



**22 oct 2020**  
**Salón de actos**

# Virtual study visit Navarra Pitch your technology to UVESA



# Company profile

- Focused on innovation projects in integrated engineering and in the industrial application of 4.0 technologies

## Products

- Digital Twins for food industries.
- Affordable platform for traceability
- Expert systems for demand prediction.
- Predictive maintenance modules.
- Improvement of machines automation and IoT systems.
- Control systems for temperature tracking and/or energy saving.
- Personalized sensor systems.
- User interface apps.

## S3Food projects:

- Beneficiary of one S3Food Validation Voucher for the project:  
**DT-OptiDry: Digital Twin for optimization of manufacturing processes in agri-food companies.**  
**Partner: Embutidos Maybe SA**
- Subcontracted digital provider in an S3Food Exploration Voucher:  
**AI-Thresh: Exploration of digital technologies for a prototype of mechanical thresher for fresh beans**  
**Beneficiary: Tierrina Vaqueira S.L.**

## Services

- ML developments for artificial vision
- Consultancy:
  - Consultancy and diagnosis for digitalization.
  - Preparation of grants submissions

# Solutions to Uvesa challenges

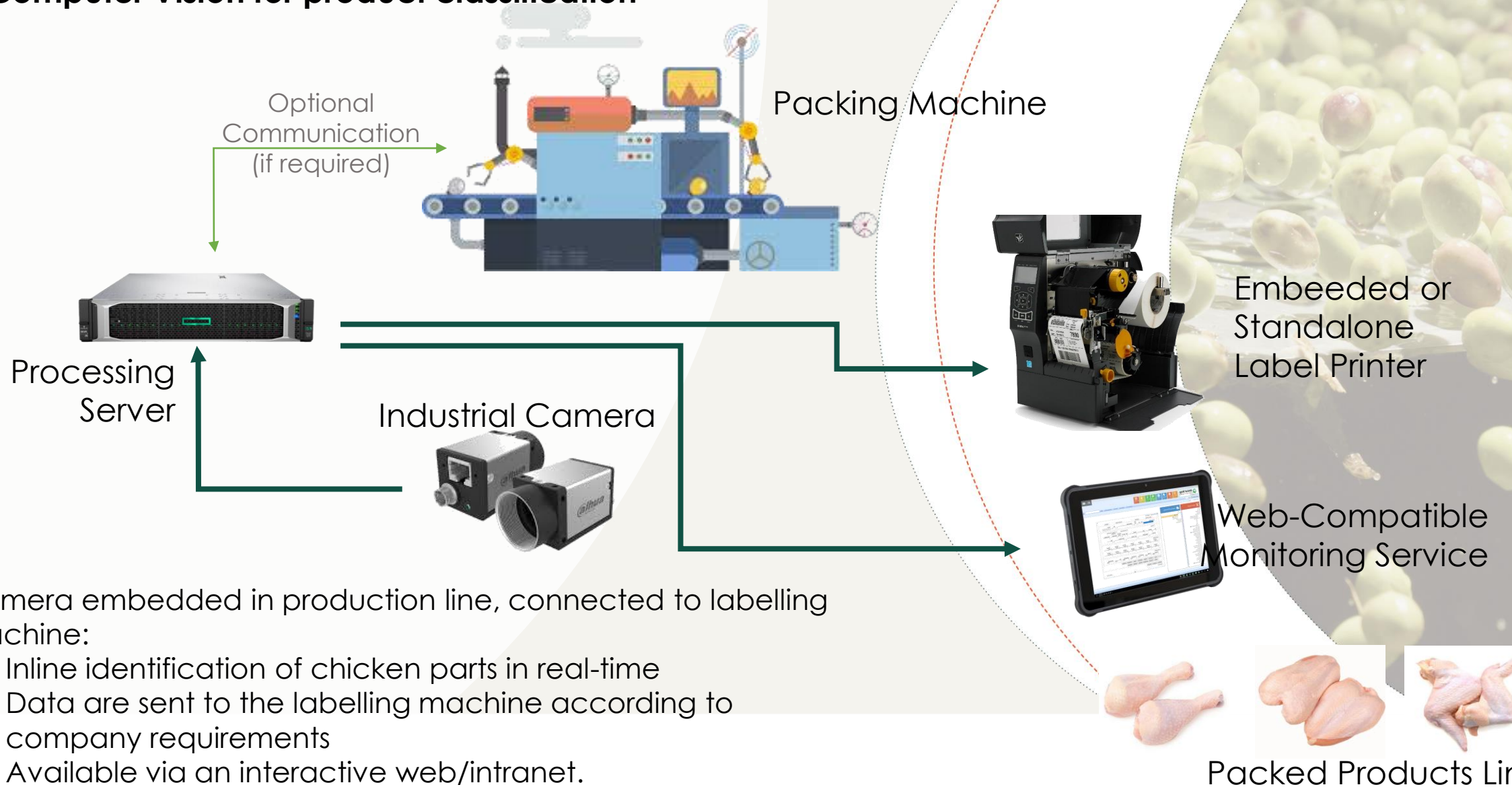
1. IDENTIFICATION OF REFERENCES :

2. LABELING AND BARCODE

4. INTEGRATION OF PALLETIZING INFORMATION AND PRODUCT DELIVERY NOTE IN THE ERP

- Middleware development, for integration with existing ERP/MES or developing of personalized MES-Like monitoring system
- Computer vision for: Classification and Identification
- Industrial automation communication and control operations.

