



REPUBLIC OF TÜRKİYE
MINISTRY OF INDUSTRY
AND TECHNOLOGY



İZMİR
DEVELOPMENT
AGENCY



IN TURKISH
AGRITRADE FOR

130
years



TAGEM
AR-GE & İNOVASYON



/ittmprojesi

ICE AND IT'S INSTITUTIONAL CAPACITY

Area of activity: Trading of Agricultural Products



Education / Training

İTTM
Agri-tech



EGE GASTRONOMİ
eg'
Branding

Futures and Options
Exchange

VOB

İzmir Agricultural Technology Center

İTTM

Aegean Gastronomy

eg'

İZLADAŞ

ICE Laboratory, R&D and
Consultancy Services Inc.

ELİDAŞ

Aegean Agriculture Products
Licenced Warehousing Inc.

Digital Integration

Trading Hall Services

İTTM
İZMİR AGRICULTURAL TECHNOLOGY CENTER

Strategic sector

Agriculture



Past



Present



Future

GLOBAL PROBLEMS

POPULATION GROWTH



2 Billion People

Suffer micronutrient deficiencies

CLIMATE CHANGE



25% of all farmlands are already rated as highly degraded.
Rise in frequency of droughts and floods, all of which tend to reduce crop yields.

NATURAL RESOURCES

FOOD WASTE



Between 33% - 50% of all food produced globally is never eaten.

Source: The World Government Summit 2050 Projections, "Agriculture 4.0: The Future of Farming Technology"

PROBLEMS IN AGRICULTURE SECTOR IN TÜRKİYE

High average age
of farmers

Climate change and
inefficient cultural
practices

Efficiency problems
of agricultural
inputs

Foreign dependency
in energy, fertilizers
and pesticides

Lack of usage of
modern techniques

AGRICULTURE IN TÜRKİYE



Arable Land: 23.8 million hectares

Agricultural Gross Domestic Product (GDP):
45.4 billion USD

Agricultural Product Exports: 26.4 billion USD

Agricultural Employment: 4.9 million people

Source: Turkish Statistical Institute (TURKSTAT), A: 17.12.2022
World Bank, A: 28.03.2023

AGRICULTURE IN AEGEAN REGION



Agricultural Area: 28 Million Decare
Agr. Production Value: 80.2 Billion TL
Agriculture Based Export: 5.1 Billion \$
Agricultural Population: ~19.5 %



ADVANTAGES OF İZMİR



Agricultural
Potential

High potential of
agriculture and
agro-industry



Focus of
Science

Universities and
Technoparks



Population

3rd biggest
province in
Türkiye



Open
Interface

Port city, easy
transportation,
attractive for
entrepreneurs
and startups



Development
Policies

Compliance with
sustainable
development
policies

GLOBAL INTEGRATION OF TURKISH AGRICULTURE AND AGRICULTURE 4.0 REPORT

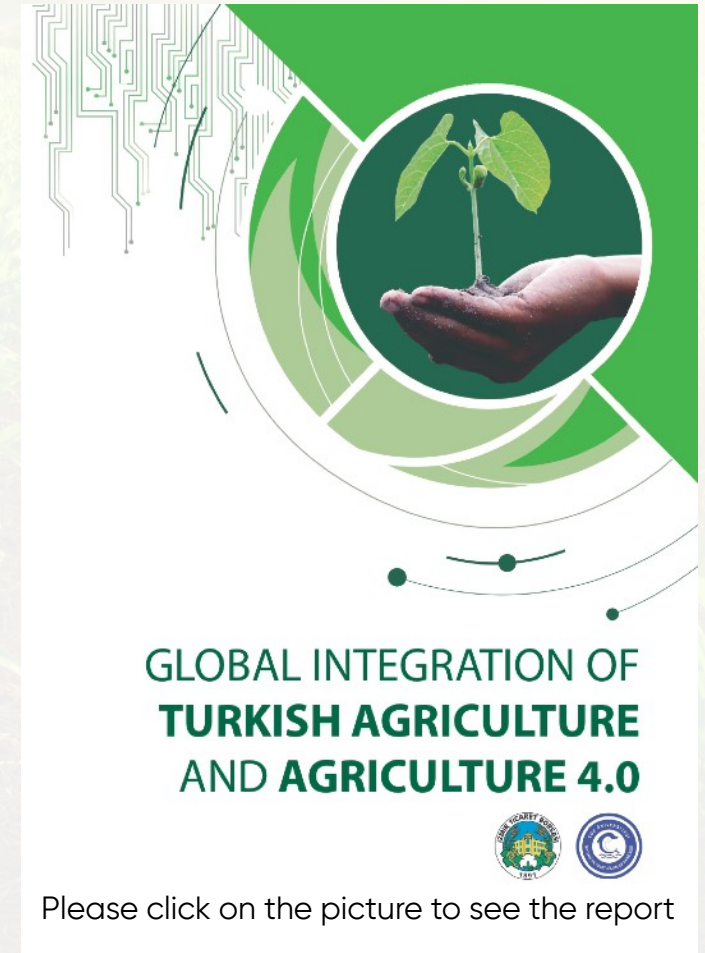
(2017-2018)

