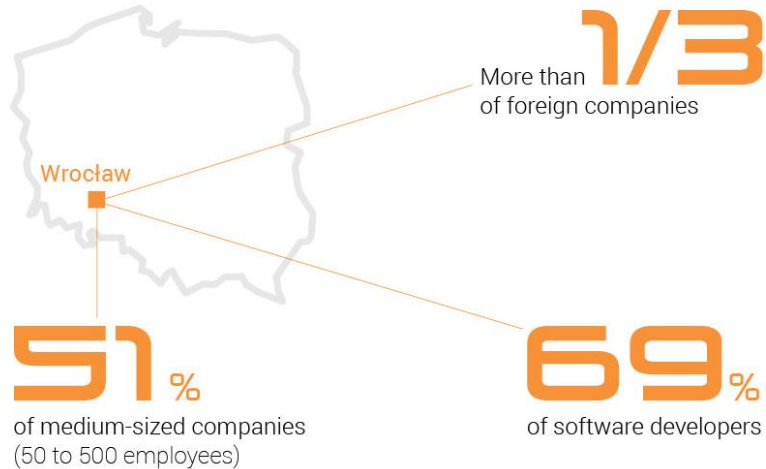# IT Industry & Education in Wroclaw

WROCLAW
- A FAVOURABLE CLIMATE FOR IT

Wroclaw – the leading IT technology hub in Poland

More than 1/3 of foreign companies

Wrocław

51% of medium-sized companies (50 to 500 employees)

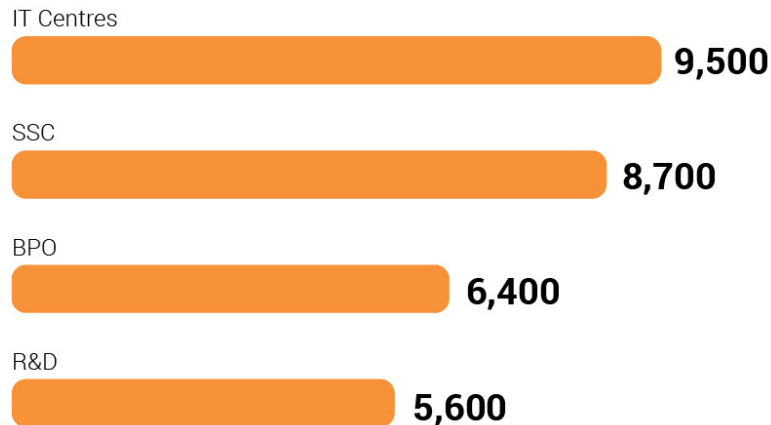**69%** of software developers

According to our estimate the size of the IT sector in Wroclaw amounts:

+ 200 companies

+ 20 000 professionals

BPO/SSC/ITO companies are the largest contributors in terms of employment

IT Centres
9,500

SSC
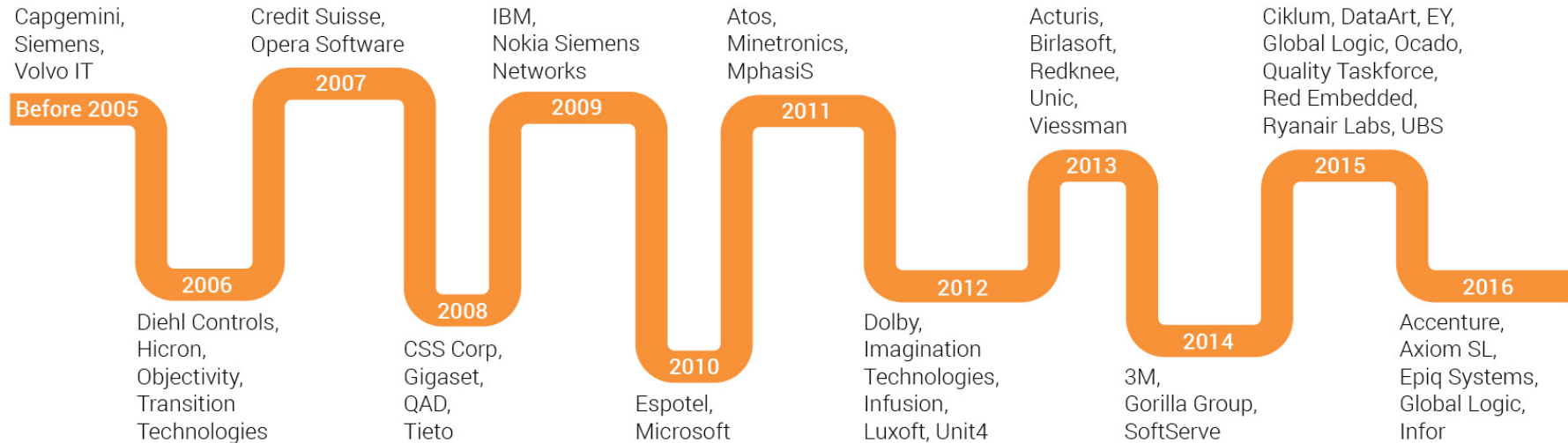**8,700**

BPO
6,400

R&D
5,600

Business Services Sector in Poland 2016. Gaining Momentum – PAIIZ

Over 80% of the R&D aggregation are IT companies

Dynamic IT ecosystem of foreign and Polish players

Major foreign investments in the IT sector in Wrocław in subsequent years

Before 2005
Capgemini, Siemens, Volvo IT

2006
Diehl Controls, Hicron, Objectivity, Transition Technologies

2007
Credit Suisse, Opera Software

2008
CSS Corp, Gigaset, QAD, Tieto

2009
IBM, Nokia Siemens Networks

2010
Espotel, Microsoft

2011
Atos, Minetronics, MphasiS

2012
Dolby, Imagination Technologies, Infusion, Luxoft, Unit4

2013
Acturis, Birlasoft, Redknee, Unic, Viessman

2014
3M, Gorilla Group, SoftServe

2015
Ciklum, DataArt, EY, Global Logic, Ocado, Quality Taskforce, Red Embedded, Ryanair Labs, UBS

2016
Accenture, Axiom SL, Epiq Systems, Global Logic, Infor

Selected IT companies, which were created or launched major operations in Wroclaw

2001-2010 SMT Software, Hicron, PGS Software, REC Global, Fingo, Sente, Techland, LiveChat

After 2011 Ten Square Games, ToopLoox, Droids On Roids, Brand24, PiLab, Monterail, Mirumee, Appformation

Selected IT companies in Wroclaw

- **Large companies (250+)**

Atos, IBM, Nokia, Capgemini, Objectivity, Unit4, Global Logic, Luxoft, Sii, SMT Software, Hicron, Tieto.

