

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Resilient infrastructure and innovation drive sustainable growth worldwide. Özyeğin University fosters entrepreneurship through its incubators and accelerators, supports start-ups with research-backed solutions, and collaborates with industry partners to build innovative, sustainable technologies.

103

Scholarly Publications
(2020-2024)

1.19

Citation Impact
(FWCI)

44

Funded
Projects

16

Student-Led
Activities



Technology-Focused Student Clubs

Among over 30 student clubs at Özyeğin University, four are specifically focused on technology, engineering, and digital innovation, providing students with hands-on experience and knowledge in cutting-edge technological fields.

The Artificial Intelligence Club brings students together with technology to encourage adoption of innovative solutions. It offers training sessions, projects, and collaboration opportunities to enhance members' knowledge and skills in artificial intelligence, integrating ethical values with advanced technology to help students develop future-oriented solutions while considering ethical responsibilities.

The OzU Blockchain Club focuses on disseminating information about blockchain technology and its applications such as cryptocurrencies, NFT, and Metaverse. It provides members interested in pursuing careers in this field with an environment for professional development, exploring and sharing the features of this emerging technology beyond traditional methods.

OzU IEEE, as a chapter of the Institute of Electrical and Electronics Engineers (IEEE), one of the world's leading engineering societies, organizes seminars, training sessions, and field trips for students. It

aims to make university life more enriching and help students shape their future career roadmaps in engineering.

The OzU Maker Club represents the maker movement, a technology-based DIY (Do It Yourself) culture. It aims to foster a maker spirit in the university ecosystem and prepare individuals who produce rather than consume. The club offers training on 3D modeling, coding, 3D printing, and design, and organizes seminars, competitions, and workshops on emerging technologies to introduce and integrate students into the maker culture.



ÖzÜ-X: Interdisciplinary Innovation Hub

Located on Özyeğin University's Çekmeköy campus, ÖzÜ-X is a transformative space designed to foster innovation, collaboration, and interdisciplinary research. As the university's flagship structure, ÖzÜ-X embodies the spirit of exploration, pushing boundaries, and redefining traditional academic and business practices. This facility serves as a meeting point for students, academics, and industry professionals, where interdisciplinary research and innovation converge.

ÖzÜ-X is a dynamic ecosystem that promotes interdisciplinary collaboration. Its flexible and social design focuses on human interaction and balances open and closed laboratories to adapt to project needs. It hosts interdisciplinary units such as the Entrepreneurship Center (Fit Startup Factory and OpenFAB Istanbul) and the Technology Transfer Office (TTO), as well as industry leaders like the GE Türkiye Innovation Center and ÖzÜ Bex, which supports SMEs in their digital transformation journey with EU funding. The makerspace, a central hub connecting laboratories, supports processes from prototyping to production, enabling the realization of innovative ideas.

ÖzÜ-X has made significant contributions to the university and the broader innovation ecosystem. Fit Startup Factory has received over

4,000 applications since 2011, supporting 250 entrepreneurs and leading to the establishment of 61 businesses. OpenFAB Istanbul has organized 86 workshops since 2016, reaching 2,113 participants. The Technology Transfer Office has been ranked among Türkiye's top 10 universities by TÜBİTAK and secured 350 million TL in funding over 10 years through collaborations with the public and private sectors.



