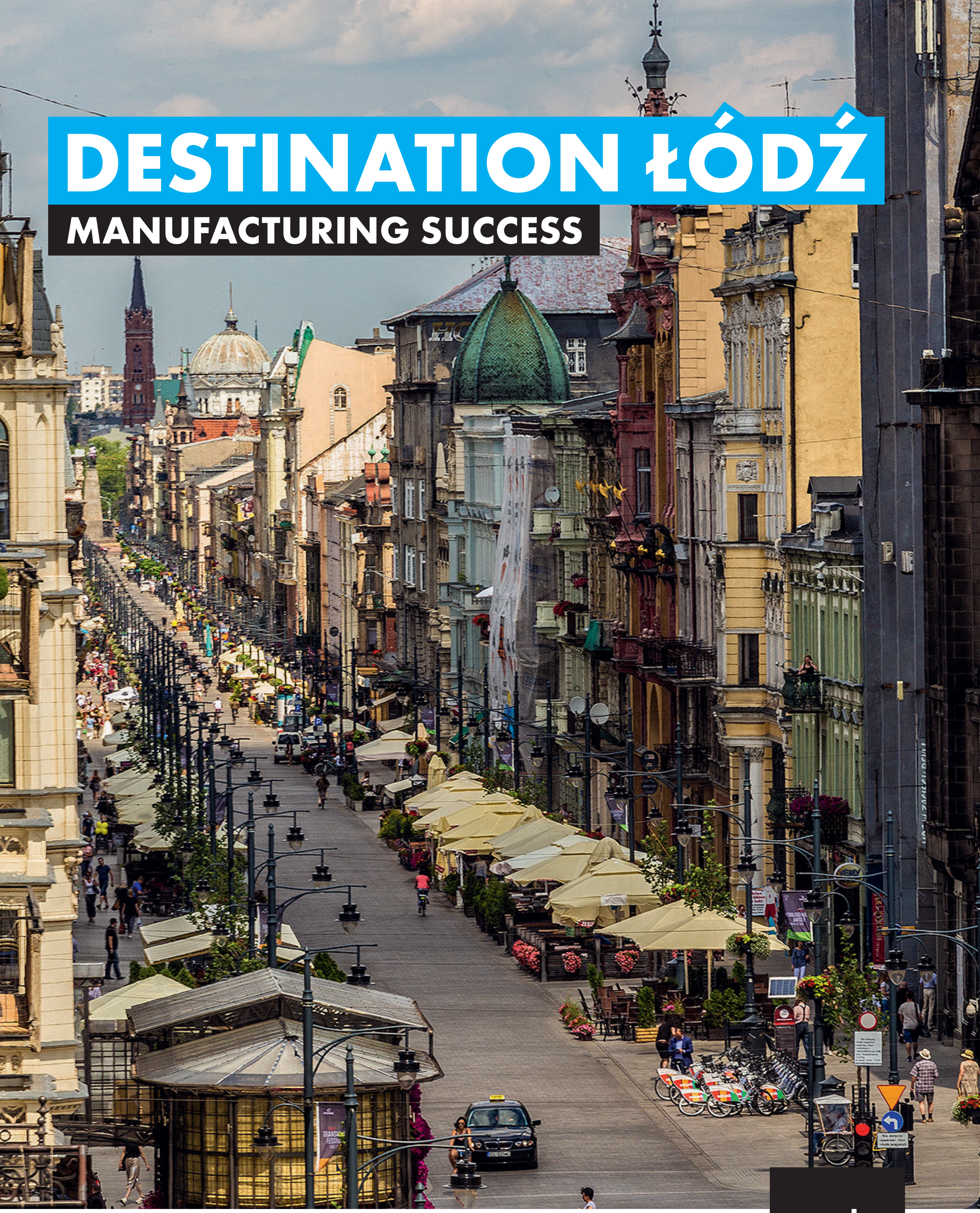
DESTINATION ŁÓDŹ

MANUFACTURING SUCCESS



JLL

REPORT

City Strategy Bureau,
The City of Łódź
NOVEMBER 2017

ŁÓDŹ CREATES

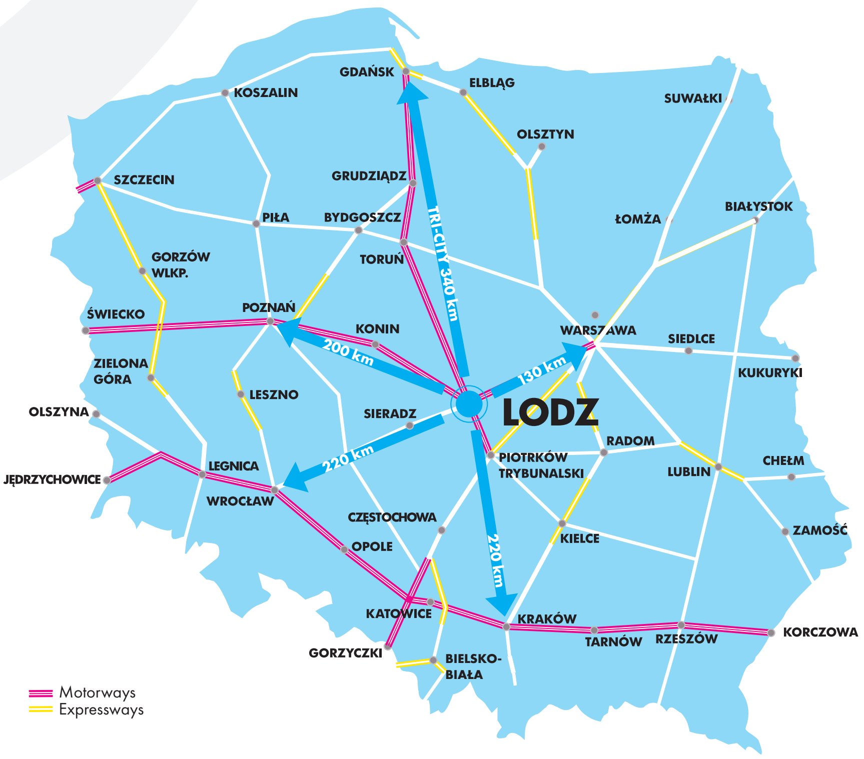
CONTENTS

INTRODUCTION

We are pleased to present a new research report focused on Łódź and its potential for investments in the commercial real estate market.
Over the last twenty-five years Poland has experienced a huge political, economic and social transformation. Łódź, formerly one of the greatest textiles industry centres in Europe, today the country's third largest city, is at the heart of those changes.
The region has gone through a profound metamorphosis to become a focal point for business process outsourcing (BPO), shared services centres (SSC) and new technologies, as well as turning into the logistics and distribution hub of Poland.
However, it is not only the economy of the city that has changed. The significance of Łódź over recent years is underlined by the profound changes to its society, the transformation of its city centre, large infrastructural projects, the rapid improvements in living conditions there and the revitalisation of its historical urban fabric.
We trust that this report will provide an interesting insight into the Łódź of today.

LOCATION

The unique advantages that Łódź offers are in no small part based on it being found in the centre of Poland and Central Europe, at the intersection of two major Trans-European Transport Network (TEN-T) road corridors. One of them is Baltic-Adriatic route, connecting sea port in Gdańsk with ports in Slovenia and Italy and the second is North Sea-Baltic, heading from Belgium and Netherlands to Estonia. In the Poland's territory, this two TEN-T corridors include major country's motorways, A1 and the A2 respectively. Factor in the S8 expressway to Wrocław, and the city is today unquestionably Poland's main transportation node.
Its setting in the middle of Europe, next to the main routes from the west to the east and from the north to the south, makes Łódź one of the most important hubs between this regions.
Łódź is the second (after Warsaw) biggest social-economic centre in Central Poland and is Poland's third largest city, with a population of 696,503. The wider agglomeration (ŁOM)* is home to over one million people.
Located in Central Poland, Łódź offers very convenient access to the other major cities in Poland: Warsaw (130 km away), Kraków (220 km), Wrocław (220 km), Poznań (200 km) and the Tri-City (340 km).



*ŁOM – Łódź Agglomeration includes Łódzki Wschodni, Brzeziński, Pabianicki, Zgierski poviats and the city of Łódź.

ECONOMY

Metamorphosis

Łodź, formerly the centre of manufacturing in Poland, is now, after years of struggling with the effects of the economic transformation and the collapse of the textiles industry, living its second life.

