

The logo features the word "AVEVAWORLD" in a bold, white, sans-serif font. The letter "E" is stylized with three horizontal bars. The background is a dark purple gradient with glowing cyan and magenta diagonal lines forming a diamond pattern.

**AVEVAWORLD**

**ACCELERATE INDUSTRIAL INTELLIGENCE**



**HEIDE  
REFINERY**



**AMITEC**

**Connect with us at Booth S5**

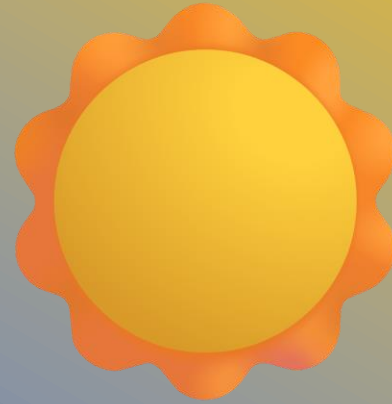
# Exporting energy - generating revenue

The export is running... The price looks good...



# Until the sun comes out

And market prices drop...



Exporting Energy

Also Exporting Energy



Higher Supply  
Constant Demand  
→ Lower Prices



# Visibility enables Actions

**Before**

**After**



Missing Data



Integrated Data



No Awareness



Visibility



No Action



Better Decisions

**You can only optimize what you can see**



HEIDE  
REFINERY

The background of the slide is a dark, teal-tinted photograph of an offshore oil rig at sea. The rig is silhouetted against a lighter, hazy sky. The foreground shows the dark, choppy surface of the water.

AMITEC

**From Data to Decisions**

How Integrated Data and Flexible  
Visualization Drive Sustainable Efficiency

# Speakers Today



## **Andreas Asmus**

- IT Application Specialist at HEIDE REFINERY since 2015
- B.Sc. EE & IT
- Aveva PI Administrator at Heide Site
- Focus on technical and operational software systems



# Speakers Today



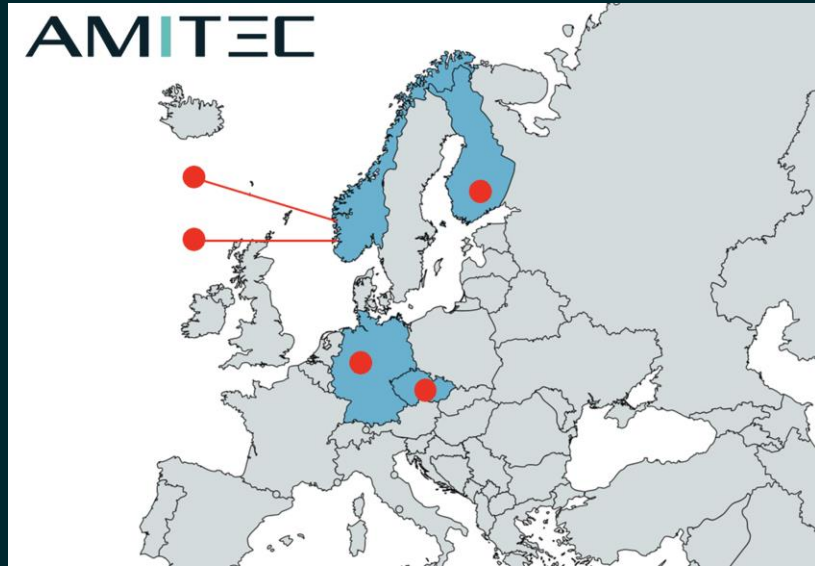
## **Markus Schimper**

- Data Analytics Engineer at AMITEC since 2021
- M.Sc. Computer Science
- Transforming (PI) data into structured analytics
- Passionate about connecting OT data with business value

# Agenda

- 
- Company Overview
  - System Platform
  - Energy and Weather Data in PI
  - Power Plant Optimization
  - Monitoring Operations in PI Vision
  - PI Vision Suite
  - Energy Management System
  - Outlook

# AMITEC - Your Partner for Industrial Digitalization



**1994**  
Founded

**80+**  
Experts

**10+**  
Languages



## Services

PI Infrastructure  
Analytics

## Support

Maintenance  
Security

## Products

Digital Solutions  
Capabilities

## Development

Custom Apps  
Integration

# Heide Refinery - Energizing the North



4,5 Million tonnes/year total capacity



490 Employees



46,5 MW Electricity from own Power Plant



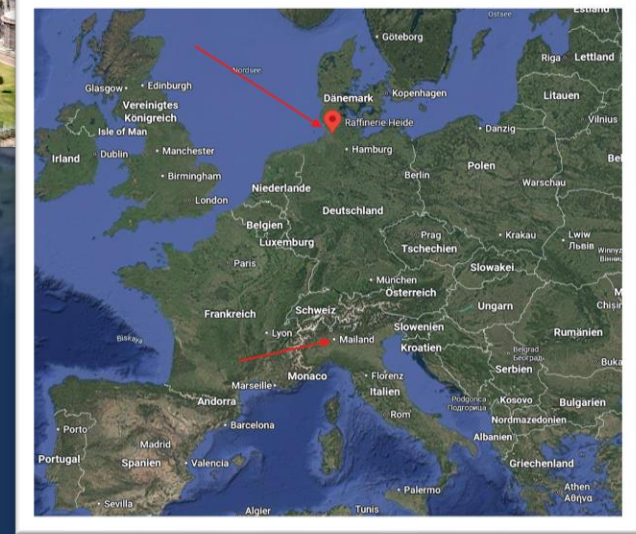
32 million euros investment 2024  
3,7 billion euros turnover 2024



