2024

ICT SECTOR OVERVIEW

Workforce demand and supply

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ACRONYMS

- **PSWD** - Private Sector-Led Workforce Development
- **IREX** - International Research & Exchanges Board
- **ODK** - Open Data Kosovo
- **Crimson** - Capital Corp. (Crimson)
- **DG** - Development Gateway
- **TAK** - Tax Administration of Kosovo
- **CBK** - Central Bank of Kosovo
- **Call Centres** - business process outsourcing
- **KAS** - Kosovo Agency of Statistics
- **MESTI** - Ministry of Education, Science, Technology Innovation
- **STIKK** - The Kosovo Association of Information and Communication Technology

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1. Background

The Private Sector-Led Workforce Development Activity in Kosovo (PSWD) is a five-year activity that supports the Kosovan private sector to develop and strengthen the workforce with more market-driven skills. PSWD harnesses collaboration between the private sector, technical and vocational education and training providers, government, youth and civil society organizations to prepare young people with skills to meet the needs of Kosovo's growth industries and help them move into jobs in these sectors. PSWD will address system constraints and leverage opportunities in three interrelated areas: skills demand, skills supply, and the enabling environment with the following goals:

- Advance private sector leadership in collaboratively determining needs, designing, and financing tailored workforce solutions (Demand).
- Strengthen private sector and key workforce ecosystem actors' capabilities to co-implement and co-assess workforce solutions (Supply).
- Strengthen workforce ecosystem relationships for sustained collaboration on inclusive employment solutions (Enabling Environment).

These goals will be achieved through the following core activities:

- Establish Sector Workforce Councils in the Information and Communications Technology, wood processing, and agri-business growth sectors to unite employers, educators, the diaspora, civil society, policy makers, and donors to define workforce development needs, and support workforce development solutions. The activity will work with Council leads to advance their ability to strategically manage the Councils, use data to develop responsive vocational and technical education, connect with the diaspora to catalyze support, and promote workforce solutions that are inclusive.
- Provide Workforce Innovation Grants to strengthen the supply of flexible, demand-led, workforce development solutions. Through careful control of grant eligibility and selection criteria, PSWD will incentivize the behavior it wants to promote and identify committed and capable recipients who are well positioned to take ownership, deliver with increasing autonomy, and sustain activities after PSWD closes.
- Support data informed decision-making to ensure that workforce solutions are demand-driven and evidence-based, and to demonstrate value to incentivize sustainable investments in workforce development. PSWD will support each Sector Workforce Council to improve its use of data through the improvement of, or development of new, digital tools that provide labor market information and measure the performance and impact of new and improved training programs.
- Support positive youth development, gender equality, and social inclusion to support diverse youth to influence and benefit from workforce solutions, ensuring that their voice is front and center throughout: as members of Sector Workforce Councils, as participants on Workforce Innovation Grant selection panels, and as central actors in annual learning exchanges.

This activity is funded by USAID and implemented by IREX in collaboration with partners Crimson Capital Corp. (Crimson)[1], Development Gateway (DG)[2], Germin[3], and Open Data Kosovo (ODK)[4].

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[1] Crimson Capital Corp. (Crimson), https://www.crimsoncapital.org/
[2] Development Gateway, https://developmentgateway.org/
[3] Germin, https://germin.org/
[4] Open Data Kosovo, https://opendatakosovo.org/

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2. Introduction and Methodology

The Information and Communication Technology (ICT) sector in Kosovo has experienced rapid growth in recent years, fueled by a dynamic workforce and increasing demand for digital services. This report provides a comprehensive analysis of the ICT sector, highlighting key employment trends, challenges, and opportunities. The ICT sector in Kosovo has seen significant growth in employment over the past five years. In 2023, the sector employed 13,048 employees, up from 9,379 in 2019, reflecting a robust expansion driven by various sub-sectors such as telecommunications, software development, and data processing.

Data for this analysis was sourced from credible organisations, including public institutions in Kosovo, serving as data collection points. To offer a more detailed view of the ICT landscape, secondary data has also been analysed and included in this report. Additionally, data from the job portal Kosova Job has been incorporated to provide further insights into current market conditions.

The report also explores the challenges faced by the ICT sector, including skill mismatches in the workforce market, and identifies opportunities for further growth and development. By leveraging both government sourced data and secondary data sources, this report aims to provide a comprehensive understanding of the ICT sector's trajectory and its critical role in Kosovo's economic development.

The data is sourced from credible organizations, including the Kosovo Tax Administration (ATK), the Central Bank of Kosovo (CBK), the Kosovo Agency of Statistics (ASK), the Ministry of Education, Science, Technology Innovation (MESTI), and KosovaJob. We have examined various publications containing both secondary and government sourced data pertaining to the ICT sector. Noteworthy among these are the "IT Barometer" report from STIKK and the "Future of IT" report from Emerging Europe. These publications provide valuable insights and context for understanding the current trends and future directions of the ICT sector in Kosovo.

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3. Workforce Demand Data

Workforce demand data is an essential aspect of understanding the employment landscape and economic vitality of any region. In Kosovo, this data provides critical insights into the needs of employers across various sectors, highlighting the types of skills, qualifications, and competencies that are in demand. This information is invaluable for policymakers, educational institutions, and job seekers, as it helps align workforce development efforts with the actual needs of the market. Kosovo's workforce market is dynamic, with certain sectors experiencing rapid growth and evolving demands.

The analysis of workforce demand data involves examining information from credible organizations, including the Kosovo Tax Administration (ATK), the Central Bank of Kosovo, the Kosovo Agency of Statistics (ASK), and job vacancy announcements from KosovaJob, to determine the current and projected needs for workforce. This data includes information on the number of active companies, annual turnover, salary information, sector export/import, employment, most demanded jobs, and the skills and qualifications required for this sector. Such detailed insights enable targeted interventions to address skill mismatches and support job seekers in acquiring the qualifications that are most valued by employers. The data presented from sections 3.1 to 3.4, sourced from the Tax Administration of Kosovo, includes economic activities categorised under NACE Codes as presented in Table 1.

NACE Code	Activity description
61.1	Cable telecommunication activities
61.2	Wireless telecommunication activities
61.3	Satellite telecommunication activities
61.9	Other telecommunications activities
62.01	Computer programming activities
62.02	Computer consulting activities
62.03	Computer installation management activities
62.09	Other information technology and computer service activities
63.11	Data processing, information hosting, and related activities
82.2	Call center activities
63.99	Other information services P.K.T
58.21	Publishing of computer games
58.29	Publication of other software
26.20	Production of PCs and peripherals
26.11	Production of electronic components
26.12	Production of electronic boards
26.30	Production of communication equipment
26.40	Consumer electronics manufacturing
80.20	Cyber security

Table 1. List of NACE codes from TAX Administration of Kosovo

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The data presented in section 3.6. Decade Analysis of ICT Sector Exports and Imports, is sourced from the Central Bank of Kosovo and includes the following categories:

Nr.	Activity description
1	Telecommunications services
2	Information services
3	Computer services

By analysing workforce demand data, stakeholders can gain a deeper understanding of employment trends, sectoral demand, and the alignment of job market needs with the educational and training programs available. This analysis is essential for developing strategies to boost job creation, refine vocational training programs, and shape overall economic policies. Understanding workforce demand helps in creating a responsive and adaptive workforce capable of meeting the needs of a growing economy, ultimately contributing to sustainable economic development in Kosovo.

3.1. Active ICT Companies

The data illustrates a significant and steady increase in the number of ICT companies active in the Tax Administration of Kosovo (TAK) from 2019 to 2023. Beginning with 1,862 companies in 2019, the number rose to 2,195 in 2020, marking a 17.8% increase. This upward trend continued with a 16.5% increase to 2,557 in 2021. The growth rate slightly accelerated in 2022, with a 17.1% rise to 2,994 companies. The most substantial growth occurred between 2022 and 2023, with the number of active companies soaring by 16.9% to reach 3,502. Overall, the five-year period saw an 88% increase in company registrations, reflecting robust and sustained growth in the sector.

In the other hand, in Figure 2. the data shows a consistent and significant growth in the number of companies in the business process outsourcing (Call Centres) sector active in TAK, increasing from 209 in 2019 to 449 in 2023. This represents a more than doubling of registrations over the five-year period, highlighting a robust upward trend in the business process outsourcing sector. To facilitate deeper analysis of this data, the dashboard offers a dedicated space for exploration and comparison.
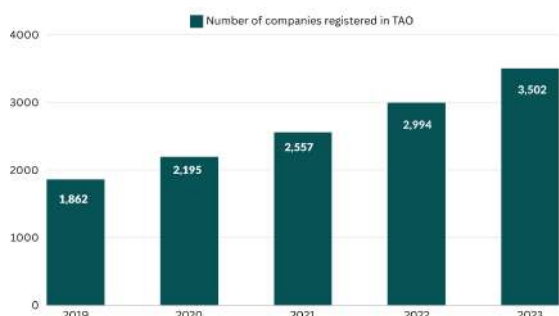
Figure 1: Number of companies active in TAK only)
Data Source: Tax Administration of Kosovo (TAK)

Figure 2: Number of companies active in TAK (Call Centres
Data Source: Tax Administration of Kosovo (TAK)

3.2. Annual Turnover and Leading Sub-sectors in the ICT Industry

While both the overall ICT sector and the Call Centres sub-sector have experienced significant growth in annual turnover, the rate of growth in the Call Centres sub-sector outpaces that of the overall sector. From 2019 to 2023, the overall ICT sector's turnover increased by 82.6%, whereas the Call Centres sub-sector turnover more than doubled, increasing by 164.9%.
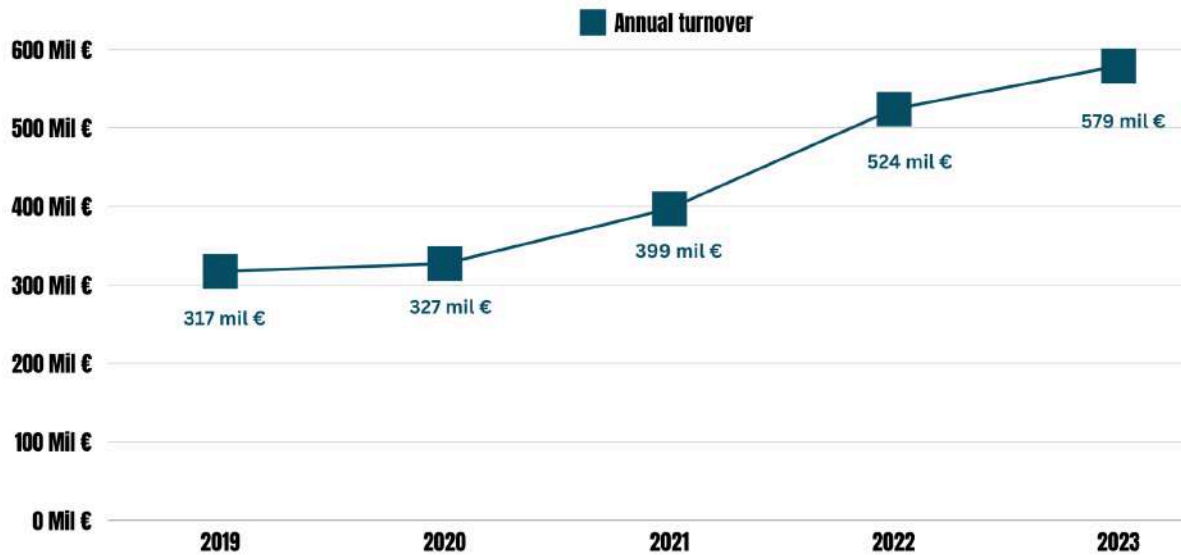
Figure 3: Annual turnover, **Data Source:** Tax Administration of Kosovo (TAK)
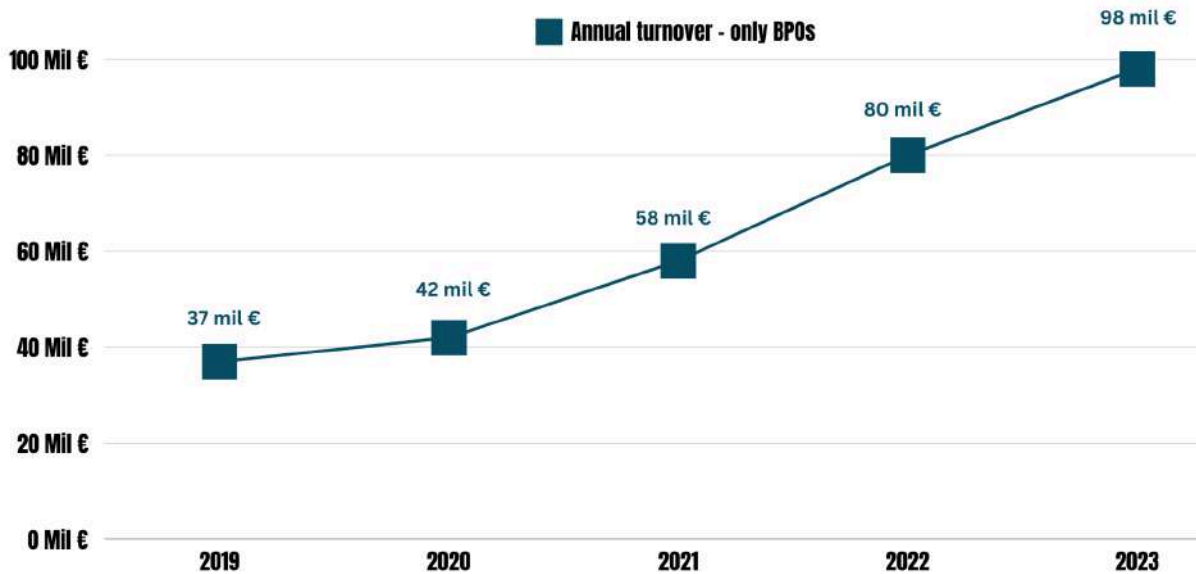
Figure 4: Annual turnover (Call Centres only), **Data Source:** Tax Administration of Kosovo (TAK)

