

# PARTNERSHIP & CONTACT

## A Transnational Cooperation:

DODILog brings together 11 partners across the FR-BE-NL-DE routes to ensure successful implementation and long-term impact.

### The Netherlands

Port of Zwolle (Lead Partner), Graansloot Kampen

### France

ARVALIS, CIRCOÉ, BDI, Javelot

### Belgium

Vives University of Applied Sciences, Inagro, MULTITEL

### Germany

Weser Business Association (WVW), Polytec

## WANT TO KNOW MORE?

Visit our website for news, events, and pilot results:  
[www.dodilog.nweurope.eu](http://www.dodilog.nweurope.eu)



### Lead Partner Contact

Port of Zwolle:

<https://portofzwolle.nl/en/>



Interreg



Co-funded by  
the European Union

North-West Europe

DODILog

## DODILOG: DIGITALIZING & INNOVATING THE AGRI-FOOD VALUE CHAIN LOGISTICS



The DODIlog project strengthens the resilience of the potato and cereal value chains in North-West Europe by enhancing the capacity of large storage hubs to adopt digital innovation. By testing advanced technologies from other sectors, such as the medical or fruit sectors, the project helps operators detect quality risks early and extend the post-harvest shelf-life of raw tubers and grains.

## OUR GOAL

Reduce food waste and financial losses, improve food safety, and increase operational efficiency through smart digital transformation.

Funding: Co-funded by the European Union through the Interreg North-West Europe programme

Total Budget: €5,544,761

EU Funding: €3,326,856 (ERDF)

Duration: 36 months (2024-2027)

## Pilots

Advanced sensing for early risk detection and crop quality preservation:

### INSECT EARLY DETECTION (NIRS)

This pilot utilizes Near-Infrared Spectroscopy to identify infested grain batches at port reception and storage facilities. The technology is non-destructive, chemical-free, and allows for the simultaneous analysis of multiple composition criteria without specific sample preparation.

### SPROUTING PREDICTION

To reduce the need for anti-germinative treatments, two advanced techniques are tested: Electrophysiological Technology (EPT), which uses electrodes to detect internal physiological changes in tubers, and Hyperspectral Imaging (HSI), which combines spectral and spatial data to identify sprouting at the dormant stage.

### MULTI-GAS ELECTRONIC NOSE (ENOSE)

Based on technology used in other food sectors, this electronic "nose" is calibrated to detect quality degradation in cereals and potatoes by identifying specific volatile organic compounds. It is linked with high-sensitivity NIRS sensors to detect hydrogen sulphide at sub-ppm levels for the earliest possible warning of rot.

### SUB-TERAHERTZ SENSING

This cutting-edge technology monitors the kinetics of potato degradation, such as skin changes or "wrinkles," directly through non-transparent packaging materials. It provides continuous quality data during long-term transportation and storage without requiring the opening of containers or packages.

## Pilots

Smart management and sustainable logistics:

### SMART VENTILATION & CLIMATE CONTROL

This system adapts industrial cooling units by using AI to link real-time internal data with external temperature and humidity parameters. By automatically setting optimal ventilation thresholds via remote management, the pilot reduces energy consumption and minimizes financial losses due to crop spoilage.

### RECYCLABLE SENSOR-BATTERY CHIPS

Using 100% recyclable agricultural wastepaper, these innovative adhesive labels track temperature and humidity throughout the supply chain. The chips utilize Near Field Communication (NFC) for easy data access via mobile devices, redefining sustainable monitoring from the warehouse to the destination.

### BUSINESS MODEL FOR CROP VALORISATION

This model harnesses real-time data to determine the most suitable storage duration and moisture content for various crop varieties. It provides precise specifications for sorting, grading, and culling, helping operators separate marketable from non-marketable lots to optimize pricing and secondary processes like biofuel reuse.

