BUSINESS COUNCIL REPORT

POLICY REPORTS

The U.A.E.'s Big Bet on Artificial Intelligence

Sept 2024

U.S.-U.A.E. Business Council

Authors

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New Developments: The U.A.E.'s Big Bet on AI

His Highness Sheikh Mohamed bin Zayed Al Nahyan and President Joe Biden shake hands during a meeting in the Oval Office, on September 23, 2024

Since the February 2024 publication of the U.S.-U.A.E. Business Council's policy report "The U.A.E.'s Big Bet on AI," the U.A.E. has continued to make advancements in the artificial intelligence (AI) and advanced technology sector. The U.A.E. remains committed to developing a digital technology ecosystem, forging international partnerships in AI, and becoming a global thought leader that shapes the policy debate around AI. The U.A.E. is prioritizing the commercial deployment of AI in key sectors such as clean energy, life sciences, space, and manufacturing. The U.A.E. is also focused on scaling up AI infrastructure and building data centers to meet the growing demand for computing power. Following the September 2024 visit of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the U.A.E., to Washington D.C., the U.A.E. and U.S. issued two joint statements that noted the deep bilateral cooperation in AI. Please see here for links:

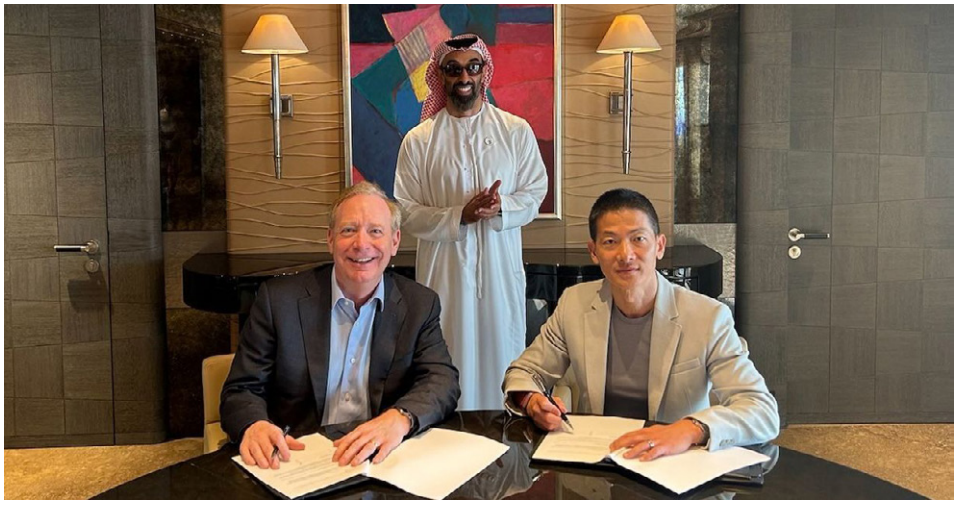
U.S.-UAE Joint Leaders' Statement Dynamic Strategic Partners
United States and United Arab Emirates Cooperation on Artificial Intelligence

Over the last seven months, numerous U.S.-U.A.E. commercial AI partnerships have been formed involving key U.S. companies such as **Amazon Web Services (AWS), Oracle, Dell Technologies, Microsoft, and NVIDIA. Meta** is also leveraging the release of its newest AI model, LLAMA 3, for U.A.E. partnerships. The U.A.E. continues to develop its indigenous AI capabilities across the value chain through updated large language models (LLMs) and plans its first AI Integration Center. In concert with progress on the commercial side, the political environment surrounding AI between the U.S. and the U.A.E. has markedly improved as the U.A.E. makes its preferred technology partner clear.

The establishment of **MGX**, a new AI-focused investment vehicle, signals a renewed focus on accelerating the adoption of AI through partnerships in the U.A.E. and internationally. As a major investment company, MGX will help drive investment flows in AI both to and from the U.A.E. MGX is a partner on an AI infrastructure investment fund that aims to mobilize up to $100 billion to enhance the future of AI. The Global AI Infrastructure Investment Partnership, which includes Blackrock and Microsoft, **will invest in data centers and AI infrastructure mainly in the U.S.** The partnership will have a particular focus on building up the power infrastructure needed to support data centers. This major deal further demonstrates that the U.A.E. and its commercial entities are major players in key technological partnerships shaping the future of AI. As of September 2024, MGX is also reportedly in talks to invest in OpenAI.

The U.A.E. is also focused on linking AI to its emerging space economy. SPACE42, which was formally established in April 2024, is committed to commercializing the deployment of AI in space. Space42 was formed through a merger of Bayanat and Yahsat. Bayanat, a geographic data and analytics provider, and Yahsat, a satellite communications company, will combine capabilities to augment SPACE42's satellite communications and geospatial solutions business lines. Given the increasing focus on the space economy as a strategic sector for the U.A.E., SPACE42's formation is a significant milestone in the U.A.E.'s AI development path. SPACE42 will commercialize opportunities in Earth observation, IoT (Internet of Things), and business intelligence through AI.

