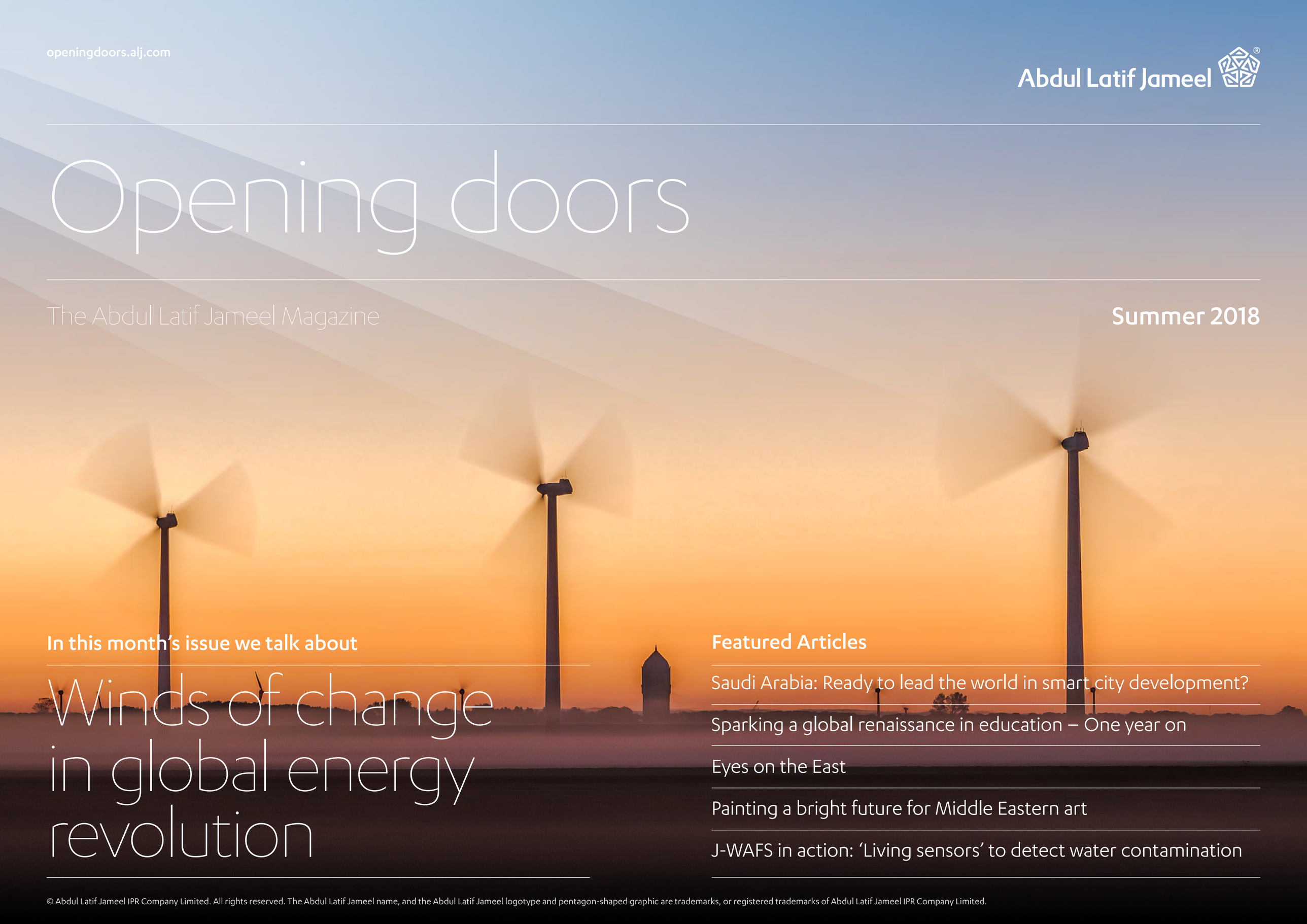
Abdul Latif Jameel

Opening doors

The Abdul Latif Jameel Magazine

Summer 2018



In this month's issue we talk about

Winds of change in global energy revolution

Featured Articles

Abdul Latif Jameel has been investing from the heart of Arabia across the promising MENAT region and beyond for over seventy years – shining a light on new opportunities for investment and growth. Trusted to open new doors; now, we are opening more.

Helping people who strive for better, to have better: better means; better lives; better prospects. Helping businesses who look further, to reach further. Into new markets, new homes, and new considerations. We can do this because we are determined in our quest for new potential; and we succeed because we never lose sight of why this matters. In this magazine, we showcase our investment in the development of the economies and the quality of life of people in the region.

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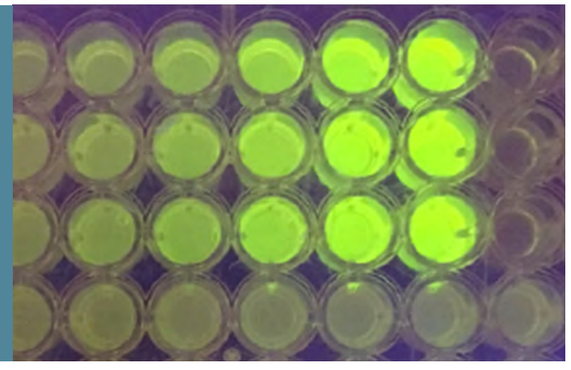

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Winds of change in global energy revolution

A new report from the Global Wind Energy Council highlights the continued advance and commercial viability of wind energy around the world.

The Global Wind Energy Council's (GWEC) 'Global Wind Report: Annual Market Update 2017', published in April 2018, reveals how wind installations are taking root at the centre of the world's renewable energy industry.

Wind energy will form a crucial part of the ambitions laid out in the Paris Agreement, the UN climate change agreement signed in 2016, which aims to ensure the unavoidable rise in global temperatures is constrained to below 2°C through positive action by government and industry. To achieve this goal, the renewable share of the world's energy supply must rise from 15% today to 65% by 2050[1].

The GWEC report highlights many reasons to be positive. Economic reality is advancing wind energy's cause far more effectively than any public relations campaign could hope. In North and Latin America, North Africa, and India, tenders are being submitted at US$ 0.03/kWh, while a recent tender in Mexico dipped below US$ 0.02/kWh.

Indeed, "today wind power is the most competitively priced technology in many if not most markets worldwide[2]," according to GWEC. It adds: "Wind power is in a rapid transition to becoming a fully commercialized, unsubsidized technology; successfully competing in the marketplace against heavily subsidized fossil and nuclear incumbents."

More than US$ 107 billion was invested in wind energy in 2017, with 52GW of wind installations being put in place – taking global wind installations up to a total of 539GW. Between 2007 and 2016, wind energy installations around the world leapt by 399.2%[3].

Steve Sawyer
Secretary General of GWEC

Steve Sawyer, secretary general of GWEC, says: **"Wind power is leading the charge in the transition away from fossil fuels, and continues to blow away the competition on price, performance and reliability. Both onshore and offshore, wind power is key to defining a sustainable energy future[4]."**

Several countries are making significant wind energy advances. Denmark, for example, generated 44% of its 2017 electricity from wind as well as adding a further 342GW of installations[5]. Uruguay used wind to generate more than 30% of its electricity, while Portugal, Ireland, Spain, and Germany generate approximately 17%-25% of their electric power through wind.

Andrea Fontana, managing director (Europe) of Fotowatio Renewable Ventures (FRV), part of Abdul Latif Jameel Energy, believes several advances are contributing to the positivity surrounding wind energy. He said: **"There's no doubt the wind sector is very competitive. We saw that in the public tenders of 2017, where the trend towards ever lower cost of energy was confirmed. Equipment performance and capacity has increased substantially, while installation, operation and maintenance costs have been reducing, which all contribute towards a more competitive pricing."**

"In lots of tenders, wind and solar must compete against each other – and wind has shown now that it can compete. Wind energy is definitely cost-competitive and, in some cases, it is more competitive than conventional energies, so it can compete in the tender process without any subsidies."

[1] Turning to Renewables: Climate-Safe Energy Solutions, International Renewable Energy Agency, November 2017
[2] Global Wind Report – Annual Market Update 2017, Global Wind Energy Council, 25 April 2018
[3] Renewable Energy Statistics 2017, International Renewable Energy Agency, 2017
[4] Cost-competitiveness puts wind in front, Global Wind Energy Council, 25 April 2018
[5] Global Wind Statistics 2017, Global Wind Energy Council, 14 February 2018

Andrea Fontana
Managing Director (Europe) FRV

Building a future based on innovation and efficiency

Although the drive towards ever lower tender prices is adding new pressures on developers, Andrea remains positive. **"Lower prices put pressure on returns. But that's not necessarily bad,"** he says. **"It forces everybody to become more efficient."**

He adds: **"It forces creativity and efficiency not just from the developer or investor, like FRV, but all the stakeholders – from landowners, technology suppliers, investors and sponsors through to advisors and lenders. FRV isn't afraid to compete, and we think wind becoming a mature and less-subsidized industry is a positive development."**

"As we develop our own projects, we'll have to become even more competitive and even more efficient. But we've been developing projects for the last 11 years, so we're probably in a good position to tackle this challenge and really pursue efficiency in everything we do."

Analysis from GWEC suggests that global wind installations will show a marked increase in 2019 after a relatively stable 2018. **"It's very hard to predict, because it's closely linked to global policies,"** says Andrea. **"But it is our expectation that installations will pick up again in 2019, particularly in developing countries like India and China, and mature regions with new targets, such as Europe, which is currently setting its goals for 2030."**

A global outlook

The rise of wind power is not restricted to any single area: it is a worldwide phenomenon. In 2017, every region of the world made significant progress on its total wind installations. The installed capacity of Africa and the Middle East rose by 15.9%. In Asia, it jumped by 12%, while Europe (up 10.4%), Latin America (up 16.8%) and North America (up 8%) also made considerable developments in their wind generating capabilities.

"India is another market with great potential for wind energy," says Andrea. **"It is extremely competitive and there are now many experienced and well-established local players."** Although profit margins are tight for overseas operators and the Indian regulatory landscape is complex and highly challenging, Andrea says that FRV has discussed partnership opportunities with Indian turbine manufacturers and will continue to track possible entry points into the Indian market.

Another area of significant potential highlighted in the report is Latin America, and particularly Argentina. **"If the [Argentinian] market continues to develop as it has over the past two years," says GWEC's Annual Market Update 2017, "there will be more investments to come[6]."**

FRV is one of a number of major players sizing up opportunities in the country: **"We've been watching closely how the renewable market is coming up there,"** says Andrea. **"The capacity factor in certain areas of Argentina is just amazing compared to the rest of the word. In the southern part of the country, you have constant stable and strong winds throughout the entire year. The things that need to be considered carefully, however, are the returns and the bankability. We've seen that financing is available, especially for wind projects, but the level of returns is not as high as in some other markets."**

FRV is also increasingly active in the wind energy markets of other countries in Latin America. It already has a presence in Chile, where it is developing a hybrid solar-wind project to generate 540GWh per year[7], and is actively following potential opportunities in Colombia, Peru and Uruguay (which increased its total wind installations by 295GW, or 24.4%, in 2017 alone[8]).

"We think the combination of solar and wind is definitely going to become more common in the future," says Andrea. **"Solar and wind work very well together: solar has a daily production, while wind – in many cases – can complement that with night-time generation.**

It provides you with a 24-hour generation core, which is normally preferred ahead of day-time only facilities."

Harnessing wind power in the MENAT region

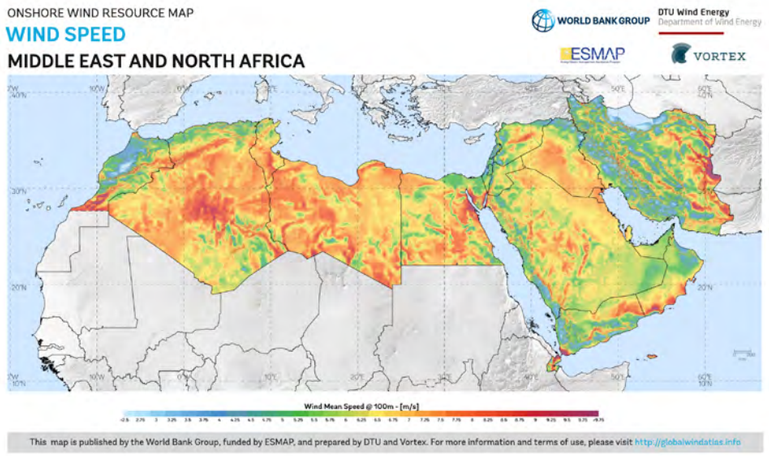
As part of Abdul Latif Jameel Energy, FRV is also looking to the positive impact it can have on Saudi Arabia, its citizens and its communities. While the country's solar power potential has long been acknowledged around the world, Saudi Arabia also enjoys ideal conditions for wind energy plants.

