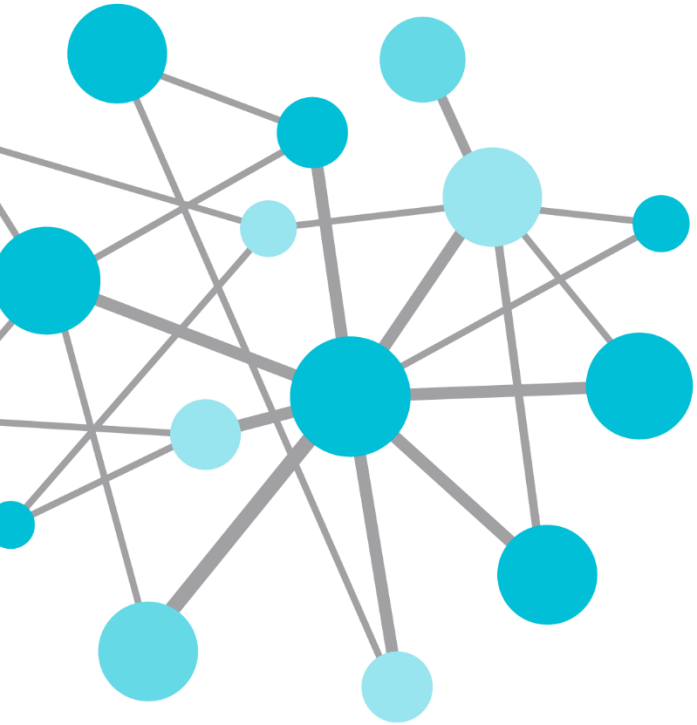


Integrating PI System and Esri ArcGIS to Improve Situational Awareness

Presented by **Jack van Alphen**
Tjidde Boers (magion)

brabant Water

Who are we and what do we do

• Production in m^3 per year	180 million
• Main Supply	23.000 km
• Number of Connections	1,1 million
• Number of Residents	2,5 million
• Number of Water Plants	30
• Turnover per year	€ 200 million
• Number of employees	800

Brabant Water Objectives,

The best water at the lowest cost, this is mostly affected by:

a) Electricity usage

b) Purification requirements

c) Permits

Different kind of purifications

Gravity based with low operational cost

Complex purification plants with higher Opex

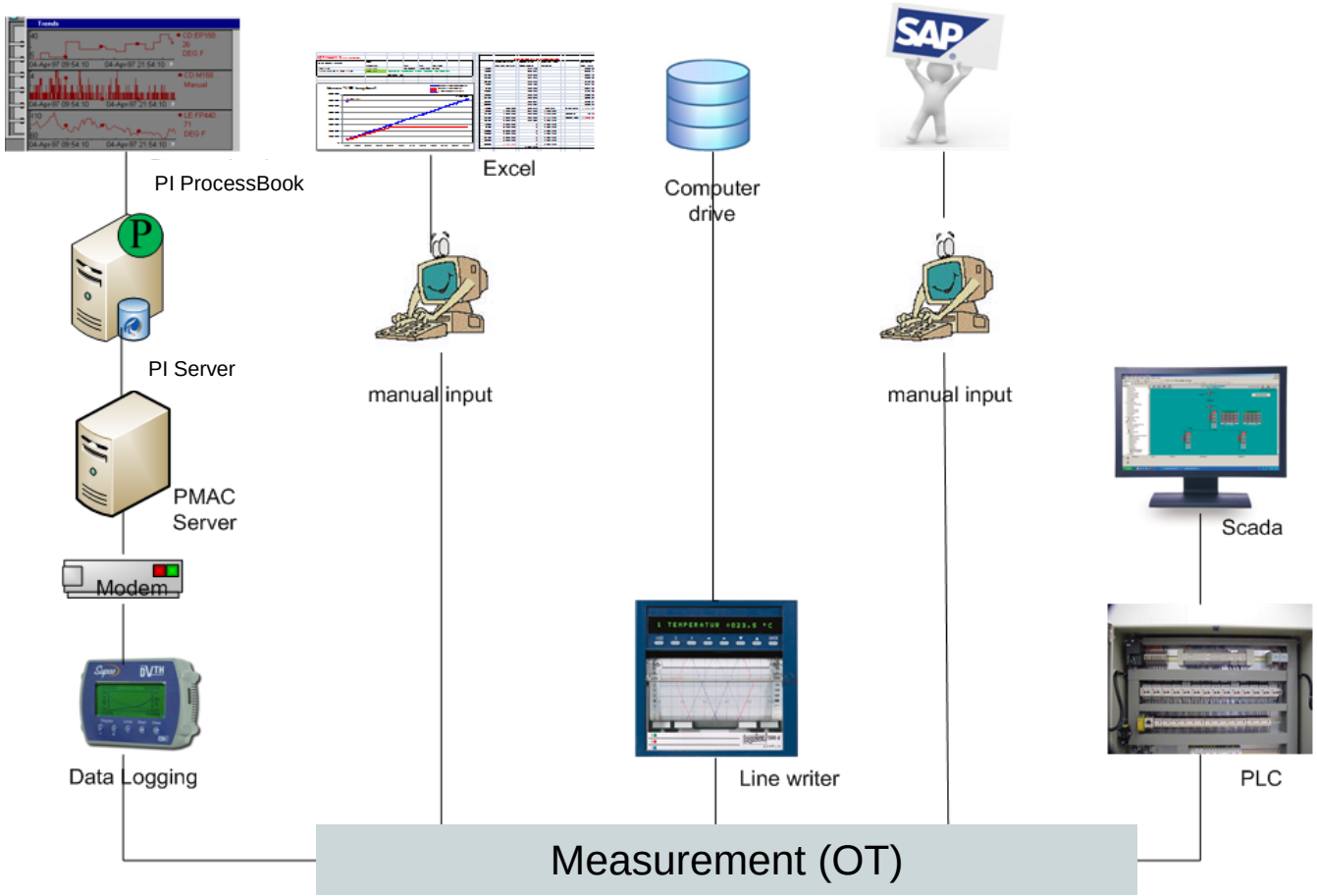
Project Objectives

1. Remove silos
