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This is part a series of publications which discusses progress updates on UN SDGs and AI usage. This publication focusses on Saudi Arabia.

Background to UN SDGs & AI benefits

Adopted in 2015, the United Nations' Sustainability Development Goals (UN SDGs) are a voluntary set of 17 goals for governments around the world to address – further split into 169 targets, with the aim of tackling a wide range of challenges including extreme poverty, climate change and gender inequality by 2030.

Given the ongoing popularity and focus on Artificial Intelligence (AI), there is a broader question of if AI can be used to help accelerate progress for each UN SDG. (Source: [World Economic Forum](#)) Organised by the International Telecommunication Union (ITU) - the UN agency for digital technologies, the annual AI for Good Summit takes place in Switzerland which recognises the potential benefits AI solutions can have to both address any current problems and accelerate UN SDG progress.

This publication aims to look at both local SDG and AI progress in Saudi Arabia, how AI solutions are being used to progress local SDG development and finishes by looking at insurer and actuarial innovation in this space.

Current challenges and SDG progress

Saudi Arabia's GDP in 2023 stood at just over USD 1 trillion, ranking it 19th in the world. (Sources: [Country Economics](#), [Trade Economics](#)) Saudi Arabia's largest import and export relations are with China, though it does have strong trade relations with India, Japan, South Korea, the USA and Germany. (Sources: [HSBC](#), [Observatory of Economic Complexity](#)) Saudi Arabia is a petrostate ranking as one of the world's largest producer of oil.

The discovery of oil for commercial quantities in 1938 in modern day Dahran, Saudi Arabia was truly transformative. (Sources: [National Geographic](#), [Opec](#)) It became a catalyst for life and the economy, shifting Saudi Arabia's finances from mainly being driven by revenue from pilgrimage to oil which in turn lead to the rapid development of infrastructure and urbanisation, as well as reshaping its global influence. (Source: [The Siasat Daily](#)) In 2023, Saudi Arabia ranked as second in terms of largest proven oil reserve globally. (Source: [OPEC](#))

In 2022, Saudi Arabia produced over 13% of the world's crude oil and is often referred to by some - at least until recently - a "swing producer" of oil, being able to in effect vary its supply of oil at minimal additional internal cost e.g. due to varying demand, and hence can influence market prices. (Sources: [Forbes](#), [Forbes](#), [US EIA](#)) Oil accounts for over 40% of Saudi Arabia's GDP, 75% of its fiscal revenue and 80% of all exports. (Sources: [CNBC](#), [IMF](#), [Reuters](#), [Trading Economics](#)) However, non-oil activities now represent more than half of Saudi Arabia's real GDP, with the digital economy accounting for 14% of GDP. Beyond crude and refined oil, major exports include polymers and acyclic alcohol derivatives. Major imports include cars, broadcasting equipment, gold, refined petroleum and packaged medicines. Trade is mainly with China (Source: [Observatory of Economic Complexity](#))



Surprisingly, Saudi Arabia spent just over 7% of its annual GDP on military needs in 2023. (Source: [The Economist](#))

There are notable majority state-owned corporations including Saudi Aramco and Public Investment Fund. Saudi Aramco is globally ranked within the top 4 in 2024 based on revenue. (Source: [Fortune](#)) It is mainly stated owned though held an IPO in 2019 for around 1.5% of its share capital and with a more substantial share offering during in February 2025. (Sources: [Investopedia](#), [Global Finance Magazine](#)) It is looking to expand its revenue streams beyond oil e.g. lithium. (Source: [Reuters](#)) Public Investment Fund is XX

Given its major dependency on oil, any transition away from its dependency on oil in the future will be a challenge – see below discussion on Vision 2030. Similarly, in 2023, there has been criticism of Saudi Arabia's "oil demand sustainability programme" (ODSP) which aims to increase demand for gas and oil in developing countries across the world. (Sources: [Carbon Brief](#), [The Guardian](#))

The unemployment rate in Saudi Arabia stands at just below 4%. (Source: [Trading Economics](#))
Expats?

