



مؤسسة الكويت للتقدم العلمي  
Kuwait Foundation for the Advancement of Sciences

2025-2029

# KUWAIT FOUNDATION FOR THE ADVANCEMENT OF SCIENCES STRATEGY

Timeless Legacy  
Innovative Future

إرثٌ راسخٌ  
مستقبلٌ مبتكرٌ



# CONTENTS

6	<b>About KFAS</b>
8	<b>Executive Summary</b>
9	<b>Introduction: Advancing Science, Technology, and Innovation</b>
11	<b>PILLAR 1: Robust Research Ecosystem</b>
11	Strategic objective 1.1: Elevate research efficacy
12	Strategic objective 1.2: Encourage transdisciplinary research
12	Strategic objective 1.3: Inform science-based policy
16	<b>PILLAR 2: Viable Innovation</b>
16	Strategic objective 2.1: Support STI solutions and transfers
16	Strategic objective 2.2: Complement innovation ecosystem growth
19	<b>PILLAR 3: Human Ingenuity</b>
19	Strategic objective 3.1: Facilitate knowledge transfers
19	Strategic objective 3.2: Develop human capabilities
23	<b>Organizational Proficiency</b>
24	<b>Annex A: Offerings</b>
25	<b>Annex B: Priority Areas</b>
26	<b>Annex C: Key Performance Indicators</b>



We affirm that the support of scientific research is fundamental to progress and is a priority for the State of Kuwait in an era of rapid development. In the age of artificial intelligence, alternative energy, and space science, the support of scientific research has become, alongside the enhancement and consolidation of national identity, a cornerstone of our vision.

We proudly recall the vision of the late H.H. Sheikh Jaber Al-Ahmed Al-Sabah (may his soul rest in peace) to establish a thriving scientific, technological, and innovative culture for a sustainable Kuwait.

From the speech of His Highness the Amir of Kuwait during the launch of the Kuwait National Space Research Center, September 2024.

---

**His Highness  
the Amir of Kuwait,  
Sheikh Meshal Al-Ahmad  
Al-Jaber Al Sabah**



KFAS is and will always be a legacy of visionary initiatives that transform Kuwait's scientific institutions and STI community into internationally recognized entities.

The 2025–2029 KFAS strategy pledges to embrace continuous learning and innovation, invest in advanced technologies, and cultivate science-based solutions to address global challenges that are relevant to Kuwait.

---

**Ameenah Rajab Farhan**  
**Director General**



Our vision is to advance science,  
technology, and innovation for a resilient, thriving, and  
sustainable future.



Our mission is to pursue scientific  
excellence to tackle national challenges through a  
prominent science, technology, and innovation model.

مؤسسة الكويت للتقدم العلمي  
Kuwait Foundation for the Advancement of Sciences

تأسست في 1976  
Established in 1976



# About the Kuwait Foundation for the Advancement of Sciences

The Kuwait Foundation for the Advancement of Sciences (KFAS) is a private, non-profit organization established in December 1976.

Through cooperation with local and international partners, KFAS funds and implements research, training, and development programs that address Kuwait's national priorities in the fields of science, technology, and innovation, as well as operating specialized scientific centers.

The programs target various segments within the innovation ecosystem. KFAS also actively engages the wider public to generate awareness and interest in the fields of science and technology.

KFAS builds alliances across academia, government, the private sector, non-government organizations, and the broader community to diffuse knowledge and accelerate progress. Through its prestigious prizes, KFAS not only celebrates the remarkable contributions of Kuwaiti and Arab researchers but also reinforces its commitment to advancing science and technology.

These prizes underscore KFAS's role in rewarding excellence, validating impactful research, inspiring future generations, and encouraging further contributions to Kuwait's scientific and technological landscape. KFAS is recognized as a leading player in Kuwait's scientific and technological accomplishments and advancements.

The governance system of KFAS is structured to ensure effective oversight and management of its activities.

It includes a Board of Directors, chaired and appointed by H.H. The Amir of the State of Kuwait, that is responsible for strategic decision-making, executive board committees focused on specific areas, and an executive management that handles day-to-day operations.



# Strategy Map



# Executive Summary

With its strategy for 2025–2029, the Kuwait Foundation for the Advancement of Sciences seeks to enhance and demonstrate the potential value of science, technology, and innovation to complement national efforts in achieving Kuwait’s vision and enhancing individual competitiveness on the global stage. In the next five years, we will promote a robust research ecosystem, catalyze viable innovation, and invest in Kuwait’s human ingenuity.

KFAS integrates its three pillars—**robust research ecosystem, viable innovation, and human ingenuity**—to create a synergistic framework where scientific advancements drive innovation, innovation fuels economic growth, and capacity-building efforts prepare individuals to excel in a knowledge-based economy.

By aligning research, innovation, and human development efforts with Kuwait’s national vision, KFAS enhances the interplay between knowledge creation, practical application, and talent cultivation, ensuring a sustainable and globally competitive future for the nation.

To promote a **robust research ecosystem**, we will amplify Kuwait’s scientific contributions regionally and internationally by enabling collaborations with institutions around the world. We will focus our efforts on evolving dynamic priority areas supported in our preceding strategy.

To catalyze **viable innovation**, we will continue to empower programs and practices that equip Kuwait to meet present and future challenges, converting research outputs into applied knowledge and technologies.

