

FLASHES

NOV 2014

A MONTHLY MAGAZINE ON KNOWLEDGE AND DEVELOPMENT
BY THE MOHAMMED BIN RASHID AL MAKTOUM FOUNDATION

POSITIVE POTENTIAL OF SOCIAL MEDIA



TRASH TO TREASURE

Reusing trash to
generate power

A STAR STUDDER FUTURE

UAE's space
ambitions

HAPPINESS METER

Happy with the
government?
Show it

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FOREWORD

Talent flows naturally to countries that create an environment for economic growth; that make life easy for enterprise; that attract and welcome investment; and that nurture a culture of achievement. The United Arab Emirates fulfills all these criteria and this is evident in the results of a new study by LinkedIn, the world's largest online professional network and recruitment platform. LinkedIn measured the net international movement of talent among its members, and topping the list as a destination for talent is the UAE, with a net talent gain of 1.3 per cent of the workforce in 2013.

The UAE is a land of opportunity, and this is obvious in the types of projects and initiatives that are regularly announced in our country. I am extremely proud that we are ushering in the space age in the Arab region – we plan to send the world's first Arab probe to Mars; we are responsibly converting our trash into power; we are using social media to build better governance. But most importantly we are doing all this on the basis of our own people's knowledge. Right from our own home-built satellites to innovative home technologies, the opportunities are vast and varied and they are all in one country: UAE.

The Mohammed Bin Rashid Al Maktoum Foundation is also making

great strides in the development of our talent pool through a series of initiatives such as the Dubai International Writing Programme. I am glad to see that in every sphere, Emirati talent is being honed and refined to meet the challenges of the future.

While we aim for the stars, we cannot ignore the realities on the ground. Even as we are progressing each day and are blessed with a life of comfort, we must stop and think about those less fortunate than us. The devastating Ebola outbreak in Africa is a glaring example which shows that more needs to be done for humanitarian causes around the world. We hope the UAE's contribution of \$5 million will help enhance the global battle against the disease.

On November 11, 2014, Dubai opened another chapter in public transport with the launch of Dubai Tram. We wish the Road and Transport Authority much success with this new project. Apart from fulfilling commuter needs, I think Dubai Tram will prove to be a great tourist attraction for many visitors.

HE Jamal Bin Huwairb

MD of the Mohammed Bin Rashid Al Maktoum Foundation and Chairman Qandil

FOUNDATION UPDATES AND INITIATIVES



Image courtesy: Frankfurt Book Fair



مؤسسة محمد بن راشد آل مكتوم
MOHAMMED BIN RASHID
AL MAKTOUM FOUNDATION



Lighting up the world of publishing

Arabic readers will now have over 1000 new titles to choose from every year, thanks to Qandil Printing and Publishing Services. The new company, established by the Mohammed Bin Rashid Al Maktoum Foundation (MBRF), aims to publish more than 1,000 new titles every year covering a wide range of topics, such as knowledge and development, business management as well as creativity and innovation. Books will be in both paper and digital formats.

MBRF announced the launch of Qandil as part of its participation in the Frankfurt Book Fair, which was held from October 8 to 12, 2014. It is envisaged the company will play a pivotal role in the dissemination of culture and knowledge in the Arab world and the wider region through its wide array of books, magazines and journals. Although Qandil's initial focus will be on the Arab world, it will in due time branch out to other languages. The company also offers a range of services to the print and publishing sectors, including acquiring and providing large orders for machinery, materials and logistical support. HE Jamal Bin Huwaireb, Managing Director of MBRF, said the initiative was launched to build partnerships and cooperation among stakeholders and developing areas and sectors that directly contribute towards the dissemination and transfer of knowledge to strengthen the pillars of a modern knowledge-based community.



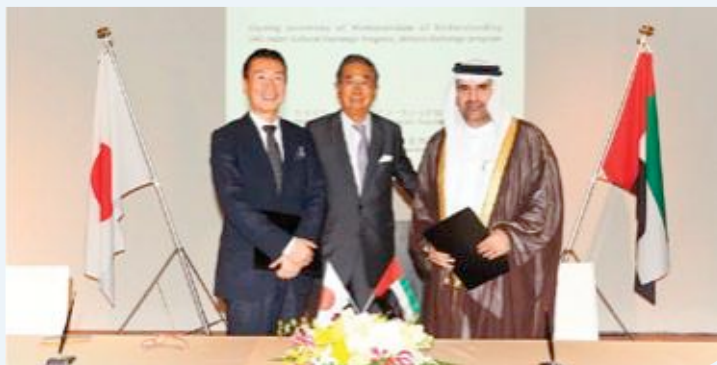
قندیل | Qandil

With Dubai as its hub, Qandil provides extensive and efficient, yet cost-effective, distribution and logistics support to print and publishing companies. It has built up a network of strategic partnerships to support these initiatives.

"The establishment of Qandil and MBRF's participation at the Frankfurt Book Fair this year is another step towards translating the vision of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to develop a knowledge-based society. It also aligns with the directives of HH Sheikh Ahmed Bin Mohammed Bin Rashid Al Maktoum, Chairman of MBRF, to develop ways of transferring knowledge and promoting intellectual creativity at the local level," said Bin Huwaireb.

Qandil comes on the heels of other major initiatives of MBRF, such as the Dubai International Writing Programme, My Family Reads and Book in Minutes, which have contributed to leveraging knowledge and development as part of efforts to strengthen the position of Dubai as a leading cultural and literary centre.





MBRF says “konnichiwa” to Japanese authors

Writers from Japan are set to visit the UAE as part of an exchange programme between the MBRF and Japan Arts and Culture Foundation. The initiative will see writers from each country visit the other to gain a deeper understanding of each other's cultures and express their experiences through their works. The programme is the result of a recent memorandum of understanding between the two organisations, signed in the presence of Ali Saeed al Nowais, UAE Ambassador to Japan, Jamal Bin Huwaireb, Managing Director of MBRF, Yasunobu Terada, Chairman, Japan Arts and Culture Foundation, and Shintaro Ishihara, Supreme Advisor, Japan Arts and Culture Foundation. The collaboration will eventually lead to the publication of books in both Arabic and Japanese, emphasising the concepts of mutual learning, cooperation and the oneness of humanity.

The UAE–Japan author exchange marks the first partnership under the Writer Exchange category of MBRF's Dubai International Programme for Writing, which is aimed at empowering young authors and providing them with a suitable environment within which to develop their talent. Under this category, MBRF will tie up with various literary and knowledge entities around the world to enable writers from the UAE and other countries to exchange ideas based on their own cultures. Writers will be chosen by a committee from their own country.

“This agreement is further confirmation of MBRF's commitment to strengthen the process of knowledge transfer and empower young Arab talents to develop their skills in order to enhance the contribution of Arab literature and creativity to the literary world,” said Jamal Bin Huwaireb.

Yasunobu Terada also praised the efforts made by the MBRF to create international partnerships with the aim of exchanging cognitive baggage.

“We are honoured to cooperate with the Mohammed Bin Rashid al Maktoum Foundation in supporting its efforts to promote and localise knowledge,” he said.



Building a smarter future

A new neighbourhood focused on education, sustainability and culture is set to rise up in central Dubai. Smart, networked and interconnected community will also leverage highly efficient energy and water technologies. The project is a result of a joint venture agreement between the Mohammed Bin Rashid al Maktoum Foundation and Nshama, a developer of smart integrated technologies.

MBRF will extend a part of its land bank in Dubai on a joint venture partnership basis for developing this community. Announcing the

partnership, HE Bin Huwareb said: "MBRF has been actively involved in promoting various cultural initiatives in the city and elevating the status of Dubai as a centre of arts, thus attracting creative minds from around the world. As Dubai prepares to host the World Expo 2020, we believe that it is important to create vibrant destinations that add to the city's overall infrastructure."

The project will be designed by world-class architects, with an emphasis on assuring open green spaces and a pedestrian-friendly layout. With a focus on youth and the creative

community, the joint venture will be a vibrant community that harnesses the power of information technology and smart connectivity. It will offer residents easy access to the business and cultural nerve centres of the city. Besides, a full spectrum of lifestyle amenities, including hotels, shopping centres, educational institutions, bookshops, healthcare facilities, and leisure attractions are being considered for the masterplans. The project will leverage green building techniques and have extensive sustainability features.

Working with words



Arab authors looking for a literary break now have the opportunity to train and learn under the guidance of some of the most prolific writers of the Arab world, with the launch of phase one of the Dubai International Programme for Writing (DIPW). An initiative by the MBRF, DIPW aims to enrich the cultural movement and intellectual development in the Arab world. It has won the appreciation of intellectuals, writers and cultural figures in the UAE, including leading industry figures such as HE Bilal al Budoor, Assistant Undersecretary for Cultural Affairs and Director of the Arabic Language Protection Society, Dr Issa Bastaki, President of the University of Dubai, HE Saeed al Naboodah, Acting Director General of the Dubai Culture & Arts Authority, and Abdul Hameed Ahmad, Editor in Chief of *Gulf News*.

Commenting on the opening of the first phase of the DIPW, HE

Jamal Bin Huwaireb, Managing Director of MBRF, said, "The launch of the programme highlights the continuing efforts of MBRF towards empowering young writers and authors from the UAE and across the Arab world in order to strengthen the dissemination of culture and knowledge in Arab societies."

