REPUBLIC OF TÜRKİYE
MINISTRY OF INDUSTRY
AND TECHNOLOGY

NATIONAL STARTUP STRATEGY

#NATIONAL TECHNOLOGY INITIATIVE


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NATIONAL STARTUP STRATEGY

PREFACE

The only way to earn Türkiye the status of a regionally and globally strong power is to establish economic and technological independence. The vision of the National Technology Initiative(NTI), which we power for this purpose, is the name of the multidimensional policy we have developed to make our country an assertive global production center in advanced technologies and strategic industrial products. Our main goals are to develop all critical products and technologies with domestic and national resources, to offer competitive products and services in the high-tech field, and to boost the effectiveness of global value chains with original and innovative production.

Entrepreneurship is a key component of our 2023 Industry and Technology Strategy, which was developed in line with the vision of the NTI. The increase in the number of Turkish entrepreneurs capable of leading innovation and transformation in the world will be decisive in achieving our goals. In a century when technology plays a leading role in the production of economic and social value, our leading power is technological entrepreneurship. In this period, technology-based enterprises have become the basic element in every aspect of life, from trade to education; and from health to transportation.

Trade volumes, cross-border activities and valuations of technology-focused companies clearly show their impact on the economy. In this context, in the 2023 Industry and Technology Strategy, we aimed to nurture 10 Turkish unicorns; companies with a valuation of up to 1 billion in 2023. As the number of Turkish unicorns, or Turcorns as we love to refer to them, grew to six quickly; two of Turcorns exceeded the valuation of $10 billion. Additionally, more than 300 Turkish startups thrived last year, with a total investment of over 1.5 billion dollars.

By institutionalizing all of these success stories, the National Startup Strategy(NSS) will serve as a roadmap for entrepreneurship in our country to move to a new phase. While the NSS charts a course for our entrepreneurs, it will infuse the spirit of entrepreneurship in our nation's codes and increase our entrepreneurial capabilities in various fields and disciplines. I wish the NSS, which I believe will be a guide for all stakeholders of the entrepreneurship ecosystem, to be beneficial for our country and congratulate those who have contributed to making it happen.

RECEP TAYYİP ERDOĞAN
THE PRESIDENT OF TÜRKİYE

MESSAGE FROM THE COCKPIT

By virtue of the 2023 Industry and Technology Strategy(ITS), which was presented with the vision of the NTI, we had laid out a crucial roadmap for Türkiye, a prominent country that produces high technology and added value in a digitalizing world, on the occasion of the one-hundredth anniversary of the Republic. One of the main components of the 2023 ITS, which we formulated with a "National Technology Strong Industry" approach, is entrepreneurship. And today, we are unveiling the National Startup Strategy in the form of a vision document that will transform the entrepreneurship ecosystem in our country into a leading ecosystem on a global scale.

The National Startup Strategy is a comprehensive vision document encompassing all stakeholders of the ecosystem, closely following the international actors, developing policies by analyzing differences and advantages, which is aimed at creating a startup ecosystem and turning our country into an attraction center for technology ventures. Our purpose is to introduce a governance mechanism that envisages the most extensive participation towards reaching the targets set by our strategy and activate the agile nature of startups in the most effective way by a participatory approach, leading our country towards the 2023 targets and beyond.

This guiding document enables us to survey the entrepreneurship ecosystem in Türkiye under five equally significant components, and present 30 strategies aimed at strengthening startups based on the NTI vision. Not only do we support the development of the ecosystem in particular, but we also focus on advancement in the fields of Opportunity Equality, Sustainable Life, Investing in the Future of Youth, and Focal Development, which are of significance for the development of the country.

We hereby invite all our youth, who constitute our biggest asset on the way to building a great and strong Türkiye; our academics, our candidate entrepreneurs of all ages who have the potential to spark transformation with their ideas; our investors who contribute to the growth of technology ventures by investing in them, international organizations, our universities, government organizations, our key stakeholders who are increasing in numbers, such as technoparks, TTOs, and acceleration programs offering services to ventures; as well as our mentors and industrialists to act together with us in order to meet the targets set in this vision document.

MUSTAFA VARANK
MINISTER OF INDUSTRY AND TECHNOLOGY

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BACK TO THE FUTURE: 2034

Türkiye has always held a respectable and strong position regionally and worldwide since its foundation. It has never compromised its potential or desire to progress, even in times of economic trouble. Thanks to a breakthrough that began in the early 2000s and gained momentum over the past 15 years, Türkiye achieved its leading position it holds today in the global arena on the 111th anniversary of its foundation.

Unquestionably, economic and technological improvements have enabled Türkiye to achieve success in international relations, culture, and arts. Türkiye is now regarded as one of the world's superpowers thanks to the NTI carried into effect through consistent policies and embraced at the social level.

Undoubtedly, the 2000s were the time of Türkiye. Acting decisively and with a vision, Türkiye turned the rapid transformation brought about by technological improvements into an opportunity. Today, Türkiye is one of the most active countries in space. In addition, it is reaping the fruits of its R&D investments in nuclear energy, which have gone back many years. It has become a production and export giant in advanced technology. It has reached its largest production capacity in Europe for microelectronics and batteries. It has world-renowned unmanned aerial vehicles (UAV) and electric mobility brands.

Of the world's top 20 defense companies, three are Turkish. A Turkish technology company has earned a place on the top 10 lists of the world's most valuable companies.

However, Türkiye's progress is not confined to a few fields or companies. Indeed, it is the output of overall progress. This progress has two main pillars: one is the country's huge and productive human resources, and the other is the vast array of startups. Türkiye's population of 100 million comprises a pool of the most qualified technology experts. In fact, the country's technology ecosystem, which has become a global attraction center owing to its more than 100,000 startups, functions as an engine accelerating its technological development.

Türkiye's above-mentioned development is based on three factors: Reading the developments and trends in technology accurately, determining the priorities and strategies properly, and putting the roadmaps into practice consistently. Türkiye set forth its NTI vision about 20 years ago. It has created strategies in diverse fields in line with its targets and carried on its path by optimizing its roadmap in accordance with the changing conditions and new targets.

NTI has faced some challenges in time, but Türkiye knew how to turn them into an opportunity. The first positive breaking point in Türkiye's development was the pandemic that engulfed the world about 15 years ago. During the COVID pandemic, world economies, health systems, and social relations were put to a challenging test. Türkiye was one of the countries that survived this misfortune with the least possible damage thanks to its infrastructure developed over years, its dynamic economy, and its strong social structure. With the vaccines and other economic aids it has developed and offered to other countries, it has also helped the world recover faster.

The COVID-19 pandemic left a trace that can be seen even today. Digitalization, for example, has gained momentum and currency much more than expected. This led technological developments to be faster. Value-added production in education, health, transportation, industry, trade, and finance gained a new dimension through digitalization. Such speed brought about a transformation in the value chain in the world of technology. Thus, countries tended to improve their self-sufficiency and reshape their supply networks.

The early 2020s was a time when other developments took place that impacted the world of technology. The basic technologies used in all fields of technology started to gain more importance during this period. In particular, the use of artificial intelligence and blockchain technology has become increasingly widespread. Therefore, countries have begun to develop strategies and make investments to become pioneers in these fields. For example, digital currencies, which are now a part of our lives, have gained importance in the early 2020s.

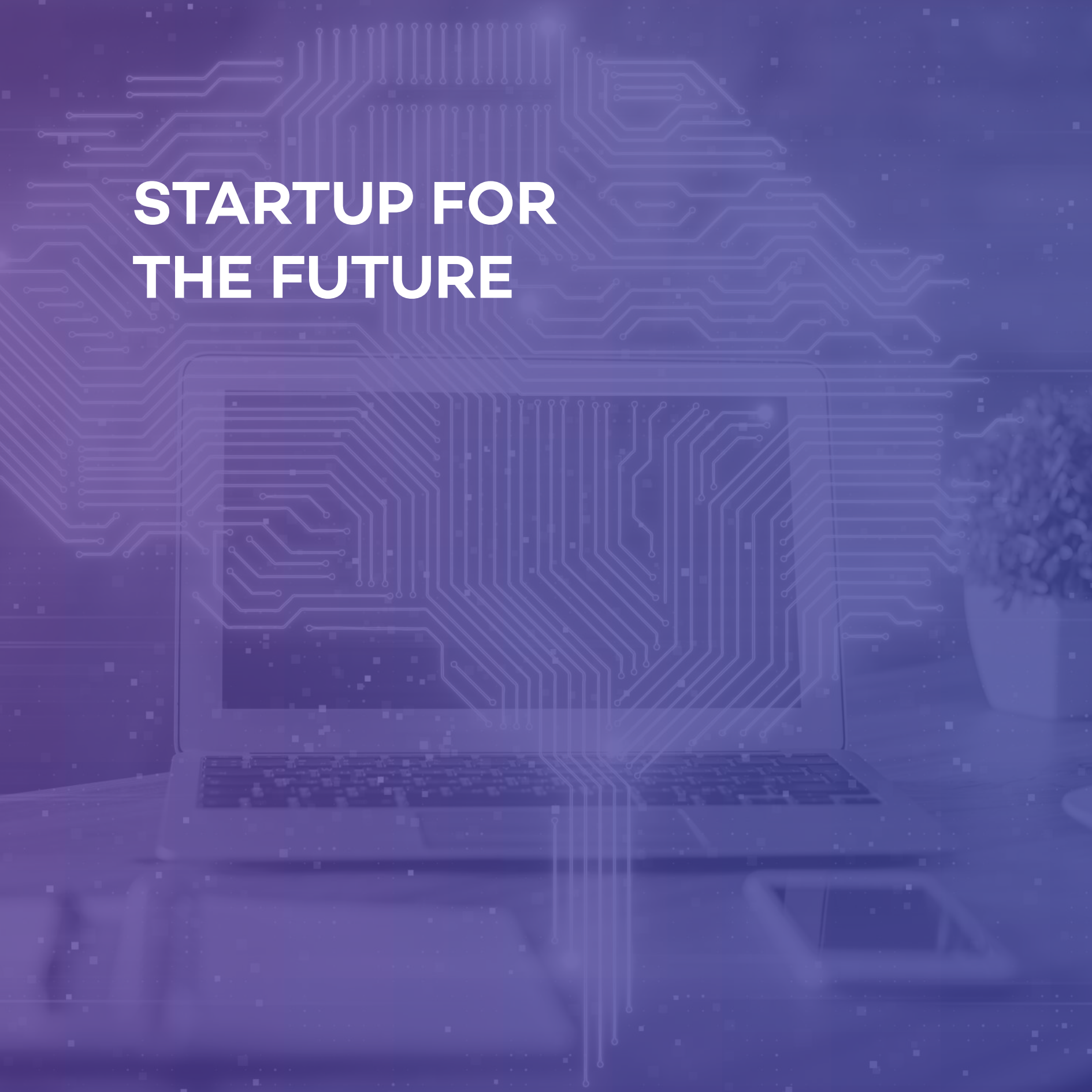
Another important development that marked this period was the fight against climate change and the efforts to build a sustainable life. With the awareness further raised by the pandemic, governments and international organizations have begun to pay more attention to this issue. A more environmentally friendly, clean, and sustainable approach was adopted within the framework of the United Nations 2030 Sustainable Development Goals and the Paris Climate Accords. Climate neutrality became a target within the scope of the European Green Deal policy by the European Union. Other developed countries have started to implement strategies to achieve carbon neutrality in all sectors, ending the use of fossil fuels and switching to renewable and sustainable energy sources such as solar, wind, biomass, and hydrogen.

Currently, it can be said that there is still much to be done to have a sustainable planet, but it is a fact that all these initiatives have helped to establish a significantly large green economy and forced the industry to transform itself.

During the time from 15 years ago till today, one of the radical changes in the world economy has been seen in global value chains. In other words, the center of gravity of the global value chain has shifted, and the Far East, where the vast majority of the world's population lives, has moved to the forefront of the global economy with its growing purchasing power. Sub-Saharan Africa, on the other hand, increased its potential and income levels through its growing population, although it still lags behind in human development indices.

When we have a retrospective look, we see that Türkiye evaluated all the economic and technological developments of the last 15 years very well. It is certain that the decision makers of the time drew a great roadmap for the country thanks to their admirable vision, and the players of the technology ecosystem did their share properly in turning the NTI into a reality. Now, we are moving on to repeat the same achievements so that Türkiye can reach its 2050 targets.

STARTUP FOR THE FUTURE



We will build on Türkiye's future economic process. While we prioritize some areas of focus development, we must seize opportunities in all sectors where we have potential. For example, underground and ground sources should be used as efficiently as possible. We believe that we will access new natural sources with our determination; and thus, we will support our economy. We believe that with our determination, we will develop new natural sources to support our economy. We can further process our mines to add value and create new areas of use. We can increase our capacity to produce high-quality products in the industry and decrease costs. We can develop new methods and tools to protect human health and place them at the world's disposal. However, we need to increase our country's innovation and technology capacity for all these developments. Our goal is to become a country that not only benefits from technology in all aspects of life; but also to develop that technology to its potential.

A few actors who set technological and innovative trends in any given country beg debate. Among these, the academia deserve a mention. At the basic research level, academia plays a crucial role in the development of new technologies given its infrastructure and the fact that is empowered by qualified human resources. Specifically, the academia has a leading position in training researchers and experts in developing technologies. Another actor is corporates or stakeholders in the traditional economy.

Such entities must undergo an innovation-based transformation to survive and gain ground in a competitive field shaped by technology. In fact, they face great pressure due to their financial resources. Therefore, they can make considerable contributions to technological development. On the other hand, the public sector must also be regarded as an actor that has the power to guide technology and innovation. It is in fact, is an important actor in technology development due to fiscal incentives, project support legislative arrangements it offers and R&D activities carried out by its institutes.

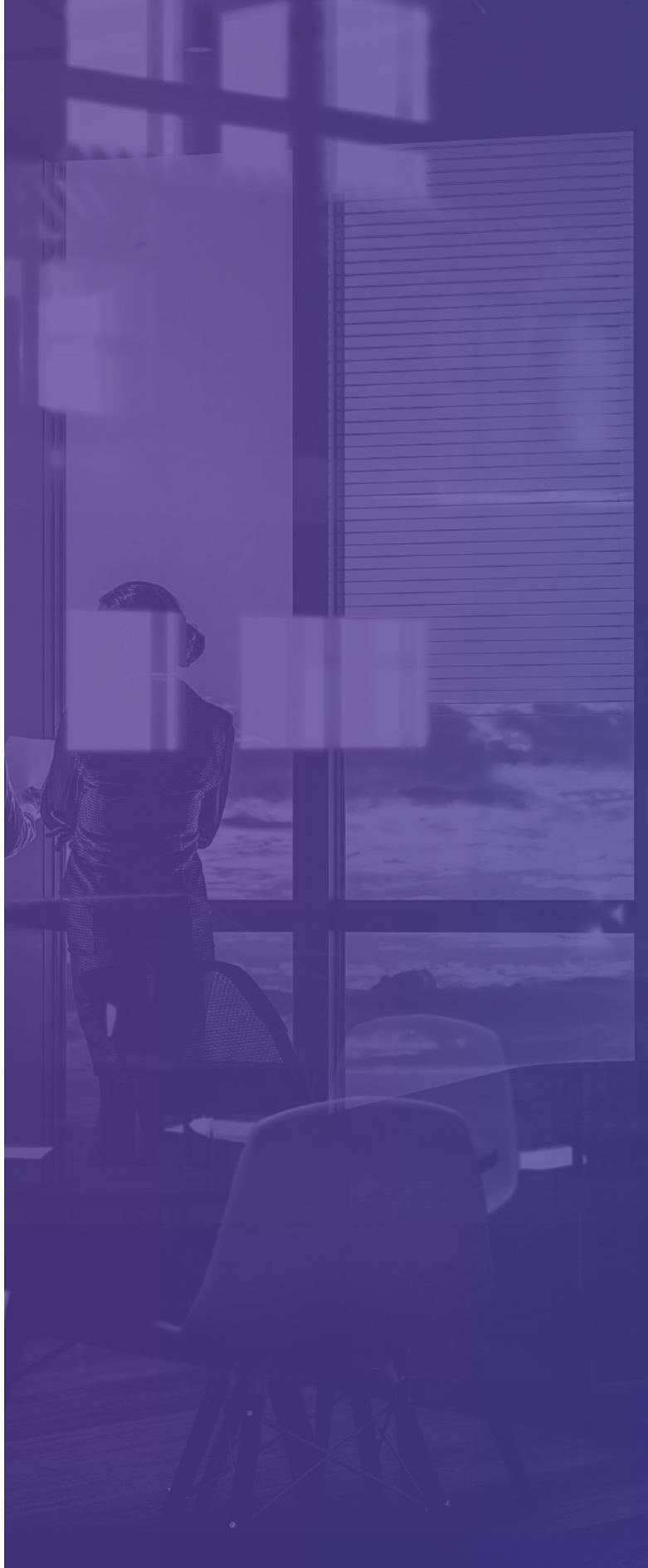
However, it would be unrealistic to expect only the above-mentioned actors to give rise to an overall technological development as they may hold little sway when it comes to creating significant value out of R&D and innovation activities, making the output commercially accessible, inventing new uses of areas for already produced products and triggering other technological developments.

There is a need for another element that would facilitate and accelerate the achievement of these results; – which is none other than a proper startup ecosystem. An ecosystem, comprising all the above-mentioned players, not only makes a direct contribution to R&D and innovation but also acts as a facilitator for the entire field of technology. It is, indeed, through entrepreneurship that technology use is maximized and goes on to create economic value.

From this perspective, startups have a central and vital role in the development of our country. We need to take the required steps to reach the point we have foreseen by following a long-term plan.

With this vision, we are launching a national initiative led by the public sector and supported by the entire ecosystem:

"Startup for Future" one that envisions a breakthrough in the startup ecosystem.



