The Ministry of Foreign Affairs of the Republic of Türkiye
Directorate General for Science and Technology Policies
TPGM

INVEST IN TECH IN TÜRKİYE

HANDBOOK

"Nexus of the World"
The Global Hub for Digital Transformation, Innovation, and Scalability

2025

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INTRODUCTION

The Directorate General for Science and Technology Policies of the Ministry of Foreign Affairs of the Republic of Türkiye **(TPGM)** is responsible for advancing Türkiye's international engagement in the fields of science, technology, innovation and space. Within the framework of Türkiye's foreign policy objectives, TPGM works to strengthen bilateral and multilateral cooperation in these strategic areas and to ensure effective representation of Türkiye in the relevant international platforms.

TPGM works closely with the relevant Turkish institutions, such as; Presidency of Cyber Security, Ministry of Technology and Industry, Ministry of Infrastructure and Transportation, The Scientific and Technological Research Council of Türkiye (TÜBİTAK), and academia, research centers, civil society and private sector.

TPGM takes active role in shaping and formulating the science and technology diplomacy of Türkiye. The core responsibilities of TPGM are as follows:

• Facilitating collaboration between Turkish institutions and international partners in the fields of science, technology, innovation and space;

• Coordinating bilateral and multilateral engagements in science, technology, innovation and space-related matters and agreements of cooperation;

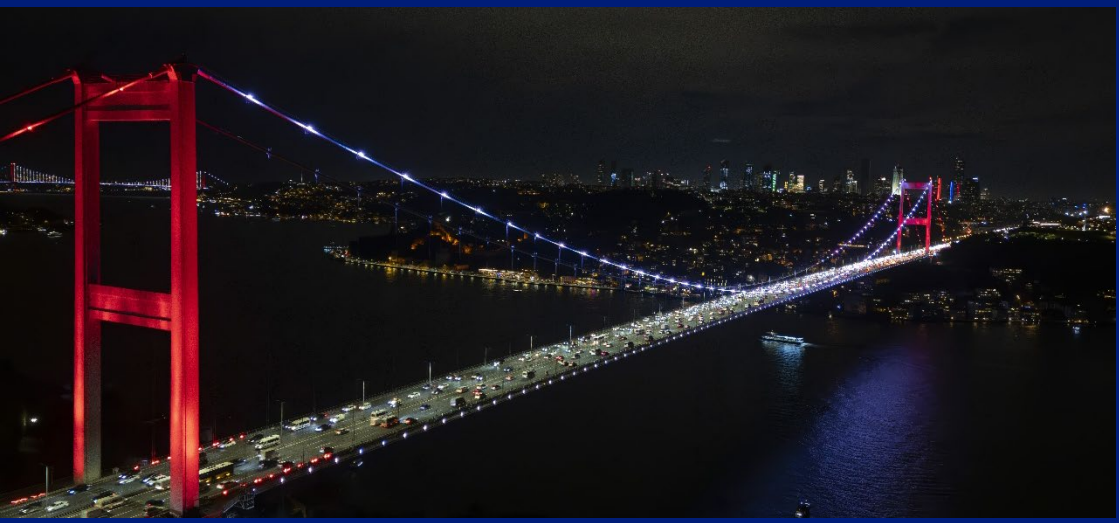
• Drafting policy papers and contributing to policy-making process on emerging technologies, including artificial intelligence, 5G, big data, digital transformation, cybersecurity, space technologies, biotechnology and neurotechnology;

• Monitoring global developments, trends, and regulatory efforts in the fields of science, technology, innovation and outer space, and providing analyses on these matters;

• Advocating for Türkiye's priorities at the multilateral proceeses on science, technology, and space related subjects.

In a nutshell, **TPGM** aims to advance Türkiye's strategic positioning in the global science, technology, and space ecosystem based on mutual interest, responsible and ethical global governance.

PART I:
EXECUTIVE VISION



PART I: EXECUTIVE VISION

1. Executive Summary: Why Türkiye, Why Now?

"Türkiye is ready to be your partner in the digital century."

We invite foreign investors to examine Türkiye not merely as a bridge between East and West, but as a digital **"Nexus"**—a central node where technology is created, scaled, and exported to the world. Over the last two decades, Türkiye has transformed its economy from an agriculture-and-textile base to a high-tech manufacturing and software powerhouse.

Geographic Advantage

At the crossroads of Europe and Asia, Türkiye's geography offers excellent access to global trade routes by air, land and sea. Türkiye's national **flag carrier** Turkish Airlines flies to the most countries in the world, making access diverse and easy. Türkiye is a peninsula, almost three quarters surrounded by water, making maritime transportation convenient in most major cities.

Labor Market

Türkiye's population is a dynamic and highly lucrative resource. As of 2024, Türkiye had more than 85 million people with a median age of 34.4. In contrast to Europe, Türkiye has a young and growing population. The labor market is also considered to be highly competitive. OECD data show that nearly 45% of Türkiye's population aged 25-34 holds tertiary education qualifications, reflecting a comparatively strong and increasingly skilled labor force. With such an advantageous geographical position and the availability of a young and highly skilled workforce, many investors choose to have their regional head offices or manufacturing.

Economic Power

Türkiye's economy has performed remarkably well with its steady growth over the past decades. A sound macroeconomic strategy, prudent fiscal policies, and major structural reforms have all contributed to the integration of Türkiye's economy into the globalized world while also transforming the country into one of the major recipients of Foreign Direct Investments (FDI) in its region. As of 2025, Türkiye is ranked around 17th in the world by nominal GDP. According to PwC's "The World in 2050" report, Türkiye could become roughly the 11th largest economy in the world in 2050, with a GDP of around 5 trillion USD (in 2016 constant-PPP terms).

A Rising Start-up Ecosystem

Türkiye stands out as a destination offering unique opportunities for entrepreneurs. Its advanced tech ecosystem, strong culture of collaboration, and innovative entrepreneurial environment make Türkiye an attractive destination for talents and start-ups. The educated and dynamic workforce provides the opportunity for enterprises to employ qualified talent at competitive wages, while collaborations with universities and research centers facilitate access to the knowledge needed by startups.

Additionally, Türkiye's large domestic market enables start-ups to scale quickly. With the support and incentives provided, entrepreneurs can easily establish and grow their businesses. These supports reduce costs and mitigate risks for investors and entrepreneurs. Moreover, Türkiye's strategic geographic location provides entrepreneurs with access to European, Asian, and Middle Eastern markets, offering global growth opportunities.

With its high quality of life, advanced healthcare services, rich cultural heritage, and tourism opportunities, Türkiye stands out as

an ideal place not only for business but also for living. Türkiye's passion for technological innovation and its globally integrated economic structure create a unique environment for entrepreneurs, making it a key player in the global entrepreneurship ecosystem.

Türkiye hosts global events to foster start-up ecosystem worldwide.

1. **TEKNOFEST** Aerospace and Technology Festival is the world's largest aerospace and technology festival, playing a critical role in the development of national technology in Türkiye and organized in partnership with numerous institutions.

   TEKNOFEST, the first of which was held in 2018, aims to increase the interest in technology in society and to raise awareness about Türkiye's transformation into a society that produces and develops technology. Within the scope of TEKNOFEST, technology competitions in various disciplines and categories are organized for hundreds of thousands of young people to realize their dreams.

2. **The Take Off Startup Summit** is the largest international startup and innovation gathering in Türkiye and the wider region.

   Organized under the leadership of our Ministry and the Investment Office of the Presidency of Türkiye, and the Turkish Technology Team Foundation (T3 Foundation), the Summit operates as a non-profit initiative fostering global collaboration in entrepreneurship, technology, and innovation.

Since its inception, Take Off has established itself as a premier platform for startups, investors, corporations, and policy-makers. With participants from over 45 countries, the summit has hosted 935 startups, 550 investors, 150 companies, and nearly 200 global speakers, attracting more than 30,000 visitors to date.

Since 2012, **TÜBİTAK's Entrepreneurship Support Program (BiGG)** has supported entrepreneurs in transforming technology and innovation-driven business ideas into high-value commercial products and services through the R&D-capable firms they establish—offering support from idea stage to market entry. Over the years, **the BiGG Program** has become a well-known initiative within the entrepreneurship ecosystem.

It seeks to promote entrepreneurship and support the creation of startups capable of developing innovative, high-tech products and services with strong international competitiveness. Entrepreneurs submit their business ideas to **BiGG Implementing Organizations (BiGG IO)**, which help them develop business plans through dedicated training.

In Türkiye, 149 BiGG Implementing Organizations are operating under 37 consortia, managing acceleration processes for aspiring entrepreneurs. Since 2012, **a total of 48,666 business idea applications have been submitted under 19 BiGG and BiGG Investment calls**, with **22,111 entrepreneurs benefiting from BiGG acceleration programs**. As a result, **2,378 technology startups have been established**, and approximately **TRY 2.5 billion** in support has been provided.

A structural change was made in 2023, transitioning the program from grant-based support to an investment based mechanism.

The BiGG Investment Program was launched, and the **TÜBİTAK BiGG Fund** was established. Under BiGG Investment Calls, a total of 404 startups have been selected for investment, with a budget allocation of approximately TRY 385 million.

In the first nine months of 2024, the TÜBİTAK BiGG Fund accounted for 228 out of the 388 total venture capital investments made in Türkiye, representing 59% of all deals and 92% of pre-seed stage investments.

"Thanks to the TÜBİTAK BiGG Program, Türkiye has become the leading country in Europe in terms of the number of pre-seed investments."

This new investment mechanism demonstrates how effectively public resources can be leveraged to support the entrepreneurship ecosystem.

Talking Points:

- **Proven Scalability:** Türkiye has transitioned from an "early-stage" market to a "scale-up" economy. Since 2020, the ecosystem has produced **7 Turcorns** (Unicorns), including *Peak Games, Dream Games, Insider,* and *Trendyol*, proving that Turkish startups can dominate global verticals.
- **State Commitment:** The **HIT-30 Program**, offering **$30 billion** in incentives for high-tech investments, signals an unprecedented government commitment to de-risking foreign technology investments.
- **Strong R&D:** Türkiye's R&D expenditures rose from $16 billion in 2024 to $20 billion in 2025.
- **Resilient Growth:** Despite global headwinds, the Turkish economy grew by an average of **5.3%** annually between 2002 and 2024, tripling its GDP to over **$1.5 trillion**.

- **Demographic Dividend:** With a median age of **34.4**, Türkiye offers a digital-native workforce and consumer base that is significantly younger than the EU average, driving rapid adoption of fintech, gaming, and e-commerce.

2. The "Nexus" Strategy: Macroeconomic Resilience & Logistics

A. Global Connectivity as a Force Multiplier:

Turkish Airlines, flying to 340+ destinations in 129 countries, turns Istanbul into a strategic management hub. Investors can manage operations in Europe, MENA, and Central Asia from a single HQ in Istanbul, accessing a $26 trillion market within a 4-hour flight radius.

Economic Depth:

- **Export Powerhouse:** Türkiye exports nearly **$3 Billion** in software annually.
- **FDI Magnet:** The country attracted **$273 Billion** in Foreign Direct Investment (FDI) from 2003 to 2024, demonstrating long-term investor confidence.

B. Türkiye as a Bridge

Türkiye believes that strengthened international cooperation with the contribution of all relevant stakeholders (including private sector) is essential for building an inclusive, open, sustainable fair, safe and secure digital future for all.

We are aware that the digital divides/gaps between the countries pose many challenges, in particular to the developing countries

(which have pressing development needs and limited resources) and to their participation in the global technology market.

In this vein, **the UN Technology Bank** in Gebze plays a crucial role in fostering sustainable development and bringing the technological/digital divide between the least developed countries and the rest of the world to ensure that no one is left behind.