80 years processor of crude oil from global and domestic sources



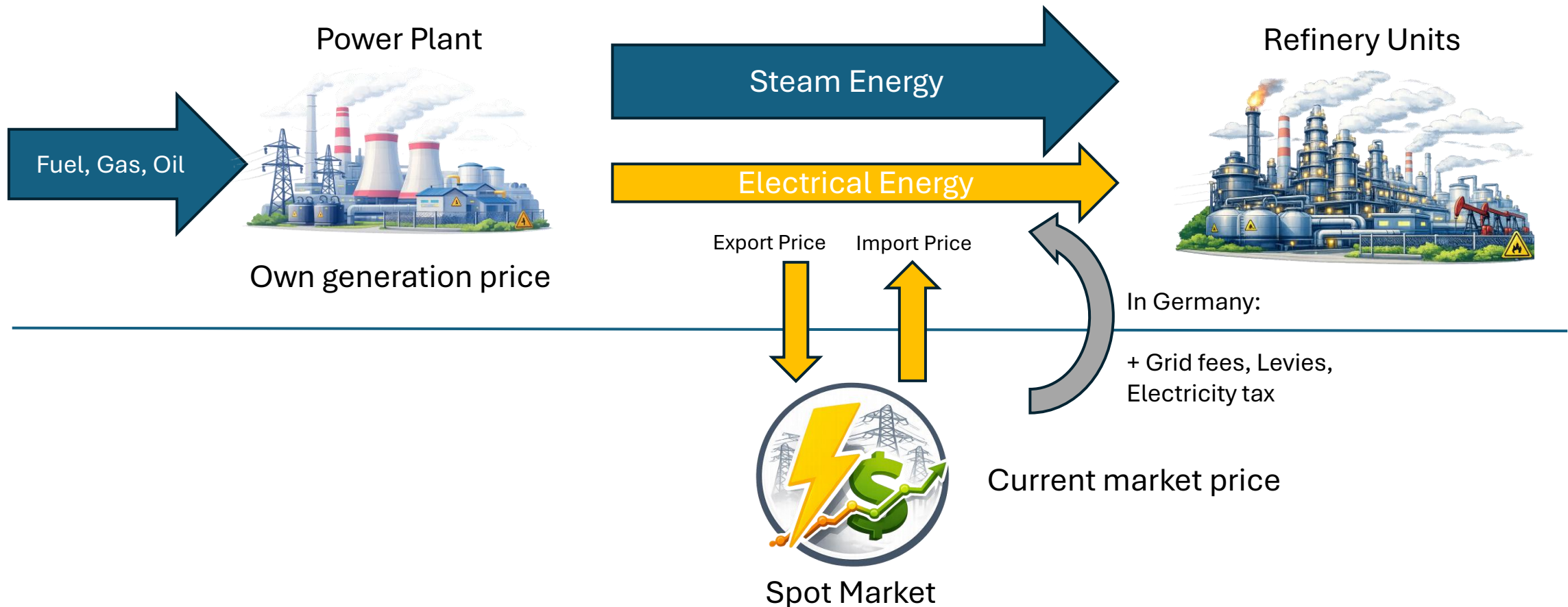
Member of the Klesch Group since 2010



HEIDE  
REFINERY

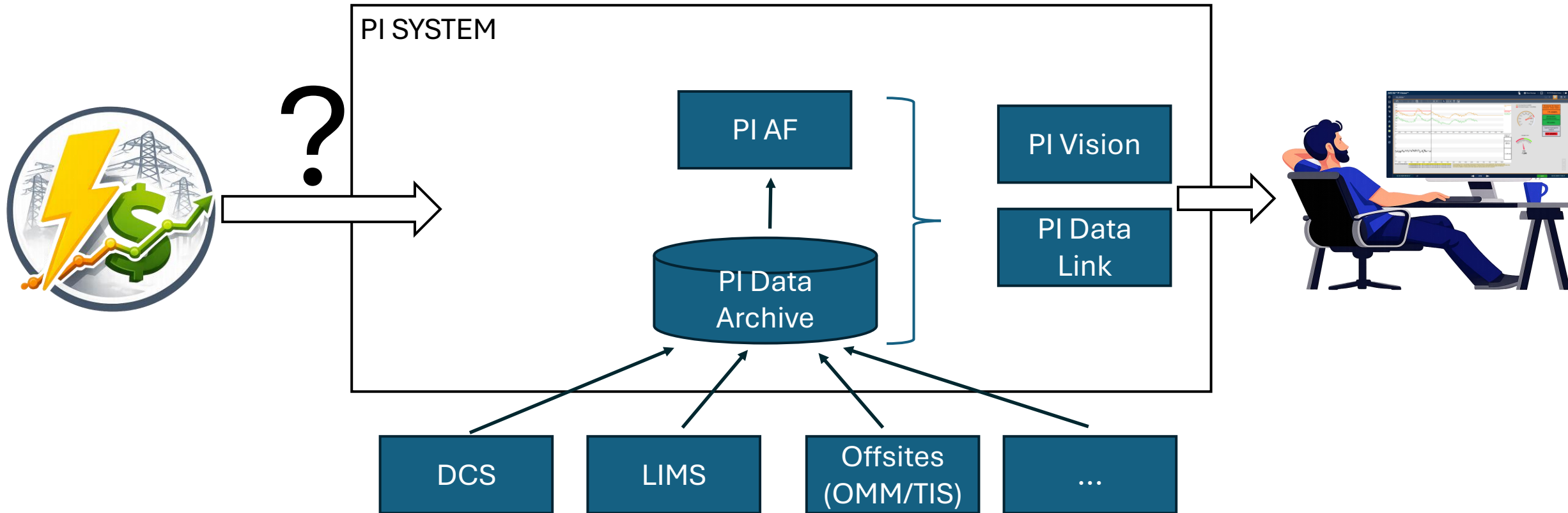


