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Real-time Silo Dashboard

Presented by
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Summary

Tom Wassink

Graduated IEM

RUG

Sept 2009

EY

Oct 2009

IT-auditor

Production planner

Avebe

Jan 2012

Dec 2012

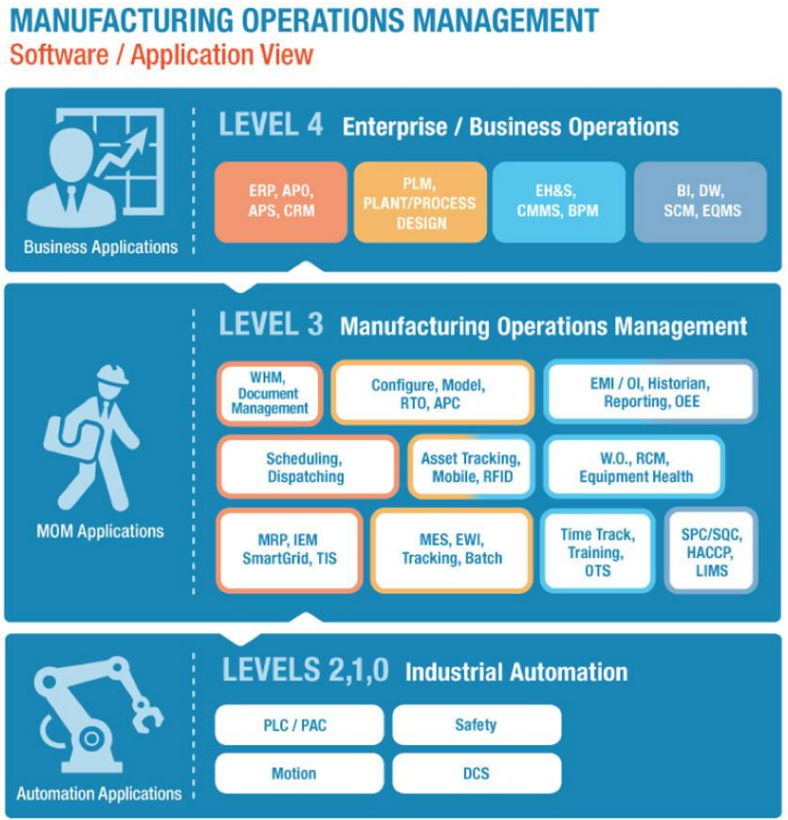
S&OP planner

IT engineer

Jun 2016

Innovation by nature

Manufacturing IT



ICT

Manufacturing IT

Innovation by nature

Avebe Factory4.0
Operations Strategy 2017 – 2023 - 2028

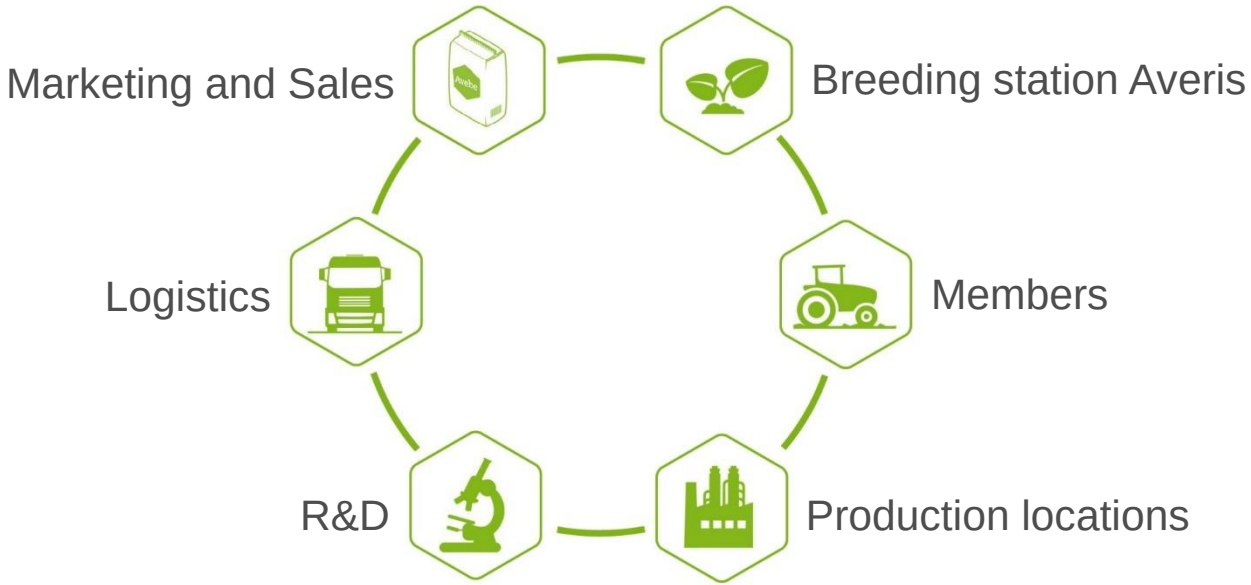
Avebe Factory4.0 – Business Drivers

- Create a step change in the plant from average performance to **World Class Predictable Excellence**