The Bank serves as “a focal point for the least developed countries to strengthen their science, technology and innovation capacity towards building sustainable productive capacities and promoting structural economic transformation”.

UN Technology Bank ensures that the support provided through the transfer of technology is tailored to specific areas or sectors where technological solutions will result in meaningful impact.

Technology transfer is not, by itself, sufficient for inducing technological development. Thus, central to the support provided by the UN Technology Bank is a capacity-building component designed to ensure local technological learning.

Taking the Bank’s vital role into account, it is critical that adequate support and predictable funding be made available by the Member States for the UN Technology Bank.

PART II:

THE ENGINES OF INNOVATION: TECHNOPARKS (TDZs), R&D AND DESIGN CENTERS

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Türkiye has been making strategic investments to become a global hub for advanced manufacturing and technology-based industries.

With over 360 organized industrial zones (OIZs), 113 technology development zones (TDZs/technoparks), and specialized free zones, we offer a wide range of tailored ecosystems for investors.

A. R&D and Design Centers

To support innovation-led growth, we also back over 1,361 R&D centers and 343 design centers across Türkiye through diverse mechanisms such as tax incentives, grants, and financing schemes.

Türkiye's total R&D workforce: 311,000 qualified personnel (mostly engineers and software developers, including R&D and Design Centers).

Our R&D expenditures rose from $16 billion to $20 billion in one year.

B. Technoparks (TDZs)

Cooperation Model: "model zones" or "sister industrial parks"

Establishing bilateral "model zones" or "sister industrial parks" can be an effective way to promote investment cooperation and knowledge exchange.

For technology investors, **Technoparks (Technology Development Zones - TDZs)** represent the most efficient, tax-advantaged, and intellectually rich environments for establishing operations.

Thematic TDZs:

Space Technopark

To support technology development efforts in this field, a space technologies-focused technopark will be established, with the aim of providing the necessary infrastructure, cultivating a highly qualified workforce, and fostering a collaborative environment. A significant portion of the technology development activities required in line with Türkiye's national space policies will be carried out in this technopark. Located in Ankara, this technopark is expected to contribute to Türkiye securing a larger share of the global space economy through the innovative technologies to be developed within its premises.

Nuclear Technopark

To consolidate the R&D and innovation ecosystem in key areas such as nuclear sciences, radiation technologies, and materials research, a Nuclear Technopark will be established. The technopark will coordinate the infrastructure and human resources of relevant public institutions, particularly TÜBİTAK and Turkish Energy, Nuclear and Mineral Research Agency (TENMAK), and support academic staff at universities as well as private sector initiatives. With its longstanding background in nuclear energy, Istanbul Technical University is expected to assume academic leadership at the Nuclear Technopark.

The technopark is intended to expand Türkiye's nuclear technology capabilities, strengthen university-industry

collaboration, and serve as a hub for advanced R&D. It will also promote the development of innovative projects in nuclear sciences and associated engineering fields.

1. Overview: The Backbone of Turkish R&D

Technoparks are special zones defined by Law No. 4691, designed to cluster academic knowledge and private sector agility.

Key Statistics:

- **Number of Technoparks: 113**
- **Tenant Companies:** Over **12,000** domestic and international technology firms.
- **Economic Impact:** Total technology exports from these zones have exceeded **$10 billion in last 12 months**.

2. Financial & Operational Advantages: A Deep Dive into Incentives

Investors establishing a presence within a Technopark benefit from a "Tax Shield" that significantly lowers operating expenses and increases return on investment.

A. Corporate Tax Exemption (100%)

- **Benefit:** Profits derived from software development, R&D, and design activities are **100% exempt from Corporate Income Tax** until **2028** (with extensions planned).
- **Impact:** This increases net profitability by approximately **25%** compared to operating outside the zone.

B. Income Tax Withholding Exemption for Personnel

- **Benefit:** Salaries of R&D, design, and support personnel are largely exempt from income tax.
  - PhD holders: **95% exemption**.
  - Master's degree holders: **90% exemption**.
  - Bachelor's degree holders: **80% exemption**.
- **Impact:** This allows companies to offer higher net salaries to attract top talent without increasing the gross employer cost.

C. SGK (Social Security) Premium Support

- **Benefit:** The state covers **50% of the employer's share** of social security premiums for R&D personnel.
- **Impact:** Drastic reduction in monthly payroll burdens.

D. VAT Exemption on Software Sales

- **Benefit:** Sales of system management, data management, business applications, and gaming software produced in the zone are **exempt from VAT (Value Added Tax)**.
- **Impact:** Competitive pricing advantage in the domestic market.

E. Customs Duty Exemption

- **Benefit:** Goods, machinery, and software imported for use in R&D projects are exempt from Customs Duty and related levies.

F. Remote Work Flexibility

- **Strategic Advantage:** A recent amendment allows R&D personnel to work remotely (outside the Technopark) up to **100% of the time** (depending on the specific sub-sector and IT designation) while the company *still retains* the tax exemptions. This aligns perfectly with modern hybrid work cultures.

3. Success Stories & Profiles:

A. Where to Invest?

Case 1: ODTÜ TEKNOKENT (Ankara) - *The Deep-Tech & Defense Hub*

- **Focus:** Defense industry, E-Gaming, Aerospace.
- **Flagship:** The **ATOM (Animation Technologies and Game Development Center)** is Türkiye's premier pre-incubation center for gaming.
- **Track Record:** It has created over **50 gaming studios** and is deeply integrated with Türkiye's top engineering university (Middle East Technical University). It is the ideal entry point for investors looking for early-stage "deep-tech" startups.

Case 2: BİLİŞİM VADİSİ (IT Valley - Kocaeli/Istanbul) - *The Mobility Corridor*

- **Focus:** Mobility, Automotive software, Battery tech, Smart Cities.
- **Anchor Tenant: TOGG** (Türkiye's electric car initiative) is headquartered here.

- **Opportunity:** Investors in autonomous driving, EV infrastructure, and smart mobility will find a complete supply chain ecosystem here. It also hosts **Digiage**, a massive game development camp.

Case 3: YTU YILDIZ TECHNOPARK (Istanbul) - *The Scale-Up Hub*

- **Focus:** Fintech, Insurtech, Sustainability, SaaS.
- **Highlight: GamesUP** cluster. It hosts over **230 gaming companies** with a combined valuation exceeding **$1.2 Billion**. It is located in the heart of Istanbul's business district, offering easy access to financial institutions.

PART III:
SUCCESS STORIES OF GLOBAL TECH COMPANIES

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The National Technology Initiative promotes national resilience without excluding global alliances, international partnerships or foreign investments. Its focus on strategic autonomy does not equate to economic isolation.

Türkiye's highly skilled workforce and unique regional position give it a strategic advantage over neighboring countries. Its geographic location, combined with major infrastructure investments made over the past 22 years, has significantly expanded export potential and improved access to global markets.

The country's robust industrial infrastructure and supply networks offer strong potential to attract international brands. By harnessing this potential through investment-friendly policies and expanding opportunities for international collaboration, Türkiye aims to drive economic growth and bolster its technological sovereignty.

"Investments by multinational technology companies in Türkiye are increasing."

- Uber announced a $200 million investment to establish a technology center in Türkiye.
- Turkcell has signed a strategic partnership agreement with Google Cloud to set up a new cloud center in Türkiye. Within the scope of the project, Turkcell plans to invest 1 billion Dollars, while Google Cloud is expected to contribute an investment of 2 billion Dollars.
- Yandex declared its intention to invest approximately $400 million over the next three years to expand its operations in Türkiye and localise key technology products for the domestic market.

- Vodafone, in cooperation with DAMAC (Emirati company), confirmed plans to establish a $100 million data center in İzmir, strengthening Türkiye's digital infrastructure and regional connectivity capacity.
- GE Aerospace opened a $31.2 million Technology Center in Istanbul, where more than 440 engineers and researchers contribute to advanced aviation technologies.
- DHL Express Türkiye launched a dedicated R&D center focusing on artificial intelligence, machine learning, cloud computing, and optimisation technologies, further integrating global innovation capabilities into Türkiye's logistics ecosystem.
- Analog Devices, together with Procal Technologies, inaugurated a new R&D office in Istanbul to support semiconductor design, advanced electronics, and high-value technological development.
- EdgeConneX announced plans to establish a new data center facility in Türkiye, marking an expansion of multinational cloud and edge-computing investments in the country.
- Inviox Studios unveiled a $10.1 million studio investment in Istanbul, supporting next-generation digital media production and creative technologies.
- Kazakhstan-based Kaspi.kz signed an agreement to acquire 65.4% of Hepsiburada, in a transaction valued at $1.1 billion, representing one of the largest cross-border investments in Türkiye's digital economy.
- Colendi secured $65 million in Series B financing, with participation from international investors including Citigroup Ventures, reflecting growing global interest in Türkiye's fintech sector.
- The European Bank for Reconstruction and Development (EBRD) and Truffle Capital made strategic investments in DGPays, enhancing the internationalisation and competitiveness of Türkiye's payments technologies.

- Kaspersky Lab opened a $5.5 million Transparency Center in Istanbul, strengthening cybersecurity cooperation and trust frameworks with global partners.
- Deloitte established a new global technology hub in Türkiye, integrating Türkiye into the firm's international digital innovation network and expanding high-skill employment opportunities.

1. Global Tech Companies in Türkiye

Türkiye today hosts the operations of virtually all globally prominent technology companies, stretching from East to West. Leading U.S. firms such as Google, Microsoft, Amazon, Meta and Apple maintain active commercial, cloud, and R&D engagements. Major European players including Vodafone, Ericsson, Siemens and SAP likewise operate extensive networks, innovation centers and digital services for the Turkish market. From Asia, global leaders such as Samsung, Huawei, Alibaba and Tencent have established strong footprints through investments, logistics hubs, e-commerce partnerships and advanced technology services. In parallel, Gulf-based technology and investment companies – including entities from the UAE, Qatar and Saudi Arabia– are increasingly deepening their presence through digital infrastructure projects, fintech collaborations and strategic venture investments. The presence of these major actors underscores Türkiye's position as a strategic bridge in the global technology landscape and its growing appeal as a regional center for innovation, talent and digital transformation.

Below is an overview of how some of these leading global technology companies operate in Türkiye, including their local offices, R&D activities, digital services, cloud infrastructure and partnerships with Turkish institutions.

A. Cisco

Founded in 1984, Cisco Systems, Inc. is an American multinational technology conglomerate that develops, manufactures and sells networking hardware, telecommunications equipment and other high-technology services and products. The largest networking company in the world, Cisco's FY'19 Revenue is USD 51.9 billion with an employee count of 77,500 globally.

Cisco has been present in Türkiye for years and has invested in various areas, one of which is training programs in the tech industry through the Cisco Networking Academy Program. Trainings have been provided through this program since early 2000s.

In 2018, Cisco opened an innovation center in Istanbul, Türkiye in a bit to develop solutions for the digital era.

In November 2025, Cisco opened a Cyber Security Laboratory in Middle East Technical University (METU). Cisco's advanced technologies meeting with METU's academic vision, the new Cybersecurity Laboratory has begun operating as a comprehensive workspace addressing needs ranging from education to research and hands-on scenarios.

B. IBM

American multinational information technology company that not only provides hosting and consulting services from computers to nanotechnology, but also manufactures and markets computer hardware, middleware and software. IBM has been operating in Türkiye since the 1930s, and since then has participated in various projects. Projects have included working together with Turkish local bodies, both governmental and NGO, to strengthen the governance practices of community organizations who are

implementing a range of local initiatives that promote economic development and growth.