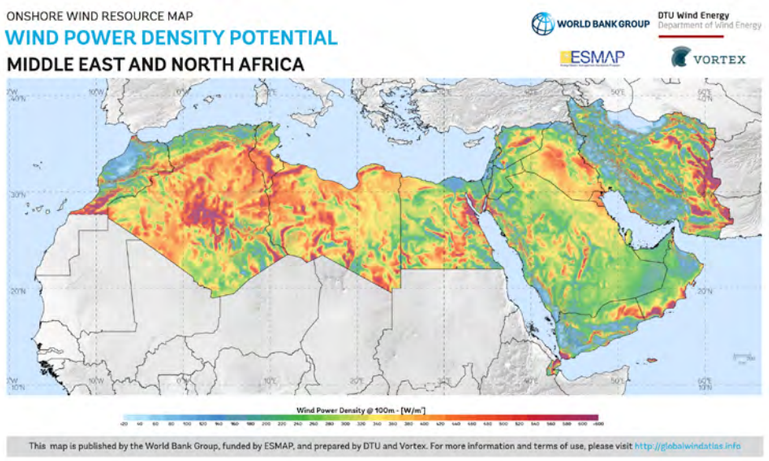
In the northeast and central regions, as well as those near mountains in the west, wind energy plants have the ideal environment in which to operate profitably. At all three locations, average wind speeds are 33% higher than that needed for the commercial success of a wind installation[9].

[6] Global Wind Report – Annual Market Update 2017, Global Wind Energy Council, 25 April 2018
[7] FRV awarded 540 GWh in Chile, Fotowatio Renewable Ventures, accessed May 2018
[8] Global Wind Statistics 2017, Global Wind Energy Council, 14 February 2018
[9] Renewable Energy in the GCC: The Human Impact, Opening Doors, 21 November 2017

Andrea explains: **"In Saudi Arabia, the National Renewable Energy Program sets out the government's ambitions very clearly. It is determined to diversify from its reliance on oil as a source of energy, which makes it a very good investment environment for renewables."**

"We've been analyzing both the solar and the wind tenders that were issued during 2017, and we'll continue our analysis and assessment of the market. We're watching closely all the programs that are being issued by the Saudi Arabian government through its Ministry of Energy."





There are plenty of opportunities elsewhere in the Middle East and across Asia, too, he says, such as Lebanon, Pakistan, and Egypt. **"We've seen that the Council of Ministers in Lebanon has approved a new round of wind projects. Pakistan also has a very attractive market, and we're aware the authorities there will soon launch a new wind power tender. That's something we're analyzing closely."**

FRV: a growing pipeline in renewable installations

Whether it is in Latin America, the MENAT region, or elsewhere, FRV is clear about its ambitions. **"So far, our wind energy pipeline has around 1.1GW in a very advanced stage: the land is secured, the wind measurement campaign has already launched, a wind mast is collecting wind data, and inter-connection and environmental pre-feasibility studies are performing,"** explains Andrea. **"We're at that stage in Mexico, for example, and in the coming months our target is to consolidate our pipeline in Mexico and make sure we're in position to bid in the coming wind tender."**

"In Chile, we have around 140MW in a project under development, and we're also securing 100MW in Europe and finalizing a joint development agreement."

In Europe it's slightly different because it's a mature market and we started our wind activities only a couple of years ago. Because it's a mature market, it's easier to enter into projects that are already under development, rather than start from scratch in the same way we have done in less mature markets like Mexico and Chile."

As technology continues to advance and prices consistently fall, the Global Wind Energy Council is confident that wind energy – and hybrid installations that also harness solar power – offer an increasingly bright vision of the world's future energy mix.

According to the Annual Market Update report, "The emergence of wind/solar hybrids, more sophisticated grid management and increasingly affordable storage begin to paint a picture of what a fully commercial fossil-free power sector will look like[10]."

Through Fotowatio Renewable Ventures, Abdul Latif Jameel Energy will be at the forefront of this clean energy revolution, benefiting citizens and communities in Saudi Arabia, the MENAT region, and the rest of the world.

Watch video here
VIDEO

Abdul Latif Jameel ENERGY

[10] Global Wind Report – Annual Market Update 2017, Global Wind Energy Council, 25 April 2018

View of Yerevan City and Ararat-Mountain, Armenia

FRV makes renewable energy history in Armenia

Tristan Higuero COO East, FRV shakes hands with Armenian Prime Minister Karen Karapetyan

Fotowatio Renewable Ventures (FRV), part of Abdul Latif Jameel Energy, has made history by securing the contract to build and operate one of the first large-scale solar power plants in Armenia.

The deal - awarded the competitive tender by the Armenia Renewable Resources and Energy Efficiency Fund (R2E2) - has also generated praise from the World Bank, will see a consortium led by FRV deliver the 'Masrik-1' 55 MW solar power plant at a tariff of US$ 0.0419/kWh.

Gegharkunik Province, Republic of Armenia, where Mets Masrik is located

The plant, which is located near Mets Masrik and Vardenis in the Gegharkunik Province of Armenia and covers a land area of approximately 100 hectares - the size of 150 soccer fields combined - will begin construction in early 2019 and be operational towards the end of 2020.

Around 300 local jobs will be created as part of the construction phase and during its 20-year lifetime, Masrik-1 will offset one million tons of carbon dioxide and create short- and long-term jobs.

Watch video here

VIDEO

Sylvie Bossoutrot, World Bank Country Manager for Armenia, said: **"The Masrik-1 solar power plant is a pioneering project for Armenia, as well as for the South Caucasus region, and an exciting opportunity for the country to further develop its renewable energy potential."**

Roberto de Diego Arozamena
Chief Executive Officer,
Abdul Latif Jameel Energy

"Armenia's growing focus on renewable energy presents numerous opportunities for Abdul Latif Jameel Energy. It further expands our global footprint, and shows that more and more countries around the world are rightly focusing on clean energy.

With countries such as Saudi Arabia putting in place initiatives such as the National Renewable Energy Program, under which the country plans to build a solar project that can supply 9.5 gigawatts of energy, there remains huge potential in renewable energy globally."

This year alone Abdul Latif Jameel Energy has announced it has been awarded a 540 GWh hybrid solar-wind project in Chile; secured financing for a Mexican solar farm that will power 150,000 homes; and announced it is supporting the launch of Jordan's first nanosatellite.

Left to right: Tristan Higuero COO East, FRV; Nicolas Fasquelle, Managing Director, Middle East & Africa, FRV; Hayk Harutyunyan, Deputy Minister, Ministry of Energy and Natural Resources; Prime Minister Karen Karapetyan; Ruben Gevorgyan, Director, Armenia Renewable Resources and Energy Efficiency (R2E2) Fund

Saudi Arabia: ready to lead the world in smart city development?

As the Saudi Arabian government pushes ahead with is stunning plans for a new 'smart city' called Neom, the most advanced city on the planet, Abdul Latif Jameel assesses the future of smart cities: what are they, how do they work, what are the theories behind them, and why are they so important for our future health – both economically and physically?

Introduction

The human population is growing faster than at any time in history. In 1960, the global population stood at a little more than three billion. Today, the figure has skyrocketed. The World Bank puts the 2016 population at 7.44 billion – a rise of almost 146% in just 56 years. In Saudi Arabia, the figures are even more startling. In 1960, the country's population was 4.09 million. By 2016, it had reached 32.28 million – an increase of 689% over the same 56-year period[1].

With these rises comes a dramatic rise in demand on resources, from food and water through to energy, space, and clean air. Around the world, cities that were designed for yesterday's populations, using yesterday's technologies, are beginning to buckle under the strain of meeting the needs of today's never-envisaged populations.

The challenge is increasing at a frightening pace. According to the Swiss-based international standards agency, International Electrotechnical Commission (IEC), "every day, urban areas grow by almost 150,000 people, either due to migration or births[2]."

Challenges of urban population growth

Facing a population growth on such an astonishing scale, cities face three sustainability challenges:

1. Economic, in terms of providing citizens with the capacity to develop their economic potential
2. Social, where opportunities, stability and security combine to affect the quality of life
3. Environmental, either of the city's own making or through weather or geological events[3].

A closer look at just one of these challenges – the environment – outlines the size of the task confronting cities around the world. According to the World Health Organization's Global Health Observatory (WHOGHO), ambient air pollution contributes to 5.4% of all deaths[4]. Currently, 92% of the world's population lives in places where air quality exceeds WHO guideline limits[5].

In economic terms, the World Bank estimates that 75% of future GDP growth around the world will come from cities and towns[6]. The UN says that for all countries, urbanization is driving economic growth, with higher per capita incomes and higher productivity being outcomes of urbanization and the process of economic agglomeration[7]. However, the pressure to fulfil these expectations and deliver increased living conditions will only rise.

Solving the environmental challenge, while at the same time unleashing a city's economic potential and delivering social justice, is a monumental test for authorities everywhere.

It is a test that many are currently failing.

Could the solution to these problems lie in the conception, development and advance of new smart cities?

Realizing the Saudi potential

In its Vision 2030 national development plan, the Saudi Arabian government sets out its ambition to have three Saudi cities recognized in the top-ranked 100 cities in the world[8]. It also states:

"To ensure we can continue to enhance the quality of life for all and meet the needs and requirements of our citizens, we will continue to ensure high quality services such as water, electricity, public transport and roads are properly provided. Open and landscaped areas will also be developed further, to meet the recreational needs of individuals and families."

[1] Data: Population, Total, The World Bank, accessed April 2018
[2] Orchestrating infrastructure for sustainable Smart Cities, IEC, 2014
[3] Orchestrating infrastructure for sustainable Smart Cities, IEC, 2014
[4] Mortality and burden of disease from ambient air pollution, World Health Organization, accessed April 2018
[5] Air pollution, World Health Organization, accessed April 2018
[6] Reshaping Economic Geography: World Development Report 2009, The World Bank, 2009
[7] Urban Economic Challenges and the New Urban Agenda, UN Habitat, accessed May 2018
[8] Vision 2030, Kingdom of Saudi Arabia

Saudi Arabia is certainly well located for the creation of a new global city, sitting at the crossroads of three continents – Asia, Europe and Africa – and with half the world's population accessible within a five-hour flight[9]. The country is already a key state in the MENAT region, and its stock market, Tadawul, is the dominant market in the GCC with a market capitalization of US$ 466 billion.

Alongside its economic strength, Saudi Arabia also benefits from a young, tech-savvy population. Its changing demographics – about half of the population is aged under 25[10] – complement the reforming drive of Crown Prince Mohammed bin Salman. A nationwide push to deliver economic diversification, in line with the ambitions of Vision 2030, is being powered by the country's rising education levels. And across rail, sea and air, investment in Saudi Arabia's infrastructure has never been higher.

Beacon projects include the US$ 7.2 billion expansion of King Abdulaziz International Airport (KAIA) at Jeddah, the US$ 5 billion development of King Abdullah Port close to King Abdullah Economic City's Industrial Valley, plus the plans of Saudi Arabia General Investment Authority (SAGIA) to invest more than US$ 141 billion on rail, metro and bus projects by 2024. These include high-speed rail links between Madinah and Makkah via King Abdullah Economic City, King Abdulaziz International Airport and Jeddah, and the Riyadh metro project.

Against this background of vision and progress, smart cities could be the logical, innovative next step in terms of creating environments that help address the challenges of our growing urban communities, rather than adding to them.

What are smart cities?

Smart cities are new cities specifically designed and built to capitalize on the full potential of technology to both address difficult issues traditionally associated with large urban development, including sustainability, congestion, transport and energy use, while at the same time improving the quality of life for inhabitants through benefits such as quicker access to healthcare, more integrated transport and less pollution[11].

Precisely defining a smart city is difficult. The Smart Cities Council, a network of leading companies advised by top universities, laboratories and standards bodies, says: "The smart city sector is still in the 'I know it when I see it' phase, without a universally agreed definition[12]."

However, common strands apply across all of the world's current smart cities. They share, according to a UK government smart cities report, a "process, or series of steps, by which cities become more 'livable' and resilient and, hence, able to respond quicker to new challenges[13]."

The same report suggests that smart cities bring together hard infrastructure, social capital including local skills and community institutions, and (digital) technologies to fuel sustainable economic development and provide an attractive environment for all.

How Seoul used smart technology to clean up the city

With a population of more than 25 million, South Korean capital Seoul generates a huge amount of rubbish.

However, an insufficient supply of public waste bins and an inefficient waste collection program was exacerbating the problem. Indeed, the city was seeing an increase in littering simply because waste bins were overflowing.

City officials installed 85 'Clean Cubes' in the city center. These general waste and recycling bins were linked to a computer network that received live updates on the bins' fill level. Using this data, officials were able to organize more efficient collection routines.

Within three months waste collection costs were cut by 83%, overflowing waste bins were eliminated and "there was a significant reduction of litter on the streets[1]."

[1] Case Study: City of Seoul, Ecube Labs via Smart Cities Council, accessed April 2018

Similarly, an IBM smart cities report says that:

"Cognitive computing and its capacity for building citizen engagement introduce fresh opportunities for government organizations to improve citizens' lives and the business environment, deliver personalized experiences, and optimize program and service outcomes[14]."

