

KAFD Dialogue Report 9 May 2023

Saudi Arabia's Journey to Becoming a

Globa

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#### KAFD Dialogue Report (Introduction) 🗕



KAFD Dialogue Report (Introduction)



Michael Lawrence OBE. The Dialogue was attended by CEOs and senior executives representing leading Saudi and international businesses.

While all discussions at the KAFD Dialogues are kept strictly off-the-record to promote a highly useful and frank exchange of views, this Dialogue Report examines the key themes covered and provides focused analysis intended to enhance knowledge and understanding of the topics for the business community in Saudi Arabia and at the international level. This report delves into the context in which the dialogue was held, taking into consideration the release of ChatGPT in November 2022. This event captured public imagination about the potentially transformative applications of Al and stimulated a debate regarding the technology's future and how to respond to it.

KAFD Dialogue Report (Introduction)



Artificial Intelligence (AI) could emerge as the most transformative technology of this century as it has the potential to not only change how businesses operate but also to transform our societies' livelihoods. As AI becomes more sophisticated, businesses that integrate the technology into their operations can increase efficiency, responsiveness to supply chain disruption, and discover creative solutions to operational problems, including the transition to net zero. AI, therefore, has the potential to reduce costs and increase outputs across all economic sectors.

Saudi Arabia has recognized the importance of Al to its digitalization and wider Vision 2030 goals. The Kingdom aims to rank among the top 15 countries in Al by 2030. To achieve this, the Kingdom has established dedicated government bodies to create an Al regulatory framework, introduced initiatives to train and reskill Saudis in Al, and formed joint ventures with international technology firms to develop Saudi Arabia's Al ecosystem. Long-lasting success will depend on developing regulatory frameworks governing Al development, data security, and consumer data privacy.

Across society, Al has the potential to address critical global challenges, such as disease cures, sustainability improvements, and effective policymaking. However, the development of Al also represents regulatory and ethical challenges that must be addressed to ensure a positive societal impact. This report summarizes the key findings from the Dialogue, examining global Al trends, risks in Al development, and the regulatory and governance challenges related to privacy, security, and labor market disruptions. It also outlines recent initiatives by Saudi Arabia to develop its Al ecosystem and explore Al's potential impact on business and priority economic sectors, including healthcare, financial services, trade, energy, and digitalization. As Al will impact all sectors, this report provides recommendations for businesses and regulators on how to respond to Al and harness its potential effectively.

# Saudi Arabia Has **Recognized the** Importance of Al

#### KAFD Dialogue Report (Introduction)

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### Key Findings of the Dialogue

# 01.

## Al's Value Creation for Business

Al can bring value to businesses by improving efficiency, enhancing sustainability practices, and enabling rapid response to supply chain and operational disruptions. This allows business to increase output, reduce costs, and improve profitability. Importantly, AI has the potential to benefit all types of businesses: multinational corporations can leverage AI to analyse vast data sets and gain commercial insights or identify improvements to internal processes to enhance operational efficiency; while Small and Medium-Sized Enterprises (SMEs) can utilize AI to increase both output and scalability.



Early adopters of Al may gain a competitive advantage by reducing costs and allocating more revenue to research and development or offering products at more competitive prices. The adoption of Al in business practice has been increasing, with a recent McKinsey survey of 1,492 companies revealing that Al adoption has risen from 20% to 50% between 2017 and 2022.<sup>2</sup> These businesses reported significant cost reduction in supply chain management, marketing and sales, product development, and corporate finance.

However, businesses should be aware that adopting Al presents new challenges. The quality of insights generated from Al systems depends on the input data's quality. To effectively leverage Al, companies need to

collect high-quality data, which raises concerns related to consumer privacy and cybersecurity. Smaller firms seeking to adopt AI may also face difficulties attracting talented AI experts, highlighting the importance of training and upskilling in AI technologies. In fact, 50% of respondents to the McKinsey survey mentioned that they are reskilling existing employees to take on AI roles.