- What are the global developments in smart agriculture?
- What is the status in Türkiye?
- What should be done in order for the agricultural sector to benefit from these developments?

Solution Proposals:

DIGITAL TECHNOLOGIES

**AGRICULTURE FOCUSED R&D
AND ENTREPRENEURSHIP
ECOSYSTEM**

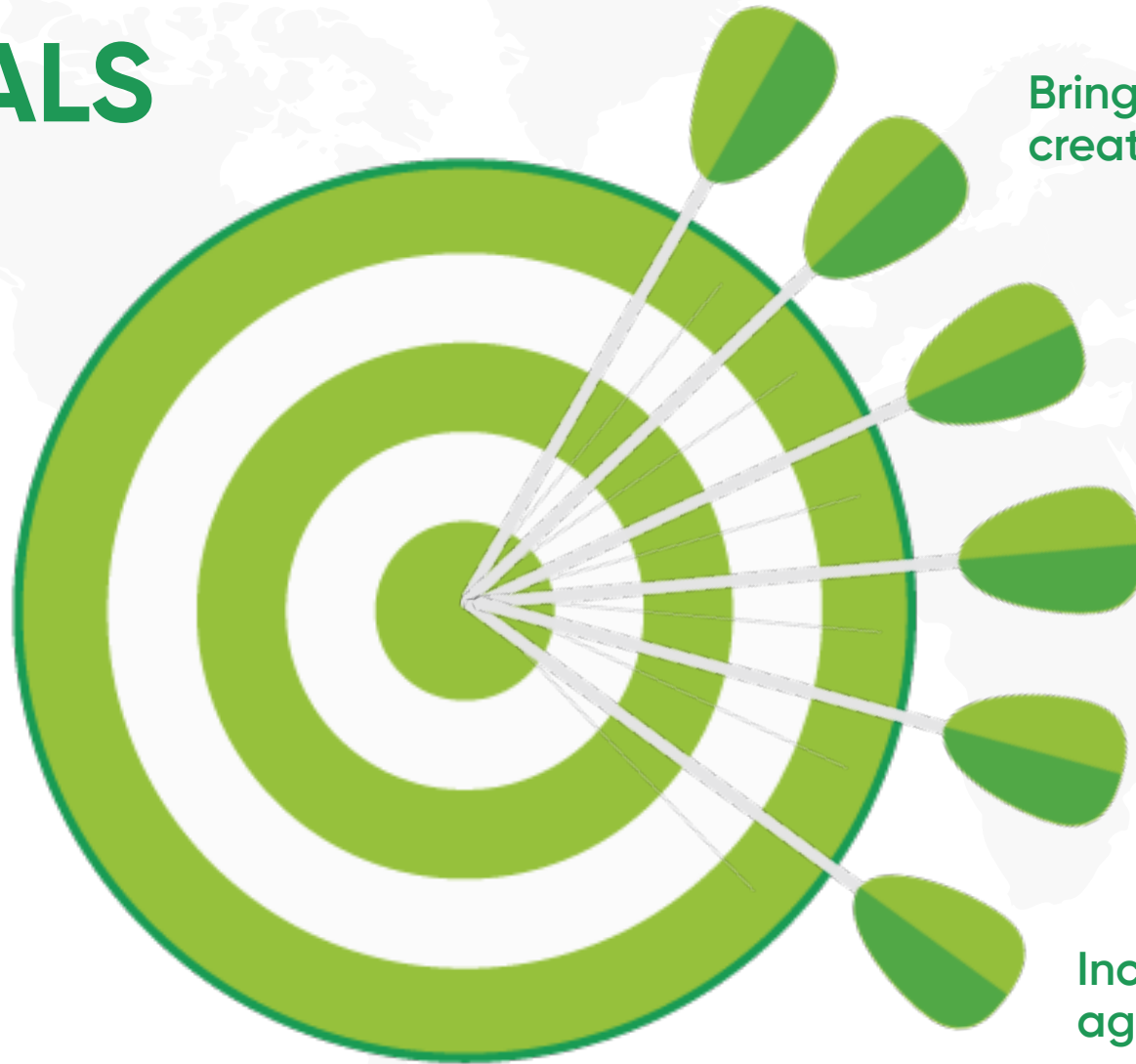


WHAT IS İZMİR AGRICULTURAL TECHNOLOGY CENTER (İTTM)?