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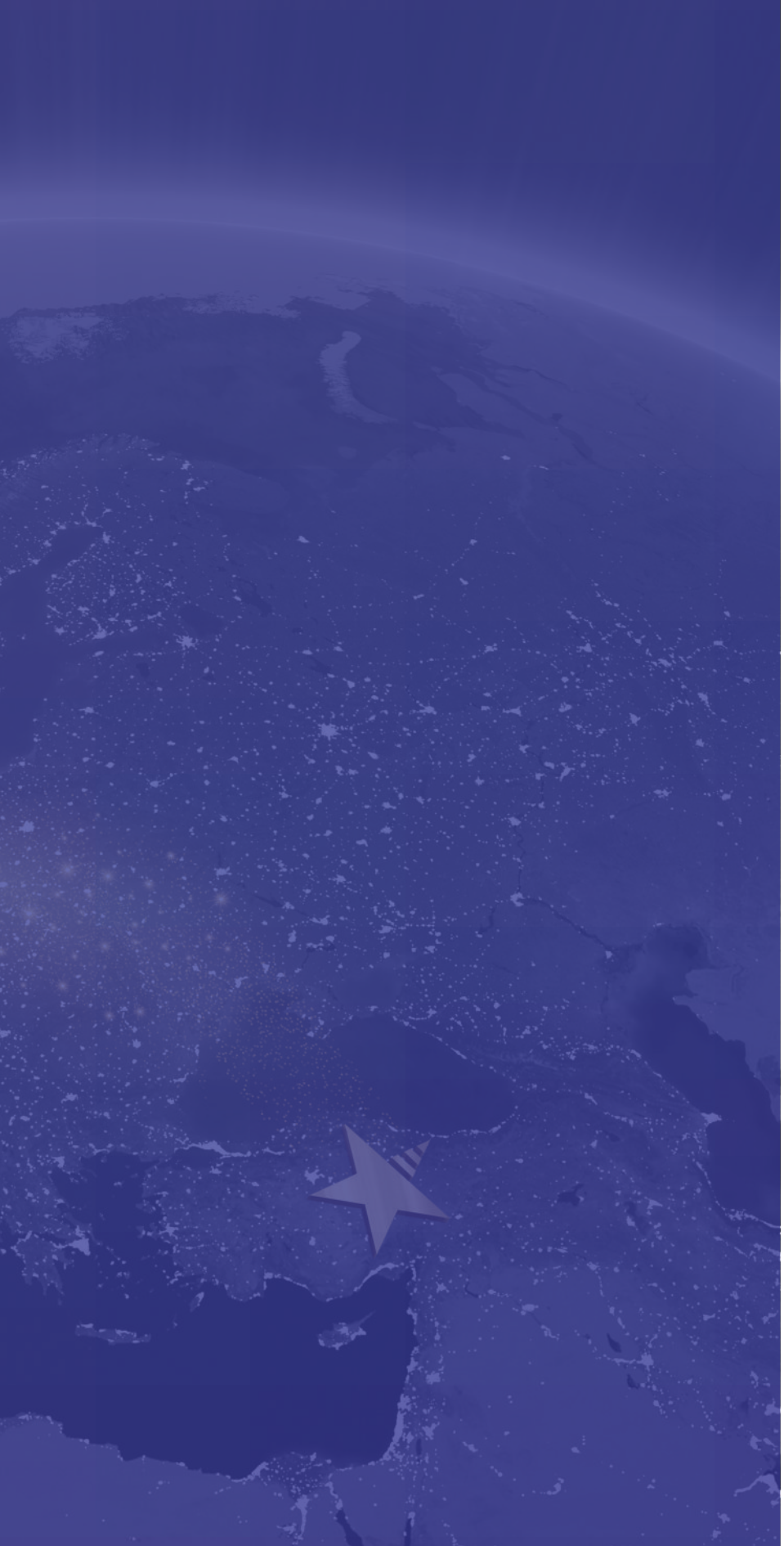
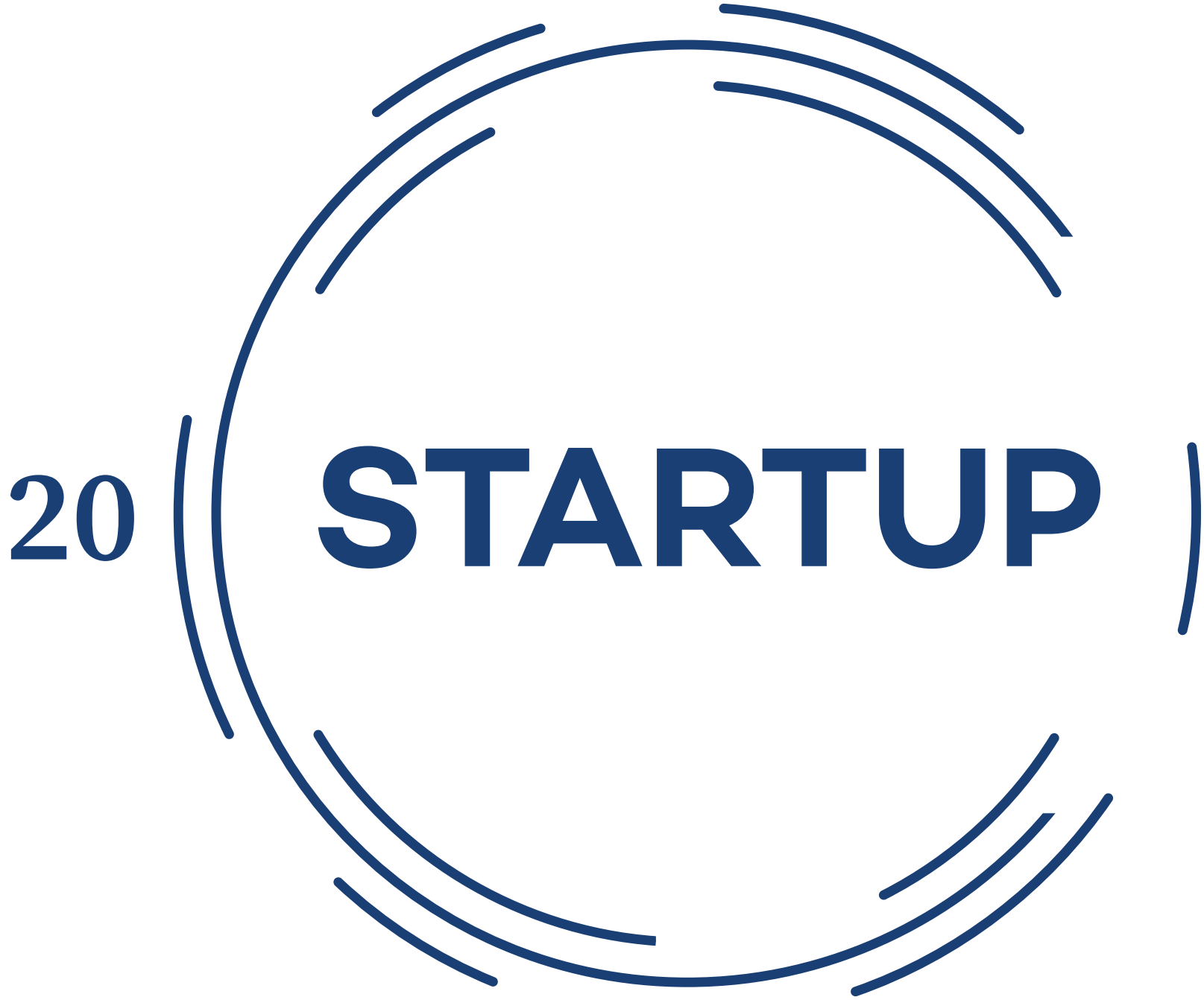
STARTUP STRATEGY



Generally speaking, “Startup for the Future” is carried into effect as a key component of the NTI. Entrepreneurship is one of the five main axes defined in the 2023 Industry and Technology Strategy, in which the targets and strategies of the NTI were determined. “Startup for the Future”, however, has been developed to complement the Industry and Technology Strategy with a focus on technology-oriented entrepreneurship activities.

The document that sets out the targets, priorities, and strategies of this initiative aimed at the development of the startup ecosystem is called Startup Strategy. The Startup Strategy was developed with a global claim during the Fourth Industrial Revolution when radical paradigm changes were observed. The purpose of this strategy is to create an entrepreneurship ecosystem with a highly competitive power in the international arena. Therefore, it was prepared as a comprehensive guiding document that closely followed international players analyzed our differences and superiorities, and developed appropriate policies that consider all of our shareholders.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STARTUP

The main objective of the Startup Strategy is to create a "leading startup ecosystem" by developing the technological milieu, which has already reached a certain maturity level in terms of cultural infrastructure, qualified human resources, and entrepreneur-friendly market opportunities, through corporate support and infrastructure, accessible financing instruments and policy tools that help to create opportunities.

In line with this objective, Startup Strategy mainly defines the responsibilities to be assumed by the public sector. Yet "Startup for the Future" can only be made real through the contributions and participation of all the relevant parties. From this point of view, the strategy is built on an approach that focuses on cooperation between the public and private sectors, gives the public sector the role of a facilitator, and envisages effective governance among shareholders.

This strategy is in line with this approach. In-depth studies were carried out with a group of shareholders comprehensive enough to represent all the players of the ecosystem. The current status of the startup ecosystem in Türkiye was analyzed, a SWOT analysis was conducted, the problems and areas of development were determined, and solution offers were introduced accordingly. In this process, the findings obtained at the preparation stage were sufficient, and the reports prepared by the important players of the ecosystem were also consulted to crosscheck the studies. As such, this strategy is a document derived from inside the ecosystem.

FINDING OUR POSITION FOR THE NEW ROUTE

Information-based manufacturing plays a critical role in the global economy, by transforming all the elements of value chains. While labor and human intelligence are becoming less important in production, innovative technological products and startups are becoming increasingly important. In this age of information, creating added value through technological innovations has become the most important winning tool owned by countries. Traditional industrial production, which plays a decisive role in the balance of power and social welfare in the global arena, is gradually being replaced by informatics and technological activities.

By the first quarter of 2021, the global startup economy reached approximately $3 trillion. Notwithstanding the specific conditions caused by the COVID-19 pandemic in 2020, the startup ecosystem had an annual growth of 10 to 14%, while the world economy grew by 2; 5- 3%.[1] By the end of 2021, angel, venture capital, and private equity investments reached 643 billion dollars, growing by 92% compared to 2020.[2] It is estimated that there are approximately two million technology startups worldwide, and every year nearly 140,000 new technology startups are added to the ecosystem.[3] In mid-2022, 1179 unicorns operating across the globe will reach a value of 3,820 dollars.[4] From these figures, it can be deduced that technology startups are not only growing fast but are also becoming the main drivers of economic growth due to their economic value.

Relative Position at The Global Level

Developed economies align and lead start-up activities on a global scale. Countries aspiring to protect and strengthen their competitive economic superiority invest more in technological development activities and initiatives. Yet, it is exemplary for developing economies that other players make a difference and strengthen their positions in this new competitive environment. For example, Türkiye has made significant progress in the startup ecosystem in recent years. It has reached an important capacity in terms of the elements constituting the ecosystem. However, it is a fact that a country that sets great goals and claims to create an entrepreneurship ecosystem that can operate on a global scale must reach a certain maturity in all aspects.

Therefore, it is important to look at developed economies and our country through globally recognized indices so that we can detect the determine our status and identify development areas.

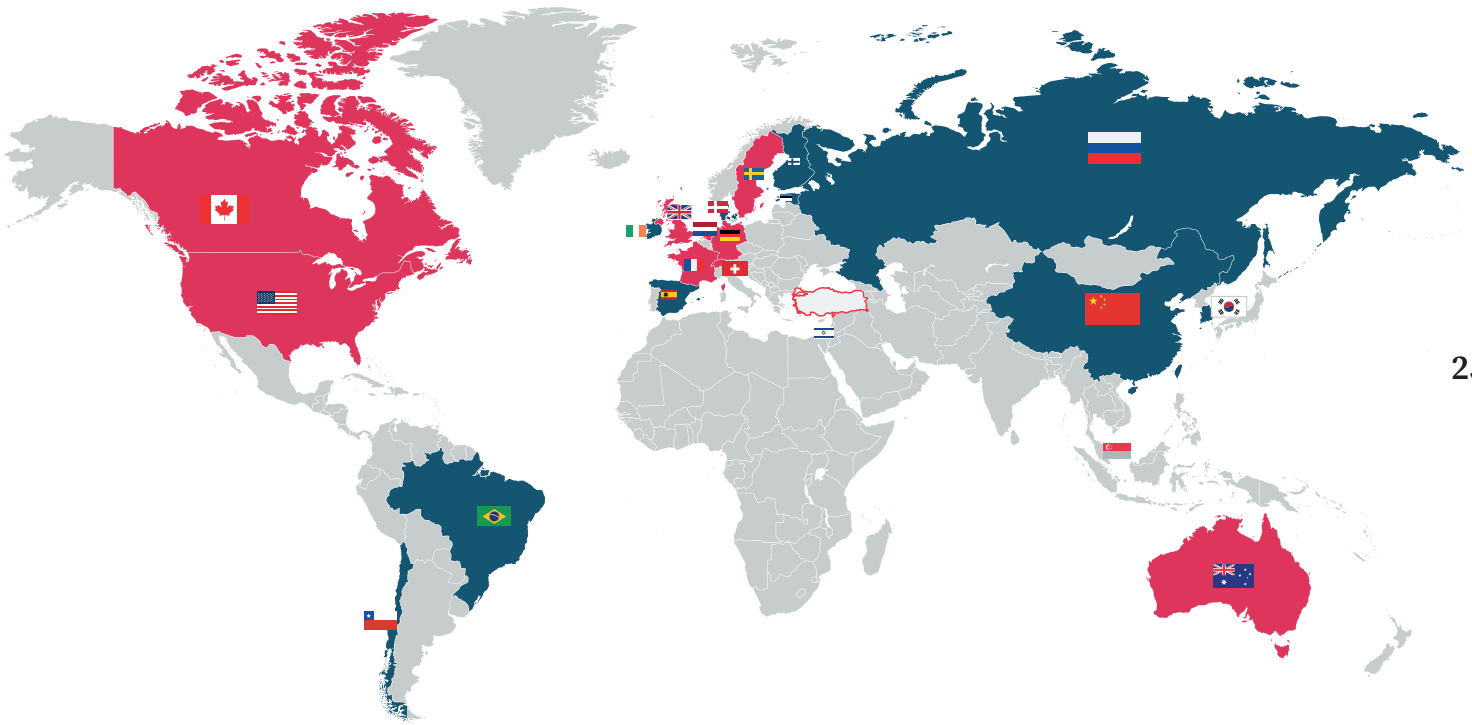
1 Startup Genome: The Global Startup Ecosystem Report 2020
2 Startups Watch 2021 Evaluation Report
3 Global Entrepreneurship Monitor Report 2020
4 CB insights, The Complete List of Unicorn Companies-July 2022

Where an ecosystem stands in a given index shows its overall maturity level and its level in the lower dimensions. These indicators serve as useful tools when it comes to determining strategic priorities and actions and measuring the impact of the strategies.

According to various indexes followed by the technology ecosystem in the world, our country has still not reached the position it aspires to be in. It is seen that some countries that have active policies on startups are at the top of the list, despite their relatively small economies, thanks to the ecosystems they have built. In the indexes where ecosystems are evaluated based on the elements independent of economic scales, Türkiye ranks about the 40th. The countries that have developed ecosystems at the level of cities are naturally at the top. İstanbul, our ecosystem for technology and entrepreneurship, occupies a place in the lists parallel to the position of our country.

Assessments based on the global indices allow us to set our priorities and focus as they provide us with best practices. They also give us guidance on where to look for the right strategies and effective implementations. Recognizing the strengths of the ecosystems that are at the top of the lists will give us practical benefits, especially in terms of our country's strategy.

Startup Ecosystem Map



Source: Compiled from diverse global index studies.

The first and the most successful example of startup ecosystems is indisputably the Silicon Valley in the US. This ecosystem, whose foundations were laid about 70 years ago, hosts the headquarters of more than 400 listed companies and over 3 million qualified employees in an area of about 3,000 km2.[5] In addition to the Silicon Valley, the US is home to the most important technology centers in the world such as Boston, New York City, Los Angeles, Seattle, Washington DC, Chicago, and Austin. Looking at the aspects that make up the U.S. success in the ecosystem, it is evident that the U.S. is constantly expanding its pool of skilled human resources through its research and development-focused universities that provide high-quality education, paving the way for a creative and open innovation environment through its cultural diversity, and easily helping new startups to break through with its collaborative culture and supportive collaboration networks. Furthermore, it is apparent that the regulatory infrastructure in the U.S. provides a suitable environment for entrepreneurs from around the world to foster new initiatives. As a result, a large number of new startups are added to the ecosystem every day, and the number of successful entrepreneurs with an eye for innovation is increasing. The US startup ecosystem has, thus, grown by creating its brand value and becoming a global attraction center. This position has brought about a structure enrichened and strengthened by the business models coming from other countries.

Another ecosystem that has become a point of attraction on a global scale is emerging in the United Kingdom, where the financial and banking sectors are particularly strong. In 2020, the value of the entrepreneurship ecosystem in the UK reached $585 billion, and venture capital investments amounted to $10.6 billion.[6] Thus, the UK became one of the top players in the global indexes. In fact, the UK is considered among the most important ecosystems in the world due to the diversity and accessibility of its funding sources at early stages. In recent years, the country has come to the forefront of health and education technologies in addition to finance technologies.

South Korea, another leading country in technology and innovation, offers an important platform for the development of an entrepreneurship ecosystem due to its infrastructure and capacity. In South Korea, the public sector plays a determining role in the development of the entrepreneurship ecosystem as well as technology-based industry. The public sector has effective support mechanisms for technology startups to access financial and advisory services.

The global technology ecosystem is growing day by day and getting rich with new actors and innovative practices. While the world's biggest socio-economic powers are on the top of the list within this structure, some centers have managed to become global attraction centers with populations of a few million.

5 2021 Silicon Valley Index
6 Tech Nation The Future UK Tech Building 2021

Of them, Estonia, an Eastern European country with a population of 1.3 million, stand out. Estonia, known for its globally renowned technology startups, has become a global attraction center among European Union countries thanks to its e-citizenship and startup visa practices. It has attracted technology experts and startups from around the world also because of its facilitating policies and high digitalization rate in public services.

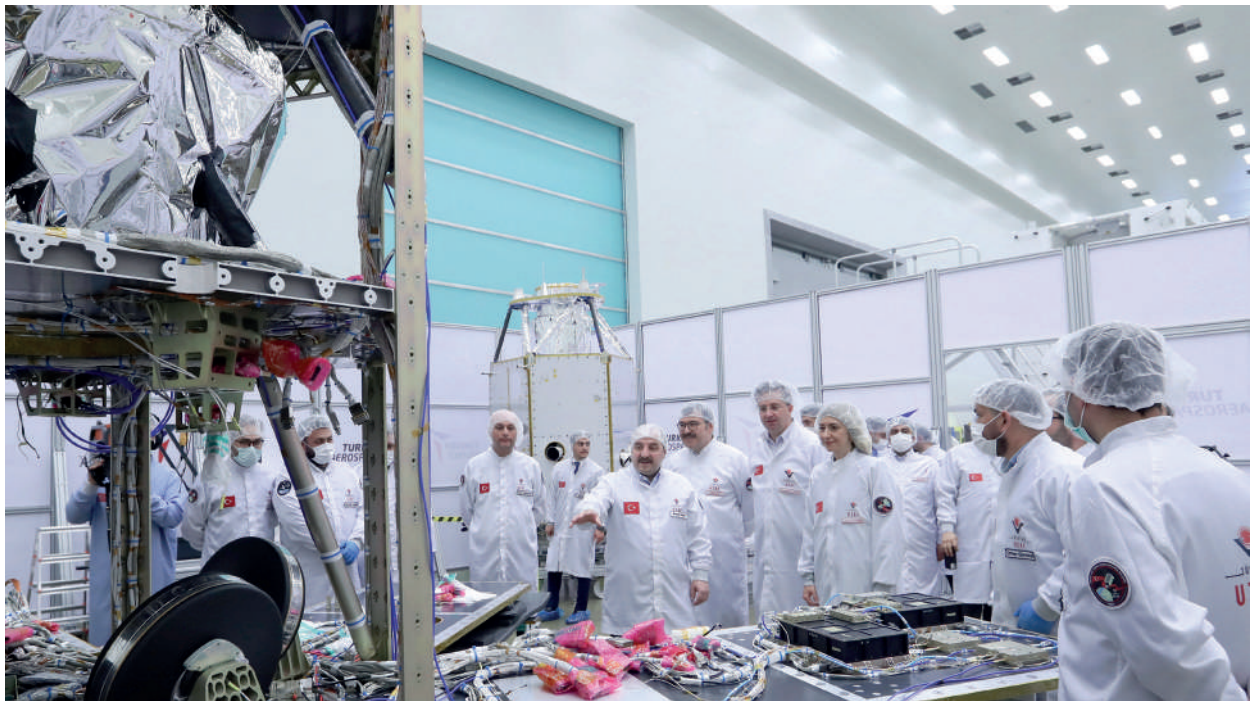
Another example is Chile, a South American country. Though Chile has a little weight in the global economy, it ranks high on the indexes because of its popularity in the other ecosystems resulting from its startup visa and effective financial support mechanisms.