Today Łódź is Poland's heart of business process outsourcing (BPO), shared services centres (SSC) and new technologies. The city is home to the headquarters or European branches of numerous global companies, including Infosys, Philips, Fujitsu, HP, TomTom and Nordea Operations Centre. The region also benefits from its central location and has developed into a distribution and logistics hub of great importance in European supply chains. Moreover, the manufacturing sector is once again thriving in Łódź, as many electronics producers, such as Bosch, Indesit and Dell, have started operations in the region. The economic growth is paralleled by rising living standards for the local population. The range of leisure and entertainment options is expanding, including numerous commercial facilities such as modern shopping centres, cinemas, theatres, sports arenas and music venues, among others.

The previous, largely stereotypical, perception of the neglected urban landscape of Łódź is going through significant changes thanks to many profound revitalisation programs led by The City and local society. The results are already visible, as many projects have been completed and the city is regaining its former charm.

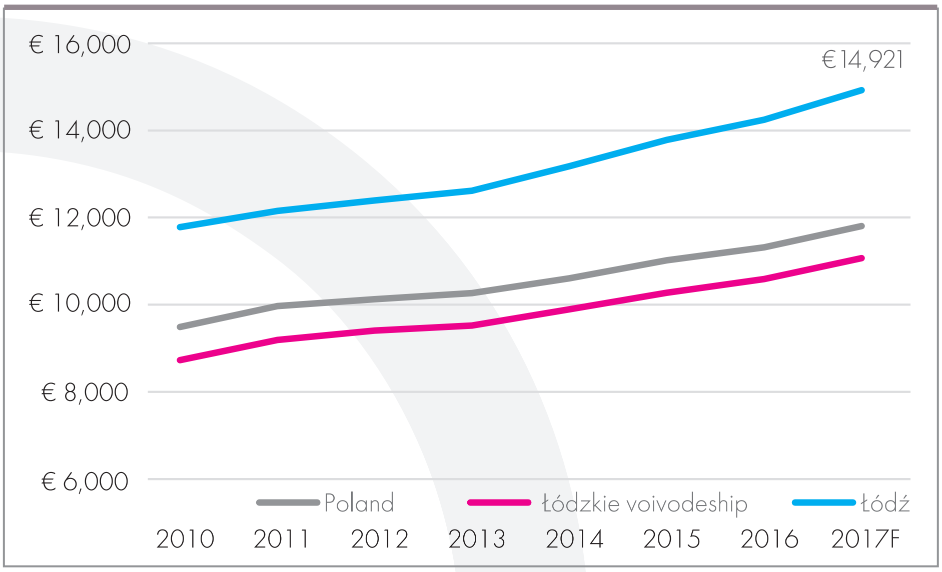
Fact sheet

Population (2016)	City	696,503
	Agglomeration	1,082,716
Population (agglomeration structure 2016)	Pre-working age	15.4%
	Working age	59.7%
	Post-working age	24.9%
GDP (2017)	Łódź overall	€10.2 million
	Łódź per capita	€14,645
GDP annual growth (2017–2019)	Poland	3.4%
Annual purchasing power per capita (2016)	City	€7,606
	Agglomeration	€7,215
Unemployment rate (July 2017)	City	7.2%
	Łódź province (voivodship)	7.4%
Sold production of industry and construction łódzkie voivodeship (2015)	Total	PLN 74,501.5 million
	Per capita	PLN 29,822
Municipal expenditure	Overall per capita (city of Łódź)	PLN 5,497
	Transport per capita (city of Łódź)	PLN 997

Source: Central Statistical Office, MBR, Oxford Economics, 2017

Economy

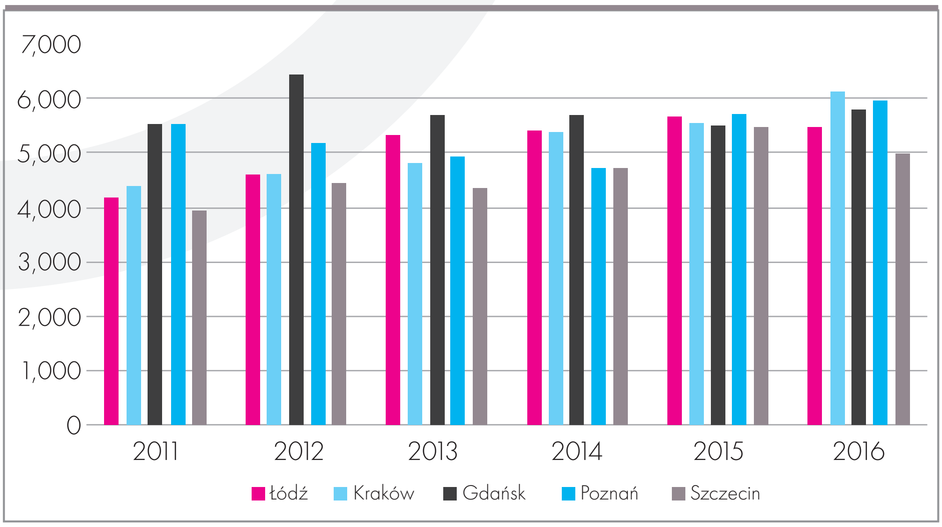
GDP PER CAPITA IN POLAND, ŁÓDZKIE VOIVODESHIP AND ŁÓDŹ



Source: Oxford Economics, 2017; F = forecast

GDP in Łódź has been growing since 2011, with the sharpest increase in coming in 2014 (a rise of 3.6%). It is expected that by the end of 2017 the GDP of Łódź will exceed the amount of €10,000 million, which is only slightly lower than the GDPs of other Polish agglomerations such as Poznań and the Tri-City. The GDP per capita indicator is expected to reach almost €15,000.

MUNICIPAL EXPENDITURE PER CAPITA (PLN)



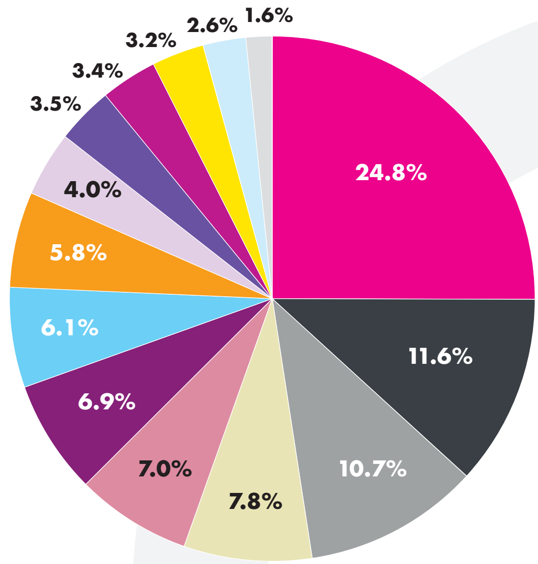
Source: Central Statistical Office, 2017

In terms of municipal expenditure per capita Łódź can be compared to cities such as Kraków, Poznań and Gdańsk. Since 2011 investments sustained on an upward trend, witnessing record-breaking volumes in 2015. Municipal expenditure in Łódź reached PLN 5,685 per capita – an amount greater than in Kraków, Poznań and Szczecin and similar to that registered in Gdańsk. In 2016 volume of expenses slightly slowed down, but still remained at a decent level.

Industries

NATIONAL ECONOMY ENTITIES IN ŁÓDŹ

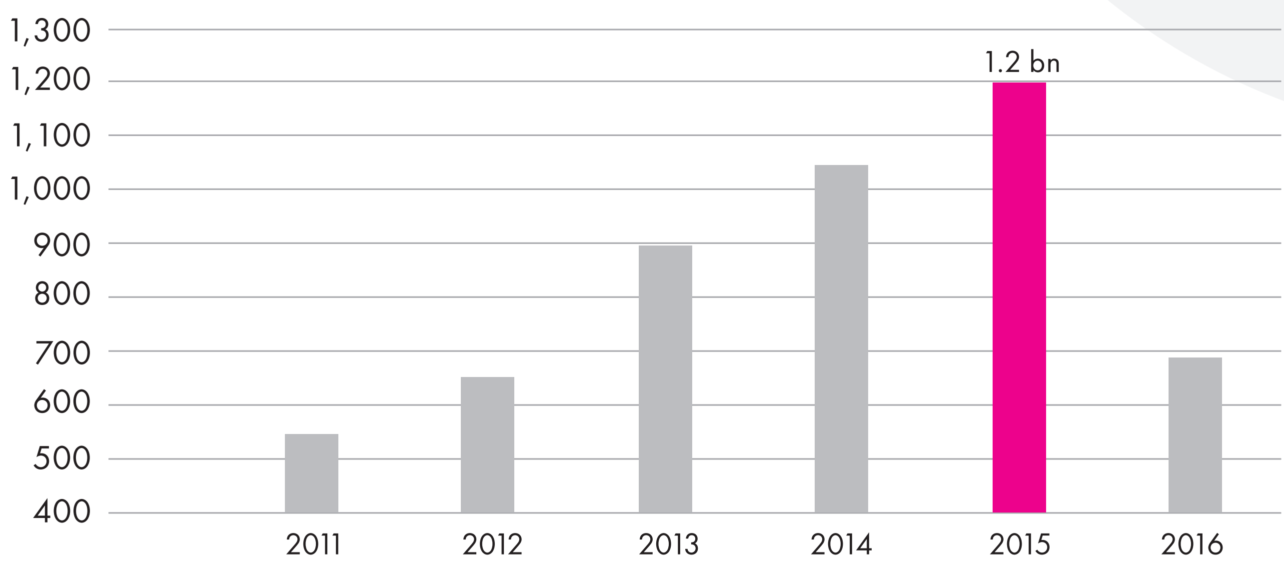
	24.8%	Wholesale and retail trade
	11.6%	Professional, scientific and technical activities
	10.7%	Manufacturing
	7.8%	Construction
	7.0%	Human health and social work
	6.9%	Activities of households as employers
	6.1%	Transportation and storage
	5.8%	Real estate activities
	4.0%	Information and communications
	3.5%	Financial and insurance activities
	3.4%	Education
	3.2%	Administrative and support service activities
	2.6%	Accommodation
	1.6%	Arts, entertainment and recreation



