Future Legacy

GE in the UAE

Foreword

More than 50 years ago, a group of visionary leaders realized the exceptional opportunities that a union would bring to its people. In 1971, the United Arab Emirates was formed, and today the nation – through the power of its people, the ambition of its leaders, and the strength of its union – has become a global player.

From a beginning that witnessed the discovery of oil and gas reserves; to the commissioning of electricity, desalination, and infrastructure projects; to the development of a solid economic, judicial, and financial foundation, the UAE has leapt from strength to strength. In aviation, healthcare, and energy, the region and the world now see the UAE as a leader – a country that implements the possibilities of the future today.

The world needs countries like this. Nations that look ahead with optimism for what lies ahead, with confidence and unity in their priorities. A country whose fabric is made up of 180 different nationalities, coming together with a common goal and purpose.

GE is humbled to have been a small part of the story of the UAE. Since the country was formed, our energy solutions have been deployed to meet the growing demand for efficient, safe, and reliable power; our advanced healthcare solutions are in use across public and private sector hospitals with the goal of achieving better patient outcomes; and we support the UAE's aviation sector through our partnerships with leading national carriers.

A little over a year ago, we made an important decision in our company's history and announced our plans to transform into three independent, industry-leading, public companies focused on the growth sectors of aerospace, healthcare, and energy – GE Aerospace, GE HealthCare, and GE Vernova, our portfolio of energy businesses. The GE of the past served a wide breadth of industries. The GE companies of the future will bring the focus and targeted innovation these industries need to move forward. These companies will be proud to continue to serve the UAE in the years ahead.

After the success of Expo 2020 and as the UAE prepares to once more step onto the global stage with the COP28 Presidency in 2023, the eyes of the world will turn to this nation as a beacon of what is possible. With wise leadership, a diverse and unified population, and an ecosystem of supportive partners, the best days of the UAE lie ahead and have the potential to positively impact our collective future.

Building a National Legacy

Although the UAE is a nation focused on the future, there is merit in looking at its storied history for context and perspective.

Partnering to create power infrastructure

With the world's sixth largest reserves of oil and gas, the UAE has over the past five decades consolidated its strength as a global hydrocarbon major.

In the nation's formative 1970s, the focus was on efficient oil and gas recovery and enhancing the country's refinery capacity. National Oil Companies (NOCs) strengthened their capabilities, with the energy sector serving as the key source of electricity and driver of desalination projects. Simultaneously, the country built its manufacturing infrastructure through massive investments in industries such as aluminum, water distillation, food processing, and cement and construction materials, all of which required accelerated electricity production.

The early years of the UAE also recorded a steady increase in population and exponential growth of the property sector, further underlining the need for an efficient, safe, and uninterrupted power and water supply.

GE's presence in the Middle East dates back to the early 1930s. It was one of the first global partners to provide advanced turbomachinery to the region's first oil and gas expeditions. Archival records show GE teams were on the ground checking equipment, reviewing maintenance plans, and studying forced outage histories. GE's gas turbines were deployed to realize the leadership's aspirations to deliver an uninterrupted power and water supply to promote the welfare of the community and accelerate domestic industry.

Today, the UAE looks forward toward a more sustainable energy future; next generation technologies such as carbon capture, utilization, and sequestration (CCUS), hydrogen, small modular reactors, and renewable energy can continue to build on the foundations of reliable power that have been put in place.

Striving for better patient outcomes

Since its formation, the UAE has been working with public and private sector hospitals to bring world-class standards in care and patient outcomes. This was reflected in the increased budgetary allocations for the healthcare sector, and further cemented when healthcare was identified as one of the six pillars of the UAE National Agenda, as outlined in its Vision 2021. Today, the UAE is focused on developing specialty care practices to provide in-country services for its population.

Aligned with this, GE Healthcare continues to focus on delivering 'precision healthcare' globally – using digital healthcare technologies and AI to analyze health data and distil actionable insight for the care of individual patients.

Innovation in aviation

A differentiating strength of the UAE is its geographic location between East and West. This natural advantage has been further amplified through the creation of a world-class aviation infrastructure, including modern airports and national carriers such as Emirates Airlines, Etihad Airways, flydubai, and Air Arabia.

The enhanced connectivity the industry brings has contributed to the nation's economic diversification strategy with the tourism, hospitality, and retail sectors now making strong contributions to the national economy. The aviation sector has also helped establish the nation as a global hub for trade, finance, and business.

To support the national aviation infrastructure, GE has, over the years, strengthened its partnerships by providing engines, training, digital solutions, innovation support, and local maintenance, repair, and overhaul (MRO) contracts and services. The company is also committed to building and fostering long-term relationships – beyond "just" the engine and into the future of flight.

> GE's presence in the Middle East dates back to the early 1930s.

Supporting human capital development

In addition to these three core industries, the UAE has long maintained a focus on its most important resource – its people. Through knowledge transfer, training programs, and an intense focus on education, the country is prioritizing the development of the population.