Whatever definition is given to a smart city, one core element is crucial: technology. The Smart Cities Council defines a smart city "as one that has digital technology embedded across all city functions[15]."

As processing power continues to increase at an exponential rate, and artificial intelligence, big data, cloud computing, and the Internet of Things reshape our lives, smart cities aim to harness these tools to transform their ability to meet the demands of 21st Century living.

Smart city ideas in practice

Elements of these theories have already been put into practice in several cities. In London, for example, the use of the SCOOT traffic system, where an online computer monitors live traffic flows from 15,000 detectors and optimizes signal timings across traffic lights, has reduced delays in the UK capital by 12%[16]. The same system is now used in more than 250 towns and cities across the country.

Singapore, meanwhile, was ranked top in all four categories – mobility, health, safety and productivity – used in Juniper Research's Top 20 Global City Performance Index 2017[17]. A significant part of Singapore's success is due to its holistic approach to becoming a world-leading smart city.

It has introduced smart technology to improve the flow of traffic while simultaneously using government policy to reduce the number of vehicles on its roads[18]. It has also trialed smart video surveillance to detect criminal activity and used digital service platforms and remote monitoring devices to increase, and improve, access to healthcare, particularly among its older citizens.

Around the world, the concept of smart cities is gathering traction. Urban planners have long advanced the benefits of smart cities and, increasingly, they are finding common allies in local and national governments. As technological advances are uncovered, smart city frameworks are solidified, and investments secured, smart cities are expected to become the new standard for urban living around the world.

During a trial in 2015, London transport officials found that by installing an inverter system on its underground lines, it could reclaim energy that would "normally be lost when the subway is braking."

The results were impressive: in one week, enough energy from one inverter was generated to power a tube station for two days[1]. The technology is now being considered as part of a major modernization project across four London Underground lines[2].

[1] London Tube trains recycle waste energy into electric power, Smart Cities Council, 2 October 2015

[2] London Underground – Inverter Trial Project, UK Power Networks Services, April 2018

[9] Saudi Arabia: Transport and Logistics Opportunities, Saudi Arabia General Investment Authority, September 2016
[10] Saudi youth anxious to see progress on prince's reform plan, Financial Times, 27 July 2017
[11] Do we really need smart cities? TechRadar, 20 March 2016
[12] Definitions and overviews, Smart Cities Council, accessed April 2018
[13] Smart Cities: Background paper, UK Department for Business Innovation and Skills, October 2013
[14] Smarter Cities: New cognitive approaches to long-standing challenges, IBM, accessed April 2018
[15] Definitions and overviews, Smart Cities Council, accessed April 2018
[16] Pedestrian SCOOT system, TRL, accessed April 2018
[17] Smart Cities – What's In It For Citizens? Juniper Research, 12 March 2018
[18] Smart Cities – What's In It For Citizens? Juniper Research, 12 March 2018

These new smart cities are likely to be powered, in large part, by seven technologies that The World Bank believes will disrupt and transform how cities deliver services to their citizens[19]. These seven technologies are:

1. **5G mobile networks,** which are expected to be up to 60 times quicker than 4G networks and available by 2020.
2. **Blockchain,** a financial technology that allows transactions to do away with intermediaries like stock exchanges that currently function as guarantors of a transaction[20].
3. **Artificial intelligence,** which is already being used by Hong Kong, Shanghai, Sydney and New York to deliver smart parking and increased energy efficiency in buildings.
4. **Autonomous vehicles,** which are set to have an enormous impact in the coming decades. Research has suggested autonomous taxis and rapid inter-urban rail systems could combine to reduce the numbers of cars in a city by up to 90%[21].
5. **Low-cost space exploration and micro-satellites,** which will be the key element in powering the 20 billion connected things research firm Gartner expects to be in use by 2020[22].
6. **Biometrics,** which could rapidly increase the number of people around the world who are able to prove their identity, thereby reducing fraud, waste and corruption.
7. **Drones,** which when paired with artificial intelligence, could soon perform everything from parcel deliveries to hazardous jobs, such as maintenance checks on rooftops or towers.

The ongoing challenges of urban living are already being considered across the Middle East, with Saudi Arabia playing a particularly prominent role.

In May 2018, it hosted The First International Conference on Humanizing Cities at Taibah University in Madinah. The conference was designed to look "at modern ways to develop public places, city centers and neighborhoods to improve urban spaces and the quality of urban life, so that cities are more friendly and comfortable places to live[23]."

Leading experts and academics from around the world flew to Saudi Arabia to take part in the conference. In the light of the NEOM announcement just seven months beforehand, it is not hard to see why.

Reducing traffic with smart parking in Barcelona

According to Urban Tide, 40% of traffic in city center areas is caused by drivers looking for parking spaces[1]. Like any major city, Barcelona was blighted by significant automotive congestion. But it took decisive action, and is now reaping the rewards.

By installing sensors in parking spaces across the city, it was able to use a smartphone app to provide drivers with a live feed of which spaces are available.

This had several significant effects: it reduced wasted time, increased better traffic flow, and improved the environment through reduced petrol usage and noise pollution. It also provided "data about parking patterns, helping officials improve management of urban mobility[2]."

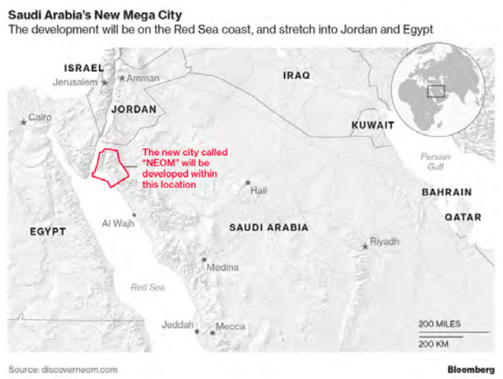
[1] 5 Smart Cities Case Studies,, Urban Tide, 8 December 2014

[2] Ten Reasons Why Barcelona is a Smart City, VilaWeb, 26 February 2014

Introducing NEOM – a Saudi smart city to lead the world

As Saudi Arabia pushes forward with its economic diversification and modernization program, one major project has attracted attention like few others.

In October 2017, Crown Prince Mohammed bin Salman unveiled the country's plans for the construction of NEOM – the world's ultimate smart city. Built on a 10,230 square mile plot stretching across Saudi Arabia, Jordan and Egypt (a site big enough to hold 37 Singapores[24]), NEOM will provide



a hi-tech hub for the world's fastest-growing industries. Its strategic location is designed to take advantage of trade routes on the Red Sea, Gulf of Aqaba, and Suez Canal, while a new bridge – the King Salman Bridge – will create a direct link between Saudi Arabia and Egypt. Even in its name, NEOM makes no secret of its ambitions: it is derived from neo, the Greek word for 'new', and mostaqbal, the Arabic term for 'future'.

In June 2017 Klaus Kleinfeld, the former CEO of Siemens, was installed as NEOM CEO. He is credited with giving the project significant momentum before handing over to Nadhmi Al-Nasr in July 2018.

"We will build the city from scratch," said Crown Prince Mohammed bin Salman. **"It will be drone-friendly and a center for the development of robotics. We want to create something different. NEOM is a place for dreamers who want to create something new in the world, something extraordinary[25]."**

Backed by US$ 500 billion from Saudi Arabia's Public Investment Fund and a range of international investors, the city is one of the key planks of Saudi Arabia's strategy to diversify its economy. The city will focus on nine industries:

1. Energy and water
2. Mobility
3. Biotech
4. Food
5. Advanced manufacturing
6. Media and media production
7. Entertainment
8. Technological and digital services
9. Living (housing, educating, healthcare, etc.)

By increasing Saudi Arabia's strength in these nine sectors, official estimates suggest that NEOM can potentially contribute US$ 100 billion to Saudi Arabia's GDP by 2030, while its per-capita GDP will become the highest in the world[26] – thanks in part to the use of robots and automation to eliminate repetitive jobs currently completed by low-skilled human workers[27].

In a statement at the unveiling of NEOM, Crown Prince Mohammed bin Salman gave more detail about the way this futuristic smart city – which will be accessible by 70% of the world's population in less than eight hours – will operate. He said[28]:

"Future technologies form the cornerstone for NEOM's development: disruptive solutions for transportation from automated driving to passenger drones, new ways of growing and processing food, healthcare centered around the patient for their holistic well-being, wireless high speed internet as a free good called 'digital air', free world-class continuous online education, full scale e-governance putting city services at your fingertips, building codes that make net-zero carbon houses the standard, a city layout that encourages walking and bicycling and all solely powered by renewable energy just to name a few.

All of this will allow for a new way of life to emerge that takes into account the ambitions and outlooks of humankind paired with best future technologies and outstanding economic prospects."

Watch video here
VIDEO

[19] Top 7 disruptive technologies for cities, The World Bank, 12 April 2018
[20] Top 7 disruptive technologies for cities, The World Bank, 12 April 2018
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How will NEOM work?

The ambition behind the plans for NEOM is without precedent. The city will be developed in its own free zone, giving it the power to set and regulate its own taxation, customs, and labor laws independently of the rest of Saudi Arabia.

This model has been successfully implemented elsewhere in the MENAT region, and NEOM will quickly become the largest such zone. This will give it the power and freedom to ensure "healthy growth and wealth for the region, investors and residents[29]."

With average wind speeds of 10.3 meters per second[30] and abundant solar resources, NEOM will be a city powered entirely by renewable energy. Its transport systems will also be "100% green" and "automated"[31], while the city's commitment to developing a world-class quality of life will spread to its education, housing and healthcare provision.

The concept for NEOM is built on six main pillars:

1. **Prioritizing humans:** the city will aim to create an "idyllic society" with comfortable living conditions.
2. **Healthy living and transport:** the city will be built to encourage walking and cycling, while advanced technologies will be used to create "an unprecedented transportation infrastructure[32]."
3. **Automated services:** it will be the first to deliver 'e-government' – a fully automated system for government services.
4. **Digitization:** it will provide high-speed internet access and online education – both completely free of charge – to all citizens through its "digital air" initiative.
5. **Sustainability:** the city will use only renewable energy and its buildings will "have a net zero carbon footprint[33]."
6. **Innovative construction:** it will encourage new techniques and materials to ensure it can meet its future requirements.

As emphasized by HE Crown Prince Mohammed bin Salman, there will also be an emphasis on artificial intelligence, robotics and drones, while supermarkets will not exist in their familiar form. Instead, automation will deliver items direct to people's homes when they need them. All of these ambitions perhaps explain why leading tech analysts are already dubbing NEOM as "a smart city on steroids[34]."

نيوم NEOM

NEOM in numbers

- Projected cost: US$ 500 billion
- Area covered: 26,500 square kilometers
- Stage one completion: 2025
- 70% of world's population less than 8 hours' flight away
- 468km of pristine beaches
- 10°C cooler than GCC average temperature
- US$ 100 billion estimated contribution to Saudi Arabian GDP by 2030

Committed to advancing smart cities across Saudi Arabia

According to the Royal Institution of Chartered Surveyors, "important smart city sectors include energy, water and transport[35]." The vital industries are all part of the 'infrastructure of life' in which Abdul Latif Jameel has extensive and world-leading experience and expertise.

Omar Al Madhi, Senior Managing Director at Abdul Latif Jameel Investments, believes these proven capabilities could play a crucial contribution as Saudi Arabia charts the next exciting phase of its development.

Mr Al Madhi said: **"For more than six decades, Abdul Latif Jameel has been at the heart of Saudi Arabian enterprise. Our business has evolved and diversified, and we now work across seven key sectors that contribute to the infrastructure of life. We have brought world-class knowledge and expertise to our home country, upskilled Saudi Arabian citizens, and significantly enhanced the quality of life of the communities we serve. We are immensely proud of these achievements and continue to strive to deliver a better future for all.**

Abdul Latif Jameel is fully supportive of the aims outlined in Vision 2030. NEOM has the potential to be amongst the 'smartest' cities in the World- and we are more than ready to play our part in helping to deliver such an exciting project."

As well as delivering enormous benefits for its immediate vicinity in Saudi Arabia, Egypt and Jordan, NEOM will also create substantial opportunities for international investors as it draws in the practical expertise and technological know-how necessary to turn the vision into reality.

"The diversification of Saudi Arabia's economy is one of our country's key developments in the coming years. International investors are already starting to see the vast potential of projects like NEOM, and Abdul Latif Jameel Investments is poised to help ambitious global companies understand the nuances and opportunities presented by a revitalized Saudi Arabian economy."

Omar Al-Madhi
Senior Managing Director at Abdul Latif Jameel Investments

One of the global organizations driving forward the vision for smart cities is the NewCities Foundation, a non-profit group that works to make "cities more inclusive, connected, healthy and vibrant[36]." They organize a rolling schedule of expositions, conferences and seminars across the world, bringing together experts and innovators from many of the leading-edge fields seen as fundamental to the smart city concept.