   Able to share information, one dataset, UoM and nomenclature. One version of the truth

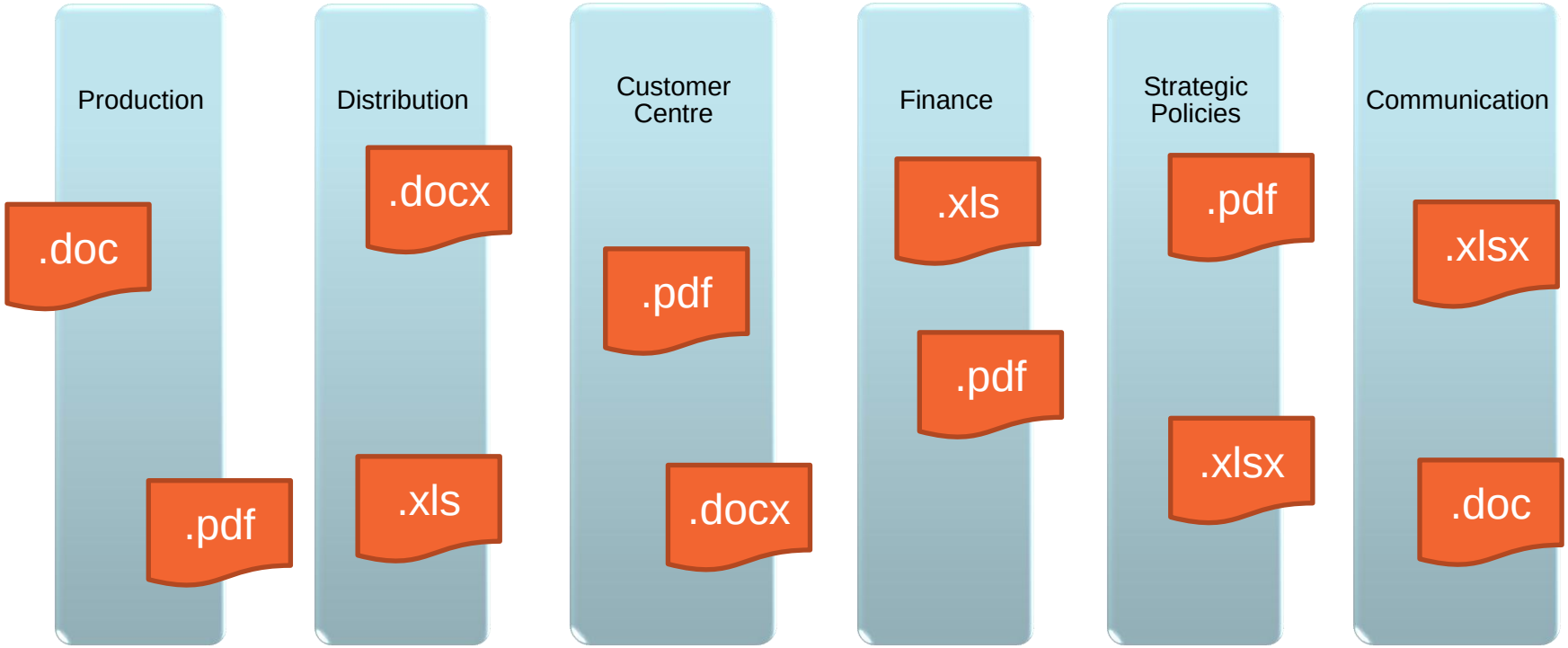
2. Add context to measurements
   Measurement by itself is meaningless, to know the actual value of the a measurement one needs context!

