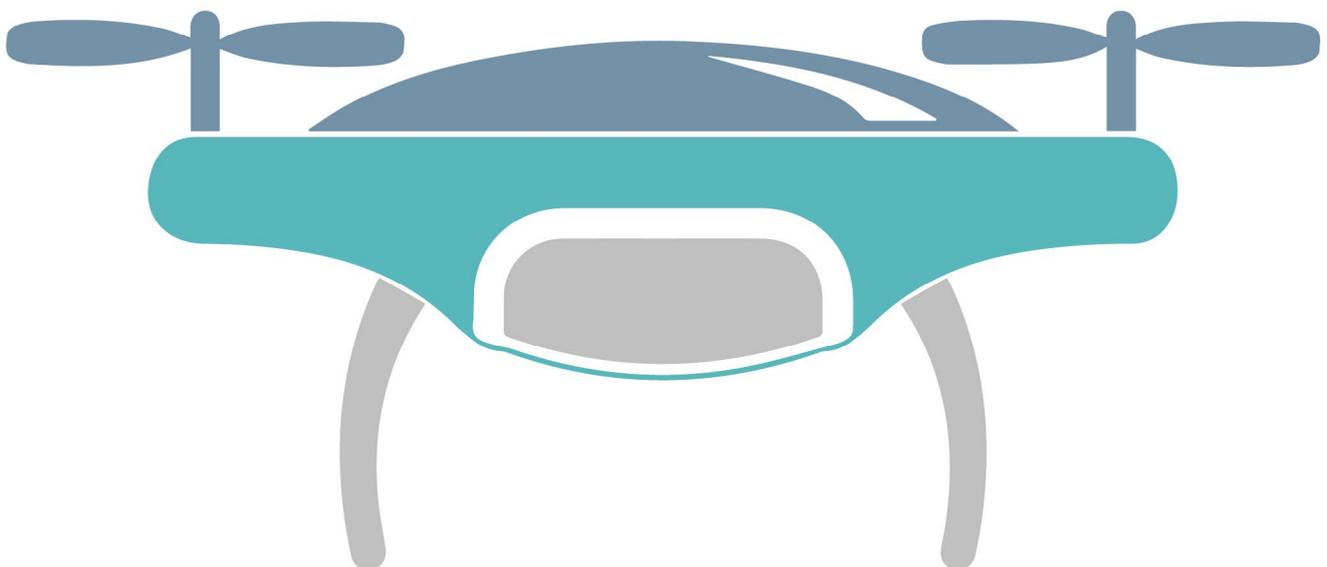




'SPOTLIGHT ON' Entrepreneur Series brought to you by



Drones and Artificial Intelligence; Smart Technology to Automate Farming Jobs

Malik Al-Toubi

What is the difference between entrepreneurship and business? In 2017, my partner Younis Al-Siyabi and I graduated from the University of Kentucky holding a Bachelor of Science in Engineering. Spending 6 years in the USA hadn't only given us our engineering degrees, but also the opportunity to learn from another culture, expand our horizons and explore careers.



I clearly remember that we asked ourselves the question: what is next after graduation?

The world is changing towards technology - that's why we switched focus from engineering to tech. However, to succeed in the fourth industrial revolution, you have to have the mindset of an entrepreneur, not just a businessman. It's not just about making money. We want to create a sustainable business; one that people will know, trust and respect. We have every intention of making a positive contribution. Indeed, our vision is to pass on the business to the next generation. The point is to create a company that is meaningful, an enterprise that will endure.

We started to dig around the Artificial Intelligence (AI) and the drone world, exploring the idea of merging them together. Younis and I decided to go to Newton Abbot in the UK to further our knowledge in the drone sector – actually, we were the first Omanis to be awarded the commercial drone pilots license approved by the UK Civil Aviation Authority.



Drones and AI

Drones are actually considered as unmanned aircraft systems. They can be self-flying drones depending on the task. AI, in terms of machine learning and detection algorithms, is how you automate the entire process without human interference. AI can also be integrated for real-time image processing. For example, the AI powered drone captures and processes the data in real-time and sends back an immediate report.

Examples of drone use in agriculture include:

- Date palm tree pollination
- Targeted pesticide spray for all types of crops
- Pesticide spray to fight desert locusts
- Crops health monitoring
- Agriculture census
- Aerial mapping for topography surveys and vegetation analysis
- Irrigation- identification of the field soil and field dryness

That's when Wakan Tech was launched in 2019.

We understand Oman's agriculture and its issues, challenges and opportunities. Our mission is to bring the best of global agri-tech to Oman; helping local farmers enhance crop productivity, cultivation and profitability. Moreover, we wanted to make sure that our products and services reach whoever needs them.

It's not always easy for a start-up to gain consumer trust, but we were confident about who we wanted to target, what problems our products and services could solve and why clients would want to buy from us. This approach helped us gain traction and brought in customers; folk who recognized the true value of what we do. We haven't looked back. And that's what makes someone not only a businessman, but a successful entrepreneur.

Wakan Tech meets a need that isn't otherwise met in the market. We are currently creating a brand new Robot called Bydar that is going to help to replace the farmers' tasks. We provide a set of truly unique products and services. For example, we're the first company to carry out aerial date palm pollination as well as spray pesticides using AI powered drones.



Bydar

Bydar in Oman means ‘the farmer’, and we named our robot by that because it can do almost everything a farmer does and can assist with every farming activity. We started by first tasking the drone to perform the harvesting of dates by using artificial intelligence in image processing. The harvesting comes in different timelines and can be set to take action on more than 50% as shown in the picture below. The robot is currently in the process of doing more than that. It’s a ground actor that collects data and autonomously perform most of the farming tasks.



Don't start a business because you've got an interesting idea. Instead, start a business because you've spotted a problem that needs solving. On a personal note, being an entrepreneur has been a remarkable experience. We are constantly growing, learning and developing. That's a great feeling. Our ambition is to be the leader in Oman's agri-tech sector, solving problems faced by local farmers. Doing our part to help Oman diversify. Long-term, we're determined to be a force to be reckoned with.

