

European Tech Hiring Trends

Tech Workforce Hiring Trends and Analysis

Belgium | Czech Republic | France | Germany | Italy | Netherlands | Poland | Portugal | Romania | Spain

ABOUT COMPTIA

The Computing Technology Industry Association (CompTIA) is a leading voice and advocate for the \$5 trillion global information technology ecosystem; and the estimated 75 million industry and tech professionals who design, implement, manage, and safeguard the technology that powers the world’s economy. Through education, training, certifications, philanthropy, and market research, CompTIA is the hub for advancing the tech industry and its workforce.

CompTIA is the world’s leading vendor-neutral IT-certifying body with more than 3 million certifications awarded based on the passage of rigorous, performance-based exams. CompTIA’s base of certified information technology professionals spans 232 countries worldwide.

CompTIA sets the standard for preparing entry-level candidates through expert-level professionals to succeed at all stages of their career in technology. Through CompTIA’s philanthropic arm, CompTIA develops innovative on-ramps and career pathways to expand opportunities to populations that traditionally have been under-represented in the information technology workforce.

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ABOUT COMPTIA’S EUROPEAN TECH HIRING TRENDS

CompTIA’s European Tech Hiring Trends provides an in-depth look at hiring trends across 10 markets. The report is designed as a resource for employers, job candidates, workforce and economic developers, policy-makers, media outlets and more. CompTIA developed the report from analysis of employer job posting data aggregated by Lightcast. See Methodology page for more details. The Q4 2022 report release covers Q3 and some prior period data series.

- | | |
|----------------|-------------|
| Belgium | Netherlands |
| Czech Republic | Poland |
| France | Portugal |
| Germany | Romania |
| Italy | Spain |

Location data maps to the European Union’s regional taxonomy. The Nomenclature of territorial units for statistics, abbreviated NUTS (from the French version Nomenclature des Unités territoriales statistiques) is a geographical nomenclature subdividing the economic territory of the European Union (EU) into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units). Above NUTS 1, there is the 'national' level of the Member States. Most other formatting and labeling in this report aligns to Eurostat standards. See the European Union’s [Eurostat](#) for more detail.

To make the data most accessible to readers, CompTIA lists the major city or metro area within the region first; and in some cases the accompanying surrounding region in parenthesis. The data is not always fully representative of the city or metro area, but generally, cities and metro areas have the highest concentration of workers in a region and therefore can reasonably serve as a proxy for the location’s hiring trends.

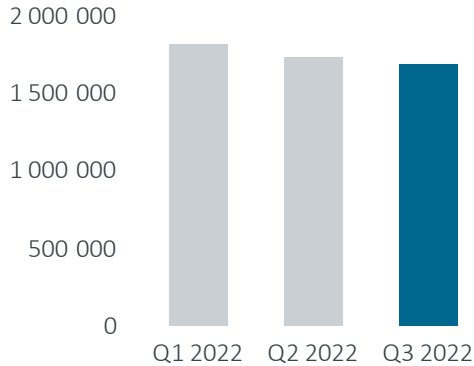
Job posting data is a good, but imperfect measure of employer hiring activity. There is a duplication factor in the job posting data due to some employers utilizing a multi-location or multi-faceted hiring strategy. For example, a large employer with multiple office locations may deploy job advertisements in various metropolitan areas to target job candidates; data deduplication processes may not perfectly resolve this type of multi-location job postings.

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REGIONAL SUMMARY



EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹

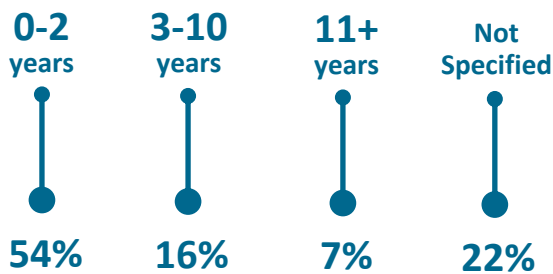
COUNTRY SUMMARY OF TECH JOB POSTINGS

	Q3 2022		Q3 2022
Belgium	63 760	Italy	53 695
Czech Republic	22 626	Netherlands	74 944
Germany	639 278	Poland	450 391
Spain	46 287	Portugal	31 016
France	280 681	Romania	24 800