The provided data in Figure 5. presents the annual turnover for different sub-sectors within the ICT industry in Kosovo from 2021 to 2023. The sub-sectors include Telecommunications, Software Development, Software Publishing, Call Centers, and Other activities. The data reveals that Telecommunications continues to lead the ICT industry in Kosovo, with Software Development and Call Centers showing the most rapid growth. Software Publishing also grew steadily, while Other Activities remained relatively stagnant.
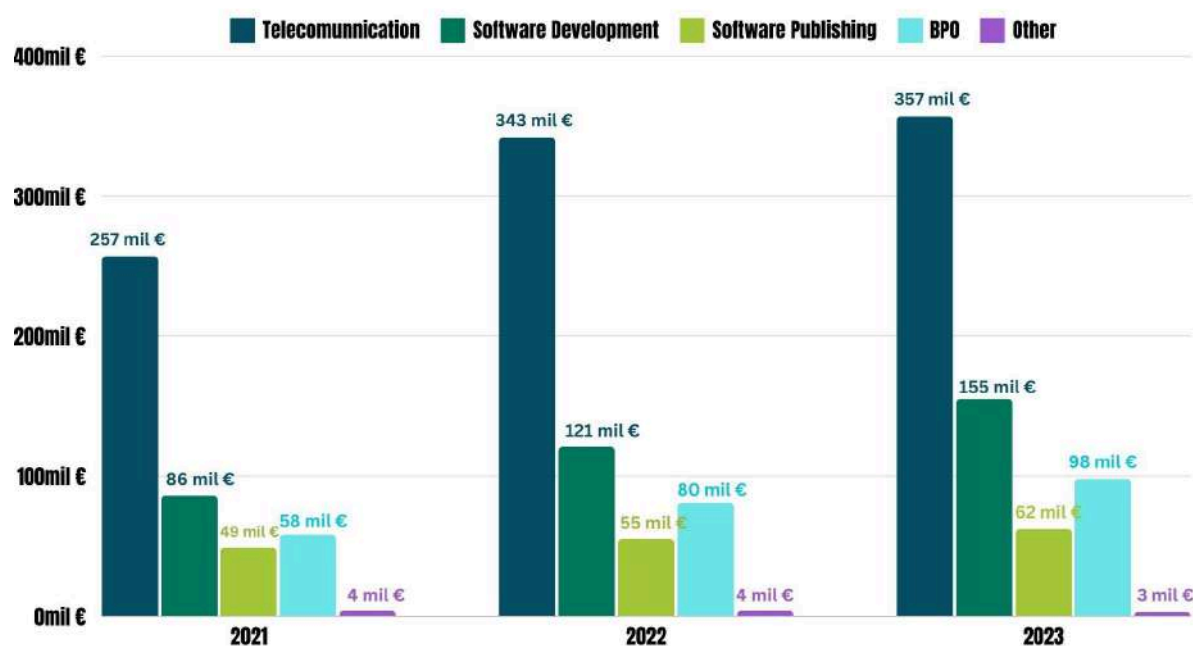
Figure 5: Annual turnover by top ICT sub-activities **Data Source:** Tax Administration of Kosovo (TAK)

Telecommunications remains the powerhouse of the ICT sector, starting with a robust turnover of €257 million in 2021. The sector experienced substantial growth, rising to €343 million in 2022 and continuing to €357 million in 2023. This 38.9% increase over three years underscores the sector's vital role in driving the ICT industry forward, maintaining its dominance through consistent performance.

In the realm of innovation and digital solutions, Software Development stood out with its remarkable growth trajectory. From €86 million in 2021, the turnover surged to €121 million in 2022, and further to €155 million in 2023. This impressive 80.2% increase reflects the burgeoning demand for software solutions and the dynamic growth of tech startups in Kosovo, positioning this sub-sector as a key player in the digital economy.

Software Publishing, while not as dynamic as other sub-sectors, showed steady and reliable growth. Turnover increased from €49 million in 2021 to €55 million in 2022, reaching €62 million in 2023. This 26.5% rise indicates a stable expansion, contributing consistently to the sector's overall growth.

The Call Centers sub-sector experienced significant growth, highlighting the rising importance of outsourcing services. Turnover jumped from €58 million in 2021 to €80 million in 2022, and then to €98 million in 2023. This 69% increase underscores the rapid expansion of call center operations, reflecting their growing role in the ICT sector's ecosystem.

3.3. Detailed Employment Data in ICT Sector

Analysing the data from TAK, the ICT sector has seen remarkable workforce growth from 2019 to 2023, with a significant increase in the number of employees over this period.

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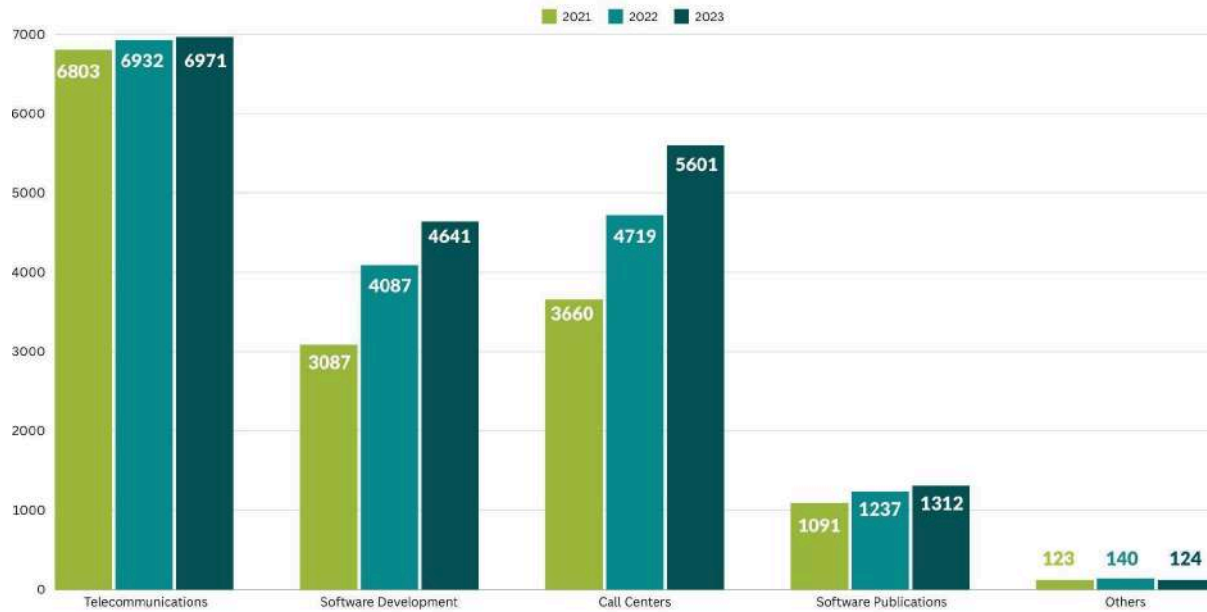
Figure 6: Number of Employees in ICT based on sub-activities, **Data Source:** Tax Administration of Kosovo (TAK)

Employment in the ICT sector has been segmented into several key activities, each telling a unique story of growth and transformation. Starting with Telecommunications, the backbone of the ICT industry, employment rose from 5,857 in 2019 to 6,174 in 2023. Next, the story of Software Development is one of remarkable expansion and innovation. In 2019, this sub-sector employed 823 people. By 2023, this number had soared to 2,345, reflecting the increasing demand for software solutions and the vibrant tech start-up scene that has emerged in Kosovo.

The most dramatic growth, however, is seen in Call Centers or Call Centress. From 2021 to 2023, this sub-sector added 1,941 new employees, demonstrating the rapid rise in outsourcing and customer service operations. This surge underscores the sector's adaptability and the growing trend of global companies seeking a cost-effective and skilled workforce in Kosovo. These narratives of growth across different sub-sectors collectively paint a picture of a dynamic and evolving ICT industry in Kosovo, poised for continued expansion and innovation.
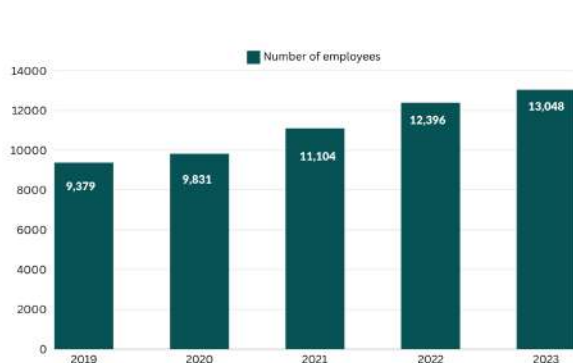
Figure 7: Number of Employees in ICT
Data Source: Tax Administration of Kosovo (TAK)
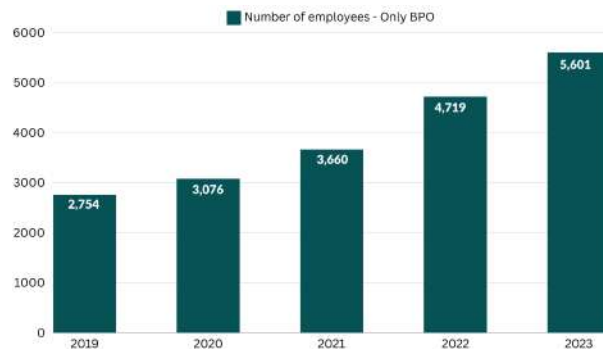
Figure 8: Number of Employees in ICT - Only Call Centress
Data Source: Tax Administration of Kosovo (TAK)

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This additional comparison underscores the dynamic expansion within the Call Centres sub-sector, driven by factors such as global outsourcing trends and the increasing need for a cost-effective and skilled workforce. The rapid growth in Call Centress is a significant driver of the overall employment increase in the ICT sector, reflecting a robust demand for outsourcing services.

In conclusion, while the entire ICT sector in Kosovo is experiencing healthy growth, the Call Centres sub-sector stands out for its exceptional rate of expansion, significantly boosting the sector's overall employment figures.

3.4. Average Salary and Top 5 Highest-Paying Activities in the ICT Sector

The data from the previous 5 years was collected from the Tax Administration of Kosovo in Figure 5. and indicates a strong positive trend in remuneration within the ICT sector, with an overall increase of approximately 42% from 2019 to 2023. This rise in average salaries reflects the sector's growth, increased demand for skilled professionals, and possibly an improved economic environment supporting higher wages.

Figure 9: Average Gross Salary, **Data Source:** Tax Administration of Kosovo (TAK)

The ICT sector in Kosovo features a variety of highly specialised and lucrative sub-sectors, each contributing to the industry's overall growth and development. Here are the top 5 highest-paying activities:

1. **Other Information Technology and Computer Service Activities**:
    - **Average Salary**: €1,910;
    - This sub-sector leads the industry, offering the highest average salaries due to the specialised nature of IT services and the high level of expertise required.
2. **Publishing Other Software**:

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- ○ **Average Salary**: €1,740;
- ○ Software publishing commands high salaries, reflecting the value of intellectual property and the specialised skills needed for developing and distributing software products.

3. **Production of Electronic Components**:
- ○ **Average Salary**: €1,730;
- ○ This sub-sector involves high-tech manufacturing, requiring advanced technical knowledge and precision, which is reflected in the substantial salaries.

4. **Computer Programming Activities**:
- ○ **Average Salary**: €1,490;
- ○ Computer programming is a lucrative field within the ICT sector, driven by the constant demand for software development and coding expertise across various industries.

5. **Computer Consulting Activities**:
- ○ **Average Salary**: €1,430; Consulting activities are highly valued due to the strategic guidance and expertise provided to businesses seeking to implement and optimise technology solutions.
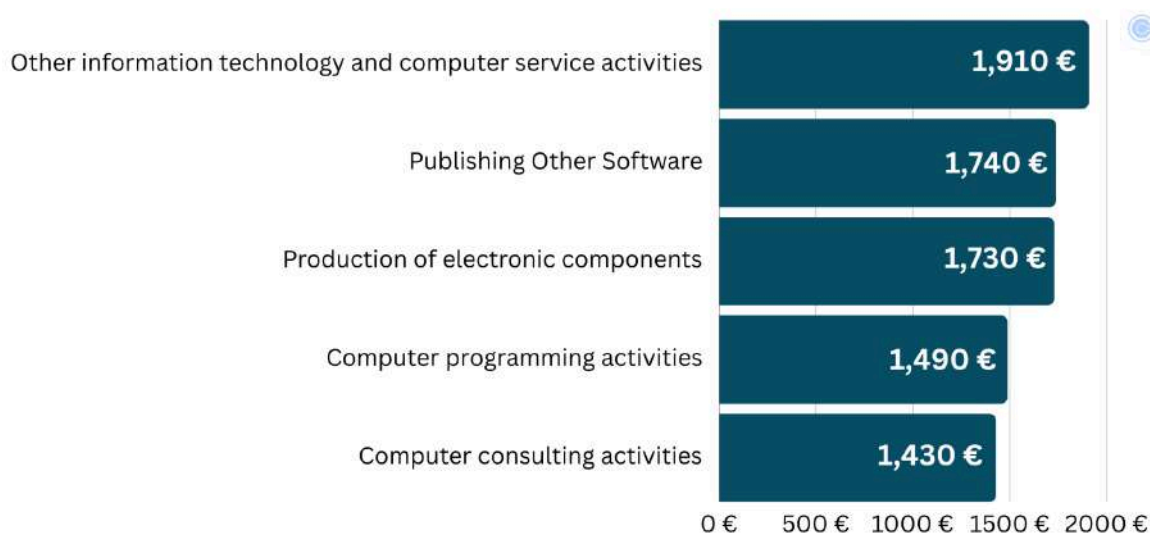
Figure 10: Top 5 activities with the highest average gross salary, **Data Source:** Tax Administration of Kosovo (TAK)

3.5. Employee Distribution by Age Groups

The graph in Figure 11 provides a comparative analysis of employee percentages across different age categories for the years 2019 and 2023. It illustrates the percentage of employees across various age categories, with the largest proportion of employees falling within the 25-34 year age group, representing 32% of the total workforce in 2019 and 34% in 2023. Both the 15-24 and 35-44 year age groups have an equal distribution of 14% and 28% respectively in both years. The 45-54 year age group makes up 15% and 14% of the workforce in 2019 and 2023, respectively. The 55-64 year age group accounts for 9% of the workforce in 2019, decreasing slightly to 8% in 2023. The smallest proportion of employees are aged 65 and above, consistently accounting for just 2% in both years.

