Boğaziçi University Sustainable Development Goals Progress Report

November • 2026



Boğaziçi University

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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Sustainable Development Goal 9:

Industry, Innovation, and Infrastructure

SUSTAINABLE DEVELOPMENT GOALS



9

Industry, Innovation and Infrastructure

A summary of Boğaziçi University's contributions to the entrepreneurship ecosystem, pioneering research, and technological infrastructure under Sustainable Development Goal 9

Total Investment
51,484,000 TRY
Biocube, DREAM BIGG & Bright Young

Technopark Target Area
120,000 m²
For advanced technology and R&D

Academic Output
1,200+
Boğaziçi LifeSci High-Impact Publications

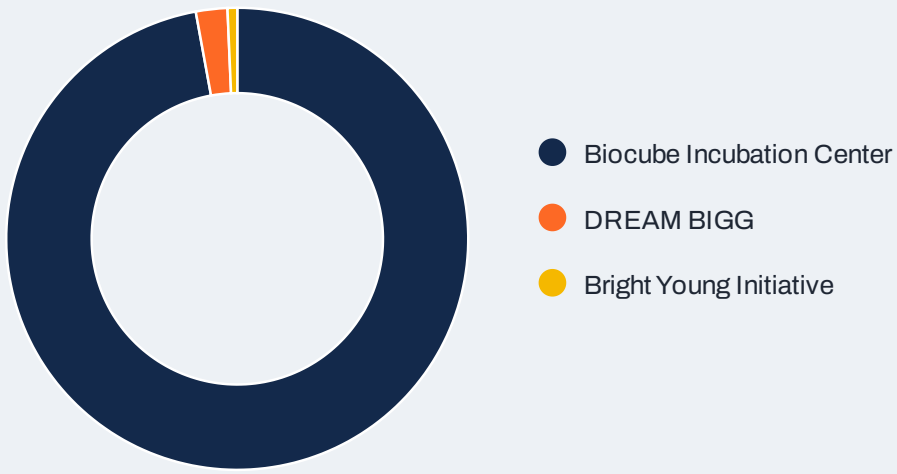
International Patents
20+
From Boğaziçi LifeSci Center

Entrepreneurship Ecosystem

Boğaziçi University offers a comprehensive support network to transform innovative ideas into sustainable businesses. From major investments like the Biocube Incubation Center to funds provided through programs like DREAM BIGG and Bright Young Initiative, it supports entrepreneurs at every stage, directly contributing to Turkey's technology and innovation capacity.

- **Biocube Incubation Center:** A thematic center established with an investment of over 50 Million TRY, focusing on biotechnology, pharmaceuticals, and medical devices.
- **DREAM BIGG:** Provided over 1.1 Million TRY in funding to technology startups through the TÜBİTAK-supported program.
- **Bright Young Initiative:** Encourages young entrepreneurs by offering 350,000 TRY in financial support for student projects.

Investment Distribution of Programs





Pioneering Research and Innovation

Our university is pioneering groundbreaking projects in a wide range of fields, from artificial intelligence to space sciences, and from health to engineering. The technologies developed by our researchers provide societal benefits and enhance Turkey's global competitiveness.

Space

Microalgae Life Support for Space

A biological life support system for space missions that converts CO2 to oxygen and can meet the needs of a 3-person crew.

3-5x More Efficient

Artificial Intelligence

AI-Powered Cost Analysis

Software that calculates critical parameters like cost, production time, and carbon emissions from technical drawings in 1 minute.

Estimate in 60 Seconds

Engineering

Next-Gen Supercapacitors

Flexible, fast-charging, and long-lasting energy storage solutions for electric vehicles and renewable energy systems.

Fast Charge & Long Life

Health

Boğaziçi LifeSci: Health Innovation

Innovative solutions from Turkey's first domestic drug candidate to smart drug systems, vaccine technologies, and biomaterials.

100+ Projects, 20+ Patents

Health

Computational MR Imaging

An international collaboration developing new MRI techniques to support the early diagnosis of multiple sclerosis (MS).

EU-Funded Project

Artificial Intelligence

AI-Powered Crime Prediction

A dynamic system using deep learning to predict the street where a crime will occur one day in advance with 80% accuracy.

80% Accuracy

Artificial Intelligence

AI in Cancer Diagnosis

AI models that enable faster, more precise analysis of tissues and cells in pathology, facilitating early detection of metastasis.

Speed and Accuracy

Artificial Intelligence

A Real Personal Assistant Model

A next-generation AI agent running on mobile devices that can make purchases, plan vacations, and organize meetings for the user.