- Comparison vs other GCC countries?
- <https://www.orfonline.org/research/saudi-arabia-a-kingdom-in-transition>

Vision 2030

Neom

Red Sea project

<https://fairsq.org/wp-content/uploads/2020/11/FS-Policy-Brief-1-Saudi-Arabia-1020.pdf>

<https://www.dw.com/en/are-saudi-arabias-plans-for-a-non-oil-future-too-grand/a-69459554>

Plastics and the lack of recycling

<https://www.ecoplasksa.com>

<https://saudiarabia.un.org/en/sdgs/2/key-activities>

Other challenges

Other challenges faced within Saudi Arabia include (Source: [Human Rights Watch](#)):

- Potential claims of using high-profile domestic and global events, including sports, to "whitewash the country's abysmal human rights record".
- Potential linkages between Saudi Arabia's sovereign fund, Public Investment Fund (PIF), to various human rights abuses.
- Concerns over freedom of expression, with recent convictions e.g. in 2023, resulting in the death penalty. Restrictions included online freedom of expression.
- Despite migrant workers representing just over 40 percentage of the population, there are concerns on their restricted rights.
- Potential misuse of counterterrorism laws to suppress local religious minorities.
- The use of death penalty extended to those below the age of 18.
- Restrictions on women's rights e.g. XX
- Limited recognition of wider communities including LGBT.



Freedom House, a non-profit organisation based in Washington DC, USA, classified Saudi Arabia “not free” giving it an overall “global freedom” score of 8 out 100 for 2024, noting its “absolute monarchy restricts almost all political rights and civil liberties.” (Source: [Freedom House](#)) On saying this however, Saudi Arabia has been working on addressing such shortcomings in recent years including lifting the ban on female drivers in 2018, easing restrictions for the need of male guardianship, changes to the *kafala* (sponsorship) system and improvements to general migrant worker rights.

<https://blogs.lse.ac.uk/mec/2025/02/27/expanding-womens-legal-autonomy-new-personal-status-law-regulations-in-saudi-arabia/>

Climate Action Tracker currently scores Saudi Arabia’s efforts in its fight against climate change as “critically insufficient”, with Climate Change Performance Index (CCPI) ranking Saudi Arabia 66th in the World. (Sources: [Climate Action Tracker](#), [CCPI](#)) CCPI assesses countries on climate policy, energy use, GHG emissions and renewable energy. In 2021, the Kingdom did announce Circular Carbon Economy approach with the aim of achieving net zero by 2060 – this is discussed further below. (Source: [SGI](#))

Focussing on UN SDG progress

Saudi Arabia submitted its latest Voluntary National Review in 2023, acknowledging “sustainability as a driving force for growth and advancement.” For more details, please see <https://hlpf.un.org/countries/saudi-arabia/voluntary-national-reviews-2023>.

Recent progress includes

<https://sdg-action.org/?s=saudi>

<https://sdgstracker.org/listing/ksa/>

Despite this, given the challenges mentioned earlier, currently Saudi Arabia is ranked 103rd globally in terms of progress, with an overall score of 64.9 out of 100. (Source: [SDG Index Dashboard](#)) Several of these SDGs are classified as facing major challenges including SDG 2 (zero hunger), SDG 5 (gender equality), SDG 7 (clean energy), SDG 12 (responsible consumption and production) and SDG 13 (climate action).



Examples of local SDG projects

Saudi Arabia is actively engaged in a range of projects to achieve UN SDGs, including:

1. Saudi Green Initiative
2. <https://www.unep.org/news-and-stories/story/saudi-arabia-strives-regreen-deserts-tackle-drought-and-land-degradation>
3. Transition away from oil
<https://carbontracker.org/reports/petrostates-energy-transition-report/>
 - Green energy ?
<https://www.sgi.gov.sa/about-sgi/sgi-targets/reduce-carbon-emissions>
 - Remove oil – impact ?
 - Continued reliance on oil despite ongoing efforts to diversify the economy
<https://www.middleeasteye.net/news/saudi-arabia-economic-crisis-oil-coronavirus-debt-vision-2030>
 - <https://sdg-action.org/?s=saudi>
 - <https://www.cnbc.com/2024/10/11/saudi-pif-allocates-5point2-billion-in-green-bonds-project-.html>
 - <https://saudiarabia.un.org/en/275362-saudi-arabia-empowering-communities-and-ecosystems-sustainable-mangrove-conservation-and>
 - <https://saudiarabia.un.org/en/284253-combating-root-cause-tackling-soil-salinity-advancing-agriculture-saudi-arabia>
 - <https://saudiarabia.un.org/en/222920-%E2%80%9E%E2%80%9Cdigital-innovation-and-technology-gender-equality%E2%80%9D-roundtable-discussions-international>
 - <https://saudiarabia.un.org/en/251168-world-food-day-2023-celebrations-focus-water-scarcity-and-sustainable-agriculture>
 - <https://saudiarabia.un.org/en/272855-saudi-arabias-continued-commitment-combating-corruption>
 - <https://www.aqbi.com/renewable-energy/2023/12/saudi-powers-up-renewable-energy-capacity-by-300/> green hydrogen plant
<https://www.pwc.com/m1/en/media-centre/articles/harnessing-the-sun-saudi-arabia-solar-revolution.html>

National Renewable Energy Program

- <https://www.alnahda.org/charity/?lang=en>
- <https://borgenproject.org/charities-operating-in-saudi-arabia/>
- <https://www2.fundsforngos.org/articles-searching-grants-and-donors/the-top-5-saudi-arabian-philanthropic-foundations-supporting-ngos/>

Public Investment Fund

- <https://earth.org/understanding-saudi-arabias-resistance-to-environmental-policy-change/>
- https://scholar.google.com/scholar?hl=en&scisbd=1&as_sdt=0%2C5&q=Saudi+sdg+progress&btnG=%E2%80%A6



AI, Climate Change & Sustainability UN SDGs & AI – Saudi Arabia

(Cont'd)



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(Cont'd)



AI progress

In 2024, Saudi Arabia ranked 22nd in the world with an overall score of 72.36 out of 100 on Oxford Insight's AI Readiness Index and similarly 58% on IMF's AI Preparedness Index – both indices showing indicative progress for AI adoption within a country. (Source [Oxford Insights](#), [IMF](#))

