



SUSTAINABLE DEVELOPMENT GOALS • UNIVERSITY COMMITMENT

SDG 9: Industry, Innovation & Infrastructure

9

9



INDUSTRY

Industry, Innovation & Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation — across our campus and the Basra community.

Contents

*Sustainable Development Goal 9, Industry, Innovation and Infrastructure
· Evidence Submission, Times Higher Education Impact Rankings 2026.*

9.1 Introduction	3
9.2 Research and innovation	4
9.2.1 Applied research and innovative solutions	4
9.2.2 Research priorities in industry, energy, and infrastructure	5
9.2.3 Postgraduate programmes and research centres	5
9.3 Digital infrastructure and e-governance	5
9.4 Sustainable campus infrastructure	6
9.5 Investment in sustainability	8
9.6 Industry and community partnerships	8
9.7 Contribution to community development.....	9
Research contributions (Scopus-indexed publications)	9

9.1 Introduction

How does Shatt Al-Arab University build resilient infrastructure, foster innovation, and contribute to sustainable industry?

How Shatt Al-Arab University delivers SDG 9

A four-step approach

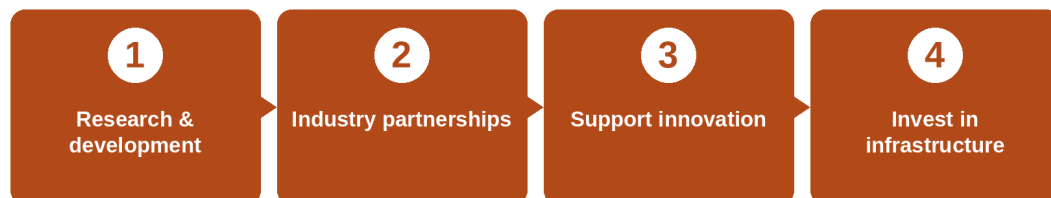


Figure 1. A four-step delivery approach.

SDG 9 framework at Shatt Al-Arab University

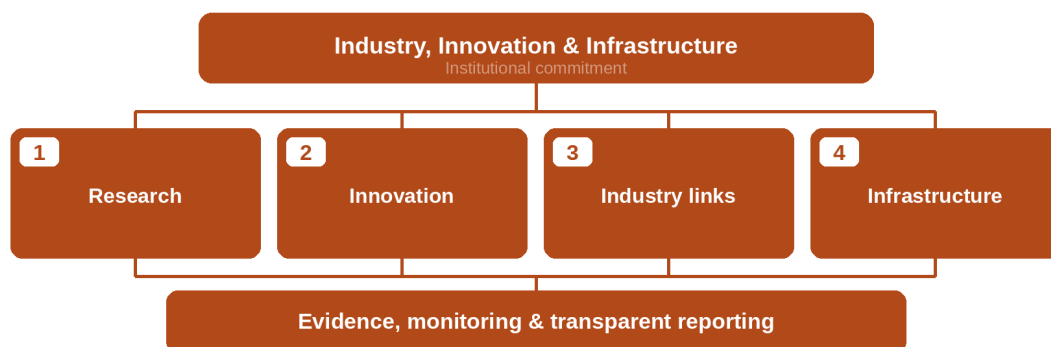


Figure 2. Institutional framework and reporting.

Sustainable Development Goal 9 calls for resilient infrastructure, inclusive and sustainable industrialization, and innovation. Universities advance this goal by generating new knowledge, training skilled people, investing in modern facilities, and turning research into practical solutions for industry and society.

Shatt Al-Arab University embeds sustainability across its work — in the curriculum, its campus, its research, and its partnerships. It integrates sustainability concepts into every discipline, not only the environmental

sciences, through tailored content and specialised training; maintains an environmentally friendly campus; promotes awareness; contributes to solving community problems through applied research; and strengthens partnerships with local institutions and the private sector. This report sets out the university's contribution to industry, innovation, and infrastructure, following the framework of the Times Higher Education (THE) Impact Rankings.



9.2 Research and innovation

Research and innovation are at the heart of the university's contribution to SDG 9. The university harnesses scientific research to develop better strategies for using resources, and embraces creative ideas, refining them into solutions of practical value to society.

9.2.1 Applied research and innovative solutions

The university supports applied research aimed at developing innovative solutions to societal problems. Its researchers conduct work that preserves and strengthens the natural resource base, develops alternative energy sources, and devises new strategies for the efficient use of available resources. A particular focus is the search for new materials to replace

existing ones, design changes that raise product efficiency while reducing material use, and new methods of energy storage for future generations — all hallmarks of innovation in industry and infrastructure.



9.2.2 Research priorities in industry, energy, and infrastructure

The university directs research toward the most pressing challenges at local and international level. Completed and ongoing work spans electricity generation and energy, building and construction materials, water, sustainable transport, pollution prevention, and climate change, alongside research on climate-adaptation strategies and on the human and economic risks to the environment.

9.2.3 Postgraduate programmes and research centres

To sustain this effort, the university offers Master's and doctoral programmes in sustainable development and environmental topics, and has established research centres dedicated to sustainable development — building the institutional capacity that long-term innovation requires.