Next-Gen AI

Engineering

ISIF'24 Award-Winning Inventions

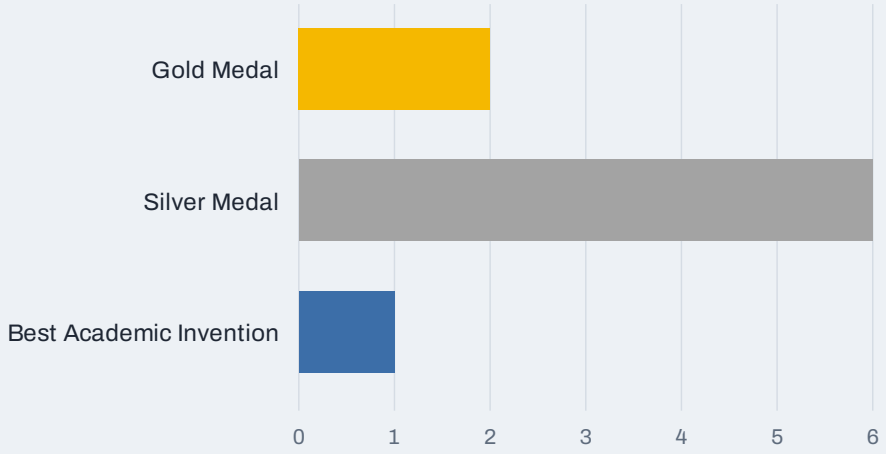
Award-winning projects in various fields, from an antigen delivery method and sleep apnea device to vibration isolation systems and wound-healing hydrogels.

9 Awards

Awards and Recognition

Boğaziçi University scientists and students demonstrate their excellence in research and innovation through prestigious awards won on national and international platforms. Achievements at major events like TEKNOFEST and the International Invention Fair (ISIF) are the most concrete indicators of the university's capacity for socially beneficial scientific production.

ISIF'24 Invention Fair Award Distribution



Great Success at ISIF'24 Fair
Our researchers won a total of **9 awards** at the fair organized by TÜRKPATENT.

Double Victory at TEKNOFEST 2025
Our Ph.D. student won both the **First Prize** and the **Best Commercialization Potential Award** with her project, selected from 14,610 applications.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Boğaziçi University maintains its commitment to developing resilient infrastructures, promoting inclusive and sustainable industrialisation and supporting innovation in line with Sustainable Development Goal 9 (SDG-9). In the face of serious impacts on global production and value chains, the university has focused on innovation and entrepreneurship by adopting sustainable development goals.

Boğaziçi University Technology Transfer Office (TTO)

Boğaziçi Üniversitesi Teknoloji Transfer Ofisi

Boğaziçi University Technology Transfer Office (TTO) is a strategic unit that aims to create economic value by transferring the knowledge and technology production of the university to the industry and to ensure that this value returns to the university. TTO was established in December 2012 and actively works to realise innovative ideas, increase opportunities for collaboration with industry and develop the entrepreneurship ecosystem.

Technology Transfer and Collaboration Development

- To ensure the transfer of university patents, technologies and research results to industry.
- To carry out joint research projects with industry and to create cooperation opportunities.

Intellectual Property Management

- To support patent applications for the protection of inventions derived from academic research.
- Providing guidance in the management of intellectual property rights and licensing processes.

Project Management and Funding Support

- Providing national and international funding sources for research projects.
- To provide consultancy and support to academicians in project management processes.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Entrepreneurship and Innovation

- Supporting innovative entrepreneurship projects and contributing to the development of the start-up ecosystem.
- Organising trainings, seminars and business networking events for entrepreneurs and academics.

Training and Capacity Building

- To organise training programmes on technology transfer, project management, intellectual property and entrepreneurship for academics and students.
- To promote the culture of innovation and entrepreneurship within the university.

Boğaziçi University and Fonbulucu Launch Collaboration to Support Biotechnology Initiatives

Boğaziçi University and crowdfunding platform Fonbulucu have launched a comprehensive cooperation to support innovative initiatives in the fields of biotechnology and health technology. This collaboration aims to facilitate access to financing and increase the commercial potential of early-stage startups in the university's Deep Technology Base. The agreement was signed at a ceremony held on 9 May 2023 at Boğaziçi University South Campus.



Derin Technology Base and Support for Startups

This cooperation, which will be carried out under the coordination of Boğaziçi University Technology Transfer Office (TTO), primarily covers early-stage startups operating in the Derin Technology Base located in the Science Technology Building of Kandilli Campus. With the inclusion of health and biotechnology-focused initiatives in pre-incubation, incubation and accelerator programmes, these initiatives will have access to the resources offered by Fonbulucu. At the same time, investment support, financing solutions and training opportunities will be offered to startups.

The support provided to entrepreneurs through Fonbulucu's subsidiary companies and investment funds will make a significant contribution to the university's entrepreneurship ecosystem. Within the scope of the cooperation, it is also planned to create an investor pool and manage this pool.