- **Medium companies (50-250)**

Acturis, Axit, Better Software Group, BLStream, Ceneo, Comarch, CSS Corp, DataArt, Diehl Controls, Divante, Dolby, Enabledware, Rinf, Espotel, Fingo, Gigaset, Grupa Unity, Imagination Technologies, Indata, Infor, InSert, IT Kontrakt, Livechat, Logitrans, Minetronics, Mphasis, NBC, Neurosoft, Ocado, Opera Software, PGS Software, Pilab, QAD, Redknee, RightHello, RST, Ryanair Labs, Sente, Silicon &Software Systems, SoftServe, Sygnity, Talex, Techland, Ten Square Games, Tequila Mobile, Tooploox, Transition Technologies, Viessman, Vulcan, Yuma.

- **Other IT companies**

Accessto, Agile Force, All Mobile, Anixe, Appformation, Arkency, Astek Polska, Brand24, BrighOne, BTech, Callstack.io, CCA, Cogniance, Dook Pro, Droids on Roids, EARP, Empirica, Fast White Cat, Fream, Fun Media, Geosoft, GISPartner, Gorilla Group, Grinn, Huzar Infusion, Inteca, Intenso, ITMation, look4IT, Minetronics, Mirumee Software, Mobile Vikings, Mok Yok IT, Monterail, MT Silesia, Naturaily, Neurosys, Nomtek, Ocado, Picadilla, Quality TaskForce, RatioWeb, Red Embedded, Red Sky, Ringo Sagiton, Satlan, Sienn, Soflab, Sofomo, Software, Solsoft, Solutions, Stemedia, STX Next, Testuj.pl, Trapeze Poland, Vratis, Wilabs, Zone IT.

- **Companies from other sectors with significant IT activity, located in Wroclaw**

3M, AB, BZ WBK / Santander, Catlin XL, Credit Agricole, Credit Suisse, Eurobank, Europejski Fundusz Leasingowy, EY, Getin Noble Bank, Impel, Kaufland, KRD Economic Information Bureau, Kruk, Netia, PPG, Qiagen, Synexus, TelForce One, UBS, Ultimo, Volvo IT.
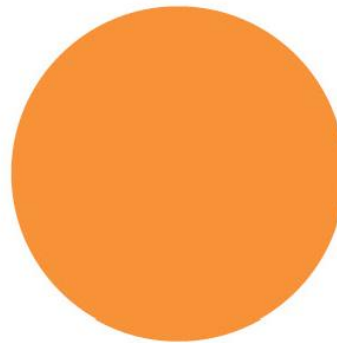
Leading academic center in Poland

WROCLAW

124,440 students in total

9 universities educating students in Wrocław for the needs of IT companies

32,328 graduates

34,831 students of exact sciences (technology, industry)

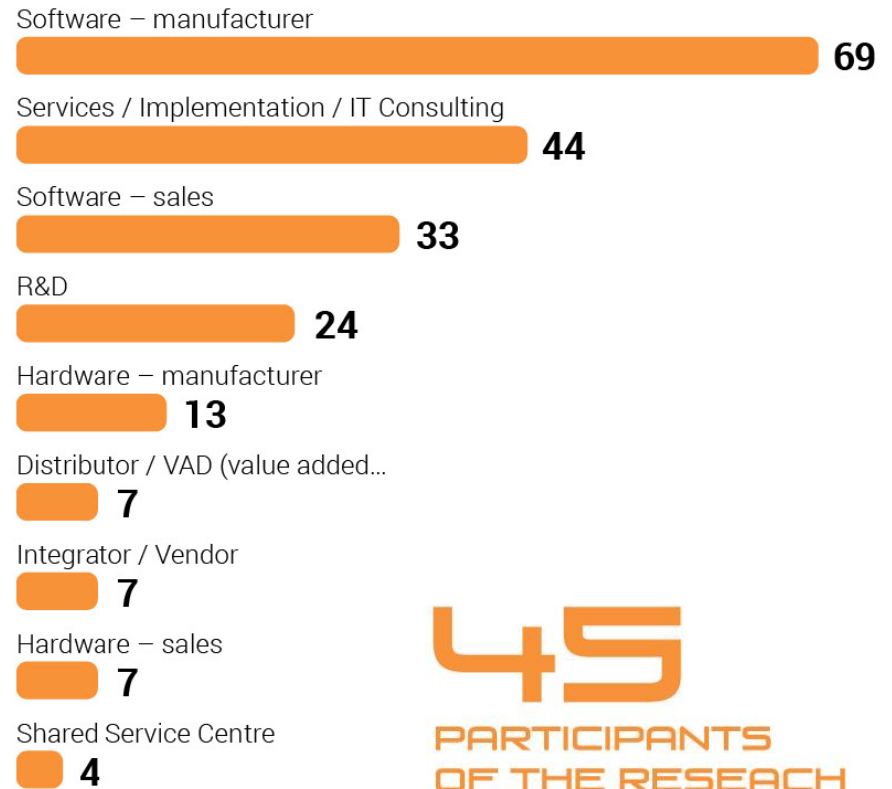| computer science students	students in related fields	computer science graduates	graduates in related fields
7,819	6,668	1,224	1,300

FROM THE PERSPECTIVE OF IT
COMPANIES.
RESEARCH RESULTS

Wroclaw's IT companies
- who are they, what do they do?

