



# Report on the Development of Cooperation in the ICT Sector between Turkey and the European Union

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## **Preface**



**Faruk Eczacıbaşı** Digital Turkey Platform Chair Since 2011, the Digital Turkey Platform, in collaboration with TBV, TÜBİSAD, and TESİD, has been conducting studies focusing on digitalization to support overall prosperity, addressing various issues and challenges. The platform has published reports on digitalization and related strategies in different periods. As we approach the end of 2023, considering the desire and necessity to enhance international collaborations in our country, we have completed a new study.

Countries and institutions that consider themselves ready for anything believe they have plans to overcome any problem or danger and almost dismiss the possibility of disrupting the established order has been dramatically shaken during the global pandemic that caught them off guard with years of global economy and habits. The pandemic reminded the world that self-sufficiency is not feasible for all capabilities, resources, and capacities and emphasized that collaboration is an indispensable reality in the world.

Despite numerous alliances and agreements, countries worldwide exhibit differences in customs, taxes, practices, and habits. Overcoming these differences and talent losses requires contemplating different collaboration models for an efficient and sustainable world.

Due to its geographical location, centuries-old trade relations, and long-term efforts for full EU membership, Turkey sees itself not only as a country near the European border but also as an integral part of Europe. Triggered by this perspective, this study attempts to summarize Turkey's capabilities and capacities in the Information and Communication Technologies (ICT) field while examining the EU's strategies and expectations in the ICT field. Simultaneously, it aims to serve as a guide for EU funds, in which we are participants and beneficiaries.

The Digital Turkey Platform believes in the importance of the outputs that can operationalize this study. Therefore, based on the research and analyses conducted at the end of the study, the platform has proposed recommendations that will enhance collaborations and suggested a structure to manage them.

Dissemination and utilization will achieve the success of the report prepared in collaboration with KPMG Turkey. Hence, we will continue collaborating with KPMG and our platform partners for the success of similar efforts by all our institutions.

## **Preface**



Murat Alsan KPMG Turkey Chair As KPMG Turkey, we take pride in leading digitalization efforts nationwide with our innovative perspective and sector-specific experiences in the digital transformation journey.

The "Collaboration in Information and Communication Technologies Between the European Union and Turkey" report reflects our in-depth expertise in this field and our contribution to the sector.

We know that digital transformation is not just a technological transition but also a comprehensive process that assists in evolving societal and economic structures.

The developments we have witnessed in the last three years have highlighted the importance of digitalization in our daily lives across all areas. We have assisted businesses and organizations in rapidly adapting their digital transformation strategies and keeping up with this extraordinary period.

Our report details the analysis of Turkey's Information and Communication Technologies (ICT) sector and workforce, outlining its capabilities, talents, and sectoral achievements. We also evaluate priority areas and opportunities. Additionally, we examine the EU's needs and opportunities in the ICT sector, its strategies and goals, the current situation, and focus areas in technology. The report identifies potential areas where Turkey can collaborate with the EU. Furthermore, it recommends Turkey's participation in EU funding programs, especially those focused on ICT, and offers insights into the application processes. The report also delves into ICT collaboration workshops between Turkey and the EU, discussing their objectives, scopes, and potential for creating synergy. Lastly, it addresses the development strategy and action plan for EU-Turkey ICT collaboration, including collaboration development needs, strategic priorities, the management model, and the roadmap.

We are delighted to be involved in preparing and contributing to this report. We sincerely thank our valuable partners, especially the Digital Turkey Platform, and all stakeholders who have been with us on the digital transformation journey. We will achieve many more successes on our digital transformation journey with collective intelligence and collaboration.

# İçindekiler





## **1. Introduction**

The report, developed in collaboration with KPMG Turkey and the Digital Turkey Platform, addresses the potential benefits of Information and Communication Technologies (ICT) collaborations between Turkey and the European Union (EU) and explores the development areas of the collaborations.

Firstly, an analysis of Turkey's ICT sector and workforce is conducted, focusing on Turkey's capabilities, talents, and sectoral achievements. Additionally, priority areas, needs, and opportunities in the ICT field for both Turkey and the EU are examined.

Next, the report delves into the EU's ICT strategies and goals, the outlook of the ICT workforce in EU countries, the current situation in the EU's ICT sector, and its focus areas in technology. Potential areas where Turkey can collaborate with the EU are also explored.

Subsequently, the report examines Turkey's participation in EU Fund Programs, specifically those focused on ICT. Detailed guidance on Turkey's participation and application processes for these programs is provided in an annex to the report. Another section discusses the purpose and scope of workshops on ICT collaboration between Turkey and the EU. The report highlights topics that emerged during these workshops and addresses elements that either hinder or enhance synergy among different focuses based on discussions.

The final section presents potential collaboration opportunities, strategic priorities, governance models, and a roadmap for collaboration between Turkey and the EU in the ICT field.

In conclusion, establishing an ecosystem and governance structure in collaboration with KPMG Turkey, the Digital Turkey Platform, and the ICT Synergy Platform is expected to enhance communication and governance effectiveness between Turkey and the EU. This structure includes increased participation in suitable consortia, awareness of the right projects, timely identification of opportunities, and more effective communication coordination.



# 2. ICT Sector and Workforce Analysis in Turkey

#### 2.1 ICT Sectoral Analysis in Turkey

Turkey's ICT (Information and Communication Technologies) sector has experienced rapid growth in recent years. Between 2018 and 2022, the sector's average annual growth in Turkish Lira was approximately 25.2%, reaching around 434 billion TL. The number of paid employees in Turkey's ICT sector has consistently increased over the past decade. In 2012, 167,570 people were employed in the industry; by 2019, this number had risen to 212,530. In 2020, it increased to 227,543; in 2021, to 259,209; and in 2022, it reached 282,000. Here are the comparisons for the years 2021 and 2022:

2021 2022 266 434 Billion TI Billion TI Industry size TL Industry size TL 29,9 24.7 Billion USD **Billion USD** Industry size USD Industry size USD 31.000 35.307 ICT Industry ICT Industry Number of Companies Number of Companies 259.209 282.000 ICT Industry ICT Industry Number of Employees Number of Employees

The results of the "Sector Balances 2022" research conducted in collaboration with the Turkish Statistical Institute and the Central Bank of the Republic of Turkey indicate that in the Information and Communication sector, large-scale enterprises are observed to be the driving force as of the fourth quarter of 2022.

## Micro

Number of Companies: 29.373 %20.9 Number of Employees: 59.074 %20.9 Net Sales: 30,3 Mil. TL %7 Total Assets: 62,26 Mil. TL %10.4 Equity: 20.24 Mil TL % 8.3

## Small

Number of Companies: 4.652 %13.3 Number of Employees: 68.904 %24.4 Net Sales: 68,73 Mil. TL %15.8 Total Assets: 74,65 Mil. TL %12.5 Equity: 31,39 Mil TL % 12.8

## Medium

Number of Companies: 827 %2.4 Number of Employees: 65.174 %23.2 Net Sales: 77,31 Mil. TL %17.8 Total Assets: 75,10 Mil. TL %12.6 Equity: 33.65 Mil TL % 13.7

## Large

Number of Companies: 185 0.5 Number of Employees: 88.963 %31.5 Net Sales: 257,9 Mil. TL %59.4 Total Assets: 384,04 Mil. TL %64.4 Equity: 160.55 Mil TL % 65.3

Micro-scale firms: Businesses employing fewer than ten annual employees and with annual net sales revenue or financial statements not exceeding 5 million Turkish Liras. Small-scale firms: Enterprises employing fewer than 50 annual employees and with annual net sales revenue or financial statements not exceeding 50 million Turkish Liras. Medium-scale firms: Businesses employing fewer than 250 annual employees and with annual net sales revenue or financial statements not exceeding 250 million Turkish Liras. Large-scale firms: Enterprises employing more than 250 annual employees and with annual net sales revenue or financial statements exceeding 250 million Turkish Liras.

# **Technology Development Zones**











## **Ministry of Industry and Technology**

General Directorate of R&D Incentives



As of 2023, 97 Technology Development Zones have been established in Turkey. Among these, 15 are located in Istanbul, 11 in Ankara, 5 in Kocaeli, and 4 in Izmir, spanning 62 cities. Of the 97 Technology Development Zones, 82 are operational, while 15 are undergoing structural and institutional development.

According to the September 2023 report of the Ministry of Industry and Technology of the Republic of Turkey on Technology Development Zone Statistics, there are a total of 9,736 companies operating in Technology Development Zones. These include 445 foreign or foreign-partnered firms, 2,662 incubation firms, and 1,951 academic-partnered firms. These companies employ 103,300 personnel, with 14,678 ongoing projects and 54,291 completed projects. The total sales volume is 303.8 billion Turkish Liras, and the export figure reaches approximately 10 billion USD.

Regarding the focus on technologies and statistics in the Turkish ICT sector:

1. Prominent technologies in the sector include artificial intelligence (AI), sectoral cloud platforms, hyper-automation, and sustainable technology.

2. Companies increasingly embrace the value of integrating artificial intelligence (AI) into their business processes. Technological advancements enable the widespread and easy deployment of AI-based systems. Companies utilize AI to enhance operational efficiency and reduce costs by automating process flows. For example, AI-powered chatbots can reduce a company's process costs by up to 30%.

3. With the development of Generative AI, companies using artificial intelligence as an auxiliary technology can shorten application development times. Applications such as ChatGPT and DALL-E are becoming more widespread, allowing AI to generate code, text, video, simulations, and other outputs.

4. Companies with an AI strategy are 1.7 times more likely to achieve their goals than those without a plan.

5. Sustainable technology encompasses a range of solutions that deliver environmental, social, and governance outcomes. Companies' significant themes are AI, sectoral cloud platforms, hyper-automation, and sustainable technology.

6. The ICT sector's export in 2022 is 28,665 million Turkish Liras, with the Information Technologies Software category comprising the largest share.

7. The total exports of the Information and Communication Technologies sector have grown at an average annual rate of 10% in USD terms between 2018 and 2022.

To advance Turkey's ICT industry, efforts should focus on increasing sector exports, attracting more financial investors, and establishing structures that enhance innovation, collaboration, ecosystem development, internationalization, and renewal practices with younger generations.



#### **Technology and Innovation Capabilities**

In Turkey, the Information and Communication Technologies (ICT) sector has reached a market size of \$24.7 billion, with a workforce exceeding 282,000. As of 2020, the market share in sub-sectors is distributed as follows: 13% Software, 39% Hardware, 41% Electronic Communication, and 7% Other Services. The export volume in the ICT field has surpassed \$10.5 billion, with more than 73% of this volume originating from commercial activities with European countries. A significant portion of this export consists of IT software services.

Turkey's ICT sector has become a significant part of the country's economy, with exports exceeding \$2 billion to regions such as the European Union (EU), the Middle East and North Africa (MENA), Asia, and North America. The information and communication technologies sector, covering software, hardware, equipment, and services, contributes more than 70% of Turkey's exports to the EU, the country's leading export destination.

Since the early 2000s, the sector has attracted approximately \$19 billion in Foreign Direct Investment (FDI), and employment in the industry has surpassed 282,000. Today, more than 40% of jobs in the ICT sector consist of R&D personnel, and approximately 58% of the workforce is under 35.

A growing number of graduates from engineering and ICT departments supports Turkey's talent pool. In 2021 alone, these departments produced more than 60,000 graduates. The combination of a qualified workforce and competitive labor costs continues to make Turkey a highly competitive country in the region.

Recognized as a priority sector in Turkey, the ICT sector has seen various initiatives to encourage investments. One significant effort is the Research and Development (R&D) Law, implemented in 2008 and renewed in 2016, which defines R&D areas and incentives. This package includes incentives such as corporate tax exemptions, VAT exemptions, and social security premium support.



Source: TUBISAD ICT Market Data 2020

Considering Turkey's increasing number of researchers and rising R&D expenditures, Turkey is on the way to improving its technology and innovation capabilities.



#### **Startup Ecosystem and Sectoral Achievements**

Turkey's startup ecosystem showed significant development in 2022. Several regulations since 2017 support this ecosystem, and it is continuously evolving. Turkey's startup ecosystem has started to stand out, especially in the gaming, artificial intelligence, finance, and health sectors. Other sectors like blockchain and food technologies are also challenging the dominance of these sectors. With increasing experience, Turkey's startup ecosystem strives to be among the top developing markets.

As a result of these efforts, Turkey became the 10th country in Europe to receive the most investments in 2022, and Istanbul ranked as the 8th European city receiving the most assets..

Turkey's startup ecosystem has rapidly progressed since the early 2010s with acceleration programs, incubation centers, and investment funds. This period is known as the "Learning Period" for Turkey's startup ecosystem. Since the beginning of 2017, Turkey's startup ecosystem entered a different phase known as the "Experienced Period."

Overall Status of 2022 Startup Investments

2022 marked a year of declining global technology venture investments, with a 4% decrease worldwide. Turkey followed this trend, recording 341 investment rounds, like 2021. However, there was a noteworthy increase in investments of \$1 million and above. Mega investments, those exceeding \$100 million, were recorded as 3 in 2022. Technology Venture Strategy

Turkey has set a "Technology Venture Strategy" to strengthen the technology entrepreneurship ecosystem. Among the strategy's goals for 2025 are increasing the number of angel investors to 5,000 in Turkey, crowdfunding activities reaching a volume of 2.5 billion TL, and Turkey being among the top 20 advanced ecosystems globally. The 2030 goals include Istanbul becoming one of the world's top 20 centers for entrepreneurship and the number of technology ventures reaching around 100,000.





\*Institutional investor: Investor types other than individual/angel investors and angel investment networks.



\$1,74 Mr

**Total Investment Amount** In 2022, techno-startups received \$1.74 billion in investment.

### 341

Investment Tour 322 techno-ventures received investments in 341 investment rounds.

#### \$400.000

Median Investment Amount The median value of investments was 400 thousand dollars.



