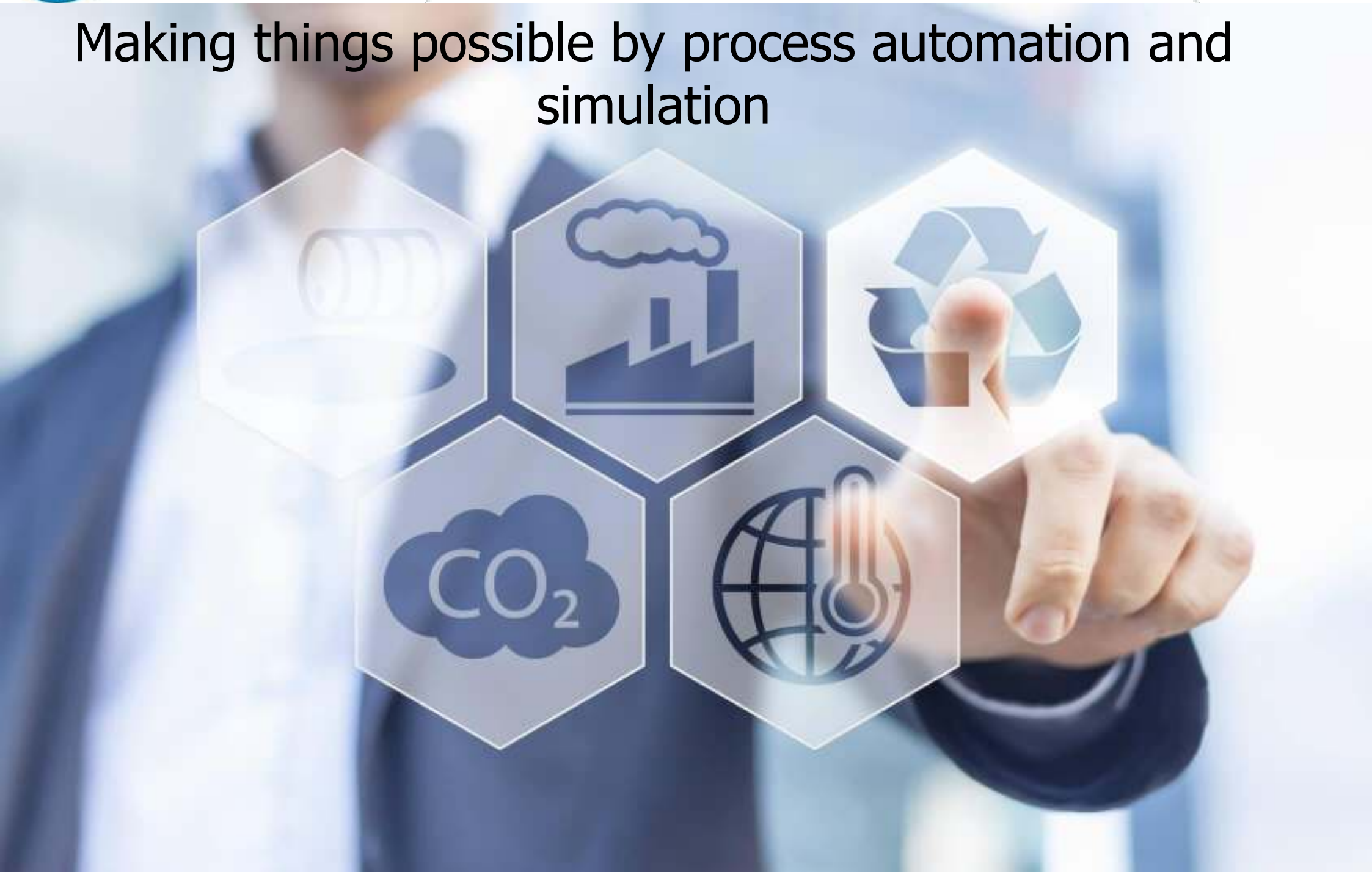
powerspex

Making things possible by process automation and simulation

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