#### Al Can Streamline The Financial Services Industry

Al can streamline and boost the financial services industry through task automation, fraud detection, enhanced compliance, and improved customer experience through chatbot assistants and tailored financial services. One significant advantage of Al in finance is its ability to detect and prevent fraud





and cyberattacks by analyzing and identifying irregular patterns that may go unnoticed by humans. This can help financial services firms reduce fraud losses, which currently amount to around SAR 180 billion (approximately US \$48 billion) per year!, and improve compliance, thereby reducing the risk of fines. Al can also provide data-driven insights that complement investment decisions and reduce operational costs. In terms of investment, Al can analyse market data from various sources, providing a clearer and more concise picture of current market conditions and sentiment. Financial services firms that integrate Al into their operations have the potential to achieve significant cost savings, with current estimates suggesting aggregate potential savings of around SAR 1.68 trillion (roughly US \$447 billion) for banks from Al applications.<sup>2</sup>

Al Will Optimize Supply Chains and Enhance Global Trade The vulnerabilities exposed by COVID-19 and the Ukraine conflict have underscored the importance of efficient supply chains for global economies. Al can assist in businesses optimizing their supply chains and manage supply chain risks. For instance, it can assist in identifying pressure points within the supply chain and leverage data from sensors across the supply chain to improve efficiency.



Al can also be applied in the manufacturing and logistics sectors. In manufacturing, Al can increase efficiency in product design and manufacturing. Predictive maintenance is another significant use case of Al, helping manufacturers monitor machinery to proactively service and repair individual components, preventing breakdowns and failures. In logistics, Al can facilitate the adoption of autonomous vehicles, enabling self-driving cars, trucks, and autonomous last-mile delivery. This transformative shift may necessitate addressing regulatory concerns regarding safety, a factor that business leaders in this sector will need to consider.

By 2025, it is expected that 80% of new supply chain applications will leverage Al to enhance resilience.<sup>3</sup> This integration of Al within supply chains can also lead to reduced cost, improved services, and increased customer satisfaction, thereby boosting global growth as Al enhances production and minimizes supply chain disruption.

Al Will Drive Sustainability and Improve Energy Efficiency Al holds significant potential for driving sustainability and enhancing energy efficiency. As mentioned previously, Al can drive efficiencies within businesses, resulting in reduced waste, consumption, and carbon emissions. Additionally, Al can improve efficiency across the entire energy sector. This requires integrating power grids and energy installations with sensors, data analytics tools, energy



storage systems, and energy management platforms to create a smart energy sector. Smart grids and installations, coupled with Al, enable energy companies to monitor energy supply in real-time and optimize efficiency. For example, automated demand response systems can help reduce energy consumption.

Finally, AI can be utilized in addressing climate change by facilitating the research and

development of enzymes that could degrade plastic waste, de-acidify oceans, and capture carbon from the atmosphere. As the Kingdom aims to achieve net-zero emissions by 2060, leveraging Al in these applications can assist the Kingdom in enhancing domestic energy efficiency and becoming more sustainable.



Healthcare is One of The Sectors That Will Benefit The Most From Al Al has significant applications in pharmaceutical development and improving patient diagnostics, leading to better patient outcomes and reduced costs for hospitals and healthcare systems. Al is expected to streamline and expedite drug discovery, transforming it from a labor-intensive industry to a data-intensive one. By mining data sets relating to chemical compounds, genetic sequencing,

and patient information, Al can assist in designing drugs and provide insights into synthesis methods.<sup>4</sup> For instance, in 2022, Google's DeepMind developed a system that can accurately predict 3D models for protein structures, enabling scientists to develop new drugs.<sup>5</sup> While challenges remain, such as accessing high-quality data and ensuring sufficient participants for clinical trials of Al-designed drugs, Al has the potential to revolutionize drug development and improve patient outcomes. In the broader healthcare sector, Al can expedite diagnostics, optimize patient care, and streamline documentation and processing in hospital, thereby increasing efficiency. For example, Lithuanian startup Oxipit, developed a system that generates patient reports for chest X-rays with no abnormalities, helping to redistribute doctors' workloads.<sup>6</sup> Additionally, Al-driven chatbots provided constant access to medical advice and support.