31% foreign companies

62% companies of Polish origin

no data

7% ORGANIZATION WITH ABOVE **1000** EMPLOYEES

15% ORGANIZATION WITH ABOVE **500** EMPLOYEES

MORE THEN **50**% MEDIUM SIZE ORGANIZATION (50-499 EMPLOYEES)

Business profile (%)

Software − manufacturer
69

Services / Implementation / IT Consulting
44

Software − sales
33

R&D
24

Hardware − manufacturer
13

Distributor / VAD (value added...
7

Integrator / Vendor
7

Hardware − sales
7

Shared Service Centre
4

45 PARTICIPANTS OF THE RESEACH

The most desirable specialist competencies (%)

Competency	%
Programming	93
Project management	82
Analytics	71
Testing	71
Databases	60
Security	38
Administration	33
Modelling	29
Virtualisation	27
Signal processing	11
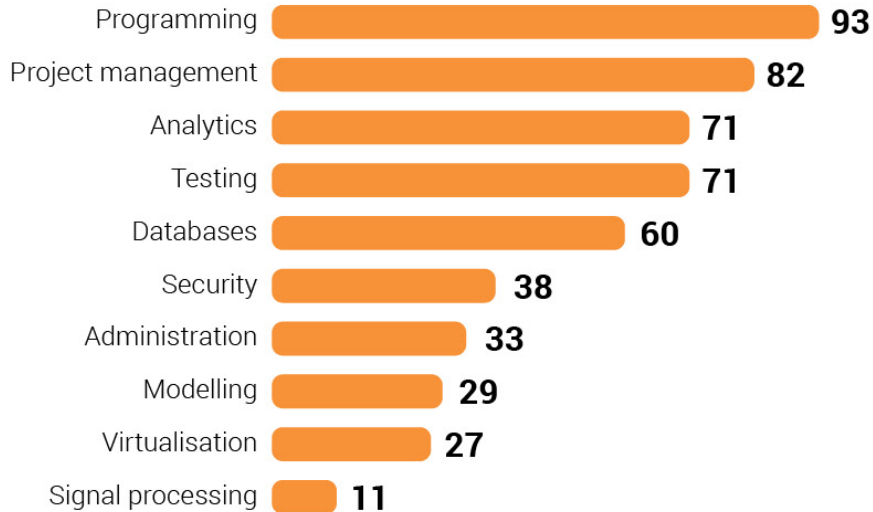
The desired programming languages (%)

Language	%
Java	73
Java Script	58
SQL	56
.NET	47
PHP	42
C++	42
C#	40
Python	31
Visual Studio	20
Ruby on Rails	16
C	11
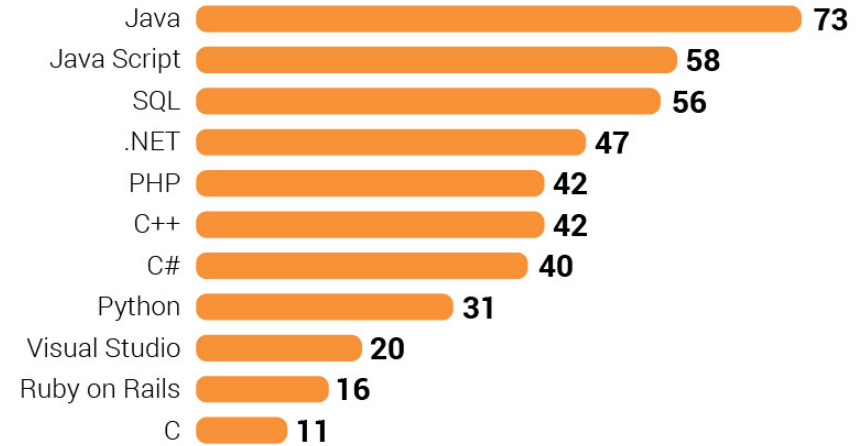
The most desirable certifications of software manufacturers (%)

Microsoft	Oracle	Vmware	Cisco (CCNA etc.)	Linux	SAP	IBM	Red Hat
36	29	24	20	20	16	11	11
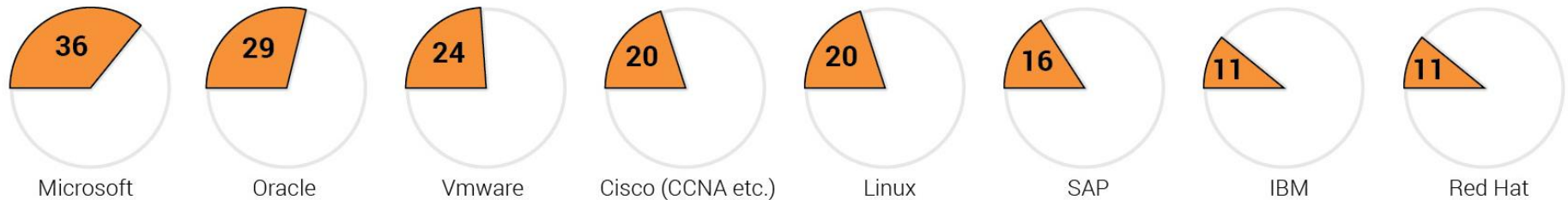
Profile of the sought candidate

The desired certifications in administration/security (%)

ITIL/IT SM
24

CCNA (Cisco Certified Network Administrator)
16

MCSA (Microsoft Certified Solutions Associate)
11

CISM (Certified Information Security Manager)
11

RHCA (Redhat Certified Administrator)
11

CISSP (Certified Information Systems Security Professional)
9

we do not require certification
64

no data
2
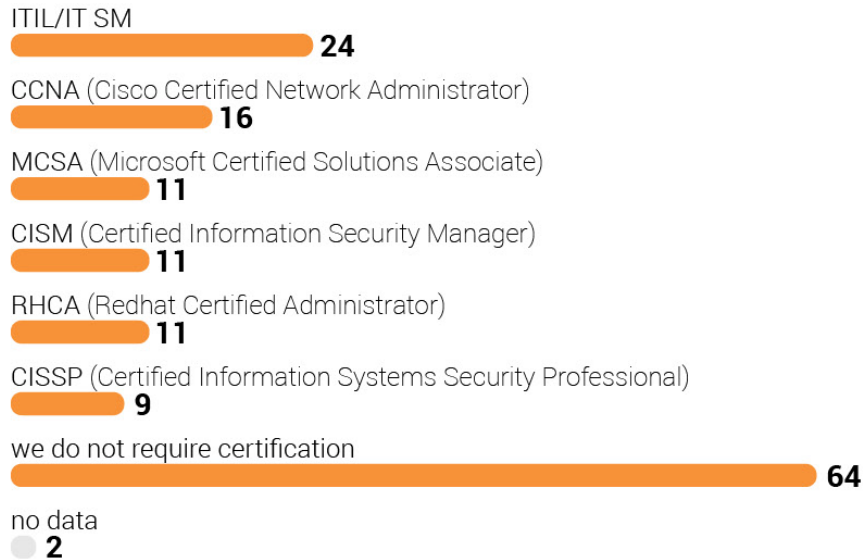
The desired certifications in project management (%)