Entrepreneurship mechanisms are generally associated with certain cities. In addition to the above-mentioned USA-based centers London, Paris, Berlin, Singapore, and Amsterdam also make the list of the most popular entrepreneurship centers. In recent years, Chinese cities such as Beijing, Shanghai, and Shenzhen have also taken center stage due to their business and investment volumes. Paris, on the other hand, is an attraction center in Europe, as it has differentiated itself from other cities in terms of the accessibility of finance, commercialization of technology, and availability of environments that facilitate cooperation. Berlin hosts quality technology startups with its strong human resources and R&D infrastructure. Singapore, which has strong ties with global ecosystems, is regarded as a gate to enter the Far East and Pacific markets for large venture capital funds and several successful startups.

Different ecosystems in different parts of the world have different qualities, but in general, accessible sources of finance with high volume, strong cooperation mechanisms and infrastructure opportunities, flexible policies attracting international talents, effective technology transfer mechanisms, a and supportive public sector are commonly observed qualities that make ecosystems successful. As a country aiming to have a strong and mature ecosystem, we need to build our own model by benefiting from the experience of other countries as much as possible.

Türkiye's first domestic and national HR earth observation satellite:

IMECE, our HR earth observation satellite planned to be launched in 2023, is preparing for space travel. İMECE, designed and produced by Türkiye from scratch, will be ready for space in the last quarter of 2022. The objective of IMECE is to enable the Turkish Armed Forces to obtain very high-resolution images below 1 meter through the electro-optical cameras developed by TUBITAK Space Technologies Research Center.



A Look from İMECE at 36-42

It is possible to state that Türkiye's technology ecosystem has made significant progress in recent years. Ten years ago, given the elements that constitute the ecosystem, there were gaps and deficiencies, but now the structure is much more mature and fuller. There have been remarkable developments in competence accumulation in focal areas at our universities that support R&D and technology development activities and pay importance to the training of qualified human resources although we are still not where we wish to be in the indices. Currently, 93 technoparks, are available. As it is known, technoparks are at the heart of startups as they host the ecosystem. Nearly 8000 technology firms operate in these zones. Supplementary elements of the ecosystem, such as accelerators and incubators, angel investor networks, technology transfer offices, and coworking spaces are improving every day in terms of quality and quantity.

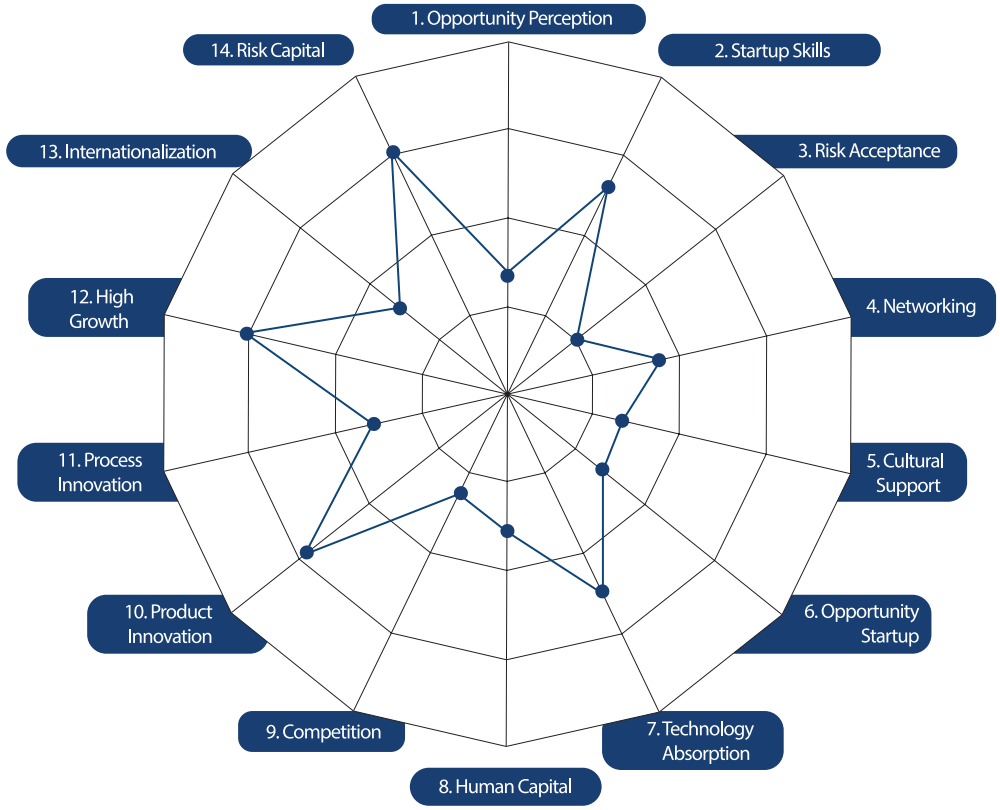
The diversity and accessibility of financial resources are both determining factors and good indicators of the level of development of startup ecosystems. Regarding venture capital investments, some hopeful developments have occurred in our country. According to the Startups Watch, Türkiye attracts the highest investment in Europe and the MENA region. In 2021, an all-time record was broken in terms of both the number of investment tours and the number of investments, and an investment of 1.6 billion dollars was made in 294 investment tours. Compared with the previous year, the amount of investment increased by approximately nine times. In the first six months of 2022, another record was broken, with an investment of 1,4 billion dollars. Thus, the target to reach an investment of TRY 5 billion in startups in our country by 2023 was achieved in 2021 and the first half of 2022. Our new target is to continue and increase such investments.

7 Compiled from Startups Watch 2021 Evaluation and Startups Centrum 2021 Türkiye Startup Ecosystem Investment Report.
8 Startups Watch 2022 First Half Türkiye Entrepreneurship Ecosystem Report

Source Startups Watch 2021 Report

Some sectors have gained prominence in Türkiye's startup ecosystem. Among them, the gaming industry, which is writing success stories on a global scale, is one of the leading ones. Turkish companies may have more than one game on the world's largest mobile gaming platform among the most popular games. This is also reflected in sales figures. In recent years, several venture capital investments have been made in the gaming industry. In 2021, the gaming industry was among the technology fields attracting the most investments with 265 million dollars invested in the same year.[9] The same trend continued in the first half of 2022.[10] Following the emergence of Turkey's first turn in this sector in 2020, the emergence of another game, Turcorn in 2021 is also an element that shows the potential of our country in this field. In addition to the gaming industry, successful products and startups have emerged in Türkiye in fields like artificial intelligence, health, fintech, SaaS and cybersecurity. Qualified human resources and dynamic startups can be mobilized in fields where there is rapid market penetration.

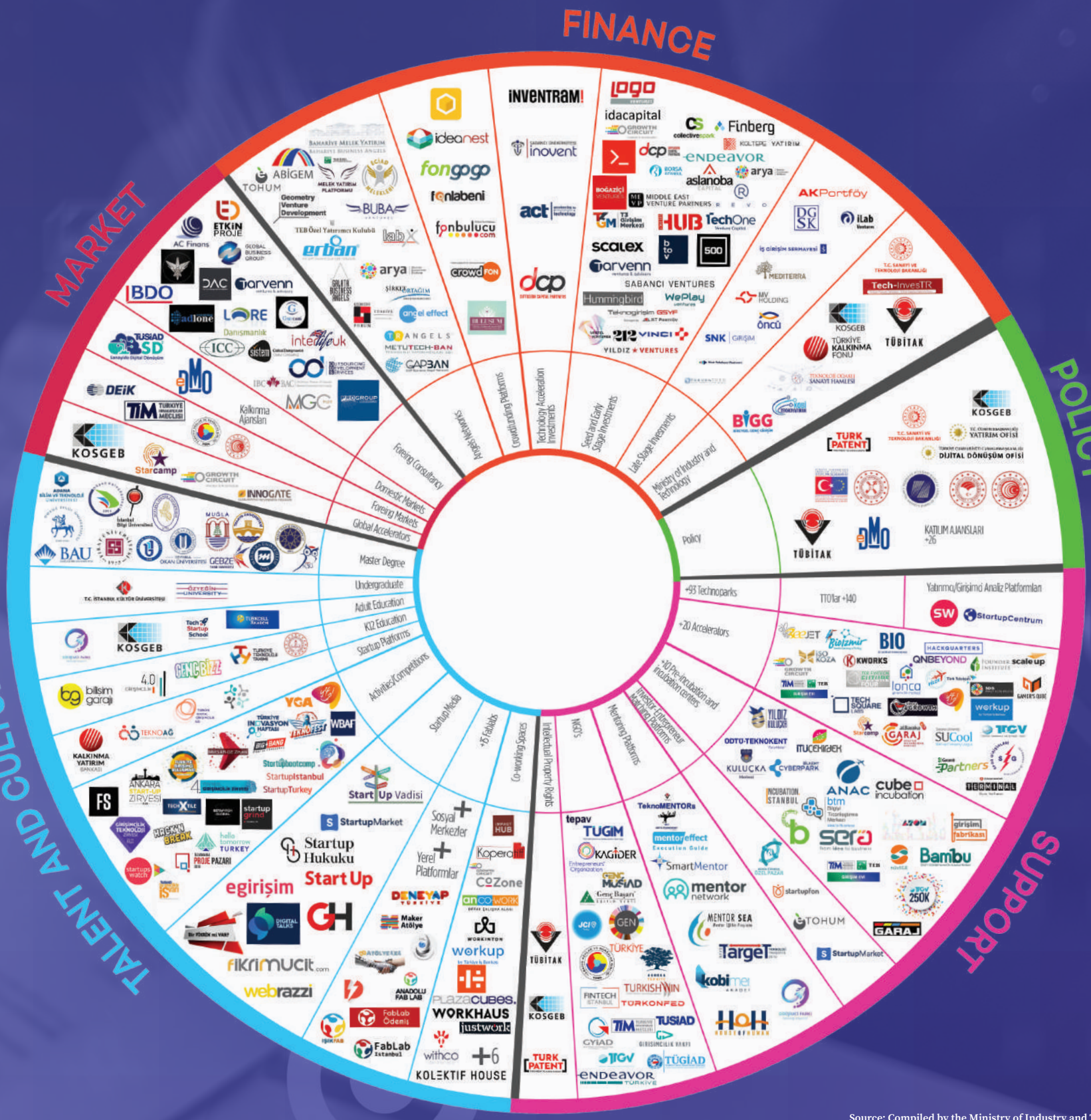
9 Startups Watch 2021 Evaluation
10 Startups Watch 2022 First Half Evaluation



Source: GEDI Global Entrepreneurship Index (2019) (Türkiye)

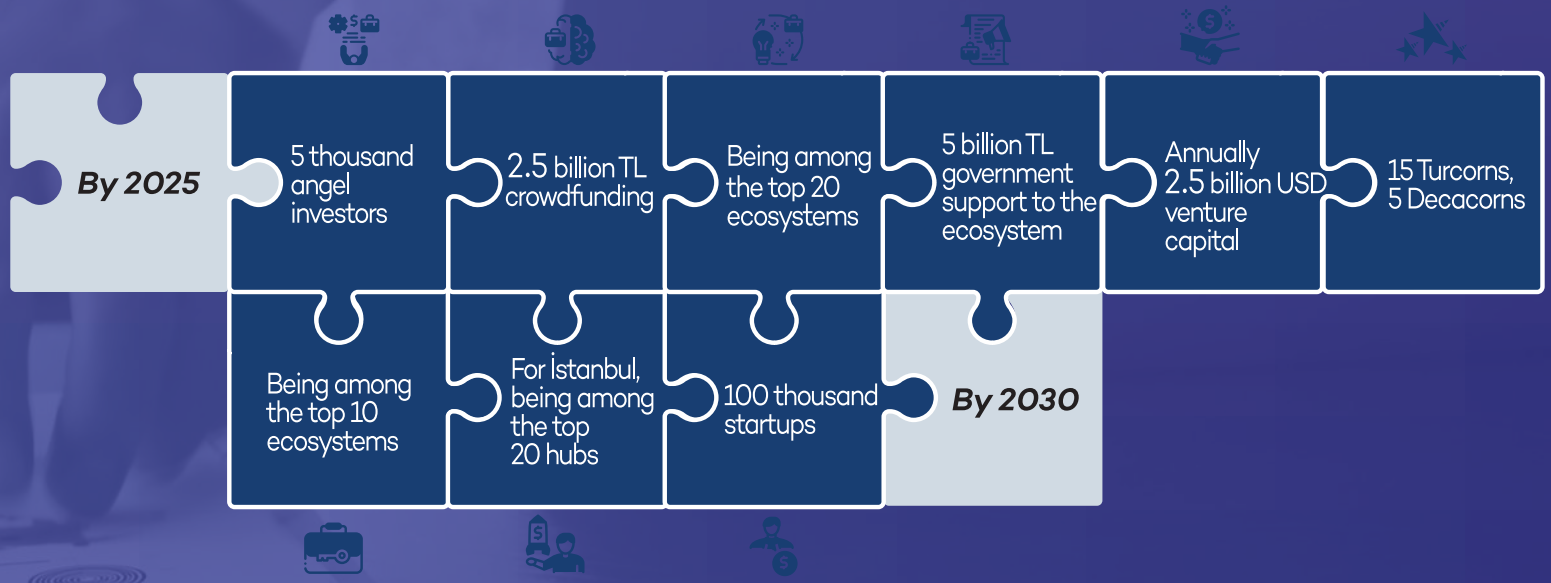
Although Türkiye has no major deficiencies in the ingredients that make up the start-up ecosystem, it is still shy of the position it deserves in terms of quality and depth. In the figure above, international comparisons were made, and the position of our country was determined through 14 factors.

ACTORS IN TÜRKİYE'S ENTREPRENEURSHIP ECOSYSTEM



Source: Compiled by the Ministry of Industry and Technology.

TARGETED GOALS


By 2025
5 thousand angel investors
2.5 billion TL crowdfunding
Being among the top 20 ecosystems
5 billion TL government support to the ecosystem
Annually 2.5 billion USD venture capital
15 Turcorns, 5 Decacorns
Being among the top 10 ecosystems
For İstanbul, being among the top 20 hubs
100 thousand startups
By 2030

COLORS OF STRATEGY

A good strategy is colorful.

Color is the key to be distinguishable. The strategy should have a distinguished premise. Colorfulness also represents richness. Ordinary and stereotypical strategies may not be expected to create significant impacts.

A good strategy shows its color.

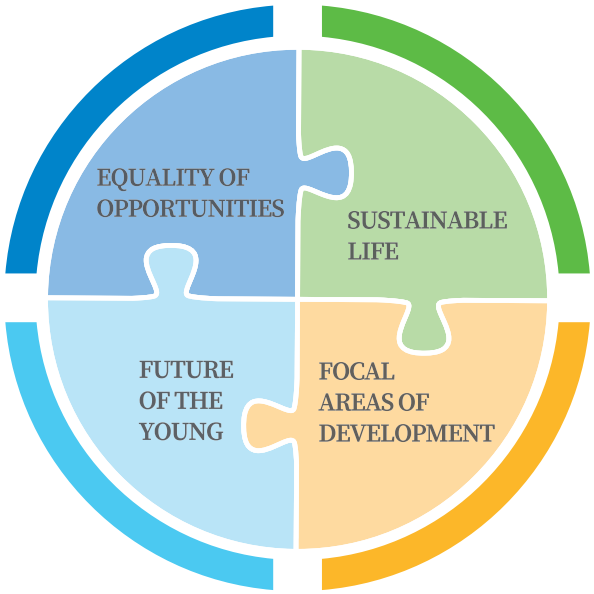
Those who really have something to assert and are self-confident make their assertions clear. Only those who are determined in sticking to their assertions can achieve results even if their premise is debatable and have certain shortcomings. To ensure the strategy become successful, assertion should be made clear and applied pertinaciously.

A good strategy spreads its color.

A high-quality strategy should be able to spread its color just like an object that penetrates its surroundings and color it with its own colors.

Goals defined in the previous section represent developments and outputs anticipated specifically for the startup ecosystem. On the other hand, such a strategy that has the power to transform the economy and social life entirely could be expected to produce broader impacts. Therefore, it should be developed in such a way as to ensure development within the ecosystem but also in other dimensions that are important for the development of the country.

Considering its potential impact, the Startup Strategy particularly focuses on the four main dimensions, including Equal Opportunities, Sustainable Living, Investment in the Future of Youth, and Focal Areas of Development. It has awareness and sensitivities, perhaps of varying degrees, in these four aspects. The implementation of actions will be focused on generating impacts of such levels as well. The strategy will reflect its colors into social life and the national economy to the greatest extent possible.



Equal Opportunities

Egalitarian representation in all aspects of social life is a prerequisite to ensure an inclusive and sustainable growth model. The ability to channel our social riches into economic activities will be the key to productivity. By melting different opinions, experiences, and competencies in the same pot in a balanced manner, an open-minded, creative, and wise spirit will be created. Failing to do so, a significant capacity will be left idle and thus wasted. Women are the building blocks of society, and it is a strategic matter for Türkiye to provide them with better access to opportunities and equal representation in the economy. In entrepreneurship that is built on innovation, it is essential to create a richer and more diverse ecosystem structure. Entrepreneurs are the main element of a diverse ecosystem, and it is rather important that they come from different socio-economic and cultural backgrounds.

Women's entrepreneurship is an undeniably significant element for national development. Therefore, it is globally urged upon and expected to be improved. According to a report published by the Global Entrepreneurship Monitor (GEM), female entrepreneurship activities are equal to or higher than those of their male counterparts only in 4 economies out of 50 surveyed.[11] In Europe, the female entrepreneurship rate approached 16% in 2020 while the share of female enterprises in total venture capital investments was 8%.[12] In Türkiye, on the other hand, 14% of 294 investments made in 2021 were made in enterprises founded or partnered by women.[13] In the first half of 2022, this rate stood at 26%.[14]

In light of the above data, it is clear that female entrepreneurship in Türkiye needs to be promoted more, which is one of the priority issues of our strategy. We believe it is important to support women in realizing their already existing potential rather than reverse discrimination. When offered equal opportunities, women prove their high potential and leave their mark in value-adding efforts in all areas. The Startup Strategy will take steps targeted to increase the number of women and sustainable female enterprises within the startup ecosystem.

Startups can offer relatively more accessible opportunities for all socio-economic groups and regions compared to other areas of economic activities. Digital business models developed utilizing available technological tools mostly allow carrying out activities and creating value in a space-independent manner. Again, such ventures can be realized through relatively smaller investments compared to other areas of activity. As the result, prospective entrepreneurs who manage to come up with a feasible business idea can achieve a success story with small budgets, no matter in which province they

11 GEM Women's Entrepreneurship 2020/21 Report
12 Startup Heatmap Europe Report 2021 The Power of the Ecosystem
13 Startups Watch 2021 Evaluation
14 Startups Watch 2022 First Six-Month Evaluation

operate.

It is no doubt that a developed ecosystem environment will make it easier for startups to come to life and grow. The advantages of being part of a big and strong ecosystem, including access to human resources and physical infrastructure, being involved in cooperation mechanisms, and finding finance cannot be denied. Besides, prospective entrepreneurs in less advantaged environments will also have the opportunity to make their dreams true.