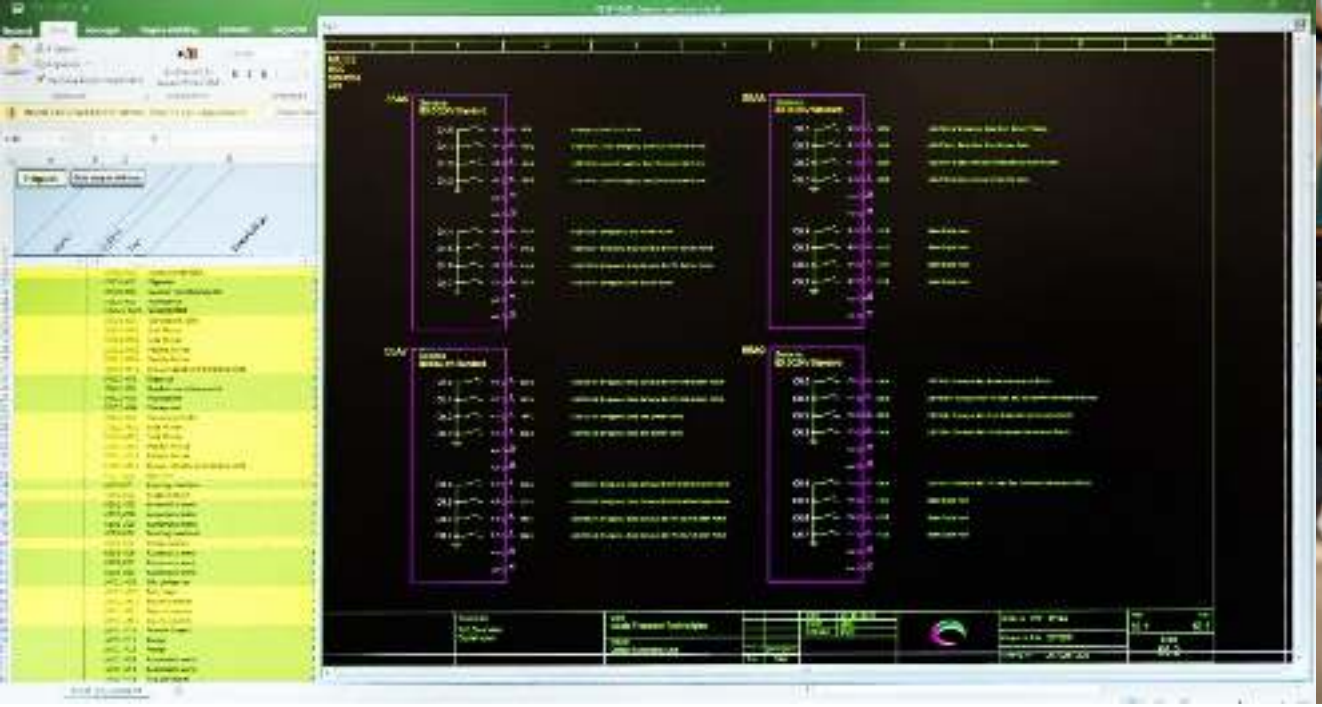
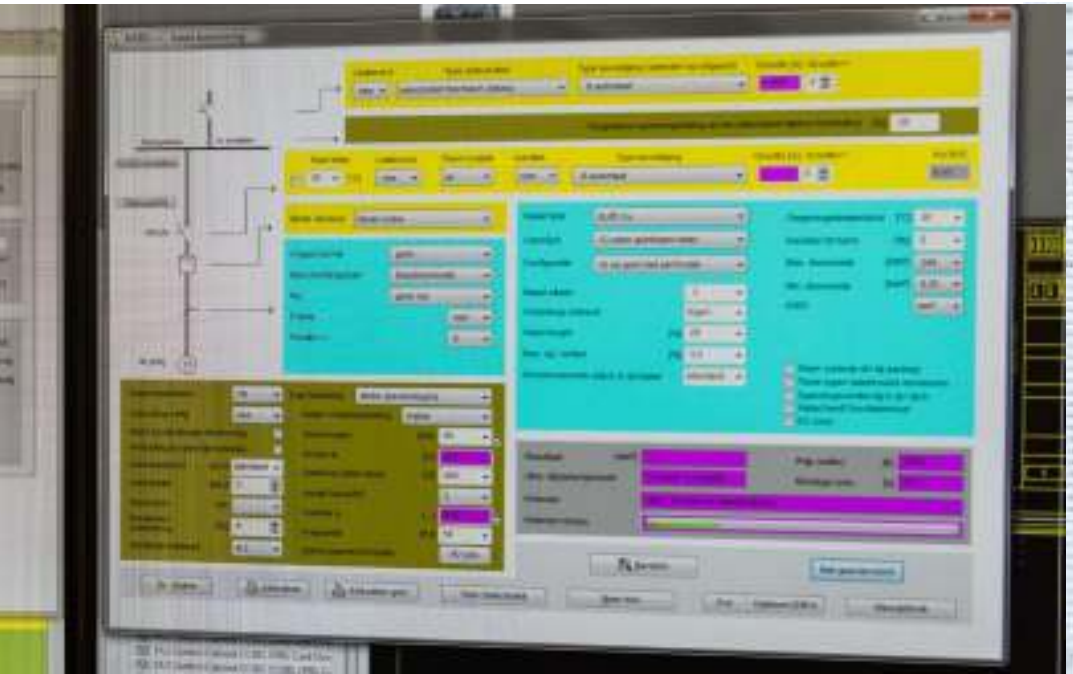
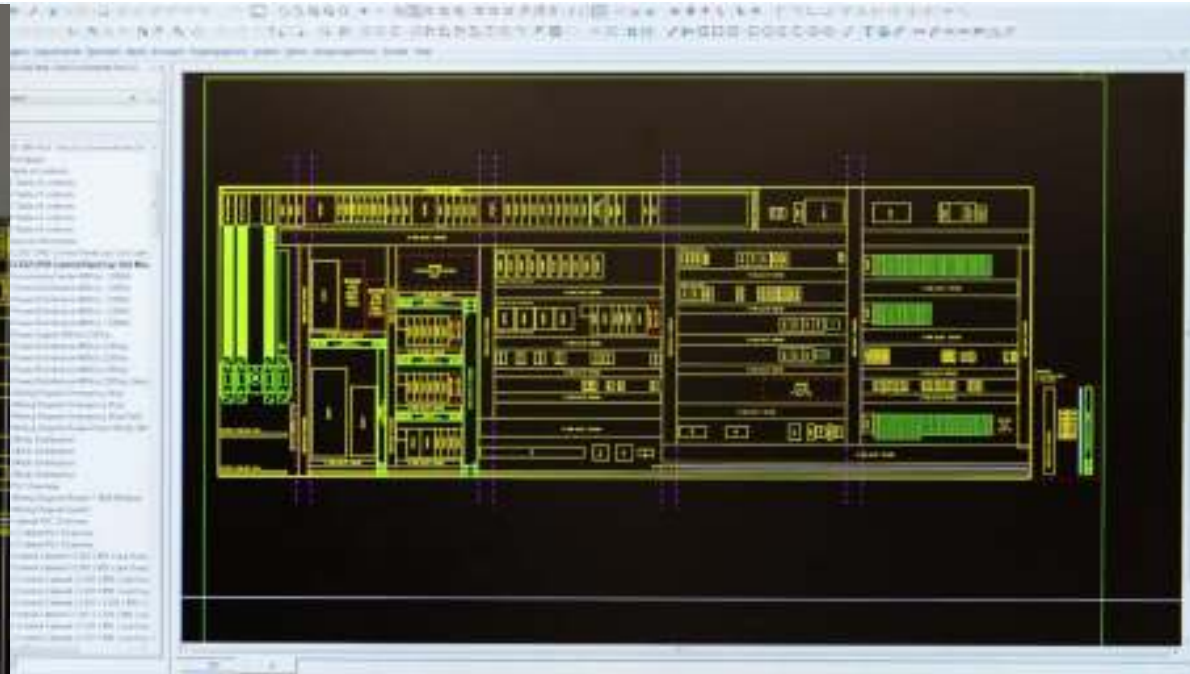
KAISEC