  - Reduce operating costs
  - Reduce utilities usage
  - Reduce quality costs
  - Increase capacity
  - Increase throughput and yields
  - Reduce business risk

About us

- Global leader in **potato starch & proteins**
- Founded in 1919
- An international farmer’s cooperative with over 2.500 members and a worldwide customer base
- Exceptional in R&D and innovation based on potato starch, starch derivatives, proteins and fibres

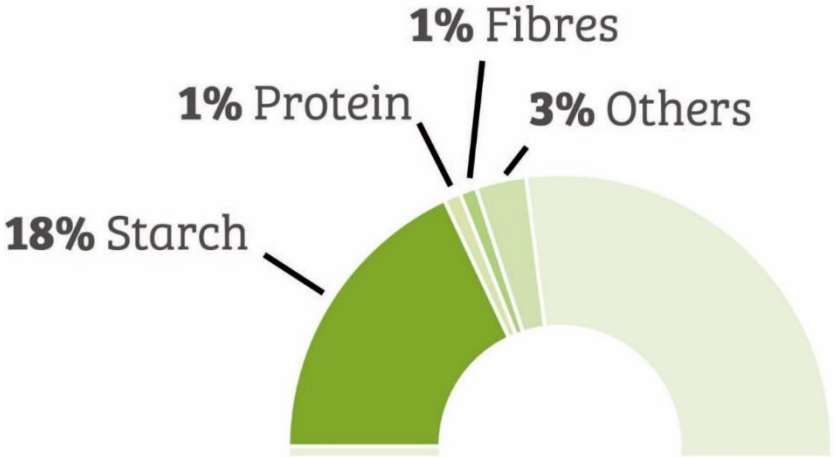
Value Chain Control



Key figures

Year	2015/2016
Net turnover (in millions of Euro's)*	**548,60**
Performance price (EUR/ton)*	**77,10**
Solvability	**48,8%**

