IT job market analysis for Bulgaria, Georgia, Italy and Turkey

Project introduction

The purpose of this project is to give an **overview of IT job market in 4 countries**: **Bulgaria, Georgia, Italy and Turkey**. Project results give a general overview of following research questions for each country:

- Type of IT specialists, their skills, their education levels, levels of English, age, gender, demographics, size of the IT labor force;
- Cities and areas in which the IT specialists concentrate;
- Situation of the labor market: What kind of jobs they look for? Main channels for applying to them? Their experience and qualifications;
- Salary levels, salary expectations;
- Possible important / interesting trends in the IT labor market.

- The research was carried out by PricewaterhouseCoopers Advisory AS in April 2017. The overview is compiled based on data and document analysis both in English and in local languages and enhanced with local expert interviews.
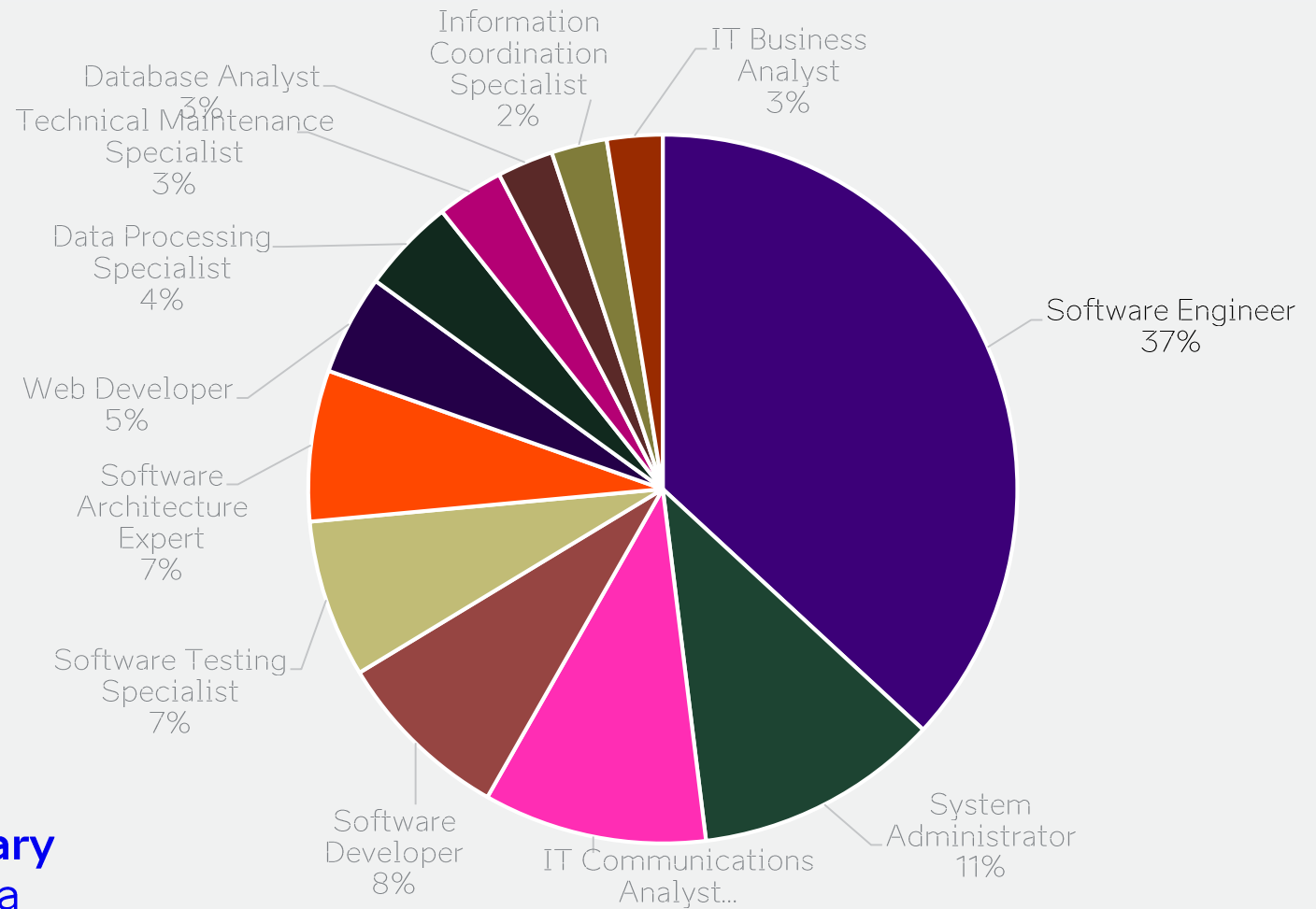
Bulgaria