İTTM is the open innovation environment where information technologies in agriculture based technologies can be produced, tested and developed on real users and products in a real life environment.



GOALS



Providing the necessary environment and infrastructure for R&D in Agricultural IT

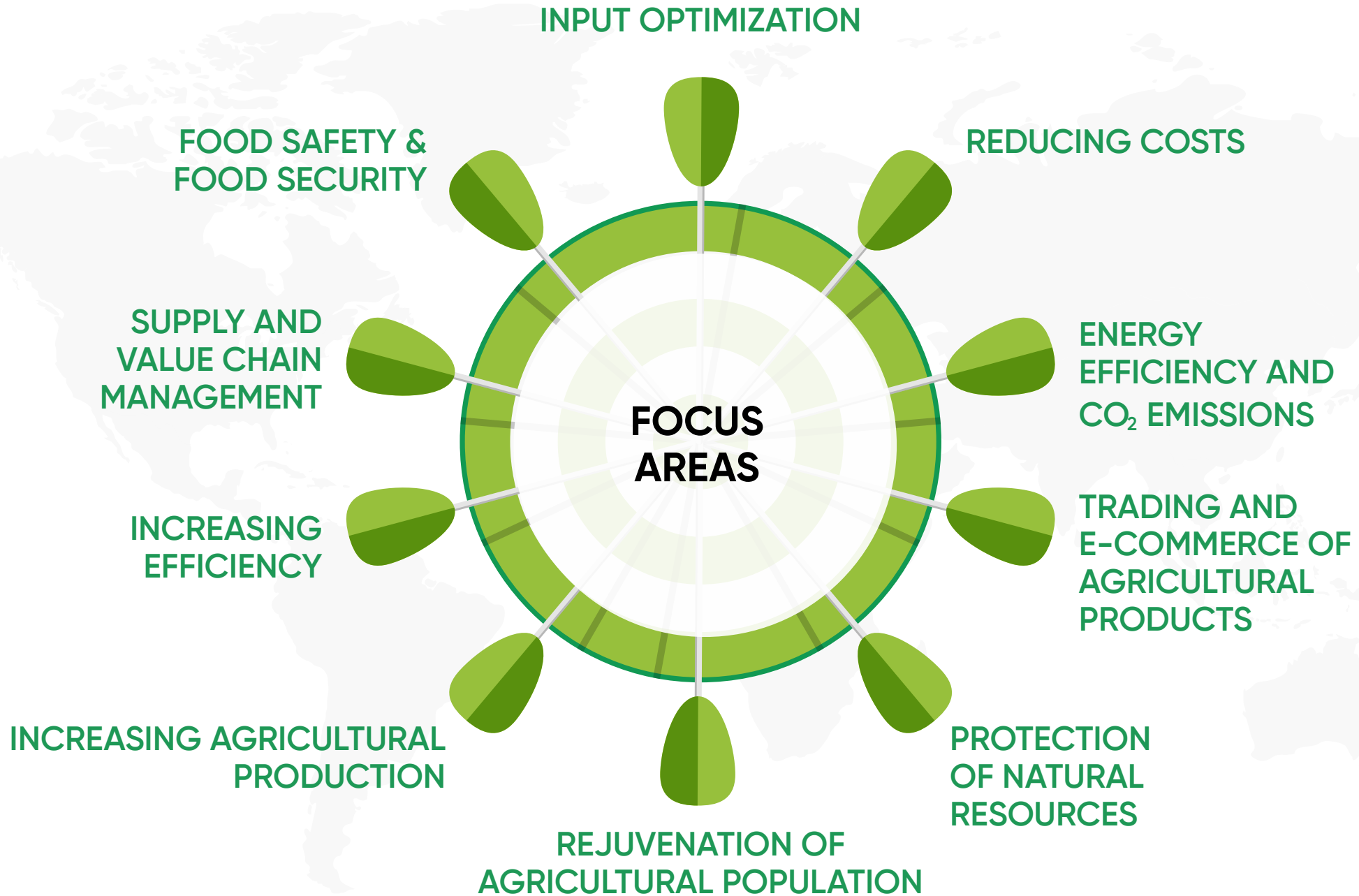
Bringing together stakeholders who create added value

