



Capturing the thriller psychology



Dancing drones to light up sky during DSF
Nation+ Page 7



Israel orders Gazans out of swathes of Khan Younis
International+ Page 11



'Take a simple idea and take it seriously'
Mind Your Money+ Page 13



Snigur finds her rhythm in Dubai
Sports+ Page 14

Dh1T in sustainable finance



PeeC Mobility founder Zach Faizal is keen to repurpose the entire fleets of ICE vehicles on the UAE roads.

Buckle up for COP28 rollout of UAE's 'repurposed EV'

Issac John
issacjohn@khaleejtimes.com

The UAE's first home-grown petrol-to-electric repurposed vehicle will have its debut on the sidelines of COP28 this week, marking a defining moment in the nation's remarkable progress towards its net-zero goals.

PeeC Mobility, a Dubai-based start-up helmed by a 24-year-old entrepreneur, Zach Faizal, is the architect of this breakthrough petrol-to-electric transition technology that will contribute to significantly reducing carbon emissions on the UAE roads.

For the Middle East region, this innovative technology is a path-breaking and cost-effective alternative to mass scrapping of existing ICE (internal combustion engine) vehicle fleets and the manufacturing of new EVs. The technology repurposes retired petrol vehicles while retaining their body and chassis before transforming them into electric vehicles at 30 per cent lower cost and 80 per cent less manufacturing time than new versions.

The start-up, which was founded by Faizal in 2022, with an ambitious target to repurpose entire fleets of ICE buses, cars and trucks on the UAE roads, looks at electric mobility with a different, creative approach.

"Today, re-engineering is quicker, smoother and greener than buying new EVs, and proves cost-efficient," said Faizal, who promises to deliver a repurposed car at almost half the cost of a new EV.

"For instance, an average electric car on the market is priced at around \$52,000. PeeC's vehicles are aimed to be priced at 30 per cent to 50 per cent lower with the volumes we're looking at. Thus solving the affordability challenge in the sector," said Faizal.

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UAE financial sector to set transition and climate adaption strategies for 2030

Waheed Abbas
waheedabbas@khaleejtimes.com

The UAE's banking and financial sector will mobilise more than Dh1 trillion (\$272.5 billion) in sustainable finance by 2030, senior officials said at the 28th edition of the United Nations Climate Change Conference (COP28) in Dubai on Monday.

Khaled Mohamed Balama, Governor of the Central Bank of the UAE, said the banking sector will need to contribute to both the UAE's medium-term economic plans and the Strategy for Net Zero by 2050.

"Critically, this requires financing the transition and climate adaption strategies of corporate customers, which includes carbon-intensive sectors, but also allocating new funds to green projects," he said.

Balama added that the current economic and sectoral structure of many countries means that the challenge facing financial institutions is significant.

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The construction of a net-zero energy mosque in Masdar City is set to break ground next year.

First net-zero energy mosque not far away

Ashwani Kumar
ashwani@khaleejtimes.com

The region's first net-zero energy mosque will be coming up in Masdar City — a sustainable urban community and innovation hub in Abu Dhabi, a top official announced.

"We have designed and created several net-zero energy projects, but this one has particular significance for us and for me personally — particularly given we're announcing it during COP28," Mohamed Al Breiki, executive director of sustainable development at Masdar City, said.

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Why this gold rush despite high rate

Nasreen Abdulla
nasreen@khaleejtimes.com

Record high rates could not keep gold buyers away from jewellery stores across the UAE that saw a huge uptick in sales during the National Day holidays. From tourists to visitors, from regulars to walk-in customers, gold shops in the country saw huge crowds thronging their facilities to snap up the yellow metal.

"We have seen a notable spike in sales in the recent past," said Nishin Thaslim, chairman of Nishka Jewellery. "A significant contributing factor has been the rising trend of gold prices. The market dynamics, including an upward trajectory in gold prices, have created increased demand."

Other industry insiders expressed similar sentiments. Suresh Babu, general manager at Zaiba Jewellers, said that the company had seen increased sales across all its outlets in Dubai. According to him, there were a number of reasons for the spike. "Expectations of further increase in prices and an influx of tourists are the key reasons," he said. "The prices are expected to rise further so people want to invest in gold. It is after all, one of the safest investments."

On Friday, gold hit \$2,075 an ounce and remained on track to soar towards an all-time high of around \$2,079-2,080 set in May.