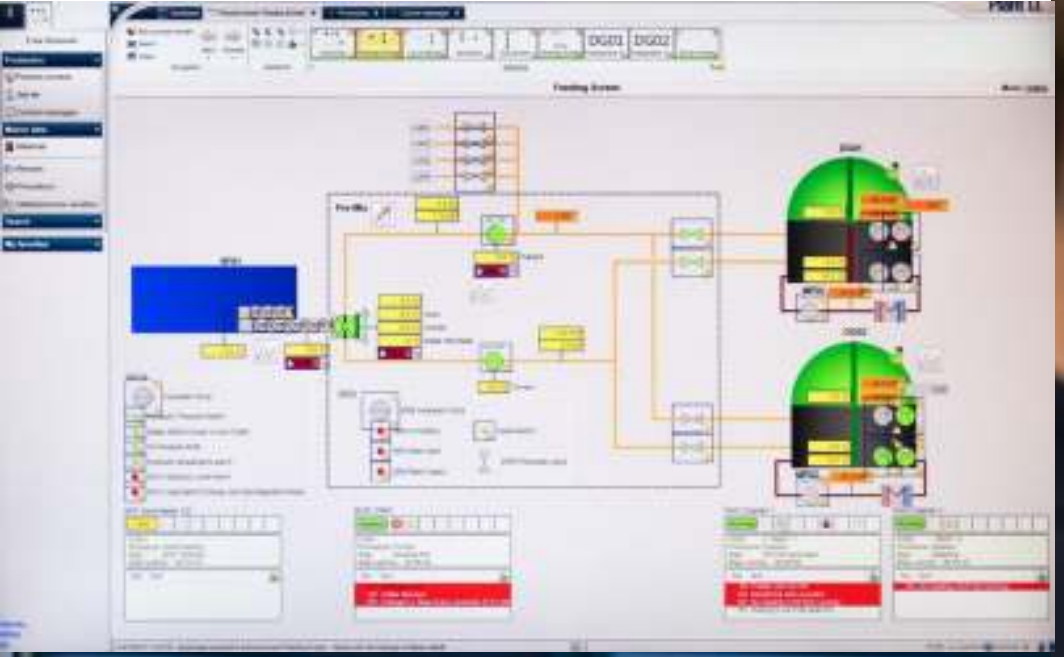

Aquamarijnstraat 5
powerspex
KAISEC
Bezoekers
Expeditie



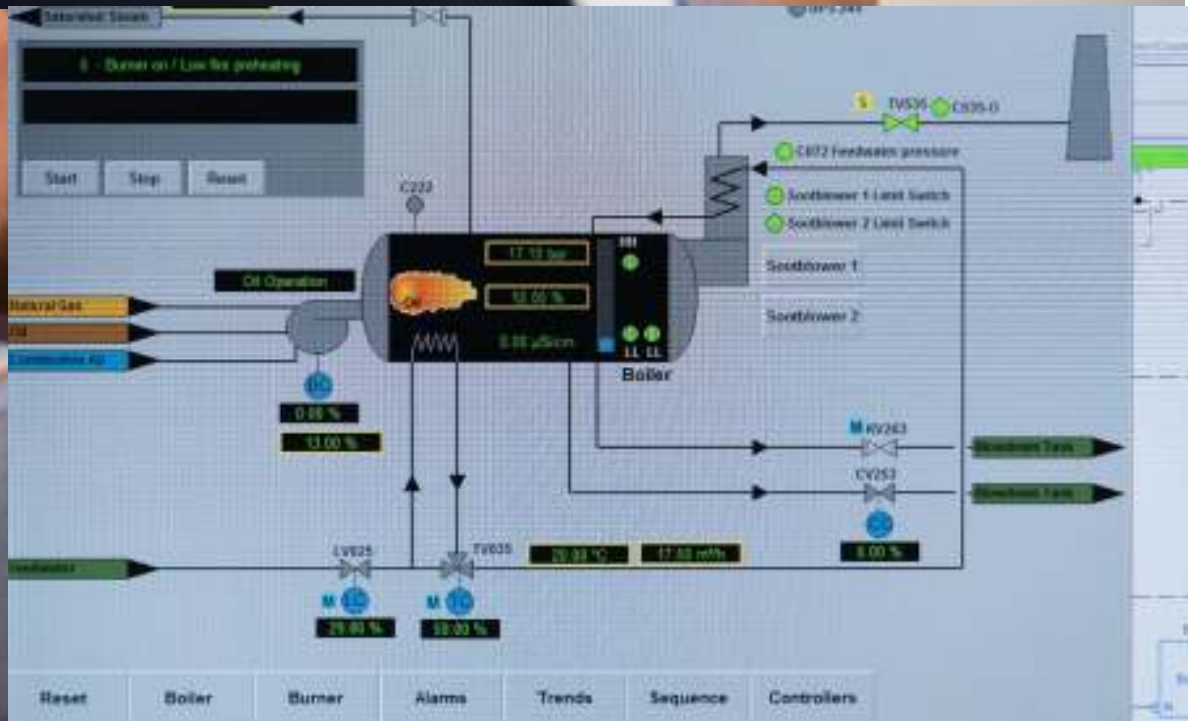
Hardware engineering







Software engineering



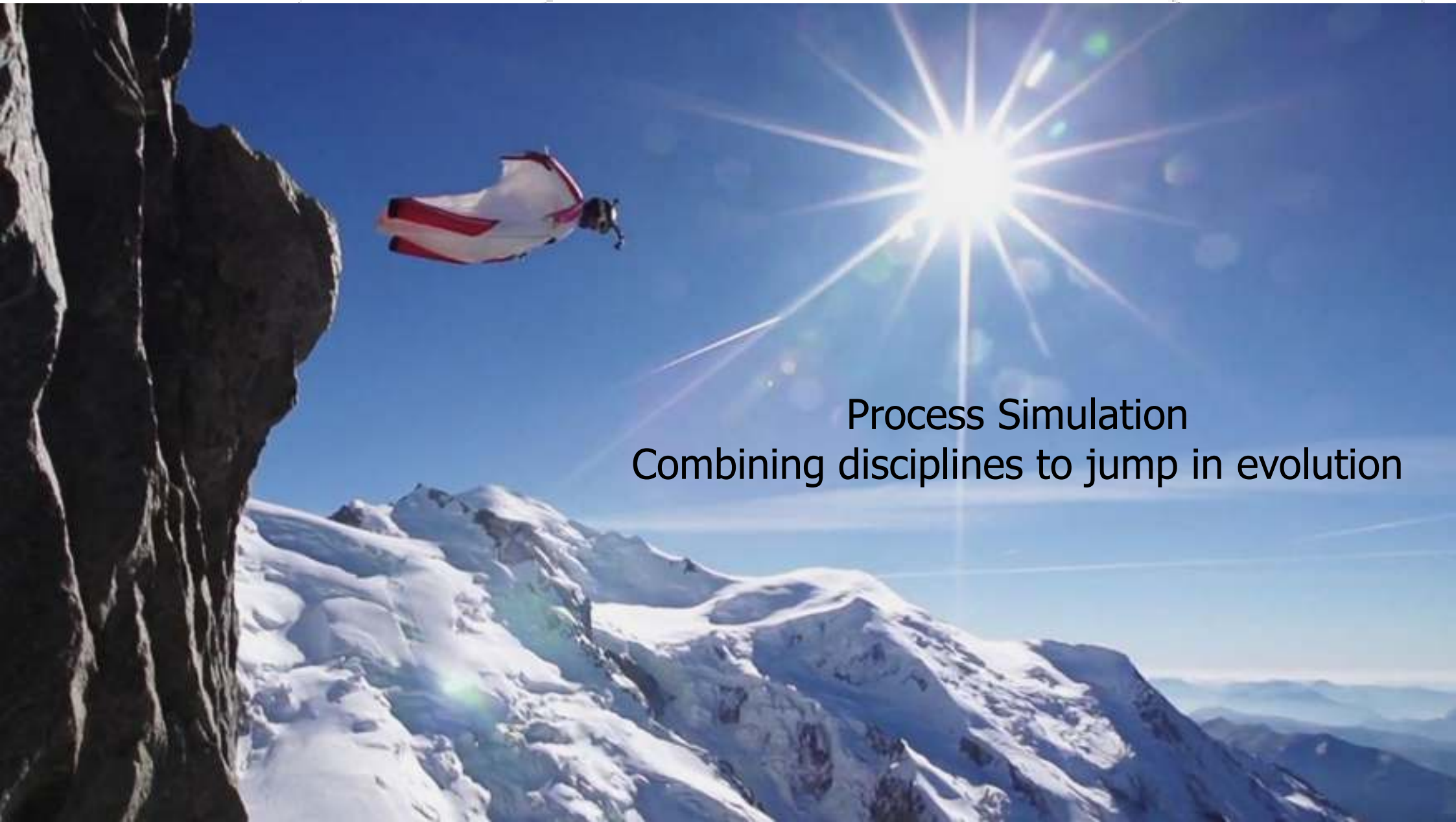
Atex

Skidbouw

Werkplaats

powerspex

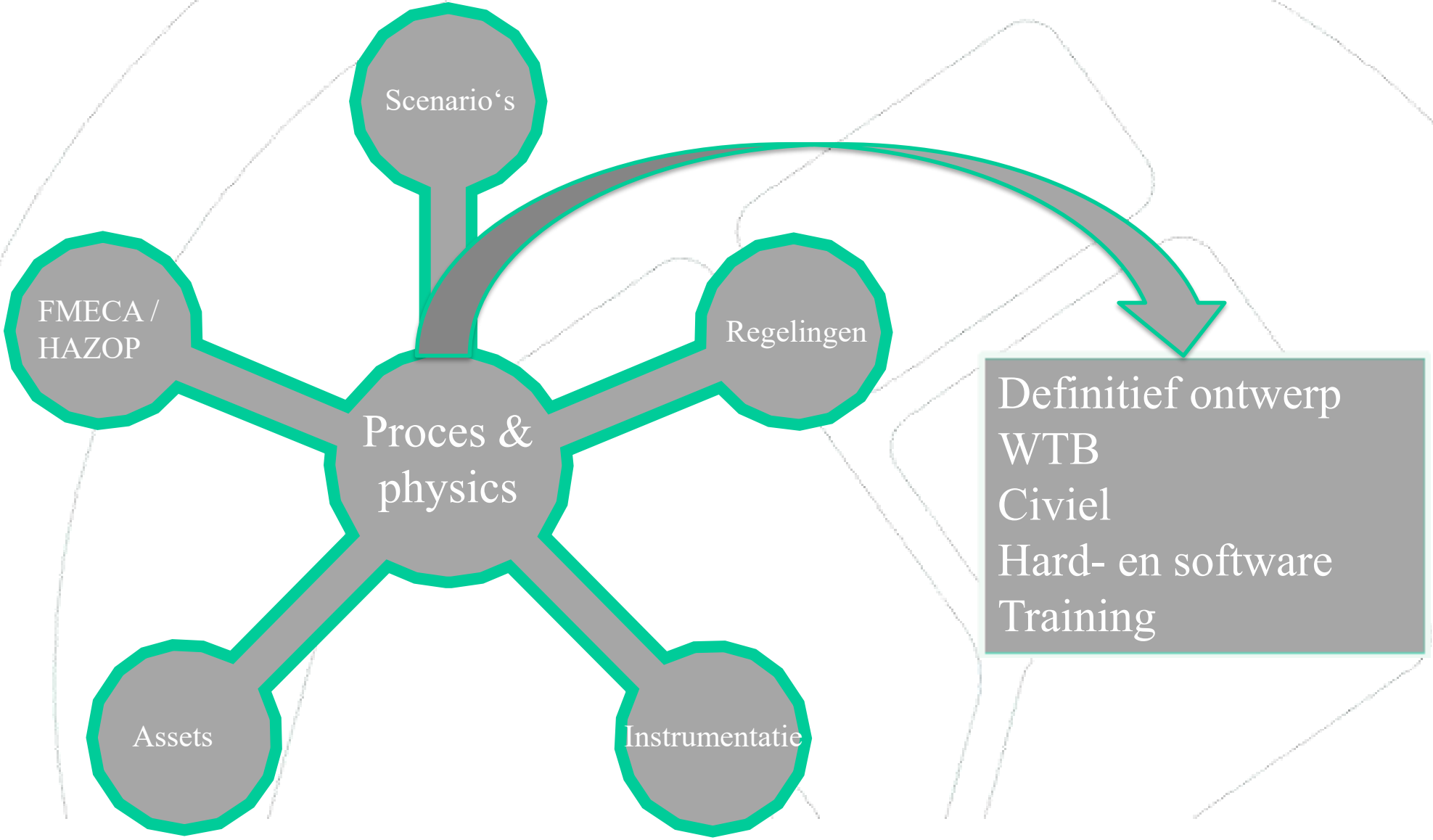
