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SPECIAL EDITION

LAW UPDATE

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INSPIRING THE NEXT 50 YEARS:
A FUTURE WITH NO BOUNDARIES



SPECIAL EDITION

UAE CENTENNIAL 2071

INSPIRING THE NEXT 50 YEARS:
A FUTURE WITH NO BOUNDARIES



FOREWORD

Welcome to this special edition of Law Update that focuses on the UAE's Centennial 2071 plan.

This year is very much a year of reflection; a time to reflect on what the UAE has achieved since its inception 50 years ago, and a time to reflect on the UAE's vision for the next 50 years.

In this issue we look back, with pride, at what this country has achieved in its young life, and look forward, with optimism, to continue pursuing the vision of the UAE's founding fathers and UAE Centennial 2071. Launched by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai and H.H. Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, UAE Centennial 2071 features four distinct pillars: a future focused government; offering excellent education; creating a diversified knowledge economy; and a happy and cohesive society. These pillars will ensure continued investment in the country's future generations, and will prepare and provide them with the necessary skills to adapt to the rapidly changing times. Furthermore, the Plan will ensure the UAE preserves its place on the global stage as a forward thinking, innovative and creative hub.

As we prepare to celebrate the anniversary of the UAE, we are also honoured to celebrate the 30th anniversary of Al Tamimi & Company's Law Update, a leading publication since its inception. The magazine has, and continues to, document, comment on and offer insights into the country's and region's legal landscape.

My partners, colleagues and I would like to extend our deepest gratitude to our clients, friends and government authorities that have supported us on this journey. With their support we have made a mark as legal pioneers across the Middle East & North Africa (MENA) region, whilst supporting the ideals and vision of our esteemed leaders.

A key feature of this special edition are the interviews we conducted with a number of industry leaders, who highlight the outstanding attributes across all areas of the UAE Centennial 2071 plan. Their insights provide a sense of the sheer scope and optimism of the plan and highlights how the attributes are infused in the entrepreneurial spirit of the nation to drive development. I would like to personally thank those who contributed their valuable insights to this milestone issue of Law Update.

As a starting point, we have a special feature on the UAE Government which provides a detailed overview of how the UAE Centennial 2071 vision was born. Through a strong desire to continue to serve its people, and ensure that the UAE will top the world in all facets of its economy, education, healthcare, entrepreneurship, innovation and technology (page 8).

Looking at the implications of the pandemic on education and what the future might look like, Dr Abdulla Al Karam, Director General of the Knowledge and Human Development Authority, believes the online learning programmes implemented by most schools at the outset of the pandemic were swift, made the necessary adjustments and minimised interruption to education (page 15).

Hassan Al Hashemi, Vice President of International Relations, Dubai Chamber of Commerce and Industry, offers insights into his vision of how Dubai and the UAE can continue to grow as an attractive financial hub. Mr Hassan also reflects on the importance of supporting the entrepreneurial spirit of women, their role in education and the workplace (page 19).

Khalfan Belhoul, CEO of Dubai Future Foundation gives his views on the Foundation's contribution to the UAE Centennial 2071 plan (page 23). The Foundation's name speaks for itself!

Paddy Padmanathan, President and CEO of ACWA Power, discusses how ACWA Power is supporting the UAE in its journey towards sustainability, as well as pioneering the development and cost reduction of renewable power generation and water desalination projects (page 29).

Dr Raja Easa Al Gurg, Vice Chairperson and Managing Director of Al Gurg Group writes how they continue to evolve and adapt against the ever-changing backdrop of Dubai (page 35).

We also hear from Sultan Ahmed bin Sulayem, Group Chairman and CEO of DP World, who gives us valuable insights into the world of transport and logistics and shares his thoughts on what to expect in the future (page 39).

In addition, we cover a number of topics that have left an indelible footprint on the UAE's legal landscape and which are worthy of note.

Our teams across the UAE touch on a wide variety of topics including: the recently established State Ministry for Food Security and the new UAE National Food Security Strategy 2051 (page 68); the ever-changing nature of Space and how we can benefit from it (page 78); how the Education sector has adapted to the demands of the pandemic (page 52); and the pros and cons of introducing further tax commitments (page 88).

I hope you enjoy this special edition and its celebration of the UAE.

Best regards,

Essam Al Tamimi
Chairman, Al Tamimi & Company

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A special feature on

THE UAE GOVERNMENT:

FUTURE-ORIENTED AND HUMAN-CENTRIC

How has the UAE Government approached planning for its future?

Preparing for the future is a key function of the UAE Government, which has created a comprehensive action plan for the development of government work, with an integrated, future-centric, vision that engages community members in its design. The plan aims to make the UAE the best country in the world by 2071.

Since it was founded, the UAE has focused on investing in and enabling citizens, securing their future, building cohesive communities, developing a national knowledge-based economy, and enhancing global competitiveness, through strategies and initiatives aimed at promoting achievement and encouraging all sectors to participate in the sustainable development of the country, to help pave the way for achieving the objectives of the "UAE Centennial 2071" vision and preparing a roadmap for the next 50 years.

Who has been involved in designing the UAE's future for the next five decades?

With the aim of involving community members in shaping the future of the UAE and developing themes and components of the UAE Centennial Plan, H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice

President and Prime Minister of the UAE and Ruler of Dubai, launched, in September 2020, the UAE next 50-years Design Project which includes a number of joint interactive initiatives between both the government and private sector and community members to collaborate in creating ideas and charting a course for the future in all sectors and fields through various activities and events organized by the 50-year Development Plan Committee, such as seminars and design sessions.

The UAE "Designing the Next 50" Project included a number of initiatives launched by the 50-year Development Plan Committee with the aim of involving individuals from all segments of society in shaping the UAE's future, including students, youth, and non-profit organisations, in addition to government leadership dialogues.

H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, along with H.H. Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, had announced in December 2019 that 2020 would be "Towards the Next 50 years." Their Highnesses issued a directive for the formation of two committees affiliated to the UAE Cabinet, the 50-Year Development Plan Committee, chaired by H.H. Sheikh Mansour bin Zayed Al Nahyan, Deputy

Prime Minister of the UAE and Minister of Presidential Affairs, and a committee to oversee the UAE's Golden Jubilee celebrations, chaired by H.H. Sheikh Abdullah bin Zayed Al Nahyan, Minister of Foreign Affairs and International Cooperation. The announcement marks the formulation of the largest national strategy of its kind to fortify the country's reputation and enhance rankings across global competitiveness indices.

What is included in the "UAE Centennial 2071" and what does this mean for future generations?

H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the UAE Centennial 2071 as a long-term government work program, based on the historic lecture of H.H. Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, addressed to future generations, in which he charted a path and laid the foundation for the future of the UAE.

The "UAE Centennial 2071" is a five-decade vision for future generations that includes: the development of a national strategy to enhance the country's reputation and soft power; ensuring diverse sources of government revenue other than oil; investing in advanced technology based education; instilling ethics and values in future generations; increasing productivity of the national economy; and enhancing community cohesion.

The "UAE Centennial 2071" is dedicated to preparing a generation that carries the flag of the future and boasts the highest scientific and professional standards, and ethical and positive values to ensure continuity, secure a happy future and a better life for future generations, which will elevate the UAE to become the best country in the world. The UAE Centennial is based on four pillars: best education in the world, best economy in the world, happiest society in the world, and best government in the world. It strives to invest in the UAE's youth and to position the UAE as the best and most advanced country in the world, through a comprehensive strategy whose outcomes and objectives will be achieved by the UAE's centenary celebrations in 2071.

How is the UAE Government preparing for the future, and in which focus areas?

The objectives of the government Pillar, under "UAE Centennial 2071", include establishing the UAE Government to be the best government in the world, with a long-term vision and inspirational leadership that anticipates, and prepares for the future. Other objectives include adopting best experiences and practices, developing a national strategy to enhance the UAE's reputation and soft power, and ensuring that there are new, diverse, and sustainable sources of government revenue other than oil, with a view to enhancing the financial and investment capabilities of the Nation.

What importance does education play in the "UAE Centennial 2071"?

Regarding education, "UAE Centennial 2071" re-affirms the UAE's commitment to provide the best education system in the world for future generations by allocating and channelling resources towards investment in an education system that will enable the country to develop the talents of future generations and build their capabilities to serve the nation. The education system will reinforce the national identity, instil ethical values and positivity, and plant skills needed for the 22nd century in future generations, equipping them with all disciplines of knowledge, while using the best artificial intelligence systems and technology in order to develop globally open-minded, qualified Emirati scientists and researchers to lead future growth.

The economy is always evolving but what are the long-term plans for economic development until 2071?

On the economy Pillar, the "UAE Centennial 2071" reiterates the UAE Government's vision to become a global economic player within the major economic groups. Developing the best economy in the world, by employing a professional national workforce and the best global talent, while relying on advanced sciences and technology, innovation, creativity, entrepreneurship and environmental sustainability as essential drivers for economic prosperity. The plan also seeks to promote the best competitive environmental, digital and physical

infrastructure in the world, establishing the UAE as a hub for innovation, a platform for entrepreneurship, and a global economic centre.

How are societal facts addressed in the “UAE Centennial 2071” Strategy?

"Society" is a vital pillar in "UAE Centennial 2071" with several target areas, notably: establishing a secure, tolerant, cohesive and ethical society that embraces happiness and a positive lifestyle, and provides higher levels of wellbeing, made up of families who are aware of the requirements of the next phase. Investing in people is also important, including solidifying future generations' adherence to their national identity and Emirati ethics, and reinforcing values of modesty and service to the nation.

How did the UAE Government develop the “UAE Centennial 2071” Strategy?

H.H. Sheikh Mohammed bin Rashid Al Maktoum and H.H. Sheikh Mohamed bin Zayed Al Nahyan launched the "UAE Centennial 2071" Strategy at the conclusion of the first edition of Annual Meetings of the UAE Government in September 2017.

The meetings witnessed the launch of many long-term initiatives, programs, policies and strategies focused on the challenges facing the country's development process, discussing government priorities in various sectors, and introducing appropriate plans and programs. The meetings also seek to align and coordinate between Federal and local government strategies and mark the start of planning for the "UAE Centennial 2071". Moreover, the meetings shed light on the outcomes related to the national indicators and national agenda, and follow up on efforts to achieve goals and results within "UAE Vision 2021".

The meetings focused on highlighting key challenges and scenarios expected during the next five decades and the development of appropriate plans in partnership with the UAE community, while paying attention to their ideas, proposals and visions for the future.

The second Annual Meetings, held in November 2018, reviewed the efforts and programs undertaken to meet the "UAE Vision 2021" and set targets for the next

decade, in addition to developing plans and strategies that lay the foundation for the "UAE Centennial 2071".

The second annual meetings discussed the first phase of the "UAE Centennial 2071" with 30 councils, aiming to create a unified vision of the country's future infrastructure and generating main ideas and directions for the first phase.

In November 2019, co-design sessions for the future of the UAE were held as part of the third annual meetings of the UAE Government. The sessions witnessed participation from Emirati representatives of the various segments of the community, notably youth, senior Emiratis, parents, people of determination, retirees, and business leaders. The meetings were aimed at developing the annual meetings' agenda and proposing focus topics and challenges to direct and plan the creation of the future in line with the goals of the "UAE Centennial 2071".

How has the UAE Government brought in its full force to prepare for a 5-year plan?

Within the framework of government initiatives aimed at enhancing government integration and cooperation country-wide, and laying down the main plans and visions for the next 50 years, the UAE Government held consultative meetings in preparation for the next 50-year plan. The meetings, which were attended by a number of ministers, government officials, secretaries-general of executive councils, heads of departments, directors general, leaders, experts, officials and employees from Federal and local government entities, focused on laying down future trends and visions along six main areas.

The consultative meetings were part of initiatives of the 50-Year Development Plan Committee, led by H.H. Sheikh Mansour bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Presidential Affairs, to strengthen government integration at the federal and local levels and intensify efforts in setting the pillars and components of the UAE Centennial Plan 2071.

The consultative meetings on "The Future of Government Work" focused on three main topics: the future of governments, the sustainability of financial resources and a long-term fiscal strategy, in addition to media and government communication. The

UAE Government also discussed, on "The Future of Infrastructure and Environmental Sustainability," ways of developing future plans to upgrade the infrastructure, housing, environment, food and water security, as well as digital infrastructure sectors.

In the area of "Security, Justice and Safety," the UAE Government focused on enhancing readiness in this vital sector. Under "The Future of Education and Human Capital" area, in support of efforts to advance the education sector and enhance investment in national skills and talents, within five main areas for the development of the sector including, early education, general education, higher education, extended axes, research and development, and strengthening the capabilities and participation of the national workforce in the labor market.

On the economic sector, the UAE Government held consultative meetings to discuss the future of economy in the UAE at the "Economic Environment" and "Economic Model and Sectors" levels, in support of the advancement of this sector through development plans and the design of trends for the next 50 years.

The meetings discussed developing the future of the community sector, by focusing on family and youth issues, sports, culture, and the values of Emirati society. In addition, special meetings were held to discuss the future of the country's healthcare and medical services and ways of developing an advanced healthcare system based on providing smart medical services and adopting national frameworks for health prevention and community education, in order to enhance the UAE's leadership and competitiveness globally.

What measures has the UAE Government used to track its progress in key areas?

The UAE emerged among the top countries worldwide in key indicators of global competitiveness for 2020. It ranked first globally in 110 indicators and first in the Arab region in 473 indicators. In addition, the UAE ranked among the top 5 countries globally in 202 indicators and in the top 10 globally in 327 indicators. In government sector indicators, the UAE ranked first for public-private sector partnership according to the IMD report, first globally for finance skills in the government sector according to the IMD report, first globally for the country's capacity

to attract the best talent according to the Legatum Prosperity Index report, second globally and first regionally for adaptability of government policy according to the IMD report, and second globally for mobile phone subscription penetration according to the ITU report. In addition, the UAE Government received an "Aa2" rating in creditworthiness, which is the strongest sovereign rating in the region by the international rating agency "Moody's for 2020.

The UAE ranked first regionally on the Government Ensuring Political Stability index according to the World Economic Forum report, first regionally on the Burden of Government Regulation index according to the World Economic Forum report, first regionally on the Transparency of Government Policymaking index according to the Legatum Institute report, and first regionally on the e-Government and e-Participation Index according to the Global Competitiveness Report and the Global Innovation Index.

What were some of the initial steps taken by the UAE Government to lay the foundation for “UAE Centennial 2071”?

In 2016, the UAE Government began laying the foundation for the future government, through a ministerial reshuffle, which was announced by H.H. Sheikh Mohammed bin Rashid Al Maktoum. The adjustment included a new vision for government directions that are primarily future-oriented and forward-looking in all areas of government work, youth engagement, the happiness portfolio, and tolerance portfolio. Ministries have been renamed and new portfolios were added for the UAE to ensure that national priorities and goals are achieved including a community prevention portfolio for the Ministry of Health and a climate change portfolio to consolidate the UAE's position as a key player on climate issues. Furthermore, the Ministry of Public Work has been renamed as the Ministry of Infrastructure Development.

H.H. Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, also approved another ministerial reshuffle adding new portfolios that deal with artificial intelligence, well-being, advanced science, advanced skills, and food security, to form an agile government to transition the country towards the Centennial.

INDUSTRY EXPERT INSIGHTS



IN CONVERSATION WITH

DR ABDULLA AL KARAM

*DIRECTOR GENERAL, KNOWLEDGE AND HUMAN
DEVELOPMENT AUTHORITY (KHDA)*

With the pandemic having accelerated the uptake of distance learning and virtual classrooms, there were multiple innovations in education delivery. How did you see educational institutions ensuring excellent education is delivered virtually? What does the KHDA envisage future classrooms to be like, will students return to wholly physical classrooms or would we see hybrid blended learning classrooms?

The pandemic has challenged expectations of what education should be and can be. Future-focused school leaders have told us that the goals of their five-year innovation strategies were met in just six months. Practices that we thought would take months or years, such as an alternative to examinations, came about in days. Students have become more independent learners; parents are more involved in their children's learning, and teachers are able to create more customised learning plans for each of their students. School leaders, teachers and parents have collaborated to adapt and innovate learning for younger and older students, and for students of determination.

Future classrooms may not be classrooms at all. When teachers and students are able to connect virtually, learning can happen wherever they are. The exclusive relationship that has traditionally existed between schools and students, and schools and teachers, is also changing.

Some students may want to study at more than one school; some teachers may also prefer to teach at more than one school. Distance learning has made it possible for this to happen.

Distance learning has served its original purpose of ensuring that education continues through a pandemic. As time goes on, its purpose is also evolving. Online learning will offer schools, teachers, students and their parents greater flexibility in how, when and where learning is delivered. More than ever, physical schools will be places for students and staff to improve their physical and emotional wellbeing; to build friendships and to have fun – an essential tenet of education.

The UAE Vision 2021 set the goal of creating a first-rate education system with mathematics, science, reading and Arabic language attainment targets. With the agenda coming to an end this year, what achievements and weaknesses in schools have you identified? How will these feed into the achievement of the Centennial Plan 2071?

Six years ago, the leadership of the UAE announced ambitious National Agenda targets for Dubai private schools, which included scoring among the Top 10 countries in the world in the international assessment Trends in Mathematics and Science Study (TIMSS).

Our education community has never backed away from a challenge. Ever since Dubai first participated in its first TIMSS cycle in 2007, schools have made consistent and significant improvement. What started out as an ambitious target soon became a reality.

In the latest round of TIMSS undertaken in 2019, students from Dubai private schools have met UAE National Agenda targets and scored among the top 10 in the world.

These results are testament to the dedication, commitment and love that Dubai's principals and teachers have for their students, their schools, and their city. They are also a reflection of Dubai's promise to provide students with a world-class education that values wellbeing as well as academics.

In response to each of the four main pillars of the UAE Centennial Plan, we continue to work with international partners

and local schools to improve and integrate wellbeing into education in Dubai. In March we will be announcing the results of the fourth year of the Dubai Student Wellbeing Census, as well as the third Adults@School Wellbeing Survey.

“Our social media presence is part of our overall commitment to meaningful engagement with our community.”

KHDA has been creatively using social media to connect with students and teachers. What benefits has KHDA seen emerging from this engagement and how does it see its increasing engagement help towards achieving excellent education?

Our social media presence is part of our overall commitment to meaningful engagement with our community. Our approach is human-centred: we don't regard ourselves as a 'government authority' communicating with 'stakeholders'; rather, we are humans communicating with other humans.

Education operates much like an eco-system, with many different individuals and organisations playing equally important roles that are vital to the health and success of the system as a whole. Social media is a fun and effective way to bring these different groups together towards the shared goal of world-class education in Dubai.

Through social media, we're able to engage with students, parents and teachers. They have direct access to the regulator, which enables them to feel a greater sense of belonging to the whole education community in Dubai. Likewise, we can use social media to gauge public opinion or to ask for specific feedback.

Through the accessible language, tone and messaging we use on social media, we have built positive relationships with our community. This not only brings our own community closer together, but also shows the qualities of Dubai's private education sector to the wider world.

While the UAE is becoming an education destination for students in the MENA and South Asian regions, what steps are you encouraging universities and schools to take to appeal to students worldwide, in line with the UAE's Centennial 2071 aim to become a competitive knowledge economy?

Dubai is home to 36 international branch campuses, the most in the world. The focus has always been on quality – while each these universities are accredited by their home countries, their programmes are also quality-assured by the University Quality Assurance International Board (UQAIB) and recognised by the Government of Dubai.

The latest data from Dubai's private higher education sector shows that 25 per cent of university students have come to Dubai specifically to study, attracted by its location, security and employment prospects. Responding to market demands, the sector has seen an 11 per cent uptake in computer science and technology programmes in the last academic year.

With our friends at Dubai Tourism and universities themselves, we are working on an initiative to attract more students from specific regions – such as China – to Dubai.

Dubai's 50-year charter, announced by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, focuses in part on higher education and building a competitive knowledge economy. Under the charter, national and private universities will become free zones, where students can carry out their economic and creative businesses. Integrated creative and economic zones will be established next to universities to support students in education, research, and finance while setting up their businesses. The end goal is not only graduating students but also coming up with companies.



IN CONVERSATION WITH

HASSAN AL HASHEMI

*VICE PRESIDENT OF INTERNATIONAL RELATIONS,
DUBAI CHAMBER*

How will the Dubai Chamber of Commerce & Industry (Dubai Chamber) focus on promoting the interests of its business community over the next 50 years?

Dubai Chamber is fully committed to supporting businesses in Dubai as they adapt to a new reality and providing access to new opportunities in the next phase of growth. In line with Dubai's vision for the next 50 years, Dubai Chamber is expanding its range of smart services that improve ease of doing business and enhance economic competitiveness. We are increasing our focus on key sectors that are driving Dubai's sustainable growth, such as e-commerce and digital economy, blockchain, artificial intelligence, high-tech industries, logistics, agribusiness, sustainability, mobility, innovation and space industry. Meanwhile, we are exploring new gateways and facilitating international cooperation that can drive and diversify Dubai's foreign trade and strengthen its position in the global arena.

In terms of maintaining the competitiveness of Dubai as an international business hub, what are the key steps that need to be taken?

As Dubai maps out its vision for the next 50 years, it has a real opportunity to create a new narrative – one that draws on its strengths and positions the city as a global hub for the future economy and a magnet for the world's most innovative companies

and startups. The timing of the recent stimulus and business-friendly measures is ideal given that multinational companies are now looking to relocate their supply chains and prepare for the post-COVID recovery. In this regard, Dubai has become a destination of choice offering vast competitive advantages.

How did the Dubai Chamber's wide range of e-services and policy advocacy efforts ensure business continuity during the pandemic? What are the lessons for the future?

Dubai Chamber's wide range of smart services have become a necessity for businesses during COVID-19, while its advanced digital infrastructure enabled it to carry out all of its operations remotely and efficiently. Over 667,000 e-transactions were processed by Dubai Chamber in 2020 as it offered 98% of its core services online and utilised digital platforms to host the vast majority of its meetings and events. Keeping all this in perspective, the Chamber plans to continue investing in advanced technologies and cutting-edge solutions that improve ease-of-doing business in Dubai, create value for its members and boost its competitiveness in a fast-changing business landscape.

“Dubai Chamber is expanding its range of smart services that improve ease of doing business.”

As a bridge between government and business, Dubai Chamber of Commerce and Industry is playing a crucial role in facilitating public-private sector cooperation and advocating on behalf of companies in Dubai to ensure a favourable business environment. In addition to engaging in an open dialogue with members of business groups and business council in Dubai, the Chamber has put in place several initiatives that businesses in the emirate are leveraging to voice their concerns, address issues of common interests and share policy recommendations.

Over the last year, we learned many valuable lessons as a chamber, including the importance of leadership, innovation, digital preparedness and close public-private sector cooperation in responding effectively to unprecedented challenges and enhancing economic competitiveness.

The UAE’s Bankruptcy law was a major step forward in modernising the UAE’s insolvency law allowing for the early restructuring of indebtedness for distressed companies. What key legal changes does the Dubai Chamber see as having the most impact for the Dubai business community in the future?

Following several business-friendly measures rolled out by the government last year, including 100% foreign ownership and the amendment of the bankruptcy law, the UAE is now opening citizenship to select foreigners including investors, specialised talents and professionals, as well as their families.

This move is game changing for many reasons. It will attract top talent with expertise needed to support the UAE’s sustainable development and transition to a knowledge-based economy. At the same time, it will elevate the country’s status in the global arena and enhance its value proposition.

Why was it important to launch the Dubai Start-up Hub (the entrepreneurship arm of Dubai Chamber) and how will this hub grow?

Since its establishment in 2016 as an initiative of Dubai Chamber of Commerce and Industry, Dubai Startup Hub has grown rapidly and expanded its offerings and network in line with the unique and changing needs of Dubai’s maturing entrepreneurial community. What began as an online interactive portal offering resources and information has evolved over the last few years to

become a one-stop shop for all things startup, providing entrepreneurs with an ideal platform for knowledge sharing, mentorship, training, development, competitions, knowledge sharing, collaboration, networking or growth opportunities.