- Population: 7 102,000 (2017)
- Total GDP: $ 49 billion (2015)
- GDP per capita: $ 6,843 (2015)

Bulgarian IT sector has about 40,000 employees.
About 75% of the employees are based in the
capital Sofia.

Bulgaria: key facts

- ICT industry comprises of about 10,000 companies and generated a revenue of $5.5 billion in 2016.
- ICT sector employs 70,000 people, of which 40,000 people work in the IT field.
- 72% of IT employees are male and **28% female**.
- **55%** of IT employees are **under the age of 35** and 45% are 35 or older.
- It is estimated that nearly 90% of IT employees have English skills between B1 and C1.

- Around ¾ of employees concentrate in the capital Sofia. Others are based in smaller cities like Plovdiv and Varna.
- About 2,000 people work as freelance IT professionals and 2016 showed a trend for more part-time contractors to become full-time employees in IT companies.

Bulgaria: job skills

- **69%** of IT employees have completed **tertiary education**. Taking into account people with a diploma or certificate (not only degree), the number of qualified employees is even higher.

Software Engineer 37%

System Administrator 11%

IT Communications Analyst…

Software Developer 8%

Software Testing Specialist 7%

Software Architecture Expert 7%

Web Developer 5%

Data Processing Specialist 4%

Technical Maintenance Specialist 3%

Database Analyst 3%

Information Coordination Specialist 2%

IT Business Analyst 3%

Bulgaria: salary levels and job market

Average gross monthly salary in IT sector is 1,300–1,400€, which currently amounts about three times the average gross monthly salary of Bulgaria (around 500€). However, IT salaries are relatively low compared to other European countries.

	.Net Programmer	Java Programmer	Python Programmer	PHP Programmer
Junior *(0–2 years of experience)*	500-700€	500-700€	500-700€	500-700€
Mid-level *(2–5 years of experience)*	1,000–1,500€	1,000–1,500€	1,000–1,500€	800–1,300€
Senior *(5+ years of experience)*	1,500–2,500€	1,500–2,500€	2,000–3,000€	1,400–2,200€

Bulgaria: salary levels and job market

- **Training centers**, such as Telerik Academy and SoftUni, usually connect students nearing graduation with employers and facilitate the job search process. University career fairs remain non-existent or, at best, very underdeveloped.

- **HR search agencies,** such as Adecco and Manpower, recruit recent IT graduates on behalf of IT companies and also offer local outsourcing and temporary labor.

- **Word of mouth** and **personal references** stand as a powerful means of finding jobs in the sector, especially for professionals with years of experience looking to change companies.

- **Head-hunting agencies**, such as Stanton Chase, play an important role in recruiting IT specialists, too, mostly for client companies that have senior technical and managerial job vacancies.

- Most common job portals are jobs.bg, jobtiger.bg and karieri.bg.

Bulgaria: conclusions

Bulgaria has quite a large number of qualified IT employees.

- At least 70% have completed tertiary education or have other relevant qualifications.
- Around 90% of employees should have good English skills around B1-C1 level.

Bulgarian IT sector salaries are still low compared to other European countries.

- However, gross salaries have continued increasing over the last years with annual growth around 10% in 2013-2016.
- Such tendency largely reflects on the low supply of qualified specialists, compared to the high labor demand of the IT industry.