To invest in Kuwait’s **human ingenuity**, we will facilitate knowledge transfers and develop people’s capabilities. We will meet shifting demands with rigorous gap analyses and needs assessments. To foster a culture of scientific interest and curiosity, our programs will promote lifelong learning.

Building on the momentum of recent initiatives to modernize our operations, we will increasingly distinguish KFAS as a model of organizational agility and proficiency. We will strive constantly to be more effective and efficient, and we will strive to adhere to international standards.

Through the interconnected pillars of research, innovation, and human ingenuity, KFAS aims to address dynamic national and global challenges by fostering collaborative networks, bridging gaps between academia and industry, and empowering individuals to lead in science, technology, and innovation-driven fields. In our pursuit of organizational proficiency, we will invest in optimizing our operations and developing a positive organizational culture.

## The 45+ year journey of funding research



**1,050**  
Researchers  
Supported



**1,500**  
Projects  
Funded



**1,400**  
Articles  
Published



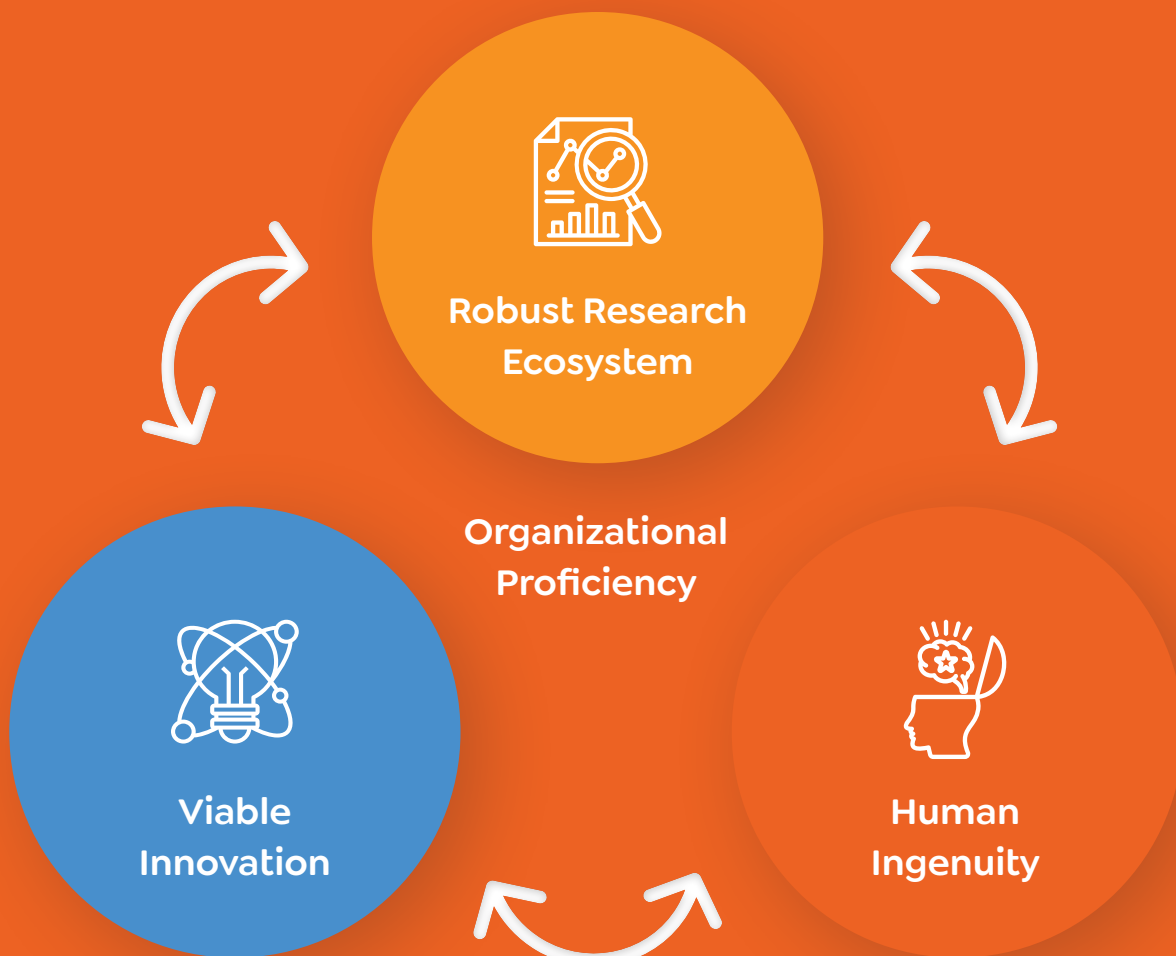
**45**  
Fields of  
Work

# Introduction: Advancing Science, Technology, and Innovation

Driving our work is the premise that science creates knowledge, technology accelerates progress, and innovation shapes transformative solutions. During 2025–2029, we aim to build on our legacy and our strengths by continuing to support exemplary programs and projects, while also accelerating our support for emerging scientific areas that call for new research, novel uses of technology, and expanded horizons in knowledge transfers and human capacities. All of our work will be aligned with our three pillars—robust research ecosystem, viable innovation, and human ingenuity—and each pillar will complement and produce synergies with the others. We will focus on elevating research

efficacy, encouraging transdisciplinary research, and informing science-based policy. We will also focus on promoting science, technology, and innovation (STI) transfers and contributing to the growth of the innovation ecosystem. And we will focus on diffusing knowledge and developing human capabilities and potential.