Source: Central Statistical Office, 2017

The number of commercial entities in Łódź in Q1 2017 was 92,450, which was an increase compared to previous years. The wholesale and retail sector accounts for the largest share (24.8%). Companies offering professional services and those from the manufacturing sector make up 11.6% and 10.7%, respectively, of the economy of Łódź. During 2015–2016 the number of newly registered entities in Łódź was relatively stable, at approximately 7,700 new companies per year. Many of those new entities are start-ups, focused mainly on IT and new technologies, with Łódź being home to numerous co-working offices. The city supports such activities, by organising events or conferences which offer a unique opportunity for the development of small companies.

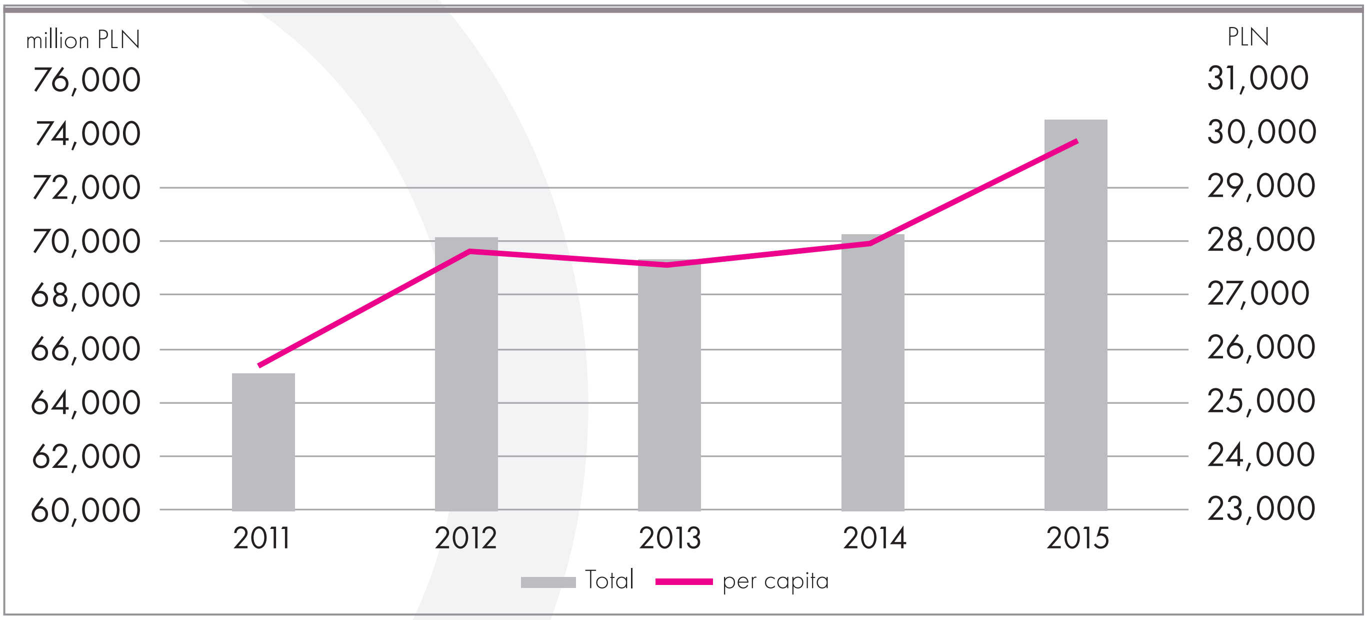
MUNICIPAL EXPENDITURE: TRANSPORT AND COMMUNICATION (IN MILLION PLN)



Source: Central Statistical Office, 2017

In 2015 transport infrastructure expenditure in Łódź reached the record-breaking level of PLN 1.2 billion, which was 14% more than in the previous year. Such a high amount was mainly due to a few sizable investments being included in budget for 2015, e.g. the transport node near the Łódź Fabryczna main train station and the "W-Z" route. In 2016 transport expenditures fell by 42% as a result of the implementing of austerity measures. After the completion of the New Centre of Łódź and the underground railway connection with other districts of the city, as well as satellite towns within the agglomeration, the importance of the terminal will strengthen considerably.

SOLD PRODUCTION OF INDUSTRY AND CONSTRUCTION IN ŁÓDZKIE VOIVODESHIP



Source: Central Statistical Office, 2017

Sold production of industry and construction volumes have remained relatively stable since 2011, oscillating between PLN 65,000 million and PLN 70,000 million per annum. The total sold production of industry and construction in 2015 was slightly (0.6%) higher than the previous year, which resulted in it hitting the record-breaking level of PLN 74,500 million.

Special Economic Zone

The Łódź Special Economic Zone (SEZ) has operated in the region since 1997 and has seen buoyant development. Today it is widely considered to be one of the best in the country. In 2005 the SEZ in Łódź was awarded the ISO 9001:2000 Quality Management System Certificate, reflecting the high standards of company operations there. Over the past decade the Łódź Special Economic Zone has been one of the most dynamically developing economic parts of Poland. Currently the Łódź SEZ covers an area of some 1,339 hectares and is divided into 44 subzones situated in the cities, towns and districts of the Łódź province. Over the last 18 years (since 1997 to 2015), investors, in co-operation with the local and national governments and the management of the zone, have contributed to the creation of more than 33,000 workplaces and to investments worth in excess of EUR 3.0 billion.

The comprehensive investor service of the zone, which has obtained an ISO quality certificate, has attracted many important business partners to the Łódź SEZ, including Indesit, Deloitte Digital, P&G, Gilette, Hutchinson, Fuji Seal and ABB.

Łódź SEZ was named the best zone for SMEs (Small and Medium Enterprises) in Europe in the fDi[1] Free Zones of the Year 2015 ranking published by fDi Magazine (Financial Times Group). As well as that title, Łódź SEZ was commended in the rankings for reinvestment during 2014, strategy for and commitment to Polish-Chinese co-operation, upgrades of facilities, and skills training and activity within vocational education.

[1] fDi Intelligence, a service from the Financial Times, the largest foreign direct investment centre of excellence globally.

KEY COMPETITIVE ADVANTAGES

- Location – in the geographical centre of Poland and Europe.
- Connectivity – access to main two routes in Poland: the A1 and A2 motorways, which are also part of TEN-T network.
- Skilled and available labour force – unemployment rate of 7.2%.
- Specialised workers – numerous universities.
- History – modernised post-industrial relicts and a city with a rich history.
- Space for investments – significant office and industrial/warehouse opportunities.
- Presence of a Special Economic Zone (SEZ) – area of some 1,340 ha in 44 subzones.

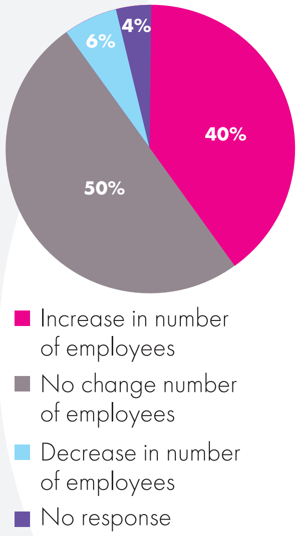
THE LABOUR MARKET

Two out of five employers plan to create new jobs over the next 6 months.