Developing competencies in information technologies in agriculture

Supporting the commercialization of agricultural technology research and access to finance

Enhancing the efficient and effective use of natural resources in agriculture

Increasing the attractiveness of the agricultural sector for young people

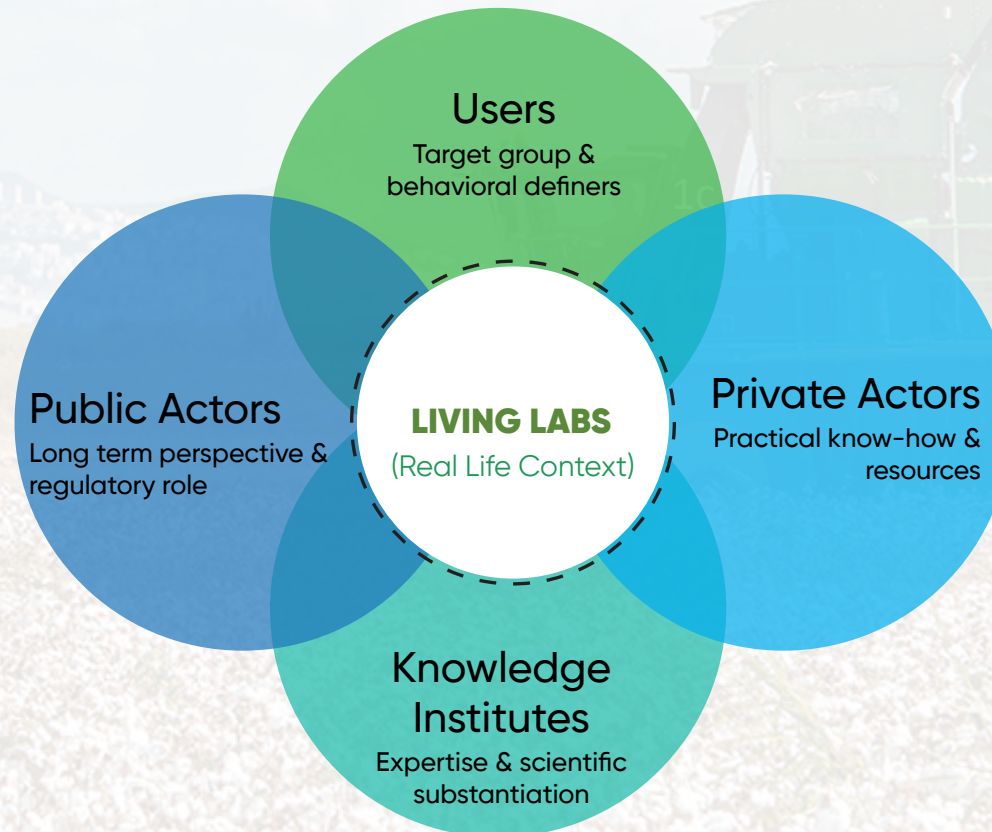


WORKING MODEL

Living Lab

Living Lab is a research concept for innovation.