We will pursue priority areas that address issues of importance to Kuwait, particularly in the areas of environment, energy, health, STEAM education, water and food security, and future economies, while maintaining a vigilant awareness of emerging trends and initiatives outside these areas that could bring benefit to the nation.







# PILLAR 1

## Robust Research Ecosystem

During 2025–2029, we will focus our efforts and build on our 45+ year legacy in supporting high quality research projects that tackle local and complex global challenges affecting Kuwait. By continuing to align our research priorities with national challenges, we will increase the impact and relevance of the research we support. We place a strong emphasis on encouraging transdisciplinary research.

### STRATEGIC OBJECTIVE 1.1

#### Elevate research efficacy

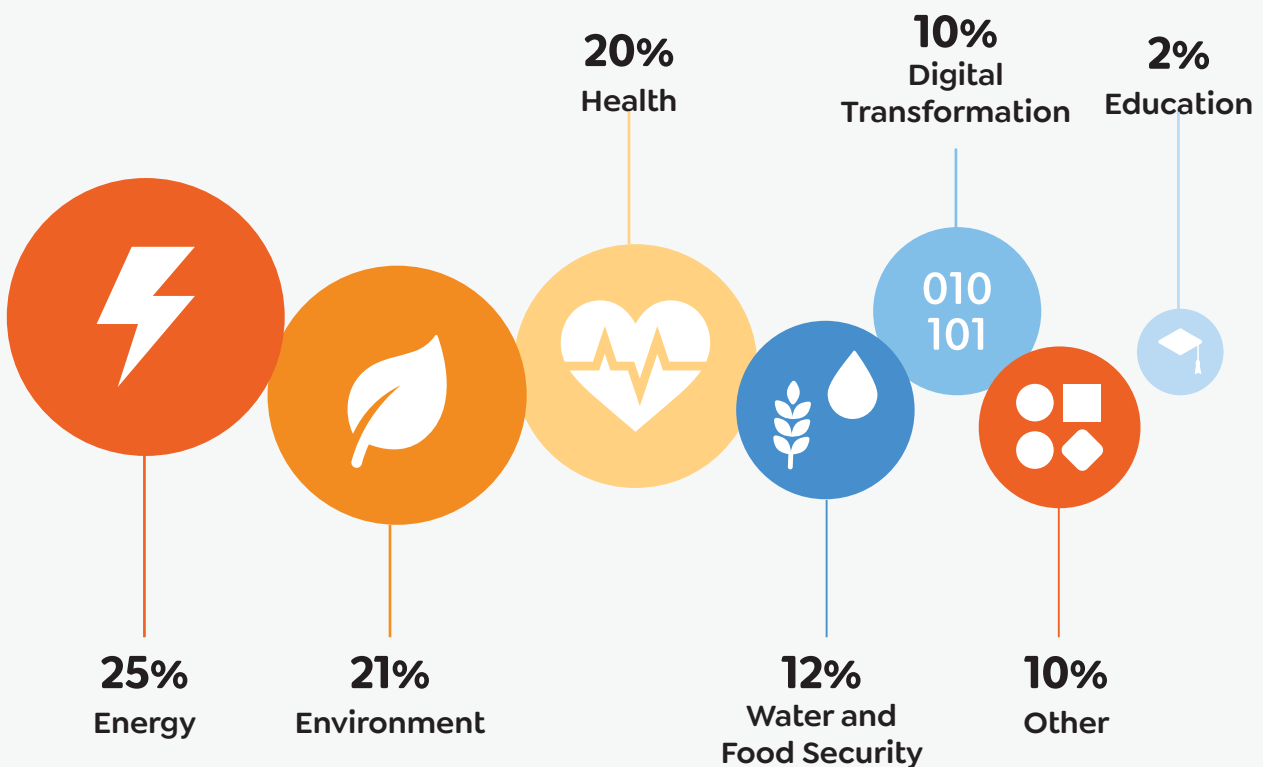
Research funding should advance scientific fields, promote innovation, and support new technology development. It should create feasible solutions to national challenges and include concrete

plans for implementation, such as clinical and service applications, policy formulation, or patent generation.

The practical applications of research maximize the visibility and influence of the research we support, allowing it to meaningfully address pressing challenges and driving societal progress. Capacity development components within our grants will help academics achieve their research targets. And embedding dissemination and publicity efforts in the grants—presenting research findings in conferences and to key stakeholders—will increase research efficacy. The KFAS prizes will continue to recognize achievements by science and research communities, youths, non-governmental organizations, civil society organizations, and the public sector.

### KFAS Funded Research

#### Distribution of domains, 2022-2024



## STRATEGIC OBJECTIVE 1.2

### Encourage transdisciplinary research

Transdisciplinary collaborations tackle complex problems that require a broad range of expertise and frontier knowledge.

Through international collaborations with renowned institutions of higher education and centers of research excellence, researchers from Kuwait will work with peers from across the globe to produce novel insights and increase Kuwait's visibility.

These collaborations aim to facilitate comprehensive solutions that address multifaceted issues and connect different sectors, cultivating an ecosystem where joint efforts drive advancements that are adaptable, scalable, and directly beneficial to the development of Kuwait.

### IMPACT: Interacting with peers across the globe

**The KFAS program at the International Center for Theoretical Physics**, a partnership spanning more than 40 years, offers exchanges through scholar visits, postdoctoral programs, and fellowships.