9.3 Digital infrastructure and e-governance

Information technology underpins the university's drive toward sustainable development. The university has developed an integrated plan

for digital transformation and e-governance, building systems that simplify administrative procedures and reduce the time and effort they require. This modern digital infrastructure improves the quality and reliability of services for students and staff and supports a more efficient and transparent institution.

9.4 Sustainable campus infrastructure

The university's physical infrastructure is designed and operated with sustainability in mind. Its main buildings provide some 30,000 m² of academic and administrative space, as set out below.

Building	Total area
Building A	13,752 m ²
Building B	2,496 m ²
Building C	13,752 m ²
Total	30,000 m ²

Energy efficiency is built into the campus. Across the major equipment categories, an average of 93% of appliances in use are energy-efficient — from air conditioners and LED lighting to computers, printers, and refrigerators.

Appliance	Total in use	Energy-efficient	Share
Air conditioners	250	240	96%
LED lamps	2,000	1,900	95%
Fans	300	290	97%
LCDs	40	35	88%
Computers	50	45	90%
Heaters	20	18	90%
Printers	122	120	98%
Refrigerators	44	40	90%
Overall	—	—	93%

The campus also prioritises green and permeable space: of a total area of about 24,055 m², a substantial share is given over to open, water-absorbing ground that supports drainage, cooling, and biodiversity. Wider measures include increasing green spaces, reducing water and electricity

consumption by relying on clean energy, and running voluntary afforestation and clean-up campaigns.





9.5 Investment in sustainability

The university backs its commitments with dedicated funding. Of an average annual budget of about US\$480,000 for the relevant programmes, roughly US\$143,000 — around 29% — is allocated to sustainability each year, as shown below.

Item (US\$)	2020	2021	2022	2023	Average
Total budget	480,000	480,000	480,000	480,000	480,000
Sustainability budget	150,000	100,000	157,381	163,251	142,658

This sustained investment funds energy-efficiency upgrades, green-campus initiatives, applied research, and digital-transformation projects.

9.6 Industry and community partnerships

The university strengthens partnerships with local institutions and the private sector to exchange experience and knowledge and to deliver joint projects for sustainable development. It expands the academic departments that meet the needs of the labour market, and helps to train and develop workers and employees in both the public and private sectors through formal cooperation and skills-improvement agreements. These links connect the university's research and graduates to industry, supporting innovation and economic growth across Basra.



9.7 Contribution to community development

The university treats community development as central to its mission. It develops the ability of students and graduates to contribute seriously to solving society's problems; works within rigorous scientific and methodological frameworks that take account of social, economic, cultural, and environmental conditions; and keeps pace with global scientific, technological, and communication advances.

It spreads science and knowledge to raise public awareness, conducts applied research that finds realistic solutions to community problems, and provides society with capable people equipped to drive meaningful change. In doing so, the university embraces innovative and creative ideas and refines them into lasting benefits for the community — the practical expression of innovation in the service of development.

Research contributions (Scopus-indexed publications)

Shatt Al-Arab University's research is indexed in Scopus and mapped to the UN Sustainable Development Goals by Elsevier - the same data source the THE Impact Rankings use for their research metric. The university currently records 179 documents from 59 authors (Scopus ID 60109790; last updated May 2026). The chart below shows how this output is distributed across the goals.



Figure. Scopus-indexed publications by SDG (data source: Scopus).

The following publications are mapped to SDG 9 in the Elsevier/Scopus SDG dataset (7 documents):

#	Publication title	Source & year
1	Understanding retailers' intentions to use AI for product waste reduction in grocery supply chains: extending the technology acceptance model <i>Mouloudj, K., Amoriello, T., Almokdad, E., et al.</i>	Sustainability (Switzerland), 2026
2	Bio-authenticated ECC framework for secure drone-to-drone communication in IoD environments <i>Saare, M.A., Abdulhamed, M.A., Abbas, S.A., Jasim, A., Al-Shareeda, M.A.</i>	Int. Conf. on Applied Innovation in IT, 2025
3	Computational fluid dynamics analysis procedure and genetic algorithm application for evaluating performance of double pipe heat exchanger <i>Kadhim, D.S., Assi, S.A., Aziz, J.S., Nadeem, Z.A.</i>	Advances in Science and Technology Research Journal, 2024
4	Validation of the toolkit for fake news awareness in social media <i>Al-Shareeda, M.A., Saare, M.A., Manickam, S., Karuppayah, S.</i>	Indonesian J. of Electrical Eng. and Computer Science, 2023
5	Wireless sensor networks in the internet of things: review, techniques, challenges, and future directions <i>Zijie, F., Al-Shareeda, M.A., Saare, M.A., Manickam, S., Karuppayah, S.</i>	Indonesian J. of Electrical Eng. and Computer Science, 2023
6	Implications for enhancing the financial reporting quality brought on by the digital revolution of internal control <i>Al Sabti, A.A.W.</i>	Int. Journal of Professional Business Review, 2023
7	Controlling COVID-19 with internet of things (IoT) technologies: a review <i>Al-Shareeda, M.A., Manickam, S., Saare, M.A., Sari, S.A., Alazzawi, M.A.</i>	CSCTIT Proceedings, 2022