Agile Project Management
49

Scrum (e.g. SMC – Scrum master certified)
49

PMI/PMP (Project Management Professional)
42

Prince 2
29

ITIL
2

we do not require certification
44

Profile of the sought candidate
- modelling/ analysing/ testing
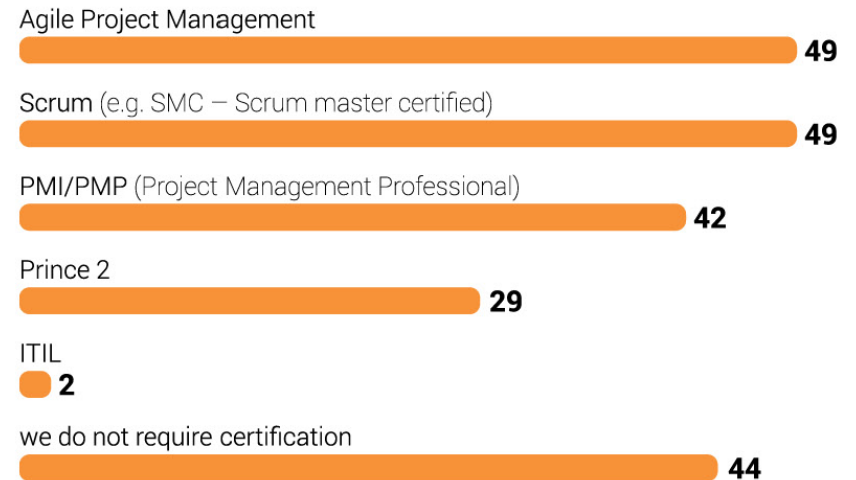
The desired certifications in the field of modelling / analysis / testing (%)

ISTQB (International Software Testing Qualifications Board)
42

UML
20
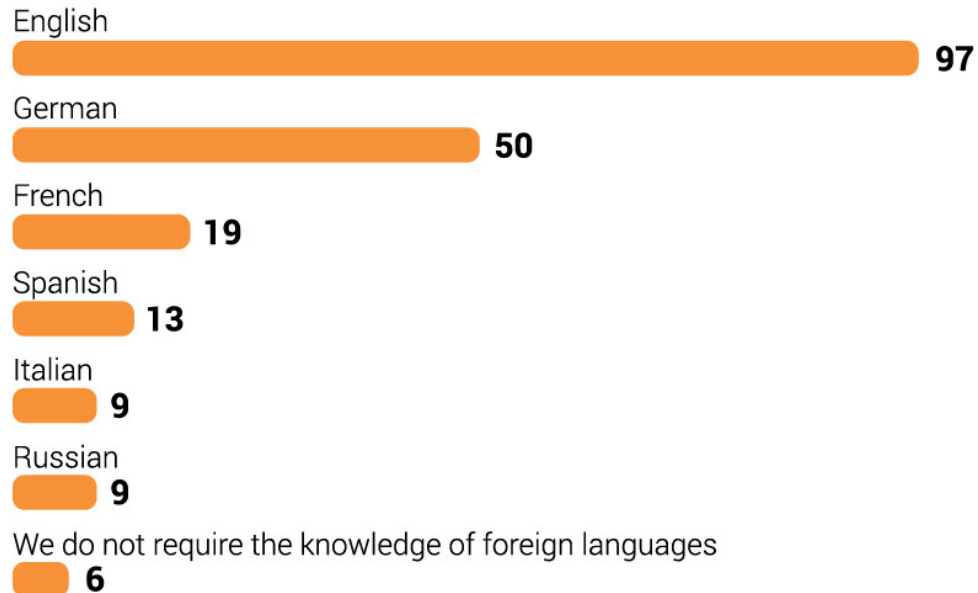
IIBA (e.g. CCBA – Certification of Competency in Business Analysis)
13

we do not require certification
51

The expected level of knowledge of foreign languages (%)

Language	%
English	97
German	50
French	19
Spanish	13
Italian	9
Russian	9
We do not require the knowledge of foreign languages	6

78%

EMPLOYERS REQUIRE KNOWLEDGE OF THE ENGLISH AT THE ADVANCED LEVEL (B2 OR C1)

Other expected competences

- sales
- action oriented on quantifiable effects
- programming experience
- statistical planning
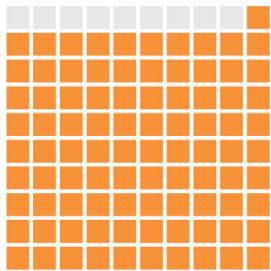- basics of higher mathematics
- basic understanding of the mobile market
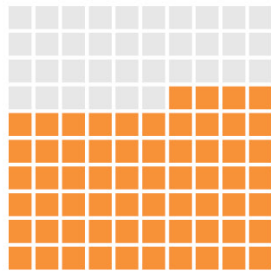- busieness analysis with knowledge of investment banking
- soft skills (communication skills, flexibility, ability to work in a group)
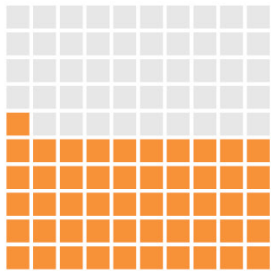
The level of atractiveness of the offer

The type of contract offered to employees by IT companies

91%
of companies offer a contract of employment

64%
offer the possibility of running a sole proprietorship

51%
of companies offer work-for-hire agreements

49%
of companies offer contracts for specific task

Infrastructure (PLN)

Average salary for the entire sample

Average salary (min–max)