#### The Role and Opportunities of Universities

Universities are a significant part of Turkey's ICT sector. Most companies employ personnel with university connections. Mainly, when companies hire an average of 18 people, it is observed that they have two personnel with university connections. Moreover, 58% of companies stated that they collaborate with at least one institution (private company, university, or public institution). This demonstrates the interaction of universities with the sector and their contribution to the industry.

Universities also have a significant impact on company employees. 31% of company personnel have graduated from the university where the company is located. In incubation centers, 52% of the personnel graduated from the center's university. This showcases the capacity of universities to contribute to talent development and the workforce market.

Universities also establish closer relationships with the sector through technoparks. Technoparks allow universities to collaborate with companies within their structure to observe sector needs. This enables universities to shape their education content according to industry needs and provide students with opportunities for hands-on learning. Additionally, technoparks create employment opportunities for university graduates, another benefit for universities.

In light of this information, Turkey's ICT sector grows and develops with the contributions and collaborations of universities. Universities play a crucial role in talent development, establishing collaborations, and contributing to the industry.

## Contribution and Opportunities of the Private Sector

Firstly, the private sector's rate of meeting expectations is higher compared to universities and the public sector. The private sector is stated to meet the expectations of companies by 66%. This indicates that the private sector plays a significant role in developing Turkey's ICT sector.

#### Status and Opportunities of Incubation Centers and Startups

Investigating incubation centers and startups, companies benefit the most from consultancy and mentorship support. Companies in acceleration centers particularly heavily use this support. In incubation centers, office support stands out.

### Participation and Opportunities of Investors and NGOs

Looking at investors and NGOs, as mentioned under the private sector heading, when evaluating the rates of meeting expectations for collaboration, it is higher in the private sector compared to universities and the public sector, with 66% stating that expectations are met. Investors and NGOs are crucial in developing Turkey's ICT sector.

In conclusion, Turkey's ICT sector is supported by the private sector, incubation centers, startups, investors, and NGOs, and these actors play a significant role in the sector's development.



Turkey considers the ICT sector a priority and has undertaken various initiatives to encourage investments. One notable incentive is the Research and Development (R&D) Law, which was implemented in 2008 and updated in 2016 to provide support. This law encompasses incentives such as corporate tax exemptions, VAT exemptions, and social security premium support. Turkey has become a leading destination for IT investments with a large and growing IT workforce, a focus on software development, and a relatively young and welleducated workforce.

The country strongly emphasizes software development and hosts many successful software companies like Trendyol, Getir, and Yemeksepeti. These companies have contributed to building a robust ecosystem for software development in Turkey by attracting investments from global giants like Google, Microsoft, and Amazon.

Turkey's IT workforce is predominantly young and well-educated. The average age of IT professionals in Turkey is 30, and a significant majority hold university degrees. In 2021, over 60% of IT professionals in Turkey were recorded as university graduates, and it is expected that this percentage will surpass 70% by 2025.





(New York=100)

48.2

Czechia

Germany

Slovakia

France

USA ¥



LABOR FORCE BY EDUCATION LEVEL University High School & Below 2022 72.1%

#### **REMUNERATION OF MANAGEMENT/ENGINEER**

Total base salary plus bonuses and long-term incentives



## **COST OF LIVING INDEX 2022**

28.3

Türkiye

Poland

Bulgaria

omania

Hungary

Turkey represents a target with high potential for companies that want to invest in the IT sector. Some of the advantages the country offers include:

A large and growing IT workforce.

01

02

03

04

05

06

A strong software development focus.

Young and well-educated workforce.

Competitive prices.

Favorable tax incentives.

Access to a huge market of 80 million.

These advantages make Turkey attractive for companies that want to invest in the ICT sector.



#### 2.2. Turkey's priority areas and opportunities in the field of ICT

Turkey has become a leading destination for ICT investments thanks to a robust IT workforce, a focus on software development, and a young and welleducated workforce.



EASE OF DOING BUSINESS RANKING, 2020







EASE OF DOING BUSINESS RANKING (Y-O-Y)

#### Strong IT Workforce

Turkey has a robust IT workforce consisting of more than one million people. Given that the ICT sector is one of the fastest-growing sectors in the Turkish economy, this workforce is expected to continue to expand in the coming years. Turkey's IT workforce includes experienced professionals with technical skills who can quickly adapt to innovations in the sector.

#### Focus on Software Development

Turkey strongly emphasizes software development. The country hosts many successful software companies, including well-known examples like Trendyol, Getir, and Yemeksepeti. Having attracted investments from globally recognized firms, these companies have contributed to establishing Turkey as a robust ecosystem for software development. Turkey's software sector provides an environment where technological innovations are rapidly embraced and competitive solutions are developed.

#### Young and Well-Educated Workforce

Turkey's IT workforce is predominantly young and well-educated. The average age of IT professionals is around 30, with approximately 60% holding university degrees. This young, well-educated workforce helps companies find the necessary skills to succeed in the ICT sector. Moreover, ICT and engineering programs at Turkish universities are designed to meet the industry's needs, providing students with opportunities to develop technical skills and innovative thinking abilities.



## **11th Largest Economy in the World**

5.4







In conclusion, Turkey's ICT sector has become an attractive destination for investors due to its strong workforce and focus. The industry has advantages such as innovation, competitive prices, and broad market access. Therefore, for companies considering investment in the ICT sector, Turkey presents significant opportunities in terms of potential.

#### **Priority Areas**

Turkey distinguishes itself in ICT investments with its prioritized areas, including:

**1. Software Development:** Turkey is a leading destination in software development, and the government invests in education programs and infrastructure to support growth in this field. Turkish software companies, such as Trendyol, Getir, and Yemeksepeti, are globally recognized success stories.

**2. Cybersecurity:** Since Turkey is a significant target for cyber-attacks, the country places great importance on cybersecurity. The government aims to strengthen national security and data protection by investing in cybersecurity research and development.

**3. E-commerce:** Turkey has a rapidly growing e-commerce market, and the government makes significant investments to improve e-commerce infrastructure and regulations. The e-commerce sector contributes to Turkey's economic growth as online shopping increases.

**4. Blockchain:** Turkey attaches great importance to research and development in blockchain technology. The government provides various incentives to expand the use cases of blockchain technology and support innovative projects in this field.

#### **Opportunities**

There are several opportunities for ICT investments in Turkey:

**1. Large and Growing Market:** With a population of over 80 million, Turkey has a significant market potential. Economic growth and government investments in infrastructure create substantial opportunities in this market.

**2. Competitive Salaries:** The cost of living in Turkey is lower compared to other countries, and the salaries of IT professionals are competitive. This situation allows companies to access a qualified workforce at cost-effective rates.

**3. Tax Incentives:** The Turkish government provides various tax incentives to foreign companies investing in the ICT sector. These incentives help reduce costs for investors and enable them to operate in a competitive environment.

**4. Access to Talent:** Turkey has a large and growing pool of IT talent. The government invests in education and training to ensure the emergence of qualified IT professionals. This provides companies with an advantage in finding skilled personnel.

In conclusion, Turkey stands out as a vital destination for ICT investments. Its robust IT workforce, focus on software development, and young, well-educated workforce are critical competitive advantages.

Additionally, government investments in priority areas and the opportunities provided make Turkey attractive for ICT investors. Factors such as the large and growing market, competitive salaries, tax incentives, and talent access contribute to a compelling landscape for ICT investors in Turkey.





# **3. Needs and Opportunities in the European Union's ICT Needs**

#### 3.1. ICT workforce outlook in EU countries

According to the Digital Economy and Society Index (DESI) 2022 report, approximately 9 million people worked as ICT professionals in the European Union (EU) in 2021, representing 4.5% of the total EU workforce. The percentage of ICT professionals has increased in the EU over the past decade, showing a 1.3 percentage point increase since 2012. As part of the goals of the European Digital Decade 2030 Program, it aims to increase this number to at least 20 million by 2030. While there has been a steady increase since 2013, acceleration is needed to achieve the target, as indicated in the graph.





New technologies and digitization, when implemented, create an impact on society through changes in how people live, work, and interact with each other. European Union (EU) member countries closely monitor employment developments for ICT professionals and position it as one of their strategic objectives. The graph shows that the percentage of employed individuals in the ICT sector relative to total employment is 5% on average in the EU. However, Switzerland and Luxembourg offer the highest rates in this regard.

Nowadays, digital skills are no longer "optional" but "critical" for businesses and the workforce. Adopting digital and advanced digital skills is now essential for embracing the transformation, and it is crucial for the survival and growth of companies. As routine tasks become increasingly automated, there is a growing risk of job loss for employees primarily responsible for such duties. More and more workers need to acquire new skills to work compatibly with (digital) technologies.

The Digital Economy and Society Index (DESI) 2022 report states that EU Member States need more digital experts in volume. This situation hinders the development, adoption, and use of essential digital technologies, especially in critical areas such as cybersecurity and data analysis, where there is continuous difficulty in filling positions.

In 2021, approximately 9 million people worked as ICT professionals in the EU. The highest figures were reported in Germany, which provided jobs for more than one-fifth of the EU's ICT workforce (22.5%), with 2 million ICT experts. Germany is followed by France with 1.2 million ICT professionals (13.9% of the EU total) and Italy with 0.8 million (9.5% of the EU total). These countries represent more than 40% of the EU's ICT workforce. The EU aims to have 20 million ICT experts by 2030, representing approximately 10% of total employment.

However, the gender distribution in the ICT sector in EU member countries is highly imbalanced, significantly favoring males. Gender Distribution Among ICT Professionals: In 2022, 81.1% of ICT professionals in the EU were male, and 18.9% were female. Among EU Member States, the countries with the highest proportion of women among employed ICT professionals were Bulgaria (28.2%), Romania (26.0%), and Malta (25.6%). In comparison, the lowest rates were observed in Czechia (10.0%), Hungary (14.0%), and Slovakia (14.9%).

Only one out of every five ICT professionals and ICT graduates is a woman, which can influence how digital solutions are designed and implemented. This gender disparity is compounded by demographic decline across the EU and the lack of specialized education in core digital fields. In an environment where the number of jobs requiring advanced digital skills is increasing, educational policies encouraging undergraduate students to choose technology education can improve their employment opportunities associated with higher earning potential. The inability to fill many of these positions underscores the role of advanced digital skills as a solution to unemployment.



#### **Digital Economy and Society Index, 2022**

#### **Digital Economy and Society Index 2022**



Source: DESI 2022, European Commission



The Digital Economy and Society Index 2022 presents the 2022 DESI rankings of states. Finland, Denmark, the Netherlands, and Sweden are countries with the most advanced digital economies in the EU, followed by Ireland, Malta, and Spain. Romania, Bulgaria, and Greece have the lowest DESI scores.

The Digital Skills Indicator is a tool that will monitor Member States' performance in achieving the skill targets of the Digital Decade proposal and provide helpful information about citizens' online behavior and their skills and competencies in various digital areas. The EU aims to equip at least 80% of people with basic digital skills. As of today, 54% of Europeans are seen to have at least basic digital skills. There are significant differences among countries, with some Member States, such as the Netherlands and Finland, approaching the target with a rate of 79% of citizens having at least basic digital skills in 2021. On the other hand, Romania, Bulgaria, Poland, and Italy rank lower in this aspect.

The European Union aims to ensure access to digital services for all citizens.

This requires a top-level digital connectivity infrastructure regarding security, sustainability, and performance. Therefore, the EU focuses on a robust digital infrastructure, semiconductor technologies, distributed data processing capacity, and quantum technologies. These factors are of critical importance for digital transformation and economic competitiveness. When assessing the connectivity score, Denmark has the highest, followed by the Netherlands and Spain. Belgium and Estonia are seen as the countries with the weakest performance in this dimension of DESI.

The Digital Technologies Score is a dimension of DESI that measures the digitalization of businesses and the extent of e-commerce. It explicitly assesses businesses' adoption of digital technologies, ranging from basic to advanced levels. This includes fundamental technologies such as electronic information sharing and social media usage and more advanced technologies like big data analytics, cloud services, and artificial intelligence. According to the European Commission's Digital Decade proposal, the goals by 2030 include more than 90% of SMEs in Europe achieving at least a basic level of digital intensity, 75% of EU companies using cloud, artificial intelligence, and big data, and doubling the number of technology companies in Europe. The countries that perform the best in integrating digital technologies are Finland, Denmark, and Sweden, while Romania, Bulgaria, and Hungary show the weakest performance in this regard.

The digital public services dimension measures both the demand and supply sides of digital public services and assesses open data. The Digital Decade aims to have all significant public services entirely online for businesses and citizens by 2030. However, online availability is likely lower for services to citizens than businesses. Despite the widespread availability of essential digital public services (such as access to online forms and appointment scheduling), more advanced public services utilizing innovative digital technologies (such as AI, big data, and robots) still require significant investment. The cost of investments and reforms planned under the RRF for digitizing public services and government processes amounts to 46 billion euros. These investments include the digitization of e-health, e-justice, and transportation and energy systems. Some member countries allocate more than half of their digital budgets to digitizing public services (for example, Malta, Lithuania, Finland, and Croatia). Member countries aim to modernize public administration, making it user-friendly, citizen-focused, and interoperable. The top performers in these scores are Estonia, Finland, Malta, and the Netherlands, while Romania, Greece, Bulgaria, and Slovakia have the lowest scores.

As for the most advanced digital economies in the EU according to the 2022 DESI rankings, Finland, Denmark, the Netherlands, and Sweden, if we summarize their key goals and focus areas;

#### Finland

Finland views digitalization as a cornerstone of national development. In line with the goals of the 2030 Digital Decade, it aims to increase the growth and productivity of the ICT sector, strengthen digital infrastructure, and invest in digital skills. Finland's 2025 Digital Development Strategy seeks to increase the contribution of the ICT sector to the total GDP by 10%, increase ICT exports by 50%, and increase the number of employees with digital skills. Developing and disseminating new technologies like 5G and artificial intelligence, improving digital education and healthcare services, and ensuring the sustainability of the digital economy are critical agendas for Finland's digitalization.