According to Shamal Ahmed, managing director - international operations, Malabar Gold & Diamonds, this upward trend will continue, despite the possibility of a correction. "The price of gold has broken a significant milestone," he said. "Investors find solace in gold as a safe haven. There might be a correction before the new year but we expect the gold price to be higher in the coming weeks. Most of the forecasts have indicated the price in the range between \$2,100-\$2,200 for the next year 2024."

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CYCLONE MICHAUNG FLOODS CHENNAI



A man uses a kayak to cross a flooded street after heavy rain in Chennai on Monday. At least four people died, factories were closed and the runway of one of India's busiest airports lay submerged due to torrential rain, as two southern states were braced on Monday for the impact of Cyclone Michaung. The severe cyclone is expected to make landfall in Andhra Pradesh around noon today. — AFP

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Food Sustainability Through

Pure Food Technology, a UAE-based, sustainable, agricultural and food technology startup has successfully developed an innovative hydroponic, robotic, solar powered proto-type that requires 95 percent less water compared to traditional farming and delivers 100 times higher plant-based crop yield, thanks to technological breakthroughs by a team of experts. Pure Food Technology are now looking to scale up the vertical farm technology in order to drastically reduce the UAE's \$7.7 billion vegetable food import bill and help the country attain self-sufficiency in nutrient-rich plant-based food production.

This is the world's first artificial intelligence driven, solar energy powered, robotics enabled, patented, 3D-printed, hydroponic vertical farm in the world. All patents have been developed and registered in the UAE and the pilot plant has been designed and built in the UAE.

The UAE, where desert dominates its landscape, imports 90 percent of its food from other countries. As the country observes 2023 as the Year of Sustainability and prepares to host COP28 Summit it looks at innovative ways to deal with climate change and sustainability in all sectors – environment, business, hospitality, healthcare, agriculture, food and human resource. Pure Food Technology, which has already successfully obtained 11 patents for innovative solutions in food production and is awaiting to receive five more patents in sustainable agriculture, robotics and hydroponic vertical farming, offers the ultimate solution to the country's agricultural and food sustainability.

Hydroponic farming is a method of growing plants without soil, where the soil is replaced by nutrient-rich water solution. The plant roots grow in a deep-water culture and a rich minerals solution. The plants and water are monitored for optimum nutrient composition to facilitate growth. As such, the hydroponic method removes risk of disease caused by soil pathogens and organisms. Additionally, hydroponically grown plants produce a higher yield than similar plants grown in soil because of optimum control over the nutrients.

Rising population is increasing the demand for food across the world. According to the United Nations' Food and Agriculture Organisation (FAO), world population is expected to reach up to 9.1 billion by 2050, for which food production due to demand is required to increase from between 25 percent to 70 percent. Such population explosion will drive the demand for alternative farming technologies that deliver higher yields in less time. The Mena region, where arable land and

Pure Food Technology unveils game-changing innovation in vertical farming to ensure food security to UAE

The world's first artificial intelligence-driven, solar energy-powered, robotics-enabled, innovation-patented and 3D-printed hydroponic vertical farm set up in the UAE, seeks investment to turn the UAE into a net plant-based food exporter from being a net food importer.

Pure Food Technology, a UAE-based sustainable agricultural and food technology startup has successfully developed an innovative hydroponic proto-type that requires 95 percent less water compared to traditional farming, to deliver 100 times higher plant-based crop yield, that will drastically reduce the UAE's \$7.7 billion fresh vegetable food import bill and help the country attain self-sufficiency in nutrient-rich plant-based food.

The UAE, where desert dominates its landscape, imports 90 percent of its food from other countries. As the country marks 2023 as the Year of Sustainability and hosts COP28 Summit, it looks at innovative ways to deal with climate change and sustainability in all sectors – environment, business, hospitality, agriculture, food and human resource.

The global hydroponics market is growing at 7.5 percent from US\$35.2 billion in 2022 to US\$58.3 billion by 2030.

water are already scarce, are witnessing the increasing adoption of alternative high-yield farming technologies.

The Global hydroponics market is growing at a Compound Annual Growth Rate (CAGR) of 7.5 percent from US\$35.2 billion in 2022 and is projected to reach of US\$58.3 billion by 2030, according to Vantage Market Research. The hydroponics market is currently undergoing substantial growth, fuelled by the rising global demand for pathogen free foods and the widespread adoption of hydroponic techniques in agriculture.

Pure Food Technology has a fully-functional hydroponic vertical farm located at Jebel Ali Industrial Area that produces vegetable crops within 35 days – using water and minerals, AI, 3D printing and robotics as a live Proof of Concept. In the planned full-scale farms, the energy required by LED lights, chillers and de-humidifiers will be completely supplied by a unique patented solar farm solution.