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	372 525
Systems Analysts and Cybersecurity ¹	208 468
IT Support Specialists and Technicians	119 185
Network and Systems Admin. and Technicians	86 254

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



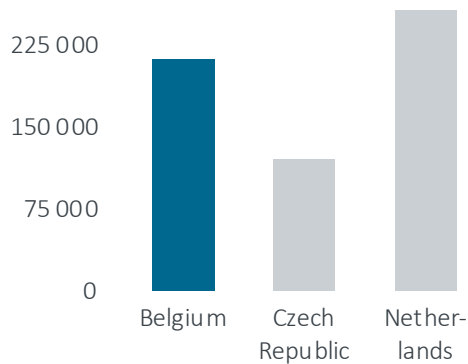
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Manufacturing
3. Administrative and Support Services
4. Professional, Scientific and Technical Services
5. Financial and Insurance
6. Human health and social work
7. Transportation and storage

¹As noted in the methodology there is a duplication factor in the job posting data due to some employers utilizing a multi-location or multi-faceted hiring strategy | See Methodology for how regions and metropolitan areas are defined.

BELGIUM

EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹



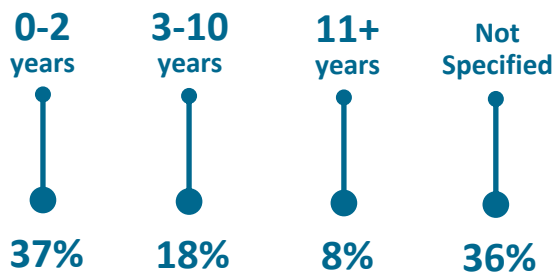
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Brussels (Brussel-Hoofdstad)	8 272
Antwerp (Antwerpen)	6 940
Charleroi (Charleroi)	6 166
Liege (Liege)	5 192
Gent (Gent)	4 729

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	28 872
Systems Analysts and Cybersecurity ¹	16 695
IT Support Specialists and Technicians	9 095
Network and Systems Admin. and Technicians	3 433

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



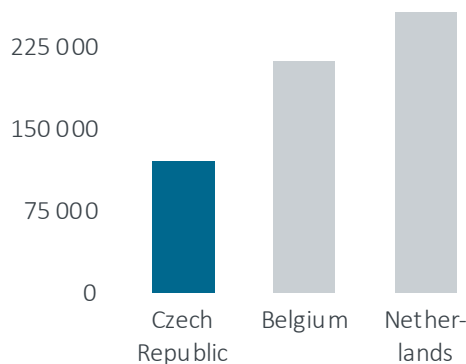
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Administrative and support service
2. Information and communication
3. Manufacturing
4. Education
5. Construction
6. Human health and social work
7. Transportation and storage

¹As noted in the methodology there is a duplication factor in the job posting data due to some employers utilizing a multi-location or multi-faceted hiring strategy | See Methodology for how regions and metropolitan areas are defined.

CZECH REPUBLIC

EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹



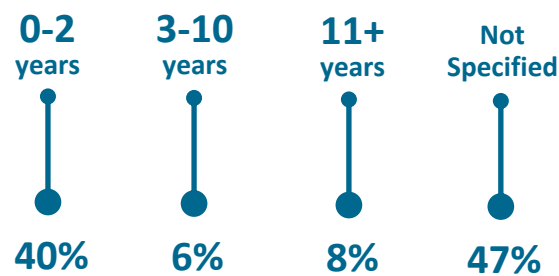
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Prague (Hlavní město Praha)	7 539
Brno (Jihomoravský)	3 687
Ostrava (Moravskoslezský)	1 311
Prague (Středočeský kraj)	1 134
Olomouc (Olomoucký kraj)	1 011

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	9 427
Systems Analysts and Cybersecurity ¹	4 833
IT Support Specialists and Technicians	2 670
Network and Systems Admin. and Technicians	2 452