#### Denmark

Denmark sees digitalization as an opportunity. In alignment with the goals of the 2030 Digital Decade, it aims to increase the growth of the digital economy and enhance competitiveness, strengthen digital infrastructure, and invest in digital education.

According to Denmark's 2025 Digital Strategy, it aims to increase the digital economy's contribution to GDP by 15%, increase digital exports by 20%, and increase the number of employees with digital skills by 50%. Developing and disseminating new technologies like artificial intelligence and robotics, improving digital public services, and focusing on digital sustainability are key agendas for Denmark's digitalization.

#### **Netherlands**

The Netherlands is a country that considers digitalization a way of life. In line with the goals of the 2030 Digital Decade, it aims to increase the growth of the digital economy and enhance competitiveness, strengthen digital infrastructure, and invest in digital education. According to the Netherlands' 2025 Digital Strategy, it aims to increase the digital economy's contribution to GDP by 20%, increase digital exports by 30%, and increase the number of employees with digital skills by 75%. Developing and disseminating new technologies like artificial intelligence and blockchain, improving digital public services, and focusing on digital sustainability are critical agendas for the Netherlands' digitalization.

#### Sweden

Sweden considers digitalization an opportunity. In line with the goals of the 2030 Digital Decade, it aims to increase the growth of the digital economy and enhance competitiveness, strengthen digital infrastructure, and invest in digital education. Sweden's 2025 Digital Strategy aims to increase the digital economy's contribution to GDP by 25%, increase digital exports by 40%, and increase the number of employees with digital skills. Developing and disseminating new technologies like artificial intelligence and cloud computing, improving digital public services, and focusing on digital sustainability are key agendas for Sweden's digitalization.

In conclusion, Finland, Denmark, the Netherlands, and Sweden are countries that view digitalization as a cornerstone of national development. These countries aim to increase the growth and productivity of the ICT sector, strengthen digital infrastructure, and invest in digital skills in line with the goals of the 2030 Digital Decade. To achieve these goals, they implement research and innovation-focused approaches to enhance the growth and competitiveness of the ICT sector, strengthen the digital infrastructure necessary for the development of the digital economy, and increase the number of employees with the digital skills required in the digital economy through education and training programs.

#### 3.2. EU's ICT strategies and targets

The EU's ICT strategies focus on important goals such as developing digital skills and expanding broadband access. These objectives are crucial for expanding the EU's digital economy and accelerating its digital transformation. Additionally, the EU's ICT strategies aim to strengthen cybersecurity and develop the EU's digital economy.

The EU aims to empower businesses and individuals for a human-centric, sustainable, and more prosperous digital future. The Digital Decade policy program will guide this transformation with concrete goals and objectives for 2030. The Commission will monitor progress towards these digital goals annually through multilateral projects that aim to address gaps in critical capacities, support an interconnected, collaborative, and secure Digital Single Market, and may involve investments from the EU budget, Member States, and the private sector.

The Commission has identified investment areas such as data infrastructure, lowpower processors, 5G communication, high-performance computing, secure quantum communication, public administration, blockchain, digital innovation hubs, and digital skills.

Europe's 2030 digital transformation outlines specific goals for ICT professionals, digital skills, business transformation, and digital infrastructures. For instance, Europe aims to have 20 million ICT professionals and wants at least 80% of its population to possess basic digital skills. The European Commission also targets that at least 75% of EU companies should use Cloud/AI/Big Data, and more than 90% of SMEs should achieve at least primary digital intensity. Infrastructure goals include providing gigalCT connections for everyone, doubling the EU's share in global semiconductor production, and establishing 10,000 climate-neutral, highly secure edge nodes.

The key themes and goals regarding Europe's digital future roadmap are outlined as follows:

- 1. Digital Transformation Goals: Europe plans to manage its digital transformation process by implementing the Digital Decade policy program with concrete goals and objectives for 2030. These goals encompass areas such as ICT professionals, digital skills, the digital transformation of businesses, and sustainable digital infrastructures.
- 2. Digital Rights and Principles: The Commission has proposed a digital rights and principles declaration. These principles emphasize that digital technologies should protect human rights and support democracy and that all digital actors should act responsibly and securely.
- **3. Digital Decade Policy Program:** This program aims to establish a regular collaboration cycle each year to achieve common goals and objectives. This framework is based on creating a collaboration mechanism between the Commission and Member States.
- 4. Multilateral Projects: The European Commission aims to expedite and facilitate the initiation of large-scale projects that a single Member State cannot develop independently. These projects can pool investments from the EU budget, Member States, and the private sector.
- **5. Implementation of Digital Projects:** The Commission will assess the implementation of digital principles and organize an annual Eurobarometer survey to monitor follow-up measures in Member States.
- **6. International Partnerships:** The EU will promote its digital agenda globally, encourage compliance or convergence with EU norms and standards, and ensure the security and resilience of digital supply chains while offering global solutions.

#### 3.3. "European Digital Transformation Decade 2030 Program"

The digital society and digital technologies bring new ways of learning, entertainment, work, exploration, and fulfilling passions. They also introduced new freedoms and rights, allowing European Union citizens to reach beyond physical communities, geographic locations, and social standings.

The European Digital Transformation Decade 2030 Program is a comprehensive framework guiding all digital-related actions. The Digital Decade aims to ensure that technology and innovation work for people in all aspects.

The policy program for the Digital Decade outlines digital goals for the next ten years in clear and concrete terms. The main goals can be summarized in four points:

- Digitally Capable Population and Highly Skilled Digital Professionals: Ensuring that all citizens have basic digital skills and providing opportunities for people of all ages to enhance their digital skills.
- Secure and Sustainable Digital Infrastructures: Ensuring the widespread adoption of gigabit and 5G networks in Europe and facilitating access to essential digital services such as data centers, cloud services, and cybersecurity.
- Digital Transformation of Businesses: Assisting businesses in adopting digital technologies and accelerating their digital transformations.
- Digitization of Public Services: Using digital technologies to make public services more efficient, accessible, and user-friendly.



20 million ICT Professionals: + gender equality **Basic Digital Skills:** At least 80% of the population

**Gigabit connectivity** for all, high-speed **mobile coverage** (at least 5G) EU region produces **20%** of world's semiconductors by 2025 Data access as fast as EUO **quantum computing** 

75% of EU companies use Cloud, Al or Big DataEU must scale up and increase funding to double Unicorns90% of SMEs are interested in technology

In addition to the goals, the Digital Decade objectives will ensure that the digital transformation in Europe benefits all individuals. The objectives can be summarized as follows:

- Safe and Secure Digital World
- Universal Access to Digital Opportunities
- Data Access for Small Businesses and Industries
- Digital Technology Access for Startups and SMEs
- Collaboration of Innovative Infrastructures
- Fair Competition for SMEs in the Digital World
- Easy Online Access to Public Services
- Research Focus on Sustainable and Energy-Efficient Innovations
- Cybersecurity for All Organizations

On the path to the Digital Decade, Member States are expected to report to the Commission on planned actions that support the defined objectives. These objectives and principles already guide the Commission's actions and policies in the digital field. The Digital Decade framework will clarify Europe's digital transformation vision and support all future European activities as innovation grows. The Digital Decade policy program for 2030 establishes an annual cooperation cycle to achieve common goals and objectives. This governance framework is based on a yearly collaboration mechanism involving the Commission and Member States.

The cooperation mechanism includes the following processes:

- o A structured, transparent, and shared monitoring system based on the Digital Economy and Society Index (DESI) to measure progress toward each 2030 goal.
- An annual report in which the Commission assesses progress and makes action recommendations (the first 'Digital Decade Status Report' was published in September 2023).
- o Digital decade strategic roadmaps, reviewing and updating every two years, summarizing Member States' adopted or planned actions to achieve the 2030 goals.
- o The European Digital Infrastructure Consortium is a mechanism supporting multilateral project implementation.

The Commission plans to review the goals by 2026 to assess technological, economic, and societal developments.

EU



#### "European Digital Transformation Decade 2030 Programme-Multi-Country Project

The "European Digital Transformation Decade 2030 Program - Multi-Country Projects" is a framework for collaboration among member states on large-scale digital projects that cannot be developed individually. It is part of the EU Digital Decade Policy Program, which aims to achieve ambitious digital goals by 2030. Member states can participate in the Multi-Country Program by submitting project proposals aligned with the program's objectives. Projects are selected based on their potential contributions, feasibility, and impact on the EU's digital goals. Once a project is chosen, participating member states work together to develop and implement it. The EU Commission provides financial and technical support and assists in coordinating the project's activities. The Multi-Country Program is a crucial tool to help the EU achieve its digital objectives. Through collaborative efforts, member states can accelerate the development and dissemination of digital technologies and services, ensuring that everyone benefits from digital transformation.

The Commission has identified the initial list of Multi-Country Projects, covering investment areas such as data infrastructure, 5G communication, high-performance computing, secure quantum communication, public administration, blockchain, digital innovation hubs, digital skills, and cybersecurity. The first report, titled "Implementation of Multi-Country Projects - Digital Decade Report 2023," has been published (https://digital-strategy.ec.europa.eu/en/library/implementation-multi-country-projects-digital-decade-report-2023). This report presents the progress in implementing Multi-Country Projects (MCPs) identified by the EU Digital Decade Policy Program.

#### 3.4. Potential areas where Turkey can cooperate with the EU

When considering the EU's goals and strategies in alignment with the European Digital Transformation Decade 2030 Program, the EU intends to promote its peoplecentric digital agenda globally and encourage alignment or convergence with EU norms and standards. The EU will create tools addressing regulatory cooperation, capacity building, skills development, investment in international collaboration, and partnerships for research. Potential areas of partnership include 6G, quantum technologies, and technology usage for addressing climate change and environmental challenges. Other potential ICT areas are listed below:

- 5G Technology: Investments in 5G development in Turkey are attracting investments in the telecommunications market. Turkey's Information and Communication Technologies Authority (BTK) has established the 'New Generation Mobile Communication Technologies Turkey (5GTR) Forum' to promote localization and collaboration between vertical sectors.
- Fiber Optic Solutions: Providers of fiber optic solutions gain market access as infrastructure investments are made by entities like Turk Telekom, TTNet, and other Internet Service Providers (ISPs). The regulatory authority in Turkey is eager to provide broader broadband access, as outlined in its 2019-2023 strategic plan.
- **3. Cybersecurity:** Prioritized topics include network, email, and web security, cyber governance, identity and certificate management, mobile security, system security, data, and application security. Turkey has increased spending on hardware and software to counter cyber threats.
- 4. Consumer Electronics and Emerging Technologies: Turkey's young population sustains sales of PCs, tablets, mobile phones, and consumer electronics, with further growth expected in the voice and video market. Implementing emerging technologies such as Machine-to-Machine (M2M) connections, AI, blockchain, and robotics will continue to grow with the development of IoT and Industry 4.0.

- 5. **Collaborative Robotics:** The EU's focus on developing and using cobots presents an opportunity for Turkey to collaborate and contribute expertise in this field. This could involve joint research and development projects and exchanging knowledge and best practices.
- 6. Artificial Intelligence Regulation: The draft of the Artificial Intelligence Act provides a potential area for collaboration. Turkey could work with the EU to align its AI regulations with those proposed by the EU or develop joint initiatives in regulating AI.
- 7. Artificial Intelligence: Turkey and Germany have come together to discuss collaboration opportunities on Artificial Intelligence (AI) and Industry 4.0. An official from Germany's Federal Ministry for Economic Affairs and Energy noted that AI is an area where German and Turkish businesses can collaborate in the future.
- 8. Data Strategy: ESMA's 2023-2028 Data Strategy presents another opportunity for collaboration. Turkey could work with the EU on initiatives to improve data accessibility, interoperability, usability, and compliance.
- **9. Digital Infrastructure:** The EU's digital decade connectivity goal provides an opportunity for Turkey to collaborate on the implementation and advancement of high-capacity networks, 5G coverage, and the Internet of Things.





# **4. Current Business Between Turkey and the EU in ICT**

Turkey's relationship with European Union (EU) funds reflects the country's integration process with the EU and economic collaboration. Designed to assist Turkey in achieving development goals in various sectors, EU funds aim to support the government in implementing significant projects in science, technology, education, health, environment, and other areas, contributing to sustainable development objectives. Turkey's access to and effective utilization of EU funds within the framework of agreements and joint programs with the EU positively impacts Turkey-EU relations and the country's socioeconomic development. Furthermore, these funds support Turkey's alignment with EU standards, enhancing its competitiveness on the international stage. The interaction with EU funds profoundly influences Turkey's relations with the EU and the country's overall development strategy.

Turkey's strategies and objectives related to EU funds align with its general development goals and the EU integration process. These funds aim to assist Turkey in achieving sustainable development goals in science, technology, education, health, environment, and other areas. Below are general details about Turkey's strategies and objectives related to EU funds:

- Science and Technology: Through EU funds, Turkey aims to become more competitive in science and technology and strengthen international collaboration. Through programs like Horizon Europe, Turkey seeks to increase research and innovation capacity and promote scientific excellence.
- Education and Youth: EU funds, such as the Erasmus+ program, aim to improve quality in education and youth fields and broaden opportunities for international exchange.
- Health: Through the EU4Health program, Turkey aims to strengthen the healthcare system and improve public health.
- Environment and Climate Change: Using the Environment and Climate Action program, Turkey focuses on taking significant steps in sustainable development and combating climate change.
- Digital Transformation: The Digital Europe program will support Turkey in accelerating its digital transformation and strengthening its digital infrastructure.
- Economic Development and Investment: Programs like InvestEU and the Single Market aim to support Turkey's economic development and improve the investment environment.
- Cultural and Creative Sectors: The Creative Europe program aims to support Turkey's cultural and creative sectors and promote international collaboration.

Detailed information, including introductions, structures, priority areas, and Turkey's relationship with European fund programs, is provided in the annex of our report.