Therefore, startups can offer a ray of hope across all social strata. To this end, we must ensure that entrepreneurial activities become more accessible to the social base. It is also important to create a nationwide infrastructure that extends beyond metropolitan areas such as Istanbul, Ankara and İzmir, as well as to guide youth toward entrepreneurship and support youth entrepreneurship. Mobilizing locally influential institutions and non-governmental organizations which can reach out to different, socio-economic groups will ensure wide participation, thereby supporting and ensuring growth in the technology ecosystem in the long term. Our strategy aims to make entrepreneurial activities more accessible at a grassroots level, thereby bringing disadvantaged social groups, - especially in terms of participation in economic activities, - into the entrepreneurship ecosystem.

Sustainable Living

The COVID-19 pandemic led to a global crisis that served as a wake-up call for the whole world and once again laid bare the need for supporting and strengthening in a participated manner the "Sustainable Development" agenda that was enforced in 2015 by a unanimous vote of 193 countries including Türkiye. The "Sustainable Development Goals" aim to enhance wealth and welfare as well as mobilize the fight against climate change – which was reinforced by the Paris Agreement – an integral part of a socially inclusive development model. Targeting economic growth with the fight against climate change at its core and encouraging businesses to develop economic models with an anti-global heating approach have entailed a need for additional global reforms. The fight against climate change has thus become a central matter in international economic and trade policies.

With the European Green Deal (EGD) announced on December 11, 2019, the European Union (EU) has set itself the goal of being the first climate-neutral continent in 2050. It has announced that it will transform all its policies on the axis of climate change by envisaging a transformation by putting these policies at the heart of the industry.

Relevant actions under the EGD provide the basis for a transformation that will gain momentum each year by reshaping the industry in the EU, including energy, transport, industry, finance, construction, and agriculture. In this framework, Türkiye has been acting with awareness of the need for developing climate change-sensitive policies as in many other countries in the world. Regulations required by its position as a candidate country as well as its trade integration with the EU and are also important to increase the share it will receive in international investments have been showing their positive impact in many aspects. The 11th Development Plan emphasized that due to Türkiye's geographical position, it ranks among the countries to be most affected by climate change. Therefore, Türkiye contributes to the anti-climate change efforts following an approach that considers its national consequences. It also underlines the fact that it follows a policy focused on green growth and limitation of increased emission trends and continues to prioritize efforts of adaptation to climate change in parallel with its position as a developing country. The "Growth"-titled section under the 2021-2023 Economy Program is focused on sustainable growth as well as export and import of value-added products.

Circular economy is another important pillar of sustainable economic growth that is sensitive to climate change which is emphasized in the said policy documents as well. Enhancing recycling activities within the product life circle reduces raw material costs, eventually contributing to the economy and the public good. On the other hand, incorporating reusable materials into the recycling chain reduces pollution and carbon emissions. A sustainable circular economy also brings about environmental and economic transformation and development and increases the need for new business models. With their new business models, dynamism, innovations, rapid transformation capacity, and ability to adapt to changes, startups will produce significant solutions in this global transformation process.

The Startup Strategy envisages major steps to create the building blocks of an enabling ecosystem for the foundation and growth of startups that will play a significant role in sustainable circular economic development in Türkiye. It also involves inclusive measures to build an ecosystem that will be central to startups that will contribute to the current global transformation.

Focal Areas of Development

The rapid development of new technologies has brought about significant opportunities. Paradigm shifts surfacing due to rapid and profound progress have reshaped existing industries and created new industries and areas of activity. This new process in which all actors at the starting point offer similar opportunities in technological domination competition. It is important to seize these opportunities at the macro and micro levels for our country and individual entrepreneurs, respectively.

In global megatrends, certain technologies and fields of application with high potential of generating added value in the future seem to be prominent with artificial intelligence being the leader of course. AI technologies are promising to create unprecedented value in almost all sectors. On the other hand, the blockchain technology is expected to have a disruptive effect in many fields. Similar core technologies, are also candidates to bring about equally transformational consequences in other areas of application. Mobility is definitely a case in point. Electrification is another key area still in its formation phase but is slated to shape the future thanks to AI-driven autonomous driving systems and high interconnectedness. Health care and smart living are other promising areas. In this field, where digital technologies have the potential to generate great value, innovations such as the use of artificial intelligence and disease diagnosis can be seen as indicators of what can be done.

For our national economy and technology ecosystem to achieve this potential, entrepreneurship activities should be concentrated on determined areas of priority.

Startups should better work these efficient areas and seize emerging opportunities. The Startup Strategy aims to concentrate entrepreneurship activities on such areas that are defined as focal areas of development. To this end, it suggests aids and incentives focused on focal areas of development and leads entrepreneurs especially to deep technology-based activities.

Areas of activity and sectors that are defined and prioritized as “Focal Areas of Development” in the Strategy include:

- Mobility
- Healthcare and Biotechnology
- Financial Technologies
- Artificial Intelligence
- Education Technologies
- Cyber Security
- Digital Game
- Blockchain

Investment in the Future of Youth

One of the main focuses of the Startup for the Future Initiative is the development of human capital in such a way that guides transforming professions due to digitalization. We believe that such intensive development aimed can only be achieved having more young people with high competencies across the country. Setting Türkiye free from its economic and technological dependencies and having a say in the global competition are dependent on skilled and original production to be created by its human capital.

Türkiye's young demographic in the 15-24 age group is nearly 13 million, out of an overall population of almost 84 million. Türkiye's young population leads the way for the future of our country which is gifted with a larger young demographic than other EU countries. This young population is one of the most important elements envisioned in the Startup Strategy. A nation's most important capital is its young population which leads to sustainable development and progress. Our target is to help all components of society – including entrepreneurs, workers, capital owners, researchers, scientists, public officers, and consumers – become productive, hardworking and investigative people open to innovations and self-improvement. This is how we can create a social structure that supports sustainable development. Steps to be taken in this direction should prioritize generations and be scaled to address the general public.

The Initiative for the Future offers a perspective that prioritizes strengthening the skills of the young population for the jobs of the future, in order to create an entrepreneurial society and equip them with the skills and entrepreneurial mindset needed in the new world to ensure sustainable development, regardless of the career path they choose.

30 STRATEGIES FOR STARTUPS

The startup ecosystem is known to have a different structure than conventional industries, from its financing methods to human resources. In this field, a strategy is needed that aims at holistic development and supporting actions that must be defined and structured according to the existing dynamics and the current background.

A developed ecosystem is one where elements supporting entrepreneurs are rich in quality and quantity.

"Entrepreneur" is the main element that is both the input and the output of an entrepreneurship ecosystem which is a complicated structure comprised of many different components with each component affecting one another at varying levels.[15] Actions taken to strengthen, support and improve the activities of this main actor also play a significant role in the development of the ecosystem. We could say that if an ecosystem is rich in entrepreneurship-supporting elements then it is a developed one that enables the formation of more value-adding enterprises. Also, the performance of an enterprise is expected to improve as the number of people and organizations interacting within the ecosystem increases.[16] On the other hand, another factor used in determining how developed an ecosystem is, is the existence of inclusive policies and regulations taking into account all actors and components.

The 11th Development Plan defines its main objective as the enhancement of the entrepreneurship culture as well as technology-based and innovative entrepreneurship capacity; strengthening of the entrepreneurship ecosystem that enhances the opportunities for access to finances, information, and the market; and ensuring scale-up of companies. It also suggests a series of inclusive policies. The 2023 Industry & Technology Strategy states that "Türkiye generating business models, products and services that can be a pioneer at international level is dependent on its possession of a solid entrepreneurship ecosystem".

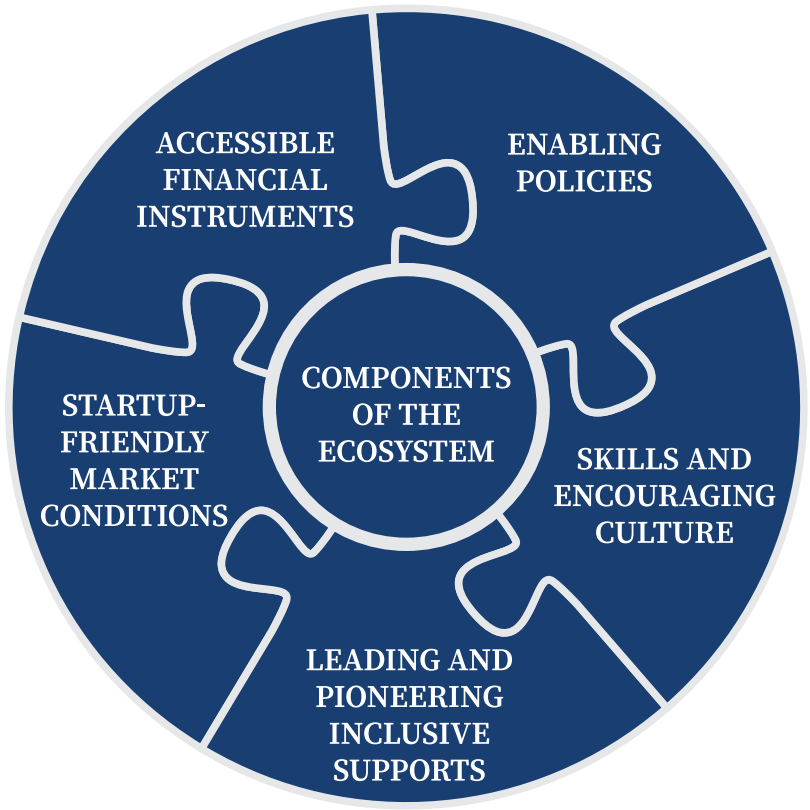
Türkiye generating business models, products and services that can be pioneer at international level is dependent on its possession of a solid entrepreneurship ecosystem".

15 Isenberg, D. (2010). How to Start an Entrepreneurial Revolution: The Big Idea, Harvard Business Review.
16 Gauthier, J. F. ve Morelix, A. (2020) Governments, Don't Let your Startups and Scaleups Die: The Importance of Well- Designed Startup Funding Policy in Times of Crisis. Startup Genome.

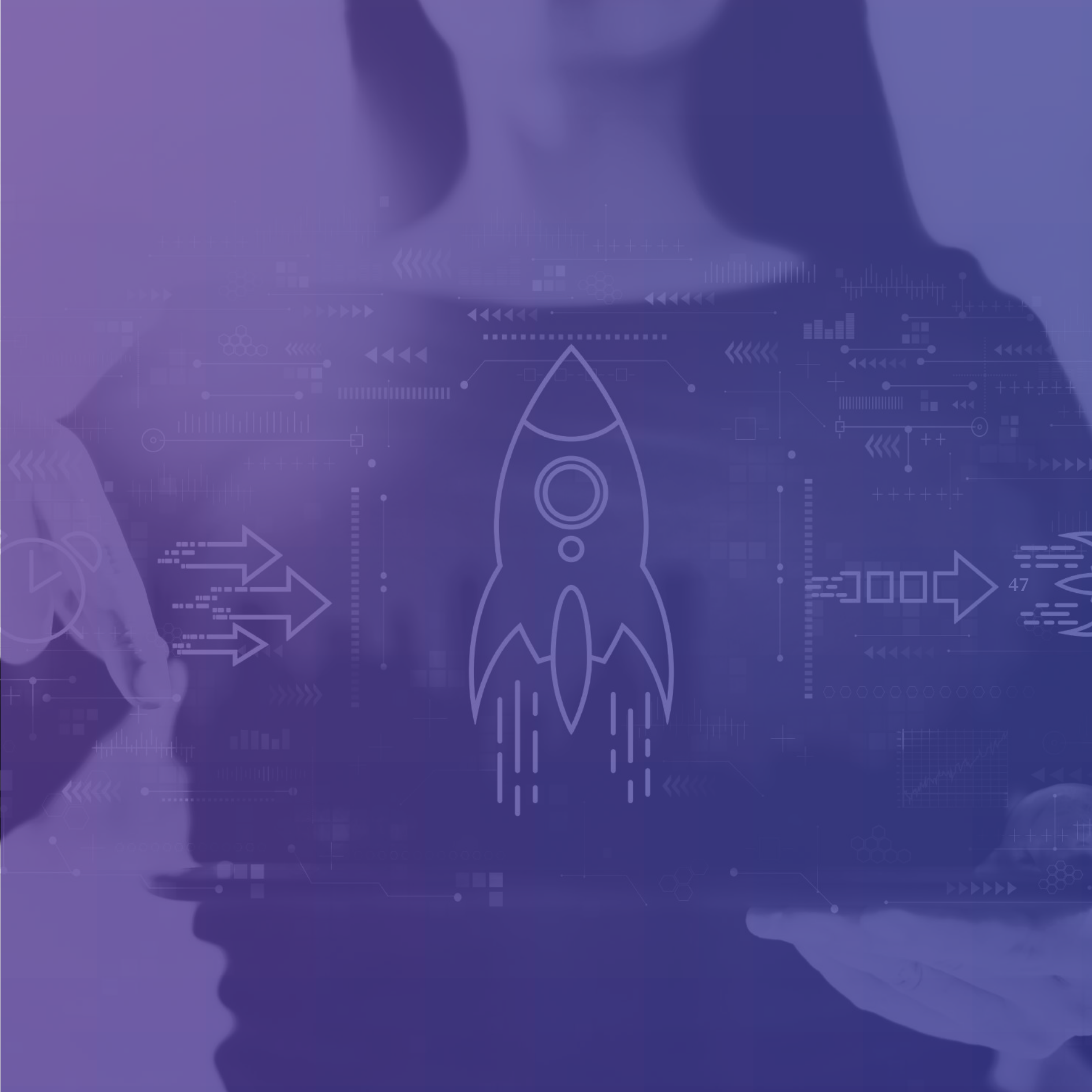
In this framework, the Startup Strategy divides the startup ecosystem under the following components:

- Accessible financial instruments,
- Enabling policies,
- Skills and encouraging culture,
- Leading and pioneering inclusive aids,
- Enterprise-friendly market conditions. [17]

Each of those components is inseparable from one another and all are equally important to Türkiye in its pursuit of becoming a globally acclaimed entrepreneurship ecosystem. The National Startup Strategy suggests 30 strategies in those 5 dimensions that drive the strategy to achieve its goals and yield effective results based on the situation assessment conducted.



17 The "Ecosystem" model in the "Entrepreneurial Ecosystem Approach and Domains of the System" put forward by Isenberg (2011) is taken as basis.



ACCESSIBLE FINANCIAL INSTRUMENTS FOR RAPIDLY SCALABLE STARTUPS

For startups to transform into rapidly scalable and sustainable firms, they should be able to have access to funding at the right time, in a structure and amounts that fit their growth needs and stages. The main elements of a solid financing environment include angel investors, venture capitalists, corporate investment, governmental support/funds, public offerings, and crowdfunding.[18]

In the startup ecosystem in Türkiye, access to finance is one of the areas that offer much room for improvement. According to the OECD Financing SMEs and Entrepreneurs 2020 Report, the existing financing mechanisms in Türkiye have not yet gained sufficient depth, although they are diverse. However, significant progress has been made in recent years. Investments that were seen to be stationary between 2011 and 2017 showed an increase of 108% in 2018.[19] Enterprise capital investments that remained within the range of 60 million USD until 2017 exceeded the range of 100 million USD, except during the crisis in 2018. The sum of annual venture capital and angel investments broke a record of 139 million USD in 2020, whereas in 2021, 294 investment rounds resulted in venture capital investments and angel investments of 1 billion 552 million USD. Of those 294 investments, 44 were foreign investors.[20] In the first quarter of 2021, the fact that Getir achieved a value of 7.5 billion USD and received an investment of about 1 billion USD is one of the biggest factors that led to this new record. The increase in the funding volume of Türkiye's entrepreneurship ecosystem in recent years brought İstanbul up to the 13th rank in the list of most invested cities in Europe and to the 4th rank in the list of investments in 2021. With investments made in 2021, Istanbul was ranked 2nd in the Middle East and North Africa following Tel Aviv and moved ahead of Dubai for the first time.[21] The record-breaking investments in 2021 were achieved within the first quarter of 2022. The 140 investment rounds that took place in the said quarter resulted in 1 billion 393 million USD in venture capital investments and angel investments, placing Türkiye in the European super league. Istanbul became the 4th most invested city in Europe while ranking the 1st when it comes to investments in gaming enterprises.[22]

In Türkiye, public funds have an important place among early sources of funds. The fact that non-public actors are not active enough to feed the ecosystem particularly in the early stages can cause many ideas to fail before they can come to life. Public funds have been providing the core capital to startups since 2017 through various programs. The 1508-Technology and Innovation-Oriented Initiatives Support Program, implemented by TUBITAK between 2007 and 2009, can be considered the first public initiative in this area. Also, to support technology initiatives, the Startup Capital Support Program was implemented by the Ministry of Industry and Technology between 2009 and 2015 under Law No. 5746 on Support for Research and Development Activities. Nearly 2 thousand startups were provided support under the said program

18 Technology Enterpreneurship Ecosystem in Türkiye (2018). OC&CStrategy and Consultants.
19 OECD Financing SMEs and Entrepreneurs Report (2020)
20 Startups Watch 2021 Assessment
21 Startups Watch 2021 Assessment
22 Startups Watch 2022 First Half Assessment

which was transferred to TÜBİTAK along with its budget allocated for 2016 and combined with the BiGG Program.

Already in place since 2012, TÜBİTAK's BiGG Entrepreneurship Support Program is listed among the most important early-stage fund sources with TRY 450,000 worth of support packages granted to early-stage enterprises. Under the program, more than 1700 startups were founded in early 2022 and TRY 229 million was granted to them as support. Another public funder in entrepreneurship, KOSGEB carried out the Entrepreneurship Support Program, under which TRY 1.7 billion of support was granted to more than 66,000 businesses between the years of 2010 and 2020.[23] In addition to startups, KOSGEB support also involved enterprises operating in conventional sectors. Those aids have a significant effect in creating source diversity and providing lifeline support to the ecosystem although they do not suffice on their own the early-stage financing needs in startups in Türkiye.

Individual Young Enterprise – BiGG Program

The Support Program known as BiGG was launched by TÜBİTAK in 2012 and its regulations and name have changed over the years. However, it still bridges a significant gap in the ecosystem. It supports all kinds of processes in an all-encompassing idea to market approach, to help entrepreneurs transform their technology- and innovation-oriented business ideas into products and services of high commercial value through the firms they will found.