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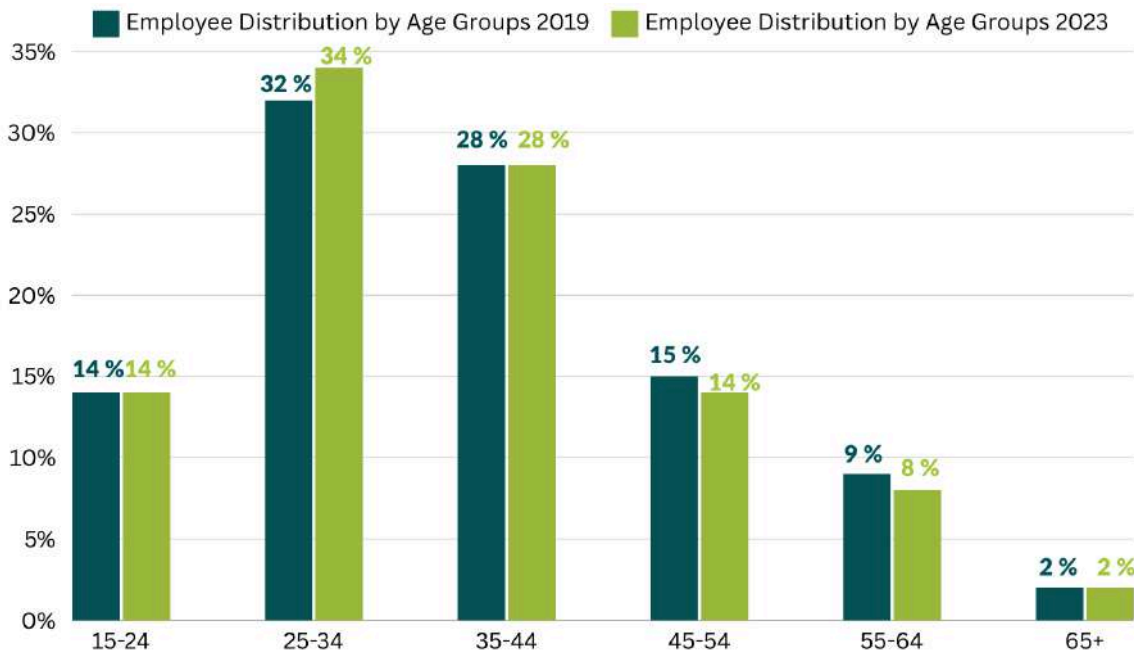
Figure 11: Employee dıstrıbutıon by age groups, **Data Source:** Tax Administration of Kosovo (TAK)

3.6. Decade Analysis of ICT Sector Exports and Imports

The nine-year analysis of Kosovo's ICT sector exports and imports data from the Central Bank of Kosovo reveals a sector that has overcome early fluctuations to achieve substantial growth in recent years. The dramatic increase in exports reflects Kosovo's rising prominence in the global ICT landscape, while the stable import growth underscores the ongoing need for foreign technology to sustain and advance local developments. This positive trend is a testament to the sector's resilience and potential for continued
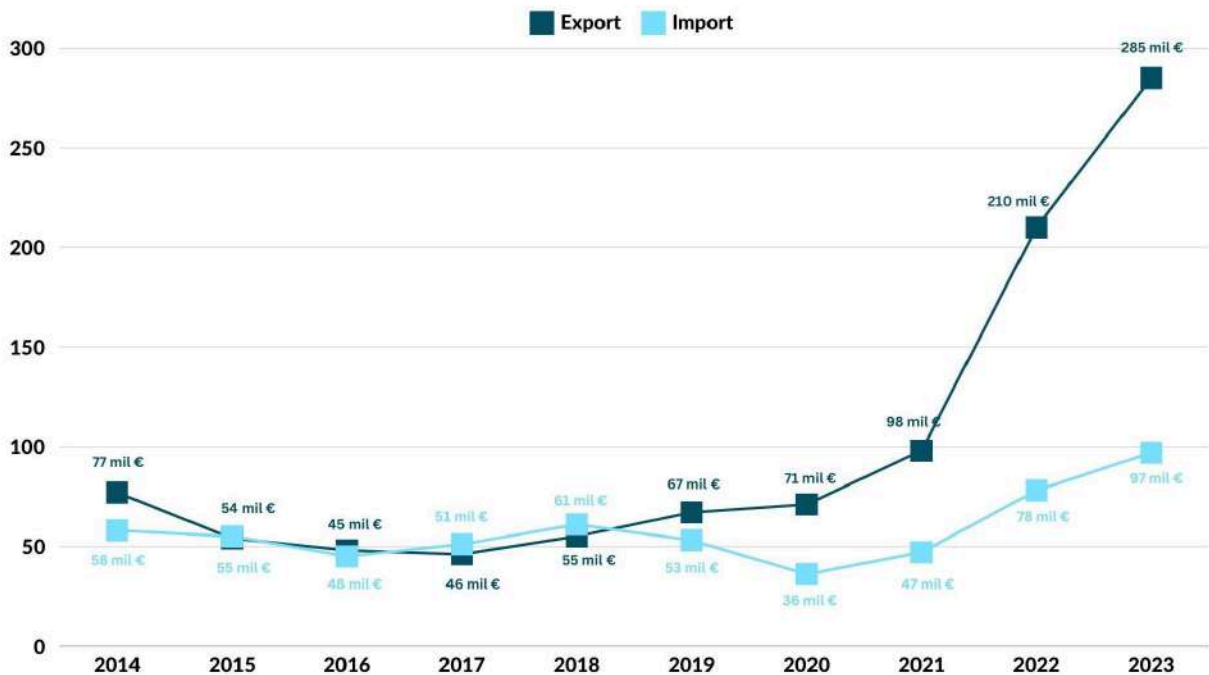
growth and success.

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Figure 12: Export and Import in the ICT Sector, **Data Source:** Central Bank of Kosovo (CBK)

Some key observations stemming from this data are as follows:

- **Export Growth:** The exponential growth in exports from 2021 to 2023 highlights the ICT sector's significant development and enhanced competitiveness in international markets. This growth could be attributed to advancements in technology, improved service quality, and strategic international partnerships.
- **Stable Imports:** The steady increase in imports suggests a balanced growth in domestic demand for ICT products and services. This trend highlights the sector's reliance on foreign technology to support local advancements and meet consumer needs.
- **Trade Balance:** The sharp rise in exports compared to imports indicates an improving trade balance in the ICT sector. The sector's ability to generate higher export revenue while maintaining a stable import level points to a strengthening economic position within the global ICT market.

The provided data in Figure 8. presents the quarterly revenues for three key service categories within the ICT sector in Kosovo for the year 2023: Telecommunication Services, Information Technology Services, and Computer Services. Here's an analysis of the trends observed throughout the year:

Figure 13: Quarterly Data of Export in the ICT Sector, **Data Source:** Central Bank of Kosovo (CBK)

1. **Telecommunication Services** showed a generally upward trend throughout the year, starting at €34 million in Q1 and peaking at €40 million in Q4. The slight dip in Q3 to €37 million was followed by a recovery and growth in Q4, indicating strong performance and demand for telecommunication services.
2. **Information Technology Services** experienced significant growth over the year, starting modestly at €1 million in Q1 and Q2, then increasing to €2 million in Q3, and finally surging to €5

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million in Q4. This remarkable increase in the last quarter highlights the growing demand and expansion in IT services.

3. **Computer Services** also showed a robust growth pattern, beginning at €23 million in Q1, increasing significantly to €35 million in Q2, and after a slight dip to €32 million in Q3, rising again to €37 million in Q4. The fluctuations indicate variability in demand but an overall positive growth trend by year-end.

3.6.1. Top 5 Countries for ICT Sector Exports and Imports of Services

The analysis of data from the Central Bank of Kosovo, the top 5 countries for ICT sector exports and imports, reveals significant trade relationships that are crucial for Kosovo's ICT industry. The balanced mix of major import sources and key export destinations underscores the sector's global integration and the potential for future growth and diversification.

The USA is the largest destination for Kosovo's ICT services exports, comprising nearly 30% of the total export value. Additionally, within the EU, Switzerland (23%) and Germany (19%) are other significant market destinations. While smaller, in 4th and 5th place, globally (8%) and in Romania (4%) represent notable portions of the export value.
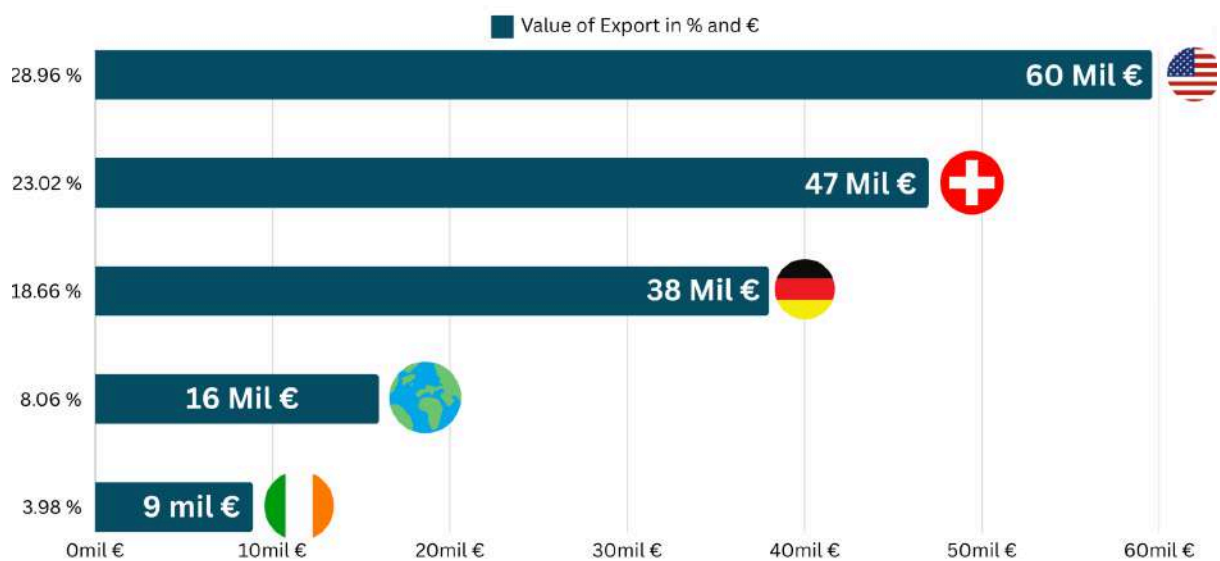
Figure 14: Top 5 exporting countries by € value and % (2022) **Data Source:** Central Bank of Kosovo (CBK)

The top source for Kosovo's ICT services imports is the USA, accounting for 21.33% of the total import value. In the EU, Albania (20.12%) and Poland (10.57%) are other significant import sources. Additionally, Germany (7.94%) and North Macedonia (6.14%) hold the 4th and 5th positions, respectively, contributing notable portions to the import value.

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Figure 15: Top 5 importing countries by € value and % (2022) **Data Source:** Central Bank of Kosovo (CBK)

Some key observations stemming from export and import data are as follows:

- **Diverse Trade Relationships:** Kosovo's ICT sector maintains a diverse set of trade relationships, both in terms of imports and exports, indicating a well-integrated position in the global ICT market.
- **Import Reliance:** The concentration of imports from the top two countries (over 40%) suggests a reliance on specific international partners for ICT services.
- **Export Strength:** The strong export figures to the top three countries (accounting for over 70% of exports) highlight key international markets that are driving the growth of Kosovo's ICT sector.
- **Growth Potential:** The data indicates potential growth opportunities by expanding trade relationships with other countries, both for imports and exports, to reduce reliance on specific partners and tap into new markets.

3.7. Job announcements analysis from KosovaJob Portal

To gain a deeper understanding of the ICT sector's demands, additional market data were analysed. One valuable source was the KosovaJob job portal. We examined the job postings over the past four years to determine the number of job positions requested, along with the specific skills and titles sought by employers.

This analysis aimed to identify trends in the ICT job market, highlighting the most in-demand roles and the skill sets that are crucial for job seekers to possess. By scrutinising this data, we aimed to provide insights into the evolving requirements of the ICT industry in Kosovo, helping educators, policymakers, and job seekers align their efforts with market needs.

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3.7.1. How many positions have been announced in total in the ICT Sector?

The data from the KosovaJob portal reveals fluctuating demand in the ICT sector, with a peak in 2021. Despite a decrease in 2023, the number of job positions remains substantially higher than in 2020, suggesting sustained demand for ICT skills. This trend highlights the dynamic nature of the ICT job market and underscores the importance of aligning skills and training with market needs to capitalize on employment opportunities.

 The peak of job announcements in 2021, the first year after the pandemic, can be attributed to several factors. The COVID-19 pandemic accelerated digital transformation across various industries, increasing the demand for ICT professionals to support remote work, digital services, and online business operations.

