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UAE becomes world's first country to produce aluminium using solar power



The BMW Group will begin sourcing aluminium produced using solar electricity with immediate effect. This marks an important milestone on the road to the company's goal of lowering CO2 emissions in its supplier network by 20% by 2030. ...

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BMW GROUP



This solar-powered aluminium will be supplied to global customers under the new product name of CelestiAL

Under an agreement struck between the Dubai Electricity and Water Authority (DEWA) and Emirates Global Aluminium (EGA) on Monday, January 18, DEWA will supply EGA's smelter with solar power from the Mohammed bin Rashid Al Maktoum Solar Park, located in Dubai.

The solar park has a current installed capacity of 1,013 megawatts using photovoltaic solar panels.

DEWA is implementing an additional 1,850 megawatts of projects using solar panels and Concentrated Solar Power (CSP). Eventually, its capacity will reach 5,000MW by 2030.

DEWA will supply EGA's smelter with 560,000 megawatt hours of solar power

annually from the facility, sufficient to produce 40,000 tonnes of aluminium in the first year itself.

EGA will in turn supply this solar-powered aluminium to global customers under the new product name CelestiAL.

The fourth phase of the solar park will, upon its completion, have the largest energy storage capacity in the world of 15 hours. It will be operational in stages starting from Q3 2021, and will provide clean energy for 320,000 residences, and will reduce 1.6 million tonnes of carbon emissions a year.

EGA's sourcing of solar power from Dubai's electricity grid will be tracked and traced through the use of the International Renewable Energy Certification System, ensuring that the energy used to produce EGA's CelestiAL solar aluminium has been sourced from the sun.



> Saeed Mohammed Al Tayer, managing director and CEO of DEWA and vice chairman of EGA said that the ability to produce aluminium using solar power will help achieve the goals of the Dubai Clean Energy Strategy 2050 in diversifying energy sources and deriving 75 per cent of Dubai's energy production capacity from clean energy sources by 2050. "The new achievement contributes to supporting our efforts in reducing carbon emissions through the Dubai Carbon Abatement

Strategy. Dubai reduced carbon emissions by 22 per cent in 2019 compared to business as usual. Results achieved exceeded the targets set in the Dubai Carbon Abatement Strategy, which aims to reduce carbon emissions by 16 per cent by 2021".

Abdulnasser bin Kalban, CEO of EGA, said, "Aluminium is a lightweight, strong and infinitely recyclable metal and these properties mean that as a material it plays

a vital global role in the development of a sustainable future. However, it also matters how sustainably aluminium is made. CelestiAL aluminium made in the UAE with solar power, will support modern life for people around the world while also protecting our planet for future generations."

<https://gulfbusiness.com/uae-becomes-worlds-first-country-to-produce-aluminium-using-solar-power/>

Harnessing the power of the desert sun: BMW Group sources aluminium produced using solar energy



The BMW Group will begin sourcing aluminium produced using solar electricity with immediate effect. This marks an important milestone on the road to the company's goal of lowering CO2 emissions in its supplier network by 20% by 2030. Since producing aluminium is highly energy-intensive, the use of green power – such as solar electricity – offers considerable potential for reducing CO2 emissions. That is why the BMW Group also plans to source aluminium produced with green power in the long term – enabling it to avoid approx. 2.5 million tonnes of CO2 emissions over the next ten years. This is equivalent to about three percent of the CO2 targets the company has set for its supplier network.

"We aspire to lead the way in sustainability and implement our sustainability goals in a systematic manner. We will be able to meet over 50% of our CO2 targets for the supplier network, just by using green power. The use of solar electricity for producing aluminium is a major step in this

direction," said Dr. Andreas Wendt, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network.

The aluminium produced using solar power is processed in the light metal foundry at BMW Group Plant Landshut to manufacture body and drive train components, including those needed for electric drive trains, for instance. Sourcing 43,000 tonnes of solar aluminium valued in the three-digit million euros will supply nearly half the annual requirements of the light metal foundry at Plant Landshut.