At the Foundation's third 'Cities on the Move' event in November 2016, in Tokyo, Mr. Hassan M. Jameel said: **"Urban mobility is incredibly important to enabling cities to become drivers of economic, social and environmental progress. Cities are built around transportation: how transportation works within a city, how roads are built, and how movements within cities are made. Urban mobility and safety is a key part of the focus on developing cities in Saudi Arabia."**

Today, these priorities are more important than ever. It is estimated, for example, that smart traffic technology could reduce traffic in NEOM by 25% and congestion by 40%[37].

By investing in its understanding of urban planning and key industries like energy, transport and water that make up the 'infrastructure of life', Abdul Latif Jameel is fostering relationships and building expertise that should bring best-in-class knowledge to Saudi Arabia and help to forge a vibrant, technology-driven future for its cities.

A trusted partner for a smarter future

Abdul Latif Jameel has long supported Saudi Arabia's efforts to deliver economic diversification, sustainability and growth. For seven decades, it has worked to deliver a better future for all Saudi Arabian citizens, and its longstanding commitment to making cities more livable is clear.

The first phase of NEOM is set to be completed in 2025, and Abdul Latif Jameel is excited by the possibilities it will offer. Indeed, as Crown Prince Mohammed bin Salman said: **"This project is not a place for any conventional investor... This is a place for dreamers who want to do something in the world[38]."**

Through Abdul Latif Jameel Investments, its dedicated initiative to attract new private-sector finance into the Saudi Arabian economy, Abdul Latif Jameel is actively pursuing its ambition to become the most trusted investment partner in the country.

Omar Al-Madhi, Senior Managing Director of Abdul Latif Jameel Investments, said: **"Abdul Latif Jameel Investments is committed to advancing foreign direct investment in Saudi Arabia's infrastructure of life. By carefully selecting and advocating the key industries that contribute to Saudi Arabia and the wider MENAT region economically, socially and developmentally, Abdul Latif Jameel Investments can help to drive progress for the next 50 years.**

Our focus on sunrise sectors, where opportunities have sustainable scalability, makes us the preferred partner for any significant entity wishing to do business in this part of the world."

By combining global experience and local expertise with its track record of success in transport, land and real estate, and energy and environmental services, Abdul Latif Jameel Investments is uniquely placed to help investors capitalize on the exciting developments in the country and maximize the potential of Saudi Arabia's vibrant smart city ambitions.

To find out more, visit www.alj.com.

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Left-to-right: Javier Huergo CIO FRV, Amina Adwan, Rafael Benjumea Sr., Chairman of IE University Foundation Advisory Board, Daniel Sagi.-Vela CEO FRV, Javier de Cendra, Dean of IE's Law School and Geoffroy Gérard; Managing Director of IE's Foundation.

Latest FRV scholarship winners announced

Two students from Jordan and Mexico will soon advance their education at the illustrious Instituto de Empresa (IE) University in Segovia, Spain, after joining the growing list of recipients of a scholarship program run by Fotowatio Renewable Ventures (FRV) and Abdul Latif Jameel Energy, as part of Abdul Latif Jameel Energy's commitment to contributing to the communities in which it operates.

The latest entrants to the Young Talented Leaders Scholarship program were chosen after judges were left hugely impressed by the quality of this year's applicants.

Jordanian student Amina Adwan receive her scholarship in relation to FRV's Mafraq II (65 MW dc) project, while the successful Mexican student to be names shortly will benefit due to the Potosi Solar Farm (342 MW dc) in the state of State of San Luis de Potosí, Mexico.

During their four-year degree programs at IE University, both students will see all their training and education costs, including tuition fees, accommodation, academic materials, travel, and meals, covered by the scholarships.

Roberto De Diego Arozamena, Chief Executive Officer of Abdul Latif Jameel Energy, said: **"The Young Talented Leaders Scholarship program delivers on one of our top priorities, which is our commitment to helping to develop the communities in which we operate."**

"We are giving young and talented individuals – including from the Middle East – the opportunity to complete their studies at a first-class university, helping them build their education and skills."

Roberto De Diego Arozamena
Chief Executive Officer of Abdul Latif Jameel Energy

Abdul Latif Jameel has a long history of supporting entrepreneurship, education and training in the Middle East and beyond, including Toyota-MIT scholarships and the Abdul Latif Jameel World Education Lab (J-WEL) at MIT.

These latest awards were announced following the visit of Saudi Arabian Crown Prince Mohammed bin Salman to Spain.

Saudi Arabian Crown Prince Mohammed bin Salman meets King Felipe VI of Spain

Abdul Latif Jameel Poverty Action Lab at MIT to expand refugees' access to higher education

Graduate-level education in data analysis and development economics will be available to refugees around the world after a pioneering new partnership between the MicroMasters team at the Abdul Latif Jameel Poverty Action Lab (J-PAL) at MIT, and the ReACT Hub.

The goal of this new collaboration is to empower refugees with training that will enable them to leverage their local knowledge, build their technical skills, and become experts in the fields of development economics and public policy.

Selected refugees will be sponsored by ReACT to join the MIT MicroMasters program in Data, Economics and Development Policy (DEDP) at the prestigious institution.

The MicroMasters program combines online instruction, in-person workshops, and paid internships, to enable refugee learners to advance both their education and professional career in an accessible and affordable manner. A MicroMasters is a professional and academic credential, accredited by MITx, MIT's online learning platform, and offers individuals a route to applying for a full Master's degree program at MIT or other universities.

Following these efforts, J-PAL hopes to empower refugees with individual roadmaps to education and career opportunities. These will support J-PAL's mission to reduce poverty by ensuring policies and programs are informed by scientific evidence.

Anna Schrimpf, Post-Doctoral Associate at J-PAL, said: **"Our hope is the refugee learners selected for ReACT scholarships will be able to gain strong technical skills and meaningful professional experiences in evidence-based policymaking that they can bring back to their communities and put into practice."**

Hassan Jameel at the Zaatari refugee camp in Jordan

"Education and learning are fundamental to a strong society, and providing access to MIT's MicroMasters is a foundation upon which to rebuild the disrupted education and careers of refugees worldwide."

"Building on the computer science and entrepreneurship support for refugees in Jordan, this collaborative effort between J-PAL, MIT, and ReACT, creates another bespoke learning opportunity for refugees, opening doors and knocking down barriers to higher education for learners."

Hassan Jameel
President of Community Jameel Saudi Arabia

Click here to find out more about the Micromasters and ReACT Hub partnership.

Watch video here
VIDEO

Sparking a global renaissance in education – one year on

Sanjay E. Sarma is the Fred Fort Flowers & Daniel Fort Flowers professor of mechanical engineering & VP for Open Learning at MIT

With the Abdul Latif Jameel World Education Lab (J-WEL) at the Massachusetts Institute of Technology (MIT) celebrating its first anniversary in May 2018, Opening Doors spoke to Professor Sanjay Sarma, MIT Vice President for Open Learning, about the Labs' inaugural 12 months and his aims for the future.

How do you assess J-WEL's first year?

We had several goals. One of them was to get a critical mass of sponsors for our work, which we have achieved. We had also hoped to get a certain amount of exposure, because this is an effort that will have a significant impact on world education. We've also made good progress there. These are all things to be proud of. But perhaps most importantly, the intellectual content of what we've been doing has been thrilling. It is both current, in terms of addressing many vital issues, such as the future of work, but is also fundamental, in that we are bringing fundamental thinking, based on science, to these problems.

Have you been pleased with the response J-WEL has received from the global education community?

Yes, we have seen interest from six continents, and people are telling us that the problems we are addressing are very, very pertinent. If you take the 'future world' for example, you might think it's a question for the more developed markets, like the United States, but it turns out to be equally relevant to other parts of the world, too.

Can you outline what are the biggest challenges facing education around the world?

We see two main themes. One is based on what we're learning from the science of learning. The other is what we're learning from changing demographics, technology, and progress. Both tell us that education has to change, at all levels. It has to be much more blended. It has to be much more hands on, but also much more fluid in its delivery. All this means that every entity that's involved in education faces a monumental challenge.

Is there anything in particular that fills you with pride about this first twelve months?

Yes. I am struck by the diversity of people and countries who are involved with J-WEL. Everything from well-funded American entities to foundations working in some of the poorer parts of the world. The work we are involved in has the potential to reach every corner of the globe.

What are your ambitions for J-WEL over the next five to ten years?

We need to build on our achievements so far and engage ourselves more deeply in the issues we see. The depth of some of the opportunities or challenges that people face in education, in different age groups, will become clearer as our research base increases. Turning that knowledge into new understandings and insights and finding new ways to disseminate them is going to be the next exhilarating step for us.

What plans do you have for further develop J-WEL's work?

One initiative we are looking at is developing podcasts, so J-WEL members can access this material on the move. They can stay up-to-date with what's happening more easily and more conveniently. One of the things I believe in deeply is 'practiced serendipity'. That is, if we inform ourselves about best practices around the world, something in our mind connects the dots and it creates a fertile environment in which all sorts of ideas can occur. So for us, we want to create an immersive web of information and learning that people can digest and, hopefully, spark some new ideas.

How important is the support of Community Jameel to help you achieve those objectives?

In addition to getting us going, Community Jameel is our warmest, closest, most supportive entity. Just this morning I got a message related to an Asian connection that we might want to make. The beauty of it, is that it's not just, "Hey, meet X." It's much deeper. "Here's a project. Here's an analysis. How do you think this might fit into some of the projects you're doing?" Community Jameel is not just help, it's highly informed, highly selective and, as a result, highly relevant help.

Are there opportunities for collaboration with the other Abdul Latif Jameel labs based at MIT?

There's all sorts of synergy between the different Jameel labs here at MIT. The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a research and outreach effort, the Abdul Latif Jameel Water and Food Security Lab (J-WAFS) is a research effort, and J-WEL is an education effort. Education very naturally fits into both. There are natural connections between us that open up a rich network of possibilities. It's very exciting. In fact, we are holding a webinar for J-WEL members next week to give them the chance to discuss the recent J-PAL Policy Brief, "Roll Call: Getting Children into School," with the J-PAL team.

MIT | J-WEL Abdul Latif Jameel World Education Laboratory

New measures to support disabled jobseekers

Rowaid Al-Sawaf, Deputy Managing Director, Abdul Latif Jameel Professional Solutions for Vehicles & Accessories (Left) and Ahmed Kathiri from Abdul Latif Jameel investments (right) make a presentation to Abdul Kareem Al Otaibi one of the program recipients at its launch.

People with disabilities in Saudi Arabia will benefit from a range of new initiatives to help them find training and employment, thanks to a program of support announced by Abdul Latif Jameel.

Specific initiatives include:

- **You steer:** Supporting individuals to work in the motor services industry by providing specially adapted cars with hand-only driving systems, along with financing support for buying vehicles.
- **Trader program:** Helping people with disabilities establish small businesses at retail malls. The program also offers a disability-friendly e-commerce tool for setting-up a business.
- **Professional training:** Sponsoring the cost of a professional training program to help people gain work experience, in cooperation with Nafisa Shams Academy.
- **Stadium opportunities:** In cooperation with Bab Rizq Jameel, people with disabilities will have the opportunity to work in in-stadium retail positions at popular sporting events.
- **Adad program:** Making it easier for companies to provide donations to cover the cost of training courses, the purchase of a passenger cars, or the cost of treatment and therapy.

The disability support program was outlined at an event at Abdul Latif Jameel Hospital for Medical Rehabilitation in Jeddah. It aims to support the Saudi Vision 2030 goals of enabling people with disabilities to ensure their independence and integration as effective members of society.

Rowaid Al-Sawaf, Deputy Managing Director, Abdul Latif Jameel Professional Solutions for Vehicles & Accessories, said: "Providing equal opportunities for everyone - men and women, young and old - is a key theme of Saudi Vision 2030. By announcing these initiatives, we are actively contributing to helping people with disabilities have exactly the same opportunities as everyone else."

Privatization program set to reap big dividends

Increased job opportunities and the arrival of the world's most cutting-edge technologies are two of the expected consequences of Saudi Arabia passing an extensive privatization program – know as Delivery Plan 2020 – in the last few weeks.

The program was launched by the country's Council of Economic and Development Affairs (CEDA), which is chaired by Crown Prince Mohammed bin Salman.

It marks a key stage in Saudi Arabia's pursuit of one of the central aims of its Vision 2030 development strategy: to boost the private sector as a driver of economic diversification across the country.

Under Vision 2030, Saudi Arabia aims to increase the private-sector share of GDP from 40% to 65%. Vision 2030 says:

"We will ... grow our economy and improve the quality of our services, by privatizing some government services, improving the business environment, attracting the finest talent and the best investments globally, and leveraging our unique strategic location in connecting three continents."

Delivery Plan 2020 will look to implement privatization reforms and initiatives across infrastructure, energy, water, transportation, telecommunications, petrochemicals and finance. Its scope will cover three main objectives[1]:

- Establishing legal and regulatory frameworks to allow privatization to progress.
- Helping suitable organizations implement privatization by creating "dedicated institutions to execute the policies."
- Setting deadlines and overseeing delivery of the privatizations.

Eleven other indirect objectives[2], such as attracting foreign direct investment and easing access to healthcare services, are also set to be supported through the execution of Delivery Plan 2020.