The U.A.E. has also made it clear that the U.S. is the preferred technology partner for Emirati companies. Since February 2024, both U.S. and U.A.E. officials have been increasingly outspoken about progress in the technology relationship at the political level. One of the key developments since February is a landmark commercial agreement between G42 and Microsoft. The Microsoft-G42 deal, in which Microsoft will invest $1.5 billion into G42 and acquire a board seat, was facilitated by sustained high-level dialogue from the U.S. and U.A.E. governments. The U.A.E. is doubling down on its commitment to become a global hub of AI innovation through partnerships with U.S. companies.



Brad Smith, Vice Chair and President of Microsoft, signs agreemeent with Peng Xiao, Group CEO of G42
Source: G42

High-Level Discussions between U.S. and U.A.E. Officials

In June 2024, U.A.E. National Security Advisor His Highness Sheikh Tahnoon bin Zayed Al Nahyan visited Washington D.C. Sheikh Tahnoon met with former U.S. President Barack Obama, U.S. Secretary of Commerce Gina Raimondo, U.S. National Security Advisor Jake Sullivan, and other key principals. **Sheikh Tahnoon's visit underscored the increasing high-level collaboration between the U.S. and U.A.E. in advanced technology.** The public nature of the visit, in contrast to previous meetings, suggests that U.S. and U.A.E. officials are growing more comfortable with the parameters of the AI and advanced technology relationship. According to news reports, Sheikh Tahnoon discussed the export control regime and new commercial, research, and educational initiatives. Assistant Secretary of Commerce for Export Administration Thea Kendler visited the U.A.E. in May 2024. A/S Kendler met with the U.A.E.'s Executive Office for Control and Non- Proliferation to discuss export control, cooperation opportunities, and exchanging expertise in capacity building. These visits have the laid the groundwork for the visit of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the U.A.E., and further cooperation in the U.S.-U.A.E. advanced technology partnership.

Thea D. Rozman Kendler, Assistant Secretary for Export Administration, Bureau of Industry and Security, U.S. Department of Commerce with Danny Sebright, President, U.S.-U.A.E. Business Council

The U.S.-U.A.E. Business Council has updated this report to reflect the key business developments shaping the U.S.-U.A.E. AI relationship.

The use of artificial intelligence (AI) in business operations has exploded in the past year. AI is poised to fundamentally transform all key sectors of the global economy, including technology, healthcare, education, agriculture, logistics, transportation, and energy. In light of the transformational power of AI in these sectors, all identified by the U.A.E. government as priority areas of growth, the U.A.E. is embarking on a path to become an AI powerhouse. In 2017, the U.A.E. adopted the National Artificial Intelligence Strategy 2031, which is designed to position the U.A.E. as a global leader in AI by 2031. As part of this national effort, the U.A.E., led by homegrown companies like **G42**, aims to develop a digital technology ecosystem by commercializing and deploying AI in priority sectors. **The U.A.E.'s AI ambitions are linked to the country's larger goal of transitioning to a knowledge-based economy.** U.S.-U.A.E. private sector partnerships are poised to a play a pivotal role in the U.A.E.'s AI development.

AI in-Focus

AI is best described as machines in combination with algorithms designed to perform tasks that typically require human intelligence. Examples include search engines like Google and recommendation systems used by Amazon. Traditionally this entailed using techniques such as Neural Networks, Machine Learning, Natural Language Processing, Computer Vision, and others which helped induce insights from big data, and image analytics. Recently, the ability to leverage transformer models and scale them with advanced computational systems have yielded large language models that can be fine-tuned into programs like ChatGPT by Microsoft and OpenAI. This type of conversational agent provides a significant leap in the augmentation of human intelligence that enhances productivity in ways which make adoption by enterprises and governments across various use cases highly appealing, due to its capability of mimicking human creativity. The term used to describe this advent is Generative AI.

The use of AI gives businesses a competitive advantage because it automates processes, provides insights through parsing large amounts of data analysis, and helps engage customers and employees. There is a strong economic case for AI adoption, and governments are also seeking ways to incorporate AI in order to help foster entrepreneurship, innovation, and research and development (R&D). These are all market and socio-economic attributes the U.A.E. is keen to develop even further. **Below are the main areas of AI most germane to the U.A.E.'s national strategy:**

- **Generative AI:** Generative AI produces content, images, media and identifies the patterns and structures within existing data. An example of generative AI includes large language models (LLMs) such as G42's Jais product, the world's highest quality Arabic LLM. In August 2024, G42 released the latest version of its JAIS model, 70B, that is expected to improve the accuracy of LLM predictions and enhance capabilities in areas such as customer service, content creation, and data analysis. In February

2024, e& announced a partnership with AWS to deploy advanced generative AI. e& will use Amazon Bedrock and Amazon SageMaker to integrate a suite of generative AI use cases.