Over the last few years, we have seen a sharp uptick

in the number of international startups that are joining Dubai Startup Hub with the intention of entering the Dubai market and leverage the emirate to expand their footprint in the Middle East. In an effort to cater to different types of startups and their unique needs, we have launched other programmes such as Market Access which is designed to facilitate business deals between leading companies in Dubai and promising startups that can solve their market challenges.

Today, Dubai Startup Hub has truly become a platform of collaboration for city ecosystem. For instance, our annual Networking Series features incubators and accelerators as guest speakers, while the annual Dubai Smartpreneur Competition is supported by public and private sector stakeholders including Smart Dubai, venture capitalists, incubators and accelerators.

Female entrepreneurship and participation in the labor force has been high on the Dubai Chamber’s agenda. Dubai Business Women’s Council, under the umbrella of the Dubai Chamber has played an active role in enhancing gender diversity. How will this role grow in the next 50 years?

The entrepreneurial landscape for women has changed a lot here in the UAE over the last decade. Women were already highly educated and working in the public and private sectors, but what happened in recent years is that many of them acquired enough skills and experience and capitalised on the opportunities this great country is offering by launching their own ventures – many of which meet market needs.

Women entrepreneurship has long been a top priority for Dubai Chamber. Not only are we empowering women in business through our initiative – the Dubai Business Women Council (DBWC).

Established in 2002 under the umbrella of the Dubai Chamber of Commerce and Industry, DBWC has dedicated its efforts to enhancing gender parity in society and encouraging women to play an active role in building the country and stimulating sustainable development. The DBWC organises tailored workshops and training sessions for its members to provide them with valuable information, best practices and skill set to excel in their field of work.

We also provide tailored support and guidance to aspiring women entrepreneurs through Dubai Startup Hub’s various programmes and working closely with our international offices to provide them with access to global growth opportunities. There is vast potential for the UAE to align its efforts with other progressive countries to expand bilateral cooperation in the area of women entrepreneurship and build partnerships to expand support to women-led businesses.

“Women were already highly educated and working in the public and private sectors, but what happened in recent years is that many of them acquired enough skills and experience and capitalised on the opportunities this great country is offering by launching their own ventures – many of which meet market needs.”



IN CONVERSATION WITH

KHALFAN BELHOUL

CEO, DUBAI FUTURE FOUNDATION

What are the top three priorities of implementing the Centennial Plan for Dubai Future Foundation?

Our leadership has always been ambitious, wise and foresighted, with a vision to place Dubai as the leading city of the future. H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai launched the foundation with the aim of institutionalising the future and that's how our story started.

Our priorities at DFF are set to fully support the implementation of the 4 main pillars of the UAE centennial plan, which are: creating a Future-focused government – a priority that we support through many initiatives such as the future-focused courses that we launch throughout the year at the Dubai Future Academy, the academic arm of Dubai Future Foundation, which offers government employees courses that fortify the most sought after future skills that allow them to imagine and design the future in line with the vision of our leaders. Our very own unique ecosystem, AREA 2071, is one of the most dynamic innovation hubs in the region, attracting talents and entrepreneurs from around the globe, supporting their growth into being positive contributors to the future, and supporting Dubai's diversified knowledge economy. At The Dubai Future Research, our research arm, continues to produce insights and recommendations

of the way forward supported by a firm foundation of evidence-based analysis and quantitative and qualitative reporting to enable stakeholders and key decision-makers to anticipate and better navigate the future, guide policy-making and develop key strategic initiatives and strategies. The Dubai Future Accelerators programme connects government and private sectors with talents and innovators from around the world to allow them to solve future challenges and use Dubai as a testbed for their innovations, to be part of creating a high quality of life for the people of Dubai and the UAE, and further solidify Dubai's position as a leading city of the future.

Considering the ambitious Centennial Plan for the UAE, how does the Dubai Future Foundation engage with the youth and empower the next generations of UAE Leaders?

Dubai Future Foundation is all about youth empowerment and engagement in creating an inclusive society. We have launched a number of programmes and initiatives that do not only focus on educating the youth with the knowledge of the future and the skills they need to lead the future, through the Dubai Future academy courses, but also on actual engagement of this significant segment of society in creating the future. In line with the vision of H.H. Sheikh

Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to inspire innovation and creativity amongst students as an integrated part of their higher education, we launched the University Entrepreneurship Program to create a suitable environment for innovation and entrepreneurship and prepares young students for the future by developing their entrepreneurial capabilities.

What is the University Entrepreneurship Program?

Aiming to achieve the goals of the Fifty-Year Charter's 6th Article, the Dubai Future Foundation has taken the essential step in realising the comprehensive vision announced by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, in creating economic and creative free zones in universities that allow students to carry out innovative businesses and creative activities as an integrated part of their higher education, the University Entrepreneurship Program ('UEP') creates a suitable environment for innovation and entrepreneurship, employs modern technology in various vital and future sectors, and prepares young students for the future by developing their entrepreneurial capabilities through five main stages: learning about successful experiences; identifying opportunities and areas of entrepreneurship; developing personal capabilities and talents; surveying potential business opportunities; and implementing ideas and projects.

12 local and national universities are taking part in the UEP program. So far, the UEP has supported more than 550 students in various ways including prototyping and investment opportunities.

What are the steps currently being taken by the Dubai Future Foundation to accelerate the adoption of technologies and digital transformation?

The need to enable new business activities based on agile regulations emerged to align with the vision of our leadership to

accelerate innovation and its application throughout all sectors. Hence, in January 2019, we launched the regulation lab (RegLab), a revolutionary approach on behalf of the UAE in the legislation and application of emerging technologies. The lab works closely with regulators, the private sector, innovators, and business leaders to co-create legislation that is in step with innovation speed. Regulations passed too early may stifle new innovations, while those that come too late may have already negatively impacted people and markets. That is why RegLab works in the regulation space to align regulation speed with innovation speed.

RegLab was launched as part of the UAE's pathway to becoming a global innovation incubator and a testing ground for future technologies and their applications shaping human life and activity in the future, such as mobility, health, 3D printing, AI, and more.

This initiative aims to create an agile and conducive legislative environment that pioneers "regulation innovation" as we develop new or existing legislation around emerging technologies in line with UAE's Centennial 2071 plan.

In addition to the RegLab, we enable and support government entities across Dubai through many initiatives such as Dubai Future accelerators, which facilitates collaborations between government entities and innovative start-ups to solve challenges of the future. Through the Centre for Fourth Industrial Revolution (C4IR), we aim to develop the tools and applications of the Fourth Industrial Revolution in the UAE and work towards developing governance frameworks, protocols, and best practices both regionally and globally.

The Centre further aims to support the UAE's strategy for the Fourth Industrial Revolution and further strengthens its position as a global hub for this

“RegLab works in the regulation space to align regulation speed with innovation speed.”

era, increasing its contribution to the national economy by means of advancing innovation and future technologies within the government.

In light of all the developments and ambitious plans for the UAE, how will you ensure that the country’s values and heritage are preserved?

Our strategy at DFF is based on our leaders' vision, and as we move forward to implement the UAE centennial plan, we draw strength from Dubai's story.

In 1970 an airport was commissioned by a ruler of a small emirate – Dubai, with sand cleaved to run concrete runways. In around 60 years, this airport became the world's busiest. In 1961, a full decade before the UAE was formed, Khor Dubai, or the Dubai Creek, was dredged to allow larger vessels in to welcome the world. In 1971, a unified nation was created out of tribal lands by leaders of vision and foresight, and the United Arab Emirates was born. In 1979, and with our leadership's visionary foresight, a gateway hub and a global trade link of the world is born in Dubai: Jebel Ali Port became the largest man-made port in the world, connecting global markets and facilitating trade. In 2016, H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai established the Dubai Future Foundation to institutionalise future foresight. Our initiatives are human-centric and tackle all aspects of human life, yet our leaders' vision, wisdom, and foresight are embedded in our DNA and in everything we do as an institution that specialises in imagining, designing, and executing the future.

Do you think that the UAE will be the top incubator for innovative ideas worldwide?

The foresight of our leadership, and the vision to place Dubai as the leading city of the future and a leading hub for tourism, finance, technology and innovation has furnished for Dubai and the UAE to become a leading incubator for talented innovators from around the globe.

The UAE has three of the most dynamic ecosystems in the region. They have succeeded in putting the UAE among the top most open and welcoming incubators globally: AREA 2071, Fazaa Center for Business Incubators and Accelerators, and Hub 71.

In addition to these dynamic hubs, and inspired by the vision of our insightful leadership DFF has set new and flexible legislation for future technologies to mitigate any adverse effects that may result from the application of these technologies in an unsafe manner and to enhance the exchange of expertise and knowledge while keeping up with the accelerating innovation in technologies.

RegLab aims to provide a set of flexible laws and legislation by working closely with policymakers from federal and local government authorities as well as the private sector and business leaders to develop legislation governing vital future sectors that positively impact societies and support the UAE's role as a global incubator of innovations and creative projects in four main areas: mobility; health; 3D printing; and artificial intelligence.

How does AREA 2071 embody the UAE Centennial 2071’s plan?

AREA 2071 is a fast-growing ecosystem with physical and, more recently, virtual activations and events that continuously aim to connect government, private sector, and start-ups beyond commercial engagements and programmes The objective of these activations is to regularly share information regarding the partner programmes, successful founders, and start-ups in the ecosystem and inspire and support new entrepreneurs and students to start their own journeys. AREA 2071 hosts a myriad of different events to transform the ecosystem into a collaborative and supportive community. Each member of this community is given the opportunity to learn, engage and grow through the exchange of knowledge, building networks, and collaboration. These events include workshops, one-on-one talks, panel discussions, pitch events,

hackathons, and open networking events. These events are driven by the needs of the community and cover technology, innovation, entrepreneurship, youth enablement, education, legal, investment, fundraising, soft skills, and women empowerment, to name a few.

Over the years, with over 26 thousand participants from around the globe, AREA 2071 hosted thousands of Workshops, presentations, and talks with guest speakers sharing their knowledge, skills, expertise on specific topics as well as one-to-one meetings, networking events, and casual conversations to enable the exchange of personal experience, stories and growth tips, in addition to special sessions with mentors, founders, and technology experts to work with start-ups on their challenges and help them explore market opportunities, industry prospects, and insights.

From your personal perspective, what current project are you working on that you are most excited for, or do you feel has the greatest potential to assist the futuristic UAE government?

I believe that every single initiative, big or small, launched by DFF is impactful, insightful, and bears great potential for progress in our society.

We are anticipating the opening of the Museum of the Future soon, which aims at further cementing Dubai as a hub

“Our leadership has always been ambitious, wise and foresighted, with a vision to place Dubai as the leading city of the future.”

for innovation and a testbed for emerging technologies and exploring the future of science, technology, and innovation. In addition to becoming a major tourist destination, the Museum will offer a platform to demonstrate and test the latest inventions

and prototypes from emerging start-ups as well as technology giants.

We are also launching the Dubai Future District, announced in 2020 by HH Sheikh Mohamed bin Rashid Al Maktoum. DFD is the Middle East's biggest future economy-

focused district and part of our unique ecosystem, AREA 2071. The district connects DIFC, Emirates Towers, and Dubai World Trade Centre, and houses an economy research centre, incubators and accelerators, and innovative space for future economy pioneers.

The new district aims at placing Dubai as the world's capital of the new economy and provides financing and legislative facilities and options for businesses from around the globe. With offerings that vary from accommodations to simplified licensing plans to visas, to unique opportunities to grow unique presence for businesses across the region, the Dubai Financial District will shift Dubai's foreign trade through stimulation and revitalisation with the continuous development of all the logistical, legislative and service tools, in addition to building new international partnerships.



IN CONVERSATION WITH

PADDY PADMANATHAN

PRESIDENT AND CEO, ACWA POWER

The UAE has an established track record as a proponent of sustainable development, and is committed to implementing the United Nations' Sustainable Development Goals (UN SDGs). It is no surprise, therefore to see the sustainability motif echoed in the UAE's Centennial plan. How has ACWA Power imbibed these priorities into its business plan?

ACWA Power has been supporting the UAE in its journey towards sustainability for well over a decade by pioneering the development and cost reduction of renewable power generation and water desalination projects. Our sector plays a vital role in achieving the United Nations Sustainable Development Goals (SDGs). By delivering cost-effective renewable energy and energy-efficient water desalination for the UAE, we are contributing to affordable energy access and clean water supplies as well as climate action through reducing the country's carbon footprint. Beyond our core operations we are also focused on fostering continuous learning for our local operations and workforces by providing training and education opportunities to our employees, and gender equality and woman empowerment in the communities we serve.

Furthermore, we are ensuring that the projects we work on are in line with global sustainability standards and are proud to have obtained the world's first sustainable and social accreditation based on the

Second Party Opinion (SPO) of Vigeo Eiris for the Taweelah water desalination power plant being built in Abu Dhabi. In addition, through our work on the NOOR 1 Energy solar power project, which is a phase of the Mohammed Bin Rashid Solar Park, we have also qualified for the Climate Bond Initiative certification.

We believe that by aligning ourselves to the SDGs as a strategic lens at the core of our operations, we support the advancement of our host nations on the global goals and, ultimately, their national contributions to the Paris Agreement.

ACWA Power operates in multiple Gulf countries and is accustomed to operating in markets that have traditionally been oil-centric. How do you see the energy sector in the Middle East changing over the next 50 years?

Countries in the GCC are signatories to the COP 21 Paris Agreement and have recognised the need to reduce carbon emissions as fast as possible to contain climate change. In addition, the cost of renewable energy has decreased dramatically in the last few years, allowing us to supply a significant segment of energy consumed each day cost competitively, regardless of whether a country is an oil and gas producer or importer.

Based on these facts, GCC governments have all announced ambitious plans to meet 30 to 50 per cent of their energy needs through renewable energy within the next decade. With the right policies in place and by leveraging public-private partnerships, these governments have already seen major projects materialise, with many under construction and in operation today.

By generating low-cost renewable energy and using the electricity intensive electrolysis process, we are now also able to contemplate splitting water molecules to produce hydrogen. As such we can deliver green hydrogen to replace fossil fuels for hard-to-abate transportation and industrial uses to further reduce carbon emissions.

Utilising our experience and expertise is critical for our endeavors in the GCC region. We are challenging costs and accelerating the energy transition by undertaking pioneering projects in the region such as the Mohammed Bin Rashid Solar Park, the NEOM Green Hydrogen project and the Red Sea Project. The Red Sea Project is the first tourism project in the world on this scale spanning an area the size of Belgium where all utility services are to be entirely powered by sustainable, zero emission energy in addition to adopting a zero waste and zero plastics approach.

The main pillars of the UAE’s future vision are built around strength in economy, happiness, government and education. How does ACWA Power’s work in sustainability interact with these areas?

With reliable, adequate and affordable electricity and water being essential for economic growth and social welfare, and as a developer, co-owner and operator of power and water assets, ACWA Power is proud and privileged to be a partner with the UAE to fulfill its vision. We support

the UAE's economy by delivering power and water reliably, sustainably and at the lowest cost possible. In addition, by deploying clean energy plants and energy efficient water projects, we are also supporting the reduction of the country’s carbon emissions in line with its commitment to the Paris Agreement.

Beyond that, by adopting policies to maximise local content development and procurement and by creating valuable employment opportunities for citizens through the activities of developing, constructing, operating and maintaining these significant assets, ACWA Power is able to contribute to the health, wealth and happiness of the countries we serve.

ACWA Power is involved in delivering one of the UAE most precious resources: water. What involvement does ACWA Power have in planning for the UAE’s other long-term objectives that involve water supply, such as agriculture and food security, happy communities, and regional stability?

The Middle East, and specifically the UAE and KSA, are the largest desalinated water producers in the world, given the scarcity of the natural resource in this region. Ensuring the provision of an adequate water supply and the most efficient use of that vital resource in food supply are both critical for these countries. ACWA

Power is focused on producing potable water in a sustainable manner; which in the case of the UAE means using reverse osmosis technology to desalinate sea water, minimising energy use in the process, and transitioning to renewable energy for that electricity required, while also minimising waste disposal and chemical usage. By continuing to reduce the cost of desalinating water, which would in turn facilitate the use/adoption of technologies like hydroponics, ACWA Power may in time be able to also contribute to the food security agenda.

The UAE’s Water Security Strategy 2036 sets ambitious targets for the use and treatment of water in a number of areas, including increasing the reuse of treated water to 95 per cent and reducing total demand for water resources by 21 per cent. How is ACWA Power prioritising its medium-term strategy to meet these targets?

Without waiting until 2036, ACWA Power is already embracing the circular economy approach of the 4 Rs; reduce, reuse, recycle and remove. We have progressively been reducing energy intensity of

“We are also pioneering the recovery of economically valuable elements from brine, which is the waste stream of the desalination process.”

desalination and recovering and reusing energy to further reduce net consumption. We are evaluating what, till recently, has been the practice of disposal of membranes used in the process. We are also pioneering the recovery of economically valuable elements from brine, which is the waste stream of the desalination process.

Finally, while ACWA Power is not directly involved in reuse of end product water, we continue to champion water reuse, recognising the environmental and social benefits.

ACWA Power is involved in multiple projects with the UAE authorities, and is a strategic partner in delivering utilities to the UAE population. Do you think the private sector has an obligation to assist the government in providing sustainable access to these resources?

Given that ACWA Power and others serving the sector are very much in the business of investing significant capital to construct plants and recover those investments and risk related returns over decades, economic growth is vital to ensure our own viability. It is very much in our interest and the collective responsibility of all market participants to

promote sustainable access to resources and efficient utilisation of services to maximise value creation. ACWA Power is able to lead the way by reliably delivering such vital inputs, electricity and water, at the lowest possible cost.

Many of the initiatives that fall under the umbrella of delivering sustainable energy and water resources are extremely costly due to the need to advance infrastructure and technological innovation. Are there any more accessible ways the SMEs and individuals can contribute to the UAE’s sustainability?

Renewable energy and water desalination technology and the construction of utility-scale plants rely on the smallest of components and the actions of individuals – demonstrating the potential for including smaller players in the value chain. In the case of renewable energy projects, we are already able to show more than 40 per cent of local content. While a more targeted effort is required, the scope for SME involvement is considerable. Furthermore, the ability to generate power from solar resources at roof top has opened a massive market for SMEs to get involved in supply, installation and maintenance for domestic, commercial and even industrial consumer segments.

From your perspective, what is the most promising development that has the greatest potential to propel the UAE towards its 2071 vision in terms of water security and sustainable energy?

Continuous development and deployment of renewable energy, expansion of sustainable water desalination and production of cost-competitive green hydrogen will be the “collective key” to deliver on the UAE’s 2071 water security and sustainable energy ambitions. ACWA Power is committed to partnering with the UAE to propel the country so it continues to lead the energy transition while benefitting from everything the ensuing green economy will provide.

The UAE Federal Competitiveness and Statistics Authority delivered a report in 2019 which revealed that advancements in sustainable communities and cities was the UAE’s fastest area of progress in its SDGs. What innovations in water and energy can be partially attributed with this success?

Given that communities and cities advance when quality of life improves, and the central driver of that enhancement is the reliable delivery of sustainable power and water, a range of innovation and evolution of technology in both areas has made a significant contribution to socio-economic progress. In the renewable energy sector, we see continuous improvements in the efficiency of PV modules and the discovery of bifacial modules. Bifacial modules allow us to harvest solar energy not just from the surface of the panel that faces the sun but also from the back of the panel, taking advantage of the reflection of the rays as they bounce off the ground. Beyond these improvements we are also refining methods of construction as well as the architecture of plants, while taking advantage of big data, machine learning and artificial intelligence to enhance operations and maintenance.

In the case of desalination, significant advances in material science and methods of manufacture have incased the efficiency of RO membranes, using low power and delivering cleaner water, while reducing reject brine. In addition, the ability to use renewable energy to further reduce the consumption of more expensive fossil fuel generated electricity is also starting to lower the overall cost and the carbon footprint of desalination.

The report further stated that the UAE could reach the Top 10 in the SDG Index by 2023 by focusing on improvements in clean water, responsible consumption and production, and climate action. How are private sector entities being encouraged to contribute to these objectives?

Private public partnerships for the provision of utility services procured through transparent competitive tenders

bring out the best in the private sector by encouraging it to keep innovating and keep challenging costs. This is already being effectively demonstrated at each successive procurement for renewable energy and desalinated water in the UAE. ACWA Power is committed to this cause by continuously leveraging our operational excellence and technical know-how to support communities and governments that we serve to encourage more sustainable projects, generate awareness and support economic development by finding smarter and better ways to achieve these goals.

“We are ensuring that projects we work on are in line with global sustainability standards.”

Water and energy security and sustainability issues are not the sole concern of the authorities and large private sector companies working in these sectors. What cross-sector initiatives and developments are you seeing that contribute to success in these goals?

We see that development and training of local talent, increasing valuable job creation, higher levels of industrialisation and knowledge transfer, and maximisation of local spend and value retention are all critical to focus on to deliver benefits to the wider economy such as increased wealth.

ACWA has aligned its sustainability efforts to the UN SDGs. Outside of the UAE’s Centennial plans, how is ACWA working towards other goals such as reduced inequalities, ending poverty, and peace, justice and strong institutions?

Power and water projects are generally located in remote areas, where companies like ACWA Power make significant investments and operate assets for periods ranging from 20, 30 and even 40 years. It is therefore critical that we have an implicit social contract with the local communities by providing training, education and equal opportunities. This will also encourage other economic activities which can grow alongside our

presence. While we can cite numerous examples, two that are particularly noteworthy in this context are Morocco and South Africa, where ACWA Power has been activating CSR initiatives and has generated W+ standard, which quantifies women's empowerment and channels funds directly to women developed by WOCAN global women-led organisations. We are also proud and privileged to have been recognised by our peers in this field, among else through an award as a sustainable role model in 2019 by the Gulf Sustainability and CSR Committee.

Despite the promise of big sky thinking and investment, the Centennial plans are hugely ambitious and sometimes, barriers and obstacles can frustrate long-term plans. What areas pose the greatest challenge to ACWA reaching its sustainability goals and why?

