



ECOSYSTEM INTEGRATION LAB

ENTREPRENEURIAL AND INNOVATIVE
RESEARCH -- COMMERCIALIZATION IN
AGRI-FOOD TECHNOLOGIES IN THE
AEGEAN REGION OF TURKEY
(AGTECH-EIL)



Initiative site: <https://riecolab-agtech-eil.yasar.edu.tr/>
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RiEcoLab's General Vision:

The overall joint vision of the RiEcoLab (Responsible Innovation-Led Entrepreneurial University Transformation Centres (Ecosystem Integration Labs)) project for 2030 is to develop a novel way of performing research and development in universities to ensure immediate commercialisation (spin-offs) and involvement of a large number of internal stakeholders (academic and non-academic staff, as well as students). The new operational framework will be introduced via Ecosystem Integration Labs (EILs), which will be developed and implemented by each participating university (relying on existing infrastructures, such as research support offices and technology transfer offices). The EILs will be tailored based on each university's HEInnovate needs assessment and intelligent specialization areas, which will govern the focus of the envisioned spin-offs. As a result, this will motivate each higher education institution (HEI) to commit to its Innovation Vision Action Plan (IVAP). This project has received funding from the European Union's – EIT Programme (European Institute of Technology) within the HEI initiative <http://riecolab.eu/>

RiEcoLab Project Partners are

- University of Lodz
- Yasar University
- University College Dublin
- ACEEU
- EBAN
- Wageningen Research
- NUSPSA / SANSPA
- HELIXCONNECT Europe

Yasar University's IVAP vision of AgTech-EIL is, by 2030, to become Aegean Region's most active innovation/entrepreneurship hub fostering inclusive spin-offs/startups/scale-ups and creating and sustaining innovative networks, pioneering in the areas of digital technologies applied in the agri-food sector; hence, to achieve sustainable circular economic development meeting all the regional, environmental, cultural, and social needs, in compliance with all quadruple helix actors (industry, academia, government, and civil society). AgTech-EIL Associated Partners are İzmir SME Development Authority, İzmir Commodity Exchange (İCE), and Northern İzmir Technology Development Center.

RiEcoLab's Promotion: Responsible Living Labs

RiEcoLab Toolkit 3 (T.3) aims to introduce the concept of Responsible Research Innovation (RRI) and embed RRI in the innovation spin-offs/startups/scale-up strategy of HEIs. The goal is to raise awareness for all stakeholders, especially university administrators, and help them understand why RRI is necessary, the benefits, and how it can be embedded in the HEIs strategy. RiEcoLab envisions its Ecosystem Integration Labs (EILs) to be developed as a living-lab (LL) structure where responsible innovation can be co-produced with quadruple helix stakeholders (scientists working in HEI's and societal actors, such as businesses, governments, end-users/citizens), to lead the path to impactful spin-offs/ startups/scale-ups and successful innovation which its envisioned users value.

The European Commission (<https://ec.europa.eu/programmes/horizon2020/en/h2020-section/public-engagement-responsible-research-and-innovation>) has provided more concrete normative orientations in the form of six policy keys that RRI should foster: ethics, gender equality, governance, open access, public engagement, and science education.

- **Ethics**: focuses, on the one hand, on research integrity (the prevention of unacceptable research and research practices) and, on the other hand, science and society (the ethical acceptability of scientific and technological developments).
- **Gender Equality**: this is about promoting gender-balanced teams, ensuring gender balance in decision-making bodies, and always considering the gender dimension in Research and Innovation (R&I) to improve the quality and social relevance of the results.
- **Governance**: arrangements that lead to acceptable and desirable futures have to be robust and adaptable to the unpredictable development of R&I (de facto governance); be familiar enough to align with existing practices in R&I; share responsibility and accountability among all actors, and provide governance instruments actually to foster this shared responsibility.
- **Open access**: addresses issues of accessibility to and ownership of scientific information. Free and early access to scientific work might improve the quality of scientific research and facilitate fast innovation, constructive collaborations among peers, and productive dialogue with civil society.
- **Public engagement**: fosters R&I processes that are collaborative and multi-actor: all societal actors work together during the process to align its outcomes to society's values, needs, and expectations.
- **Science Education**: focuses on enhancing the current education process to better equip citizens with the necessary knowledge and skills to participate in R&I debates and increase the number of researchers.

RRI entails engaging all actors, from individual researchers to policymakers, educators, business and industry innovators, civil society organizations, and governments, through inclusive, participatory methodologies in all stages of R&I processes and in all levels of R&I governance (from agenda-setting to design, implementation, and evaluation).

Actors aiming at Responsible Research and Innovation commit themselves to the following principles:

- Transparency: by engaging in open innovation, reflecting on and openly disclosing the purposes and potential implications of innovations and the associated uncertainties.
- Participation & Inclusion: by involving people of a broad diversity and different backgrounds on eye-level (inclusive innovation processes) and considering their needs.
- Governance: capacity building for Responsible Innovation, fostering the links between innovation and CSR/Sustainability Management, and implementing gender equality.
- Anticipation: assessing risks and broader impacts (risk management and due diligence), considering ethical limitations, welcoming early warnings of adverse effects, and mitigating harms.
- Sustainability: orienting innovation towards Planet, People and Profit (triple bottom line) and increasing shared value (for the company and society).

Living labs (LL) have a lot in common with Responsible Research and Innovation (RRI) at first glance. Nevertheless, living labs are various, and not all approaches to living labs qualify as RRI. RRI seeks to bring forward various social and ethical values related to innovation and enriches an exclusive focus on business or societal goals. Therefore, an RRI approach may be beneficial for shaping the Living Labs intended to tackle the more complex societal challenges or wicked problems. To define the “right” type of impact, research and innovation usually depart from normative anchor points. Such a value-driven base must be open to public debate and not be left to experts alone to define. Therefore, especially for the more encompassing innovations seeking solutions to grand challenges, it may be essential to adopt an RRI approach. LL from goal effectiveness perspective (GEP-LL) and LL adopt an RRI perspective (RRI-LL).