Use of green power key to reduce CO2 emissions

The trend towards e-mobility means that a much larger percentage of a vehicle's lifecycle CO2 emissions now comes from upstream added value in the supplier network. In an electrified vehicle, CO2 emissions from the use phase are much lower,

but producing battery cells or aluminium is very energy-intensive. Without corrective measures, CO2 emissions per vehicle in the BMW Group supply chain would increase by more than a third by 2030. The company not only wants to stop this trend, but also reverse it – and even lower CO2 emissions per vehicle by 20% from 2019 levels.

The BMW Group has therefore already agreed with suppliers for its current fifth-generation battery cells that they will only use green power for producing battery cells.

The BMW Group is now taking the next logical step by sourcing aluminium produced with green power. Because, as e-mobility takes off, aluminium will become increasingly important as a lightweight material that can partially offset the heavy weight of the batteries in electrified vehicles. However, producing aluminium is extremely energy-intensive. Generating the electricity needed to produce primary aluminium, i.e. aluminium obtained directly from the mineral compound alumina, is alone responsible for about 60% of the global aluminium industry's greenhouse gas emissions. The use of solar electricity is therefore an effective lever for reducing the CO2 emissions associated with aluminium smelting.

Solar park in the desert supplies green power for aluminium production

The BMW Group already has a long-standing supply relationship for primary aluminium with Emirates Global Aluminium (EGA). EGA has now become the first company in the world to also use solar

electricity for commercial production of aluminium, which it will initially supply exclusively to the BMW Group. EGA sources the electricity used to produce the aluminium destined for the BMW Group from the Mohammed Bin Rashid Al Maktoum Solar Park in the desert outside of Dubai, which, in the final stage of development, is set to become the world's largest solar park. It is operated by the Dubai Electricity and Water Authority, which has the electricity it produces sustainably certified by third parties, ensuring that it can supply EGA with power that is traceable and transparent.

Abdulnasser Bin Kalban, Chief Executive Officer of EGA, said: "We are delighted to have the BMW Group as our first customer for low-carbon CelestiAL aluminium from EGA. Aluminium is light, strong and infinitely recyclable. That is why it plays such an important role in the development of a more sustainable society and in making modern life possible. But how sustainably the aluminium is produced is also important. Solar aluminium is a step in the right direction – it uses a natural and abundant source of energy in our desert environment to produce a metal that is vital to the future of our planet."

Wendt adds: "In EGA, we have found a strong partner who values sustainable development just as much as we do. It is a special honour for us to be the first customer to receive aluminium produced using solar electricity. Aluminium plays an important role in e-mobility and using sustainably produced aluminium is tremendously important to our company."

Innovative production processes: light metal foundry at BMW Group Plant Landshut

The light metal foundry is the largest production unit at BMW Group Plant Landshut and the company's only European manufacturing facility for light metal casting. Last year, the more than 1,600 employees at the light metal foundry at BMW Group Plant Landshut produced a total of 2.9 million cast components. The scope of production includes engine components such as cylinder heads and crankcases, components for electric drive trains and large-scale structural components for vehicle bodies.

The light metal foundry is one of the most state-of-the-art foundries in the world. Its innovative and sustainable production processes have won numerous awards. The light metal foundry also works with

shaping sand cores, among other methods, to manufacture cast parts. The sand cores are produced using inorganic binders – making the casting process virtually emission-free. Five different casting methods are used for standard production of cast components. The most suitable casting method is selected, depending on the component concept, technological requirements and production volume.

