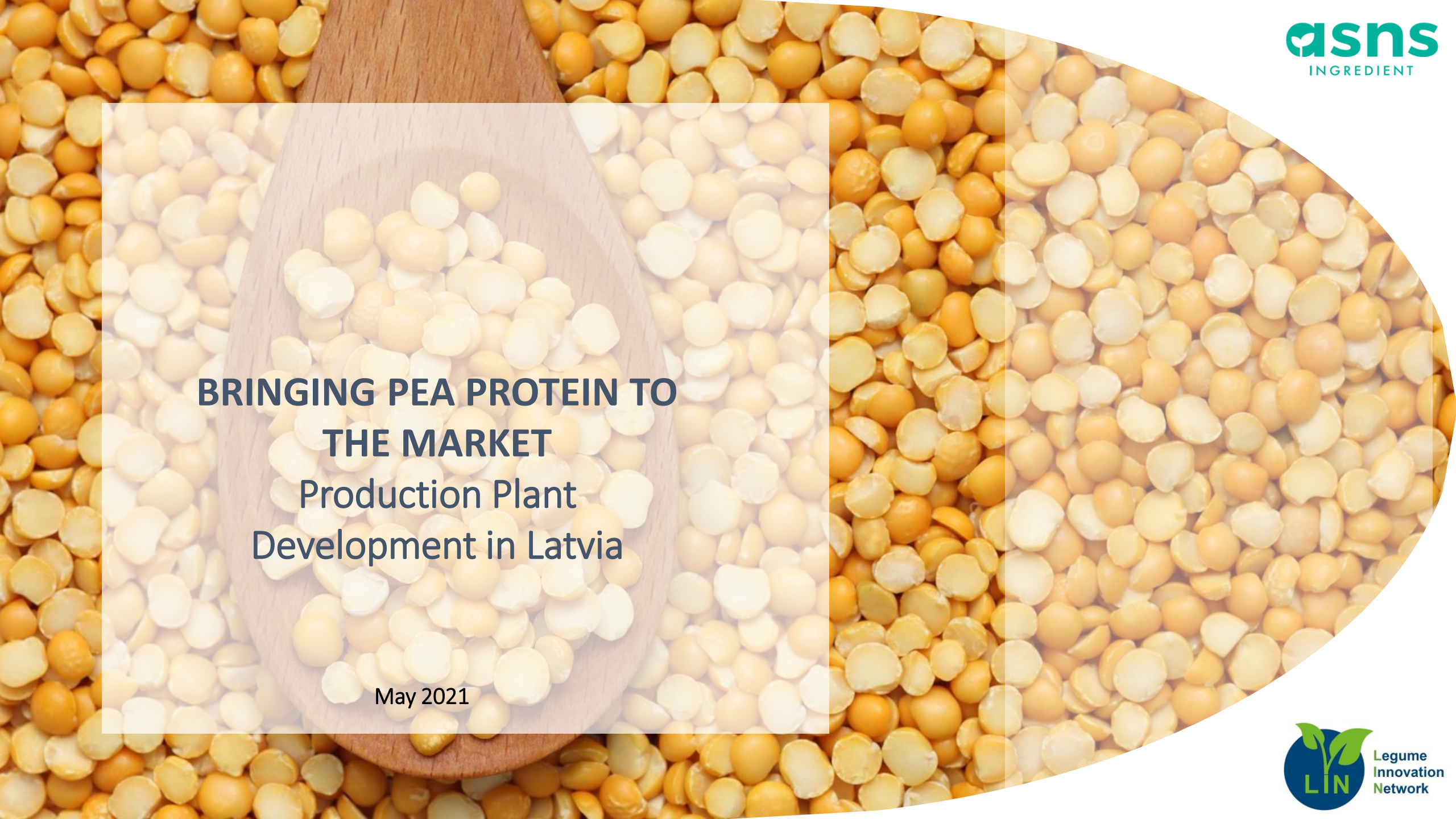


The background of the slide is a close-up photograph of yellow split peas. A wooden spoon is positioned diagonally across the center, filled with the same yellow split peas. The lighting is bright, highlighting the texture of the peas and the wood of the spoon.