In an effort to bring skilled workers and diverse perspectives from around the world, the UAE has adopted a number of new visa rules, including new types of longer-stay visas that encourage a sense of belonging and permanency.

Fully supportive of this, GE's operations in the UAE are underpinned by long-term initiatives to support human capital development, innovation, and the digital transformation of industry. From upskilling youth to promoting an inclusive workforce, and championing social causes, GE serves as a responsible corporate citizen, creating long-term building blocks that will contribute to future transformation.

Powering the future of energy

UAE as an emerging energy leader

Perhaps more than any other industry, access to energy is a key lever for economic development. Currently, the way the world gets its power is going through an enormous transition. The UAE is at the forefront of regional and global players in how it thinks about energy diversification.

Taking the dialogue on clean energy to a global level, the International Renewable Energy Agency (IRENA) became the first global inter-governmental organization to establish its headquarters in the Middle East in Abu Dhabi in 2010.

Shortly thereafter, the nation marked a strategic shift in its energy strategy with the announcement of the UAE Vision 2021 in 2011, which focused on a sustainable development model and economic and energy sector diversification. This was followed by the Cabinet implementing the UAE Green Agenda 2015-2030 to drive the country's ambition to become a successful model and global hub for the low-carbon green economy.

With energy sector diversification taking precedence, the subsequent years have seen several strategic announcements, including the launch of the UAE Energy Strategy 2050 that targeted an energy mix combining renewable, nuclear, and cleaner energy sources to meet the UAE's economic requirements and environmental goals.

The nation highlighted the need to address the four pillars of the energy transition – ensuring energy security, affordability, reliability, and sustainability. At the Federal and Emirate levels, in addition to clear pathways outlined for the energy transition, demand-side management strategies were implemented that encouraged residents to rationalize the use of power and electricity.

A history of collaboration

Historically, GE has supported the UAE's energy framework on three levels. One, by enhancing operational efficiency, making the most of every molecule of oil and gas; two, by providing a broad array of power generation, transmission, distribution and water process technologies to address domestic requirements; and three, by helping to advance the energy transition through investments in a range of decarbonization technologies.

Initially, the primary role of the company was to support its customers and partners in strengthening their capabilities and in the lifecycle servicing of a large installed base of GE turbines for the oil and gas sector. GE and partner ADAT (Abu Dhabi Aircraft Technologies) expanded their partnership with the Gulf Turbine Services (GTS) repair facility, which offered enhanced levels of service and support for gas turbine operators throughout the region.

In the oil and gas sector, GE had built a strong footprint in the region delivering an advanced portfolio of technologies for the oil and gas sector that contributed to better business outcomes. GE also played a central role in investing in a Center of Excellence in water in Jebel Ali Free Zone when GE was involved in water processing technologies.

As cleaner energy became the focus, GE provided its landfill gas engines for a landmark project in Dubai, helping to convert waste to energy, with the potential of generating 1 megawatt (MW) of power and reducing the adverse impact of greenhouse gases on the environment.

At Masdar City, one of the world's most sustainable cities, GE partnered to accelerate research and development in clean energy. We worked to investigate the reduction of peak power demand in Masdar City by using smart home appliances with some of the first residents. The company also opened an innovation center and GE Garages workshop in Masdar City, encouraging co-creation and knowledge transfer. GE has also long held a presence during Abu Dhabi Sustainability Week. GE's commitment to promoting sustainability was celebrated with the company winning the 2018 Zayed Future Energy Prize for Large Corporations in 2018.

Although GE's portfolio has shifted over the decades, the commitment to the needs of the country has never wavered.

Solutions at play during the current decade of action

The UAE Energy Strategy 2050, launched in 2017, focuses on diversifying power generation and increasing the contribution of clean energy to the country's supply. This is broken down as 44% clean energy, 35% gas, 12% clean coal, and 6% nuclear. The UAE government aims to invest AED 600 billion by 2050 to meet the growing energy demand and ensure sustainable growth.

Based on this strategy, natural gas continues to play an important role in the country's energy transition story. To make this segment more efficient, the UAE's partners are not only deploying the latest gas turbine technology, but also implementing upgrades on the existing installed base.

GE has been at the forefront of this, highlighted through collaborations with leading utilities, aluminium smelters, oil and gas companies, and others, helping them to

reduce the intensity of their carbon emissions, enhancing productivity with advanced digital industrial solutions, and more.

GE's upgrades can enhance the output, efficiency, flexibility, and availability of gas turbines, while reducing environmental impact. An MXL2 upgrade on two GE 13E2 gas turbines at a facility in Abu Dhabi has increased the total output of the turbines by up to 23 MW using the same amount of fuel. It has also enhanced the availability of each turbine by an additional 6 days per annum by extending the duration between gas turbine maintenance intervals, thus leading to lower operational costs. Moreover, the upgrade solution will help deliver significant environmental benefits, preventing up to 18,000 tons of annual carbon dioxide emissions. Solutions such as GE's Asset Performance Management (APM) software are also being used in the UAE to increase the reliability and availability of equipment, decrease costs, and reduce operational risks.