Table 1 Comparison between GEP-LL and RRI-LL

GEP-LL	Overlap	RRI-LL
<ul style="list-style-type: none"> • reflection on cost structure and effectiveness • customer segments and revenue streams • definition of leadership and decentralize decision making • clear definition of impacts to be achieved • agreement on the value of the intended impacts 	<ul style="list-style-type: none"> • participatory design, co-creation • multi-stakeholder development of shared vision on innovation future and contribution by the LL • incorporation of participative monitoring and evaluation • Attention to legal issues of public policies and private accountability • Concept of collective learning 	<ul style="list-style-type: none"> • More attention for an exploration of a diversity of impacts, including unintended ones • Effort to include diverse stakeholders who do not necessarily agree • Openness towards disagreement about value and acceptance of the innovation • Articulation of (tacit) normative background of the innovations

All in all, we promote the existence of RRI-LL. As Yasar University and AgTech-EIL are concerned, our role is to embed RRI-LL principles in the İzmir Agricultural Technology Center initiative.

Yasar University's IVAP vision of AgTech-EIL: İATC¹

İzmir Agricultural Technology Center (İATC) is a project which aims at bringing together agriculture with technology under the leadership of the İzmir Commodity Exchange (ICE) and in cooperation with the Ministry of Agriculture and Forestry of the Republic of Turkey, İzmir Institute of Technology, Yaşar University, İzmir Chamber of Commerce, Aegean Region Chamber of Industry, Aegean Exporters' Association, İzmir Chamber of Shipping and İzmir Union of Tradesmen and Craftsmen Chambers with guidance from the İzmir Development Agency.

Considering it in a holistic way as vegetative and animal production, agriculture should be carried out based on the principles of ensuring continuity and security of supply, protecting the resources and environment, and protecting consumer health. To be able to satisfy the needs of increasing day by day and, in the meanwhile, to be able to maintain the profitability of production has made it necessary to use technology in an intense manner in the agricultural sector as in all other sectors.

As a result of the current Industry 4.0, technology development brings about radical changes in the agricultural sector after the service and industrial sectors. The concept emerging as a result of this new change is called Agriculture 4.0 (Smart Agriculture). Agriculture 4.0 applications make it possible to develop solutions to different requirements as well.

The need for an independent environment has risen in which technological producers and agricultural producers may come together in order to be able to identify the needs precisely and to analyze the feasibility thereof. İzmir Agricultural Technology Center has been brought into being as an independent structure which is of the nature of a center of attraction for agricultural technologies and enterprises and an R&D center for agricultural technologies, which will serve as a bridge for the development of agricultural technologies, identify the rules as an interface, create a common language between stakeholders and be owned by the stakeholders. Our goal is to contribute to maintaining national agriculture in accordance with changing conditions and developing new and effective technologies. The opportunities we offer are

- For Agricultural Enterprises and Farmers
 - Reasonably priced and easy-to-use solutions which enhance efficiency and profitability
 - An open innovation environment in which needs may be included in multidisciplinary research and rapidly converted to solutions complying with their requirements
 - A reliable consultancy and training service
- For Agricultural Machinery Manufacturers
 - Consultancy and training infrastructure at the moments when companies require their own needs
 - Opportunity to study for technology companies and academicians

¹ https://www.youtube.com/watch?v=1dXEgrOhiGw&feature=emb_imp_woyt

- For Researchers and Academicians
 - Opportunity for a multidisciplinary approach to scientific research and innovation
 - Opportunity to be able to find solutions in a scientific approach to actual problems as an open innovation center
 - Support to services related to research (protection of intellectual property rights, connections with industry, commercialization)
- For Technology Companies
 - Opportunity to understand the requirements of the sector and convert them into successful business models
 - Opportunity to reach technical knowledge and areas of application which will speed up product developments and bring competitive solutions
- For Entrepreneurs and Students
 - Opportunity to be able to see several problems and opportunities coming from the field as an open innovation center
 - Opportunity to work with firms and specialists in different disciplines
 - Opportunity to benefit from the Center as a point to access funds and as a point of contact
 - Opportunity to make use of working areas on a free-of-charge basis

İATC will operate through three different membership systems tailored to the requirements of all stakeholders. İATC primary premises are the main service building in which offices are located, and office spaces are designed with different features by the type of membership. Testing sites are agricultural fields independent of the İATC primary premises, where pilot growing, technology development, and practices are planned. Infrastructural services mean internet, electricity, water, and power supply services.

The quadruple helix partners are depicted in Figure 1, and their visions are explained in Annex A. The timeline of İATC and RiEcoLab's contribution is given in Figure 2.

