THE IMPORTANCE OF NATIONAL TECHNOLOGY INITIATIVE AND THE ROLE OF BİLİŞİM VADİSİ IN GLOBAL COMPETITION

Ahmet Serdar İBRAHİMCİOĞLU

THE IMPORTANCE OF NATIONAL TECHNOLOGY INITIATIVE AND THE ROLE OF BILIŞIM VADISI IN GLOBAL COMPETITION

Ahmet Serdar İBRAHİMCİOĞLU[†] IT Valley

Abstract

To prevent monopolization in scientific and technological developments due to globalization, countries are developing their own technology strategies. For these strategies to succeed, current developments should be followed and the initiatives put forth should not be disconnected from the social and cultural consciousness. Within this context, the total independence in the economic and technological fields vision of Türkiye is named the National Technology Initiative. Bilişim Vadisi plays a significant role in transferring the success of Turkish Airlines in the defense industry to civilian technologies to actualize the vision of the National Technology Initiative. The National Technology Initiative bases its strategy on three concepts. These concepts are "indigenous", which means belonging to a certain area in geographical terms; "national", which means belonging to a certain nation; and "authenticity," which means that a product with an intellectual value does not directly include other intellectual outputs but has its own specific intellectual value. Bilişim Vadisi is acting in accordance with these values in terms of the development of the brands within itself and shaping its ecosystem according to a model that supports the companies developing key technologies from end to end. In Bilisim Vadisi, which mainly focuses on conducting studies on technologies such as mobility, network technologies, cybersecurity, design technologies, smart cities and gaming technologies to strengthen the ecosystem, there are specific clustering specific to every area. To get rid of external dependency and provide the proper basis for import substitution and National Technology Initiative, human capital should be provided. 42 Software Schools, organized by Bilişim Vadisi, is an ecosystem where important steps are taken to improve human capital through Robotics Coding and Artificial Intelligence Workshop, education camps, workshops and entrepreneurship events. As mentioned in detail throughout the article, it is making a great contribution to the import substitution process within the scope of civilian technologies through brands such as Togg, AirCar, Business Incubator, Design Clustering Center and DIGIAGE. As a result, Bilişim Vadisi plays the role of being the greatest technology development area in Türkiye to actualize the human capital and import substitution strategies of the National Technology Initiative.

Keywords

Bilişim Vadisi, Civilian Technology, National Technology Initiative, Globalization, Entrepreneurship

i info[at]bilisimvadisi.com.tr

1. Introduction

The Western countries, which switched to mass production under the influence of industrialization, put the functioning mechanism known as triangular trade into place in the 16th century. This caused a fundamental paradigm shift in production and market styles, on a global scale. The commercial networks, which also existed in the early modern period, have allowed cultural and scientific exchanges by sharing the positive values of the communities. With industrialization, this mutualist relationship concluded with the industrialized countries' absolute domination. According to Immanuel Wallerstein's "modern world-system" theory, the fundamental element that divides the countries into two categories -core countries and peripheral countries- is technological development. The center consists of technologically advanced countries. The periphery and semi-periphery consist of the countries that allow limitless capital stock. This world system, named "the world economy" by Wallerstein, is a system that integrates through the market instead of a political center; two or more regions are interdependent on each other in terms of food, fuel and protection; and several central administrations in the global power compete with each other. This system not just includes economic dependency but also the analysis of globalization, which results in cultural and social uniformity. To get rid of the center and periphery dichotomies, countries should be economically and technologically independent and should take action to position themselves as producers and stakeholders in the global competition.

