



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



# Smart Agribusiness, Innovation and Digitalization

## CONTEXT

The agriculture sector is facing multiple challenges across the world. With the global population projected to increase significantly to 9.6 billion by 2050, combined with the depletion of essential natural resources and the effects of climate change, there is a need for a revolution in agriculture and the food sector. Smart Agribusiness - defined as applications of digital technologies to improve efficiency of all the stakeholders in the interrelated and inter-dependent value chains in agriculture - has the potential to provide this much-needed revolution.

## APPROACH

### Smart Agribusiness:

- Is enabled by digital technologies that form part of the so-called “Fourth Industrial Revolution (4IR)”. Digital technologies can accelerate innovation, lower cost of scaling-up of solutions, increase transparency and promote informed, evidence-based transformation of the agriculture and agribusiness sector.
- Refers to applications of digital technologies to improve efficiency of all the stakeholders in the interrelated and inter-dependent value chains in agriculture.
- Benefits from the recent surge in technologies to reduce information and financial asymmetry across the agricultural value chain. Vibrant agro-industries can ignite growth in other sectors, through higher demand for inputs, technology, transport, communication, and quality infrastructure.

Potential entry-points for UNIDO have been identified in the following areas:

### Precision Agriculture

- Working with technology manufacturers to introduce lower cost and lower tech solutions.
- Matchmaking between commercial and small operators to increase uptake of new technologies.

### Food Safety and Quality

- Enabling digital and remote auditing and training of food business.
- Developing data-driven food safety regulatory functions.

### Convening Ecosystems

- Increasing awareness of bottlenecks and opportunities in industrializing countries.
- Encouraging co-creation of solutions by convening multiple stakeholders.

### Human Capital Development

- Designing and implementing digital skills development programmes.
- Supporting customizations of national policies to better address skill gaps.

### Smart and Sustainable Food Enterprises

- Designing and deploying performance management digital tools for enterprise productivity, efficiency, sustainability and compliance.



GEOGRAPHICAL SCOPE

**GLOBAL**



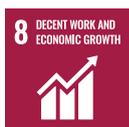
**12  
ONGOING  
PROJECTS**



**PARTNERS**

Food safety regulatory bodies, multi-stakeholder platform partners, multi-nationals and Small and Medium Sized Enterprises, industry associations, regional industrial development zones

## WORKING TOWARDS



**CONTACT**

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## HAYFA KHALFAOUI LAUNCHES THE FIRST SMART FARM IN JENDOUBA

After graduating in computer engineering and working several years as an IT manager, Hayfa Khalfaoui decided to take an unusual turn in her career. While working for a client in the dairy sector, she discovered her passion for cattle breeding. At only 28 years old, Hayfa launched Lait Espoir – Tunisia’s first smart dairy farm. The young entrepreneur has developed two technological solutions to facilitate the management of a dairy cattle farm, which she is now marketing across the country. The “Smart Farm” mobile application enables farmers to monitor and enhance the breeding,

health and wellbeing of cattle whilst the “Smart Milk” app provides traceability and improves the quality and quantity of milk production. The business already provides employment to 11 people.

Hayfa received business support from Mashrouzi (‘my project’ in Arabic), which is a partnership between UNIDO, USAID, the Italian Agency for Development Cooperation (AICS) and the HP Foundation designed to foster youth entrepreneurship in Tunisia and support the creation and growth of enterprises.

**“Mashrouzi provided me with business coaching in finance and marketing. I also received assistance from a cattle breeding expert to develop specific content for my Smart Farm app”**

Hayfa Khalfaoui, Founder and owner of Lait Espoir



Success Story



Design and introduction of digital learning and knowledge sharing



Introduction of remote inspection solutions for food safety regulatory bodies platforms



Introduction of a digital twin software for food enterprisers to manage productivity, compliance and performance



Support in traceability and certification of goods and products (e.g. block chain in garment)



Digital solutions for artisanal businesses (digital design, prototyping, access to market, traceability)



Online startup incubator and accelerator services through the IDEA (Innovation, Development and Entrepreneurship for All) App