# Simplified Overview of Power Plant Optimization

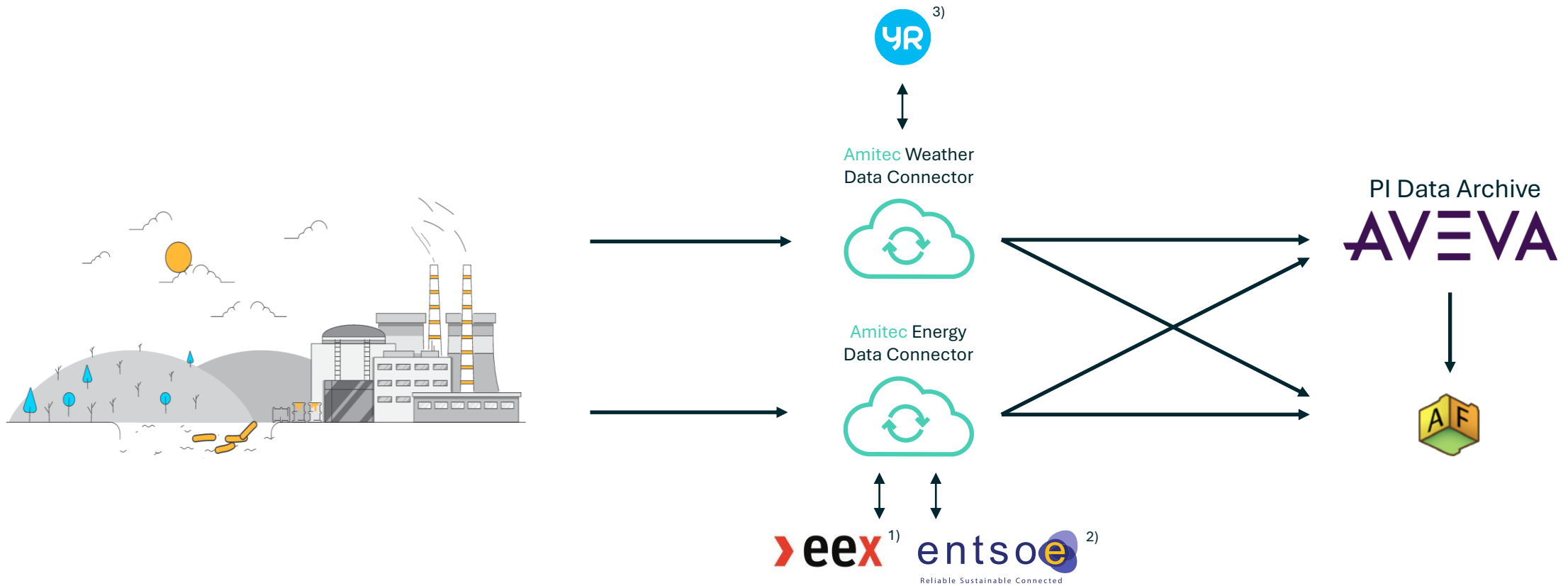


Images generated with AI

# PI System Heide Architecture Overview

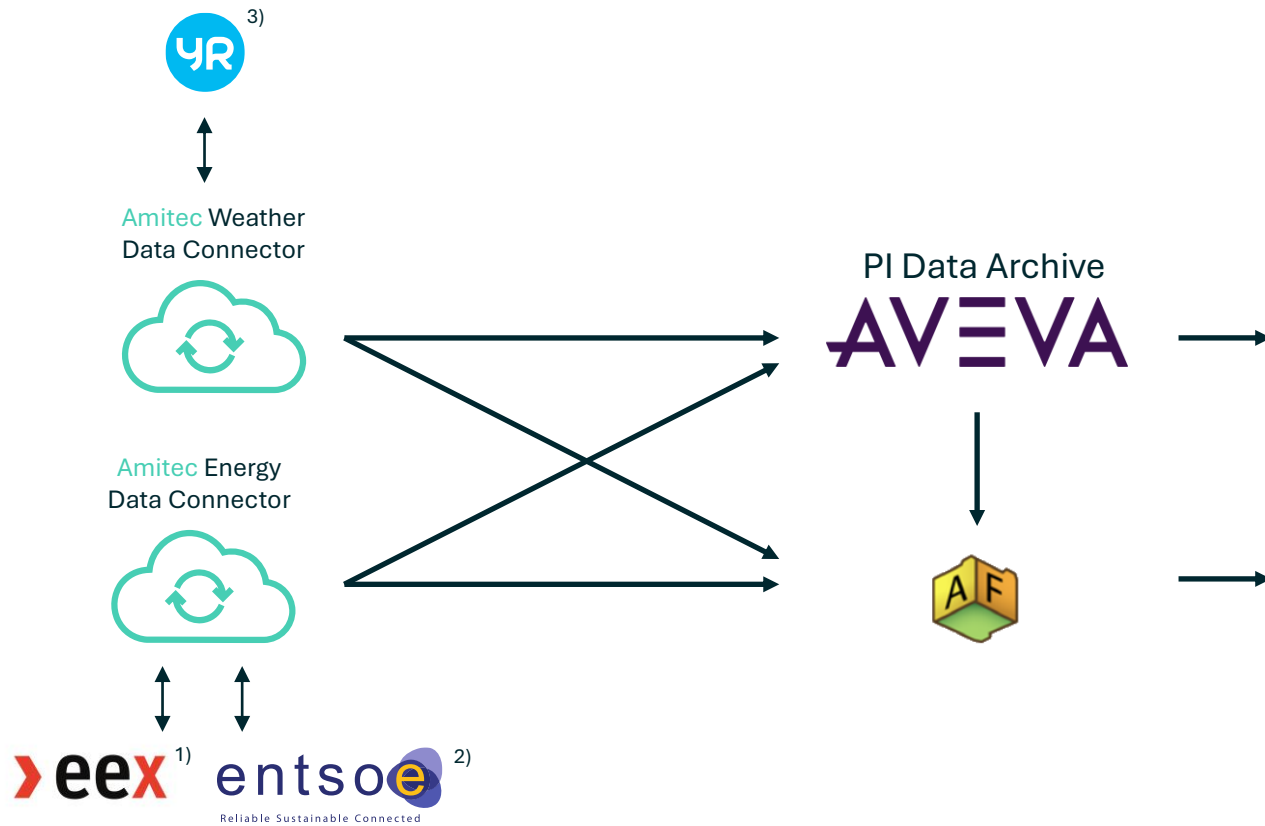