Ingredients of the potato

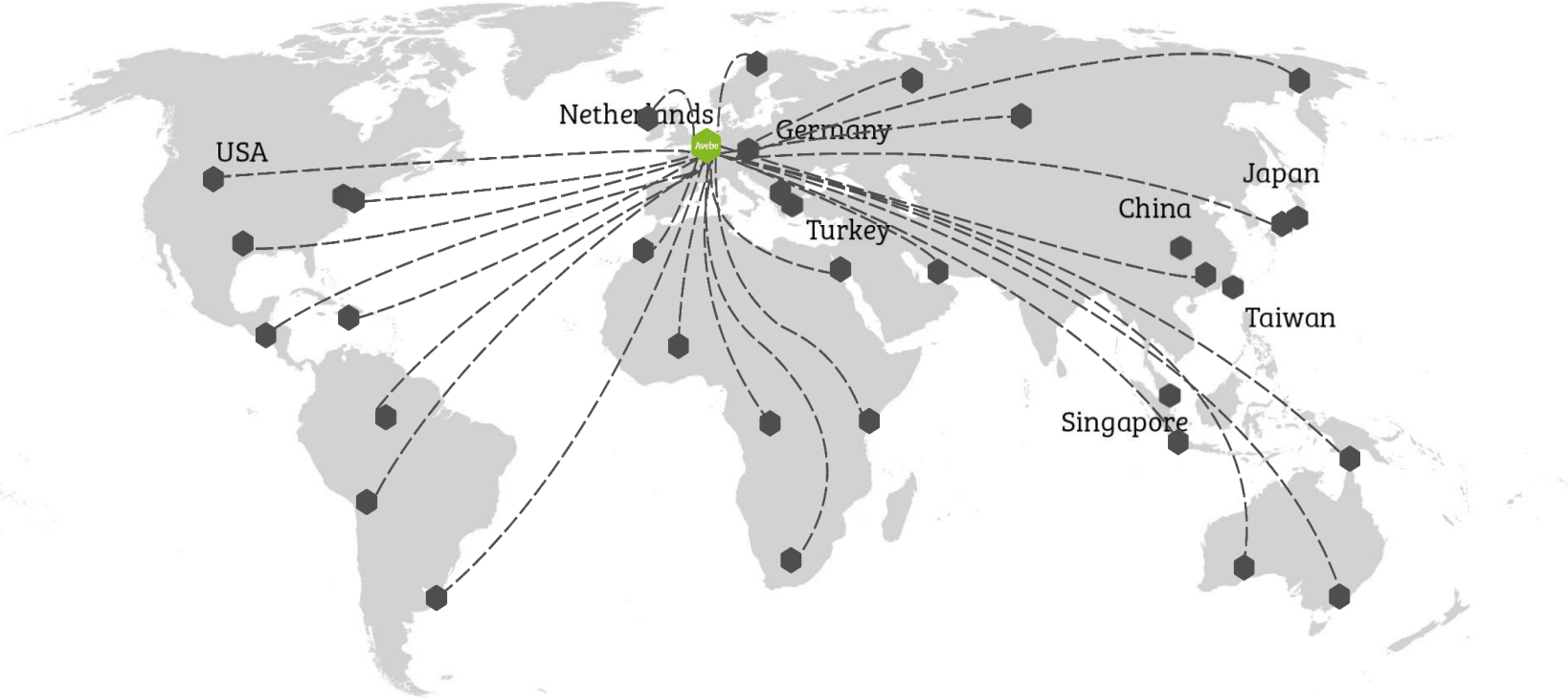


We extract all valuable ingredients of the potato

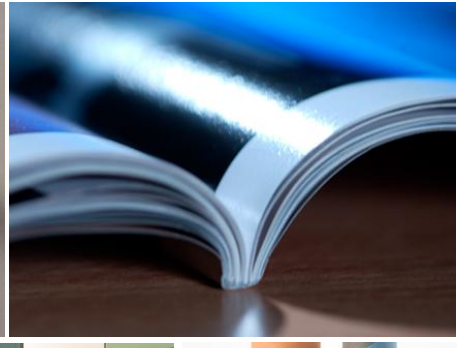
Production locations

Sales offices

Customers


Netherlands
Germany
