PS 3.1: Geopolitical Landscape: Global Governance

Room: Lotus Suite 1-4, FL. 22

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AI in the Kingdom of Saudi Arabia

Saudi Arabia is emerging as a **global AI leader** under Vision 2030

KSA **1st** globally in AI government strategy (Global AI Index - Tortoise, 2023).

WSIS Prize 2024 by ITU for 'Elevate' AI training program

38K+ graduates in AI fields (2019-2023)

$1.7 billion invested in AI companies in 2023 (Crunchbase, 2024)

Member of UN AI Advisory Body

NEOM invested **$100M** in Pony.ai for autonomous vehicles

LEAP

Saudi Arabia announced a **$6.4 billion** fund for emerging tech at LEAP 2024

Saudi Arabia is the largest in MENA for colocation data centers (22 active, 40 under development)

Supercomputing: 10 supercomputers, 8 ranked in **the global Top 500** (Top500, 2024)

Cloud computing: **$18B** investment to enhance Saudi cloud services.

SDAIA to **train 1M** people in AI by 2030

100TB+ of data stored in National Data Lake

320+ government systems integrated for AI-driven insights.

8.7K+ datasets hosted in Open Data Platform.

86% of Saudi universities offer AI-related degrees

AI publications **grew by 45%** (2019-2023) (OECD, 2024)

AI patents **increased by 50%** annually, with **590+** AI patents filed

SDAIA launched **11 Centers** of Excellence in AI

SDAIA

39% of Saudi government entities use or experiment with AI

81% of entities report AI improves service delivery

Common use cases: Optimization **(71%)**, Predictive Analytics **(48%)**

AI to **contribute $15B** to Saudi GDP by 2030 (PwC, 2017)

AI market CAGR **expected at 29%** until 2030 (Statista, 2024)

$15B investment in Saudi data centers by 2030 (IDC, 2024).

KSA's commitment

Riyadh AI Declaration

A call to action for inclusive, innovative, and impactful AI for all in the intelligence age.

UN | IGF Internet Governance Forum RIYADH 2024 | Digital Cooperation Organization

an aspirational declaration to foster international cooperation's in the outlined topics and is not legally binding. Adopted in Riyadh, December 2024

Focuses on Artificial Intelligence, Digital Identity, and Online Safety

In an era of digital transformation, AI and global digital identities offer opportunities and challenges.

Ensuring digital inclusion, privacy, and governance is key to empowering all citizens.

IGF 2024 fosters global cooperation for responsible digital governance.

AI is a transformative force influencing policy, economy, and culture.

• Promotes digital inclusion, sustainability, and responsible governance.

• Encourages AI-driven social and environmental responsibility.

• AI can bridge the digital divide by improving accessibility.

• Empowers marginalized communities via speech-to-text and machine learning.

• Enhances equitable access to education, healthcare, and information.

• AI supports UN Sustainable Development Goals (SDGs).

• Helps environmental protection, disaster response, and public health.

• Drives economic inclusion and societal resilience.

• AI accelerates research, market exploration, and business productivity.

• Reduces costs and enables efficient decision-making.

• Enhances sustainable growth and innovation.

• AI enhances decision-making and collaborative governance.

• Improves transparency, efficiency, and international coordination.

• Supports global trust in AI-driven solutions.

• Data protection, misinformation, and child online protection are priorities..

• International cooperation is essential for secure digital environments.

• GDPR and Saudi Data Protection Laws reinforce responsible data use.

• AI, digital ID, and online safety drive a more inclusive digital future.

• Global cooperation is essential for secure and ethical digital advancements.

• Riyadh Declaration promotes responsible AI and digital ID solutions.

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Regulatory Sandboxes for Innovation in Saudi Arabia

« Saudi Arabia has launched several regulatory sandboxes to support technological and healthcare innovations.

« These sandboxes provide a controlled environment to test new solutions before full deployment.

IPSAR MVP

IPSAR Sandbox (Healthcare Regulatory Sandbox)

- Provides a secure environment for healthcare innovations.
- Supports collaboration between startups, insurers, and researchers.
- Helps develop and refine regulations for health-tech solutions.