# Energy and Weather Data in PI



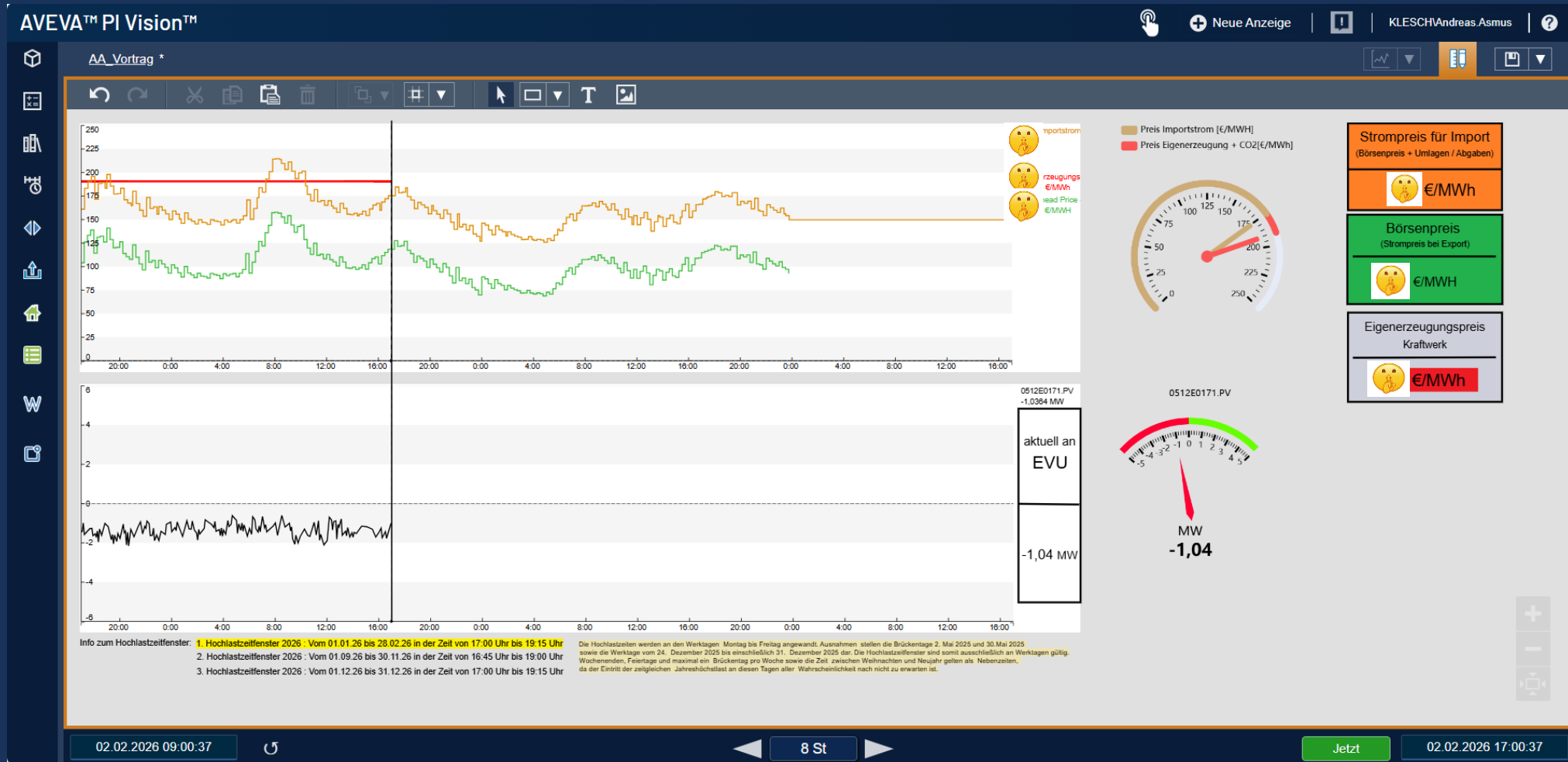
1) Source: EEX (European Energy Exchange)  
2) Source: ENTSO-E (Transparency Platform)  
3) Source: Yr.no API (MET Norway)