USA
Japan
China
Turkey
Taiwan
Singapore

Major player in the Food industry



Innovation by nature

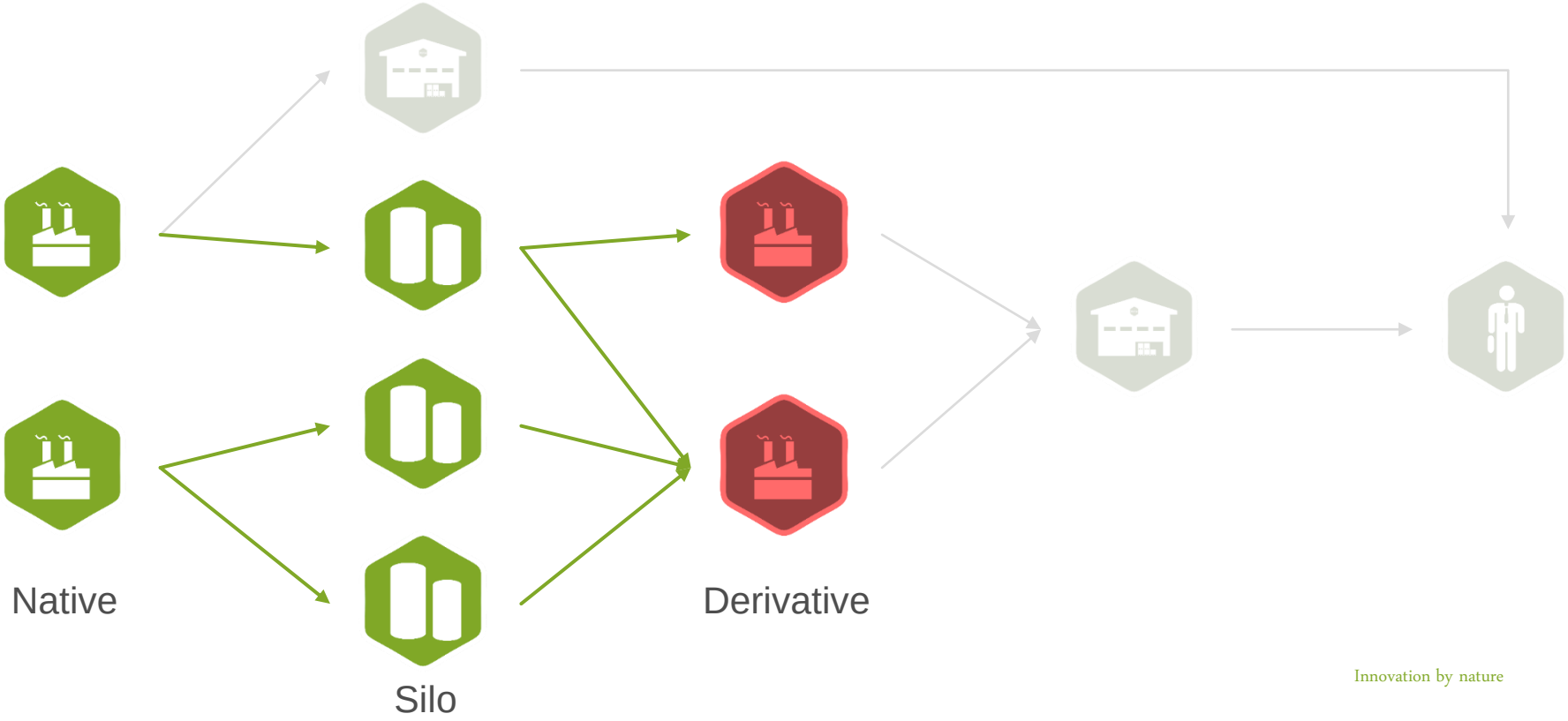
Business challenge

Starch logistics

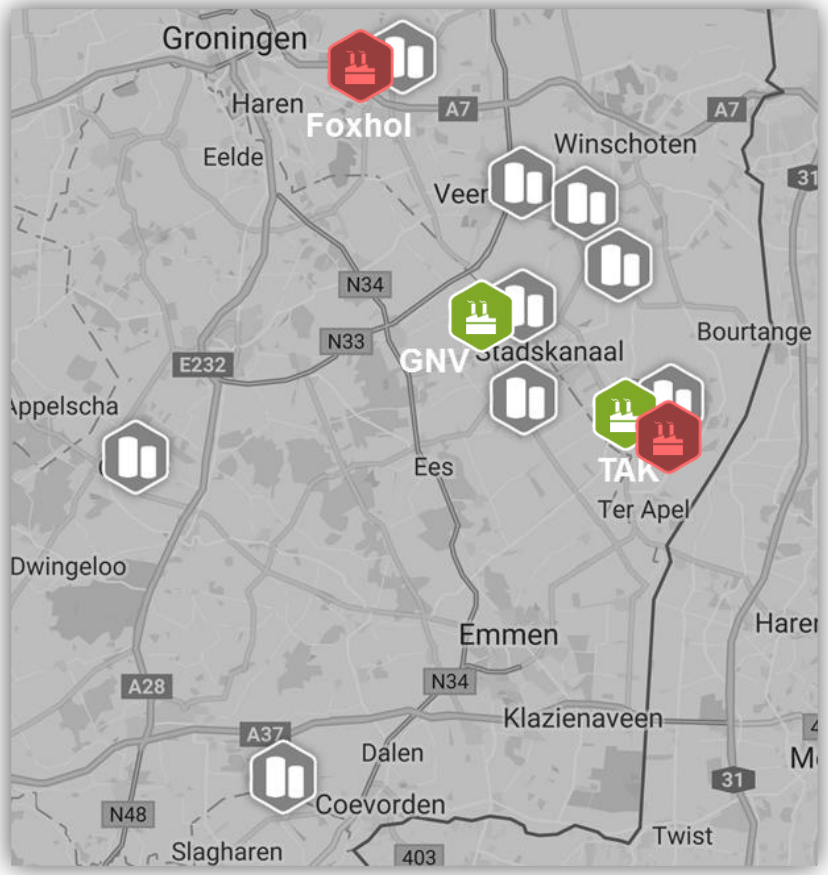
Native