Declarations of employment increase are made more often by companies from the construction sector (45%), industrial sector (44%) and trade and repairs (40%). Over the next 6 months, inhabitants of the largest Polish cities (46%) and employees from rural areas – the ones living within urban agglomerations (45%) and outside (45%) – can expect new job offers more often.

PLANNED CHANGES IN EMPLOYMENT LEVELS IN THE NEXT SIX MONTHS:

Recent years have shown that Poland has become a country conducive to the development of business service centres, and the city of Łódź is one of the most attractive investment areas in Poland.



Source: Employers' Plans: results of the 35th edition of the Randstad Research Institute and TNS Polska survey, August 2017

New investors come to the region looking for employees, with the most commonly offered posts being those in accounting, logistics and customer service. Employment in these sectors of modern business services is increasing and it is estimated that the number of workplaces in business centres in Poland will exceed 300,000 in 2020 (ABSL 2017).
Posts in financial control, financial analysis, process improvement and tax are being offered more and more often. The development of business service centres in Łódź has led to growing demand for bilingual employees and English has become mandatory for many posts. It is desirable to also offer another language, with German being most common after English.
It is interesting that salaries also vary in terms of language skills. The highest wages can be negotiated by employees who are fluent in speaking and writing more than two foreign languages.
Łódź is one of the largest academic centres in Poland: there are approximately 85,000 students at the 20 colleges in the city, with the most popular being the University of Łódź, Łódź University of Technology, the University of Social Sciences, Łódź Film School, Medical University and Academy of Art.

STUDENTS AT LANGUAGE, BUSINESS AND ADMINISTRATION, IT AND TECHNICAL FACULTIES IN ŁÓDŹ (2016/2017):

Degree courses	Students
Business and administration	**18,400**
Technical-engineering	**7,300**
IT technologies*	**6,300**
Languages	**4,200**

Source: Central Statistical Office, 2017

One should note that 43% of the students in Łódź areat faculties improving competencies useful for working in shared service centres (business and administration, technical-engineering, IT technologies, languages).
The residents of Łódź rate the local employers in this sector positively, recognising the potential for their own professional development. It appears that not only remuneration is attractive, but also the actions taken by companies which are related to motivation programs or other additional non-payroll benefits, such as lunch vouchers, reimbursement of commuting costs and summer vacations for employees and their families.

*including a subgroup of interdisciplinary qualification programs covering information and communication technologies

AVERAGE SALARIES IN BPO/SSC SECTOR: EUR PER ANNUM (TWO TO THREE YEARS' EXPERIENCE, ENGLISH AT B2/C1 LEVEL)

	Łódź
F&A: Accounting	14,000
F&A: Planning / financial control /reporting	16,000
Banking: Fund Accounting	13,000
Banking: AML/KYC	11,000
Banking: Analysis (Product Control, Reporting, Business Analysis)	15,000
Customer Service	11,000
HR: Payroll	15,000
HR: Admin & reporting	11,000
Procurement	15,000
IT: Service desk	11,000
IT: Software development	27,000
IT: Infrastructure management	20,000

Source: Randstad, 2017

EASE OF FINDING TALENT (WITHIN THREE MONTHS)

	10	**20**	**50**
F&A: Accounting	easy	easy	easy
F&A: Planning / control / reporting	easy	medium	challenging
Banking: Fund Accounting	easy	medium	medium
Banking: AML/KYC	easy	medium	challenging
Banking: Analysis (Product Control, Reporting, Business Analysis)	easy	medium	challenging
Customer Service	easy	easy	easy
HR: Payroll	easy	medium	challenging
HR: Admin & reporting	easy	medium	challenging
Procurement	easy	medium	challenging
IT: service desk	easy	medium	challenging
IT: software development	easy	medium	challenging
IT: infrastructure management	easy	medium	challenging

Source: Randstad, 2017 easy medium challenging

SALARIES FOR SELECTED LOGISTICS AND LIGHT PRODUCTION POSITIONS IN THE ŁÓDŹ REGION

Position	**Production engineer/ Machine operator (unskilled)**	**Production engineer/ experienced machine operator (skilled)**	**Warehouse employee (licensed)**	**Warehouse employee (not licensed)**	**Packing/ Sorting employee**	**Foreman**
Minimum remuneration (gross hourly rate)	3,19 EUR	3,79 EUR	3,55 EUR	3,19 EUR	3,08 EUR	4,74 EUR
Most common remuneration (gross hourly rate)	3,32 EUR	4,03 EUR	3,91 EUR	3,32 EUR	3,32 EUR	5,69 EUR
Maximal remuneration (gross hourly rate)	3,79 EUR	4,98 EUR	4,27 EUR	3,55 EUR	3,44 EUR	7,11 EUR
Bonuses	Attendance bonus 0,24 - 0,47 EUR/ hour, bonuses: production, efficiency, quality: 5–15% of the base rate	Attendance bonus 0,24 - 0,47 EUR/ hour, bonuses: production, efficiency, quality: 5–15% of the base rate	Attendance bonus 0,24 - 0,47 EUR/ hour, bonuses: production, efficiency, quality: 5–15% of the base rate	Attendance bonus 23,70-71,09 EUR	Attendance bonus 23,70-71,09 EUR	Bonuses from 23,70- -236,97 EUR

Source: Randstad, 2017
1 EUR = 4,22 PLN (NBP, 13.12.2017)

Randstad Employer Brand Research 2017

Stressing or improving those elements is crucial for the employer's brand identity (EVP), as they have the strongest influence on their image.

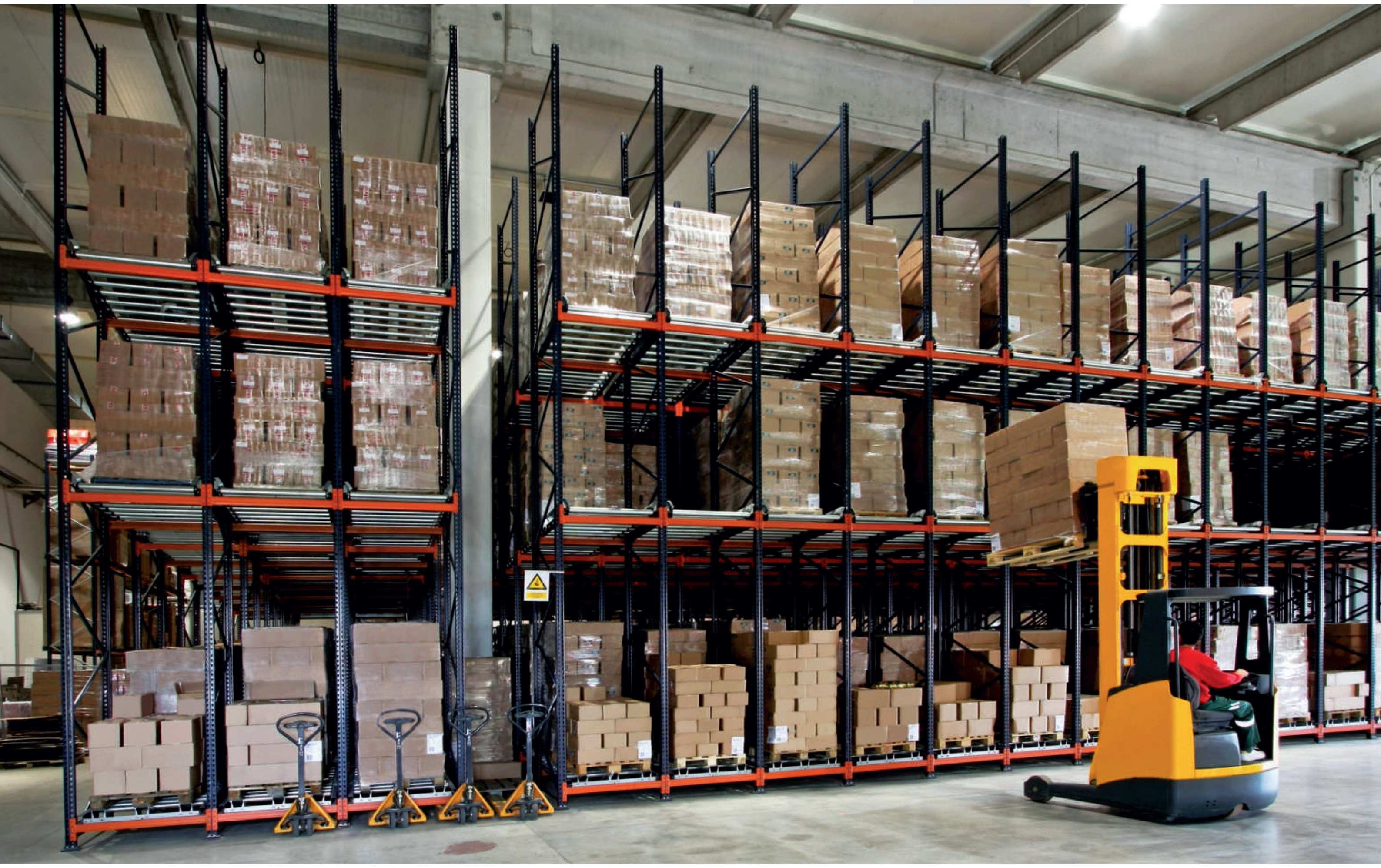
TOP FIVE FEATURES OF A PERFECT EMPLOYER:

- **salaries and benefits (77%)**
- **employment stability (57%)**
- **working atmosphere (52%)**
- **work-life balance (50%)**
- **professional development (44%)**

2016 was characterised by good indicators on the labour market. The unemployment rate is steadily decreasing and the number of investments in Poland is rising, which has resulted in the Polish market changing dynamically. The ability to manage employees' experiences is becoming a challenge for many companies. The Polish labour market is maturing, heading towards the concentration on the authentic needs and expectations of employees. The difficulty in recruiting the valuable people has led to companies competing by offering a wide range of non-payroll benefits. Employees are watching trends in the labour market and now expect more from their employer. The solution to the problem of attracting and retaining the most valued employees is the internalisation of common values. The companies which can accurately define their EVP (Employee Value Proposition) and reach out to the appropriate groups of people will win. For those companies the race for ever more attractive benefits and higher wages does not pose a threat.

However, this year's Randstad Employer Brand Research shows that the most desirable elements of employment are still salaries and benefits.

Having a satisfactory level of income, with an attractive benefits package, is an elementary need for employees. Other important features pointed out by employees are stable employment, a friendly atmosphere in the workplace, a balance between private life and work, and opportunities for further professional development.



INFRASTRUCTURE AND CONNECTIVITY

Łódź is located at the intersection of the two main Polish motorways: the A1 and the A2, which is a crossroads of the highest significance, with the routes leading from Western Europe to the east and from the Baltic Sea to the south of the continent. The motorways are also a part of Trans-European TEN-T network, included in Baltic-Adriatic and North Sea-Baltic corridors.

After the completion of the S8 expressway (in 2016), the city is now passed by three major routes. A connection will also soon be provided by the western bypass for Łódź (the S14), which will complete the ring-road around the city. Once all of the major motorways have been completed the accessibility of the city will be even better and the amount of transit traffic streaming through the city centre will be greatly reduced.

Rail connections are also being improved. Once the main reconstruction work on the railway tracks between Łódź and Warsaw had been completed, the travel time between the two cities was reduced to 60 minutes. Given its close proximity to Warsaw, Łódź has an excellent potential to become a significant office hub.

The Fabryczny railway station, which is located in the city centre, has recently undergone a major modernisation and extension. The multimodal terminal now offers access to a number of means of public transport such as railway, municipal transport and city bikes. The design included placing the railway tracks and platforms underground, anticipating the future construction of the diametric tunnel under the city, which is expected to be opened by 2022. The railway tunnel will connect a northern station (Łódź Żabieniec) and a southern station (Łódź Kaliska) with the Fabryczny railway station and feature the construction of two additional underground stations: Łódź Centrum and Łódź Manufaktura, serving local and regional trains. This development will provide very rapid and convenient access to the city centre from the main satellite towns of the agglomeration and from the more remote neighbourhoods of Łódź.

In addition, since 2013 Łódź has had a direct rail connection with Chengdu in China. The journey along this route of almost 10,000 km takes approximately 12 to 14 days and delivers freight from Poland to China and vice versa. It is an attractive alternative to sea freight, which takes approximately 45 days. Another advantage is fact that the railway ends in a large industrial area of China. This railway and the terminal located in Central Poland are a gateway for Chinese companies which want to invest in Poland and other European markets. It is expected that this connection will further improve Łódź's position as a key logistics hub of Europe.

The city centre is ten minutes away from the Reymont International Airport in Lublinek, which offers convenient links to many European cities, such as London, Dublin, East Midlands, Athens, etc, as well as to Burgas. In May 2012 the new Terminal III was opened, increasing the airport's annual capacity to approximately 2 million passengers. In 2016 the terminals served a total of 241,270 travellers and almost 6,600 tons of cargo freight; however, cargo operations were mostly of the RFS (Road Feeder Service) type. In addition, Chopin airport in Warsaw, which serves approximately 100 destinations, is only 90 minutes' drive away.

REVITALISATION PROGRAMS

In recent years Łódź, as a leader of revitalisation efforts among Polish and European cities, has introduced numerous programs which aim to revive the city, in particular entailing spatial, social and economic transformations. The main objective is improving the living conditions of the residents of Łódź. The changes focus not only on infrastructure, architecture and public spaces but also on the change of use of particular buildings and entire areas of the city. Post-industrial structures are being converted into flamboyant and thriving places dedicated to modern functions, such as offices, retail, residential and hospitality spaces.

The City has identified and marked out the key area of the city where most of changes will take place. The area covers more than 6% of Łódź and it is home to 23% of the city's population.

The city hall has also prepared various documents regarding revitalisation such as a local programme of revitalisation for the city of Łódź coherent with Integrated Development Strategy of Łódź 2020+. Programmes cover strategic objectives including those focused on urban fabric, architecture and Łódź's local identity.

Of the numerous revitalisation and refurbishment projects here the most noteworthy include the New Centre of Łódź (Nowe Centrum Łodzi), the City of Tenements (Mia100 Kamienic) and the Priest's Mill (Księży Młyn).

The New Centre of Łódź (Nowe Centrum Łodzi)

This urban transformation project of an unprecedented scale covers an area in the heart of the city centre adjacent to the recently modernised railway Łódź Fabryczna station. On completion it will provide new, top quality retail, office, and residential space combined with entertainment and education facilities as well as transportation. This is one of the most significant developments in Europe, making the city centre be more attractive and convenient for both local residents and visitors. The main idea for the plan initially included only two projects – the EC1 power plant and Łódź Fabryczna railway station – but it was later expanded to almost 100 hectares in the very heart of Łódź.

The new railway station is now one of Poland's largest and most modern. The railway tracks and platforms being put underground has opened new development. The station will become fully operational after the completion of the underground railway tunnel connecting other parts of the city with the downtown.

The EC1 former power plant has become a symbol of the project and one of Łódź's landmarks. With its specific post-industrial architecture combining a range of new uses, such as an interactive science centre, a cinema, a library and other cultural and artistic functions, it is now a centre of culture for locals and also tourist destination of national importance.

Other efforts are focused on refurbishing existing tenements and condensing the urban fibre in the city centre. Combining new roles, such as retail and office space for lease, the area will be turned into a major destination in the city.

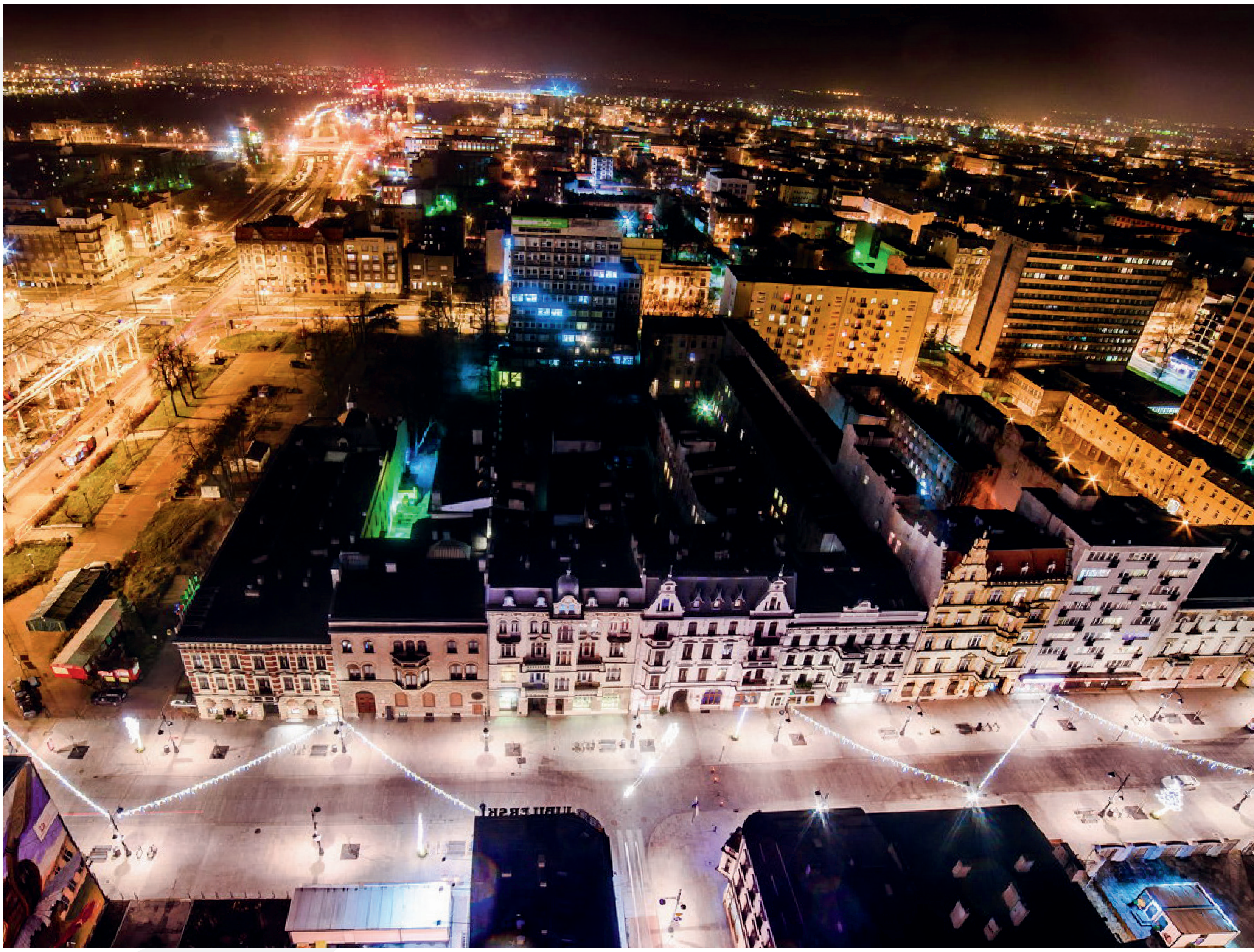
The City of Tenements (Mia100 Kamienic)