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



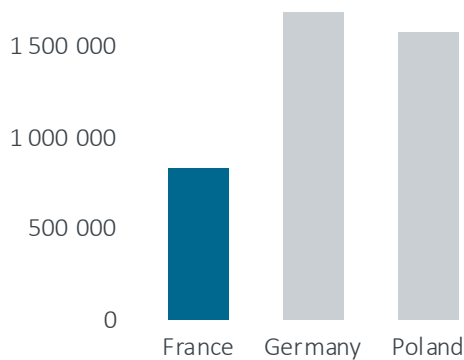
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Manufacturing
2. Information and communication
3. Administrative and support service
4. Construction
5. Human health and social work
6. Transportation and storage
7. Education

¹As noted in the methodology there is a duplication factor in the job posting data due to some employers utilizing a multi-location or multi-faceted hiring strategy | See Methodology for how regions and metropolitan areas are defined.

FRANCE

EMPLOYER JOB POSTINGS FOR TECH HIRING



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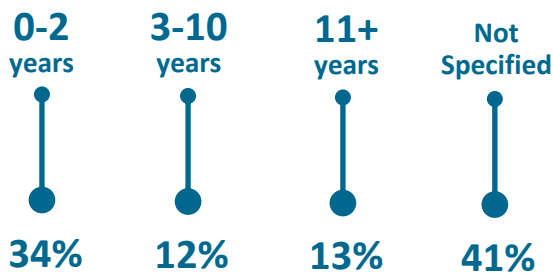
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Paris (Paris)	26 900
Lyon (Rhône)	17 406
Nanterre (Hauts-de-Seine)	11 533
Nantes (Loire-Atlantique)	10 423
Toulouse (Haute-Garonne)	8 988

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	95 473
Systems Analysts and Cybersecurity ¹	87 178
IT Support Specialists and Technicians	46 170
Network and Systems Admin. and Technicians	30 055

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



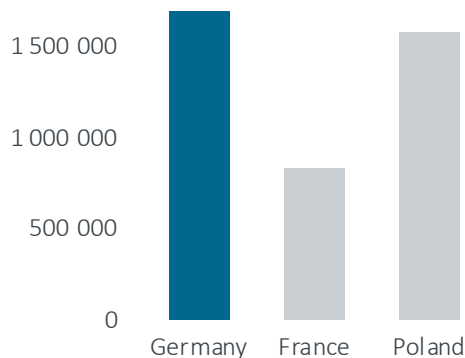
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Manufacturing
4. Accommodation and food service
5. Other service
6. Transportation and storage
7. Construction

¹As noted in the methodology there is a duplication factor in the job posting data due to some employers utilizing a multi-location or multi-faceted hiring strategy | See Methodology for how regions and metropolitan areas are defined.

GERMANY

EMPLOYER JOB POSTINGS FOR TECH HIRING



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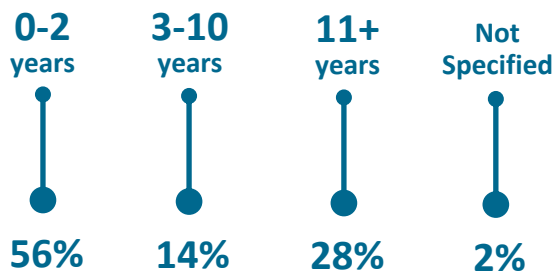
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Berlin (Berlin)	26 900
Munich (München, Kreisfreie Stadt)	17 406
Hamburg (Hamburg)	11 533
Stuttgart (Stuttgart, Stadtkreis)	10 423
Cologne (Köln, Kreisfreie Stadt)	8 988

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	235 699
Systems Analysts and Cybersecurity ¹	203 862
Network and Systems Admin. and Technicians	86 834
IT Support Specialists and Technicians	82 693