# Energy and Weather Data in PI



1) Source: EEX (European Energy Exchange)  
 2) Source: ENTSO-E (Transparency Platform)  
 3) Source: Yr.no API (MET Norway)

# Market-Based Power Plant Dispatch Optimization



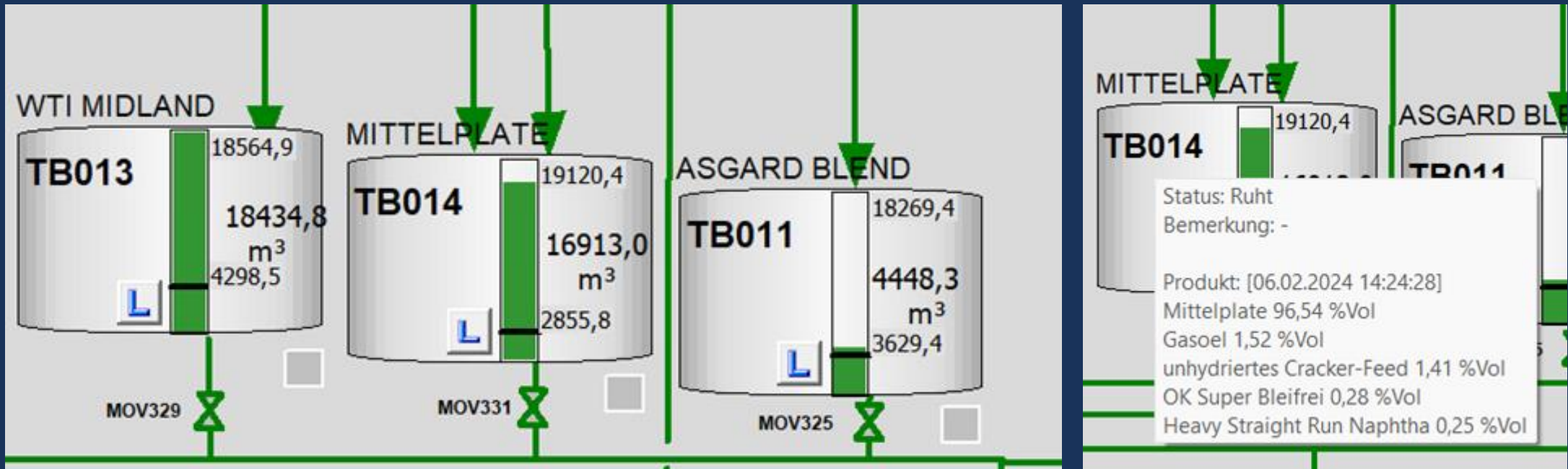
# Results & Business Impact

- **Economic improvement of about 100%** (optimized operation vs. baseline)
- Small integration effort, very high business impact
- No automation required — transparency only
- Data visibility influences operational decisions directly

**This project did not change the plant -  
it changed the decisions people make!**

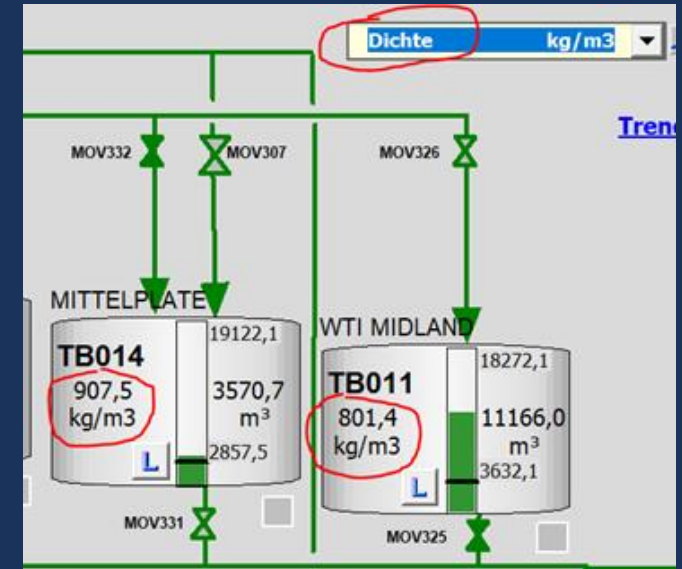
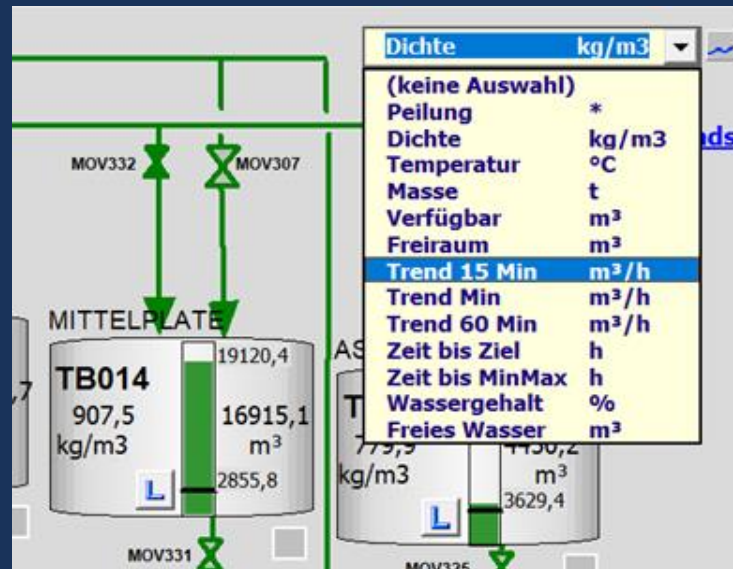
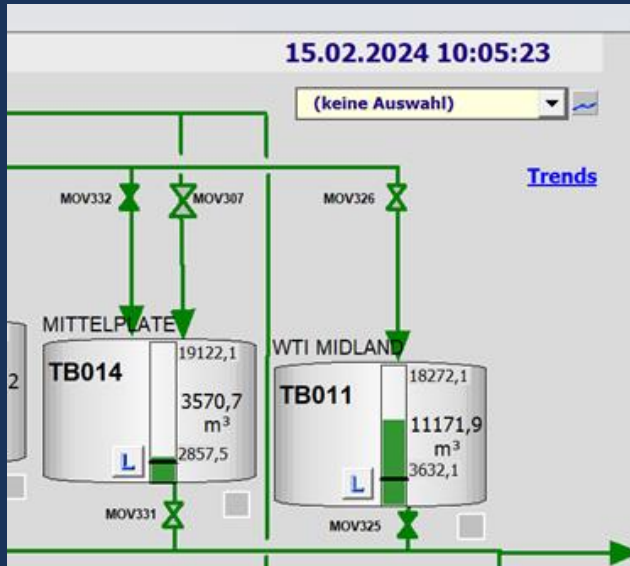
# From Process Book to PI Vision with Amitec