GE also set up a Monitoring & Diagnostics Center in Dubai – an industry-leading power generation equipment monitoring facility. The Center's experts work with customers to increase uptime while reducing operations and maintenance expenses. Today, more than 950 power producing utilities use the M&D Center's monitoring services for over 6,000 power plant assets around the world.

Every day, the Center receives over 1 million data points per second, coming from thousands of sensors attached to monitored assets. By providing a real-time view of asset data, the Center enables more effective, collaborative trouble-shooting with experts, enhancing the ability to forecast and prevent power outages through predictive maintenance alerts, and providing customized solutions.

Finally, GE's Jebel Ali Service Center is another key local initiative. Completed in 2006, covering over 4,000 square meters, and representing an investment of over US$ 11 million, it houses two workshops – one each for gas turbines and generators. The facility offers advanced maintenance, testing, and repair solutions. Over the years, the Center has served more than 80 customers from over 35 countries and services equipment built by both GE and other Original Equipment Manufacturers (oOEM).

The only GE facility of its kind throughout the Middle East and Africa, it offers the advantage of delivering faster services at competitive costs to customers in the region and beyond, while operating to the same high-quality standards found at GE's facilities globally. Led by a team of expert professionals, the site has global ISO 9001 quality, as well as ISO 14001 environment, health, and safety (EHS) certifications.

Moving towards a Net Zero future

The UAE has now scaled up its focus on energy transition and decarbonization, announcing its Net Zero by 2050 Strategic Initiative just weeks before it marked its 50th National Day in 2021. A crowning glory in the nation's ambition to be a climate action leader was the UAE winning the bid to host COP28 in 2023.

Today, with up to 240 GE-built turbines across the UAE, the company continues to play an integral part in shaping the power sector of the nation. GE's portfolio of solutions that can potentially support the decarbonization of the industry includes a mix of renewables, gas, nuclear, hydrogen, CCUS, hybrid solutions, battery energy storage solutions, and other low and near-zero power sources.

GE can support the country's move toward hydrogen by enabling hydrogen-blended fuels in power plants for lower carbon emissions. GE is a world leader in gas turbine fuel flexibility, including more than 100 gas turbines that have operated (or continue to operate) on fuels that contain hydrogen and have accumulated more than 8 million operating hours.

GE's HA gas turbines were designed to reduce carbon emissions and support today's flexible power generation needs. The technology has helped deliver two world records for powering the most efficient plant in an H-class combined-cycle (CC) application. The first GE H-class gas turbines in the UAE are being commissioned in the emirate of Sharjah. Installing three 9HA.01 units is expected to help reduce carbon dioxide emissions by up to 4 million tons per year, compared to current levels.

GE has also signed memoranda of understanding (MOUs) with leading organizations in the oil and gas and aluminium smelters sectors in the UAE to develop roadmaps to reduce greenhouse gas emissions. Under the MOUs, we intend to explore hydrogen as a fuel for power generation, CCUS, and other potential solutions to support the transition to a lower carbon energy future.

Of course, renewable energy will also play a key role in the UAE's energy future. By 2030, Dubai's Mohammed Bin Rashid Solar Park is set to reach 5 gigawatts (GW) of solar power generating capacity, expected to reduce over 6.5 million tons of carbon emissions annually. GE provided the inverter technology for the solar park, the largest single-site solar energy project in the world.

With its global reach, innovation expertise and decades of local presence, GE's portfolio of energy businesses are expected to continue to be a strong partner to the government and the private sector as GE Vernova. In fact, as an independent company, GE Vernova will have the focus and capacity to usher in a new era of reliable, affordable, and sustainable energy. We are committed to supporting the UAE as it works to move the energy transition forward.

Precision Healthcare

Since the formation of the nation, the UAE had established the need for building modern healthcare facilities by leveraging both the public and private sectors. The focus has always been on the patient, through bringing advanced diagnostic and care solutions that would lead to better outcomes.

With the UAE recording an increasing incidence of lifestyle diseases, the need to promote an 'early health' or preventative model has increased. This is being made possible by advances in diagnostic tools such as cardiac biomarkers, non-invasive diagnostic imaging, targeted therapies, and IT-based disease management, which has the potential to nearly double the survival rates from cardiovascular disease, diabetes, and other chronic conditions.

GE has a legacy of supporting the UAE's healthcare sector, having provided more than 16,000 pieces of advanced medical equipment to support the nation's mission of promoting wellness and building cross-generational health. For decades now, GE's technologies have complemented the UAE's healthcare sector by enabling clinicians to provide greater options in patient care management.