- **Enterprise AI:** Enterprise AI uses machine learning technology to solve problems faced by large-scale companies, industries, and organizations.
- **Robotics:** Robotics involves the manufacturing and operation of robots. AI-controlled robots help automate processes and increase output and are especially useful in the manufacturing and healthcare fields.
- **AI as a Utility:** Another area the U.A.E. is actively participating in lies within the foundational building blocks of enabling AI, which is infrastructure. This takes the form of advanced technologies such as High Performance Computing, as well as Cloud Computing technologies.

The U.A.E.'s AI Strategy

The National Strategy for Artificial Intelligence 2031 is the U.A.E.'s hallmark plan to position the country as a global hub for AI. While AI adoption has accelerated globally in the past year, the U.A.E. has long had a forward-looking and ambitious position on AI. In 2017, as part of its National Strategy for Artificial Intelligence 2031, the U.A.E. appointed His Excellency Omar Al Olama as Minister of State for Artificial Intelligence, the first country to create such a post. Concurrently, the U.A.E. stood up the AI Everything conference, now co-located with GITEX Global. The conference helped position the U.A.E. as a global thought leader in emerging technologies such as AI. Ultimately, the **U.A.E.'s efforts to commercialize AI is part of a larger agenda to diversify the economy, stand up a digital ecosystem, and grow knowledge-based sectors.**

Under the National AI Strategy, the U.A.E. seeks to:

- Build a reputation as an AI destination
- Increase the U.A.E. competitive assets in priority sectors through deployment of AI
- Develop a fertile ecosystem for AI
- Adopt AI across customer services to improve lives and government
- Attract and train talent for future jobs enabled by AI
- Bring world-leading research capability to work with target industries
- Provide the data and supporting infrastructure essential to become a test bed for AI
- Ensure strong governance and effective regulation`

Already, the U.A.E. has a series of AI projects, institutions, and digital clusters that are leveraging the power of AI. Currently, the U.A.E. identifies three priority sectors for AI trials and adoption: resources and energy, logistics and transport, and tourism and hospitality. Eventually, the U.A.E. envisions a complete and "fertile" AI ecosystem across a diverse range of sectors. The U.A.E. is placing special attention on the R&D of AI. **This includes educational institutions, startup incubators, and accelerator programs.** Additionally, the U.A.E. seeks to build up AI physical and virtual infrastructure such as cloud services, data centers, and specialized hardware.

The U.A.E.'s top AI institutions include:

Minister of State for Artificial Intelligence, Digital Economy & Remote Work Applications Office: Federal governmental body responsible for the deployment of AI in the U.A.E. and creating a strong enabling environment for commercial AI growth.

The U.A.E.'s leading commercial AI company, based in Abu Dhabi, comprising of:

AIQ: Develops cutting-edge, AI-powered energy tools to drive the oil and gas industry into the digital realm and enable sustainability.

SPACE42: A new space technology company formed from a merge of Bayant and Yahsat. The company is central to the U.A.E.'s aims to become a key commercial player in space through the deployment of AI. The new entity will offer a vertically integrated system that delivers geospatial analytics, including ownership in upstream and downstream infrastructure for remote sensing including satellite platforms.

Bayanat: Bayanat is a provider of customized end-to-end geospatial intelligence products and services. The company has three core divisions: Artificial Intelligence Solutions, Smart Operations Solutions, and Smart Mobility Solutions. SPACE42 will leverage Bayanat's data acquisition capabilities which include satellite based earth observation, synthetic aperture radar (SAR), and multi-spectrum imagery

Yahsat: A satellite communications company. The company, a subsidiary of Mubadala, has five geostationary satellites that reach more than 80% of the world's population. Yahsat provides services in critical communications services including broadband, video broadcasting, backhauling, mobile voice, and data solutions.

Core42: A provider of full-spectrum AI enablement solutions, including cloud, high-performance computing (i.e. **Condor Galaxy:** a cloud-based network of nine interconnected AI supercomputers developed in partnership with Cerebras. The first cluster, currently operational, combines 64 CS2 machines which produce 4 ExFLOPs of AI compute (at FP16) and is deployed in Sunnyvale California), cybersecurity, AI & Data solutions (i.e. Jais, the world's most performant Arabic LLM), digital, and integration services, that unlock national-scale digital transformation. In April 2024, G42 announced that it selected **Qualcomm's** Cloud AI 100 Inference products for use in its Condor AI platform. This partnership will increase inference performance and cost efficiency. G42's collaboration expands the scope of the U.A.E.'s technological cooperation with key U.S. technological companies.