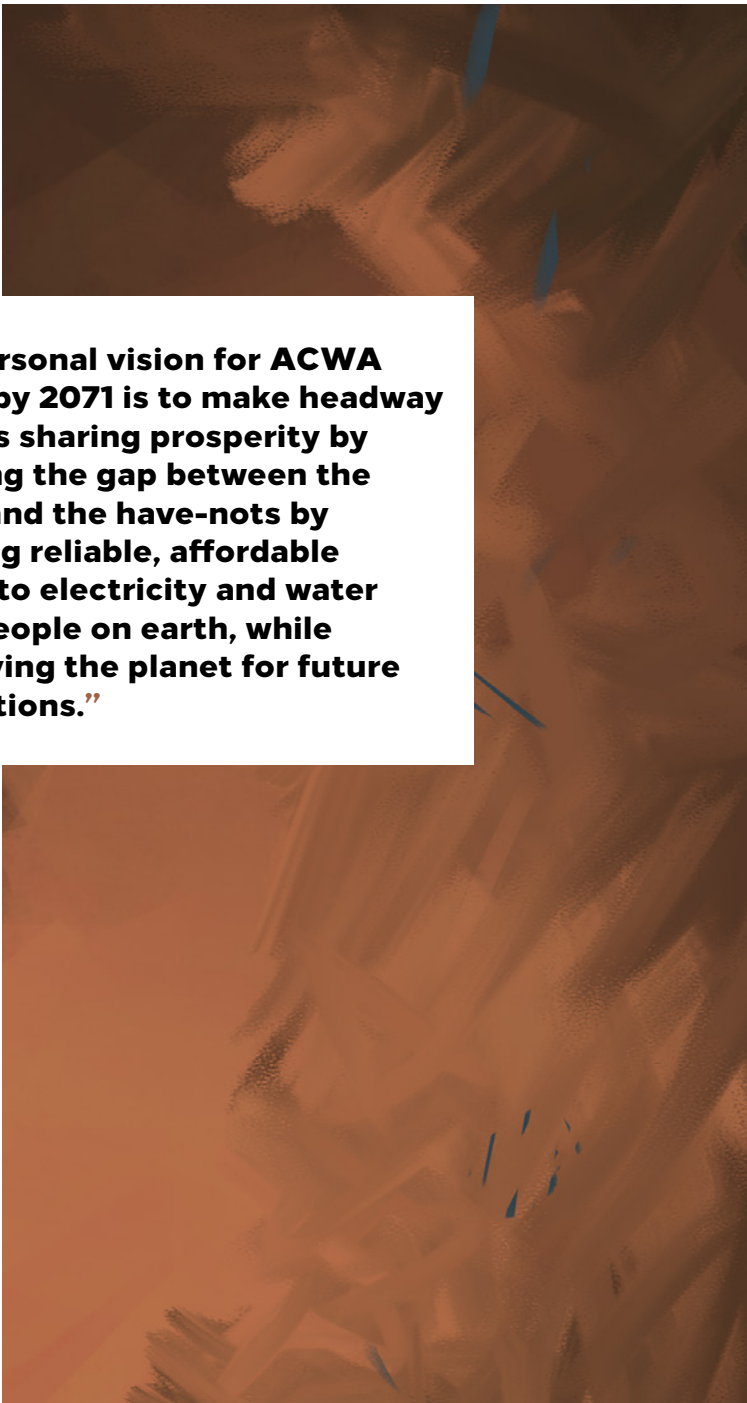
Given that many entities have recognised the urgency and benefits of reducing the carbon footprint of all human and industrial activity, the biggest hurdles are already behind us. However, implementing the energy transition and ensuring that countries retain the maximum value and build solid foundations for the green economy will require committed, passionate and capable professionals at higher numbers than before. While our part of the world is blessed with a disproportionately high percentage of young people, the challenge that needs to be managed is to train and develop them to contribute to this massive task ahead of us, so they can ultimately benefit from it as well.

Strategic visions like the Centennial 2071 can have a secondary benefit of showing the value in advance planning, and having bright, ambitious optimism for the future. What is your personal vision for ACWA by 2071?

As a company driving the energy transition through the expansion of renewable energy and sustainable desalination as well as the propagation of green hydrogen, we have an important

role to play in bringing down the cost of electricity, thus laying the foundations for human and industrial activity to be “fuelled” by zero carbon electricity. My personal vision for ACWA Power by 2071 is to make headway towards sharing prosperity by reducing the gap between the haves and the have-nots by enabling reliable, affordable access to electricity and water to all people on earth, while preserving the planet for future generations.

“My personal vision for ACWA Power by 2071 is to make headway towards sharing prosperity by reducing the gap between the haves and the have-nots by enabling reliable, affordable access to electricity and water to all people on earth, while preserving the planet for future generations.”





IN CONVERSATION WITH

DR RAJA EASA AL GURG

*VICE CHAIRPERSON AND MANAGING DIRECTOR,
EASA SALEH AL GURG GROUP*

Is the Centennial Plan already being included into your objectives?

As a significant contributor to the economy with six decades of business acumen and expertise, several elements of the Centennial plan will be part of Easa Saleh Al Gurg's strategic objectives this year and beyond.

As a multifaceted conglomerate ESAG continues to evolve, while balancing emerging global challenges that shape future progress. We believe in being at the forefront in aligning our operations to cohesively match the trade and economic goals of the nation.

What are the top three priorities of implementing the Centennial Plan in the Al Gurg Group?

Our priorities based on the draft plan would focus on:

- Building Emirati values and ethics for the future generations. This ties in with the intrinsic DNA of our Group and the values instilled more than six decades ago by our Chairman and founder HE Easa Saleh Al Gurg. Over the decades ESAG has built an admirable portfolio of complementary businesses and partnerships that are reflective of its values. Adopting a strategy of sustainable, organic growth in its

core areas of strength, the Group has implemented sound business practices anchored on loyalty, transparency and honesty.

- Raising productivity of the national economy. Operating across diverse sectors that seamlessly integrate both expertise and product variation, we continue to offer solutions that support the country's evolving infrastructure within the Industrial, Retail, Consumer as well as Building & Construction sectors.
- Enhancing society's cohesion. Our ongoing CSR initiatives focus on giving back to the community and wellness within our own workforce; the Al Gurg Charity Foundation is an able and reliable partner of government initiatives that focus on establishing a secure, empathetic and ethical society besides offering a better quality of life to those who require assistance.

What is the most challenging element of implementing a 50 year plan into your objectives now?

To keep constantly evolving to meet future needs and build successful and valued business outcomes. To optimally balance Artificial Intelligence and Social Intelligence within our leadership and staff, which requires greater creativity and partnering with like-minded organisations.

There is less time to play it safe and a need to move to a position of learning from new realities. The future focus will need to encompass skills of adaptability, innovation, and courage.

Dubai is on the global map of business cities: what must we keep in mind to progress and remain on this map in the new normal and beyond?

One of the factors that distinguishes Dubai from other global business hubs is the strong value proposition it offers to companies, investors and top talent from around the world. The emirate continues to drive global interest by adding new competitive advantages and incentives.

The government’s forward-looking vision and proactive approach in adapting to changing market dynamics has resulted in several measures being introduced. These include long-term residency visas, a virtual working programme and most recently, a strategic move to grant UAE citizenship to select foreigners.

Going forward, start-ups and SMEs are expected to play a much bigger role in fostering a culture of innovation and supporting Dubai’s transition to a digitally driven economy in the post-COVID era. In the Dubai of the future, innovation, knowledge and intangible assets will be the key growth drivers and elevate the emirate’s standing in the global arena.

How can the government best influence the private sector to align with the goals of the plan?

Dubai is a leading example of a city that has fast tracked economic development through close public-private sector co-operation. For instance, the emirate’s success in dealing with COVID-19 and the gradual reopening of the economy would not have been possible without the seamless collaboration between

government and business stakeholders who aligned their efforts to ensure compliance and develop effective solutions.

As a bridge between Dubai’s government and businesses, Dubai Chamber plays a crucial role in facilitating public-private sector partnerships that foster economic

growth and innovation. While our leadership lays the groundwork for UAE’s post-COVID-19 economic recovery and prepares for the next 50 years, we are now exploring new ways to involve the private sector in important discussions and plans that will shape the nation’s future.

“Our ongoing CSR initiatives focus on giving back to the community and wellness within our own workforce; the Al Gurg Charity Foundation is an able and reliable partner of government initiatives that focus on establishing a secure, empathetic and ethical society besides offering a better quality of life to those who require assistance.”





IN CONVERSATION WITH

SULTAN AHMED BIN SULAYEM

GROUP CHAIRMAN AND CEO, DP WORLD

DP World plays a protagonist role in the UAE's trade and logistics sector. What is the UAE vision for trade and where does DP World see itself involved in achieving this vision?

DP World has been taking big strides on its journey of transformation into a global provider of end-to-end logistics solutions, backed by one of the world's largest networks of ports, economic zones, feeders and inland transportation assets operating in 60 countries across six continents. Our vision revolves around 'Smarter Trade. Better Future'. One of our strategic objectives has been to develop innovative logistics solutions, and this involves making supply chains more efficient by lowering costs, increasing speed and transparency, and mitigating the environmental impact. Innovation is at the core of our business, as we adopt innovative ways to enhance efficiency and help keep trade flowing. The company is now geared up to help build the next phase of the global economy to accelerate growth. We believe digitalisation is the way forward for ports, logistics and supply chain industry in the region and the world to overcome the challenges in a post-pandemic world. Innovative digital platforms making the movement of cargo more efficient is an inseparable part of our strategy.

How do you think global freight transport will evolve over the next 50 years considering the shift in both consumer and business behaviour?

There have been shifts in business behaviour during the COVID-19 pandemic from which the industry as a whole has derived lessons for the future. We have always been planning ahead, as we operate an extensive and geographically diverse network in both developed and emerging economies. We have multiple trade-enabling businesses, from deep seaports and marine terminals to industrial parks, and logistics and economic zones to maritime services. DP World is always

“We believe digitalisation is the way forward for ports, logistics and supply chain industry in the region and the world.”

determined to find solutions to solve the challenges of our customers and partners, and our focus is on enabling the most efficient movement of cargo globally, through the access we provide to production and consumption centres. We offer digital end-to-end supply chain solutions, and we have been developing innovative digital platforms to make the movement of cargo more efficient from the point of origin to the point of consumption. We believe digitalisation is the way forward for ports, logistics and supply chain industry in the region and the world to overcome the challenges in a post-pandemic world.

How is DP World digitalising the supply chain? What does this mean for the future?

DP World has been adopting an innovative approach to enhance efficiency and help keep trade flowing. The company is now geared up to help build the next phase of the global economy to accelerate growth. As part of its strategy to become the world's leading end-to-end logistics provider, DP World has launched cutting-edge online logistics tools and services, covering sea, land and air shipping around the world. The connected ecosystem of platforms enables freight forwarders and any business, to book shipments of cargo from and to anywhere in the world, by any combination of sea, land and air. The initiative represents a major step forward in digitising the management of logistics to increase the efficiency, visibility and the resilience of global supply chains. DP World has accelerated the already planned roll-out of the platforms to help companies meet the challenge of the COVID-19 crisis and keep trade flowing including vital food and medical supplies.

Do you think that the demand for digital supply chains will increase?

Digitising trade will help companies do more business, more efficiently. It will also support the global imperative to keep trade moving during crises to help meet the demand of world markets. Modernising the processes by which logistics operate is critical to building more robust and more efficient supply chains which will help economic development and generate more prosperity. To elaborate, the acceleration of the already planned roll-out of the platforms followed DP World's acquisition of SeaRates.com, a digital platform that enables customers to transport cargo worldwide at the click of a mouse, along with LandRates.com and AirRates.com. DP World has also created the Digital Freight Alliance which is an online association that brings freight forwarders globally onto one platform, giving them access to new

tools, routes and services, and enabling them to do more business anytime, anywhere. Our new platforms, including the Digital Freight Alliance, will contribute to opening new commercial opportunities for our customers, even during the sudden economic downturn. This technology is a direct business enabler.

Do you think that innovation will meet the evolution of on-demand logistics?

Innovation has always been the key driver for growth in international logistics, and DP World is at the forefront of tech innovation in the transport and logistics industry. DP World is a data-driven global logistics provider, creating end-to-end supply chains, backed by innovative digital platforms. DP World's vision is to digitalise supply chains leveraging our worldwide infrastructure of ports, terminals, economics zones and other assets. As we seek to develop futuristic means to boost trade, and evidence of this is our investment in hyperloop technology. DP World has been a key enabler of

developing this technology for deployment. Hyperloop systems would not only support passengers, but also high-priority, on-demand goods, allowing deliveries to be completed in hours versus days with greater reliability and fewer delays. It will expand freight transportation capacity by connecting with existing modes of road, rail, ports, and air transport, and will provide greater connectivity with manufacturing parks, economic zones, distribution centres, and regional urban centres.

Is it necessary to expand the ports and terminals' investment platforms considering the new era of digitalisation?

Real-world infrastructure remains an indispensable asset. Our new platforms are moving the management of moving cargo online. It will enable our customers to be more efficient and increase the visibility and predictability of supply chains. This will help them to grow their

“Innovation has always been the key driver for growth in international logistics, and DP World is at the forefront of tech innovation in the transport and logistics industry.”

businesses, and ultimately keep countries supplied with the vital goods they need. DP World's growing global network of ports, terminals and economic zones is the bedrock of the business with 128 units in 60 countries. The digital trade and logistics' platforms will leverage this vast network of real-world infrastructure to offer end-to-end supply chain services. An example of our efforts is the recent inauguration of the expansion of the main berth at the DP World Caucedo port terminal. The project is part of the company's plan for growth in the Dominican Republic, with the objective of directly contributing to the transformation of the country into the principal logistics' hub of the Americas. The expansion adds 450 metres of berth.

What opportunities are there for further maritime development and expansion and is there any region in focus for the future?

We continue to seek opportunities in this area wherever they may be. A recent example is Drydocks World joining a consortium of superyacht marina development in Montenegro. The consortium and operating Group Adriatic Marinas ('ADM' - fully owned by the Investment Corporation of Dubai ('ICD') and Damen, the Dutch shipbuilding Group, have agreed that Damen's role in the redevelopment of the former Bijela Shipyard, Boka Bay, Montenegro should now be taken up by a new consortium member, Drydocks World - Dubai, a leading provider of yacht service, maintenance, repair and refit as well as marine and offshore services to the shipping, oil, gas and energy sectors. By forging a consortium of this nature between Adriatic Marinas and Drydocks World, we are bringing together the considerable combined resources and expertise to develop a world-class facility in Montenegro which will support the economy of the country.

Another example is the development of Dubai Maritime City. In early Novemner 2020, we announced the overall completion of 70 per cent of the road and

infrastructure works within Phase I of the residential and commercial development at Dubai Maritime City. The completion is expected in the first quarter of 2021. It will provide DMC with an efficient and sustainable infrastructure to support a modern business community, and enable the vision of sub-developers. The development consolidates DMC's status as a leading maritime services provider.

With increasing economic diversification and shifts to digitalised services, will the maritime industry remain a key element of the UAE's economy?

The maritime industry is part of the history and heritage of Dubai and the UAE, and will always remain a key element in UAE's economy. DP World and Free Zones, including Jebel Ali Port and JAFZA, contribute some 33 per cent to Dubai's GDP. DP World has played an instrumental part in Dubai's emergence as one of the most connected cities both in the region and the world and the emirate's diversification and growth strategy.

In November 2020, you went to Nevada in the US to witness the testing of the first new mode of mass transportation; the Virgin Hyperloop. Do you believe this technology will prove to be a game changer for the movement of people and goods?

It's a game changer, being the first new mode of mass transportation in over 100 years. We have made a multi-million-dollar investment for the research and development of hyperloop technology, leading to the historic milestone. We are one step closer to ushering in a new era of ultra-fast, sustainable movement of people and goods. DP World and Dubai are at the forefront of technological innovation in the transport and logistics industry. The world has been changing quickly and we wanted to be involved in the potential this mode of mass transportation presents, to connect markets and economies, keep trade flowing and help build the global economy's next phase to accelerate

“It's a game changer, being the first new mode of mass transportation in over 100 years.”

growth. This historic testing milestone will pave the way for the certification of hyperloop systems around the world – a key step towards commercial projects, including those in Saudi Arabia and United Arab Emirates.

Following the Peace Treaties between Israel and the UAE and Bahrain, do you believe that trade in the Middle East region is set for a significant boost with the routes becoming shorter and trade easier?

We are confident that the Abraham Accords will yield great results for trade in the region. We estimate at least US\$5 billion trade in the beginning between the UAE and Israel and it will increase as there are many opportunities. From the technology side, we see huge opportunities. We never looked at it earlier, but port facilities will allow us to link our ports in Europe to the Middle East. Israel is a very well-established market with traders.

The geographical proximity of Israel and the UAE offers significant advantages for fresh agricultural products, which can now be transported directly from Israel to markets in the UAE and beyond. What will the UAE investigate to develop more rapid means of delivery in the future?

People can look at the UAE as an important place to reach bigger markets. Within three hours of a flight from Dubai, you can reach two billion people. And you find several flights from Dubai and other emirates daily to access these markets. You can fly and ship anything at any time of the day from the UAE to anywhere in the world. The Fresh Market in Dubai's Ras Al Khor area opened the first-ever display of Israeli produce recently. The introduction of Israeli produce adds to Dubai's drive to diversify the sources of imported produce in the UAE. The geographical closeness and the speed with which the products can be transported directly to markets in the UAE is a great advantage.

Jebel Ali Port is already one of the most significant shipping hubs in the world. How do you see the ports in the UAE evolving over the next 50 years to help meet the UAE's Centennial objectives, whether this is in relation to sustainability, innovation or trade security?

Innovation has always been the key driver for growth in international logistics, and DP World is at the forefront of tech innovation in the transport and logistics industry. For example, at DP World, we invested US\$4 billion over four years in digital technology and – in a contrast to the decline in the rest of the industry. Today we are well prepared to emerge stronger from the COVID-19 crisis, but we need to continue to keep ahead of the curve. That approach covers all our disciplines.

Sustainability is an obvious focus of the UAE's strategic vision. What methods will DP World and other global shipping companies use to help reduce the global carbon footprint of the industry?

As an industry leader, DP World has committed to a zero-carbon future by 2050. Our approach is to decarbonise our operations through implementing applicable and future reduction measures, which are grouped into five pillars: 1) equipment electrification and efficiency; 2) process efficiency & digitalisation; 3) renewable energy supply 4) Low carbon fuel supply; and 5) carbon compensation through blue carbon initiative under DP World Ocean Enhancement Programme. DP World's current operations are heavily reliant on fuels, particularly in the maritime division, decarbonising the fuel supply is essential to achieve the organisation's zero-carbon future. Part of our long-term approach, we see hydrogen as both an energy source and a maritime fuel. Hydrogen can be used in fuel cells to power electric vehicles and vessels in the long term. Also, Hydrogen Electrolysis have an opportunity to capture surplus renewable energy and store it for long durations for reuse when needed.

Expanding the perspective beyond the UAE, shipping and logistics are the ties that connect countries and continents across the world. Which region or countries do you expect to be leading and innovating the industry in the coming decades?

DP World has been at the forefront of efforts to connect countries and continents. DP World's growing global network of ports, terminals and economic zones are the bedrock of the business, and we deliver our services through an interconnected global network of 128 business units in 60 countries across six continents, with a significant presence both in high-growth and mature markets. Wherever we operate, we integrate sustainability and responsible corporate citizenship into our activities, striving for a positive contribution to the economies and communities where we live and work. The digital trade and logistics platforms will leverage this vast network of real-world infrastructure to offer end-to-end supply chain services.

The Centennial plan is a sweeping plan with the kind of optimistic and blue-sky vision that has become emblematic of the UAE's national spirit, but what is your personal hope for the UAE's success over the new 50 years?

We are determined to make our presence felt in 'Designing the Next 50' project and shaping the future of the UAE. Our aim is to be active participants in the unification of minds and visions to achieve innovation and to be in ship-shape to meet the requirements of a new phase of development in the UAE.

“Our aim is to be active participants in the unification of minds and visions to achieve innovation and to be in ship-shape to meet the requirements of a new phase of development in the UAE.”



SECTOR INSIGHTS

PUSHING THE BOUNDARIES OF THE POSSIBLE: THE GROWTH OF AI IN THE UAE

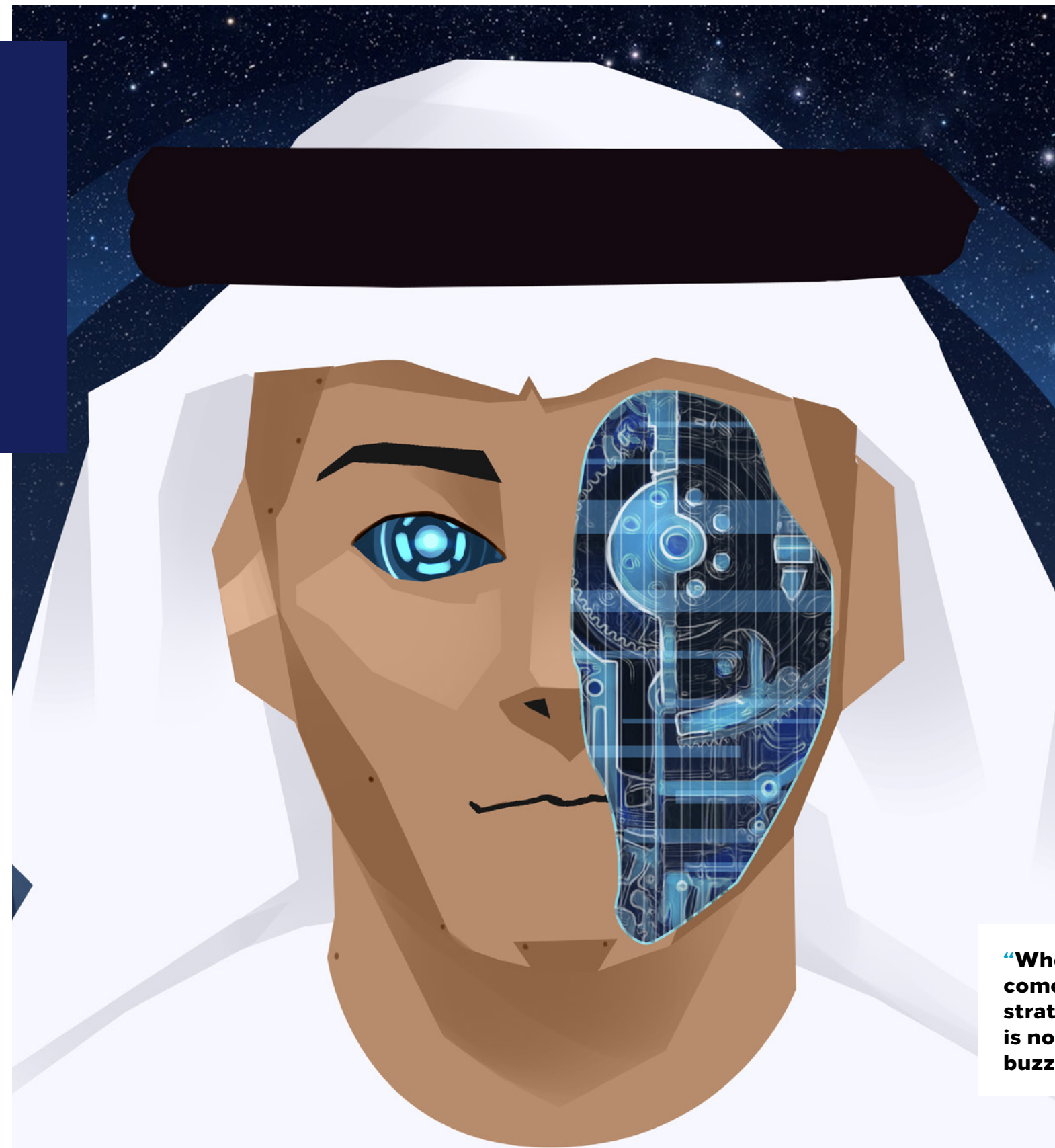


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Introduction

A pioneer for innovation in the Arab world, the UAE government's Centennial strategy recognises the pivotal role of emerging technologies in fostering economic development, reducing the impact of a future financial crisis, and addressing the 21st century's unique set of challenges. In fact, innovation is at the very heart of the Centennial vision for a "future-focused government" and plays a central role in the UAE's goal

of becoming a diversified knowledge-based economy. Accordingly, the UAE government has drawn up various initiatives aimed at investing in emerging technologies and preparing future generations with the skills and knowledge needed to future-proof their careers within the context of this changing landscape. Specifically, Artificial Intelligence ('AI') has been mentioned as one of the key tools which will be used to "achieve the objectives of the UAE Centennial 2071".



The UAE's Strategy for Artificial Intelligence ('AI Strategy') launched in 2017 followed the objectives of the country's National Innovation Strategy, which aims to use innovation as a pillar to achieve the targets of the UAE's Vision 2021, and become one of the best countries in the world. This year marks the realisation of this vision, as the UAE has maintained its position within the Global Innovation Index ('GII') as the leading nation for innovation in the Arab world for the fifth consecutive year.

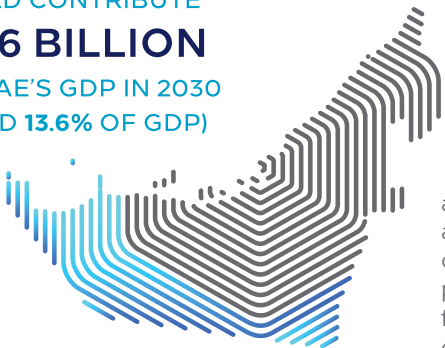
The UAE has shown that it backs vision and strategy with rigorous policy making, agile strategising and the adoption of disruptive technologies across key sectors. Accordingly, when it comes to the UAE's strategies, AI is not just a buzzword. The AI Strategy aims to boost government performance on all levels, and to use AI to provide a range of services across key sectors such as health, space, transport, energy, water, technology, education, and traffic. In recognising the huge cost-saving potential of automation, the government strategy also sets the ambitious goal of saving 50 per cent of annual government costs using AI.