## Computer Vision for product classification



Camera embedded in production line, connected to labelling machine:

1. Inline identification of chicken parts in real-time
2. Data are sent to the labelling machine according to company requirements
3. Available via an interactive web/intranet.

Packed Products Line



# Uvesa Challenge 2 Proposal

## Barcode Identification for product classification

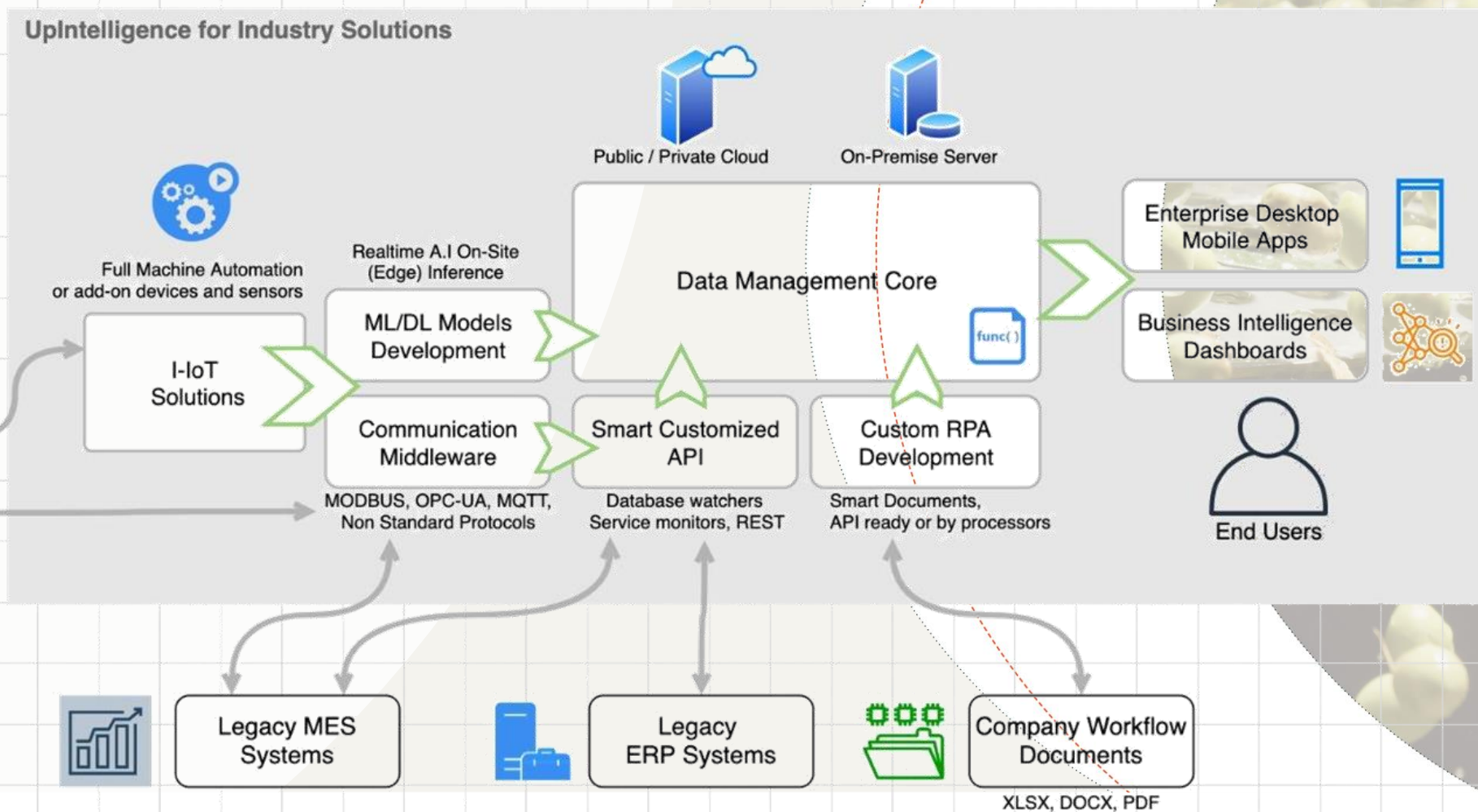
- 1- Labelled packages are already identified thanks to Proposal 1
- 2- Communication is established with the ERP software or alternative data source to get the correct customer order contents
  - if the product doesn't match the requirements a signal is sent to the production line at sync time to re-arrange the package, additionally a visual information aid can be sent to the operator.

# Uvesa Challenge 4 Proposal

## Smart Delivery notes building in ERP

- 1- Product packages already in pallets are identified using computer vision and a barcode in the labelled pallet trough an online industrial camera
- 2- Communication with the ERP software to get the customer order contents,
  - new delivery note according to the pallet contents and the customer data
  - supervision through mobile device and a web application.

# UPintelligence ecosystem



# Parts of the system:

- Computer vision Algorithm for 1-D or 2-D barcode product identification.
- Compatible API to communicate with the ERP software using current ISA-95 models, through webservices, direct APIs or direct database queries.
- Industrial automation communication with line machinery to signal wrong products inline.
- Hardware for the real-time barcode detection and communication. Optional output to standard industrial automation equipment and signalling
- Several inline high-speed cameras for real-time identification
- Web application for the delivery personnel

## Advantages:

- Small hardware footprint
- High availability, and durability (hardware and software)
- Secure data management platform
- Real time reports and available historical information
- Highly optimized algorithms
- Easy to update for changing industrial needs



# Personalized solutions for digitalization and connectivity in food companies

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