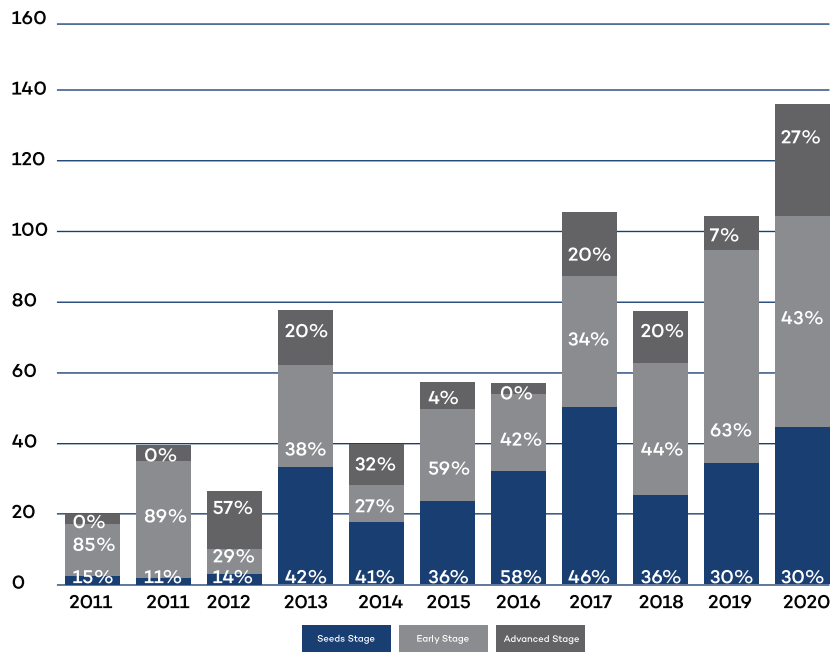
Amended in 2015, the Program was renamed as BiGG and its structure was also changed. The Program that has been conducted in cooperation with stakeholders since 2012 now integrated organizations into its support system and began to carry out the 1st Stage application gathering and acceleration procedures – training, mentorship, business plan development activities – through those Implementing Organizations.

A further change introduced in 2021, removed a condition that mandated enrollment in formal education. Therefore, entrepreneurs of any age group who are not in the partnership structure of any company can apply to the Program with their technology-based business idea and receive a core capital as grant up to TRY450,000.

23 KOSGEB Entrepreneurship Support Programme New Entrepreneur Support Final Assessment Report

When it comes to annually collected entrepreneurship investments (sum of angel investments and venture capital) by investment stage in Türkiye's entrepreneurship ecosystem since 2010, it transpires that annual venture capital has been increasing. On the other hand, there are other trends by investment stage are concerned. As far advanced-stage investments other than seed and early stages are concerned, investments in advanced stages are seen to be increasing year by year. This could be deemed an indication that the ecosystem has been developing and gaining depth in a holistic manner. Surely, investments in seed and early stages are also important should there be missing links in the early stages of an innovation, a venture may not progress to the advanced stage. On the other hand, an ecosystem which does not invest in advanced stages is not enabling for scale-ups. This causes enterprises to leave the ecosystem after a certain stage and prefer to scale up in more developed and established ecosystems. Accordingly, the Startup Strategy involves many strategies to help create the fund volume needed at different stages.

VENTURE INVESTMENTS IN TÜRKİYE'S ENTREPRENEURSHIP ECOSYSTEM BY STAGE (M $) (2010-2020)



Source: Startupswatch 2020 Report Data

1. Encouragement of Venture Capital Practices

Existing regulations for venture capital practices in Türkiye have achieved a certain maturity and continue to improve in line with the needs of the ecosystem. There are significant tax incentives implemented to increase venture capital (VC) and investments. However, there are various limitations or areas of improvement observed in practice. To accelerate growth and make regulatory arrangements more ecosystem-friendly:

• Improvements will be made in regulations and other limitations faced in practice will be removed to enhance the efficiency of incentive practices that can be benefited from.

• Guidance and awareness-raising efforts will be carried out to encourage individual investors that meet the definition of qualified investor to participate in venture capital.

• Practices in foreign countries will be examined and fund management processes will be improved to encourage establishment of venture capital domestically.

• To channel accumulated private pension funds into startups as investment, arrangements will be made to increase the rate of obligatory funds to be transferred from those funds to the venture capital fund and savers will be encouraged to include venture capital funds in their portfolio.

2. Traditional Capital's Participation in Venture Capital Funds

A major part of capital stock in Türkiye is owned by traditional economic actors who have been active for many years. Also, most capital owners carry on their activities and investments in conventional sectors. To catch up with the current economic transformation, part of that capital needs to be directed into technological fields. To this end, encouraging major corporate companies and family businesses to participate in venture capital funds would be beneficial. In this framework:

• It will be ensured that the number and amount of venture capital funds established or contributed to by corporate firms is increased. The progress will be supported by the fund of funds mechanism. Firms that have an extensive business experience, sector knowledge and purchasing power will be encouraged to lead the way and provide guidance for enterprises through acceleration programs.

• Related incentive legislation will be regulated so as to ensure transfer of part of the benefit comprised of public incentives granted to investments in conventional sectors into the startup ecosystem. In case of investments made under incentive documents, firms that invest in venture capital funds will be enabled to benefit from the additional investment contribution rate.

3. Promotion for More Shares from the Global VC Pool

In the global arena there is a huge capital flow centered on technology. Technology ecosystems can only grow by as much as their share in that flow. The technology ecosystems in Türkiye currently benefit from this opportunity only at a modest rate, although recently there has been some increase. Startups that have been increasing in number and growing more competent year by year are also becoming significant profit centers for global capital. It is crucial to inform the world efficiently of the potential our ecosystem holds to develop collaborations aimed at mutual gain. In light of this vision:

• Efficient communications will be carried out to encourage globally prominent capital funds to invest in our technology ecosystem. Under a program that will target at a specifically determined audience, the number of advertising activities and summits to be held will be increased.

• Actions will be taken to enhance interaction between international investors – Turkish expatriates, mainly closely knitted and related communities – and the technology ecosystem in Türkiye. Promotional and matching activities will be stepped up to encourage successful Turkish business people based abroad to invest in the technology firms in Türkiye.

4. Public Support Cloud in the Development of VC

Ecosystem verification is an important aspect of venture capital investment. If are made in a fund or enterprise, the presence of reliable actors mitigates the perceived risks. Especially for capital owners who invest in this field or the Turkish market for the first time, the presence of anchor investors brings an element of trust. Therefore, the participation of the public in venture capital funds as a stakeholder will increase the interest in the ecosystem.

For venture capital funds to improve their corporate capacities, make reasoned investments, and achieve commercial feasibility, on the other hand, the amount of funds raised is critical. For more funds to achieve the critical threshold and existing funds to be more effective, the public supporting the funds as leverage would be quite beneficial. For these purposes:

• The number and count of fund of multi-manager investments, AKA funds, carried out by the public will be increased. A total of TRY 3 billion funds earmarked to serve as a FOF will be injected into the ecosystem by 2025, which will help increase the number of funds investing in Turkish enterprises and enhance the volume of overall venture capital funds by obtaining funds from abroad in exchange for the public funds to be put in, and ensure that the enlarging ecosystem becomes specialized and diversified vertically. The superstructure which will act as FOF will assume the mission of distributing all public FOF mechanisms for one main purpose. Accordingly, those funds strengthened through public funds will be able to operate as a result of this effective strategy. This FOF will continue to be expanded through current funds from investments. Thereby feeding the ecosystem as a support cloud in a continuous and encompassing manner under the management of the Ministry of Industry and Technology.

• To facilitate access to funds needed by enterprises, a readily accessible mechanism which enables direct investment in enterprises through the co-financing method will be put into effect.

• The public FOF mechanism will focus on the establishment of venture capital funds specifically for the areas of improvement (biotechnology, AI, blockchain, mobility, 5G, digital transformation of the industry, healthcare, finance, cybersecurity) prioritized in line with the focal technologies roadmaps under the 2023 Strategy for Industry and Technology.

A Public FOF Practice: Tech-InvesTR

Founded in cooperation of the Ministry of Treasury and Finance and TÜBİTAK, TechInvesTR – a FOF structure – allows making investment in early-stage technology-based enterprises and contributes to the formation of a sustainable venture capital ecosystem.

The venture capital funds established under the Tech-InvesTR Program for Supporting Venture Capital can be participated by Technology Transfer Offices (TTO), Research Infrastructure (RA), Technoparks and other third party private investors as partners as well as the Ministry of Treasury and Finance.

Upon the establishment of 5 funds to which TÜBİTAK and the Ministry of Treasury & Finance anticipates to transfer funds of about 350 million TL under the Tech-InvesTR Program, actions have been taken to invest fund of 1.7 billion TL including the amounts guaranteed by national and international investors in tech-based enterprises.

5. Facilitating Access to the Funds

Startups are typically considered high-risk in terms of a financial investment as they aim to produce innovation-based value rather than implementing well-tested and repeated business models. Tech firms that have a modest capital, a non-scaled income and yet-to-be-improved cash flow have a quite limited credibility in the financial system. Therefore, they have a hard time accessing finances other than venture capital investments.

For the development of technology ecosystems, it is important that enterprises have alternative opportunities access to finances. Ensuring such diversity for Turkish enterprises would therefore offer great benefits. For these purposes:

• For startups to better benefit from the banking system, the loan guarantee mechanism will be strengthened with the focus being on technology-related fields.

• Necessary measures will be taken to promote the use of convertible finance instruments. Such instruments which do not involve direct share selling or partnership can offer time and cost advantages both to entrepreneurs and investors in appraising early-stage enterprises. For those instruments to be used within the ecosystem, action will be taken to clarify the opportunities provided and improve the applicable legislation as needed.

• Action will be taken to improve the peer-to-peer financing method as an innovative instrument in enterprises' access to finances.

6. Angel Investment

Angel investment, i.e., individual participation capital is one of the commonly used the financial instruments in meeting financial needs of early-stage enterprises across the world. Angel investment invests in tech enterprises at a stage where such investment involves the highest risk and offers a lifeline support for their idea to blossom. It is one of the highest risk funds in the ecosystem as it is invested in a relatively obscure output that is yet to emerge.

In Türkiye the number and volume of angel investors are yet to be improved. Angel investment is a highly developed sphere across the world and the number of angel investors has been increasing day by day. In 2019, 10 billion Euro of such investment was made in Europe while 26 billion USD was invested in the USA. There are 345,000 and 340,000 active angel investors in Europe and the USA respectively.[24]

On the other hand, in Türkiye there were approximately 795 angel investors licensed to benefit from those incentives by the first half of 2022. However, the number of active angel investors that benefit from incentives under their license remained

24 Compiled from the Total Number of Business Angels in Europe from 2014 to 2019, Statista and the World Angel Investment Forum.
25 The Ministry of Treasury and Finance Individual Participation Report 2022 2nd Quarter.

limited to 50.[25] The number of investors licensed under the incentive program and the number of investments made seems to be low despite Türkiye's perceived potential in this regard. In 2020, angel investors and networks invested a total of $61 million in 76 startups. In 2019, a total of $52.7 million was invested in 41 startups.[26] This type of investment which is critical, particularly for the development of early-stage enterprises, needs to be approached to the levels seen in matured ecosystems. To this end:

• To ensure the management of incentives offered to angel investors in synergy with other policy instruments and practices applicable to the enterprise ecosystem, Individual Participation Investment licensing and incentive practices will be carried out by the Ministry of Industry and Technology.

• Efforts will be carried out to diversify the taxable items subject to incentives in Individual Participation Investing.

• Awareness-raising and training programs will be organized across the country to encourage potential angel investors with high levels of income and experience in this direction.

• To increase the angel investors' contribution to the ecosystem, qualified angel investors will be utilized in the public support mechanisms. Also, mechanisms will be developed to encourage angel investors that are licensed but inactive to become active and ensure that such an investors support enterprises not only as investor but as a mentor.

7. Crowdfunding Instruments

Crowdfunding is an instrument that plays a significant role across the world in helping many innovative ideas and projects access the required finances to grow into a major companies. It is used as an alternative method of financing, especially for early-stage technology startups that cannot obtain loans from financial institutions.

Angel investment Networks accredited by the Ministry of Treasury and Finance:

- *Keiretsuforum İstanbul*
- *Erban Erciyes Melek Yatırım Ağı*
- *Reinves Angels*
- *Gapban Melek Yatırım Ağı*
- *Şirket Ortağım*
- *TR Angels Melek Yatırım Ağı*
- *Egiad Melekleri*
- *Bahariye Melek Yatırım*
- *Arya Ekosistem Danışmanlık AŞ Ağı*

26 Startupus Watch 2019 and 2020 Evaluation Reports

Source: Ministry of Treasury and Finance

There are four types of crowdfunding mainly used in the technology ecosystem : donation-based, reward-based, share-based, and borrowing-based crowdfunding.

• Considering the driving effect of crowdfunding in developing new ideas, such practices will be pioneered for ventures at the idea stage and academic-based enterprises. To enable the realization and commercialization of academic ideas, practices where reward- and donation-based crowdfunding are commonly used, will be carried out.

• To support activities of startups that add value by putting technology into public service but struggle with accessing finances, the SocialUp Program aimed at fundraising by means of crowdfunding will be put into practice.

• Share-based crowdfunding campaigns through which the public provides co-financing in focal areas of improvement will be organized to support enterprises to scale-up.

Crowdfunding *is a financial instrument widely used in developed countries, but it offers important opportunities in developing countries as well. It is utilized to measure whether products of an early-stage enterprise will draw the expected interested and access needed seed capital. According to the Capital Market Law, crowdfunding refers to "collection of money from public through crowdfunding platforms within the rules and procedures defined by the Board and without being subject to the provisions of the said Law on investor indemnity to help a project or enterprise access the fund they need."*

Types of Crowdfunding

Reward-Based Crowdfunding:

A method where the fund-gathering party predetermines a reward at the beginning and gives that reward to funders if the project becomes successful. The platforms called Bulușum, Fongogo and Fonlabeni set example for reward-based crowdfunding.

Equity-Based Crowdfunding:

Refers to selling of shares of fund-receiving companies to investors as in public offering, enabling fund-searching entrepreneurs to access finances without interest. Fonbulucu and efonla are examples of share-based crowdfunding platforms in Türkiye.

Lending-Based Crowdfunding:

It is an alternative method offering unsecured loan to fund collectors with low interest and involves P2P and P2B microcredits. Borrowing-based crowdfunding practice was put into practice upon the Crowdfunding Communiqué developed by the CMB and enforced on 27.10.2021.

Donation-Based Crowdfunding:

Platforms through which funders provide support without financial gain to projects they believe to produce benefits. CrowdFon and ideanest are examples of donation-based crowdfunding platforms in Türkiye.[27]

27 (Paschen, J. (2017). Choose wisely: Crowdfunding Through the Stages of the Startup Life Cycle,Business Horizons, Vol (60), p. 179-188, CMB Communiqué on Share Based Crowdfunding)

ENABLING POLICIES: ROLE OF THE PUBLIC ENTREPRENEURSHIP

Entrepreneurship ecosytems are structures that require harmonious interaction of many stakeholders with widely ranging dynamics. Entrepreneurs, investors and institutions that develop regulative public frameworks and structures that encourage/ improve startups are an integral part of such ecosystems. Ecosystem actors interacting with one another and carrying out their activities in harmony is rather critical for the development of the ecosystem. It is important that the public develops innovative and enabling policies compatible with the dynamics of the ecosystem and thus strengthen its infrastructure. Actions to be taken to enable the entrepreneurship ecosystem in Türkiye to become a global hub include revisiting the public policies with an innovative approach specific to startups.

8. Legislative Regulations

Existing legislation has a determinant effect on the creation and growth of newborn and developing areas of activity. Prohibitive and restrictive legislative regulations can block the way of activities with great potential for growth. Also, regulations that do not take into account the specific dynamics of the area of activity in question or do not address the needs of ventures and consumers, although they are not restrictive, may not bring the expected benefits, even if they were developed with the best intentions.

In new technological fields, adopting a liberal approach to advocating unlimited freedom is neither realistic nor beneficial. Establishing a legal framework is important to ensure predictability and establish a fair competitive environment, especially for enterprises. However, this framework needs to be built on smart regulations which consider the dynamics of the ecosystem and the needs of relevant actors. Accordingly:

• A participative and transparent governance mechanism will be established to serve as a guide and determinant factor in the development of public policies and legal regulations to influence startup activities. This **governance mechanism** will function in such a way that ecosystem actors will be represented at maximum and produce impact.

• Startups' relationship with legislation will be strengthened. Startups must be subject to many regulations in a broad area of activity. In many regards, use cases experienced for the first time are seen and, in this case, entrepreneurs are unable to clearly understand or are uninformed of the framework provided by the legislation. This becomes a significant barrier or risk element for entrepreneurs who already do not have a close relationship with applicable legislation. To help this problem to be resolved, guiding documents will be developed to help regulation on technology ecosystem to be clearly understood and training programs will be organized in common problem areas.

• **Regulatory Sandbox** formation will be pioneered for promising activities with growth potential, particularly in focal

development areas. Regulatory sandboxes are innovation mechanisms that are created in cooperation of the public sector with the private sector and facilitate the development of new products and services with exemption from various legislative regulations.

9. Startup Badge

Technology initiatives that develop technology and produce high- added value are building the future of the Turkish economy. The development of these companies, which develop quality products and services based on R&D, is closely followed and supported in Technoparks. Although technoparks are mechanisms of special importance for the development of the ecosystem, our technological breakthrough needs to be managed in a broader framework.

Without being limited to technoparks, a new framework should be defined in order to monitor the development of technology initiatives in a more inclusive way, to provide the support they will need and to provide a more qualified communication between enterprises and the public. For this purpose,

• **The Startup Badge** application will be implemented in order to identify technology-based activities and initiatives that produce high- added value. Companies with the Startup Badge will be offered various conveniences and privileges at the point of benefiting from government support and incentives. This application will also allow the development of the technology ecosystem to be monitored.

10. A Solution Partner Public Agency: Startup Office

Public aids have a significant effect on the development of the technology ecosystem. It could be said that public aids make effective contributions in a holistic manner in many countries that are successful in this field. In most of those countries, we see that there is an efficient structure in close touch with and accurately identifies the needs of the ecosystem and generates solutions with well-established communication.

In Türkiye, it is safe say there is intensive public support for the enterprise ecosystem. Various public institutions, mainly KOSGEB and TÜBİTAK, provide financial aid. However, there is a need for a holistic perspective to ensure those aids create a greater effect. On top of grant support, there is also a need for an inclusive mechanism that considers all financing opportunities and complementary elements such as training and counseling. Accordingly:

• **A Startup Office** will be founded as the primary solution partner of the startup ecosystem. It will be structured in such way that it will be the only stop for enterprises at different stages to apply for grant support, loan guarantee, mentorship service, and support for activities, infrastructure, or interface. Its job description will include carrying out and supporting various activities including promotional events etc. to support the development of the ecosystem. To offer those services more effectively to enterprises, the office headquarters and

service points will be located within the ecosystem and at centers where startups are concentrated.

11. Digital Company

Digitalization is the most prominent aspect of the 4th Industrial Revolution. Upon the COVID-19 pandemic, digitalization has gained momentum all around the world and digital transformation has left its mark in all areas. Also, in the entrepreneurship ecosystem which is one of the most dynamic ecosystems in the economy, digitalization has been bringing about new approaches within itself and had a transformative effect on other areas as well.

• Specifically for technology- and innovation-based enterprises a digital company will be set up with the aim to facilitate foundation and liquidation procedures, provide special exceptions in taxation, and thus encourage the foundation of more Turkish enterprises, as well as creating more appeal for successful foreign enterprises to be drawn into the Turkish ecosystem.

12. Springboard for Startups: Public Procurement

Early-stage startups often struggle overcoming the first sales barrier to commercialize their products and services. When they overcome this hurdle, their commercialization process accelerates thanks to the acquired credentials. The existence of a supportive demand base also acts as a springboard for scaling up businesses and entering international markets. Public procurement is a significant instrument to help technology ecosystems develop in terms of both effects. Effective use of public procurements in this direction is one of the main goals of public policies. In this framework:

• The main framework for the prioritization of startups in technology purchases of public administrations will be determined by the Executive Committee of Industrialization.