Additionally, global disruptions such as the war in Ukraine may have influenced labor markets and economic conditions, prompting businesses to seek out ICT talent to navigate these challenges. This surge reflects the critical role of ICT in adapting to and recovering from global crises, highlighting the sector's resilience and continued growth potential.
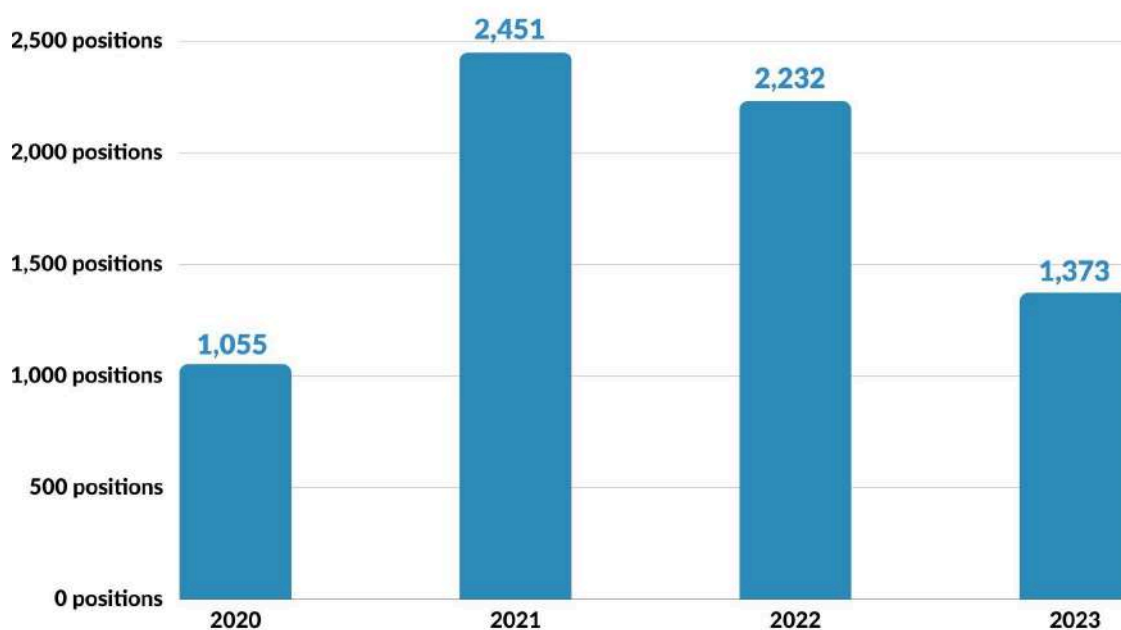
Figure 16: Number of job positions announced in total in the ICT Sector, **Data Source:** KosovaJob

3.7.2. Number of job announcements by sub-sectors

The data is detailed in Figure 16. reveals varying demands across different ICT sub-activities over the past four years. Information Technology consistently shows high demand, peaking in 2021. Marketing, Advertising & PR also sees significant demand, though it has decreased slightly in recent years. Customer Support & Call Centers show a steady demand but a declining trend. Telecommunications, while initially low, has shown a gradual increase in job announcements. This analysis underscores the

dynamic nature of the ICT job market and the need for targeted skill development in these key areas.
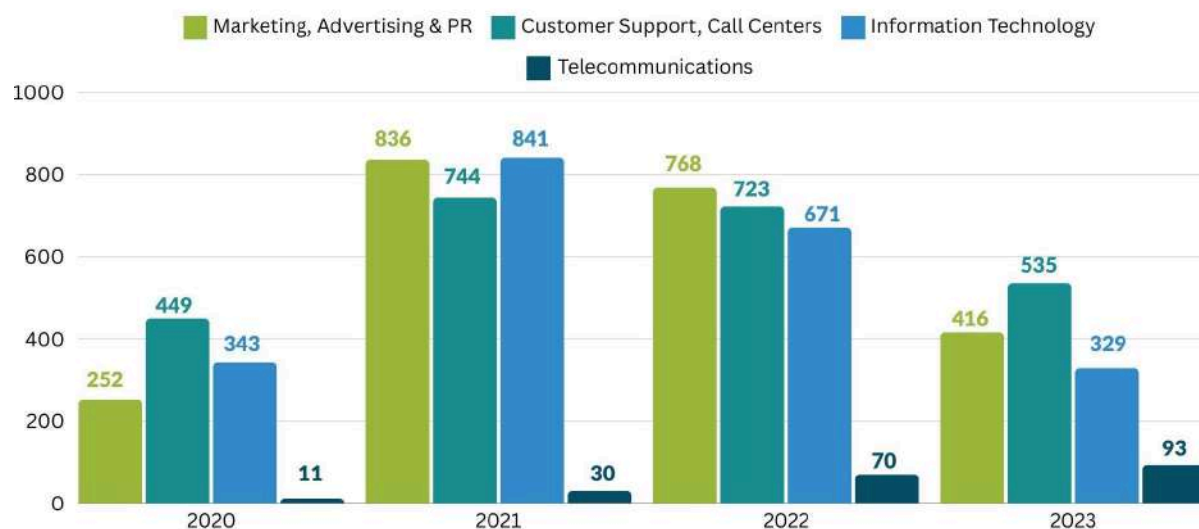
Figure 17: Number of job announcements by sub-sectors, **Data Source:** KosovaJob

Furthermore, Table 2. highlights the total number of job announcements for the period 2020-2024, positioning Customer Support and Call Centers in the first place over the past four years. This is closely followed by Marketing, Advertising & PR in the second place. Information Technology is next, while Telecommunications ranks last in terms of job postings. This ranking underscores the consistent demand for customer support and IT skills in the job market.

#	Sub-Sector	Total number
1.	Customer Support, Call Centers	2,451
2.	Marketing, Advertising & PR	2,272
3.	Information Technology	2,184
4.	Telecommunications	204

Table 2. The number of job announcements for the period 2020-2024, **Data Source:** KosovaJob

3.7.3. Top 10 most wanted positions in KosovaJob for the year 2023

The table below provides a detailed breakdown of the top 10 most wanted job positions according to the job portal KosovaJob. Additionally, the Salary column includes information from Rroga.com[5], which indicates the average salaries for these positions. The Sample column shows the number of people who anonymously provided salary information for each role.

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[5] *Rroga* *https://rroga.com/, (Last Accessed June, 2024)*

Position Title	Number	Salary	Sample
1. Telephone Agent	102	507 €	142
2. Call Centre Agent	97	527 €	168
3. Customer Service Agent	32	511 €	114
4. Graphic Designer	30	346 €	32
5. Customer Support Specialist	24	512 €	172
6. Call Center Worker	22	600 €	256
7. Team Leader	17	500 €	132
8. Marketing Specialist	17	639 €	88
9. Marketing Assistant	16	314 €	80
10. Promoter	16	-	-

Table 3. Top 10 most wanted positions in KosovaJob for the year 2023, **Data Source:** KosovaJob and Rroga.com

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4. Workforce Supply Data

Workforce supply data is a crucial component in understanding the dynamics of the workforce in any region. In Kosovo, this data provides insights into the availability of employees, their skills, and educational background. It serves as a foundational element for policymakers, educational institutions, and businesses to make informed decisions that affect economic growth, employment rates, and workforce development.

Kosovo's workforce market is characterized by a youthful population, with a significant portion of its citizens under the age of 30. This demographic trend presents both opportunities and challenges in terms of employment and skill development. Accurate and up-to-date workforce supply data helps in identifying gaps between the skills of the workforce force and the needs of the market, thereby enabling targeted interventions to enhance employability and productivity.

The workforce supply data encompasses various aspects, including the number of individuals entering the workforce, their educational qualifications, vocational training, and gender distribution.
By analyzing workforce supply data, stakeholders can better understand trends in workforce participation, unemployment rates, and the alignment of educational outcomes with workforce market demands. This analysis is essential for developing strategies to improve job creation, vocational training programs, and overall economic policy.

4.1. The number of students enrolled in public vocational secondary schools

The Figure 10. depicts the number of students enrolled in public vocational secondary schools over the past three school years: 2021/2022, 2022/2023, and 2023/2024. In the 2021/2022 school year, there were 4,262 students enrolled. Enrollment slightly decreased in the 2022/2023 school year to 4,168 students, but increased again in the 2023/2024 school year to 4,560 students. Overall, the data shows a decline in enrollment from 2021/2022 to 2022/2023, followed by a significant increase in 2023/2024. This suggests a recovery or growth in interest in vocational education after a dip in the middle year.

Figure 18: Number of students enrolled in public vocational secondary schools for the past three school years, **Data Source:** Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training provider

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4.1.1. Key Trends in Public Vocational Secondary Schools

- Consistent High Demand for Computing: Over three years, the "Computing" program has consistently attracted the highest number of students.
- Strong Interest in Telecommunications and IT Systems: These fields have seen steady enrollment, indicating sustained interest in these areas.
- Moderate to Low Enrollment in Specialized Fields: Programs like "Mechatronics," "Business IT Technician," and "Production operator" have moderate enrollment, while more niche programs such as "Electric car" and "Software Designer" attract fewer students.
- Need for Curriculum Updates: The trends suggest a need for curriculum updates and better resource allocation to balance enrollment and meet market demands. Enhanced career guidance could also help in increasing awareness and interest in less popular programs.

4.1.2. The number of students enrolled in public vocational secondary schools 2021/2022

The 2021/2022 enrollment data for public vocational secondary schools highlights key trends in student preferences. The "Computing" program leads with 2,122 students, showing high demand for IT skills. "Telecommunications" and "Production Operator" programs also attract many students, with 658 and 441 enrollments, respectively.

Moderate interest is seen in "Computer control of cars" (227 students), "Mechatronics" (166 students), and "PTT" (155 students), offering diverse technical opportunities. Niche programs like "Software Designer" (114 students) and "IT systems technician" (86 students) have fewer enrollments.

Less popular programs include "Industrial electronics" (78 students), "Business IT Technician" (77 students), and "Consumer electronics" (56 students), with "Information technology services" (51 students) and "IT Technician" (31 students) having the lowest enrollments, possibly due to limited job prospects.
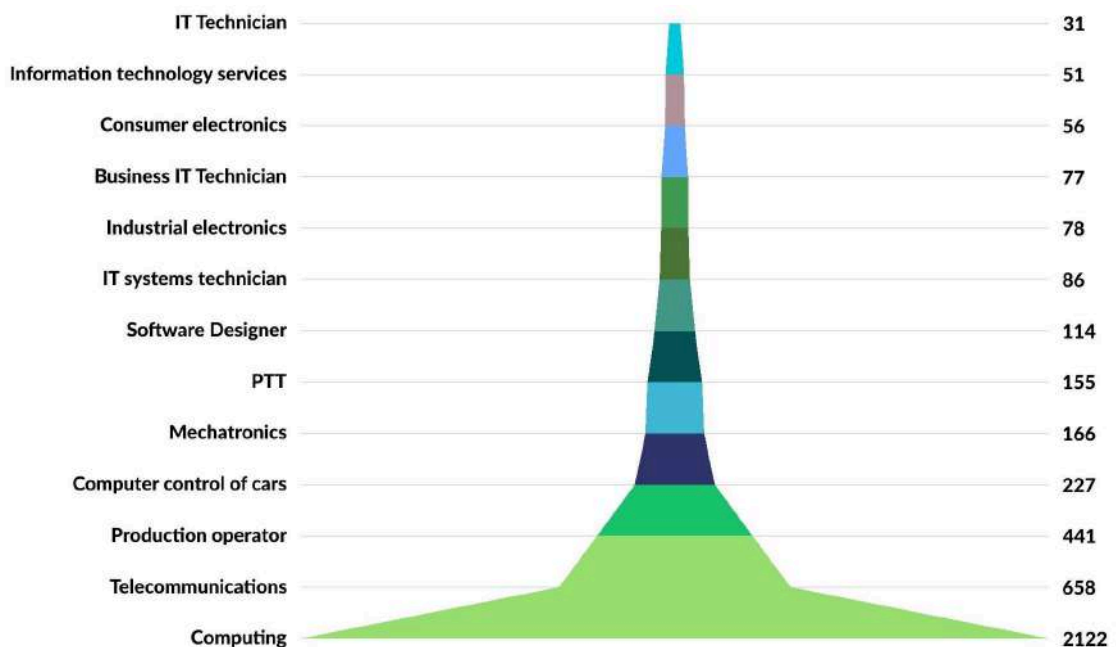
Figure 19: Number of students enrolled in public vocational secondary schools 2021/2022,
Data Source: Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

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4.1.3. The number of students enrolled in public vocational secondary schools 2022/2023

In the 2022/2023 academic year, the "Computing" program led in popularity with 1,676 students, indicating a strong demand for IT skills. "Telecommunications" and "Production operator" programs also saw high enrollments with 509 and 403 students respectively.

Moderate interest was shown in "IT systems technician" (394 students), "Business IT Technician" (291 students), and "Mechatronics" (282 students). Lower enrollments were noted for "Computer control of cars" (262 students) and "Software Designer" (129 students).

Less popular programs included "Information technology services" (53 students), "Consumer electronics" (50 students), and "IT technician" (37 students), with the least enrollment in "Electric car" (33 students), "Electronics technician" (29 students), and "PTT" (20 students). These trends highlight the need for curriculum updates, better resource allocation, and enhanced career guidance to align vocational programs with market demands.

Program	Students
PTT	20
Electronics technician	29
Electric car	33
IT technician	37
Consumer electronics	50
Information technology services	53
Software Designer	129
Computer control of cars	262
Mechatronics	282
Business IT Technician	291
IT systems technician	394
Production operator	403
Telecommunications	509
Computing	1676

Figure 20: Number of students enrolled in public vocational secondary schools 2022/2023
Data Source: Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

4.1.4. The number of students enrolled in public vocational secondary schools 2023/2024

In 2023/2024, the "Computing" program led with 1,771 students, showing high IT demand. "IT systems technician" and "Telecommunications" followed with 545 and 381 enrollments.