Georgia

- Population: 3 718,200 (2017)
- Total GDP: $ 14 billion (2015)
- GDP per capita: $ 3,754 (2015)

Georgian IT sector has about 4500 employees. Nearly 97% of IT sector jobs are located in the capital Tbilisi.

Georgia: key facts

- 48% of employees are male and 42% female.
- There is no exact data about age of IT employees but experts say IT workforce consists mainly of young people.
- Majority of IT specialists should have at least intermediate knowledge of English, but recruiters should pay attention to checking language skills
- From 2014-2016, nearly 6100 IT students have entered Georgian universities.

Out of them 3400 have concentrated on Informatics. Other major programs are Electronics and Computer Engineering, Information Technology and Computer Science.
- There is no public data on graduate numbers, but a noticeable drop-out rate should be considered.

Georgia: job market

- Interviewees emphasized that there is a lack of qualified IT experts in Georgia, especially of IT project managers and data/business analysts. Companies are in strong competition for talent and this has caused a steep rise in salary levels.
- Common demand for all applicants is relevant technical education and knowledge of English language.
- Most common job portals in Georgia are jobs.ge, jobgeo.com and hr.ge.

Following table gives on overview of demand of specific IT skills based on job advertisements:

Profession	Percentage of job market demand
Developer	30%
IT support specialist	25%
Programmer	15%
System & Database Administrators (mostly SQL)	10%
Data Analytics & IT Processing Manager	10%
Other (e.g. technical customer support)	10%

Georgia: salary levels

Georgian IT salaries are low compared to other European countries. Average income of IT sector is around 550€.

Based on working experience	Salary
Entry level	300-400€
Less than 5 years	400-1,200€
More than 5 years	> 1,200€

Based on profession	Salary
IT Support Specialist	300-500€
Web Developer	300-750€
IT Project Manager	750-1200€
System Administrator, Database Administrator, Data Analyst	550-950€
Android Developer, IOS Developer, JAVA Developer	750-1,200€
Programmer	900-1,500€

Georgia: conclusions

IT sector and workforce in Georgia is still relatively small and developing.

- Georgian IT sector had just 4,500 employees and 78 million € turnover in 2015. In comparison, Estonia had more than 20,000 ICT employees and over 3,5 billion annual turnover in 2015.

Georgian IT sector salaries are still low compared to other European countries.

- IT sector salaries generally fall between 300-1200€. Average income in the sector is around 550€.
- Low local salaries make IT specialists to prefer working for foreign companies that offer higher income and better working conditions. In this case, IT experts often work as outsourced specialists or freelancers.