	Junior specialist (<3 years exp.)	Specialist (>3 years exp.)	Manager (Team Leader, First Line Manager)	Director (Middle / High Level Manager)
max	6,000	8,100	13,500	19,000
avg	**4,675**	**6,525**	**9,925**	**12,867**
min	2,200	3,000	4,200	6,600
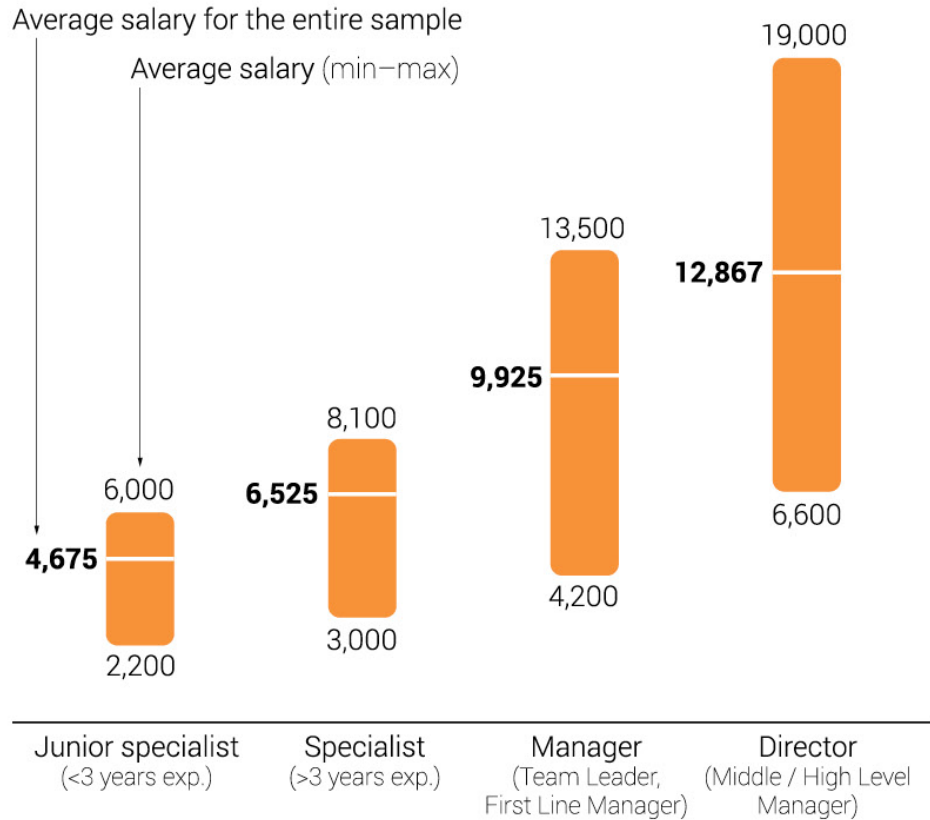
Salaries

Software development (PLN)

Average salary for the entire sample

Average salary (min–max)

	Junior specialist (<3 years exp.)	Specialist (>3 years exp.)	Manager (Team Leader, First Line Manager)	Director (Middle / High Level Manager)
Max	8,000	13,000	16,000	30,000
Average	**5,333**	**8,564**	**11,617**	**17,811**
Min	3,000	5,000	6,500	7,000
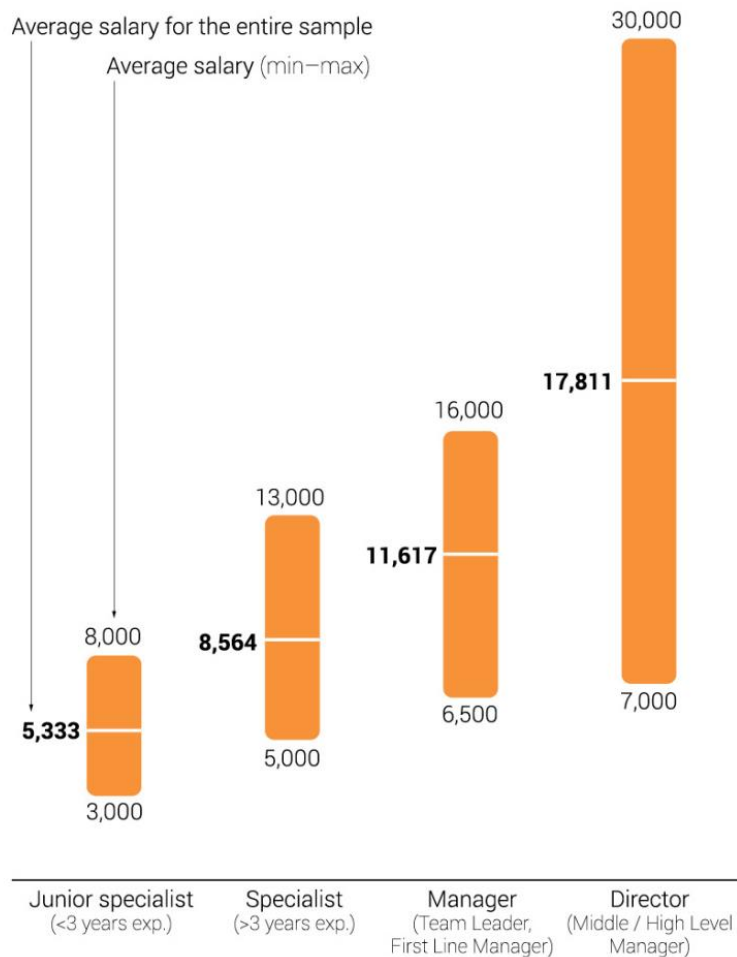
Business applications (PLN)

Average salary for the entire sample

Average salary (min–max)