Turkey's strategies regarding EU funds are built on strengthening its relations with the EU, enhancing international competitiveness, and achieving sustainable development goals. Additionally, these strategies aim to deepen Turkey's compliance with EU standards and collaboration with the EU.

For instance, according to data from the European Commission for 2021-2027, Turkey's net contribution to the Horizon Europe program is determined to be 681.9 million Euros. Within this program, Turkey has seen 3,659 participations and 20,996 applications. These numbers demonstrate Turkey's interest in the Horizon Europe program and its significance for the country. The Horizon Europe program aims to increase Turkey's research and innovation capacity and strengthen its international collaboration in science and technology.

Turkey's active participation and funds received through the Horizon Europe program showcase the extent to which Turkey benefits from EU funds and how these funds contribute to Turkey's scientific and technological development.

#### 4.1. Turkey's Digitalization Goals

Turkey, as a determined country in the field of digitalization, has set strategic goals to take significant steps in this area. The critical importance of digital technologies for society and individuals was underscored, especially during the COVID-19 crisis. To achieve its digitalization goals, Turkey plans to make strategic investments in infrastructure and take significant steps in education. Programs focusing on expert and researcher training, youth and adult education, and training for new skills and professions are envisioned. Embracing concepts like data and open data is also a target. Creating a digital transformation strategy involves centralizing topics such as intelligent automation, data and analytics, modern workforce, and risk compatibility, with developing policies and procedures in these areas being crucial.

Digitalization can potentially increase societal welfare and elevate technological awareness and cultural levels. Additionally, digital transformation is emphasized as a necessity for developing digital resilience to manage global threats more efficiently for state institutions, the private sector, and citizens in the new reality.

Turkey's digitalization goals aim to present digitalization trends and proposed digitalization goals to all segments of society, ensuring that the country becomes a more effective player in the digital economy.

#### **Turkey's Digital Infrastructure:**

Turkey's digital infrastructure has seen significant developments in recent years. Expanding broadband access and speed has made internet access possible for more individuals and businesses. Mobile internet usage has gained popularity, with people accessing the internet through mobile devices. Data centers and cloud computing technologies have increased data storage and processing capacity, enabling businesses and individuals to manage their data securely and effectively. Cybersecurity infrastructure has also been improved, enhancing Turkey's ability to protect its digital assets.

#### Key Technologies in Digital Transformation:

Digital transformation has accelerated technological innovation and development in Turkey. Artificial Intelligence and Machine Learning have helped optimize decisionmaking processes for businesses and governments. Blockchain Technology has increased transparency and security in the finance and supply chain sectors. The Internet of Things (IoT) has brought significant developments in smart cities and industrial automation. Big Data and Analytics have significantly progressed in data-driven decisionmaking and business intelligence. 5G and beyond mobile technologies have supported digital transformation by providing high-speed internet access and advanced mobile communication capabilities.

#### **Sectoral Digital Transformation:**

Sectoral digital transformation has brought significant changes to various industries in Turkey. In industrial digital transformation, automation and optimization of production processes have increased efficiency. Digital solutions such as telemedicine and electronic health records have improved patient care and operational efficiency in the healthcare sector. In the education sector, e-learning and virtual classrooms have expanded access to education and enriched the learning experience. Digital transformation in agriculture has increased efficiency through smart farming technologies and promoted sustainable farming practices. Digital payment systems and blockchain-based solutions have made financial transactions more secure and transparent in the financial sector.

#### International Collaborations of Turkey's Digital Transformation:

Turkey's international collaborations in digital transformation hold significant strategic importance regionally and globally. The country cooperates through multilateral and bilateral agreements to promote digital technologies and innovation, harmonize regulations, and integrate into the digital economy. These agreements are crucial for enhancing Turkey's digital infrastructure, increasing cybersecurity capacity, and incorporating more effectively into the digital economy.

Turkey's role in international organizations contributes to the dialogue and collaborations on digital policies, standards, and regulations. Collaborating with the United Nations, the World Trade Organization, the World Bank, and other international organizations, Turkey develops policies and strategies on the digital economy, cybersecurity, e-commerce, and other digital issues.

The interaction between the global digital agenda and Turkey allows the country to become more visible and influential in international discussions on digital technologies and innovation. As part of the global digital agenda, Turkey continues to pursue and expand international collaborations and agreements to maximize the opportunities brought by digital transformation and to secure a more competitive position in the global digital ecosystem. Furthermore, Turkey's international partnerships in digital transformation support Turkish businesses and ventures in becoming more competitive worldwide, contributing to Turkey's role as a more effective player in the digital economy.




# 5. Cooperation Workshops Between Turkey and the EU in ICT

#### 5.1. Purpose and scope

The ICT sector holds a crucial position in Turkey, acting as a significant locomotive driving the development of various sectors such as industry, communication, transportation, energy, and infrastructure. The role of the software and information technology sector is critical in realizing Turkey's future vision. The industry is expected to provide creative solutions to changing global needs, develop reliable solutions adhering to international standards, and actively engage in developing and utilizing new technologies.

KPMG Turkey's culture extends beyond good business practices. KPMG collaborates diligently with other organizations, governments, and non-governmental organizations to scrutinize issues and work towards making a positive difference in people's lives, welfare, and happiness levels. The Digital Turkey Platform is specifically designed to contribute to developing information, communication, and electronic issues in Turkey, offering solution proposals for existing problems. Its main objectives include creating strategy and policy recommendations in this field, determining a common vision and action strategy, developing and maintaining collaborations with international institutions as representatives of Turkey in the fields of information, communication, and electronics, and conveying the issues of information, communication, and electronics to public institutions and political will.

To enhance synergy in Information and Communication Technologies (ICT) collaborations between Turkey and the European Union (EU), KPMG Turkey hosted six sessions of "Turkey-EU Collaboration Workshops in the ICT Field" in partnership with the Digital Turkey Platform on January 17, 23, and 27, 2023. The workshops aimed to identify fundamental problems, determine prominent needs, and develop solution proposals for these needs. The workshops were organized to discuss and increase collaboration and synergy between the EU and Turkey, review collaboration opportunities between academia and the private sector, discuss mutual expectations, enhance the efficiency of fund utilization, and explore ways to develop the entrepreneurship ecosystem. Although specific topics were addressed, participants approached the issues from various perspectives, resulting in outputs containing findings and recommendations in almost every aspect affecting the ICT sector.

Workshop participants discussed issues related to EU projects and shared their views on the private sector-academia relationship. Participants from startups, investment funds, technology parks, and EU representations also expressed their opinions in different sessions and exchanged ideas.



#### **Basic Needs**

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Establishing the ecosystem and governance structure that will implement the strategies and targets determined for EU-Turkey ICT cooperation

All stakeholders supporting the EU-Turkey ICT cooperation will contribute to a dynamic platform that can meet information-sharing, communication, and coordination requirements

Informing, communicating, and coordinating the needs and capacity requirements as well as the right targets and guidance in order to compete at the EU level

Monitoring and evaluating the determined strategies targets and actions, as well as sharing the evaluation results and new actions on the platform

Monitoring and evaluating actions in line with the defined strategy and objectives, and sharing new actions on the platform based on the results of the evaluation.





# 6. Turkey-EUICT Cooperation Development Suggestions

Advanced and developing countries consider technology and digital transformation to be fundamental priorities for increasing economic value. In line with this goal, decisions in the fields of policy, law, economy, and education are strategically prioritized. Considering the dynamic changes worldwide and the transformation of industries by new technologies, it is crucial for Turkey to take high-tech steps for sustainable growth and permanence in the global value chain.

As mentioned in the report, Turkey should aim to become a center for technology production and export with its existing potential. The digitalization initiatives in local companies and the gains and experiences obtained as a result of these initiatives should be leveraged, especially in the EU market. For this, the public and private sectors, academia, incubation centers, and civil society organizations should work collaboratively. Innovation and a culture of research and development should become fundamental values for Turkey to achieve these goals. In line with the highlighted topics and fundamental needs emerging in the workshops:

To successfully implement the EU-Turkey ICT collaboration strategy and goals, we propose the establishment of a dynamic platform in the ecosystem and governance structure created, where stakeholders contribute. This platform aims to provide the necessary information, communication, and coordination to compete at the EU level. By encouraging the development of skills such as foreign language and digital competence, it seeks to create a more competent workforce. It will support the monitoring and evaluation of defined strategies and goals, and by sharing the results, it will enable all stakeholders to benefit effectively. To ensure effective coordination among all stakeholders and the establishment of this proposed platform, a governance model for the development of this collaboration is recommended.

#### 6.1. Collaboration Development Governance Model

- In order to solve and overcome the difficulties encountered and the basic needs related to them, it is recommended that ecosystem and governance structures be designed and implemented between the European Union and Turkey.
- Key stakeholders representing the public and private sectors, academia, startups, NGOs, and other organizations related to the ICT and technology sectors from both EU countries and Turkey should be identified.
- A governance structure should be developed for how the body will operate, including leadership roles, decision-making processes, membership requirements, and meeting schedules.
- The purpose, scope, responsibilities, and authorities of the governance structure should be clearly defined.

The ecosystem and governance structure of this coordination body, which is planned to be constructed in this direction,

- 1. Main information providers in European location
- 2. "European Communication and Information Group" that will communicate with Turkey by consolidating information from the main information providers in the European location
- 3. The "ICT Coordination and Communication Group" will be in close contact with the "European Communication and Information Group" and will consist of representatives of consultancy companies, NGOs, private and public sectors, universities, incubation centers, and startups in Turkey.
- 4. "EU-TR ICT Supporting Units," to which the EU Presidency and TUBITAK will support the development of the "ICT Coordination and Communication Group," and other public institutions will contribute when necessary.

is thought to happen. The image below details the interrelationships and basic roles of this governance structure.

# **Recommended Ecosystem and Governance Structure**

This proposed ecosystem and governance structure is planned to establish and operate an ICT Synergy platform under the ownership of the Digital Turkey Platform. KPMG Turkey and other stakeholders are expected to carry out activities for the operation of this ecosystem within the scope of the roles and responsibilities detailed below.





# **Recommended Governance Roles and Responsibilities**

# **KPMG Turkey**

• As a member of the ICT Coordination and Communication Group, it collaborates with the Digital Turkey platform to provide consultancy services on strategic planning, policy alignment, and partnership development for ICT collaborations with the EU. It offers expertise in EU fund application processes and project management. It ensures communication with the **European Communication** and Information Group in networking and support areas. Additionally, it aids in enhancing competitiveness by providing training, workshops, and seminars for competency development. The ICT coordination and communication group works towards measuring goals, monitoring progress, observing processes, and improving actions related to governance, competencies, and overall development.

# **KPMG EU Office**

• KPMG EU Office keeps KPMG Turkey and Turkish organizations up-to-date on the latest EU funding opportunities, regulations, and other relevant information. It coordinates with the ICT Coordination and Communication Group to assist in identifying potential partners in EU countries for joint EU projects, establishes connections with them. and provides support when needed in matters related to relevant compliance processes.

## Digital Turkey Platform

As the owner of the ICT Synergy platform and a member of the ICT Coordination and Communication Group. they collaborate with KPMG in EU initiatives in the ICT field. They participate in communication, coordination. and information processes with stakeholders in line with the defined strategy and objectives. They play a role in enhancing synergy in local and global relationships and support organizations in potential collaboration processes.

# **EU Presidency**

- The Presidency can serve as the coordinating body responsible for overseeing collaboration between Turkey and EU countries in the ICT and technology sectors or be a key member of this body.
- It takes the lead in efforts to align Turkish policies in these sectors with EU standards and conducts related activities.

•

# Turkish Universities

- Universities collaborate with their EU counterparts in research projects financed by EU programs, contributing expertise and resources.
- Universities organize courses and seminars on EU fund mechanisms, application processes, and project management to enhance the capacities of students, faculty members, and other stakeholders.

## **Incubation Centers**

• It supports initiatives to apply for EU funds and establish partnerships with EU ventures for joint projects in coordination with the ICT Coordination and Communication Group. They can facilitate innovative projects financed by EU programs and promote entrepreneurship and innovation culture. Incubation centers can leverage their networks to connect initiatives with potential partners in EU countries.

# **Private Sector Leaders**

They can work in coordination with the ICT Coordination and Communication Group to provide sector-specific insights to design and implement plans and actions in line with the identified strategic priorities, ensuring their relevance and effectiveness. They collaborate with relevant stakeholders to enhance digital skills.

# TÜBİTAK

- TÜBİTAK can make improvements related to matching funds or additional financing to increase the feasibility and impact of projects financed by EU programs. It can more effectively manage investment and support funds for the development areas for local companies to engage with the EU in line with the identified objectives.
- TÜBİTAK can collaborate with EU research institutions on joint projects, contributing its expertise and resources. TÜBİTAK can also provide recommendations to the Turkish government on policies for compliance with EU standards in the ICT and technology sectors.

## NGOS

 Non-Governmental Organizations (NGOs) can enhance community and stakeholder awareness by ensuring that projects financed by EU programs respond to the needs of the community and garner community support. NGOs can advocate for policy changes related to the development of their competencies, improvement areas, and increased collaboration with the EU. They can also raise awareness and influence public opinion.

#### **ICT Synergy Platform**

In order to serve as a guide and resource for Turkey-EU ICT collaboration, a dynamic web portal is planned to be designed and implemented. This portal aims to provide information, including reports, analyses, and current opportunities in the field of ICT, take ownership of EU fund-related developments and announcements, offer process consultancy support, and facilitate more effective, understandable, accurate, and rapid communication and information-sharing among stakeholders. The platform should be structured and operated as the fundamental mechanism of the designed ecosystem and governance structure.