BRINGING PEA PROTEIN TO THE MARKET

Production Plant
Development in Latvia

May 2021

Market Demand

Global trends towards more plant-based food will drive pea protein market growth

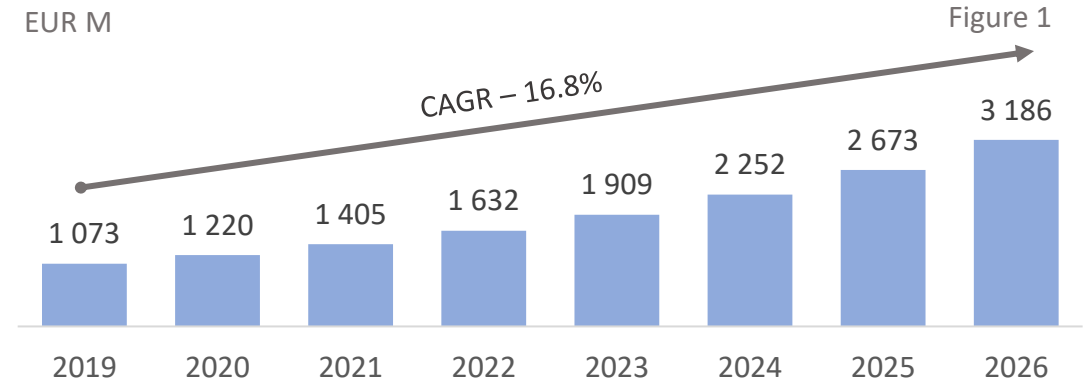
According to research, global pea protein market **revenue** is **expected to reach EUR 3'186 M by 2026, CAGR of 16.8%** over the forecast period (Figure 1).

Global pea protein market **volume** is expected to reach **1,371 thousand tons by 2026, CAGR of 16.5%** over the forecast period (Figure 2).

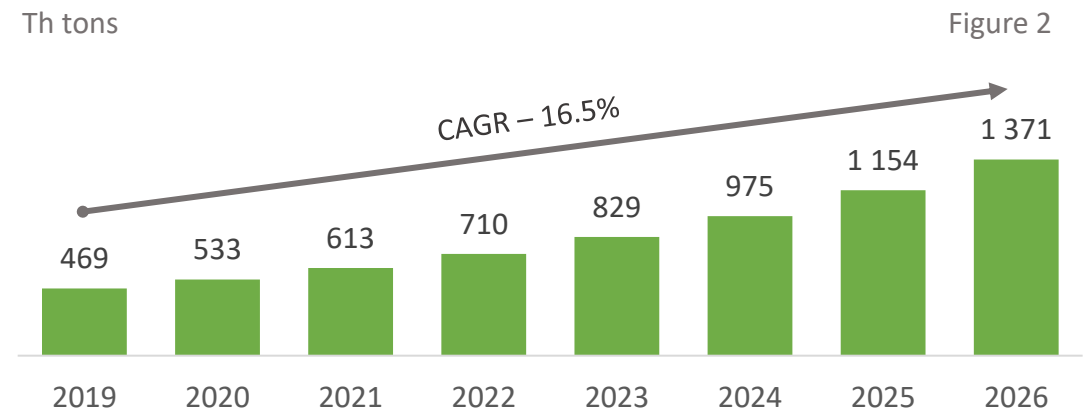
The **main demand growth drivers** are expected to be:

- **Growing demand for pea protein in various applications**, including meat substitutes, sports supplements, nutraceuticals, bakery products, and beverages.
- Growing consumer **preference towards vegetarian and vegan diets** along with **high health benefits, digestibility, and anti-allergen properties**.
- **Pea production provides various environmental benefits** such as low energy consumption, CO₂ absorption, and small water consumption.
- **Increasing consumer awareness for healthy food ingredients** and consumer trends for weight management should propel the industry growth and driving the demand for pea protein market.