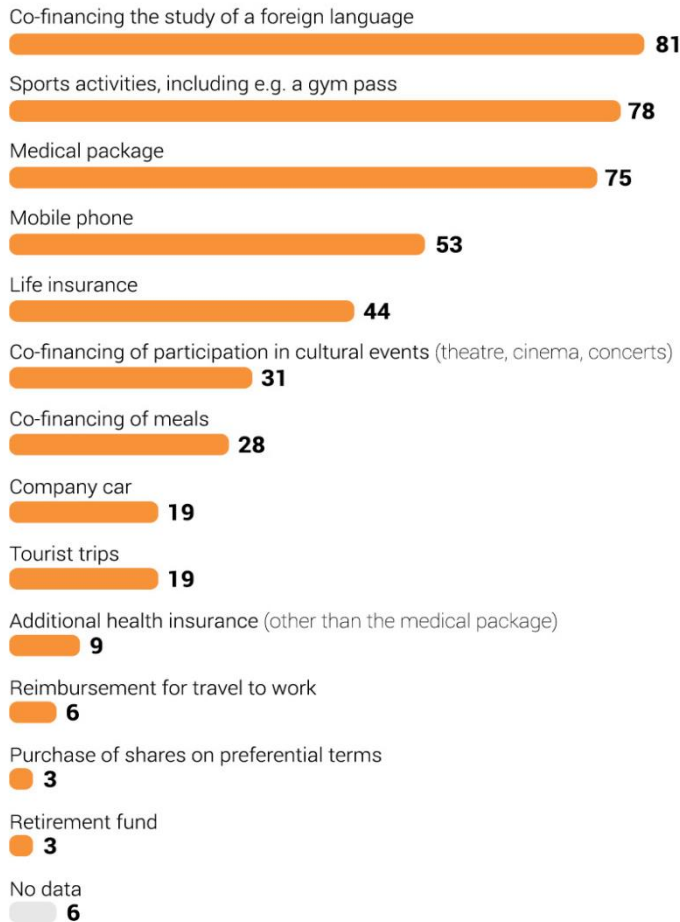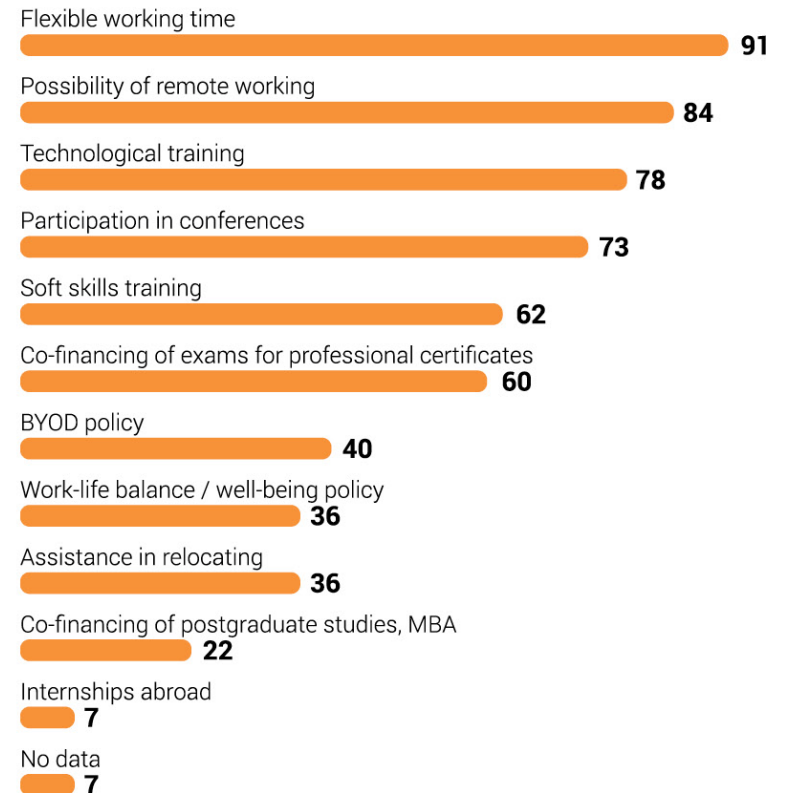|	Junior specialist (<3 years exp.)	Specialist (>3 years exp.)	Manager (Team Leader, First Line Manager)	Director (Middle / High Level Manager)
Max	8,400	11,00	16,000	22,000
Average	**7,000**	**9,781**	**14,000**	**18,667**
Min	5,600	8,150	12,000	15,000
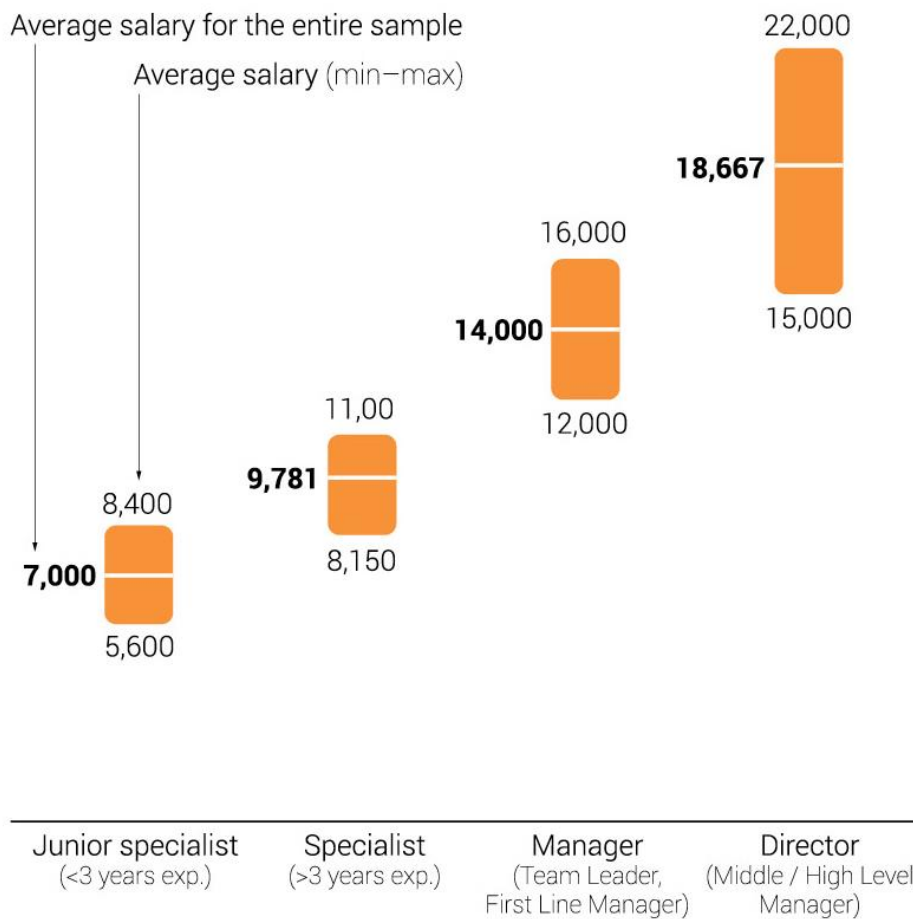
Benefit and additional elements shaping the work environment