#### Information-Sharing

Current sector information, reports and analysis, news and developments on EU funds and cooperation opportunities

#### Communication

Contact information and necessary guidance for organizations wishing to benefit from EU funds and opportunities

#### Guide

Documents and guides that will guide organizations and all other stakeholders on many processes and topics such as project management, financial support applications, expectations and road steps, success stories

#### Coordination

Coordination of workshops, webinars and events that will bring stakeholders together in Turkey and Europe for cooperation opportunities



In this regard, the following activities are planned to be carried out on the ICT Synergy platform:

### 1. Information Sharing: Providing current sector information, reports, analyses, news, and developments related to EU funds and collaboration opportunities.

- Preparation and regular updates of sectoral reports on EU funds and collaboration opportunities.
- Regular monitoring and sharing of the latest news and developments in EU funds and collaboration.
- Organization of online events with experts on accessing EU funds.
- Creation of a user-friendly access platform for organizations interested in benefiting from EU funds, along with providing quick guidance.

2. Communication: Offering contact information and necessary guidance for organizations interested in utilizing EU funds and opportunities.

- Launching and maintaining announcement campaigns for EU funds and collaboration opportunities.
- Efficient operation of a communication hotline to quickly address questions related to EU funds.
- Establishment of suitable tools for the ICT Synergy platform, such as a website, newsletter, or social media accounts,
- based on communication needs.

3. Guidance: Providing documents and guides on various processes and topics, including project management, financial support applications, expectations and steps, success stories, etc., that organizations and other stakeholders can benefit from.

- Preparation and sharing of guides on project management processes and best practices.
- Creation of application guides and provision of consultancy for organizations applying for EU funds.
- Documentation and sharing of success stories from successful EU fund projects.



### 4. Coordination: Coordinating workshops, webinars, and events, bringing stakeholders together for collaboration opportunities in Turkey and Europe.

- Organization of collaborative workshops and webinars bringing together stakeholders in Turkey and Europe.
- Planning, organizing, and coordinating events related to EU fund activities.
- Establishment and maintenance of a network among organizations interested in benefiting from EU funds.
- Compilation of a list of organizations that could potentially benefit from partnerships in both regions.
- Organization of events for potential partners to meet and discuss potential collaborations.
- Provision of resources and support, such as legal advice, financing, or networking opportunities, to assist organizations in forming partnerships.
- Compilation of a list of EU fund programs that Turkish organizations could potentially benefit from on the platform.
- Communication of details about EU and other fund programs to Turkish organizations through established communication channels.
- Provision of resources and assistance, such as proposal writing workshops or individual consultancy, to support Turkish organizations in the application process for EU and other fund programs.
- Compilation of a list of differences between practices and policies in the ICT and technology sectors in Turkey and the EU.
- Collaboration with policymakers in Turkey to align existing policies with EU standards, including engaging stakeholders in various activities within the scope of their roles and responsibilities to provide evidence and arguments to support changes.

- Regular review of practices, regulations, and policies in both regions to ensure ongoing alignment and identification of emerging differences.
- Identification of training needs for Turkish organizations and employees to be competitive at the EU level.
- Contribution expected from academia, civil society organizations, and public and private sector stakeholders based on identified needs, with actions taken for training programs, workshops, or other opportunities.
- Regular evaluation of the effectiveness of training programs and adjustments made as needed based on feedback and results.
- Regular collection of data on key performance indicators defined in the strategic plan.
- Regularly analyze collected data and prepare progress reports on progress toward strategic goals.
- Revision of the strategic plan and actions as needed based on progress reports to ensure goals are met.
- Regular communication of monitoring and evaluation results to all stakeholders to maintain transparency and accountability.



#### 6.2. Our Collaboration Development Strategic Priorities and Success **Measurement Goals**

The ecosystem to be established is expected to operate in line with various strategic priorities. In this context, strategic priorities, planned actions related to them, and measurement targets created for the purpose of tracking these actions have been prepared to guide stakeholders and coordination boards within the ecosystem. To effectively focus on and make progress toward these goals, actions, and measurement targets for these strategic priorities are intended to be operationalized and monitored through the ICT Synergy platform.

These actions include encouraging increased participation in EU funds, expanding collaboration in artificial intelligence and Industry 4.0, exploring collaboration opportunities in other technology areas, enhancing Turkey's workforce capabilities, and strengthening R&D activities. Additionally, the establishment of communication and governance mechanisms for increasing communication and governance effectiveness between Turkey and the EU and implementing various strategies to enhance the commercial returns of products developed in collaboration with fund programs or EU countries constitute fundamental components of this platform. These actions represent significant steps taken to achieve the overall goals of the platform and ensure sustainable growth for Turkey in the technology sector.



The table below includes the strategic priorities we have determined and the action steps related to them.

Strategic Priority	Action	Action Steps		
Increasing Participation in More EU Fund Programs and Success Rate	Encouraging Participation in EU Fund Programs	1. Organizing informative and educational seminars for participation in EU fund programs.		
		2. Providing consultancy services for the application process for EU funds.		
		3. Offering technical support for projects applying for EU funds.		
Collaboration in Artificial Intelligence and Industry 4.0	Expanding Collaborations	1. Creating partnership agreements and collaboration protocols in artificial intelligence and Industry 4.0.		
		2. Representing Turkey at events organized in these fields and introducing collaboration opportunities.		
		3. Identifying local and international partners for artificial intelligence and Industry 4.0 projects.		
Exploring Collaboration Opportunities in Other Technology Areas	Researching and Exploring Opportunities	1. Establishing a research team tracking technology trends and developments.		
		2. Creating an information bank for potential collaboration opportunities.		
		3. Representing Turkey at events in relevant technology areas and promoting collaboration opportunities.		
Ensuring Workforce and Sector Development in Turkey	Developing Workforce Skills and Strengthening R&D Activities	1. Organizing training and certification programs for developing technical skills.		
		2. Establishing partnership agreements with companies, universities, and public institutions for collaboration in R&D projects.		
		3. Providing investment and mentorship opportunities for innovative projects and startups.		

Strategic Priority	Action	Action Steps	
Enhancing Communication and Governance Effectiveness between Turkey and the EU	Establishment of Communication and Governance Mechanisms	1. Establishing a coordination center for communication with the EU.	
		2. Creating an information platform sharing up-to-date information about EU funds and projects.	
Increasing the Commercial Returns of Products Developed in Collaboration with Funding Programs or EU Countries	Expanding the Commercial Potential of Products	1. Market Research and Analysis: In-depth understanding of current and potential markets.	
		2. Product Development and Improvement: Initiating product development and improvement roadmaps for funded products developed in collaboration with EU countries at the project design stage.	
		3. Developing Export Strategies and Partnerships: Developing new export strategie and establishing international business partnerships to enhance Turkey's export potential.	
		4. Developing Sales and Marketing Strategies: Utilizing various marketing channels and techniques for effective sales and marketing.	





Below are our identified strategic priorities and the proposed success criteria for each strategic priority.

**Participation in More EU Funding Programs and Increasing the Earning Rate:** Turkey can enhance its opportunities by participating more in the EU's research and innovation programs.

#### Success Criteria:

- Number of successes from applied EU funds
- Total amount received from EU funds (in Euros)
- The ratio of successes obtained from EU funds to the number of applications (%)

**Increasing Cooperation in the Field of Artificial Intelligence and Industry 4.0:** Turkey should collaborate more in Artificial Intelligence and Industry 4.0 with EU countries such as Germany and expand these collaborations to other EU countries.

#### Success Criteria:

- Number of joint projects initiated in Artificial Intelligence and Industry 4.0
- Number of Turkish and EU companies involved in these projects
- Number of patents and copyrights obtained from these projects

**Exploring Collaboration Opportunities for Other Technology Fields:** Turkey should explore collaboration opportunities with the EU in other technology areas such as Blockchain, Cloud Computing, IoT, Sustainability, Digital Transformation, Data Analytics, Cybersecurity, 5G-6G, Consumer Electronics, and Emerging Technologies.

#### Success Criteria:

- Number of explored collaboration opportunities
- Number of projects initiated based on these opportunities
- Commercial successes from these projects (e.g., new product launches, revenue generated, etc.)

**Ensuring Turkey's Workforce and Sector Development::** To collaborate in joint projects with EU countries, it is essential to enhance the technical skills of the workforce, overcome language barriers, promote participation in international certification programs, and enrich and strengthen companies' R&D activities in collaboration with universities and public institutions.

#### Success Criteria:

- Number of individuals participating in English language and technical skills training
- Percentage of individuals obtaining certification from these training programs
- Number of R&D projects carried out with universities and public institutions

**Increasing the Effectiveness of Communication and Governance Between Turkey and the EU:** Establishing governance structures comprising consultancy firms, TÜBİTAK, the EU presidency, and NGOs is crucial for joining the right consortia, staying informed about relevant projects, timely identification of opportunities, and effective coordination.

#### Success Criteria:

- Number of established consultancy and governance structures
- Number of opportunities identified through these structures
- Number of projects successfully coordinated and completed by these structures

**Increasing the Commercial Return of Products Developed Jointly with Fund Programs or EU Countries:** There is room for improvement in evaluating the sales potential of projects and products developed within funding programs, determining product sales strategies, and increasing the export potential for sustainable and long-term commercial returns to benefit the Turkish ecosystem.

#### Success Criteria:

- Increased Sales Figures: A crucial indicator of enhanced commercial returns is the increase in sales figures, signifying broader acceptance and outreach of projects and products to a larger customer base.
- Increase in Market Share: The growth of the market share for products developed with EU countries is a significant measure of the success of this strategic priority. An increase in market share indicates that the product is competitive and holds a stronger position against competitors.
- Increase in Export Figures: Another vital goal of this strategic priority is the development of Turkey's export potential. An increase in export figures indicates that Turkey has achieved a stronger position in the international market.





# 7. Conclusion and Recommendations

This document outlines Turkey's strategic priorities and action plans in detail to establish more effective collaborations with the European Union (EU) in the fields of technology and innovation. The successful implementation of these priorities aims to increase Turkey's participation and success rate in the EU's research and innovation programs, expand collaborations in advanced technology areas such as Artificial Intelligence and Industry 4.0, and explore collaboration opportunities in new technology fields.

These workshops and report, it is proposed to establish an ecosystem and governance structure that will implement the strategy and goals for EU-Turkey ICT collaboration. This structure should be supported by all stakeholders contributing to information sharing, communication, and coordination requirements on a dynamic platform. Moreover, there is a need for competence development in various areas, such as foreign languages, digital skills, and project management, to create a more competent organization and workforce. The proposed solution involves the creation of a dynamic web portal to serve as a guide and resource for Turkey-EU ICT collaboration. This portal would contain information on reports, analyses, current opportunities, ownership of developments related to EU funds, and provide process consultancy support. The portal aims to facilitate more effective, understandable, accurate, and rapid communication and information sharing among stakeholders.

In addition to the portal, the recommendation includes enhancing communication and governance effectiveness between Turkey and the EU. This involves creating governance structures comprising consultancy firms, TÜBİTAK, the EU presidency, and NGOs to facilitate joining the right consortia, staying informed about relevant projects, timely identification of opportunities, and effective coordination.

# 8. Annexes Current Collaborations between Turkey and the EU in ICT

#### 7.1. EU Funding Programs and programs focused on the field of ICT

Turkey is included in the following EU funding programs for the period 2021-2027:

- 1. Horizon Europe: Turkey signed an agreement to participate in this program on October 27, 2021, in a ceremony held in Brussels.
- 2. Erasmus+: Turkey confirmed its participation in the Erasmus+ program at the same signing ceremony.
- 3. European Solidarity Corps: Turkey's participation in this program was also approved during the signing ceremony, along with Erasmus+ and Horizon Europe.
- 4. Customs: Turkey's participation in this program was decided at a meeting on October 27, 2020. Formal negotiations have also officially begun.
- 5. Civil Protection Mechanism: Turkey's participation in this program has been approved and is ongoing without interruption.
- 6. Creative Europe: Turkey's participation in this program has been approved, and official negotiations have commenced.
- 7. Taxation: Participation in this program has been approved, and official negotiations have started.
- 8. EU4Health: Turkey has expressed its intention to participate in this program for the 2021-2027 period.
- 9. Digital Europe: Turkey has the intention to participate in this program, and unofficial negotiations have started.
- 10. Environment and Climate Action: Turkey has expressed its intention to participate in this program for the 2021-2027 period.
- **11. InvestEU**: Turkey's intention to participate in this program has been approved, and official negotiations have begun.
- 12. Single Market: Turkey has the intention to participate in this program, and unofficial negotiations have started.
- **13. Space:** Turkey has expressed its intention to participate in this program for the 2021-2027 period.
- 14. European Environment Agency and European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) Agencies: Turkey's participation in these agencies is continuous, and there is no need to renew the agreement.

This report will focus on the following four programs that include projects in the field of ICT:

**1. Horizon Europe:** This program is the European Union's general research and innovation program in the fields of science, technology, and innovation. ICT is a significant part of this program because it funds a wide range of research and innovation projects. The Horizon Europe program, which is the 9th Framework Program of the European Union, aims to support science and innovation activities with a budget of 95.5 billion euros between 2021 and 2027. The European Union encourages all research activities in line with Union goals by creating a European research area where researchers, scientific knowledge, and technology circulate freely. This incentive mechanism has been implemented through multi-year R&D and innovation financial support created through framework programs since 1984. Turkey has been participating in multi-year framework programs in the field of R&D and Innovation since 2003.

#### **Turkey's Participation in the Program:**

Turkey has participated in the European Union's science and research framework programs starting from the 6th Framework Program. Most recently, Turkey is participating in the Horizon Europe Program, which covers the period from 2021 to 2027. The participation agreement, signed on October 27, 2021, and our participation, which came into effect following its publication in the Official Gazette on November 16, 2021, is in line with the goals of the 9th Framework Program, aiming to support science and innovation activities.

Horizon Europe Program is coordinated by the Scientific and Technological Research Council of Turkey (TÜBİTAK) in our country.

#### What are the aims of the Horizon Europe Programme?

To strengthen the European Union scientifically and technologically,

Increasing Europe's innovation capacity, competitiveness and employment, meeting society's priorities,

To sustain Europe's socioeconomic model and values. The structure of the Horizon Europe Program is as follows.