C. Ericsson

Ericsson, a world leader in communications technology and service, works in 180 countries and employs more than 111,000 experts in line with its vision of “the Networked Society". Ericsson's services, software, and infrastructure – particularly in mobility, broadband, and the cloud – enable the telecoms industry and other sectors to conduct better business, increase efficiency, improve user experience, and capture new opportunities.

Ericsson Türkiye’s R&D team, consisting of more than 550 R&D and technical support employees based in its İstanbul, İzmir and Ankara locations, provides services through innovative activities in various fields of information and telecoms technologies. In those centers, more than 140 R&D projects, 20 of which are supported by TÜBİTAK, are being implemented. Ericsson Türkiye participates in many international R&D projects together with SMEs and universities in Türkiye. Ericsson Research is a global organization that develops new patentable technologies and system concepts, which drive the standardization of future mobile systems, innovating and re-shaping the industry 5-10 years ahead. Ericsson Research has operations in eleven countries including Türkiye.

D. SAP

SAP SE is a German-based European multinational software corporation that makes enterprise software to manage enterprise resources, business operations and customer relations. Founded in 1972, SAP currently has operations in over 180 countries and has labs in only 20 countries, one of which is in Türkiye.

Within this context, a significant portion of the SAP Data Hub solution, which includes artificial intelligence and machine learning applications, is developed by Turkish engineers at the SAP Development Center and exported to the whole world. SAP SE sees Türkiye as the "main hub" for digital transformation and Turkish engineers carry out "mega" projects in Turkic republics, Russia, Africa, the Middle East and Europe.

E. Huawei

Chinese multinational networking, telecommunications equipment, and services company. Founded in 1987, Huawei is currently the largest telecommunications equipment manufacturer in the world, as well as the second largest smartphone manufacturer in the world. Huawei began its operations in Türkiye in 2002. Currently, in its Türkiye office, Huawei has over 1,500 employees, an R&D center which is second-largest R&D center outside of China, training center, and a customers solutions and integration experience center.

F. Alibaba

Alibaba Group is the world’s largest online and mobile commerce company. Alibaba describes its mission as to make it easy to do business anywhere. In 2018, Alibaba group acquired the major shares of Türkiye’s leading e-commerce platform Trendyol which is serving over 16 million customers. It is also the fastest growing e-commerce company in the region with over 90 million monthly visits. Trendyol is the largest internet employer in Türkiye with a team over 2300 people. Trendyol has an R&D center with an ever-growing R&D team that focuses on NLP, real-time data analysis, machine and deep learning, data visualization and big data.

G. Microsoft

American multinational technology company that develops, manufactures, licenses, supports and sells computer software, consumer electronics, personal computers and related services. Founded in 1975, in 2020, Microsoft reported revenue was 143 billion dollars with over 144,000 employees. Microsoft Türkiye is used as a managing center for the Middle East and Africa regions, composed of 79 countries. Microsoft acquired Citus Data Inc., a Software Development company that was founded in Türkiye and then expanded internationally. Upon acquisition, Microsoft continued investing Citus's team in Türkiye and expanded their responsibility by giving them additional products to develop that are core to Microsoft's Azure Data platform.

H. Nokia

As a B2B technology innovation leader, Nokia pioneering networks that sense, think and act by leveraging work across mobile, fixed and cloud networks. In addition, Nokia create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs. Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today and to create the digital services and applications of the future. Nokia operates in Türkiye for several decades and adheres to a long-term integration strategy aiming development of innovative technologies, creation of digital economy and a digital society.

Nokia has a partnership agreement with Karel, Turkish electronic manufacturer, to produce 4.5G and 5G base stations in Türkiye. Local manufacturing of Nokia base stations started and ongoing since May 2022. Jointly with Turk Telekom and Arçelik Nokia runs

5G@EndTech program to stimulate development of the local 5G use-cases for industries.

Nokia has a strategic partnership agreement with MEXT Technology Center, to collaborate in the context of digitalization of the industrial manufacturing sector in Türkiye with Nokia 5G infrastructure.

İ. ZTE

ZTE, Chinese multinational ICT solutions vendor acquired nearly half of Turkish Netaş's shares in 2017. This is considered one of the biggest transactions in technology development investments in Türkiye. With this investment, Netaş achieved 170% growth in telecommunications technologies. Localization efforts, conceived in 2019 with FTTx systems, endure with many other products of ZTE. The goal here is to undertake local production of ZTE staples by way of transferring the know-how to Türkiye. Another joint step in this direction was for the IPTV technologies. Netaş started building ZTE`s new generation IPTV platform in Türkiye.

2. Venture Capital Investments

Between 2019 and 2024, Türkiye attracted approximately USD 5.4 billion in venture capital investments. **In 2024 alone, 469 deals accounted for a total of USD 1.1 billion in investments.**

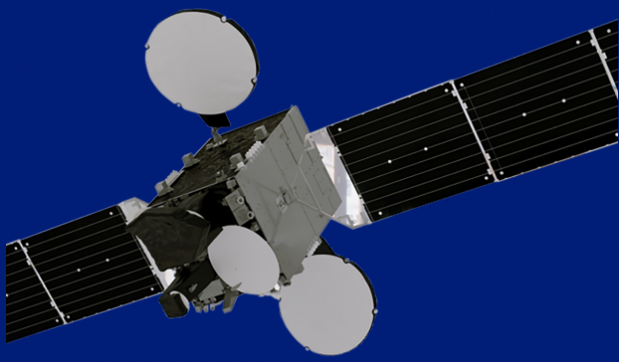
In terms of deal volume, the most active sectors were artificial intelligence, biotechnology and health technologies, while SaaS (Software as a Service), artificial intelligence, and grocery delivery ranked highest in terms of investment size. Since 2022, the number of Venture Capital Investment Funds (VCIFs) has rapidly increased to 455.

The **TÜBİTAK BiGG Fund**, which had 27 AI-focused investments in 2024, was the most active fund in this field during the period. Through the Technology and Innovation Fund (TIF), investments were made in 12 technology-focused startups at a certain level of maturity and in three additional funds.

With the **GO Entrepreneurship Office** initiative, pre-incubation and incubation-stage startups will benefit not only from physical space but also from customized consultancy services tailored to their specific needs.

Young entrepreneurs will gain one-stop access to investment opportunities and acceleration programs through these offices. Alongside fast-growing sectors such as gaming and fintech, Türkiye aims to make a leap forward in high-investment areas like healthcare and artificial intelligence, while ensuring that investments in the entrepreneurial ecosystem are sustained and continuously expanded. To take regional dynamics into account in investment decisions, the Regional Development Fund (BKF) has been established and it will continue to support entrepreneurs through this channel.

PART IV:
STRATEGIC INVESTMENT PROGRAMS



PART IV: STRATEGIC INVESTMENT PROGRAMS

In response to these complex dynamics, **Türkiye's National Technology Initiative** serves as the nation's guiding star. This ambitious agenda is designed to forge a path toward technological self-sufficiency, scale frontier innovation, and translate scientific advancements into broadly shared prosperity. It represents a strategic pivot toward a high-tech, innovation-driven economy, built upon a robust and rapidly expanding technology ecosystem.

Within the framework of **the National Technology Initiative** vision, the “2023 Industry and Technology Strategy”, published by the Ministry of Industry and Technology in 2019, implemented comprehensive and multidimensional industry and technology policies aligned with Türkiye’s 2023 goals.

The implementation period of the 2023 Strategy saw significant achievements: **Togg** delivered its first vehicle; **the Technology Focused Industrial Move Program** was launched; **the National Space Program** was published, and Türkiye’s first crewed space mission was planned. **Teknofest Aviation, Space and Technology Festivals** were held, and new institutions such as the **Türkiye Open Source Platform**, the **Artificial Intelligence Institute**, and **the Rail Transportation Technologies Institute** were established.

*[During this period, manufacturing industry exports exceeded **USD 240 billion**, and notable increases were recorded in both R&D personnel and the number of researchers.]*

Launched in 2019, **the Technology Focused Industrial Move Program** ensures that industrial inputs are equipped with domestic and national capabilities and supports R&D initiatives in technologies that will shape Türkiye’s future in strategic focus

areas. Combining investment incentives with support from TÜBİTAK and KOSGEB under a single mechanism, the program aims to produce medium-high and high-tech products using domestic capabilities.

The Move Program supports innovative and competitive investments through calls issued in product and technology areas selected according to current needs and technological developments. These investments are closely monitored until completion, benefit from tailored financial support, and undergo impact analysis.

To accelerate Türkiye's technology-driven development, the program will issue theme-based calls at regular intervals.
To date, the program has issued calls in areas such as machinery, mobility, structural transformation in production, healthcare and chemical products, and digital transformation.

Most recently, a new call titled **"Emerging Innovative Technologies"** was introduced to support critical investments in future technologies. This call seeks to realize major investment projects that will strengthen local production capacity for strategic products. The program represents a strategic initiative designed to transform industry and position Türkiye as a global production hub.

Two flagship examples embody the success and future direction of the **National Technology Initiative.** First, the **defense industry** is a paradigm of strategic transformation. Driven by the necessity to safeguard its sovereignty, Türkiye undertook long-term investments in R&D and human capital, transitioning from a technology importer to a nation capable of designing and manufacturing its own sophisticated platforms, including UAV systems, helicopters, naval vessels, and satellites. This success serves as a blueprint for other strategic sectors.

Second, Togg, Türkiye's **domestically produced electric and smart vehicle**, is the "signal flare" for the transformation of the nation's leading export sector, the automotive industry. **With over 80,000 units already delivered**, Togg is more than just a car; it is a catalyst for an entire mobility ecosystem, accelerating the growth of startups in related fields. This illustrates a core tenet of Türkiye's strategy: leveraging pioneering brands to drive systemic change. With its robust automotive industry, Türkiye is poised to lead the transformation in the mobility sector.

*[Türkiye currently hosts production by 13 brands, including **8 global manufacturers**, and has seen its annual passenger car output rise from around 200,000 to 1.365 million over the past 22 years. Backed by such production capacity and experience, Türkiye stands on strong footing. Investments by international manufacturers such as Ford, Renault, Toyota, Hyundai, and Mercedes-Benz, along with the emergence of domestic brands like Togg, continue to diversify and expand Türkiye's capabilities in the automotive sector.]*

The Ministry of Industry and Technology and its affiliated institutions are working to position Türkiye as a global hub for electric, connected, and autonomous vehicle technologies. Through the Technology-Focused Industrial Move Program, 38 investment projects—worth over TRY 32 billion—are being supported in the mobility sector.

This strategy is supported by a suite of policies that have enabled Türkiye's startup scene to mature significantly. **Annual venture capital investment has skyrocketed from an average of $66 million to $1 billion over the past five years. The total venture capital investments in last five years has exceeded $5.5 billion.** Consequently, Türkiye is now home to **seven unicorns**, or **"Turcorns,"** a dramatic increase from zero before 2019. To sustain this momentum, targeted initiatives have been launched,

such as the **"Turcorn 100 Program"** to help top startups scale globally, the **"Terminal İstanbul"** project to convert Atatürk Airport into the world's largest startup hub, and the **"Türkiye Tech Visa Program"** to attract global talent.

Developed by repurposing the terminal buildings of Atatürk Airport, **Terminal İstanbul** will become a true meeting point for students, entrepreneurs, investors, universities, and major technology companies. With its diverse set of functions, including incubators, accelerator programs, R&D laboratories, testing centers, Deneyap workshops, coding schools, a science center, a children's university, and shared working spaces, the project will offer robust support to the entrepreneurship ecosystem.

GO Entrepreneurship Offices are being established to enable young people to commercialize innovative and sustainable business ideas by combining them with scientific research and advanced R&D projects in a rapidly evolving technological landscape.