3. Geographical Map as visualization starting point
   data should be accessible and understandable for all Brabant Water information workers.

Current Situation

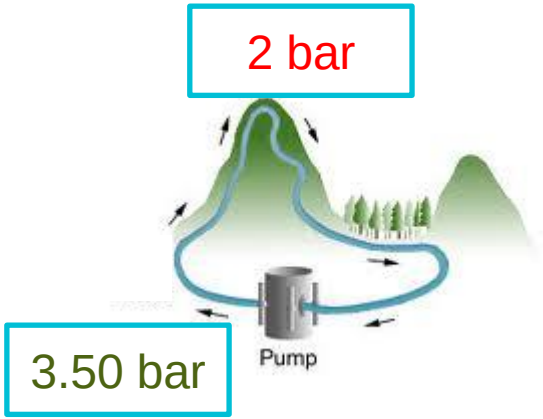


Silos; project start

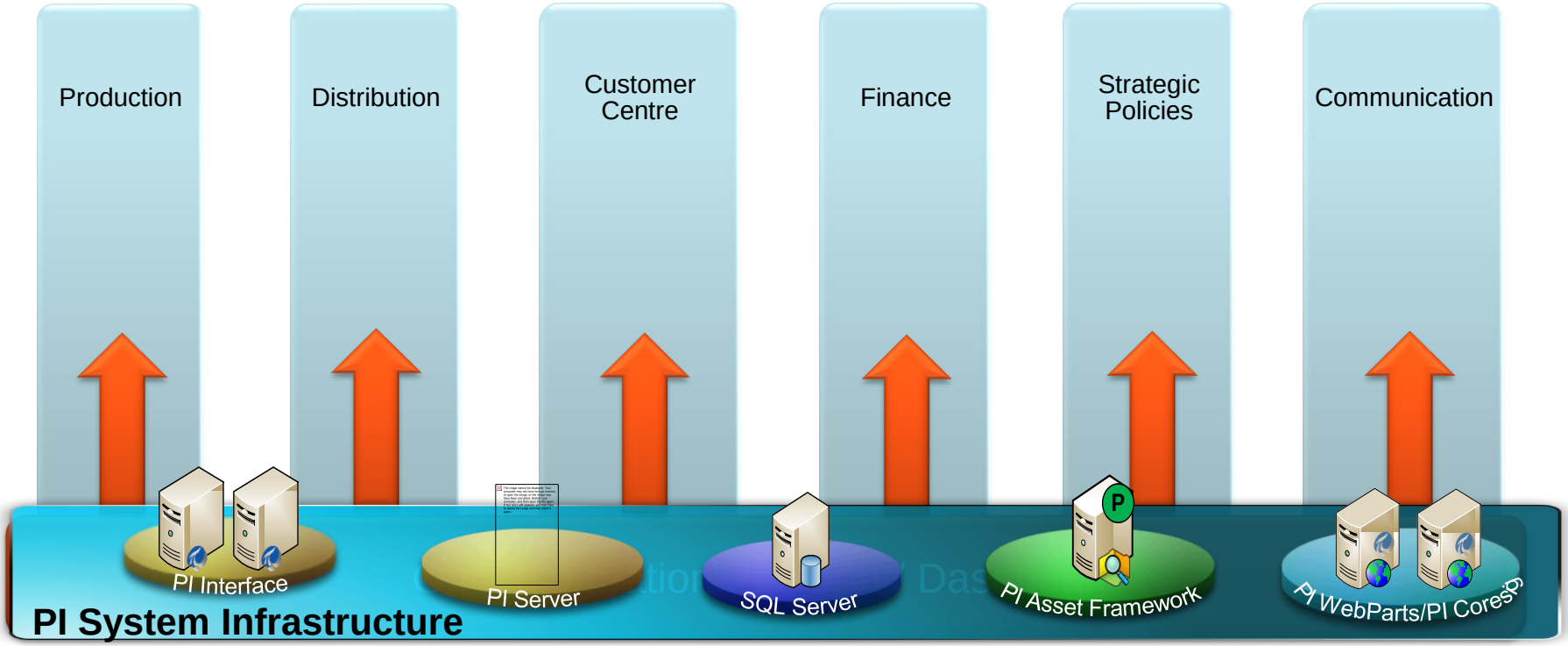


The value of Context

- Measurements will have more value with context
- Example:
  - Pressure measurement 3.50 bar
  - Context: above 3 bar is acceptable pressure
    - So should we be happy with this value?
    - Now add some more context: the pump station is 5 meter below sea level en the consumers are on a hill located 10 meter above sea level...