Likewise, Saudi Arabia can leverage Al in healthcare to work towards its goal of increasing life expectancy to 80 years, as outlined in Vision 2030.



Al Highlights The Importance of Data Privacy and Security As Al becomes increasingly pervasive, it becomes crucial to introduce measures and security protocols to protect individuals' data and privacy. Data is essential to feed machine learning networks and train large language models (LLMs). The growing demand for data may incentivize companies to collect more customer data to inform Al-generated insights. Ensuring informed consent for user



data to be utilized in Al systems will become increasingly challenging, given the difficulty of explaining how Al systems work and utilize data to the general public. As data collection increases, the security of this data becomes vital. Therefore, companies investing in Al should also prioritize investments in robust cybersecurity measures.<sup>7</sup>

Al Will LeadTo Labor Market Restructuring But Can Also Create Jobs



The adoption of Al technology is likely to resu in reduced labor requirements for firms, and certain sectors may experience job losses as a consequence of Al's growth and development. Similar to previous technological revolutions, there will be inevitable labor market disruption. Policymakers should anticipate job losses in specific sectors and work toward mitigating societal tensions arising from labor market restructuring. However, it is important to note that Al also has the potential to create jobs. Increased productivity and value created by Al can lead to job growth. Moreover, Al will give rise to new job opportunities, such as prompt engineers who optimize text prompts for Al systems.



Al's Development May Be Hindered By A Lack of High Quality Data The accuracy and validity of machine learning algorithms heavily depends on well-labelled, high-quality datasets. Without such data, the outputs of Al models will reflect the inaccuracies present in the input data, diminishing their predictive power. In 2022, large Al models were trained on massive datasets, including billions of images and vast amounts of text from the

internet, which amounted to roughly 10,000 GB<sup>®</sup> However, researchers project that the stock of high-quality data to train Al systems and LLMs could be depleted by 2026.<sup>9</sup> Moreover, the use of large-scale data sets can give rise to legal challenges, as copyrighted material might be included, potentially infringing on intellectual property rights.<sup>10</sup> For instance, Getty, an image licensing service, has filed a lawsuit against the creators of Stable Diffusion for violating the copyright of its watermarked photograph collection.<sup>11</sup> Al's ability to generate synthetic data that does not exist in the real world is a powerful application, as evidenced by Stable Diffusion's ability to create images of people on highways to train autonomous driving systems.

Regulation Is Necessary But Should Not Stifle Innovation Calls for regulating AI have grown since the launch of ChatGPT. There is consensus among tech leaders that AI should be regulated to ensure responsible and ethical use. OpenAI CEO Sam Altman urged lawmakers to regulate the technology during a US Senate hearing in May 2023. However, regulation should not impede innovation in sectors where AI holds the greatest potential to improve lives. Regulations can be tailored to prevent or control high-risk applications of AI,



such as in autonomous driving, social-scoring, CV scanning, and political campaigning, while also incorporating safeguards to protect data privacy and prevent bias.

Some voices have gone even further, as a petition signed by various technology leaders, including Elon Musk and Steve Wozniak, in March 2023 called for a six-month pause in developing Al systems more powerful than Chat GPT-4. They argued that the current pace of development poses a "profound risk to society and humanity". The petition advocates for AI labs and independent experts to use this pause to collaboratively develop and implement safety protocols for advanced AI design, rather than allow technology firms to continue racing toward developing Artificial General Intelligence (AGI) systems, that "no one – not even their creators – can understand, predict, or reliably control".<sup>12</sup>



Ensuring AGI Alignment With Human Values Concerns have been raised by those who believe that AGI could pose an existential challenge to humanity. They worry that AI systems could develop power-seeking behaviors attempting to deceive human operators and undermine human oversight and control. As AI systems become more sophisticated, the inputs and prompts required from humans to ensure alignment with human interests and values will also become more complex. An emerging training method called 'Reinforcement Learning from Human Feedback (RLHF)' involves humans ranking Al outputs based on given inputs to encourage an alignment with human preferences. OpenAl has stated its commitment to using RLHF as part of its long-term approach to develop AGI that aligns with human valuesHowever, challenges remain. As AI systems become more intelligent and the problems they tackle become more intricate, it becomes increasingly difficult for humans to evaluate the alignment of outputs with human values. Moreover, human values are diverse and not universally shared, raising broader questions about which specific values AI systems should be aligned with.