Non-wage benefits offered most often (%)

Co-financing the study of a foreign language — **81**

Sports activities, including e.g. a gym pass — **78**

Medical package — **75**

Mobile phone — **53**

Life insurance — **44**

Co-financing of participation in cultural events (theatre, cinema, concerts) — **31**

Co-financing of meals — **28**

Company car — **19**

Tourist trips — **19**

Additional health insurance (other than the medical package) — **9**

Reimbursement for travel to work — **6**

Purchase of shares on preferential terms — **3**

Retirement fund — **3**

No data — **6**

Additional elements shaping the work environment (%)

Flexible working time — **91**

Possibility of remote working — **84**

Technological training — **78**

Participation in conferences — **73**

Soft skills training — **62**

Co-financing of exams for professional certificates — **60**

BYOD policy — **40**

Work-life balance / well-being policy — **36**

Assistance in relocating — **36**

Co-financing of postgraduate studies, MBA — **22**

Internships abroad — **7**

No data — **7**

Previous recruitment experiences

Top 5 of the easiest and the most difficult positions to fill

The easiest positions to fill

Nearly half of employers close the recruitment process within a maximum of 4 weeks.

1. Tester
2. Help desk
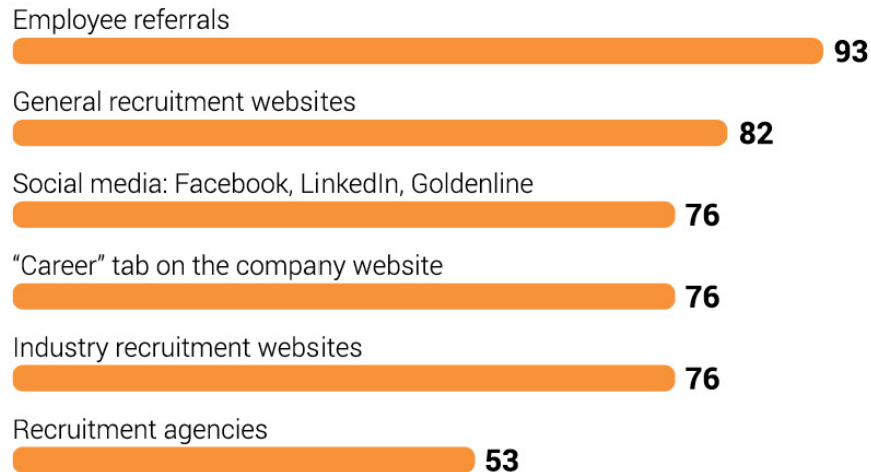3. Programmer
4. Webmaster/business analyst
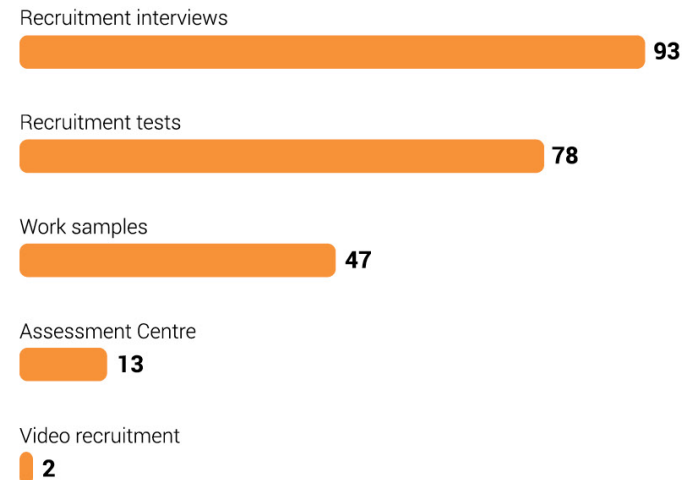5. Webdeveloper

The most difficult positions to fill

For nearly 70% of employers, the recruitment process lasts more than 6 weeks

1. Programmer
2. IT systems/database designer/architect
3. Business analyst
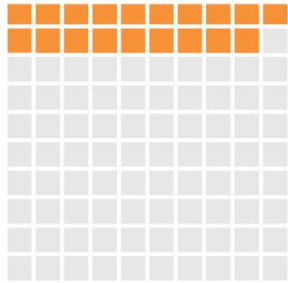4. ERP/SAP/CRM consultant
5. Webdeveloper

The most frequently used sources of candidates (%)

Source	%
Employee referrals	93
General recruitment websites	82
Social media: Facebook, LinkedIn, Goldenline	76
"Career" tab on the company website	76
Industry recruitment websites	76
Recruitment agencies	53

The most frequently used methods of recruitment (%)

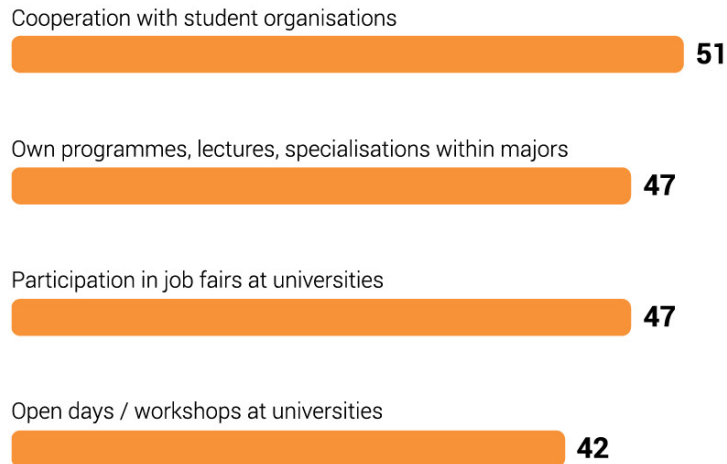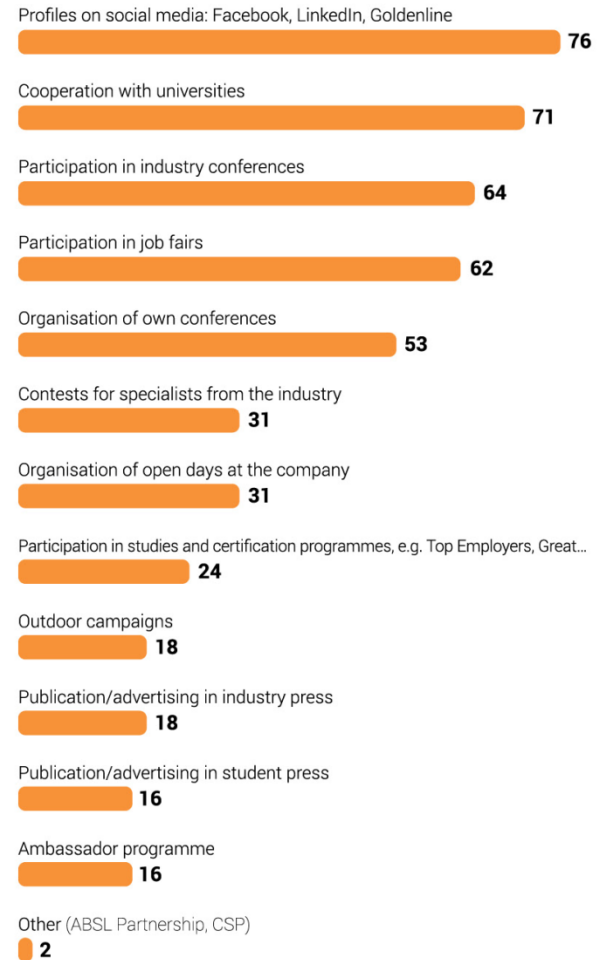| Method	%
Recruitment interviews	93
Recruitment tests	78
Work samples	47
Assessment Centre	13
Video recruitment	2