The UAE had earlier announced the National Strategy for Food Security that aims to make the UAE the world's best in the Global Food Security Index by 2051. By launching the National Food Security Strategy 2051, the UAE aims to achieve zero hunger by ensuring access to safe, nutritious and sufficient food all year round. The strategy specifically aims to implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems.

Pure Food Technology, which powers the proposed scale vertical farm with solar energy, uses 3D printing technology to develop parts of its components and proprietary home-grown robotics solutions to transport fresh produce from farm areas to packaging stations that reduces the cost of production.

"The UAE imports \$7.7 billion of fresh vegetables each year. If funded adequately and scaled up properly, Pure Food Technology can produce enough plant-based food, such as fruits and vegetables, to meet the total demand of the UAE throughout the year and make the UAE self-reliant in food production," Sebastian Carlton, Chief Executive Officer of Pure Food Technology, says.

"Our proprietary in-house solution that involves 11 registered patents for innovation, is the ideal solution to the UAE's food security needs and if scaled up further, it could meet the total demand of the plant-based food of the entire GCC. We have the proof of concept and a hydroponic farm in place that produces vegetables in just 35 days.

"Pure Food Technology's hydroponic vertical farming is an innovation – many parts of which have been patented, ensures sustainable agriculture and falls in line with the United Nations' Sustainable Development Goals and the UAE's drive for innovation and sustainability. Once scaled up properly, we could grow enough food not only to meet the UAE's domestic demand, but also export to other countries and this will facilitate the UAE becoming a centre for global hydroponic vertical farming."

Vertical farming – where produce is grown in vertical stacks, using less square footage than in a field – offers many advantages. One is a perfectly controlled growing environment. The other is much more efficient use of re-



Mr Sebastian Carlton, Chief Executive Officer and Founding Partner (Left) and Mr Cenk Yabas, Chief Technology Officer and Founding Partner (Right) of Pure Food Technology at their innovative pilot vertical farm in Jebel Ali, where vegetable crops grow within 35 days using Artificial Intelligence, Robotics and 3D Printing technology. In the full scale farms, operational costs are estimated to be 50% of market comparable with zero energy costs due to the use of Solar Power



If funded adequately, Pure Food could grow enough food to meet the total domestic demand of the UAE and export to the GCC countries

"Once scaled up properly, Pure Food Technology can produce enough plant-based food not only to meet the UAE's demand, but also export to other countries that will help the UAE to become a centre of global hydroponic vertical farming..."

— Sebastian Carlton, CEO and Founding Partner of Pure Food Technology

sources.

Due to the UAE's climate, water and land resources, it can only provide a small fraction of its overall food requirements. The UAE Government is striving to develop its food producing sectors with key focus on the agriculture sector, to facilitate its goal of achieving the UAE Vision 2021 and the UAE Centennial 2071 Plan.

In 2017, for the first time the UAE Government established a State Ministry for Food Security, in line with FAO's vision. The new ministry led in creating the UAE National Food Security Strategy 2051, which was approved in November 2018. The new strategy aspires to make the UAE rank top of the Global Food Security Index by 2051.

In 2018, the UAE stood at 31st place on the Global Food Security Index. In December 2019 the UAE had risen 10 places to 21st position.

Further, on 28 June 2020, the UAE Cabinet approved the national system for sustainable agriculture to improve self-sufficiency in food, enhance farms and create opportunities to ensure that the agriculture sector is always ranked high in the UAE. The national system for sustainable agriculture seeks to: Improve self-sufficiency from the targeted agricultural crops by five per cent annually, increase the average farm income by 10 per cent annually, increase the workforce in the sector by five per cent annually and achieve a 15 per cent annual reduction in water used for irrigation of a production unit.

Cenk Yabas, a UAE-based hydroponic expert, engineer and Chief Technology Officer at Pure Food Technology, says, "Our unique innovative hydroponic vertical farm system will accelerate the UAE's drive for food security, nutri-

tion, good health of its citizens and ensure sustainability across the entire agriculture and food value chain.

"In addition to that, if scaled up at a national level, this could turn the UAE into a net vegetable and fruit exporter, from a large importer that will not only save the country valuable foreign currency, but also help it to increase its export earnings – ensuring economic stability. It will also protect the UAE consumers from external food shocks and crises by stabilising domestic supply.