Living lab is a user-centered, open innovation ecosystem that often operates in a regional context, integrating simultaneous research and innovation processes in a public - user - private sector - knowledge organizations partnership.



It is an experience center where the outputs of research and development activities can be tested and applied in real life environments and with real users.



İTTM AND ABSOIZ'es



Agriculture Based Specialized Organized Industrial Zones (ABSOIZ)

- Dikili (Greenhousing)
- Bayındır (Cut flowers)
 - Kınık (Medicinal and Aromatic Plants)
- Bergama (Dairy products)

LOCATION



T.C. Tarım ve Orman Bakanlığı Uluslararası
Tarımsal Araştırma ve Eğitim Merkezi

Entrepreneur Offices

Data Acquisition Lab

Data Analysis Lab

Prototyping Lab

Monitoring of Cultivating Lands

Meeting / Conference Rooms

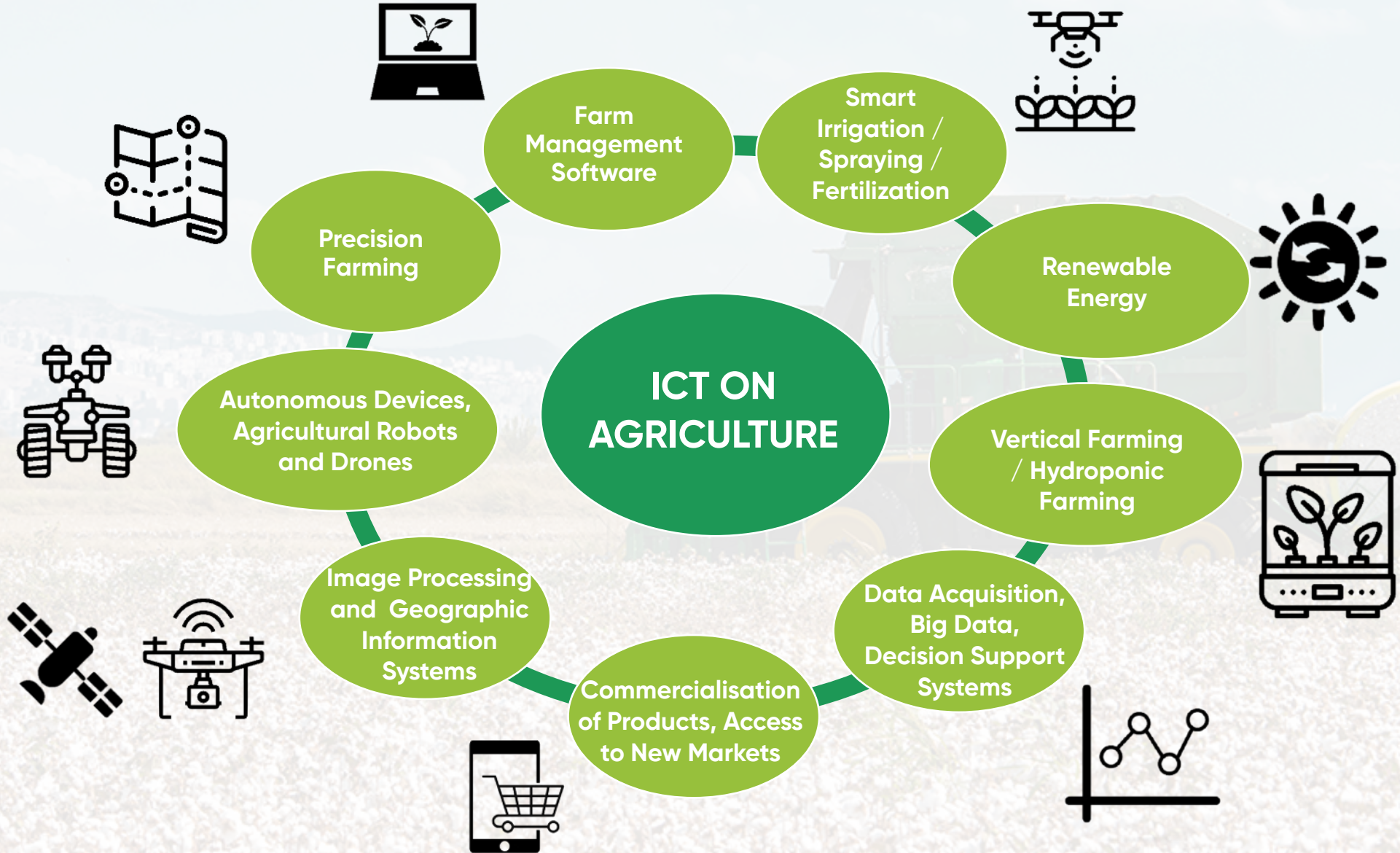


FACILITIES

- 22 Office (R&D Enterprises)
- 9 Office (Supporting Enterprises)
- 18 shared office fixed desk
- 39 shared office shared desk
- Laboratories
- Agricultural databases



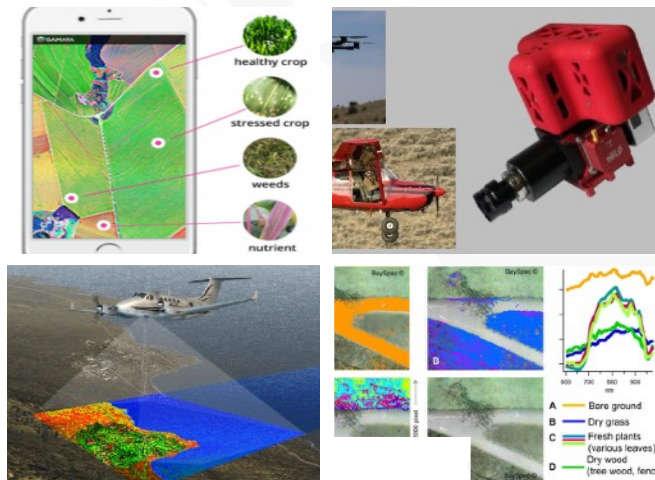
FIELDS OF TECHNOLOGY



EXAMPLE USE-CASES

Imaging Systems

Special cameras that collect data at wave lengths that the human eye cannot see are used to detect plant diseases and pests, estimate harvests, and implement precise farming practices that increase yield.



Drones / UAVs

Easy, effective, and efficient applications in land mapping, remote sensing, disease detection in plants, and input application (such as pest control)



Sensors, Robotics, and Autonomous Devices

Increased productivity and precision, cost reduction, reduced use of inputs, and more efficient and productive harvesting through the use of autonomous and GPS-based agricultural machinery