Destructive technologies, which allow the decentralization of financial assets, such as blockchain, artificial intelligence and automation based on digitalization, are enabling the re-formation of competition conditions around the world. Maybe in this new model, which can be named "the digital system," added value consists of human capital and softwarefocused innovations instead of manufactured goods. This eliminated the obligation of countries to be material-focused and external dependent and guided countries to produce key technologies with domestic resources. For example, Germany became the country leading Industry 4.0 strategy in Europe apart from the USA model. In his report for The Friedrich-Ebert-Stiftung (FES); Professor Wolfgang Schroeder, who studies the political system of Germany at the University of Kassel not only examined the strategy of creating and using new options but whether the German production model can compete in the light of new developments or not, contrary to the destructive USA model. He discusses the question, "Can German stakeholders give a structural acceleration to the revival of the manufacturing industry that pledges not only technological and traditional progress but also social progress?" Industry 4.0 means better permeability in business processes, advanced training activities, better opportunities for a positive work-life balance, and, in the end, social innovations such as a decrease in social inequality. European Union is at the forefront of the actors focusing on increasing economic-social and regional harmony. The encouragement of sustainable development with balanced economic growth is one of the main goals of the EU at the point of ensuring social progress in a competitive market economy. It helps European citizens and businesses to benefit from digital technologies at their best by supporting research with the aim of a sustainable economy and providing social benefits and innovation policies. The Horizon Europe and Digital Agenda strategies can also be seen as the main systems aiming to accelerate this progress.

On January 22, 2016, the Government of Japan released the 5th Science and Technology Basic Plan. The plan suggests "Society 5.0," which is a future society vision under the guidance of scientific and technological developments. A "super smart society" that will

bring wealth to humans, who are an ideal form for the future society, through an initiative that combines the real-world and cyber world by using information and communication technologies to the full extent. The initiatives aimed at realizing this ideal society are now being deepened and promoted as Society 5.0 (Kravets et al., 2020, p. 11). Within the framework of conformity with the fourth industrial revolution policy, South Korea is also prioritizing making the infrastructure and technology available to everyone.

Another actor that needs to be mentioned is China. China is integrating its global trade policies into world markets and contributing to the creation of large market opportunities. China's Digital Silkroad and Made in China 2025 projects are components of a global development strategy named the Belt and Road Initiative. China, which constituted its strategy to include the whole society, is rapidly presenting technological advancements on the global scene to encourage effective governance and control. China aims to modernize its industrial capacity to compete in domestic and global areas and secure its position as the leading force in advanced technologies such as 5G. China also sees MIC 2025 as a chance to collaborate more effectively with industrialized economies and proactively shape the international standards for developing technologies, including blockchain and the Internet of Things.

As an objection to the monopolization of scientific and technological developments in this changing system, Türkiye structured policies that will allow a breakthrough in critical technologies, ensuring economic and technological independence and increasing global competition power through the "National Technology Initiative" roadmap. Successful examples from the defense industry have accelerated this move. In the "2023 Industry and Technology" report released on September 18, 2019, it was stated that defense industry projects have decreased costs and revealed the capacity to develop products in advanced technologies such as unmanned air vehicles, missiles, radar systems and satellites. Thus, it is aimed that the achievements of defense industry development projects and domestic suppliers who improved themselves to serve as models for the studies of other sectors (T.R. Ministry of Industry and Technology, 2019). In this article, the focus will be on the total technological and scientific independence philosophy of Türkiye and the progress of the "National Technology Initiative" in civilian technologies through the values put into practice by Bilişim Vadisi.

2. The Importance of National Technology Initiative in Global Competition

Globalization is discussed from different perspectives in every field of social sciences in the current academy. Against the objections stating that it creates an exploitative relationship in terms of culture, it is also seen as an inevitable way of producing economic plus value. When it is discussed with the recent history projection, globalization which is immanently associated with bipolarization has become immanent with economic domination of a center under the title of "The End of the History", as Fukuyama conceptualized at the end of the Cold War.

Sociologist George Ritzer suggests a globalization analysis through McDonald's by analyzing not only the economic aspects of the success of the American hamburger chain but also the several ways it influenced communal living in many ways in his book *The McDonaldization of Society*, which he defined as a societal criticism study. He bases his analysis upon Max Weber's rationalization theory and utilizes extensive empirical and anecdotal data to track these effects. The revolutionary effect of McDonald's in the fast-food industry

caused so many clones in every branch of the retail industry to be established in not only America, but the entire world and other social institutions to adopt the principles of McDonald's to their jobs. Ritzer perceives the process by which these values govern more sectors of society in order to include education, work, healthcare, travel, leisure, diet and other areas. To better comprehend what McDonaldization is all about and hence better define its alleged impacts in the knowledge domain, one must first question what characterizes it and where the appeal of this paradigm rests. Ritzer posits four "attractive dimensions" for both the producer and the consumer: efficiency, calculability, predictability and control. Each of these four has resulted in positive and irreversible improvements in a wide range of domains (Ritzer, 1996). In the twenty-first century, successful models that have expanded from the local to the global are beginning to undermine this picture of Ritzer. Ecosystems that can turn their productive capacity into profit exponentially through innovative initiatives such as digitization rather than stringent regulations can generate value from the local to the global level. The fact that cities, as local actors, see import substitution as the basic production unit and strive to become self-sufficient as a new value, hence reducing foreign dependency, has added a new dimension to globalization debates. In this context, Jane Jacob identifies the following breakthroughs and barrier mechanisms for towns to overcome the consequences of the global market:

- 1) The development of central marketplaces for imported commodities and the process of import substitution,
- 2) Economic relations of the city's own areas with the center,
- 3) Works attached to the city center from the outside,
- 4) Economic interactions of cities among themselves,
- 5) Planning and economy

Import substitution is important in Jacobs' basic approach because it protects the value created by local power from global power (Jacobs, 1970). Türkiye has created strong intercity networks with strong tactics in order for the aforementioned breakthroughs to occur. The Mega Technology Corridor, which includes Bilişim Vadisi, strengthens technological and economic ties between the city's own areas and the center along a single line and channels of reciprocal information transfer are developed within the framework of a vision. H.E. Mr. President, Recep Tayyip Erdoğan articulated this vision in 2011 as a corridor beyond a field, citing large-area projects such as Silicon Valley in the United States, the Pearl River Delta in China and Skolkovo in Russia as examples. This corridor concept also seeks to reinforce Türkiye's current geopolitical and geo-technological advantages, based on Türkiye's geopolitical role as a bridge. Bilişim Vadisi, which has an advantageous location due to its proximity to places such as Bursa, Kocaeli, Sakarya, Istanbul and Gebze, is located at the heart of the Mega Technology Corridor between Izmir and Istanbul, starting from Izmir Institute of Technology via Mega Technology Corridor, together with Togg's Gemlik Factory, Bilisim Vadisi Gebze and Bilisim Vadisi Istanbul, which started its operations in Istanbul, on the same corridor. Bilişim Vadisi serves the function of being the appropriate ecosystem for the realization of strategies prepared with a national leap from the local to the global, as will be discussed in the following sections.

Another trend that rattles traditional economic models in the twenty-first century is the growth of free products as a result of the digital values-centered structure of the production method. This issue highlights the need to reassess direct development policies. In the book,

"The Second Machine Age", Andrew McAfee, co-founder of the MIT Digital Economy Initiative and Erik Brynjolfsson, head of the Stanford Human-Centered Artificial Intelligence Institute's Digital Economy Lab, debate the validity of traditional economic systems in the digitalized market. Despite all of the attention it receives from economists, professionals, journalists and politicians, according to McAfee and Brynjolfsson, Gross Domestic Product (GDP) does not quantify our well-being, even if measured properly. GDP and productivity growth trends are significant, but they are insufficient indicators of our overall well-being, let alone our economic well-being. Consider some of the changes in the commodities and services we can consume to gain a better picture of our basic economic progress. Children using smartphones today have access to more information in real-time via the mobile web than the president of the United States did two decades ago, in addition to their massive music libraries. They believe that Wikipedia alone contains fifty times more material than the Encyclopedia Britannica, which he claims was the most important repository of knowledge for the majority of the twentieth century. Most of the infotainment available today, as well as over a million apps on cellphones, is free, similar to Wikipedia but not as much as Britannica. These services are practically invisible in official statistics because they do not have any cost. They add value to the economy, but not to the economy's gross domestic product. The growing availability of free items is not keeping the productivity momentum flowing because our productivity data is also based on GDP measurements. However, there is no denying that these giveaways are worthwhile (Brynjolfsson & McAfee 2014, p.102). As a result, the shift in financial asset values toward digital-oriented production needs a re-examination of widely recognized assessment instruments as well as existing assumptions about development levels. Concepts and assumptions revolving around the concept of globalization really include approaches that are rooted in twentieth-century literature and, if I may use the term, "outdated". The vitality of the actions taken in the name of the "National Technology Initiative" in the new world system may be seen more clearly when combined with this updated cyclical method.