Insight in processes, quantum leap in engineering



Process Simulation
Combining disciplines to jump in evolution

powerspex

Kwantum sprong door simulatie



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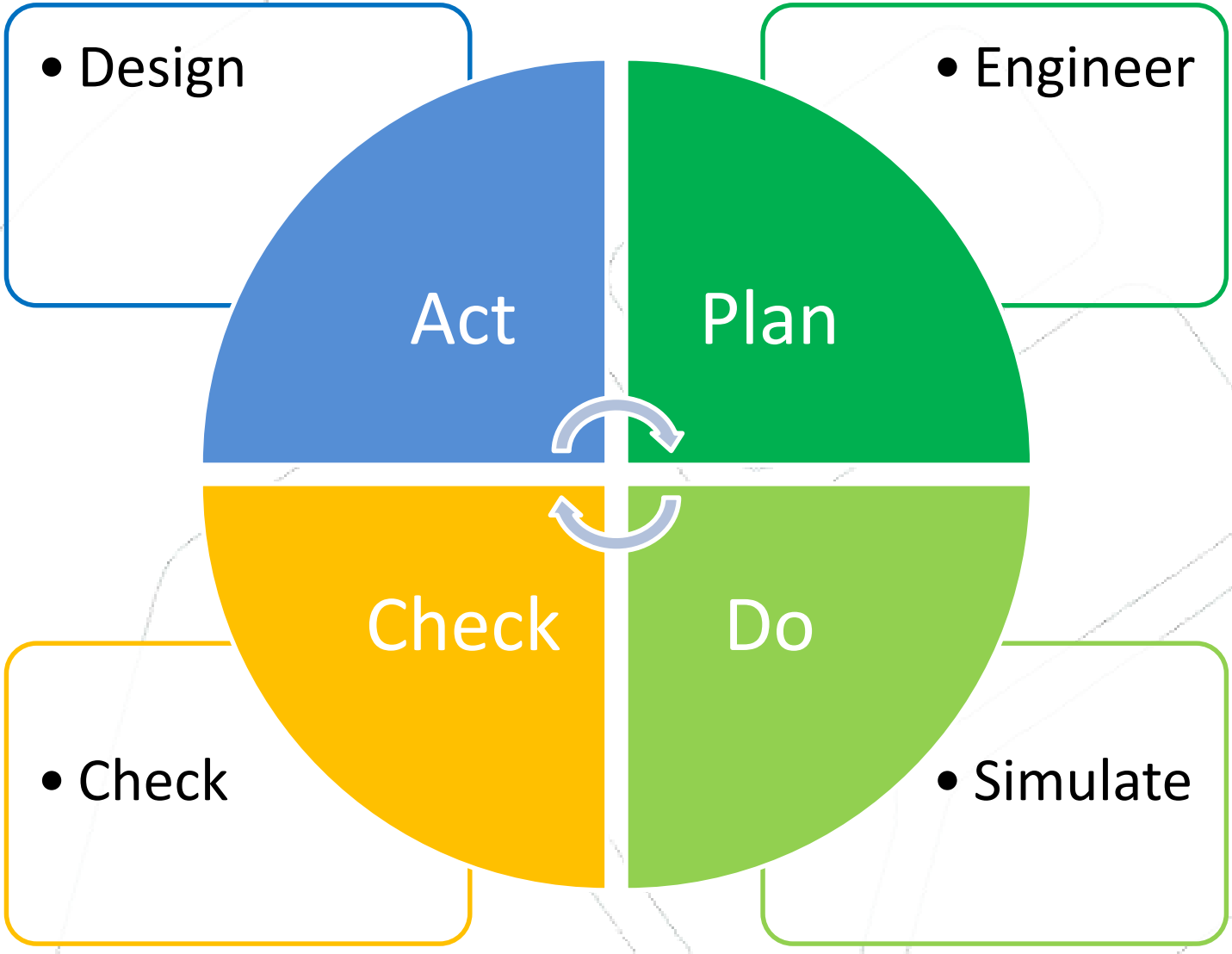
Simulatie is een integraal controle systeem ➔ zekerheid