Global Pea Protein Market Value Forecast



Global Pea Protein Market Volume Forecast



Project Summary

The first pea protein isolate production plant in Eastern and Northern Europe



The Project aim is to **build a production plant in Latvia** for **production of pea protein isolate and its by-products**

Latvia was chosen as the location for the new pea protein isolate plant because of:



- advantageous **geographical location**;
- **excellent growing conditions** for legumes;
- good **transportation infrastructure**;
- **competitive costs** of production.



Total required **investment is EUR 90 M**, of which 89% are investments in fixed assets, the rest – in Project setup, financing costs and working capital. The investment includes the the **R&D lab** together with Latvian University of Life Sciences and Technologies and the facilities for the **regional bioeconomy cluster**.

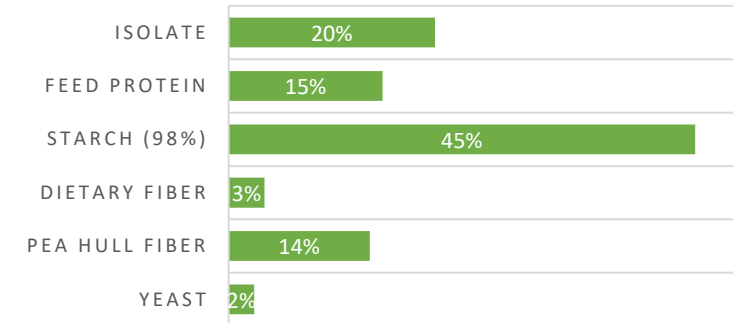


Planned **optimal production capacity is processing of 138k tonnes of peas p.a.**, which constitutes approx. 87% of total factory capacity, thus reserving a capacity buffer. Optimal capacity will be reached in 4th year of operations. The **main raw material suppliers** are expected to be **LATRAPS farmers**.



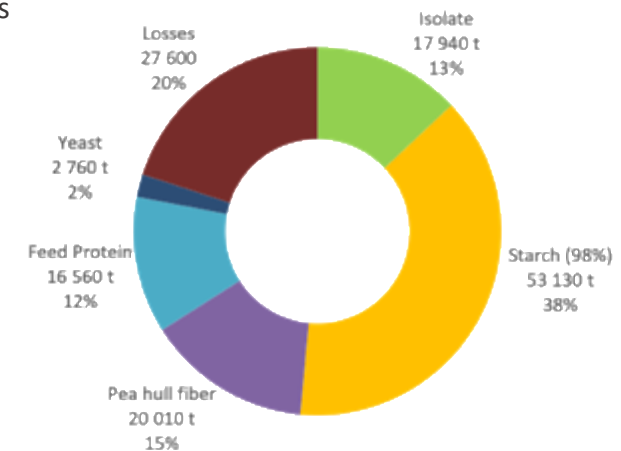
The **innovative production process was designed based on the industry's best technological practices**, project team's knowledge, and in collaboration with innovative technologies producer Buhler's (Switzerland).

END PRODUCTS



Planned optimal production output

Th. tons



Project Developers

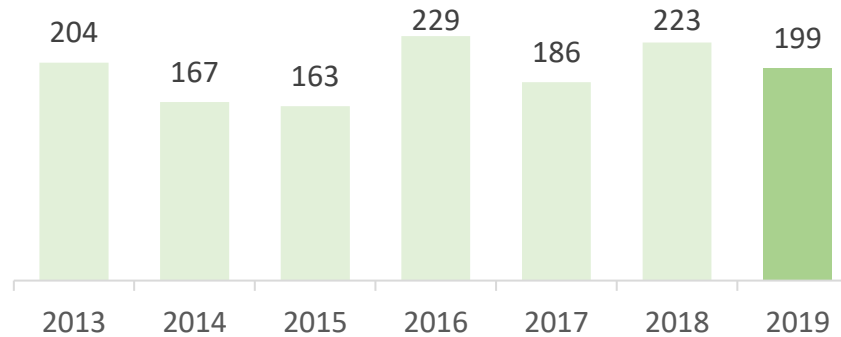
LATRAPS and VAKS the largest cooperatives in Latvia uniting more than 1600 farmers