Moderate interest was seen in "Business IT Technician" (363), "Production operator" (288), "Computer control of cars" (246), and "Mechatronics" (226). Less popular were "Software Designer" (161), "Electric car" (90), "PTT" (78), and "IT Technician" (64).

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Programs like "Information technology services" (64), "Consumer electronics" (59), and others had the lowest enrollments. These trends suggest the need for curriculum updates, better resource allocation, and enhanced career guidance to balance student distribution and meet market demands.

Figure 21: Number of students enrolled in public vocational secondary schools 2023/2024,
Data Source: Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

4.2. The number of students enrolled and graduated in University Education, Information and Communication Technology

The analysis below of the number of students enrolled and graduated in University Education, Information and Communication Technology reveals an increase in female enrollment in bachelor's programs, while male enrollment saw a slight decline.

Master's programs showed emerging interest among both genders. Graduations in 2021-2022 indicate a gender disparity, with males outnumbering females in both bachelor's and master's degrees. This suggests ongoing efforts are needed to balance gender representation in ICT education.

- **Bachelor's Degree Enrollments:**
    - Female Students: Increased from 704 in 2021-2022 to 871 in 2022-2023;
    - Male Students: Decreased from 1,946 in 2021-2022 to 1,830 in 2022-2023.
- **Master's Degree Enrollments:**
    - Female Students: No data available for 2021-2022; 130 enrolled in 2022-2023;
    - Male Students: No data available for 2021-2022; 160 enrolled in 2022-2023.
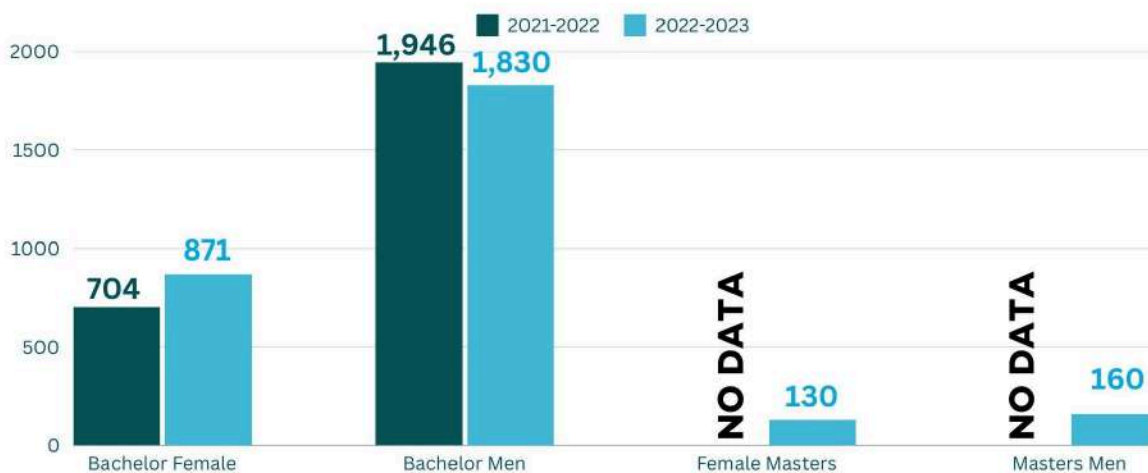
Figure 22: The number of students enrolled in University Education Information and Communication Technology (Bachelor & Master for the years 2021/2022 and 2022/2023), **Data Source:** Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

These insights highlight an overall increase in female enrollment in bachelor's ICT programs, while male enrollment slightly decreased. The master's programs data, available only for 2022-2023, indicates emerging interest among both male and female students in advancing their ICT education.
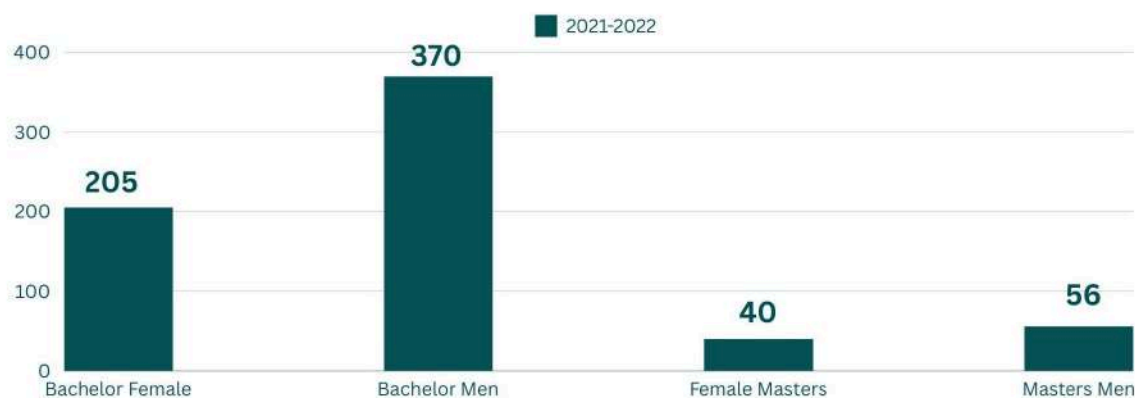
Figure 23: The number of students who graduated in University Education Information and Communication Technology (Bachelor & Master for the years 2021/2022 and 2022/2023), **Data Source:** Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

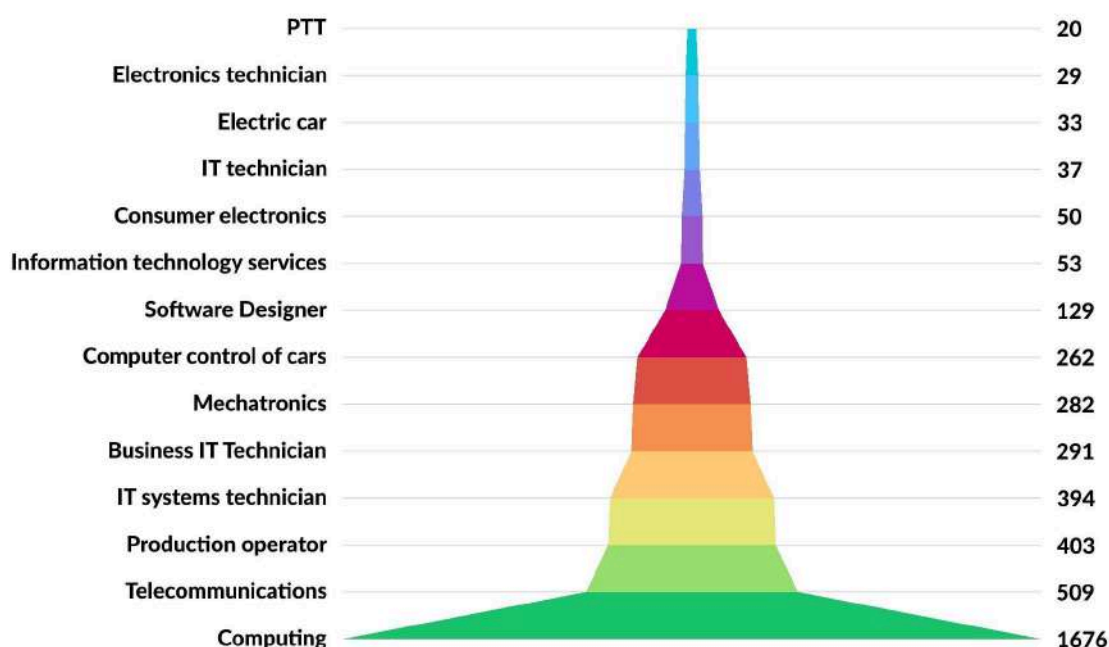## 4.3. Number of training providers in the ICT sector and their status

In Kosovo, across different municipalities, there are a total of 106 training centres, comprising 47 public and 60 private institutions, as detailed in Table 4. Public providers include 33 vocational high schools, 3 NGOs, 7 vocational centres, and 3 training centres of competence. In contrast, all 60 private training providers fall under the category of vocational/private training institutions. This highlights a balanced but distinct separation between public and private training opportunities, with private institutions having a notable presence in vocational training.

However, it is important to highlight that the USAID Private Sector-Led Workforce Development (PSWD) Activity has successfully identified these 60 private training providers and continues to engage in identifying additional training providers each year to ensure comprehensive coverage of the private sector.

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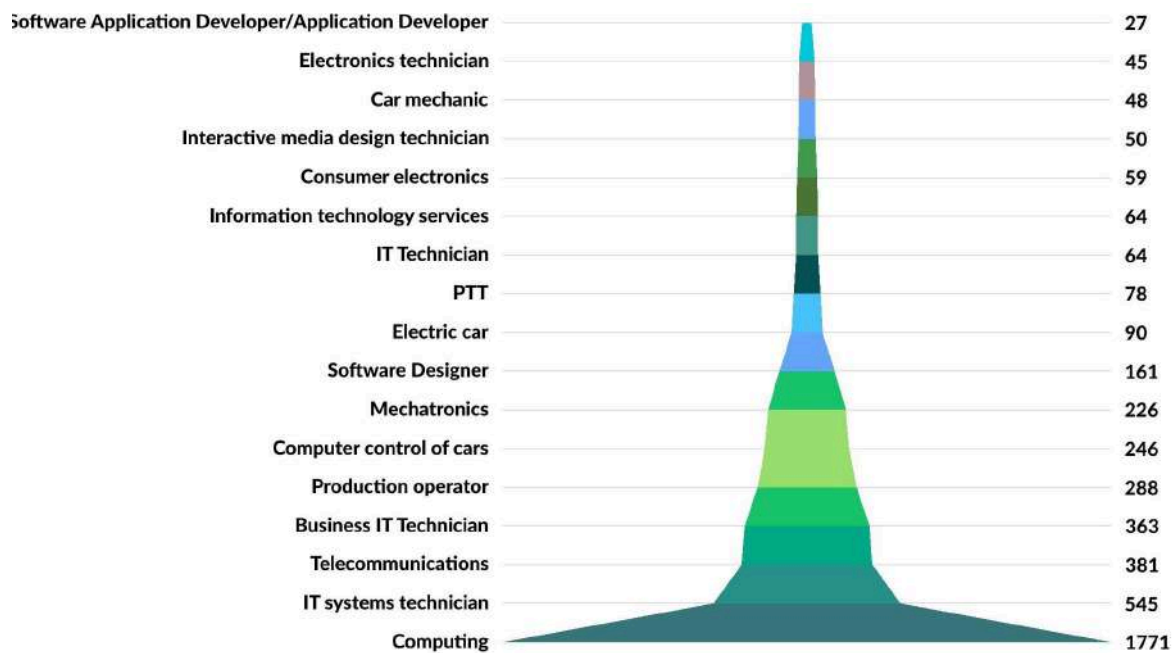| Training providers	Public	Private
Institution for Vocational Education and Training (IVET)	33	
NGO	3	
Institution for Vocational Education and Training (IVET)	7	
Center of Competence	3	
Institution for Vocational Training (IVT) - private		60
Total:	46	60

Table 4. Training Providers and their Status, **Data Source:** Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

4.4. Percentage and number of training providers by municipality

The distribution of 106 training centers across various municipalities in Kosovo is visually represented in the chart in Figure 15. The capital of Kosova, Prishtina has the highest concentration with 52 centers, accounting for 46.4% of the total. Prizren follows with 7 centers (6.3%), and Pejë with 6 centers (5.4%). Municipalities like Ferizaj, Gjakovë, Gjilan, and Mitrovicë each have 5 centers (4.5%), while Kamenicë and Lipjan each have 3 centers (2.7%). Drenas, Viti, and Malishevë each host 2 centers (1.8%). Many other municipalities, including Deçan, Fushë Kosovë, Istog, Kaçanik, Klinë, Obiliq, Podujevë, Rahovec, Shtime, Skenderaj, Suharekë, Vushtrri, and Graçanicë/Lapnasellë, each have 1 center (0.9%). This distribution highlights a centralization of training centers in Prishtinë and suggests opportunities for expanding training facilities in underrepresented areas to ensure wider access to vocational training across Kosovo.
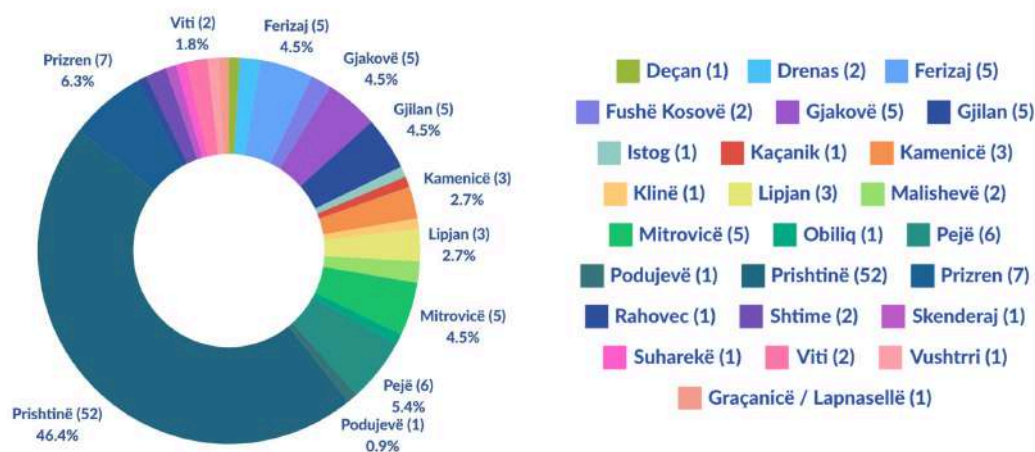
Figure 24: Percentage and number of training providers by the municipality, **Data Source:** Ministry of Education, Science, Technology Innovation, 2024 "SMIA" & interview with training providers

5. Additional insights, secondary source data

In 2023, #Kosova was ranked first in the Western Balkans and 11th in Europe in the publication Future of IT, Emerging Europe[6]. "In 2020, the highest number of ICT students per 100,000 people is estimated to be in Kosovo, while the second and third highest values are observed in North Macedonia and Estonia." Additionally, it is mentioned that "The best IT infrastructure in the region can be found in 2023 in Romania. Kosovo and Estonia follow while Hungary and Lithuania complete the top five."