International Cooperation for Al Regulation



As governments and policymakers embark on shaping regulations around Al, there is a risk of the development of a complex and fragmented global regulatory landscape with distinct regimes across different regions. This scenario could impose costs on companies involved in Al development and hinder the global deployment of Al products. Therefore, international cooperation becomes crucial to ensure the establishment of global standards for Al use that maintain consistency across borders while fostering innovation and economic growth.

### **G** Saudi Arabia's Journey to Becoming a Global Al Hub

Al holds immense potential in streamlining and driving growth across various priority sectors outlined in the Kingdom's reform program. This section delves into the steps taken by Saudi Arabia to position itself as a global Al hub, highlights the key organizations driving Al's adoption, and explores the policies implemented to advance its Al ambitions.



Established in 2019, the Saudi Data & Al Authority (SDAIA) plays a pivotal role in supporting and driving the data and Al agenda within the Kingdom, aiming to position Saudi Arabia as a global leader in data-driven economics. In 2020, SDAIA introduced the National Strategy for Data and Al (NSDAI), outlining the vision and mechanisms to transform Saudi Arabia into a data and Al hub by 2030.13

The SDAIA comprises three core entities: the National Data Management Office (NDMO), the National Information Center (NIC), and the National Center for AI (NCAI).

The National Data Management Office (NDMO) serves as the regulatory arm of SDAIA, managing national data sets, developing standards, and ensuring compliance. It is actively working on frameworks for data privacy, and freedom of information, and is currently focused on drafting and implementing Saudi Arabia's Personal Data Protection Law (PDLP), which is set to take effect in September 2023.

The National Information Center (NIC) serves as the Kingdom's national data bank, hosting government data, and providing the latest Al-driven insights, technology services, and digital solutions for government agencies in the Kingdom. Within the NIC, the Estishraf Platform analyses government data to generate insights and support decision-making processes.<sup>14</sup>

A primary objective of the NIC is to implement an "open data by default" approach across Saudi Arabia's government agencies after 2025. The NIC will ensure that any government data made accessible adheres to stringent security, data protection, and privacy measures. Open data is considered a crucial mechanism for encouraging Al companies to engage with a market, as access to large datasets is valuable for training machine learning systems.

The National Center for AI (NCAI) focuses on formulating an Al strategy for the Kingdom, promoting innovation through research and development programs, and building the capacity and human capabilities of Saudi Arabia in Al.

#### Key Al Organizations

In addition to the SDAIA, the Kingdom has also established the Saudi Company for AI (SCAI), which is owned by the Public Investment Fund (PIF). SCAI's primary objective is to drive the development and growth of AI in the private sector. It achieves this by fostering partnerships both locally and internationally, investing in Al startups, and collaborating with the SDAIA to address AI market gaps in Saudi Arabia and globally. For instance, in September 2022, SCAI announced a SAR 776 million (approximately US \$206 million) investment through a joint venture with China's SenseTime to enhance the Kingdom's Al ecosystem and operate an Al lab.<sup>15</sup>

Furthermore, established digital enablers in the Kingdom, such as Saudi Telecom (stc), play a vital role in advancing the broader digital and data-led economy that is essential for driving Al. As the largest data center operator in the Kingdom, stc partners with the SDAIA to integrate Al capabilities across Saudi Arabia's digital ecosystem.<sup>16</sup> A recent memorandum of understanding (MoU) between the SDAIA and stc outlines key initiatives, including the implementation of a personal data protection system by stc, an increase in Al education through the stc Academy, and the development of local AI systems and algorithms.<sup>17</sup> While Al itself is a digital technology, it also acts as an enabler of digitalization. For example, Al can be utilized in telecommunication for tasks such as data analysis, customer service, and call routing. Al-powered solutions can also enhance network performance, strengthen security measures, and detect/respond to cyber-attacks. Furthermore, AI has the potential to be deployed across 5G networks and future-generation networks to gather data that can be fed into neural networks, thereby improving machine learning capabilities.