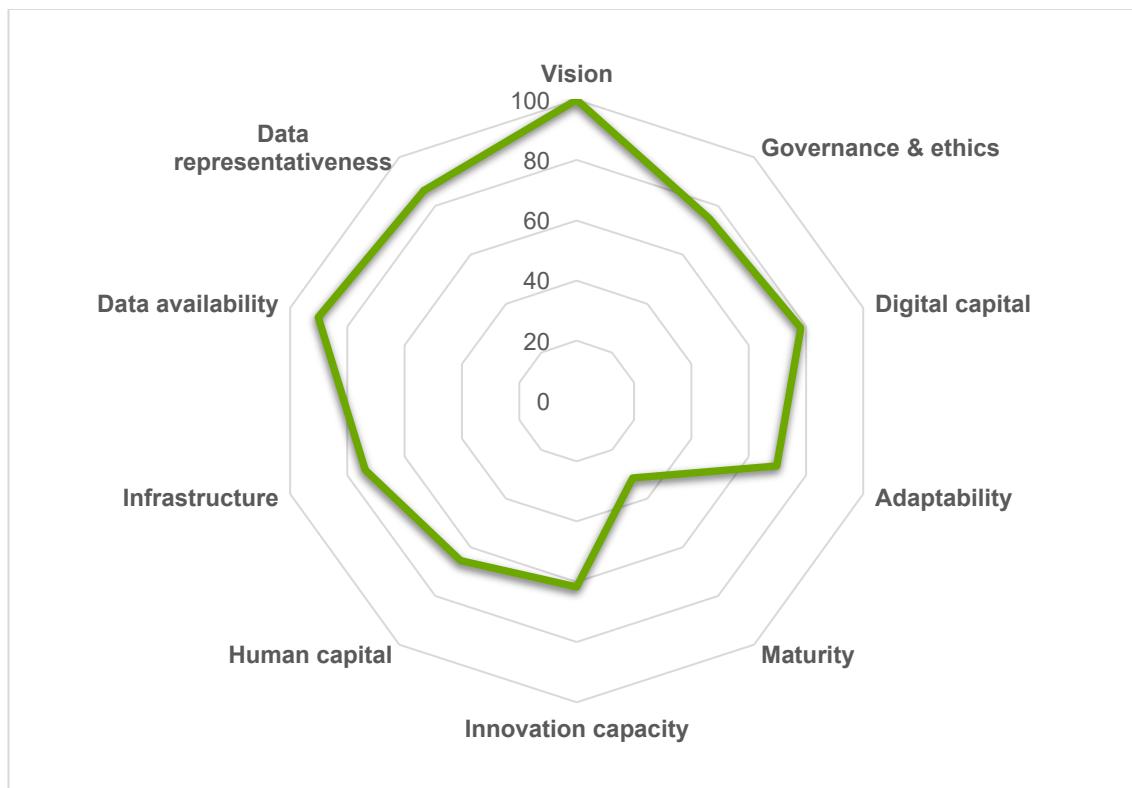


Figure 1: Breakdown of Oxford Insights' 2024 AI scores by dimension for Saudi Arabia
(Source: [Oxford Insights](#))

Figure 1 goes into more detail, showing that though AI implementation is not as mature as it could be, overall vision and direction of travel is scored highly.

Vision

<https://sdaia.gov.sa/en/SDAIA/about/Pages/AboutAI.aspx>

<https://www.weforum.org/stories/2025/01/playbook-economic-growth-saudi-arabia/>

NEOM, LEAP Riyadh



Other recent developments in Saudi Arabia include:

- Data centre future expansion and continued investment. The market for data centres in Saudi Arabia is expected to triple from USD 1.3 billion in 2024 to USD 3.9 billion in 2030, with over USD 20 billion investment alone in data centres in early 2025. (Sources: [Capacity Media](#), [WAM](#)) This continued growth is fuelled in part by investments by AWS, Google and Microsoft. (Source: [WAM](#)) For example, Microsoft completed data centres in 3 sites in 2024 which are expected to go live from 2026. (Source: [Microsoft](#))
- Google announced plans to establish an advanced AI hub in Saudi Arabia. This partnership between Google Cloud and the Public Investment Fund is expected to add as much as USD 71 billion to Saudi Arabia's GDP. (Source: [Data Center Dynamics](#), [Wired](#))
- In May 2025, Nvidia announced that it will sell hundred of thousands of AI chips to Saudi Arabia, including 18,000 Blackwell chips to the Saudi AI firm Humain. (Sources: [Reuters](#), [TechInAsia](#))
- <https://countryeconomy.com/gdp/saudi-arabia?year=2023>
- <https://www.msn.com/en-gb/money/technology/nvidia-and-humain-to-power-ai-factories-of-the-future-in-saudi-arabia-with-strategic-tech-alliance/ar-AA1ER2pg>
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In line with its overarching Vision 2030, Saudi Arabia is looking to push ahead with investments in quantum technology, having recently published its Quantum Economy Landscape in Saudi Arabia [report](#) in December 2024. Saudi Arabia is looking to expand its quantum investment across a range of areas including developing talent, R&D and hardware innovation. (Source: [World Economic Forum](#)) Interestingly, the World Quantum Day 2024 event was held in Saudi Arabia. (Source: [World Quantum Day](#)) Other related initiatives include Saudi Aramco and French start-up Pascal's collaboration to deploy a quantum computer by the end of 2025 in Saudi Arabia. (Source: [Sifted](#))

Regulations

There are currently no outright AI regulations in Saudi Arabia. However, the Saudi Data & AI Authority (SDAIA) published draft AI Principles dated September 2023. The proposed framework covers 7 principles or areas: fairness, privacy & security, humanity, social & environmental benefits, reliability & safety, transparency & explainability, accountability & responsibility.