**The US–Kuwait Precision Medicine Series** of collaborative workshops conducted by KFAS and the National Academies of Sciences, Engineering,



## STRATEGIC OBJECTIVE 1.3

### Inform science-based policy

We will support more science-based policy research and engage decision makers while facilitating scientific knowledge and innovative technology deployment to government entities and corporate researchers.

Policy research that fosters economic and social development for the wellbeing of society will increasingly be part of our portfolio. Through our offerings ranging from funding to capacity building, recent KFAS-supported studies explore the policy implications of world views and attitudes about science, of rebalancing energy sources in Kuwait, and of how spatial patterns affect urban governance.

and Medicine to promote knowledge exchanges on recent advances in the field of precision medicine.

**The Kuwait programs at the London School of Economics and at the Harvard Kennedy School** create opportunities to channel academic input and expertise from Kuwait on issues of national importance and in KFAS priority areas.



We aim to demonstrate to Kuwaiti policymakers that KFAS is a trusted partner for expertise and knowledge in formulating public policy reforms and in communicating the essence of scientific topics to increase public awareness.

Funded by KFAS, the National Plan for Environmental Emergencies is developing guidelines and standard operating procedures for the Environmental Public Authority to strengthen

its emergency response capabilities. The plan analyzes the need for managing environmental crises, evaluating current staffing and procedures, and enhancing coordination with other local entities.

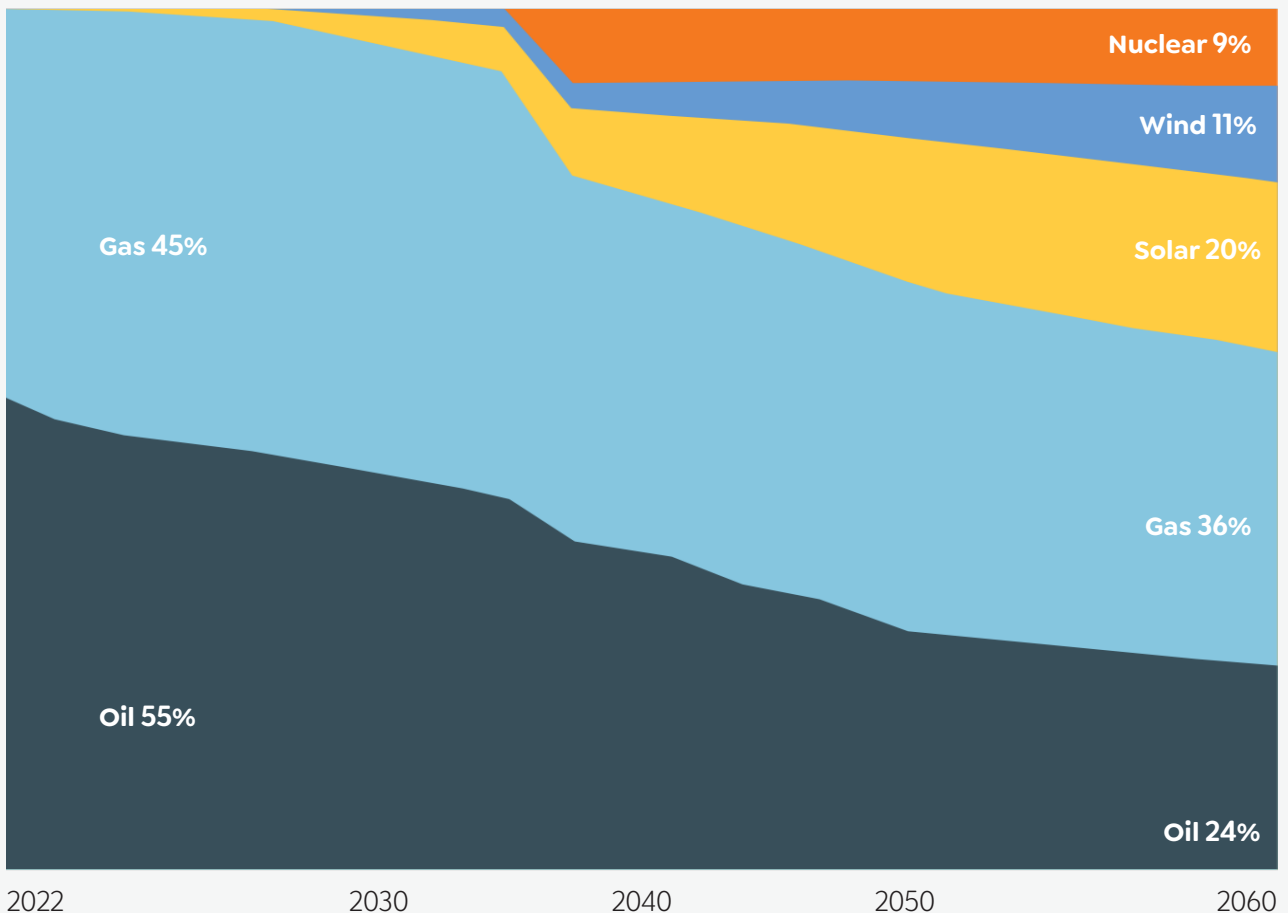
Beyond impacts in the science community, we are targeting research that directly improves life in Kuwait.