Starch logistics

Starch logistics



Starch silo’s



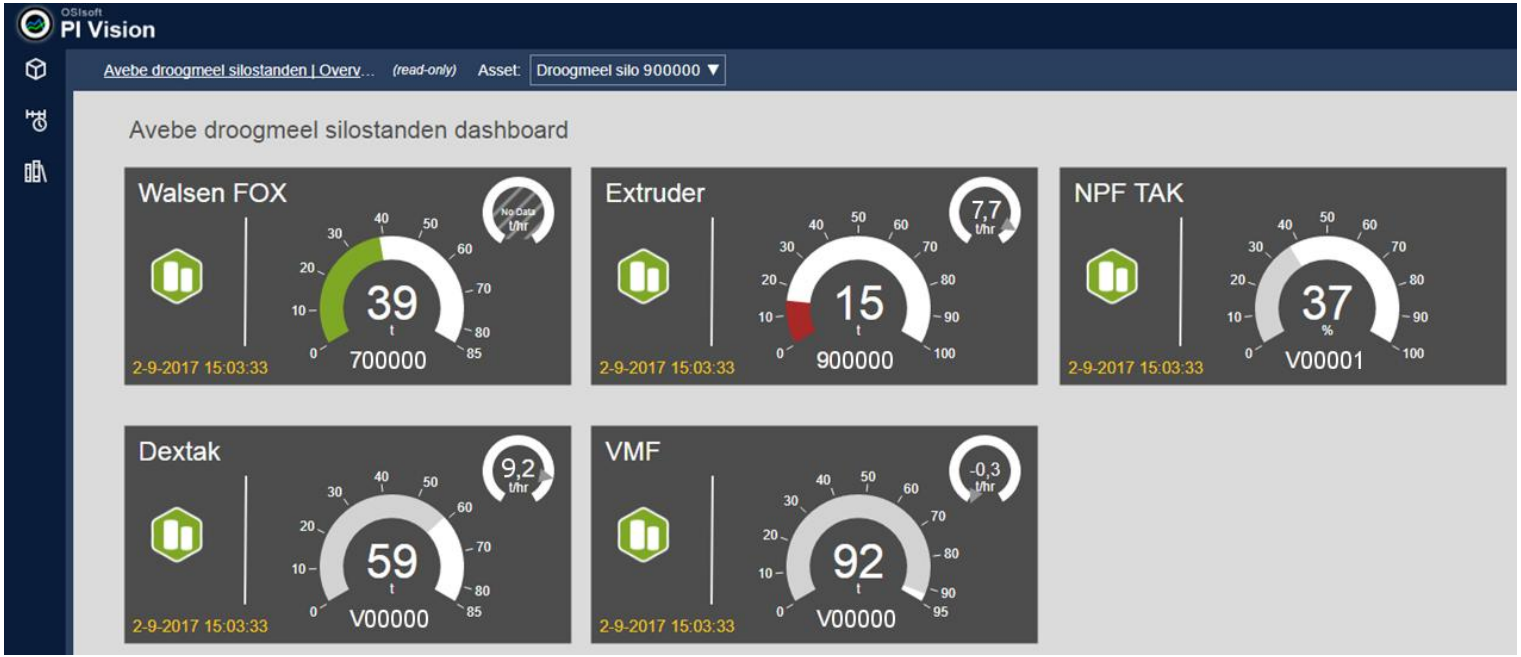
Silo planning

Information available for planning

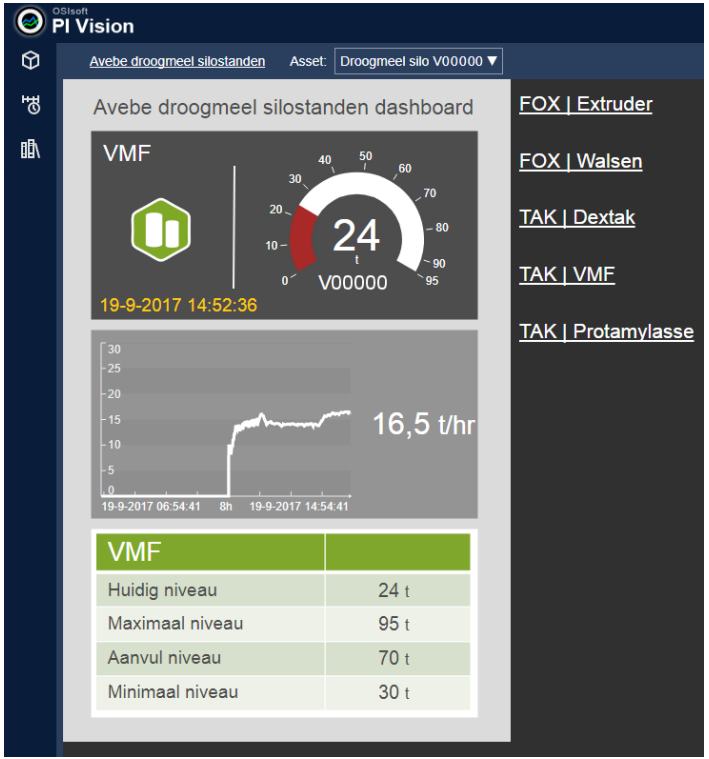
How to optimize silo planning?

Solution with PI System