#### Data and Privacy Regulation in Saudi Arabia

Saudi Arabia's NSDAI aims to establish "welcoming, flexible, and stable regulatory frameworks... that would attract companies, investors and talents" and provide guidelines for "data protection and privacy standards". 18 The Personal Data Protection Law (PDPL) of Saudi Arabia serves as the legal foundation for safeguarding individuals' data privacy and security. It regulates organizations' collection, processing, retention, and disclosure of personal data. Businesses operating in Saudi Arabia and utilizing the personal data of Saudi residents must comply with these regulations. They are required to develop a personal data privacy policy, obtain consent from individuals before processing their personal data, notify individuals in case of data misuse, and maintain

records of processing activities. Cross-border data transfer are only permitted if the personal data is protected to a level mandated by the government.<sup>19</sup>

Although the PDPL was initially scheduled to come into effect in March 2023, it was postponed to September 14, 2023, following further amendments on March 27, 2023.<sup>20</sup> This delay allows businesses an additional six months to adapt their data processing practices to comply with the new regulations. A comprehensive data privacy law like the PDPL can benefit Saudi Arabia's Al sector by promoting transparency and accountability, thereby enhancing consumer trust in new Al products, encouraging the growth of the AI sector.

#### Upskilling Saudis in Al

A primary focus of the NSDAI is to enhance the data and Al skills of Saudi Arabia's population, developing the sector and providing a pool of local talents for international companies interested in investing in the Kingdom. Saudi Arabia's young demographics, with 66% of the population under 35, present an opportunity to nurture the country's expertise in data and Al. The NSDAl outlines its ambitions to increase Saudi Arabia's local workforce of data and Al specialists by 20,000 and aims to have 40% of its total workforce trained in basic data and Al literacy skills by 2030.<sup>21</sup> To achieve this, the NSDAI plans to integrate Al education within K-12 and university curricula, while the SDAIA has established an academy to train Al talent. Various technology companies and institutions are partnering with the SDAIA to deliver AI

education in the country. For example, the King Abdullah University of Science and Technology (KAUST) recently announced the establishment of the Center of Excellence in Data Science and Al at the Global Al Summit in September 2022.<sup>22</sup> The Global Al Summit, another initiative by the SDAIA, serves to foster interest and learning within the Kingdom's Al sector by bringing together global thought leaders, decision-makers, and innovators for discussions on Al. Two summits have already taken place, with the most recent event featuring 200 speakers from 90 countries.<sup>23</sup>

#### Saudi Collaboration with International Technology Firms

Saudi Arabia has been engaging in collaboration with global technology leaders to enhance its expertise, develop skills, and attract more investment, thereby strengthening the Kingdom's domestic Al ecosystem. Given the importance of data access in Al development, partnering with international technology companies can contribute significantly to the growth of domestic Al capabilities. In the second half of 2022 alone, the Saudi government signed memoranda of understanding (MoUs) with Google, IBM, and Intel supporting the Kingdom's digitalization efforts. 24,25,26 Additionally, Chinese firms such as Huawei, Alibaba, and SenseTime have also been capitalizing on the Kingdom's increased focus on digitalization. For instance, In 2020, Huawei and the SDAIA established a partnership through the National Al Capability Development Program, aiming to support the

government, Saudi businesses, and research institutes in finding Al technology partners and nurturing their own Al talent.<sup>27</sup>

There are several factors that make partnerships with Saudi Arabia potentially appealing to international technology firms.

The Kingdom's commitment to economic diversification is driving government spending in non-oil sectors thereby creating opportunities for international technology firms to contribute to these sectors. Moreover, the proliferation and development of smart cities across the Kingdom, such as KAFD are providing testbeds for companies to trial AI and other digital solutions. These initiatives offer an attractive environment for international technology firms to collaborate, innovate, and deploy their technologies.