Khazna: a JV with e& (formerly Etisalat), is the largest regional datacenter provider and looking to expand internationally and specialize in advanced infrastructure to cater to the AI era and efficiently host high performance compute systems.

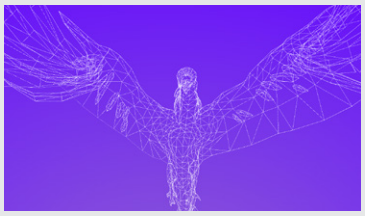
M42: combines G42 Healthcare's unique medical and data-centric technologies with Mubadala Health's world-class patient services and state-of-the-art facilities to provide the highest level of personalized, precise, and preventive care through AI, genomics and multi-omics, and digital services.

Presight: AI and predictive intelligence company fusing Big Data, advanced Analytics, and Machine Learning to power the next generation of cities, businesses, and industries by unlocking better decision-making processes and efficiencies. In June 2024, Presight announced a commercial partnership with **Dell Technologies** to accelerate AI and big data adoption in the U.A.E. The collaboration will focus on developing innovative edge, open RAN, and IoT analytics architectures.

Advanced Technology Research Council (ATRC): The overarching advanced technology research body in Abu Dhabi.

MGX: A new $100 billion AI investment company chaired by Ahmed Yahia Al Idrissi, CEO of Mubadala's direct investments platform. MGX is intended to be a "national champion" aiming to accelerate the adoption of AI through partnerships both domestically and internationally. MGX is focusing on three areas: AI infrastructure, semiconductors, and AI core technologies and applications. A priority area for MGX will be building more data centers. The Wall Street Journal reported in September 2024 that MGX is in talks to invest in OpenAI.

Technology Innovation Institute (TII): Abu Dhabi-based leading global advanced technology center that focuses on applied AI research. TII is the applied research arm of ATRC.



Falcon AI: Large-scale LLM released by TII. TII recently released the second version of Falcon. Falcon 2 comprises of Falcon 2 11B, an enhanced LLM, and Falcon 2 11B VLM, a vision-language model (VLM). Falcon 2 11B VLM is a significant breakthrough as it is TII's first multimodal model.

AI71: ATRC's new AI company. The entity builds on the TII Falcon generative AI models and will focus on multi-domain specializations.

Mohamed bin Zayed University of Artificial Intelligence (MBZUAI): The world's first graduate-level, research-based academic institution devoted to study AI. MBZUAI aims to support the advancement of scientific research, development, transfer, and use of AI.

Abu Dhabi Department of Government Enablement: This office centralizes over 30 government entities through digitization and includes an Office of Artificial Intelligence. The work of the Abu Dhabi Digital Authority (ADDA) was folded into this department.

Digital Dubai: Governmental body that develops and oversees the implementation of policies and strategies that govern all matters related to Dubai's information technology, data, digital transformation, and cyber-security. AI-focused initiatives include the Ethical AI Toolkit and AI Lab.

U.A.E. Focus: Startups and AI Exports

As an emerging technology, startups are crucial to developing a thriving AI ecosystem. Often, these smaller companies are the breeding grounds of AI innovation and development. A business climate with strong levels of entrepreneurship and a startup culture bodes well for AI development in a country. AI positively impacts startups by promoting product differentiation, customer engagement, and operational efficiency. Although the focus is often on big technology players, startups will be crucial in U.S.-U.A.E. AI collaboration. The U.A.E. offers AI startups a strong business enabling environment to encourage growth and take risks.

Exporting AI is another key issue particularly for the U.A.E. as it seeks to become a key connector and technology provider across different markets in the Global South. AI exports help countries gain a competitive advantage as trade fosters knowledge sharing, innovation, and R&D. AI exports also give countries and companies insights into AI regulatory controls. This is important as the debate on how to use AI has quickly become a contentious international political issue. The U.A.E. seeks to not only be an incubator of AI technology domestically but a global thought leader that shapes the unsettled policy debate on AI.

Top U.A.E. AI-Related Startup Projects, Companies, and Centers Include:

مسرعات دبي المستقبل
DUBAI FUTURE *ACCELERATORS*

Dubai Future Accelerators (DFA): Affiliated with the Dubai Future Foundation, DFA facilitates collaboration between startups, private entities, and government on emerging technologies such as AI.

HUB71

Hub71 is an Abu Dhabi-based global tech system comprised of startups that has pursued AI partnerships, such as 2021 agreement with AIQ to accelerate AI solutions in the energy industry.