"Pure Food Technology's innovative hydroponic vertical farm uses the Fourth Industrial Revolution – Robotics, Artificial Intelligence, 3D Printing Technology – as well as Solar Energy to power the farm. We can set up the farm in the middle of the desert and grow food without adding power supply from fossil fuel, without using soil, affecting environment or deploying a large pool of people. Everything is automated – from start to finish with very minimal human intervention – that makes it unique."

The company is currently promoting its sustainable agricultural solution to investors to scale up to fulfil the UAE's vision 2031 and 2071. ■

Contact Us

Interested parties could contact at the following address:

Pure Food Technology
Level 3, Building No. 3, One Central, DWTC
PO Box 9573, Dubai, UAE
Cell : +44 7787 500333
Cell : +971 50 719 0633
Email : sebastian@pureimpact.capital
Web : www.purefoodtechnology.com
Web : www.pureimpactcapital.com ■

Pure Food Technology

Pure Food Technology is a sustainable Agri-Tech Company that has developed a unique, patented, advanced hydroponic vertical farming system that utilises artificial intelligence, robotics and solar energy and produces higher yield with less energy, cost and efforts.

The company provides food security by an advanced form of vertical hydroponic far-

ming that offers 100 times more yield than field farming using zero fossil fuel energy – making farming more sustainable. Its system uses the power of clean energy for carbon-neutral crop production.

Its unique and patented process require 95% less water, only 1% of the land resource, resulting in crop yields 100 times that of field farming. It produces leafy greens, herbs, fruit and vegetables with no field or soil and completely sustainably. ■

Pure Food Technology

A UAE-based Agri-Tech Start-up, Pure Food Technology is set to turn the UAE into a plant-based food exporter, from a net food importer, through innovation and technology.

The company has secured 11 patents and has achieved 90 percent automation powered by robotics and 3-D printing technology to deliver 100 times yield, compared to field farming, with 95 percent less water use and a fraction of the production cost. It has developed a disruptive new technology that can eliminate the UAE's US\$7.7 billion food import bill, thereby aiding in the UAE goal of self-sufficiency in terms of food security.

Pure Food Technology has successfully developed an innovative hydroponic proto-type that requires 95 percent less water compared to traditional farming, and delivers 100 times higher plant-based yield, thanks to technological breakthroughs by a team of experts. The company is now looking to fund the development and build full scale vertical farms across the UAE.

This is the world's first AI-driven, solar energy-powered, robotics-enabled, innovation-patented and 3D-printed hydroponic vertical farm to be set up in the UAE, where desert dominates its landscape, imports 90 percent of its food from other countries. As the country observes 2023 as the **Year of Sustainability** and hosts **COP28 Summit**, it looks at innovative ways to deal with climate change and sustainability in all sectors – environment, agriculture, food and other areas.

Pure Food Technology, which has already received 11 patents for innovative solutions in food production and awaits five more patents, offers the ultimate solution to the country's agricultural and food sustainability.

Khaleej Times spoke to Sebastian Carlton, CEO and Founding Partner of Pure Food Technology, on the company's revolutionary solutions and how it could help the UAE become a regional hub in sustainable farming. Excerpts:

What is hydroponic farming? How does it work? Hydroponic farming is a method of growing plants without soil, where the soil is replaced by nutrient-rich water solutions that feed the plant roots.

The plant roots are submerged in deep water culture, utilising a rich mineral solution and monitored to maintain appropriate nutrient composition for growth. As such, the hydroponic method employed removes the risk of disease caused by soil organisms and pathogens. Additionally, hydroponically grown plants produced in this system deliver a much higher yield than similar plants grown in soil be-

How much investment does your farm need to scale up?

We are currently self-funding, in order to make a significant impact we would look to deploy around US\$100 million in the region and we are in deep discussions with several parties on joint venture in this regard.

Let us be clear however, this innovation is for the



Sebastian Carlton, Chief Executive Officer and Founding Partner of Pure Food Technology

Cenk Yabas, Chief Technology Officer and Founding Partner of Pure Food Technology

Can it meet the demand for plant-based food of the UAE?

Yes, of course, if scaled up properly. Now that the prototype is live and we are producing vegetables every 35 days just out of nutrient-rich water, we need investment to scale up and ensure that the full demand of the UAE's plant-based food is met from our farms.

The UAE, where desert dominates its landscape, imports 90 percent of its food from other countries. As the country observes 2023 as the **Year of Sustainability** and prepares to host the **COP28 Summit**, it is looking at innovative ways to deal with climate change and sustainability in all

sectors – environment, agriculture, food and other areas.