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



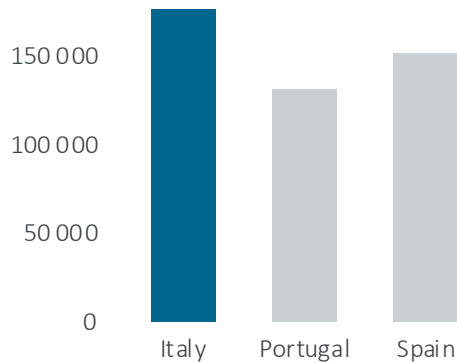
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Manufacturing
3. Administrative and support service
4. Human health and social work
5. Transportation and storage
6. Construction
7. Education

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ITALY

EMPLOYER JOB POSTINGS FOR TECH HIRING



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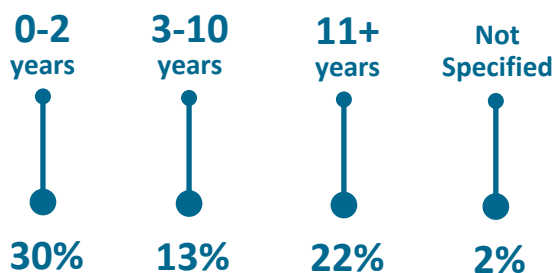
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Milan (Milano)	11 133
Rome (Roma)	4 684
Turin (Torino)	2 285
Bologna (Bologna)	1 988
Padua (Padova)	924

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	19 994
Systems Analysts and Cybersecurity ¹	16 892
Network and Systems Admin. and Technicians	5 936
IT Support Specialists and Technicians	4 638

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



LEADING INDUSTRY SECTORS FOR TECH HIRING

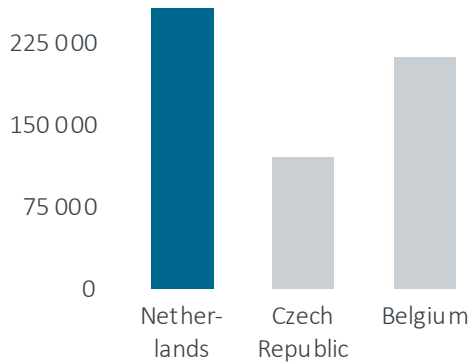
1. Information and communication
2. Manufacturing
3. Administrative and support service
4. Other service
5. Human health and social work
6. Accommodation and food service
7. Transportation and storage

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NETHERLANDS



EMPLOYER JOB POSTINGS FOR TECH HIRING



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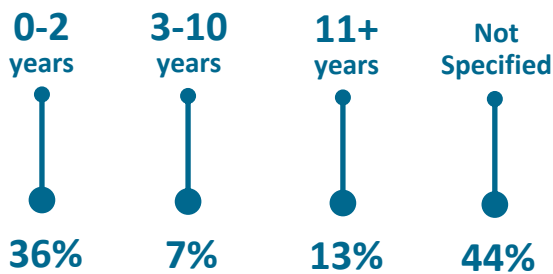
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Amsterdam (Groot-Amsterdam)	11 726
Utrecht (Utrecht)	10 725
Hertogenbosch (Noord- Brabant)	4 731
Rotterdam (Groot-Rijnmond)	4 519
The Hague (Agglomeratie's-Gravenhage)	3 626

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	37 087
Systems Analysts and Cybersecurity ¹	17 212
IT Support Specialists and Technicians	7 589
Network and Systems Admin. and Technicians	7 105

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



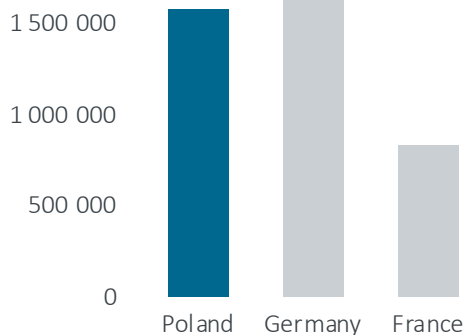
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Manufacturing
4. Education
5. Construction
6. Transportation and storage
7. Human health and social work

