

9



## SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

Khalifa University of Science and Technology advances SDG 9: Industry, Innovation and Infrastructure by delivering world-class research, fostering innovation ecosystems, and supporting the development of resilient, sustainable, and technology-enabled infrastructure. As a national research university, KU plays a critical role in strengthening industrial competitiveness and innovation capacity.

INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



9



## Key Contributions

### 1. Research Excellence and Technological Innovation

In 2025, Khalifa University continued to lead high-impact research in **advanced materials, robotics, artificial intelligence, aerospace, clean energy, biomedical engineering, and smart systems**. These research activities contribute to technological advancement and industrial innovation.

### 2. Innovation Ecosystem and Technology Transfer

KU strengthened its innovation ecosystem through **patents, start-ups, spin-offs, and industry collaboration**, enabling the translation of research outcomes into commercial and societal value. Support for entrepreneurship and commercialization enhances innovation-driven economic growth.

### 3. Smart and Resilient Infrastructure

The University continued to invest in **state-of-the-art research infrastructure, laboratories, digital platforms, and smart campus technologies**, supporting efficient operations, research excellence, and resilience.

### 4. Industry Collaboration and Applied Research

In 2025, KU expanded applied research and joint development projects with **national and international industry partners**, addressing real-world challenges in energy, mobility, manufacturing, healthcare, and digital infrastructure.

### 5. Education and Skills for Innovation

Through research-integrated education, graduate training, and hands-on learning, KU develops highly skilled graduates capable of contributing to innovation, industrial development, and infrastructure advancement.

INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

9



## SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

### Industry & Innovation Research

In 2025, Khalifa University strengthened its contribution to SDG 9: Industry, Innovation and Infrastructure through a focused portfolio of research projects advancing sustainable industrial processes, resilient infrastructure, and enabling digital technologies.

Collectively, these initiatives leverage robotics, artificial intelligence, digital platforms, and advanced materials to enhance industrial efficiency, infrastructure resilience, and technology-driven innovation, supporting national and global industrial transformation agendas.

54

Active Awarded Research  
Projects in 2025

26M

Projects' Research Budget  
(AED) in 2025

### Main research themes:

Robotics

AI and Digital  
Platforms

Advanced  
Materials

INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

9



## SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

### Industry & Innovation Research

- **MSAP: Multi-Robot Platform for Smart Cities:**  
Enables fleets of robots to cooperate in next-generation city services and infrastructure
- **LLM-Based Mobile Robot for Warehouses:**  
Uses large language models to automate warehouse logistics and material handling
- **Smart AgriTech Drone for Precision Farming:**  
Maps crop health and yield using AI-powered drones to boost agricultural productivity
- **Smartphone-Based Biosensor for Water Quality:**  
Detects pharmaceutical contaminants in water using a portable phone-based sensor
- **Multifunctional Ceramics for Extreme Environments:**  
Develops advanced ceramic materials to protect critical infrastructure in harsh conditions

INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