Certification by Aluminium Stewardship Initiative (ASI)

The light metal foundry at BMW Group Plant Landshut was already certified for its sustainable use of aluminium back in December 2019. It meets the standards of the Aluminium Stewardship Initiative (ASI), an international non-profit organisation supported by environmental and industrial associations, NGOs, aluminium producers and processing companies. ASI aims to maximise aluminium's contribution to a sustainable society and defines sustainability criteria for an environmentally and socially responsible aluminium value chain. Through this initiative, following an audit by an independent third party, the BMW Group received confirmation that its light metal foundry handles aluminium in a conscious and responsible manner.

Responsible use of natural resources

In addition to using green power to produce aluminium, the BMW Group is also taking additional steps to safeguard reserves of critical raw materials. For instance, the BMW Group has set itself the goal of significantly increasing the percentage of recycled raw materials, so-called secondary material, by 2030 and using raw materials multiple times in a circular economy. The use of secondary material reduces CO₂ emissions substantially compared to primary materials and also conserves natural resources.

At the same time, the BMW Group is establishing carbon footprint as a new contract award criterion for its supply chain and already began implementing this for the tenders with the biggest carbon footprint in 2020.

These measures are already delivering results in the BMW iX (power consumption combined: < 21 kWh/100 km in the WLTP* test cycle; CO₂ emissions combined: 0 g/km): Relying on renewable green power to produce battery cells, in combination with increased use of secondary material, reduces CO₂ emissions in the BMW iX supply chain by 17%, com-

pared to the same vehicle produced without these measures.

The BMW Group aims to have more than seven million electrified vehicles on the roads by 2030 – two thirds of them fully-electric. For this order of magnitude, BMW Group Purchasing is working with suppliers to ensure not only that the supply chain can manage the growth in volumes, but also that it can implement the requirements for sustainable development. In this way, BMW Group Purchasing is making a vital contribution to the company's transformation towards e-mobility.

About Emirates Global Aluminium (EGA)



EGA is the world's largest producer of "premium aluminium" and was the first company headquartered in the Middle East to join the Aluminium Stewardship Initiative. EGA has supplied the BMW Group with primary aluminium since 2013.

EGA is an integrated aluminium producer, with operations ranging from bauxite mining to refineries and electrolysis, all the way to production of cast primary aluminium.

In 2019, EGA sold 2.6 million tonnes of cast metal. EGA is the only aluminium producer in the United Arab Emirates – making it the fifth-largest aluminium-producing country in the world.

With more than 400 customers in over 50 countries, EGA is one of the largest suppliers of foundry alloys to the automotive industry worldwide. EGA is certified to IATF 16949:2016, the latest global standard established by the automotive industry, which aims to ensure even more rigorous quality management in the global automotive supply chain.

<https://gulfbusiness.com/bmw-group-becomes-first-customer-for-uaes-solar-powered-celestial-aluminium/>

<https://www.press.bmwgroup.com/global/article/detail/T0325353EN/harnessing-the-power-of-the-desert-sun-bmw-group-sources-aluminium-produced-using-solar-energy>

UAE's Mars Hope probe 'is safe and will begin sending key science data in two months'



The UAE's Hope probe is another step closer to begin capturing data from Mars after it moved into the transfer orbit.

On Tuesday, Hope was successfully placed in the planet's capture orbit. To collect data on the Red Planet, it must move into the science orbit but first pass through the transfer orbit – where the probe is now.

The spacecraft will spend two months in the transfer orbit as mission control at Mohammed bin Rashid Space Centre carries out a series of rigorous tests to ensure Hope's subsystems and instruments are working.

Omran Sharaf, Mars mission director, said the spacecraft will beam back the first image in a week.

A day after UAE made history by becoming the fifth country to reach Mars, Mr Sharaf described the tense orbit entry stage as nerve-racking.

He said support from the community helped motivate the team, who had

spent the past six years working hard to ensure its success.

"Yesterday was one of the riskiest phases and we managed to succeed that stage – and by that I mean Emiratis and residents – whether you work in the space sector or not," he said.

"The mission tested how much the team can handle and also us, as a society, on how we can deal with such difficult tasks. What was special was seeing ... all of the UAE community supporting this mission and that they understood, if the mission failed, we had already achieved success."