Once we meet the full domestic demand of the UAE, we could then export to the rest of the GCC countries and help them achieve food security. So, from a net importer, the UAE could become a net exporter of plant-based food and reduce or eradicate its US\$7.7 billion (Dh28 billion) vegetable food import bill.

The UAE, with the implementation of our technology, could realistically become a net exporter of plant based foods and thereby become a significant food supply hub and technology incubator in the region. ■

cause of the use of LED lights, vertical shelves, optimum nutrition and robotic crop seeding, transplant, rotation and harvest.

Rising populations are increasing the demand for food across the world. According to the UN Food and Agriculture Organisation, the world population is expected to reach up to 9.1 billion by 2050, for which food production is expected to increase between 25 percent to 70 percent.

We cannot feed the current population of 8 billion, with 800 million people going hungry every day. It is estimated that there is less than 3 percent of arable land left available for cultivation globally and field farming has not changed other than improvements in farm equipment in 10,000 years. It is impossible to feed the world population without new technology.

The pressure on demand drivers for food is anticipated to drive the demand for alternative farming technologies that deliver high yields in less time. The MENA regions, where arable land and water are already scarce, are witnessing increasing adoption of alternative high-yield farming technologies, which is expected to boost market growth.

What is vertical farming? How does it work?

Vertical farming – where produce is grown in vertical shelves, uses less than 1 percent of the land resource of field farming. Crops are grown in perfectly controlled indoor environments eradicating adverse crop impact due to seasonal weather, pests and soil pathogens.

Vertical farming provides potential for much more efficient use of resources. Pure Food Technology grows one crop of leafy

larger cause of mankind and is aligned with the UN Sustainable Development Goal of Zero Hunger.

The technology, without adjustment, can operate effectively within 35 degrees North/South latitude and is therefore a global solution to food security, with the journey starting in the UAE – a country that is nurturing innovation and technology. ■

greens in 35 days, each crop is grown in vertical stacks eight levels high.

Is there any environment or health risk?

No. In fact it is the opposite. Our method of controlled environment farming is not only environmentally friendly, but the food is healthier than those grown in soil. No chemicals are needed to control pests.

We use an optimum nutrient mineral mix to feed the plants and the crop is not subject to soil pathogens. Pure Food Technology takes this one stage further in that they do not use disinfectant but use organic local flora to balance the environment in a completely natural way; we also replenish minerals and nutrients to the plants that are depleted in field farming due to aggressive farming techniques. The Pure Food Technology system is completely sustainable, utilising solar power for all energy requirements including powering LED lights chillers and dehumidifiers.

Hydroponic and vertical farming are nothing new. What is so different at Pure Food Technology?

Pure Food Technology is the world's first hydroponic vertical farm that uses a number of innovations in food production that drastically reduces cost due to high-level technology including Artificial Intelligence, 3-D Printing, Robotics and Solar Energy deployment. It is unique in plant-based food production.

So, just to reiterate, this is the world's first artificial intelligence-driven, solar energy-powered, robotics-enabled, innovation-patented and 3D-printed hydroponic vertical farm set up in the UAE. The major costs of a vertical farm are power costs, labour costs land/rent costs and depreciation.

Pure Food uses solar energy to power the farm. There is no requirement for power to be supplied from the grid, therefore it is already a Net-Zero farm, as far as energy and power is concerned. In fact, if we deploy a larger solar plant, then we would be able to ensure power supply to facilities, such as residences of the farm employees and

other facilities.

Second, we are using 3-D Printing technology to print most farm components. We use PET (recycled water bottles) to print farm parts such as water and plumbing systems and robotic parts. This means that we gain a cost and supply advantage whilst maintaining sustainable credentials.

Third, we have developed and patented home-grown robotic technology that handles seeding, transporting, transplanting and harvesting in addition to post-production logistics to pack and transport the farm produce, drastically reducing human intervention.

Fourth, we are using the best combination of nutrients to deliver vegetables in the shortest time – the crop grows in just 35 days. We have a unique patented, robotic, transplant system that optimises efficiency in terms of photon delivery to plant canopy. This means higher yields with lowest production costs due to high-level automation. The net result is that we are able to produce 100 times higher crop yield compared to field farming, with 95 percent less water usage and Net Zero energy – making it the most sustainable agricultural solution in the region.

Why did you decide to develop this in the UAE?

The UAE is one of the most tolerant and one of the most business friendly countries in the world. It is a land of opportunity where the country's leadership promotes innovation.

I recall once, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, said, "The future belongs to those who invest in innovation and technology."