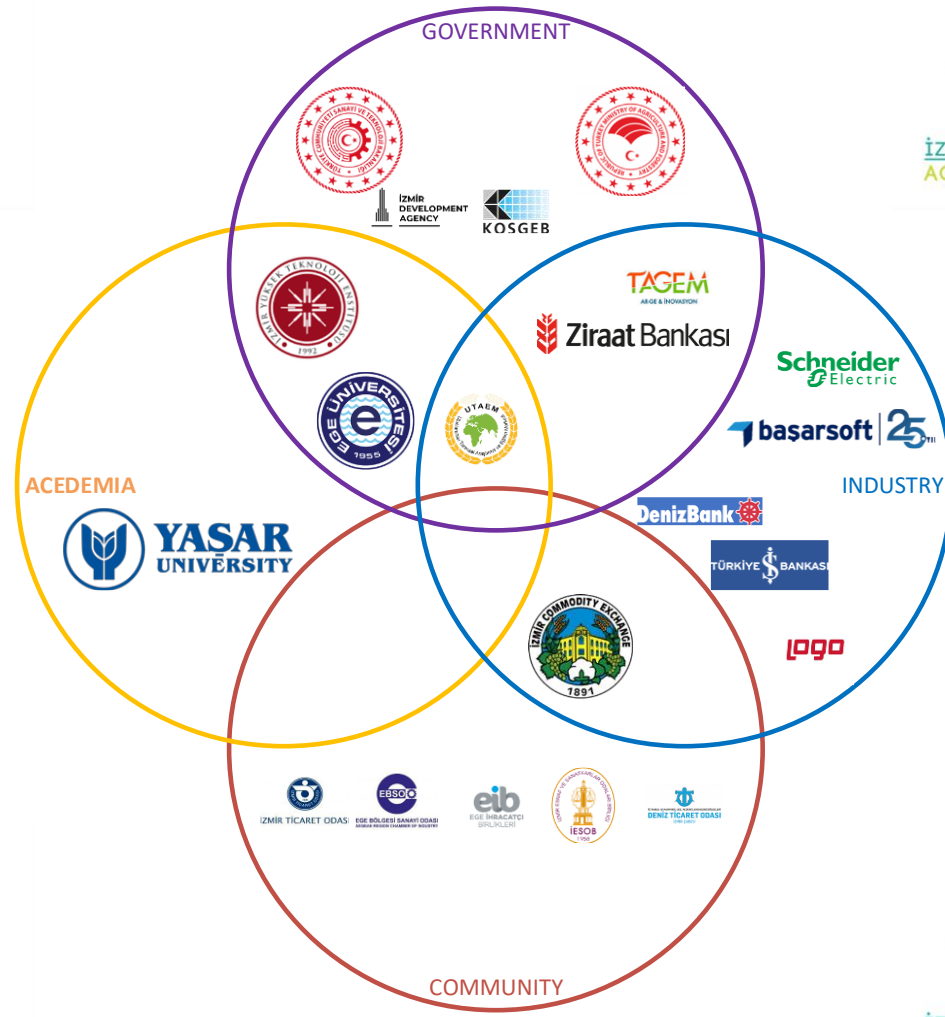


Figure 1 İATC Quadruple Helix Partners

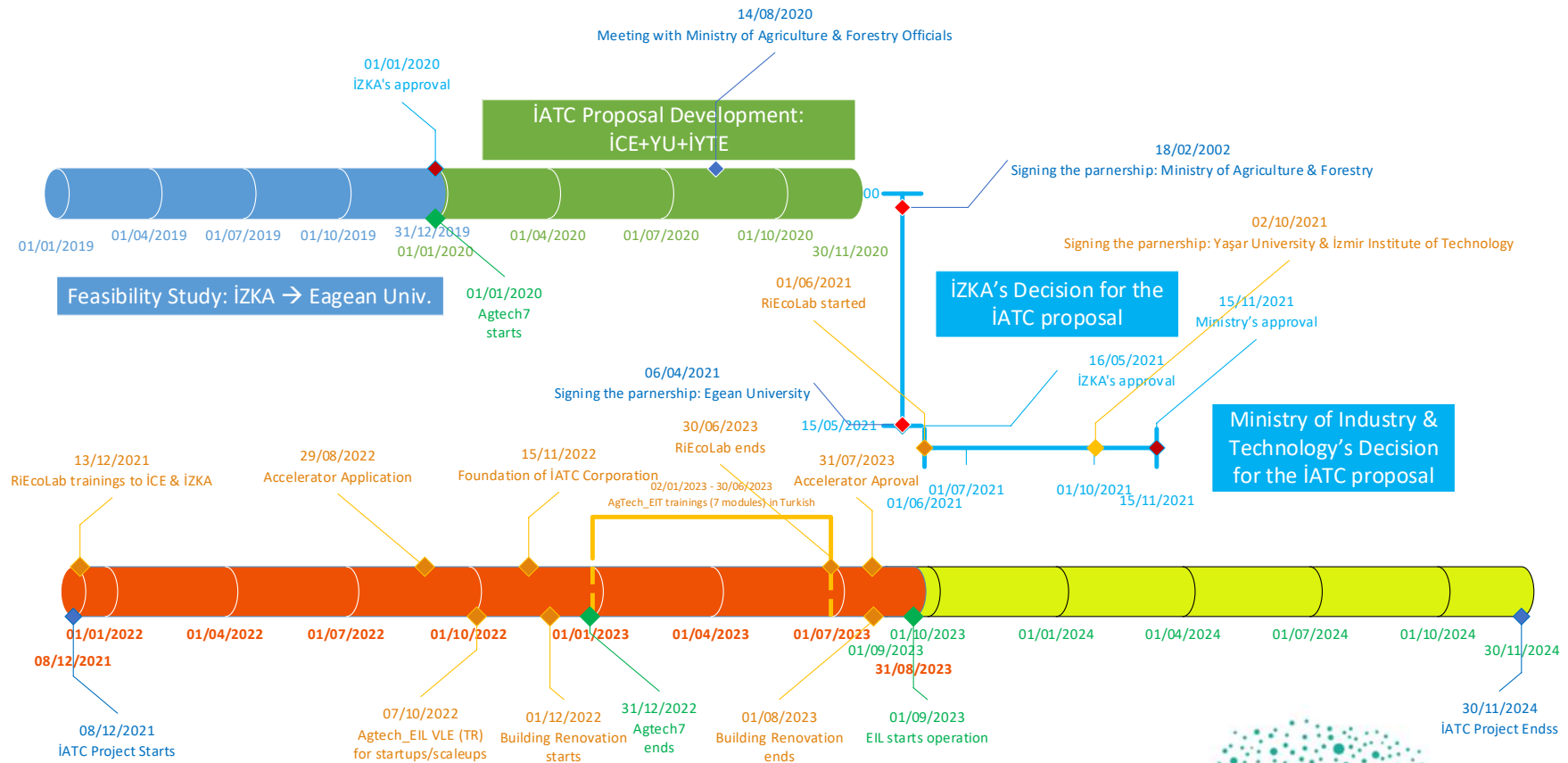


Figure 2. Timeline of IATC

Feasibility Study Grant:

İzmir Development Agency (İZKA) announced the 2018 Feasibility Support Program with a budget of 2 Million TL to provide direct financial support to the feasibility studies for the benefit of essential opportunities in terms of the development and competitiveness of İzmir, the prevention of threats and risks to the regional economy, and the development of the innovation and entrepreneurship capacity of the region.

While the applications should be aimed at realizing the feasibility studies that fall within the scope of the goals and priorities of the support program, the purpose of the support program has been determined as “utilizing important opportunities for the development and competitiveness of İzmir, preventing threats and risks to the regional economy, and improving the innovation and entrepreneurship capacity of the region”. The feasibility grant was given to the İATC initiative via Egean University from İZKA in 2019. The feasibility study put forward the following outputs.

Agriculture covers the fields of seed, fertilizer, medicine, irrigation, waste management, environmental technologies, renewable energy, food industry, storage and logistics, especially crop production and animal production. It is challenging to find innovative solutions to the needs and problems of the agricultural sector, whose backward and forward connections are so dense and comprehensive with technological products. In addition, as the size of the enterprises in the agricultural sector differs, the needs, problems and perspectives vary. The interest of all the sector stakeholders in technology for different reasons and the widespread use of these products is significant in terms of efficiency, quality, food safety and sustainability.

Within the scope of feasibility, the development axes of İATC were determined as efficiency and quality, innovation, ethics and sustainability. Strategic targets and activities have been selected under these development axes. Accordingly, five main activities were designed. These are Continuous Needs Analysis from the Field, Technology Map Update and Technology Development, Incubation and Acceleration, Training and Consultancy activities.

Guided Project Grant:

Guided Project Support is a financial support method in which the Agency directly carries out the project preparation process without making a call for project proposals. In Guided Project Support, unlike other financial support methods, projects are initiated under the agency's leadership and developed under the agency's leadership. This support program welcomes proposals whose scope had been undergone a feasibility grant.