Łódź is famous for its fabulous and numerous palaces and tenements with their marvellous Art Novueau architecture; however, many of those were in a poor, often dilapidated, condition and in need of major refurbishment. The City of Tenements (Mia100 Kamienic) project was launched in 2011 and covered 100 tenements in the city centre. The main idea was raising the living standards of locals and improving the visual appeal of the main historic areas. The effects of the program have been significant, with many premises now adapted for commercial use and local inhabitants living in better conditions. In addition, air quality has been improved, as individual heating sources were replaced with municipal central heating.

The Priest's Mill (Księży Młyn)

This was the first integrated revitalisation project in Łódź. The former working-class quarter designed and developed by Karol Scheibler is now a destination for Łódź's residents as well as tourists, who are eager to see this modernised historical part of the city. The work has focused on refurbishment and modernisation of the existing historically valuable area and particular buildings, and featured the introduction of new uses therefor. The space around buildings is now developed in a consistent way, numerous ground-floor premises have been converted into retail units and many cultural destinations have been created.

EXPO 2022 "CITY RE:INVENTED" – POTENTIAL IMPACT



Łódź Piotrkowska Str. by night

Łódź shortlisted with two other cities, which have submitted competing bids to host a world-class event, the Expo 2022. Expos are among the world's largest and most famous exhibitions, and are focused on culture, technical and scientific achievements of the world's nations. They are held cyclically all over the world, promoting innovative ideas improving the lives of people and the natural environment.

Poland and Łódź, with a proposal themed City Re:Invented, was competing for Specialised Expo 2022 only with Minneapolis (United States) and Buenos Aires (Argentina). The proposed event's theme was focused on city revitalisation, something Łódź is justly famous for.

City RE:Invented is a program addressed to human vital needs and processes in changing post industrial cities. The idea is to share the great knowledge of revitalisation on both the theoretical and practical levels, as Łódź has a wealth of experience and a thick portfolio of such projects. One of the key aspects supporting the bid, in addition to state-of-the-art architecture and urban planning solutions, was the involvement of the local community in the entire process.

Łodź is an extraordinary place among European cities, one where the industrial urban fabric is being changed to suit new uses. Łódź also has rich architecture, as some 4,000 elegant tenement houses, 30 palaces and 300 post-industrial sites are located there.

THE REAL ESTATE MARKET

Supply	Stock	397,500 m²
	New completions (H1 2017)	33,700 m²
Demand	Gross Take-up (H1 2017)	29,700 m²
Vacancy	Vacancy rate	6.0%
Pipeline	Under construction	134,300 m²
Rents	Prime rents	11.5–13.2 (€ / m² / month)

Source: JLL, 2017

The office market in Łódź

Łódź is the seventh largest market in Poland in terms of office stock, with total supply in Łódź amounting to 397,500 m². The majority of that office space is located in the very centre of the city. Numerous office buildings, including Red Tower, Łódzkie Centrum Biznesu, Orion and Łódź 1, are situated along Piłsudskiego Street and Adama Mickiewicza Avenue. Another noteworthy area is along Kościuszki Street – the location of such significant developments as the Synergia office complex and University Business Park A&B. Currently there are almost 80 existing office buildings within the city limits.

Demand for office space in the city continues to be on a sound upwards trend. One recent year that saw particularly notable take-up was 2015, when transactions for 70,000 m² were signed. 2016 also proved to be successful for the city, with some 67,000 m² transacted on. During the first half of 2017 gross demand reached 29,700 m², with significant shares of renewals and pre-lets (52% and 26%, respectively). Thanks to such transaction volumes Łódź has become the fifth largest city in terms of new demand registered in regional markets excluding Warsaw.

SELECTED MAJOR TRANSACTIONS IN ŁÓDŹ IN 2016 – Q2 2017

Date	Building	Tenant	Type	Total Size (m²)
2017 Q2	Textorial Park	Fujitsu Technology Services	Renewal & Expansion	10,000
2016 Q4	University Business Park B	Ericsson	New deal	8,400
2016 Q1	Primulator	Primulator	Owner-occupier	7,300
2016 Q4	Nowa Fabryczna	Fujitsu Technology Solutions	Pre-let	6,300
2016 Q4	Nowa Fabryczna	Whirlpool	Pre-let	5,600
2016 Q4	Symetris Business Park II	Philips	Pre-let	5,600
2017 Q1	Nowa Fabryczna	McCormick	Pre-let	3,600
2017 Q1	Sterlinga Business Center	GFT Polska	Renewal	3,400

Source: JLL, 2017

The vacancy rate in Łódź is still following a descending trend. During the first half of 2017 further falls in the amount of empty space were observed. Currently the percentage of all space which is vacant is at the level of 6.0%, which is the lowest in any of the major office markets in Poland. Moreover, the vacancy rate in Łódź is expected to remain on its downward trajectory due to the remarkably well-let projects currently under construction. At present, the city has only 23,900 m² of immediately available office space.

The first half of 2017 proved to be successful on the new supply side, with almost 33,700 m² of modern space entering the market. The most significant completions in H1 2017 included Nowa Fabryczna A & B and Comarch HQ on Jaracza Street. Further developments planned for the remaining part of 2017 will together push that total to a record-breaking annual volume in Łódź of 83,800 m². Developer activity in Łódź is quite extensive, with some 135,000 m² being built in 13 developments. Four of those will each offer more than 18,000 m² of modern office space: Przystanek mBank (an owner-occupier project due for delivery in H2 2017), Ogrodowa Office Łódź (due in 2018), Brama Miasta Łódź I (2019) and Hi Piotrkowska 155 (2018). In addition to office projects built from scratch, developers, as part of the Łódź revitalisation program, are also working on modernisation initiatives involving post-industrial sites such as Monopolis, OFF Piotrkowska Center and Łódź.Work, to name just a few.

Monopolis is currently the largest ongoing renovation and revitalisation office project in the city. When completed, in 2020, it will not only offer A-class office space (23,400 m² in three buildings) but also a variety of services and amenities and a wide range of city-forming functions, including a multi-functional hall with a theatre, an urban art gallery, a vodka production museum, a library, a fitness centre, a swimming pool, a club for children, and a kindergarten. Open to the general public, Monopolis will offer a modern, flexible office space in extraordinary post-industrial surroundings.