Italy

- Population: 60 579,000 (2017)
- Total GDP: $ 1,816 billion (2015)
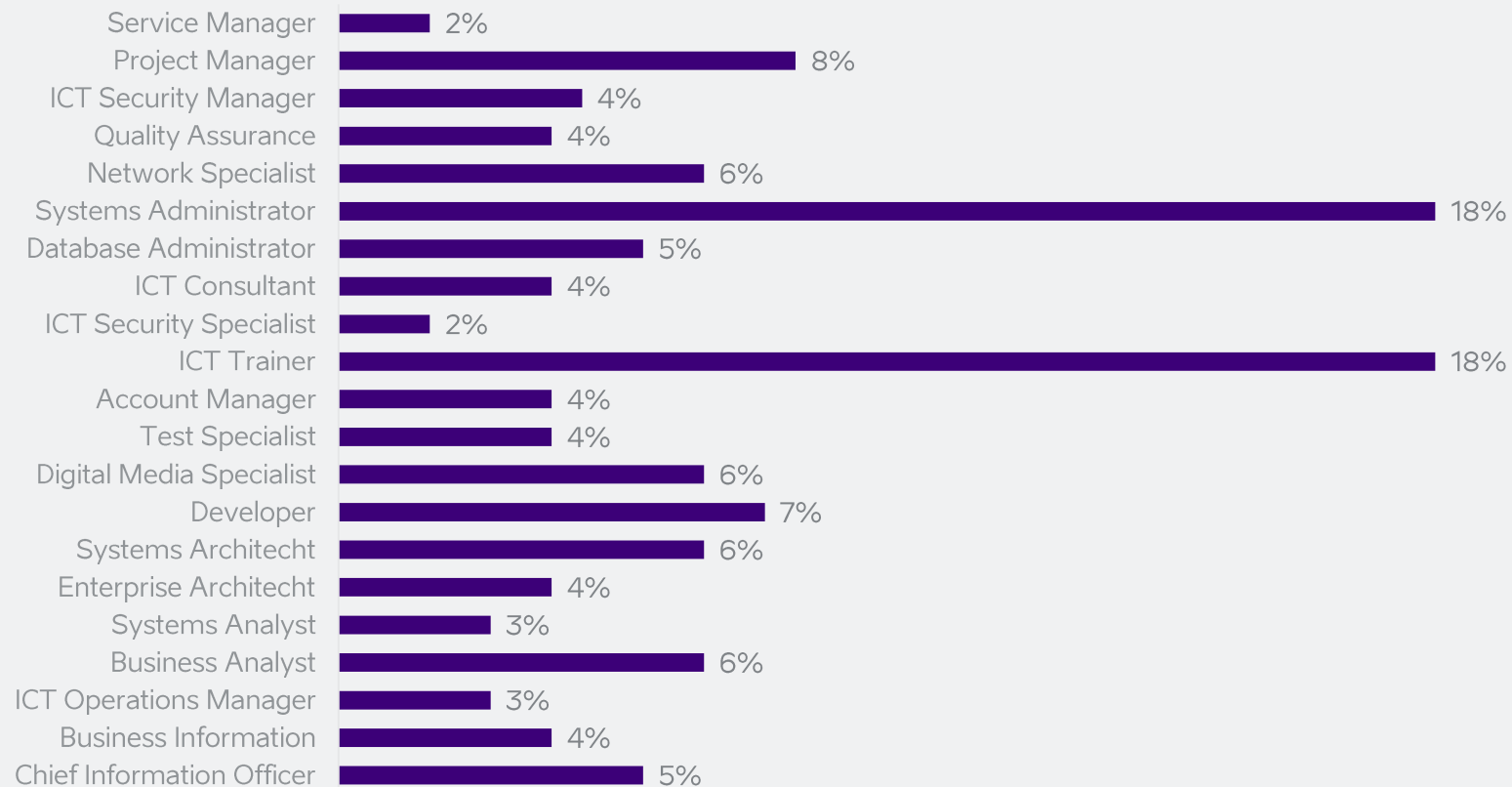- GDP per capita: $ 29,867 (2015)

Italian IT sector has nearly 585,000 employees.
Only 25% of ICT employees are under the age of
35

Italy: key facts

- There are about 585,000 ICT employees in Italy.
- Around 3,500 university students graduate from computing science every year.
- 86% of ICT employees are male and 14% female.
- 25% of employees are under the age of 35 and 75% are 35 or older
- There is no specific data of English skills of IT employees, recruiters should pay attention to checking English language skills.

