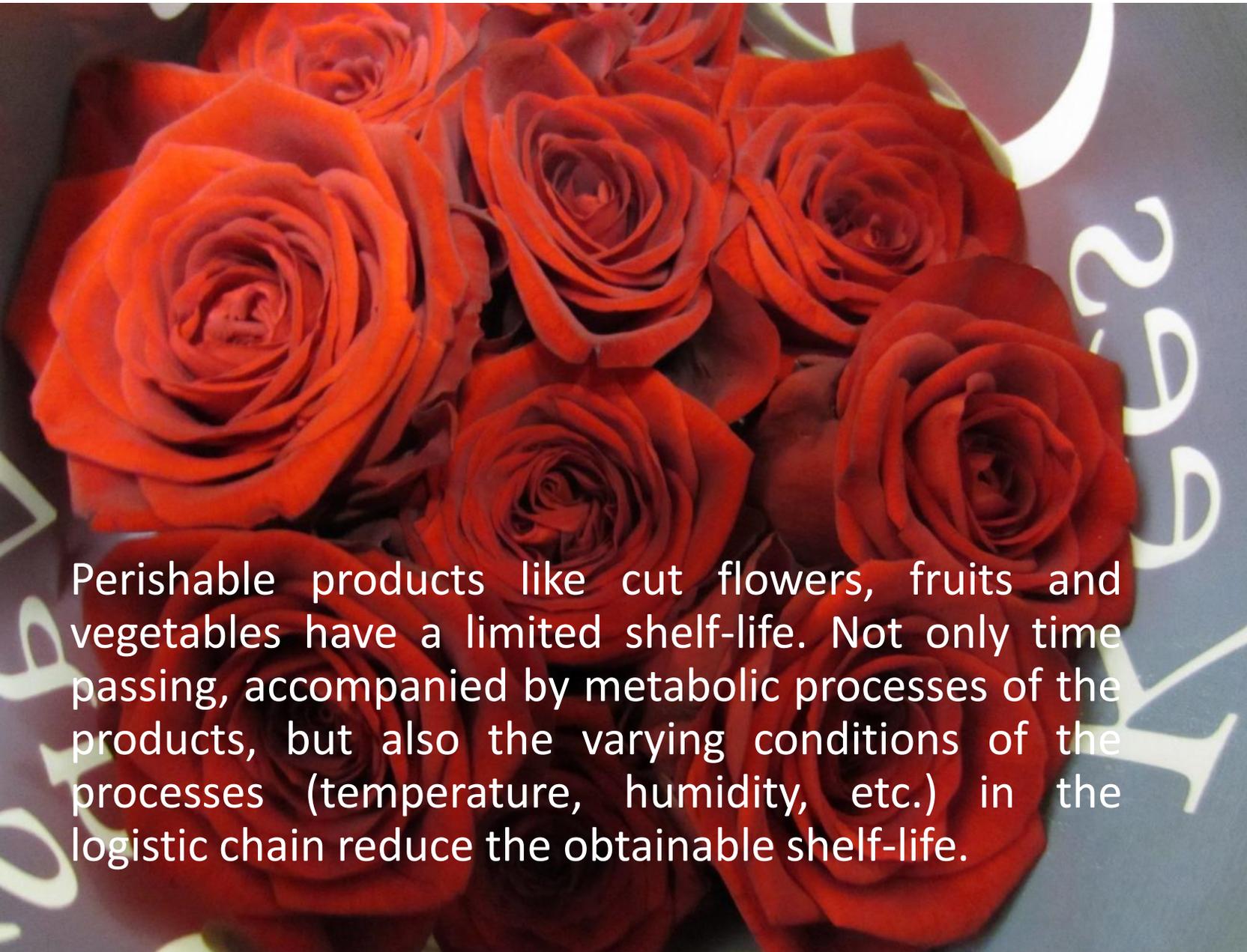# Invivo SP PP

Shelf-life prediction of perishable products

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Background

Perishable products like cut flowers, fruits and vegetables have a limited shelf-life. Not only time passing, accompanied by metabolic processes of the products, but also the varying conditions of the processes (temperature, humidity, etc.) in the logistic chain reduce the obtainable shelf-life.
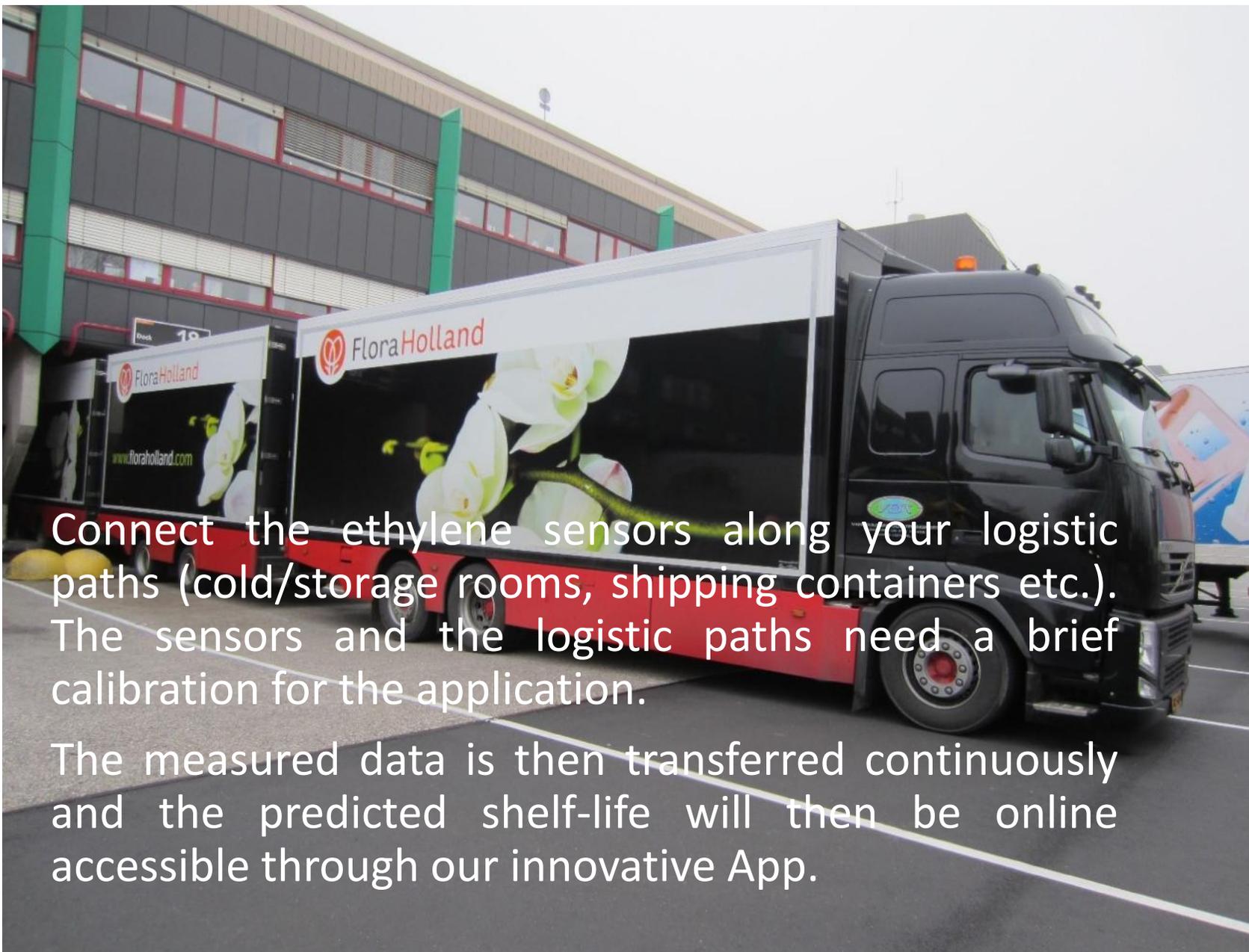
State of the Art

At the moment there exist no objective tool to predict the shelf-life of the processed products in the logistic chain on a product or charge level. Only mean values for the shelf-life of the products exist derived from previously processed products. They depend on the product, the producer and the logistic path.

This approach is vulnerable for several reasons. There is no information available about the actual products in the chain. Products with differences in the input quality are treated identically throughout the chain. This means neither the products with a high nor the products with a low quality are treated in an optimal way. And finally the shelf-life cannot be predicted on a product or charge level.