كامبس دبي للذكاء الاصطناعي والويب3
DUBAI AI & WEB3 CAMPUS

AI and Web3.0 Hub: DIFC will launch an AI cluster with the goal of bringing more than 500 high-tech companies by 2028.

Smart and Autonomous Vehicles Industry (SAVI) cluster: ADIO and Farady Future partnered in December 2023 to bring generative AI and advanced intelligent electric vehicle capabilities to the SAVI cluster.

Dubai Centre for Artificial Intelligence's (DCAI) Accelerator Programs: A global AI startup ecosystem in Dubai. The program supports the development of innovative AI-based solutions to current and future challenges in two main sectors: government services and media and communications.

The Applied AI Company (AAICO): A U.A.E.-based technology company that exports AI products to the U.S., U.K, and Europe. AAICO provides productivity outcomes through supervised AI systems which can be safely adopted in mission-critical industries such as healthcare, insurance, pharmaceuticals, and banking.

startAD: A nation-building organization that ignites homegrown innovation and propels the U.A.E. into an entrepreneurial economy by equipping startups, SMEs, and young talent with the necessary tools to build innovative new products that serve a global need, collaborate across organizations, and develop entrepreneurial capacity.

U.S.-U.A.E. Private Sector Engagement and Opportunities

U.S. technology companies lead the world in AI innovation and capabilities. The U.A.E.'s investment in AI research, business-friendly environment, and skilled workforce makes the country a natural partner for U.S. technology companies. **The AI National Strategy 2031 calls for U.A.E. firms to partner with global AI technology firms to foster greater links into global value chains and enable technology transfer from international firms.** However, this has been complicated by U.S. concerns regarding security risks posed to U.S. technology by collaboration with Chinese technology.

An interesting example of how this dynamic is playing out is a decision by G42, in the latter half of 2022, to enhance its technology stack for enterprise AI and public sector applications. G42 initiated discussions with U.S. hyperscale cloud providers to transition its cloud environment to a more robust and AI-enhanced platform, concluding a deal with Microsoft Azure. Furthermore, as part of the process of acquiring licensed technologies from U.S. technology companies such as Nvidia, Cerebras, AMD, and others, G42 took proactive steps to address U.S. regulatory requirements by creating a Regulated Technology Environment that was suitable for the evolving U.S. regulations, and by shifting away from previous technology suppliers, including Chinese hardware.

G42's decision bodes well for future U.S.-U.A.E. AI collaboration, although some U.S. government scrutiny is still expected in an area as sensitive as exporting AI technology. The Committee on Foreign Investment in the United States (CFIUS) scrutinizes inbound foreign investments into the United States. Although U.S. companies can still export to the U.A.E., businesses should track U.S. export rules on the underlying technology of AI, particularly advanced AI chips exports from Nvidia and AMD. Investments from the U.A.E. accounted for 13 filings listed in the 2022 CFIUS Annual Report that was announced in August 2023.

Additionally, the Bureau of Industry and Security of the U.S. Department of Commerce in 2023 announced the implementation of additional export controls on exports to the People's Republic of China for certain advanced computing Items, including chips commonly used in graphics processing units, if the chips exceed either of two parameters, a performance threshold, or a performance density threshold. The BIS export controls also imposed additional license requirements on exports of the advanced computing items to more than 40 additional countries, including the U.A.E., that were considered to present a heightened risk for diversion to China. U.S. companies that wish to export high performance GPU chips (manufactured by companies including Nvidia, Cerebras, and AMD) to the U.A.E. should check U.S. export licensing requirements and apply for an export license as appropriate in advance.

Source: G42

In April 2024, Microsoft and G42 announced a strategic partnership that includes a $1.5 billion investment from Microsoft in G42 to accelerate AI development and global expansion. The Microsoft-G42 deal includes the formation of a $1 billion fund for developers. Crucially, the partnership establishes a first of its kind Intergovernmental Assurance Agreement that commits both companies to world-leading standards in AI safety and security. This agreement is a baseline for future cooperation and it has been reported that Microsoft is interested in further commercial partnerships with G42 on data centers. In May 2024, Microsoft and G42 announced plans to spend $1 billion on projects in Kenya, including a massive geothermal-powered data center. The first phase will have a capacity of 100 megawatts and is expected to be operational in about two years. Microsoft plans to use the initial cloud-computing power from the plant to create an East African region for its Azure product while G42 sees a promising market in East Africa for its LLM products and models. G42 and Microsoft's joint venture into the African market builds on the U.A.E.'s objective to become the AI connector and provider for the Global South. In September 2024, Microsoft and G42 announced that establishment of two new centers in Abu Dhabi. The first center will focus on advancing the responsible deployment of AI in the Middle East and Global South. The second center will be an extension of Microsoft's AI for Good Research Lab into the U.A.E. These two new data centers further demonstrate the deep collaboration between G42 and Microsoft across a range of AI solutions and policy.