These offices not only provide entrepreneurs with technological infrastructure, mentorship, and consultancy services but also offer extensive support in key areas such as strategic business model development, access to financial resources, marketing strategies, and global expansion. Through these offices, young entrepreneurs will become integral stakeholders in the entrepreneurship ecosystem and gain the opportunity to commercialize their ideas both locally and internationally.

Through initiatives such as Terminal İstanbul, GO Entrepreneurship Offices, venture capital funds, and similar instruments, Türkiye aims to position itself as a global hub for technology entrepreneurship.

Looking ahead, Türkiye's ambition is to become a leader in next-generation technologies, including artificial intelligence, quantum computing, semiconductors, and nuclear energy. This will be underpinned by massive investments in digital infrastructure, including a plan to expand data center capacity to **1 gigawatt by 2030**, **attracting over $10 billion** in investment.

Through programs like the **Investment Commitment Advance Loan (YTAK)** and the **Local Development Move**, we offer favorable financing and grant-based incentives to promote strategic investments in high technology, digital and green transitions (twin transformation), and supply security.

Operated through intermediary banks, **the Investment Commitment Advance Loan (YTAK) program** was introduced by the Central Bank of the Republic of Türkiye (CBRT) in 2023 to finance investment projects with strategic or technological value. Eligible projects must involve a minimum investment of ₺1 billion and are evaluated based on technology and strategy criteria.

The scheme offers loans with maturities of up to 10 years, including a two-year grace period. In its initial phase, the CBRT allocated ₺300 billion over three years, with an annual ceiling of ₺100 billion.

The Local Development Move introduces a new vision and dimension to regional development, emerging as a key tool to prevent the over-concentration of industrial investment in specific areas and to ensure more equitable distribution of prosperity nationwide.

Under this initiative, each province will identify a limited number of high-impact investment areas capable of accelerating provincial development. These will be supported through periodic calls. Special support mechanisms will also be introduced, under the

coordination of the Ministry of Industry and Technology and through development agencies and regional development administrations, to encourage industrial investment in high-potential regions. With the active involvement of development agencies operating in 26 regions and investment support offices established in 81 provinces, these investment themes will be updated annually, ensuring the creation of a dynamic and sustainable framework for local development.

1. HIT-30: High-Tech Türkiye Investment Program

"The 30 Billion Dollar Commitment"

Announced in 2024, **HIT-30** is Türkiye's most ambitious incentive package to date, specifically targeting high-technology investments that reduce import dependency.

A. Calls

(Applications can also be submitted for high-tech topics within the scope of HIT-30, even if there is no announced call.)

HIT-Electric Vehicles
Türkiye is the 3rd largest automobile manufacturer in Europe and the 12th largest in the world. In commercial vehicle production, it is the leader in Europe. With the HIT-Mobility call, it is aimed to increase Türkiye’s strength in the automotive industry in the field of electric vehicle production. With a total support budget of $5 billion, the goal is to reach an annual production capacity of 1 million electric vehicles.

Within the scope of the call, new investments will be supported, including the establishment of R&D centers with a high local

contribution rate, providing an annual production capacity of at least 150,000 electric vehicles.

HIT-Battery
Energy storage systems play a critical role in achieving the net-zero emission target. With the HIT-Battery call, it is aimed to bring Türkiye's production capacity in this field to a level that meets domestic demand and particularly leverages export potential towards the European market. With a total support budget of $4.5 billion, the goal is to establish a production capacity of 80GWh, focusing on local contribution and including R&D center investments.

Within the scope of the call, investments in battery and active material production facilities starting from the cell-level with a minimum annual capacity of 5GWh will be supported.

HIT-Chip
Semiconductors are a critical input for industries where Türkiye has strong production capacity, such as defense, automotive, and white goods. With the HIT-Chip call, it is aimed to increase Türkiye's semiconductor production capacity to enhance technological independence and industrial competitiveness in strategic areas. With a total support budget of $5 billion, the goal is to establish a major production capacity at 65nm or more advanced technology.

Within the scope of the call, investments covering elements of the chip value chain such as ingot, wafer, testing, and packaging will also be supported.

HIT-R&D
Türkiye has a rapidly developing ecosystem with approximately $12 billion in R&D expenditures and 273,000 R&D personnel. With the HIT-R&D call, it is aimed to enhance the capacity of the R&D

ecosystem through R&D centers to be established and pioneering R&D activities to be conducted by globally competent firms in Türkiye. The goal is to establish 10 globally scaled R&D centers in Türkiye, focusing on priority technology areas with a total grant support budget of $1 billion.

Within the scope of the call, R&D center investments of the top 1,000 companies listed in the EU Industrial R&D Investment Scoreboard that will provide employment for at least 250 R&D personnel will be supported.

HIT-Wind

Türkiye is the 5th largest supplier of wind energy production equipment in Europe. With the HIT-Wind call, it is aimed to increase the current production capacity with a focus on integrated OEM investments. The growth of a local OEM that can reach a competitive position in the global arena will be facilitated.

Within the scope of the call, with a total support budget of $1.7 billion, projects aimed at the production of new technologies, growing areas such as offshore turbines, and critical components of turbines will be supported.

HIT-Data Center

In the digital age, a country's global competitiveness depends not only on having data, but also on having strong infrastructures that can store and process this data securely, quickly, and efficiently. Today, advancements in artificial intelligence, big data, high-performance computing, and cloud services have made scalable, high-capacity, and technologically advanced data centers a strategic necessity.

To ensure that Türkiye can continue its digital transformation across all sectors—from public services to industry, finance, and healthcare—there is a need for:

- Establishing high-capacity and secure data centers,
- Expanding hardware and infrastructure that can support artificial intelligence workloads, and
- Building an ecosystem that prevents idle capacity in IT hardware investments and improves overall efficiency.

Through the HIT–Data Center Call, the goal is not only to meet Türkiye's growing data infrastructure needs in the short term, but also to build data center capacities that can support artificial intelligence and future digital technologies over the long term.

HIT-AI

Artificial intelligence has become a strategic element—alongside energy, technology, and capital—in shaping economic growth, public security, and national sovereignty. From big data and cloud services to the Internet of Things and quantum computing, nearly all advanced technologies require high-capacity and secure data processing infrastructures when combined with artificial intelligence.

For Türkiye to deepen its digital transformation sustainably across strategic sectors such as public administration, industry, healthcare, finance, defense, and academia, there is a need for:

- High-capacity and reliable computing infrastructures that can primarily support artificial intelligence workloads,
- Investments in servers, storage, and network systems optimized for AI training and inference, high-performance computing, and data-intensive applications, and
- The development and delivery of value-added AI services and cloud-based solutions that can operate on these infrastructures with high quality and performance.

Through this call, the goal is to develop next-generation cloud infrastructures in Türkiye that can support AI-focused workloads, and to ensure that AI and other cloud services running on these infrastructures reach a wide range of users—from startups to large industrial enterprises, from financial institutions to public organizations.

HIT-Quantum

Quantum technologies are opening the door to a new era that surpasses the computational power of classical computers. From chemistry and drug discovery to finance and materials science, quantum computing is becoming a strategic tool for addressing problems once considered unsolvable. Therefore, quantum infrastructures are not merely a technology investment, but a critical foundation for enhancing competitiveness in key industries, ensuring national security, and strengthening scientific independence.

For Türkiye to become a global player in the field of quantum technologies in the coming years, there is a need for:

- High-capacity infrastructures capable of providing quantum computing services,
- A scalable quantum hardware and software ecosystem accessible to research centers, universities, and the private sector, and
- Value-added solutions and skilled human resources to be developed and nurtured on these infrastructures.

Through this call, the aim is to strengthen Türkiye’s quantum ecosystem, enhance national research capacity, and position her as a regional leader in quantum technologies.

HIT-Industrial Robot
Industrial robots have become a strategic element for labor productivity, product quality, and global competitiveness. From automotive and white goods to defense, electronics, and metalworking, they have become core enablers of high-precision, high-throughput manufacturing systems.

Türkiye stands out as a compelling destination for industrial robot investments, supported by strong industrial base, young and dynamic workforce, strategic geographic position, and accelerating automation needs. Demand is on a steady upward trajectory: as of 2023, the installed base reached approximately 26,413 robots, representing a 15% increase relative to last year.

To deepen Türkiye's industrial digital transformation over the long term, the country requires:

- Domestically developed critical industrial robot components that will strengthen the ecosystem (such as servo motors, reducers, and servo drives),
- High-volume robot manufacturing infrastructure,
- R&D centers and skilled workforce capable of generating sustained value.

Through this call, the objective is to strengthen the domestic industrial robotics ecosystem, drive localization in critical components, and attract manufacturers that commit to minimum annual production capacity of 5,000 industrial robots.

(Ended Calls)

HIT-Solar
Türkiye ranks first in Europe and fourth in the world in terms of panel production capacity.

Investments aimed at the initial and highest value-added segments of the solar energy technology value chain have been made to enhance Türkiye's competitiveness and global position in this field.

With the HIT-Solar call, it has been aimed to improve the cell production capabilities of Türkiye's panel manufacturing industry.

A total support budget of 2.5 billion dollars has been allocated to establish a cell production capacity, including high domestic contribution and R&D center investments.

Within the scope of the call, investments focusing on cell production starting from the ingot stage, with a minimum annual production capacity of 5GW, have been supported.

B. Project-Based Investment Incentives

Corporate Tax Deduction:

One of the most significant obligations for investors, corporate tax, can be applied at a discounted rate and within specified periods. This support aims to reduce costs for investors by providing tax advantages, thereby encouraging new investments and improving the capacities and competitiveness of existing businesses.

Employment Supports:

1. Social Security Premium Support: Social security premium payments constitute a significant portion of the operating expenses for investors. Social security premium payments can be covered by the Ministry within certain rates and periods.

2. Qualified Personnel Support: Salaries of R&D personnel and key personnel in the production process can be covered by the Ministry within certain rates and periods.

Interest/Profit Rate Support: To facilitate financing for investors, interest or profit rate support is implemented within certain periods and limits related to credit or financing. This support aims to enhance investors' motivation to invest by enabling them to access financing more easily and under favorable conditions.

Energy Support:

Energy support is a mechanism implemented to reduce the energy costs of energy-intensive investment projects. Under this support, companies investing in such projects may have up to 50% of their energy bills paid by the government for a certain period and within specified limits.

Other Grant Supports:

Projects that meet the criteria set by the Ministry can manage their investment processes more easily and efficiently by taking benefit of grant supports. These supports not only provide financing opportunities for investments but also contribute to reducing various investment costs, thereby supporting the sustainability of investments.

Other Tax Incentives:

1. Customs Duty Exemption: Customs duty exemption can be provided for investment goods, machinery, and equipment obtained domestically and/or abroad.

2. VAT Exemption: Building-construction expenses or investment goods within the project scope can be exempt from VAT.

C. Market Development Supports

1. Public Procurement Guarantee: A public procurement guarantee can be provided for products within the investment scope that will create a leverage effect on the project and for items within the purchasing power of the public.

2. Customs Duty Exemption: Depending on the added value that the project will provide in the long term, and commitments on investment and local production, temporary customs duty exemption can be applied to a designated number of products imported by investors during market entry phase.

3. Exemptions in Relative Regulations: In return for investment and local production commitments, support or exemption may be provided regarding regulations that hinder the investor's market entry.

D. Investment Land Opportunities

By evaluating the qualities and potential gains of investments, the most suitable investment lands will be determined and offered to investors based on the characteristics and needs of the projects. Specifically, for the HIT-30 Program, these investment lands may be allocated free of charge or at a discount with alternative acquisition models.