MAIN FIELDS OF ACTIVITY

AGRICULTURAL NEEDS
ASSESSMENT AND
PROJECT MANAGEMENT

TRAINING AND
CONSULTANCY

TECHNOLOGY
SERVICES

INCUBATION AND
ACCELERATION



MEMBERSHIP TYPES

Type A Membership

Entrepreneurs/businesses located in the İTTM via their R&D and innovation projects

Type B Membership

Companies that located in İTTM's offices and enables / supports enterprises with R&D projects in İTTM

Type C Membership

Entrepreneurs/businesses which located in the İTTM's open office with fixed desks

Type D Membership

Entrepreneurs/businesses which located in the İTTM's open office with shared desks

Type E Membership

Independent from location, entrepreneurs/businesses that joins İTTM to be part of the network, benefit from online services, and support projects in İTTM



BUSINESS PARTNERS



— Çiftçinin Bankası —
DenizBank 

TÜRKİYE  BANKASI

 **Ziraat Bankası**

NEOHUB

 **İmeceMobil**

 **Ziraat GSYO**



BUSINESS PARTNERS



üyeleri





PROJECTS



Tokio University of
Agriculture and
Technology

Catapult Satellite
Applications

European Fund
for Southeast
Europe

KOSGEB

Izmir
Development
Agency



Kapsayıcı
Büyüme Derneği
(Association)



UK Science &
Innovation Network



Finance in Motion



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T.R. Ministry of Industry and
Technology



DATA-DRIVEN IRRIGATION MANAGEMENT PROJECT (DIMP)

The aim is to develop an intelligent irrigation system based on drone-based remote sensing techniques in precision agriculture, including the development of drought maps and risk analysis for the project area, testing in pilot areas, and demonstrating the socio-economic impact of using these systems.