Source: Aletihad

Another significant development is the establishment of the U.A.E.'s first AI Integration Center at Masdar City. In May 2024, World Wide Technology (WWT) signed a MoU with NXT Global to begin work on the center. The AI Integration Center will support the objectives of the U.A.E.'s National Artificial Intelligence Strategy 2031 and is aligned with ATRC. Exporting both physical and virtual plug-and-play cutting-edge AI infrastructure to the world will be a key focus of the AI Integration Center. Additionally, the WWT NXT Global partnership will also focus on building up the U.A.E.'s AI capabilities related to building and delivering end-to-end full stack cutting-edge AI technology. The AI Integration Center is expected to bolster the flow of AI innovation from "end-to-end" between the U.S. and the U.A.E.

There are many opportunities for private sector collaboration between the U.S. and U.A.E., particularly in strategic sectors such as health care, space and energy transition. The recently held COP28 also affords opportunities for companies to build on the U.A.E.'s sustainability-focused COP legacy agenda through AI implementation. A sampling of current and future U.S.-U.A.E. private sector collaborations in key sectors include:

Energy

AI has the potential to accelerate the transition to clean energy. Identified by the U.A.E. government as one of the three priority sectors for AI adoption, the U.S. and U.A.E. have explored AI energy partnerships as early as 2019. Under the U.S.-U.A.E. Strategic Energy Dialogue, the two countries agreed to cooperate in areas of mutual interest in AI. Shortly after this announcement, **ADNOC** selected **Honeywell's** AI-enabled asset monitoring and predictive analytics solution to improve efficiency in its downstream and upstream operations. Other U.S. companies have also announced partnerships. Earlier this year, **IBM** and MBZUAI launched an AI Center of Excellence that seeks to leverage AI in developing carbon neutral solutions to existing energy supplies. U.A.E. companies making strides in the energy AI space also include **Masdar**, DEWA, and BEE'AH. Masdar City, MBZUAI and The Catalyst partnered to establish the region's first clean technology startup accelerator with the aim to drive the growth of AI. COP28 President H.E. Dr. Sultan Al Jaber is focused on incorporating AI into the energy transition through a Changemakers Majlis series that convenes energy majors and tech leaders. ADIPEC 2024 will feature a new Digitization and Technology Conference to promote collaborative action to unlock the opportunities presented by AI.

Sustainability & Climate Technology

The U.A.E. is focused on sustainable development across all its strategic sectors. AI and advanced technology will be a play a key role in helping the U.A.E. meet Net Zero targets. The Dubai Electricity and Water Authority (**DEWA**) and **Microsoft** are collaborating on new digital solutions, including quantum computing, AI, and blockchain, to help identify leakages, conserve energy and make the energy system more sustainable. DEWA is one of the world's first utilities to adopt Microsoft's smart assistant program Copilot into its operations. NVIDIA and G42 announced a partnership to establish the **Climate Tech Lab in Abu Dhabi**. Collaboration will focus on developing AI solutions to improve weather forecasting through NVIDIA's Earth-2 platform.

Healthcare

A key sector for the U.A.E. as the country to seeks to bolster its human development agenda. The Department of Health – Abu Dhabi is driving a profound transformation across the Emirate's healthcare sector by setting a progressive regulatory framework that foster innovation, favors PPPs, and promotes and ensures excellence across the entire ecosystem. **Cleveland Clinic Abu Dhabi** is integrating AI into its operations, such as trialing new AI technology to help diagnose and treat stroke. Last month, Cleveland Clinic Abu Dhabi, which is part of G42's healthcare focused subsidiary **M42's** network, and MBZUAI signed a Memorandum of Understanding to advance research and education in AI. Cleveland Clinic Abu Dhabi and Cleveland Clinic colleagues in the U.S. conducted the U.A.E.'s first robot-assisted kidney transplants. AWS is working with M42 on a "Genomics-as-a-Service" offering, and Illumina is a key partner with M42 on short read sequencing. **Dell Technologies** and PureHealth partnered in Abu Dhabi this year to utilize generative AI across healthcare services including in early disease detection, medical data analysis and personalized treatment plans. U.A.E. governmental agencies such as the Dubai Health Authority (DHA) have been forward leaning on AI implementation and launched an AI strategy as early as 2018.