Rector Prof. Dr. Mehmet Naci İnci: 'We Offer New Opportunities in Health and Biotechnology'

In his speech at the ceremony, Boğaziçi University Rector Prof. Dr. Mehmet Naci İnci stated that this collaboration offers an important opportunity for entrepreneurs. Prof. Dr. İnci said, 'With this collaboration, we offer new generation tools to support the initiatives of our students, graduates and faculty members in the fields of biotechnology and health technology. We aim to create value for our country and the world by combining the intellectual accumulation of our university with the expertise of Fonbulucu.'

Hakan Yıldız, CEO of Fonbulucu: 'We Will Launch New Unicorns'

Hakan Yıldız, CEO of Fonbulucu, stated that they will facilitate access to financing for startups in difficult-to-scale areas such as biotechnology and health technology. Yıldız said, 'With this cooperation, we will create an investor pool with thousands of investors and offer fast and secure solutions to startups. We believe that Boğaziçi University initiatives will create new unicorns with this support.'

Scope of Cooperation and Future Plans

Within the scope of the cooperation, the existing facilities of Fonbulucu and its subsidiary companies will be made available to Boğaziçi University initiatives. In addition, if the university aims to establish a venture capital investment fund, the parties will provide the necessary support.

Participants

The ceremony was attended by Prof. Dr. Gürkan Kumbaroğlu, Vice Rector of Boğaziçi University, Volkan Özgüz, General Manager of TTO, Dr. Yalçın Koçak, Chairman of the Board of Fonbulucu, and representatives of other stakeholders involved in the collaboration.
This cooperation will not only strengthen the leading role of Boğaziçi University in the fields of innovation and entrepreneurship, but will also contribute to the entrepreneurship ecosystem in our country.

Entrepreneurship Support for Boğaziçi Students with Bright Young Enterprise Programme

Organised in cooperation with Boğaziçi University Technopark and Entrepreneurship Application and Research Centre, ‘Bright Young Initiative Programme’ creates an important platform to support the innovative initiatives of Boğaziçi University students. Held on 26 November 2024 at Boğaziçi Teknopark Kandilli Campus, the "Bright Young Initiative Programme Demo Day “ event attracted great interest in terms of exhibiting and rewarding students” innovative ideas.

Awards and Support for Students' Innovative Projects

Within the scope of the event, 10 entrepreneurs developing projects in different fields such as gaming, health technologies, software and artificial intelligence presented their projects to a distinguished jury. As a result of the jury evaluation, four initiatives received financial support, while all participants were entitled to benefit from the infrastructure and mentoring services of Boğaziçi University Technopark Incubation Centre.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

The winning projects include:

- GLYDE Games: Received the first prize with their game project.
- Innorare: Received the second prize with its clean intermittent catheterisation (CIC) catheter initiative.
- Pura: Won the third prize with its reusable hybrid rocket system project for space exploration.
- Navibu: Received the jury's special award with its innovative navigation system supported by artificial intelligence.



While a total of 350 thousand TL financial support was provided to the winning projects, all participants had the opportunity to benefit from the incubation services of Boğaziçi Technopark.

Remarks by Dr Cem Duran, General Manager of Boğaziçi University Technopark

Delivering the opening speech of the event, Boğaziçi University Technopark General Manager Dr Cem Duran drew attention to the importance of the support provided to reveal the entrepreneurial potential of students. Dr Duran made the following statements:

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Boğaziçi University produces internationally acclaimed projects in areas such as gaming, health technologies, software and artificial intelligence. With the Bright Young Enterprise Programme, we aim to contribute to the global success stories of our students by providing comprehensive support to their innovative projects.'

Aim of Bright Young Enterprise Programme

The programme aims to support students to transform their innovative ideas into commercial value and join the entrepreneurship ecosystem. In this context, entrepreneurs:

- Financial support,
- Infrastructure and laboratory services,
- Mentoring support is provided.

Boğaziçi University's Role in the Entrepreneurship Ecosystem

Bright Young Initiative Programme has once again demonstrated the leading position of Boğaziçi University in the field of entrepreneurship. The University continues to contribute to the realisation of innovative projects at both national and international level by increasing the entrepreneurship potential. The projects supported under the programme add value not only to the career development of students, but also to the entrepreneurship ecosystem of the country.



Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Great Support for Biotechnology Initiatives from Boğaziçi University and Teknopark Istanbul: Biocube Incubation Centre

Biocube Incubation Centre, which was established in cooperation with Boğaziçi University and Teknopark Istanbul to support entrepreneurs working in the fields of biotechnology, pharmaceuticals and medical devices, is preparing for its official opening. This centre, which is the first of its kind in Turkey and was established with a total investment of more than 50 million TL, aims to support 40 startups per year.