- The highest concentration of ICT employees in Italy are located in the Northern region. Dominating cities are Milan, Torino, Genova, Bologna, Firenze and Rome.
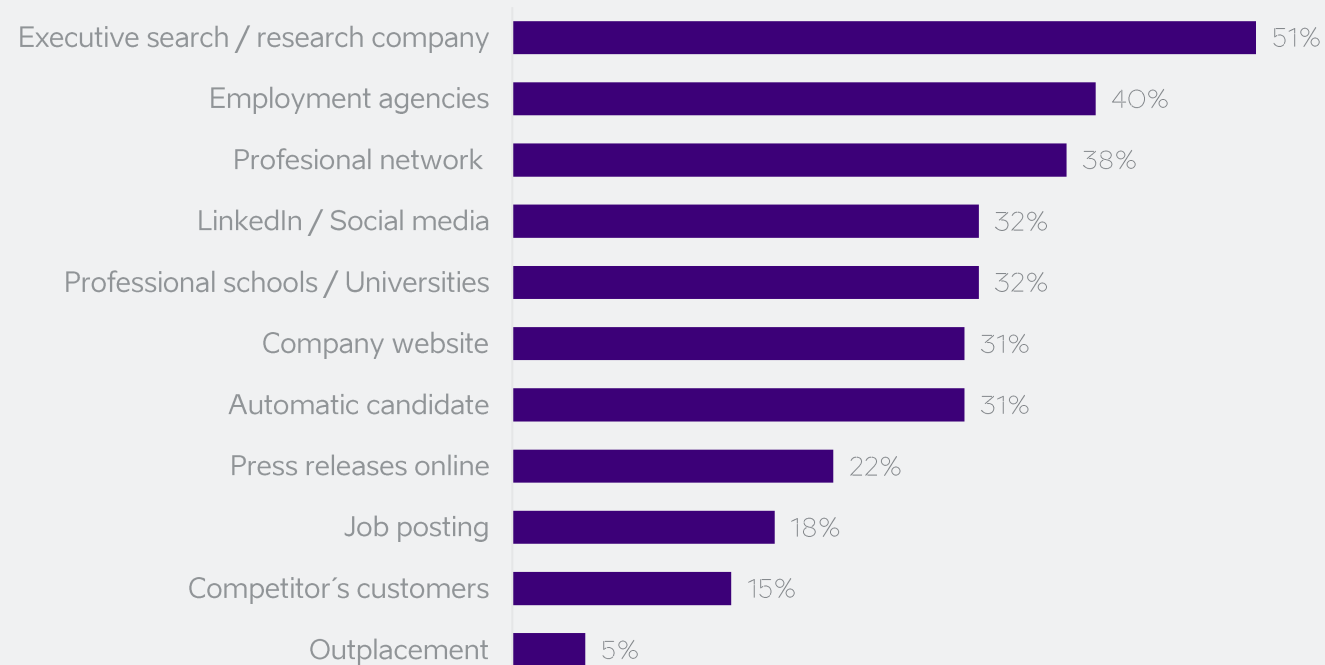
Italy: job skills

Following chart gives an overview of specific skills among IT specialists and strictly counts only those professionals, who reached necessary level in professional skills test.

Role	Percentage
Service Manager	2%
Project Manager	8%
ICT Security Manager	4%
Quality Assurance	4%
Network Specialist	6%
Systems Administrator	18%
Database Administrator	5%
ICT Consultant	4%
ICT Security Specialist	2%
ICT Trainer	18%
Account Manager	4%
Test Specialist	4%
Digital Media Specialist	6%
Developer	7%
Systems Architecht	6%
Enterprise Architecht	4%
Systems Analyst	3%
Business Analyst	6%
ICT Operations Manager	3%
Business Information	4%
Chief Information Officer	5%

Italy: job market

Positions most difficult to fill are Security Specialist, Enterprise Architect and Business Analyst.
Executive search/research companies are considered as the most prevalent channel for recruiting ICT specialists, followed by the employment agencies and professional network:

Channel	Percentage
Executive search / research company	51%
Employment agencies	40%
Profesional network	38%
LinkedIn / Social media	32%
Professional schools / Universities	32%
Company website	31%
Automatic candidate	31%
Press releases online	22%
Job posting	18%
Competitor´s customers	15%
Outplacement	5%

Italy: salary levels

Specification	Monthly salary in EUR		
	Executive	Manager	Employee
Chief Information Officer	8,756 €	–	–
ICT Operation Manager	7,562 €	4,740 €	3,024 €
Project Manager	7,257 €	4,509 €	2,831 €
Account Manager	8,293 €	5,173 €	3,260 €
System Analyst	–	4,236 €	2,800 €
Database Administrator	–	4,425 €	2,758. €
Enterprise Architect	–	4,429 €	3,125 €
Developer	–	3,765 €	2,426 €
Technical Specialist	–	4,294 €	2,366 €
System Analyst	–	4,093 €	2,766 €
ICT Security Specialist	–	4,498 €	2,814 €
Network Specialist	–	4,107 €	2,637 €
Service Desk Agent	–	4,551 €	2,513 €
ICT Consultant	–	–	3,020 €
Digital Media Specialist /Web Developer	–	–	2,073 €
Test Specialist /Software Tester	–	–	2,390 €

Italy: conclusions

Only 25% of IT employees in Italy are under the age of 35.