Actions undertaken on the field of Employer Branding

ONLY **19** % OF WROCŁAW IT EMPLOYERS **HAVE** IDENTIFIED THEIR EMPLOYER VALUE PROPOSITION

Dominant forms of cooperation with universities (%)

Cooperation with student organisations — **51**

Own programmes, lectures, specialisations within majors — **47**

Participation in job fairs at universities — **47**

Open days / workshops at universities — **42**

Tools used to build the image (%)

Profiles on social media: Facebook, LinkedIn, Goldenline — **76**

Cooperation with universities — **71**

Participation in industry conferences — **64**

Participation in job fairs — **62**

Organisation of own conferences — **53**

Contests for specialists from the industry — **31**

Organisation of open days at the company — **31**

Participation in studies and certification programmes, e.g. Top Employers, Great... — **24**

Outdoor campaigns — **18**

Publication/advertising in industry press — **18**

Publication/advertising in student press — **16**

Ambassador programme — **16**

Other (ABSL Partnership, CSP) — **2**

Competences of the graduates

Assessment of the level of competence (%)

○ Very low   ○ Low   ● Satisfactory   ● Good   ● Very good

Knowledge of technology / IT skills

| 3 | 10 | 36 | 38 | 13 |

Knowledge of foreign languages

| 3 | 8 | 46 | 38 | 5 |

Communication skills

| 33 | 38 | 28 |

Ability to work in a team

| 5 | 26 | 46 | 21 | 3 |

The demands of Employers to Universities

Regarding the curriculum, teaching other languages in addition to English, German, French.

More in classes/information on application maintenance in the programme. Introduction to business analysis.

Preparing a dedicated person/team for cooperation with business.

Sending students to internships.

Initiating research, raising funds from national and European sources of financing for the implementation of joint projects, implementation of projects aimed at training future engineers for the needs of employers, joint organisation of different types of classes at universities, cooperation in order to define/consult on educational programmes which take into account the current needs of the labour market, organisation of internships for students, support in the employment of graduates.

Greater openness to SMEs.

Each university should have one person for contact with our company in the form of an account manager, so we don't have to spend time managing relationships with several people per institution. Our employees should be involved in the activities of the Career Office and as lecturers of practical subjects.

Working with students on specific business cases.

The Universities' expectations of Business

Increased participation in scientific and research projects, greater involvement in shaping the educational offering through internships/traineeships delivered, support in renewing the laboratory base, cooperation at curriculum level

Professional lectures on specific technologies, student internships and traineeships, talking about INNOVATIVE ideas implemented by the business environment that encourage students to improve their knowledge and show what it is worth learning. We like it when companies tell us about some technologies (even not necessarily innovative, but ones we find difficult to talk about because we do not know them).

As part of a consortium, delivering research and development projects, cooperation in taking people on doctoral studies for (paid) internships, with scopes related to the subject/area of the doctoral dissertations; support for the delivery of subjects, e.g. through sharing (free of charge or at very favourable financial terms - educational versions possible) programs/systems, co-teaching subjects, where the latest innovations in the ICT area can be presented; co-organizing postgraduate courses; recruiting students for placements internships linked to their pursued theses.

Information about new technologies, joint ventures, exchange of experience in the design of information systems, review of curricula

Intensified cooperation in the R&D area

Clearer formulation of what is required of our graduates.

Working with students on specific business cases.

Involvement in the education process through evaluation of the curriculum – advisory role

Investment in equipment, scholarships for outstanding students, paid internships and traineeships.

Participation in the delivery of classes, taking students for traineeships and internships, hiring graduates, consultation on curriculum, organization of study visits at companies.

1. Cooperation with the Universities.

2. Technological education of youg people and people from outside the industry.

3. Attracting professionals from outside of Wroclaw.

4. Activation of the Wroclaw community related to the industry.

RESEARCH PARTNERS

HRK S.A.
HRK is one of the major consulting organizations as regards HR management in Poland. Since 2000 we have been supporting managers in winning employees and effective staff management. We offer projects related to recruitment, research and development of professional potential (including advanced Assessment / Development Centre study), building career paths, employer branding and – under the business name of HRK Payroll Consulting – remuneration management and managing personnel documentation.
We carry out projects across the country as well as abroad.
More: *www.hrk.pl*

ARAW S.A.
Wroclaw Agglomeration Development Agency is a city-owned company established for supporting FDI – Foreign Direct Investment in the area of Wroclaw. ARAW is responsible for investment promotion, and thus constitutes an interface between the investor and their regional agents: local authorities, real estate owners and representatives, recruitment agencies, special economic zones, supply chain partners, business supporting institutions, etc. ARAW offers continuous support to international investors and domestic companies that are interested in further development and identification with the region and a local community.
More: *www.araw.pl, www.invest-in-Wroclaw.pl*