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For instance, GE has formed alliances to further the nation's goals of developing advanced healthcare infrastructure. GE and Gulf Capital partnered to develop the region's largest diagnostic and healthcare service centers. GE is working with Al Jalila Children's Specialty Hospital in Dubai to provide advanced medical technology, and developing other healthcare projects in Abu Dhabi and the broader Middle East. Other key public and private partners include, the Dubai Health Authority, MAF Ventures, and SEHA Abu Dhabi.

Capitalizing on the UAE's reputation as a global logistics hub, GE Healthcare, in partnership with Ceva, inaugurated its first distribution warehouse center in the Jebel Ali Free Trade Zone Area. The 30,000 square foot facility serves global markets from the UAE, including the wider Middle East, Africa, Europe, Turkey, and Central Asia.Dubai Healthcare City and GE Healthcare have also signed an agreement to support human capital development in the region's healthcare sector. As part of the MoU, GE will participate in the delivery of world-class healthcare training and education programs at the Mohammed Bin Rashid Academic Medical Center (MBR-AMC) for healthcare professionals, in addition to introducing leadership curriculum from GE's world-renowned Crotonville leadership center.

The pivot to digital healthcare

With the advances in healthcare technology and the enormous possibilities offered by digitalization, the UAE was one of the first nations in the region to embrace the potential of digital health.

A frontrunner in leveraging new generation technology, GE's strategic focus on digitalizing the healthcare infrastructure is reflected in its support for building next generation 'digital' hospitals in Dubai.

On the frontlines during COVID-19

GE's expertise in advanced healthcare technology was underlined during the COVID-19 pandemic, when we partnered with SEHA and ADI to deliver the 'CT in a Container.' This innovative solution, featuring advanced Computed Tomography (CT) equipment by GE Healthcare, helped in diagnosing viral pneumonia attributable to COVID-19.

The fully insulated, self-contained modular units were sited in temporary tactical areas so that those who were suspected of having COVID-19 could be tested without having to enter hospital facilities. This, in turn, ensured better infection control and an additional level of protection for frontline healthcare workers in hospitals.

Four 'CT in a Container' were specially built and fully assembled in the UAE – two at Sheikh Khalifa Medical City and Al Ain Hospital and two at the special COVID-19 screening center in Al Dhafra and Emirates Humanitarian City.

A strong example of GE Healthcare delivering tailored solutions to aid UAE authorities in addressing this

pandemic, the 'CT in a Container' enabled physicians to complete patient lung screenings in under one minute and served more than 100 patients a day.

Intelligence-based healthcare system shaping the future

The UAE is setting a new legacy in healthcare with its focus on advancing precision health – treating more patients in an individualized way, with the goal of improved patient outcomes.

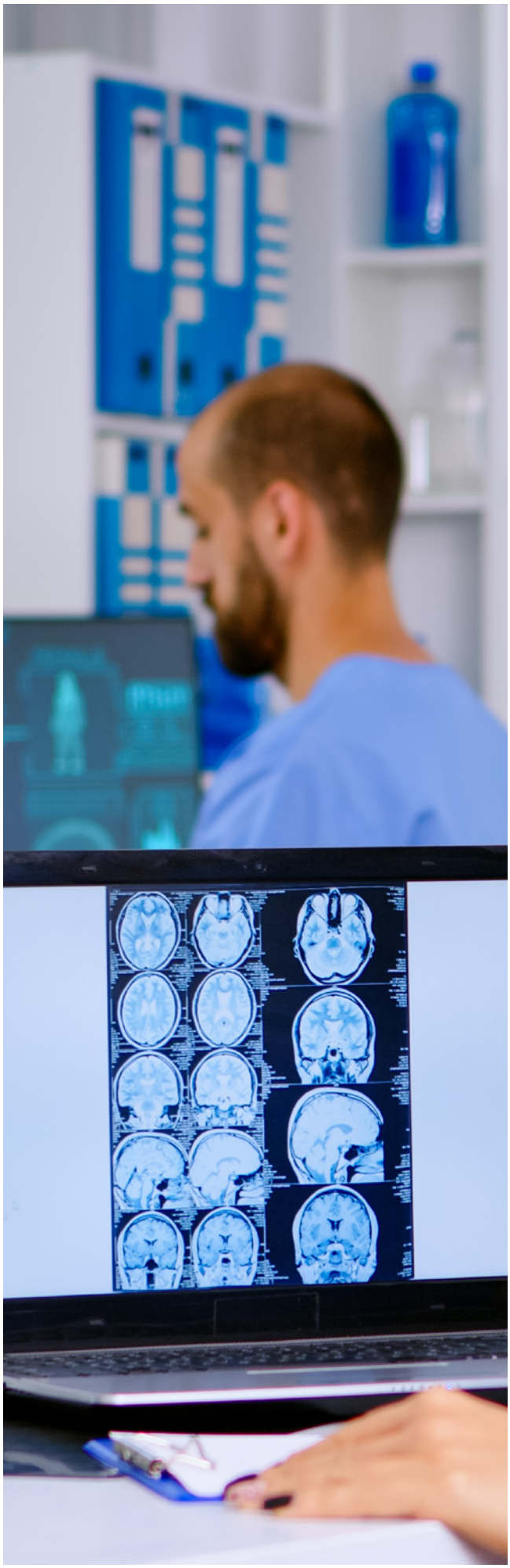
GE believes that delivering on the future of healthcare is about enabling precision health—integrated, efficient, and highly personalized care. Making this a reality requires many aspects of healthcare infrastructure to come together – merging clinical medicine and data science by applying advanced analytics and artificial intelligence across every possible point of the patient journey.