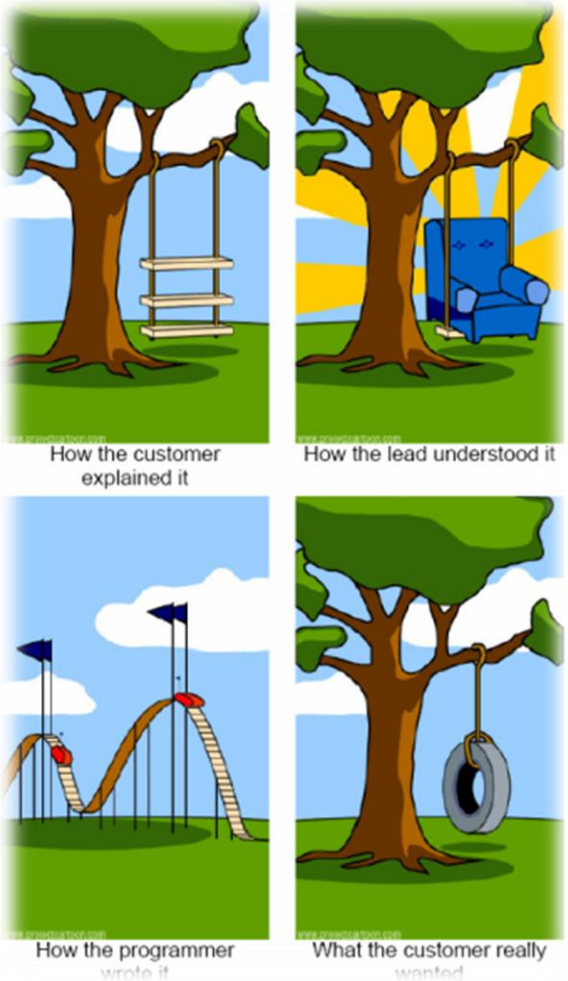


Silo's; Target

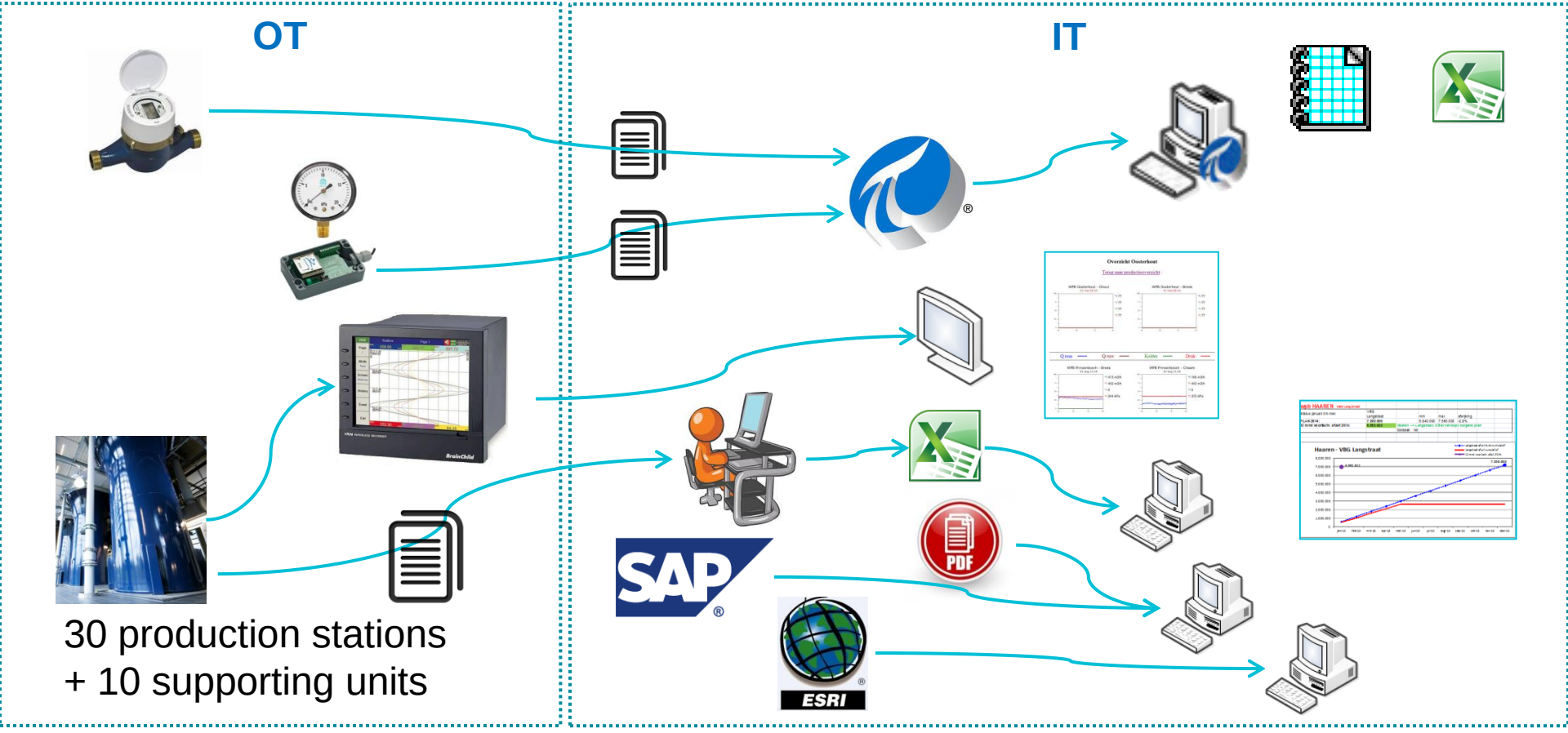


Tjidde: Can this be made?

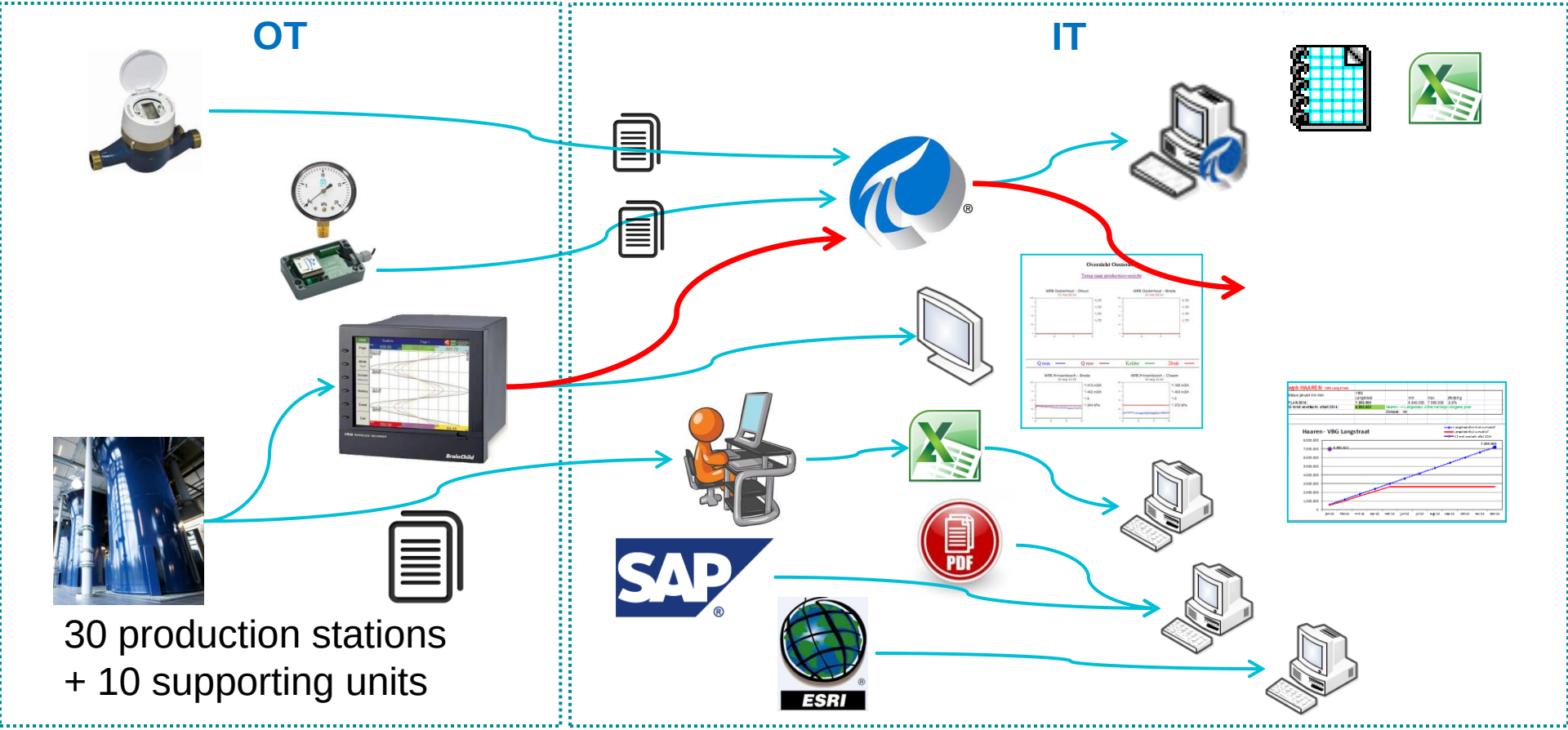
- Given our need for removing silos and adding context
- Added our need for an easy to use system
- Given our current infrastructure
- And...we do not accept a custom solution!