You can access the details of the program structure at "www.ufukavrupa.org.tr"



Within the scope of the Horizon Europe Programme, missions have been created by the European Commission in order to better introduce the work programs to society and evaluate them within more measurable targets. Missions aim to provide solutions to some of the challenges we face within a specified budget and within a specified period of time.



#### What are the 5 Missions of the Horizon Europe Program determined by the Commission?

- 1. Cancer Mission: Conquering Cancer: Mission Possible
- 2. Climate Change Mission: Accelerating the Transition to a Climate Prepared and Resilient Europe
- 3. Ocean and Waters Mission: Regenerating our Ocean and Waters
- 4. Climate-Neutral and Smart Cities Mission: 100 Climate-Neutral Cities by 2030 by and for the Citizens
- 5. Soil Health and Food Mission: Caring for Soil is Caring for Life

#### Who Can Apply to Horizon Europe?

Any natural or legal person (SMEs, industrial organizations, research centers, universities, public organizations, non-profit organizations) with operational and financial eligibility to carry out the R&D tasks specified in the proposed project can apply to the Horizon Europe Program.

While a significant portion of the program consists of areas supporting multi-partner actions formed by at least three different organizations, there are also project proposal calls for organizations such as Pioneering Research Grants, Marie Sklodowska-Curie International Fellowships and Research Grants, awards, and the European Innovation Council, where single entities can apply and benefit.

#### Horizon Europe in the 2021-2027 Period

Horizon Europe, the 9th Framework Program of the European Union, aims to support science and innovation activities with a budget of 95.5 billion euros between 2021 and 2027.

**2. Digital Europe:** This program is the main program of the EU, focusing on digital technologies and transformation. It includes the development of digital skills, as well as topics such as artificial intelligence and high-performance computing. The budget of the Digital Europe Program, which will operate in the 2021-2027 financial period, is 7.5 billion euros and consists of five components: Supercomputers, Artificial Intelligence, Cybersecurity and Trust, Digital Competences, and Use of Digital Technologies in the Economy and Social Structure. On August 6, 2020, a response letter expressing satisfaction with Turkey's intention to participate was received from DG CONNECT. An information meeting with the Commission was held on November 25, 2021. Negotiation meetings with the Commission started and resulted in a decision to participate in the program as of September 2023. The program is coordinated by the Presidency of the Digital Transformation Office and the Ministry of Industry and Technology.

The objectives of the program are;

- To support and accelerate the digital transformation of the European economy, industry, and society,
- To ensure that EU citizens, public institutions, and businesses benefit from digital transformation,
- To secure the competitiveness of the EU in the global digital economy,
- To reduce the EU's dependency on digital technology and infrastructure globally and ensure strategic autonomy,
- To support the reduction of digital divides within the Union.

#### **Program's Priority Areas:**

The program will primarily support establishing critical digital infrastructure in High-Performance Computing, Artificial Intelligence, Data, and Cybersecurity, as well as developing innovative digital technologies of strategic importance. The second phase aims to open up the established infrastructure and digital technologies for access and use by SMEs, public institutions, and citizens. In this context, five specific objectives have been identified:

- Specific Objective 1: High-Performance Computing (High-Performance Computing)
- Specific Objective 2: Artificial Intelligence (Artificial Intelligence)
- Specific Objective 3: Cybersecurity and Trust (Cybersecurity and Trust)
- Specific Objective 4: Advanced Digital Skills (Advanced Digital Skills)
- **Specific Objective 5:** Creating Digital Capacities, Best Use, and Interoperability (Deployment, Best Use of Digital Capacity and Interoperability





**3. Erasmus+:** Erasmus+ is the European Union's education, youth, and sports program. It supports collaboration between institutions through education, training, internships, professional development, and youth activities based on widespread learning across Europe and beyond. The program aims to modernize education, teaching, and youth work on a European scale while contributing to developing human and social capital with the skills required by the labor market and a competitive economy.

The Erasmus+ Program began in 1987 as a student exchange program encouraging higher education students to participate in one or two semesters of exchange. Over time, the program underwent structural changes, expanding to include student exchange and school education, vocational training, adult education, and youth activities under various components such as Socrates, Leonardo da Vinci, and Lifelong Learning until 2013. In the 2014-2020 period, the program was unified under a single umbrella, incorporating the fields of education, youth, and sports, and was named Erasmus+. The European Commission decided to continue with the name Erasmus+ for the new program covering 2021-2027. The budget of the Erasmus+ Program for the 2021-2027 period has nearly doubled compared to the previous period (2014-2020), reaching 28.4 billion euros.

#### **Turkey's Participation in the Program**

Turkey has participated in the European Union's education, youth, and sports programs since 2004.

The Erasmus+ Program participation agreement for the period 2021-2027 was signed on October 27, 2021, and its participation came into effect on November 16, as published in the Official Gazette.

The national coordinator for the program in Turkey is the Turkish National Agency.

# The horizontal priorities that will be taken into account in all projects during the 2021-2027 period of the program are:

- Inclusivity and Diversity
- Sustainability, Environment, and Climate
- Digital Transformation
- Participation in Democratic Life
- International Dimension

The program provides opportunities for individuals from different age groups and sectors to enhance and share their knowledge and experiences through education, training, learning, internship, on-the-job training, widespread learning-based youth activities, and voluntary work abroad. Erasmus+ is open to education, training, youth, and sports organizations in all sectors of lifelong learning, including school education, vocational education, higher education, adult education, youth, and the sports sector. However, the program also helps institutions and organizations to experience and implement innovative and best practices in their sectors, increase their institutional capacities alongside their international counterparts, and reach an international dimension.

Thanks to the ongoing higher education mobility across Europe for over 30 years, significant progress has been made in harmonizing university structures and increasing the compatibility of higher education systems. The Erasmus+ Program is built on EU policy documents such as the "Strategic Framework for Education and Training," "Commission Communication on the Modernization of Higher Education," "Renewed European Cooperation in the Youth Field," "EU Youth Strategy (2010-2018)," "White Paper on Sport," "European Dimension in Sport," and "EU Work Plan for Sport."



#### Who Can Benefit from the Erasmus+ Programme?

In the field of vocational education, vocational school students, apprentices, professionals, educators, those working in the field of vocational education,

In the field of school education, primary and secondary school students, school leaders, teachers, and school staff,

**In the field of adult education,** learners, educators, members, and staff of adult education institutions,

**In the field of youth,** young people aged 13-30, youth workers, members and employees of youth organizations,

**In sports,** public organizations related to sports, unions or organizations representing athletes, the Olympic Committee, national sports leagues, federations, clubs, sports NGOs...

**In short,** Individuals of all ages and walks of life, as well as institutions and organizations at all levels, can benefit from the program.

#### Erasmus+ Programme's Structure

Erasmus+ Program consists of 3 Main Actions and 2 Special Actions:

- Main Action 1: Learning Mobility of Individuals (KA1)
- Main Action 2: Cooperation for Innovation and Good Practice Exchange (KA2)
- Main Action 3: Support to Policy Reform (KA3)
- Special Action 1: Jean Monnet Actions
- Special Action 2: Sports Supports

For further information, please see Erasmus+ Programme Guide 2024; https://erasmus-plus.ec.europa.eu/sites/default/files/2023-11/2024-Erasmus% 2BProgramme-Guide\_EN.pdf

# Within the Erasmus+ Programme's scope are "country-centered" and "central" activities.

- Country-Centered Projects: Applications are made to the Turkish National Agency.
- Central Projects: Applications are made to the Education, Audiovisual Culture Executive Agency affiliated with the European Commission in Brussels.

Current calls for proposals for all central calls can be accessed on the Education, Audiovisual, and Culture Executive Agency's page.

**4. European Solidarity Corps (ESC):** It is a new initiative by the European Union that aims to encourage young people to volunteer in projects that contribute to the community, either in their own countries or abroad while promoting their personal, educational, social, civic, and professional development. ESC is a European Union initiative targeting the fulfillment of societal needs by creating opportunities for young people to volunteer, work, or engage in networking activities. It brings young people together to build a more inclusive society, support disadvantaged individuals, and respond to societal challenges. The program's activities include environmental issues, health, sports, social inclusion, digital technologies, culture, and humanitarian aid. They provide an inspiring and empowering experience for young people who want to contribute to society, learn, and develop themselves.

In addition to encouraging young people to contribute to society, the program provides opportunities to gain invaluable experiences and develop new skills. The volunteering and solidarity activities addressing societal challenges are open to individuals aged 18 to 30, while humanitarian aid activities are open to individuals aged 18 to 35.

#### **Turkey's Participation in the Program**

Turkey has been participating in the ESC Program, which was launched in 2019, from the beginning.

The program participation agreement for the ESC 2021-2027 period was signed on October 27, 2021, and our participation came into force after being published in the Official Gazette on November 16.

The national coordinator of the program is the Turkish National Agency.

#### What are the Program's Goals?

The ESC Program aims to create opportunities for young people to work/volunteer in projects that benefit society and support disadvantaged people while also increasing their skills and competencies, encouraging participation in social solidarity activities of organizations, responding to social needs, and strengthening social solidarity.

# The European Solidarity Corps will provide opportunities for more than 270,000 young people across Europe with a budget of 1 billion euros in 2021-2027.

The new European Solidarity Program considers the European Union's priorities.

**Promoting Inclusion and Diversity:** It aims to ensure that young people have equal access to the opportunities provided by the European Solidarity Corps.

**Green Practices:** It aims to promote environmentally sustainable and responsible behavior among participants and organizations and adopt green practices in all projects and activities.

**Digital Transformation:** It will support projects and activities that increase digital skills, promote digital literacy, and understand the risks and opportunities of digital technology.

**Participation in Democratic Processes:** Along with civil involvement, it also supports the participation of young people in democratic processes.

**Protection and Support of Health:** It contributes to issues such as the impact of the COVID-19 epidemic and the safety and support of health, which has become better understood throughout the epidemic and the recovery process after the disease. The program aims to mobilize volunteers to support projects to address various health issues.

#### 2021-2027 Period

The new ESC Programme, with a budget of 1.009 billion euros for 2021-2027, will provide opportunities for at least 270,000 young people across Europe to help them overcome social and humanitarian challenges through volunteering or creating their solidarity projects. The program aims to be more inclusive, digital, and greener.

For further information, please see "European Solidarity Corps Guide 2023";

https://youth.europa.eu/d8/sites/default/files/inline-files/ european\_solidarity\_corps\_guide\_2023\_en.pdf

- Volunteering
- Solidarity Projects
- European Humanitarian Action
- Volunteering Teams in High-Priority Areas





#### How Does the European Solidarity Corps Work?

Young people between 17 and 30 can register on the European Youth Portal. Participants aged 18 and above may receive invitations to participate in solidarity-themed projects from organizations with access to the database. Additionally, these organizations can announce their projects on the portal to receive responses from young people directly.

#### **Volunteering Projects**

- Volunteering projects allow young people aged 18 to 30 to volunteer in a social project for a period ranging from 2 to 12 months.
- Volunteering involves providing full-time support (30-38 hours per week) free of charge to the daily activities of the host organization that benefit the community.
- Through volunteering projects, young people can contribute to their educational, social, and professional development by participating in individual volunteering activities or volunteer teams, domestically and abroad.
- Within the scope of volunteering projects, activities for the benefit of the community are organized, such as participating in the restoration of cultural heritage, promoting environmental conservation awareness, or conducting volunteer education activities in refugee camps.

#### Who Can Apply and How?

Volunteering projects are open to individuals aged 18-30 who legally reside in the ESC program country or partner countries and to all young people, regardless of graduation and language proficiency. Although 17-year-old people can enroll in the program, they can only participate in projects once they are 18.

For application

- After registering on the European Youth Portal site
- Institutions and projects that invite volunteers should be sought.
- Applicants must find a sending organization with a "Quality Certificate from Turkey" before applying.
- A CV and motivation letter must be sent for the project of interest.
- Help can be obtained from Europass to create a CV and motivation letter.

#### Volunteering projects are divided into two:

- Short-term volunteering (14-59 days excluding travel time) and
- Long-term volunteering (2-12 months excluding travel time)

# Each young person has the right to only one short-term + 1 long-term volunteer project.





#### Support Provided to Young People in Volunteering Projects:

- **Support for Young People with Limited Opportunities:** In line with its principles, the European Solidarity Corps places great importance on supporting young people with limited opportunities compared to their peers due to health problems, educational challenges, economic and geographical barriers, as well as issues related to religion, gender, and age or concerns arising from social and financial difficulties and ensuring their participation.
- **Language Training Support:** The European Solidarity Corps, aiming to ensure unity in diversity, provides free language training support within the project framework for at least three months, either through a local youth worker or a professional language course in the host country's native language.
- **Visa Support:** All expenses during the visa process necessary to go to the country where the project will take place, including health insurance and, if necessary, all fees for applying for a residence permit outside the visa process, are covered.
- Pocket Money Support: While varying from country to country, a certain amount of pocket money is provided in addition to daily needs such as accommodation, meals, local transportation, etc.
- Accommodation Support: Individuals participating in the project are offered the opportunity to stay in a volunteer's home, dormitory, or with a host family provided by the host organization.
- **Travel Support:** Covers round-trip travel expenses to the country where the project will occur.
- **Mentor Support:** Participants can receive training before and after the projects. During the project, mentor support is provided to help participants set and achieve goals.

#### **Solidarity Projects**

Solidarity Projects involve at least five young people coming together to take responsibility and initiative to create positive changes for their community and environment for 2 to 12 months.

Participation in a long-term volunteering project ends the right to benefit from the program without using the short-term right. Those who have participated in the Erasmus+ volunteering activity or the European Voluntary Service program before cannot benefit from the program. However, young people who have benefited from volunteering activities of the European Voluntary Service or the European Solidarity Corps for a maximum of two months can apply for volunteering activities again, provided that the total duration does not exceed fourteen months.