### IMPACT: Policy advancements in the energy-environment nexus

Initiated by KFAS, the first energy transition roadmap for Kuwait, published in collaboration with Hartree and relevant stakeholders, provided a comprehensive pact for growth including all sectors to collaborate to reach Kuwait's carbon neutral target by 2060.

The transition would give Kuwait a more diverse and sustainable energy mix in the three major consuming sectors, with oil and gas down 60% while renewable sources would compose 40% of the energy mix (see figure).

#### Rebalancing Kuwait's Energy Sources



## IMPACT: Directly improving life

**Kuwaiti National Stem Cell Registry:** KFAS funded the establishment of the National Unrelated Hematopoietic Stem Cell and Cord Blood Donor Registry. Located in Kuwait University's Health Sciences Center, the Registry supports patients needing stem cell transplants and contributes to international stem cell registries to increase donor availability. KFAS is now looking to fund the Center for Stem Cell Registry, developing Kuwait as a regional hub for stem cell research and donor matching.

**Hypertrophic Cardiomyopathy:** KFAS funded cutting-edge research on understanding and treating hypertrophic cardiomyopathy in Kuwait. The findings have been pivotal in unraveling the novel mutations and mysterious causes of the disease, paving the way for early health interventions that can save lives. By funding such collaborative research projects, KFAS not only highlights the quality of research in Kuwait, but also sparks inspiration among future researchers.

**Kuwait Danish Dairy Company—No Sugar Added Project:** KFAS co-funded a project with Kuwait Danish Dairy to offer new food products with no sugar added, built upon a science-based matrix for reengineering food to provide clinical evidence to support its efficacy. Clinical trials were conducted with the Dasman Diabetes Institute, with the new products tested and evaluated by consumers and diabetic patients.



## IMPACT: Prizes recognizing excellence

Recognizing the scientific achievements of Kuwaiti and Arab researchers locally and internationally, as well as hosting STI-based competitions, can encourage the advancement of science, technology, and innovation.

**The Kuwait Prize**, introduced in 1979, recognizes the lifetime achievements of Arab scientists across the globe. Having witnessed a surge of applications from Arab researchers everywhere, it is awarded in five fields, four announced annually—basic sciences, applied sciences, economics and social sciences, and humanities, arts and literature. The fifth field, emerging interdisciplinary sciences, is announced every two years.

**The Jaber Al-Ahmad Prize for Young Researchers** recognizes distinguished Kuwaitis holding a PhD

who are accomplished producers of scientific papers.

**KFAS Appreciation Award** recognizes the contributions of those who served Kuwait with their great deeds and taking pride in them as role models in society and in professional, cultural, and scientific circles.

**The Al-Sumait Prize for African Development** annually honors individuals or institutions who have made significant advances in the fields of food security, health, and education in Africa through their work or research. The objective of the award is to recognize the finest studies, scientific projects, applied research, and innovative initiatives that have had a significant impact and lasting influence on advancing Africa's economic and social development.





## PILLAR 2 Viable Innovation

To catalyze viable innovation, we will continue to empower programs and practices that equip Kuwait to meet present and future challenges, converting research outputs into applied knowledge and technologies.

Our innovation priorities for 2025–2029 are to support science–technology innovations and grow the budding innovation ecosystem. We will enhance our Innovation Challenge program and deploy projects focusing on STI and fostering an innovative ecosystem. Our main stakeholders are applied science researchers in academia and business and educators in disciplines related to applied technology solutions.

### STRATEGIC OBJECTIVE 2.1 Support STI solutions and transfers

Academia–industry collaborations develop solutions and products. Private research and technology development includes feasibility studies, research and development projects, and technology transfer opportunities. Pilot projects for specific technologies can, if successful, be deployed on a wider scale.

Our highly successful Innovation Challenge program helps private sector employees tackle challenges facing their firms. After studying approaches to change-making, typically partnering with experts, the participants explore innovative ways to help their companies evolve.

### STRATEGIC OBJECTIVE 2.2 Complement innovation ecosystem growth

The Kuwait innovation ecosystem comprises research, private, and government entities, and we will continuously assess our role in supporting and expanding it. We actively identify the many

actors within this system and evaluate their level of viability in innovation to deepen our understanding of their contributions. This allows us to pinpoint strategic entry points where we can support and drive progress. Simultaneously, we are exploring opportunities to contribute through policy research, supporting outreach and networking, facilitating partnerships for the creation of platforms and databases, and establishing links to regional and global innovation ecosystems.

We will facilitate access to reliable data and knowledge that can nurture the health of the innovation ecosystem. We will fund innovative technology transfer projects and pilots. And we will support the provision of infrastructure, tools, and resources to underpin research and development and innovative solutions.

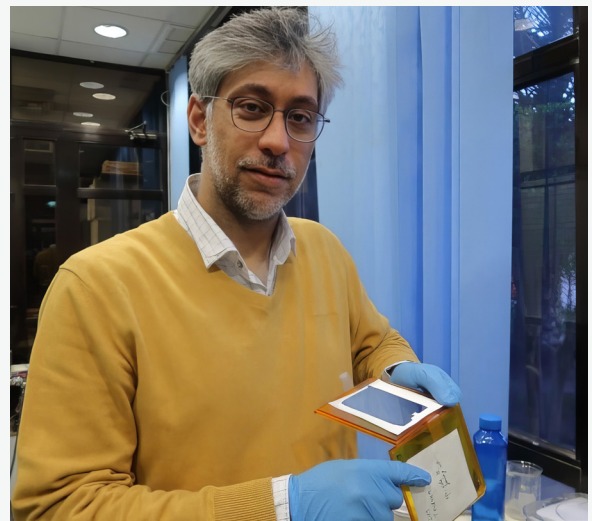


## IMPACT: From science to viable innovation

**High-Efficiency Solar Cells:** KFAS led the initiative to implement photovoltaic applications on residential rooftops and selected car parks, with a focus on producing efficient solar cells at lower manufacturing cost. Reaching at least 23% efficiency, the hybrid perovskite solar cells that were developed were tested under local conditions by the Kuwait Institute for Scientific Research, and a perovskite lab was established at Kuwait University.