Having the İATC feasibility study project accepted by İZKA, İCE, together with Yaşar University and İzmir Institute of Technology, started to develop a proposal for the Guided Project grant worth €2 million if accompanied by a matching fund from the partners. The partners of the guided Project are İzmir Commodity Exchange (ICE), the Ministry of Agriculture and Forestry

of the Republic of Turkey, İzmir Institute of Technology, Yaşar University, İzmir Chamber of Commerce, Aegean Region Chamber of Industry, Aegean Exporters' Association, İzmir Chamber of Shipping and İzmir Union of Tradesmen and Craftsmen Chambers.

The proposal was submitted to İZKA in December 2020, and the approval was sent to the Ministry of Science and Technology for granting the funds. Eventually, we received positive news about the grant in mid-November 2021. Finally, the grant was signed on December 8th.

Accelerator Grant:

KOSGEB's accelerator programs are in two tracks. One track is İŞGEM, which supports entrepreneurs, while the second program, TEKMER, supports innovative/technological startups/spin-offs. The TEKMER support program aims to support the establishment and operation of structures that will provide incubation services to ensure the establishment and maintenance of enterprises in line with national plans and programs with the cooperation between actors in the entrepreneurship ecosystem. If granted under the TEKMER program, any accelerator can get around 400 000 € for starting up the incubator. Most importantly, any startup if accepted to a TEKMER accelerator, can get a bold sum of incentives and certain tax exceptions, which is very attractive for tech companies.

There are two crucial cooperation organizations for the TEKMER application, which will take place under the coordination of the İTB. Although the main contractor İCE has intensive work in the agriculture sector and Agriculture 4.0, critical cooperation will be made with the two universities in the R&D and entrepreneurship ecosystem management field. Strategic cooperation organizations have signed agreements on this subject, İzmir Institute of Technology and Yaşar University.

With the support of the İzmir Development Agency-guided project signed in December 2021, the infrastructure development of the building where the İzmir Agricultural Technology Center will operate will be established. İATC office and application areas (1,600 m²) will be based in the International Agricultural Research and Training Center (UTAEM) campus in Menemen, İzmir. There will be additional administrative offices in the Konak district. Being the main beneficiary of the guided İATC project, the Ministry of Agriculture and Forestry reserved a building as office space for İATC laboratories and entrepreneurs. In order to ensure that the technologies to be developed are tested in the natural environment, UTAEM lands and, if necessary, lands belonging to other institutes affiliated with the Ministry are opened as a living lab.

Figure 3 depicts the living lab and accelerator sites and the renovated building.



Living Lab

Accelerator



Figure 3. The site of IATC

VLE & Training

European HEIs have shown interest in agri-tech recently; however, their training curricula lack an interdisciplinary approach. Increase in agribusiness interest ventures globally, yet small-scale entrepreneurs, angel investors and incubator managers are unaware of agri-tech benefits. Combining agricultural knowledge, engineering innovation, and business/investor insights (inter-disciplinary approach) will allow Universities to understand and exploit the innovation potentials of agri-tech deeply. Engaging food/ag-tech professionals and early-stage investors in a learning process will demonstrate how disruptive agri-tech can change the game in (agri)business. Target-groups:

- Universities' students from Agriculture, Engineering, Business backgrounds.
- Agribusiness companies (i.e. agri-tech and food-tech).
- Angel investors and HEIs' 'in-house' incubator managers.

A unique face-to-face & online training program combining agricultural knowledge, engineering innovation, and business insights from domain experts addressing the needs of University students, professionals, and early-stage investors.

The curriculum with seven agri-tech modules:

1. Data Analytics in Farm Management Information Systems.
2. Blockchain in food value chains.
3. Financial innovation in agri-food.
4. IoT and Earth Observation.
5. Lean startup for agri-tech ventures.
6. Bridging public and private impact investors to support spin-offs, startups, scale-ups
7. Embedding RRI-LL principles in the İzmir Agricultural Technology Center

The first five modules were initially developed within the Agtech7 project in English. The Agtech7 project is "A Knowledge Alliance of Agribusinesses, Academia and Business Angels for Disruptive Farm-to-Fork Agri-Tech Training" with the following partners:

- P1 -- University of Novi Sad
- P2 -- Biosense Institute
- P3 -- Maastricht University
- P4 -- European Business Angel Network ASBL
- P5 -- South East European Research Centre- SEERC
- P6 -- Neuropublic SA
- P7 -- Yasar University
- P8 -- Camli Yem Besicilik San. Ve Tic. A.Ş.

These five modules from the Agtech7 project were translated into Turkish as well as the last two modules developed within the scope of the RiEcoLab Project. These modules are uploaded into Yaşar University's MOOC system, which can be seen in Figure 4:

<https://sakai.yasar.edu.tr/portal/site/AgTech-EIL>

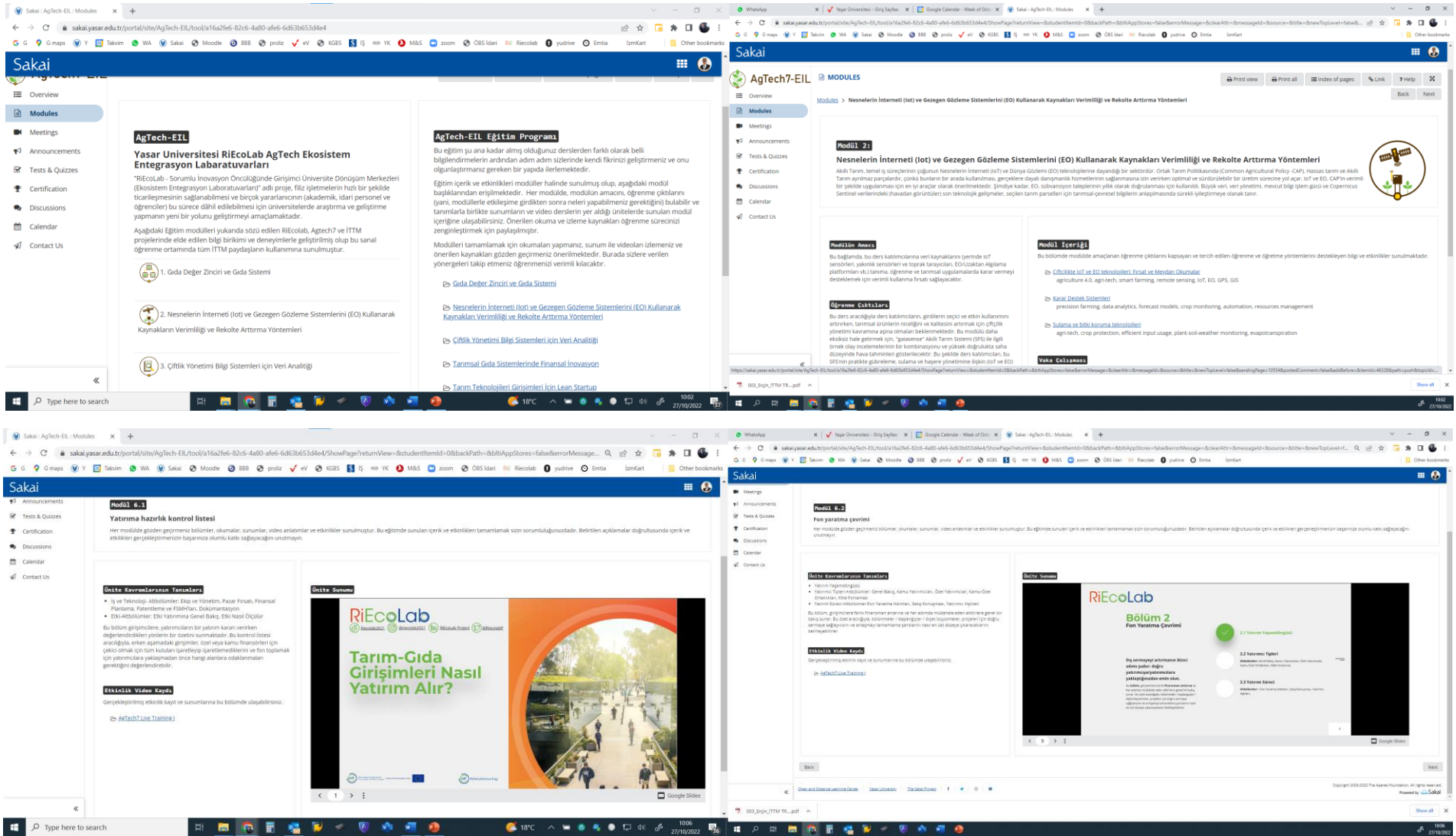


Figure 4. Agtech-EIL Training: Virtual Learning Environment

ANNEX A OTHER PARTNERS IN AGTECH-EIL: İATC



Republic of Turkey Ministry of Industry and Technology

The Ministry of Industry and Technology is a government ministry office of the Republic of Turkey, responsible for industrial and commercial affairs in Turkey.

Duties

The duties and powers of the Ministry of Industry and Technology are as follows;

- To carry out studies to determine industrial policies and strategies, to prepare administrative and technical regulations for industrial products and to ensure their implementation, to keep the registry of industrial enterprises, to produce industrial statistics and analyzes.
- To carry out studies for the preparation of productivity policies and strategies in order to develop the economy in accordance with the principles of productivity, to increase and improve the productivity of industrial enterprises and to support clean production projects.
- To cooperate with relevant institutions and organizations in order to determine science, technology and innovation policies in line with economic development, social development and national security objectives, to ensure the implementation of the determined policies, to support research, development and innovation programs and projects for industry, activities and investments to be made within this scope, to take and implement incentive measures, to regulate and inspect these issues.



Republic of Turkey Ministry of Agriculture and Forestry

- **Mission:**

- to ensure the sustainable use of agricultural and ecological resources,
- to increase standard of living in rural areas; and
- to ensure access to safe food and high-quality agricultural products needed by Turkey and world markets.

- **Vision**

- is effective in both rural and urban areas,
- is only one step away from the shareholders and consumers,
- has enough expertise to find solutions to all kinds of agricultural problems; and
- has completed its organizational and administrative transformation process.



İzmir Institute of Technology

İzmir Institute of Technology (IZTECH) is a Turkish state university established in 1992 to offer higher education and carry out research in the fields of science and technology.

- **Mission**

-IZTECH has taken on a mission to carry out advanced research, education and production as well as publication and counselling in the field of science and technology.

- **Vision**

-IZTECH's vision is to be a leader in science and technology and a unique world university in terms of its educational standards.

The extended notification by the main strategic axes constituting the IZTECH Vision is to;

- lead the establishment of high technology in national priority areas,
- provide unique and qualified contribution to digital transformation and technological changes by providing a cooperative, student-oriented and practical learning opportunity in the work environment in education,
- protect environmentally and humanly sensitive development sustainably,
- be a respected research university in the thematic areas that it leads in the world.



Ege University, the fourth founded university of Turkey, is established in accordance with the law No. 6595 issued on May 20th, 1955 and began its educational life on November 5th, 1955.

The first two faculties of Ege University are Faculty of Medicine and Faculty of Agriculture, which were founded in 1955. School of Nursing was also established within the same academic year.

Ege University, having completed its entire establishment in a span of 20 years, added new faculties, institutions, and schools to its academic units in different dates.

In 1982 the bisection of Ege University facilitated the foundation of Dokuz Eylül University with the handover of many pre-established faculties and graduate schools. Furthermore, the faculties and graduate schools of Ege University in various provinces and districts were later assigned to become the first faculties and graduate schools of Afyon Kocatepe University, Pamukkale University, Celal Bayar University, and Adnan Menderes University.

By the year 2019, Ege University includes 17 Faculties, 9 Institutes, 4 Graduate Schools, 1 State Conservatory of Turkish Music, 10 Vocational Schools, 6 Rectorate Units, 37 Application and Research Centers.

By the academic year 2017-2018, Ege University hosts a total number of 65.587 students, 55.875 of which are undergraduate and associate degree students, and 9.712 are postgraduate students. The university has 3156 academic staff and 6347 administrative staff.

MISSION

As a pioneering and leading research university in Turkey and in the world; our mission is to meet the regional, national and universal needs in the field of research and education, to present the R&D experience to the benefit of the society, to raise individuals who are committed to their basic values, who are professionally and culturally equipped, who are open to change and who adopt scientific thinking as a way of life.

VISION

Our vision is to become a world university pioneering in scientific research, having a strong cooperation and communication network with its national and international stakeholders, having a student-oriented, green, sustainable, accessible and livable campus, contributing to economic, social and cultural life and having a strong financial structure.