Advanced Technology Infrastructure and Modern Facilities

Established on the third floor of Teknopark Istanbul's Incubation Centre on a total area of 1,500 square metres, Biyoküp offers a world-class infrastructure for entrepreneurs with 12 laboratories, 8 GMP-compliant clean rooms and open office areas. In addition to chemical cabinets, fume hoods and safety cabinets specially designed for entrepreneurs, common laboratories also include basic equipment such as centrifuges, autoclaves, incubators and ultrapure water devices.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Strong Collaborations and Sustainable Support Mechanisms

The project is led by Boğaziçi University Life Sciences and Technologies Application and Research Centre (Boğaziçi LifeSci), coordinated by the Ministry of Industry and Technology and supported by the IPA funds of the European Union, with the contributions of important institutions such as Istanbul Health Industry Cluster(ISEK) and Istanbul Development Agency(İSTKA). The Centre aims to provide entrepreneurs with technical support and mentoring services as well as infrastructure use.

Strategic Objectives

Biocube Incubation Centre in the field of health and biotechnology:

- Development and commercialisation of sustainable products with high added value,
- To provide Turkey's health entrepreneurship ecosystem with a world-class infrastructure,
- It aims to offer entrepreneurs the opportunity to realise their bold projects.

Boğaziçi LifeSci Industrial Projects Coordinator and ISEK Coordinator Prof. Dr. Cengizhan Öztürk stated that this centre will fill an important gap in the field of life sciences, which is among Turkey's strategic priorities, and said, ‘Biocube will enable the rapid development of vital products for our country and bring them to the economy.’

Invitation to Applications

Boğaziçi University and Teknopark Istanbul invite entrepreneurial companies and scientists working in the field of biotechnology, pharmaceuticals and medical devices to apply for the Biocube Support Programme. Bringing together the infrastructure and support services needed by the entrepreneurship ecosystem, Biyoküp offers a great opportunity to realise the health initiatives of the future.

Biyoküp Incubation Centre aims to increase Turkey's global competitiveness in the field of biotechnology with its structure that encourages innovation and entrepreneurship.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Boğaziçi University Technopark: The Centre of Advanced Technology and Innovation

Boğaziçi Technopark was established in 2010 with the aim of becoming the pioneer of advanced technology and innovation with the deep-rooted history and strong infrastructure of Boğaziçi University. For 14 years, Teknopark has been operating at Boğaziçi University North Campus and continues to grow by expanding its area in 2023. In the next two years, a new 30,000 m² Technopark building will be added to the university. In addition, with the announcement of a new area of 47,000 m² in Kandilli Campus, work is continuing rapidly to create a Technopark area of 120,000 m² in total.



Vision and Targets

Boğaziçi Technopark aims to lead sustainable economic development at national and international level by supporting advanced technology-oriented studies. With the strong infrastructure and facilities provided by Boğaziçi University, Teknopark continues to support R&D companies and entrepreneurs, contributing to their success and encouraging technological innovations.

Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Services

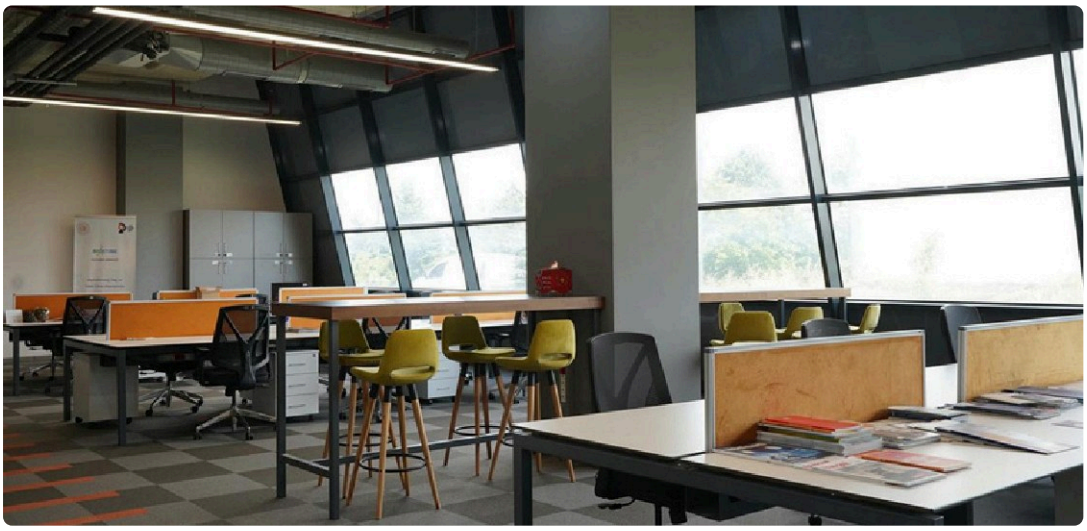
Boğaziçi Technopark offers the following services to entrepreneurs and R&D companies:

- R&D and Laboratory Infrastructure: Technology development support for companies with advanced laboratory facilities and research facilities.
- Advanced Technology and Innovation: Innovative solutions and innovation-oriented services in technology development processes.
- Quality, Ethics and Sustainability: Projects that support sustainable development by considering ethical values in technological solutions.
- Entrepreneurship Support and Technology Transfer: Mentoring, investment support and university-industry co-operation opportunities for entrepreneurs.

New Steps in Technological Development

Boğaziçi Technopark continues to be an important centre in the entrepreneurship and technology development ecosystem with its expanding areas and strong infrastructure. With its new technopark buildings and advanced technology-oriented services, it will continue to contribute to technological innovations both regionally and globally.

With the vision and leadership of Boğaziçi University, Technopark continues to be an ideal centre for entrepreneurs and companies that will shape the technologies of the future.



Building Resilient Infrastructure, Promoting Inclusive and Sustainable Industrialisation and Supporting Innovation

Strong Support for Technology and Innovation Oriented Initiatives with DREAM BIGG

DREAM BIGG Programme, run by Boğaziçi University Technology Transfer Office (TTO), supports technology and innovation-oriented business ideas within the framework of TÜBİTAK 1812 Investment-Based Entrepreneurship Support Programme (TÜBİTAK BIGG Fund), enabling entrepreneurs to transform into globally competitive, innovative and sustainable companies. The programme had a strong impact on the entrepreneurship ecosystem, enabling investments of over 1,134,000 TL between 2020 and 2023.



DREAM BIGG: Contribution to the Entrepreneurship Ecosystem

Developed by TÜBİTAK and aiming to encourage qualified entrepreneurship, DREAM BIGG stands by entrepreneurs from the idea stage to the market. Within the scope of the programme, entrepreneurs turn into successful start-up companies by benefiting from opportunities such as validating their business ideas, receiving mentorship, creating a business plan and meeting with investors.

Opportunities Offered by the Programme

- Expert Mentors: In the 6-week acceleration programme, entrepreneurs have the opportunity to develop their ideas with expert mentors.
- Competent Trainings: During the programme, trainings are provided on topics such as design thinking, project management, marketing strategies and intellectual property rights.

- Intellectual Property Protection: Entrepreneurs' business ideas are secured with blockchain technology.
- Entrepreneur Friendly Investors: Entrepreneurs come together with suitable investors through Dream BIGG's collaboration network.
- Boğaziçi Business and Alumni Network: Participants benefit from access to Boğaziçi University's extensive business and alumni network.

New Success Stories in the Entrepreneurship Ecosystem

Volkan Özgüz, General Manager of Boğaziçi University TTO, stated that they are proud of the contributions of DREAM BIGG to the entrepreneurship ecosystem and said, 'Thanks to our programme, we not only provide financial support to technology and innovation-oriented initiatives, but also offer a strong platform where entrepreneurs can realise their visions.'

Investing in the Future with DREAM BIGG

DREAM BIGG aims to contribute to both the entrepreneurship ecosystem and the national economy by commercialising technology and innovation-oriented business ideas. The programme offers entrepreneurs not only financial support but also a unique support network in terms of information, connections and strategy.

> **For more information about DREAM BIGG:**
> https://bogazicibigg.com/

News

Microalgae-Based Life Support System Developed for Space Missions

Within the scope of Türkiye's National Space Program, Boğaziçi University, in collaboration with TÜBİTAK Marmara Research Center and Istanbul Medeniyet University, has developed the project "MicroAlgal Life Support Units for Space Missions (UzMAn)". The project was among the 13 experiments tested aboard the International Space Station (ISS) by astronaut Alper Gezeravcı.

Led by Dr. Berat Zeki Haznedaroğlu of Boğaziçi University's Institute of Environmental Sciences, the study demonstrated that microalgae are capable of converting carbon dioxide into oxygen three to five times more efficiently in microgravity compared to enclosed terrestrial environments. All three species of microalgae tested showed strong performance, and the findings revealed that, when sufficiently scaled, the system could fully meet the daily oxygen needs of a three-person crew.

This breakthrough holds significant implications for the development of biologically based and renewable life support systems for long-duration space missions. In the event of mechanical system failures, the self-renewing capacity of microalgae provides a sustainable backup solution. Dr. Haznedaroğlu also noted that beyond oxygen production, the project will continue to explore the potential of microalgae to serve as a nutritional resource for astronauts in space missions.