Other core objectives set by the AI Strategy include establishing an incubator for AI-related innovations, and employing AI in the field of customer service. Smart Dubai, the government office charged with the city's overall digital transformation has an AI Lab which is focused on accelerating Dubai towards becoming the smartest city in the world. More tangible strategies include the Autonomous Transportation Strategy, which aims to

"When it comes to strategy, AI is not just a buzzword."

transform 25 per cent of the transportation in Dubai to autonomous mode by 2030. The strategies have led to noticeable AI developments in UAE government. For example, ‘Rashid’ is a call centre virtual agent which offers answers to customers’ questions about various transactions in Dubai. Another example is in healthcare, where the UAE

AI COULD CONTRIBUTE
US\$96 BILLION
TO THE UAE’S GDP IN 2030
(AROUND 13.6% OF GDP)



Ministry of Health and Prevention (‘MOHAP’) has made use of AI in chest x-ray examinations to diagnose certain diseases such as tuberculosis. Within the transport sector, the Road and Transport Authority (‘RTA’) has developed Dubai’s Autonomous Taxi, which brings Dubai one step closer to achieving the targets set by the Autonomous Transportation Strategy. Artificial Intelligence is expected to post a monumental shift to the pillars of our economy and society. To put this into context, PwC estimates that AI could contribute US\$96 billion to the UAE’s GDP in 2030 (around 13.6 per cent of GDP). In this light, clear policy initiatives are required to ensure that our transition towards the Fourth Industrial Revolution is as ethical and responsible as practicable.

To set the framework for a smooth transition, the UAE has established an AI Council which is tasked with proposing policies to create an AI friendly ecosystem, encourage advances in research and promote collaboration between the public and private sectors. Notably, the AI Council has announced that it aims to issue a government law on the safe use of AI. The UAE’s National Programme for AI has also committed to initiatives and collaboration between the private and public sectors. Examples include the Think AI Initiative, which includes a series of strategic roundtables to accelerate AI’s adoption, and a one year AI training programme designed for government employees.

Goodbye brute force: hello data bias, the black box effect and machine ethics

With great opportunity comes great challenges, and AI is in many regards a double-edged sword for policymakers. While automation can lead to increased efficiency, there are several ethical dilemmas with artificial intelligence that should be carefully considered. As discussed below, the UAE is already taking many of the required regulatory precautions to effectively manage and optimise the use of AI. Having said that, continuous monitoring and review of the risks associated with AI are required to maximise its benefits within the next 50 years. The following are just a few examples of how AI is being used and some of the associated policy challenges.

1. Automated decision making by companies

This could be anything from online recruitment tools, to usage in credit allocation or loan processing. For example, AI software is already increasingly being used to screen resumes. The algorithm in these tools typically uses NLP to recognise word patterns in resumes, and assess them against the company’s criteria. As with credit decisions, machine learning and big data allow for many types of data to be factored in. There are two issues in this for policymakers. The first is that automated decision making can lead to biased decision outcomes (often reflecting biases in the underlying data), and the second is the “black box” difficulty with AI. An example of the first issue is a recruiting tool which was being used by Amazon, where currently 74 per cent of the company’s managerial positions are held by men. Therefore, an algorithm that used NLP to recognise word patterns in resumes and compares them against the company’s predominantly male engineering department to determine an applicant’s fit was found to be gender-biased. While the UAE needs to take legislative action to prevent discriminatory uses of AI in the future, the current DIFC Data Protection Law already has a section on automated individual decision making, whereby the data subject has the right to object to a decision which is based solely on automated processing where this can produce legal or seriously impactful consequences. This is similar to other data protection laws such as the GDPR.

In order for the UAE to take advantage of the full potential of AI, it needs more policy and discussion between the private and public sectors to clarify which laws will apply to emerging technologies.

2. Facial recognition

Deep learning algorithms, through the use of convolutional neural networks (‘CNNs’), can analyse visual imagery. Facial recognition tools can identify or verify a person by comparing a person’s facial contours against previous data patterns (training data). MIT researchers have found that there is a potential for bias in the algorithms within some facial recognition systems, where darker skinned complexions were less likely to be recognised. This is because the training sets of facial recognition tools were overwhelmingly male and white. As such, where the person in the photo (the unseen data) was a white man, the model had 99 per cent accuracy. Officials at Dubai airport have announced plans to use robots to detect the faces of wanted criminals in airports, and it is expected that their use will grow under the UAE’s futuristic vision. In line with this, policymakers need to be aware of current ethical issues with the use of facial recognition software and draw up adequate policies to address it. Proposed regulations could include imposing a legal obligation to have a diverse training data set.

3. Algorithmic decision making in court proceedings

One of the most controversial examples of the use of AI in court proceedings is through criminal Justice Algorithms: sometimes referred to as “risk

assessments” or “evidence based methods” which purport to predict the future behaviour of defendants. At the present stage, the UAE has opted to use AI to enhance, rather than replace judicial decision making. For example, in Abu Dhabi Courts, judges are allowed to use machine learning algorithms trained on past cases (predictive analytics) to help them in sentencing or acquitting criminals. Likewise, within the DIFC courts, Amna Al Owais, the Chief Registrar of DIFC Courts, has said that they are looking to use predictive analytics to help judges in their research.

4. Autonomous Vehicles (AVs)

Machine learning algorithms are used to make AVs capable of judgments in real time and a car must learn and adapt to the unpredictable scenarios from surrounding objects. A key concern is the safety of such algorithms and the ethical dilemmas of programming them. These issues must be addressed as part of the UAE’s Autonomous Transport Strategy.

Creating an ethical infrastructure for regulating Artificial Intelligence

Despite the ethical and policy issues with the increase in the use of AI the UAE, like many jurisdictions, has yet to enact an overarching law specifically targeted at regulating the use of AI. However, it is worth noting that this is not to stop existing regulations, such as those relating to product liability, to apply to AI just as they would with any other malfunction. For a detailed discussion of safety, liability, privacy and discrimination laws that would apply to

AI, please see our article titled “Artificial Intelligence: Regulatory Approaches in the UAE and Abroad”.

The UAE recognises the importance of creating an ethical infrastructure. A set of non-binding AI principles & ethics guidelines have been issued by Smart Dubai’s AI lab. The principles are:

1. Fairness: Under this principle, data should be diverse and representative of the affected population. Moreover, algorithms need to avoid non-operational bias; steps need to be taken to mitigate and disclose biases inherent in datasets, and significant decisions need to be provably fair.

2. Accountability: Accountability for AI lies not with the system itself but with those who design it and developers should take steps to mitigate risk in the systems that they design. Moreover, AI systems need to have a built-in appeals procedure where the user can challenge significant decisions.

3. Explainability: AI systems should be “as explainable as technically possible”. It should be possible to ascertain certain factors affecting a decision on an individual, and the decision making process should be explained to them.

4. Transparency: Developers should build systems where failures can be easily traced. Those who use should be transparent about the data and algorithms they use (within the remits of IP law and privacy law). While this is a good start, in the future of the UAE, binding regulation may well be required to encourage innovative usage of AI, provide conceptual clarity, and manage associated

risks. Regulators need to strike a balance between safeguarding risks present in the uses of AI without stifling potential advancements. The US and EU provide good examples that can be followed and improved upon in the UAE's next decades.

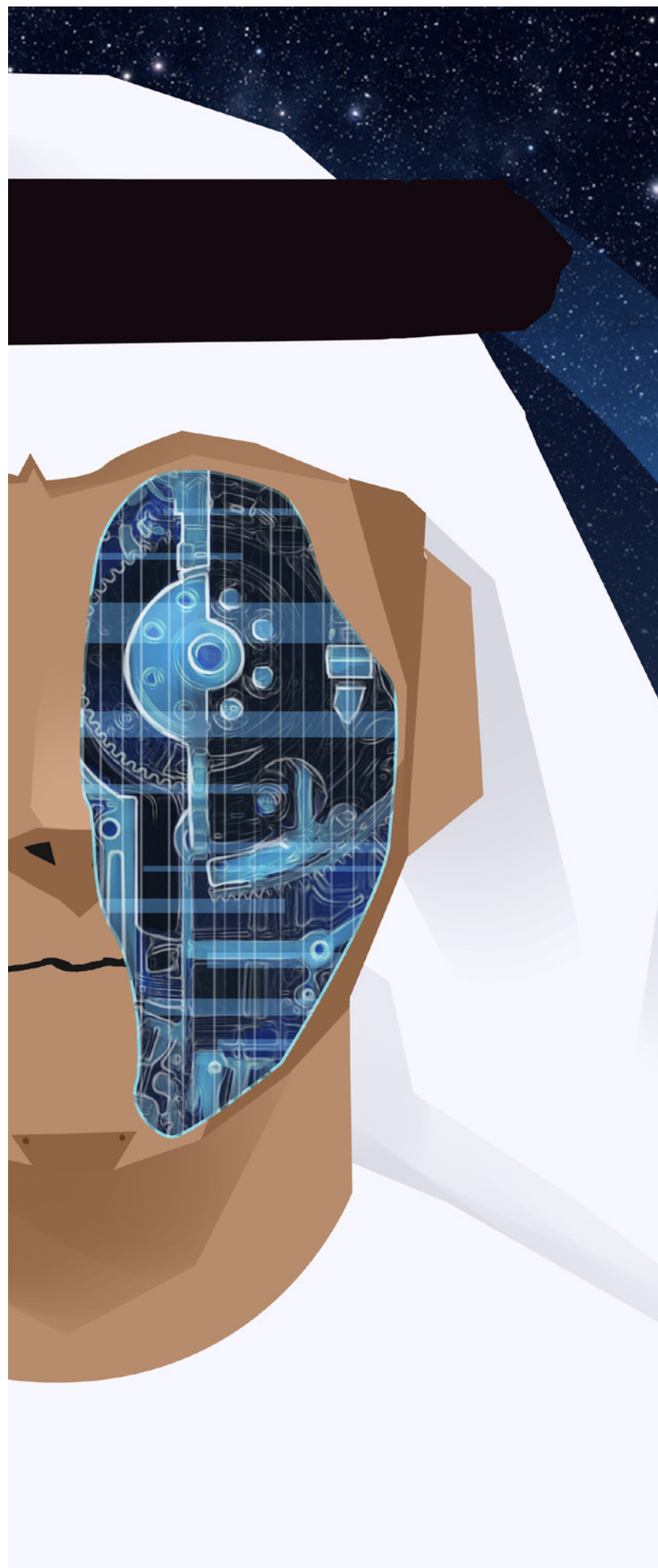
In the EU, there has been a wealth of new guidelines, publications, and declarations from various bodies on AI in recent years. Notably, the EU's ethics guidelines for trustworthy AI include similar guidelines to Smart Dubai, which strive to ensure that the use of AI is "trustworthy". The guidelines flag that user trust is an essential component in the deployment of new technology. Without trust, the economic and potential societal benefits of AI cannot be realised as users will not adopt it. The guidelines outline lawfulness, ethics, and robustness as the three pillars of trust.

The EU's Policy and Investment Recommendations for Trustworthy AI set out further steps that governments can take to further the adoption and acceptance of AI. These include:

- developing an AI-specific cybersecurity infrastructure; and
- redeveloping education to reflect emerging technologies, reskilling and upskilling the workforce to prepare for a change in the landscape.

Managing risk and liability

As discussed concerning AVs and algorithmic decisions, the question of liability is increasingly important when adopting autonomous systems. Well conceived laws regarding the liability of AI systems can help manage this.



For example, in the EU, there is a European Commission report on Liability for Artificial Intelligence and other Emerging Digital Technologies. This recommends:

1. strict liability for operators of technologies that carry an increased risk of harm to others. Where the risk of harm is not "significant", there should be certain duties such as having to choose the right system for the right task and skill;
2. persons using autonomous technologies should not be less accountable for harm than otherwise;
3. there should be liability for manufacturers of products or digital content incorporating emerging digital technology if there has been damage caused by defects in their products;
4. it must be ensured that victims are entitled to "facilitation of proof" in circumstances where an emerging technology has caused harm but its complex nature "i.e. black box effect" makes it difficult to prove liability;
5. data loss as damage: the destruction of the victim's data should be regarded as damage, for which compensation should be available; and
6. devices should not have a legal identity as the harm caused should be attributable to existing persons or bodies.

Driving accountability

Regarding algorithmic decisions, the US has introduced a bill for algorithmic accountability "the Algorithmic Accountability Act (S.

1108, H.R. 2231). If enacted, it would require covered entities to conduct "impact assessments" on their "high-risk" automated decision systems to evaluate the impacts of the system's design process and training data on "accuracy, fairness, bias, discrimination, privacy, and security." Adopting such a law in the UAE could help to reduce algorithmic biases in companies that rely on automated decision making.

Facial recognition is another sensitive use of AI where legal clarity is essential. In the US, the Commercial Facial Recognition Privacy Act prohibits entities from using "facial recognition technology to collect facial recognition data unless such entities: (1) provide documentation that explains the capabilities and limitations of facial-recognition technology; and (2) obtain explicit affirmative consent from end users

Conclusion

A "wait and see" approach has been largely adopted by governments in relation to AI as they seek to understand how this emerging technology will develop and mature and what hitherto unknown risks may emerge. It is a delicate balance to mitigate such risks whilst avoiding the stifling of innovation. Work is underway by the World Economic Forum's Centre for the Fourth Industrial Revolution to develop a roadmap for policy makers to facilitate discussion in regulation methodology regarding AI. It will be interesting to see if the UAE's leadership in the advancement of AI will also see a focus on developing policies, laws and regulations that drive fairness, transparency and accountability whilst maintaining trust in the use of AI.

For further information, please contact Martin Hayward (m.hayward@tamimi.com).

DESTINATION 2071: REIMAGINING EDUCATION AND GETTING UAE TO THE TOP OF CLASS



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The UAE education sector is one the leading private education markets globally and represents a fascinating petri dish of different curricula, brands, influences and themes, making it the most diverse education landscape in the world.

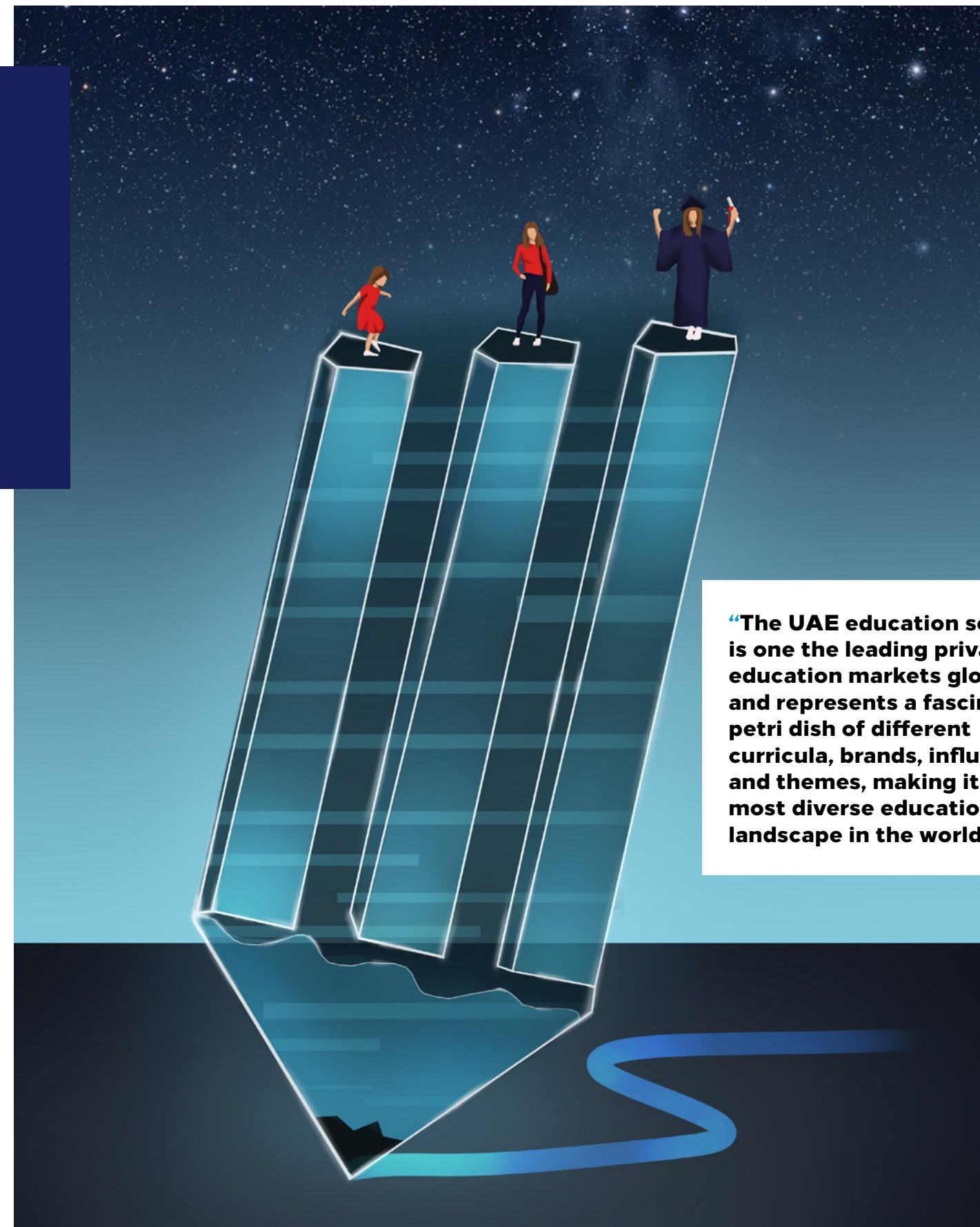
Already a leader in the region, how does UAE meet its centennial goal to be become a world leader in education by 2071?

The UAE is in a fantastic position to make that jump. This article explores some of

the elements we believe can deliver fundamental change and improvement.

The UAE is already in a formidable position:

- most diverse education landscape in the world with multiple curricula and influences;
- world leading in K12;
- many leading education providers already here;
- ideal location at a global intersection (all the talk of the demise of the physical campus is



“The UAE education sector is one the leading private education markets globally and represents a fascinating petri dish of different curricula, brands, influences and themes, making it the most diverse education landscape in the world.”

overblown and whilst there is a role for blended learning models it will not replace the physical coming together of students and faculty); and

- far-sighted and ambitious government leadership.

The following are the areas where we see opportunities for the UAE to make a quantum leap in world education rankings. Some of these ideas are ones that could apply to any country in the world.

K12

The UAE K12 sector is already a global leader in many ways. The pandemic showed how well equipped it was to make the move to remote learning, having invested heavily in EdTech for years beforehand.

We believe the school or university of the future will continue to be a physical campus experience, with elements of blended learning and perhaps a minority of students learning remotely. Of course there will be room in the ecosystem for entirely online education delivery models but we believe this will complement and not replace the physical campus.

The student experience, see below, will become ever more important across K12 and Higher Education.

An opportunity exists to reimagine the relationship between the school campus: generally built at enormous expense with state of the art facilities with the wider community, be it using sports facilities in the evenings, adult education etc. In essence placing the school campus at the heart of the community; not just an 8am-4pm building.

Student experience

Oftentimes education institutions in the region have a very top-down approach with insufficient focus on the students, their campus experience and the wider pastoral role of the education provider. Students perform better when they feel they are genuinely part of an education community rather than just headcount.

How many education providers put the resources required into pastoral care and place it at the centre of the student experience?

How many education providers have reliable data and knowledge in relation to where their former students went to? At Higher Education ('HE') level it is very limited. This information is gold from the point of view of curriculum design, feedback in relation to the student experience as well as building up a proper alumni programme.

Leadership

Leadership within HE institutions in the region has been described as being transactional rather than transformative. There is an emphasis on process and bureaucracy as opposed to taking a lead on transforming HE and its outputs.

HE needs to be more proactive and shape the debate about its future, rather than being reactive and just a passenger on the journey.

Teaching methods are often uninspiring, delivered in a method that our grandparents would be familiar with. In order to grow, there needs to be more space for creative influence, disruption and a 'business as unusual' approach.

Regulatory innovation

The UAE could decide to create the most dynamic and nimble regulatory environment in the world. The regulator mind-set would need to pivot from gatekeeper to stakeholder; i.e. it would look to see how it can support education providers in their quest to implement quick and innovative changes (whilst maintaining quality) and the regulator's KPIs would be adjusted accordingly.

The long laundry lists of 'do's and don'ts' that education providers must observe would be radically cut to the most essential only. COVID-19 has shown that a lot of these requirements are completely unnecessary; the show went on without them.

Trust is a critical part of the equation here. If the regulator moves from being a gatekeeper it must place trust in the education providers that they will step up to the plate and do not need to be micro-managed. The institutions, in turn, must show maturity and move away from a sometimes infantile approach where they are afraid to think for themselves and always look to the regulator for answers.

A nimble regulatory environment with greater autonomy for the institutions has all the hallmarks of the leading education systems in the world. It will create the space needed for innovation and transformation.

“The regulator mind-set would need to pivot from gatekeeper to stakeholder; i.e. it would look to see how it can support education providers in their quest to implement quick and innovative changes (whilst maintaining quality) and the regulator’s KPIs would be adjusted accordingly.”

Quality

A related regulatory topic is of course quality. The UAE is already making a concerted effort on this front and it is absolutely vital to continue to work on this if UAE is to become a world leader in education. Quality does not mean, however, that the regulator needs to micromanage the education providers or force them into box ticking exercises that keep up appearances but in which no-one really believes.

Again, if we look at the leading education markets, the institutions have a lot of autonomy and a significant amount of trust and latitude is given to those with proven track records; we think this is the best model to instil maturity and self-reliance in our education leadership teams.

Skills versus competencies

There is a worldwide fascination with credentials as opposed to skills. The education system that equips its students with skills will excel. This will require a change of mind-set from parents, industry and broader society. It also includes instilling cognitive and emotional skills to better cope, in order to create flexible and dynamic citizens of the world.

Collaboration

A critical factor that is currently lacking here is collaboration and addressing this is imperative if UAE is to aspire to No.1 status.

To break it down further we are talking about collaboration between:

- education providers: competitors can also collaborate on areas of joint interest for the betterment of the entire sector and this is common in other leading jurisdictions but almost non-existent here;
- education providers and regulators: in order to have a dynamic collaborative relationship and foster regulatory innovation. The Ministry of Education is making strides in this regard which is very welcome; and
- education providers and industry to address: (i) respective needs of education, society and industry and the type of graduates produced; and (ii) R+D funding and collaboration (see below).

Vocational training

Technical and Vocational Education and Training ('TVET') is an area that is underdeveloped in the UAE which is surprising given the presence of so many industrial heavyweights here. Unfortunately, there is a stigma associated with vocational training around the world generally with a few notable exceptions like Germany.

The benefits of vocational training are indisputable and will help propel key engineering and precision manufacturing industries. In

order to create the impetus for this it will involve changing the mind-set of students and parents (who heavily influence student's course choice and perceptions), deep engagement with industry and a policy led approach from government and regulators.

R+D

The countries that are top of the education charts, as measured by the rankings organisations, have a common theme of high spending on research and development.

Currently in UAE there are a handful of universities engaged in R+D. Funding has traditionally been a problem, particularly for private international branch campuses; the vast majority of R+D funding coming from government (emirate and federal level) and being pumped into a few public backed universities.

Recently there have been some positive developments in this area whereby public funding has been made available for both public and private universities and awarded by way of competitive tender. This model bodes well for the future and if the amounts are significantly increased, in association with the establishment of government funding agency/ research council and a co-ordinated policy, it will be lead to a thriving research environment.