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POLAND

EMPLOYER JOB POSTINGS FOR TECH HIRING



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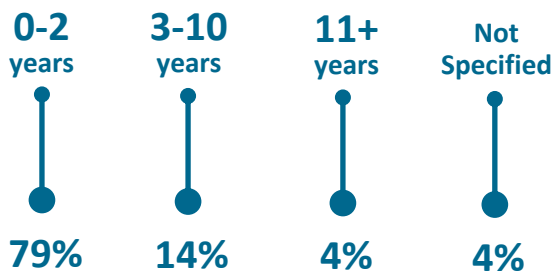
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Warsaw (Miasto Warszawa)	50 799
Krakow (Miasto Kraków)	47 141
Łódź (Miasto Łódź)	44 763
Wrocław (Miasto Wrocław)	22 502
Nowy Sącz (Nowosądecki)	14 913

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	234 813
Systems Analysts and Cybersecurity ¹	100 440
Network and Systems Admin. and Technicians	30 508
IT Support Specialists and Technicians	15 479

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



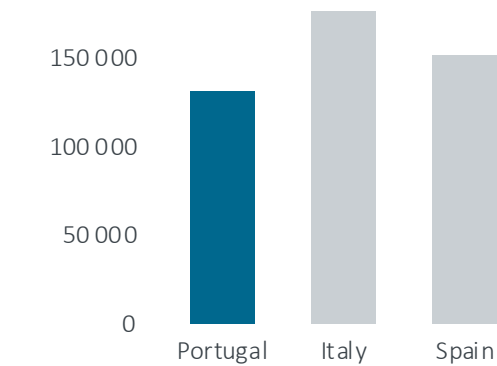
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Education
4. Other service
5. Manufacturing
6. Human health and social work
7. Construction

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PORTUGAL

EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹



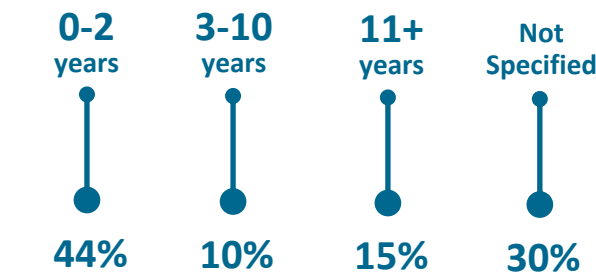
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Lisbon (Metropolitana de Lisboa)	13 562
Porto (Metropolitana do Porto)	7 303
Leiria (Região de Leiria)	1 199
Guarda (Beiras e Serra da Estrela)	955
Ponta Delgada (Região Autónoma dos Açores)	622

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	15 293
Systems Analysts and Cybersecurity ¹	6 732
IT Support Specialists and Technicians	4 256
Network and Systems Admin. and Technicians	1 453

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



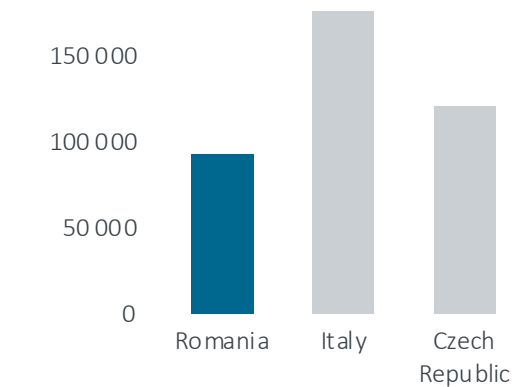
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Manufacturing
4. Other service
5. Human health and social work
6. Construction
7. Transportation and storage

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ROMANIA

EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹



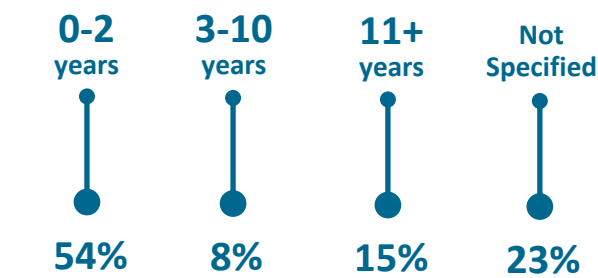
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Bucharest (București)	6 993
Cluj-Napoca (Cluj)	3 529
Alba Iulia (Alba)	2 663
Iași (Iași)	1 870
Constanța (Constanța)	1 718