Source architecture



Remove silos

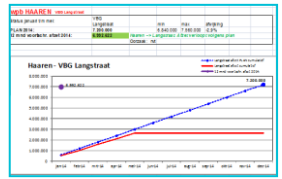


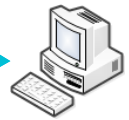
Add context

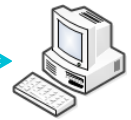
OT

IT

30 production stations
+ 10 supporting units







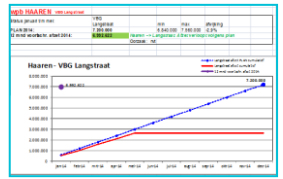
Make information available on a Map

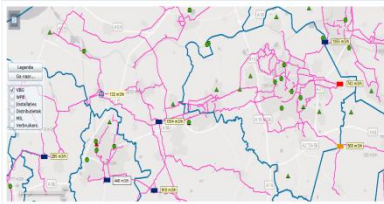
OT

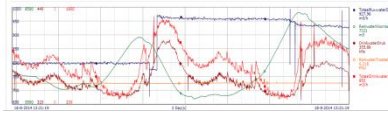
IT

30 production stations
+ 10 supporting units

Brabant water Intranet





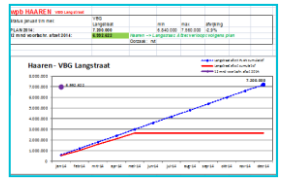


System based on OSIsoft Infrastructure

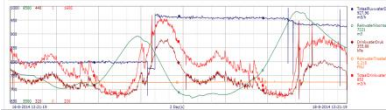
OT

IT

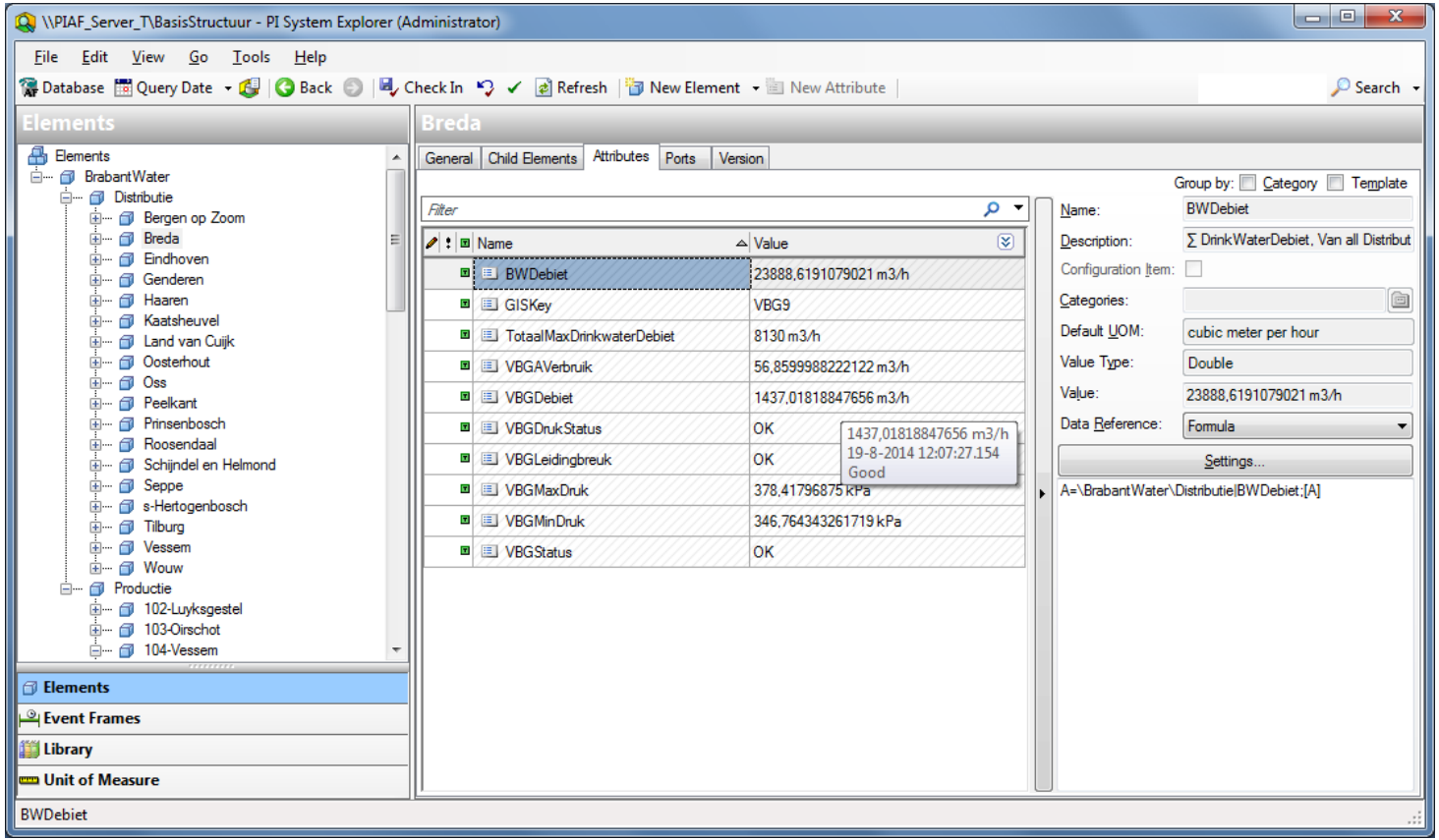
32 production stations



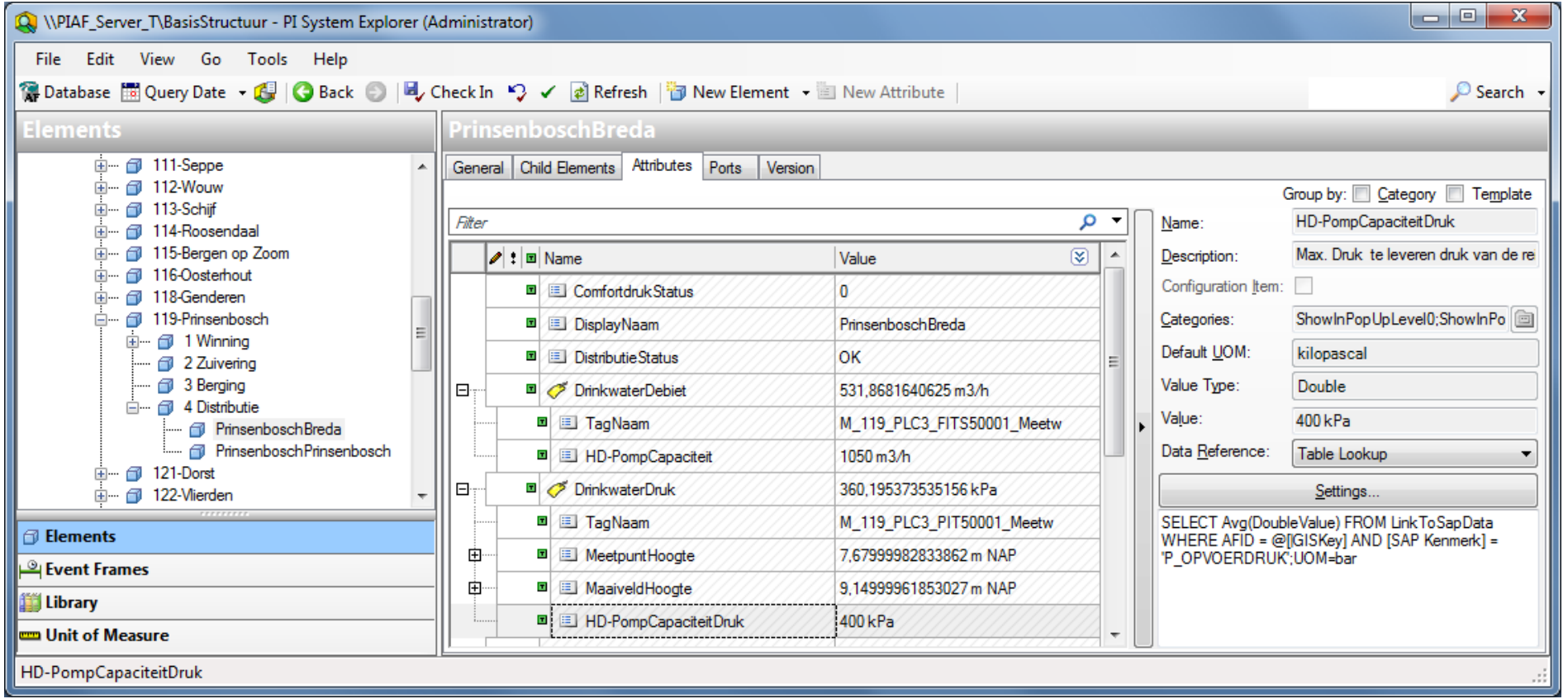
Brabant water Intranet



The Brabant Water PI AF structure 1/2



The Brabant Water PI AF structure 2/2



Brabant Water demo

‘Live’ DEMO

Current - Benefits