Above, the assertion that science and technological progress have advanced toward monopolization has been addressed through the discourse of globalization and the contention that this is not an unalterable human destiny has been presented alongside an examination of the shifting cyclical picture. The National Technology Initiative is a concept that opposes monopolization in scientific and technological breakthroughs to prevent asymmetric concentration of science, technology and welfare in the hands of a few countries or enterprises. The ability of any country to secure the data of its own residents, to create and produce strategically vital technology goods with its own skills, is important in terms of protecting national sovereignty, according to a paper published by the Ministry of Industry and Technology. The following are the three primary components of the National Technology Initiative (T.R. Ministry of Industry and Technology, 2019, p. 18):

The term "indigenous" refers to something that is geographically associated with a specific location. When it comes to domestic production in Türkiye, some of the ingredients, such as raw materials, semi-finished products and workmanship, are thought to be supplied from our nation and the product that results from this production in our country is also known as domestic goods.

On the other hand, the term "national" refers to what belongs to a country. Although imported inputs are used in the production of national combat aircraft because we own the intellectual and industrial property rights, management, decision-making mechanisms and capital, it will be a national production that we carry out by making decisions based on our

national interests and the aircraft produced will be our national aircraft. As a result, in important sectors such as national security, nationality has been accepted as a priority approach.

Authenticity, on the other hand, means that an intellectually valuable work of art, academic work, invention, or product does not directly contain other intellectual outputs, but instead has its own intellectual value. In industry and technology, authenticity refers to a situation in which the intellectual development of a product or service from conception to launch is carried out by its creators without being influenced by comparable or identical products.

By integrating its vision with local, national and original projects, Bilişim Vadisi also generates an entrepreneurial environment in terms of Türkiye's breakthrough in civil technologies.

3. The Role of Bilişim Vadisi in the National Technology Initiative

Bilişim Vadisi's conceptual foundations were set in 2011, while the physical foundations were laid in 2015. As of 2021, Bilişim Vadisi, which began operations in 2019, has grown to become Türkiye's largest technology development region. Bilişim Vadisi performs its activities with the goal of letting Türkiye become fully independent in terms of economy and technology within the framework of the vision of the National Technology Initiative. In this respect, Bilişim Vadisi acts as a bridge to allow Türkiye to transfer its achievements in the defense industry to civilian technologies. Within the context of its 2023 Vision objectives, Bilişim Vadisi generates brands by continuing its efforts in order to strengthen Türkiye's power and manufacture new technologies and goods with high added value. Togg (Automobile Initiative Group of Türkiye) available at Bilişim Vadisi is produced in line with these three concepts and plays a transformative role in the mobility ecosystem. Under the mobility sub-heading, it is deemed as one of the important steps of transition to civilian technologies in the light of the National Technology Initiative, as it supports developments in several civilian technologies such as digital geographical systems, 3-D printing, 5G communication technologies, material technologies and energy technologies.

To develop key technologies on a local and national scale, to offer competitive products and services in high-tech domains and to create long-term value through original and inventive manufacturing, the entrepreneurial ecosystem must have an innovative structure that fulfills all needs. In order to provide this opportunity, there is a Business Incubator at Bilişim Vadisi. The modern Incubation Business Center, which houses physical working areas for entrepreneurs who began their activities in Bilişim Vadisi, hosts pre-incubation and incubation initiatives in the field of civil technologies such as mobility, connection technologies, smart cities and cybersecurity. The Incubator supports technology enterprises to reach their goals in all processes from business ideas to commercialization activities. The Incubator supports entrepreneurs in their basic and advanced training as well as offering modern workspaces and it creates an important opportunity for the entrepreneurs with the Russian Doll Model it has developed together with the organizations it works with. The model which is called "Incubator Motivation" helps the entrepreneurs to share their professional experience with all the stakeholders within the ecosystem. The incubator and Pre-Incubator Program are the earliest of the programs and services Bilişim Vadisi offers to companies. Entrepreneurs that are accepted to the program gain the right to become a member of the Business Incubator for 6 (six) years. In this way, entrepreneurs find the chance to easily access Outdoor and Indoor Office Opportunities, Unlimited Electricity and Fiber Internet, training according to Technology preparatory levels, Financial and Legal Counseling, Patent Advisory Support, R & D Exemption Support, Mentorship and Technical Mentorship. Accelerator and Demo Day Programs are among the other important activities offered by the Business Incubator. Entrepreneurs aiming to get included in the enterprise ecosystem of Bilişim Vadisi within the scope of this program gain the opportunity to cooperate with other partner companies and to select their own entrepreneurs in order to support their works in the available projects.