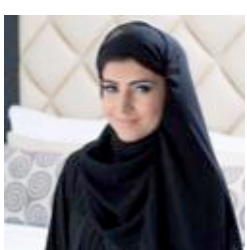
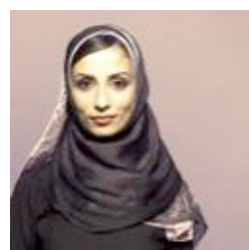
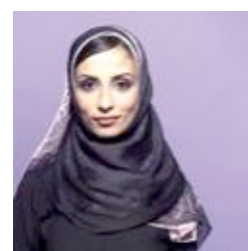
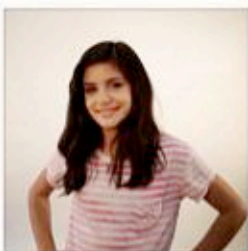
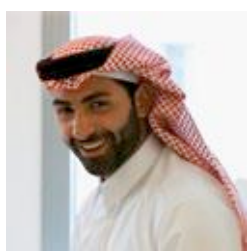
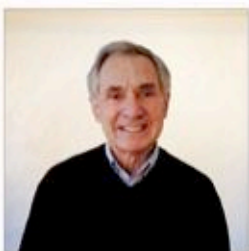
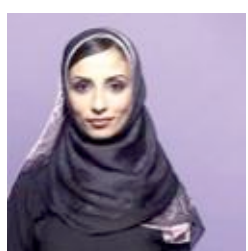
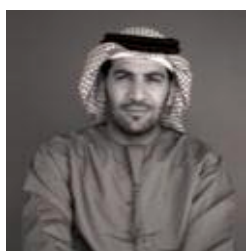
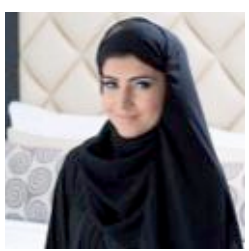
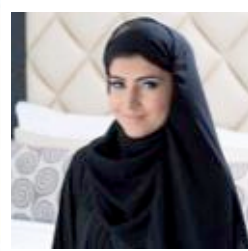
Phase one began with a training workshop on novel writing by Lebanese novelist, Najawa Barakat. The five-day event was attended by eight Emirati aspiring writers. Barakat said: "I am happy to contribute on a personal and professional level to the Dubai International Writing Programme's efforts to train Arab talent and develop a new generation of Arab novelists."

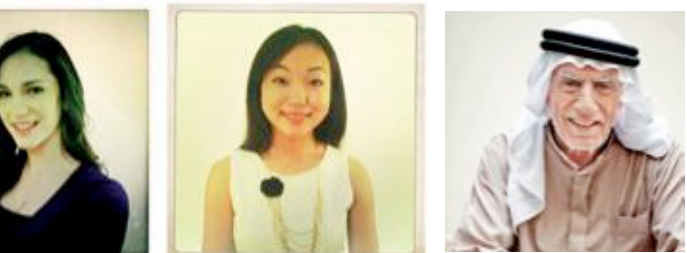
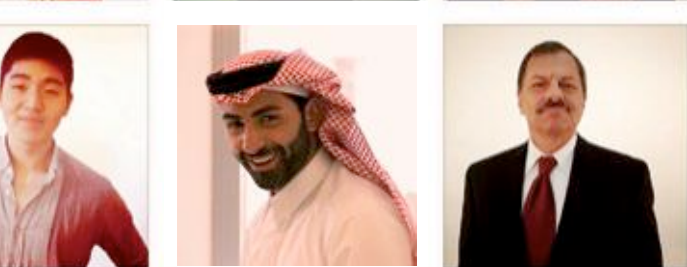
During the workshop, Barakat outlined the skills necessary for creative writing and to build a coherent narrative. She provided training, guidance and information on the different

schools of writing as well as fiction-writing methods and narrative assets.

Under the DIPW, MBRF will form partnerships with leading literary figures and local experts to train candidates. Trainers will be allocated various fields of writing, including: literature; science and research. The initiative will also contribute to building cultural bridges, promoting intercultural dialogue and strengthening partnership agreements. It will foster a greater understanding between the MBRF and various organisations working in the publishing sector globally.

DIPW represents a key part of the activities and initiatives launched by the MBRF to enhance the capability of the intellectual and literary community. The programme also supports national publishing houses that contribute to the enrichment of the cultural movement and intellectual activities in the UAE and the Arab world.





POSITIVE POTENTIAL OF SOCIAL MEDIA

THE UAE IS COMMITTED TO HARNESSING THE POWER OF SOCIAL MEDIA TO HELP DRIVE THE DEVELOPMENT OF GOVERNMENT, SOCIETY AND BUSINESS, NOT ONLY IN THE EMIRATES BUT IN THE ARAB WORLD.

“Social media channels have created new opportunities, removed all barriers and made the audience part of our development plans. Having tremendous influence, today social media channels serve as an open parliament and cannot be ignored or misled.”

This is how His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai describes the evolution of social media, its influence, and the opportunities it provides for

everyone to participate in, and contribute to, positive societal change and be a part of Dubai's culture of innovation that drives sustainable development.

In less than a decade social media has become a huge part of our daily lives, our culture and the way we interact with those around us. People typically spend more than three hours a day on social media platforms. From breaking news, to finding new jobs, to how we shop and stay in contact with friends and family, social media has redefined how we conduct our daily lives.

According to research presented at

the recent 2014 Gulf Research Meeting social media, including platforms like Facebook and Twitter, is the most preferred source of news in the UAE. The country boasts the second highest Facebook penetration in the region at 58 per cent. There are 3.6 million Facebook users in the UAE, with 2.3 million in Dubai alone.

The Emirates also have the highest LinkedIn penetration in the Middle East with 22.4 per cent of total users while UAE residents post 2.5 million tweets a day. So there is no getting around the fact that social media has changed the way we interact.

ARAB SOCIAL MEDIA AWARDS CATAGORIES



PERSONALITY
OF THE YEAR



GOVERNMENT
SECTOR



BLOGS



MEDIA



PRIVATE SECTOR



SPORTS



EDUCATION



CSR



ENTREPRENEURSHIP



YOUTH



TECHNOLOGY



TOLERANCE



ENVIRONMENT



SHOPPING



HEALTH



TOURISM



ART



ENTERTAINMENT



SAFETY
& SECURITY



POLITICAL
TOLERANCE

ARAB SOCIAL MEDIA AWARD

In June this year, HH Sheikh Mohammed unveiled the Arab Social Media Awards to honour those who harness the huge positive potential of social media for the good of the Arab world.

Speaking at the launch, Sheikh Mohammed noted that social media has become fundamental to the social, economic and political fabric of the Arab world and has played a key role in shaping events.

"Social media influencers are important change-makers in society. Those who bring wisdom, creativity and positivity are a powerful force for good, because social media offers powerful tools for development and progress," he said.

"The Arab world has not yet made the most of the enormously positive potential of social media. This prize will highlight successful examples and use them as a basis to maximise the benefits for society." The Awards will highlight the most important social media initiatives in the Arab world and promote best practices across the various platforms and technologies.

The Arab Social Media Awards are based on three main pillars: communication, creativity and impact. They include 20 categories: Government Sector; Private Sector; Blogs; Media; Sports; Tolerance; CSR; Education, Youth, Technology, Entrepreneurship, Political Tolerance, Arts, Safety & Security; Shopping; Environment; Tourism and Entertainment. There is also the Personality of the Year Award. At the time of writing entries

had closed and the judging committee was working its way through the submissions. Results are expected by the end of the year.

SLEW OF INITIATIVES

However, the Awards are not the UAE's first social media initiative. The leadership recognises the critical role that it plays in citizen engagement and, as such, a slew of initiatives have been implemented during the past few years.

In December 2013, HH Sheikh Mohammed Bin Rashid called on Emiratis to take part in the world's largest brainstorming meeting to develop the country's health and education sectors. More than 82,000 ideas were submitted by the public on Twitter and the initiative's website, leading to changes in healthcare and public education. For instance, one tweet, from Omar Al Hamadi, an Emirati doctor, led to the creation of a medical board.

ARAB SOCIAL MEDIA REPORT

Furthermore the Arab Social Media Report, produced by the Dubai School of Government's Governance and Innovation Programme, is an ongoing series that highlights and analyses social networking across the Arab region including analysis of Facebook and Twitter users in all 22 Arab League countries. It then highlights a specific theme in each issue (ranging from general usage trends to the impact of social media on civil movements, and its role in Arab women's empowerment). This is part of a larger research



UAE
RESIDENTS
POST 2.5
MILLION
TWEETS
A DAY

55%
STRONGLY
SUPPORTS THE
GOVERNMENT'S
USE OF SOCIAL
MEDIA FOR
PUBLIC
SERVICES

initiative focusing on social engagement through ICT for better policy in Arab states which explores the use of social networking services in governance, entrepreneurship promotion and social inclusion.

The sixth Arab Social Media Report, which focused on the public sector in Arab nations, was released in June this year. Among the key findings was that Arabs have positive attitudes towards being engaged by government with 55 per cent of respondents saying that they strongly support the government's use of social media for the design and delivery of public services.

Respondents also agreed that social media facilitates better accessibility to government entities and public sector officials. This means that social media is not only giving a voice to the public, but is also assisting policy-makers in serving people's needs.