We are inspired by his vision and wisdom. This is a country, which has become

What is the market opportunity for hydroponic farming?

The Global hydroponics market is growing at a Compound Annual Growth Rate (CAGR) of 7.5 percent from US\$35.2 billion in 2022 and is projected to reach US\$58.3 billion by 2030, according to Van- tage Market Research.

How significant is this for the UAE and other GCC countries that can't grow enough food due to extreme climate?

Due to the UAE's extreme climate, scarce water and limited arable land resource, it can only currently provide a small fraction of its overall food requirements.

The UAE Government is striving to develop its food producing sectors with a key focus on the Agri-Tech sector, to facilitate its goal of achieving the UAE Vision 2021 and the UAE Centennial 2071 Plan.

In 2017, for the first time, the UAE Government established a State Ministry for Food Security. The new ministry led in creating the UAE National Food Security Strategy 2051, which was approved in November 2018. The new strategy aspires to make the UAE top of the Global Food Security Index by 2051.

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

Further, on 28 June 2020, the UAE Cabinet approved the national system for sustainable agriculture to improve self-sufficiency in food, enhance farms and create opportunities to ensure that the agriculture sector is always developing. The national system for sustainable agriculture seeks to: Improve self-sufficiency from the targeted agricultural crops by five per cent annually, increase the average farm income by 10 per cent annually, increase the workforce in

the sector by five per cent annually and achieve a 15 per cent annual reduction in water used for irrigation of a production unit.

Pure Food Technology's unique, innovative, hydroponic vertical farm start-up will accelerate the UAE's drive for food security, nutrition, good health of its citizens and ensure sustainability across the entire agriculture and food value chain.

In addition to that, if scaled up at a national level, this could turn the UAE into a net vegetable and fruit exporter, from a large importer, and this will not only save the country valuable foreign currency, but also help it to increase its export earnings, thereby enhancing economic stability. It will also of course protect the UAE consumer from external food shocks and crises by stabilising domestic supply.

Pure Food Technology's innovative hydroponic vertical farm epitomises the Fourth Industrial Revolution – Robotics, Artificial Intelligence, 3D Printing as well as Solar Energy to power the farm. We can build the farm in the desert and grow food without adding power supply from fossil fuel, without using soil, with a positive impact on the environment without deploying a large pool of people. We are 90 percent automated from seeding to harvest, with minimal human intervention and zero power costs... that makes Pure Food Technology unique.

The company is currently promoting its sustainable agricultural solution to investors in order to scale farm production and fulfill the UAE's vision 2031 and 2071. ■

a global hub for economy, trade, tourism, technology and innovation. It is developing the largest number of start-ups in the region.

Our Chief Technology Officer Mr. Cenk Yabas, has been a resident of the UAE for two decades. Mr. Yabas has researched and made extensive field tests in the hydroponic space for more than 10 years and has grown multiple hydroponic crops at scale and sold the produce into the retail market proving gross revenue projections.

Mr. Yabas has worked intensively over the last 3 years to design and develop our hydroponic farm after years of research, field tests and study. We believe in the vision of the UAE and that this is the right place to develop and scale the technology, in order to help meet UAE's food security targets.

You mentioned innovation. How can you prove it?

The best way to prove innovation is to register and patent innovative solutions and then produce and test the technology in the field.

The hydroponics market is currently undergoing substantial growth, fuelled by the rising global demand for chemical free foods and the widespread adoption of hydroponic techniques in agriculture. The opportunities are unlimited – depending on investment and ability to scale. ■

We have already obtained 11 patents on our proprietary solutions. There are five more patents in the pipeline; these demonstrate our innovative solutions.

We have developed a pilot plant in Jebel Ali where we can show the technology working, including seeding, transport, transplant and harvesting robots, 3D print farm and hydroponic nursery producing volumes of nutrient rich crops of leafy greens and other vegetables.

Can it function in the desert environment?

Yes, it can. In fact, the farm is specifically designed to work in a desert environment and due to certain elements of the technology, a desert environment actually improves efficiency in our system. We can take any water source including seawater and brackish water. We also hold patents for a unique co-generation solar panel system and solar farm that provides us with hybrid hydroponic production further reducing costs and balancing crop varietal production and volume.

We can multiply the number of production units and scale up the production within the desert environment, where we can use the land area for solar panels to power the farm. In fact, as the farm doesn't need soil and just water, minerals and sun, we could use the empty desert land-mass to scale up the farm-with efficiencies that are not currently possible using existing technology. ■