

THE EYE IN THE SKY

that can help farmers,
landowners and even
skyscraper developers
to look after
their assets



European Training Foundation

Vancho Naunov has his eye on your land.

The 26-year-old from North Macedonia is the founder of one of the only drone construction and surveying firms in the Western Balkans.

Vancho set up Drone Ops in 2021 after four years' experience of building drones and delivery services via drone. The self-taught drone enthusiast has now diversified into digital camera crop and forestry analysis with the help of a €25,000 grant from North Macedonia's Innovation and Technological Development Fund.

The company has turned over EUR 100,000 in its first year – including the grant cash – and Vancho is busy developing and building specialised drones used for agricultural analysis.

'We have been scouting for diseases and deviation in fields using a regular digital camera mounted to the drone with super zoom capacities – this was the easiest and cheapest way in the beginning to deliver services to farmers and crop owners,' Vancho notes.

But as his market expands, he is turning to more sophisticated technology to grow his business.

'We are using cameras with multi-spectral sensors that can see and detect hidden disease in crops that cannot be picked up by the naked eye.'

Vancho, who was talking to the European Training Foundation in September at the Turin launch conference of its new four-year (2022-2025) project 'Skilling Up the Western Balkans agri-food sector: digitalising, greening', adds that a key challenge to growing his business is finding people with the right productivity-enhancing skills.

With a core group of five employees – and a further 6 that are used on demand – Vancho needs drone builders and operators, agricultural analysts, and people with business and marketing skills.

The biggest challenge has been finding qualified people able to build and operate the drones, but Vancho has developed a two-pronged human resource solution. The first approach is to reach out to ex-military men with experience in unmanned aerial vehicles (UAV's).

'We don't have enough people in North Macedonia to expand, the labour market is very limited,' he says. 'I employ several retirees - old Yugoslav and Macedonian army pilots. They understand the systems and are the only ones who know how to build these drones.' The second approach is to employ several university students on paid internships, helping Vancho to solve a resourcing issue at the same time as giving them access to a unique opportunity to improve their skills and understanding of UAV systems.

Although he may face future skills challenges, meaning he is likely to have to cast his net wider as he grows his business, Vancho is now expanding his services and markets.

He sells drones under government forestry tenders and rents out drone services to farms for crop spraying, as well as crop and irrigation monitoring. He focuses on farms of at least 20 hectares – surveying the typical 1.4-hectare farm in the country is not economically viable.

It is a cost-effective service with a 20ha survey (including analysis and results) taking a day and costing around EUR 300.

Drone services are, he says, better than the other technological tool used by farmers – the Sentinel Satellite.

'The satellite has a definition of 20x20 metres; drones achieve 5x5 metres – and can be used in all weathers, with cloudy skies being no obstacle,' Vancho observes.

Growers who fork out for Drone Ops services can expect to save between 30% and 50% on crop treatment costs.

Although agriculture surveying is likely to always be the core business for the company, Vancho is sure the sky's the limit for this business: he plans to use drones to monitor large areas of solar panels – where dust and dirt can decrease efficiency by up to 90% - and even has plans for offering services to clean windows of skyscrapers, using drone-mounted high-pressure jet sprays.