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	15 133
Systems Analysts and Cybersecurity ¹	4 107
IT Support Specialists and Technicians	1 625
Network and Systems Admin. and Technicians	1 219

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



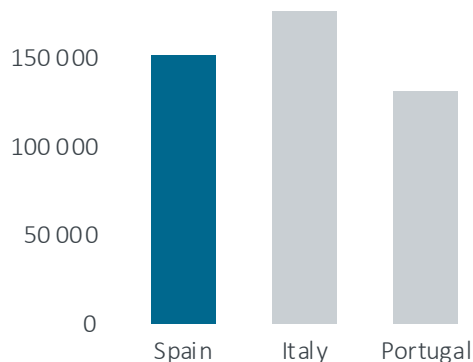
LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Manufacturing
4. Human health and social work
5. Other service
6. Transportation and storage
7. Construction

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SPAIN

EMPLOYER JOB POSTINGS FOR TECH HIRING



Data Source: CompTIA analysis of Lightcast job posting data¹



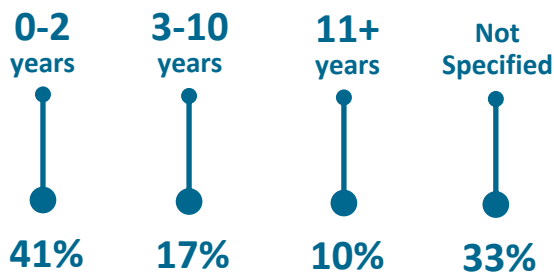
LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q3 2022
Madrid (Madrid)	12 965
Barcelona (Barcelona)	7 529
Guadalajara (Guadalajara)	998
Málaga (Málaga)	840
Seville (Sevilla)	725

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q3 2022
Software Developers, Programmers and Web	20 156
Systems Analysts and Cybersecurity ¹	12 796
IT Support Specialists and Technicians	3 832
Network and Systems Admin. and Technicians	3 405

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE



LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and communication
2. Administrative and support service
3. Manufacturing
4. Education
5. Construction
6. Other service
7. Transportation and storage

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APPENDIX

APPENDIX I

ID	Occupation Category	Total
1330	IT Managers and CIOs	89 030
2153	Telecommunications Engineers	2 620
2511	Systems Analysts and Cybersecurity	470 747
2512	Software Developers	509 660
2513	Web and Multimedia Developers	134 681
2514	Applications Programmers	31 874
2519	Software and Applications Developers Other	26 398
2521	Database Designers and Administrators	15 966
2522	Systems Administrators	119 484
2523	Network Administrators and Engineers	20 339
2529	Database and Network Professionals Other	46 720
3511	IT Operations Technicians	14 370
3512	IT Support Specialists and Technicians	86 658
3513	Network and Systems Technicians	31 279
3514	Web Technicians	9 334
3521	A/V technicians	19 857
7422	IT Installers and Servicers	58 460
Q3 2022 TOTAL		1 687 477

APPENDIX II

ID	Occupation Category	Belgium	Czech Republic	France	Germany	Italy
1330	IT Managers and CIOs	2 540	2 664	16 577	15 762	2 936
2153	Telecommunications Engineers	157	51	596	445	621
2511	Systems Analysts and Cybersecurity	16 695	4 833	87 178	203 862	16 892
2512	Software Developers	20 027	6 645	72 626	179 788	15 198
2513	Web and Multimedia Developers	6 524	1 146	12 449	24 488	2 510
2514	Applications Programmers	1 444	835	2 805	17 420	1 160
2519	Software and Applications Developers Other	713	641	2 976	11 361	526
2521	Database Designers and Administrators	626	189	1 755	3 043	227
2522	Systems Administrators	1 950	1 876	21 604	63 132	2 812
2523	Network Administrators and Engineers	710	128	4 459	5 759	1 031
2529	Database and Network Professionals Other	2 342	339	2 877	10 940	2 451
3511	IT Operations Technicians	1 197	381	6 442	1 147	1 016
3512	IT Support Specialists and Technicians	5 183	1 867	24 467	26 421	3 933
3513	Network and Systems Technicians	773	448	3 992	17 943	795
3514	Web Technicians	164	160	4 617	2 642	600
3521	A/V technicians	1 938	116	14 013	1 618	347
7422	IT Installers and Servicers	777	306	1 248	53 507	640
Q32022 TOTAL		63 760	22 625	280 681	639 278	53 695