The program has been widely praised by leading business figures from around the world, who have hailed it as a definitive sign that Saudi Arabia is open for business.

As a result of the initiative, officials hope to raise US$ 11 billion in non-oil revenues by 2020[3].
A statement from the Council of Economic Development Affairs said: **"The program's initiatives will be implemented to take into account the interests of all beneficiaries and enhance the fairness of transactions with the private sector. The program will result in greater control over service providers to ensure that beneficiaries receive the best services."**

During the initial stage, 10 sectors – including health, housing, education, and Hajj and Umrah – will be targeted. There has also been long-rumored speculation about the privatization of Saudi Arabia's state-owned football clubs.

Delivery Plan 2020 is the latest in a series of economic and societal reforms designed to reshape Saudi Arabia and strengthen its position, both within MENA and on a global stage, over the coming decades.

As one of the most trusted partners in Saudi Arabia, Abdul Latif Jameel Investments will continue to work to support the government's astute reforms and its ambition to secure a brighter future for every citizen. With excellent brand recognition, in-depth market knowledge and strategic links stretching across the business world, we will use our heritage and local understanding to encourage investment and development in Saudi Arabia from companies around the world.

رؤية VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

[1] Green light for crown prince-led Saudi privatization program, Arab News, 25 April 2018
[2] Saudi Crown Prince approves Privatization Program, Saudi Gazette, 25 April 2018
[3] Saudi targets $11 billion non-oil revenues by 2020, CPI Financial, 25 April 2018

J-WEL celebrates a year of promoting excellence in education

The Abdul Latif Jameel World Education Lab (J-WEL) marked its first anniversary in May 2018, promising to continue to work for educational reform and transformation around the world.

Based at the Massachusetts Institute of Technology (MIT) and funded through a generous gift from MIT alumnus Mohammed Abdul Latif Jameel '78, J-WEL promotes excellence in primary and higher education, and workplace learning.

Fady Mohammed Jameel, President, Community Jameel International

J-WEL Executive Director Vijay Kumar said: **"This is just the beginning. It has been an exciting year, pointing to both the tremendous opportunity for making an impactful educational difference globally as well as the hard work ahead to realize it."**

MIT President Rafael L. Reif acknowledged J-WEL's role in helping MIT "carry out the biggest aspiration we have – to educate as many people in the world as possible."

Fady Mohammed Jameel, President of Community Jameel, praised the organization's first 12 months. He said: **"We are acutely aware of the importance of transforming education and learning at all levels, and equipping individuals — both young and of working age — with the skills and abilities needed for the future. This means schools, universities, educational environments, and employers working together with one common goal. J-WEL's focus populations include learners in the developing world, those underserved by education such as women and girls, a growing displaced population that includes refugees, and a workforce in need of STEM knowledge and skills."**

In its first year, J-WEL hosted two member gatherings on the MIT campus. Branded as 'J-WEL Weeks', the events attracted more than 220 attendees from 30 countries. J-WEL has also awarded grants of almost US$ 500,000 to MIT faculty to fund educational innovation and research.

MIT Vice President for Open Learning Sanjay Sarma said: **"J-WEL is quickly becoming MIT's platform for educational transformation with the world, not just for digital learning, but for any kind of educational change."**

Watch video here
VIDEO

Sanjay E. Sarma is the Fred Fort Flowers & Daniel Fort Flowers professor of mechanical engineering & VP for Open Learning at MIT

Eyes on the East

Exploring the growing trade between Saudi Arabia and the wider MENAT region and markets in the Far East

Introduction

A decade ago, the world was struggling to contain the challenges of a major financial crisis. Few countries were left unaffected by what the IMF deemed the worst global recession since the 1930s[1].

Today, confidence is returning.

World real GDP is expected to increase by 3.2% in 2018 and 3.1% in 2019[2]. In a survey conducted by Emirates Investment Bank, 65% of high net-worth individuals based in the Gulf Cooperation Council (GCC) thought the global economic situation was either improving or stable[3]. The World Bank has described 2017 as "much stronger than expected[4]," while the International Monetary Fund (IMF) believes that "the world economy continues to show broad-based momentum[5]."

However, there remain some threatening signs in the global trade environment, with a protectionist U.S. president and the potential reaction he incites causing concern among many. The World Trade Organization (WTO) is one such body. It argues that "increased use of restrictive trade policy measures and the uncertainty they bring to businesses and consumers could produce cycles of retaliation that would weigh heavily on global trade and output[6]."

Yet there are still strategic routes to success available to economies willing to diversify and focus their energies eastward. Much of the GCC has already developed deep and ever-increasing links with the Far East. "Largely under the radar, these growing ties between the Gulf and Asia have the potential to reshape geopolitical patters and relationships," says The Washington Post[7].

The World Economic Forum expects China, the East's major power, to overtake the United States as the world's dominant economic power by 2030[8]. It states that "China's policy of enhancing its capabilities and building economic links with many countries has seen it "become viewed as a vital overseas partner and investor."

Saudi Arabia too has already long since established strong trade links with China. The world's most populous country is the biggest importer of goods to the Saudi Arabian economy, and the second biggest market for Saudi Arabia's exports. And another Far East economy, Singapore, is fourth[9]. In 2014, The Economist recognized that Saudi Arabia had "the greatest potential to change the investment dynamics of the (GCC) region, largely thanks to its mega-projects pipeline requiring major external project finance and further steps towards liberalisation", and that "Chinese investment into Saudi Arabia is growing at a fast clip[10]."

Indeed, through its ambitious Belt and Road Initiative, which aims to connect 70 countries across Asia, Africa, Europe and Oceania through new railroads and shipping lines[11], China is already showing its determination to forge new trade routes fit for the 21st Century.

So, what could a burgeoning trade relationship between Saudi Arabia, the wider – and rapidly developing – economies of the Middle East, North Africa and Turkey (MENAT) region and Eastern powers including China, Japan, Korea and the ASEAN bloc, notably Singapore and Malaysia, mean for the future flow of investment between the Middle East and the Far East?

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A more prosperous Middle East

Vincent Lo, Chairman of the Hong Kong Trade Development Council (HKTDC), believes China's Belt and Road Initiative could have unprecedented benefits for the markets involved. He said: **"The initiative offers immense development opportunities for both developed and emerging economies around the world[12]."**

Vincent HS Lo, Chairman of the Hong Kong Trade Development Council

The 'belt', according to the UK's The Guardian newspaper, is "a series of overland corridors connecting China with Europe, via Central Asia and the Middle East[13]."

In June 2018, more than 3,000 government officials and business leaders from 51 countries gathered at the Hong Kong Convention and Exhibition Centre for the third annual Belt and Road Summit. The Belt and Road plans aim to **"promote economic cooperation and connectivity' through a massive infrastructure development project[14]."** They are viewed as a serious signal of China's intent to strengthen its economic ties with countries both near and far.

This appears to be good news for nations across the MENAT region, and particularly the economically powerful GCC bloc. China's first Arab policy paper revealed in January 2016, that trade between the Middle East and Beijing increased by 600% in the decade up to 2014[15], reaching US$ 230 billion in that same year[16]. It also outlined some of the key areas that could further benefit the Middle East in the medium- and long-term.

Chinese Premier, Xi Jinping meets with Crown Prince Mohammad bin Salman of Saudi Arabia, August 31, 2016

The increased trade links between China and the Middle East are one of three reasons, alongside growth opportunities across MENA and China's 'Going Global' economy policy, that lead BMI Research to indicate that Chinese investment in the infrastructure markets of the MENA countries will continue to gather pace in the coming years[18].

The Middle East Institute also recognises these changes. It affirms that China is already the largest trading partner with the region and growing its trade relations with the Arab states is "a top priority for China", its goal being to double its trade with the region to US$ 600 billion by 2020[19]."

The relationship between the Middle East and China is a relationship borne of mutual respect, convenience and economic realities. "As China looks west, Arab countries turn east," is the verdict of The Economist, which reports that China's oil imports from the Middle East will double from three million barrels a day in 2015 to 6 million barrels a day in 2035[20].

Beyond China

The GCC's trade links with the Far East extend beyond China, however.

Japan imports 76% of its oil from Saudi Arabia, the UAE and Kuwait, while bilateral trade between Japan and the UAE was worth US$ 51 billion in 2014[21].

In addition to its practical legislative changes and insightful strategic policies, Saudi Arabia's determination to spread its message led to the country's involvement in several high-profile international trade and diplomatic initiatives during spring 2017.

In 2017, Indonesia also announced plans to increase its trading links with the Middle East. Its ambition is to increase non-oil and gas exports to the GCC by 5.6% (US$ 3.49 billion), with a series of government programs launched and quarterly targets announced[22].

Similarly, the GCC-Singapore Free Trade Agreement (GSFTA) came into effect almost five years ago, in September 2013[23]. And there are also significant links between the GCC and South Korea. According to a report from the Middle East Institute, exports from Korea to the GCC reached US$ 17.8 billion in 2013, with cars, steel, machinery and electronics among the most popular Korean imports into the GCC[24].

An indication of the ever-growing links between the Middle and Far East is summed up in a report from French think tank Institutes Francais des Relations Internationales, (IFRI) which found that Gulf States' exports to Japan, South Korea, China and India were more than three times larger than to the United States and the European Union, and the figure is set to grow over the remainder of this decade[25].

This East-to-East trade growth can be seen very visually as shown below[26]:

Saudi Arabia: pioneering trade links

For Saudi Arabia, increasing the links with China and other Far Eastern economies is an economic imperative. As Crown Prince Mohammed bin Salman continues to drive forward with the ambitious and far-reaching reforms of Vision 2030, which puts economic diversification at its central pillar, there is increasing optimism and belief in the possibilities afforded by expanding east.

"We support the entry of more non-oil products from Arab states into the Chinese market. We will continue to improve the trade structure and push for sustained and steady development of two-way trade. We will strengthen exchanges and consultations between Chinese and Arab trade authorities, complete China-GCC FTA negotiations, and sign a free trade agreement at an early date[17]."

Vincent Lo
Chairman of the Hong Kong Trade Development Council (HKTDC)

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[18] China Set To Expand MENA Market Share, BMI Research, 11 January 2017
[19] The Middle East is the Hub for China's Modern Silk Road, Middle East Institute, 15 August 2017
[20] The great well of China, The Economist, 18 June 2015
[21] Japan-GCC: A renewable partnership, Gulf News, 29 February 2016
[22] Indonesia Targets 5.6% Export Increase to GCC, Ministry of Foreign Affairs Republic of Indonesia, 1 June 2017
[23] Gulf Cooperation Council-Singapore Free Trade Agreement comes into force on Sept 1, The Straits Times, 1 September 2013
[24] Korea and the GCC: Reaching a Sustainable Economic Partnership, Middle East Institute, 6 June 2014
[25] The GCC States of the Persian Gulf and Asia Energy Relations, IFRI, September 2012.
[26] Global Marine Trends 2030, Lloyd's Register Marine & University of Strathclyde

Saudi Arabia is right at the crossroads of important international trade routes between three continents: Asia, Europe and Africa. We will therefore maximize the benefits from our exceptional and strategic geographic position, agree new strategic partnerships to grow our economy, and help Saudi companies to increase exports of their products[27]."

Vision 2030 outlines a clear ambition for Saudi Arabia: to be "the heart of the Arab and Islamic worlds, the investment powerhouse, and the hub connecting three continents." Saudi Arabia wants to increase foreign direct investment from US$ 8 billion in 2017 to US$ 18.6 billion by 2020[28]. By 2030, it aims to increase foreign direct investment from 3.8% of GDP to 5.7%[29].

"Opening Saudi Arabia further for business will boost productivity and smooth our journey to become one of the largest economies in the world... We will create an environment attractive to both local and foreign investors, and earn their confidence in the resilience and potential of our national economy[30]."

Across Saudi Arabia, there is physical evidence of the commitment the government is giving to its Vision 2030 ambitions. From a new airport in Al-Qunfudah through to the US$ 7.2 billion expansion of Jeddah's King Abdulaziz International Airport (KAIA), a growing capacity for air freight and a 21% increase in annual throughput at King Abdullah Port[31], Saudi Arabia is making a determined move to become a global logistics hub.

"To take full advantage of these investments, we plan to work with the private sector and enter into a new series of international partnerships to complete, improve and link our infrastructure internally and across borders. ... Air, maritime, and other transport operators will be encouraged to make the most of their capacity: achieving durable links between existing trade hubs, as well as opening new trade routes. This will reinforce our position as a distinctive logistical gateway to the three continents[32]."

A focal point for foreign direct investment

Saudi Arabia is also, increasingly, becoming a major destination for foreign direct investment. As a leading member of the GCC, Saudi Arabia offers the benefit of providing duty-free access to each of the other five members of the organization.

Companies doing business in Saudi Arabia also enjoy several financial benefits, including a complete absence of income tax, sales tax, and property tax. Overseas investors enjoy just 20% corporate tax on total profits and 5% withholding tax, with any losses being able to be "carried forward indefinitely to offset future taxes[33]."