INVIVO
Institute for trace gas technology

INVIVO
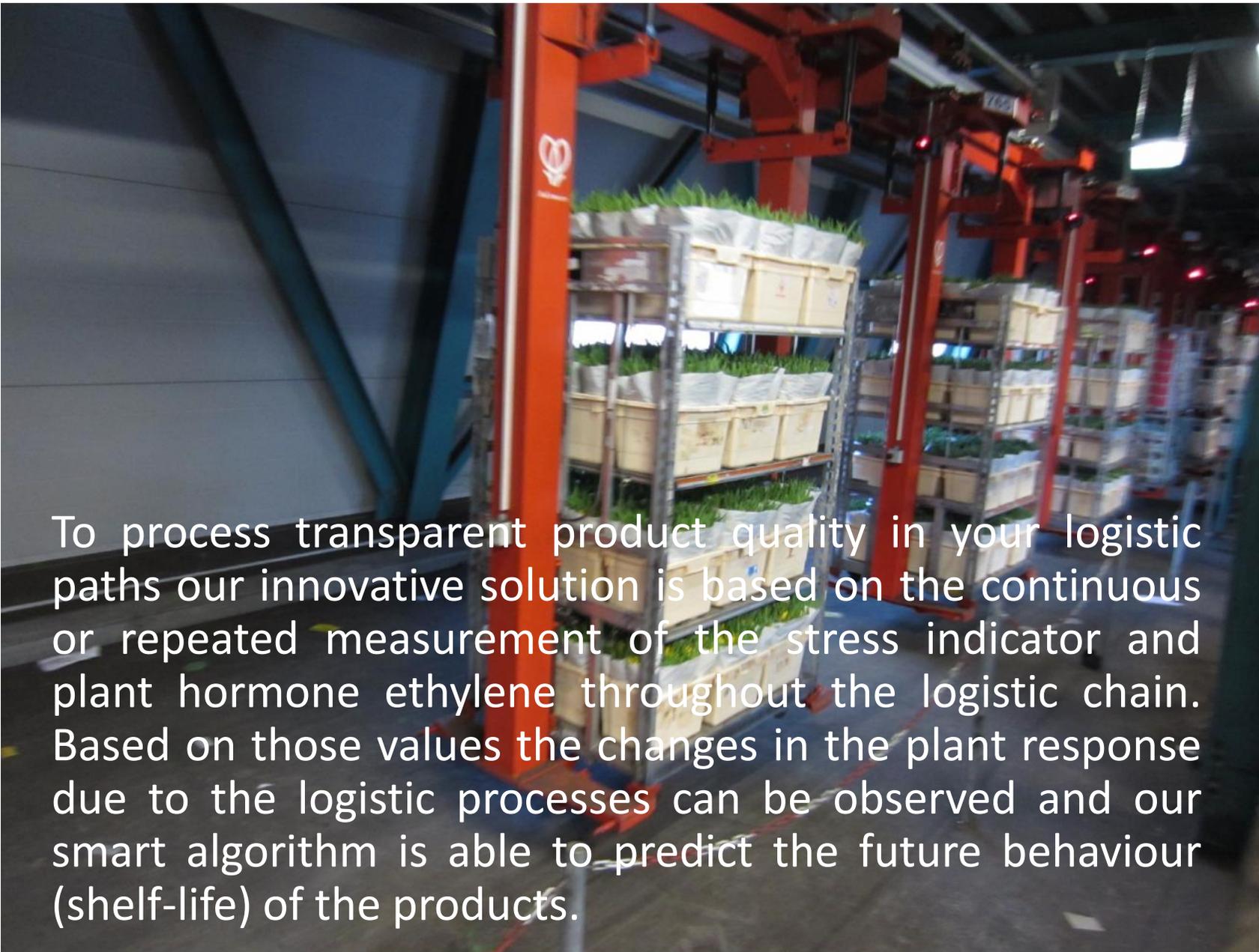Institute for trace gas technology

Innovative Approach

Connect the ethylene sensors along your logistic paths (cold/storage rooms, shipping containers etc.). The sensors and the logistic paths need a brief calibration for the application.