Pathbreaking research in this regard includes revolutionary projects such as the 'Digital Womb', which highlights GE's mission to help infants grow and develop healthily by creating sensors that continuously monitor without obstructing them in any way. With advanced data, new parameters and insights can be developed to help improve the care neonatologists give for reducing pain, increasing sleep, and improving overall monitoring approaches.

Another project is 'Virus Hunters' which are tiny sensors that are being developed to enable smartphones to detect the coronavirus. Successful roll out would mean, in the future, smartphones and smartwatches equipped with such sensors could help users detect not only the SARS-CoV-2 virus causing COVID-19, but also other pathogens and irritants.

Additionally, GE's Command Center technology, which is currently operating in Dubai in partnership with Dubai Health Authority, uses artificial intelligence in real time to support the optimal delivery of patient care. These hubs, usually located within the walls of a hospital, monitor assets, people, and performance. Over time, they learn more and can lead to the launch of improvement programs and focal points to drive a transparent, integrated healthcare culture.

Building on more than 100 years of innovation, GE HealthCare, as it will be known from January 2023, will be an independent health organization, focused on building intelligence-based healthcare systems and a healthier and more sustainable world. They will seek to create a world where healthcare has no limits.



Reimagining the Aviation Sector

The UAE has invested significantly in building a robust aviation industry, through the establishment of innovative, future-focused national carriers and world-class airports that enhance global connectivity. From a single airline with two aircraft in 1985 to four airlines that operate thousands of weekly flights to 80+ countries today, the growth and development of the industry has been nothing short of incredible.

A defining strength of GE's operations in the UAE is its partnership with the nation's aviation sector. Over the years, GE Aerospace has offered a wide range of solutions for, and with, its customers including aircraft engines, maintenance and servicing, asset management, software and optimization solutions, and access to its local and global innovation and maintenance, repair, and overhaul (MRO) networks. The company has built strong relationships with airlines across the UAE including Emirates, Etihad Airways, Air Arabia, and flydubai, by providing solutions that prioritize reliability, innovation, and sustainability.

Three core areas define GE Aviation's operations in the UAE: providing reliable technology as well as service, repair, and maintenance support; leveraging the power of data and analytics to enhance operational efficiency; and partnering in promoting innovation.

> The company has built strong relationships with airlines across the UAE by providing solutions that prioritize safety, reliability, innovation, and sustainability.

Building long-term partnerships

GE has built long-term partnerships with UAE carriers over many decades. Among key agreements, Emirates signed a ten-year After Market Services Agreement in support of the largest GE90 and GP7200 engine fleets in the world and extended the TrueChoice Flight Hour agreement with GE for MRO of 54 GE90-115B engines that power its Boeing 777-300ER aircraft. This followed GE and Emirates Airline celebrating the accumulation of one million cycles with its GE90 engine fleet.

Emirates also entered into a US$16 billion TrueChoice agreement with GE Aviation for MRO of GE9X engines that will power the airline's fleet of 150 Boeing 777X aircraft over a period of 12 years. This is Emirates' largest single-engine MRO contract to date.

Another strategic deal is the 12-year OnPoint solution contract signed by Emirates with GE Aviation covering the maintenance and inventory support for various avionics, electrical power, and mechanical systems on all Emirates Boeing 777 aircraft currently in service and the 44 more 777-300ERs on order.

In addition to engine agreements, Emirates and GE worked together to develop the technologically advanced Engine Overhaul Shop, complementing a Test Cell Facility in Al Warsan. The state-of-the-art engine shop, one of the largest in the region, can perform 300 shop visits per annum for GE's GE90 and Engine Alliance's GP7000 engines, which power the Boeing 777 and Airbus A380 aircraft respectively.

In the capital, Etihad Airways has signed agreements with GE for GE90-115B engines to power its two Boeing 777 Freighters, as well as a 12-year OnPoint solution services agreement for the new GE90 engines. The new engines and OnPoint solution agreement are valued at more than US$475 million at engine list price and over the life of the service agreements.

At the Dubai Airshow in 2021, Etihad Airways signed an agreement with GE for future opportunities to work together on initiatives to lower carbon dioxide emissions from its fleet of 787 aircraft as part of the airline's comprehensive sustainability program.