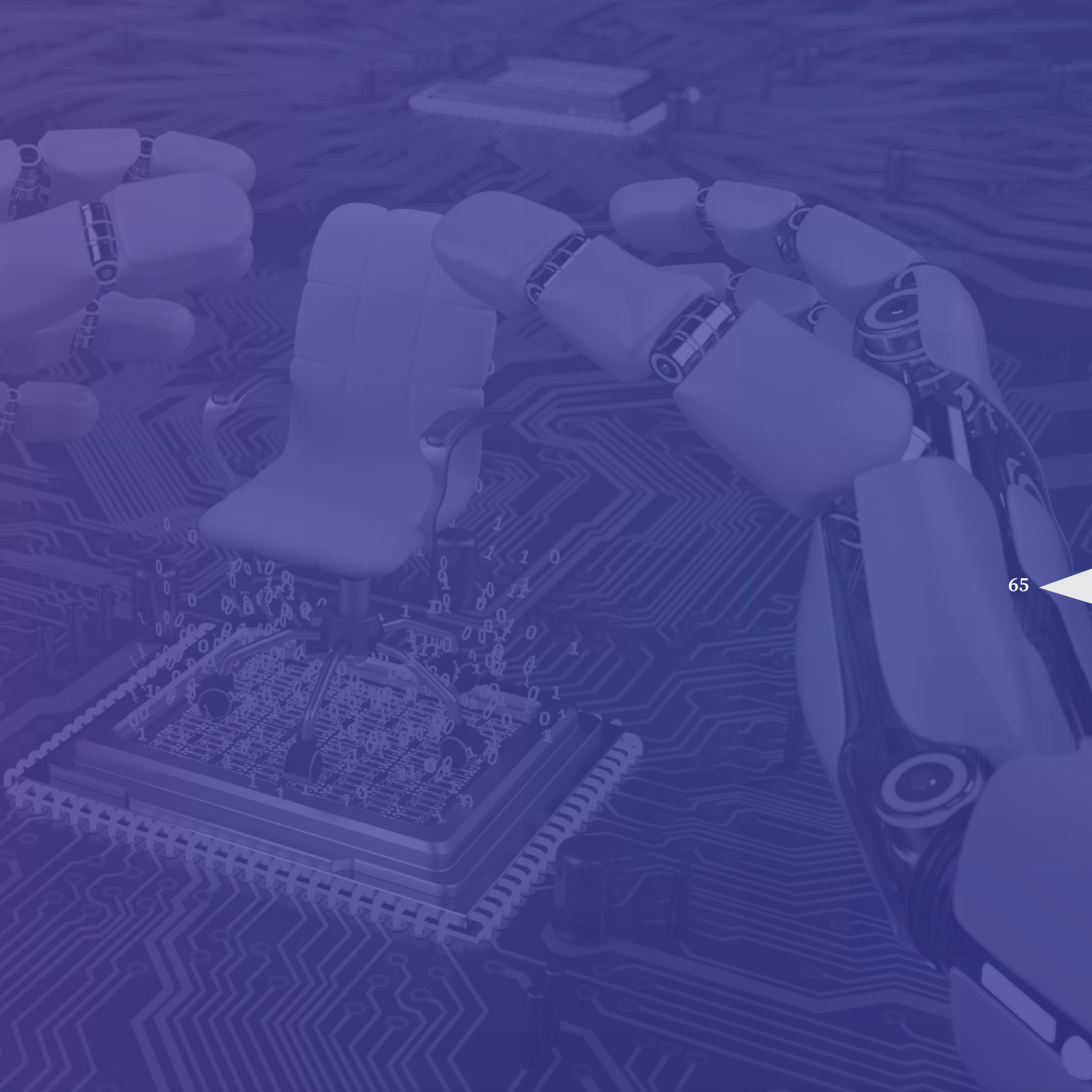
• In public procurements of information systems, authorization and purchase models that will eliminate the competitive disadvantages of local firms will be employed.

• **A technology counseling mechanism** will be established in order to monitor technological trends and identify competencies of local producers in new technological areas. In light of the information obtained, it will offer counseling services to public institutions and private sector suppliers regarding technological product and service purchases.

• To contribute to productization, commercialization and branding process of startups through public procurements, the scope of TechnoCatalogue that allows direct procurement will be extended.

All Governmental Aids Are Only One Click Away: yatirimadestek.gov.tr

The website (www.yatirimadestek.gov.tr) which collects all governmental aids under one platform has become the new address for those who wish to realize their business ideas. The Ministry of Industry and Technology Directorate General of Development Agencies provides comprehensive information on the said website about all investment procedures. The search engine on the main page of the website delivers rapid and reliable results. The website enables access to either brief or detailed information on support announcements while the "Incentive Robot" on the website provides details on provinces and sectors considered for investments. In the website which shares the estimated return of investment incentives, the "Investor Dictionary" can be used to find out the meaning of technical terms related to aids and investment. The Q&A page also allows access to investment support office specialists working for the Development Agencies in 81 provinces.



BUILDING BLOCK OF AN ENTREPRENEURIAL NATION: SKILLS AND ENABLING CULTURE

The Turkish economy has significant natural advantages in the entrepreneurship area thanks to its size, young population, high levels of technology use, and its position as a regional hub. Ranking among the biggest 20 economies of the world, Türkiye has a population of 84 million with a 40- million demographic falling within the 15-45 age group. Half of the population that ages over 15 has a high school diploma or higher. Türkiye is a country with a young population where the rate of the old population dependent on working age population stands at 12%. This rate is lower than most of the developed or developing countries.

Digitalization has reshaped the working culture in the evolving and developing world and created many new business areas while rendering many others outdated. It is anticipated that 15% of current jobs in the world will be fully automated while 32% will witness a drastic transformation through digitalization.[28] It is critical for the nation to raise existing talents as individuals who possess the required qualifications in such transformed working areas, give direction to future jobs, and even join the Startup army and shape the future through its employment-generating enterprises. Today, 90% of existing jobs require IT competence. Türkiye has highly developed facilities for youth to access the technological tools required achieve these goals.

Türkiye's advantages arising from its human capital have found only limited representation in the entrepreneurship area. Extensive actions will be taken as needed to transform those natural advantages into infrastructure that will be utilized in the establishment of a global startup ecosystem, thus creating a qualified entrepreneurial society that inspires global interest.

With steps to be taken to raise qualified human capital, Türkiye will go a long way toward achieving its goal of becoming a globally influential startup ecosystem. This will increase the number of prospective entrepreneurs and more importantly enhance their quality.

A qualified entrepreneurial society that inspires global interest

28 Compiled from the OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis and Word Economic Forum Future of Jobs 2020 Report.

Qualified Human Capital in Software: Open-Source Platform

An "Open-Source Platform" where public sector, private sector, NGOs and universities came together has been launched with the aim to improve the software development ecosystem, enhance the software quality produced in Türkiye, and promote open-source coding for the development of globally acclaimed products and services. The Open-Source Platform is targeted to increase the number of qualified software developers and open-source software products, as well as the number of companies and entrepreneurs that offer support services for such products.

To achieve this goal, two Advanced Coding /Software Developer Schools named "42-Kocaeli" ve "42-İstanbul" have been founded to train human resources needed in this field. They aim to raise qualified software developers and equip them with internationally recognized certificates.

13. Entrepreneurship Training for High School Students

To ensure long-term development in the entrepreneurship ecosystem, human capital should be continuously improved. The major young population of secondary schools in Türkiye will be the biggest group to feed into the ecosystem. Ensuring our youth become equipped with skills that successful entrepreneurs need to possess will contribute to the development of the country. This framework, sets a target to help our youth acquire problem solving and teamwork skills as well as have the motivation and awareness for generating social and economic impact. Young students in science and vocational high schools are considered natural candidates for techno-based entrepreneurship. If we are to talk about technology, seeing high school students only as individuals to be educated would be a mistake. As individuals who use technology, follow up on current trends, and even set new trends and produce new technologies, they should be given a more effective role. Accordingly:

• **GALİP (Prospective Entrepreneur High School Program)** will be launched in cooperation with the Ministry of National Education to ensure students of science and vocational high schools step into the startup ecosystem. Related student club activities will be supported, and students will be offered applied entrepreneurship training.

Contests will be organized to raise awareness and increase their motivation in this respect.

• The program will help our youth have closer contact and interact more with the technology ecosystem. Science and vocational high schools will be paired with Technoparks to provide youth with internship opportunities in Technopark companies.

Deneyap Technology FabLabs:

The Deneyap Technology FabLabs are qualified and unique training centers which offer theoretical and applied technological trainings with the mission of raising future stars in the technology field. Deneyap providing training to secondary and high school students in various fields including Robotics & Coding, Electronic Programming, Software Technologies, Cyber Security, Aviation and Space Technologies, Materials Science and Nanotechnology, and AI will be carried out in 81 provinces in cooperation with the Ministry of Industry & Technology, the Ministry of Youth and Sports, TÜBİTAK and T3 Foundation. These trainings to be delivered for 3 years completely free-of-charge are aimed to raise top tier researchers and entrepreneurs who develop technologies in Türkiye.

14. Entrepreneurship Education in Higher Education

For young people who acquire basic entrepreneurship skills in high school, higher education is the most critical and most suitable time for them to achieve the qualifications needed for entrepreneurship. To nourish and enlarge the human capital pool, we need to raise more prospective entrepreneurs out of university students. We need to discover promising young talents who are university students and support their development.

In raising an entrepreneurial generation, universities should serve as an incubator with all of their functions. In addition to making the curriculum fulfilling, they should also offer youth an enabling environment and opportunities to help them internalize, experience and adopt entrepreneurship as a culture. They should be encouraged to take part in entrepreneurship contests including hackathons, ideathons, and datathons during their university years.

Entrepreneurship should not remain a social activity complementary to university education. Nor should it be deemed a skill only business management students can acquire. It should be positioned as a basic acquirement, particularly for engineering and science students who are natural candidates for startups. Mobilizing student clubs is certainly one of the most effective ways of getting in contact with youth.

Supporting mechanisms that put young people at their center goes hand in hand with the entrepreneurship spirit. In this framework:

- Assessment and evaluation methods to identify individual entrepreneurship skills are to be developed with the aim to provide guidance to youth in their educational life and reveal the entrepreneurship map of our human capital.

- Universities will be collaborated to ensure entrepreneurship and entrepreneur skills get more coverage in the curriculum of technology-focused departments to be prioritized, particularly in engineering and science departments. Those pieces of training will be reinforced by case analysis classes.

- To enhance the efficiency of entrepreneurship training, support will be solicited from the technology ecosystem. Training will be enriched with shared experiences of successful entrepreneurs and other actors in the ecosystem. In addition to other supportive activities, a special program for university students will be carried out.

- A mentorship and support program aimed at student activities in universities will be launched. A mechanism to act as a bridge between the national technology ecosystem / public sector and university students.

Youth offices and youth centers that are established in universities with increasing numbers by the Ministry of Youth and Sports will assume a critical role in the functioning of this mechanism. It is anticipated that they will function as a center that provides guidance for student activities and creates opportunities for interaction with the technology ecosystem.

Hackathon *is a coding contest on a certain subject where people compete in groups. They are used to produce new ideas/products, promote a brand or a company, and create a competitive environment for technology recruitments. In those time-limited competitions, teams submit their output to the jury at the end of the event. Major tech companies often organize in-company hackathons as well.*

Ideathon *is a marathon in which teams must submit innovative ideas or projects on a specific or unspecified topic in a limited amount of time. They offer an efficient environment enabling participants to find out about new technologies, improve themselves, and exchange ideas in a social atmosphere. Such brain-storming events increase the interest in technology development, innovative idea generation, and startups among young people.*

Datathon *is type of hackathon focused on data technologies. Participants are expected to analyze given datasets in a limited time using their digital competencies and seek to find the most ideal solution. .*

15. Lifelong Entrepreneurship

In pursuit of achieving an entrepreneurial society in Türkiye, encouraging a lifelong learning culture among our people would be the key to inspiring continuous development and helping individuals acquire new skills as needed for the technological progress and digital transformation experienced.

• Mechanisms to allow unpaid leave are to be developed to encourage professionally experienced individuals to become entrepreneurs. The aim is to help professional experience turn into an enterprise and thus produce sustainable economic added value as well increasing the number of qualified entrepreneurs which is one of the most fundamental needs of the ecosystem and consequently enhance the rate of successful enterprises.

• Necessary action will be taken to render continuing education centers in universities more efficient in offering qualified and non-formal education opportunities.

• The Startup Office will assume an efficient role in promoting entrepreneurship trainings. In addition to qualified training and counseling services custom-tailored for different target audiences in the ecosystem, a comprehensive online training content pool will be developed based on existing national and global platforms and target audience will be granted free access through special packages.

• The number of raining and incubator programs through which municipalities will get in direct contact with youth of their jurisdiction will be increased and their quality will be improved.

16. Women's Entrepreneurship Initiative

One of the priorities of this strategy is to allow women to reach their potential in entrepreneurship and the economic area under equal opportunities. Granting prospective female entrepreneurs better access to training and mentorship opportunities would be an important area of support in speeding up their bid to rise up to a well-deserved position.

It is very important for young women to have role models to look up to and access the support they need to build confidence in their own skills, find connections to help with their professional network, and have mentors that have gone through similar experiences.

• To maximize public efficiency in this respect, a Women Entrepreneurship Initiative will be launched. It will be part of the entrepreneurship governance mechanism and thus help keep the matter within the agenda of decision- makers and also pioneer female-oriented activities.

• Under the Initiative, a program will be launched to help women with high potential or promising skills who study in related fields or are new in their professional careers meet female leaders in entrepreneurship and innovation areas.

• An interactive network with the initiative in its center will be established to ensure the initiative creates impact before technoparks, universities and corporate firms.

17. Promoting Entrepreneurship to the Public

Students at high school and university levels will be informed about the importance and benefits of startups through designed training programs. Those interested in entrepreneurship are offered informative content through lifelong training opportunities. However, to build a culture that attaches importance to and encourages startups, there is a need to raise awareness among the general public other than the primary target audience. The importance of startups for the future of our nation should be effectively promoted to youth, the elderly, capital owners, and educators. To achieve this goal, it is planned to use all communication channels to be effective in conveying this message to more people. Success stories are believed to be powerful in inspiring interest in startups, as they raise faith and motivation to achieve similar success stories, provide guidance on how to succeed, and widen horizons in generating value.

These stories will also be valuable in the eyes of their main characters. Entrepreneurs who are publicly recognized and appreciated are known to assume more responsibilities as role models for young people. To achieve this effect:

• To help those efforts achieve maximum impact, a comprehensive and holistic communication plan will be developed with the aim to produce permanent results with a long-term and coherent implementation plan.

• To reach the wider public, conventional mass media will be actively utilized. TV shows with innovative concepts will be developed and digital media will be used extensively. Support will be solicited from public influential figures.

• **National Technology Stage** to promote inspirational success stories and enterprises will be launched.

• To make this matter a pressing item in the public agenda, reward successful individuals, and encourage young people in this direction, **National Technology and Startup Awards** will be organized at the national level with fulfilling ownership rewards.

18. Entrepreneurship Activities Beyond Borders

The horizon and dreams of an entrepreneur should go beyond borders. The focus of our ventures should not remain local, but rather have a regional and global claim. Entrepreneurs should have an eye around with the goals such as following global trends, adapting innovations to the business model, scaling in new markets, finding investors.

Our technology ventures and entrepreneurs should be more integrated with the global ecosystem. And to that end, skills such as global thinking, the ability to adapt to different cultures, and communicating better in international environments will be more in demand. With the aim to make the technology ecosystem of Türkiye more international,

• The foreign students studying in our country will be ensured to have more place in our technology ecosystem. These students will be encouraged to start a joint venture with Turkish entrepreneurs in Türkiye. Thus, besides the positive contribution to the venture ecosystem culture, a link with the country of origin of the foreign student will be established, in particular for the venture.

• By virtue of the Startup Office measures will be taken to facilitate the access of human resources in the ecosystem to the training programs in important venture hubs in the world and to consultant networks and encourage them for participating in technology-oriented events. Support will be provided for cooperation with international stakeholders by the side of acceleration and incubation programs in Türkiye.

19. Entrepreneurship Olympiads

It will be a correct strategy to make use of the power of competition to roll out entrepreneurship as an enthusiastic concept among the youth. Competitions have always been an interesting platform among youngsters, where they are challenged, their differences are displayed and they are enthusiastic and have fun. The competitions organized in regional and national levels would motivate youngsters even more.

In this respect,

• An entrepreneurship competition network at the local level aiming at high school and university students separately will be set up. Regional competitions including schools, student clubs, technology parks, development agencies and other relevant local actors in the process will be organized; a national platform will be established with the participation of the winners of regional competitions.

The largest aviation and aerospace festival in the world:

TEKNOFEST

In Türkiye, where technology and In Türkiye, where the technology and R&D culture have rapidly developed in the last 15-20 years, TEKNOFEST Aviation, Aerospace and Technology Festival has started to be organized to popularize these subjects among secondary and highs school students, graduates of all levels and ages, families; in short to create strong awareness in wider perspective.

With the leadership of Türkiye Technology Team Foundation (T3 Foundation) and the Ministry of Industry and Technology, the first TEKNOFEST took place in September 2018, with the support of the important institutions and companies of Türkiye.

Organized one year in Istanbul and the following year in another city in Anatolia, the festival succeeded to be the biggest technology event of the world with 1.740.000 spectators in the second year already.

It beats records every year regarding both visitor and competition application numbers.

Competitions on several different fields of technology are organized from rockets to autonomous driving systems, drones to submarines and various activities as aircraft exhibition, fairs, science talks, entrepreneurship summit whereby technology firms are promoted

Not remaining within the boundaries of our country and becoming an international competition with participants from over 100 countries every year, TEKNOFEST is on its way to be a world brand.

LEADING AND PIONEERING INCLUSIVE SUPPORTS

Startup ecosystems producing efficient outputs have several different actors with strong relations among themselves. Assisting entrepreneurs to exchange ideas, build up teams and reach to the resources they need for growth, rich ecosystems provide infrastructure for the establishment of ventures with global claims on the one hand and are a candidate to be a global attraction center on the other. There are several different actors in the startup ecosystem of Türkiye. Clustered in general around universities 93 technology parks, 150 technology transfer offices, over 100 acceleration programs, incubation centers and common working spaces with operation permits as of the first half of 2022, and mentors, NGOs gathered around these structures form the corporate support pillar of the startup ecosystem.

Türkiye took important steps after the 2001 crisis to develop and implement many key public policies for startups. Laws No. 4691 and 5746 can qualify as pioneers. Law No. 4691 on Technology Development Regions allowed for incentives for the establishment of Technology Development Regions, commonly called technoparks, and the activities therein. METU Teknokent and TUBITAK Marmara Research Centre Technopark (Martek) being the first in 2001, Cyberpark in Bilkent University, Izmir TGB in Izmir High Technology Institute and GOSB Technopark as an authentic model with the joint contribution of the private sector and foreign capital were set up in 2002. Right after these steps, in 2003 Hacettepe University, ITU, Anadolu University, Selçuk University, Kocaeli University, Yıldız Teknik University and Istanbul University applied and most of them integrated rapidly in the structuring process. The relative success of these first examples accelerated the establishment of technoparks in almost all Anatolian cities, primarily the metropolitan ones. As of June 2022, 79 technoparks became operational, and with 14 more working on the infrastructure, there are a total of 93 technoparks.