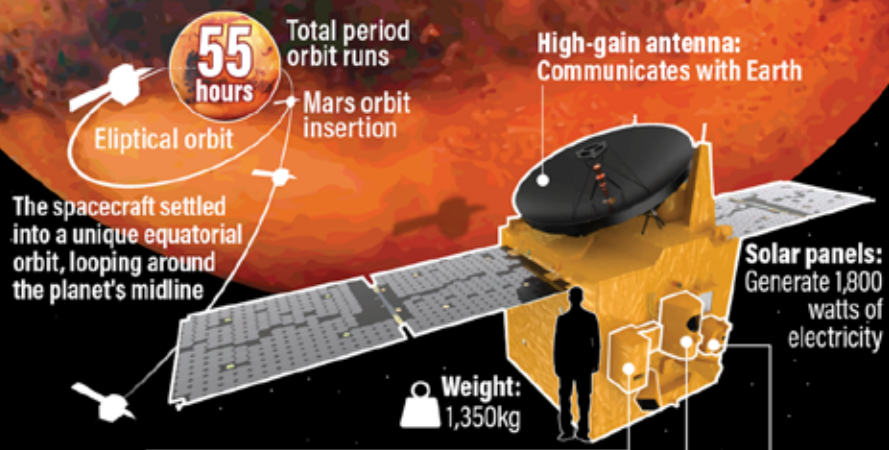
Tuesday's successful orbit insertion came six years after the mission's inception, and after the probe had travelled through space for seven months. Hope defied a 50 per cent risk of failure to enter Mars orbit.

It will spend two years orbiting the planet and sending back data to fill a gap in research and provide the world with more information about Mars.

The probe will study how energy moves through the atmosphere during the day and through the seasons of the 687-day Mars year.

<https://www.thenationalnews.com/uae/science/uae-s-mars-hope-probe-is-safe-and-will-begin-sending-key-science-data-in-two-months-1.1163715#1>

HOPE'S MARS MISSION TASKS



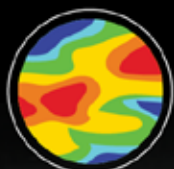
EMIRATES MARS ULTRAVIOLET SPECTROMETER (EMUS)
Measures emissions in the spectral range 100–170 nm to measure global characteristics and variability of the thermosphere, and hydrogen and oxygen coronae

EMIRATES MARS INFRARED SPECTROMETER (EMIRS)
It examines temperature profiles, ice, water vapour and dust in the atmosphere

EMIRATES EXPLORATION IMAGER (EXI)
High-resolution multiband (visible and ultraviolet) camera. Measures properties of water, ice, dust, aerosols and abundance of ozone in Mars' atmosphere



ULTRAVIOLET



INFRARED



HIGH-RESOLUTION PHOTOGRAPHY

SCIENCE OBJECTIVES

The mission will now search for connections between today's Martian weather and the Red Planet's ancient climate