SHARIKNA

During GITEX Technology Week held in October 2014, the UAE's Telecommunications Regulatory Authority (TRA) launched the "Sharikna" app on the UAE official government web portal, Government.ae.

Sharikna is similar to Twitter and allows users to follow specific topics and receive the latest updates on issues of their interest.

The TRA said that the launch was part of developing the official UAE Government portal to provide better interaction and engagement levels with users in the country.

#DARDACHAT

In line with HH Sheikh Mohammed's vision, the Mohammed Bin Rashid Al Maktoum Foundation (MBRF) launched a programme called "#Dardachat" on Twitter.



Every Saturday, the MBRF announces, through the forum, a choice of three topics related to the knowledge economy, culture or youth. People are then asked to vote for their preferred topic of discussion using #MBRF_Dardachat plus the topic number.

The topic with the highest number of votes opens for discussion on Tuesday with the MBRF posting questions and moderating the discussion throughout the day. At the end of the discussion, a summary of the Dardachat is published on the MBRF website.

Social media platforms are, in fact, becoming the new majlis for the Arab world. They have created a revolution in communications, providing people from all walks of life with a platform to voice their opinions and discuss their concerns. In so doing, they have provided decision-makers with a detailed insight into society offering information that cannot be found elsewhere.

The UAE has always had an accessible government that is in touch with all sectors of its population. But by launching itself on social media, it is not only telling the people it governs that it is there to help with problems but that it is also open to constructive feedback and honest opinions. The extensive use of social media, both by leaders and the people, is helping a good government become even better. †



#MYDUBAI TRIP

The #MyDubai initiative – an attempt to create the world’s first autobiography of a city through images – was announced by His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Dubai Executive Council, earlier this year.

Through his Twitter handle, Sheikh Hamdan requested residents and visitors to join him in sharing photos, videos and stories on social media and show their experiences of Dubai.

The intention is to celebrate the everyday lives of the people and communities of the Emirate and show the city that lies beneath the landmarks, headlines and superlatives.

To date #MyDubai has received an overwhelming response – at time of writing there are more than 1.34 million Instagram submissions of photos and videos uploaded.

Dubai’s Department of Tourism and Commerce Marketing (DTCM), an avid supporter of the initiative, joined hands with Qabeela New Media to produce a 12-episode travel series curated by well-known Emirati social travel experts Mohamed and Peyman Parham Al Awadhi (pictured), Peeta Planet (an international,



award-winning TV series) based on the entries.

The “#MyDubai Trip” is a social travel series that documents the journey of some of the most influential Instagrammers from around the world as they experience Dubai. Their itineraries are thoughtfully curated and crowd-sourced from several of Dubai’s renowned social media personalities. The series will be broadcast online between November 2014 and January 2015.

DTCM will also be selecting outstanding photographs and videos and displaying them on its social media channels – @definitelydubai – and throughout the year at exhibitions and roadshows across the globe.



THE HAPPINESS METER

If you are happy with the government and you really want to show it, use the Happiness Meter.

Measuring people's happiness and satisfaction with government services on a daily basis is now possible thanks to the Happiness Meter unveiled last month by HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai.

The 'Happiness Meter' is an electronic device is connected to a central network to send daily reports to decision-makers to help them monitor the types of government services that people are most happy about, as well as identify the geographical areas where these services are being provided.

Customers will be given three options to express their happiness and satisfaction about government services and the app will be available at service points or via smart virtual

platforms that provide the services through the Internet.

Speaking at the launch, Sheikh Mohammed said: "Preparing annual or quarterly reports to measure the happiness and satisfaction of the public does not meet our ambitions because today the world is transforming very fast and people's expectations too are changing rapidly.

"Therefore, government services must be monitored on a daily basis. Developing services is a daily task, and such an approach will have a real effect on people's happiness. For this reason, we have called this initiative the 'Happiness Meter', which will monitor the reports from work sites on a daily basis."


The initiative is a part of Dubai government's efforts to develop customer services and is also part of a strategy to

shift towards smart governance which aims to use technology to increase the government effectiveness in achieving public satisfaction.

Currently, the initiative has started with government departments, but will eventually include the private sector too. Dubai Municipality has already begun installing the devices at its head office. The facility will be extended to its service centres later this year.

Dubai is the world's first city to apply a daily measurement of the happiness and satisfaction of the public in the services provided to them across all its government centres through a smart system. In 2013, the UAE was ranked the 14th happiest country in the world, and the first among the Arab countries, in the second United Nations World Happiness Report. [↑](#)



A satellite with solar panels is positioned in the upper right corner of the frame. The Earth's horizon, showing a blue and white atmosphere, curves across the middle of the image. A bright star is located in the center, creating a prominent lens flare that radiates across the dark space background.

A STAR STUDDDED FUTURE

UAE HAS AMBITIOUS SPACE
ASPIRATIONS FROM LOCALLY
MANUFACTURED SATELLITES
TO A MISSION TO MARS



Around the world space technologies are becoming increasingly important to the security and economy of nations, in many cases backed by massive national programmes and establishments. The sector forms an integral part of telecommunications, navigation, broadcasting and climatology. The industry is estimated at \$300 billion globally, with annual growth of 8 per cent. Keeping pace with global trends, the UAE too is reaching for the stars and this is no small feat for a country not even 50 years old.

Emirates Institution for Advanced Science and Technology

Dubai is committed to excellence within the satellite and space industry. The establishment of the Emirates Institution for Advanced Science and Technology, (EIAST) in 2006 is testament to this. Since its inception, EIAST has been enhancing technological innovation and scientific skills among UAE nationals. Last year, scientists at EIAST announced plans to launch a new satellite – Khalifa-Sat – by 2017. While the UAE already has four satellites (Abu Dhabi and Dubai have two each) orbiting the planet, what is unique about Khalifa-Sat is that it will be the first to be completed by Emirati engineers..

Khalifa-Sat and UAE's First Satellite Facility

The Leadership sees Khalifa-Sat as sending a message to the world that the Arabs have joined the modern space age.

“Our history says that Arab and Muslim scientists gave the world great achievements. We continue to believe that the same creative spirits run in their children,” said HH Sheikh Mohammed Bin Rashid Al Maktoum, UAE's Vice President and the Ruler of Dubai, at the launch.

Khalifa-Sat will be the most advanced satellite of its kind and will have an electronic propulsion system allowing it to shift position. On board cameras will also be able to tilt and extend their area of coverage. Improved imaging and faster download speeds will provide town-planning experts with detailed images.

Khalifa-Sat will have a high resolution giving exact detail. The satellite is bigger than the previously launched DubaiSat1 and 2 satellites and, with almost twice the capacity it will also move faster, providing a better capability for targeting.



A special facility will be built at the EIAST HQ to help complete the development of the satellite inside the UAE. Khalifa-Sat will be developed in South Korea initially and transferred later to EIAST's in the UAE, half way through.

Scientists and engineers from the Satrec Initiative in South Korea will partner with a team of 45 Emirati engineers to finish the project.

The manufacturing facility for Khalifa-Sat is expected to be completed in the next few months. It will include a "clean room" and electrical and mechanical laboratories that will be equipped with cooling and ventilation systems and be completely insulated from dust and humidity.

This is the first phase of a larger satellite-making development which is expected to be finished within the next two years.

Once completed and equipped, the last phase of Khalifa-Sat, which will take 18 months, will be completed at the primary facility by Emiratis.

Globally, Khalifa-Sat has been acknowledged as an important landmark in the UAE's satellite development programme. For the team of Emirati engineers at EIAST, the project will provide a chance to position UAE as a leader in regional space technology and as a provider of advanced technology. With the completion of the latest satellite, Emirati engineers should be able

to develop different satellites with varied applications.

Embarking upon the manufacture of satellites means Dubai will compete with Europe, the US, Russia, Japan and Korea. Given its proximity to Africa, from where most of the future demand will come, UAE is well placed to become a serious player say industry sources.

Satellite Ventures by Abu Dhabi's Mubadala

EIAST's was followed by the formation of YahSat by Abu Dhabi company, Mubadala, the region's first hybrid military and commercial satellite company, in 2007.

YahSat's first satellite was launched in 2011 and provides satellite links to TV networks and other corporate customers, together with communications to the UAE army, as well as commercial links to corporate customers and TV broadcasters. The company's second satellite, launched in April 2012, also provides broadband internet (YahClick) in a number of markets.

In July this year, YahClick revealed that it had accumulated 30,000 global customers. This was followed by the announcement that Yahsat would launch its third satellite, Yah 3. The new satellite will expand the company's Ka-band coverage – which offers satellite broadband and backhaul



KHALIFA-SAT WILL BE THE MOST ADVANCED SATELLITE OF ITS KIND AND WILL HAVE AN ELECTRONIC PROPULSION SYSTEM ALLOWING IT TO SHIFT POSITION.



'Invisible The agency was launched with the goal of sending an unmanned mission to Mars by 2021 – the year the nation turns 50.

(data distribution) services for telecoms networks – to an additional 17 countries and 600 million users across Africa and Latin America, including coverage for more than 95 per cent of the population in Brazil. Yahsat said the third satellite will make the company the world's eighth largest operator in terms of revenue.

The Final Frontier

This year can be regarded as a landmark one for UAE's celestial aspirations with HH Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE, announcing the establishment of the UAE space agency in September.