Sovereign Cloud

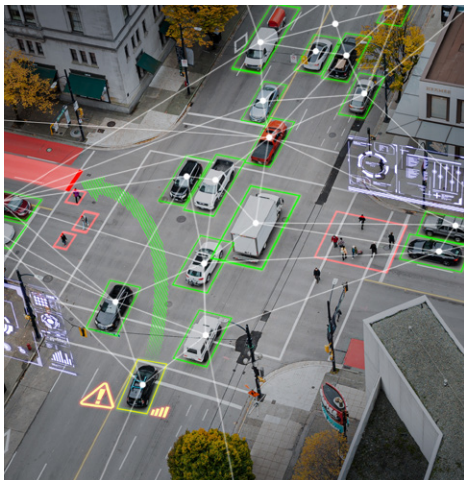
Over the past 2 years, **Microsoft** has formed a steadfast relationship with G42, leveraging Core42's robust national cloud and AI infrastructure along with Microsoft's technological prowess, both companies were able to leverage Azure Confidential Compute, to enable Microsoft Cloud for Sovereignty (MCfS) and launch a unique offering in the UAE which leverages the Microsoft public cloud backbone, while Core42 delivers the Sovereign Controls Platform, a sophisticated layer atop MCfS, meticulously designed to provide regulatory assurance for secure workloads. Their combined capabilities can be transformative in the UAE and select markets abroad. In June 2024, **du** announced that it will deploy **Oracle Alloy** to offer hyperscale cloud and sovereign AI services for the government and public sector entities in the U.A.E.

Agriculture

The U.A.E. seeks to incorporate AI into agricultural operations to boost efficiency and bolster food security. The U.A.E. introduced an AI-powered mobile app last year to detect crop disorders. During COP28, MBZUAI and Silal, an Abu Dhabi-based agri-food company, announced the formation of an AI Center of Excellence with the goal of developing and expanding the U.A.E.'s food production sector. U.S. AI-related engagement in the U.A.E.'s agricultural sector includes AIM for Climate's "Grand Challenge: Leveraging the Power of AI and Machine-Learning" initiative. As part of **Microsoft's** "AI for Good" initiative, the company will support food security initiatives.

Transportation & Logistics

The U.A.E. seeks to integrate AI into its transportation and logistics sectors to bolster its reputation as a crossroads between East and West. **Etihad Airways** is partnering with MBZUAI to conduct research into how AI could transform key aspects of the U.A.E.'s aviation sector. **Microsoft** launched a partnership with Abu Dhabi Terminals in 2021 that deployed AI-based container smart tracking solutions in the Abu Dhabi port system. **Emirates Group** and **Amazon Web Services** (AWS) are pioneering a new AI-enabled iXR platform that will feature 3-D virtual hubs, virtual training, gamified environments, and simulated experiences. DP World is engaged on AI training through its Big Tech Project competition and its ZODIAC training program which aims to improve supply chain utilization globally. In September 2024, Dubai Multi Commodities Centre (DMCC) launched its AI Centre. DMCC's aim is to provide access to capital and accelerator programs, networking, education, and training related to AI.



Infrastructure & Construction

The U.A.E. seeks to incorporate AI into its infrastructure and construction sectors. The U.A.E. is a pioneer in smart city development with both Dubai and Abu Dhabi ranked as the smartest cities in the Middle East and North Africa region. Initiatives such as Abu Dhabi's Smart Solutions and Dubai Smart City are models for global smart city development. U.S. companies such as **IBM** provide solutions and expertise for smart city projects in the U.A.E.

Space

The U.A.E. is seeking to become a key player in the space economy over the next decade. AI and other forms of advanced technology will be leveraged for successful commercial ventures. U.S.-U.A.E. technological cooperation is also at the heart of bilateral government projects. The U.S. supported the launch of a U.A.E. probe to Mars and NASA has trained Emirati astronauts. Earlier this year, the U.A.E. agreed to develop an airlock module for the Lunar Gateway. **SPACE42**, an AI-powered space technology company formed from a merger of Bayanat and Yahset, is focused on deploying technology and AI in space. SPACE42 aims to lead efforts to achieve the objectives of the U.A.E.'s National Space Strategy 2030. SPACE42's commercial objectives include establishing a platform for transformative AI technologies in space and using AI to further develop its satellite communications business.

Defense

The defense industry is a traditional anchor of the U.S.-U.A.E. commercial relationship. The U.A.E. military is actively incorporating AI into military training. Earlier this year, **L3Harris** formed a partnership with the Tawazun Council to establish a machine learning and artificial intelligence center. There will be many private sector opportunities as the U.A.E. seeks to leverage AI to build up its indigenous defense industry. **EDGE Group** will play a primary role in developing AI capabilities in this field and is prioritizing cooperation in AI technologies. U.S.-based Shield AI, a startup developing AI software for automated drone piloting, set up its international office in the U.A.E. last year.