A business-friendly environment is provided for issues such as expropriation, infrastructure construction, and obtaining necessary permits within organized industrial zone and special industrial area models.

E. Financing Support

Special financial supports are provided for investments under the scope of HIT-30, such as capital contributions, low-interest investment loans, and coverage of interest expenses.

F. High-Level Policy Support

The Industrialization Executive Committee, which will operate under the chairmanship of the President of the Republic of Türkiye, will guide policies and practices that support technological development and domestic production in the priority areas of HIT-30.

The committee will provide the necessary contributions to the success of special investments through decisions it can take in a wide range of investment-related topics, from public procurement guarantees to regulatory arrangements, and its guiding power over public institutions.

G. Program Duration

Factors such as the number and size of projects planned for support, production capacity, and quality vary depending on the specific investment subject. The aim is to complete investments by 2030.

The period for taking benefit from the special incentive packages defined within the scope of HIT-30 will end between 2030 and 2032, depending on the subject of the investment. As investments are made for each investment subject, special privileges will gradually decrease and be terminated based on the level of achievement of the goals.

[Once the targeted number of projects and capacity size is reached in a specific investment area, new applications for support will not be accepted under the HIT-30 program in the related investment area.]

2. Türkiye Tech Visa

"Bridging Global Talent to Türkiye"

"This program acts as a red-carpet entry for international tech founders and experts."

Türkiye Tech Visa is an exclusive invitation program tailored for talents with critical expertise in technology, as well as for tech startups with innovative business models and technology-based operations. The Türkiye Tech Visa Program offers exclusive privileges and advantages for professionals with expertise in technology and startups operating with innovative business models.

Under this program, participants are granted a **special work permit for three years**. Additionally, **residence permit procedures for the families** of Türkiye Tech Visa holders have been significantly simplified. This arrangement accelerates the processes for family members to live and work in Türkiye, supporting program participants in making long-term plans and establishing a permanent life in the country.

The program aims to accelerate the integration of successful technology experts and tech startups into Türkiye's technology ecosystem and facilitate their operations in the country. To achieve this, entrepreneurs accepted into the program will be offered **six months of free consultancy services** for the companies they

establish in Türkiye through Ministry of Industry and Technology. The services to be provided within this scope are as follows:

- **Company Establishment Consultancy:** The consultancy service covers all stages to help entrepreneurs overcome any challenges they may encounter during the company formation process in Türkiye. It starts with selecting the most suitable structure based on the type of company (such as a joint stock company, limited liability company, sole proprietorship, etc.) and its field of activity, and includes preparing all necessary documents and submitting applications to the relevant official authorities.
- **Accounting and Financial Services:** Services include budget preparation, cash flow management, bookkeeping, and financial reporting. Additionally, support is provided on tax filings, financial audits, and compliance processes. Entrepreneurs are also offered detailed information and strategic guidance on Türkiye's financial ecosystem to help them achieve their financial goals.
- **Tax Management and Compliance Services:** The program provides entrepreneurs with comprehensive information on Türkiye's tax system and obligations. These services include detailed explanations on VAT, corporate tax, income tax, and other tax liabilities, tax planning strategies, legal compliance processes, and methods for taking advantage of tax benefits.
- **Commercial Law Consultancy:** From the company formation stage onwards, services cover the preparation of commercial contracts, legal review of business agreements, protection of intellectual property rights, licensing processes, partnership and investment

agreements, and all other commercial legal processes. Furthermore, expert guidance is provided on the legal regulations, consumer rights, and competition law that must be followed when conducting business in Türkiye, aiming to protect entrepreneurs from legal risks.

- **Labor Law Consultancy:** Detailed consultancy services are offered on labor law regulations, employee rights, and employer obligations applicable to employees in Türkiye. These services cover various topics such as the preparation and review of employment contracts, employee rights (wages, leave, social security), occupational health and safety, termination processes, and collective bargaining agreements. Additionally, special consultancy services are provided on the employment of foreign workers, work permits, and residence permits, supporting entrepreneurs in creating a legally compliant work environment in Türkiye.

- **Training on Incentives and Support Programs:** There are numerous public incentive and support programs available for entrepreneurs in Türkiye. The services offered cover various topics such as R&D incentives, investment incentive certificates, tax reductions, grant programs, low-interest loans, and other financial supports. To ensure entrepreneurs make the most of these incentives, detailed guidance and consultancy are provided on application processes, required documents, and eligibility criteria. Effective use of these incentives and supports helps entrepreneurs reduce operational costs in Türkiye and enhance their competitive strength.

Additionally, to ensure that entrepreneurs coming through the Türkiye Tech Visa Program adapt to and successfully integrate into Türkiye's entrepreneurial ecosystem, the program offers:

- Informative orientation programs about Türkiye's technology and entrepreneurship ecosystem,
- Events designed to create networking and collaboration opportunities,
- Introductions to collaboration possibilities with universities, research centers, and Technology Development Zones.

In addition, office spaces provided within technoparks and incubation centers offer modern and flexible work environments tailored to the needs of Türkiye Tech Visa holders. These centers provide the necessary infrastructure and support for participants to bring their innovative projects to life.

As part of the **Türkiye Tech Visa Program**, cooperation protocols have been signed with six technoparks located across various regions in Türkiye, and the program will proceed effectively with the support of these technoparks:

- **Antalya Teknokent,**
- **Bilişim Vadisi,**
- **Bilkent Cyberpark,**
- **Erciyes Teknopark,**
- **Gaziantep Teknopark**
- **Yıldız Teknopark.**

The technoparks collaborating under the Türkiye Tech Visa Program offer several key supports to entrepreneurs. Foremost

among these are the provision of free office spaces (based on availability) and facilitation of business establishment and development processes. Additionally, they offer training programs on topics such as business model development, customer analysis, and financial management, contributing to the enhancement of entrepreneurs' knowledge and skills.

Talking Points:

- **Fast-Track Residency:** Provides a **3-year work and residence permit** for founders and key technical staff (and their families) in an accelerated timeframe.
- **Technopark Access:** Tech Visa holders are granted expedited entry into Technoparks, unlocking the tax incentives mentioned in Section 5 immediately.
- **Consultancy:** The program includes free legal, fiscal, and technical consultancy to help foreign startups navigate the Turkish market.
- **Scope:** Specifically targets startups in AI, Gaming, Cybersecurity, and Fintech.

PART V:
SECTORAL DEEP DIVES & OPPORTUNITIES

#NATIONAL TECHNOLOGY INITIATIVE

PART V: SECTORAL DEEP DIVES & OPPORTUNITIES

1. E-Gaming: The "Silicon Valley" of Mobile Games

Istanbul is now the **#2 city in Europe** (after London) for the density of gaming studios, with **517 active studios**. With Istanbul emerging as the second-largest hub for game studios after London in terms of studio density, the city has become a focal point—particularly in the mobile gaming space.

Türkiye's tech entrepreneurship ecosystem in the gaming sector has drawn global attention due to the rapid growth and high-impact achievements of its startups. Numerous Turkish gaming companies have achieved notable success, creating not only a strong impression on the international stage but also a ripple effect that continues to inspire a new generation of game studios and founders.

These ventures are distinguished by their steady expansion in the global market and growing competitiveness. Türkiye is currently home to **13 investment funds dedicated to gaming**, in addition to accelerators and incubators specifically designed to meet the needs of game startups.

These resources collectively offer critical early-stage financing and strategic guidance, enabling local talent to rapidly scale and refine their products. Fully aware of the increasing foreign interest in acquisitions and partnerships, Türkiye is taking proactive steps to position the region as a dynamic player in the global gaming industry.

These efforts are transforming the ecosystem into a promising environment for investors seeking high-growth, innovation-driven opportunities.

The Investment Thesis:

- **Low Cost / High Quality:** The cost of developing a mobile game in Türkiye is estimated to be **50-60% lower** than in the US or Western Europe creating high profit margins.
- **Proven Exits (The "Peak" Effect):**
  - **Peak Games:** Acquired by Zynga for **$1.8 billion**.
  - **Dream Games:** Reached **$2.75 billion** valuation in just 23 months.
  - **Gram Games & Rollic:** Acquired by global giants, validating the exit strategy for investors.
- **Talent Factory:** The "Peak Alumni" effect has resulted in over **80 new startups** founded by former Peak employees, creating a self-sustaining ecosystem of experienced founders.

2. Cyber Security: A Regional Defense Shield

- **Cluster Strategy:** The **Turkish Cyber Security Cluster**, led by the Presidency of Defense Industries, unites 200+ local firms.
- **NATO Standard:** Turkish firm **STM** manages critical NATO intelligence infrastructure projects, proving the "military-grade" quality of Turkish software engineering.
- **Talent Pipeline:** Specialized "Cyber Security Vocational High Schools" and bootcamps ensure a steady supply of certified security analysts.

A. National Position

With the **2024–2028 National Cybersecurity Strategy**, Türkiye emphasizes human-centered policies, domestic technological development, and robust international cooperation.

The entry into force of the **Cybersecurity Law** in January 2025, along with the establishment of **the Presidency of Cybersecurity** and the recent appointment of its Head in October 2025, marks a decisive step in enhancing deterrence and international credibility.

Türkiye has advanced to the position of a **"Role Model Country" in the ITU Global Cybersecurity Index in 2024**, reflecting our strong commitment to legal frameworks, institutional readiness, and multistakeholder engagement.

With a market size of **$345 million (2023)**, Türkiye is rapidly becoming a regional leader in cybersecurity solutions.

B. Creating the "Talent"

Türkiye has invested heavily in capacity-building for the younger generation. Development agencies across the country have launched multi-stakeholder initiatives in cybersecurity, software, and artificial intelligence.

A notable example is the **"Siber Vatan" (Cyber Homeland) Program** led by the Western Black Sea Development Agency, which provides training curricula, capacity-building, and motivational activities to nurture a new generation of cyber experts.

Complementing these efforts, the **SiberLab Virtual Cybersecurity Laboratory** provides cloud-based, reusable environments for training, simulation, and exercises, making

advanced cybersecurity education more accessible and cost-effective.

The Cybersecurity Education Portal (SGEP), a web-based platform designed for students and public employees interested in building skills in cybersecurity, provides an e-learning opportunity. SGEP covers a wide spectrum of introductory-level knowledge, while allowing users to assess themselves through interactive exercises.

TR-CERT, operating within the Information and Communication Technologies Authority (BTK), organizes cybersecurity training programs, summer camps, and competitions for various communities, while also providing online training to professionals working in CERTs.

[Moreover, TR-CERT protects the country's digital borders 24/7 in coordination with sectoral and institutional Cyber Incident Response Teams. This defense structure proactively detects and prevents phishing attempts and vulnerabilities, transforming cybersecurity from a passive defense posture into an active deterrence mechanism by utilizing AI technologies.]

BTK-Academy established within BTK, also provides online training courses on cyber security and other related areas, open to the public.

With the training contents available on the BTK-Academy official web portal, **over 800.000 individuals and cyber security professionals have had the opportunity to increase their expertise** and to contribute to the human resource of Türkiye. Online training courses on 55 topics regarding cyber security are offered on the portal and provided by TR-CERT & BTK-Academy cooperation.

Türkiye conducts awareness-raising campaigns for children's online protection and activities to increase families' awareness of their responsibilities. In 2025, 81 online and face-to-face training sessions have been held for students, teachers and parents on conscious and safe use of the Internet, reaching nearly 12,000 people in total.

The **"Safe Internet Service"**, which is the internet access profile for children and families in order to protect them from harmful content, has also been introduced in these trainings. The number of Safe Internet Service subscribers has reached over **55 million** at the national level.