The agency was launched with the goal of sending an unmanned mission to Mars by 2021 – the year the nation turns 50. For this, the UAE space agency has signed a MoU with EIAST stating that the first Arab/ Islamic probe to reach Mars will be overseen and financed by the UAE space agency, while a team of Emirati experts will handle the project in cooperation with international partners.

These announcements mark a turning point in the country's development, establishing space technology as a new driver of diversified economic growth. The Mars mission will enrich Emirati capabilities as well as increasing human knowledge about space exploration and distant planets.

The probe will take nine months to reach Mars making the UAE one of only nine countries with the same ambition.

UAE's investments in space technology has already exceeded Dh20 billion including satellite data and TV broadcast company Al Yah Satellite Communications, mobile satellite communication company Thuraya Satellite Telecommunications, and Earth mapping and observation system Dubai Sat. †

THE UAE'S SATELLITES

Dubai Sat1 launched in 2009 by EIAST, is the first Emirati-owned satellite. This was followed by DubaiSat2 in 2013. Since its launch, Dubai Sat1 has been beaming back images that have helped international authorities in disaster recovery after Pakistan's floods, Japan's tsunami and nuclear crises to name a few.

The images have also been used locally to monitor shoreline erosion and the effects of harmful algal blooms. The \$50 million (Dh183.6m) satellite, now in orbit 682kms above the earth's surface, has also captured imagery for the Emirates Atlas, a physical and online map of the UAE.

DubaiSat2's first images have already been beamed back to Dubai, with much greater clarity than its predecessor and much more frequently. About 30 per cent of DubaiSat1 was built by Emiratis, and UAE engineers are responsible for about half of DubaiSat2's design and manufacturing, with the South Korean company Satrec1 helping with the rest.

Abu Dhabi's first satellite, Yahsat Y1A, was launched in April 2011. The satellite provides communications for government and commercial customers. It also beams down HD TV broadcasts to countries in the Middle East, Asia and Africa.

Y1B, the second satellite launched in April 2012 and provides commercial broadband internet.

The evolution of the satellite industry in the UAE dates from the late 1990s prior to which much of the country's satellite requirements were served by the Arab League's Arabsat, which launched its first satellites in 1985.

Thuraya, the satellite phone subsidiary of Etisalat was incorporated in 1997. Some three years later its first satellite launched. While the company's original satellite, Thuraya1, is no longer in use, it has subsequently launched its second and third satellites in 2003 and 2008, both of which are expected to remain functional until 2020.



Can Organic Batteries Fuel the Future?

A host of innovations and advances in the production of organic batteries show that they might just be the solution for clean energy.

Even after decades of improvement in renewable energy systems, more than 95 per cent of companies energy requirements are still provided by fossil fuels, nuclear power and traditional hydropower. We all want electricity to be available to us at the flick of a switch, and fossil fuels provide this. Currently solar power and wind power are at their peak only when the sun is shining or the wind is blowing. The unreliability of wind

and sunshine is the biggest obstacle to a large proportion of our electricity from renewable sources.

So, what could dramatically advance the use of renewable energy? The simple answer is economical energy storage. Conventional storage methods of sourcing renewable energy are far too costly and bulky to make them viable for use in the common household. Renewables will be able to provide the lion's share of the world's energy needs

only when they are available wherever and whenever they are needed.

Cost-effective means of storing large amounts of electrical energy could solve our energy problems. And new research shows that organic batteries could be a possible solution.

Harvard's Organic Battery

In January this year researchers at Harvard University created an organic battery that could be the first step



The organic mega flow battery with Professor Michael J Aziz of the Harvard School of Engineering and Applied Sciences.

towards keeping large amounts of electricity in storage when we don't need it immediately. The new organic battery is a metal-free, flow battery that uses low-cost organic molecules called quinones, dissolved in water, instead of expensive metals, to store electrical energy. Quinones are similar to organic compounds found in rhubarb. They are much cheaper and more abundant than the metals used in existing batteries. Additionally, the amount of charge they hold is determined by the size of the tanks in which they are held – the bigger the tank, the more energy they can store.

Until now, flow batteries relied on expensive and difficult to maintain chemicals such as vanadium and platinum, driving up the energy-storage costs. The new battery is made with chemicals that are significantly less expensive, have no precious metals but perform as efficiently as vanadium flow batteries.

The use of organic compounds opens up a new set of possibilities for the economic storage of massive amounts of renewable energy. The next step, according to researchers, is to further test and optimise the system and bring it toward a commercially viable scale.

Organic Redux Flow Battery

Scientists at the University of Southern California (USC) have also created similar quinone-based batteries that last for about 5,000 recharge cycles, giving them an estimated 15-year lifespan. The technology developed by the USC team is called an organic redux flow battery. It consists of two tanks containing solutions of electroactive chemicals. These are pumped into a cell, which is divided by a membrane. The solutions interact through the membrane and electricity is produced.

Like Harvard's organic battery, the USC battery also uses quinones instead of metals or other toxic materials. The quinones used in the flow battery are currently produced from naturally occurring hydrocarbons, but the team hopes one day to derive them directly from carbon dioxide. The

USC team has filed several patents with regard to the design of the battery, but the immediate goal is to scale up the technology to make it more practical.

Cotton Fibre Battery

If things go as planned, then the humble cotton fibre will see a promotion from simply clothing us to powering our cars. Japan Power Plus has just announced its new Ryden battery, which is made primarily from cotton. Here, cotton fibres are modified to create a new form of carbon fibre that forms both the anode and cathode of the Ryden battery. An organic fluid is used as the electrolyte. Japan Power Plus envisages the Ryden battery as a substitute for the lithium-ion battery that powers electronic cars.

Ryden battery does not contain lithium oxide, nor any expensive rare earth metals. It will not catch fire if punctured. And unlike lithium ion batteries, it can be charged and discharged thousands of times without losing its energy capacity. Ryden also generates more power than a lithium battery and can charge 20 times as fast. If all these claims hold true, then the Ryden battery could have a huge impact on the automobile industry. It could result in cheaper long-range electric cars that can travel hundreds of miles on a single charge and be recharged in minutes rather than hours.

Initially, Power Japan Plus plans to sell batteries for use in electronic devices, but would later collaborate with electric car makers and license the technology to their battery makers. While the technology has yet to be proved effective in electric cars, the company has said it will demonstrate that capability later this year.

Organic batteries could be the missing link to getting most of our power from the sun or wind. Although still in the lab, the promise of this technology is attracting funding from many government agencies looking to reduce their country's carbon footprint. If successful, organic batteries might prove to be a technology present at almost every renewable energy power facility across the world. ♪



**COTTON FIBRE
WILL SOON
BE POWERING
CARS FOR US**

FROM SHOP SHELF TO CAR BOOT:

Volvo is piloting a fully auto-mated service that allows online orders to be delivered to cars.

Husbands rejoice! You may now never have to stop at the supermarket for last-minute purchases, thanks to a new e-delivery service that sends groceries right to the trunk of your car. While that sounds like an idea straight out of fantasy land, Swedish car company Volvo has announced a technology that could make this a reality.

Unveiled at the Mobile World Conference in March this year, Volvo's Roam Delivery service enables car owners to have online purchases delivered to their cars and even have returns collected from them.

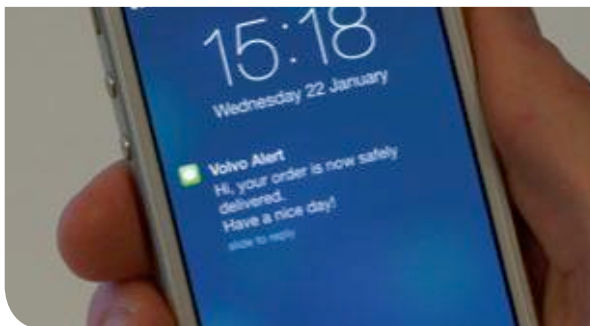
Using an app on a smartphone or tablet, drivers will be able to track when their vehicle is opened and locked with a digital key. This key will work through a button within the app, remotely locking or unlocking the car. Normally, the system will only allow the driver's own phone to unlock the car, but a courier's device could be given temporary access. This means that products could now be delivered to individuals, rather than home or work addresses.

Volvo will be ready to launch Roam once it has been developed further with couriers and retailers.

It is clear that Roam Delivery may have an effect on much more than just the car industry.

"Car deliveries will present greater opportunities for the customer. Retailers will be able to give the customer one additional option that their competitors may not have. It's a case of added simplicity," said Klas Bendrik, Volvo's chief information officer.

Volvo also believes the technology could save the courier industry money by eliminating missed first-time deliveries, which it said cost \$1.25bn a year. "This will benefit the environment as well, as fewer journeys will be made," Bendrik added.



The Volvo's Roam Delivery service enables car owners to have online purchases delivered to their cars and even have returns collected from them

He is also confident that car owners should not be worried about security. Multiple security checks will be in place before a courier delivers an item, and once the delivery has been made, the courier will no longer have access to the key.

The system received an enthusiastic reception at the Mobile World Congress, and has generated a lot of interest from outside the automobile industry.

"It's interesting what you can do when a car and customer are connected," said Bendrik. [t](#)



SMART HOMES A REALITY IN UAE

The smart home automation service is going to become a reality in the UAE with telecom operators du and etisalat gearing up to launch the service. While du's facility will only be available in the first quarter of 2015, Etisalat has announced that it will launch its smart home services this month.