**Inland Biofloc Shrimp Farming of the White Leg Shrimp (*L. Vannamei*) in Kuwait:** To assess the impact of probiotics on juvenile shrimp feed, the project models sustainable white-legged shrimp farming in desert areas using groundwater. A complete cycle of shrimp cultivation was achieved using brackish groundwater in the Kabd area. KFAS is funding the second phase of the project as a pilot study with Dana Fisheries to develop a green feed formula for shrimp production.

**Mobile Non-Destructive Testing Inspection:** The EQUATE Group, a global producer of petrochemicals and the world's second largest producer of ethylene glycol, patented an innovative robot that will increase safety, efficiency, and quality during maintenance of its facilities. The robotic solution was invented by a team of EQUATE engineers in collaboration with KFAS and the Sabah Al-Ahmad Center for Giftedness and Creativity through the KFAS Innovation Challenge program. The invention is a measurable improvement in the use of effective technology to support and advance maintenance. The robots will not only keep employees safe, but also improve productivity through cost and time efficiencies.







## PILLAR 3

### Human Ingenuity

To invest in Kuwait's human capabilities—fueling people's ingenuity and cultivating a future mindset—we will meet shifting demands for training and capacity development with rigorous gap analyses and needs assessments. To foster a culture of scientific interest and curiosity, our programs will diffuse knowledge and build human capabilities while also engaging youth and the public through science education and outreach.

#### STRATEGIC OBJECTIVE 3.1

##### Facilitate knowledge transfers

We will create meaningful impact by enabling knowledge-sharing platforms—such as webinars, lectures, seminars, conferences, and exhibitions—to inspire critical thinking, build networks, and promote collaborative learning. We will strengthen the capacity of educators by enhancing their scientific and technological expertise, enabling them to effectively integrate technology into teaching and classroom management. This will empower them to have a greater impact on education and foster more

dynamic learning environments. We will fund pilot projects for the development of science, technology, engineering, art, and math (STEAM) curricula in schools and enhance the scientific and technological knowledge of teachers and administrators. We will use creative marketing channels to disseminate STI knowledge to relevant stakeholders.

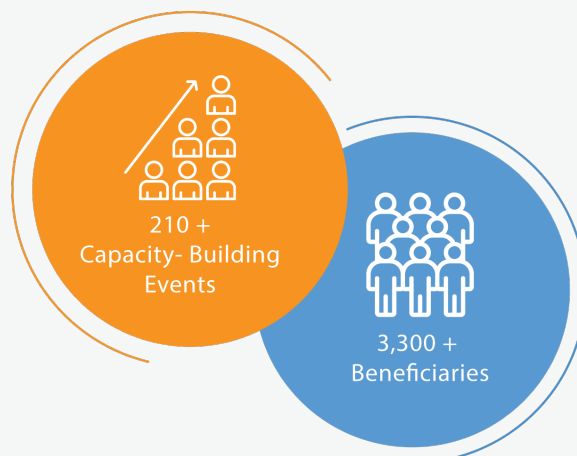
#### STRATEGIC OBJECTIVE 3.2

##### Develop human capabilities

We will enhance the capabilities of STI professionals by equipping them with cutting-edge knowledge and skills, ensuring they stay aligned with the latest trends in their fields. Through in-depth engagements in workshops, courses, and training programs, we will foster meaningful professional development and career growth, culminating in recognized certifications that highlight their expertise and achievement. This will empower participants to apply advanced knowledge and skills to drive innovation and impact in their respective areas.

### KFAS 2022–2024 strategy cycle

#### Capacity building programs for the private sector and research community



We will also provide capacity building opportunities to the private sector based on the needs identified by our contributing companies in line with the KFAS mission, stakeholder feedback, and future trends.

Our executive education programs, both in Kuwait and abroad, will provide executives with an opportunity to interact and share experiences with participants from all over the world, exchanging knowledge while acquiring the latest leadership concepts and tools. These events focus on topics such as how to lead a high performance team and how to design, plan, and implement a risk-management strategy.

Our programs enable Kuwaiti youths to obtain professional certificates accredited by international bodies to improve their career prospects. In collaboration with NGOs and universities, we will also sponsor capacity building events and workshops for the public and other groups of individuals who have an interest in science such as doctors. And we will promote the creation of educational content, resources, and materials to support individuals with special needs, their families, and those working with them.

## Enterprise Learning and Development - Focus Themes



## IMPACT: The KFAS centers

KFAS has acted as an incubator of several centers in Kuwait and conducts many of its educational programs at those centers.

**TSCK:** The Scientific Center was established in the year 2000 based on the vision of the late Amir Sheikh Jaber Al-Ahmad Al-Jaber Al-Sabah, under the umbrella of the Kuwait Foundation for the Advancement of Sciences, with the aim of igniting a passion for science among all age groups and promoting sustainability and knowledge within Kuwaiti society.