Beyond this, TÜBİTAK runs a range of science awareness and education programs, including science fairs, workshops, and public lectures. The theme of "cybersecurity" has been integrated into these programs, encouraging projects and outreach activities that raise awareness on issues such as personal data protection, malware prevention, and defense against cyberattacks.

3. Artificial Intelligence (AI) & Data Analytics

Türkiye published The **National AI Strategy (2021-2025)** in 2021, which emphasizes the promotion of AI development for fostering innovation and a competitive environment, while upholding human rights, democratic values, and fundamental freedoms. This Strategy prioritizes AI as a critical growth engine.

Türkiye ranks **16th globally** in AI-related academic publications.

- **Verticals:** High adoption in Banking (fraud detection), Retail (predictive analytics), and Manufacturing (predictive maintenance).

- **Case Study: Insider**, a Turkish B2B SaaS Unicorn backed by Sequoia, uses AI to predict consumer behavior for global brands like Samsung and Ikea.

Investments amounting to $**10 billion in data center and artificial intelligence** will be implemented by 2030.

Our roadmap further foresees expanding **data center capacity** from 250 megawatts today to **1 gigawatt by 2030**, powered by renewable energy, so that our digital transformation is also sustainable.

In addition, TÜBİTAK (our National Research Institute) is developing our first **large-scale Turkish language model (LLM)**.

By training on trillions of tokens of carefully curated Turkish data, the model will serve not only scientific research but also applications in public services, education, and industry. This initiative, aligns with our National AI Strategy and the 2030 Industry and Technology Strategy. We aim to strengthen linguistic sovereignty, enrich AI systems with Turkish data, and ensure that future generative AI applications are built upon national values and needs.

Within the scope of Pre-Competition Collaboration Projects, the Turkish Large Language Base Model Sectoral Adaptation Project support program has been announced. This program aims to add features such as image and/or sound processing, video generation, translation, and function calling (artificial intelligence agents) to Turkish major language base models, and to create sector-specific, finely tuned versions of these models for use in many sectors ranging from finance and banking to e-commerce, education to health, industry to public services.

To advance an **autonomous vehicle ecosystem** in Türkiye, R&D efforts focused on autonomous driving systems are being supported, including the development of critical components such as sensor technologies, **AI-powered driving software**, and connected vehicle infrastructure. In the meantime, legal and technical frameworks are being implemented to enable the safe testing of autonomous vehicles on public roads, with the overarching goal of establishing Türkiye as a regional technology hub in this field.

Togg, Türkiye's domestically developed and nationally owned automotive brand, has already launched production and is steadily gaining market share. The Ministry of Industry and Technology's incentives and support for autonomous system development are helping Togg and other domestic manufacturers build strong capabilities in autonomous technologies.

4. Fintech: The Cashless Revolution

- **Scale:** Türkiye has **400 million** active credit/debit cards, making it one of the largest card markets in Europe.
- **Regulatory Openness:** Recent regulations aligning with **PSD2** (Open Banking) and the issuance of **Digital Banking Licenses** have opened the door for foreign fintechs to enter the market without needing physical branches.
- **Crypto Adoption:** Türkiye has one of the highest crypto-asset adoption rates in the world, presenting opportunities for Web3 and Blockchain infrastructure investments.

5. Space and Satellite: A Rising Sector

Today, the space economy is expanding its scope to include emerging fields such as space tourism and space mining. The United States, China, and Russia remain the leading countries in this domain, while the European Union, India, and Japan are other significant players in this global race.

A. Space

Türkiye established the **Turkish Space Agency (TUA)** in 2018 and unveiled its **National Space Program (NSP) in 2021**, setting clear strategic goals to become a globally competitive actor in space technologies.

Space programs hold critical importance for countries in terms of scientific and technological development, innovation, industrial transformation, national security and defense, environmental monitoring, and international prestige, serving as a driving force for growth.

Although costly, the direct and indirect benefits they provide motivate countries to implement such programs. Similarly, the National Space Program was formulated with a view to developing Türkiye's space capabilities, achieving international competitiveness, and contributing to scientific research; it was launched to ensure Türkiye's independence in space technologies, support economic growth, and foster scientific progress.

The National Space Program focuses on the following ten main goals:

1. Unification of Satellite Production under a Single Framework and Indigenous Satellite Development Program
2. Lunar Program
3. Regional Positioning and Timing
4. Spaceport and Independent Access to Space
5. Turkish Astronaut and Science Mission
6. Technological Research on Space Weather
7. Observation and Tracking of Space Objects from the Ground
8. Development of the Space Industry Ecosystem
9. Space Awareness and Human Resource Development
10. Space Technology Development Zone

As part of the NSP, we successfully completed our First Manned Space Mission in January 2024, sending the first **Turkish astronaut** into space. This was followed by our second astronaut's suborbital research flight in June 2024, contributing to scientific data collection.

Our **Moon Program** aims to send a spacecraft—developed with Turkish engineering and rocket technologies—to lunar orbit and eventually achieve a soft landing on the Moon.

Within the scope of the Lunar Program, **a spacecraft equipped with a propulsion system** developed with national capabilities, which would be designed and produced by domestic engineers and scientists, aims to reach the Moon. This program is critically important for Türkiye to establish itself as an independent and strong actor in space technologies.

Looking ahead, we aim to strengthen our international scientific partnerships, especially in the area of human spaceflight, space science missions, and satellite R&D.

To support technology development efforts in this field, **a space technologies-focused technopark** will be established, with the aim of providing the necessary infrastructure, cultivating a highly qualified workforce, and fostering a collaborative environment. A significant portion of the technology development activities required in line with Türkiye's national space policies will be carried out in this technopark.

"We invite space companies to open offices in the forcoming space technopark."

Located in Ankara, this technopark is expected to contribute to Türkiye securing a larger share of the global space economy through the innovative technologies to be developed within its premises.

Türkiye also possesses the capacity to establish **astronaut training infrastructure** that can serve other countries. The establishment and evaluation of these infrastructures will contribute to positioning Türkiye among the leading nations in space activities.

By 2030, we also intend to establish a spaceport through international cooperation, which will enhance Türkiye's launch and satellite deployment capabilities.

We will host the **77th International Astronautical Congress (IAC) in Antalya**, between 5-9th October 2026.

B. Satellites

*"Türkiye has become **one of the eleven countries** developing its national satellite."*

Türkiye began its space activities with communication satellites, taking its first step by launching the TÜRKSAT 1B satellite in 1994. In the 2000s, Türkiye accelerated its satellite development efforts, achieving substantial progress in Earth observation satellites, reconnaissance satellites, and CubeSats. Türkiye's first domestically produced communication satellite, TÜRKSAT 6A, was successfully launched on July 9, 2024.

Türkiye has developed advanced capabilities in earth observation and imaging satellites through projects like BİLSAT, RASAT, GÖKTÜRK, and İMECE.

In an effort to commercialize the R&D and production capabilities developed in satellite technologies and contribute to national security, a National Satellite Company will be founded.This company will unify all public entities within the satellite ecosystem under a single structure, thereby enhancing coordination and enabling more efficient use of both human and infrastructure resources.

Through major public engagement platforms like TEKNOFEST, national sky observation festivals, and training programs, we are investing in building a strong talent pipeline in space science and aerospace engineering.

Fergani and **Plan-S**, two Turkish private space companies, also launched 19 satellites to space.

Satellites in Near Earth Orbit (LEO) have become a major focus of interest in recent years, both commercially and scientifically. This call for proposals primarily aims to develop satellite technologies, critical satellite subcomponents, ground systems and applications that will operate in Near Earth Orbit, as well as the infrastructure that will enable these satellites to communicate with IoT devices in

areas where communication infrastructure is absent or very limited.

Through the “Satellite Technologies Development Call” conducted by our Ministry, Pre-Competitive Cooperation Projects will be supported for the design, prototype production, testing, verification, launch, commissioning and satellite-based application development processes of critical technologies and sub-components required in satellite systems and/or satellite platforms. This call for proposals aims to provide up to 50% grant support, amounting to 75 million TL, for the development of IoT-based satellites that will operate in Low-Earth orbit.

PART VI:
INFRASTRUCTURE & DIGITAL TRANSFORMATION

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Türkiye has adopted **cloud computing** as a strategic priority, aiming to bolster the competitiveness of businesses, particularly SMEs, by offering next-generation technology solutions, while at the same time expanding national capacity through large-scale data centers and international partnerships.

Meanwhile, **open-source software** developed domestically will foster innovation through enhanced transparency and flexibility, thus contributing significantly to the country's digital transition journey. On another front, efforts will be intensified to establish a secure and sustainable national **Internet of Things (IoT)** ecosystem. Through the integration of IoT devices and wireless network technologies, high-speed data transmission and real-time monitoring capabilities will be strengthened.

Blockchain, decentralized finance (DeFi), and crypto asset technologies represent additional strategic domains that will play a vital role in enhancing Türkiye's competitiveness in the digital economy. In this context, the necessary legal and technical infrastructures will be established, with a view to positioning Türkiye as a global hub for fintech through the development of innovative digital finance solutions.

1. Data Centers: The Regional Cloud Hub Strategy

Türkiye's data localization laws (KVKK) require banking, payment, and telecom data to remain within national borders. This regulatory environment creates a massive demand for local Data Centers.

- **Current Capacity:** 250 megawatts in approximately **100,000 m²** of white space (60k in Marmara, 30k in Ankara).
- **Quality:** 38 Tier III and Tier IV certified data centers.
- **Opportunity:** Large scale data center investments that are integrated with large scale cloud or AI service providers can be incentivized under HIT-30 Data Center Call. Also, global cloud providers (Hyperscalers) or other large scale cloud investors that will invest in cloud and AI infrastructure and services can be incentivized under HIT-30 AI Call to establish local "Availability Zones" to serve not just Türkiye, but the broader region.

2. Connectivity - 5G

Türkiye's 5G spectrum auction concluded with bids totaling **$3.53 billion** including VAT. The tender, held on Oct. 16, covered 11 spectrum packages across two frequency bands and drew participation from the country's three major mobile operators: Turkcell, Türk Telekom and Vodafone Türkiye.

- **Fiber:** 549,000 km of fiber optic infrastructure.
- **5G:** The "5G Valley" initiative in Ankara is testing 5G applications, with commercial rollout preparations underway, offering opportunities for network infrastructure investments.

3. Digital Transformation

"Digital government is one of our flagship achievements."

The **e-Government Gateway (e-Devlet)** now provides over **8,600 services** from more than 1,106 institutions. In the past year alone**, 68 million citizens — representing 76% of our population** — actively used this platform.

According to the European Commission's most recent report, **Türkiye ranks 10th** among 35 countries in **e-government maturity with a score of 81%, well above the EU average of 70%**.

In the latest report of **ICT** (Information & Communications Technology) Development Index of **ITU**, Türkiye scored **94.7** in the field of '**meaningful connectivity**' and **82.3** in the field of '**universal connectivity**', which is a clear indicator of Türkiye's strength in the field.

Dijital Transformation Program

A digital transformation program has been launched to support businesses' digital transformation investments. In addition to the incentive package provided by the program, which aims to integrate high value-added technological products and solutions into existing business processes, training support is also provided to businesses to develop their human resources for digital transformation.

4. Computing Power

"Türkiye is fully integrated into both the national and international high-performance computing ecosystem."

A. Super Computers

To strengthen Türkiye's data processing infrastructure, a new supercomputer has been commissioned within the Turkish National Science e-Infrastructure (TRUBA), which offers high-performance computing and data storage capabilities.