Offering home security and peace of mind, Etisalat's app will allow owners to change the home ambience to fit their mood, open doors to let guests in while they are still on their way home and equip the home to send users a message when kids are safely indoors.

"It is our network penetration, both fixed and mobile, that gives us the edge to integrate smart home services and provide our customers a highly innovative platform that connects various devices. It is, in fact, the cornerstone to ensure necessary coordination and high levels of security and safety," said Rasheed Al Abbar, Vice-President for home products marketing at Etisalat.

This will be the first time NFC (Near Field Communications) has been used by Etisalat in home automation technology.





NATURE'S TINY ENGINEERS: How corals stir things up

Scientists discover that corals use their cilia to control their environment, stirring up water currents to deliver nutrients.

It was once thought that corals – whose calcium-carbonate skeletons form the foundation of coral reefs – were passive organisms that relied entirely on ocean currents to provide them with nutrients and oxygen. However, new research by the Massachusetts Institute of Technology (MIT) has brought to light their true nature. Studies show that they are rather violent, sweeping water into turbulent patterns that greatly enhance their ability to exchange nutrients and dissolved gases within their environment.

Researchers determined this by studying living corals in a laboratory tank. They

used powerful microscopes and high-speed video cameras to magnify the coral surface, exposing the turbulent phenomenon. Corals have cilia, small thread-like attachments that can push water along their surface. The cilia are arranged in such a way that they produce strong swirls of water, drawing nutrients toward the coral, while driving away potentially toxic waste products, such as excess oxygen.

The researchers tested six different species of reef corals, demonstrating that all share the ability to induce complex turbulent flows around them. “While that doesn’t yet

Source: www.natureworldnews.com



'Invisible Coral Flows' reveal the path of water as it flows around coral.

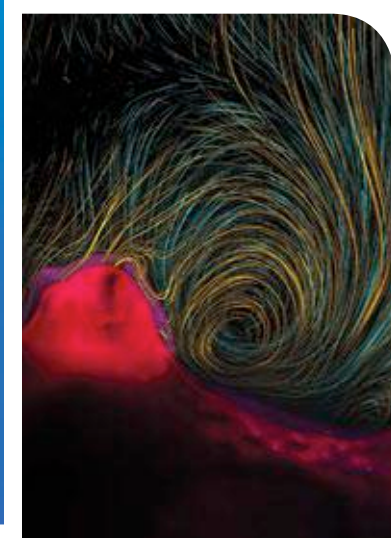


Image courtesy: Vicente Fernandez, Orr Shapiro and Roman Stocker

prove that all reef corals do the same, it appears that most, if not all, have the cilia that create these flows. The retention of cilia through 400 million years of evolution suggests that reef corals derive a substantial evolutionary advantage from these flows," said Orr Shapiro, co-first author on the MIT paper.

This close-up understanding of how coral reefs work could help scientists predict how they cope with a changing ocean environment in the face of climate change. The researchers added that the experiments could play a role in human health research. Cilia are found inside human airways, where they help to sweep away contaminants; but these microscopic internal hairs are very difficult to study.

"It is rare that you have a situation in which you see cilia on the outside of an animal. So corals could provide a general model for understanding ciliary processes related to disease," said Roman Stocker, an associate professor of civil and environmental engineering at MIT. ↑



DUBAI CORAL REEF FLOURISHING

In August 2013, a spectacular coral reef, thought to be the largest in Dubai, was opened to the public five years after it was relocated to The World Islands. Diving groups are now free to explore the reef, which was moved in 2008 from the Dubai Drydocks breakwater for protection. The corals were discovered by property developer, Nakheel, in 2007 while conducting an environmental-impact study on the Drydocks breakwater. A causeway had been planned near or on the breakwater, meaning the coral would need to be destroyed in any development.

This was one of the largest coral-relocation projects ever conducted globally, with more than 20,000 coral colonies spared from the effects of infrastructure development.

The techniques used to transport the corals underwater with minimal handling were a world first and showed the creativity and ingenuity that can result when engineers and ecologists work together for conservation.

The move also brought additional, originally unintended, benefits for other fauna. This area to which the corals were relocated has a diverse community of reef fish, including rare species not seen in there before.



From Trash to Treasure

Dubai Municipality is reusing trash to generate power.

Every Dubai resident sends 2.8 kilograms of waste to landfill every day.

Last year, the Jebel Ali landfill was closed as it reached maximum capacity and it is anticipated that the Al Ghusais landfill will be operational for only another seven to ten years.

Such statistics are alarming. It is evident that waste management is one of the biggest challenges we face today and it is crucial to explore sustainable ways to manage waste. To deal with the growing waste problem, Dubai Municipality (DM) has already prepared the Masterplan 2030 – Integrated Waste Management Plan for solid waste, which aims to reduce energy demand by 30 per cent, as well as zero waste by 2030.

In the past few years, the authority has undertaken a number of campaigns such as My City and My Environment and opened a number recycling centres to tackle the growing waste issue. These campaigns have paid off: data shows that the yearly amount of rubbish permanently relegated to landfill has dropped markedly.

In 2013, DM recorded as much as 2.6 million tonnes of garbage sent to landfill, 900,000 tonnes less than the 3.5 million tonnes sent to landfill in Dubai in 2010.

Trash to Energy

While its recycling and waste-reduction initiatives have been successful, the most notable project by DM is the one at the Al Ghusais landfill that converts household trash into energy. The initiative is the first of its kind in the GCC.

Each day, 5,000 tonnes of municipal solid waste is tipped into the landfill, which rises 40 metres above the ground. Now, the millions of tonnes of trash deposited over the last 20 years is actually generating

power after Dubai commissioned the region's first plant to recover methane gas from the landfill. The site, developed by Green Energy Solutions and Sustainability LLC (GESS), launched in 2013.

"Al Ghusais landfill is not only the largest gas-recovery project in the region but also the first to produce power," said Anita Nouri, business development director of GESS.

The project will also contribute to reducing greenhouse gas emissions equivalent to about 250,000 tonnes of carbon dioxide, allowing Dubai to reduce its carbon footprint. Currently, the Al Ghusais landfill generates one megawatt (1,000kw) of power that meets all its internal and site requirements. However, DM plans to generate 20mw of power from landfill gas by 2020. DM is in talks with Dubai Electricity and Water Authority as to how this power can be integrated into the city's grid.

The initiative, known as the Clean Development Mechanism project, is modelled on the United Nations Framework Convention on Climate Change and is being hailed as a significant step in addressing the challenge of urban waste management, while generating power to meet developmental requirements.



**DM
PLANS TO
GENERATE
20 MW OF
POWER
FROM
LANDFILL
GAS BY
2020**





GLOBAL EBOLA

RESPONSE KICKS INTO GEAR

Dubai supports UN measures to contain spread.

Since the Ebola virus was first identified in 1976, no outbreak has been as widespread or persistent as the current epidemic. Global health authorities are struggling to contain what has become the worst outbreak yet, killing nearly 5000 victims at time of writing.

‘In light of this the international has community has escalated its support.’

The World Bank Group, for example, is mobilising a \$400 million finance package for the countries hardest hit. Of that, \$117 million has already been disbursed to countries and implementing agencies, including \$58 million for Liberia, \$34 million for Sierra Leone, and \$25 million for Guinea.

These funds pay for: essential supplies and drugs; personal protective equipment and infection-prevention control materials; health worker training; hazard pay and death benefits to Ebola health workers and volunteers; contact tracing; vehicles; data-management equipment and door-to-door public health education outreach.

In September, the United Nations Security Council adopted a resolution declaring the outbreak a “threat to international peace and security”.

At the same time the United States said that it would send 3,000 military personnel to West Africa and spend \$750 million to support civilian efforts. While these moves are unprecedented for a disease, experts fear that

quelling the contagion now will be more difficult than if it had been tackled earlier.

Although the recent outbreak was first detected in March, Médecins Sans Frontières (MSF) was, until about September, the only organisation to deploy substantial relief in the affected region.

Since then MSF has repeatedly demanded that the international community launch a major effort to tackle the situation.

The United Nations Mission for Ebola Emergency Response resolution has called on member states to respond urgently and deploy resources from UN agencies in coordination with member nations and donors. The Mission's remit includes "stopping the outbreak, treating the infected, ensuring essential services, preserving stability and preventing further outbreaks," said UN Secretary-General Ban Ki-moon.

The United States plans to establish military-run command and control headquarters in Liberia and build 17 treatment centres comprising 100 beds each in the affected regions. It hopes to recruit medical staff and train up to 500 healthcare workers a week.

Unfortunately, the public health community tends to view military involvement "with suspicion and mistrust", said Adam Kamradt-Scott, a health policy researcher at the University of Sydney.

He does however welcome the US plan. "Military forces have unique skill sets that can assist civilian authorities."

If the operation does help to counter Ebola, he added, it could set a new precedent for responding to disease outbreaks of international concern. However, training forces in outbreak response will take time. The situation is also too dire for the United States alone to solve and other nations must step in – something that the UN resolution hopes to co-ordinate.

Jean-Clément Cabrol, Director of Operations for MSF in Geneva said that both efforts are welcome, but that the situation has worsened recently and speed is now of vital importance. Treatment centres in the three countries most affected – Liberia, Sierra Leone and Guinea – are completely overwhelmed according to local reports. This is fuelling the spread of the disease, because centres are forced to turn away infected people who then contaminate others.