Public funding is the most important factor but private funding from industry and alumni is also an important piece in order to make funding for research more sustainable in the long-term. How do we encourage international corporations with offices here to spend

some of their R+D budgets in UAE? A new and imaginative approach is required, whether it is something like the offset programme (where defence contracts awarded to foreign companies included a commitment by the company to do some of the manufacturing for that project in UAE), encouraging private sector matching for research council funding (very popular internationally) or another model. The homegrown industrial heavyweights also have an important role to play here.

Leakage

A lot of UAE K-12 students move abroad for their higher education. How do we address leakage and keep a higher percentage of them here? If the other issues discussed in this article are addressed, we believe it will lead to an uptick of resident students deciding to stay here for university.

Conclusion

In summing up, there are lots of reasons to be optimistic that the UAE can reach the top of the world class by 2071. It is currently in an ideal position from which to launch and all of the above action areas are deemed entirely achievable if a full blooded approach to tackle them is taken.

For further information, please contact Ivor McGettigan (i.mcgettigan@tamimi.com).

HERE COMES (MORE OF) THE SUN: WHAT WILL BE LIGHTING LAMPS IN 2071



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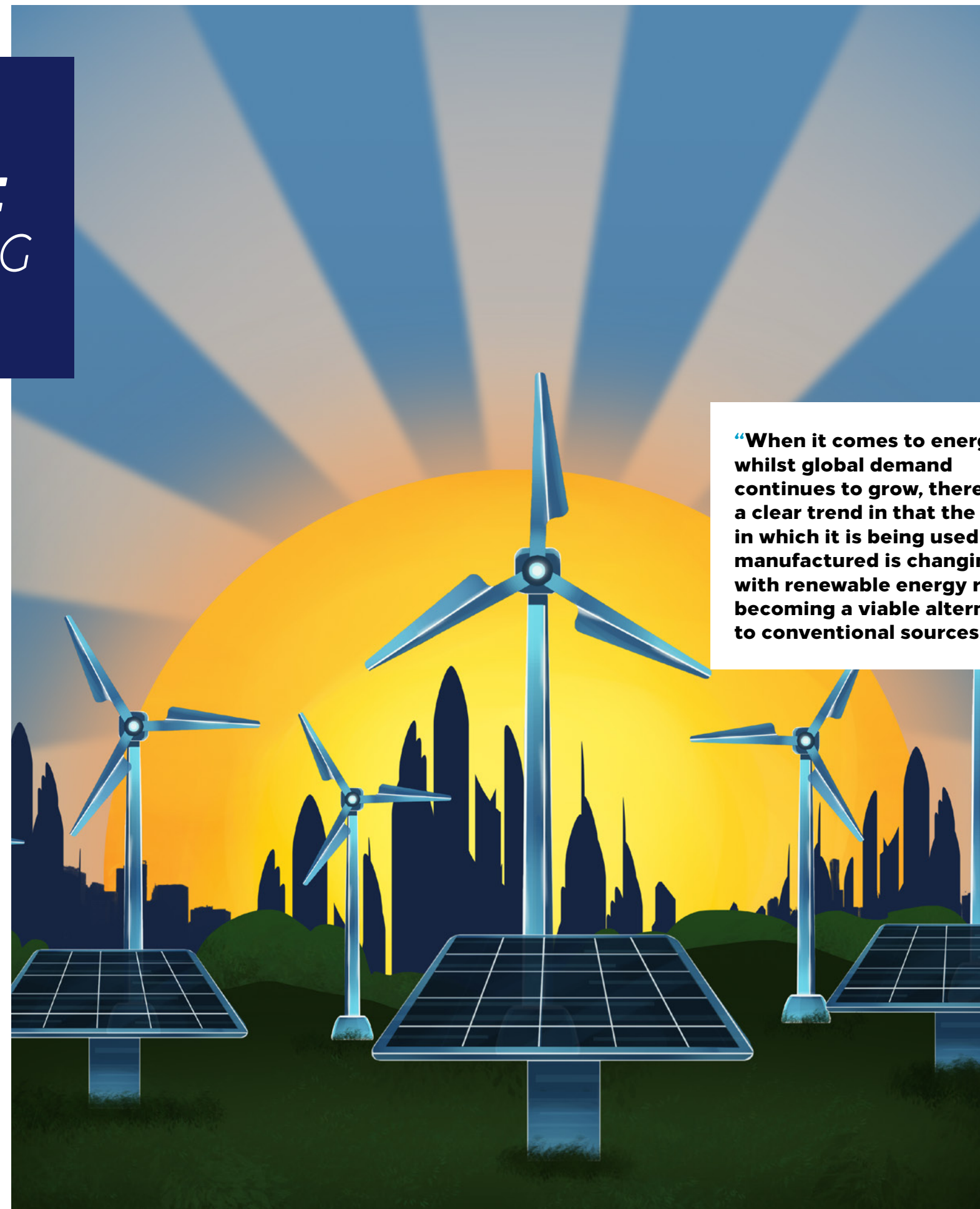


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**Research by Ahmed Khairi, Paralegal*

When it comes to energy, whilst global demand continues to grow, there is a clear trend that the way in which it is being used and generated is changing, with renewable energy having now become a viable alternative to conventional sources. With an increased focus on minimising carbon pollution and a desire by countries to reduce energy imports, governments and corporations globally have long term targets to reduce emissions, committing to raising the amount of

renewable capacity and securing reliable and efficient supplies of energy. Energy transformation is at the forefront of many government policies and investment by companies into clean energy is paving the way for an accelerated transformation of the global energy system. This article looks at global trends emerging in the renewables energy sector including advances in artificial intelligence and storage solutions and also some of the challenges facing the sector



“When it comes to energy, whilst global demand continues to grow, there is a clear trend in that the way in which it is being used and manufactured is changing, with renewable energy rapidly becoming a viable alternative to conventional sources.”

as a whole. A further area this article will focus on is how the UAE has developed its policies towards global clean energy initiatives and the challenges it faces.

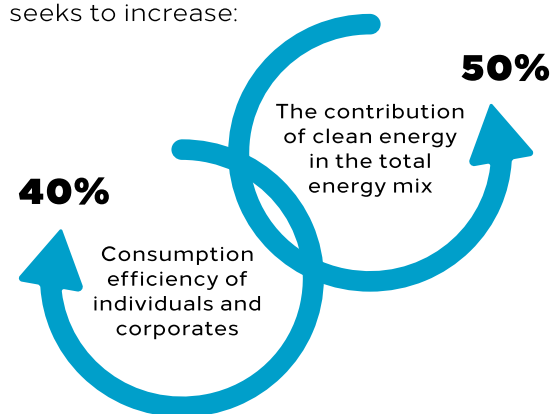
Long and lonely technology development

In the early stage of development in advanced economies, new renewable energy technology, such as solar, wind, wave, biofuels, was a niche market due to the disproportionate production cost and need for subsidies. In 2021 much renewable energy technology has matured to provide competitive and/or

cheaper alternatives to conventional power (e.g. solar). Given that the UAE was a late entrant to the renewable energy sector, having only entered within the last decade, it was able to benefit from the economies of scale and advancements made by countries such as China. The UAE was able to take advantage of these economies (as well as the low cost of financing) and develop

its solar energy infrastructure without the need for state support. The ‘single buyer’ model deployed by UAE electricity procurers has led to a highly competitive market where world-beating low tariffs for solar projects have been regularly achieved in projects like the fifth and latest phase of the Mohammed Bin Rashid Solar Park and the Noor Abu Dhabi PV Power Plant (and recently bettered in Saudi Arabia for the Al-Faisaliah solar scheme). At the heart of the UAE government’s focus on renewable energy is the “Energy Plan 2050” which launched in 2017. This ambitious plan seeks to increase the contribution of clean energy in the total energy mix to 50 per cent and to increase consumption

The Energy Plan 2050 seeks to increase:



efficiency of individuals and corporates by 40 per cent. Ultimately, the goal of “Energy Plan 2050” is to create an energy mix that combines renewable, nuclear and clean energy sources to reduce the country's carbon footprint and diversification of its economy away from fossil fuel. The UAE Centennial Plan is 21 years in the future to these goals so it is not unreasonable to expect further advancements after 2050.

But whilst a full switch to renewable energy supply over the next 50 years is possible, this does not come without challenges. According to a report prepared by IRENA on Global Energy Transformation – A roadmap to 2050, some of the biggest challenges that the sector will face over the coming years include, storage and the speed of progress, public policy and regulation and the need to increase investment into smart energy systems, power grids and recharging infrastructure. Further, the impact of COVID-19 has temporarily diverted attention away from policies relating to renewable energy and resulted in labour shortages, national and international restrictions and disruptions to supply and manufacturing chains.

Given that context, what does reside in the UAE's energy future? Three areas are of particular interest: storage; artificial intelligence; and green hydrogen.

When ice is slowly melting

Energy storage is the need to trap generated power pending its despatch to the grid at the required time. Storage technology has lagged generation to date but is key to addressing the need to balance the supply of energy from irregular natural sources with demand whilst ensuring a consistent and uninterrupted supply. According to a report prepared by IRENA on Utility-Scale Batteries, battery storage systems are emerging as one of the potential solutions to increase system flexibility as a result of their unique capability to quickly absorb, hold and reinject electricity. Further, with the rise of electric vehicles bringing lots more innovation in the battery space, declining costs of producing batteries and improved performance has meant that the demand for battery storage is at an all time high, particularly in countries such as Australia, Germany, Japan, United Kingdom, the United States and other European countries. For example, in 2020 Japan has completed one of its first large scale solar farms to meet the requirements of a local grid operator and the state of New South Wales announced the construction of four large battery projects aimed at modernising the state's power grid by shifting to renewable sources of

power supplemented by battery storage.

Regulatory and financial incentives are commonplace in these countries to encourage the deployment of battery storage solution. The incentives are particularly generous in countries that have energy stability concerns, such as Germany where government has provided levy and grid tariff exemptions to energy storage facility providers and low rate interest loans and in Italy where the government has offered 50 per cent deductions for storage installations. The UK government has also recently changed planning legislation to encourage the development of larger batteries to store renewable energy from solar and wind farms. This contrasts to the UAE where specific financial or regulatory incentives are not used to promote investments in grids (which are all state controlled) or storage solutions in the UAE.

However, the UAE has one of the highest solar irradiation levels in the world and we expect storage solutions will be increasingly deployed to manage the supply of energy as well as to meet the UAE's clean energy targets set out in “Energy Plan 2050”. Typically, solar projects (typically PV) in the UAE have not had battery storage attached as part of their required design but the most recent Abu Dhabi project, the Noor project at Al Dhafra, has an optional large scale battery energy storage system with a capacity of 300MWh which, once completed, will be the first power plant in the region which integrates solar and storage. Further, as part of DEWA's ‘Digital DEWA’ programme, testing energy storage technologies such as

different batteries and energy from hydrogen is one of the key pillars of that programme. Therefore, an increased focus on battery storage in the UAE, coupled with greater private sector participation, is likely to continue to drive investments into large scale battery energy storage systems in the UAE.

The years since it's been here

A further trend in the renewables' energy market is the emergence of artificial intelligence to drive improvements in efficiency, quality and access but also in the planning, operation and control of power systems. Investment in artificial intelligence is poised to grow rapidly over the next fifty years with energy suppliers, including traditional firms such as Abu Dhabi National Oil Company, that has entered into a joint venture with an Abu Dhabi-based AI and cloud computing company to develop AI products and applications for the oil and gas industry, noting the significant advantages that can be gained from investment in artificial intelligence. AI is to be used in the development of smart machines and advanced sensors to make more accurate weather predictions, the development of storage units based on understanding consumption patterns and monitor power demand to aid supply and demand. Dubai's government, for example, is committed to artificial intelligence in the renewable energy sector. In an effort to achieve the objectives of the UAE Centennial 2071, and the focus on innovation, the Dubai Electricity and Water Authority has aligned its own goals with UAE Centennial 2071 and has revealed plans to build the world's first autonomous renewable energy digital utility. The

project will focus on the Plan's four pillars to deliver a new utility experience and make Dubai a global model for clean energy and green economy. Of note is the third pillar, which will seek to use artificial intelligence to make Dubai the first city to provide AI-based electricity and water services.

However, the regulatory framework surrounding artificial intelligence will need to evolve in such a way as to balance the ethical need to control data against the practical consequences of applying artificial intelligence to analyse data so that renewable energy can work more efficiently. Whilst many developing nations have developed regulatory frameworks supporting data collection, arguably these still do not go far enough to protect specific uses of data. A notable example of existing legal frameworks that can control the use of data is the UK's Data Protection Act and the EU's GDPR. Currently the UAE does not have a single codified set of data protection laws and therefore the regulation of data protection will need close attention to support the growth of artificial intelligence.

It's alright

Green hydrogen is effectively produced by renewable energy splitting water molecules into hydrogen and oxygen. One of its most important advantages is that it enables the storage of renewable energy in large quantities for a sustained period of time which increases energy flexibility and inter-seasonality issues. Moreover, it has the potential to overcome many difficult challenges of energy production such as producing hydrogen without CO2 emissions and/or polluting particles.

In the UAE green hydrogen initiatives are beginning in earnest. In 2021, ADNOC, Mubadala and ADQ formed the Abu Dhabi Hydrogen Alliance for the purpose of creating a green hydrogen economy in the UAE. Siemens Energy has announced plans to build a solar-powered green hydrogen plant in Masdar City and also entered into a MoU with Mubadala to produce green hydrogen. Looking regionally, the world's largest green hydrogen project was unveiled earlier this year in the Kingdom of Saudi Arabia. The US\$5 billion plant will use four gigawatts of renewable energy and is jointly owned by Air Products, Saudi Arabia's ACWA Power and the corporate arm of NEOM, a mega-city planned in Saudi Arabia. The energy procurement frameworks both Federally and in the larger Emirates are sufficiently adaptable to allow for their adoption, provided the technology is as cost effective as solar has proven to be more recently.

Notwithstanding the challenges highlighted in this article, with clean energy at the top of every agenda in the UAE, the renewables' energy sector within the UAE is most certainly poised to transform at a rapid pace over the next 50 years and in line with the industry trends highlighted. However, increased focus on the regulatory framework is required to ensure that the UAE can continue to keep up with the pace of energy transformation globally.

For further information, please contact Mark Brown (m.brown@tamimi.com).

A SUSTAINABLE FUTURE: LEGAL PERSPECTIVES ON CLIMATE CHANGE AND THE ENVIRONMENT IN THE UNITED ARAB EMIRATES



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The UAE Centennial 2071 project is the national strategy that has been put in place for the next 50 years and that will enhance the country's reputation, and drive it to become one of the best countries in the world by 2071. Core to this

strategy is the commitment of the government to observing international and regional commitments to the climate change agenda, and promoting investment in projects that are built on solid sustainability principles, in order to achieve a better quality of life for its citizens.



The UAE has adopted many of the long-term sustainability plans developed by the United Nations Sustainable Development Goals' initiatives, including:

- no poverty;
- zero hunger;
- good health and well-being;
- quality education;
- gender education;
- clean water and sanitation;
- affordable and clean energy;
- decent work and economic growth;
- industry, innovation and infrastructure growth;
- reduced inequalities;
- sustainable cities and communities;
- responsible consumption and production;
- climate action;
- life below water;
- life on land;
- peace, justice and strong institutions; and
- partnership for the goals.

(as monitored by the Federal Competitiveness and Statistics Authority)

Climate change

Climate change and the security of core assets required to enable the country to function independently, is a key concern for the UAE government. Geographical considerations, increasing temperatures, changes in weather patterns, and lack of rain create a harsh environment in which to support a successful economy, build and maintain essential utilities infrastructure, allow people to live and work, to grow food and maintain adequate

water supplies. Environmental experts believe these issues, if not addressed urgently, could cause critical security of supply issues in the near future. We are already witnessing the government taking greater responsibility for critical infrastructure assets, such as, water supply, seawater desalination facilities, food production, and more investment in clean energy projects.

Clean energy

The UAE's Energy Strategy 2050 seeks to convert the country to clean energy sources by the year 2050, with the following targets: Clean energy 44 per cent, Gas 38 per cent, Clean coal 12 per cent and Nuclear energy six per cent.

There are however, significant challenges ahead to improve the UAE's current global rankings in relation to air pollution and unsustainable groundwater extraction. A recent study by the UN SDSN Global Index indicated the UAE's level of freshwater withdrawal from renewable water resources was at 2346.5 per cent as opposed to a global average of 65.4 per cent. Air pollution ranks amongst the highest in the world according to the Environmental Performance Index prepared by Yale University. The UAE ranks as fourth globally in exposure to particulate matter (2.5), which stem from highly dangerous, carcinogenic materials from fossil fuels. The UAE has put in place emissions' targets that are comparable to international standards. What is needed, is more assistance (financial, knowledge, and technical) to support industrial operators with compliance, and to put the infrastructure in place to enable the targets to be met

Sustainable infrastructure assets

A number of steps are being taken aimed at achieving sustainable infrastructure assets. In order to reduce its carbon footprint, the UAE monitors the emission of gases arising from industrial activities and that contribute to the greenhouse effect, and as a result, has reduced its carbon emissions significantly in recent years. The Abu Dhabi National Oil Company has committed to reducing flaring of natural gas. Developers of commercial buildings and domestic housing stock, are required to comply with green building codes.

Measures that will improve sustainability and tackle environmental challenges aimed directly at population behavior, and enabling change at a cultural level include: taxation on higher polluting cars; greater emphasis on electric powered cars; and the prohibition of single use plastic items such as bags, cutlery, bottles and cups. It is important for those who believe in the importance of the environment to the economy to participate in activities that benefit everyone.

Legislative change

The UAE was one of the first countries in the Middle East to introduce environmental protection legislation, demonstrating the vision and leadership of Sheikh Zayed bin Sultan Al Nahyan, President of the UAE, and fondly remembered as the 'father of the nation'. Sheikh Zayed, introduced the Federal Law No. 24 of 1999 on the Protection and Development of the Environment, having recognised that the protection of the environment was, and in the

future would be, of critical importance to the success of the country and its economy. This law placed protections upon biodiversity, land and marine areas, and required any person or company that intended to carry out any activity that might cause any harm to the environment to obtain a permit from the environmental regulator – The Ministry of Climate Change and Environment ('MOCCAE'). Since then, secondary regulation has been promulgated to control various environmental risks, and the responsibility for environmental controls and protection extended to other governmental stakeholders, creating a collective responsibility on government departments to consider the environmental risks and benefits of many economic and industrial activities and projects. That being said, given the pace of change at international and national level in terms of the overall strategy and policy agenda, there is much to be done to develop new legislation that supports the strategy and enables the economy, business and the community to thrive.

Legislative change typically starts by benchmarking existing legislation against the laws of other countries that have led the way on the environmental and sustainability agenda. Singapore is a good example of a jurisdiction that is often benchmarked by the UAE government as representative of the type of success which could be replicated and thereafter improved upon in the UAE, by introducing measures which ensure all citizens enjoy clean air, water and sanitation, quality healthcare and education, as well as lush greenery and safe common spaces. The creation of a

garden city with rooftop gardens and green walls has made a difference as Singapore has become one of the most carbon efficient countries in the world. Vertical food zones and investment in agriculture have been important in shaping success in relation to many of the goals which the UAE also strives to achieve.

In the United Kingdom, the government has outlined a ten-point plan which includes a number of objectives including the greater use of nuclear power, increased production of low carbon hydrogen public transport, offshore wind power investment and 30,000 hectares of trees to be planted every year, as part of nature conservation efforts. The UAE is committed to similar goals, having brought its first nuclear power plant to operational level in August 2021, and having completed significant renewable energy projects, largely in solar energy projects, and is now also examining greater use of waste-to-energy and wind projects.

Investing in a sustainable future

The role played by financiers in assisting the government to achieve environmental goals should also not be underestimated. Whether funding comes from sovereign wealth sources, investors, or banks, there should be an increased focus on borrowers meeting certain environmental criteria before a project is approved

for investment. European banks have already taken this type of approach in relation to the European Principles for the Environment. Many international institutions insist upon adherence to the Equator Principles when providing project finance.

“The UAE's Energy Strategy 2050 seeks to convert the country to clean energy sources by the year 2050, with the following targets: Clean energy 44 per cent, Gas 38 per cent, Clean coal 12 per cent. Nuclear energy six per cent.”

'Responsible investing' is the trending investment strategy adopted by many key investors seeking to account for both financial returns and social/environmental good in their investment decisions. This new investment approach acknowledges the relevance to the investor of environmental, social and governance ('ESG') factors, and of the long-term health and stability of the market as a whole. Many investors have started to integrate ESG factors into their investment portfolios and investment decisions when assessing a potential investment in a company. There is a noticeable confidence that ESG analysis can provide valuable insights about factors having a significant impact on the financial metrics of a company and therefore better inform investment decisions and financial performance. ESG is increasingly important for investors in public companies and so, to win the battle for capital, public companies must respond by improving their ESG credentials and

mind-set and correspondingly inform the market. ESG is also a major pillar of public policy and strategic planning for governments and, on the global platform, is a part of the United Nations Sustainable Development Goals.

Conclusion

Having set a clear strategy, policy agenda and goals, new regulation in relation to the environment and climate change for the UAE must take into consideration the concerns and interests of all stakeholders, including government, business, and the population. The correct balance of law coupled with investment will ensure that the UAE government can regulate effectively and continue to encourage trade and tourism whilst protecting the natural environment. Close and effective cooperation with the international community and regional neighbours will also be of critical importance to ensuring a unified and consistent approach to effective regulation, and to support a happy and cohesive society.

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WHERE TO FROM HERE? THE FUTURE OF THE UAE FINANCE INDUSTRY



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The UAE is celebrating its Golden Jubilee, marking 50 years since its union. Over this relatively short history, we have seen buoyant growth in the UAE finance industry, notwithstanding periods of dramatic volatility in the global economy and the onset of a global pandemic. The UAE finance industry continues to adapt and change through innovation in policy, mind-set, and technology.

The future of finance in the UAE

Deliberating about the future of the UAE's finance industry, we are mindful of the significant developments in the UAE's short history. The UAE issued its first currency in 1973 and transitioned since then from a trading hub for the region into one of the world's leading financial centres. From humble beginnings, the UAE has rapidly grown to be home to over 50 onshore commercial



banks, two world class financial centres and a legal and regulatory regime which is constantly evolving to keep up with global standards.

The UAE Centennial 2021 Project, in celebration of its Golden Jubilee, aims to make the UAE the best country in the world by 2071. The UAE's vision for the future is established on an impressive history of development and progress that should set a solid foundation for ongoing development in the next 50 years. The UAE's finance industry is poised to accept the challenge proclaimed by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai when he stated that:

"The future belongs to those who can imagine it, design it, and execute it. It isn't something you await, but rather create."

Embracing technology

One of the reasons that the UAE has become a global leader in finance has much to do with it embracing advances in technology to steer the finance industry to offer more efficient and enhanced products and services to meet the expectations of the digital consumer. In

Dubai Future Foundation's ('DFF') recent, "Life After COVID-19: Financial Technologies" report (the 'Report'), it states the following:

"[the coronavirus] is an important opportunity for

private sector entities to accelerate the digitisation of financial services."

"The UAE is celebrating its Golden Jubilee, marking 50 years since its union. Over this relatively short history, we have seen buoyant growth in the UAE finance industry notwithstanding periods of dramatic volatility in the global economy and the onset of a global pandemic."

The Report continues with the following observation:

“The financial technologies industry – fintech – not only appears to be resilient to the risks of the pandemic, but is widely expected to emerge stronger as people turn to digital-only services.”

Funds and alternate financing

Another reason the UAE has become a global leader in finance has to do with it embracing diversified offerings from collective investment funds and adding to its ever growing creative alternate financing options, including the regulation of crowdfunding initiatives, insurance, securitisations, Sukuk and the ever growing business of investment management.

Growth of digital technologies

UAE digital banking proponents speculate that the shift to digital in the post COVID-19 world is enhanced with the ease and security of digital banking, featuring contactless payments, online remittances and e-commerce transactions.