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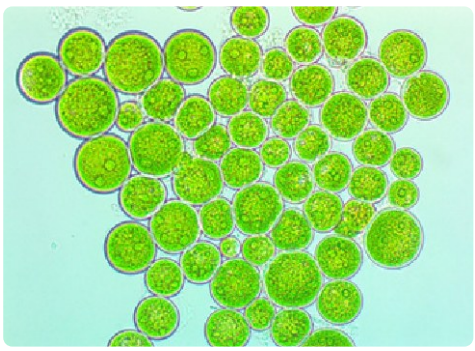


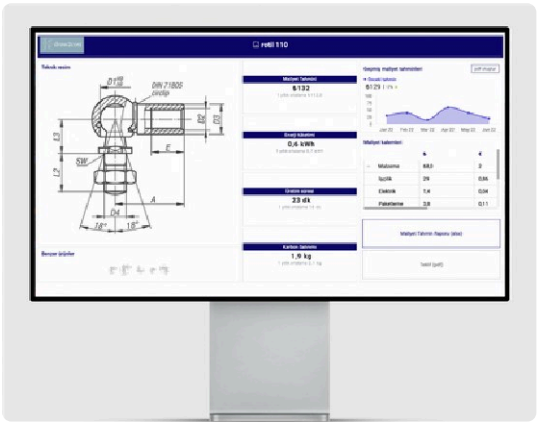
News

AI-Powered Cost and Energy Analysis Driving Industrial Efficiency

Boğaziçi University's Institute of Data Science and Artificial Intelligence is leading an innovative project designed to enhance energy efficiency and process optimization in the industrial sector. Supported under TÜBİTAK's 1711 Artificial Intelligence Ecosystem Call and developed in partnership with private industry, the project "AI-Assisted Cost Estimation Software from Technical Drawings" enables the prediction of critical parameters—such as cost, production time, energy consumption, and carbon emissions—directly from technical drawings of manufactured parts in just 60 seconds.

By automating processes that would traditionally take days of manual analysis, this university–industry collaboration aims to save both time and resources, while simultaneously improving the energy efficiency and global competitiveness of local manufacturing enterprises. In doing so, Boğaziçi University delivers direct services to industry, contributing significantly to digital transformation, cost analysis, and sustainable energy management.





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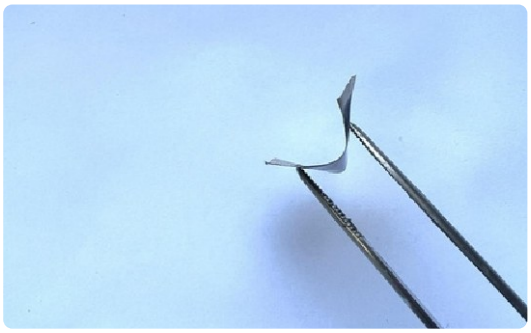
News

Next-Generation Supercapacitor Development for Industry

Led by Assoc. Prof. Müslüm Demir from the Department of Chemical Engineering at Boğaziçi University, the next-generation supercapacitor project aims to develop flexible, fast-charging, and long shelf-life energy storage systems for industrial applications. Supported by TÜBİTAK's 2247-D National Young Researchers Program and awarded by the Japan Society for the Promotion of Science, the project focuses on designing advanced supercapacitor electrodes for use in fields requiring high energy efficiency, such as electric vehicles, electronic devices, and renewable energy systems.

Conducted within Boğaziçi University's strong research infrastructure, these studies facilitate the development of cutting-edge technologies with direct industrial applications while promoting the widespread adoption of clean energy solutions in energy transformation processes. The active involvement of students and researchers at various levels further strengthens university–industry collaboration and contributes to the advancement of the university's research capacity.





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News

Boğaziçi LifeSci: Pioneering Health Innovation and Global Achievements

Boğaziçi University's Life Sciences and Technologies Application and Research Center (Boğaziçi LifeSci) stands at the forefront of Turkey's innovation ecosystem through groundbreaking research and entrepreneurship in the life sciences, as underscored by Minister of Industry and Technology Mehmet Fatih Kacır. The Center currently hosts more than 100 advanced research projects, has produced over 1,200 high-impact publications, and holds more than 20 international patents. Under the leadership of Prof. Dr. Rana Sanyal, Turkey's first domestically developed drug candidate—fully owned in terms of intellectual property rights—has received approval from the Ministry of Health and reached the clinical research stage, marking a milestone achievement with global recognition in the field of health innovation.

