# **Executive summary**

Oil has provided Kuwait with wealth and well-being for the past 80 years. Slowing demand for oil is threatening the sustainability of the current economic and social model, emphasising the need to transition towards a knowledge-based society – where value creation, the resolution of societal challenges and the well-being of society at large will be based on the production, diffusion and implementation of knowledge.

"New Kuwait", an overarching national development plan, proposes a vision of transforming Kuwait into a trading and finance hub, and a transition toward a knowledge-based society ("Smart Kuwait") by 2035.

The OECD Review of Innovation Policy: Kuwait offers an overview of the main characteristics of the country's innovation system and policy, the challenges it faces, and the way forward towards a knowledge-based society.

It is based on extensive evidence, including a background report coordinated the Kuwait Foundation for the Advancement of Science (KFAS), desk research of over 600 documents, and 4 in-country missions where 111 meetings were held with stakeholders from government, academia, businesses and civil society. In addition, results of a dedicated innovation and R&D survey on 2 326 companies were used, providing initial insights on the innovation and R&D behaviour of Kuwaiti businesses.

## Main characteristics of the Kuwaiti innovation system

The Kuwaiti fledgling innovation system includes a moderately developed research sector, concentrated around Kuwait University (KU) and the Kuwait Institute for Scientific Research (KISR), with additional contributions provided by the Ministry of Health, the Dasman Diabetes Institute and private universities.

There is some scale of research activity in the oil sector, as well as the chemicals and food industries. Healthcare is the leading sector in services, and a pocket of excellence exists in the medical technology sector.

Overall spending on R&D is estimated at 0.33-0.37% of gross domestic product, less than half of the level realised in neighbouring Saudi Arabia and the United Arab Emirates, and less than a fifth of the 2% target set in the Blue Ribbon report in 2007.

There is no governmental body – ministry or agency – with a mandate for policy making in science, technology and innovation (STI), and no national strategy pertaining to STI. The strategies and research agenda of the two main research institutions (KU and KISR) are developed mainly bottom-up and their research budgets are negotiated directly with the Ministry of Finance, while the KFAS finances individual projects. In particular, the link towards the "New Kuwait" Development Plan remains tenuous.

As a corollary of this set-up, there is also no governmental funding body for research, or for innovation, and little or no financial instruments to support STI activities. A USD 6.6 billion National Fund for SMEs supports entrepreneurship, but does not specifically support innovation, and some of its rules are discouraging in particular for technology start-ups, such as the rule about exclusive Kuwaiti ownership of equity, which precludes attracting foreign talent through equity.

At the centre of Kuwait's fledgling innovation system is KFAS, an institution that raises awareness, provides training grants for R&D projects in academia and business, and operates its own research centres.

## The way forward towards "Smart Kuwait"

Going forward, Kuwait requires a clear strategy of promoting STI as a major enabler of the transition towards the knowledge society. Such a strategy should be articulated around the policy challenges and priority actions listed in Table 1.

# Table 1. Main challenges and priority actions

Main policy challenges	Priority actions
Raise overall awareness and reduce barriers to innovation	<ul> <li>Promote science, innovation and entrepreneurship as national values.</li> <li>Continue improving framework conditions for innovation</li> <li>Unleash the innovative spirit of non-Kuwaitis by providing equal opportunity.</li> <li>Further involve Kuwait in regional and international co-operation</li> </ul>
Set up the appropriate governance and institutions for the science, technology and innovation (STI) system	<ul> <li>Develop an integrated national innovation strategy coherent with the vision for attaining "Smart Kuwait" in 2035.</li> <li>Create a wide-scoping ministry with an overall mandate for STI policy</li> <li>Create a fully professional and autonomous research and innovation agency.</li> <li>Improve the production of STI-related statistics to enable the development of evidence-based policies.</li> </ul>
Reinforce the scientific research base to ensure absorption and endogenous production of knowledge in selected niches of excellence	<ul> <li>Gradually increase funding for R&amp;D in public and private institutions.</li> <li>Introduce performance contracts for higher education and public research institutions.</li> <li>Remove the disincentives to external funding in higher education institutions (HEIs) and research institutions.</li> <li>Remove the bureaucratic barriers and streamline the basic processes involved in research activities in HEIs and research institutions.</li> <li>Revise the teaching and research incentive systems implemented in HEIs to increase the engagement of faculty in research activities.</li> </ul>
Develop support for business innovation	<ul> <li>Help businesses to engage in innovation and R&amp;D through dedicated support schemes, including direct grants; consider the costs and benefits of a tax credit scheme.</li> <li>Create a holistic support mechanism for start-up companies, including equity funding, incubation and acceleration schemes.</li> <li>Use public procurement to encourage innovation.</li> <li>Support the upgrade of innovation capabilities in state-owned enterprises.</li> </ul>
Foster knowledge diffusion and co-creation between science and industry	<ul> <li>Initiate support for technology diffusion and absorption policies, such as technology extension services.</li> <li>Develop a structured approach to creating links between business and academia</li> <li>Provide incentives for individual researchers to unleash their creative potential.</li> <li>Establish mechanisms for technology foresight and intelligence, in support of the proposed national innovation strategy.</li> </ul>
Build up the human capital needed for the transition towards a knowledge- based economy and society	<ul> <li>Create a new public research university, focused on STEM disciplines.</li> <li>Provide support for the establishment of strong doctoral schools involving world-class faculty.</li> <li>Improve absorption capacity in SMEs by supporting upgrades in vocational education and training.</li> <li>Provide for career mobility between science and industry.</li> <li>Attract and support internationally recognised researchers.</li> <li>Institutionalise nationwide forward planning of employment and skills.</li> </ul>
Establish the role of STI in tackling societal challenges	<ul> <li>Articulate the national innovation strategy around key economic and societal priorities.</li> <li>Launch a few large programmes to tackle societal challenges in line with national priorities.</li> </ul>

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