Krzysztof Witkowski, President of the Board, Virako: *Currently the largest ongoing revitalisation in Łódź, Monopolis will, when completed, offer 23,400 m² of high quality office space developed in both existing historical buildings as well as two new sites. In total the project will offer nearly 2,500 comfortable workplaces of the highest standard. The office buildings will offer opportunities for flexible arrangement of these well-lit open-space office areas. Today an office building, no matter how modern, is not enough. So, in addition to offices, employees and visitors to Monopolis will have numerous amenities at their disposal, including restaurants, cafes, services points, green rooftop terraces, a museum of Monopol Wódczany's history, an art gallery, a theatre, a fitness centre with a swimming pool, a club for children, and a kindergarten. With its extensive functionality, Monopolis will answer tenants' changing expectations by providing bespoke spaces in historic surroundings. The site will also offer companies the opportunity to stand out from the competition by helping to create an important office location. The concept of Monopolis seamlessly blends in with the Nowe Centrum Łodzi project – it is both modern and multi-functional as well as being able to create a remarkable space for the residents of Łódź. That is because Monopolis, with its modern international design and technical standards, as well as its commercial and city-forming functions, will be open to the public. The location will perfectly encapsulate Łódź's character by respecting and promoting the location's history and architecture.*

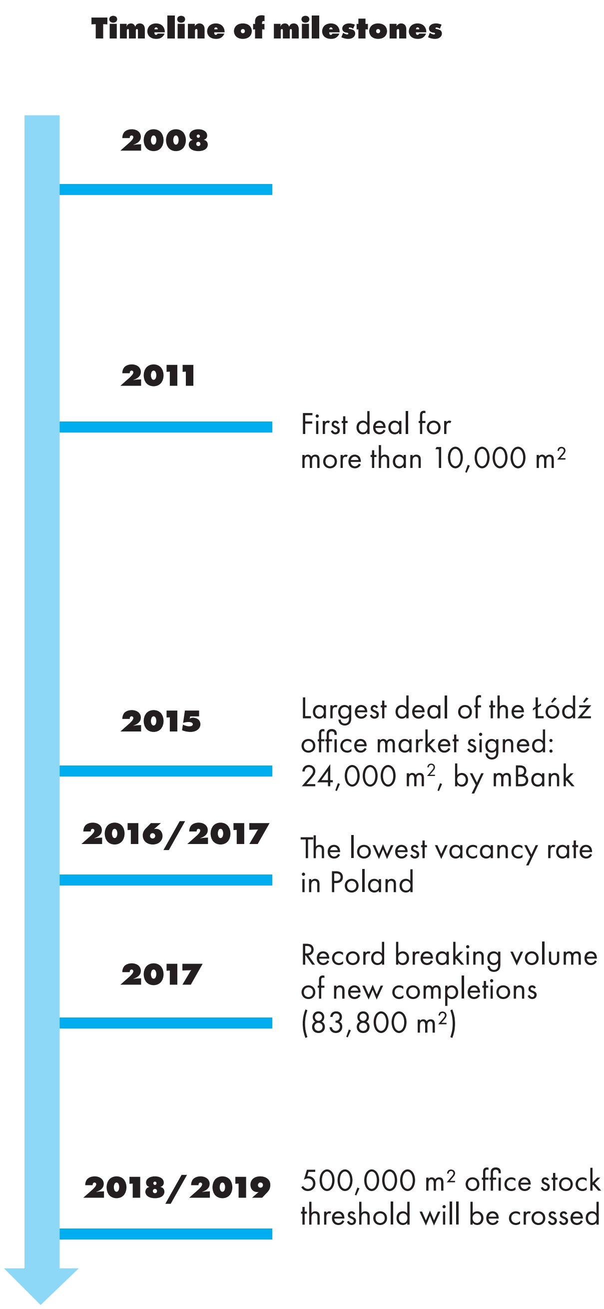
MAJOR OFFICE BUILDINGS IN ŁÓDŹ

Building	Completion year		Total Area (m²)	Vacancy
University Business Park	A	2010	37,400	6%
	B	2016		
Green Horizon	A	2012	29,800	1.5%
	B	2013		
Red Tower	2008		13,700	0%
Sterlinga Business Centre	2010		12,800	5%
Cross Point	A	2009	15,800	0%
	D	2017		
Textorial Park	2009		11,600	0.5%
Nowa Fabryczna	A&B	2017	19,400	2.4%

Source: JLL, 2017

Prime headline rents in Łódź were under downwards pressure from 2009 to 2012; however, over the last two years they have remained relatively stable, with small corrections of the upper rental band. Currently they range from €11.50 to €13.20 / m² / month, with average rents standing at €12.20 / m² / month. Prime rents in Łódź can be compared to those in Lublin or Szczecin, two cities that offer the lowest rental levels among the main regional office markets in Poland.

FIRST OFFICE BUILDING WITH MORE THAN 10,000 M²



Source: JLL, 2017

The logistics market in Central Poland

Central Poland, with a total modern industrial stock of 1.68 million m^2, is the fourth largest market in Poland (after Warsaw, Upper Silesia and Poznań).
Almost 28% of the existing stock is located within Łódź city limits, making the city the second most popular subzone in the region. The largest amount of regional stock in any subzone (37%) is located in the vicinity of Stryków, north-east of Łódź, at the intersection of two main motorways, the A1 and the A2. Another popular warehousing location in the Central Poland market is Piotrków Trybunalski, some 50 km south of Łódź (with 23% of the existing stock).
Central Poland is maintaining its upwards trend in terms of take-up; with more than 390,000 m^2 leased in first half of 2017 in new deals and tenant expansions, it was the leader among Poland's industrial markets in that period. The average annual net take-up in Central Poland from 2012 to 2016 is slightly above 180,000 m^2, with an additional 120,000 m^2 per annum signed as renewals in that period.
The cities of Łódź and Stryków are the most popular subzones among new tenants, as almost 70% of space in the region leased in new deals and extensions during past five years is located there.
Central Poland is the perfect location for central warehouses of companies handling countrywide distribution. The three most active sectors in Central Poland warehouse market are retail, logistics and light manufacturing, which have together accounted for in excess of 80% of net take-up since 2012. The all-time leaders are 3PL companies, which in recent years have been over-taken by retailers (including the e-commerce sector).
The vacancy rate in Central Poland is gradually falling and at the end of H1 2017 it stood at 2.6%, which is the lowest among the major markets in Poland.

<table>
<tr><td rowspan="2">Supply</td><td>Warehouse stock</td><td colspan="2">1,685,000 m²</td></tr>
<tr><td>New completions (H1 2017)</td><td colspan="2">128,000 m²</td></tr>
<tr><td>Demand</td><td>Net take-up (H1 2017)</td><td colspan="2">392,000 m²</td></tr>
<tr><td>Vacancy</td><td>Vacancy Rate</td><td colspan="2">2.6%</td></tr>
<tr><td>Pipeline</td><td>Under construction warehouse stock</td><td colspan="2">206,000 m²</td></tr>
<tr><td rowspan="2">Rents</td><td rowspan="2">Prime effective rent</td><td>Łódź Big Box + SBU</td><td>2.70 – 3.70 (€ / m² / month)</td></tr>
<tr><td>Central Poland Big Box</td><td>2.00 – 2.80 (€ / m² / month)</td></tr>
</table>

Source: JLL, 2017

The existing stock within Łódź city limits was fully leased at the end of June, with no available space for tenants.
Rents in Central Poland are amongst Poland's lowest, with space in big box facilities offered for 2.60 – 3.20 € / m^2 / month. Comparable, but higher, rents are seen in the other largest markets, such as Warsaw Suburbs, Upper Silesia, Poznań and Wrocław. However, projects located within the city limits of Łódź are offered with in slightly higher rental bands: 3.40 – 3.90 € / m^2 / month. The above figures do not include incentives from landlords and should be treated as bases for negotiations (i.e. headline rents).
Almost 60% of existing stock is in the hands of only four developers: Logicor, Segro, Prologis and Panattoni (in descending order of market share). However, more that 75% of the space currently under construction is being developed by Panattoni, which may take the lead in the near future.