ID	Occupation Category	Netherlands	Poland	Portugal	Romania	Spain
1330	IT Managers and CIOs	2 571	39 833	1 238	1 344	3 565
2153	Telecommunications Engineers	141	335	62	44	168
2511	Systems Analysts and Cybersecurity	17 212	100 440	6 732	4 107	12 796
2512	Software Developers	21 586	153 841	11 143	11 719	17 087
2513	Web and Multimedia Developers	12 192	68 407	2 882	2 229	1 854
2514	Applications Programmers	1 849	3 994	858	683	826
2519	Software and Applications Developers Other	1 321	7 648	384	476	352
2521	Database Designers and Administrators	406	8 837	201	125	557
2522	Systems Administrators	3 871	20 948	846	739	1 706
2523	Network Administrators and Engineers	2 799	4 613	245	121	474
2529	Database and Network Professionals Other	2 833	20 146	1 781	1 203	1 808
3511	IT Operations Technicians	550	2 811	255	325	246
3512	IT Support Specialists and Technicians	5 496	11 514	3 756	1 005	3 016
3513	Network and Systems Technicians	435	4 947	362	359	1 225
3514	Web Technicians	139	923	26	26	37
3521	A/V technicians	785	396	167	207	270
7422	IT Installers and Servicers	758	758	78	88	300
Q3 2022 TOTAL		74 944	450 391	31 016	24 800	46 287

METHODOLOGY

This report was developed by CompTIA using employer job posting data aggregated by Lightcast (<https://laborinsight.lightcast.io>).

Lightcast aggregates employer job posting data across a range of sources to produce the best possible depiction of hiring activity. As with any data source, however, there are limitations. Employer job posting data is a useful, but an imperfect proxy for job demand. Not every posting translates to a new job; hiring employers may change their plans, post multiple times for the same job, hire internally, try different approaches to find the right candidate and so forth. For example, a large employer with multiple office locations may deploy job advertisements in various metropolitan areas to target job candidates; data deduplication processes may not perfectly resolve this type of multi-location job postings. Also, one ad may be posted for multiple openings. Lightcast data methodologies address many of these potential issues, but there will inevitably be some margin of error.

Additionally, within a time period, there may be situations where a worker is hired, the person is not the right fit and is let go, and a firm starts the process over again. In the aggregate there is a single position, but using job posting data, it may appear there are 2 positions.

CompTIA recommends using job posting data in conjunction with government labour market statistics and other data sources where available to get a more complete picture of workforce dynamics for a given occupation category.

Occupation categories are standardised for consistency and to enable comparisons across markets. The tradeoff is slightly less granularity, especially in certain newer job roles. For example, this data set does not have dedicated categories for cybersecurity, cloud, data scientist, or artificial intelligence. Rather, these positions are combined under broader occupation categories.

Location data maps to the European Union's regional taxonomy. The Nomenclature of territorial units for statistics, abbreviated NUTS (from the French version Nomenclature des Unités territoriales statistiques) is a geographical nomenclature subdividing the economic territory of the European Union (EU) into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units). Above NUTS 1, there is the 'national' level of the Member States. See the European Union's [Eurostat site](#) for more detail.

To make the data most accessible to readers, CompTIA lists the major city or metro area within the region; and in some cases the accompanying region in parenthesis as noted above. The data does not fully represent the city or metro area, but generally, cities and metro areas have the highest concentration of workers in a region and therefore can reasonably serve as a proxy for the location's hiring trends.

Please contact the CompTIA Research and Market Intelligence Department at research@comptia.org with any questions.



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