Bilişim Vadisi is concerned with the information transfer of the ecosystem's constituents by staying connected with one another. Stakeholders and initiatives that participate in the Mobility Acceleration Program, which is organized under the slogan "R&D firms engaged in the field of mobility develop their entrepreneurs," can collaborate on potential projects by building closer relationships with one another. The Mobility Working Group was founded to plan and contribute to events organized in the Incubation Operation Center with the participation of several enterprises working in the field of mobility technologies under the umbrella of Bilisim Vadisi. Following meetings with the appropriate working group, it was determined to concentrate efforts on developing an entrepreneurial ecosystem in the field of mobility in order to contribute to the growth of our country's mobility ecosystem. The program, which was first organized in 2021 and is titled Mobility and Autonomous Vehicles, covers many sub-titles of civil technologies in addition to mobility focal points such as cybersecurity, artificial intelligence, machine learning, battery technologies, functional security, electric vehicle technologies, micro-mobility, logistics and IoT. Entrepreneurs are given the opportunity to make presentations to the Bilişim Vadisi Venture Capital Investment Fund, national and international investment groups, Angel Investment Networks, corporate technology companies and individual investors at the end of the program, as well as infrastructure support for the Incubation Business Center.

Within the ambit of the National Technology Initiative vision, there are also objectives of preserving the Earth's ecological balance through helpful technologies that affect the local to the global. Mobile laboratories to measure carbon emissions are established within the body of Bilişim Vadisi Chemical Technology Center under the leadership of the Istanbul Chemicals and Chemical Products Exporters Association and thanks to the workshops planned on the green agreement, steps to leave a better world for future generations are also pioneered. The fundamental goal of the First Machine Age was to maximize profit in manufacturing. Ecological balance and humanitarian living conditions were not taken into consideration in line with this goal. The technology of the time shaped contemporary people's habits through shaping their living patterns, city silhouette, production consumption and transportation modes. To break these patterns, present technology should be revised with destructive technologies and the city's structure and living habits should be adjusted for a more habitable future. The rise in automobile use affects the carbon footprint more every day as the number and concentration of the urban population grows. As a result, the major mobility-oriented technology that must be implemented first is fully autonomous and linked electric vehicles, which will reduce the usage of fossil fuels. In this context, autonomous and electric vehicles should be considered as a replacement technology for traditional modes of transportation. The first step toward progress in autonomous and electric vehicles is to deliver qualified human value. The Robotaxi-Passenger Autonomous Vehicle Competition, organized as part of the world's largest Aerospace and Technology Festival TEKNOFEST, sets out a vision to lead this transformation by encouraging participants to make original designs in the field of autonomous vehicle technologies and to gain competence in algorithms and reporting. Our Robotaxi journey, which began with only 8 vehicles at Atatürk Airport in its first year,

expanded to 17 vehicles in its second year, with a track built on the Bilişim Vadisi Kocaeli campus that simulates the urban traffic condition. In its third year, 36 vehicles participated on the track in the competition, which increased its level of one hundred percent year after year. The TEKNOFEST Robotaxi-Passenger Autonomous Vehicle Competition enables for studies to be conducted in a broad scope that targets several mobility topics such as autonomous vehicles, electric vehicles, charging and battery technologies and last kilometer deliveries. The competition's purpose is to track the activities of engineer candidates who want to work in related disciplines and to commercialize the ideas of entrepreneur candidates within them into a product.

Another aspect that will ensure the realization of initiatives outside of proper physical venues in order to ensure the development of the technology ecosystem is the investment funds that make the activities sustainable. Bilişim Vadisi Venture Capital Investment Fund is established with the strategy to invest, from seed funding into Series A, in enterprises that carry on business in civilian technology. This fund offers financial support to entrepreneurs that develop projects in the fields of mobility, communication technologies, cybersecurity, software, design, game and animation and smart city. The Venture Capital Investment Fund, Türkiye's first investment fund established in collaboration with a technology development zone, Bilişim Vadisi, has a capital of TRY 300 million and is co-founded by Albaraka Türk, Vakıf Katılım and Kosgeb. Applicants must have finalized their business formation and achieved sales before applying for the fund. Bilişim Vadisi Venture Capital Investment Fund invested in 11 projects after receiving 892 applications.