UPPER ATMOSPHERE



Ice clouds

Studying atmospheric escape

Escape of hydrogen and oxygen

LOWER ATMOSPHERE



CO₂ clouds

Global weather mapping



Water vapour

Understanding climate dynamics

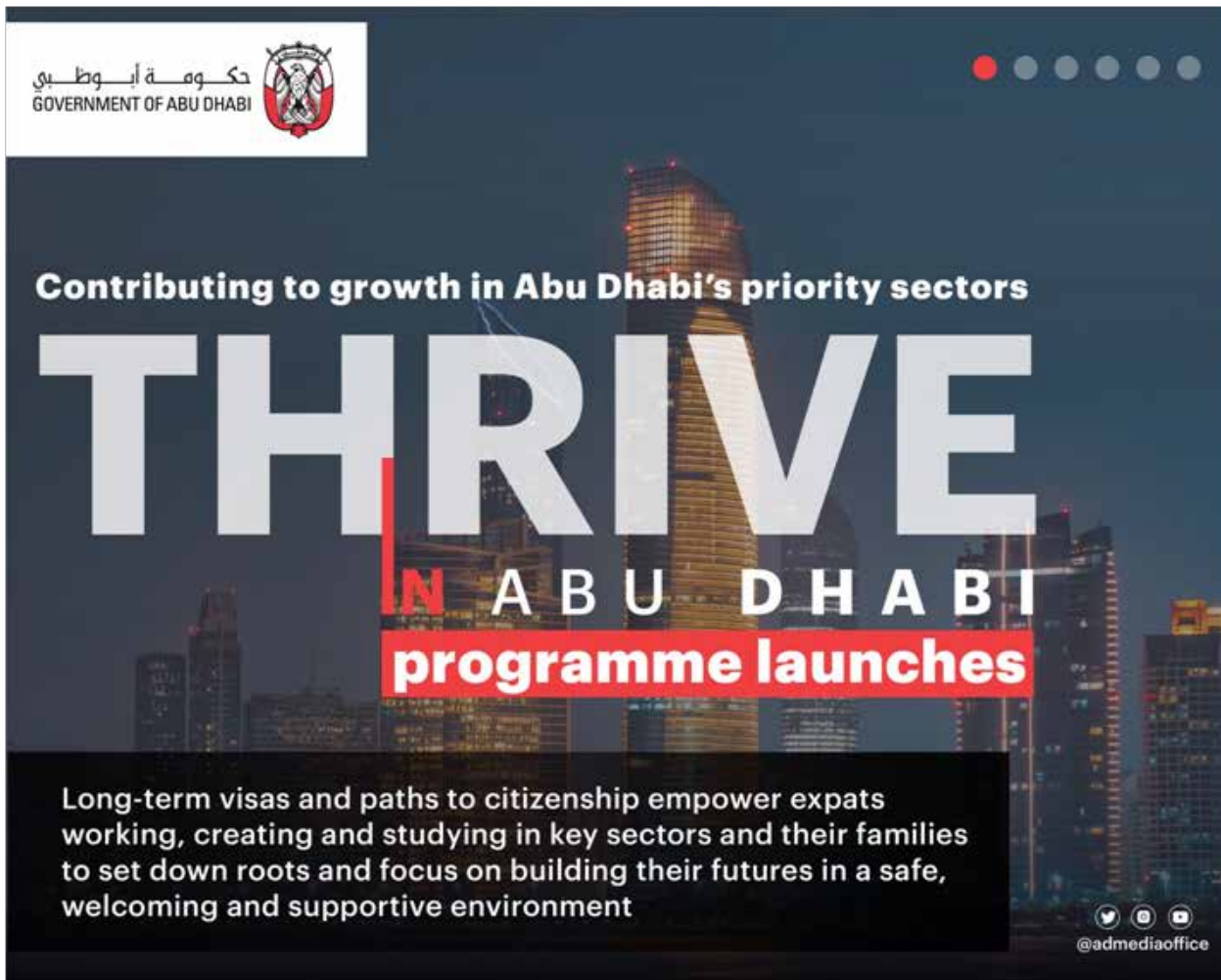


Dust storms

MISSION TIMELINE



Thrive in Abu Dhabi programme launched to encourage global talent, investors to build their futures in the emirate



Talented professionals and students, and investors, in priority sectors are being encouraged to set down roots with their families in Abu Dhabi as part of a new programme that supports the emirate's strategy to develop key areas such as culture, healthcare, research and development (R&D) and real estate.

Thrive in Abu Dhabi highlights the long-term visas and paths to citizenship available for expats working, creating, studying, excelling or investing in priority sectors that empower them to build their futures in a safe, welcoming and supportive environment, while contributing to Abu Dhabi's sustainable development.