For more details, please see <https://sdaia.gov.sa/en/SDAIA/about/Documents/ai-principles.pdf>.
(Sources: [SDAIA](#), [Whitecase](#))

<https://eurisko.net/how-saudi-arabia-is-leading-the-ai-revolution-in-the-middle-east/>



Example local AI projects used to promote SDGs

Saudi Arabia has seen a growing number of AI initiatives aimed at leveraging technology for various sectors. Here are some notable examples:

Saudi Arabia has been leveraging AI across a range of initiatives to promote SDG progress
(Source: [LinkDevelopment](#)):

Education
Energy
Healthcare
Smart Cities
Sustainability



Opportunities for local insurer and actuarial innovation within SDGs

There are several opportunities for local insurer and actuarial innovation in Saudi Arabia that align with the local SDGs. Here are some key areas:

Microinsurance solutions

Microinsurance solutions provided by Milliman via its specialist Microinsurance Centre. Products cover includes health, loss of crop or livestock, and death and disability cover. (Source: [Milliman](#)) Microinsurance are insurance solutions aimed at low-income individuals or households who would not normally have access to insurance products.

Social security benefits

Development and promotion of social security benefits.
<http://muhanna.com/en/actuarialservicessaudiarabia/>

Solar power protections

As part of the National Renewable Energy Programme, the solar-powered energy market is expected to achieve a compound 51% annual increase between 2024 and 2029. (Source: [PwC](#)) Insurance products help reduce risks and promote take up in alternative renewable energy solutions such as solar energy. Insurers for example within the US are providing insurance to ensure a minimum level of electricity cover provided by solar panels, beyond damage coverage for the actual panels. Such solutions will help promote the transition to solar energy.

Wider insurer penetration

It is surprising that despite Saudi Arabia's ranking in terms of global GDP, insurance penetration sits at just below 2% in 2023, there is scope for insurers to expand services within Saudi Arabia. (Source: [Milliman](#)) This gives the opportunity for actuaries and existing insurers to influence any upcoming regulatory dialogue within the insurer space within Saudi Arabia. For example [XX](#)

Solution	Description	Source
Green Technology Insurance	Supports renewable energy projects like wind and solar farms, ensuring financial protection against risks.	Clyde & Co
Infrastructure & Construction Insurance	Covers risks associated with major infrastructure projects, including smart cities and giga-projects like NEOM.	Clyde & Co
Health & Life Insurance Expansion	Aims to increase life insurance spending per capita and medical insurance penetration to improve healthcare access.	Riyadh Daily
Regulatory Reforms & Market Development	Establishment of the Saudi Insurance Authority to enhance regulatory oversight and promote stability.	Riyadh Daily
Professional Liability & Business Protection	Provides coverage for directors and officers of international companies operating in Saudi Arabia.	Clyde & Co
Reinsurance Sector Growth	Mandates insurers to allocate a percentage of cessions to domestic reinsurers, strengthening local capacity.	Riyadh Daily



Further reading

1. Milliman 2023 insurer report on Saudi Arabia <https://sa.milliman.com/en-GB/insight/ksa-industry-update-year-end-2023>
2. OECD AI summary for Saudi Arabia <https://oecd.ai/en/dashboards/countries/SaudiArabia>
3. UN SDG dashboard <https://dashboards.sdgindex.org/profiles/saudi-arabia>
4. UN SDGs <https://saudiarabia.un.org/en/sdgs>
5. UNESCO report on AI adoption in Saudi Arabia <https://www.unesco.org/ethics-ai/en/saudiarabia>
6. UNESCWA report on regional UN SDG progress <https://www.unescwa.org/publications/progress-towards-sustainable-development-goals-arab-region>
7. Voluntary National Reviews for Saudi Arabia <https://hlpf.un.org/countries/saudi-arabia>
8. Vision 2030 <https://www.vision2030.gov.sa/en>

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