It is critical to cultivate the ability to think freely supplied by art for a manufacturing model that incorporates original items. The Design Clustering Center is the "New Design Ecosystem", providing this opportunity. Architectural Design, Public Art, Industrial Design and Fashion Design are available in the Design Clustering Center, which is exclusively present at Bilişim Vadisi among all technoparks. Valuable artists and designers in our country bring tradition and innovation together to blend technology with art. Within the framework of this vision, the Center aims to establish business relationships between design companies and R & D companies to integrate design into technological products. The industrial design of AirCar, a two-person capacity electrical and fully autonomous flying car, was developed in this Center. AirCar, which can make approximately 70-km with two passengers, aims to introduce cargo and search & rescue versions in 2024 and to start carrying passengers in 2026.

The National Technology Initiative's six main priorities are as follows: "1. Inclusive, holistic and "stakeholder-oriented" approach, 2. Data-based, impact-oriented and accountable targets, 3. Policies that closely monitor the world and direct pioneering breakthroughs, 4. Agile, change-oriented and adaptable policies to innovations, 5. Human Capital Development, 6. Independence and Global Competition" (T.R. Ministry of Industry and Technology, 2020, p. 24). In order to meet these six objectives, human capital is necessary under each topic. The human capital needed in today's digitalizing world is focused on software skills. Türkiye Open-Source Platform Project, managed by Bilişim Vadisi and a project partner of TUBITAK TUSSIDE, aims to increase the number of software developers in our nation and turn it into a software and technology exporter. In this regard, successful international software schools were investigated and it was decided to collaborate with Ekol 42 Software Schools of French origin, taking into account both the learning methodology and the employment rate of their alumni. As a result, 42 Istanbul and 42 Kocaeli Software Schools began operations in August 2021, with participation from the

Minister of Industry and Technology, Mr. Mustafa Varank and the Turkish Open-Source Platform's founding members. 42 Software Schools' "peer learning" concept and gamified learning infrastructure help students learn the software. It also motivates students to collaborate on projects by having them fall in love with the program. At least 40% of students enrolled in these programs, which are open to everyone over the age of 18, have never worked with software or had software training. Following training at a software school that lasts for about 3 years, students do their mandatory internship for 3 months at the end of the first year. It contributes to import substitution through its works that generate value on a worldwide scale by lowering license prices and decreasing foreign dependency. Ekol 42 Software Schools continues to take a role in the realization of the goal to reach 500 software developers as determined in the 2023 Industry and Technology Strategy.

It is also critical to conduct integrated research in collaboration with Türkiye's educational institutions to ensure that an innovative education model is viable for future generations in order to develop human value. A training opportunity is available in Bilişim Vadisi through the Open Source Based Robotic Coding and Artificial Intelligence Workshop, which seeks to teach entry-level robotics and advanced Arduino-based coding logic. With the protocol signed with the Kocaeli Directorate of National Education, the procedure is moving on like 3 days online and 2 days physical at BV Academy, under the framework of In-Service Training, which MoNE instructors are now getting. The training consists of 3 fundamental topics. These are:

- 1. Robotic Coding and Robot Technologies,
- 2. Open-Source Software,
- 3. Artificial Intelligence Applications

. This workshop is expected to produce the best results by training qualified teachers in the field of software and ensuring the continuity and prevalence of Open-Source Software projects.