In this context, TÜBİTAK ULAKBİM's next-generation data center and Türkiye's highest-capacity supercomputer, ARF, have been made available for use. We are investing heavily in infrastructure: **our national supercomputer ARF**, launched in 2024, **already ranks among the world's top 500**, with the equivalent capacity of 40,000 laptops. Plans are underway to triple its capacity through next-generation GPUs to support advanced AI research and industrial applications.

TRUBA supports the high-performance computing needs of universities, public institutions, and the private sector. The ARF system, equipped with direct liquid cooling technology, serves academic researchers as well as those from the public and private sectors, who work in computational sciences including climate modeling, biotechnology, basic sciences, and medical sciences, enabling the development of innovative solutions for the future. Through the TRUBA Data Center and the ARF Computing Cluster, Türkiye is adding a new dimension to its scientific research capacity and enhancing its global competitiveness.

With support from the Ministry of Industry and Technology, the MareNostrum5 supercomputer, which has been established and operated by a consortium that includes Türkiye (through TÜBİTAK

ULAKBİM), Spain, and Portugal, was ranked 35th worldwide on the Top500 list published in November 2024. The MareNostrum5 system is accessible to researchers from all sectors through EuroHPC Joint Undertaking calls
and national-level applications.

The second phase of the ARF cluster, ARF-ACC, provides computing resources to researchers working on AI technologies. Furthermore, the BSC AI Factory (BSC-AIF) a project supported by the Ministry of Industry and Technology, in which TÜBİTAK is a partner—has been selected as one of the first seven AI Factories to receive support from the **European High-Performance Computing Joint Undertaking** (**EuroHPC-JU**). Our participation in the **EuroHPC-JU**, gives our researchers access to AI Factories.

Updating MareNostrum5 into a supercomputer optimized for AI is expected to expedite the development of industrial and public AI ecosystems.

To ensure clarification of rules on data sharing at national level for data governance and promote the effective use of data processing infrastructure, it is essential to establish strategies that foster the creation of sector-specific data spaces, such as the Public Data Space, which enables secure and controlled data sharing.

Equally important for facilitating data sharing, is the availability of neutral and trustworthy data-sharing service providers, along with mechanisms aligned with open data policies to allow the reuse of datasets for scientific and commercial purposes.

B. Quantum Computers

Quantum technologies are enabling transformative innovations in positioning, imaging, computing, communication, sensing, and security.

Quantum computers offer significant advantages in solving complex mathematical problems, large-scale optimization, molecular simulation, AI, big data analysis, and cryptography. In addition to high-speed, efficient computing, quantum encryption methods bolster data security; quantum sensors allow for precise measurements; quantum sensing enhances next-generation radar and imaging systems; and quantum communication technologies, which are enabled by quantum entanglement and quantum key distribution, allow for ultra-secure data transmission.

Türkiye has recently given momentum to its publicly supported R&D activities in quantum technologies. Several projects, coordinated by TÜBİTAK have been launched, and the Quantum Technologies Department was established within TÜBİTAK BİLGEM in 2023. This department aims to position Türkiye as a leader in quantum technologies by conducting research and developing systems in quantum computing, communication/cryptography, imaging, sensing, and metrology.

Meanwhile, the Presidency of The Republic of Türkiye Secretariat of Defence Industries and universities continue to support research into quantum security and sensing technologies. To that end, **ASELSAN** has founded **KUANTAL (Quantum Research Laboratory)** to advance its work in this area. Türkiye's first domestically developed quantum computer, **QuanT**, was recently launched by **TOBB University of Economics and Technology**. Moving forward, international collaborations led by the public sector and investments from the private sector will be pivotal in building national capacity in this field.

The forthcoming establishment of the **National Quantum Institute** under TÜBİTAK will further expand Türkiye's capacity in this field. The institute will act as a national coordinator, bringing together stakeholders, enhancing infrastructure and talent

development, and managing project-based initiatives. The institute will focus on building infrastructure and human resources, executing high-tech projects, and developing quantum computing, communication, and sensing systems for both civilian and military applications.

Among its key goals are the **production of superconducting and photonic quantum computers** and their application in cryptology and cybersecurity. In the field of **quantum communication**, the institute will pursue the production of **crystal or diamond-based quantum emitters, photonic circuits, and single-photon detectors**. **A Rydberg-based quantum antenna** will be developed, and, in collaboration with the Presidency of The Republic of Türkiye Secretariat of Defence Industries **a prototype quantum radar/LiDAR system** will be produced.

PART VII:
HUMAN CAPITAL:
THE TALENT ADVANTAGE

PART VII: HUMAN CAPITAL: THE TALENT ADVANTAGE

A strong emphasis is also placed on human capital development. In cooperation with the Council of Higher Education (YÖK), the **"Sector on Campus Program"** stands out as a successful model of university–industry collaboration.

Through this program, industry professionals deliver courses directly in universities, ensuring that students gain access to the most up-to-date practices and technologies in areas such as ICT, artificial intelligence, defense industry, cybersecurity, digital transformation and advanced manufacturing technologies.

Since its launch in the Spring Semester of 2022, the program has reached over 22,000 students through nearly 800 specialized courses, supported by 108 leading firms in the sector. This initiative bridges the gap between theory and practice, strengthening the supply of qualified experts in Türkiye.

One of Türkiye's key priorities is to position itself as a global hub that attracts both domestic and international scientists. Attracting researchers trained in countries with relatively advanced technological capabilities is essential to raising the overall level of expertise in universities and across the industrial ecosystem.

To this end, TÜBİTAK has launched several programs that have enabled nearly 1,200 Turkish and international researchers residing abroad to return to Türkiye and conduct their work here since 2018.

Through the highly regarded International Fellowship for Outstanding Researchers and Young Researchers Program, Türkiye has attracted talent from:

• Global technology companies including Amazon, Apple, Bosch, GE, Intel, Siemens, and Volvo;
• Prestigious research institutions such as CERN, CNRS, and the Max Planck Institute;
• World-leading universities such as Harvard, Oxford, Humboldt University of Berlin, ETH Zurich, and MIT.

These programs will be expanded in the coming period to also attract experienced engineers and technical experts currently working abroad.

1. Demographics

"Türkiye offers a demographic dividend that Europe has lost."

- Türkiye has a population of 85 million people, with a median age of 34.4, making it the EU's largest youth pool.
- **Young Population:** 32.6 million people are under the age of 24.
- Türkiye boasts one of the largest talent pools in Europe and the MENA region with more than **1 million university graduates per year**, including over 80,000 engineering and engineering trade graduates.

Digital Natives: "This generation grew up with mobile technology, fueling the gaming and e-commerce boom."

In 2024, number of people who uses internet in Türkiye increased from 87.1% to %88.8.

Türkiye's growing population is digitally connected and active, as evidenced by the fact that it is the **5th largest market for Instagram**, 7th largest market for X (Twitter), 12th largest market

for TikTok, 11th largest market for YouTube, 14th largest market for LinkedIn, and the 14th largest market for Facebook globally (Statista, 2024).

Furthermore, Türkiye is the **8th largest market for mobile apps**, based on the estimated total number of app downloads (Linkedin/Testcribe, 2023). With these figures, Türkiye proves to be an ideal production and testing ground for technology developers.

2. Engineering Talent & Cost Competitiveness

- **STEM Output:** Over **100,000 students** graduate annually from STEM fields (Science, Technology, Engineering, Math).
- **Workforce:** 213,000+ ICT professionals, 70% of whom are under 35 years old.
- **Arbitrage:** The cost of employing a Senior Software Engineer in Türkiye is significantly lower than in Poland, Czechia, or Estonia, while technical proficiency remains on par or higher.

PART VIII:
LEGAL FRAMEWORK AND PROTECTION OF INVESTMENT

PART VIII: LEGAL FRAMEWORK AND PROTECTION OF INVESTMENT

1. FDI Law & Investor Rights

- **Law No. 4875:** Grants foreign investors the exact same rights as local investors.
- **Freedom of Transfer:** Guarantees the free transfer of net profits, dividends, proceeds from the sale of shares, and license fees to foreign countries without restriction.
- **Arbitration:** Türkiye recognizes international arbitration awards, providing a neutral ground for dispute resolution.

2. Intellectual Property (IP) & Data Protection

- **IP Protection:** The Industrial Property Law is fully harmonized with EU standards. Specialized "IP Courts" handle disputes efficiently.
- **KVKK (GDPR):** The Personal Data Protection Law (KVKK) is modeled on the EU's GDPR. 2024 amendments have simplified cross-border data transfers, facilitating operations for multinational tech firms.

PART IX:
STRATEGIC COLLABORATION & INVESTMENT MODELS

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For International Investors, Tech Giants, and Industrial Leaders

1. MODELS FOR HIGHER EDUCATION INSTITUTIONS & ACADEMY

Model A: "Corporate-Sponsored Degree Program"

- **Reference:** *Yandex's Machine Learning Master's Program at METU (Middle East Technical University).*
- **Concept:** A global tech giant partners with a top-tier Turkish technical university (e.g., METU, ITU, YTU) to co-design a specialized degree program.
- **Mechanism:** The company provides the curriculum (e.g., Cloud Architecture, AI Ethics, Cyber Defense), visiting lecturers, and software licenses. The university provides academic accreditation and facilities.
- **Investor Benefit:** Early access to a pre-trained, "work-ready" talent pool familiar with the company's specific tech stack before they hit the open market.
- **Incentive:** Universities and Technoparks offer **income tax exemptions (up to 95%)** for R&D personnel and student researchers, significantly lowering the cost of running such programs compared to the EU/US.

Model B: "Tech Talent Accelerator Campuses"

- **Reference:** *Google Game & App Academy / Samsung Innovation Campus.*
- **Concept:** Establishing short-term, intensive "Bootcamps" located physically within university Technoparks.

- **Mechanism:** These centers focus on rapid upskilling in specific domains (e.g., Swift/iOS development, Android, Azure).
- **Investor Benefit:** Türkiye has a massive youth population (median age 33.5). This model rapidly converts young talent into the company's developer ecosystem.
- **Incentive:** If located in a Technopark, the operation is exempt from **Corporate Tax and VAT**.

Model C: "Joint Deep-Tech R&D Laboratories"

- **Reference:** CISCO Cyber Security Laboratory, located in the Graduate School of Informatics at Middle East Technical University (METU).
- **Concept:** Establishing a dedicated R&D lab within a university Technopark to solve specific "hard-tech" problems (e.g., material science, battery tech).
- **Mechanism:** Faculty members work as part-time consultants; PhD students work as researchers.
- **Incentive:** Projects conducted here benefit from **100% Customs Duty Exemption** on imported lab equipment and prototypes.

2. MODELS FOR MANUFACTURING & PRODUCTION RELOCATION

Focus: Moving production lines, assembly, and supply chains to Türkiye to leverage cost, logistics, and incentives.

Model A: The "Euro-Asia Supply Chain Hub" (Nearshoring)

- **Target Audience:** European and US manufacturers looking to de-risk their supply chains from the Far East.
- **Concept:** Relocating final assembly or component manufacturing to Türkiye to serve the EU market duty-free.
- **Mechanism:** Utilizing the **Customs Union** between Türkiye and the EU. Goods produced in Türkiye travel freely to Europe without customs duties.
- **Logistics Advantage:** Turkish Airlines connects to **340+ destinations**. A truck from Istanbul reaches Munich or Milan in under 72 hours.
- **Incentive:**
    - **Strategic Investment Scheme:** For high-import-dependency products, the state offers **Land Allocation** (free land) and **VAT Exemption** on machinery.