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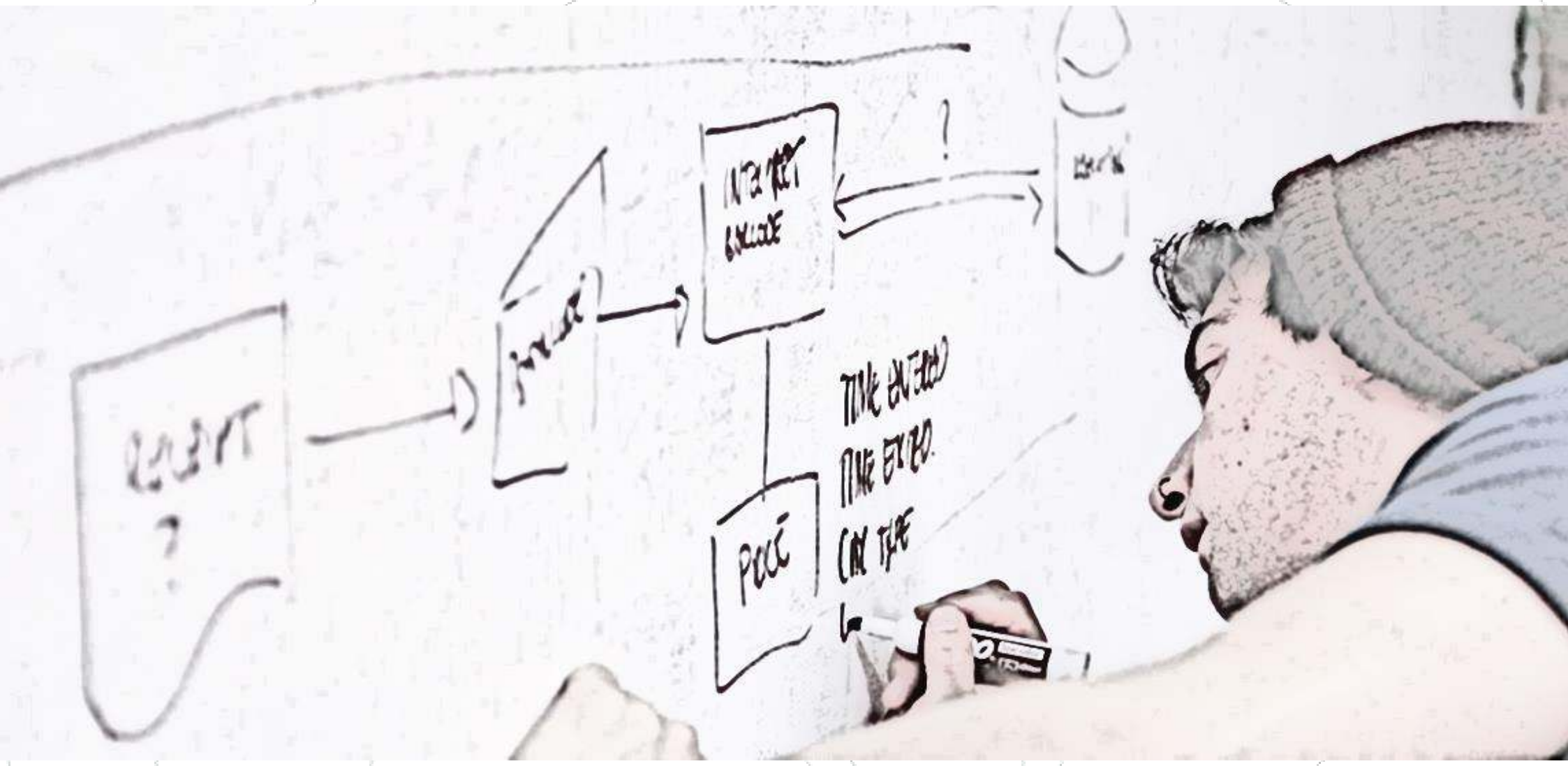
Engineering nieuwe projecten



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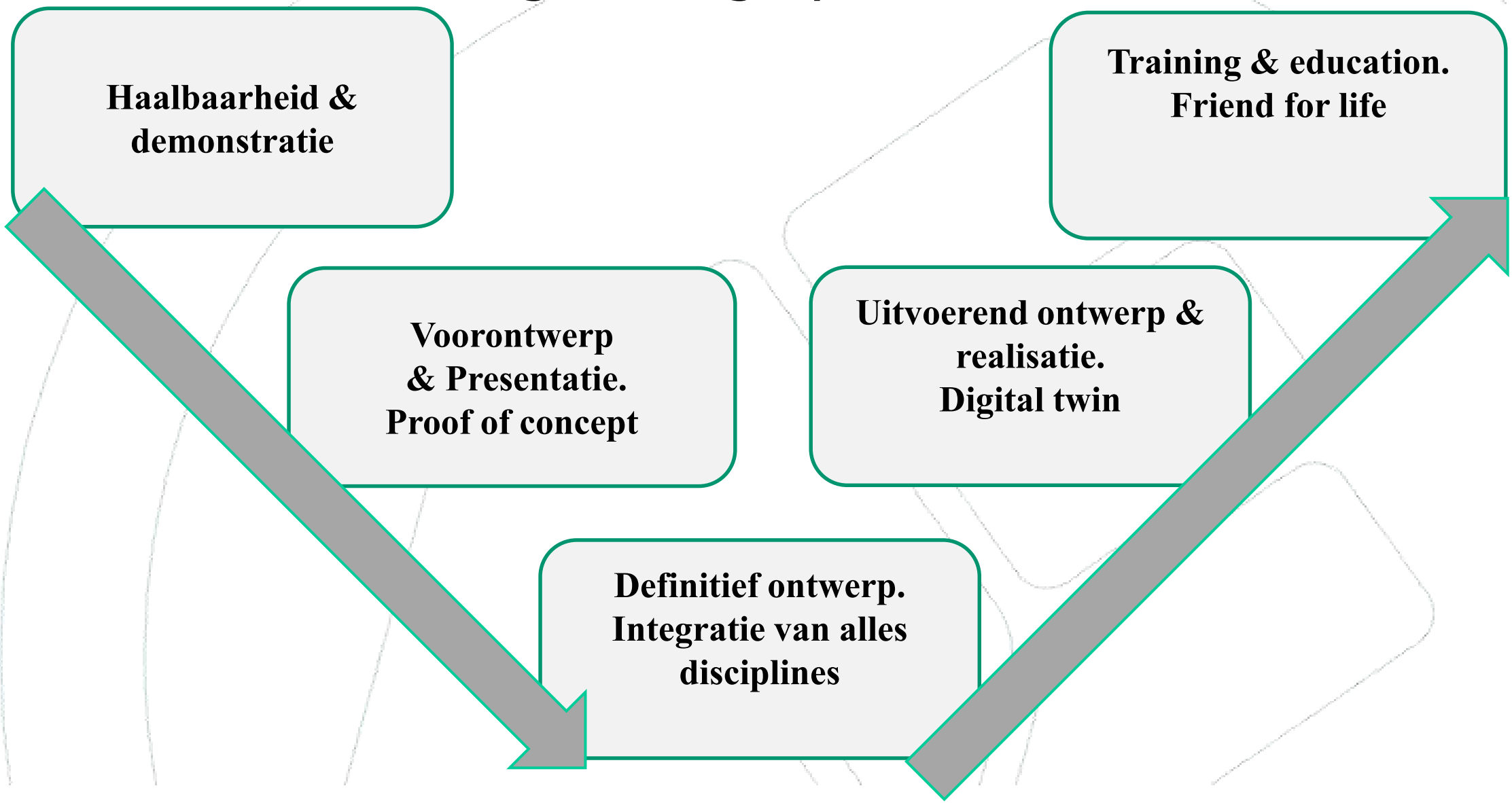
Engineering by simulation