One of the underlying challenges for increased reliance on digital banking is the negative consequence of cybercrime requiring banks to implement state-of-the-art security controls to protect consumers and ensure their ongoing comfort in using a banks’ digital platform. The UAE continues to modify its anti-money laundering and counter terrorism legislation and practices to ensure that it remains at the forefront, globally, in addressing these risks in the finance industry.

Embracing digital innovations and competition appears to be the principal objective in today’s finance industry to achieve sustainability as a core initiative. The development

and implementation of new technologies in the finance industry in the UAE is also developing a new glossary of terms The use of technologies such as FinTech, internet of things (IoT), E-Wallets, Robo Advisors, robotic process automation, blockchain, 5G, chatbots and artificial intelligence (AI) continue to be the focus for the future of the finance industry.

Virtual assets regulation

The UAE generally has been cautious when considering the implementation of regulations on virtual assets, however that is slowly changing. The ADGM currently regulates the operation of virtual assets under the Financial Services and Markets Regulation (‘FSMR’), and the DFSA has recently issued its first consultation paper on regulating digital assets such as cryptocurrencies. The onshore position is also changing with the crypto asset regulations issued by the Securities and Commodities Authority in relation to securities, and the new crypto asset licenses available in the DMCC.

Growth of the collective investment funds regime and alternate financing arrangements

In addition to the growth of digital technologies, the UAE is showing tremendous growth in alternate finance options including collective investment funds and non-fund investment and finance arrangements.

Collective investment funds

There are three jurisdictions in the UAE that offer a host of options for the establishment and management of collective investment funds and regulation of fund managers, administrators,

custodians, auditors, valuers and Shari’a boards; being onshore UAE, which is currently regulated by the Securities and Commodities Authority (‘SCA’), the ADGM and the DIFC. These jurisdictions provide a domestic jurisdiction for fund managers and sponsors to establish an investment fund while retaining appropriate levels of investor protection.

As an alternative to conventional banking and finance transactions, sponsors and investors, globally, regularly explore opportunities to establish or invest in collective investment funds that pool investors’ contributions, which are then managed by a regulated fund manager based on a disclosed investment objective and strategy in the offering documents.

In addition to offering domestic public and professional opened-ended and closed ended funds, each of the fund regulators in the UAE offers a host of specialist funds, including Islamic funds, fund of funds, master funds, feeder funds, private equity funds, property funds, real estate investment trusts (‘REITs’), hedge funds, umbrella funds, money market funds, exchange traded funds (‘ETFs’) and venture capital funds (‘VC Funds’).

There has been a steady growth in the popularity of domiciling investment funds in the UAE as opposed to establishing them offshore in the Caribbean or the Channel Islands. Much has to do with (i) the global standing of the UAE regulators who are all IOSCO members; (ii) the liquidity in the region; and (iii) investors’ preference to invest locally rather than in some distant offshore centre. The formation of domestic investment funds is positioned to continue to grow in the future, and especially in the post-COVID-19 world.

Alternate finance options

As an alternative to the collective investment funds’ regime in the UAE, alternative finance options continue to grow. Raising capital through bonds and Sukuk remains strong, with an ever growing industry which includes securitisations, supply chain finance, credit funds, captive offerings, finance leasing and crowdfunding (with the UAE recently introducing its first crowdfunding regulations outside of the financial free zones).

What lies ahead?

Innovation and implementation of digital technologies

Clearly, the ongoing digitalisation in the finance industry is inevitable. With FinTech hubs, like those established in the DIFC and the ADGM, opportunities to test and develop new technologies will continue to have a base. Further, the expansion of venture capital and business incubators together with government programmes and Sovereign Wealth investment and promotion of new technologies are contributing to laying the foundation for continued growth of this industry in the UAE.

Digital banking vs bricks and mortar

Many financial pundits believe that the increase in digital banking in the future will result in the demise of the brick-and-mortar banks. Others believe that this view has been greatly exaggerated. Only time will tell. However, the significant number of expatriates working in the UAE that continue to have banking relationships and family in their home countries, are increasingly

reliant on digital platforms to carry out their international bank transfers and general banking. With the onset of coronavirus in 2020, there has been a significant increase in the use of digital apps to assist with banking transactions. As the baby-boomer generation is being replaced by millennials and centennials (aka Generation Z, Gen Z, iGen), the argument that digital banking will increase significantly in the future is certainly persuasive.

Increased diversity of investment strategies and platforms

The diversification in the UAE of finance options through its investment funds’ regime and alternate platforms demonstrates that the UAE finance industry is both creative and responsive; key characteristics that have propelled it to being a leading global financial centre. This diversification of finance options will continue to grow and, coupled with technology, alternative solutions through low cost easy-to-use funding platforms are likely to disrupt the conventional banking industry.

A reason for optimism in the growth of the financial industry in the UAE

Leaders in the finance industry strive to define a vision for their finance organisation and establish goals to adopt and implement emerging technologies to stay competitive and increase profitability. While this is not without its challenges, given the abundance of new technologies available to

“The diversification in the UAE of finance options through its investment funds’ regime and alternate platforms demonstrate that the UAE finance industry is both creative and responsive; key characteristics that have propelled it to being a leading global financial centre.”

digitalise finance operations and the support of the UAE regulatory bodies, the industry in the UAE is well placed to embrace this change and in doing so continues to be a market leader globally.

H.H Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, Chairman of the Executive Council, Chairman of the Board of Trustees at Dubai Future Foundation summarised the challenges in creating the future we want, which has significant relevance to the future of the finance industry in the UAE, when he stated the following:

“Creating the future we want requires determination, hard work and a specific and advanced set of skills, tools and technologies.”

Al Tamimi & Company celebrate the successes in the growth of the UAE finance industry in the past 50 years and we look forward to working in this industry as it continues to excel in the next 50 years and beyond.

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FOOD FOR THOUGHT: THE FUTURE OF FOOD SECURITY IN THE UAE



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What is food security?

Food security has been defined by the Food and Agriculture Organization of the United Nations (the 'FOA') as "all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food that meets their food preferences and dietary needs for an active and healthy life". In July 2017, the UAE Government agreed to build on its support to the FAO Sub-regional Office for the Gulf Cooperation

Council (the 'GCC') States. The renewed FAO-UAE partnership aims to:

- improve the sustainability of agriculture and fisheries production in the UAE and the sub-region, thereby improving nutrition, food safety and food security;
- contribute to eradicating hunger and poverty in developing countries by improving agriculture and fisheries-based livelihoods; and

- motivate innovation, technology-sharing and development in the food and agriculture sectors.

In 2017, for the first time the UAE Government established a State Ministry for Food Security, which became FAO's line Ministry by June 2019. The new Minister has led the new UAE National Food Security Strategy 2051, which was approved in November 2018. It is most notable that the new strategy aspires to make the UAE top of the Global Food Security Index by 2051 and among the top 10 countries by 2021, and focuses on facilitating the global food trade, diversifying food import sources and identifying alternative supply schemes.

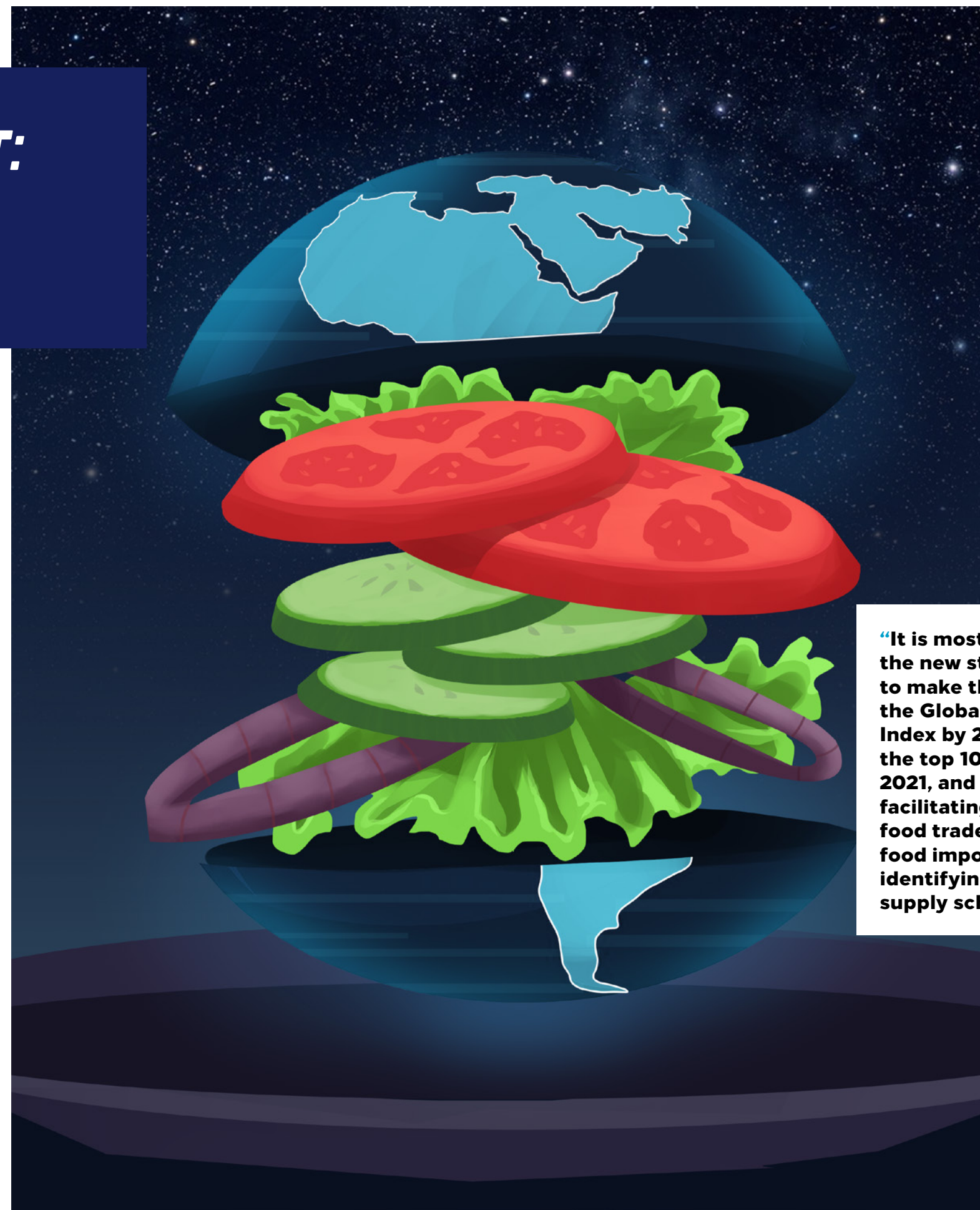
In 2018, the UAE Government announced that the UAE stood at 31st place on the Global Food Security Index. In December 2019 the index showed that the UAE had risen 10 places to 21st position, with the National Food Security Strategy 2051

"It is most notable that the new strategy aspires to make the UAE top of the Global Food Security Index by 2051 and among the top 10 countries by 2021, and focuses on facilitating the global food trade, diversifying food import sources and identifying alternative supply schemes."

proving its influence throughout the year. This is an impressive achievement by the UAE and is a clear indication that the UAE is benefiting from the strategy which aims for its population to have access to

safe, nutritious and affordable food for a healthy life at even during states of emergencies.

Due to the UAE's climate, water and land resources, it can only provide a small fraction of its overall food requirements. The UAE Government strives to





develop its food producing sectors with key focus on the aquaculture sector, to facilitate its goal of achieving the UAE Vision 2021 and the UAE Centennial 2071 Plan.

The UAE Government issued Aquaculture Pulse 2020 report which aims for the

aquaculture sector to enhance marine resources, maintain their sustainability and guarantee food security for future generations. The report analyses consumption in the local and international markets, taking into account the product quality and size. This strategic report aims to attract investors and ensure the success for aquaculture projects in the UAE, highlighting the advantages of the local produce in terms of quality and cost.

Further, on 28 June 2020, the UAE Cabinet approved the national system for sustainable agriculture to improve self-sufficiency in food, enhance farms and create opportunities to ensure that the agriculture sector is always ranked high in the UAE. The national system for sustainable agriculture seeks to:

- improve self-sufficiency from the targeted agricultural crops to five per cent annually;
- increase the average farm income to 10 per cent annually;
- increase the workforce in the sector by five per cent annually; and
- achieve a 15 per cent annual reduction in water used for irrigation of a production unit.

In addition, the UAE Government has also:

- established the Food Security Dashboard of Dubai which is capable of using artificial intelligence to analyse indicators of food security e.g. stock availability, production and consumption; levels;
- launched the UAE Food Bank in 2017, which is a charitable organisation. It distributes food to those in need by collaborating

with local authorities. It is the first food bank in the United Arab Emirates;

- established the Food Security Research Platform. This an online portal that allows specialists to share its latest findings and publications across different research themes. It aims to serve the needs of a wide range of stakeholders in terms of data, information and knowledge on research and development in sustainable food systems across the food value chain; and
- established Abu Dhabi Farmers' Services Centre responsible for agriculture, food safety and food security affairs in Abu Dhabi.

Federal Law Number 3 of 2020 ('Strategic Food Security Law')

The UAE recently introduced the Strategic Food Security Law which was approved with the aim of enhancing food supplies in the event of emergencies, and thereby achieving food sustainability. The provisions of the law apply to the Ministry of Economy ('MOE'), producer or importer and the registered vendors with a view to ensuring adequate food supplies across the UAE at all times, including in the event of a disaster.

The Strategic Food Security Law provides that the MOE shall prepare statistics, reports and databases in relation to the production and provision of food, propose policies relevant to food commodities, estimate the volume of food consumption and availability of produce in the UAE and the originating.

In relation to providers and the registered vendors, the new law imposes several obligations which they must abide by and they are as follows:

1. maintenance of the safe stock subject to the provisions of this Law;
2. supply the strategic stock of food commodities upon request;
3. electronic connection with the competent entity and the authority to ensure the continuous follow up of quantities, kinds and condition of the strategic stock of food commodities;
4. execution of resolutions issued by the competent entity;
5. distribution of commodities in case of emergencies according to the distribution plans prepared by the authority in co-ordination with the competent entity; and
6. maintenance of an appropriate warehouse for storage of the commodities in the UAE.

The Strategic Food Security Law also provides that incentives and facilities will be introduced for the provider and registered vendor

through a Cabinet Resolution which is yet to be published.

Non-compliance with the Strategic Food Security Law imposes significant monetary penalties including a fine of no less than AED 500,000 (US\$136,000) and not more than AED 2 million (US\$5.5

“The UAE recently introduced the Strategic Food Security Law which was approved with the aim of enhancing food supplies in the event of emergencies, and thereby achieving food sustainability. The provisions of the law apply to the Ministry of Economy ('MOE'), producer or importer and the registered vendors with a view to ensuring adequate food supplies across the UAE at all times, including in the event of a disaster.”

million) which can be imposed on producers, importers and registered vendors who are found to be in violation.

It is clear that securing sustainable sources of food is a matter of national security. The initiatives introduced by the UAE Government and the new Strategic Security Law will further enable the UAE to achieve its vision of becoming a leader in food security by 2051.

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UAE HEALTH 2071: THE FUTURE OF HEALTHCARE



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The Centennial 2071 project launched by the Cabinet of the United Arab Emirates aims to place the United Arab Emirates ('UAE') as the best country in the world by 2071.

In order to be the best country in the world, the UAE must have a healthy population with access to the highest standards of healthcare in the world. The COVID-19 pandemic puts healthcare at the forefront of human existence, and there is no time to be lost in navigating out of the crisis and putting in place a national health strategy that will defeat COVID-19 whilst outlining the objectives for the healthcare sector that will support the UAE in becoming the best country in the world by 2071.

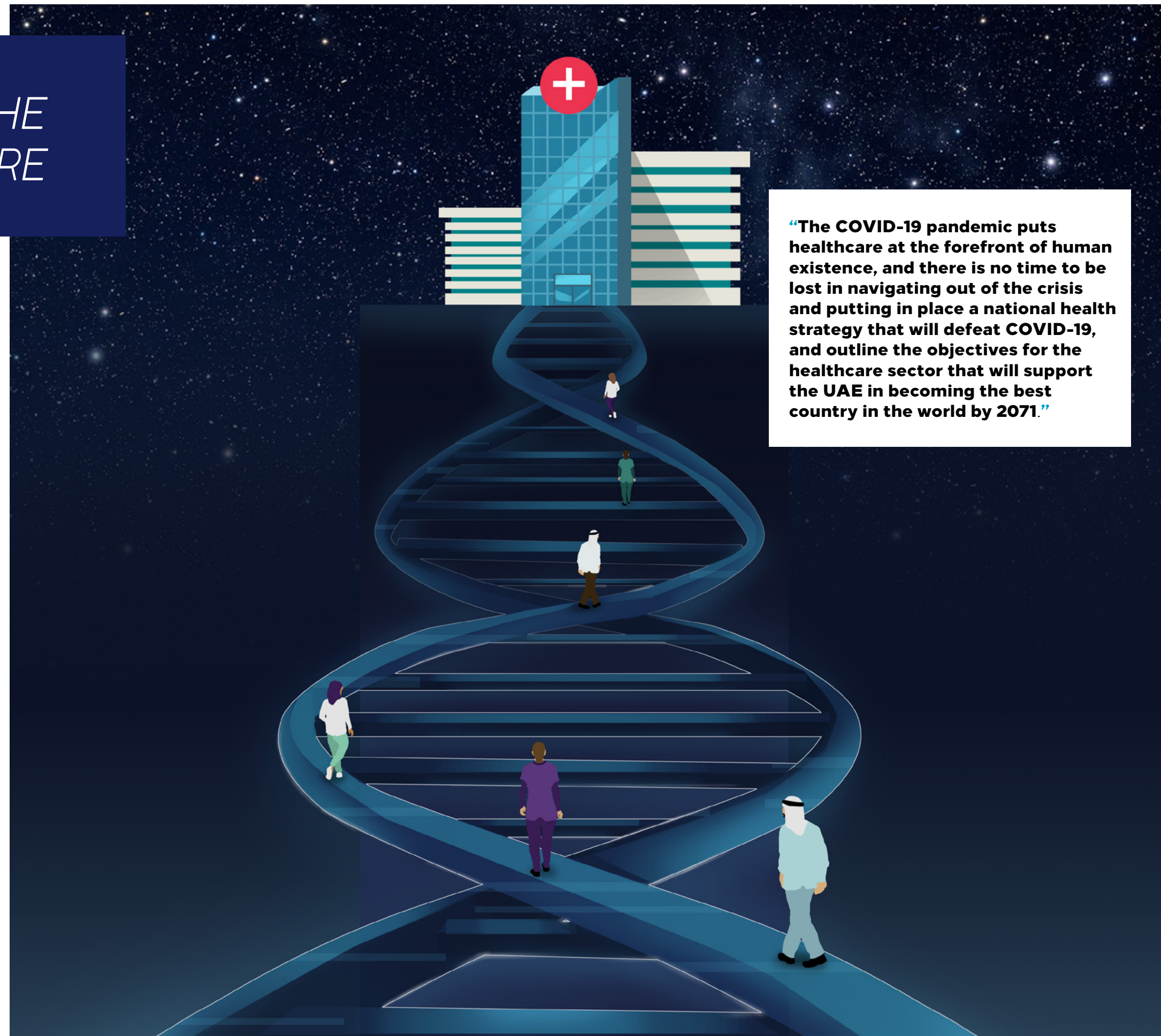
Healthcare for all citizens

The government's healthcare policy is both inward and outward looking (and paraphrased) as follows:

- to develop a healthcare system for citizens and residents that delivers good quality healthcare to international standards, with a focus on lifestyle diseases;
- improvement in access to healthcare through e-health, smart health; and
- to become a top destination for medical tourism.

It is undeniable that the UAE has built an impressive health infrastructure consisting of hospitals, clinics, home care

"The COVID-19 pandemic puts healthcare at the forefront of human existence, and there is no time to be lost in navigating out of the crisis and putting in place a national health strategy that will defeat COVID-19, and outline the objectives for the healthcare sector that will support the UAE in becoming the best country in the world by 2071."



services, and diagnostic laboratories, providing for the healthcare needs of the population and growing new areas of clinical expertise; for example, in diabetes care, cancer treatment, and cardiology services, to name but a few. The transition from public to private sector services has been led through private sector investment, insurance provision, and more recently public-private-partnership projects, currently placing the split at 65/35 per cent in favour of the private sector.

Important collaborations with global brands, such as Cleveland Clinic, Mayo Clinic, Johns Hopkins, Mediscin, Imperial College London, Kings' College London, amongst others, all play a significant role in bringing care to international standards, building trust, improving quality of care and offering medical tourism services.

Medical tourism

Medical tourism is a key pillar of the UAE healthcare strategy. The medical tourism strategy is built upon the concept of inward tourism, building hospitals, some operated by respected international brands, that create a package of services (including concierge) that bring medical tourists to the UAE for treatment. The key question now is, 'has this strategy been successful and is it the best strategy for the future?'

There is no doubt that the medical tourism strategy has been successful. As a result of a huge amount of political will, and efforts by both public and private infrastructure investment in hospitals, the UAE has recently made it into the top 10 list of globally ranked

medical tourism destinations. According to the Medical Tourism Index, the world's most attractive countries for medical tourism are Canada, the United Kingdom, Israel, Singapore, and Costa Rica. Dubai is currently ranked sixth and Abu Dhabi eighth. With the UAE-Israel normalisation of relations treaty signed in September 2020, the UAE has an opportunity to collaborate with Israel with a view to improving its ranking and moving up into the top five of world ranked destinations for medical tourism.

The UAE is in a good position to improve its global ranking. However, improvements in certain areas will be required. Statistics indicate that, in some cases, hospitals were either not receiving the volume of tourism patients that were expected, or not able to raise the targeted revenue from those patients. There has been a disconnect between supply and demand, and with competition within the private sector that has resulted in healthcare operators all offering similar services and chasing the same medical tourists. Competition for the same medical tourists has, in some respects, resulted in it taking longer and costing more to achieve strategic goals.¹

According to the Medical Tourism Association, the reasons why people choose other countries instead of their own countries for medical treatment are fourfold:

- higher quality of treatment;
- cheaper prices;
- a treatment option not available at home; and
- to undergo treatment as soon as possible without queues.

The UAE is a comparatively expensive option for medical tourism and, with some variables in capacity, quality, and trust. Arguably, the UAE only scores very well in two out of four of these criteria.² Future-proofing the medical tourism strategy requires corrections to be made in order to give the UAE a better score in those areas where it is not performing as well as expected; quality and cost.

The future for medical tourism

Review the medical tourism strategy and decide what needs to change to make medical tourism more applicable to the current and post COVID-19 environment. We recommend:

- addressing the issue of competition between healthcare operators. There should be a clear and unified plan as to how the healthcare operators will deliver the medical tourism strategy. There ought to be consumer choice, but through a controlled licensing system, for example, offering a selected range of services that do not compete with each other, and which are of the highest caliber of quality;
- developing the capability of offering COVID-19 vaccines to medical tourists; and
- a global medical tourism vision that supports *delivering healthcare to the patient wherever they are in the world*. This can be achieved in parallel with digital health initiatives.

With the 'World Medical Tourism and Global Health Congress' having taken place in Abu Dhabi in 2019 the spotlight remains upon the UAE to make the required changes in its medical tourism strategy that will continue to make medical tourism successful.

2071 - healthcare agenda for change

We propose three new strategic goals that could drive the UAE to become a global leader and strategic partner of choice for healthcare science and innovation:

1. a national Life sciences strategy;
2. a national digital health strategy; and
3. growing and attracting talent

Life sciences

The UAE is investing heavily in health science and technology, tripling its research capacity and productivity in recent years.

Health science institutions in the UAE are actively collaborating with a multitude of intuitions worldwide on a range of life science projects. The Dubai Science Park (a dedicated free zone established to attracting life science and technology businesses) connects international health science institutions with local institutions and supports participation in research projects and clinical trials. Similarly, the Mohamed Bin Rashid University of Medicine and Health Sciences undergraduate programme is heavily research-focused.