R&D and Education

In order for AI to be deployed and commercialized in key sectors, professionals and policymakers need to have a strong understanding on how to use AI. The U.A.E. is therefore focused on developing an R&D ecosystem that forms the foundation for AI commercialization. MBZUAI, ASPIRE and U.A.E.-based incubator programs help catalyze partnerships and provide through leadership on AI. U.S. companies are plugging in to this desire to bolster AI training. Google has formed a series of partnerships in the U.A.E. to bolster AI R&D. Google plans on expanding its "Grow with Google" program which offers education programs in AI. Additionally, Google plans an "AI Majlis" program which will feature quarterly private Majlis sessions that bring leaders from Google, government, academia, and business in the U.A.E. together to discuss and advance AI principles and policies. The most recent AI Majlis series in May 2024 focused on incorporating AI into the healthcare and life sciences sector. SAS has also piloted AI education programs and seeks to reinitiate the AI Minds program with the U.A.E. government. **New York University Abu Dhabi** launched the Center for AI and Robotics (CAIR) in 2023. CAIR's research areas include the processing and fusion of data from sensors to perceive the surroundings of the robot and intention of moving objects, path planning and navigation in unknown environments, and the coordination of multi-agent systems formed by groups of robots.

Financial Services

The U.A.E. is strengthening its position as a center of global finance and capital. Abu Dhabi financial institutions, such as Abu Dhabi Global Market (**ADGM**) and Abu Dhabi Commercial Bank (**ADCB**), are seeking to leverage AI. In November 2023, ADGM and MBZUAI signed an MoU to develop AI-based technological tools designed to assist in regulatory compliance tasks within the financial services sector. ADCB has implemented an AI-powered risk management platform called Falcon. Falcon uses machine learning algorithms to analyze large volumes of data and provide real-time risk assessments to the bank's risk management team. U.S. companies such as **Mastercard** are getting involved by partnering with the U.A.E. to deploy AI to combat financial crimes and strengthen the security of the digital ecosystem. In September 2024, Mastercard and the U.A.E. government signed an MoU to establish a global AI center in Dubai focusing on financial security and digital ecosystem protection. The **Global Center for Advanced AI and Cyber Technology** will pioneer AI-driven solutions to tackle pressing global challenges. As an emerging hub for financial technology such as blockchain and cryptocurrency, AI is poised to play a key role in future collaborations in this sector.

Outside of these sectors, the core of AI's impact will remain the technology space, particularly in AI enterprise development. The U.A.E.'s desire to scale up complementary technologies and infrastructure such as data farms, cloud computing and supercomputing will require private sector partnerships, and U.S. companies are poised to play a big role. These are areas where G42 is making its biggest impact and has inked partnerships with **Microsoft** and **Cerebras**. G42 has signed an MoU with **AWS** to explore collaboration opportunities.

As U.S.-U.A.E. private sector engagement on AI ramps up in the next year, it is becoming clearer what types of capabilities U.S. and U.A.E. companies bring into partnerships. **Leading U.S. companies will plug-in to the emerging U.A.E. technology ecosystem by investing, promoting innovation, and instituting global best practices.** U.S. companies can also support U.A.E. policymakers write and design regulations around the ethical use of AI. In May 2024, ATRC and G42 joined a landmark global safety AI pledge that aims to harness AI for ethical purposes. G42 and ATRC joined major U.S. companies such as Microsoft, Google, Meta, Amazon in this safety commitment.

In turn, the U.A.E. offers U.S. companies a gateway to the Middle East, but also more broadly, the Global South. In addition to possessing a strategic location, the U.A.E. can attract top talent, build world-class infrastructure, and stand up a supportive regulatory commitment. H.E. Olama has also argued that the U.A.E.'s small size is actually an "enabler" as it allows for the quick deployment of AI technology.

Looking Ahead

AI has quickly become a central business issue. **The U.A.E. was early to realize the transformational potential of AI to support the country's larger goal of economic reform.** Over the past year, the U.A.E. and companies such as G42 have distinguished themselves by the pace in which they have commercialized AI technologies and pursued global partnerships. Although the U.A.E. has made great strides, it cannot become an AI powerhouse strictly on its own. U.S.-U.A.E. private sector collaboration on AI will undoubtedly contribute to this goal in the coming years.

The Business Council, through its Digital Domain Working Group, has set up an AI Task Force that will provide a platform for U.A.E. leadership to engage with industry about their vision for AI, bring together industry to discuss and advocate for policies that underpin the responsible regulation of AI and convene key stakeholders from across industry to explore the transformative potential of AI in all sectors, including education, healthcare, and energy.

U.S.-U.A.E. Business Council members are invited to register their interest here in joining this taskforce. Existing Digital Domain Working Group members will automatically be included in the work of the new AI Task Force.

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