Creative talent are encouraged to be part of a global arts and culture hub, join the emirate's dynamic media and entertainment industry, or support the development of our understanding of the past among fellow academics, conservators and archaeologists.

The creative visa builds on Abu Dhabi's five-year Culture Sector Strategy for Abu Dhabi, unveiled in November 2019 by the Department of Culture and Tourism, which covers five strategic objectives: preserve and sustain Abu Dhabi's cultural heritage; increase awareness of, and engagement with, cultural heritage and the arts; stimulate creativity as a driver for education and social change; build and enable capacity in Abu Dhabi's culture sector; contribute to economic growth and diversification.

Abu Dhabi has a thriving cultural and creative sector with strong global credentials, including world-class museums, arts centres, art fairs, music concerts, and a grassroots artistic community. These include Louvre Abu Dhabi, Manarat Al Saadiyat, Warehouse241, Abu Dhabi Art annual fair, Qasr AlHosn and Cultural Foundation and the forthcoming Zayed National Museum and Guggenheim, as well as international educational institutions supporting stu-

dents to excel in creative industries: NYU Abu Dhabi, Sorbonne Abu Dhabi, Berkley College and CNN Academy.

Students with a PhD or promising scientific ability at either high school or university level can expand their horizons and ensure exciting career paths by studying at one of a collection of world-class academic institutions in Abu Dhabi, including NYU Abu Dhabi, Sorbonne Abu Dhabi and Khalifa University, which in January 2019 was ranked 13th out of 442 universities from 43 countries in the Times Higher Education Emerging Economies University Rankings.

Students can learn the skills of the future, including in specialist areas such as AI, at the new Mohamed bin Zayed University for Artificial Intelligence, or coding at the innovative coding school 42 Abu Dhabi. They can participate in pioneering research in areas related to Covid-19 and AgTech at UAE Universi-

ty, or focus on tolerance and coexistence at the world's first university dedicated to human fraternity, the Mohamed bin Zayed University for Humanities.

Thrive in Abu Dhabi invites **innovators** to turn their idea into reality - with access to funding and incentives - as part of a dynamic R&D ecosystem that is pioneering new technologies to solve the global challenges of the future, from water security to food technology.

The emirate is focused on fostering a thriving R&D ecosystem that brings together all relevant players, including academic institutions, research institutes and the private sector. In 2020, Abu Dhabi launched the Middle East's first research council, the Advanced Technology Research Centre (ATRC). It includes the Technology Innovation Institute, whose seven pillars are quantum research, autonomous robotics, cryptography, advanced materials, digital security, directed energy and secure systems.

As part of Abu Dhabi's accelerator programme, Ghadan 21, the Department of

Education and Knowledge has launched academic research grants to award AED40 million in competitive research funding to support R&D. Abu Dhabi's economic investment strategy is also focused on attracting innovation-led companies that are focused on R&D. For example, all AgTech firm investments by Abu Dhabi last year included significant R&D set-ups.

Investors, including entrepreneurs, can tap into major opportunities by expanding their business in key sectors including five 'growth sectors' identified by ADIO - financial services, ICT, health services and biopharma, AgTech, and tourism - as well as real estate. Long-term visas also empower expats to invest in their "forever home" in an attractive real estate market where they can plan to retire.