Law No. 5746 on Supporting Research and Development Activities is another supporting element in the ecosystem. Incentives and tax exemptions are applied for the revenues gained from the work of R&D and support personnel working in particular in R&D and design centers.

In the current situation, the increasing number of qualified mentors, technology transfer mechanisms specialized in vertical technology areas or technology startups that have reached a certain size and the increasing number of accelerators, incubation centers and shared office space are among the factors that will feed the ecosystem.

Technology Development Centers (TEKMER) Support Program:

An important step was taken for the innovative entrepreneurship activities in our country through Technology Development Centers (TEKMER) first steps of which was taken by KOSGEB in 1991 within METU and ITU.

TEKMERs are structures providing services to entrepreneurs and enterprises with a technology/innovation-oriented business idea/project including research&development and/or product/process/service innovation in one or several related themes.

As an important starting point in commercialization of the know-how in the universities and granting access for SMEs to the university research infrastructure, TEKMERs also form the foundations of Technoparks.

TEKMERs provide services to entrepreneurs and enterprises as business development, access to financial resources, management, training, consultancy, mentor, office and access to co-operation networks during the pre-incubation, incubation and following processes.

TECHNOPARKS

73 IN OPERATION
19 UNDER DEVELOPMENT
(Jan 2022)

20. Istanbul Venture Center: The New Attractive Center of Technology Startups

Linking many structures as a bridge between continents, connecting different ecosystems, people, institutions - organizations and cultures, Türkiye as a natural point of connection, has the potential to become a global attraction center by making use of the location also in the startup ecosystem.

Startup Blink 2020 Report emphasizes the bridge position of Türkiye and shows Istanbul among the startup ecosystems which are global attraction centers.

• **Istanbul Venture Centre** will be established to contribute to strengthening this position and making Istanbul a center of attraction, which comes forefront in our country with its advanced startup ecosystem and already hosts many accelerators, incubations, TTOs, technoparks, mentors, investment networks and ventures. This center is aimed to be a platform where the leading actors of the ecosystem are located and the heart of startups beats; and an attraction center for those interested as foreign investors, entrepreneurs and consultants would not leave without a visit. For this center to achieve the desired impact, it is planned to be founded and managed with a participatory structure. Besides, cooperation with international actors will also be ensured to reinforce its relationship with the global ecosystem. This structure will be deployed not only as a physical space but also a cooperation and interaction platform.

21. Special Supports to Turcorn Candidates

Ventures in the world of technology face different challenges along their way up. Their needs differ from more traditional companies as they grapple with more basic challenges such as customer verification and team set-up. Relatively bigger ventures encounter their own challenges trying to scale up and reach new markets.

For the value production mechanism of the ecosystem, it is of vital importance to ensure a smooth flow at all stages of the growth process of ventures. It would create bottlenecks in the value chain in the ecosystem if the ventures who have been supported sufficiently in the startup process and progressed successfully, lack the support that would assist them overcome challenges in the scale-up stage. This bottleneck would spread over all the links of the chain. Supports for scale-ups need to be strengthened to ensure new Turcorns coming up and the functioning of the whole value chain. In this respect,

• A special program called **TURCORN 100** will be materialized, whereby tailored supports will be provided to the future Turcorn candidates with a global claim, to make new Turcorns possible in the startup ecosystem of Türkiye. Certain number of ventures with a potential of becoming

Turcorn will be provided supports specific to their needs to allow them scale up in a short period and make their global claims come true. The ventures in the program will be provided beside financial supports, with many opportunities as missions abroad, field-based consultancy, access to qualified co-operation networks and financial resources.

TURKISH UNICORNS: TURCORNS

The companies rapidly scaling up from the startup level to be valued 1 billion Dollar and not offered to public are called "unicorn".

The term unicorn was first used by investor Alieen Lee in an article published in Techcruch in 2013. As of the beginning of 2022, there are around 1000 unicorns in the world.

"Turcorn" was used for Turkish unicorns in the 2023 Industry and Technology Strategy, and at least 10 Turcorns were aimed to come true until 2023.

The first Turcorn in our country was Peak Games reaching to a valuation of 1.8 billion dollars in 2020. Then, the second Turcorn was Getir, which received an investment of almost 1 billion dollars in 2021. The third Turcorn was again a game startup Dream Games, reaching to 1-billion-dollar value with the investment received in June 2021.

And then, our first decacorn was announced to be Trendyol. Offered to public through NASDAQ, Hepsiburada also ranked among the Turkish ventures exceeding 1-billion-dollar value. Receiving 121-million-dollar worth investment in the first quarter of 2022, the sixth Turcorn of Türkiye was the Insider with a valuation of 1.22 billion dollars and receiving an investment of 768 million dollars and reaching to 11.8 billion dollars, Getir became the second decacorn of Türkiye. The progress towards the objective of 10 Turcorns until 2023, 15 Turcorns and 5 Decacorns until 2025 continues.

Deep Tech Startups

The term deep-tech startups is used for ventures in different sectors, developing products with big scientific leaps or based on engineering innovations. Companies developing products based on scientific data or R&D in general have a transformative potential in technology. In all deep-tech categories involving different fields of technology, the commercialization process is longer than those of other technology startups. Furthermore, developing product-service in deep-tech areas is a long and costly process. However, the outputs of this challenging process create a transformative impact for the world, as was understood once more during the COVID-19 pandemic. The primary obstacle before the development of deep-tech startups in our country is the access to financing and funding resources, like anywhere in the world. Another important problem deep-tech startups face with is the delivery of outputs to the market. The largest customer of the products and services produced by deep-tech startups is generally the states.

In this context, it is important that the state mechanisms are equipped with a structure supporting local deep technologies.

22. Investment in Deep Tech Startups

Startups developing deep-tech products/services based on scientific information and R&D have the potential to create more value for economies and humanity, as observed during the COVID-19 pandemic. As a country, we must invest more for the increase in the number of deep-tech based startups to grow this potential.

Developing product-service in deep-tech areas generally requires a high-cost, risky and long process. The supports to be provided for development in these areas should be specialized accordingly.

- **The academia has an important role and potential in deep-tech entrepreneurship. Current technology transfer mechanisms will be strengthened, and measures will be taken to commercialize the patents in deep tech to provide opportunities for more academics to productize and commercialize their R&D outputs.**

- **The promising qualified startups in this area in our country will be defined and needed support will be provided to such startups within the scope of Turcorn 100 program, by forming a new window for them.**

Academic Entrepreneurship in Türkiye

Academic entrepreneurship is a phenomenon developed during the process of transformation into information society. In 1990s, when information technology, finance and biotechnology started to grow in the USA, the phenomenon of information society emerging as a composition of technological, economic, cultural and corporate factors, became an element fed by academics and engineers together to develop the technology in universities and research centers. A rapid change was experienced in universities with the development of information society, whereby universities and academics turned to entrepreneurship and the concept of entrepreneur university emerged. With the process of information society, the universities in the world, primarily in the USA, entered into a phase of transformation towards entrepreneur universities. This transformation in the universities played a key role in the development of academic entrepreneurship.

Main actors leading the new information production are scientists, i.e., academics. Encouraging academic entrepreneurship is another way of transferring the outputs of the academics developed through scientific and technological research projects to industry and transforming them into economical added value. In parallel to the transformation in developed countries, the universities in Türkiye as well have the tendency to transform into entrepreneur universities. There has been a significant increase in the academic entrepreneurship activities in Türkiye since 2000s.

• Measures will be taken to develop incubations and accelerations that specialize in critical technology verticals and providing real test environments depending on their use scenarios.

• A mechanism allowing for starting up a venture in Türkiye will be established for our expert human resources located in important universities, research centers or big companies abroad in the field of deep-tech.

• Supporting mechanisms will be developed to gain the know-how of deep-tech in the defense industry in the ecosystem by converting them to spin-off ventures.

23. Startups Driving Green Economy and Pursuing Social Benefits

Support mechanisms will be developed that will contribute to the inter-development of a green economy taking sustainable development as a basis by establishing a balanced relation between aimed policies and economic goals within the scope of the fight against climate change and circular economy aiming for efficient use of resources.

• Special support programs will be adopted for startups operating in the fields of climate-friendly technologies, clean production technologies and energy efficiency and renewable energy areas.

• Measures will be taken to ensure the startups developing solutions in the green economy benefit more from the financial resources allocated by international organizations specifically for this field.

Utilizing startups to solve social problems and adapting different models for societal transformation and sustainable economic development with a systematic transformation objective, technology-based social enterprises develop strategies not only in pursuit of economic gains but also adopt approaches that prioritize societal benefits. In doing so, they stand out as areas to be addressed in the strategy.

• Contribution will be provided for the social entrepreneur role models contributing to societal transformation acting on income models aiming at social benefit in startups to meet with the potential startups and sustainable business models to be adopted; and for these role models to be more visible in the entrepreneurship ecosystem.

24. Support for the Idea Phase

For Türkiye to reach a leading position in terms of start-ups, the ecosystem should be continuously beefed up with more ideas coming to life. The more hatchlings hatch out and make their way to the sea, the more adults there will grow and live for many years. It is important to ensure more hatchlings are safe on their survival journey. To grow the startup pool, the necessary support for idea- stage and early-stage startups to survive under challenging conditions should

be provided. An entrepreneur candidate starting with an idea for a technological product must first confirm the technical feasibility of the idea. The main challenge an entrepreneur faces at this stage is access to appropriate infrastructure or the supply of necessary tools, equipment and material. Confirmation of the feasibility of the idea at this stage depends on the entrepreneur's self-resources or the opportunities provided by the respective ecosystem infrastructure. Performing necessary studies for technical feasibility, presenting a preliminary prototype to customers or funding resources at the idea stage would be a critical threshold for the startup to jump to the next stage. The needs of youth are also similar in terms of technology competition, with an important function improving the interest in technology by the society.

• Implementation of the Innovation Voucher program will be adopted to encourage the candidate entrepreneurs who want to turn their ideas into reality and provide them with the initial capital they need. Innovation checks will be distributed in an easy and accessible method, in which application and assessment procedures are minimized and without any obligations to set up a company. In the distribution of checks, mainly the assessment of angel investors and support interfaces will be considered. Likewise, financial support will be provided to the teams attaining technology competitions to be defined.

• The national inventory of the prototype laboratories and common use spaces, which entrepreneur candidates make use of, will be produced and the accessibility of the current infrastructure will be improved.

• TEKNOFEST Workshops will be established, through which an opportunity to primarily science high schools and youth to get prepared for national and international competitions, in particular to TEKNOFEST and their technology educations will be supported.

25. Clustering and Acceleration Mechanisms Specific to Focal Areas of Development

In certain sectors or technology verticals, clustering mechanisms, where companies and research institutions could create a cluster and benefit from a scale economy through common pre-competition solutions to their common needs, would create important benefits in the entrepreneurship ecosystem.

However, the number of accelerating mechanisms, providing important opportunities for startups to ensure their rapid scaling by nurturing an entrepreneurship culture and granting access to needed capital, market, customer bases, and leaders are on the rise in Türkiye. It is still shy of the expected level as of now. The development of accelerating mechanisms specifically for technology verticals as commonly seen in the world and increasing their numbers would allow

for emerging and rapid scaling-up of new startups in especially priority and critical technology fields.

• The development of the entrepreneurship ecosystem will be accelerated by supporting specialized actors with strong sectoral and global links, performing accelerating programs in focal areas of development.

• New accelerating mechanisms, including detailed information, directing and consultancy services about the regulation process in the field of health and verification processes, test and laboratory facilities through health personnel that will use the product or service developed to respond to differentiating needs of startups in health technologies and biotechnology, which became of significant importance through COVID-19 throughout the world, will be adopted through public support.

• Finance and Technology Base will be founded under the auspices of Istanbul Finance Centre and fin-tech ventures will be clustered within this scope.

• Clustering supports will be provided in the fields of artificial intelligence and blockchain. In this context, incubation centers and acceleration mechanisms will be established under competent universities. Through the activities such as hackathon and ideathon etc. to be organized in these centers, the youngsters will be driven to develop technology in the fields of artificial intelligence and block chain.

• TEKMER mechanisms will be strengthened in the focal development areas.

26. New Generation Technoparks

The heart of the technology and innovation ecosystem beats in technoparks. In the technoparks, the number reaching 93, around 8000 technology companies are operative. Beyond providing physical opportunities and tax incentives to ventures, technoparks are structures aiming to ensure cooperation and interaction within the ecosystem. In almost two decades, technoparks have served as a tool to create a significant capacity in Türkiye in terms of technology culture. From this point on, technoparks' assimilation of the needs of the entrepreneurship ecosystem and improvements in their processes in line with these needs will enable more startups to benefit from the infrastructure of technoparks and will be an important driving force for the development of the entrepreneurship ecosystem.

Taking part in these important elements of the technology and entrepreneurship ecosystem dictates the use of a "physical proof", as used traditionally in government incentives and documentation of business processes. However, some insufficient and restraining areas have been created using this approach through digitalization. In particular, in new digital business models, where individual work is possible, all processes can be handled digitally. During the COVID-19 pandemic, the need to consider this became even more significant. On the other hand, in this digital world where creating value and export has become accessible, bureaucracy should also become more facilitating and smoother in line with the trend. An environment that encourages the participation of more individual technology developers and new ventures in the chain value should be prepared. To this end:

• A regulation will be made to consider criteria such as continuity of innovation activities, commercialization performance, and receiving investment, besides the R&D projects in the technopark incentives. Thus, the economic value production potential of technoparks will be increased.

• In technopark incentives, regulations for minimizing the obligation on a spatial dependence with innovative approaches will be made.

• Especially in newly established technoparks, support will be provided to develop the corporate capacity and facilitator role in the ecosystem, of the executive company.

• Mechanisms will be developed for Technopark Executive Companies to access co-operation networks, access to financing, exchange of experience, and especially enabling their roles as investors, rather than a space provider position to technology companies. It is foreseen that the transformation in the relevant R&D laws will support this change.

• In the Information Valley coordination, a cooperation network will be established among the technoparks in different provinces. This network will drive cluster formations in technology verticals.

Thematic Technopark: Bilişim Vadisi

Centers of technological innovation, the first example of which is Silicon Valley in San Francisco, USA, are ecosystems where companies, organizations, research and development studies on information technologies come together. These ecosystems, also known as the "technology base," which provide important opportunities for technology startups, are now located in Israel, Germany, Portugal, India, Sweden, South Korea, and the People's Republic of China, in addition to the United States of America.

Acting as a lever in the information pillar of National Technology Initiative, Bilişim Vadisi of Türkiye was established on 16.08.2012 on a field of 2.847.968,66m2. Among its stakeholders are Turkish Patent and Trademark Institution, TÜBİTAK, Gebze Technical University, Kocaeli Metropolitan Municipality, KOSGEB, Turkish Standards Institute, Istanbul Chamber of Commerce, Istanbul Chamber of Industry, Kocaeli Chamber of Commerce, Kocaeli Chamber of Industry, Gebze Chamber of Commerce, Kocaeli University, Izmir High Technology Institute and TOSB. Information Valley qualifies as a national project, referred to in national and regional strategy papers, with an intermediary role to enact more comprehensive objectives.

Bilişim Vadisi is the largest technopark of our country, performing activities in line with the objectives of "National Technology Initiative". Among its focal areas are mobility, connection technologies, smart cities, cyber security, design technologies and game development technologies. Bilişim Vadisi that will act as a lever in the transition of our country to the innovation economy, provides all infrastructure, consultancy, mentor and fund resources needed by entrepreneurs along with the Incubation Operating Centre, Design Clustering Centre, Digital Animation and Game Production Centre, Startup Capital Investment Fund it has.

27. Supporting Entrepreneurship for Regional Development

Technology ecosystem has been concentrated heavily in Istanbul. However, startups should be an important agenda for all our regions and provinces. In the gradually digitalizing business world, value creation potential of the enterprises becomes independent from the space. It would not be wrong that this trend accelerated during the COVID-19 pandemic.

Development of entrepreneurship culture in all our provinces will contribute significantly in feeding the ecosystem. For the youth living in these provinces, entrepreneurship promises new horizons and new hopes. This field should be addressed as an important area of development in regional development policies. In this respect, to develop startups in our provinces,

• Entrepreneurship focus will be highlighted in the activities and supports of Development Agencies. Development Agencies will take a more active role directly or through incentives in issues such as establishing entrepreneurship centers and infrastructure locally, increasing the number of acceleration programs, facilitating the access of entrepreneurs to funding locally, increasing the number of angel investors.

• Special regional entrepreneurship strategies through Development Agencies will be prepared for provinces such as Istanbul, Ankara and Izmir, that come to forefront in the entrepreneurship ecosystem.

• Local activities will be guided throughout the country via the establishment of a **Startup Centre** Model, where technology ventures will thrive, and which should be implemented and rolled out by local actors.

STARTUP-FRIENDLY MARKET CONDITIONS

The total market size, where startups will be hosted, is calculated by addressing national economic situation, level of digital literacy, internet use, width of the mobile coverage and consumer habits as the tendency to test new products and services. Recently, the digital economy of Türkiye has grown rapidly and the e-trade volume in our country was 266.2 billion TRY in 2020 demonstrating a 66% increase compared to the previous year. In 2019-2020 period, e-trade order number increased from 1.36 billion to 2.29 billion, with an increase of 68%.[29] Türkiye Fintech market is considered to have a size around 15 billion dollars with over 200 companies and to grow by an average of 14% annually. According to Ease of Doing Business 2020 Index published by the World Bank, measuring the ease of doing business in countries by analyzing issues as establishment of business, construction permits, receiving power, registering property, getting loan, protecting minority investors, tax payment, inter-border trade, implementation of contracts and solving problems, employment, Türkiye ranks 33 among 190 countries in terms of ease of doing business.[30]

Türkiye is an important springboard and test market for local and even international startups before they enter global markets. Currently, the most important constraint faced by startups in market conditions is reaching the customer and making the first sale. The regulations required to sell to the public in sectors with public customers are an obstacle for startups. In addition, while it is an important requirement for startups, which have difficulties in opening up to international markets, to set out with the vision of a born global business, it is seen that the awareness on this issue is not yet at a sufficient level. At this point, the inability to use cooperation networks, which are an important factor in accessing the international market, and the lack of necessary infrastructure for startups in international market research and investor-customer meetings are also important problems. With the improvement of the current conditions in line with the needs of startups, it will become a candidate market for global technology initiatives.

29 Compiled from the data of the Ministry of Commerce and TURKSTAT.
30 The Word Bank Doing Business 2020

28. International Strategic Alliances and Collaborations

The digitalization process not only facilitates the global circulation of information, products and services, but also supports the free movement of talent and initiatives. The direction of this flow is determined by the natural advantages of the countries and the special opportunities offered by the states. There are examples of countries that have achieved success in this field by implementing targeted and stable state policies in the global arena. Türkiye has the potential to be a regional and global center of attraction with its material and cultural wealth and strong ecosystem. An active public policy is required to bring more talent and initiatives into the country. On the other hand, it is necessary to have strong international cooperation networks so that startups can easily reach new international markets, scale quickly in those markets, and our technology ecosystem can benefit from the developments and competencies in other countries. For this, focused process management should be done to establish cooperation channels with target countries and ecosystems.

- Bringing Türkiye's startups closer to the leading ecosystems in Europe is considered a top priority. Close cooperation will be established with actors such as funds, accelerators and angel investment networks in cities such as London, Berlin, Paris and centers where our citizens live intensively. Preliminary measures will be taken to enable startups to be more involved in these markets.