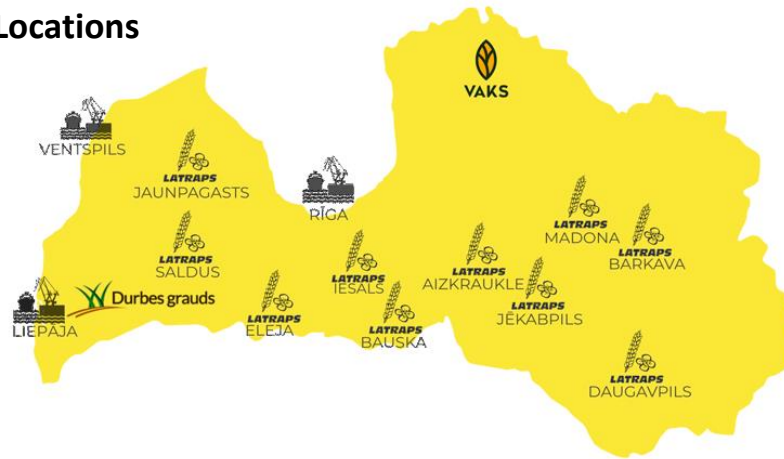
- Pea project initiator and owner **LATRAPS is the largest agricultural company in Latvia, comprising more than 1,000 farms** from all regions of Latvia.
- LATRAPs is the **4th largest exporter of grain in Europe**. LATRAPs exports grain products to more than **30 countries** around the world.
- LATRAPs owns **nine grain logistics and pre-processing service centers** throughout Latvia and **one malting plant**. Various grain acceptance plants enables LATRAPs members to engage in crop production in various regions Vaks and Durbes grauds are long-term cooperation partners.