SELECTED MAJOR TRANSACTION IN CENTRAL POLAND IN 2016 – Q2 2017

Period	Subregion	Park	Area (m^2)	Tenant	Sector	Type of a deal
2017 Q2	Stryków	Panattoni Park Stryków	101,700	Castorama	Retailer	New deal
2017 Q1	Łódź (city)	Panattoni Park Łódź East II	79,000	BSH	Light manufacturing	New deal
2017 Q2	Piotrków Trybunalski	P3 Piotrków	55,800	Kuehne & Nagel	Logistics operator	New deal
2017 Q2	Łódź (city)	Panattoni BTS Łódź	50,700	OBI	Retailer	New deal
2016 Q2	Piotrków Trybunalski	Prologis Park Piotrków II	42,900	Agata Meble	Retailer	New deal
2017 Q2	Stryków	Segro Logistics Park Stryków	30,400	Arvato	Logistics operator	New deal
2017 Q2	Stryków	Hillwood Stryków	28,900	Spedimex	Logistics operator	Renewal
2016 Q2	Stryków	Prologis Park Stryków	22,300	Arvato	Logistics operator	New deal

Source: JLL, 2017

MAJOR PARKS IN CENTRAL POLAND

Property	Subregion	Area (m²)	Landlord
SEGRO Logistics Park Stryków	Stryków	196,600	SEGRO & JV partners
Logistic City	Piotrków Trybunalski	136,000	Emerson
Logicor Stryków	Stryków	101,500	Logicor
Prologis Park Piotrków	Piotrków Trybunalski	101,100	Prologis & JV partners
P3 Piotrków	Piotrków Trybunalski	90,100	P3/GIC
Panattoni Park Stryków II	Stryków	87,000	PZU
Panattoni Park Łódź East	Łódź (city)	84,700	PZU

Source: JLL, 2017

Timeline of milestones

2004 First 100,000 m² of total stock

2007 First park with more than 100,000 m² of existing area (Segro Logistics Park Stryków)

2013 First 1 million m² of total industrial stock

2017 First new deal for more than 100,000 m²

2020 2 million m² of total stock

Source: JLL, 2017

The retail market in Łódź

Supply	Shopping centres	527,000 m² of GLA
	Stand-alone retail warehouses	97,000 m² of GLA
	Outlet centres	16,000 m² of GLA
	Retail parks	6,000 m² of GLA
Vacancy	Vacancy rate	5.0%
Rents	Prime rents	50-55 (€ / m² / month)

Source: JLL, 2017

In September 2017 modern retail stock in the Łódź[2] agglomeration totalled 646,000 m² and was dominated by the shopping centre format. Size-wise that format accounts for 82% of the market of large-scale properties (with GLA in excess of 5,000 m²).

In terms of market saturation, with 546 m² of shopping centre space per 1,000 residents Łódź is the third densest of Poland's major agglomerations. The city ranks ahead of the Tri-City, Kraków, Warsaw, Katowice and Szczecin agglomerations, with only Poznań and Wrocław having higher retail densities. The second important factor influencing the retail market here is purchasing power. With €7,215 per capita per year, the Łódź agglomeration is still the least affluent market of the eight major agglomerations in Poland, although that figure is 11% higher than the national average (€6,523). Currently, there are 14 shopping centres (defined as schemes in excess of 5,000 m² of GLA with more than ten units in an adjacent shopping mall) trading in the Łódź agglomeration; together they offer a total of 527,000 m² of GLA. Importantly, the two largest Polish shopping centres are found in Łódź: the famous Manufaktura (110,000 m² of GLA) and Port Łódź (104,000 m² of GLA).

MAJOR SHOPPING CENTRES IN THE ŁÓDŹ AGGLOMERATION

Shopping centre	Opening date	Area (m²)	Developer
Manufaktura	2006	110,000	Apsys
Port Łódź	2009 Extension in 2010	104,000	Inter IKEA
Galeria Łódzka	2002 Extension in 2008	45,000	ECE
Sukcesja	2015	44,000	Fabryka Biznesu
Pasaż Łódzki	2000 Extension in 2010 and 2011	37,000	DT Casino
M1	1999	36,500	Metro Group
Tulipan	1999	32,000	DT Casino

Source: JLL, 2017

[2] Łódź agglomeration includes: Łódź, Pabianice, Konstantynów Łódzki, Ksawerów, Andrespol, Brojce, Nowosolna, Rzgów, Zgierz, Ozorków Miasto, Stryków and Aleksandrów Łódzki.

In September 2017 no new shopping centres were under construction or at an advanced stage of planning. In the mid-term perspective, however, we may expect some modernisations and extensions of existing retail schemes.
The ongoing regeneration projects in Łódź, such as Nowe Centrum Łodzi and Monopolis, will transform many currently run-down parts of the city, thus expanding the functional borders of the city centre. Also, the construction of an underground railway tunnel, crossing the city centre and connecting the Fabryczny and Kaliski railway stations, has already been announced, with two new underground stations planned along its route: Łódź Centrum and Manufaktura.
Compared to other European countries, such as the UK, Italy, France, Spain and Germany, and even the Czech Republic and Hungary, Poland has patchy retail thoroughfares, but ones with definite growth potential. Retailing in the city centre of Łódź has traditionally been focused on Piotrkowska Street, which is the longest street in the city, with numerous tenement houses dating back to the 19th and early 20th centuries. This 4.2 km-long thoroughfare is the city's main landmark and tourist destination. The recent renovation of the street, which involved the complete pedestrianisation of its main stretch, has led to vacant units being filled mostly by gastronomic ventures.
New dining and entertainment zones have emerged near Piotrkowska (such as OFF Piotrkowska, Piotrkowska 217, Pasaż Schillera and Plac Komuny Paryskiej square).

Initially as an experiment, 6 Sierpnia Street was turned into a pedestrian-friendly Woonerf: a street with calmed vehicular traffic. The outcome exceeded all expectations and the new public space was very much welcomed by locals and the idea will now be replicated on a number of other streets intersecting Piotrkowska Street.
Shopping centre prime rents in Łódź, defined as rents for a 100 m² unit for a fashion and accessories sector tenant in the best shopping centres in the market, are at the level of €50 to €55 / m² / month. It has to be underlined, however, that such high rents refer to prime pitch areas of only a small number of the best performing shopping centres in a city. Rents recorded in the other, non-prime, centres are significantly below those amounts.
In terms of vacant space, Łódź ranks in the middle of Poland's eight major agglomerations with a 5% vacancy rate in shopping centres (excluding retail parks and outlet centres) at the end of H1 2017 .

Timeline of milestones

1997 – The first shopping centre in Łódź (CH Guliwer) opens

2006 – The biggest shopping centre in Poland (Manufaktura) opens in Łódź

2009 – The Ikea store in Łódź opens (the second largest shopping centre in Poland)

2012 – The first outlet centre (Ptak Outlet) opens in Rzgów (in the Łódź agglomeration)

2015 – The most recent opening of a shopping centre in Łódź (Sukcesja)

Source: JLL, 2017

After hours

The last decade has brought big changes for Łódź resulting from the investment booms both in the city and in the private sector here.

The ground zero from which one can chart the comeback of Łódź as a trend-setter was the successful renovation of Piotrkowska Street (in 2014), which is the heart of Łódź, and the participatory budgeting which gave the residents of Łódź the chance to change their nearest neighbourhood. Compared to Warsaw or the Tri-City, Łódź is not an easy or obvious city when it comes to finding ways to spend one's free time. A little bit of effort, however, guarantees a positive surprise.

For a few years now Łódź has been investing in its cultural options. And as a result of that festivals with a brand that is recognisable and appreciated Europe-wide are waiting for enthusiasts of major events. The key event on the cultural and entertainment calendar of the city is Light. Move.Festival, which this alone year offered more than 50 different mappings, illuminations, light shows, and music events in the very heart of Łódź. Every year more than half a million people come to Łódź specifically for this event. Lodz Design Festival, Photofestival and the Festival of Comics and Games are among the other popular brands in Poland which have built their own loyal groups of fans. For lovers of music concerts by such stars as Depeche Mode, Florence and the Machine, and Rod Steward are held at the Łódź Atlas Arena, and, for the more discerning listener, the city offers Soundedit (the International Festival of Music Producers) and Domoffon held in OFF Piotrkowska – one of the most popular meeting places for the young generation.

Several dozen cultural institutions are to be found in Łódź, including a dynamically extended and revitalised CHP plant – EC1 Miasto Kultury – which, in the nearest future, will be the place where the ultra-modern Centre of Science and Technology and the Centre of Comics are to open, and where the premiere of the "Leonardo da Vinci – Energy of Mind" exhibition will take place.

When it comes to sports in Łódź there is now a continuously extending and modernising sports and recreational infrastructure. Options include swimming pools (Aquapark, Zatoka Sportu, Wodny Raj and the swimming pool at Sobolowa), newly built bike lanes and jogging paths in Stawy Jana, and a ropes course in Arturówek. One can move between all of the attractions either by Łódź City Bikes or other public transport, with the option of paying for the number of stops passed (the first system of this type in Poland has been being tested in Łódź since the summer of this year).

In the evenings, a must-visit location is Piotrkowska Street, which is characterised by pavement cafés and fashionable restaurants, as well as two places particularly trendy among the young generation and visitors: OFF Piotrkowska and Piotrkowska 217.

For those who are fond of peace and quiet, Łódź offers walks in dozens of parks, which are experiencing an absolute revolution thanks to comprehensive redevelopment. These parks, which were mainly built by factory owners, delight the eye and soul with their unique climate of 19th-century Łódź, surrounding revitalised factories which have now regained their brilliance and serve new purposes.

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Łódź 2017