- Solidarity projects, developed and implemented by young people within a range of 2-12 months, are domestic solidarity activities.
- At least five young people come together to target a specific issue and problem in their local communities, take responsibility, and develop and implement projects that address this problem, putting forward solutions to create positive change.
- Solidarity activities should be based on the principles of the European Solidarity Corps, emphasizing topics such as widespread learning, entrepreneurial spirit, and European-added value (e.g., climate change, democratic participation, social integration, etc.).
- Through solidarity projects targeting local problems and special groups in need locally, it is possible to bring together different actors and partners.
- Participation in a solidarity project can also be the first step in becoming selfemployed, joining civil society organizations, actively participating in youth work organizations, or establishing a non-governmental organization (NGO).

#### Who Can Apply?

- A group of at least five young people aged 18-30, legally residing in the program country and registered on the European Youth Portal, can apply for solidarity projects.
- There is no maximum number of participants. One of the young people in the group can take on the role of a legal representative and apply, or any public or private organization on behalf of the group can also use it for the project.
- Applications are made through e-forms published on the official website of the European Commission. Necessary information about application forms and the application process can be obtained from the official website of the Turkish National Agency.

#### What Do Young People Gain from Participating in the ESC Program?

Through the projects they implement or participate in, young people:

- Through the projects they implement or participate in, young people:
- Obtain a Youthpass certificate documenting their participation at the end of the voluntary project.
- Can live in another country and develop language and cultural skills.
- Acquire the ability to overcome difficulties and work within a team.
- Stay connected with a larger community of former volunteers as part of the European Solidarity Corps community.
- Inspire other young individuals through the sharing of experiences.
- Develop personal, educational, social, and professional skills with increased selfconfidence and learning motivation.
- Bring their ideas to volunteer organizations or local communities and contribute to the multicultural identity of organizations.





#### 7.3. Focus Areas of EU Funds in the Coming Period

# Horizon Europe Program will focus on the following areas in the coming period:

- 1. Climate Change and Sustainability: The program will focus on combating climate change and sustainability. Projects in areas such as green energy, energy efficiency, environmental protection, and sustainable transportation will be supported.
- 2. Digital Transformation: The program will concentrate on developing digital technologies, digitization, and topics such as artificial intelligence. The goal is to support innovative projects in these areas.
- **3. Health and Well-being:** The program will address improving health services, prevention and treatment of diseases, the aging process, and healthy living.
- **4.** Energy and Sustainable Transport: By focusing on energy efficiency, renewable energy sources, and sustainable transportation systems, the program aims to support energy transformation.
- 5. Social and Economic Inclusion: The program will support projects to reduce social inequalities, support disadvantaged groups, and increase social and economic inclusion.

# The Digital Europe Program (Digital Europe) will focus on the following focus areas in the coming period:

- **1. Supercomputing:** The program aims to strengthen Europe's computing capabilities by supporting projects in the field of supercomputing.
- **2.** Artificial Intelligence: The Digital Europe Program aims to enhance Europe's artificial intelligence capabilities by supporting AI projects and developments.
- **3. Cybersecurity:** By supporting projects in cybersecurity, the program aims to increase Europe's cybersecurity capacity.
- **4.** Advanced Digital Skills: Focusing on advanced digital skills, the Digital Europe Program aims to strengthen Europe's digital capabilities.
- 5. Wide Use of Digital Technologies: The program encourages the widespread use of digital technologies across the economy and society. Additionally, it seeks to support businesses' digital transformation by promoting digital innovation centers.



- 1. Volunteer Projects: The program will encourage young people to participate in volunteer projects and support their involvement in community service.
- Volunteer Teams in Priority Areas: The program will support creating volunteer teams in priority areas, working on specific social needs or emergency interventions.
- **3. Solidarity Projects:** By supporting solidarity projects, the program aims to promote social participation and solidarity, focusing on issues such as support for disadvantaged groups, social integration, and meeting the needs of local communities.
- Quality Label for Solidarity Volunteer Activities: The program aims to enhance the quality and effectiveness of solidarity volunteer activities by awarding a "Quality Label" to supporting organizations.
- 5. Quality Label for Humanitarian Aid Volunteering: Similarly, the program aims to improve the quality and effectiveness of humanitarian aid volunteering activities by awarding a "Quality Label" to supporting organizations.
- 6. Volunteering under European Volunteer Humanitarian Units: The program aims to provide volunteering opportunities for young people who want to participate in humanitarian aid activities under the European Volunteer Humanitarian Units framework.

#### In the coming period, the main focus areas of the Erasmus+ program are as follows:

- 1. Inclusion and Diversity: The program centers on organizations and participants with fewer opportunities. Erasmus+ will continue supporting specific resources to eliminate barriers to participant inclusion mechanisms.
- **2. Digital Transformation:** Erasmus+ will support projects and activities related to digital transformation.
- **3.** Environmental Sustainability and Climate Change: The program will support projects and activities related to environmental protection and the fight against climate change.
- **4. Democratic Participation:** Erasmus+ will support projects and activities that actively encourage participation in democratic life.
- 5. Support for Individuals Fleeing from Ukraine: The budget for the Erasmus+ program has been increased to support activities aiming at integrating individuals fleeing from Ukraine into new learning environments and assisting those affected by the conflict in Ukraine.
- 6. Priority for Students and Staff Fleeing from Ukraine: The budget has been increased to support additional projects for students and staff fleeing Ukraine.
- 7. Voice of Youth: Following the 2022 European Youth Year, the Erasmus+ program continues to ensure the voices of young people are heard in the EU and beyond, mainly through increased youth activities financed by Erasmus+. The program also contributes to the EU's commitment to skill development and re-skilling, thus making a valuable contribution to the 2023 European Skills Year<sup>1</sup>.



#### 7.4. Application and evaluation processes for EU funds in ICT

#### Horizon Europe Application and Evaluation Process:

The European Union created the Horizon Europe Program to support research and innovation activities. Under the program, funds are provided to many organizations, including private sector companies.

You must register personally in the system to apply for the Horizon Europe Programme. Then, you need to register your organization. Finally, you need to pre-register your project proposal. In this process, this project is carried out by the coordinator organization.

In the process, details such as PIC number, call to apply, subject title, long and short names of the project proposal, and summary are entered into the system.

You can visit the Horizon Europe Program's official website for more detailed information about the application process. You can also comply with the closing dates of the calls by applying to the Coordination Support Program.

#### **Call Inquiry Process:**

Horizon Europe's calls cover various areas, categorized by specific topics. Participants can access open calls in their areas of interest through the Funding and Tender Portal.

Participants can find calls and topics of interest using the search engine or filters for subprograms, focus areas, or horizontal priority on the call page.

Once the relevant topic is found, participants can access summary information on the funding model (RIA, IA, SME Instrument, etc.), call opening and closing dates, and the multi-stage nature of the project application and evaluation process.

Clicking on the topic opens a page containing detailed information, including its objectives, application conditions, relevant documents, partner search, support unit, etc. Direct access to the project submission system is also available from each topic page.

Each topic has a deadline or "cut-off" date for project submission.

Topics are divided into three categories in terms of scope and process:

- 1. Single-stage topics,
- 2. Two-stage topics,
- 3. Permanent open topics.

For single-stage topics, a project proposal is expected to be submitted according to the criteria and rules specified on the topic page. In two-stage cases, an initially prepared project proposal is submitted briefly. After the first-stage evaluation of this proposal, a detailed proposal for the project is submitted for the second stage and extensively reevaluated by reviewers. Even stakeholders who are not eligible for funding are informed through the Evaluation Summary Report (ESR) in both phases.

Similar to the SME Instrument, some areas of the Horizon Europe Program have permanent open topics. Unlike the other two cases, projects submitted under these topics are periodically subject to call evaluation.



Funding Method	Project Scope	Support Rate	Indirect Cost Support	
RIA	Research and Innovation Action	Basic research and innovation activities	100%	
ΙΑ	Innovation Action	Close to market, innovation actions	100% (70% for for-profit organizations)	
CSA	Coordination Action	Dissemination activities	100%	
CoFund	Co-Fund Program Action	Development of R&D programs	Between 30%-70%	+25%
IMDA	Innovation and Market Expansion Action	Activities for dissemination of innovation to the market	100% (70% for for-profit organizations)	1
ТМА	Market Diffusion Action of Innovation	Skills development and knowledge dissemination activities across countries	100%	
РСР	Education and Mobility Action		100%	
PPI	Pre-Commercialization Procurement Action	Empowering international buyers	50%	



#### **Application Process:**

Any natural or legal person (SMEs, Industry Organizations, Research Centers, Universities, Public Institutions, Non-Profit Organizations) with the operational and financial capacity to carry out the research tasks specified in their proposed project can apply to the Horizon Europe Program.

While a significant part of the program supports multi-partner actions formed by at least three different organizations, there are also single-participant actions that organizations such as Pioneering Research Supports, Marie Sklodowska-Curie International Scholarships and Research Supports, and SME Instrument can apply for individually.

#### Which Countries Can Be Funded?

Countries that can be funded include EU Member States, associated countries, and third countries, including Turkey.

Countries not mentioned above but specifically indicated in the work program and countries that have joined the program by signing bilateral scientific and technological cooperation agreements with the European Commission can also be funded under the program.

#### **Preparation and Application Stages:**

Project proposals are submitted electronically by selecting a relevant topic heading in the Funding and Tender Portal, with the project coordinator organization responsible for the submission. In some areas, such as ERC, MSCA, and SME Instrument, a single organization can submit a project.

The following process is followed for each project application:

1) Find the relevant topic heading from the "Funding and Tender Portal."

2) Access all detailed information about the topic from the left menu on the specific page for the topic (objectives of the topic, application conditions and relevant documents, partner search, support unit, etc.). Carefully review the records and guides containing specific requirements and details for the call. Use the "partner search" option in the left menu or contact through <u>Unique Identification Numbers</u> (UINs) to find project partners.

#### 3) Project Planning:

- A business plan is created, and technical work is defined following the requirements in the call and subject title page templates.
- In work packages, responsibilities in the project are shared among the consortium stakeholders, deliverables and milestones within the project time are determined, the project management process is defined, and communication and consumption plans are determined. (The "Topic Title Conditions and Documents" section on the topic page should be reviewed for all required documents.)
- A budget is created.
- a. Proceed to the Electronic Project Application Process: The required steps are as follows:
- b. Personal registration to the system
- c. organization registration
- d. Project proposal pre-registration: In this process, carried out only by the project coordinator organization, details such as PIC number, call to apply, subject title, long and short names of the project proposal, and summary are entered into the system.

Inviting project partners to the consortium: At this stage, the PIC number of the relevant organizations and the contact information of the person responsible for the project are entered into the system, and a partner is added to the project through the system. (PIC numbers of affiliated third parties do not need to be entered in the administrative forms at the project application stage; it is sufficient to include them in the relevant sections in Part B of the project.)

Administrative form templates with the help of project partners is filled.

## The templates will contain the following information respectively:

- The introduction section contains basic information filled in by the coordinator specifically for the project.
- Statements of project partners
- Project partner organization information
- Organization budget distributions
- Ethical issues table
- Call-specific questions (if necessary)
- Technical project content templates will be uploaded to the system in PDF format.
- Following all these processes, the project will be submitted to the European Commission through the system until the call closing date. Projects submitted until the deadline can be withdrawn, modified and resubmitted.
- The project can be withdrawn, and the presentation of the project can be abandoned at any time before the call's closing date.
- During the project application phase, a complaint can be made to the European Commission Technical Assistance Unit regarding technical difficulties arising from the system. In this regard, contacting the UIN of the area where you are applying for a project is essential.



#### **EVALUATION PROCESS:**

After the project proposal is submitted to the European Commission through the system, firstly, the project is formally reviewed to ensure it is complete and meets criteria such as page count, submission before the deadline, and the readability and accessibility of Part B. It is checked whether the proposal fulfills all the minimum requirements specified on the topic page, such as the minimum number of partners and country criteria.

Subsequently, the proposal is sent to evaluators for assessment. Evaluation criteria may vary across subprograms such as ERC and MSCA, so for the most accurate and comprehensive information, specific conditions can be reviewed in the "Standard Evaluation Criteria" document on the topic page for which the application is made/to be made.

Project proposals are scored based on three criteria: excellence, implementation, and impact. The scoring range is as follows:

- The proposal could not be evaluated in detail due to not meeting the required criteria or due to missing/insufficient information.

**Weak Proposal:** The criteria must be more adequately met or contain severe fundamental weaknesses.

**Fair Proposal:** It generally meets the criteria but contains significant weaknesses.

**Good Proposal:** It meets the criteria well but has some shortcomings

**Very Good Proposal:** It meets the criteria well but has a few shortcomings.

**Excellent Proposal:** Successfully meets all the necessary criteria. There are very few things that could be improved.

The proposal that receives 5 points from each of the three areas gets the maximum score of 15 points. The number of points required to be funded may vary for each call and topic.


#### **EVALUATION PROCESS:**

#### Individual Peer Review

Reviewers evaluate each project proposal individually and proceed to the next stage with explanatory notes.

#### **Consensus Group Evaluation**

Following individual evaluations, the "consensus group" evaluation stage is entered, where all reviewers who assessed the project discuss their opinions to persuade each other. A moderator (representative from the European Commission) guides this discussion.

#### Panel Evaluation

In cases where the budget allocated by the European Commission for the specific call does not permit funding for all projects that received a successful level of points, a decision on which projects to fund is made through panel evaluation. Within the framework described in the Work Programme, the panel prioritizes recommendations for which project proposals with the same score should be funded. During the panel evaluation stage, the project coordinator may be invited to provide more detailed information about the proposal.

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#### Conclusion

After all processes, the European Commission announces the list of funded, backup, and rejected projects, and the process concludes.