### Case Study: KAFD's Utilization of Al to Become A Smart City

Since 2022, the King Abdullah Financial District Development & Management Company (KAFD DMC) has been actively integrating Al into KAFD's built environment to optimize efficiency in the business district's operations while enhancing the experiences of KAFD's tenants, employees, residents, and visitors.

Ensuring safety and security within the district is a top priority for KAFD DMC and as a result, Al systems utilizing advanced technologies for access control have been implemented. These systems instantly detect and track potential risks and emerging incidents, allowing efficient resource allocation and prompt responses to any security threats.

For instance, Al video analysis enables crowd and vehicle management by identifying objects, behaviors, and events requiring a swift response, and preventing the escalation of any security incidents. In fact, insights from Al video analysis inform operational decisions by understanding crowd and vehicle dynamics within KAFD such as occupancy levels, unwanted intrusions, smoke and waste detection and customer sentiment during events through facial recognition.

This is cascaded across all aspects of KAFD functions. Thus, by leveraging Al to monitor and manage people and traffic flow, security personnel are allocated effectively, congestion is alleviated, and parking is optimized in KAFD. Al-powered smart parking management has revolutionized parking access, occupancy monitoring, and behavior management, improving customer experiences and parking facility utilization.

Similarly, while vehicle detection systems identify parking and traffic violations and incidents, footfall monitoring analysis provides valuable data on people flow, interactions, queue management, and crowd dynamics. Moreover, the comprehensive data collection that underpins the system allows for the development of innovative solutions to improve both operations and the customer experience within the district.

Supplemented by the district's virtual reflection, or digital twin, real-time monitoring and analysis of data from various sources boosts security, operational awareness, and service performance while ensuring running costs are low. The digital twin provides an immersive experience for all who visit, work or live in KAFD.

Al technology allows companies to raise living standards and better predict the future needs of its users. By adopting Al within its smart city solutions across the district, KAFD DMC is proactively innovating, making smarter decisions for the wider community and helping improve quality of life.

## Conclusion The Future of Al

Al is a transformational technology with the potential to revolutionize businesses, societies, and our daily lives. It offers significant opportunities for global growth and has strategic importance for Saudi Arabia and Vision 2030. However, as with any emerging technology, the full impact and implications of Al are not yet fully understood. This raises concerns about potential policy challenges such as labor disruption, infringement of privacy and security, and the development



of advanced AI systems that are difficult to comprehend and control.

Governments, policymakers, businesses, and technologists need to carefully consider these challenges and ensure that the potential benefits of Al in delivering efficiency, prosperity, and solving humanity's greatest challenges, are realized. In the coming years, we can expect several key trends that will shape the future development of Al. These trends are explored in greater detail below.

#### ALWILL EVERAGE MORE EXTENSIVE DATA

With the increasing amount of data being shared between consumers and organizations, Al will play a more prominent role in our everyday lives. We can anticipate a higher use of Al to analyse consumer data in making financial and sustainability decisions, such as choosing environmentally friendly products and optimizing energy usage.<sup>28,29</sup>

#### AI WILL DRIVE SUPPLY CHAIN PERFORMANCE

The potential of AI to enhance efficiency and sustainability in supply chains can help reduce costs and mitigate supply chain disruptions. Real-time data will likely be used more extensively to enable immediate monitoring of supply chain disruptions, leading to better risk management strategies for smoother global operations. We can also expect increased automation in factories and supermarkets.<sup>30</sup>

#### CHATBOTS WILL BECOME MORE PREVALENT AND SOPHISTICATED

Al powered chatbots will become increasingly common in the average consumer experience. Companies like Microsoft, Google, Alibaba, IBM, Tencent, and SenseTime are investing significant resources in developing chatbots.

Financial service companies, in particular, will integrate chatbots into their commercial banking sectors, and Al companies will offer chatbots-as-a-service to businesses. Additionally, Al plug-ins will likely become more widely available, streamlining everyday tasks such as web browsing, email drafting, and workflow management.