Finally, the values created by global competitiveness should go beyond data analysis and profitability. Projects on entertainment culture should be produced for technology knowledge that embraces all aspects of human beings. Bilişim Vadisi is also making groundbreaking advances in game development, which has left the film sector trailing in terms of market share. In this respect, Digital Gaming and Animation Center (DIGIAGE) is the name of one of Türkiye's major game industry formations, with camps and initiatives run by Bilişim Vadisi annually. With various training, camps, programs and events related to the sector, the Center, which directs the game industry with all entrepreneurs who have an idea in the game and animation categories, provides the entrepreneurs with the right and effective environment where they can realize their projects. It offers sectoral seminars, camps and training in order to contribute to the Turkish Game Development ecosystem and ensure that our country, particularly our youth, benefits much more from the global digital economy. Creating a large game ecosystem together with the people participating in these programs, DIGIAGE unites those interested in the sector not only through physical channels but also through online channels such as Discord. Every endeavor to develop human value in our country by producing original ideas, new tales and competitive apps always aims to push the Turkish game ecosystem forward. Sharing key themes such as entrepreneurship and the game business with industry representatives and entrepreneurs by specialists in terms of empowering people is simply one of DIGIAGE's current initiatives. The game Ecosystem of Bilişim Vadisi creates a difference with the organization

of activities that will continue the interaction among entrepreneurs, investors and critical actors of the game and animation industry. Those willing to enter the sector need to closely follow the industry-based reports, game development camps and all national and international developments related to game development camps. Information needs to be used within a project for technical information to be more permanent and functional. In this respect, in every Game Camp organized, digital games developed by the participants throughout the camp are presented to the appreciation of the sector. Investors from Türkiye and various other countries as well as many students, volunteers, trainers and investors are included in the game development ecosystem through face-to-face meetings and online presentations.

Conclusion

Technologically advanced countries and regions in the world gathered their own technological moves together under a certain name against the Fourth Industrial Revolution. Europe is shaping technological transformation strategies with Industry 4.0 in Europe; China with Made in China 2025 and the USA with the Internet of Things and Artificial Intelligence Technologies. Türkiye named its strategy consisting of 5 main components including "High Technology and Innovation", "Digital Technology and Transformation", "Entrepreneurship", "Human Capital" and "Infrastructure" as the National Technology Initiative within the framework of the fundamental goals available in the roadmap specified in the 2023 Industry and Technology Strategy Plan. In this way, policies regarding the moves to be taken towards technological transformation will be applied as a whole in a harmonious way. Bilişim Vadisi performs its activities with the goal to let Türkiye become fully independent in terms of economy and technology within the framework of the vision of the National Technology Initiative. In this regard, Bilişim Vadisi serves as a vital bridge in the transfer of Türkiye's achievements in the defense industry to civilian technologies.

References

- Brynjolfsson, E., & McAfee, A. (2014). The Second Machine Age: Work, progress and prosperity in a Time of Brilliant Technologies. Langara College.
- Jacobs, J. (1970). The Economy of Cities. Vintage.
- Kravets, A. G., Bolshakov, A. A., & Shcherbakov, M. (2020). *Society 5. 0.* Springer International Publishing AG.
- Ritzer, G. (1996). The McDonaldization of Society: An Investigation into the Changing Character of Contemporary Social Life. Pine Forge Press
- Schroeder, W. (2016) Germany's Industry 4.0 Strategy: Rhine Capitalism in The Age of Digitalization. *Report for The Friedrich-Ebert-Stiftung*.
- T.R. Ministry of Industry and Technology. (September 18, 2019). 2023 Sanayi ve Teknoloji Stratejisi. The Official Website of T.R. Ministry of Industry and Technology: https://www.sanayi.gov.tr/2023-sanayi-ve-teknoloji-stratejisi.

About Author

Ahmet Serdar İBRAHİMCİOĞLU | Bilişim Vadisi (IT Valley), General Manager | info[at]bilisimvadisi.com.tr

Ahmet Serdar İbrahimcioğlu graduated from Yıldız Technical University, Department of Mechanical Engineering in 2008. In 2013, he conducted a study on "Real Estate Assessment in Sustainable Structures" in the Department of Construction Engineering Construction Management at Yıldız Technical University, Institute of Science. In 2019, he completed his second master's degree at Bahçeşehir University, Department of Business Administration, with a thesis titled "Planning of Technology in the Sector of Information Technology". Currently, İbrahimcioğlu is working on his doctoral study on the "Resilience Capacity of the Information Sector in Türkiye" in the Department of Business Administration at Gebze Technical University. Having served as the Technical Manager and Deputy General Manager at Yıldız Technical University Techno Park, İbrahimcioğlu was appointed as the General Manager of Bilişim Vadisi on November 12, 2018. Being a Member of the Board of Trustees at Yıldız Technical University İbrahimcioğlu is married with three children.