PI Vision dashboard – Overview

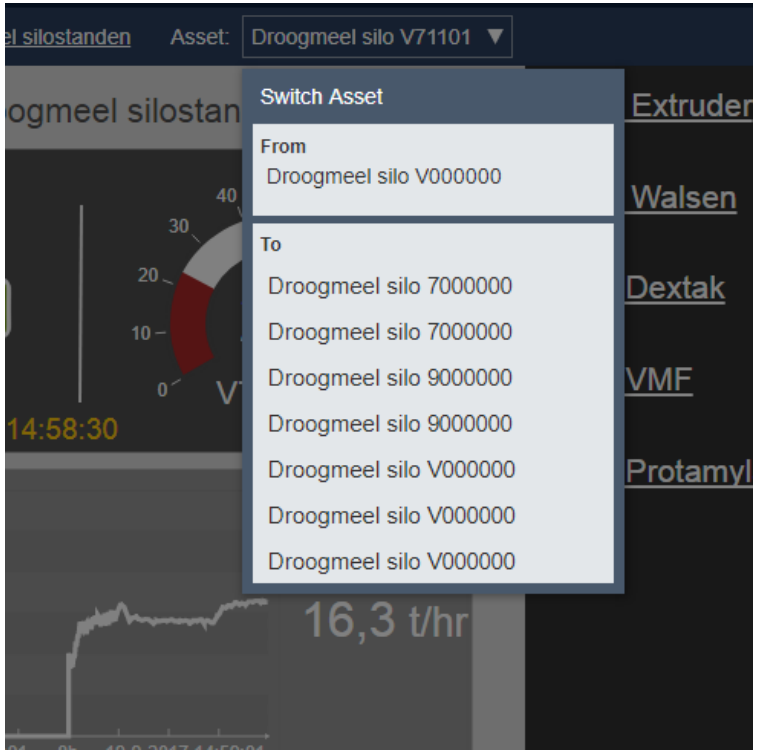


PI Vision dashboard – Detailed view



Detailed view for use on mobile phone

PI Asset Framework



PI Asset Framework used to create the dashboard:

- **quickly**
- **consistent**
- **easy to adapt**

PI Asset Framework – Element template

Dry Starch Tank

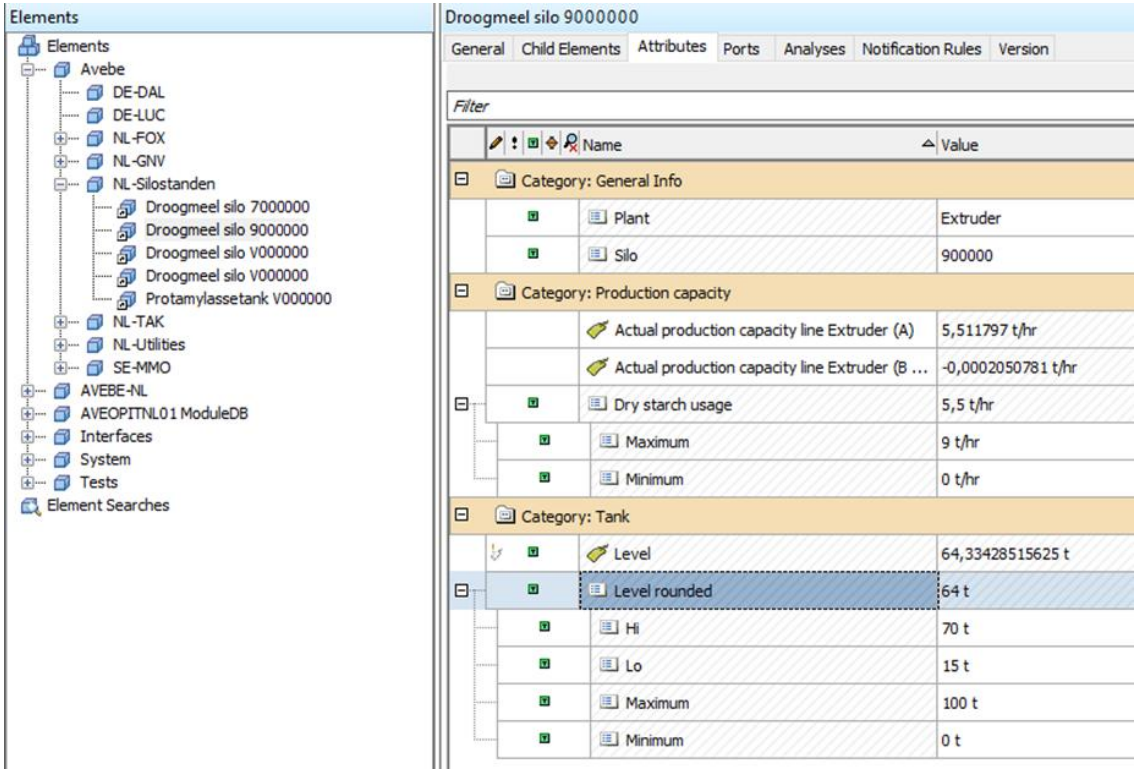
General | Attribute Templates | Ports | Analysis Templates | Notification Rule Templates

Filter

Name	Description	Default Value
Category: General Info		
Plant		
Silo		
Category: Production capacity		
Dry starch usage	Current dry starch usage for the production li…	0 t/hr
Maximum		100 t/hr
Minimum		0 t/hr
Category: Tank		
Level		0 t
Level rounded	Level rounded is to round to the nearest integer	0 t
Hi		80 t
Lo		20 t
Maximum		100 t
Minimum		0 t

Dry starch tanks are elements based on a template

PI Asset Framework – Element



Dry starch usage determination depends on production line

Business impact

Business benefits

“We do not have to call the operators all the time”

Innovation by nature

Real-time silo dashboard

COMPANY and GOAL

Coöperatie Avebe U.A. is an international Dutch starch and proteins manufacturer, and wanted to reduce the risk of **downtimes** and increase the silo planning **efficiency**

CHALLENGE

The transport company has to make a starch shipment planning such that all factories can continuously operate

- The current sources of information were phone calls with operators and manual readings of silo levels

SOLUTION

A real-time silo dashboard for the planners. The dashboard gives the planners information of the current silo levels of each derivative factory

- The dashboard is developed with PI Vision and makes use of the advantages of the Asset Framework.

RESULTS

Reduction of the risk of downtime due to empty starch silos and more efficient starch shipment planning

- e.g. start cleaning the trucks when all silos are full

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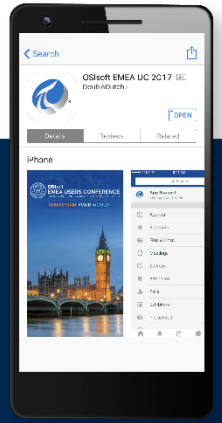
Questions

Please wait for the **microphone** before asking your questions

State your **name & company**

Please remember to…

Complete the Online Survey for this session



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감사합니다

Danke

谢谢

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado

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