As Minister Kacır emphasized, these efforts are strengthening Turkey's potential to foster a "Turcorn" in health entrepreneurship while ensuring the sustainable advancement of national R&D capacity through EU-funded flagship projects. With its robust infrastructure, Boğaziçi LifeSci generates innovative solutions across a wide spectrum—from micro and nano devices to biomaterials, from vaccine technologies to smart drug delivery systems— establishing a significant model under SDG 9 (Industry, Innovation, and Infrastructure).
These accomplishments reinforce Boğaziçi University's role not only as a leader in Turkey but also as a strategic actor contributing to science- and technology-driven sustainable development goals across Europe.



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Innovative Approaches in Computational MR Imaging: EU-Funded Twinning Project at Boğaziçi University

Led by Prof. Dr. Esin Öztürk Işık from the Institute of Biomedical Engineering, the EU-funded Twinning Project under the Horizon Europe Program aims to strengthen Türkiye's capacity in the field of computational magnetic resonance (MR) imaging. Over the course of three years, the project will foster collaborations with leading international research institutions such as the University Medical Center Amsterdam and Fraunhofer MEVIS, while offering summer schools, workshops, and short-term exchange opportunities for students. In addition, research will focus on developing novel MR techniques to support the early diagnosis of multiple sclerosis (MS), complemented by awareness-raising activities designed to inform the public about the disease. Backed by a highly competitive EU funding scheme, this initiative stands out as a powerful example of producing innovative research outcomes in health while transforming academic knowledge into tangible societal benefits.



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Pioneering Space Research: Boğaziçi University's Microalgae Breakthrough

Türkiye's first astronaut, Alper Gezeravcı, conducted experiments of Boğaziçi University's "MicroAlgal Life Support Units for Space Missions (UzMAn) Project" aboard the International Space Station, yielding findings of critical importance for future crewed lunar missions. This study demonstrated the role of microalgae in water and oxygen cycles under microgravity conditions, contributing to the development of sustainable biotechnological solutions for life support systems. Led by Boğaziçi University researchers, such projects not only make strategic contributions to Türkiye's National Space Program but also position the university at the forefront of internationally recognized innovative research.





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Boğaziçi University Scientists Win 9 Awards at ISIF'24

Boğaziçi University researchers achieved remarkable success at the 9th International Invention Fair (ISIF'24), organized by the Turkish Patent and Trademark Office (TÜRKPATENT) as part of TEKNOFEST 2024, securing a total of nine awards: two gold medals, six silver medals, and the Best Academic Invention Award.

- Prof. Dr. Nesrin Özören (Department of Molecular Biology and Genetics) and researcher Ali Can Salihlioğlu received the Best Academic Invention Award for their study on "An Antigen Delivery Method". In addition, Prof. Özören was awarded a gold medal for her research on "ASC Specks Particles in Cancer Immunotherapy."
- From the Institute of Biomedical Engineering, Assoc. Prof. Dr. Özgür Kocatürk, Assoc. Prof. Dr. Albert Güveniş, and Dr. Sefa Zülfikar won a gold medal with their project on a "Mouthpiece Device for the Treatment of Obstructive Sleep Apnea Syndrome."
- Assoc. Prof. Dr. Sema Dumanlı Oktar (Department of Electrical and Electronics Engineering) earned a silver medal for her study on "A System and Method Enabling Data Exchange Between In-Body and Out-of-Body Elements."
- Prof. Dr. Çetin Yılmaz and Ahmet Onur Özyar (Department of Mechanical Engineering) received two silver medals for their projects "A Joint Mechanism" and "A Vibration Isolation System."
- Prof. Dr. Amitav Sanyal, Prof. Dr. Rana Sanyal, and research assistant İsmail Altınbaşak (Department of Chemistry) were awarded a silver medal for their work on "Biocompatible and Biodegradable Hydrogels Suitable for Wound and Burn Treatment with Drug Delivery Properties."
- Prof. Dr. Can Yücesoy (Institute of Biomedical Engineering) and researcher Cemre Su Kaya earned a silver medal for their project on "A Drug for the Treatment of Muscle Spasticity via Chemical Muscle Denervation."
- Prof. Dr. Arda Deniz Yalçınkaya and Prof. Dr. Günhan Dündar (Department of Electrical and Electronics Engineering), together with Prof. Dr. Hamdi Torun of Northumbria University (UK), won a silver medal for their project on "A Biosensor with Integrated Antenna and Measurement Method for Biosensor Applications."

These achievements stand as a strong testament to Boğaziçi University's culture of interdisciplinary research, scientific excellence, and its innovation capacity focused on societal benefit.