Furthermore, the spread to densely populated Lagos is extremely worrying as the Nigerian city has a population roughly equivalent to that of Guinea, Sierra Leone, and Liberia combined, and it took nearly two weeks to establish the first effective isolation and treatment facilities there.

Stopping the outbreak at source in Africa will take many months. Experts say that three core interventions have halted every previous outbreak and can stop this one too: exhaustive case and contact finding; effective response to patients and the community and preventive interventions. However, identifying infected persons quickly requires accessible diagnostic and treatment facilities. In the current

outbreak, the number of patients has far exceeded local capacity, resulting in a vicious cycle in which more cases lead to overloading of facilities, which then leads to more cases.

In addition to implementing stringent control efforts, authorities need to accelerate development and deployment of vaccines and antiviral treatment. Supportive medical care can also substantially reduce case fatality rates. Further, there is a need to put systems in place to prevent further outbreaks. It is evident that international efforts will be effective only if they include training for healthcare staff, for example in biosafety. Money and supplies are welcome, but by themselves they are not enough adds the experts. [f](#)



THE ARAB PHYSICIAN WHO DISCOVERED PULMONARY CIRCULATION

Arab biographers and historians consider Ibn al-Nafis as one of the greatest physicians in the history of medicine.

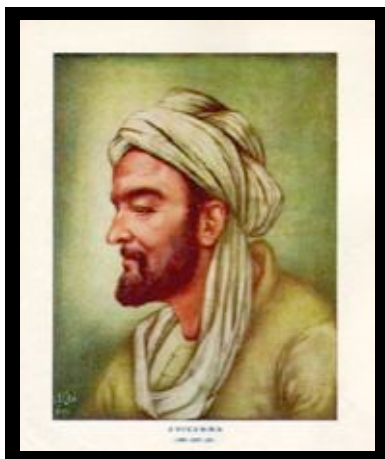
In 1628, Sir William Harvey of Kent announced his discovery of the circulation of blood within the human body. It was a momentous discovery and went on to seal Sir Harvey's place in medical history in the Western world. He backed his findings with in-depth explanations of the experiments he had carried out. Harvey's work is regarded as a major advance in our knowledge of the cardiovascular system.

However, later it was found that more than 300 years before Harvey was born, an eminent Arab physician of the thirteenth century, Ibn Al-Nafis, had already correctly explained the basic principles of pulmonary circulation.

WHO WAS IBN AL-NAFIS?

'Alâ' al-Dîn abu al-Hasan 'Ali ibn abi al-Hasim al-Qarshi, known as Ibn al-Nafis, was born in 1210 at Al-Qarsh near Damascus. He studied medicine in the city of Damascus under the supervision of the distinguished professor Muhadhab al-Din al-Dakhwar in Al-Nuri Hospital's medical school.

Ibn al-Nafis moved to Cairo where he practised and taught medicine in the Al-Naseri Hospital built by Salah al-Din al-Ayyubi. In 1285, he became the chief physician of Mansuri Hospital, a position he held until he died in 1288 aged 80. According to many historians, Ibn Al-Nafis was a great physician and a prolific author, the best



among his contemporaries and the most distinguished scholar of his time in the medical profession. The Muslim physician was also a distinguished authority on Quranic studies, Prophetic tradition, Islamic jurisprudence, Islamic philosophy and Arabic language studies. He wrote famous authoritative works on most of these subjects.


The most voluminous book of Ibn al-Nafis is his encyclopaedic work Kitab al-Shamil fi al-Sina'a al-Tibbiya (The Comprehensive Book on the Art of Medicine). Based on its table of contents, historians surmise that the book was intended to have 300 volumes. However, Ibn al-Nafis lived to write only 80 volumes of which, until

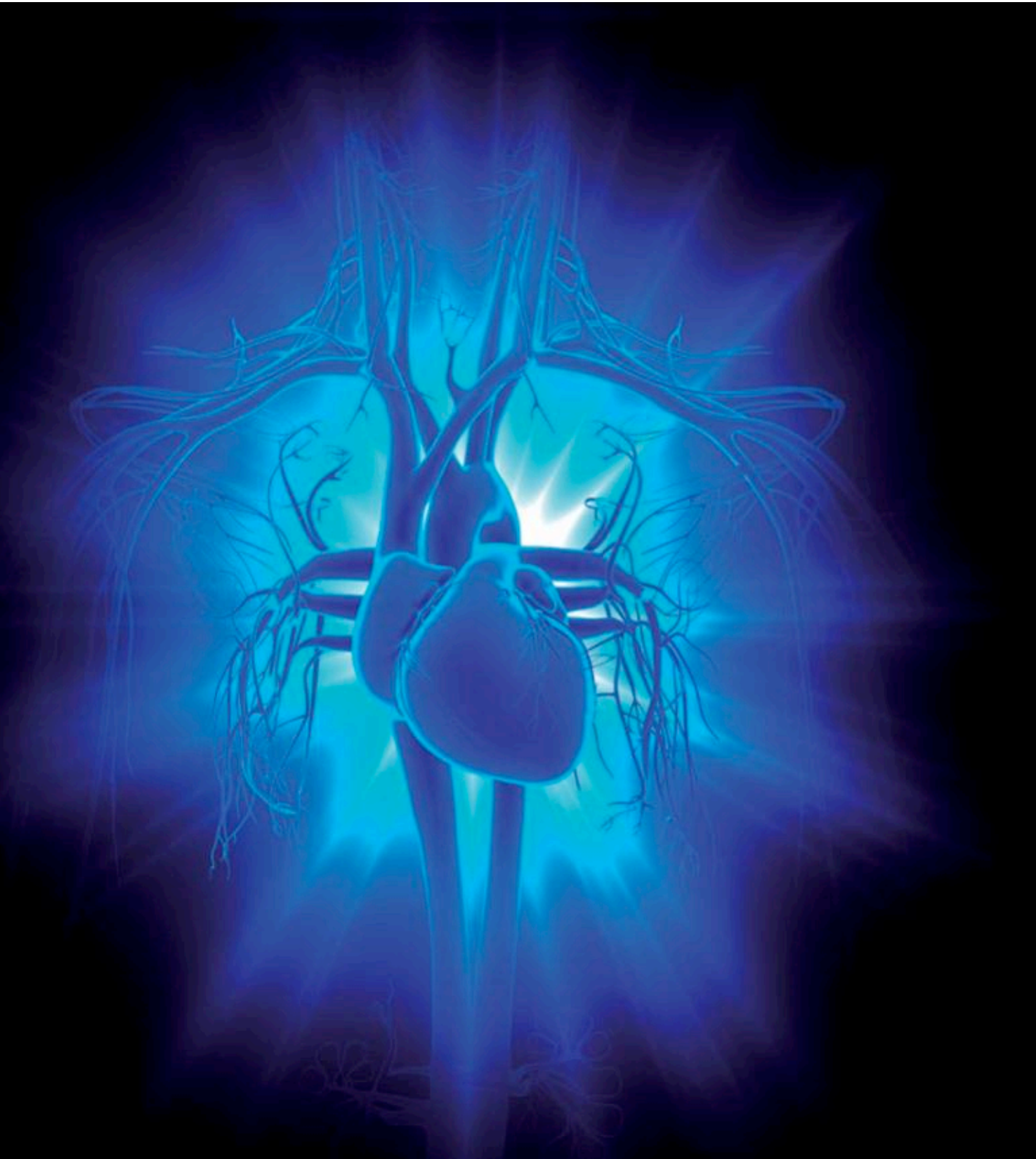
now, 28 have been found. The Kitab al-Shamil is representative of the wave of intense scientific activity that had spread among the scholars of Cairo and Damascus in 1258, following the massive loss and destruction of books during the sacking of Baghdad by Hulagu Khan's army. At the time, 48-year old Ibn al-Nafis was at the peak of his medical experience. He wrote Al-Shamil and other scholars wrote similar huge encyclopaedic works on different branches of science in an attempt to cope with the disaster and to preserve the scientific and cultural heritage pioneered by Baghdad, the leading centre of Islamic civilisation in that era.

Ibn al-Nafis was reputed to have recorded his own experiences, observations and deductions rather than using reference books. His religion (Islam) and his mercy towards animals prevented him from practising anatomy. His major contribution – the discovery of the lesser circulation – was nonetheless a physiological one and would probably have been more adequately documented had he resorted to animal dissection. As more work has been done on the translation of Arabic texts, it now seems clear that parts of Ibn al-Nafis's books were available in medieval Europe, and may have influenced the work of people such as Harvey.

HIS LEGACY

In time, Ibn al-Nafis' Kitab went on to replace *The Canon of Medicine* of Avicenna (Ibn Sina) as a medical authority in the medieval Islamic world. He played an important role in the establishment of the foundation of urology, as well as all other medical and surgical specialties. He was also the first to describe the circulatory system and the true concept of the blood supply of the heart.

A talented physician and a gifted medical writer, Ibn al-Nafis's discoveries and medical works greatly contributed to the progress of medical knowledge and practice. His influence on the generations of doctors and scholars who came after him, both in the East and West, is well documented up to the 17th century. Arab biographers, historians and reviewers unanimously consider Ibn al-Nafis as the greatest physician in history, with some referring to him as "the second Ibn Sina" and others considering him even greater than all his predecessors. 







CORPORATE GOVERNANCE, WHAT, WHY AND FOR WHOM?