- Custom Functionalities in Process Book (VBA Code + ModuleDB)

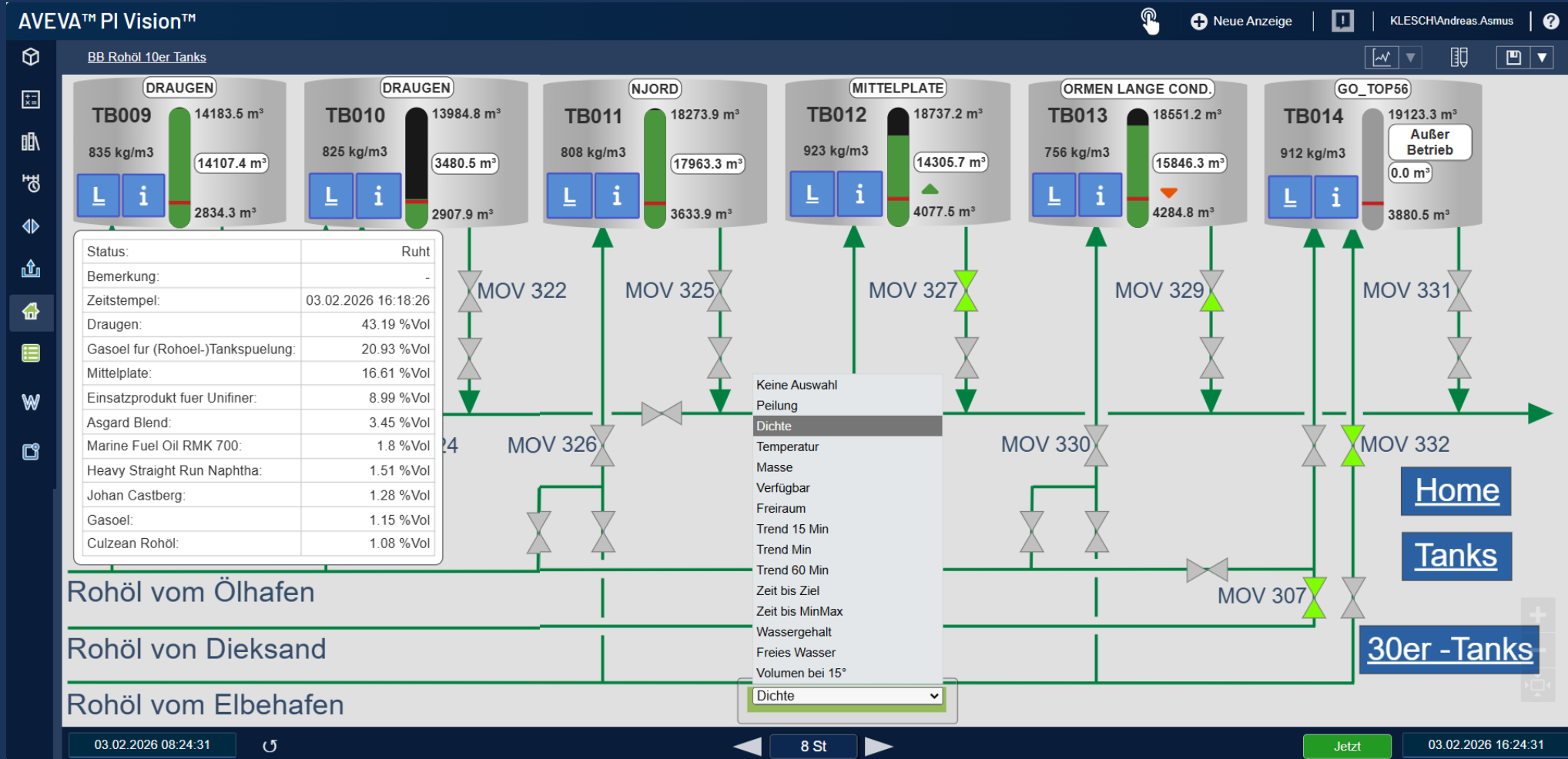


# From Process Book to PI Vision with Amitec

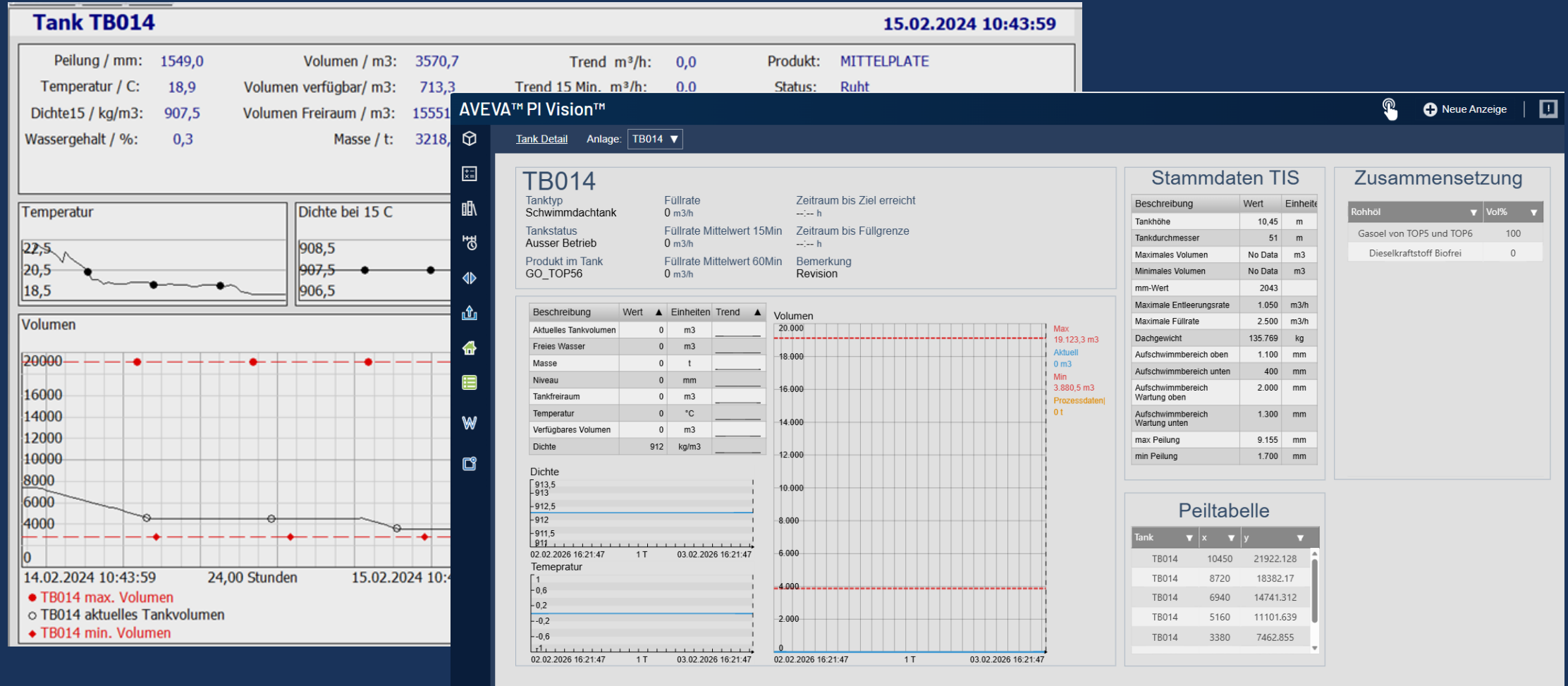
- Custom Functionalities in Process Book (VBA Code + ModuleDB)



# From Process Book to PI Vision with Amitec



# From Process Book to PI Vision with Amitec



# From Process Book to PI Vision with Amitec

View Insert Tools Draw Arrange Window Help

Suchen 160%

Punktattribute

Punktname: \\SWHEIS6150\0227T0594.PV

Snapshot: 8.6203 °C

Zeitstempel: 20-Feb-2024 14:31:15

Kategorisiert Alphabetisch

(Tag)	0227T0594.PV
archiving	1
changedate	16-Feb-2021 08:36:09
changer	SWDE1\Ralf Everding
compdev	0.5000001
compdevpercent	0.5842263
compmax	1800
compmin	0
compressing	1
convers	1
creationdate	13-Nov-2008 14:04:09
creator	piadmin
dataaccess	o: g: w:
datagroup	PIGroupIncompatible
dataowner	PIUserIncompatible
datasecurity	piadmin: A(r,w)   piheide: A(r)   PowerUsers: A(r,w)
descriptor	VBR-LUFT VOR GEBL CC2
digitalset	

AVEVA™ PI Vision™

Properties

0227T0594.PV

Path: \\swheis6150\0227T0594.PV

Descriptor: VBR-LUFT VOR GEBL CC2

EngineeringUnits: °C

Value: -5.08993435

Timestamp: 03.02.2026 16:23:15

Attributes

Name	Value
archiving:	1
changedate:	2021-02-16T07:36:09Z
changer:	SWDE1\Ralf.Everding
compdev:	0.50000006
compdevpercent:	0.5842263
compmax:	1800
compmin:	0
compressing:	1
convers:	1
creationdate:	2008-11-13T13:04:09Z
creator:	piadmin
dataaccess:	o: g: w:
datagroup:	PIGroupIncompatible
dataowner:	PIUserIncompatible
datasecurity:	piadmin: A(r,w)   piheide: A(r)   PowerUsers: A(r,w)   PIWorld: A()
descriptor:	VBR-LUFT VOR GEBL CC2
digitalset:	
displaydigits:	5