As part of the MoU, Etihad Airways will allow GE to use its fleet of 787s, spearheaded by the signature Greenliner aircraft, as a test platform for new technologies and engine hardware aimed at reducing carbon dioxide emissions and improving the performance of the GEnx engines that power the aircraft. The data from these tests will be shared between GE and Etihad Airways to inform implementation of enhancements across Etihad Airways' 787 fleet.

Strengthening local competencies

Building its localization footprint in the digital aviation sector, GE opened the Middle East Aviation Technology Center at the Dubai Airport Free Zone in 2015 to support customers' operations by leveraging data analytics, domain experience, and software capabilities to increase productivity, maximize performance, and minimize down time.

In 2018, GE Aviation has opened its On Wing Support Center in Dubai South's Aviation District Aerospace Supply Chain Facility, marking the expansion of the company's engine repair services. This builds on the On Wing Support Center GE has been operating with Emirates Airline since 2013, providing 24/7 quick-service repair solutions for all GE and CFM engines that serve the airline's fleet. With the facility in Dubai South, the center serves all UAE customers – including Emirates, Etihad Airways, Air Arabia, and flydubai – providing prompt maintenance and repair. From Dubai, the On Wing Support Center serves over 19 nations in the Middle East, Africa, South Asia, and Southeast Asia.

GE Aviation and Emirates Airline have also successfully implemented GE's electronic Flight Operations Quality Assurance (eFOQA), Fuel Insight, and Flight Pulse among Emirates' pilot community. The project was delivered on Emirates' fleet of B777 and A380 aircraft. The suite of digital products allows Emirates, by using aircraft data and smart analytics to optimize efficiency, reduce operational risk, and improve pilot awareness.

Looking ahead, GE will focus on aviation as GE Aerospace. The independent company remains committed to the continued development of the UAE's aviation sector and beyond. The new business will have sustainability at its core, while still prioritizing safety and innovation.

Recently, Mubadala-owned Sanad Aerotech completed the maintenance of 100 GEnx engines on behalf of GE Aviation – another significant milestone. Sanad was the first MRO partner within GE Aviation's global services network to obtain MRO certification for the GEnx engine and remains the only certified GEnx MRO partner in the Middle East and North Africa region. With GEnx reaching 10 years of operation in 2021, Sanad has expanded its existing maintenance and repair services to include the full overhaul of 315 GEnx engines until 2035. Sanad and GE Aviation have also signed an AED 500 million maintenance services agreement for next-generation engines for narrow-body and wide-body aircraft.

Partnering for breakthrough innovations

In an effort to further contribute to the strength of the aviation ecosystem in the UAE, GE continues to support innovation through a commitment to developing the future of flight. GE Aviation is on board with industry initiatives to fly net zero by 2050 and approve and adopt 100% sustainable aviation fuel (SAF).

This was underpinned by GE's partnership with Etihad Airways in operating its most sustainable flight ever from London's Heathrow to Abu Dhabi. The flight leveraged the learnings and efficiencies developed over the last two years of the airline's comprehensive sustainability program to reduce carbon emissions (CO2) by 72% in absolute terms compared to the equivalent flight operated in 2019.

The flight was part of the Etihad Greenliner Program – a two-year partnership between Etihad and Boeing using Etihad's Boeing 787 fleet as a test bed for sustainability improvements in partnership with organizations across the industry. As a Greenliner partner, GE drew on data gathered from the aircraft's sensors and analyzed it to enhance the understanding of flight performance and quick recognition of unsustainable activities.

GE Aviation also signed an agreement with Emirates Airline to develop a program that will see an Emirates Boeing 777-300ER, powered by GE90 engines, conduct a test flight using 100% SAF. A milestone collaboration for both Emirates Airline and GE Aviation, the flight is expected to demonstrate how flying widebody commercial aircraft using jet fuel made from alternative sources can lower lifecycle carbon dioxide emissions compared to petroleum-based fuels with no operational issues.

Globally, GE is currently developing the next suite of engine technologies – including open fan architectures, hybrid-electric and electric propulsion concepts, and advanced thermal management concepts – that offer the potential to achieve at least a 20% additional improvement in fuel efficiency compared to today's state-of-the-art single-aisle aircraft engines.

In the innovation space, GE is part of the Aviation X Lab, the ambitious aviation-specific incubator that brings some of the largest global pioneers under one umbrella – Emirates, GE, Thales, and others – with the aim of scaling breakthrough solutions for the future of aviation. In partnership with Dubai Future Foundation, the initiative aims to innovate and create the next era of aviation with its bold vision to positively impact the lives of 1 billion people. Aviation X Lab inspires innovative solutions for challenges such as achieving a carbon negative aviation sector for which it reaches out to start-ups, innovators, academics, NGOs, activists, and corporates globally to participate in the challenges.