- Even though the Italian ICT workforce has nearly 585,000 people, just ¼ of them are younger than 35.
- High salary levels in Italy make it less likely for other countries to attract talent to work abroad.

Salary levels of Italian IT specialists are high compared to many ohter European countries.

- Job prospects for ICT specialists in Italy are very are promising. For example both Cisco Systems and Apple are making large investments in developing professional skills of (their future) IT employees.

Turkey

- Population: 79 814,871 (2017)
- Total GDP: $ 718 billion (2015)
- GDP per capita: $ 9,186 (2015)

IT sector in Turkey has about 74,400 employees.
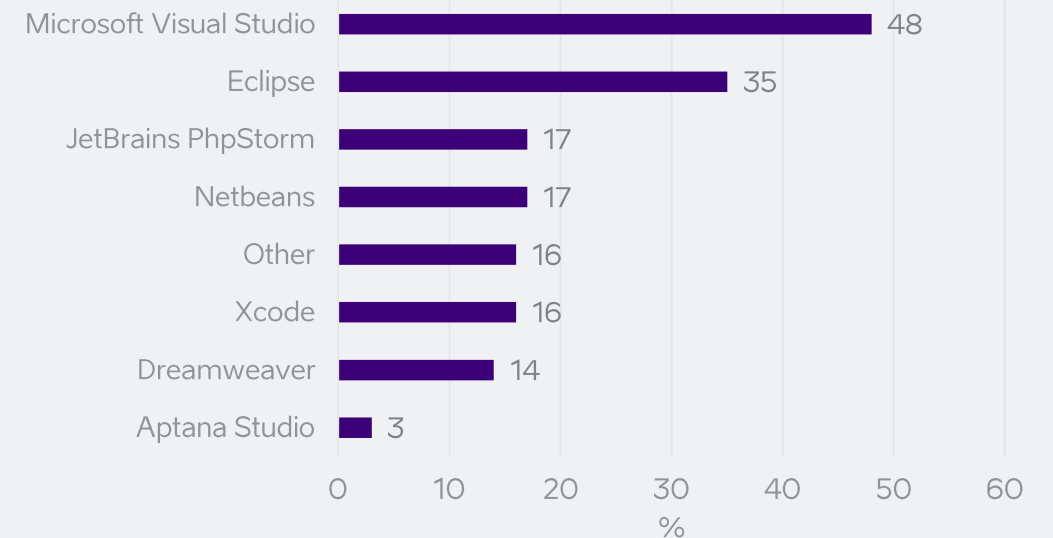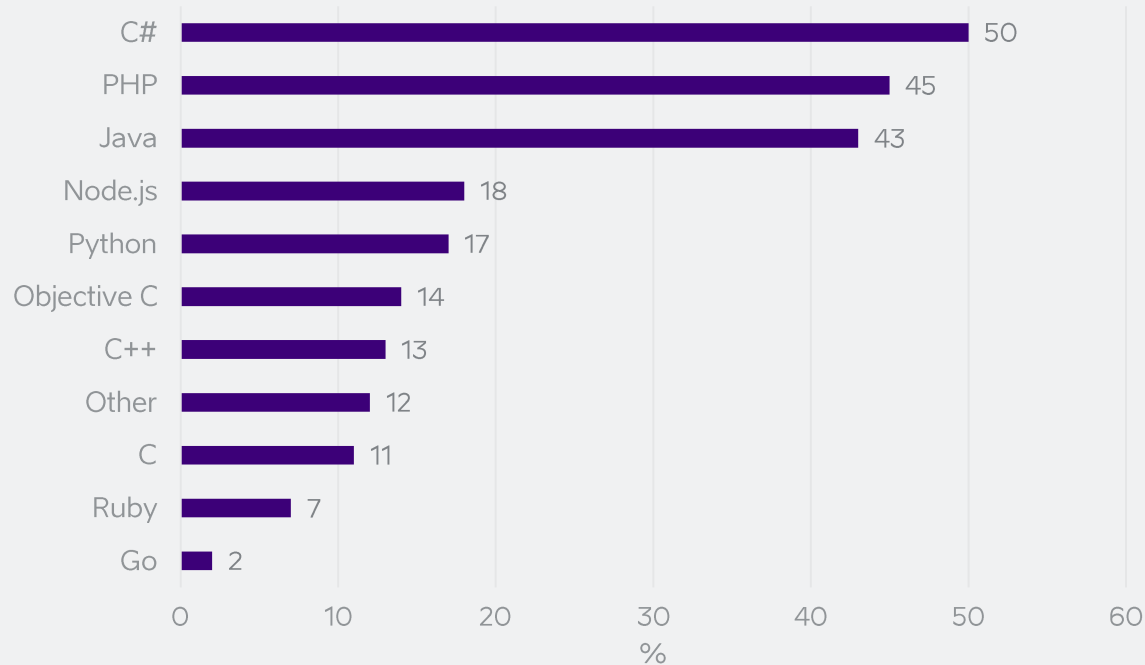70% of employees are under the age of 33.
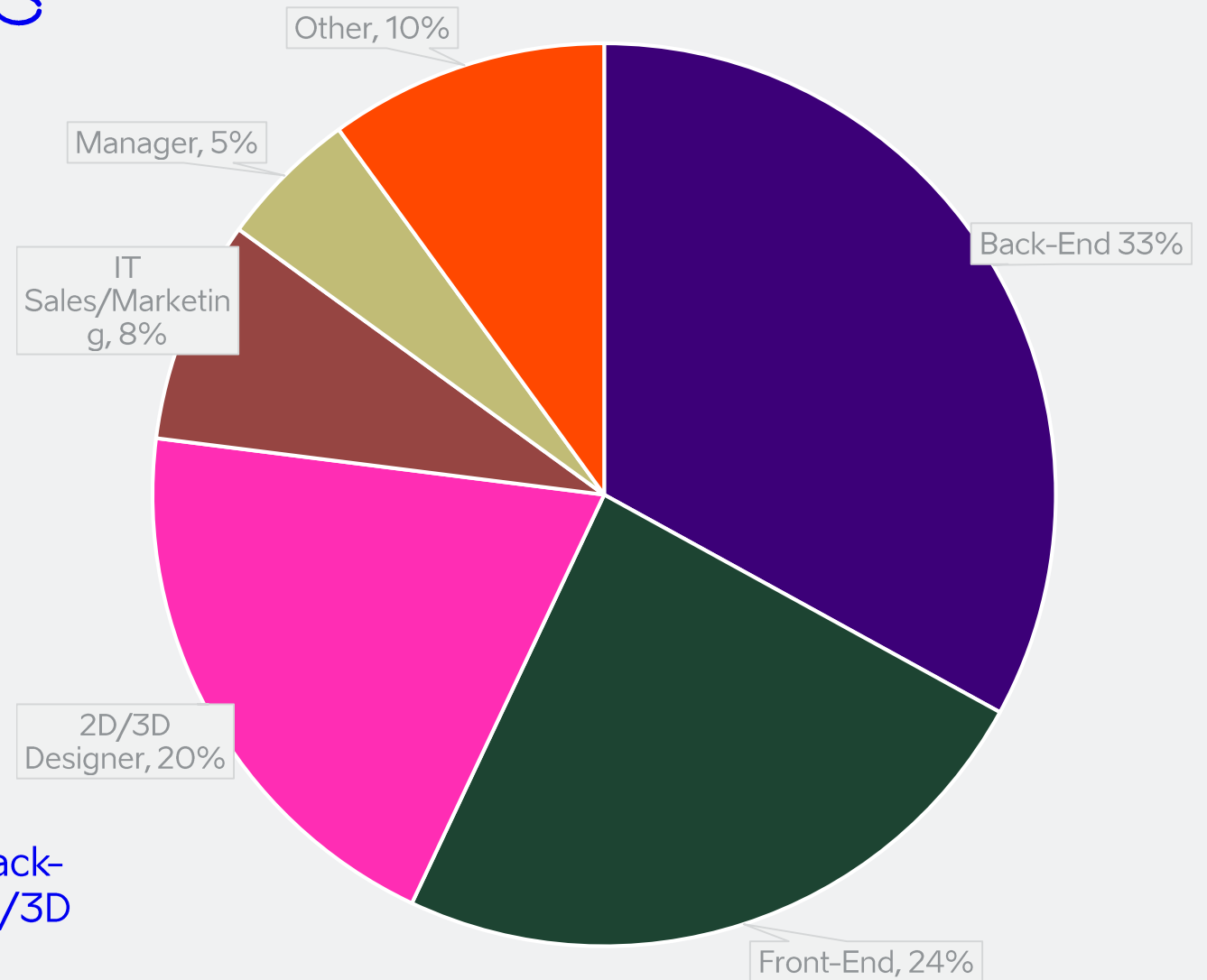
Turkey: key facts