DR ASHRAF GAMAL EL DIN,
CEO OF HAWKAMAH
INSTITUTE OF CORPORATE
GOVERNANCE, EXPLAINS.

While sound corporate governance has always been a concern in the region, it has become especially crucial in the aftermath of the global financial crisis and the government's campaign against corporate malpractice. With the UAE, specifically Dubai, emerging from financial crisis, deficiencies in corporate governance have become even more relevant. The office of Dubai's ruler, HH Sheikh Mohammed Bin Rashid Al Maktoum, has warned that "there will be no tolerance shown to anybody who tries to exploit his position to make illegal profits," therefore, corporate governance is a hot topic that Dubai's business community is taking very seriously.

SO, WHAT EXACTLY IS CORPORATE GOVERNANCE?

Corporate governance is the system by which companies are directed and controlled. In its narrow sense, it is a source of shareholder value. Good corporate governance leads to better company performance, higher profitability and efficiency levels. In its wider sense, the definition takes into account all the company's stakeholders and corporate social responsibility (CSR).

Corporate governance is important because it is part of the institutional infrastructure (laws, regulations, institutions and enforcement mechanisms) underlying sound economic performance. Better corporate governance



correlates with better operating performance and market valuation of companies.

Preserving and protecting property rights encourages innovation and long-term investment in human and physical capital, foreign direct investment, as well as the creation of intellectual property. It stimulates performance, generating higher returns and profitability of companies, leading to higher total factor productivity growth.

Similarly, limiting the abuse of corporate insiders enhances leadership, demonstrates transparency and social accountability and creates an efficient mechanism for transferring wealth between generations. By monitoring managers of companies in the financial sector and making them accountable,

good corporate governance implies protection of investors' interests. This, in turn encourages both domestic and foreign portfolio investment and direct investment.

And good corporate governance is not the sole preserve of large multinational organisations. It is equally applicable to family-owned companies and SMEs. One of the key challenges in such businesses is the close ties or interface between the company and the family. Research has shown that the majority of family-owned companies disintegrate after the third generation. The overlap between the family and the company is usually a source of serious problems. Corporate governance helps streamline the relationship in a way that ensure that the company is managed professionally, at a distance from the way in which the family operates.

In response to these concerns, the Government of Dubai, together with Hawkamah, is making efforts to improve corporate governance



**CORPORATE
GOVERNANCE
PLAYS A KEY
ROLE IN THE
SUCCESS OR
FAILURE OF
FAMILY OWNED
BUSINESSES.**

across the emirate. The core objectives of Hawkamah are to execute and improve corporate governance in areas such as transparency, independent auditing, board responsibilities and robust procedures.

The most common structure of corporate governance is owners, sometimes called the General Assembly, the management, and the Board of Directors. Sometimes, the owners are either too busy with other things or may have multiple investments, meaning that they cannot supervise management themselves. They elect a Board of Directors to take care of the shareholders' interests in the company.

Apart from the owners, the board also takes care of other stakeholders' rights such as employees, customers, creditors, governments, and the society at large. So they do not only serve the owners, but also the employees, customers, etc.

Whether the company is large or small, from a legal stand point, the board is liable for what the company does. Therefore, board members must have the time to do their job correctly. That job is to set the tone at the top in terms of overall strategy, policies, and to ensure that the management is sufficiently qualified to serve the company

strategy. To do that the board must have all the skills and knowledge needed to ask all the right questions and to assess the company and top management performance. It is essential that board members have a strong financial background, others have strong experience in the field of operation of the company, others understand strategy, risk, and all other relevant areas of expertise.

Skilled board members will also become members of various board committees that help the entire board to do its job correctly. There are various types of committees such as the audit committee, corporate governance committee, risk committee, remuneration committee, just to name a few.

Directors or board members also need to understand what is expected from them, and how to fulfil their responsibility. They need to understand the role of board committees and how they function. That is why 'Director Development Programmes' are very important. For no one is born to be an effective board member. Both training and exposure are important in making successful board members.

Corporate governance is no longer a luxury. The biggest corporate failures in the last 15 years happened because

of corporate governance failures. We have to remember that there is no "one size fits all" approach. Each company is unique and needs to be studied and understood so that the proper corporate governance structure reflects its needs.

Corporate governance is relatively new to the GCC countries. Indeed it is only in the last 10 years that an Arabic word for corporate governance, Hawkamah, has emerged. Despite its infancy in the region, corporate governance has made significant headway. The region is on the right path but significant challenges remain, especially in the areas of transparency and disclosure, board practices and risk management, whether in the realm of listed companies, banks or state-owned enterprises. Economic opportunity in the region is enormous, and so is the potential risk. We need to ensure the governance frameworks and practices are up to the task so that the region can continue to prosper. †



ABOUT THE AUTHOR:

Dr Ashraf Gamal El Din is the CEO of Hawkamah, the Institute for Corporate Governance. Prior to joining Hawkamah, Dr Ashraf served in a number of key positions such as the executive chairman of Egypt Post and the deputy executive director of the Egyptian Banking Institute, the training arm of the Central Bank of Egypt. He was also the Founder and Project Manager of the Egyptian Corporate Responsibility Center working on promoting the concepts and application of CSR in Egypt. Furthermore, he was the Executive Director of the Egyptian Institute of Directors (EIoD), the Institute of Corporate Governance in Egypt and the Arab Region.



DUBAI METRO: FIVE YEARS ON

DUBAI METRO CELEBRATED ITS FIFTH ANNIVERSARY IN SEPTEMBER THIS YEAR. WE TAKE A LOOK AT ITS REMARKABLE SUCCESS AND FUTURE PLANS.

Back in the 1990s when residents were reeling under the pressure of perpetual traffic jams and road-related chaos, Dubai announced plans to build a metro network to cover the length and breadth of the city. Even as pessimists bemoaned the ensuing road closures, traffic diversions and the digging up of almost half the city to lay the foundations of Dubai Metro, the plan went full steam ahead. Today, Dubai Metro is one of Dubai's most extraordinary success stories, transporting in excess of 470 million passengers in five years.

The brainchild of HH Sheikh Mohammed Bin Rashid al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, Dubai Metro has quickly become the most popular and convenient medium for travel in Dubai. The cheaper, faster and more reliable Dubai Metro was a boon for the thousands of commuters who had relied on public bus services, illegal car lifts or had been forced to shell out hundreds of dirhams on taxi rides.

The 52-kilometre Red Line was opened in September 2009 and began with 10 stations connecting Rashidiya to Jebel Ali. This was followed by the opening of the 23-km Green Line in 2011, connecting Al Qusais to Dubai Creek. Five years on, 47 stations, including 10 underground, are operational.

For as little as Dh5.80, a commuter can get from one end of the city to the other on a regular ticket, while a gold-class ticket costs Dh11.60. A daily ticket with unlimited travel is Dh14 and a 30-day pass is Dh270, all of which are considerably less costly than hiring cabs or risking fines using illegal taxis.

RISING PASSENGER NUMBERS

The Roads and Transport Authority (RTA) said the number of passengers daily has jumped almost 10 times – from 60,000 passengers in 2009 to about 500,000 this year. The total has touched nearly half a billion in the past five years. According to the RTA, around 80 per cent of passengers do not own cars. This directly implies that the Metro has significantly contributed to reducing the number of potential vehicles on roads. With Dubai's resident and tourist population growing each day, one can only imagine the level of traffic congestion had the Metro not been there.

Despite its resounding success, Dubai Metro has still not achieved break even, but hopes to do so by 2017. RTA aims for the Dubai Metro to account for 30 per cent of all journeys made in Dubai by 2030. Last year, the network accounted for 13 per cent.

ENVIRONMENTAL IMPACT

Taking into consideration the direct impact of reducing vehicles from the roads and easing congestion, Dubai Metro has, according to the RTA, helped reduce CO2 emissions by more than 645,000kg/day.

"Dubai Metro was designed and constructed to meet the highest environmental sustainability standards. Hence, it significantly contributes to the green environment by reducing CO2 emissions. The design adopted for the Metro system has minimum impact on air quality compared to a car which emits 6–9 tonnes of CO2 per year," said Mattar Al Tayer, Chairman of the Board and Executive Director of RTA.



RTA AIMS FOR THE DUBAI METRO TO ACCOUNT FOR 30 PER CENT OF ALL JOURNEYS MADE IN DUBAI BY 2030

Considered one of the most efficient, safest and cleanest metro systems, RTA said the availability of trains has reached 100 per cent while the punctuality rate is at 99.8 per cent. Crime and vandalism, which are so common on most metros around the world, are at near zero level.

FUTURE PLANS AND ARTS HUB

In the coming years, RTA will be focusing on the planning and provision of the road and rail infrastructure required to serve the Expo 2020. The expansion of the Red Line to reach the Expo 2020 site is the top priority.

There are also plans for six metro stations to be filled with public art, diversifying their use. The RTA and Dubai Culture and Arts Authority recently announced that they would spend \$50 million to turn the six metro stations into art galleries by March next year. Burjuman station is to double as a music and art gallery, while Emirates Towers station will become a showcase for Islamic decorations and manuscripts. The Financial Centre station is to house an Islamic numismatics (coin) gallery, while the Burj Khalifa/Dubai Mall station will have an e-library. Business Bay will display a photo gallery and Noor Bank station will host the Museum of Contemporary Art and offer a diverse collection of artefacts, paintings, designs, graphics, sculptures





and other collectables created by artists from all over the world.