#### AI'S IMPACT ON SUSTAINABILITY WILL **EXPAND**

While AI has primarily focused on cost-efficiency, we will witness a deeper exploration of AI's potential to enhance sustainability outcomes in 2023. This will depend on the availability of accurate and high-quality data on carbon-emissions throughout the supply chain. As ESG (Environmental, Social, and Governance) data becomes more accessible, organizations will be empowered to make targeted investments, select partners, and make supply chain improvements. This will enable better assessment of long-term risks, improved emissions monitoring, and more informed investment strategies.<sup>31, 32</sup>

#### AI CHALLENGES WILL RECEIVE GREATER **ATTENTION**

As Al becomes more sophisticated, policymakers and regulators will prioritize safety concerns. User privacy and data security will remain important, but broader concerns about the safety and societal impact of AI systems will gain greater attention. Policymakers will likely introduce standards and safety protocols for Al development. For instance, the European Union (EU) is in the process of introducing an AI Act that categorises AI uses by risk, and bans certain uses, such as subliminal advertising or government-run social scoring.<sup>33</sup> The EU also aims to make Al systems more explainable and transparent to users and consider regulation for disclosing system training, operation, and monitoring.<sup>34</sup> This may lead to regulatory convergence globally, reducing compliance costs for multinational companies and facilitating market expansion similar to how elements of the EU's General Data Protection Regulation (GDPR) have been adopted beyond the EU.<sup>35</sup>

As Al safety garners more scrutiny, we can expect increased resources and research dedicated to safety and alignment research. There may be calls for establishing international institutions or independent governance bodies focused on Al. Additionally, advocacy for safeguards like disclaimers for Al-generated work, provenance systems, or digital watermarks to identify Al-created content may grow.

### Recommendations

Businesses should adopt Al to boost output, reduce costs, and improve profitability. They should establish internal task forces to explore Al applications in their operations, enabling a first-mover advantage.

Governments should invest in digital infrastructure, including high-speed internet connectivity, cloud computing, and edge computing, to enable Al adoption across their countries.

Addressing potential risks and challenges as AI advances technology firms should prioritize research on alignment, AI safety and mitigating false information generation. Collaboration between industry, academia, and government is essential in this regard.

Integrating Al into logistics hubs and domestic manufacturing sector will accelerate Saudi Arabia's development and achieve Vision 2030 goals, such as increasing non-oil GDP contributions from exports. Businesses integrating Al need robust digital infrastructure to unlock its full potential. High-quality data recording, processing, store, and transmit capabilities are crucial. Investing in cybersecurity solutions is essential to protect Al-enabled data.

Policymakers should prepare for labor restructuring and educate their populations on utilizing Al for their work and productivity. Moreover, they should collaborate with technology firms to provide educational resources, training, and skill development programs to facilitate adaption to Al-driven changes.

Saudi Arabia's banks should encourage the uptake of AI to achieve cost savings that can support SME growth and green projects as part of the Financial Service Development Program (FSDP).

Governments and businesses should prepare for geopolitical tensions in the Al space. They should navigate potential differences in regulatory regimes emerging from countries like the US and China to maintain productive relations with both sides. Policymakers must carefully consider associated risks and challenges as computing power becomes more accessible and powerful, addressing the potential misuse of Al for nefarious purposes.

Governments and bsusinesses should promote international cooperation to establish global standards for Al. This ensures consistency, interoperability, and ethical use while nurturing innovation and economic growth, preventing a fragmented regulatory landscape.

Overall, these recommendations highlight the importance of Al adoption, infrastructure development, education, addressing risks, international cooperation, and balanced regulation to harness the full potential of Al while mitigating challenges.

Government should regulate Al to ensure responsible and ethical use while balancing innovation. Working groups comprised of policymakers, businesses, and academics should be fostered to develop future regulations.