GE was also a founding member of Intelak, an aviation incubator and accelerator that gives early to late-stage startups access to programming, mentorship, and a network of partners. Intelak creates an ecosystem dedicated to bringing aviation, travel, and tourism solutions to the region with a rotating group of corporations as its anchor.

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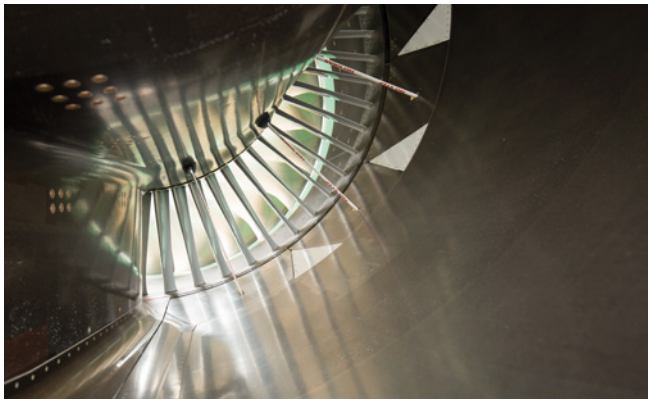

Future Leadership

One of the central developmental narratives of the UAE is its focus on building national capacity and a future generation of talented professionals. With inclusivity and diversity at the core of the leadership's vision, nurturing youth, a focus on STEM, and empowering women are critical pillars of the UAE's past, present, and future. This will ensure a rich pipeline of individuals who are ready to lead across the industries of energy, aviation, and healthcare.

At the heart of GE's onward journey in the UAE is a commitment to continue nurturing local talent.

Driving business leadership, GE launched the Leadership Accelerating Business (LAB), a corporate learning development center in Abu Dhabi that was modeled on GE's Crotonville executive education program that has benefited a number of industry professionals. LAB ran for nearly a decade in the 2000s.

In strategic agreements to drive local value creation by building a culture of innovation and entrepreneurship, GE joined hands with the UAE Ministry of Economy. GE organized a series of leadership sessions led by experts at the GE Ecomagination Innovation Center in Masdar City for government employees nominated by the Ministry of Economy. It specifically addressed the areas of localized innovation and 'start-up' culture, which emphasized the principles of lean manufacturing and agile problem solving.

The UAE Ministry of Education and GE signed an MoU for strategic cooperation to pioneer a new career-oriented innovation and talent development program for Emirati youth and prepare the next generation of Emirati youth for high-quality jobs in line with market-specific needs. GE shared its global knowledge base, resources, expertise, and professional training capabilities to create tailored programs and initiatives to help develop the professional skills of Emirati youth.

Harnessing the Fourth Industrial Revolution

One of the driving forces of the UAE's growth story is its focus on leveraging the potential of the Fourth Industrial Revolution. Announcing the national strategy, His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President and Prime Minister and Ruler of Dubai, observed, "We believe that science, technology, and innovation represent the roadmap for building future generations."

Further, the formation of the Ministry of Industry and Advanced Technology (MOIAT), focused on leveraging the potential of the Fourth Industrial Revolution, highlighted the government's vision to convert bold ideas into reality while promoting domestic creation manufacturing. GE supports the nation's Operation 300bn strategy to promote industrial manufacturing by harnessing the power of technology, exchanging learnings, and engaging in MOIAT initiatives.

GE has also supported the nation's efforts to create a modern and comprehensive data privacy framework. To work collaboratively with international companies that have established a significant presence in the country, the UAE Office of Artificial Intelligence hosted several sessions to collect and integrate feedback from across multiple organizations and entities. GE was part of this process and contributed to this very important milestone for the country.

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Supporting start-ups and youth talent

Over the years, GE has worked on numerous initiatives to bring STEM to diverse communities in the region, supporting the next generation of leaders.

From 2016-2018, GE drove its GE Garages initiative in the UAE to prepare young talent for the technologies and opportunities of the future. Its mission was to shift the mindset that the barriers for entry into industrial entrepreneurship are too high. In the UAE, garage projects included a year-long partnership with the UAE Ministry of Energy to run a series of advanced manufacturing workshops for employees of government and semi-government organizations. GE Garages Workshops were hosted for numerous groups, including a program where school children built fully functioning robots using 3D-printed parts they made themselves.

In support of local entrepreneurs, GE launched the MEMakers Venture Program with Wamda for start-up ventures to accelerate the Middle East's digital industrial entrepreneurship ecosystems. The initiative included three years of bespoke research and content creation for a digital content hub.

An integrated member of the community

For several decades, GE's global volunteering program has been active in the UAE. Hundreds of volunteers have contributed thousands of hours to projects focused on education, the environment, children with special needs, Ramadan initiatives, and more.