Currently, the majority of metro stations on the Green and Red lines offer a few shops; some have cafes and even hairdressers. For instance the Burj Khalifa/Dubai Mall station and the air-conditioned passenger bridge that links it to the Dubai Mall can be considered a mini shopping centre. Walking through the bridge, commuters may stop at a whole gamut of stores, from novelty gift shops to marshmallow chocolate dip stands.

As the world's longest driverless, fully automated metro system, Dubai Metro has not only won us accolades but also revolutionised the way we travel in Dubai. [f](#)



THE HISTORY OF TRAMS

WITH DUBAI TRAM OPENING
THIS MONTH, WE LOOK BACK
IN HISTORY TO TRACE THE
ORIGIN OF THE TRAM.

Dubai Tram opened its doors to passengers on November 11, 2014. The sleek tram system will be the world's first to have platform screen doors at all 11 stations. To be served by 11 trains, each with five carriages divided into Gold, Silver and Family, the Dubai Tram is expected to serve 27,000 riders per day and is designed to be one of the safest across the globe.



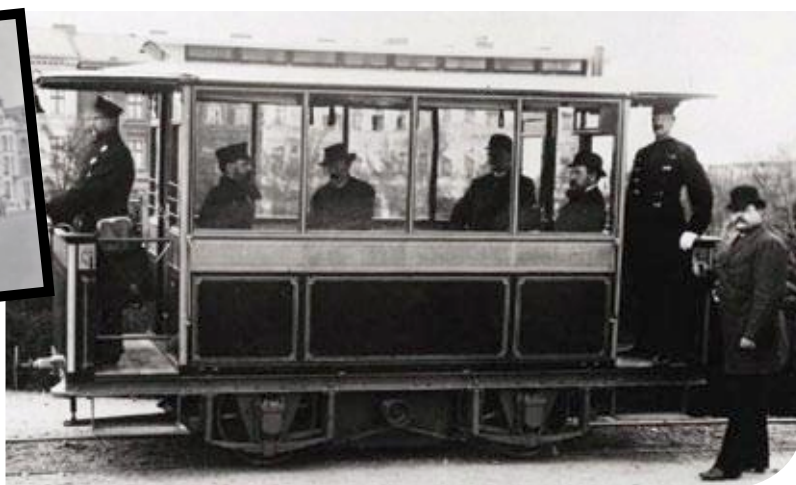


HORSE-DRAWN TRAMS

Looking at Dubai Tram's sleek carriages and state-of-the-art technology, it is hard to believe that the tram has been around for almost 200 years. Its origins can be traced back to the plateways used in Western mines and quarries to ease the passage of horse-drawn wagons. The world's first passenger tram came into existence only in the early 1800s in Wales. The Mumbles Railway was built under an Act of Parliament in 1804, authorising the removal and carriage of limestone from the quarries at Mumbles to the docks area of nearby Swansea. At the time, there was no road link between Swansea and Mumbles and only when children started hitching rides on the trams did local entrepreneurs realise that this could be some form of passenger service. In 1807 permission was given for the line to carry passengers. The wagon was completely open but its running on rails meant a much smoother ride for passengers than on a horse-drawn carriage, which ran over potholes and bumpy roads.

Although the Mumbles Railway was a huge success, it was not until 1860 that horse-drawn trams started appearing in Britain's major cities. Birkenhead established the first route, from Woodside to Birkenhead Park. The following year London's first tramway opened the following year between Marble Arch and Notting Hill Gate.

By the late 1800s there were thousands of horses on the roads and towns and cities began to smell like farmyards. Each horse deposited 14 kgs of manure and 9 litres of urine a day; horse manure was being linked to infant mortality. The steam locomotive, which had become established for long-distance travel, proved too inflexible for use in cities, and the pollution caused by the soot and noise would have been massive. The hunt was now on for a new kind of public transport system.



ELECTRIC TRAMS MAKE A DEBUT

In 1879, Siemens & Halske presented the world's first electric train in the southwestern Lichterfelde suburb of Berlin, for which power was supplied through the rails. The 150-volt direct current flowed through the two rails to the small locomotive via an insulated flat iron bar mounted between the rails. This was opened to the public in 1881 and was known as the Gross Lichterfelde Strassenbahn. This idea soon caught on, with cities all over the world changing to electric tram networks as they were much cheaper and quicker to construct than conventional railway lines or underground systems, and the expense of having to care for horses and clear up their waste became obsolete.

The electric tramway reached Britain in 1885 in Blackpool, with the tram car picking up the current from a third middle rail in the road. But for safety reasons, electrified running rails were unsuitable for a street environment, and this later changed to an overhead wire, which was safer and far

more reliable. By the 1920s trams were enjoying a golden era.

Most towns and cities had vast networks and lower fares meant that the trams became the main transport of the working class. Trams were now much more comfortable, with enclosed top decks.

HIGHS AND LOWS

However, the Second World War destroyed many tram systems. Diesel-driven buses and cars also contributed to the decline of the tram. But with the problems of air pollution and traffic chaos now being seen in towns and cities across the globe, there has been a resurgence in electric tram systems in recent years.

Today hundreds of cities and towns all over the world have a tram system as part of their urban transport network, some of them making up a large part of a city's mass rapid transit system, some of which operate as part or all of an underground system and some even making up a city's entire mass rapid transport system. ↑

THE WORLD'S TEN LARGEST TRAM SYSTEMS

Country	City	Routes	Length in km
Australia	Melbourne	27	250
Russia	St Petersburg	22	240
Austria	Vienna	40	215
Germany	Berlin	28	188
Italy	Milan	17	160
Canada	Toronto	11	156
Hungary	Budapest	33	153
Romania	Bucharest	26	143
Czech Republic	Prague	33	141
Poland	Warsaw	24	120

'appy days at GITEX

There was a flurry of launches at GITEX this year, with more than 3700 exhibitors from 160 countries bringing the latest technology to Dubai.

The 2014 GITEX technology week was simply brilliant. Judging by 100,000 who people turned up at the Dubai World Trade Centre to experience some of the most amazing technological advances of the day. Here are some of the highlights.

DUBAI CULTURE APP

Launched by the Dubai Culture and Arts Authority, the app focuses on educating visitors on the Emirate's culture and heritage. Aiming to enrich the travel experience, it complements Dubai's Smart City vision.

RTA'S SMART DRIVE APP

The RTA's Smart Drive app, available from Google Play and Apple Store, gives users the opportunity to locate themselves using a built-in navigation system with GPS technology, without connecting to the internet. The RTA also launched: a Smart Parking app, enabling users to identify vacant parking spaces on Sheikh Zayed Road all the way to Abu Dhabi; Nol Smart Posters, allowing commuters to pay their mass transit fares via smartphones; the Smart Taxi app, which lets customers book taxis and directly track their movement in a real-time environment; and the Smart Salik app, offering access to multiple Salik-related services.

DUBAI POLICE'S SMART PATROL CARS

The Dubai Police's new fleet of road patrol cars will keep a close eye on Emirate's roads. Each vehicle is equipped with 12 cameras offering a 360-degree view of the surroundings and assisting officers in detecting traffic violators and wanted cars.

SAMSUNG'S ANDROID-POWERED PRINTERS AND APP

Samsung launched the world's first Android-powered printers that enable printing without a PC. It also launched the Smart Printer Diagnostic System smartphone app for users to report any printer issues from their smartphones, creating a completely mobile printing experience.



UPGRADED E-GATE SMART SYSTEMS

All UAE airports will be fitted with the new and improved e-gate Smart machines, which will allow users to enter the country after scanning their passports and eyes, so they no longer need to show their e-gate cards.

CARBON FOOTPRINT APP

Launched by the UAE Ministry of Environment and Water, the app is designed to encourage environmental responsibility by calculating consumption of power and water, use of transportation, generation of waste, and carbon emissions.

MYID SERVICE

Customers of 10 major local government entities including Emirates ID, can now register with Dubai Smart Government's (DSG) MyID service to obtain a single sign-on (username and password) that gives them access to more than 250 services provided by these entities and lets them complete their transactions electronically.

UAE TRA APP

Currently available only on Android, UAE's Telecommunications Regulatory Authority (TRA) app provides services such as device verification, SMS marketing, signal coverage and much more to users



UAEPEDIA

The updated version of the TRA's online encyclopedia, UAEPedia, includes: apps for Android and iOS devices; Augmented Reality covering a variety of UAE monuments; interactive maps with directions; location-linked QR codes; smart browsing; a UAE timeline and Instagram-like photo albums where users can upload and share their images or videos.

The website will also include: UAETube; UAECinema – an archive for videos and documentaries relating to the country from local producers; UAECalendar – listing key dates in the UAE's history; and UAERQuote – a portal displaying quotes from the nation's greatest individuals. [f](#)



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brunch at table 9

'A Classy Affair'

by darren
velvick



table 9 Head Chef, Darren Velvick, is reputed for his high-quality, original menus with a personalised dining experience. Serving dinner daily and 'A Classy Affair Brunch' paired with a sophisticated sharing experience on weekends.

Brunch price starts from AED 195.

Dinner from Sun - Fri | 6.³⁰pm - 11.⁰⁰pm
Brunch every Fri & Sat | 12.⁰⁰pm - 3.³⁰pm