To further complete this analysis of the ICT sector, we also included additional insights from the Kosovo IT Barometer, annually published by the Kosovo Association of Information and Communication Technology (STIKK)[7]. This provided a comprehensive view of the current trends and demands in the ICT sector, supporting our goal of developing a robust, market-driven workforce.

5.1. Human Resources

The provided data visualisations offer a detailed look at the gender distribution and role allocation within the ICT sector, as well as insights into the presence of specific job roles.

These visualisations collectively highlight the gender disparities across different roles, with men dominating technical and managerial positions while women are more prevalent in administrative roles. The data also underscores the critical importance of technical and professional roles in the ICT sector, reflecting the demand for specialised skills. Additionally, the high employment rate suggests robust job opportunities in the sector.
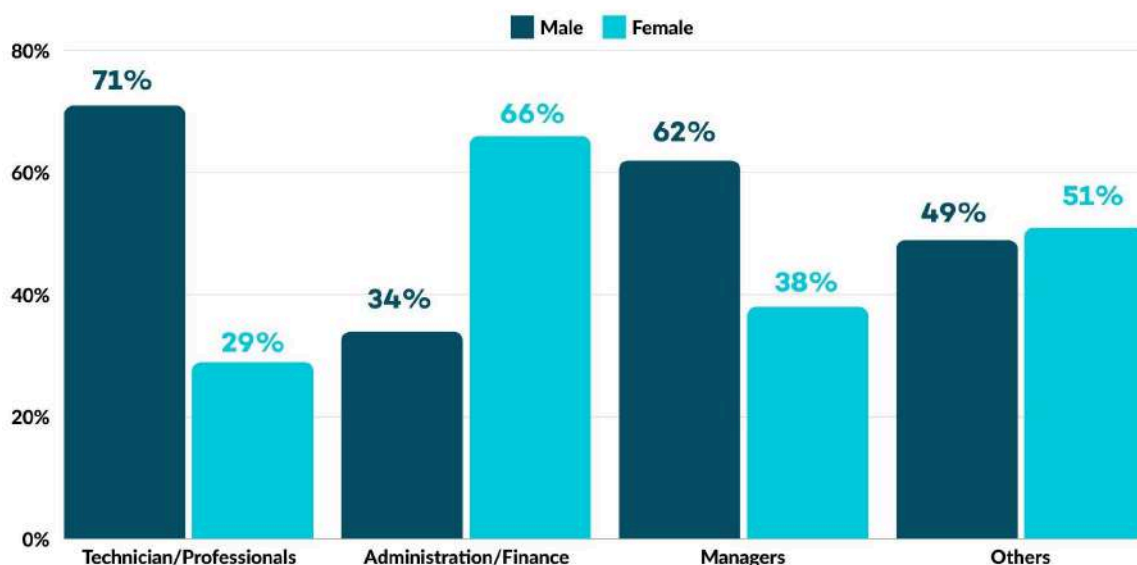
Figure 25: Company Structure (Male/Female), **Data Source:** STIKK, Kosovo IT Barometer 2021-2022

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[6]*Future of IT, Emerging Europe, 2023, https://emerging-europe.com/future-of-it-2022/ (Accesed June, 2024)*
[7] *The Kosovo Association of Information and Communication Technology (STIKK), https://stikk.org/en/ (Accesed June, 2024)*

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5.2. Use of technology: Operating Systems, Programming Language, Programming Frameworks, Data storage and database technologies

The data visualizations below from the IT Barometer provide a comprehensive overview of technology adoption in Kosovo's IT sector, highlighting the predominant use of Windows OS, the popularity of JavaScript as a programming language, and the significant reliance on cloud services and SQL databases for data storage and management.
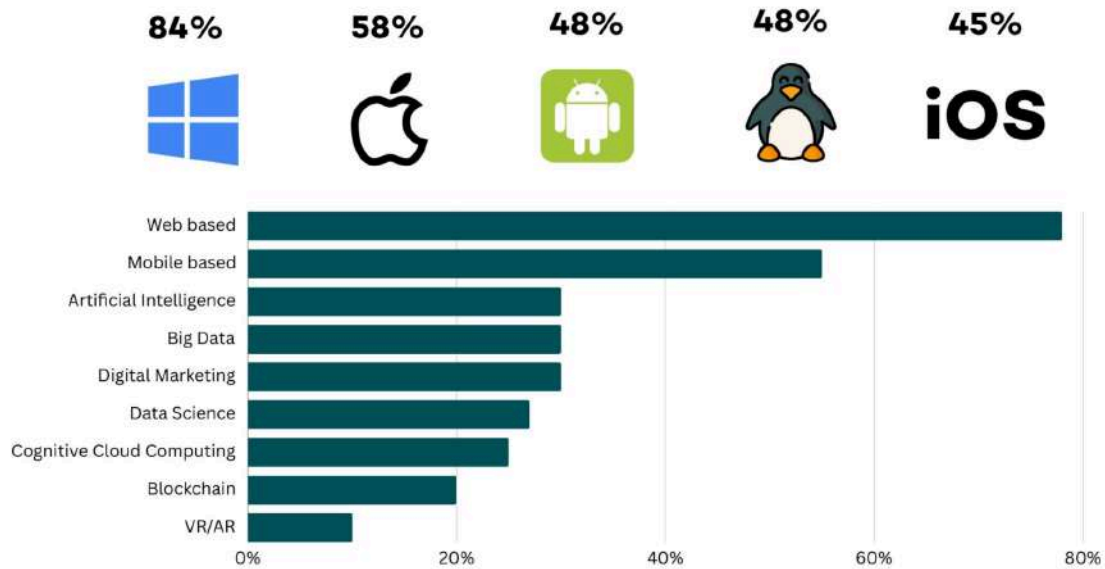
Figure 26: Use of Technology - Operating Systems, **Data Source:** STIKK, Kosovo IT Barometer 2021-2022
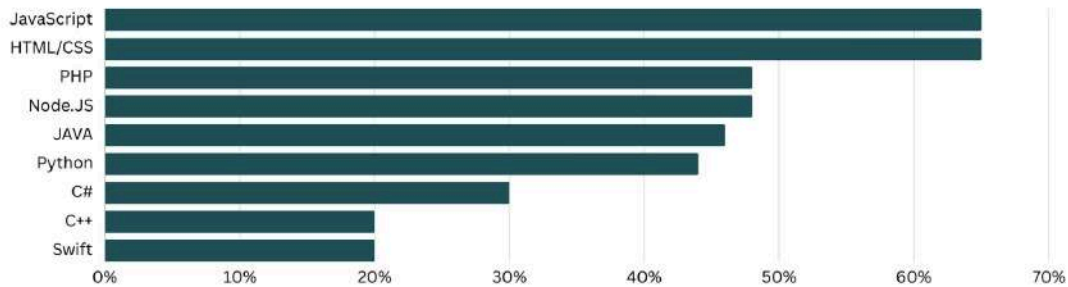
Figure 27: Use of Technology - Programming Language, **Data Source:** STIKK, Kosovo IT Barometer 2021-2022
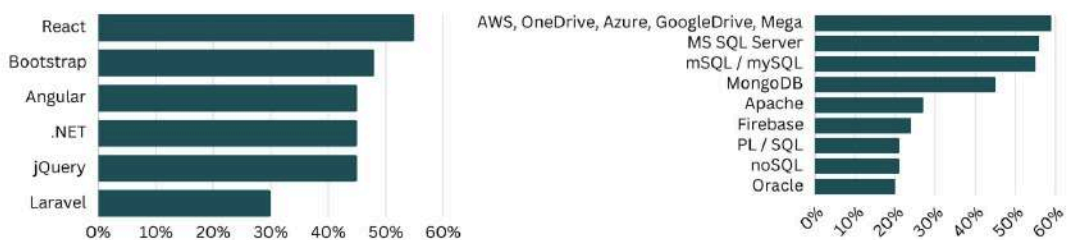
Figure 28: Use of Technology - Programming Framework (Left) and Data Storage and Database Technologies (Right), **Data Source:** STIKK, Kosovo IT Barometer 2021-2022

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5.3. The most in-demand skills and the most frequent training courses attended by the staff of ICT companies

According to the IT Barometer, communication skills and cybersecurity are also highly valued. Senior software developers and software architects are the most in-demand roles, followed by roles requiring strong communication and project management skills.
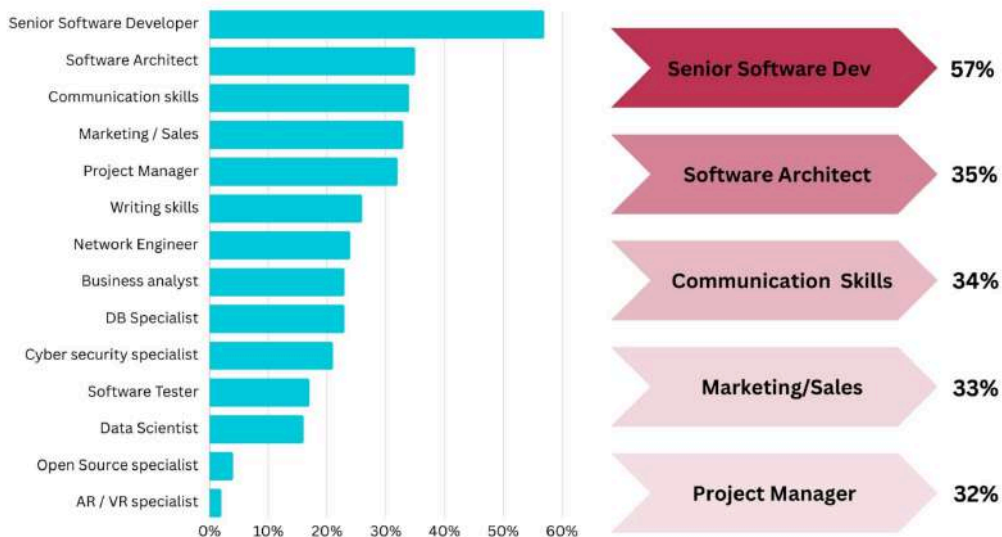
Figure 29: The most in-demand skills, **Data Source:** STIKK, Kosovo IT Barometer 2021-2022

Furthermore, the most frequent courses attended by ICT Companies indicate a strong demand for programming skills, both back-end and front-end, and highlight the critical need for software engineering, database development, and network management skills.
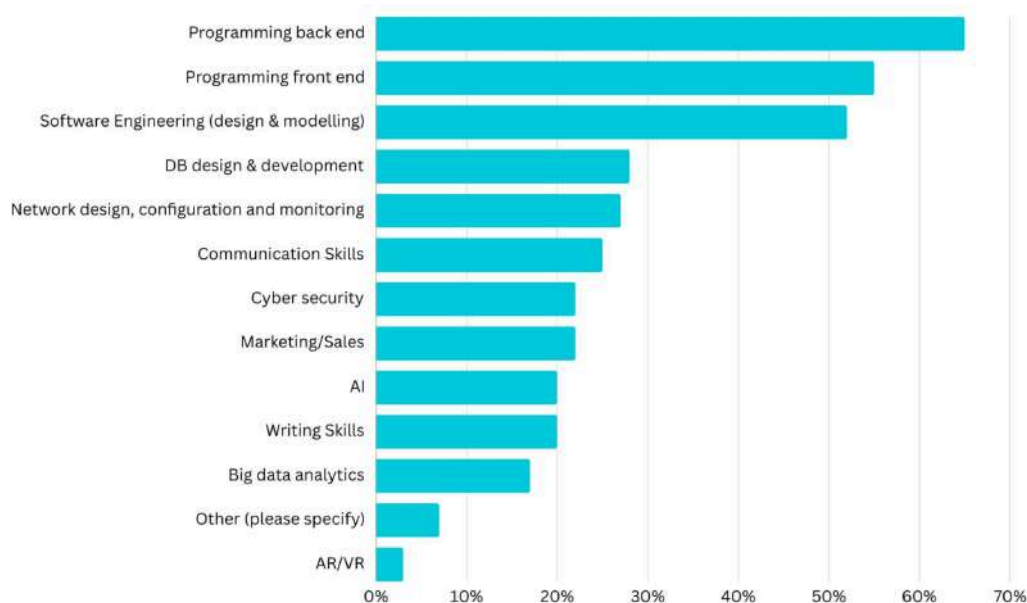
Figure 30: The most frequent training courses attended by the staff of the ICT Companies, **Data Source:** STIKK, Kosovo IT Barometer 2021-2022

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5.4. Average salaries in the ICT sector