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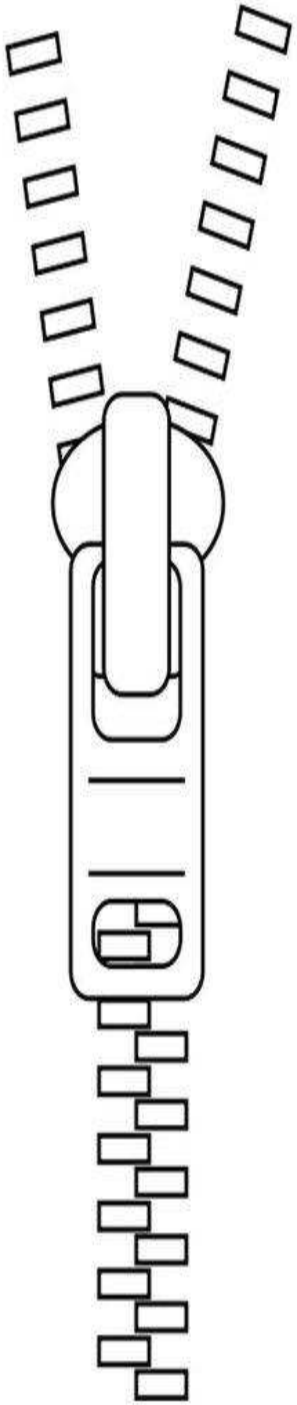
Programma van eisen
Specificaties
Kansen en risico's
Disciplines
Engineering
Realisatie
Project planning
Proces zekerheid
TCO
Garantie
Asset management

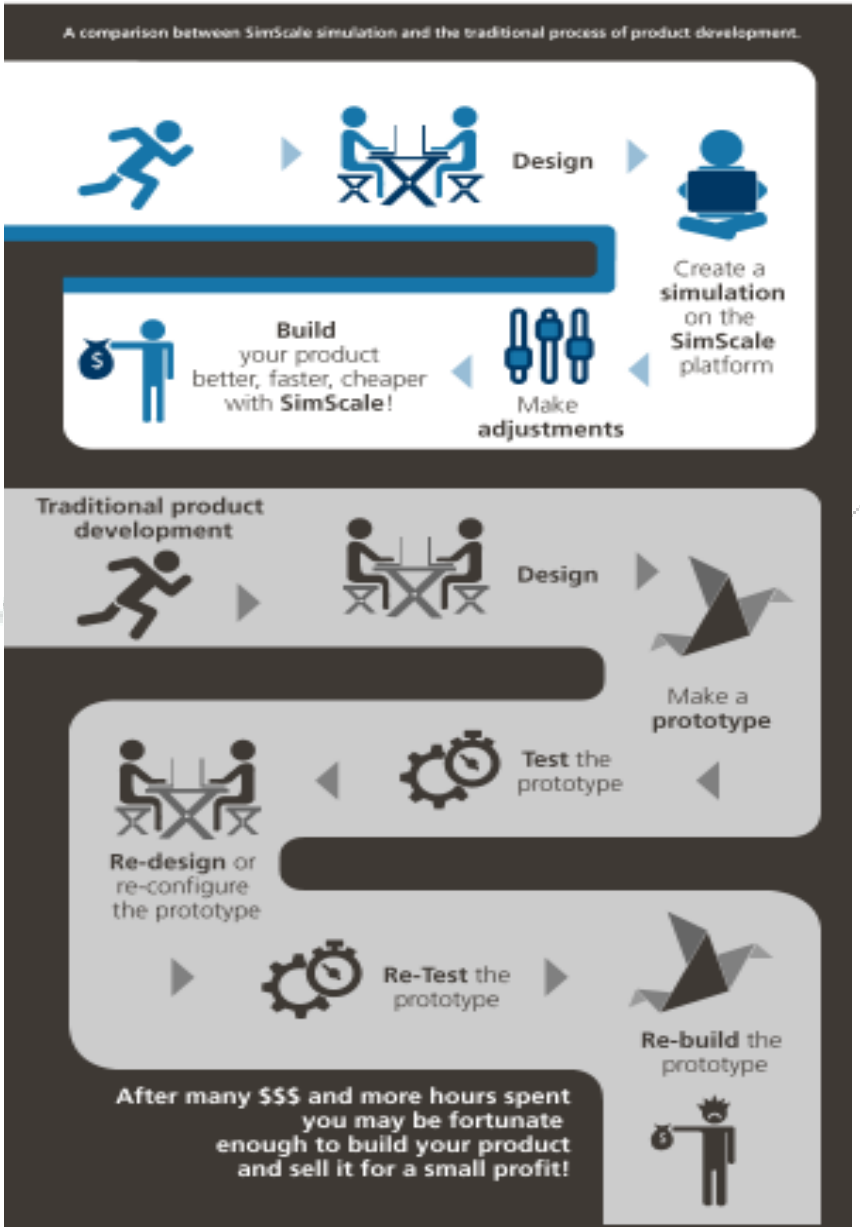


Opdrachtgever
Onderaannemers
Stakeholders
Belangen
Doelstellingen
Betalingen
Financiering
Samenwerking

Project belangen

Partij belangen

PsxCad Engineered Reality



- Engineering met onderbouwing en meer overtuigingskracht
- Future proof ontwerp
- Totaal overzicht proces en functionaliteit
- Engineering met integraal kwaliteitsborging
- Verkorte engineering. Van schets naar uitvoerend ontwerp
- Geautomatiseerde hardware en software engineering voor E&PA.
- Korte opstart en commissioning periode door integraal ontwerp
- Optimale basis voor onderhoud- en monitoringstrategie
- Engineered reality wordt digital twin na realisatie
- Simulatie in interactie met SCADA.
- Scenario’s simuleren
- Maakt ambities concreet