In 2017, His Excellency Eng. Ibrahim Al-Omar was appointed as the Governor of the Saudi Arabian General Investment Authority (SAGIA). One of his priorities is to continue to develop Saudi Arabia's attractiveness on the international stage. He said[34]:

"Whenever SAGIA meets with foreign investors unfamiliar with Saudi Arabia, they often leave surprised and impressed with what they see and hear when we discuss the on-going transformational changes under Vision 2030.

His Excellency Eng. Ibrahim Al-Omar – Governor, Saudi Arabian General Investment Authority (SAGIA)

Judging from their reactions, they perhaps came to Saudi Arabia with one perception, and left with another.

While we are a country with a population of nearly 32 million, more than half of whom are under the age of 25, this population is growing at a rate of around 2.5% annually. This strong consumer-led market is driven by relatively high amounts of purchasing power compared to our regional peers."

"Saudi Arabia also provides a base for investors to reach an even larger market of approximately 1.5 billion consumers in some of the world's fastest growing markets, which are just a short five-hour flight from Riyadh."

Saudi Arabia already benefits from a deep and extensive relationship with China, based first on foreign policy but with increasingly deep economic ties[35]. In 2017, for example, Saudi Arabia's King Salman led a trade mission to China that resulted in more than US$ 65 billion worth of economic and trade deals signed[36].

Analysis by The Economist revealed that bilateral trade flows between Saudi Arabia and China were worth more than the trade flowing between Saudi Arabia and the United States[37], traditionally its strongest Western ally both economically and politically. Indeed, Bahrain, Egypt, Iran and Saudi Arabia all import more from China than any other country, with Saudi Arabia joining Iran and Oman in exporting more goods to China than any other country[38].

There are concrete links with other major Eastern powers, too. The Saudi Japan Vision 2030 is a formal agreement to strengthen bilateral economic cooperation between the two countries. In Spring 2017, Saudi Arabia's King Salman visited Japanese Prime Minister Shinzo Abe in Tokyo to mark the agreement.

The Saudi-Japan relationship is borne of a combination of Saudi Arabia's Vision 2030 and Japan's Growth Strategy, which was unveiled in 2013 and three years later defined three requirements to achieve its ambitions – the first of which was "strategic expansion into 'promising markets'[39]."

Other investments are also being made with Eastern partners. In early 2017, Saudi Aramco committed US$ 7 billion to buy a stake in a major refining and petrochemical project of Malaysian firm Petronas. The venture, known as PRefChem, is likely to be used as a platform to other investments in Southeast Asia[40].

[27] Vision 2030, Kingdom of Saudi Arabia.
[28] Saudi Arabia: An Attractive and Fast-Growing Destination for Foreign Direct Investment, Opening Doors, Summer 2017
[29] Vision 2030, Kingdom of Saudi Arabia.
[30] Vision 2030, Kingdom of Saudi Arabia.
[31] Saudi Arabia: At the heart of global trade routes, Opening Doors, Spring 2018.
[32] Vision 2030, Kingdom of Saudi Arabia.
[33] Saudi Arabia: An Attractive and Fast-Growing Destination for Foreign Direct Investment, Opening Doors, Summer 2017
[34] A vision to become an investment powerhouse, Opening Doors, Winter 2017/18
[35] The Middle East is the Hub for China's Modern Silk Road, Middle East Institute, 15 August 2017
[36] The Middle East is the Hub for China's Modern Silk Road, Middle East Institute, 15 August 2017
[37] Is China pivoting towards the Middle East? World Economic Forum, 4 April 2017
[38] The great well of China, The Economist, 18 June 2015
[39] Saudi Japan Vision 2030, accessed May 2018
[40] Saudi Aramco to buy $7 billion stake in Petronas' RAPID refinery project, Reuters, 28 February 2017

The combination of regulatory reforms and diplomatic efforts appears to be bearing significant fruit elsewhere, too. In February 2017, PepsiCo indicated its confidence in Saudi Arabia's future by unveiling plans to open a significant manufacturing plant in Jeddah. It will initially supply the entire Gulf region, before expanding further in future years. Sanjeev Chadha, CEO of PepsiCo in Asia, the Middle East and North Africa, said: **"The plant is going to be one of the largest in the PepsiCo system globally[41]."**

Global electronics giant Sony is also aiming to grow its presence across the Middle East and Africa. It aims to increase business by 20 percent in 2017 through a combination of new product launches and a refreshed business strategy[42].

Historical leaders in East-to-East trade

Since 1955, when Abdul Latif Jameel secured an agreement with Japanese automotive manufacturer Toyota to become its official distributer in Saudi Arabia, Abdul Latif Jameel has been at the forefront of East-to-East trade links.

The vision of founder, the late Abdul Latif Jameel, has passed down through generations of Abdul Latif Jameel staff. By adding value and encouraging development in the communities where they operate, Abdul Latif Jameel has forged longstanding international links with a network of partners.

The business' roots in eastern markets were humble, with an initial order of just four Toyota BJ all-terrain vehicles more than 60 years ago. Today, Abdul Latif Jameel's position as a leading distributor and retailer of some of the world's leading passenger vehicle brands has helped make them a significant contribution to the economic development of Saudi Arabia.

For the last 17 years, we have also been involved in a joint venture with DENSO, another Japanese firm, providing air conditioning and refrigeration equipment for human and food transportation. As well as manufacturing and assembling air conditioning for the Toyota Hilux pickup, the joint venture also distributes DENSO parts across North Africa, as well as manufacturing vehicle air conditioning equipment in Turkey.

Elsewhere in the east, their Singapore hub enables DJ Parts – one of our three automotive aftermarket parts brands – to conduct its research and development. P2 and FBK, two parts brands, operate out of factories in Malaysia and China, where the organization also has its own distribution points.

Pioneering East-to-East relations, Abdul Latif Jameel also has significant relationships with China's enormous economy.

George (Heng) Wang, Country General Manager for Abdul Latif Jameel Motors in China

That history was one of the key reasons why HIGER Bus, the world's third largest bus manufacturer and one of China's top 500 most valuable brands, chose to partner with Abdul Latif Jameel as a vehicle to extend its reach into the Saudi Arabian market.

姜海峰 Jiang Haifeng, General Manager Overseas of HIGER Bus Company

Jiang Haifeng, General Manager Overseas of HIGER Bus Company, said: **"HIGER's partnership with Abdul Latif Jameel Machinery will further strengthen the brand and will provide customers peace of mind."**

Hassan Jameel, Deputy President and Vice Chairman of Abdul Latif Jameel, also commented: **"This is another demonstration of our position as an investment partner of choice for international businesses operating in Saudi Arabia and the region."**

Strategic guidance and support for global investment partners

The growth of Saudi Arabia and the development of external trade links has always been a major focus for Abdul Latif Jameel. In 2016, this vision entered another chapter with the formation of Abdul Latif Jameel Investments.

By committing considerable resources to this venture, which is designed to facilitate foreign direct investment into Saudi Arabia, Abdul Latif Jameel is demonstrating its determination to accelerate and help deliver the economic diversification outlined in Vision 2030. It also affirms our position as one of the most trusted investment partners in the region.

Under the leadership of Senior Managing Director Omar Al-Madhi – recognised by the World Economic Forum as a 'young global leader' and a former chief executive officer of Volkswagen Group Saudi Arabia and prior to that a member of SAGIA's executive team – Abdul Latif Jameel Investments provides insights and guidance to a wide range of investment partners looking to tap into the very real development and growth opportunities in Saudi Arabia and the wider MENAT region.

Omar Al-Madhi, Senior Managing Director Abdul Latif Jameel Investments

Abdul Latif Jameel Investments combines a deep knowledge of MENAT markets, including links with governments, financial institutions and brand partners, with assets that are ready to be deployed.

It builds on Abdul Latif Jameel's history of exploring new markets and expanding its international reach into territories rich with potential, and provides investors the opportunity to leverage strategic partnerships and gain access into the significant and developing consumer markets of Saudi Arabia and the MENAT region.

"Abdul Latif Jameel Investments is committed to advancing foreign direct investment in Saudi Arabia's infrastructure of life. By carefully selecting and advocating the key industries that contribute to Saudi Arabia and the wider MENAT region economically, socially and developmentally, Abdul Latif Jameel Investments will help to drive progress for the next 50 years.

"Our focus on sunrise sectors, where opportunities have sustainable scalability, makes us the preferred partner for any significant entity wishing to do business in this part of the world. And by bringing together our operational, strategic and financial expertise developed in other markets, particularly in the East, we are ideally positioned to support the ambitions of, Japanese, Chinese and ASEAN organizations."

Omar Al-Madhi, Senior Managing Director
Abdul Latif Jameel Investments

To learn more about the opportunities available in Saudi Arabia to proactive organizations from China, Japan and ASEAN countries, visit the investments section of our the Abdul Latif Jameel website.

[41] Pepsi building 'one of its largest plants' in Saudi Arabia – reports, FoodBev Media, 22 February 2017
[42] Sony aims to grow business by 20pc in region, TradeArabia, 6 April 2017

Abdul Latif Jameel Motors agreement puts Saudi Arabian women on the road to driving success

Tens of thousands of Saudi Arabian women will have convenient and affordable access to driving schools across the country after Abdul Latif Jameel Motors signed an agreement supply more than 500 Toyota vehicles.

The partnership will see Abdul Latif Jameel Motors deliver cars to driving schools at Princess Noura Bint Abdulrahman University in Riyadh, King Abdulaziz University in Jeddah, Imam Abdulrahman bin Faisal University in Dammam and Tabuk University.

In common with all learning vehicles, the fleet of Toyota cars will be specially adapted to feature dual controls, so the vehicles can be controlled by both the instructor and the learner. Abdul Latif Jameel Motors will also provide maintenance, spare parts and technical support for each of the vehicles.

Women have been able to drive on Saudi Arabian roads since June 24, 2018. More than 20,000 females applied to driving schools in the days after the change was announced in 2017.

Watch video here
VIDEO

The new law is seen as another major step in the Saudi Vision 2030 modernization program driven by His Excellency Crown Prince Mohammed bin Salman, which is set to deliver dramatic changes in the economic and social outlook of the country's 16 million women. It also follows other landmark steps, including opening Saudi Arabia's football stadiums to women, allowing women to vote and run in municipal elections from 2015, and the re-opening of cinemas for the first time in 35 years.

Together from the Start

Abdul Latif Jameel Motors' partnership with the four universities, which has been branded 'Together from the Start', was announced in May 2018 at Princess Noura Bint Abdulrahman University.

Senior figures attending the event included His Excellency Major General Mohammed Al Bassami, General Directorate of Traffic; Hassan Jameel, Deputy President and Vice Chairman of Abdul Latif Jameel; and Nobuhiko Murakami, Chief Executive Officer, East Asia, Oceania and Middle East Region for Toyota Motor Corporation.

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Hassan Jameel said: **"Allowing women to drive is a significant milestone for Saudi Arabia, and our society as a whole, and we are delighted to be playing a part in the process. Women driving will ultimately give them more mobility in every sense – logistically, socially and economically – while at the same time have a positive impact on the country's development in the long term, which is a key pillar of Saudi Vision 2030."**

Supporting women across Saudi Arabia

Abdul Latif Jameel's support for the empowerment of women within Saudi Arabia stretches beyond its driving school partnership.

Since our earliest days, it has long-valued the talents, skills and dedication of Saudi Arabia's females. By 2016, its job creation and training initiative Bab Rizq Jameel, which is part of Community Jameel, had created more than 100,000 jobs for women in Saudi Arabia through partnerships with almost 1,400 private-sector companies.

Those efforts will also be enhanced under the terms of the 'Together from the Start' initiative, with Bab Rizq Jameel running courses on female empowerment, small business development in the arts and culture sector, and road safety at each of the four universities.

These steps are all designed to help the government achieve its Vision 2030 ambition of increasing women's participation in the workforce from 22% to 30%. Abdul Latif Jameel is proud to work towards a better future for all Saudi Arabian citizens, and will continue to enhance the communities in which we serve.

Real people, real stories – no such thing as a typical day

Abdul Latif Jameel isn't the average employer. Our core values guide the way we work with our business partners, within our communities, and with each other, and we invest considerable time, effort and resources in maintaining a working culture that is open, collaborative and nurturing. Today, we are a culturally diverse business, employing more than 16,000 people worldwide from a variety of professional backgrounds, representing over 40 nationalities.

Eduardo Mendoza, General Manager, Abdul Latif Jameel Land, grew up in the Philippines, where he worked as a project engineer. He joined Abdul Latif Jameel as a site engineer in 1994 and has been promoted several times since, thanks partly to the regular and wide-ranging training opportunities he has enjoyed.

Watch video here

VIDEO

"One of the things I really appreciate about working for Abdul Latif Jameel is that they are fair. Regardless of your nationality, race or religion, they value hard work and believe in equal opportunities for everybody. You're given a chance to show the best that you can offer, and I really appreciate that.

There's no such thing as a typical day, I'm always on the go, traveling from site to site and different offices, having meetings and checking paperwork, but I really like this diversity. Being part of a multicultural team is also something I really enjoy. It's always interesting to understand how people from other countries work and think.