The salary data highlights a clear hierarchy in the ICT sector, with senior technical roles like Senior Software Developers and Software Architects commanding the highest salaries. There is also a significant value placed on data analysis and cybersecurity. Management roles offer competitive mid-range salaries, while technical support and entry-level positions have lower average salaries. This data reflects the demand for high expertise and leadership in driving the ICT sector forward.
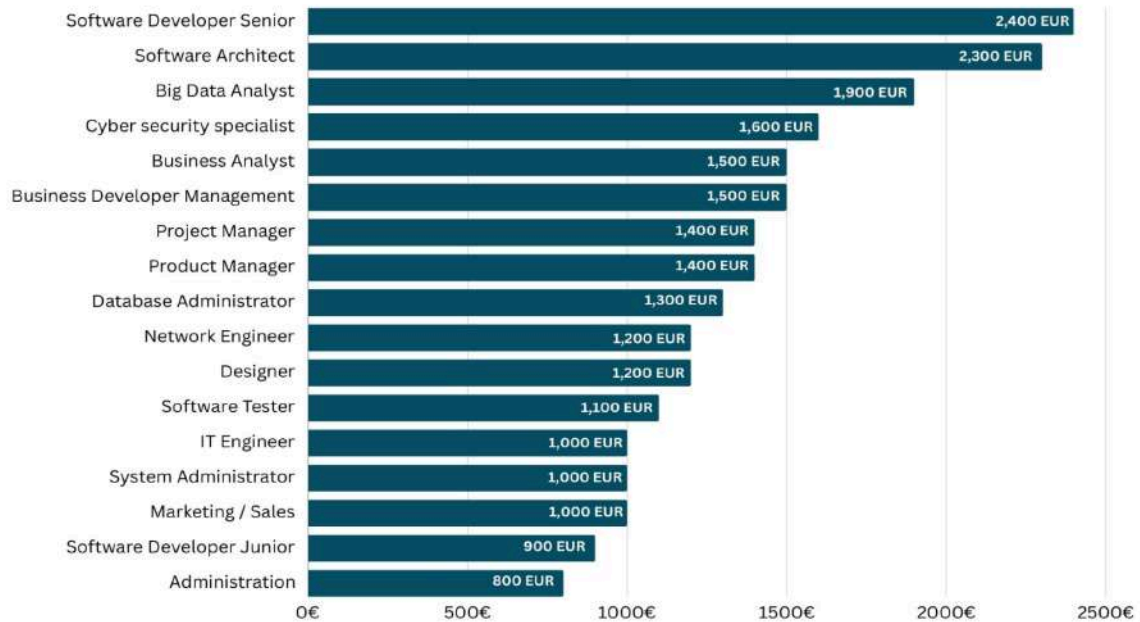
Figure 31: Average salaries of the ICT Companies, **Data Source:** STIKK, Kosovo IT Barometer 2021-2022

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6. The perspective of NGOs representing youth, women, and minorities

PSWD USAID's Activity in Kosovo held a meeting with NGOs representing youth, women, and minorities to discuss creating a more inclusive workforce. The discussion focused on the challenges these groups face in accessing the workforce market and explore collaboration opportunities between civil society and Policy Working Groups to advocate for comprehensive workforce development policies. This meeting underscored USAID's commitment to fostering equitable opportunities for all in Kosovo. The following are the main barriers identified for these groups in society:

6.1. Barriers that young people encounter during access to the workforce market

The main barriers that young people encounter during their access to the workforce market include: Skills mismatch; Inadequate professional education; Low involvement in decision-making; Insufficient government support.

#	Barriers that young people encounter during access to the workforce market
1	Skills-Missmatch
2	Inadequate professional education
3	Low involvement of young people in decision-making
4	Insufficient support for young people

Table 5. Barriers that young people encounter during access to the workforce market, **Data Source:** PSWD Project

6.2. Barriers that women encounter during access to the workforce market

Barriers that women encounter during access to the workforce market: Family responsibilities; Lack of nurseries/kindergartens for children; Mismatch of skills and workforce market requirements; Lack of formal employment contracts; Low wages & the gender pay gap; Non-compensation for overtime and practical work; Insufficient government support; Fear of losing social assistance; Limited transportation options Dependence on remittances.

#	Barriers that women encounter during access to the workforce market
1	Family-responsibilities
2	Lack of nurseries/kindergarden for children
3	Missmatch of skills and labor market requirements
4	Lack of formal employment contracts

5	Low wages and gender pay gap
6	Non-compensation for overtime and internship work
7	Insuficient government support
8	Fear of losing social assistance
9	Limited transportation options
10	Dependences on remittances

Table 6. Barriers that women people encounter during access to the workforce market, **Data Source:** PSWD Project

6.3. Barriers that minorities encounter during access to the workforce market

Barriers that minorities encounter during access to the workforce market: Discrimination in employment in the private sector; Fear of losing social assistance; Mismatch between professional training and the needs of the minority; Declining interest in professional education; Differences in participation rates between minority groups; Limited access to transportation.

#	Barriers that minorities encounter during access to the workforce market
1	Discrimination in employment in the private sector
2	Fear of losing social assistance
3	Missmatch between professional training and the needs of the minority
4	Declaining interest in professional education
5	Difference in participation rates between minority groups
6	Limited transportation options

Table 7. Barriers that minorities people encounter during access to the workforce market, **Data Source:** PSWD Project

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7. Conclusions and Recommendations from Data Swap Activity

As part of the Private Sector-Led Workforce Development Activity in Kosovo, which aims to create a private sector-led workforce development ecosystem equipping youth with the necessary skills for growth industries driving Kosovo's economic development, we organized a data swap activity. This activity focused on the ICT, agribusiness, and wood processing sectors and aimed to embolden the private sector to develop and strengthen the workforce, resulting in more market-driven skills.

The primary purpose of the Data Swap is to support Council Leads from the project's targeted sectors in providing data-based decision-making advice. This activity brought together relevant stakeholders from the private sector, public institutions, donors, and non-profit organizations to present and review the data included in this report. The goal was to ensure accurate interpretation, discuss discrepancies, and identify additional data sources that could enhance the analysis of the workforce in the targeted sectors. Through this collaborative effort, we aimed to refine our understanding of workforce needs and better align our strategies with market demands.

During such discussion, additional conclusions and recommendations were proposed as follows:

- Forecasting an increase in the number of employees in the ICT sector, by more than 10% over the existing number, reflecting a positive trend of increased demand for workforce force.
- workforce demand is expected to grow by around 6-8%, based on projections and analysis of current data.
- The data of the past years show that there has not been a decrease in the number of employees in demand, but a slowdown in the growth rate due to the global crisis, the crisis in the USA, and competition with the countries of the region.
- It was emphasized that forecasts show that there will be a special demand for positions such as System Architect, Business Analyst, Full-Stack Developer, and Artificial Intelligence (AI) specialists.
- The government has approved new regulations for digitization, which is expected to positively affect the growth of the sector and the demand for workforce force.
- It has been emphasized that the ICT sector has the lowest level of informality for employment, compared to other sectors, which helps create a more transparent and regulated workforce market.
- Job advertisements on online portals do not always accurately reflect the required workforce profiles, as many companies in the ICT sector do not advertise public positions and use other recruitment networks.
- It was emphasized that there is a decrease in the number of job announcements. One reason for this may be that employers are using academies and training centers to recommend employees, rather than advertising positions publicly.
- In order to encourage companies in the ICT sector to invest in the development and training of their staff, it was suggested that these investments be partially exempted from taxation. This would help increase the capacity of the workforce and improve their skills.

Annex 1. List of profiles by private and public providers in the ICT sector

The list of profiles provided by private providers is processed from the data source from the Ministry of Education, Science, Technology, and Innovation from "SMIA" & interviews with training provider companies and are updated on an annual basis.

Nr.	Institution	Municipality	Private/Public	Profile
1	PBC Academy	Prishtinë	Privat	Zhvillues i softwerit
1	PBC Academy	Prishtinë	Privat	TETE (Tech-knowledge & Techno-logic) Program
2	Shkolla Digjitale	Prishtinë	Privat	Junior Programmer
2	Shkolla Digjitale	Pejë	Privat	Junior Programmer
2	Shkolla Digjitale	Mitrovicë	Privat	Junior Programmer
2	Shkolla Digjitale	Gjakovë	Privat	Junior Programmer
2	Shkolla Digjitale	Prizren	Privat	Junior Programmer
2	Shkolla Digjitale	Ferizaj	Privat	Junior Programmer
3	Cacttus Education	Prishtinë	Privat	Network and System Administrator
3	Cacttus Education	Prishtinë	Privat	Zhvillues i ueb-it dhe i aplikacioneve mobile
4	PROED	Prishtinë	Privat	Zhvillues i softuerit
5	UBT	Prishtinë	Privat	Network and System Administrator
5	UBT	Prishtinë	Privat	Zhvillues i aplikacioneve
6	Kolegji Europian i Kosovës	Prishtinë	Privat	Teknik i Zhvillimit te Softuerit
7	International Business College Mitrovica	Mitrovicë	Privat	IT Help Desk
8	Asociation "Loyola-Gymnasium"	Prizren	Privat	Operatorë i Robotëve Industrial - Teknik i Drejtimit të Proceseve
9	Gjimnazi Britanik për Teknologji	Prishtinë	Privat	Teknologji e Informacionit
10	BEETROOT ACADEMY	Prishtinë	Privat	Zhvillues i aplikacioneve për ueb
11	Next Gen Networks Institute (NGN)	Prishtinë	Privat	Instalimi i fibrave optike
11	Next Gen Networks Institute (NGN)	Prishtinë	Privat	Video Editing
11	Next Gen Networks Institute (NGN)	Prishtinë	Privat	DevOps
12	Gjirafa Life	Prishtinë	Privat	Software Engineer
13	BIT Academy	Prishtinë	Privat	Zhvillimi i ueb-it
14	ROI Academy	Prishtinë	Privat	Zhvillimi i ueb-it
14	ROI Academy	Prishtinë	Privat	Cybersecurity
14	ROI Academy	Prishtinë	Privat	Digital Marketing
14	ROI Academy	Prishtinë	Privat	Design and Video
15	Training and Development Institute RIT/AUK	Prishtinë	Privat	CISCO Networking Academy

Nr.	Institution	Municipality	Private/Public	Profile
15	Training and Development Institute RIT/AUK	Prishtinë	Privat	Microsoft Courses
15	Training and Development Institute RIT/AUK	Prishtinë	Privat	Android Programming Courses
15	Training and Development Institute RIT/AUK	Prishtinë	Privat	Computer Programming Courses
16	ICK- Innovation Center Kosovo	Prishtinë	Privat	Cmputer Programming Courses
16	ICK- Innovation Center Kosovo	Prishtinë	Privat	Video Editing & Graphic Design
16	ICK- Innovation Center Kosovo	Prishtinë	Privat	Digital Marketing
17	Celonis Academy	Prishtinë	Privat	Fundamental JAVA (Back-End)
17	Celonis Academy	Prishtinë	Privat	Advanced JAVA (Front-End)
17	Celonis Academy	Prishtinë	Privat	Software Engineering
17	Celonis Academy	Prishtinë	Privat	Teamwork
18	Creative Hub	Prishtinë	Privat	Digital Marketing
18	Creative Hub	Prishtinë	Privat	Graphic Design
18	Creative Hub	Prishtinë	Privat	Human Resources
18	Creative Hub	Prishtinë	Privat	Front End Web Development
18	Creative Hub	Prishtinë	Privat	Data science
19	Venture UP	Prishtinë	Privat	Digital Marketing
19	Venture UP	Prishtinë	Privat	Unreal Engine 4
19	Venture UP	Prishtinë	Privat	Machine learning
19	Venture UP	Prishtinë	Privat	Web Programming
19	Venture UP	Prishtinë	Privat	AI
20	Jungle	Prishtinë	Privat	Web Design and Applications
20	Jungle	Prishtinë	Privat	Data science
20	Jungle	Prishtinë	Privat	Digital Marketing
20	Jungle	Prishtinë	Privat	Project Management
20	Jungle	Prishtinë	Privat	Graphic and Motion Design
21	SPEEEX Education	Prishtinë	Privat	Web Programming
21	SPEEEX Education	Prishtinë	Privat	Cybersecurity
21	SPEEEX Education	Prishtinë	Privat	Data Science
22	Coders Lab	Prishtinë	Privat	Junior Programmer
23	Bonevet	Prishtinë	Privat	IoT
23	Bonevet	Prishtinë	Privat	Graphic Design
23	Bonevet	Prishtinë	Privat	Social Media Marketing
24	Numaricks and the Blank Collar	Prishtinë	Privat	The Blank Collar (TBC) - curriculum with 12 modules

Nr.	Institution	Municipality	Private/Public	Profile
25	42 Prishtina	Prishtinë	Privat	Computer Programming
26	Infotech	Prishtinë/Gjilan	Privat	CISCO Networking Academy
26	Infotech	Prishtinë/Gjilan	Privat	Microsoft Courses
27	Flutura Academy	Drenas	Privat	Digital Marketing
27	Flutura Academy	Drenas	Privat	Graphic Design
27	Flutura Academy	Drenas	Privat	3D Design
27	Flutura Academy	Drenas	Privat	Robotics
27	Flutura Academy	Drenas	Privat	Computer Programming
28	Probit Acaddemy	Prishtinë	Privat	Web Development
28	Probit Acaddemy	Prishtinë	Privat	Java Development
28	Probit Acaddemy	Prishtinë	Privat	C# with SQL Server
28	Probit Acaddemy	Prishtinë	Privat	Python with Data Science
28	Probit Acaddemy	Prishtinë	Privat	CISCO Networking Academy
29	IKAF	Prishtinë	Privat	Auditor i IT i certifikuar
30	Qendra e trajnimeve Gold	Ferizaj	Privat	Java Development
30	Qendra e trajnimeve Gold	Ferizaj	Privat	HTML & PHP
31	CatKosovo	Prishtinë	Privat	Graphic Design
31	CatKosovo	Prishtinë	Privat	Digital Marketing
32	United Pixels	Prishtinë	Privat	Graphic Design
32	United Pixels	Prishtinë	Privat	Digital Arts
33	ArchiEdu	Prishtinë	Privat	Adobe Photoshop
33	ArchiEdu	Prishtinë	Privat	CAD Design
34	Youth Center	Lipjan	Privat	Web Programming - Front End
34	Youth Center	Lipjan	Privat	Graphic Design
34	Youth Center	Lipjan	Privat	Systems and Network Administration
35	Romb Academy	Gjakovë	Privat	JAVA Development
35	Romb Academy	Gjakovë	Privat	Python Programming
35	Romb Academy	Gjakovë	Privat	Web Development
36	Next Academy	Gjakovë	Privat	AI in project management
36	Next Academy	Gjakovë	Privat	3D Design
38	Information Development Initiative	Prishtinë	Privat	CISCO Networking Academy
39	DataProgNet IT Academy	Ferizaj	Privat	CISCO Networking Academy
40	Mediafleta	Gjilan	Privat	CISCO Networking Academy
41	The Open Institute	Prishtinë	Privat	CISCO Networking Academy
42	Intelligent Vision Training Center	Pejë	Privat	CISCO Networking Academy
43	Bota Digjitale	Pejë	Privat	CISCO Networking Academy