İZMİR TİCARET ODASI

İzmir Chamber of Commerce

- Vision:
 - They continue to lead Izmir trade life by developing our member-oriented, modern, pro-active and facilitator services. They keep their works for rising our city's high life quality and making Izmir a universal city for local and foreign investors.
 - Izmir should be a competitive and universal brand city in trade, production and tourism with a high life quality.
- Mission:
 - By the law competence, Izmir Chamber of Commerce that represents trade life of Izmir:
 - Provides services to Izmir tradesmen covering all areas of trade with its qualified human force,
 - Facilitates and develops city's trade activities by solving short-term and long-term problems,
 - Contributes to make Izmir an attractive city in trade and investments with high competitive force and life quality.



EGE BÖLGESİ SANAYİ ODASI
AEGEAN REGION CHAMBER OF INDUSTRY

Aegean Region Chamber of Industry

- **Mission**
 - Their mission is to create value by providing certification, initiative and monitoring, training, research and trade promotion services to their members

with the perception of perfectness and to contribute to the development and sustainability of the industry with our stakeholders.

○ **Vision**

- To be the first solution partner in the globalization of our industry and to keep our position of leading chamber.



Aegean Exporters' Associations

The Aegean Exporters' Associations, one of the unique examples of public and private sector cooperation established in Turkey, has built herself into a research, coordination, decision making and implementing institution, which works for the promotion of Turkey's exports and provides the smooth and functional running of the relationships between the exporters and the law making system in a rational and dynamic way.

The first Exporters' Union, Izmir Dried Fruits Exporters' Union was founded in 1939, and followed by other Associations. Working in close collaboration with the Ministry of Economy, Aegean Exporters' Associations General Secretariat comprises of 12 different associations and serves over 8.000 member companies. The annual exports realized by the members of these 12 Associations account for approximately 10% of Turkey's total exports.



İzmir Chamber of Shipping

• **Mission**

-To offer our members efficient, productive and affordable services for shipping activities which are compatible with global system with the purpose of developing Turkish Shipping Sector in a free competition environment, increasing international competitive power of Turkish Shipping Sector and contributing to the national economy through our ever-developing service concept.

- **Vision**

-To achieve the ideal of becoming a Maritime Nation and a Maritime Country.



İzmir Union of Chambers of Merchants and Craftsmen

- **Mission**

Within the framework of the understanding of institutionalism, for “Artisans and Craftsmen”;

- To fulfill the duty of qualified representation in every appropriate and necessary environment / formation,
- To guide them in the light of reason, science and law, to support them in adapting to changing socio-economic and socio-cultural conditions and technological developments,
- To contribute to the improvement and development of work and working conditions,
- Taking an active role on their behalf in democratic decision processes and protecting their rights,
- To lead them to keep the Ahi-order tradition created with universal moral values and the understanding of doing good business alive, and to contribute to the economy of İzmir, the country and humanity increasingly.
- It is to carry out Unity Studies based on the principle of “Keep the Craftsmen Alive so that the Society Develops”.

- **Vision**

- It is to guide the Tradesmen and Artisans in a sustainable manner as a leading professional organization within the framework of the understanding of “Member-Oriented Benefit Creation” based on research and continuous learning, which takes its knowledge from the technology and communication opportunities of the age, and the principle of continuous improvement and development, and thus to create social benefit.



İzmir Commodity Exchange

İzmir Commodity Exchange (ICE) was established in İzmir, the 3rd largest province of Türkiye, in 1891 as the first commodity exchange of Türkiye.

İzmir has always been an important hub for agricultural production and one of the leading centres for domestic and foreign trade throughout the Ottoman Empire and the Turkish Republic. In fact, İzmir harbour was the greatest export harbour of the Ottoman Empire in the early 20th century, which made the city the host for the first efforts to systemize the agricultural markets and the first commodity exchange of Türkiye.

As the economic life was severely damaged and agricultural production decreased during the World War I and Turkish Independence War, İzmir Commodity Exchange experienced rough times. Following the independence of Türkiye and declaration of the republic, the present building of the İzmir Commodity Exchange was built and opened with a ceremony on June 11th 1928.

İzmir Commodity Exchange is one of the rare commodity exchanges in Türkiye that still has active transaction halls, which indicates that it strives to keep the tradition of commodity exchange alive by keeping pace with the novelties.

According to Article 28 of the Chambers, Commodity Exchanges and Union law numbered 5174. "The Commodity Exchanges are the associations with public corporation establishment and they are established to handle the purchase and sales of the goods quoted in the commodity exchange market and to determine, register and declare the prices of those goods in the market."

When the name "Exchange Market" is mentioned, it is thought that it is the Stock - Exchanges where the bonds are exchanged. However, there are differences between the Commodity Exchange Market and the Stock - Exchanges. The fundamental difference between the two is that the Commodity Exchange Market deals with agricultural goods.

The Commodity Exchanges, which are bound to judicial procedures, have financial and administrative autonomy. In other words, they are such associations that they generate their own resources and they also use those resources as well as support public establishments with those resources. In addition, they carry out these procedures without creating any financial burden for the government. Moreover, these associations are administered by the committees elected from their own members. This feature enables them to pursue their indispensable liberal democratic qualities. The Commodity Exchanges are also one of the

important components of the market economy as the prices of agricultural goods in those markets are determined according to the demand-supply principles.

They develop and implement participative tools to mobilize the local potential with a holistic approach for the sustainable development of İzmir.

Established with a decree of the Council of Ministers in 2006 as one of the two pilot agencies in Türkiye, İzmir Development Agency conducts pioneering activities for the sustainable development of İzmir. Aiming to mobilize the local potential based on the principle of participation, İzmir Development Agency prepares İzmir-based regional plans within the framework of national development targets and provides financial and technical support to projects developed to accomplish the main objectives and priorities identified in these plans.

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İZKA aims to transform the city into an attraction center by promoting the unique investment environment in İzmir and the business opportunities it offers as a port city to domestic and foreign investors. It aims to position İzmir as a globally recognized destination with its city marketing efforts. İzmir Development Agency, which conducts its activities with an innovative, objective and solution-oriented approach, pursues for a dynamic İzmir that makes the most efficient use of its resources through efforts to achieve social, economic and cultural development.

İzmir Development Agency operates within the coordination of the Ministry of Industry and Technology and the Executive Board is the decision-making body of the Agency. The Board is chaired by the Governor of İzmir and it consists of the Mayor of İzmir Metropolitan Municipality, İzmir Chamber of Commerce Chairman of the Board, CEO of the Aegean Region Chamber of Industry and other three members elected by the Development Council.

The vision is to become an internationally recognized organization that sets an example in the field of regional policy practices with the knowledge it generates, methods it develops, as well as the original and innovative transformation programs it implements.