Jeddah is a very family-oriented place. We dine out every Saturday night and enjoy picnics in the parks. I'm very aware of the importance of staying healthy here, with so many restaurants and different cuisines it would be very easy to slip into unhealthy habits, so I play tennis, swim and often go jogging too – the corniche is a great place for an evening stroll after work."

New partnership provides boost for Saudi Arabian jobseekers

Saudi Arabian jobseekers will soon have more opportunities to build rewarding careers at small and medium-sized businesses in the country, following confirmation of an exciting partnership between Bab Rizq Jameel Recruitment and Bayt.com, one of the leading job sites in the Middle East and North Africa.

Watch video here

VIDEO

Under the agreement, which was signed at a ceremony at Dar Hussein Jameel in Jeddah, Bab Rizq Jameel Recruitment "will use the Bayt.com platform to search for registered candidates, announce job openings, and manage the employment process."

The two organizations will also team up to offer recruitment services to small and medium-sized businesses across Saudi Arabia. The deal is specifically designed to help both companies "make a positive and sustainable social impact on the lives of the young men and women in Saudi Arabia and beyond."

Rola Basamad, Senior General Manager of Bab Rizq Jameel, was delighted to have confirmed this groundbreaking initiative. She said: **"The agreement will allow us to share the best expertise, knowledge and resources to address the challenges faced by the recruitment industry in Saudi Arabia."**

Since its inception in 2007, Bab Rizq Jameel Recruitment has helped to create almost 300,000 job opportunities in Saudi Arabia. Last year alone, it worked with several business sectors to provide a total of 51,449 jobs across the country.

Its three core programs – recruitment programs, stadium job opportunities, and vehicle job opportunities – have helped to boost the Saudization of the labor market and given fresh economic assistance to families in more than 110 locations across the country.

BAB RIZQ JAMEEL RECRUITMENT

bayt The Middle East's #1 Job Site

Painting a bright future for Middle Eastern art

As Director of Art Jameel, Antonia Carver has a front-row seat as the Middle East's art scene develops a worldwide reputation.

She spoke to Opening Doors to discuss Art Jameel's role in the exciting changes affecting Saudi Arabia, UAE and the wider region's art sector.

In the almost 20 years since Antonia Carver arrived in the Middle East, many things have changed. But few have undergone such a vibrant transformation as the arts scene of Saudi Arabia and the United Arab Emirates. "There's been a seismic shift in interest and understanding of the Middle East and awareness of the great artistic talent that comes out of this region," she says.

It is an opportunity, she believes, that the region has quickly grasped. Saudi Arabia has a dynamic and fast-growing arts scene. Sharjah has more museums than any other Gulf city and the Sharjah Biennial has run for more than 20 years. Abu Dhabi is home to The Louvre. And Dubai hosts more galleries than any other Middle Eastern city, while its auction houses and art fair has helped it to become the commercial hub for Middle Eastern art.

So while places like Baghdad, Beirut, Amman and Cairo have been 'grand old centers of culture' for centuries, new cities are now forging an exciting path to global dominance.

Carver explains: **"In the mid-2000s there was a big shift towards understanding Gulf cities. They were cultural destinations and places that could bring together people in a way no other sites could. Dubai, for example, became a place where the art world at large came to access art from South Asia, from Iran, and from the wider Arab world."**

It is a backdrop against which Art Jameel, the creative industries arm of Community Jameel, has been able to flourish. It is currently developing major new arts centers in both Saudi Arabia and Dubai. Hayy: Creative Hub will open in 2019 in Jeddah, while Dubai's Jameel Arts Centre, which will be a contemporary arts institution hosting world-class exhibitions supported by library and learning opportunities, is scheduled to open in November this year.

As an organization, Art Jameel operates on an international and a local level," says Carver. **"Our main bases are in Dubai and Jeddah, and we also have major supporters in London (The V&A) and New York (the Met). But at the heart of the organization is the nurturing and showcasing of Middle Eastern artists to the rest of the world. In Saudi Arabia, for example, we're working very locally, from the ground up, and then pairing that with an international approach by being the connector that links those two scenes."**

Project Space Art Jameel, in Alserkal Avenue, Dubai, features a year-round programme of art exhibitions, studios, workshops and events.

The Jameel Arts Center, Dubai

Mehdi Moutashar and Marina Tabassum announced as first ever joint winners of Jameel Prize 5, flanked by Antonia Carver, left, Tristram Hunt, Director of the V&A (far left) and Fady M Jameel, right.

The Hayy Creative Hub Jeddah Saudi Arabia (artist's impression)

In Dubai, an international approach dominates every aspect of life – including the arts, where Art Jameel acts an important catalyst. **"The Jameel Arts Centre is a place for everyone,"** says Carver. **"That's a message that comes from the very top of our organization. We're really looking at communities at large, and looking at how art can impact on lives and contribute to a building a thriving society."**

Through initiatives such as the Jameel Prize, an international award for contemporary art and design inspired by Islamic tradition and run in partnership with London's V&A museum, Art Jameel encourages and supports the growth of Middle Eastern art around the world.

Staging the award also provides a bank of knowledge that helps to shape Art Jameel's operations in Saudi Arabia and Dubai, where different audiences benefit from different experiences.

Watch video here

VIDEO

Carver says: "The Jameel Arts Centre in Dubai is quite close to the airport, which is one of the World's busiest. So it's ideal for people coming in transit, taking a few hours out between flights or before they head off to a hotel, and coming to see the center. That mix between a local audience and an international one is more pronounced in Dubai than it is in Jeddah."

"Our audience in Jeddah will be more local in orientation. There have been enormous strides in recent years, especially by the Saudi Arts Council, the General Entertainment Authority, the General Cultural Authority, the MiSK Foundation, and the Ministry of Arts, but the number of international practitioners coming to Jeddah is still relatively low. That's one of the things Hayy hopes to do: we want to create a local-international exchange."

Watch video here

VIDEO

"Having these two centers, one in Dubai and one in Jeddah, is also something we can develop in terms of the UAE-Saudi Arabia relationship. Our understanding from the governments in both countries is that they're looking more and more for the exchange between the two countries to be something that could be played out in the cultural sector. We want to play our part. We aim to be the institution that brings these two communities together."

ART JAMEEL

J-PAL launches 'Policy Insights' to help shape public practice around the world

Governments, NGOs, firms, funders and policy makers can now quickly understand and benefit from the lessons learned from leading-edge research, thanks to the launch of the new Policy Insights program from the Abdul Latif Jameel Poverty Action Lab (J-PAL).

J-PAL's Policy Insights program is a series of brief publications highlighting the theories, results and insights of research from around the world in J-PAL's nine sectors: agriculture; crime, violence and conflict; education; environment and energy; finance; gender; health; labor markets; and political economy and governance.

The Policy Insights library, which was launched in May 2018, contains a unique range of detail to help governments and other shape policy and practice around evidence-based research. Some of its latest topics include:

- Credit's limited impact on smallholder farmer profitability
- Reducing energy and water use through information and social comparisons
- Increasing college access by making the application process easier

Each Insight is compiled by extensive searches for published and working papers around the world using Google Scholar, peer-reviewed journal portals, online evaluation databases, and existing literature reviews.

These are drawn together by J-PAL's Sector Chairs and staff. They also include a summary of their perspective on the evidence around a specific topic, as well as highlighting open questions or areas of debate where applicable.

The authors of all studies cited in each Policy Insight can also provide input on the publication, while each Insight will also be updated as the relevant body of evidence grows.

"Policy Insights ... offer a perspective on the important takeaways from the growing evidence base on highly policy-relevant topics, and provide some direction for policymakers seeking to inform policy with scientific evidence."

"When combined with a detailed understanding of context and program implementation, we hope these insights can be practical inputs for policy and program design."

"Over time, we hope this can become a go-to resource for policymakers looking for a quick synopsis of the state of the evidence on a wide range of topics."

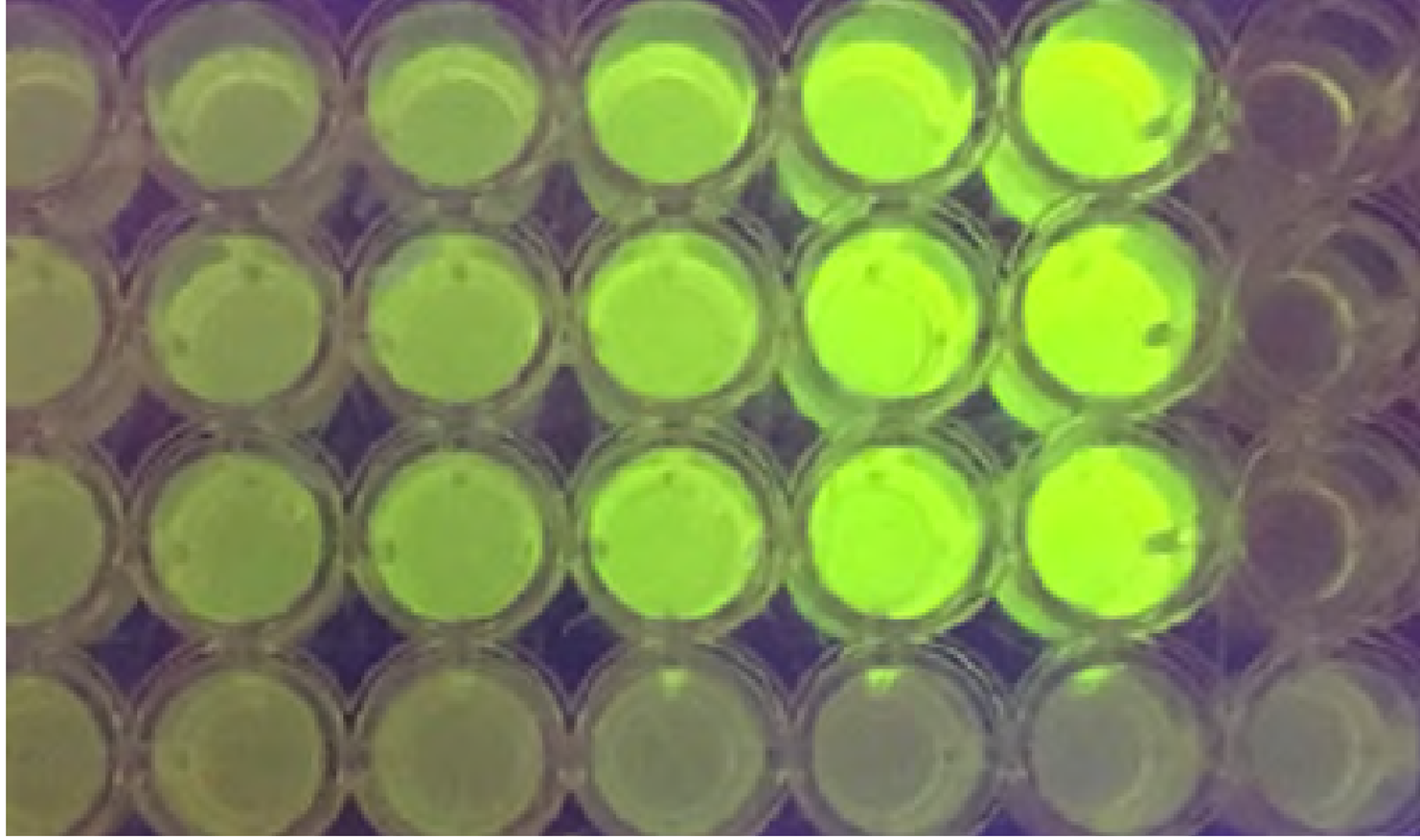
Benjamin Olken,
Director of J-PAL

Click here to learn more about J-PAL's Policy Insights

J-PAL Community Jameel

J-WAFS in action:

‘Living sensors’ to detect water contamination



Tzu-Chieh Tang (Zijay)
Doctoral student in the Department of Biological Engineering at MIT

Tzu-Chieh Tang (Zijay) is a doctoral student in the Department of Biological Engineering at MIT, funded by the Abdul Latif Jameel Water and Food Security Lab (J-WAFS). His research is focused on developing ‘living water sensors’ that can record contaminant levels in water supplies and serve as bioremediation tools. Originally from Taiwan, Zijay joined MIT after completing a masters at the Masdar Institute in the United Arab Emirates.

J-WAFS communications and program manager Andi Sutton spoke to Zijay about his research and its aims.

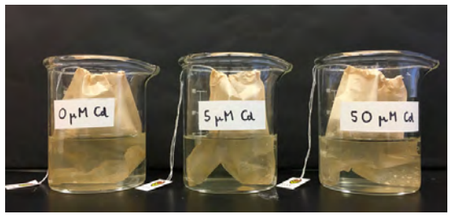
Q. What brought you to study with J-WAFS at MIT?

When I was an undergrad, synthetic biology was a relatively new field. I came across a paper that looked at how you could apply the principles of computer science and electrical engineering to do circuit design in living cells, and I thought, ‘This is really cool!’