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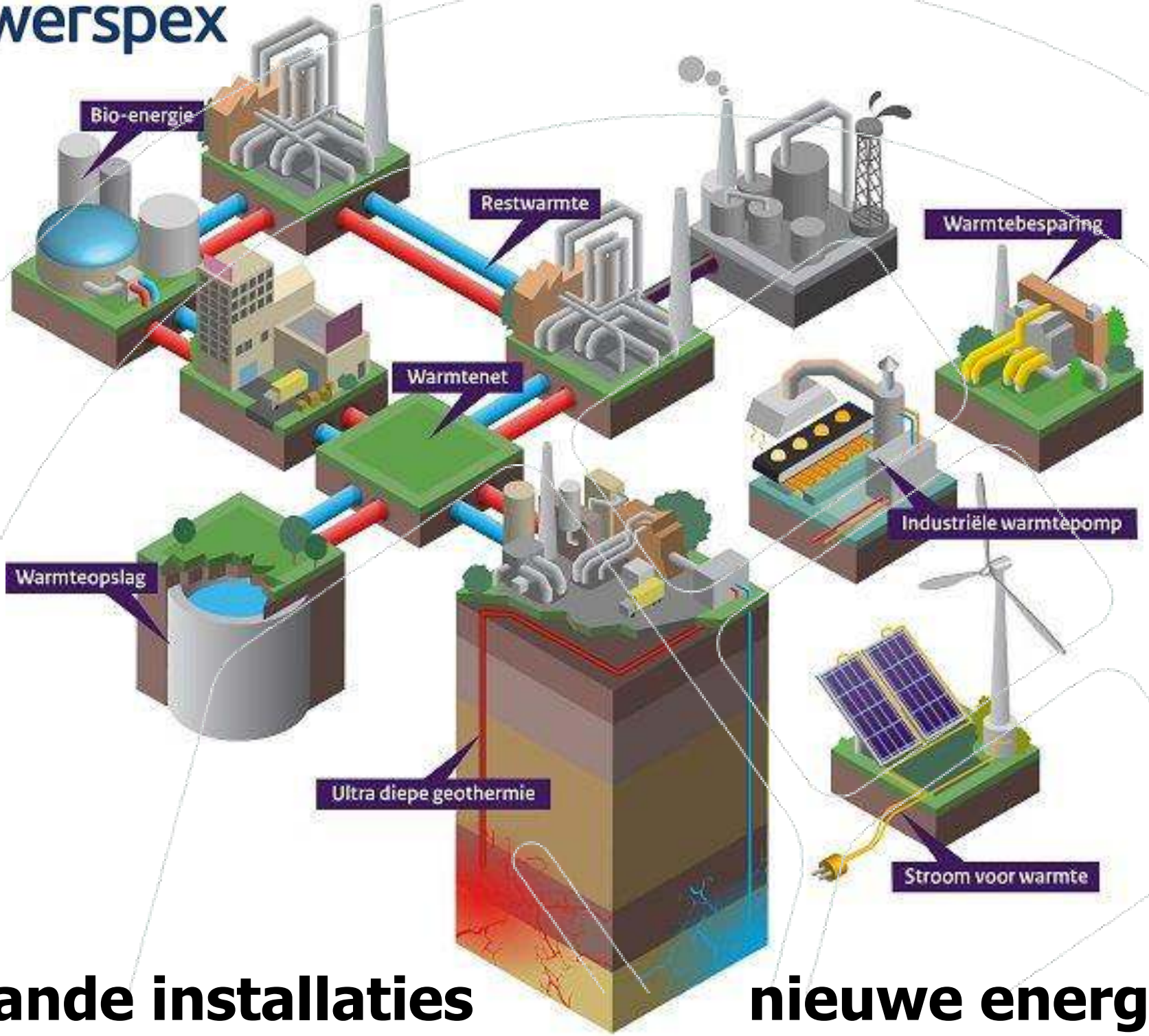

Bestaande installaties **nieuwe energie**

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Bestaande installatie nabootsen tot digital twin

Input

Docs en specs
Hydraulisch profiel

PFD, P&ID, Lay-out

Asset en leiding specs

Ervaring operators

Simulator

Digitale tweeling
Probleem definitie

Toekomst scenario's

Optimalisaties

Opschaal effecten

Testen processen

Output

Inzicht & Info
Oplossen problemen

kWh & onderhoud

Proces optimalisatie

Toekomstig ontwerp

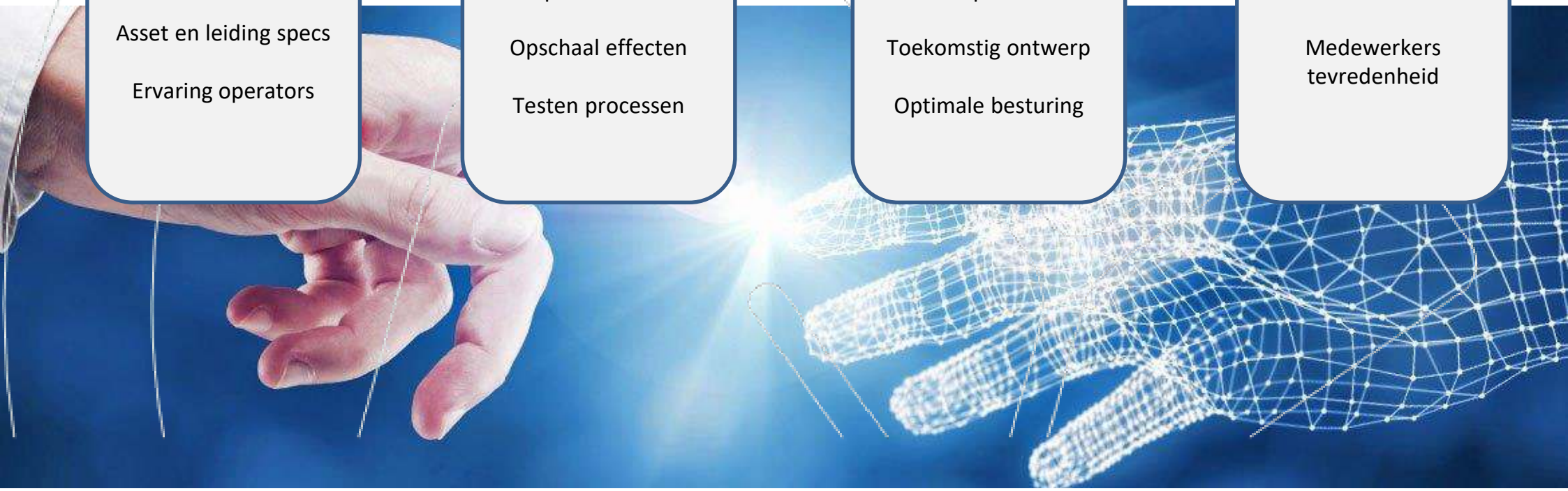
Optimale besturing

Organisatie

Betere bediening
Training instrument:
-Bediening
-Onderhoud

Betrokkenheid

Medewerkers tevredenheid



Markten

- Energie centrales
- Afval Energie centrales
- Warmtenetten
  - Warmtedistributie
  - Verschillende warmtebronnen
  - Hoogthermisch en laagthermisch
- Turbines
- Water
  - Energy & performance scan pompstations
  - Digital twin van drinkwater verzorgingsgebied
- Opleiding
- Training