- The **TEKNOVISA Program**, a special visa application for talents with critical expertise in the field of technology, innovative business models and technology and innovation- based startups, will be implemented. Steps will be taken to create mutual free movement opportunities for the countries where a "Strategic Alliance" will be established.

Why Startup Visa?

Startup Visa applications, unlike other visa types, are a special type of visa that is applied by providing temporary, conditional, facilitated and additional support for entrepreneurs, who are a specially selected qualified and talented target group beyond the entry permit, to realize their innovative or technology-based business ideas. Countries are growing and developing their ecosystems by attracting talented entrepreneurs from other countries with the entrepreneur visa. The common features of entrepreneurship visa programs are eliminating the problems that entrepreneurs will experience at various bureaucratic stages, facilitating legal proceedings, and creating mechanisms that will accelerate their adaptation to the country and the entrepreneurship ecosystem.

With the Startup Visa, it is aimed to develop a facilitating and encouraging mechanism that will enable the emigration of entrepreneurs, especially from abroad, to our country. It is aimed to attract technology startups operating in the startup ecosystem to our country by enriching it with additional supports such as a scaling-specific acceleration program, mentoring mechanisms, and meeting with investors.

- **A mentoring network consisting of technology leaders living both in Türkiye and in different countries will be established. Leaders in this network will be expected to represent our country in the international arena. In addition, support will be received both in terms of drawing up public policies and in the process of expanding abroad of startups with global potential.**

- **A special support program will be implemented in order to bring innovative business models, deep technology-based initiatives with global success potential to our country.**

- **In addition to advanced technology markets, developing ecosystems with which we have good cultural relations are also seen as an important development channel. Public diplomacy will be used effectively to establish deep cooperation in our geography of influence. Platforms such as TEKNOFEST will be made more visible in the international arena as a suitable ground for the development of these partnerships.**

- **In order to increase the number of startups with a born global company vision, programs will be organized where startups will gain experience in accessing the market on a global scale.**

- **In order for startups to be effective in the global market, a widespread and continuous support mechanism will be operated with the e-Turquality Program.**

What is a Born Global Company?

The traditional internationalization theory, which envisages a gradual process for companies to present their products and services to the national market, has lost its validity with the increase in the speed of technological innovation. Businesses that engage in international activities in a short time after their establishment stand out in terms of creating sustainable commercial value. Small and medium-sized companies with scarce resources, operating internationally since or shortly after their establishment, with high commercial competitiveness are called Global Born Companies.

29. Overseas Mission as a Solution Partner

Türkiye is one of the leading countries with a widespread and effective overseas presence all around the world. We need to make use of this presence more effectively to make sure that our startups have a better competitive edge around the globe. To this end,

• The Ministry of Industry and Technology will assign **Technology Attaches** specialized in technology to take more target-oriented actions and make a greater impact. Technology Attaches will serve as a representative and solution partner for our technological ecosystem in respective cities and countries.

• Our overseas missions will be assisted in terms of technological focus, organizational capacity, and priorities. The overseas missions will create a higher value as a solution partner to adapt global technological developments in our country and export our technological initiatives. Cooperation will be struck with the Ministry of Foreign Affairs to ensure that the Turkish diplomats contribute to the Ministerial actions of the technological ecosystem throughout their tenure in the headquarters.

• A roadmap will be developed to make sure that the organizations and agencies with overseas operations such as the Presidency

of Turks Abroad and Related Communities, Turkish Cooperation and Coordination Agency (TIKA), and Yunus Emre Institute enhance their inputs in this respect.

30. Efficacy in Technology Marketplaces

A significant portion of the global demand for technological products and services is met by mass platforms. Many companies in the conventional or digital economy purchase technological products or services they need for their operations from suppliers or developers situated anywhere around the world using mass- twinning mechanisms. This global business climate, where suppliers are almost anonymous, removes borders and facilitates technological exports. Application markets, where individual products play a larger role than developers in the individual consumption of technology, offer equal market opportunities for technology manufacturers, regardless of their country of presence or location. They offer a major opportunity or revenue, not only for technology companies but also for individual developers. From this standpoint, these mechanisms, which can be billed as democratic, constitute great business potential, particularly for ecosystems with robust human resources.

Türkiye is one of the countries capable of making use of this growing economy thanks to its robust human capital. It needs to maximize both the exports of online products and services to foreign companies, and the high-sales potential in application markets of video games. In this context,

- The legislation on the generation of revenue based on individual exports of technology will be made explicit and improved in a way to pave the way for actions to be taken in this respect. Actions will be taken to remove the barriers to improvement in this respect.

- In an effort to make use of global "freelance" opportunities, actions will be taken to inform and guide young technology experts and their initiatives. Those to operate in this realm will be provided with training and consultancy services and a partnership will be struck with initiatives that render such services.

- **Startups Platform** shall be rolled out to serve as a go-to media for those interested in more information about the Turkish technology suppliers operating in focal areas of technology, serve as a platform to promote startups, match commercial partnerships, and run events to enhance interactions as part of the ecosystem.

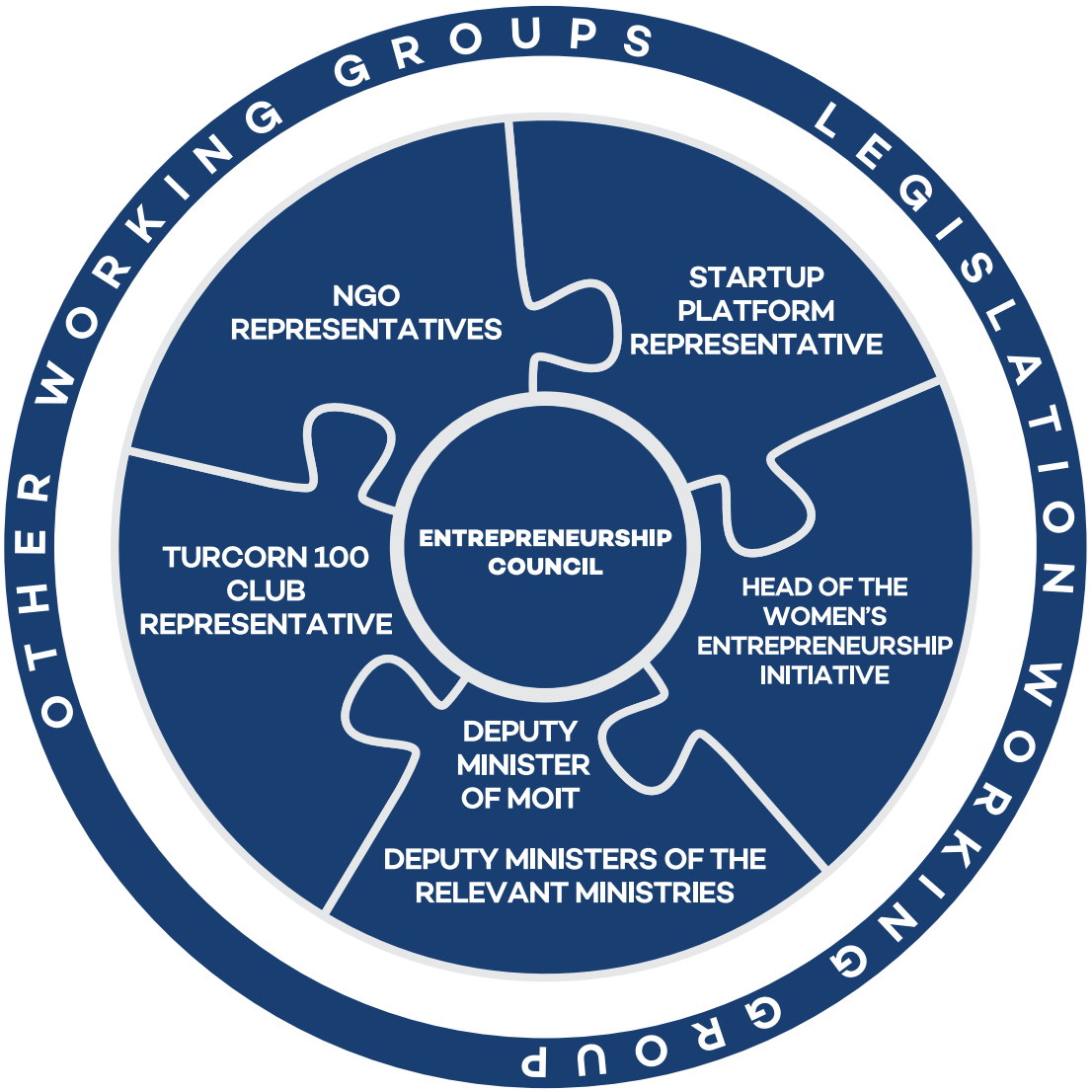
GOVERNANCE MECHANISM OF THE STARTUP STRATEGY

The vision and objectives set out under the Startup Strategy can be achieved by the involvement of **not only the state administration but also all relevant actors through their all-out mobilization and sense of ownership,** turning Türkiye into an entrepreneurial nation and a global center of attraction for startups. This overall vision entails inclusive actions, consensus, decisiveness to achieve the objectives, and **cooperation among all the actors** to design and implement policies. An active role to be played by the actors of the ecosystem who join forces with willingness, self-sacrifice, and determination to establish the Startup Strategy, and provide know-how and experience to serve as a basis or the formation of each set of action is a must for the vision to be achieved.

Brought about by the Startup Strategy, the inclusive governance mechanism will be coordinated by the Directorate General of National Technology, and the entire process will be monitored by all the stakeholders based on measurable, transparent, tangible, and open data. As a main element of the governance mechanism,

The Entrepreneurship Council will be chaired by the relevant Deputy Minister of Industry and Technology and joined by deputy ministers of other relevant ministries as permanent members, directly developing and executing inclusive and construction policies with a focus on startups based on requests from the ecosystem. Relevant NGO representatives and the Head of the Women's Entrepreneurship Initiative will also be permanent members of the Entrepreneurship Council, playing an active role in bringing up room for improvement as part of the ecosystem. The most important aspect of an entrepreneurship ecosystem is the entrepreneurs who shape an ecosystem around themselves and undergo transformation. The Entrepreneurship Council will serve as a governance mechanism intertwined with startups, make decisions with all the stakeholders, and monitor their implementation via the stakeholders. To be joined by a member to be named by Turcorn 100 Platform that consists of Turcorn 100 graduates, the Council will receive specific requests and needs of potential and existing Turcorns and take actions to pave the way for startups with global presence. To convene within the body of the Entrepreneurship Council, the **Legislation Working Group** will make sure that the legislation on **Startups** is understood by all stakeholders of the ecosystem and it is compiled and presented in a plain manner. This would help entrepreneurs focused on technology-driven business development, investors of technology startups, and stakeholders that provide services for startups such as financial consultants, lawyers, social security experts, mentors, and acceleration program experts make use of a holistic, consistent, and intelligible guideline. Being translated into other languages, this guideline will encourage more foreign actors (entrepreneurs, investors, mentors, specialists etc.) to contribute to the startup

ecosystem in Türkiye. Ad-hoc groups will be formed to coordinate actions upon the request of the Legislation Working Group, which is to serve on a permanent basis, and the members of the Council. All ecosystem stakeholders will convene as part of the **Entrepreneurship Summit** to be held once a year to exchange views on realizations and requirements .


OTHER WORKING GROUPS
LEGISLATION WORKING GROUP
NGO REPRESENTATIVES
STARTUP PLATFORM REPRESENTATIVE
TURCORN 100 CLUB REPRESENTATIVE
ENTREPRENEURSHIP COUNCIL
HEAD OF THE WOMEN'S ENTREPRENEURSHIP INITIATIVE
DEPUTY MINISTER OF MOIT
DEPUTY MINISTERS OF THE RELEVANT MINISTRIES

CONCLUSION

HEADING TO THE FUTURE

Laying out a national vision with a focus on startups, which is a major component of the National Technology Initiative, the Startup Strategy describes the initiative "Entrepreneurship for the Future" to make an all-out breakthrough in this respect. Seeking to improve the startup ecosystem in Türkiye and establish a global ambition in technology, this strategy boasts a public ideal that keeps tabs on global developments, analyzes our differences and superior aspects, and develops and executes policies in consideration of all stakeholders.

The Startup Strategy, which typically sets responsibilities to be assumed by the public sector, opens a window into the initiative "Entrepreneurship for the Future" and shows the determination of the public sector to turn this initiative into an action that lives and achieves its objectives. In this document, the public sector has set tasks for itself using 30 strategies.However, the Strategy has been built on a perspective that relies on the dynamism of the ecosystem, assigns facilitating and supportive roles to public organizations, and suggests effective governance among stakeholders. Undoubtedly, the objectives set out as part of the strategy can be achieved by the contributions and inputs of all stakeholders of the startup ecosystem. Our message is clear: We call upon all public agencies, investors, non-governmental organizations, financial corporations, local actors, ecosystem specialists, entrepreneurs, potential entrepreneurs, and all other stakeholders to be part of our vision and motivation, contributing to the initiative "Entrepreneurship for the Future".

NOTES TO STAKEHOLDERS

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Entrepreneurs and Prospects: *You are, beyond any doubt, our biggest trump card. You have a high potential to influence the future of our country. This Strategy has been developed to lead the way for you and help bring out your potential. Our country has a lot of opportunities for success. Among them are physical venues and infrastructure, training opportunities, guiding mechanisms, and financing. This has brought about significant know-how as part of the ecosystem. It is crucial for you to make use of the opportunities and know-how.*

Türkiye is a large country. It offers great market opportunities in many areas. However, you should not let your perspective and entrepreneurship be restricted by the borders of the country. You must keep tabs on global developments in technology. It is extremely important for you to adapt novelties to your initiative on time. On the other hand, having your initiative penetrate global markets should always be one of your objectives. Competition in global markets will help your initiative become more competitive. This is how you will enhance your potential to grow at home and abroad.

The technological revolution that we are going through creates scores of new opportunities for our country and initiatives. Emerging technologies such as artificial intelligence and blockchain give rise to new scenarios for value-added production. New realms of action including mobility and smart life rapidly grow. This Strategy has focused on some aspects of technology. You can be a leader in one of those aspects.

A Turkish entrepreneur should focus on generating social benefit, as well as financial value. He/she should adopt it as a principle to take the motto of "justice and compassion for humanity" raised by the National Technology Initiative one step further. This perspective undoubtedly includes environmental awareness and sustainability.

Public Agencies *play a major role in guiding public innovation and entrepreneurship. All public agencies should make use of this strength in a way to promote and expedite the growth of our entrepreneurship ecosystem and startups based on an entrepreneur-friendly public approach.*

Legislative amendments are the most important public instruments to promote growth in technology. We expect all the public stakeholders to attach priority to the consideration of the effects of any legislative amendment on the entrepreneurship ecosystem. Rather than protective, restrictive, and excessively regulatory approaches, they need to adopt an approach that allows for growth. The needs and reports of the ecosystem should be taken into consideration to the maximum extent for the development of any legislation with an impact on technology and entrepreneurship.

Public agencies can offer significant input for entrepreneurship through the big data they have. It is crucial for the agencies to offer their data for the ecosystem in the form of open data. To do so, the agencies should take inventory of their data, and make available adequate data sets for entrepreneurs.

In addition, we must make public procurements a leverage that we use more effectively for our technology ecosystem. In this respect, it is safe to say that significant progress has been made in terms of initiatives and practices that prioritize reliance on domestic resources for public procurements. However, we are of the opinion that our public agencies should serve as a stakeholder in the development and maturation of domestic products and services, going beyond being another client. Our agencies should pave the way for experiments to improve our startups, provide high-quality feedback, and create opportunities to improve themselves. They need to develop their supply plan in a way to seek a transition to a domestic option at a reasonable time even if it is not when T equals zero. We call on our public agencies to take more initiatives to opt for domestic companies and contribute to their growth.

Corporations: *We expect domestic or international corporations to follow the suit to make contributions just like public agencies do. You can make invaluable contributions to the growth of startups through your purchasing power, organizational experience, sectoral network, expertise, and experience of your executives. We expect our corporate companies to be open to more cooperation with startups. In this cooperation, your stakeholders may not have some characteristics such as institutionalism and financial power that your corporate stakeholders have. On the other hand, they often have more agile working models, creativity and the ability to produce solutions. Therefore, you should aim to establish balanced cooperation with startups, where you will support their weaknesses and benefit from their strengths.*

Corporations sometimes make the mistake of considering cooperation with startups a favor to them. Doing business with large corporations is surely crucial for startups to grow whereas this relationship should be based on a more rational and well-functioning point of view. Technological startups can offer more effective and creative solutions to the problems facing large corporations. We urge corporations to focus on making better use of this strength. In addition, the booming appraisals of technological startups create attractive investment opportunities for large-scale companies. Once you invest in these startups, you will be able to reach a higher appraisal for your company, using your business networks and sectoral know-how. One should remember that most of the economic growth and social impact are achieved by innovative and agile technology companies.

Local and Regional Actors: *Startups offer major opportunities for local development as much as conventional employment and businesses do. Due to their location, agnostic nature digital business models make it possible to establish successful startups anywhere in the country and create added value, and well-qualified jobs. Entrepreneurship has been a tangible and proven way of making big dreams come true for young people living in cities other than metropolitans.*

Given their roles as actors of local development, municipalities, and chambers of industry and commerce, should offer opportunities and lead the way for young people to set up technological startups. One of the tangible actions they can take is to help young people attend technology competitions TEKNOFEST being a case in point. Young people should be further encouraged and assisted in this respect. Workshops should be rolled out in every city for them to attend technology competitions. Industrial businesses, technoparks, or OIZs offer their infrastructure to competitors. Additionally, local programs should be adopted to meet the material costs of the competing teams. Their transportation expenses should be covered by sponsors or other modes of assistance. This would help young people take their early actions of startups in a firm manner.

Apart from the competitors, more training and mentorship opportunities should be provided for potential entrepreneurs. It would be better for local authors to adopt training modules proven at the national scale and collaborate with leading partners if needed. The Ministry or development agencies may offer guidance to implement high-quality and sustainable programs.

Academic Community: *Universities offer the most efficient environment to raise potential entrepreneurs and promote entrepreneurship with high- added value. Their curriculum and innovative culture should be promoted for universities to grow into high-quality plants for entrepreneurship. The curricula of fundamental sciences and engineering departments should be upgraded from the perspective of productization and commercialization. Diversifying courses with case analyses from the entrepreneurship ecosystem would prove useful. On the other hand, students would be encouraged if their entrepreneurship were considered for academic performance. Universities should regard the commercialization of products developed as part of R&D as a must for return on resources spent and the creation of added value. From this point of view, the idea that entrepreneurship is not less valuable than academic courses should be the dominant perception and view among academics. In addition, the technology transfer mechanisms of universities should be strengthened and special efforts should be exerted to collaborate with the private sector to prevent patents and utility models from being idle.*

Pillars of the Ecosystem: *A successful entrepreneurship ecosystem is certainly not made up of the aforementioned actors. The success of an ecosystem is enhanced by multilateral communication and collaboration among actors. To this end, we have a note to share with technoparks, technology transfer offices, mentors, financial corporations, consultants, and experts who make great contributions to entrepreneurs and entrepreneurship ecosystems in our country. It is crucial for you to share your experience with other stakeholders to ensure that the pillars of the ecosystem influence the entire ecosystem , not just on paper. We call on you to implement all learning models with all actors in the ecosystem and strengthen the pillars. This is how we can increase the number of success stories further.*

We can build an entrepreneurial society

All together,

Together, we can!

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