IPSAR Sandbox

CST — Communications, Space & Technology Commission

CST Emerging Technologies Sandbox
Technology & Telecom

- Supports the testing of AI-driven and digital innovations.
- Requires solutions to demonstrate clear customer benefits and a commercialization plan.
- supports health-tech solutions but is not exclusively focused on healthcare.

Emerging Technologies Regulatory Sandbox

Ministry of Health — وزارة الصحة

Saudi Ministry of Health (MOH) Sandbox

- Provides a regulatory testing environment for medical and digital health solutions.
- Enables startups to pilot healthcare innovations under real-world conditions.
- Focuses on integrating new digital health solutions into Saudi healthcare.

Service Cards - Regulatory Healthcare Sandbox

Saudi Food & Drug Authority — الهيئة العامة للغذاء والدواء

Saudi Food & Drug Authority (SFDA) Sandbox
Food, Drugs & Medical Devices

- Controlled testing environment for innovative pharmaceuticals, medical devices, and food safety solutions.
- Enables startups, biotech firms, and pharma companies to test products under regulatory oversight.
- Supports Saudi Arabia's regulatory compliance in healthcare.

https://www.sfda.gov.sa/en/news/1752538

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Example: SDM

« SDM is a health-tech startup based in Saudi Arabia, specializing in AI-driven diagnostics for various and chronic diseases,
 Using Artificial Intelligence, Deep Learning, and Large Multimodal Models (LMMs), SDM's platform can diagnose a wide array of diseases (ocular, systemic and chronic), including Diabetic Retinopathy, Glaucoma, Retinal Degeneration, Hypertension, Cardiovascular Disease, and Alzheimer's through retinal imaging.

Progress and KPIs

5	+20	12
MOUs Signed	Sites Launched	Collaboration Agreements
+2400	+100	+25K
Training Hours for Photographers	Health Care Professionals Trained	Exams Completed
10	4	30%
Jobs Listed for AI Development & Other	Top healthcare Providers Launching	Increased Awareness Among Patients
100K	>98%	+10K
Dataset Images Used to Train AI Model	SAARIA Sensitivity Achieved	Hours Training AI Model Using GPUs

Example: National Project
Biocontrol Strategy for Dengue Fever in Jeddah

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Leveraging IoT & AI-powered systems for Efficient Dengue Fever Biocontrol Using Wolbachia Replacement

Real-time Monitoring:
- GPS-tagged release of Wolbachia-infected mosquitoes.
- Environmental conditions monitored via IoT-connected weather stations.

Digital dashboard:
- Aggregates real-time field data from ODK, IoT sensors,
- Provides visual insights on mosquito populations, *Wolbachia* dispersal, and environmental conditions
- includes AI models predicting trends based on climate, breeding sites, and *Wolbachia* spread.
-Supports data-driven decision-making.

ODK (Open Data Kit) app:
- Allows real-time mosquito monitoring data by scanning QR codes linked to GPS coordinates.
- Ensures accurate tracking of Wolbachia mosquito release sites and population changes**.**

IoT in Mosquito Rearing Labs

1) Smart Environmental Control:
- IoT sensors regulate temperature, humidity, and light cycles for
  optimal mosquito growth.
- Automated climate control ensures consistent breeding conditions.

2) Automated Feeding Systems:
- IoT-enabled larvae feeding dispensers ensure precise food
  distribution.
- Reduces manual labor and enhances survival rates.

3) Water Quality & Oxygen Monitoring:
-IoT sensors track water pH, oxygen levels, and cleanliness in larval
  trays.
- Automated alerts notify staff of suboptimal conditions.

4) AI-Powered Larvae Counting & Sorting:
- Camera-based AI systems count and sort larvae/pupae for quality
  control.
- Ensures only healthy mosquitoes are released.

National Committee of Bioethics (NCBE)

- Constituted by a Royal Decree No. 7/B/ 9512 in 2001
- Reconstituted by a Royal Decree No. (59/M) in 2010
- Mandate: To formulate and follow up the execution of standards and bioethics of research

https://ncbe.kacst.edu.sa/en/about-us/who-we-are/

Thank you