

# DEVELOPMENT OF AGROBUSINESS INNOVATION IN ALGERIA « InnovAgro »

## THE AGRITECH BUSINESS OPPORTUNITIES IN ALGERIA

### SmartDateSorter

Intelligent mobile unit for sorting and grading dates.

#### IDEA N°07A

TYPE OF OPPORTUNITY:

Mechanical and digital technology (mobile Internet of Things (IoT) device).

#### CHALLENGE:

Date sorting and grading is often carried out manually, resulting in inefficiencies, errors, losses and high costs. Small producers lack the means to access fixed grading units and struggle to improve the quality of their batches due to a lack of sorting.

#### IMPACT ON THE VALUE CHAIN:

- Reduction in losses due to inadequate sorting.
- Improving the quality of products delivered to national and international markets.
- Increased market value thanks to precise, standardised calibration.

#### SOLUTION:

**Development of a mobile sorting and calibration unit equipped with:**

- High-definition cameras to detect the visual quality of dates.
- IoT sensors to measure height, weight and texture.
- Modular, mobile system enabling the unit to be transported directly to producers.
- Data analysis platform to provide statistics on quality and performance.

#### BENEFITS OR EXPECTED IMPACT

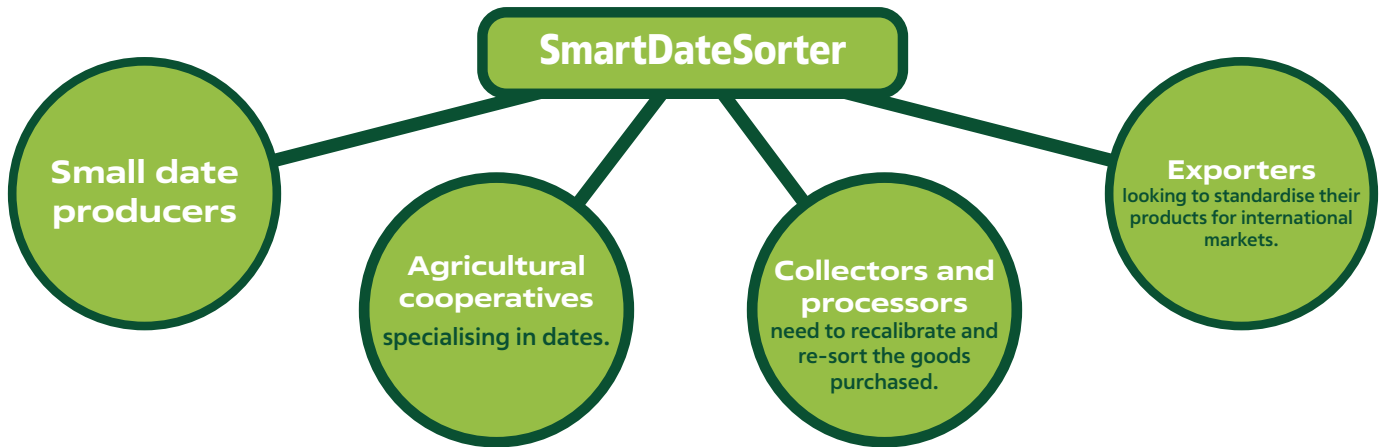
- Precise, standardised sorting increases the commercial value of the dates.
- Reduced logistics costs thanks to the unit's mobility.
- Improved access to specialist markets thanks to high quality standards.



#### SOLUTION COMPONENTS

- Development of an easy-to-transport mobile unit.
- Integration of IoT sensors for real-time measurements.
- Intelligent data analysis (AI) software to optimise calibration and sorting based on learning.
- Training, maintenance and (remote) support for end users.

# WHO WILL PAY FOR THIS SERVICE OR PRODUCT ?



## SUCCESS STORIES

### Automate and Control Ltd

offers an innovative sorting system for dates, using digital hyperspectral technology to inspect each individual fruit. The system automatically detects and rejects foreign matter and mycotoxins, while assessing the sugar (Brix value) and moisture content of the dates. Designed to handle the fruit gently, it preserves its integrity throughout the sorting process, guaranteeing optimum quality for the market.

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*Crédit photo : www.quadramachinery.com*

### Buhler

Various optical sorting systems for agricultural products.

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### Quadra Machinery

specialises in advanced date sorting machines that use infrared and high-resolution cameras combined with artificial intelligence to assess the weight, size, colour, moisture and sugar content of each date with exceptional accuracy. These systems are designed to handle different varieties of dates, ensuring gentle processing to preserve the integrity of the fruit. AI-driven technology continually learns to identify new defects, improving sorting accuracy over time. Quadra's complete date processing lines include steps from emptying, washing and brushing to grading, sorting, quality inspection, packing and palletising, all in compliance with strict EU standards.

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## PROCESS FOR REALISING THE OPPORTUNITY

### PHASE 1:

Study of the specific needs of date producers and the market (downstream links).

### PHASE 2:

Design and prototyping of the mobile unit.

### PHASE 3:

Field tests, data input and adjustments.

### PHASE 4:

Commercial launch and user training.

#### COMPLEXITY



MEDIUM TO HIGH

#### LEVEL OF INVESTMENT NEEDED



MEDIUM TO HIGH