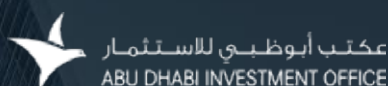
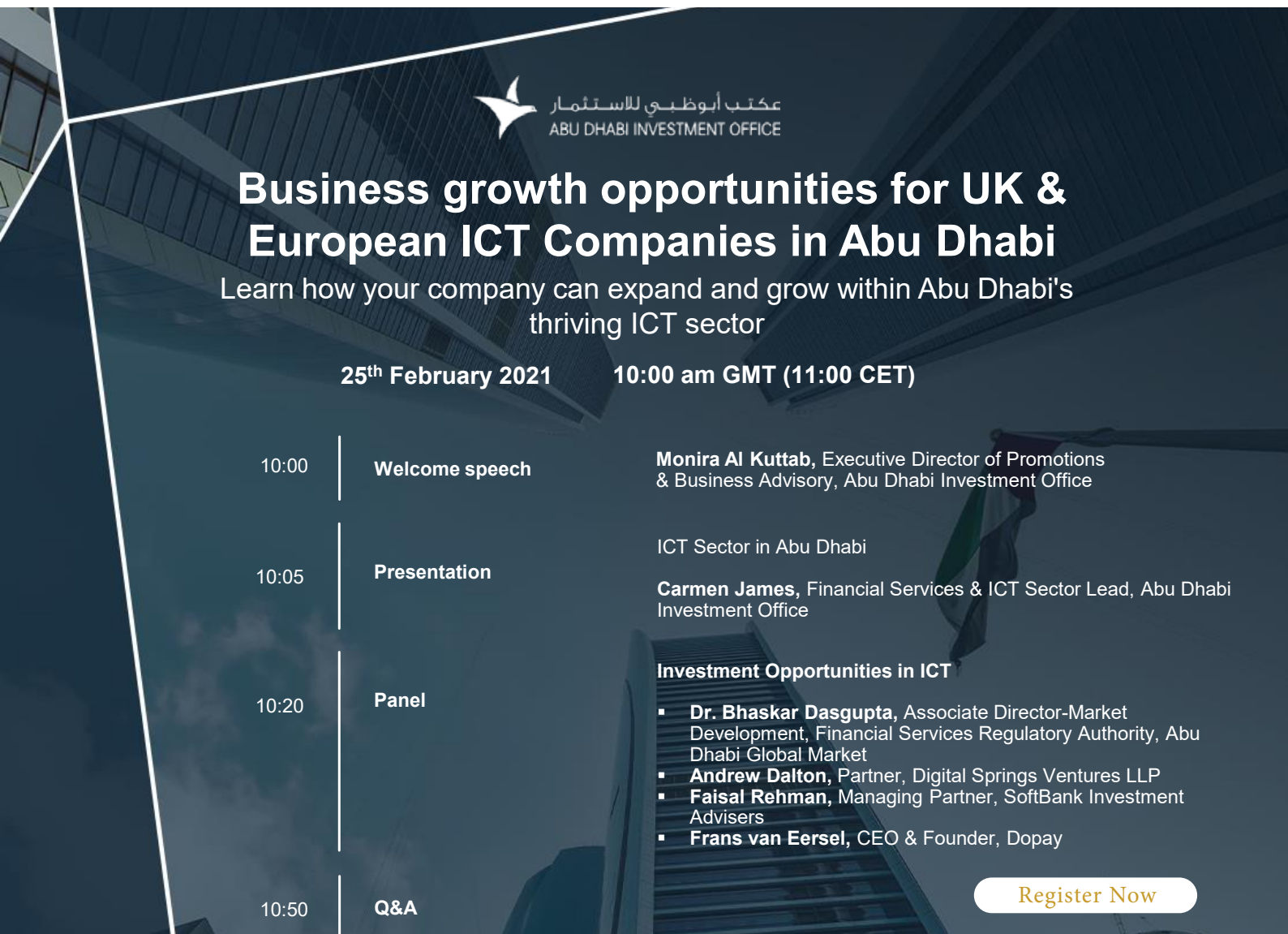
Start-ups are receiving significant support, with Abu Dhabi emerging as a global start-up hub, particularly for future technologies such as FinTech, AgTech, HealthTech and EdTech. Ghadan 21 has accelerated the ecosystem's development by supporting start-

ups and SMEs through initiatives such as Hub71, a global start-up ecosystem that is now home to more than 100 start-ups, Ventures Fund (managed by ADQ) and SME Credit Guarantee and SME supply chain financing initiative.