The KAFD Dialogues touch on different issues of critical importance to the global business community. If you would like your organization to be represented at future Dialogue sessions at KAFD, please express your interest to the following email address: kafd.dialogue@kafd.sa

#### References

- Source: https://www.insiderintelligence.com/ insights/ai-in-finance/
- 2. Ibid.
- Source: https://www.gartner.com/en/newsroom/ press-releases/2022-08-22-gartner-surveyreveals-80-percent-of-executives-thinkautomation-can-be-applied-to-any-businessdecision
- Source: https://www.politico.eu/article/ai-isabout-to-remake-the-pharmaceutical-drugmedicines-industry/
- Source: https://www.deepmind.com/research/ highlighted-research/alphafold
- 6. Source: https://oxipit.ai/products/chestlink/
- Source: https://www.ericsson.com/en/ blog/2022/8/ai-and-privacy-everything-youneed-to-know
- Source: https://www.ft.com/content/03895dc4a3b7-481e-95cc-336a524f2ac2
- https://www.technologyreview.
  com/2022/11/24/1063684/we-could-run-out-ofdata-to-train-ai-language-programs/
- 0. Source: https://hbr.org/2023/04/generative-aihas-an-intellectual-property-problem
- Source: https://www.reuters.com/legal/gettyimages-lawsuit-says-stability-ai-misused-photostrain-ai-2023-02-06/
- 12. The petition can be read in full here: https:// futureoflife.org/open-letter/pause-giant-aiexperiments/
- 13. Source: https://ai.sa/
- 14. Source: https://www.ncbi.nlm.nih.gov/pmc/ articles/PMC8242113/
- 15. Source: https://www.arabnews.com/ node/2161476/business-economy
- Source: https://www.zawya.com/en/business/ technology-and-telecom/saudis-stc-and-sdaiasign-mou-to-develop-digital-technologies-andai-solutions-mp01id1c
- Source: https://www.zawya.com/en/business/ technology-and-telecom/saudis-stc-and-sdaiasign-mou-to-develop-digital-technologies-andai-solutions-mp01id1c
- 18. Source: https://ai.sa/Brochure\_NSDAI\_ Summit%20version\_EN.pdf
- Source: https://securiti.ai/saudi-arabiaperhttps://ai.sa/ - myCarouselsonal-dataprotection-law/

- 20. Source: https://www.clydeco.com/en/ insights/2023/04/saudi-arabia-confirmsupdates-to-pdpl
- Source: https://ai.sa/Brochure\_NSDAI\_ Summit%20version\_EN.pdf
- 22. Source: https://www.zawya.com/en/business/ technology-and-telecom/saudis-kaust-sdaiaannounce-center-of-excellence-in-data-scienceand-ai-ltc4c4ie
- Source: https://globalaisummit.org/en/News/ Pages/NewsDetails.aspx?NewsId=17
- 24. Source: https://newsroom.ibm.com/2022-09-27-Saudi-Data,-Al-Authority-SDAIA-and-Ministryof-Energy-Partner-with-IBM-to-Accelerate-Sustainability-Initiatives-in-Saudi-Arabia-Using-Al
- Source: https://www.kaust.edu.sa/en/news/ self-driving-car
- 26. Source: https://gulfbusiness.com/googlecloud-inks-sustainability-agreement-with-saudigovernment-authorities/
- Source: https://www.huawei.com/en/ news/2020/10/huawei-sdaia-national-aicapability-development-program
- 28. Source: https://www.forbes.com/sites/ ganeskesari/2022/12/22/ai-trends-for-2023industry-experts-and-chatgpt-ai-make-theirpredictions/?sh=38b133a831ca
- 29. Source: https://www.forbes.com/sites/ forbesbusinesscouncil/2022/05/05/the-futureof-ai-5-things-to-expect-in-the-next-10years/?sh=4cb126cd7422
- Source: https://www.ncbi.nlm.nih.gov/pmc/ articles/PMC9524319/
- 31. Source: https://www.forbes.com/sites/ forbesbusinesscouncil/2022/05/05/the-futureof-ai-5-things-to-expect-in-the-next-10years/?sh=4cb126cd7422
- https://www.europarl.europa.eu/ RegData/etudes/STUD/2021/662906/IPOL\_ STU(2021)662906 EN.pdf
- 33. Source: https://artificialintelligenceact.eu/
- Source: https://ec.europa.eu/research-andinnovation/en/horizon-magazine/opening-blackbox-artificial-intelligence
- https://www.brookings.edu/blog/ techtank/2022/02/01/the-eu-and-u-s-arestarting-to-align-on-ai-regulation/

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