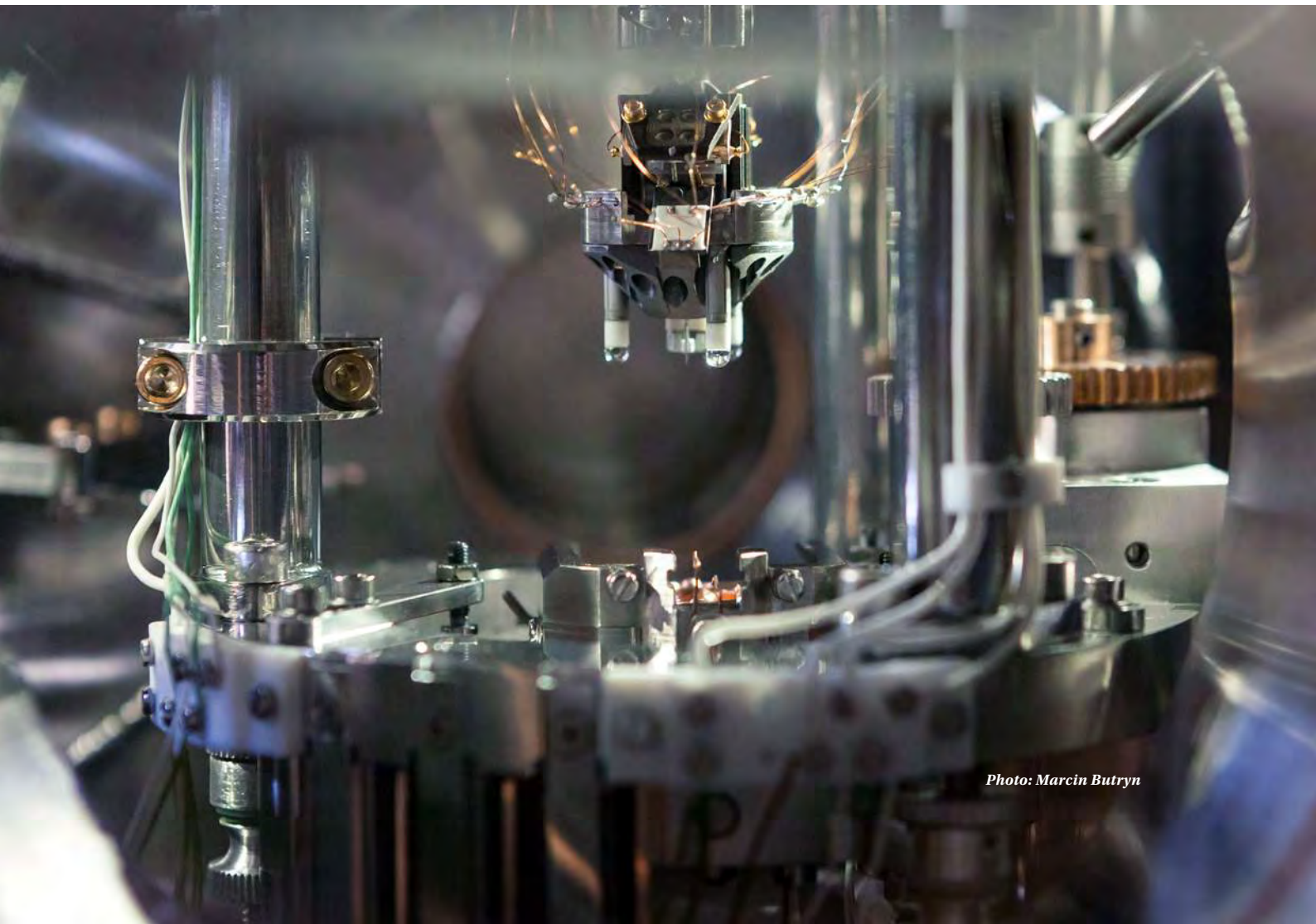


Photo: Marcin Butryn

Photovoltaics

Research team lead by prof. Mirosław Wendeker, Lublin University of Technology and MPK Lublin

Photovoltaic structure technology has been developed at the Lublin University of Technology to reduce fuel consumption and toxic emissions. The team led by prof. Mirosław Wendeker from the Department of Thermodynamics, Fluid Mechanics and Aero Drives of the Lublin University of Technology created solar panels that will be used in public transport buses. The advantages of the project include reducing ecological threats and increasing the service life of batteries, alternator bearings and V-belts. It is important to emphasise that they already cover the roofs of several Lublin public transport buses and their operation is highly rated.



Photo: Shutterstock



Photo: Press materials, FlexiOss

Bone replacement substitute

Research team lead by prof. Grażyna Ginalska, Medical University of Lublin and Medical Inventi

"FlexiOss bone replacement substitute", submitted to the 21st edition of the Polish Product of the Future Competition, received the main prize in the category "Entrepreneur's Product of the Future". FlexiOss bone substitute biomaterial is based on hydroxyapatite ceramics and organic polymer. FlexiOss, protected by Polish and European patents, resembles bone tissue in terms of its composition and properties. It features biocompatibility, bioactivity and non-toxicity. An innovative feature of FlexiOss are its hemostatic properties - by absorbing blood at the surgical site, it prevents clots. From the patient's point of view, FlexiOss makes it possible to properly rebuild bone tissue and has a low risk of inflammation, infection and recoil.