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Nr.	Institution	Municipality	Private/Public	Profile
44	Advanced technologies Academy	Prishtinë	Privat	CISCO Networking Academy
45	Dautti	Gjilan	Privat	CISCO Networking Academy
46	CITECH Academy	Prishtinë	Privat	CISCO Networking Academy
47	Gold N' Links	Prishtinë	Privat	Cybersecurity
48	Business Support Center Kosovo	Prishtinë	Privat	Digital Marketing
49	Meister Training Center	Graçanicë/ Lapnasellë	Privat	Asistenti i kualifikuar i mekatronikës
50	Instituti Teknologjise Informative Pro Kosova	Prizren	Privat	SQL
50	Instituti Teknologjise Informative Pro Kosova	Prizren	Privat	C#
51	Growzillas	Prishtinë	Privat	Social Media Management
51	Growzillas	Prishtinë	Privat	Digital Marketing Essentials
51	Growzillas	Prishtinë	Privat	Digital Desing
52	Cegis Group	Prishtinë	Privat	Windows Development
52	Cegis Group	Prishtinë	Privat	Web Development
52	Cegis Group	Prishtinë	Privat	Database development
53	Coders hub	Prishtinë	Privat	Full Stack Developer
53	Coders hub	Prishtinë	Privat	Amazon Web Services
53	Coders hub	Prishtinë	Privat	XR Development
53	Coders hub	Prishtinë	Privat	Cybersecurity
55	Makerspace Innovation Center Prizren	Prizren	Privat	Front End Web Development
55	Makerspace Innovation Center Prizren	Prizren	Privat	Back-end Web Development
55	Makerspace Innovation Center Prizren	Prizren	Privat	Video Editing
55	Makerspace Innovation Center Prizren	Prizren	Privat	Graphic Design
55	Makerspace Innovation Center Prizren	Prizren	Privat	Photography and Photo Editing
55	Makerspace Innovation Center Prizren	Prizren	Privat	Accounting through Software and Taxes
55	Makerspace Innovation Center Prizren	Prizren	Privat	3D Modelling & Printing
55	Makerspace Innovation Center Prizren	Prizren	Privat	CNC Routing
55	Makerspace Innovation Center Prizren	Prizren	Privat	Social Media Management
56	Kolegji Universum	Prishtinë	Privat	Computer Science
56	Kolegji Universum	Prishtinë	Privat	Graphic Design
56	Kolegji Universum	Prishtinë	Privat	Cybersecurity
57	CreativeUp Academy	Prishtinë	Privat	Siguria e informacioneve

Nr.	Institution	Municipality	Private/Public	Profile
57	*CreativeUp Academy*	Prishtinë	Privat	Six Sigma
57	*CreativeUp Academy*	Prishtinë	Privat	Cybersecurity ISO/IEC 27032
57	*CreativeUp Academy*	Prishtinë	Privat	Cloud Security
57	*CreativeUp Academy*	Prishtinë	Privat	GDPR dhe privatesia e te dhenave
57	*CreativeUp Academy*	Prishtinë	Privat	Tranformimi digjital
57	*CreativeUp Academy*	Prishtinë	Privat	Social Media Management
58	*XPERT Technologies*	Prishtinë	Privat	Telekomunikacion
58	*XPERT Technologies*	Prishtinë	Privat	Cybersecurity
102	Scantech Academy	Lipjan	Privat	Digital Marketing
102	Scantech Academy	Lipjan	Privat	Graphic Design
102	Scantech Academy	Lipjan	Privat	Full Stack Developer
103	Cyber Academy	Prishtinë	Privat	Cyber range engineer
103	Cyber Academy	Prishtinë	Privat	Content creator
103	Cyber Academy	Prishtinë	Privat	Video content creator
103	Cyber Academy	Prishtinë	Privat	CACP Instructor
104	Post and Telecom of Kosovo Center for Training and Development	Prishtinë	Publik	CISCO Networking Academy
105	IAAP Fan S. Noli	Podujevë	Publik	Teknik i sistemeve të TIK
105	IAAP Fan S. Noli	Podujevë	Publik	Telekomunikacion
105	IAAP Fan S. Noli	Podujevë	Publik	PTT
105	IAAP Fan S. Noli	Podujevë	Publik	Informatikë
106	IAAP Fehmi Ladrovci	Drenas	Publik	Operator i Prodhimit
106	IAAP Fehmi Ladrovci	Drenas	Publik	Mekatronikë
106	IAAP Fehmi Ladrovci	Drenas	Publik	Telekomunikacion
106	IAAP Fehmi Ladrovci	Drenas	Publik	Informatikë
107	IAAP Hivzi Sylejmani	Fushë Kosovë	Publik	Informatikë
108	IAAP Ismail Dumoshi	Obiliq	Publik	Informatikë
108	IAAP Ismail Dumoshi	Obiliq	Publik	Operator i Prodhimit
109	IAAP Rifat Gjota	Pejë	Publik	Teknik i sistemeve të TIK
109	IAAP Rifat Gjota	Pejë	Publik	Teknik i informatikes së biznesit
109	IAAP Rifat Gjota	Pejë	Publik	Informatikë
109	IAAP Rifat Gjota	Pejë	Publik	Makina elektrike
109	IAAP Rifat Gjota	Pejë	Publik	Telekomunikacion
109	IAAP Rifat Gjota	Pejë	Publik	Elektronikë konsumuese
109	IAAP Rifat Gjota	Pejë	Publik	Dirigjim kompjuterik i makinave
109	IAAP Rifat Gjota	Pejë	Publik	Zhvillues i aplikacioneve softverike
109	IAAP Rifat Gjota	Pejë	Publik	Elektroteknik i informatikes
110	IAAP Mithat Frashëri	Istog	Publik	Teknik i sistemeve të TIK
110	IAAP Mithat Frashëri	Istog	Publik	Informatikë
110	IAAP Mithat Frashëri	Istog	Publik	Telekomunikacion

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Nr.	Institution	Municipality	Private/Public	Profile
110	IAAP Mithat Frashëri	Istog	Publik	Operator i prodhimit
110	IAAP Mithat Frashëri	Istog	Publik	Dirigjim Kompjuterik i Makinave
111	IAAP Fehmi Agani	Klinë	Publik	Informatikë
111	IAAP Fehmi Agani	Klinë	Publik	Operator i Prodhimit
112	IAAP Tafil Kasumaj	Deçan	Publik	Informatikë
112	IAAP Tafil Kasumaj	Deçan	Publik	Teknik i sistemeve të TIK
112	IAAP Tafil Kasumaj	Deçan	Publik	Mekatronikë
113	IAAP Arkitekt Sinani	Mitrovicë	Publik	Informatikë
113	IAAP Arkitekt Sinani	Mitrovicë	Publik	Telekomunikacion
113	IAAP Arkitekt Sinani	Mitrovicë	Publik	Operator i Prodhimit
114	IAAP Anton Çetta	Skënderaj	Publik	Informatikë
114	IAAP Anton Çetta	Skënderaj	Publik	Telekomunikacion
114	IAAP Anton Çetta	Skënderaj	Publik	Operator i prodhimit
114	IAAP Anton Çetta	Skënderaj	Publik	Teknik i sistemeve të TIK
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Teknik i sistemeve të TIK
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Teknik i informatikes së biznesit
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Informatikë
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Telekomunikacion
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Mekatronikë
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Operator i prodhimit
115	IAAP Lutfi Musiqi	Vushtrri	Publik	Dirigjim kompjuterik i makinave
116	IAAP Ymer Prizreni	Prizren	Publik	Teknik i informatikes së biznesit
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Zhvillues i aplikacioneve softverike
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Teknik i sistemeve të TIK
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Informatikë
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Telekomunikacion
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Mekatronikë
117	Qendra e Kompetencës - 11 Marsi	Prizren	Publik	Teknik i dizajnit grafik
118	Qendra e Kompetencës	Prizren	Publik	Teknik i informatikes së biznesit
119	IAAP Skender Luarasi	Suharekë	Publik	Teknik i sistemeve të TIK
119	IAAP Skender Luarasi	Suharekë	Publik	Informatikë
119	IAAP Skender Luarasi	Suharekë	Publik	Teknik i informatikes së biznesit
119	IAAP Skender Luarasi	Suharekë	Publik	Teknik për dizajnim të mediave interaktive
120	IAAP Mehmet Isai	Gjilan	Publik	Informatikë
120	IAAP Mehmet Isai	Gjilan	Publik	Teknik i sistemeve të TIK
120	IAAP Mehmet Isai	Gjilan	Publik	Mekatronikë
120	IAAP Mehmet Isai	Gjilan	Publik	Telekomunikacion

Nr.	Institution	Municipality	Private/Public	Profile
120	IAAP Mehmet Isai	Gjilan	Publik	Dirigjim Kompjuterik i Makinave
120	IAAP Mehmet Isai	Gjilan	Publik	Teknik i informatikes së biznesit
121	IAAP Andrea Dursaku	Kamenicë	Publik	Teknik i sistemeve të TIK
121	IAAP Andrea Dursaku	Kamenicë	Publik	Informatikë
122	IAAP Jonuz Zejnullahu	Viti	Publik	Zhvillues i aplikacioneve softverike
122	IAAP Jonuz Zejnullahu	Viti	Publik	Informatikë
122	IAAP Jonuz Zejnullahu	Viti	Publik	Telekomunikacion
122	IAAP Jonuz Zejnullahu	Viti	Publik	Operator i prodhimit
122	IAAP Jonuz Zejnullahu	Viti	Publik	Teknik i sistemeve të TIK
123	IAAP Pjetër Bogdani	Ferizaj	Publik	Teknik i sistemeve të TIK
123	IAAP Pjetër Bogdani	Ferizaj	Publik	Informatikë
123	IAAP Pjetër Bogdani	Ferizaj	Publik	Operator i Prodhimit
124	IAAP Feriz Guri &Vllezrit Çaka	Kaçanik	Publik	Informatikë
124	IAAP Feriz Guri &Vllezrit Çaka	Kaçanik	Publik	Telekomunikacion
124	IAAP Feriz Guri &Vllezrit Çaka	Kaçanik	Publik	Elektronikë Industriale
124	IAAP Feriz Guri &Vllezrit Çaka	Kaçanik	Publik	Operator i Prodhimit
125	IAAP Adem Gllavica	Lipjan	Publik	Informatikë
125	IAAP Adem Gllavica	Lipjan	Publik	Operator i Prodhimit
126	IAAP Naim Frashëri	Shtime	Publik	Informatikë
127	IAAP Nexhmedin Nixha	Gjakovë	Publik	Operator i Prodhimit
127	IAAP Nexhmedin Nixha	Gjakovë	Publik	Informatikë
128	IAAP Lasgush Poradeci	Malishevë	Publik	Teknik i sistemeve të TIK
128	IAAP Lasgush Poradeci	Malishevë	Publik	Zhvillues i aplikacioneve softverike
129	IAAP Minatori	Fushë Kosovë	Publik	Informatikë
129	IAAP Minatori	Fushë Kosovë	Publik	Telekomunikacion
130	IAAP Tehniçka shkolla	Kamenicë	Publik	Informatikë
131	IAAP Sejdi Kryeziu	Kamenicë	Publik	Informatikë
132	Qendra Burimore Nëna Terezë	Mitrovicë	Publik	Informatikë
133	IAAP Selajdin Mullaabazi-Mici	Rahovec	Publik	Informatikë
134	Qendra Burimore Xheladin Deda	Pejë	Publik	Informatikë
135	IAAP 28 Nëntori	Prishtinë	Publik	PTT
136	IAAP Shtjefën Gjecovi	Prishtinë	Publik	Operator i prodhimit
136	IAAP Shtjefën Gjecovi	Prishtinë	Publik	Dirigjim kompjuterik i makinave

Nr.	Institution	Municipality	Private/Public	Profile
137	IAAP Profesionale Shtime	Shtime	Publik	Informatikë
138	IAAP Kongresi i Manastirit	Viti	Publik	Informatikë
138	IAAP Kongresi i Manastirit	Viti	Publik	Operator i prodhimit
139	Qendra e Kompetencës	Malishevë	Publik	Teknik për dizajnim të mediave interaktive
140	Qendra për aftësim profesional -QAP (CPD)	Prishtinë	Publik	TIK
140	Qendra për aftësim profesional -QAP (CPD)	Prishtinë	Publik	Elektronikë Industriale
141	Qendra për aftësim profesional -QAP (CPD)	Mitrovicë	Publik	TIK
142	Qendra për aftësim profesional -QAP (CPD)	Prizren	Publik	TIK
143	Qendra për aftësim profesional -QAP (CPD)	Ferizaj	Publik	TIK
144	Qendra për aftësim profesional -QAP (CPD)	Gjilan	Publik	TIK
144	Qendra për aftësim profesional -QAP (CPD)	Gjilan	Publik	Dizajn grafik dhe multi-media
145	Qendra për aftësim profesional -QAP (CPD)	Gjakovë	Publik	Teknologji informative dhe e Komunikimit
146	Qendra për aftësim profesional -QAP (CPD)	Pejë	Publik	Computer networking
147	IAAP Gjin Gazulli	Prishtinë	Publik	Telekomunikacion
147	IAAP Gjin Gazulli	Prishtinë	Publik	Informatikë
147	IAAP Gjin Gazulli	Prishtinë	Publik	Elektronikë Industriale
147	IAAP Gjin Gazulli	Prishtinë	Publik	Wiring technician

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