LATRAPS Turnover

EUR M



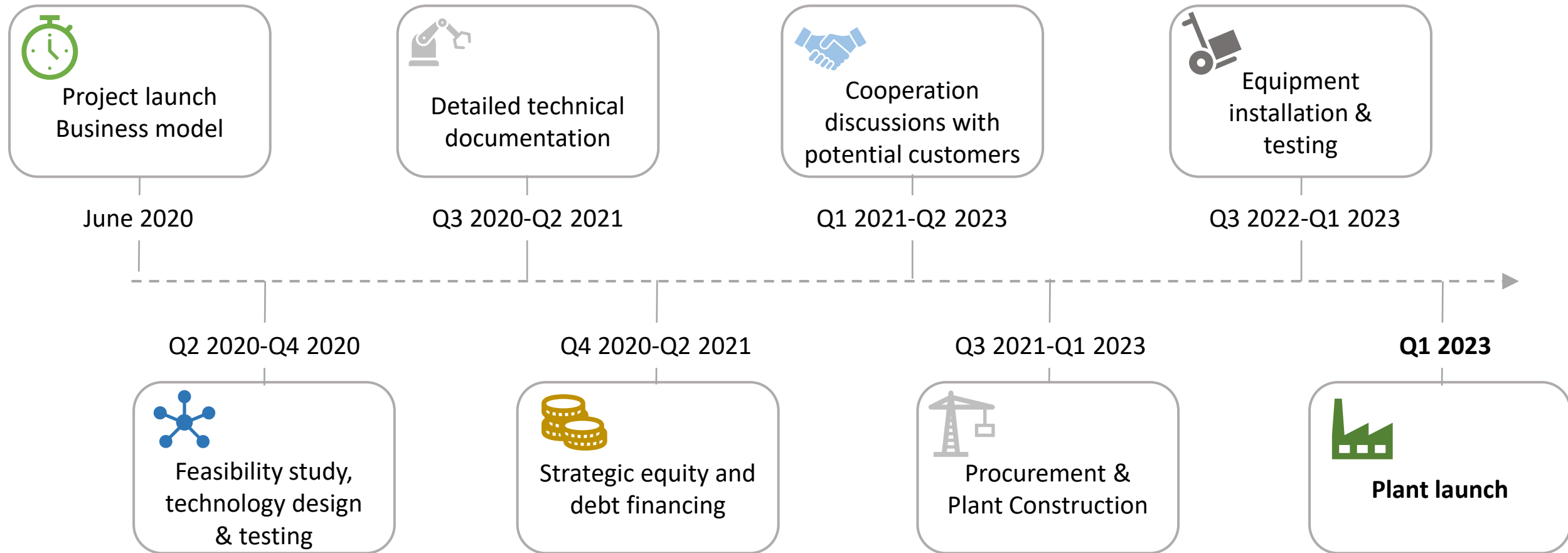
Locations



- **VAKS is the second largest** agriculture cooperative in Latvia uniting more than **600 farmers**.
- The turnover of VAKS has grown from **EUR 57 M in 2018 to EUR 80 M in 2019**.
- **VAKS owns four grain logistics centres**, mostly in the Eastern part of Latvia.
- **80% of the produced grain** is exported via VAKS sales channels.

Project Timeframe

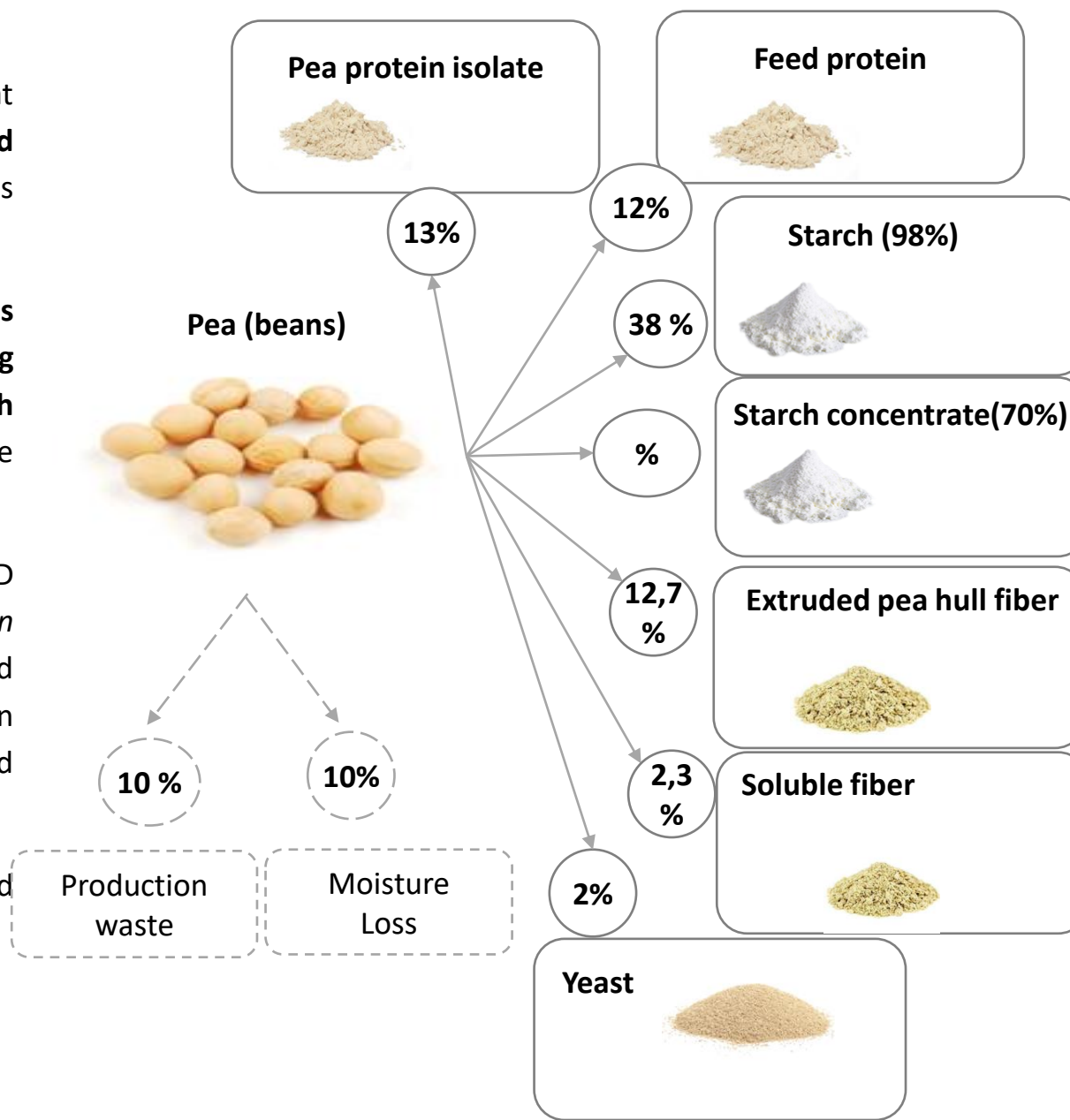
Launch of the new pea protein isolate plant is planned in Spring 2023