**DDI:** Dasman Diabetes Institute was established in 2006 as an initiative by the late Amir Sheikh Jaber Al-Ahmad Al-Jaber Al-Sabah, and the Kuwait Foundation for the Advancement of Sciences, with the aim of combating the spread of diabetes in Kuwait through scientific research, prevention, education, and training.

**SACGC:** The Sabah Al-Ahmad Center for Giftedness and Creativity was established in 2010 under the umbrella of the Kuwait Foundation for the Advancement of Sciences, to support gifted and creative individuals in Kuwait and to empower those with exceptional abilities through programs that promote innovation and integrate knowledge with future skills.

**ASPD:** The Advancement of Sciences Publishing and Distribution Company was established in 1984 as a publishing arm of KFAS to popularize science in Kuwait and the Arab world, expanded its activities to scientific enlightenment, educating non-specialist audiences, engaging children and young adults in science, and enhancing scientific communication skills.

**KNSRC:** Kuwait National Space Research Center, established in 2025, will build national capabilities to design, run, and operate Kuwaiti space projects following the successful launch of the first Kuwaiti satellite and to maintain Kuwait's position on the map of regional and international scientific and technological accomplishments.



## IMPACT: Human knowledge development

**Citizen Science:** KFAS has pioneered citizen science initiatives in Kuwait, ranging from environmental monitoring to astronomy, to make science more accessible. The projects engage the public in research, foster innovation, and promote scientific literacy. By involving citizens, KFAS aims to cultivate a knowledgeable society, inspire curiosity, and empower individuals to contribute meaningfully to important scientific and environmental issues.

**Generation Science:** We empower students in grades 7 to 12 to lead STEM engagement by equipping them with leadership skills, hands-on experience, and national collaboration opportunities. Through structured training, mentorship, and real-world projects, they build confidence as STEM ambassadors, driving awareness and innovation in their schools and communities. This experience fosters a strong sense of purpose, encouraging students to pursue STEM pathways while contributing to a diverse and future-ready workforce.

**Hi-Po Leadership:** By investing in the potential of rising Kuwaiti leaders, creating value for today and empowering a prosperous tomorrow, the High Potential (Hi-Po) Leadership Program provides self and professional growth with significant returns on human capital investment.

**Plug and Play Tech Center:** The KFAS-supported center is a prominent start-up accelerator and innovation hub. It focuses on fostering entrepreneurship and facilitating connections between inventors, start-ups, corporations, and investors. It also offers resources such as mentorship, funding opportunities, workspaces, and networking events to help inventors and startups grow and succeed. The center is known for its industry-specific programs, particularly in fintech, health tech, and mobility.



# Organizational Proficiency

In our pursuit of organizational proficiency, we will invest time and energy in optimizing our operations and resource allocations, developing a positive organizational culture, and enhancing our values—**excellence, collaboration, adaptability, empowerment**—for sustained growth. We will track our success by measuring our adoption of digital technologies, our approaches to driving internal activities, and our effectiveness in delivering our core offerings in our priority areas (see Annex A and Annex B).

Our lean organizational structure, engrained team-work science, and community engagement encourage creativity and collaboration. Using data analytics and artificial intelligence facilitates our performance assessments, staff development plans, leadership development and succession plans, and change management and contingency plans.

We will boost our collaborative culture and develop talent from within through mentorship programs that build the skills, confidence, and efficacy of new recruits and early career employees. We will enhance cross-departmental collaboration to pool our diverse expertise and knowledge. We will become adaptive, pro-active, and responsive by embedding resilience practices into our culture and operations. We will enrich our presence locally and internationally and enhance

the visibility of our work by leveraging traditional and social media to make the public more aware of our impact.

We will increasingly distinguish KFAS as a model of organizational proficiency in Kuwait, striving constantly to be more effective and efficient while adhering to international standards and best practices. Since a more efficient KFAS will be positioned to provide better services to stakeholders, we will work continually to improve processes and procedures and regularly evaluate our programming using key performance indicators (see Annex C).

To enhance KFAS's reputation as a pioneer in science, technology, and innovation, we will prioritize strategic communication initiatives that highlight our impact and achievements. By disseminating research outcomes, innovation milestones, and community engagement efforts through traditional and digital platforms, KFAS will reinforce its role as a catalyst for progress. We will also foster deeper connections with stakeholders through events and partnerships, ensuring our contributions to Kuwait's development are widely recognized. These efforts will support our commitment to aligning with Kuwait's national vision and furthering our mission to advance a resilient and knowledge-driven society.

**Objective 1: Enhance Operational Efficiency**

**Objective 2: Adopt Innovative Solutions**

**Objective 3: Promote a Collaborative Culture and Talent Growth**

**Objective 4: Enrich KFAS Presence**

**Objective 5: Optimize KFAS Partners**



# ANNEX A

## What We Offer

### Grants

---

- Research
- Capacity Building
- Networking
- Outreach
- Academic Support
- Data/ Content Creation and Dissemination

### KFAS-Organized Activities

---

- Networking
- Outreach
- Capacity Building

### Projects

---

- Research and Studies
- Pilot Projects
- Private Sector R&D

### Prizes/ Awards

---

- Kuwait Prize
- Jaber Al-Ahmad Prize for Young Researchers
- KFAS Appreciation Award
- Al-Sumait Prize for African Development

# ANNEX B

## Priority Areas

KFAS will pursue priority areas that address issues of importance to Kuwait, particularly in the areas of environment, energy, health, STEAM education, water and food security, and future economies, while maintaining a vigilant awareness of emerging trends and initiatives outside these areas that could bring benefit to the nation. The below table highlights some of the subcategories within each priority area.