TAT Tokyo University of
Agriculture and Technology

Tokyo University of
Agriculture and Technology



Comprehensive Growth
Association



UTAEM



Ege University

UNITED KINGDOM STUDY VISIT

In March 2023, a joint program was carried out with Satellite Applications Catapult (SAC) for capacity building and developing collaborative programs that can be carried out with Harper Adams University, Cranfield University, and Lincoln University for the establishment of a living lab. The program was aimed at developing partnerships with SAC-affiliated firms.



UK Science
& Innovation
Network

UNIVERSITY OF
LINCOLN



CATAPULT
Satellite Applications



Harper Adams
University



2023 ITTM NEEDS ASSESSMENT PROJECT

The first ITTM Needs Analysis activity has been carried out to determine the 11 strategic and economically most valuable products for the Aegean Region. Through face-to-face interviews with 110 producers, productivity increases that can be achieved through information technologies in the production stages will be researched, and presented as project topics that ITTM entrepreneurs can work on. Additionally, entrepreneurship competitions will be organized for one or more of these problems.



* Tomato

* Cotton

* Potato

* Corn

* Olive

* Grape

* Fig

* Cattle

* Cherry

* Thyme

* Wheat

İTTM GUIDED PROJECT

To establish the physical infrastructure of İTTM, Guided Project Support was obtained from İzmir Development Agency for building design, construction works, and procurement of some laboratory equipment. The project, which started in December 2021, will last for two years. A support of 6,000,000 TL, equivalent to 50% of the project cost, has been obtained.



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İZMİR
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Ministry of Agriculture and Forestry
İzmir Institute of Technology
Yaşar University
İzmir Chamber of Commerce
Aegean Region Chamber of Industry
Aegean Exporters' Association
İMEAK Chamber of Shipping İzmir Branch
İzmir Union of Chamber of Tradesmen
and Artisans



TEKMER PROJECT PARTNERS



Yaşar University, founded by the Selçuk Yaşar Sports and Education Foundation in 1999, is the institution where Yaşar Group Companies, known for their contributions to the Turkish economy and their leadership, realize their vision of establishing a modern university. The aim of the university is to combine technology and science, to emphasize technology and to integrate into the global education system. The university has established the Faculty of Agricultural Sciences and Technologies, the faculty will admit students for the first time in the 2021-2022 term.



IN TURKISH
AGRITRADE FOR **130**
years

Izmir Commodity Exchange (ICE) is the owner of the İTTM project. ICE was established in 1891 as Türkiye's first exchange. All of the approximately 1800 members of the Izmir Commodity Exchange specialize in agricultural production and trade. ICE has a long portfolio of projects focusing on trade, licensed warehousing, agriculture, education, technology, laboratories and food. The price quotation of ICE, which is also very active in social responsibility projects, has 113 agricultural commodities.



Izmir Institute of Technology (IZTECH) is a state university established in 1992 to provide higher education services and to conduct research in the fields of science and technology. It is the only example of high technology institutes in our country, which is one of the most advanced technical university models in the world. Education and research activities are carried out in 18 undergraduate, 27 graduate and 19 doctoral programs. IZTECH is the founder of the technopark called "Izmir Technology Development Zone", where 150 technology companies operate.



TEKMER STATUS AND IT'S ADVANTAGES FOR ENTREPRENEURS



SOCIAL INSURANCE
SUBSIDIES

EXEMPTION FROM
STAMP TAX

STOPPAGE
INCENTIVE FOR
INCOME TAX

INCOME AND
CORPORATE TAX
EXCEPTION / R&D
DISCOUNT

EXEMPTION FROM
CUSTOMS DUTY



MILESTONES





Thank you



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