TOP-5 Ofen

Übersicht

Ofenleistungsregelung

Verbrennungsluft T-594 -5 FC-562 24,7 CC-2 90,0 %

Dampf v VV-5

FC-501 261,8 Vorwärmung T-524 250 FC-509 53,8 FC-510 56,6 FC-511 62,6 FC-512 58,0

T-501 7 P-506 17,7

P-501 21,2

Heizöl T-531 168 "Vorlauf" F-553 1429 kg/h

FC-554 500 kg/h T-0593 159

34,1 % "Rücklauf"

Zerstäuberndampf F-4 783

# Results

- **Agile approach → Iterative process → Fast results**
- **High User Acceptance due same custom functionalities**
- **No user training required**
- **Faster performance**

**Successful implementation of PI Vision**

# PI Vision Suite



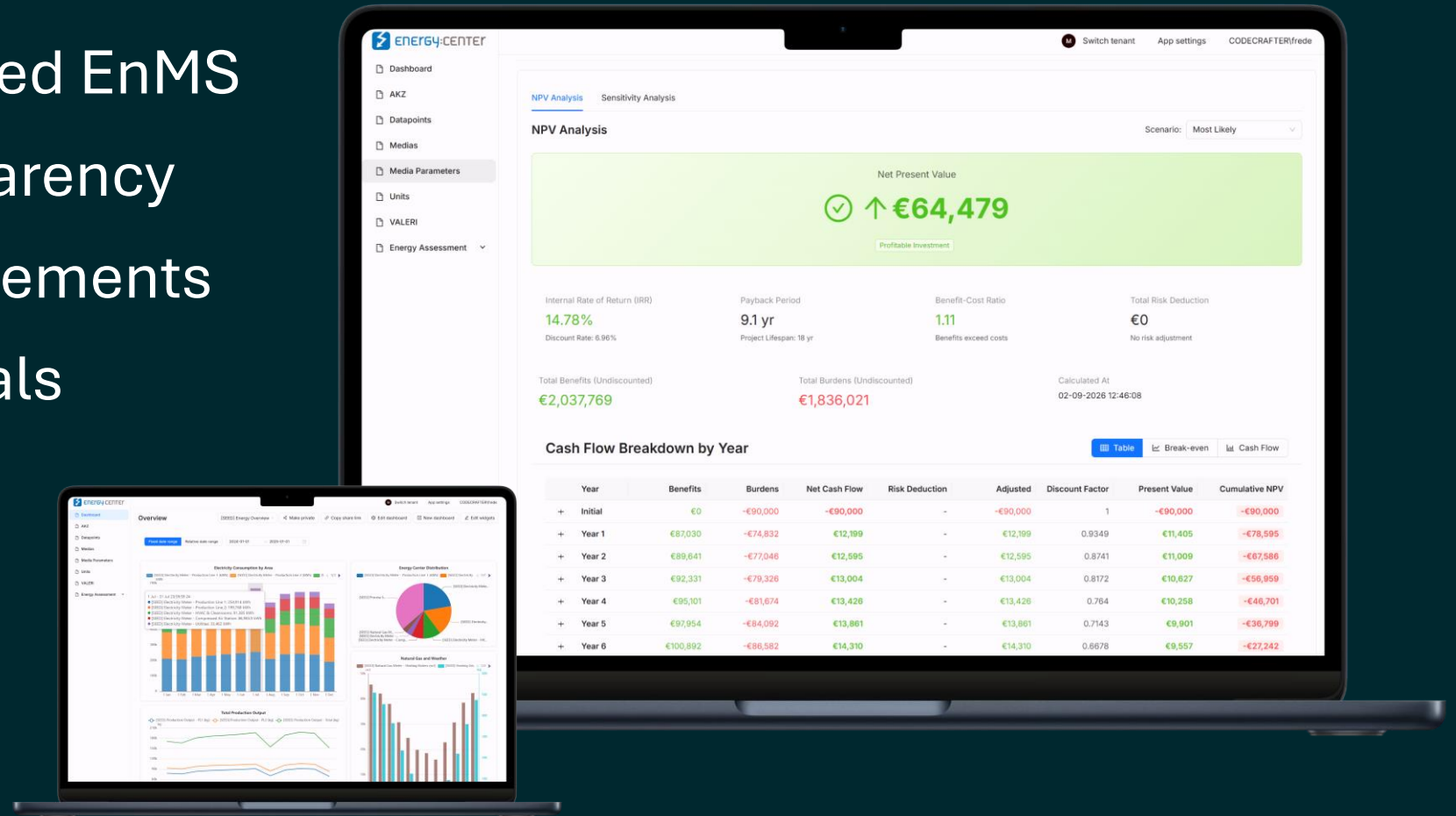
- ✓ 40+ ready-to-use Symbol and Tools
- ✓ Customization



- ✓ Improved operational efficiency
- ✓ Sustainability goals

# Energy:Center - Energy Management in Practice

- ✓ ISO 50001 Certified EnMS
- ✓ Real-time transparency
- ✓ Efficiency improvements
- ✓ Sustainability goals



# Energy:Center at Heide Refinery

## Current Status & Next Steps

- **Prototype completed** for one unit
- **Prototype expansion** in progress
- **Rollout to additional units**

## Expected Outputs

- **Monthly energy reports**
- **Daily monitoring**
- **VALERI project management**



**HEIDE  
REFINERY**

The background of the right side of the image is a photograph of an offshore oil rig at sea, viewed from a distance. The rig is silhouetted against a teal-colored sky. The foreground shows dark, jagged rock formations. A diagonal blue line separates the left dark blue area from the right teal area.

**AMITEC**

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**Thank you! Let's continue the conversation!**