One important partner is Injaz UAE, a member of Junior Achievement (JA) Worldwide, the world's largest non-profit business education organization. Volunteers sign up to regularly conduct day-long innovation camps and other initiatives such as the 'Company Program', a 15-week curriculum designed to give young people real-life experience with entrepreneurship while working with a seasoned professional. During weekly video workshops, GE employees served as advisors to their groups, providing guidance, making suggestions, and offering experience to students working to launch their business venture.

GE Volunteers regularly help with environmental clean-up events either as part of wider UAE initiatives or through GE-led events. The teams have tackled clean-up and recycling at beaches and farm areas between Dubai and Abu Dhabi.

To support children with special needs, GE has an ongoing partnership with Al Manzil School. Among other initiatives, the company hosts an annual "Sports Day" which sees GE Volunteers lead teams of students at the school in an Olympics style day of games. The event is a staple of the UAE GE Volunteers calendar and is met with keen enthusiasm by both the school and the volunteers. GE has also organized the painting of schools, robotics camps, art auctions, and summer camp outings for various schools around the country.

Every year during the Holy Month of Ramadan, GE Volunteers contribute time, donations, and funding to various country and GE-led initiatives. This includes the "Adopt-a-camp" initiative by the Dubai Chamber, during which volunteers collected, sorted, and delivered a month's worth of supplies to workers in labor camps. Each year, the group also participates in funding and hosting shopping trips for new clothes for Eid for underprivileged children.

GE Volunteers UAE is an active group focused on education, service, community, and the environment

GE at Expo 2020: Shaping the Future Today

Expo 2020 Dubai had a significant impact in highlighting the resilience of the UAE and its focus on promoting the themes of sustainability, mobility, and opportunity – relevant to people anywhere in the world.

In line with its commitment to tackling the world's biggest challenges, GE held a high-level forum titled 'Spotlight Tomorrow' at Expo 2020 Dubai. The forum focused on embracing the future of energy, flight, and health by bringing together influential experts from across the industry who contributed to insightful discussions and highlighted key actions to address the global challenge of sustainability.

GE's 'Insights into Inclusion' event witnessed diversity leaders from NGOs, startups, and multinationals examining how corporations can drive inclusion for success. Key learnings from these sessions were developed into a whitepaper to help further the conversation among the wider business community. GE also partnered again with Injaz UAE to host the 'STEM for the Next 50' Innovation Camp for 250 female students, driven with the support of over 50 GE volunteers from across the company, which was held in celebration of the UAE's Golden Jubilee. The week-long program aimed to encourage the students to pursue careers in STEM by engaging them in critical thinking and problem-solving modules to find innovative solutions to the energy transition.

GE in the UAE: The Future Legacy

More than 80 years ago, we started our journey in the Middle East. Today, we are proud to be a contributing partner in this incredible community with technology solutions that drive vital infrastructure growth, deliver electricity, support better health outcomes, and connect people and places through flight. We are honored to have had a small part to play in helping to achieve the UAE's ambitious development plans and we will continue to build on our history as we evolve from one company into three.

As GE HealthCare, GE Vernova – our portfolio of energy businesses, and GE Aerospace, we will strive to remain laser focused on tackling some of the world's greatest challenges. Whether contributing to the energy transition, precision health, or the future of flight, these three companies will continue to pave the way for our customers, with integrity, innovation, and sustainability at the center.

The nation challenges us to push our frontiers. And we will deliver tangible results on the following commitments.

Commitment 1

Our ambition is to be a net zero company by 2050, including Scope 3 emissions from the sale of our products. We will work with our customers in-country to achieve this, aligned in support of the nation's Net Zero by 2050 Strategic Initiative.

Roadmap: We will support the continued generation of reliable power, while aligning with the sustainability and decarbonization targets outlined by the nation as it prepares to host COP28. We will accelerate actions to decarbonize the sectors in which we operate by delivering technology for critically needed emissions reductions and scaling breakthrough technologies for a lower-carbon future.

Commitment 2

We have partnered in the strengthening of the nation's healthcare sector with the deployment of over 16,000 GE Healthcare technologies nationwide and by being at the forefront of the future of health – during and after the pandemic.

Roadmap: We will continue to partner with the public and private sector to help deliver integrated, efficient, and highly personalized care by applying advanced analytics, digital solutions, and artificial intelligence across the patient care journey.

Commitment 3

We will continue to work with the nation's airlines on a sustainable future of flight.

Roadmap: To accelerate the uptake of alternative fuels such as SAF and decarbonization efforts, GE Aerospace will continue to collaborate across the aviation industry. We are working on what's next – focused on reducing carbon emissions and improving fuel efficiency through open fan, hybrid electric, hydrogen combustion, and others.

Commitment 4

GE has invested significantly in localization and capacity development initiatives across energy, healthcare, and aviation. Our investments address the needs of the community and GE's three future companies will continue this focus.

Roadmap: We will continue to build on our presence in diversified sectors aligned with the vision of the nation and create national competencies to drive transformational growth by empowering the next generation.