Model B: The "High-Tech Gigafactory" Model (HIT-30 Program)

- **Target Audience:** Electric Vehicle (EV) battery makers, Semiconductor (Chip) foundries, Solar/Wind energy equipment manufacturers.
- **Concept:** Establishing large-scale, high-tech manufacturing facilities.
- **Mechanism:** Applying for the **HIT-30 Program**, a **$30 Billion** package designed specifically for high-tech manufacturing.
- **Investor Benefit:**
    - **Cash Grants:** Reimbursement of up to **30%** of Capital Expenditure (CapEx).
    - **Tax Credit:** Corporate Tax exemption up to **80%** of investment.

Model C: The "Free Zone Export Base" Model

- **Target Audience:** Companies aiming to export >85% of their production (e.g., Consumer Electronics, Textile, Auto Parts).
- **Concept:** Establishing a factory within one of Türkiye's **19 Free Zones**.
- **Mechanism:** These zones are considered outside the customs territory.
- **Incentive:**
    - **100% Corporate Tax Exemption** for manufacturing companies (provided they export).
    - **100% Income Tax Exemption** on employee salaries (if export ratio >85%).
    - **Free Profit Transfer:** Unlimited transfer of profits and capital back to the HQ.

Model D: The "Green Manufacturing" Transition Model

- **Target Audience:** Companies subject to the EU Green Deal and Carbon Border Adjustment Mechanism (CBAM).
- **Concept:** Moving energy-intensive production to Türkiye to utilize its high renewable energy capacity.
- **Advantage:** Türkiye ranks **5th in Europe** for renewable energy capacity.
- **Incentive:** "Green Transformation" investments receive priority incentives, including VAT exemption and interest rate support on loans used for green retrofitting.

3. MODELS FOR PRIVATE TECH GIANTS (BIG TECH)

Reference: *Google, Microsoft, Amazon, Huawei.*

Model A: "The Regional Engineering & Remote Hub"

- **Concept:** Establishing a "Center of Excellence" where Turkish engineers work remotely or hybrid for global projects, without needing to relocate them to the US/UK.
- **Cost Advantage:** The cost of a senior software engineer in Türkiye is significantly lower than in Poland or Czechia, providing high ROI.
- **Incentive:** Recent Technopark regulations allow personnel to work **remotely** (outside the physical zone) up to **100% of the time** while the company still retains tax exemptions.

Model B: "Hyper-Scale Cloud Region Investment"

- **Concept:** Establishing a local "Availability Zone" or Data Center in Türkiye.
- **Driver:** Data localization laws (KVKK) require banking, payment, and telecom data to stay in Türkiye. This creates a guaranteed market for local cloud infrastructure.
- **Incentive:** Data Center investments are classified as "Priority Investments" under **HIT-30**, eligible for cash grants and energy cost support.

Model C: "SME Digitalization Partnership"

- **Concept:** Partnering with KOSGEB (SME Development Organization) to digitize Türkiye's millions of SMEs using the tech giant's tools (e.g., Cloud, AdTech, E-commerce infrastructure).

- **Mechanism:** The tech giant provides the platform; the government provides grants to SMEs to purchase the service.

4. MODELS FOR E-GAMING COMPANIES

Reference: *Zynga (Rollic, Peak), Dream Games.*

Model A: "The Acqui-Hire & Scale Model"

- **Concept:** Acquiring a promising small studio not just for its IP, but for its cohesive team ("Acqui-hiring").
- **Why Türkiye:** Istanbul is the **#2 city in Europe** for gaming studios (517 studios). The talent is abundant and experienced in rapid prototyping.
- **Advantage:** Fast entry into the market with a team that has already "shipped" products.

Model B: "LiveOps & Support Center"

- **Concept:** Moving the "Live Operations" (customer support, community management, data analytics, server maintenance) of global games to Türkiye.
- **Incentive:** If established in a **Free Zone**, these services are classified as "software/IT services export," qualifying for **100% Income Tax Exemption** on staff salaries.

Model C: "Incubation Sponsorship"

- **Concept:** Sponsoring established incubators like **ATOM** (METU) or **Digiage** (Bilişim Vadisi).

- **Benefit:** "First Right of Refusal" on investing in indie games produced in the center. Low-cost access to hundreds of prototypes annually.

5. MODELS FOR DIGITAL MARKETPLACES & E-COMMERCE

Reference: *Trendyol (Alibaba), Amazon Türkiye.*

Model A: "E-Export Logistics Hub"

- **Concept:** Using Istanbul as the fulfillment hub for the MENA, Eastern Europe, and Central Asia regions.
- **Mechanism:** Leveraging Turkish Airlines massive cargo network (flying to more countries than any other airline).
- **Incentive:** Investments in logistics and warehousing in Free Zones are tax-exempt.

Model B: "Technological R&D Center"

- **Concept:** Instead of just a sales office, establishing the *platform development* HQ in Türkiye.
- **Case Study:** Trendyol is not just a retailer; it is a registered R&D Center employing thousands of engineers to build its own logistics algorithms and payment systems.
- **Incentive: 100% R&D Tax Deduction** on expenditures.

6. MODELS FOR ARTIFICIAL INTELLIGENCE (AI) COMPANIES

Model A: "Data Labeling & RLHF Center"

- **Concept:** Establishing a center for "Reinforcement Learning from Human Feedback" (RLHF) and data annotation.
- **Why Türkiye:** A large, young, educated population with high English proficiency compared to cost-competitive peers.
- **Incentive:** Can be set up in a **Technopark** as a software activity, benefiting from 0% Corporate Tax.

Model B: "Chip Design & Hardware" (HIT-30)

- **Concept:** Investing in the manufacturing and complementary facilities (i.e. test and packaging) of chips for electronic devices and AI chips (Semiconductors).
- **Incentive:** The **HIT-30 Program** specifically targets chip manufacturing, offering **cash grants** and **state contribution** options from the state.

7. MODELS FOR UNICORN & SCALE-UP COMPANIES

Model A: "Dual-HQ Strategy" (The Bridge)

- **Concept:** Maintaining a commercial HQ in London/New York for valuation purposes, but moving the **Engineering & Product HQ** to Istanbul or Ankara.

- **Benefit:** Drastically reduces burn rate (runway extension) due to lower engineering costs while maintaining high-quality output.
- **Enabler:** The **Tech Visa** allows easy movement of C-level execs between HQs.

Model B: "Cost Optimization Center"

- **Concept:** Relocating non-core but critical functions (QA Testing, DevOps, Customer Success) to Türkiye.
- **Incentive:** Service export incentives in Free Zones allow for high-quality service delivery at a fraction of the cost of Western Europe.

8. CROSS-BORDER ECOSYSTEM EXPANSION MODELS

Focus: Turkish Technoparks expanding into Africa to build talent pipelines and trade bridges.

Model A: "The Techno-Bridge Africa Hubs"

- **Concept:** Leading Turkish Technoparks (e.g., Bilişim Vadisi, ODTÜ Teknokent, YTU Yıldız) can establish physical **"Communication & Entrepreneurship Offices"** in key African tech capitals (e.g., Lagos, Nairobi, Cairo, Cape Town).
- **Mechanism:**
    - **Talent Scouting:** These offices serve as on-the-ground hubs to identify top African software developers and data scientists through hackathons and coding challenges.

    - **Remote Work Pipeline:** Hiring African talent to work remotely for Turkish technology companies. This addresses the talent shortage in specific niche areas while providing competitive employment in Africa.
    - **Soft-Landing for Turkish Startups:** Serving as a sales and operations base for Turkish startups expanding into the African market.
- **Strategic Enabler: The Türkiye Tech Visa:**
    - High-potential African founders and senior engineers identified by these hubs can be fast-tracked for the **Türkiye Tech Visa**.
    - This grants them a **3-year work and residence permit** in Türkiye, allowing them to relocate to the main Technopark in Türkiye to accelerate their ventures or join Turkish R&D teams.
- **Benefits:**
    - **For Türkiye:** Access to a vast, young, English speaking talent pool; increased export of Turkish technology products to Africa.
    - **For African Nations:** Job creation, technology transfer, and direct access to the European market via the Turkish ecosystem.
- **Incentive:** Activities coordinated through these hubs can benefit from **service export incentives** provided by the Ministry of Trade, which often covers a portion of rental and operational costs for overseas units.

9. MODELS FOR INVESTMENT FIRMS, VCs & PRIVATE EQUITY

Target Audience: Global Venture Capitals, Sovereign Wealth Funds and Private Equity Firms.

Reference: The rise of "Turcorns" (Peak, Dream Games, Insider) and the GSYF (Venture Capital Investment Fund) structure.

Model A: "The GSYF (Venture Capital Investment Fund) Structure"

- **Concept:** Establishing a dedicated investment vehicle in Türkiye using the **GSYF (Girişim Sermayesi Yatırım Fonu)** legal structure, which is specifically designed for tax efficiency.
- **Mechanism:** The foreign fund establishes a GSYF regulated by the Capital Markets Board (SPK). This fund acts as the local vehicle to deploy capital into Turkish startups.
- **Investor Benefit:**
    - **Tax Exemption:** Earnings and capital gains derived from GSYFs are generally **exempt from Corporate Tax**for the fund itself.
    - **Simplified Bureaucracy:** The structure is streamlined for qualified investors and allows for flexible portfolio management.
- **Market Context:** The GSYF market in Türkiye grew by **190% in 2023** and another **86% in 2024**, reaching a volume of **$6.8 Billion**, proving its popularity among institutional investors.

Model B: "The 'Turcorn 100' Co-Investment Partnership"

- **Concept:** Partnering with the Turkish Ministry of Industry and Technology's **"Turcorn 100" Program**.
- **Mechanism:** The government identifies and supports 100 deep-tech and high-growth startups with the potential to become Unicorns ("Turcorns").
- **Action:** The foreign VC becomes an **accredited co-investor** in this program.

- **Incentive:**
  - **De-Risking:** Startups in this program receive substantial government grants and mentorship, reducing the burn rate and risk for private investors.
  - **Access:** Direct access to the highest-potential, pre-vetted deal flow in the country.
  - **Exit Strategy:** The program actively supports these companies in preparing for global IPOs or exits.

Model C: "The Venture Builder Studio Model"

- **Concept:** Instead of searching for existing startups, the Investment Firm establishes a **Venture Builder (Startup Studio)** within a **Technopark** to build companies from scratch.
- **Mechanism:**
  - The firm hires a team of top-tier Turkish engineers and product managers (leveraging the low cost of high-quality talent).
  - The studio churns out multiple MVPs (Minimum Viable Products) annually.
  - Successful products are spun off as independent companies.
- **Why Türkiye?** The "Cost-to-Build" in Türkiye is significantly lower than in the US or EU, but the product quality is world-class (as seen in the gaming sector).
- **Incentive:** Because the Studio is in a Technopark, all software development activities and personnel costs are **tax-exempt**, maximizing the capital efficiency of the initial seed funding.

10. MODELS FOR SPACE-TECH & SATELLITE

Reference: Türkiye is one of 11 countries capable of producing its own communication satellites.

Model A: "Satellite Data Downstream Center"

- **Concept:** A data analytics center that processes imagery from satellites (for agriculture, disaster management, border security) for clients in Africa and Central Asia.
- **Incentive: HIT-30** explicitly lists "Communication and Space" as a priority sector for cash grants.

Model B: " Manufacturing of Low-Earth Orbit (LEO) Satellite Components "

- **Concept:** Manufacturing high-precision components (solar panels, thrusters, composites) for global LEO satellite constellations (like Starlink/OneWeb competitors) or manufacturing LEO satellites..
- **Advantage:** Türkiye's aerospace cluster (Ankara) has AS9100 certified manufacturing capabilities at a fraction of EU costs.
- **Incentive:** Aerospace investments receive **Strategic Investment** status, granting land allocation and tax benefits. Also, satellite manufacturing investments can be incentivized under **HIT-30 Program**.

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