<p style="text-align: center;"><b>Environment</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Climate Change</li> <li>• Marine Conservation</li> <li>• Pollution Prevention</li> <li>• Desertification</li> <li>• Waste Management</li> <li>• Sustainable Resource Management</li> <li>• Technology for Environmental Monitoring</li> <li>• Eco-friendly Materials and Product development</li> <li>• Environment Policy and Governance</li> </ul>	<p style="text-align: center;"><b>Energy</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• Renewable Energy / Alternative Energy</li> <li>• Energy Security</li> <li>• Technologies Life Cycle Assessment</li> <li>• Energy Efficiency</li> <li>• AI integration in Energy Systems</li> <li>• Energy Monitoring and Software</li> <li>• Energy Efficiency and Conservation</li> <li>• Energy Policy and Governance</li> </ul>	<p style="text-align: center;"><b>Future Economies</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• AI Technologies</li> <li>• Robotics</li> <li>• Industrial Internet of Things</li> <li>• Big Data</li> <li>• Digital Transformation and Innovation</li> <li>• Industrial Transformation</li> <li>• Circular Economy</li> <li>• Data-driven Economy</li> <li>• Urban Innovation</li> <li>• Technology-driven Economic Growth</li> </ul>
<p style="text-align: center;"><b>STEAM Education</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• Innovative Education</li> <li>• Professional Development</li> <li>• Data Science and Analytics</li> <li>• Community Engagement in STEAM Learning</li> <li>• STEAM-focused Extracurricular Programs</li> <li>• Online Learning Platforms and Tools</li> <li>• Collaborative Learning</li> </ul>	<p style="text-align: center;"><b>Health</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• Wellbeing</li> <li>• Mental Health Awareness</li> <li>• Personalized Medicine</li> <li>• Health Sciences</li> <li>• Biomedical Engineering</li> <li>• Nutrition</li> <li>• Assistive Technologies</li> <li>• Digital Health</li> <li>• Health Informatics</li> <li>• Public Health and Disease Prevention</li> </ul>	<p style="text-align: center;"><b>Food and Water Security</b></p> <hr/> <p><b>Including:</b></p> <ul style="list-style-type: none"> <li>• Smart Farming and Agriculture</li> <li>• Livestock</li> <li>• Water Scarcity</li> <li>• Sustainable Agriculture</li> <li>• Food Safety Technology</li> <li>• Water Resource Management</li> <li>• Food Security and Nutrition</li> <li>• Innovation and Technology in Food and Water Systems</li> <li>• Aquaculture and Fisheries Management</li> </ul>



# ANNEX C

## Key Performance Indicators

### Pillar I: Robust Research Ecosystem

#### Elevate research efficacy

##### Citations of research outputs

- KPI: Number of citations in various reputable publications

##### Publications with high impact

- KPI: Number of high-impact publications

##### Patents filed and commercialized (long-term for monitoring purpose only)

- Patents KPI: Number of patents (filed and commercialized) as result of KFAS research grants

##### Research grants in priority areas and SDGs (monitor)

- KPI: Number of research grants addressing priority areas and SDGs

#### Encourage transdisciplinary research

##### Interdisciplinary

- KPI: Number of interdisciplinary research grants

##### Multi-institutional (Intersectoral)

- KPI: Number of intersectoral research grants

##### International collaborative research

- KPI: Number of international/regional collaborative research grants

#### Inform science-based policy

##### Impact of policy research grants

- KPI: Number of policy research grants funded
- KPI: Number of formal/informal interactions between researchers and policymakers (meetings, advisory boards, roundtables, workshops, networking events)

##### Policy research products adopted (monitor)

- KPI: Number of international/regional collaborative research grants

### Pillar II: Viable Innovation

#### Support STI solutions and transfers

##### Number of STI technology transfer projects approved

- KPI: Number of projects (approved) that focus on innovative STI solutions

##### Number of technology transfer projects aligned with priority areas

- KPI: Number of STI projects approved (funded) that address priority areas

##### Adoption of pilot projects (monitor)

- KPI: Percentage of pilot projects that successfully transition from the pilot phase to full-scale implementation

## **Complement innovation system growth**

### **Co-funded research projects**

- KPI: Total number of co-funded research projects for the private sectors

### **Sponsoring innovative initiatives**

- KPI: Total sponsoring of innovative initiatives (hackathons, competitions, incubators)

### **Support agreements for the private sector collaborations (monitor)**

- KPI: Total number of formal partnerships or collaborations established between research institutions and private sector entities.

## **Pillar III: Human Ingenuity**

### **Facilitate knowledge transfers**

#### **Transfer knowledge**

- KPI: Number of knowledge transfer programs held: webinars, conferences, seminars, exhibitions, fairs, festivals

### **Develop human capabilities**

#### **Capacity building initiatives**

- KPI: Number of training programs and workshops (core competencies, soft skills)

#### **Capacity building beneficiaries**

- KPI: Number of beneficiaries in capacity building activities

#### **Knowledge gained**

- KPI: Percentage of knowledge gained on applicable activities