

DEVELOPMENT OF AGROBUSINESS INNOVATION IN ALGERIA « InnovAgro »

THE AGRITECH BUSINESS OPPORTUNITIES IN ALGERIA

SmartPrune

Intelligent solution for pruning in arboriculture.

IDEA
N°29



TYPE OF OPPORTUNITY: **Robotic and Internet of Things (IoT) technology for the automated management of fruit trees.**

*Related to other sheets

CHALLENGE:

Pruning fruit trees is an essential operation, but it is time-consuming, costly and often inaccurate when carried out manually. The lack of local expertise exacerbates inefficiencies and directly affects the quality and quantity of agricultural yields.

IMPACT ON THE VALUE CHAIN:

Upstream : Optimising orchard management through precise and efficient pruning.

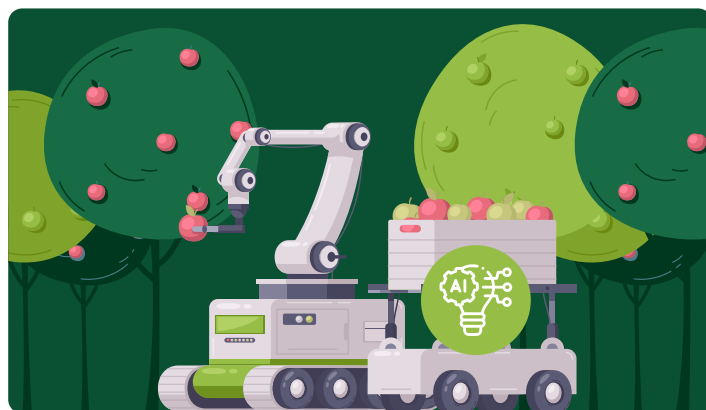
Downstream : Improving fruit quality, increasing yields and reducing losses.

SOLUTION:

Development of an intelligent system combining robots equipped with IoT sensors and artificial intelligence to carry out pruning operations. The system includes :

- **Real-time tree analysis** : sensors and cameras to assess branch condition, growth and pruning requirements.
- **Automated decision making** : AI algorithms to determine which branches to prune based on yield objectives.
- **Robotic operation** : Robotic arm for precise cuts and reduced risk of injury to the tree.

Monitoring and reporting : Digital platform to provide farmers with detailed analyses of the condition of trees and the interventions carried out.



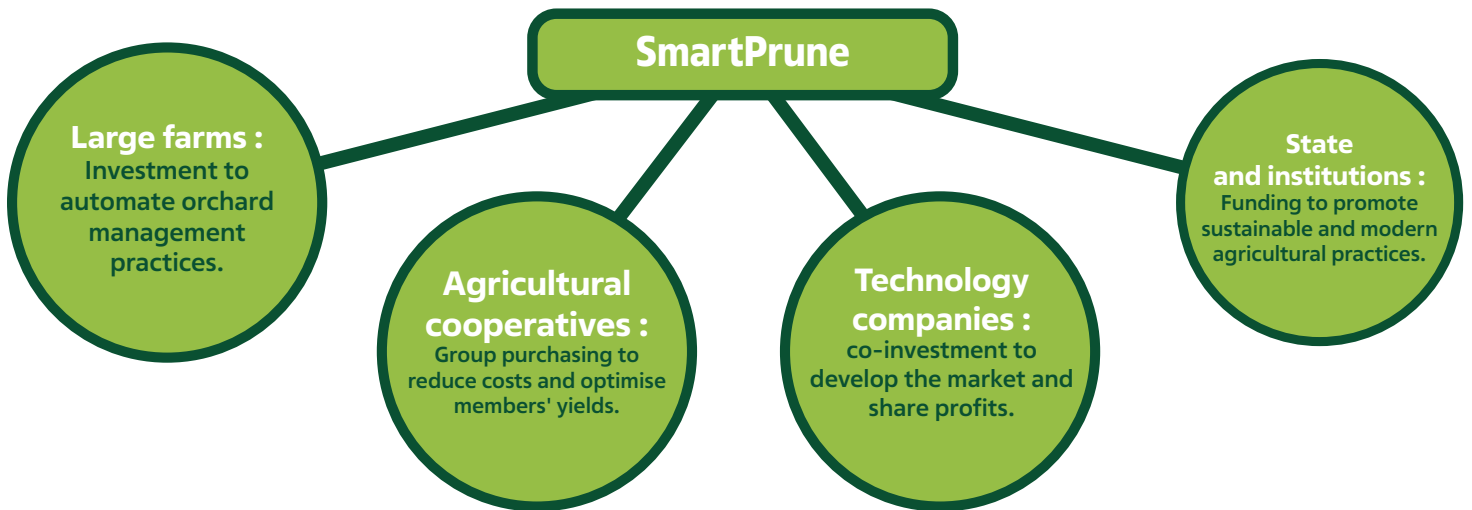
BENEFITS OR EXPECTED IMPACT

- **Save time and resources** : reduce labour costs and improve operational efficiency.
- **Greater precision** : Optimum pruning to promote healthy trees and maximise yields.
- **Sustainability** : Reduction in intensive farming practices and damage caused by inappropriate pruning.
- **Ease of use** : simple interface to enable farmers to control and supervise operations remotely.

SOLUTION COMPONENTS

- **IoT sensors** : Real-time monitoring of tree growth and environmental parameters.
- **Cameras and AI** : Visual analysis of trees to guide pruning decisions.
- **Robotic arm** : Equipment capable of cutting branches with precision.
- **Digital platform** : Interactive dashboard for viewing data and managing operations.
- **Maintenance and support** : Technical assistance to ensure continuous operation of the system.

WHO WILL PAY FOR THIS SERVICE OR PRODUCT ?



SUCCESS STORIES

FFRobotics

develops intelligent robots for harvesting and pruning in arboriculture, offering increased precision, reduced labour costs and improved efficiency in farming operations.

[CLICK HERE](#) ➔

Agrobot

designs advanced robotic solutions for agriculture, including automated harvesting robots for specialist crops, to reduce labour costs and improve operational efficiency.

[CLICK HERE](#) ➔



PROCESS FOR REALISING THE OPPORTUNITY

PHASE 1:

Needs analysis : Identification of target crops and farmers' specific needs.

PHASE 2:

Technological development : Design and testing of robotic equipment with integration of AI and IoT sensors.

PHASE 3:

Pilot project : Implementation on pilot farms to assess effectiveness and refine functionality.

PHASE 4:

Training : Raising farmers' awareness of how to use and maintain the systems.

PHASE 5:

Large-scale deployment : Marketing with ongoing technical support

COMPLEXITY



LEVEL OF INVESTMENT NEEDED



Here are some opportunities that you might be interested in related to yours – Scan QR code

Linked in chain

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