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TÜBA Thesis Award for AI Model Predicting the Time and Location of Crime

Boğaziçi University graduate Dr. Tuğrul Cabir Hakyemez, under the supervision of Prof. Dr. Bertan Badur from the Department of Management Information Systems, received first place in the Social Sciences and Humanities category of the Turkish Academy of Sciences (TÜBA)–TEKNOFEST 2024 Doctoral Science Awards for his dissertation titled “Developing a Dynamic Predictive Policing System.” The model, developed using artificial intelligence and deep learning techniques, can predict with high accuracy (80% precision) the specific streets where crimes are likely to occur one day in advance, offering an innovative approach to urban safety and crime prevention policies. Tested on crime data from Chicago, it stands as the first predictive policing system of this scale developed in Türkiye, representing a pioneering study in both academic and societal impact. This achievement highlights Boğaziçi University’s capacity to produce innovative research at the intersection of social sciences and artificial intelligence, generating concrete contributions to sustainable development and public security.



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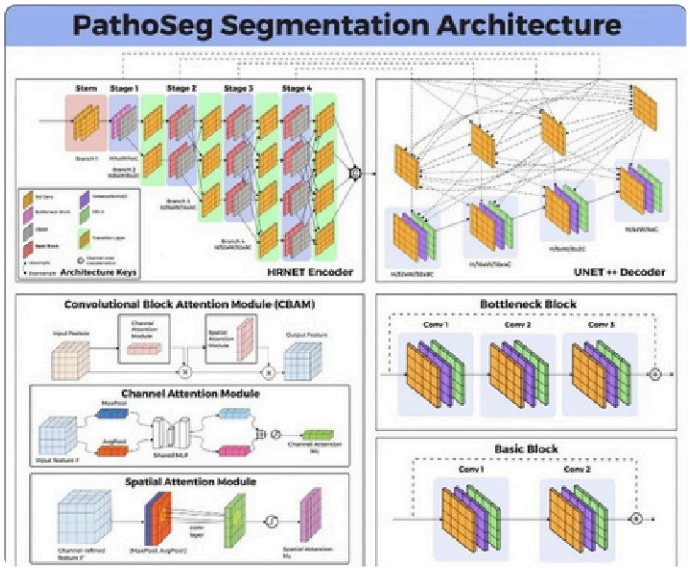
Pioneering Innovations in Cancer Diagnosis with Artificial Intelligence

Associate Professor Mehmet Turan of Boğaziçi University's Department of Computer Engineering and his team have developed two artificial intelligence models, PathoSeg and PathopixGAN, that significantly enhance both the speed and accuracy of cancer diagnosis. Published in Elsevier's prestigious journal Medical Image Analysis, this research goes beyond traditional microscopic examinations in pathology, enabling faster and more precise segmentation of tissues and cells, while also facilitating the early detection of metastasis. In addition, the PathopixGAN model addresses imbalances in histopathology datasets by generating realistic synthetic images, thereby allowing for more effective analysis of rare cases. These innovations not only transform clinical diagnostic processes but also support the advancement of personalized treatment options in patient care. Boğaziçi University's pioneering work in AI and deep learning represents a groundbreaking contribution that aspires to serve as a global reference point and is recognized among the featured innovative research outputs.





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News

Pioneering Advances in AI Agents: Boğaziçi University Develops a “Real” Personal Assistant Model

Researchers at the Boğaziçi University Institute of Data Science and Artificial Intelligence are developing a next-generation AI agent model—supported by the European Union’s Digital Europe Program—that can operate on mobile devices and perform actions akin to a real personal assistant. Developed under the project “On-Device AI Agents: Transforming Real-Time API Interactions with Privacy-Preserving Intelligence”, the model stands out from existing systems by enabling capabilities such as making purchases on behalf of the user, planning vacations, organizing meetings, and taking actions based on personal preferences through voice interaction. Leveraging advanced technologies such as the MareNostrum 5 infrastructure at the Barcelona Supercomputing Center, the project aims to enhance the reasoning and real-world interaction capabilities of open-source models. This pioneering initiative, both in Türkiye and globally, represents a strong example of Boğaziçi University’s outstanding innovative research in artificial intelligence.



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Double Award Success of Boğaziçi University Student at TEKNOFEST 2025

Boğaziçi University continues to play an active role in extending its innovative, engineering, and environmentally friendly technologies beyond campus, exemplified by a remarkable achievement at TEKNOFEST 2025. Aslıhan Yeşir, a Ph.D. student at the Institute of Environmental Sciences, won both the First Prize and the Best Commercialization Potential Award with her project, selected among 14,610 applications and 50 finalist teams. This dual recognition reinforces Boğaziçi University's vision of transforming environmental sustainability and innovative engineering solutions into societal benefit, while sharing them on national and international platforms. Supported by its technopark infrastructure, entrepreneurship ecosystem, and research-driven applied education model, the university equips its students with the capacity to integrate theoretical knowledge with practical and innovative solutions, creating impact at a societal scale.









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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
To build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
SUSTAINABLE DEVELOPMENT GOALS