- Turkish ICT sector employs 113,000 people.
  Out of them, **74,400** work for IT sector.
- Every year there are about **8,500** places
  available for IT-related university programs.
  95% of them focus on Computer Engineering.
- At least **60%** of all IT employees are university
  graduates.
- It is estimated that almost **70%** of IT employees
  in Turkey are **under the age of 33.**
- It is estimated that only around 10% of IT

- employees in Turkey are female.
- Most important cities where IT specialists
  concentrate are Istanbul (nearly 60%) followed
  by Ankara, Kocaeli and Izmir.
- There is no specific data of English skills of IT
  employees, but it is estimated to be relatively
  poor. Recruiters should pay attention to
  checking English language skills.

Turkey: job skills

Preferred programming languages and integrated development environments
of Turkish IT specialists are as follows:

Programming languages (%)

Language	%
C#	50
PHP	45
Java	43
Node.js	18
Python	17
Objective C	14
C++	13
Other	12
C	11
Ruby	7
Go	2

Integrated development environments (%)

IDE	%
Microsoft Visual Studio	48
Eclipse	35
JetBrains PhpStorm	17
Netbeans	17
Other	16
Xcode	16
Dreamweaver	14
Aptana Studio	3

Turkey: job skills

Other, 10%

Manager, 5%

IT Sales/Marketing, 8%

Back-End 33%

2D/3D Designer, 20%

Front-End, 24%

- Most demanded IT specialist type in Turkey are back-end developer, front-end developer (24%) and 2D/3D designers (20%).

Turkey: salary levels

	1-3 Years	3-5 Years	5-10 Years
C#.NET	$ 550–1,150	$ 1,150–2,300	$ 2,300–3,650
Java	$ 700–1,400	$ 1,400–2,750	$ 2,750–4,500
PHP/MYSQL	$ 550–1,150	$ 1,150–2,300	$ 2,300–3,400
HTML/CSS/JS	$ 550–900	$ 900–2,050	$ 2,050–3,000
ORACLE PL/SQL	$ 700–1,150	$ 1,150–2,050	$ 2,050–3,400
Python	$ 700–1,150	$ 1,150–2,050	$ 2,050–2,900
SAP/ ABAP	$ 900–1,000	$ 900–2,250	$ 2,250–4,350
MS Dynamics	$ 700–1,150	$ 1,150–2,100	$ 2,100–3,400
IT Manager			$ 2,500–7,000

Turkey: conclusions

IT sector in Turkey has 74,400 employees and 70% of employees are under the age of 33.

- There is a big proportion of young IT professionals in Turkey. However, recruiters must pay attention to checking professional skills and English proficiency of potential candidates.

Turkish IT salary levels are lower than in most European countries.

- Due to recent turbulent political situation in Turkey, an increasing number of educated and wealthy Turks have moved or consider moving abroad.

In case you have any additional questions, feel free to contact us.

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