Advancing Sustainable Infrastructure Through Energy Research

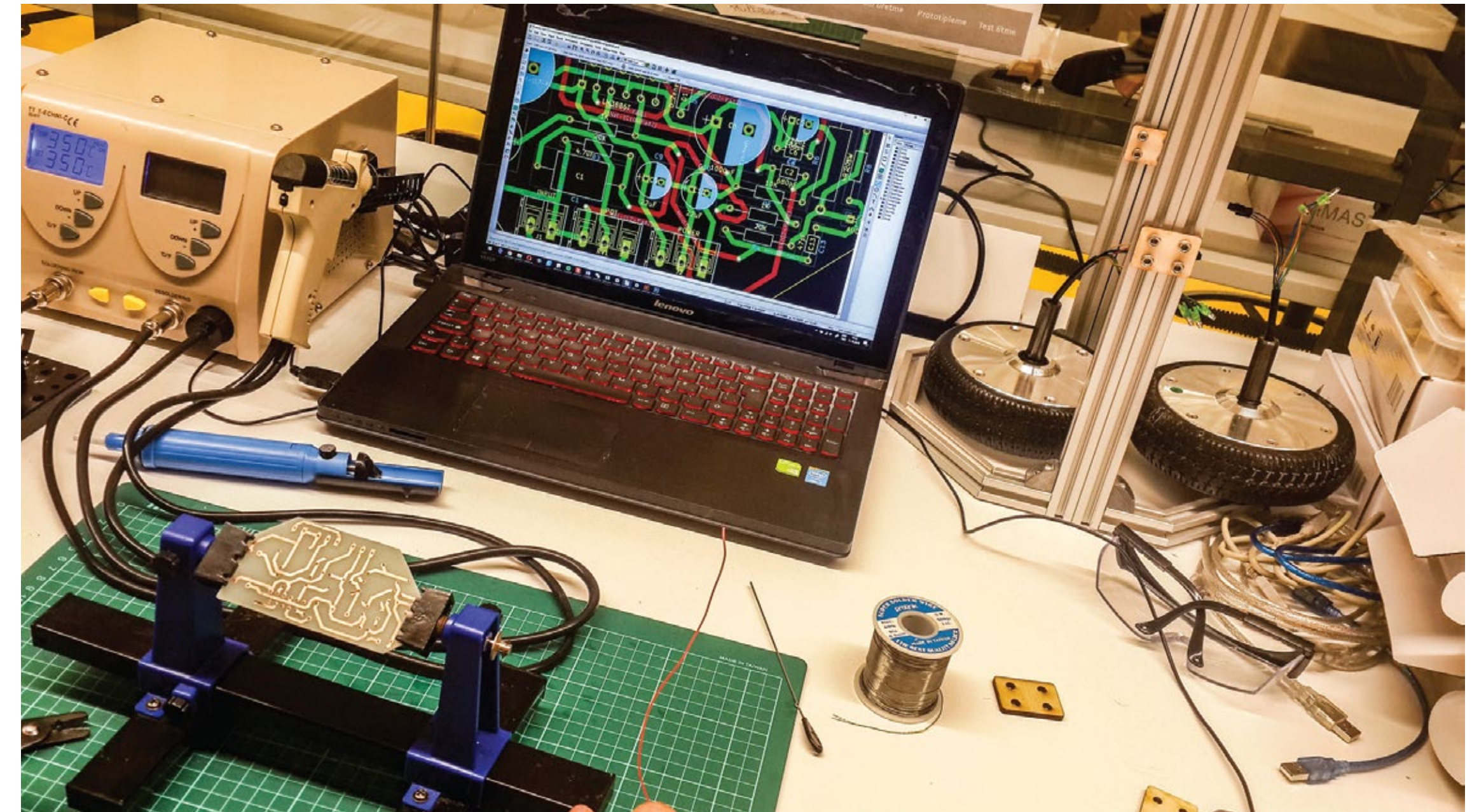
The Center for Energy, Environment and Economy (EÇEM) at Özyeğin University plays a central role in advancing sustainable infrastructure, energy efficiency, and innovation through interdisciplinary research and global collaboration. Under the leadership of Prof. Dr. M. Pinar Mengüç, the Center acts as a hub that connects academia, industry, and policy to develop solutions for sustainable industrial development and low-carbon transformation. In 2024, EÇEM expanded its international engagement through high-profile collaborations and events. Prof. Mengüç represented the Center at the Economist's Sustainability Week in London, sharing insights on renewable integration, circular economy practices, and carbon reduction. He also joined the University of Indonesia GreenMetric National Workshop, where Özyeğin University ranked among Türkiye's top institutions in Energy & Climate Change and Education & Research. EÇEM hosted the Climate Crisis and Sustainable Climate Transformation Conference and co-organized the "Green and Blue Transformation in Vehicle Technologies" workshop with METU-TEKPOL, highlighting the Center's leadership in fostering interdisciplinary dialogue and user-centered innovation for sustainable mobility.