- Data instantly available, One version of the truth
  4500 hrs, freed up for other business processes
- Higher data quality, Detect problems in the network faster
- 3000 hrs, not needed for corrections of reports
- Data infrastructure for future projects priceless……☺

Near future PI System projects:

- Add tags 

- Data availability to field mechanics

- Distribution pressure profiles

Expected - Benefits

- Detect problems in the network faster
- Improved situational awareness
- Avoid leakages, spillage incidents
- Water supply improves
- Improved water quality
- Improved energy efficiency

Contact

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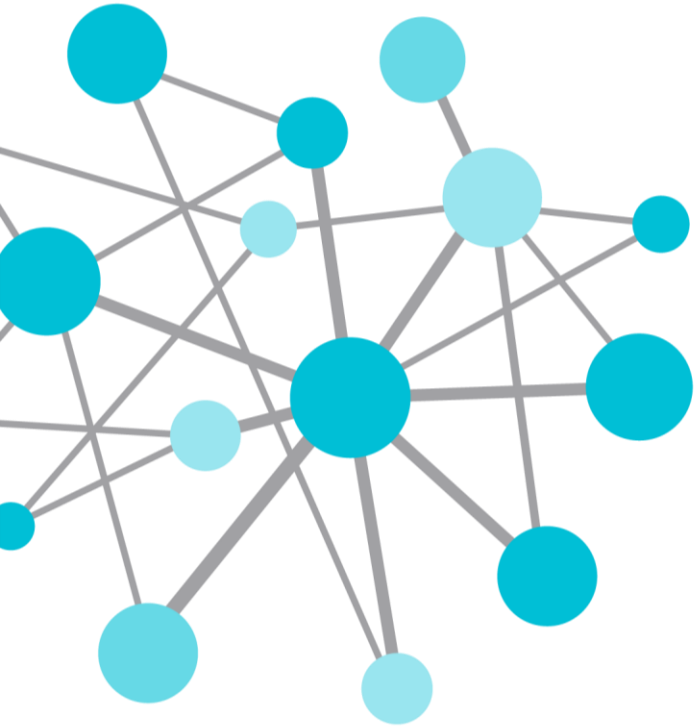
Questions

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

State your **name & company**



THANK YOU

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