Those who excel in areas such as sport, healthcare, science, education or engineering are enabled to accelerate their careers in a global trade hub with a rapidly diversifying economy and fast-growing private sector that supports residents to be the best in their field, while creating a home in Abu Dhabi.

The diversity of Abu Dhabi's support for talented expats is in line with the leadership vision to diversify the economy as well as ensure a welcoming, safe and supportive environment where everyone can thrive.

<https://www.mediaoffice.abudhabi/community/thrive-in-abu-dhabi-programme-encourage-global-talent-investors/>



Business growth opportunities for UK & European ICT Companies in Abu Dhabi

Learn how your company can expand and grow within Abu Dhabi's thriving ICT sector

25th February 2021 10:00 am GMT (11:00 CET)

10:00	Welcome speech	Monira Al Kuttab , Executive Director of Promotions & Business Advisory, Abu Dhabi Investment Office
10:05	Presentation	ICT Sector in Abu Dhabi Carmen James , Financial Services & ICT Sector Lead, Abu Dhabi Investment Office
10:20	Panel	Investment Opportunities in ICT <ul style="list-style-type: none"> ▪ Dr. Bhaskar Dasgupta, Associate Director-Market Development, Financial Services Regulatory Authority, Abu Dhabi Global Market ▪ Andrew Dalton, Partner, Digital Springs Ventures LLP ▪ Faisal Rehman, Managing Partner, SoftBank Investment Advisers ▪ Frans van Eersel, CEO & Founder, Dopay
10:50	Q&A	

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UAE News
@UAEnews

Minister of Climate Change applauds formation of UAE Circular Economy Council dvr.it/RsM7vM



7:28 PM - Feb 9, 2021 - dvr.it

Etihad Airways
@etihad

100% of our crew are vaccinated. We're the first airline in the world to vaccinate all pilots and cabin crew on board against #COVID19



9:16 AM - Feb 10, 2021 - dvr.it

Dubai Trends
@DubaiTrends

Hub71 attracts over 100 startups in two years as tech ecosystem gears up for global growth dvr.it/RsR4vG



7:28 PM - Feb 10, 2021 - dvr.it

UAE News
@UAEnews

Net worth of Non-Arab foreign investments totals AED1.68 billion since start of 2021 dvr.it/RsM7LJ



7:26 PM - Feb 9, 2021 - dvr.it

UAE News
@UAEnews

Covid: UAE's stimulus packages total Dh395 billion dvr.it/RsQXhD



4:42 PM - Feb 10, 2021 - dvr.it

Zawya
@Zawya

The benchmark five-year bonds are expected to launch later on Tuesday... bit.ly/3y8cZy via @Zawya #FirstAbuDhabi #FAB #banking #bonds #euros



9:21 AM - Feb 9, 2021 - Twitter Web App

ArabianBusiness
@ArabianBusiness

@Masdar eyes further growth in #US #cleanenergy market after @EDFOfficial deal



UAE's Masdar eyes further growth in US clean energy market after EDF deal
Masdar achieves first closing on the acquisition of 60% of a 160W clean-energy portfolio of projects in the United States
arabianbusiness.com

3:34 PM - Feb 8, 2021 - Zoho Social

Mubadala
@mubadala

Emirates Global Aluminium
@egofficial

EGA, @Mubadala and Dubai Holding today completed a major milestone with the first firing of the Siemens Energy H-class gas turbine at the new AED 1 billion state-of-the-art efficient power plant under development at our Jebel Ali site in Dubai. Read more: bit.ly/39HME6u.



8:01 AM - Feb 3, 2021 - Twitter Web App

Ministry Of Economy - United Arab Emirates
@Economyuae

The UAE ranked first in the region and fourth globally in the 2020 Global Entrepreneurship Index, ahead of European countries, the United States, and Asian countries in many different sub-indicators.



4:08 PM - Feb 11, 2021 - Twitter for iPhone

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