The measured data is then transferred continuously and the predicted shelf-life will then be online accessible through our innovative App.
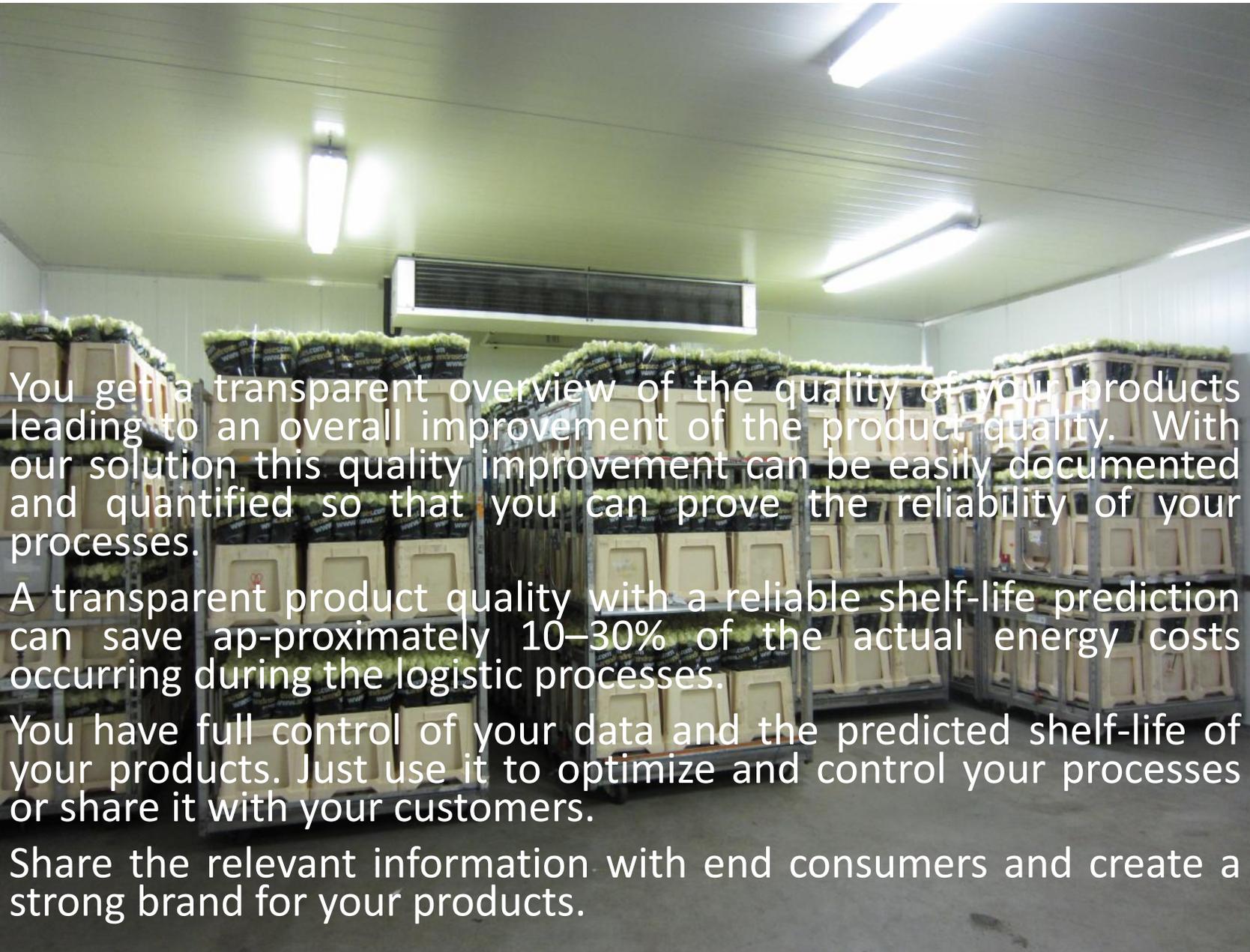
Logistics 4.0

To process transparent product quality in your logistic paths our innovative solution is based on the continuous or repeated measurement of the stress indicator and plant hormone ethylene throughout the logistic chain. Based on those values the changes in the plant response due to the logistic processes can be observed and our smart algorithm is able to predict the future behaviour (shelf-life) of the products.
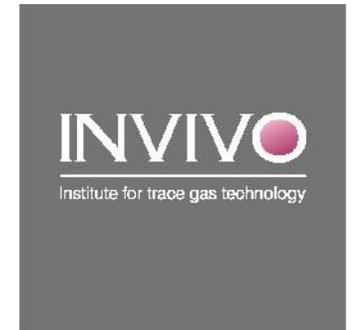
Advantages

You get a transparent overview of the quality of your products leading to an overall improvement of the product quality. With our solution this quality improvement can be easily documented and quantified so that you can prove the reliability of your processes.

A transparent product quality with a reliable shelf-life prediction can save ap-proximately 10–30% of the actual energy costs occurring during the logistic processes.

You have full control of your data and the predicted shelf-life of your products. Just use it to optimize and control your processes or share it with your customers.

Share the relevant information with end consumers and create a strong brand for your products.

Team

- Our team has more than 20 years of experience in measuring gases at trace amounts, developing new applications in all fields of life sciences. Combining the knowledge of gas sensing with modelling capabilities we can offer a completely new approach to predict the shelf-life along the complete logistic chain.

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