Recent examples of groundbreaking research projects include; the

American University of Sharjah biomedical engineering programme, which is working in collaboration Rashid Hospital Dubai (funded by Al Jalila Foundation), to improve diagnosis and treatment of epilepsy by using the skills of engineers, scientists and mathematical techniques to localise the source of epilepsy in the brain. Another project, in collaboration with Johns Hopkins, concerns developing quantitative measures to measure brain injury following cardiac arrest through clinical trials on intensive care patients.

The Abu Dhabi Investment Authority and Mubadala Investment Company each have significant life sciences' investments locally and worldwide. Mubadala Investment Company, in co-operation with a consortium of investors have acquired a majority stake in the Envision Pharma Group, a leading technology enabled scientific communications' company, expanding UAE access in life science technology across European and Global markets.

The UAE is also making significant strides in finding solutions to COVID-19 through clinical trials and vaccine research. Abu Dhabi state-owned G42 (in which Mubadala recently acquired a stake) is collaborating with both Chinese and Russian state-owned enterprises on COVID-19 clinical trials of an UAE/Chinese vaccine, and the Russian vaccine, Sputnik V. Approval has already been granted for the UAE/Chinese vaccine Sinopharm, with the offer of vaccination to UAE residents. Phase III trials are in progress on Sputnik V. These measures places the UAE amongst the leading global nations offering a vaccine for widespread use, and large-scale production. Using sovereign wealth

fund and other investment expertise, the UAE is well positioned to be able to monetise the vaccine and offer a global solution as part of a medical tourism strategy.

COVID-19 led change will force the life sciences' sector in the UAE to adopt a business-focused approach to its development strategy, and examine a range of business models and the related components needed that give rise to investment opportunities. The pace of change across the industry and markets is now irreversible.

Life sciences' infrastructure investment needs commitment from the government. In Abu Dhabi, the DOH is regulating and supporting the development of health science innovations using a business-orientated approach through a Health Accelerator programme in partnership with the Abu Dhabi Global Market regulatory framework that facilitates investment in health-tech innovation.

The vision for 2071 – life sciences and innovation

- **A national life sciences and research strategy:** drawn up by MOHAP in collaboration with industry stakeholders.
- **Regulations and Guidelines:** creating a regulatory framework that facilitates a willingness to participate, with robust but practical data access and confidentiality protections, that make it easier to run clinical trials but also helps patients and trial volunteers to understand their rights.
- **Collaboration and integration:** between national policy,

¹ <https://www.imtj.com/blog/medical-tourism-strategy-where-does-it-all-go-wrong/>
² <https://www.medicaltourism.com/mta/home>

government institutions, and science institutes aimed to improve the environment for research, innovation and clinical trials.

- **UAE or GCC regional center: create a center of expertise:** develop strong collaborations with institutions in the Middle East region, United States, Europe and around the world. This will improve the global standing of the UAE in the life sciences' sector.
- **Capacity building:** creating research training programmes, curriculums, and good clinical practice guidelines in collaboration with health authorities and academia. Creating bridge programmes amongst universities, research institutions, and intern programmes.
- **Projects portal:** a consolidated website for all approved research and clinical trial projects, with status updates on approvals and progress through trial phases.
- **Champions:** the UAE must have champions drawn from practising clinicians, scientists, and experts. This will improve the UAE's global standing, and also act as role models for the next generation.
- **Contractual processes:** streamlined to make it easier for institutions, research units, and research co-ordinators to deliver research projects, protect intellectual property, and support the monetisation of innovation.

Digital health

Technology will drive better health outcomes at a lower cost. The trends are towards better diagnosis and prevention, and continuous improvements in the management of chronic diseases, such as though remote monitoring of diabetes.

The future strategy requires a cultural change with regards to prevention of illness rather than consuming health services after the onset of illness. Technology will enable rapid access to health information and prevention, through diagnostics, high quality care and treatment: this is key for medical tourism going forward.

Telemedicine

The UAE has embraced the concept of telemedicine and, having already sought to create a regulatory framework enabling telemedicine activities, was easily able to approve the urgent and widespread use of telemedicine services in the face of the COVID-19 pandemic, enabling continued access to health advice for those in lockdown and allowing e-prescribing and home delivery of medication. There is no turning back. Telemedicine must be at the centre of the future of healthcare delivery systems for the UAE. The benefits include increasing accessibility, focus on wellness and prevention all of which result in reduced costs.

Artificial Intelligence

The use of artificial intelligence ('AI') and machine learning in healthcare is essential in order to support e-health delivery systems.

AI data prediction tools, machine learning algorithms for image analysis, and robotics will become woven into the fabric of the future vision for healthcare. The use of AI in combination with the increasingly popular use of wearables and remote monitoring devices will underpin the wellness and prevention agenda. Innovation is thought of as expensive but it can be instrumental in decreasing costs over time. Upfront technology and equipment costs lead to downstream benefits, less surgical complications for example, and over the longer term the investment will reap rewards and reduces costs.

UAE regulators are now developing AI policy models setting out the essential requirements of AI in an healthcare framework; ethics, safety, responsibility, and security implications of AI use in healthcare.

Cloud technology

Cloud technology offers great potential for enabling large volumes of data to be processed and managed by both regulator-controlled centralised systems and healthcare entities. However, the present policy position in the UAE is for data to be hosted onshore on local servers ensuring greater control and security.

We see there being a place in a future national healthcare strategy for the use of cloud technology in association with adequate security protections. This will be essential as cloud technology works hand-in-hand with telemedicine delivery systems and AI solutions. With greater volumes of personal health information exchanged

through technology-led and online communication systems, it is very important that tech companies and telemedicine providers operating in the UAE have effective and secure methods of processing and storing data.

Regulation for the use of e-Health

Regulatory reforms must support and boost the health-tech sector. Leaner and faster regulation processes are needed that can be quicker on approving medical devices and pharmaceuticals. Regulation and policy drafting departments need to be more tech-savvy, engage with innovators and create the regulations of the future. Approval processes must be rapid; quicker at providing medical research and clinical trials' approvals. Better regulation, supporting the use of technology, should be at the heart of the healthcare solution, which will translate into a reduction in costs.

Digital health must be at the core of the 2071 centennial health strategy.

The UAE has done much to bridge the gap between digital health technology advances and drafting regulations enabling digital health, but much more needs to be done.

Growing and attracting talent

A best-in-class healthcare system can only succeed with the best talent.

The UAE government, along with health and science intuitions, must recognise the importance of growing and attracting talent both in clinical medicine, and in research and development.

Young students have the opportunity of choosing to pursue a career in medicine and health sciences. There are now opportunities to study within the UAE (such as at the Mohamed Bin Rashid University of Medicine and Health Sciences) but the majority of students must travel abroad to receive education and exposure to working in other healthcare systems. There should be much more investment in our talent of the future.

Funding of research projects is important, along with having processes in place for utilising and supporting the research, and obtaining the consumables needed for research projects. It will be important to create a culture for research with free-flowing dialogue between government and science institutions on the core issue of inspiring the next generation of doctors and scientists.

The vision for 2071 should support growing and educating local talent in parallel with offering funding and grants for sending the best students abroad for the experience of working shoulder to shoulder with internationally recognised physicians and scientists.

Retaining quality healthcare staff remains a challenge. Hospitals that are undersupplied with patients, or where there are insufficient volumes of patients with complex needs requiring clinical specialists, do not create the environment or career development pathways that talented professionals look for in a long-term career destination.

The vision for 2071 must focus on developing centres of excellence, enabling

volumes of complex cases to be clustered together, supporting the development of specialists, with associated medical research projects and the opportunity to publish research results: all leading to delivery of higher quality care and better patient outcomes.

Conclusion

In January 2020, H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai said that the year 2020 would be the year of preparing for the 50 years ahead.

“our responsibility is to maintain development, excellence and continued growth... including in the health... and wellbeing of citizens”

The healthcare vision for 2071 must leverage the momentum in technology and innovation investment that has emerged from the COVID-19 crisis, and launch a national health sciences and technology strategy that prioritises digital health, health sciences, whilst nurturing the most talented physicians and scientists: promoting the importance of building both human and machine learning capabilities and knowledge, inspiring the next generation, and enabling the UAE to participate in the role of global health citizen.

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STAR LAWS: HOW UAE LAW IS BOLDLY GOING INTO THE FINAL FRONTIER



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The UAE's Centennial vision, boldly aims to make the country the "best in the world by 2071". With its futuristic outlook and robust government strategies, the UAE is well placed to tackle some of the 21st century's most pressing challenges.

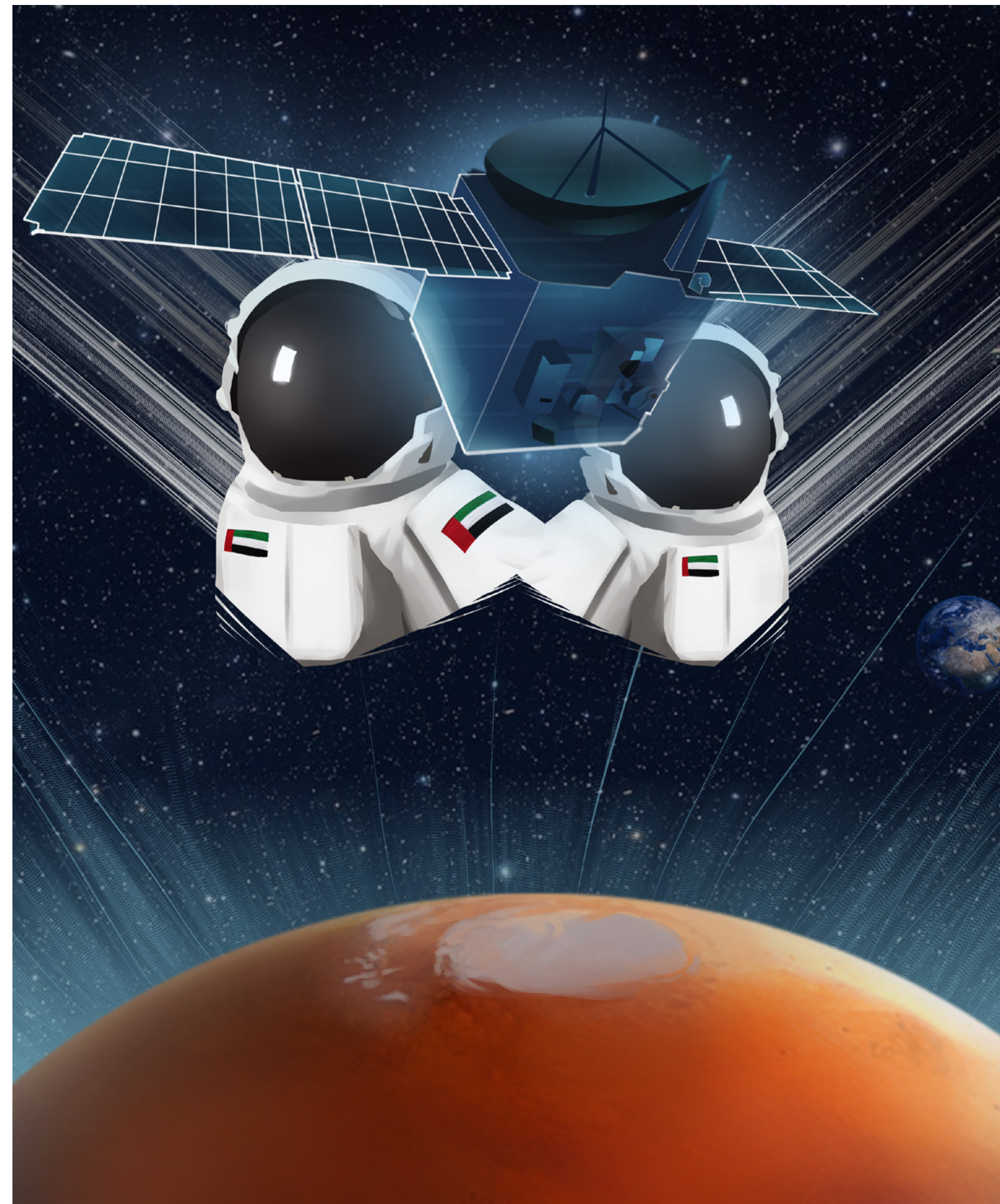
From the first Apollo moon landing, to Space X's successful astronaut launch, our use of space is changing. Today, space is being used for all kinds of peaceful purposes such as environmental monitoring, broadcast communications, delivering the internet, weather

prediction, navigation and scientific exploration. Space exploration, followed by the prospect of eventually becoming a multi planet species, could also help us address some of the 21st century's unique set of challenges, such as overpopulation and climate change, to name but a few.

Our changing relationship with space however, is not reflected in the law. Unlike the 1970s, when the first space treaties were drafted, the commercialisation of space travel is no longer science fiction.

Leading by example to other countries in the region, the UAE enacted the Federal Law No.12 of 2019 on Regulation of the Space Sector ('Space Law') in December 2019, which supplemented, and consequently clarified many of the conceptual difficulties with the treaty framework, while at the same time ensuring compliance.

A unique challenge, for the UAE's next 50 years is to ensure that it continues to take the right policy and regulatory initiatives to accommodate this change in the landscape.



Earth to Mars: a multi-planet legal system?

The notion that our laws transcend the realm of planet earth is perhaps somewhat surprising.

According to the United Nations Office for Outer Space Affairs ('UNOOSA'), “the primary goals of space laws are to ensure a rational and responsible approach to the exploration and use of outer space for the benefits and interest of all human kind”.

As such, space law covers a variety of diverse matters such as preservation of the space and earth’s environment, liability for damages caused by space objects, settlement of disputes, protection of national interests, rescue of astronauts, sharing of information about potential dangers in outer space, use of space-related technologies, and international co-operation.

To that end, on an international level, the UAE is signatory of 4 out of 5 key following treaties that govern activity in space.

1. The Outer Space Treaty 1967

Entered into force on 10 October 1967, the treaty forms the main framework of space law. It recognises the importance of the use and scientific exploration of outer space for the benefit and interest of all countries.

Under the treaty, outer space is only to be used for peaceful purposes. Specifically, it prevents the placing of weapons of mass destruction in orbit or on the moon or other celestial bodies. The treaty also rules that

outer space is not subject to 'national appropriation'. Moreover, it does not allow the establishment of military infrastructure, manoeuvres or the testing of any type of weapon on planets or moons.

2. The Rescue Agreement 1968

Elaborating on elements of the Outer Space Treaty the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space provides that a state that is a party to the agreement shall take all possible steps to rescue and assist astronauts in distress and promptly return them to the “launching” state, and that states shall, upon request, provide assistance to launching states in recovering space objects that return to earth outside the territory of the launching state.

3. Space Liability Convention 1972

Elaborating on parts of the Outer Space Treaty, the Convention on International Liability for Damage Caused by Space Objects provides that a launching state shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth

“From the first Apollo moon landing, to Space X’s successful astronaut launch, our use of space is changing.”

or to aircraft, and liable for damage due to its faults in space. The convention also includes the settlement procedure for damage claims.

4. Registration Convention 1975

Entered into force in 1976, the Convention on Registration of Objects Launched into Outer Space serves as

a mechanism to assist states in classifying and identifying space objects. The convention acknowledged the importance of maintaining a register that was openly accessible to states and international organisations. Specifically, states are required to register details about the orbit of each space object with the United Nations.

5. The Moon Agreement 1979 (UAE is not party to this Agreement)

The Agreement Governing the Activities of States on the Moon and other Celestial Bodies entered into force in June 1984, and further elaborated on the Outer Space Treaty as applied to the Moon and other celestial bodies, providing that those bodies should be used exclusively for peaceful purposes, that their environments should not be disrupted, that the United Nations should be informed of the location and purpose of any station established on those bodies.

In addition, the 1979 Moon Agreement provides that the Moon and its natural resources are the common heritage of mankind and that an international regime should be established to govern the exploitation of such resources when such exploitation is about to become feasible.

Where to from here? Celestial property rights, cyber-attacks, and other new challenges for our use of outer space

Since the enactment of the initial space treaties, our use of space has changed dramatically, meaning that the international treaty framework is now not necessarily fit for purpose.

For instance, today, there are more satellites than ever, and the once farfetched idea of having accidental collisions in space is now a reality. Further, almost every country uses information generated from space.

However, unlike the focus of those treaties, the majority of today’s satellite owners are not international organisations or countries, but rather the commercial sector. Soon, the changing cost benefit equation of satellite ownership will also mean that ownership of satellites may even be extended to individuals through the mass market availability of small “mini-satellites” deployed in space.

Another major change in how we, as a species interact with outer space lies in the rise in commercial asteroid mining. We mentioned above that the Outer Space Treaty has a non-appropriation clause. As it stands, international law prohibits the sovereign ownership of celestial bodies, but it is uncertain as to whether ownership by private bodies is equally prohibited. This then leads us to the question, who owns what in space? And what property rights, if any, go into the final frontier? The law is in need of clarity. Furthermore, states are already positioning “defensive” space weaponry. Today’s reality, whether we like it or not, is that contrary to the provisions of the state treaties, outer space is militarised.

The amount of information that is generated or transmitted through space is also on the rise, and so is our vulnerability to the manipulation of space data. Cyber-attacks in space are now occurring constantly.

Finally, despite its currently exorbitant cost, space tourism is currently on the

rise, with the potential of becoming a multi-billion dollar industry. As such, national laws need to step in where the international treaty framework falls short. A proper legislative framework is needed to pave the way for future investments, and new opportunities within this sector.

The UAE’s Space Law: transformational times call for transformational measures

National laws have stepped in to regulate space operations conducted by private companies where the international treaty framework falls short in light of our changing use of space.

International law remains the main framework for space activities. However, it is national space legislation that ties the link between the private space sector and the international framework.

Accordingly, many countries have enacted their own space laws. For example, in France, space activities fall under Law No. 518 of June 2008 (*LOI n° 2008-518 du 3 juin 2008 relative aux opérations spatiales*), which addresses issues linked to the privatisation of space activities, and the authorisation and supervision of all space operations performed by French operators. Moreover, it takes into account the long term implications of space activities, such as increase in space debris. Likewise, in the US, the Commercial Space Launch Act was enacted in 1984 to incentivise and regulate the commercial space launch industry. Key attributes included imposing and enforcing insurance and financial responsibility on licensees.

The UAE enacted Space Law in 2019 to directly tackle many of the challenges we have highlighted regarding the commercialisation of space. The Space Law seeks to go above and beyond many other national space regulations in many respects.

The Space Law aims to address the interest of private companies within outer space, as well as many of the other challenges which have emerged from our changing use of outer space. Notably, the law fills in the gaps of the international treaty framework, which previously took precedence, and brings much needed clarity to the subject.

The UAE had already inaugurated the nation’s first space agency, the UAE Space Agency, in 2014, which is responsible for regulating and supporting the national space sector. The Space Law has replaced the UAE Space Agency’s establishment law but specifically provides that the UAE Space Agency is tasked with overseeing the nation’s space sector development and lays out some of its objectives which include encouraging and developing the uses of technology and space science in the state, and to work to spread awareness of the importance of the space sector.

Further, it is prohibited to own a “Space Object”, carry out or participate in “Space Activities”, or establish, use or possess related facilities or utilities without obtaining an authorization from the UAE Space Agency.

Space exploration, followed by the prospect of eventually becoming a multi planet species could also help us address some of the 21st century’s unique set

of challenges, such as overpopulation and climate change, to name but a few.

Key provisions of the Space Law include the regulation of the ownership of space objects, sending astronauts to space and operating space tourism flights.

As such, the Space Law recognises the challenges and opportunities posed by the commercialisation of space travel, and aims to create the right regulatory infrastructure for achieving the objectives of the state's national policy, which include:

1. stimulating investment,
2. implementing the necessary safety, security and environmental measures to enhance space activities; and
3. supporting the principle of transparency and the commitment of the State to implement the provisions of international

conventions and treaties related to Outer Space, to which the UAE is a party.

The regulated activities which come under the law include the launch, the removing or disposal of an object from the orbit, operating Space Objects through monitoring and controlling them, satellite communication activities, extracting or exploiting "Space Resources", space exploration for scientific purposes, and conducting space-related scientific experiments.

The Space Law sets the legislative framework for our evolving use of space in the next centennial where we are expected to see a surge in manned spaceflights, or even long-term human residence in space. It also regulates the construction or use of facilities in space or on the surface of celestial bodies. Another important feature is regulating "Space Data" management activities, which

includes receiving, storing, processing, distributing, archiving or disposing of any Space Data.

The territorial scope of application of the Space Law applies to space activities that are carried out: 1) in the State's Territory or the State's establishments outside the State's Territory, 2) from ships or aircraft registered with the State or Space Objects registered by the State; or 3) by persons who hold the nationality of the State, or companies that have a headquarters in the State.

Regarding environmental issues, provisions of the Space Law are focused on Space Debris mitigation by imposing a requirement on every operator to mitigate Space Debris and reduce its effect and to minimise risks of collisions.

The future of space in the next 50 years is going to see an increase in manned

spaceflight activities. As such, the Space Law sets out certain precautions that must be followed before a physical person is permitted to participate in spaceflight. For example, it imposes the requirement of submitting to the agency, proof that the physical person is aware and informed of all risks, and has had the necessary training and reaches the required standard of health necessary for such a flight. Such standard laws and procedures are going to be crucial in paving the way for an increase in safe space travel, or space tourism.

The Space Law clarifies the issue of liability, which is expected to gain relevance as our use of space increases, and the risk of collision of space objects compounds. It provides for liabilities between contracting parties (Art 20) and also provides that the operator shall be liable for any damage caused to others on the surface of the earth or in the aircraft while flying inside or outside the State's Territory (Art 21). Damages are defined as "any loss of life, personal injury, or any other harm to health, or the loss or damage that is caused to the property of the State, the property of Persons, or the property of intergovernmental organisations." The Space Law prescribes liability for hitting another space object (Art.22) and sets out the requirement for adequate insurance and guarantees caused (Art.25). It requires any operator to have an insurance contract with one of the insurance companies approved by the UAE Space Agency.

As the number of commercial space launches is set to increase, the Space Law also imposes the requirement of registering all space objects. Space Object must be registered with Space Agency and also be registered with United Nation space objects, with the Space Agency and

also register with the United Nations register to comply with the international treaty framework.