AI in cancer diagnostics

Billenium and the Maria Curie-Skłodowska University in Lublin

Billenium S.A. in cooperation with the Institute of Computer Science of the Maria Curie-Skłodowska University in Lublin is working on a unique AI algorithm that will help create a system for early diagnosis of brain tumours. The research is using artificial intelligence to develop a model for analysing test images.

The diagnostic system will use deep learning methods and modern imaging techniques that will make it possible to better tailor the treatment method to a particular patient and increase the survival rate of patients with brain cancer. The model will include an algorithm in the form of source code

prepared for the project and a description of sample solutions of both simple and extreme cases. Part of the project will be a detailed analysis of the results obtained along with full documentation of the work to be carried out, as well as tests confirming the effectiveness of the model. The tasks included in the schedule, i.e. the creation of an image marking tool, marking entered data and their analysis, data optimisation, algorithms and development of the report will concern oncological changes in the brain. Currently, development work is underway on tools for marking images and managing them.

Startup platforms

Samsung Inubator

An incubator working in cooperation with NASK and the Lublin University of Technology in the field of cybersecurity.

Unicorn Hub Platform

Incubation of innovative business ideas mainly from industries such as: IT/ICT, Medicine/Public Health, Smart City/Transport.

Idealist Sterter Platform

Areas of incubation: energy, tourism, medicine/health, IT/ICT/robotics/automation, at every stage of technological readiness.



Photo: Press Office, Samsung

Lublin is... a city of the future

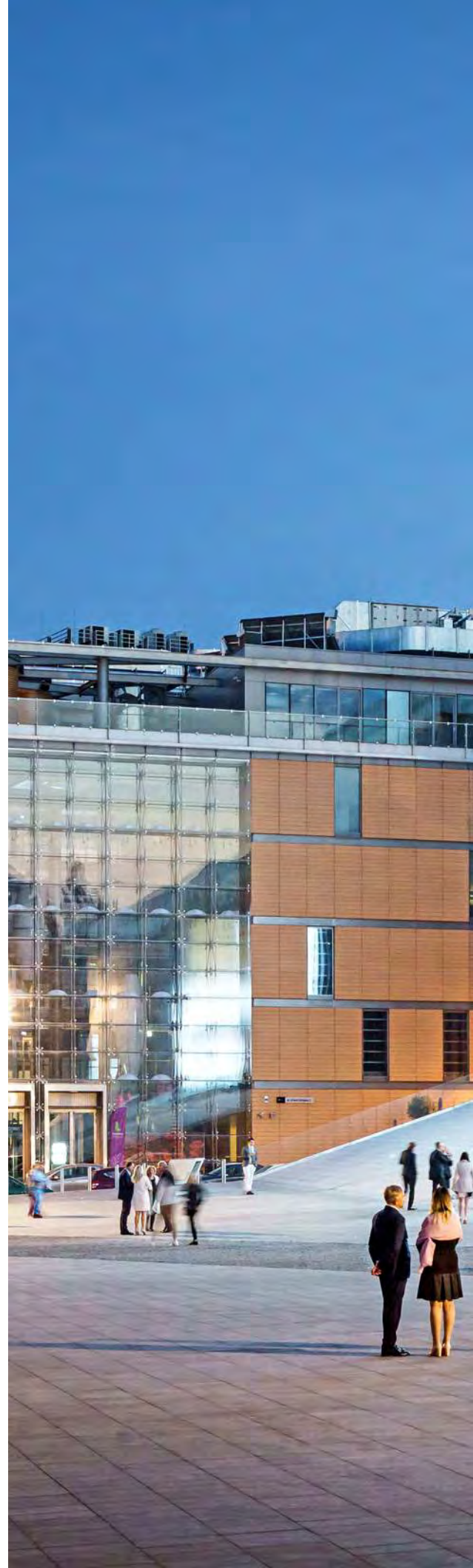
The current Lublin Development Strategy 2013-2020 is coming to an end. The city decided to involve residents in creating the new Lublin 2030 strategy. The participatory nature of the project will set the optimal direction of the city's development, which will take into account the needs of both local government and residents.

The project 'Let's invent Lublin together. We participate in creating an intelligent strategy Lublin 2030' received an award in the Human Smart Cities competition organised by the Ministry of Investment and Development. Thus, the Lublin city hall received funding in the amount of PLN 3.6 million for its implementation, which will take place over the next two years. After being developed, the project will be made available to other cities as a template that they will be able to use.

The project was created to include residents in building a smart city of the future. The strategy is to be based on current trends, but it also anticipates potential changes in the direction of development in the future. The intention of the city is to reach at least 10 percent of residents who will help create a vision of a smart city of the future. The project envisages consultations with groups of experts, residents and representatives of social and professional groups. All ideas will be subject to public consultation.

Human Smart Cities

The goal of the Human Smart Cities competition organised by the Ministry of Investment and Development was to select the most interesting ideas for implementing the idea of building a smart city of the future with the participation of its inhabitants. Three categories of cities were distinguished in the competition due to their size. There were 13 metropolises in the large cities category, from which two winning projects were selected. One of them was the idea of the City of Lublin.





Centre for the Meeting of Cultures and Lublin Conference Centre, photo: Marcin Tarkowski

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