The benefits of a digital approach to farming

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Maria Tunberg

Digital solutions are changing how farmers operate. The increasing amount of data that is 'harvested' from farms allows for improved management and optimised production.

This data can help to increase efficiency and lead to more sustainable farming, but experts recognise that agricultural digital transformation requires adequate connectivity and knowledge. It also must be managed wisely, and farmers should be treated as equal participants.

The digital farm

The agricultural sector already uses technology, but, as Maria Tunberg explains, "We now have a push for increased digitalisation to enable farmers to share much more data and use a range of new digital technologies."

Digitalisation at farms involves autonomous machinery, connected animals, virtual fencing and the use of drones and satellites to collect data.

"We know more about what is happening at a farm level today," Tunberg adds. This provides opportunities, but also poses challenges in terms of integrating different systems, ensuring adequate connectivity and security, and managing the legal and ethical aspects of big data management.

Profitable digital solutions

Nonetheless, the increase in the amount of digital information acquired can help farmers to become more efficient, profitable and sustainable.

"Margins within agriculture are generally slim," explains Tunberg, "so anything that can improve profitability at the farm level is important. There are clear benefits of digitalisation from a sustainability and climate point of view, including the ability to use resources more efficiently when producing food."

Pushing innovation forward

Tunberg works at Analysys Mason, a global telecoms, media and technology (TMT) specialist that supports customers in a range of sectors, such as the food and farming sectors, to facilitate digitalisation and drive innovation.

Analysys Mason is working with national and international bodies to facilitate the digital transformation that is reshaping the agricultural sector. Together, they support the creation of precision farming techniques and study new developments such as smart urban agriculture. Analysys Mason also analyses the costs and benefits of

connectivity solutions that enable advanced machine autonomy, AI, drones and other use cases, including the extension of 5G rural connectivity in Europe.

Tunberg emphasises the need for dialogue when building smart and sustainable food and farming systems given the range of stakeholders in the agricultural ecosystem, including farmers, policymakers, regulators and equipment manufacturers. “We work to ensure that all stakeholders are included in the ongoing transformation and that farms of the future have the connectivity, equipment and knowledge required to benefit from digital solutions.”