The mission is to generate information based on Green and Blue Growth approaches and to develop pioneering, original and exemplary projects for İzmir.



In 1997, DenizBank was acquired by the Zorlu Holding in the form of a banking license from the Privatization Administration. Undergoing three shareholder changes and done public offering in its short history, the Bank was acquired in October 2006 by Dexia, one of the leading financial groups of Europe. Later on, being subject to the biggest one-time investment made by Russia in Turkey, DenizBank started to serve under the umbrella of Sberbank, one of the biggest banks in the world, as of September 28th, 2012. Finally, the shares were transferred to Emirates NBD as of August 2019, again one of the leading institutions in its region.

In the frame of corporate identity projects, the bank implemented a “back-to-life” program covering recruitment and opening new branches, by preparing a five-year strategic plan in 1997. The bank supported this process by acquiring some of the bank branches under the control of Saving Deposit Insurance Fund and including Tarişbank to the group at the end of 2002. During this period, the bank acquired banks in Austria and Russia in addition to its factoring, financial leasing, investment and portfolio management companies in order to perfect the range of its existing banking products and services. Besides, DenizBank took over the Retail Banking Department of CitiBank as of July 1st, 2013 together with its more than 600 thousand customers and around 1,400 employees.

Since its foundation, the bank has made substantial investments in technology, R&D and innovation, was entitled as the “Most Innovative Bank of the World” more than once in the USA and Europe, and has integrated all the areas of either physical or digital contact with customers through “phygital” strategy. In July 2021, the bank established a new fin-tech company NEOHUB as a subsidiary of Intertech, in order to support the entrepreneurial ecosystem of Turkey with the “ecosystem banking” understanding.

In addition, DenizBank works for the future of its country and society, providing support in all areas such as health, sports clubs, municipalities, shipping, tourism, energy, education, infrastructure and agriculture, taking it as a duty to embrace the needs of SMEs who are the heart of economy, and creating precedent financing models for the sector in most of these areas.

In addition to DenizBank, DenizBank Financial Services Group includes six domestic and three international financial subsidiaries, six domestic non-financial subsidiaries and a branch in Bahrain. DenizYatırım, Deniz GYO, DenizPortföy Yönetimi, DenizLeasing, DenizFaktoring, FastPay, Intertech, NEOHUB, DenizKültür, Ekspres Bilgi İşlem ve Ticaret, Açık Deniz Radyo-TV

and Bantaş are the domestic subsidiaries of the Group, and Eurodeniz, DenizBank AG and DenizBank Moscow are the foreign subsidiaries. With a broad service network reaching all parts of society in Turkey, DenizBank has 697 branches in Turkey and Bahrain, in addition to 20 branch locations of its subsidiary DenizBank AG in Austria and Germany. The Group operates in EU countries via DenizBank AG, while CJSC DenizBank Moscow serves abroad to the existing customers that have trade relations with Russia.



“Paramount among measures that will liberate and augment the nation is the establishment of a bank, utterly modern and national in identity, born directly out of the people’s respect and confidence...” These words uttered by Mustafa Kemal before the Council of Ministers which summoned in July 1924, express his aspirations for the foundation of a national bank.

The inception of the country’s first truly national bank following the promulgation of the Republic dates back to August 26th 1924, mandated by Atatürk, consequent to the First Economy Congress in İzmir. İşbank begun to operate with two branches and 37 staff under the leadership of Celal Bayar, the first General Manager to run the bank.

Our Vision is becoming the bank of the future, creating sustainable value with an inclusive and participatory approach. Our Values are innovation, solidarity, common sense, reliability, sincerity, transparency guided by the principles of «Intelligence, diligence, integrity; technical and methodical work» in reference to İşbank’s founding philosophy. Our Strategic Goals are

- Commitment to our country
- Strong and sustainable financial performance
- Effective risk management
- Flawless customer experience
- Value creating technology and innovation leadership
- Happy and productive human resources
- Ethical and responsible banking, that is compassionate towards people, society and environment

Our Strategy is managing our balance sheet to ensure sustainable and value added growth while using our internal and external resources in accordance with the priorities of the country’s economy and preparing our enterprise for the future by continuously improving our business model in synergy with our group companies and all our business partners in the period of technological transformation



Ziraat Bank is a state-owned bank in Turkey founded in 1863. Ziraat Bank offers commercial loan support to companies and tradesmen, as well as personal loans such as consumer loans, vehicle loans and housing loans.

Vision

To be a bank that is universal, respected and has high market value; a bank that provides extensive, reliable service everywhere in Türkiye and the world at the same quality, and meets the needs of every segment; a bank that sees human resources as its most valuable asset; a bank that continuously makes a difference and creates value in a way that befits its deep-rooted past; a bank that promises more from a bank at every stage and serves as a model for its competitors.

Mission

To be a bank that understands customer needs and expectations, thereby offering them the best solutions and value recommendations from the most appropriate channel; a bank that brings to every segment of society a wide range of products and services in the fastest, most effective way through its extensive network of branches and alternative distribution channels; a bank that operates with profitability and productivity at global standards by recognizes its ethical values and social responsibility; a bank that holds customer satisfaction to be more important than anything else.



International Agricultural Research and Training Center (IARTC)

Initial foundation process of International Agricultural Research and Training Center (IARTC) began with the decision of Ministry Cabinet numbered 94/6291 and dated 22.11.1994 and published in Official Gazette numbered 22149 dated December 22nd 1994. The center was put into service on September 9th 1996 in Menemen with the name Agricultural Hydrology Research and Training Center.

The center was turned into International Agricultural Research and Training Center with the decision of Ministry Cabinet numbered 2009/14606 and dated 21.01.2009 and published in Official Gazette numbered 27138 dated 11.02.2009 in order to increase productivity and quality in agricultural production, provide national and international education and training about preserving natural and genetic resources and their sustainable use and conduct researches about these trainings.

Mission is:

- to ensure the sustainable use of agricultural and ecological resources,
- to increase standard of living in rural areas; and
- to ensure access to safe food and high-quality agricultural products needed by Turkey and world markets.

Vision is to become a competent institution which

- is effective in both rural and urban areas,
- is only one step away from the shareholders and consumers,



The first of the research institutions under the mandate of the Ministry was established in 1894. General Directorate of Agricultural Research (TAGEM) was established in 1991 with the Decree No. 441 for the centralized management of research institutions whose numbers increased over time. In 2011, it was named “General Directorate of Agricultural Research and Policies” with the Decree Law No. 639. TAGEM’s structure includes 48 Research Institutes, most of which were established in the 1930-1980 period, and 24 institutions affiliated to other general directorates of the Ministry, which have been granted research authorization.