Emirates Mars Mission

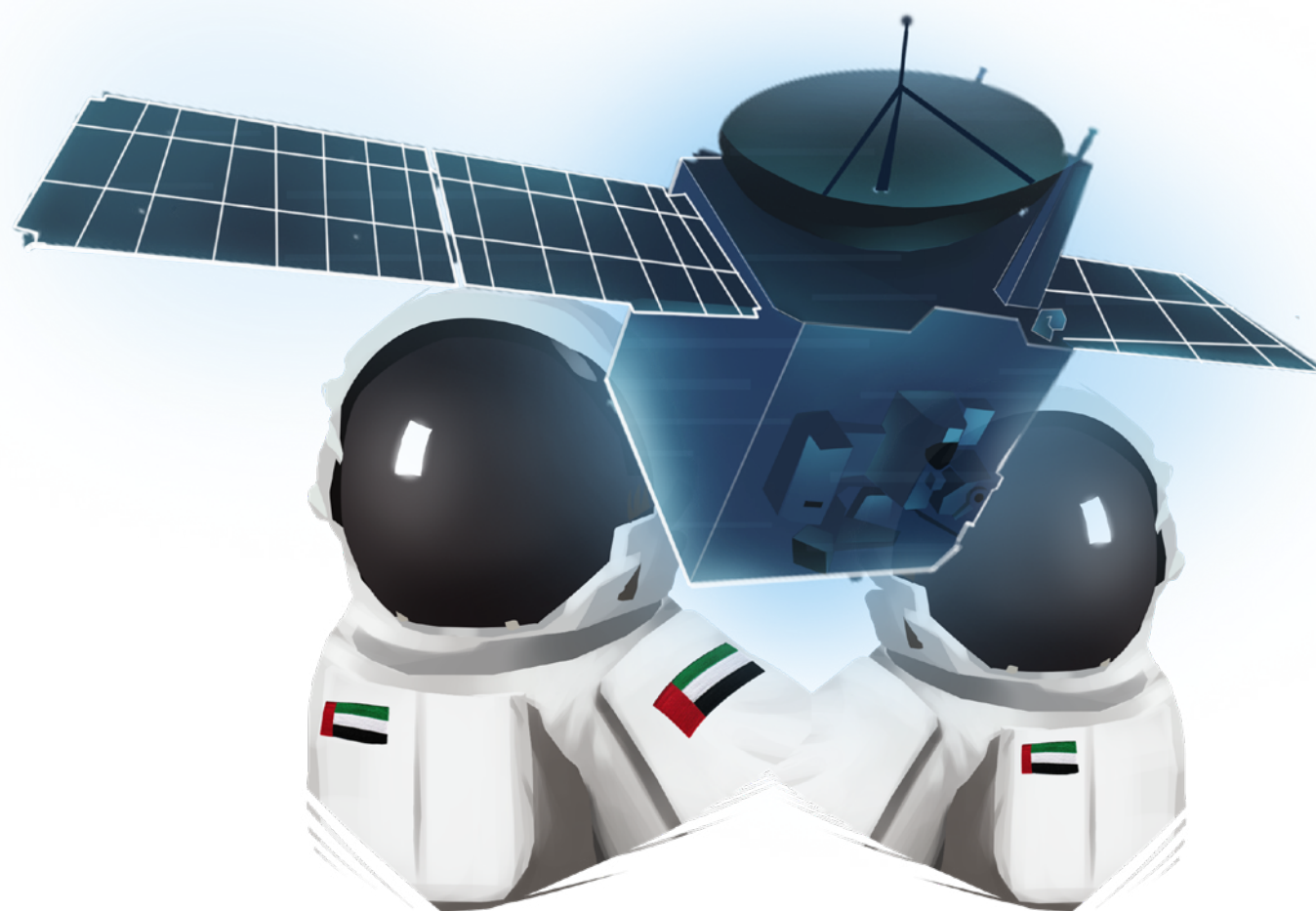
The Mohammed Bin Rashid Space Centre ('MBRSC') is a Dubai government entity working on the UAE space programme, including space satellite projects, the UAE astronaut programme and the Emirates Mars Mission (or Hope Probe).

The probe was launched in July 2020, and reached Mars' orbit on 9 February 2021, making the UAE the first Arab country to reach the red planet. The success of the mission comes in the 50th anniversary of the union of the UAE. The probe will study the atmosphere of Mars. Goals of the mission include establishing a sustainable knowledge-based economy, promoting diversification and encouraging innovation, elevating the UAE's status in the space race and further widen benefits.

Conclusion

The UAE has one of the largest space sectors in terms of size of investment, comprising more than AED 20 billion (approximately US\$5.5 billion) of national investments in space technologies, according to TDRA, UAE operates 9 satellites. The UAE's Space Law cements the country's pioneering edge in the region in developing its national space sector. The legislation clarifies many of the shortfalls of the international treaty framework and is expected to further boost investment, research and development within the space sector as we embark on the next 50 years.

"The UAE's Space Law directly tackles many of the challenges regarding the commercialisation of space, and aims to go above and beyond other national space regulations in many respects."



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PLANNING FOR THE NEXT 50: ESTATE AND SUCCESSION PLANNING IN THE UAE



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H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the United Arab Emirates ('UAE') Centennial 2071 project to establish the UAE as the greatest country in the world by 2071. This vision was endorsed by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai to allow for further development of the Emirates in the five decades

following 2020. One of the main objectives of the project is to build a stronger and more attractive environment for generations to come, with respect to the UAE economy and other areas in the jurisdiction. A vision such as this clearly points out the far-reaching and forward-thinking approach to be implemented ahead of its time in order to deal with the rapid changes taking place in the world currently and in the coming years. Taking into account



the recent announcements in relation to estate and succession planning, one can see the objective of achieving a more efficient and straightforward regime for expatriates residing in UAE, to plan their estate in the forthcoming years.

Currently, there are a number of laws and regulations allowing non-Muslims to effectively distribute their estate to their loved ones. These options allow for non-Muslims to register wills with full testamentary capacity and not be subject to the Sharia principles of inheritance. The Wills can also include guardianship clauses to allow non-Muslim expatriates to determine matters such as custody and guardianship of minor children. If there is no registered Will, then the UAE Personal Status Law will come into effect and thus inheritance principles based on Sharia will be applied to the estate. This means

“Currently, there are a number of laws and regulations allowing non-Muslims to effectively distribute their estate to their loved ones.”

that certain (prescribed by law) legal heirs will inherit a distinct share from the individual’s estate. The will can be executed and registered within a time period of approximately 2-3 weeks.

Will registration options

There are different authorities and options to register a Will in the UAE. Wills are registered either at Dubai International Financial Centre (‘DIFC’), Abu Dhabi Judicial Department (‘ADJD’) or at Dubai Court.

DIFC

The DIFC Wills Service Centre released new rules to allow non-Muslims to include all of their worldwide assets in a DIFC Will. The DIFC Wills Service Centre allows eligible non-Muslim individuals to formally register their English language Wills according to the principles of testamentary freedom, enabling them to choose to dispose of their UAE or worldwide based assets upon death as they see fit. The fees for registering a single Will in DIFC amounts to AED 10,000 (approximately US\$2,700) + VAT.

Abu Dhabi

The Abu Dhabi Judicial Department (‘ADJD’) has rules relating to succession and inheritance matters for non-Muslims holding assets in the UAE. The new Office allows non-Muslims with assets in Abu Dhabi and other Emirates to have the option to deal with their estates as they so choose. It also offers flexible legal options, where previously there was inflexibility, to assist non-Muslim families in the event of death. The fees for registering a single Will in ADJD amounts to AED 950 (approximately US\$259) plus legal stamping fees, since the Will in ADJD needs to be in bilingual format.

Dubai

The Dubai Local Courts allow non-Muslims to notarise a bilingual Will before a Notary Public. The fees for executing and notarising a Will before the Dubai Courts amounts to approximately AED 2,000 (approximately US\$545).

Recent developments

With hundreds of different nationalities residing and working in the UAE, the UAE Government’s latest

endeavour in providing a better living environment has resulted in the introduction of a number of crucial amendments to several laws: most notably, amendments to Federal laws specifically relating to issues of divorce, separation and inheritance.

The Personal Status Law has undergone revisions, by way of Federal Decree number 29 of 2020 (‘Amended PSL’), and the Civil Code has been revised, by way of Federal Decree number 30 of 2020 (‘Amended Civil Code’).

The amendments allow for expatriates to apply the laws of their home country in relation to inheritance of their UAE estate, so that the distribution of an individual’s estate will take place according to the laws of the country of which the individual is a citizen, instead of the application of UAE law (which codifies Islamic Sharia principles on inheritance). However, an exception remains with respect to UAE real estate, which shall continue to be subject to UAE laws, unless a will has been registered in the UAE.

These amendments have been introduced as a positive step in the UAE Government’s continued drive to enhance the UAE as a location for expatriates to live and work.

The future

In order to further enhance the existing laws in relation to estate and succession planning in UAE, we highlight certain recommendations and steps that can be taken to ensure a more desirable approach to a sensitive subject.

Costs

Registration of a will with the DIFC Wills Service Centre can be seen to be relatively

expensive amounting to AED 10,000 (approximately US\$2,700) plus VAT for a single Will and AED 15,000 (approximately US\$4,000) plus VAT for mirror Wills. This amount is comparatively expensive when compared to common law jurisdictions where there is no such obligation to register a will. There are over and above costs besides the fee for the registration of the will, which include the fees for drafting a Will by a legally qualified lawyer and other charges of translation, stamping and enforcement. It would be ideal to lower the registration fee in the DIFC to facilitate an even more appealing standard for non-Muslims in Dubai.

Additional Wills Registry

It would also be ideal to have a second Wills Registry outside of the DIFC, in Dubai. Currently, a two-stage process is required for retrieving an enforcement order by the DIFC courts in cases where the assets are located outside DIFC. A second Wills Registry in onshore jurisdiction of Dubai would eliminate the requirement for a two stage process of obtaining a DIFC Courts’ order and then further a Dubai Courts’ order for enforcement of assets outside DIFC. This would be a perfect step for removing the prerequisite for double enforcement through both the Dubai Courts and DIFC Courts in situations where the assets are located outside of DIFC. It would also significantly reduce the costs for registration of Wills. An equivalent of the DIFC Wills Service Centre, when created, in an onshore jurisdiction would be a significant factor

in making the registration of wills more accessible to the overall public in UAE.

Real Estate

The recent amendments aimed at simplifying the distribution of an individual’s estate by allowing the application of the laws of the country of which the individual is a citizen, instead

“These amendments have been introduced as a positive step in the UAE Government’s continued drive to enhance the UAE as a location for expatriates to live and work.”

of the application of UAE law. However, under the new proposed amendments the same does not extend to UAE real estate property. This means that individuals would still have to register a will for their UAE real estate, if they do not wish for it to be subjected to UAE law. In cases where an individual fails to register a will, then his or her assets. in respect of real estate property, will be distributed in accordance with Sharia inheritance principles. It is recommended that further amendments be introduced to Federal laws so as to apply to immovable property, as well as movable property.

In following with our Ruler’s vision, it is vital that a structured approach be followed for developing a more cost effective service for registration of wills in the UAE. It is also important that more offices be located in various locations to permit easier access for registration of wills. Such steps would allow the UAE to remain an attractive destination for expatriates and their families and would provide peace of mind that individuals’ assets would be dealt with in a manner in which they would wish.

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THE INTRODUCTION OF CORPORATE TAX IN THE UAE: MYTH OR REALITY?



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In recent years, the UAE has undergone significant tax changes to modernise its tax system to bring it in line with international best practices and standards and to diversify state revenue.

Looking ahead, the UAE may consider imposing additional taxes to help achieve its economic vision over the next 50 years. This article discusses the UAE's evolving

tax environment and explores the possibility of the future introduction of a Federal corporate tax in the UAE.

Implementation of indirect taxes

The introduction of VAT had been under discussion in the GCC for more than a decade prior to the UAE establishing the Federal Tax Authority in

2016 to administer, collect and enforce Federal taxes, which currently comprise excise tax and VAT.

In 2015, the International Monetary Fund ('IMF') recommended that the GCC countries reform their existing tax systems by introducing VAT to tackle fiscal deficits and increase government revenue. The IMF estimated that the potential revenue from VAT at 5 per cent would represent around 1.5 to 2 per cent of the gross domestic product, depending on the individual country.

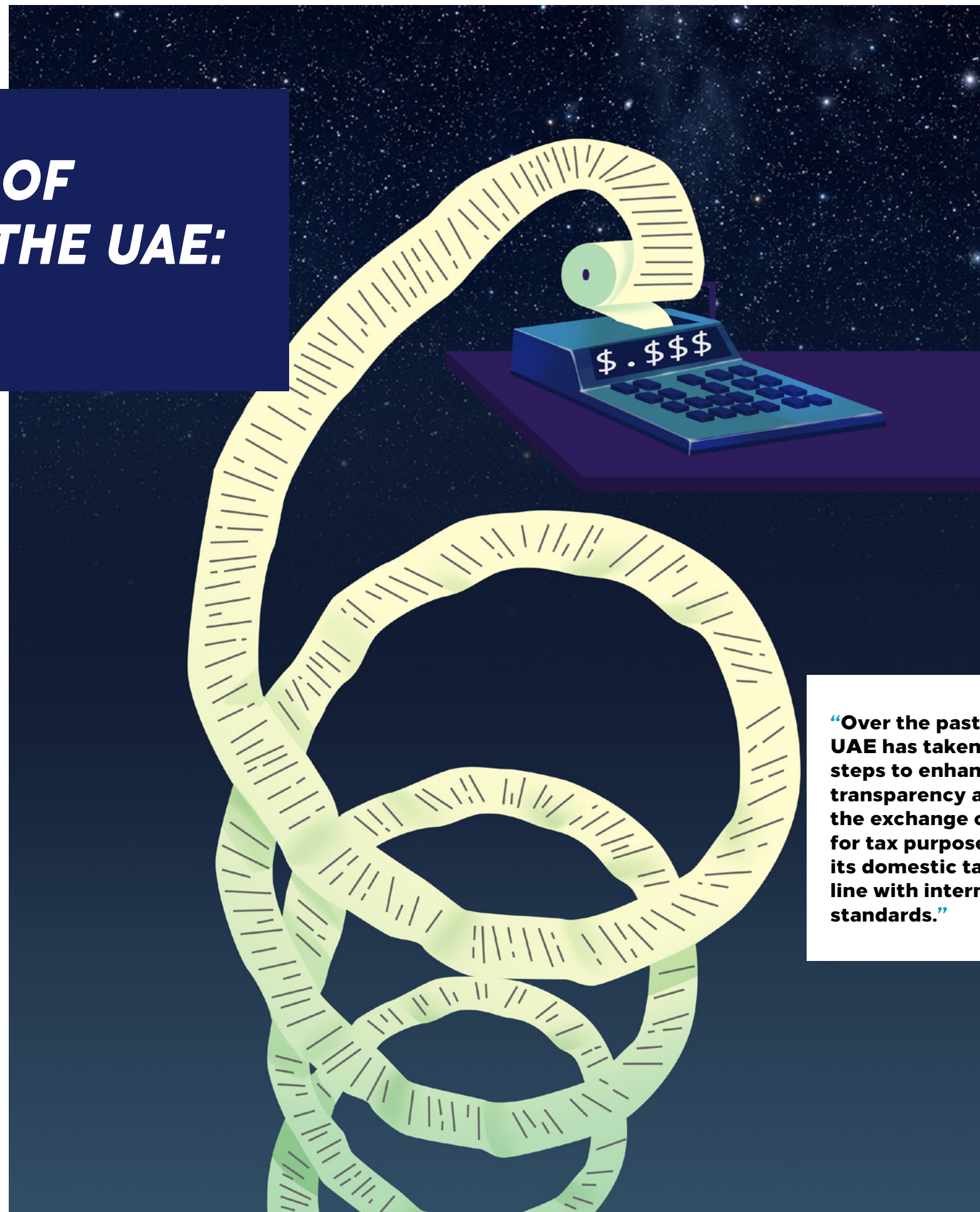
With a view to diversifying government revenue and reducing dependence on hydrocarbons, GCC countries agreed to a common legal framework to implement excise tax on selective goods that are considered harmful to human health and VAT on the supply and import of goods and services.

In line with these GCC agreements, the UAE introduced its first two taxes at the Federal level: Excise Tax at the rate of 100 per cent on energy drinks and tobacco

products; and at 50 per cent on carbonated drinks from 1 October 2017 (expanded to e-smoking devices and liquids at the rate of 100 per cent and sweetened drinks at the rate of 50 per cent from 1 December 2019) and VAT

at the standard rate of five per cent with effect from 1 January 2018.

“Over the past few years the UAE has taken significant steps to enhance tax transparency and to facilitate the exchange of information for tax purposes by bringing its domestic tax rules into line with international standards.”



Current direct tax environment for businesses

There are limited direct taxes in the UAE.

Currently there is no corporate tax in the UAE at the Federal level, but some individual Emirates impose a limited corporate tax on enterprises engaged in exploration and production of oil and gas at rates up to 55 per cent and on branches of foreign banks operating in the UAE at the rate of 20 per cent.

The UAE has also established many free zones that provide tax holidays and exemptions for terms of between 15 to 50 years.

UAE’s drive to modernise tax rules

Over the past few years the UAE has taken significant steps to enhance tax transparency and facilitate the exchange of information for tax purposes by bringing its domestic tax rules in line with international standards. Many of the changes in the UAE were driven by the Organisation for Economic Cooperation and Development’s (‘OECD’), Base Erosion Profit Shifting (‘BEPS’) project which seeks to tackle international tax avoidance and address gaps in existing tax rules that allow the profits of multinational companies to be artificially shifted from high tax jurisdictions to low or no tax environments where little or no economic activity takes place. A 15-point BEPS Action Plan was developed by the OECD in partnership with the G20 countries in 2013.

The UAE already has a wide tax treaty network with over 90 double taxation treaties in place with other countries. These treaties seek to eliminate double taxation and facilitate the exchange of

tax information on a bilateral basis. In addition, the UAE has implemented the Common Reporting Standard for the automatic exchange amongst tax authorities of financial account information of foreign tax residents. In this regard, the UAE signed the OECD Convention on Mutual Administrative Assistance in Tax Matters in April 2017 and ratified the same in April 2018.

The UAE became a BEPS inclusive member in May 2018, together with more than 135 other countries, committing to the implementation of four minimum BEPS standards, namely countering harmful practices (Action 5), countering treaty abuse (Action 6), transfer pricing documentation and country-by-country reporting (Action 13) and improving dispute resolution mechanisms (Action 14).

In July 2018, the UAE signed and subsequently ratified the Multilateral Competent Authority Agreement to complete the implementation of the Common Reporting Standard and to facilitate compliance with various BEPS transparency measures including the exchange of country-by-country reports under BEPS Action 13.

In line with its commitments as a BEPS inclusive member, the UAE has taken various measures to implement the minimum BEPS standards. The UAE signed up to the OECD’s Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting in June 2018 (also known as the

“multilateral instrument”) allowing the UAE to modify existing double tax treaties without the need for protracted bilateral negotiation. The UAE also issued initial substance regulations and a cabinet resolution on country-by-country reporting with effect from April 2019.

Recent international tax developments

One of the key areas of focus of the OECD BEPS project was Action 1 which addressed the tax challenges of the digital economy. There was a concern that existing international tax rules were outdated and had not kept pace with the rapid digitalisation of the global

economy, which has changed the way many businesses are structured and conduct business. The OECD work on Action 1 is based on two pillars and has

become known as the BEPS 2.0 project. Pillar 1 deals with the allocation of taxing rights between jurisdictions and nexus rules whereas Pillar 2 deals with the proposal for a global minimum tax regime.

Recently the OECD issued a blueprint on Pillar 2 which deals with the development of global minimum tax rules to ensure that worldwide income of businesses is subject to an agreed minimum rate of tax regardless of where they are headquartered or operate thereby limiting the incentives for businesses to locate functions, activities and profits in low-tax jurisdictions.

The blueprint includes an income inclusion rule and an undertaxed payments rule (known as the global anti-base erosion (GloBE) rules) and a Subject to Tax rule. The income inclusion rule gives countries the ability to include foreign income of overseas subsidiaries and branches in its tax base if that income is taxed at below a minimum effective tax rate in the jurisdiction of the subsidiary or branch. The undertaxed payments rule increases the tax base of the payer by disallowing a tax deduction or requiring an adjustment where the payment is not subject to tax at the global minimum effective tax rate in the hands of the recipient. The Subject to Tax rule denies treaty benefits and imposes a withholding tax or other means of source taxation on payments if they are not subject to a minimum rate in the country of the recipient.

While there are still some political and practical obstacles to the proposals under Pillar 2 and building consensus amongst member jurisdictions of the Inclusive Framework has been a major obstacle, the blueprint is intended as a basis for future agreement. A number of areas require further work and agreement, including the minimum tax rates (the blueprint suggests 10 per cent to 12 per cent for the GloBE proposal and 7.5 per cent for the Subject to Tax rule). The timeline for reaching an agreement and resolving any outstanding issues has been set at mid-2021. As a next step, the Inclusive Framework will need to achieve an agreement on the development of

model legislation, standard documentation and guidance, designing a multilateral review process if necessary and exploring the use of a multilateral convention.

“No country or institution can require or force the UAE to introduce corporate tax. Indeed, countries are entitled to have limited or no corporate tax to give themselves a competitive advantage and to attract foreign investment. As such, the right to introduce corporate tax is the UAE’s sole prerogative and whether or not corporate tax is ultimately adopted will be a sovereign decision taken by the UAE based on local economic and political considerations.”

The proposals under Pillar 2 represent a radical change to the international tax rules and go beyond taxing only digital businesses. Previously, the OECD had stated that the digital economy was becoming the entire economy itself and so specific rules designed for the digital economy would not work and, as such, the digital economy cannot be ring fenced. Accordingly, if the proposals under Pillar 2 are implemented, it would have major implications for multinational companies headquartered or operating in the UAE. A number of countries have already taken unilateral measures and implemented their own digital services tax based on the OECD work under Action 1 and Pillar 2 and it is possible that other countries could implement their own minimum tax rules based on the OECD framework if a consensus is not reached by mid-2021.

Currently most jurisdictions tax income if the entity generating the income is resident or has a permanent establishment in the country or otherwise the entity derives local source income. A consequence of Pillar 2 is that, subject to any minimum threshold (currently a EUR 750 million annual group consolidated revenue threshold is proposed in order for the rules to be applicable to a multinational enterprise), overseas jurisdictions will be granted additional taxing rights where other jurisdictions such as the UAE have not exercised their taxing rights or income is subject to low rates of tax.

Concluding thoughts

Taxes are the main source of revenue for most countries globally. While taxes generally help governments to generate additional revenue and fund public expenditure, there is a major difference between direct taxes such as corporate tax and indirect taxes like VAT and excise tax.

Although VAT and excise tax are collected by businesses on behalf of the government, these indirect taxes are taxes on consumption that are intended to be borne by the final consumer. As such, although there is a compliance burden and a cost for businesses in accounting for indirect taxes, the economic cost of VAT and excise tax should be passed on to the ultimate consumer and generally should not represent a direct cost to businesses. Therefore, such taxes are generally investment neutral. On the other hand, corporate tax is a disincentive

for foreign direct investment because it is directly imposed on the taxable profits of companies. The absence of a Federal corporate tax in the UAE is very attractive for businesses operating or seeking to invest in the UAE and the encouragement of foreign investment into the UAE is an important part of domestic policy.

It is for these reasons that the implementation of VAT and excise tax was a popular choice and historically limited direct taxes have been maintained on businesses. While the UAE has expanded its tax base with the implementation of indirect taxes and Federal corporate tax has been under

UAE to introduce corporate tax. Indeed, countries are entitled to have limited or no corporate tax to give themselves a competitive advantage and to attract foreign investment. As such, the right to introduce corporate tax is the UAE's sole prerogative and whether or not corporate tax is ultimately adopted will be a sovereign decision taken by the UAE based on local economic and political considerations.

However, in determining whether or not to introduce corporate tax, the UAE will also need to monitor and take into account international developments arising as a result of the OECD's BEPS

2.0 project. In light of these radical changes to the international tax landscape, the UAE faces an interesting policy dilemma.

Clearly there are benefits in introducing a Federal

corporate tax as it would enable the UAE to generate additional revenue in line with its diversification strategy and future vision. In addition, the implementation of a Federal corporate tax at the rate of between 10 per cent and 15 per cent should not necessarily make the UAE less competitive in the region given that four of the six GCC countries already have a comprehensive corporate tax system with Saudi Arabia imposing corporate tax at 20 per cent, Qatar at 10 per cent, Kuwait at 15 per cent and Oman at 15 per cent.

The question is, therefore, whether the UAE should further expand its tax base by introducing a minimum level Federal corporate tax and realise tax revenue from companies that operate in the UAE, or risk maintaining the status quo and allow other countries to tax UAE businesses in the future which would erode one of the historical benefits of doing business in the UAE. Going forward, the introduction of corporate tax in the UAE may become a necessity rather than strictly a "choice".

“The question is therefore whether the UAE should further expand its tax base by introducing a minimum level Federal corporate tax and realise tax revenue from companies that operate in the UAE, or risk maintaining the status quo and allow other countries to tax UAE businesses in the future which would erode one of the historical benefits of doing business in the UAE.”

discussion in the past, it has so far been reluctant to introduce a corporate tax at the Federal level.

Although the UAE introduced substance rules and implemented other measures based on its international commitments, this was with a view of facilitating tax transparency and tax information exchange in order to prevent companies from avoiding taxes in other countries by artificially shifting profits from those countries to the UAE with little or no local substance. No country or institution can require or force the

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