I’ve always looked to nature for inspiration. Many living things have self-cleaning and self-healing surfaces. They’re all out there in nature. Since it’s very difficult to replicate these processes using artificial approaches, I wanted to know how I could use a living part of nature to recreate these systems. So of course, I looked to MIT, which is one of the strongest places to do research in synthetic biology. MIT also has a strong materials science community, which appealed to my interest in materials and surfaces, so it was a good combination for me.

Q. What problems are you trying to address with your research?

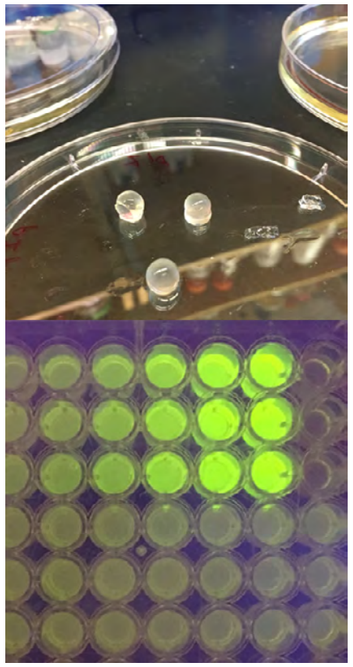
Water sensing is usually done with electronic sensors or mass spectrometers. These methods provide better results than current biological sensors can provide. Even though bio-sensing has been understood for a while, people haven’t yet found a way to deploy bio-sensors safely and cheaply. Our lab is trying to solve this problem. We want to prove how bio-sensors can have advantages over electronic sensors, like functioning without a power supply, so they can be used in remote areas that lack modern infrastructure.



Q. How do your biosensors work?

Our lab is engineering living materials that can sense and respond to environmental stimuli. We are using synthetic biology to engineer microbes, such as E. coli and budding yeast, to sense and record specific contaminants (heavy metals and other chemicals) by lighting up when they come in contact with them.

The major challenge of making a device out of living materials is that there is no actual structure to contain the cells. The E.coli that we use are free-floating; they don’t form a bulk material. So, we worked with Professor Xuanhe Zhao’s group in the mechanical engineering department at MIT, to use a tough hydrogel they developed to contain the microbes.



This serves as a division of labor: the hydrogel provides the structural integrity, and the engineered bacteria do the sensing.

Q. Does this produce the self-generating living system that you were originally inspired to make?
Actually, no. What we'd really like to do is see if we can make the microbes, or other living organisms, produce their own container, as well as doing the water sensing. This is what I'm working on now. I'm collaborating with someone in the Department of Bioengineering at Imperial College London, as well as another lab in MIT's Department of Materials Science and Engineering, that uses yeasts to do bioremediation, to create a living filter that can sense and remove chemical and biological contaminants. The work is still in its early stages, but the results are promising.

Q. Synthetic biology research often has a long time horizon. How will you define completion for your project?
Completion will mean that we can beat the results of the electronic water sensor counterparts in terms of specificity and sensitivity. But we are not there yet. I believe that if we can show the potential of our bio-sensors to be viable water sensing products for industry, we might get more support.

Q. How important has J-WAFS' support been for your research?
One area I'm keen to do further research is in optimizing the sensors to see the true extent of their potential. This is another way that J-WAFS has been really helpful. Through J-WAFS, I was introduced to people at Xylem Inc., another J-WAFS research affiliate, about their interest in this work and possible future support. This would never have happened if I had not had this J-WAFS' affiliation.

Q. Besides your current work, what other water research excites you at the moment?
Based on my experience and discussions with others in my field, it's clear that there is already a lot of work being done in sensing and removing different contaminants from water, like heavy metal ions and chemicals. Right now, though, we don't have very good sensors for pathogens like microbes. I think it would be really nice if we could use the fact that some microbes can detect others to build bio-sensors to detect pathogens in food and water. This is where we could beat electronic sensors in terms of sensitivity. The issue of biological contaminants is, to me, equally if not more important than chemical ones.

Q. What are your next steps after MIT?
I'm really excited about the research I've been doing, but last year I was involved in a start-up competition. So, I could see developing research for commercialization as a possible career path. But, there are so many things I still want to do, so I'm still exploring my options.

J-WAFS Abdul Latif Jameel World Water and Food Security Lab

First residents prepare for J|ONE opening

Two hundred and forty-two families will soon be enjoying the life-enhancing benefits of brand new homes after Abdul Latif Jameel Land unveiled its completed J|ONE residential development in Jeddah.

The launch marks the culmination of a remarkable project. First announced in 2016, the build of the one- to four-bedroom apartments was completed in just 19.5 months.

Watch video here
VIDEO 1

Residents in the new complex in the Al Salamah area in Jeddah's north west will be able to relax in shared facilities including outdoor pools, a health club, home theatre, café, lounge, gaming room, beauty salon and mini-market. A daycare nursery is also available for residents with young children, while more than 300 parking lots and a CCTV network offer convenience and security.

Watch video here
VIDEO 2

Spread over 64,000m2, J|ONE is Abdul Latif Jameel Land's first response to the housing issues facing Saudi Arabia. The Company is now determined to build on this demonstrated ability to create communities with vibrant social, commercial and residential hubs.

"J-ONE is a pioneering residential development for both Abdul Latif Jameel Land and Saudi Arabia. It is a key milestone in delivering upon the residential development and housing ownership goals identified in Saudi Vision 2030, and in addressing growing housing demand in the market. For the residents, our focus on the community element of residential living is what will set apart J-ONE in the Jeddah market."

Fady Mohammed Jameel, Deputy President and Vice Chairman of Abdul Latif Jameel

J-WAFS at MIT develops new technologies addressing water and food challenges

Several new research projects have been supported in the latest round of seed grant funding announced by the Abdul Latif Jameel World Water and Food Security Lab (J-WAFS), at Massachusetts Institute of Technology (MIT) in the United States.

The research includes projects such as

- **Silk-based food safety sensor:** The development of a silk-based food safety sensor that changes color based on the presence of common food viruses and diseases. The aim is to print inks, which are edible and visible to the naked eye, on food packaging or directly on food. This sensor could enable point-of-use detection of contamination and food spoilage for meat and dairy products.

- **New approaches to ensure safe drinking water:** The problem of arsenic contamination in water occurs throughout the globe, and is particularly extreme in South Asia where over 100 million people experience daily exposure to dangerous concentrations of arsenic that occurs naturally in groundwater. J-WAFS funding will support the development of models to identify and disseminate more effective strategies that take into account how and where dangerous concentrations of arsenic exist to help promote water safety.

- **Improving understanding of soil and climate impacts on agriculture for improved crop production:** Climate change is bringing temperature and precipitation changes that will increasingly stress the crops our global food system depends on, and these changes are affecting regions of the world. J-WAFS aims to improve future practices to breed plants for stress tolerance, such as droughts, by developing new tools to understand the structure and dynamics of the plant genes and how they respond to changes in the environment.

Eleven principal investigators working across six MIT departments will lead the projects, each of which has received a two-year grant of up to US$ 200,000.

Fady Mohammed Jameel, President of Community Jameel International, said: **"J-WAFS is at the forefront of delivering real solutions to help tackle food and water challenges. Since 2014, we have seen J-WAFS researchers develop technology that converts water from air, even in arid conditions, while another project resulted in reduced storm-water runoff and improved water systems in urban centers."**

"J-WAFS research can make a real difference to communities, and at the same time is an opportunity to tackle some of the most pressing issues related to food and water safety and security in the Middle East and around the world."

J-WAFS enables the world's leading researchers to explore scalable solutions for water and food systems. Since 2014, it has supported 30 research projects aiming to improve food and water safety and security.

John Lienhard, the Abdul Latif Jameel Professor of Water and Food at MIT, said: **"Investing in research results in creative innovations in food and water that will enable a sustainable future. Further, these seed grants have repeatedly been leveraged by their recipients to develop significant follow-on programs, that further multiply the impact."**

Click here for a full list of J-WAFS' current funded projects.

J-WAFS Abdul Latif Jameel World Water and Food Security Lab

J-PAL Japanese partnership aims to enhance education in Africa

Abdul Latif Jameel Poverty Action Lab (J-PAL) has signed a cooperation agreement with Japan International Cooperation Agency (JICA) and Pratham, a global education charity, to enhance education in parts of Africa.

The cooperation agreement was signed at a public forum on health and education in Tokyo in June, co-hosted by the three organizations.

The centerpiece event, held at JICA headquarters, was an opportunity for attendees from Japanese academic institutions and government agencies to learn about J-PAL and Pratham's recent research, particularly in the education sector.

J-PAL and Pratham also convened a series of private meetings and workshops with the JICA leadership and education and health sector teams.

Through the new collaboration, the organizations will work to expand the 'Teaching at the Right Level' (TaRL) program for school education in Africa, following a successful scale-up of the program in Zambia.

TaRL is a pedagogical approach that involves evaluating children using a simple assessment tool and then grouping them according to learning level rather than age or grade. It was pioneered by Pratham in India and its effectiveness has been evaluated and enhanced in collaboration with J-PAL's rigorous scientific approach.

Watch video here

VIDEO

"J-PAL's pioneering education research with Pratham in India, the 'Teaching at the Right Level' program and now its scale-up in Zambia, are helping to improve learning outcomes for millions of children around the world," said Fady Jameel, President of Community Jameel International."

"Through cooperation with JICA, with its outstanding record of development work in Africa and beyond, the impact of J-PAL's research and Pratham's education work is set to achieve an impact at an even greater scale."

Fady Jameel
President of Community Jameel International

J-PAL has a track-record of leveraging insights gained from its research to support policymaking around the world, including in the Middle East, where J-PAL has active and completed research projects and local partnerships to support policymaking in Saudi Arabia, Egypt, Jordan, Lebanon and Morocco.

To date, J-PAL affiliated researchers have conducted more than 860 evaluations in 80 countries, and more than 300 million people have been reached by programs tested and found to be effective through J-PAL evaluations. The organization has been instrumental in increasing the number and quality of randomized evaluations on development interventions.

J-PAL ABDUL LATIF JAMEEL POVERTY ACTION LAB

Pratham Every Child in School & Learning Well

Community Jameel

MITEF winners revealed in partnership with Community Jameel

More than 400 investors, entrepreneurs, media representatives and renowned public figures gathered in Muscat, Oman, for the 11th annual awards ceremony of the Arab Startup Competition held by the MIT Enterprise Forum (MITEF) Pan-Arab Region.

The awards, which took place in April, are organized in partnership with Community Jameel among others. They are designed to support entrepreneurs in the Middle East.

Ten winners across three categories – Ideas, Social Entrepreneurship, and Startups – were revealed at the ceremony, which also featured on-stage panel discussions entitled 'Building Emerging Ecosystems' and 'What Silicon Valley Investors Want to See in MENA'.

The main winners included Quirkpod, an Egyptian online life-coaching platform to help young people develop valuable skills; Al Khuadairi, an Egyptian organization that converts waste and soil-damaging chemical fertilizers into energy; and ProvenMed International, a Tunisian firm working on lifestyle solutions for patients suffering from incontinence.

Hala Fadel, Chair of the Board of MITEF Pan Arab, said: **"Investing in Arab entrepreneurship will... contribute to the revitalization of the economy, and lead to the creation of new partnerships that can eventually transform into large institutions."**

Community Jameel, a social enterprise organization that promotes a positive society and economic sustainability, has been a partner of the competition since its inception 12 years ago.

Fady Mohammed Jameel, President of Community Jameel International, said: **"We are honored to serve entrepreneurs across the region and have been delighted that our efforts have been so well received.**

"The major success of the MITEF Pan Arab competition has been our record of translating ideas into successful businesses, and innovative concepts into stories of success."

"Since launching in 2006, we have provided financial support totaling almost $970,000 to over 430 technology and knowledge-based start-ups. More than 2,300 young and ambitious entrepreneurs have received high-level training by regional and world experts creating at least 2,600 new job opportunities."

EVENTS

Events round-up

A brief look at some of the upcoming business events in the region.

International Conference on Economics and Business Research, Riyadh, Saudi Arabia
August 13-14, 2018
www.10times.com/icebr-riyadh
Participants from across the globe share their insights and experiences in relation to the very latest issues and ideas in economics and business research.

Higher Education and Careers Fair, Riyadh, Saudi Arabia
September 28-30, 2018
www.hecfsaudi.com
Now in its third iteration, HEFC brings together global educational institutes and aspiring international students from across Saudi Arabia under the same roof.

Innovative Cities Summit, Riyadh, Saudi Arabia
September 23-24, 2018
www.innovative-smartcities.com
Government leaders and industry experts will address some of the key challenges around inhabitable and sustainable cities, exploring how cities can better govern and build up resilience through policy, technology and social innovations.

Water, Energy, Technology and Environment Exhibition (WETEX), Dubai, UAE
October 23-25, 2018
www.wetex.ae
Organised by the Dubai Electricity and Water Authority, this exhibition brings together the latest innovations, technologies, advances in research, regulatory information and other developments in water, energy and the environment.

Abdul Latif Jameel