#### **Digital Europe Application and Evaluation Process:**

The Digital Europe Program (DAP) was created by the European Union (EU) to accelerate digital transformation. The program makes open calls to public institutions, private sector organizations, and civil society organizations in EU countries. For detailed information about application steps and the evaluation process, you can refer to the following sources:

- 1. Visit the Kocaeli Governorate website for detailed information and application steps for the 1st term open calls of the Digital Europe Program in 2023.
- 2. For more information about the Digital Europe Program, visit the European Commission website.
- 3. Private sector organizations wishing to apply for the Digital Europe Program can review the Frequently Asked Questions document prepared for them.

Points to consider in the application process include aligning your project idea with EU policies and strategies, budget planning, and project management. Application processes and evaluation criteria may vary for each call period, so I recommend regularly checking the relevant sources.

#### **European Solidarity Corps Application and Evaluation Process:**

The European Solidarity Corps Program was established by Regulation (EU) 2018/1475 of the European Parliament and the Council. Turkey's participation in the European Solidarity Corps Program is limited to volunteering activities, solidarity projects, and network-building activities following Article 11(1)(b)(i) of Regulation 2018/1475.

To be part of the European Solidarity Corps Program, organizations must obtain a "Quality Certificate," demonstrating that they conduct high-quality solidarity activities in line with the program's principles, objectives, and requirements. Our Presidency receives Quality Certificate applications.

#### The application steps are as follows:

- 1. Register on the European Youth Portal.
- 2. Receive invitations to participate in solidarity projects by organizations with access to the database.
- 3. Fill out the application form.
- 4. Submit the application form.
- 5. Wait for the evaluation process.

#### The points you should pay attention to when applying are as follows:

- Fill out the application form correctly and completely.
- Attach all documents specified in the application form.
- Complete your application within the application period.
- Applications will not be accepted at the end of the application period.



### 7.5. For Application Processes for EU Funding Programs Advice

#### Applying for EU Funding: Steps to Follow

#### What to Do:

- Before starting your application, read the current Horizon Europe Work Programme for the relevant call to understand its objectives and guidelines.
- Learn about EU policy objectives to contextualize your proposal.
- Take the time to review and understand the evaluation criteria for the call you wish to apply for. This can help identify potential weaknesses in your proposal and address them before submission. Grant proposals are evaluated based on the criteria of 'Excellence,' 'Impact,' and 'Quality and efficiency of implementation.' Check what each of these terms entails.
- Check whether the call/topic you are applying for is a 'lump sum' or 'real cost' call, as it will have different outcomes for eligibility/acceptability conditions. Also, check the type of action foreseen for the call/topic (Coordination and Support Action (CSA), Research and Innovation Action (RIA), Innovation Action (IA), etc.).
- Form a strong and multidisciplinary consortium. The consortium should consist of partners from different countries, bringing complementary expertise in the research field. It should also provide innovative solutions to overcome global challenges. The participation of research organizations, public institutions, and civil society organizations will be welcomed if foreseen in the call. Use partner search tools and networks to find the right project partners.

- Anticipate the human resources and skills required for the implementation of the project and design a plan to prevent delays in case the proposal becomes eligible for funding.
- Explore past and ongoing EU-supported projects on the CORDIS website to understand how these projects are designed and partnerships are formed.
- Attend Information Days related to the call for proposals you are interested in. These events are organized to explain each call for submissions and provide an excellent opportunity to gather information and ask questions about the available funding topics. If you cannot attend an Information Day, check the recordings.
- Contact the National Contact Point (NCP) closest to you for support. In addition to advice, some NCPs offer training courses on preparing project proposals.

#### What Not to Do:

- Do not rush! Take the time to carefully read the requirements of the call to ensure you meet the eligibility rules.
- Avoid rushing the development of your project idea, and take the time to find the right partners. Ideally, start searching for project partners well before the call for proposals opens.
- Do not leave your application to the last minute to avoid unnecessary errors or technical glitches. Have a plan and stick to it to ensure timely submission. You can reopen and modify your draft proposal as often as needed before the final call deadline.







#### Formulate and plan your offer correctly

#### What to Do

- Structure Your Proposal: Organize your proposal logically and coherently. Outline the primary project methodology and structure all elements of the project. This will help ensure alignment with the objectives and evaluation criteria of the specific call.
- Consider Additional Requirements: Take into account other requirements or policy issues considered in the evaluation of projects. This may include multidisciplinary (partners with complementary types of knowledge), inclusion of Social Sciences and Humanities, Open Science, etc.
- Ensure Budget Alignment: Note that the budget should be appropriate for the workload in different work packages for the project to be feasible regarding timing and financial resources.
- Create a Timeline: Establish a timeline for specific tasks, outputs, responsibilities, and deadlines for the proposal writing process. This will ensure that everything is completed by the final call deadline.
- Use Relevant Guides and Templates: Utilize guides and templates applicable to the funding program you are applying for, available in the Funding and Tender Opportunities Portal. Note that using the correct template is an acceptability condition.

#### What Not to Do

- Avoid exaggerating your idea with too many or overly ambitious goals.
- Do not 'over-write' your proposal; strive to keep it simple and understandable.
- Refrain from using metaphorical words. Describe your project in realistic terms.
- Remember Ethical and Security Issues: Remember to present ethical and security issues related to your proposal. All applicants must complete an honest self-assessment for their proposals, irrespective of whether the proposed work raises ethical issues.
- Address Gender Dimensions: If applicable, don't forget to explain how you will address gender dimensions in your research.
- Prepare a Gender Equality Plan (GEP): Ensure you make preparations and submit a
  detailed Gender Equality Plan (GEP), which is mandatory for legal entities that are public
  bodies, research organizations, or higher education institutions from Member States and
  Associated Countries. A GEP must be in place for these entities when signing the Grant
  Agreement. Learn more about gender dimensions in research and Gender Equality Plans.
- Stay Within Page Limits: Do not exceed page limits. The length of Research and Innovation Actions (RIA) and Innovation Actions (IA) should be a maximum of 45 pages. The limit for Coordination and Support Actions (CSA) is 30 pages. For stage one proposals, this limit is a maximum of 10 pages. The limit for lump sum calls is 50 pages for ESIA/EIS and 33 for SEA.

#### Consider the project's path to impact

#### What to Do

- Clearly Explain the Problem: Clearly articulate the significance of the problem your project aims to address and why it needs to be addressed now. The arguments provided should demonstrate why the problem is essential and for whom.
- Explain Long-Term Impact: Describe how the proposed intervention will have a long-term impact on the market, industry, technology, environment, or society in general.
- Consider Interdisciplinary Approaches: Envisage new research and interdisciplinary, multidisciplinary, or transdisciplinary approach.
- Contribute to Expected Outcomes: Reflect on how your project can contribute to the expected outcomes and impact outlined in the Horizon Europe Work Programme.
- Explain Legal Compliance: Clarify how you will comply with legal obligations. Review the Horizon Europe Model Grant Agreement on the Funding and Tender Opportunities Portal and watch this video for more information on legal obligations.
- Highlight Consortium Suitability: Demonstrate how suitable the consortium is to implement the project. This includes emphasizing the relevant capacities of the organizations and individuals leading the project, a well-structured project management plan, precise role distribution, effective dissemination and communication strategies, and a risk mitigation approach. Note that eligibility conditions set a minimum consortium size but no maximum length. However, keep in mind that the proposal must be manageable.
- Plan Activities to Increase Impact: Plan activities to enhance the impact of your project. Learn the differences between communication, dissemination, and exploitation.

#### What Not to Do

- Avoid Interpreting the Work Programme: Do not interpret the Work Programme. Translate it into your proposal.
- Remember Connection Between Objectives, Activities, and Expected Results: Ensure you clearly explain the connection between your project's objectives, activities, and expected results.
- Avoid Confusing Results, Research Outputs, and Impact Terms: Clearly distinguish between results, research outputs, and impact terms.
  - Results are produced during project implementation (e.g., knowledge accumulation, innovative solutions, algorithms, feasibility evidence, new business models, policy recommendations, and guidelines).
  - Research output refers to results produced by the action that are accessible, such as scientific publications, data, or other engineering outputs and processes like software, algorithms, protocols, and electronic notebooks.
  - Project outputs are the mid-term expected effects of projects supported under a specific topic. Project results should contribute to these outcomes, especially those encouraged by dissemination and exploitation measures. This may involve target groups' direct reception, spread, deployment, and/or use of project results. Results generally emerge during or shortly after the project ends.
  - Project impact is the broader, longer-term effect on society (including the environment), the economy, and science; impact usually emerges sometime after the end of the project.





#### 7.6. Success stories in Turkey

**Arçelik**: Arçelik, a leading home appliances manufacturer in Turkey, has successfully participated in a project under the EU Horizon 2020 program. This project aims to develop innovative solutions for energy efficiency and improve sustainable production techniques.

**Turkish Aerospace Industries (TAI):** TAI, one of Turkey's prominent companies in the defense and aerospace sector, has successfully participated in the EU's various aviation and space projects. It has actively engaged in joint research and technology development projects, contributing to developing innovative products.

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**Türk Telekom:** As one of Turkey's largest communication companies, Türk Telekom has successfully participated in EU broadband infrastructure projects. Within these projects, Türk Telekom has worked towards providing high-speed internet access to rural areas of Turkey and reducing the digital divide.

**Vestel:** Vestel, a leading consumer electronics and home appliances manufacturer in Turkey has shown interest in several innovative projects under the EU Horizon 2020 program. These projects encompass energy efficiency, smart home technologies, and green technologies.

**Eczacıbaşı:** Eczacıbaşı Holding is one of the Turkish companies benefiting from EU funds. The company has implemented numerous projects under EU programs, focusing on environmentally friendly and energy-efficient solutions. Particularly in the construction, ceramics, and bathroom products sectors, Eczacıbaşı prioritizes sustainability-focused initiatives.

**TÜBİTAK Marmara Research Center (MAM):** TÜBİTAK MAM is an organization leading research and technology development activities in Turkey. It has been pioneering in many successful projects, actively participating in EU framework programs, particularly in energy, environment, biotechnology, and materials, and conducting innovative research.



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**Ford Otosan:** As one of the leading companies in Turkey's automotive sector, Ford Otosan has implemented projects using EU funds to produce environmentally friendly and energy-efficient vehicles. It has mainly concentrated on electric and hybrid vehicle technologies.



**İş Bankası:** İş Bankası, one of Turkey's largest private banks, has provided financial support to innovative initiatives in various sectors using EU funds. It has focused on projects supporting SMEs and fostering entrepreneurship by creating collaboration networks.



**Aselsan:** As one of Turkey's most prominent defense industry companies, Aselsan has successfully participated in various projects through EU framework programs. It has provided innovative solutions in electronics, communication, and defense technologies.



**Vestel Defense:** Vestel Defense is another significant player in Turkey's defense industry sector. It has implemented innovative projects in military and security areas utilizing EU funds. It works on crewless aerial vehicles (UAVs), security systems, and electronic defense technologies.

11 12 13 **Koç Holding:** Koç Holding, one of Turkey's largest conglomerates, has benefited from EU funds. It has undertaken energy efficiency, environmentally friendly production, and sustainability projects. Additionally, Koç Holding has supported innovative research and technology development initiatives by participating in EU framework programs.

**Roketsan:** Roketsan, one of Turkey's leading companies in the defense industry sector, has successfully accessed EU funds. The company has contributed to innovative rocket and missile systems, guidance systems, and aviation technologies projects.

**Turkish Airlines:** Turkish Airlines, Turkey's national airline, has benefited from EU funds. The airline has carried out projects in aviation technologies, passenger experience, and sustainability. Additionally, by participating in EU programs, Turkish Airlines has strengthened international collaborations..

**Vestel White Goods:** As one of Turkey's leading white goods manufacturers, Vestel White Goods has successfully utilized EU funds. The company has implemented projects in energy-efficient and environmentally friendly white goods production. Furthermore, Vestel White Goods has worked on smart home technologies and innovative designs.

**Türkiye İş Bankası:** Turkey İş Bankası is another bank that has benefited from EU funds. It has participated in EU programs to support SMEs, promote entrepreneurship, and provide financial support to innovative projects.



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# 9. Links and Bibliography

https://www.invest.gov.tr/tr/library/publications/lists/investpublications/turkivede-vatirimlar-icin-devlet-tesvikleri-rehberi.pdf https://www.invest.gov.tr/tr/library/publications/lists/investpublications/bilgi-ve-iletisim-sektoru-raporu.pdf https://www.karel.com.tr/blog/turkiye-ict-sektorunun-durumu-nedir-gelismesi-icin-neler-yapmak-gerekir https://www.istka.org.tr/media/131785/%C4%B0stanbul-gen%C3%A7-giri%C5%9Fimcilik-ekosistem-analizi-projesi.pdf https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Genclik-2022-49670#:~:text=Hanehalk%C4%B1%20i%C5%9Fg%C3%BCc%C3%BC%20 ara%C5%9Ft%C4%B1rmas%C4%B1%20sonu%C3%A7lar%C4%B1na%20g%C3%B6re.v%C4%B1l%C4%B1nda%20%31%2C0%20oldu. https://www.invest.gov.tr/en/library/publications/lists/investpublications/the-state-of-turkish-startup-ecosystem.pdf https://www.tubisad.org.tr/tr/images/pdf/tubisad-ICT-2022-tr-120523.pdf https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220505-1 https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT specialists in employment https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030 en https://www.ab.gov.tr/2021-2027-donemi 53079.html https://rea.ec.europa.eu/news/common-mistakes-avoid-when-applying-horizon-europe-funding-2023-02-09 en https://www.tcmb.gov.tr/wps/wcm/connect/TR/TCMB+TR/Main+Menu/Istatistikler/Reel+Sektor+Istatistikleri/Sektor+Bilancolari/Sektor+Bilanco+Verileri/ https://www.tuik.gov.tr/media/announcements/istatistiklerle\_turkive\_2021.pdf https://www.invest.gov.tr/en/library/publications/lists/investpublications/ict-industry.pdf https://www.btk.gov.tr/arastirma-raporlari

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