The Center's research translates directly into practical applications for sustainable infrastructure. At the 10th Euro-American Congress on Construction Pathology (Rehabend 2024), EÇEM researchers presented energy efficiency renovation strategies for historic buildings in Istanbul, integrating heritage conservation with modern sustainability principles. EÇEM also contributes to the Horizon Europe LEGOFIT Project, a €20.7 million initiative involving 19 partners from 10 countries to design energy-positive buildings. Its pilot at Özyeğin University's Çekmeköy Campus integrates smart energy management technologies such as thermostatic and occupancy sensors, window monitors, and cloud-based boiler control systems.

OzU MakerLab - OpenFab

OzU MakerLab OpenFab reached 1,355 people through 104 different training sessions (workshops and courses) in 2024. While the majority of the training took place at OpenFab, some sessions were conducted internationally at different venues (Lisbon BioLab - Portugal, Vulca Seminar - Zam Germany). Participants who benefited from the training include OzU students, academics, researchers, administrative staff, external stakeholders from industry, high school students, and culinary arts center students (Le Cordon Bleu).

The training is not limited to engineering students but is designed for groups from all disciplines and fields, with participants ranging from gastronomy to interior architecture, business administration, industrial design, and hotel management students. Examples of training include the MAKEngineer Certificate Program, Creative Coding and Drawing Robot Workshop, Upcycling Workshop, 3D Printer Cookie Cutter Workshop, and Introduction to Vacuum Forming Workshop. All training, workshops, and interactive events primarily emphasize innovation and practical application.





University-Industry Partnership Projects

Over the past year, Industry Collaborations has successfully completed 29 university-industry collaboration consulting projects, alongside 7 successful national and international industry-partnered grant projects. Projects such as "Development of Solution Method for Scheduling Refrigerator R&D Test Rooms" by Dr. Ali Ekici, "AI-Based Plastic Injection Quality Control System" by Dr. Erinç Albey, "Building Height Detection from Satellite Images" by Dr. Hasan Fehmi Ateş, and "Manufacturing Innovation Digital Advancement Services Hub" by Dr. Erinç Albey demonstrate the university's commitment to addressing real-world industrial challenges through innovative research and development.

By bridging the gap between academia and industry, these initiatives create practical solutions that directly impact manufacturing efficiency, quality assurance, and technological advancement. Özyeğin University's multidisciplinary approach combines expertise in artificial intelligence, operations research, and computer vision to deliver tangible value to industry partners, strengthening Türkiye's innovation ecosystem while ensuring research remains relevant and impactful in today's rapidly evolving technological landscape.

National Recognition for Innovation Excellence

Özyeğin University has demonstrated its significant contribution to industry, innovation, and infrastructure development by securing 6th place nationally in TÜBİTAK's (Turkish Scientific and Technological Research Council) Entrepreneurial and Innovative University Index 2024. This achievement positions Özyeğin University among the top three foundation universities in Türkiye and maintains its distinction as the youngest foundation university in the top ten rankings. Published annually by TÜBİTAK since 2012, the index evaluates universities' entrepreneurship and innovation performance across four main categories comprising 23 indicators: Scientific and Technological Research Competence, Intellectual Property Pool, Collaboration and Interaction, and Economic and Social Contribution. Özyeğin University's strong performance across all these dimensions reflects its holistic approach to innovation that extends beyond academic research to encompass technology transfer, industry partnerships, intellectual property generation, and tangible contributions to economic and social development.