TAGEM Research Institutes develop know-how, new varieties, technologies and methods in the fields of plant and animal production, soil and water resources, animal health, plant health, agricultural economics, food and feed and present all the outputs to our producers and interested parties in order to increase the quantity and quality of agricultural production.

TAGEM is the largest R&D institution in Turkey with its 72 affiliated and authorized Research Institutions, employing approximately 10,000 people, holding a total of 21000 ha of land, 21,000 ha of land and around 300 active laboratories.

The main goals within the scope of R&D studies conducted are; to produce applicable solutions in all areas of the sector, to reduce the foreign-source dependency of our sector by developing the imported technology with local opportunities in cooperation with the public-private sector.



Schneider Electric SE is a French multinational company that specialises in digital automation and energy management. It addresses homes, buildings, data centers, infrastructure and industries, by combining energy technologies, real-time automation, software, and services.

Schneider Electric is a Fortune Global 500 company, publicly traded on the Euronext Exchange, and is a component of the Euro Stoxx 50 stock market index. In FY2020, the company posted revenues of €25.2 billion.

Schneider Electric is the parent company of Square D, APC, and others. It is also a research company.



Başarsoft was founded in 1997 by a team of experts in Geographical Information Systems (GIS) under the name Başar Computer. Başarsoft's main field of work is Geographic Information Systems. Başarsoft has been Turkey's only authorized MapInfo representative since 1999.

Today, it also provides support for the Middle East as a solution center. MapInfo Pro products have an important place among the most preferred products in the GIS market today, as they are translated into Turkish, open to development, and fully cover the concept of GIS. Başar Bilgisayar changed its title to Başarsoft Information Technologies Inc. in 2013.

Mission

To ensure the establishment of innovative, scalable and solution-oriented systems with current technology integrated with corporate management and decision-making

systems, for public, infrastructure companies and private sector in the field of geographic information systems (GIS).

Vision

The aim is to combine and develop the map-based spatial information technologies and navigation data with other innovative information systems, to offer solutions that facilitate human life, and to make the company, which is the leader in Turkey, a leading brand in its field worldwide.



Logo was founded in 1984. Founded in 1984 to develop applications for personal computers, Logo is one of the biggest software companies in Turkey. With the solutions, services, and innovations offered, Logo has become Turkey's software industry innovation leader.

Logo offers customer-needs-oriented innovative products and services by paying close attention to the technological developments to distinguish itself from competition as an IT company. In a similar vein, Logo is a firm believer that the most important source for product development and sustainable solutions is R&D and innovation power. It organizes its R&D activities in accordance with the three "Horizons", which are classified as short, medium and long term.

Since customer-oriented R&D and innovation remain the epicenter of its corporate culture, Logo channels the most important part of its human resources and revenues into the development of superior products for its customers by using new generation technologies. Logo allocates 30% of the total revenues to investments and spending in R&D

Logo is on the way to becoming an innovative international leader, and thus taking important steps in this regard on a global scale. First of all, it carries on with its endeavors to transform into an organization where the finance, talent management, brand management and platform technologies are centralized. This international organization is molded in a two-tier shape: the strategic groups create a cluster on a central level and the tactical groups on a regional level. The functional part of the products is locally developed and managed. The non-functional technology is strategically developed at the center.



KOSGEB (Small and Medium Enterprises Development Organization of Türkiye), which was established with the law numbered 3624 in 1990, provided services and supports only for the production industry SMEs until 2009. However, due to the increase in the added value production and employment creation potentials of the sectors other than the production sector in our country and due to the requests received from SMEs in the sectors other than the production sector, the necessity to enlarge the target population of KOSGEB so as to cover all SMEs.

In line with this, the “Law numbered 5891 on Amending the KOSGEB Establishment Law numbered 3624” was published in the Official Gazette dated May 5th 2009 and numbered 27219. The law amendment provided the necessary legal grounds for KOSGEB to support SMEs other than the ones in the production industry sectors. The Cabinet Decree numbered 15431 on the “Determination of Sector and Regional Priorities of Small and Medium Enterprises that will Benefit from the Services and Supports to be Provided by KOSGEB” was published in the Official Journal dated September 18th 2009 and numbered 27353, and with this decree, the sector and regional priorities related with the enterprises that will benefit from the services and supports to be provided by KOSGEB were determined.

Mission

To increase the shares of SMEs and entrepreneurs in economic and social development to reach an innovative, technological and competitive structure through effective supports and services.

Vision

Stronger SMEs and Developing Economy with KOSGEB.

ANNEX B NEWS about AGTECH-EIL(İATC) DEVELOPMENT



20.06.2022

ICE, Denizbank and Türkiye İş Bankası partnered at İATC

DenizBank, which has been working continuously for 20 years for the future of agriculture and farmers, and İşbank, which always considers the support of agriculture and the use of technology in agriculture among its priorities, also became partners in İzmir Agricultural Technology Center. [Read More](#)



08.12.2021

İATC İzmir and İstanbul press launches were held

The Silicon Valley of Agriculture, İzmir Agricultural Technology Center İzmir and İstanbul press launches were held.

[Read More](#)



08.12.2021

İATC Project Contract signed

İzmir Commodity Exchange presents another very important project to İzmir and Turkey in the 130th anniversary of its establishment.

[Read More](#)



02.10.2021

Yaşar University, İzmir Institute of Technology and İzmir Commodity Exchange signed a cooperation for İATC

On February 10th, 2021, cooperation protocols were signed with Yaşar University and İzmir Institute of Technology, which are partners of İzmir Agricultural Technology Center Project.

[Read More](#)



06.04.2021

Ege University and İzmir Commodity Exchange signed a cooperation for İATC

On April 6th, 2021, an İATC cooperation protocol was signed with Ege University.

[Read More](#)



18.12.2020

Ministry of Agriculture and Forestry and İzmir Commodity Exchange signed a cooperation and project partnership for İzmir Agricultural Technology Center

İzmir Agricultural Technology Center cooperation and project partnership protocol was signed between the Ministry of Agriculture and Forestry and İzmir Commodity Exchange.

[Read More](#)



14.08.2020

Meeting with authorised officials from Ministry of Agriculture and Forestry

In relation with the Project Izmir Agricultural Technology Center (İATC), the Management of the Exchange has gathered with the authorized officials of our affiliates and of the Ministry of Agriculture and Forestry.

[Read More](#)