Production Technology

Efficient and tested

- The planned technology is very efficient – it is planned that **80% of the main raw material (peas) can be transformed into end-products**, 10% is moisture loss and 10% is production waste.
- All of the **end-products have been already produced as samples in pilot-scale and full-scale manufacturing processes** and **tested in certified laboratories after each technological alteration** to see if the products meet the prescribed standards.
- **Tests were performed in several laboratories:** in R&D company *Improve* (France), in laboratory *Bilacon* (Germany), at technology producer *Buhler* (Germany), and at R&D and manufacturing company *Hamilton*. Production has been designed and adjusted to get the needed nutritional balance in each product.
- Some of the **world leading food companies** have received the samples and expressed firm interest.



SWOT Analysis

Strengths

- **Location and raw material availability.** One of the main strengths is the **close partnership with Latvian farmers** that will ensure large part of raw material, and the **possibility to cover the rest of the supplies within 400 km (Lithuania, Estonia).**
- Excellent legume growing conditions, **high yields, high quality.**
- **Professional and experienced project team** with deep knowledge in the product development, market, and technology.
- **Flexible technology** that can be used for other plant products, i.e. peas and beans.

Opportunities

- Having **no competition in the region and being close to Northern Europe**, which is a wealthy region with a high demand for high-quality, healthy foods & beverages, paying significant attention to sustainable and environment conscious production.
- **Fast growing demand for plant-based products** in typical animal-based industries (meat, dairy products) and gluten-containing foods.
- Develop **the biotechnology cluster in Latvia** and enhance the bio food and feed industry in the region.

Weaknesses

- **The domestic market is limited and less attractive.** The local market size is small and prices comparably low, therefore it is necessary to look to global partners.

Threats

- As many companies have noticed the attractiveness of the market, **other companies could decide to also open a production plant in Eastern Europe.**
- As **harvest is dependent on weather**, it can decrease the yield and increase the price of the main raw material.
- **Timeframe of the project**, the production plant will be ready only after 2 years, and during that time there might be changes.
- **Product substitutes and new food innovation**

Contacts

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