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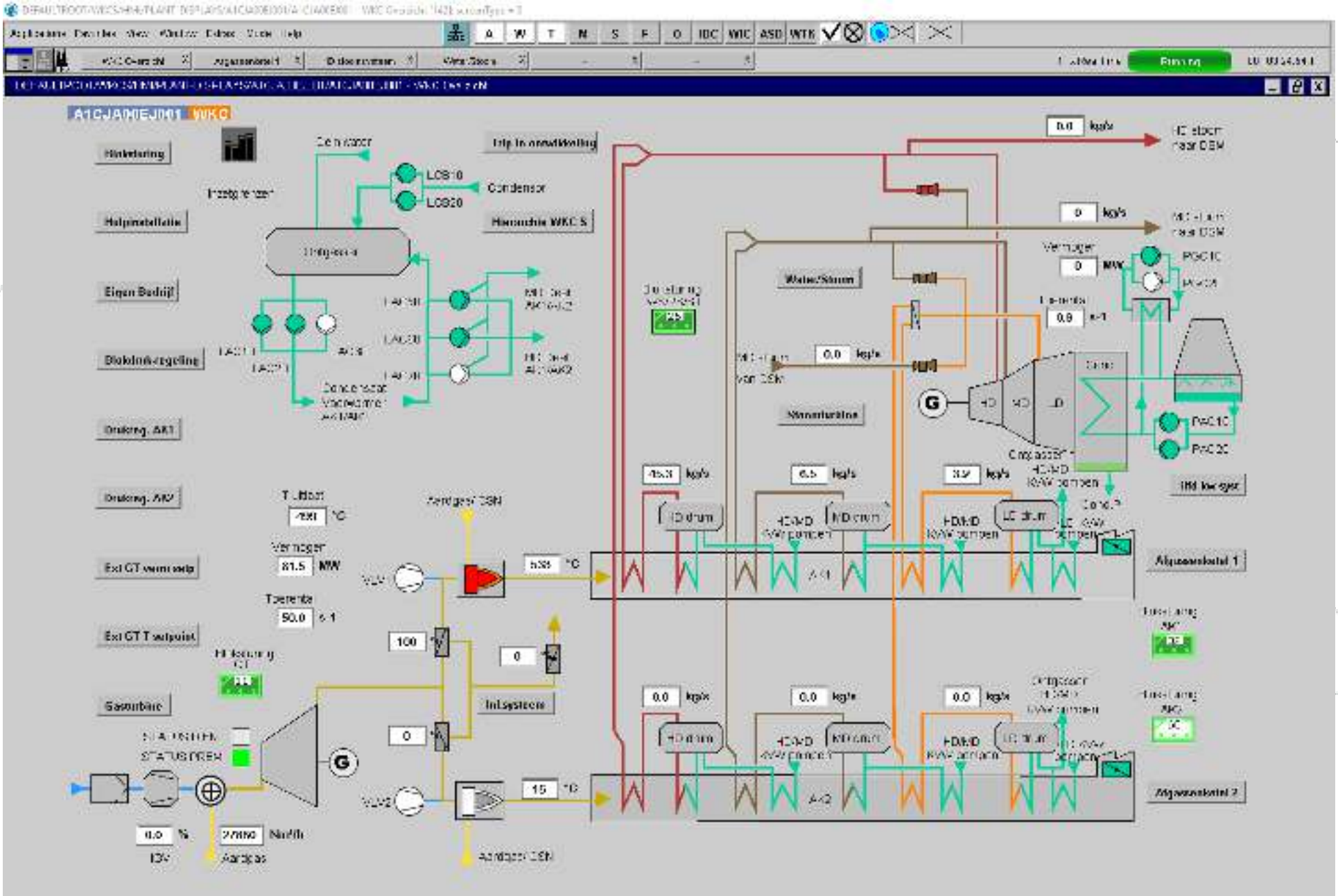
Training simulatoren energie centrales



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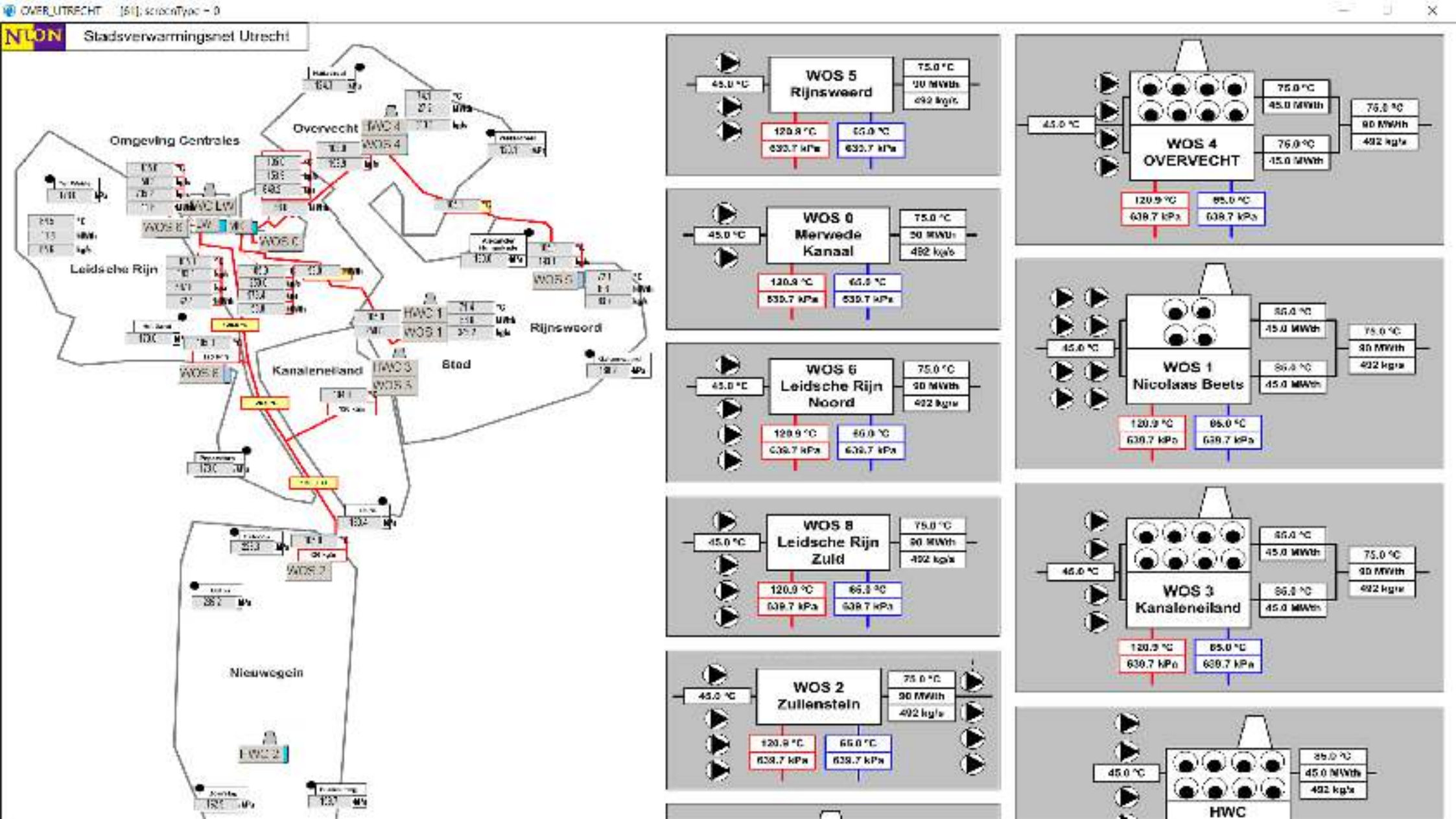
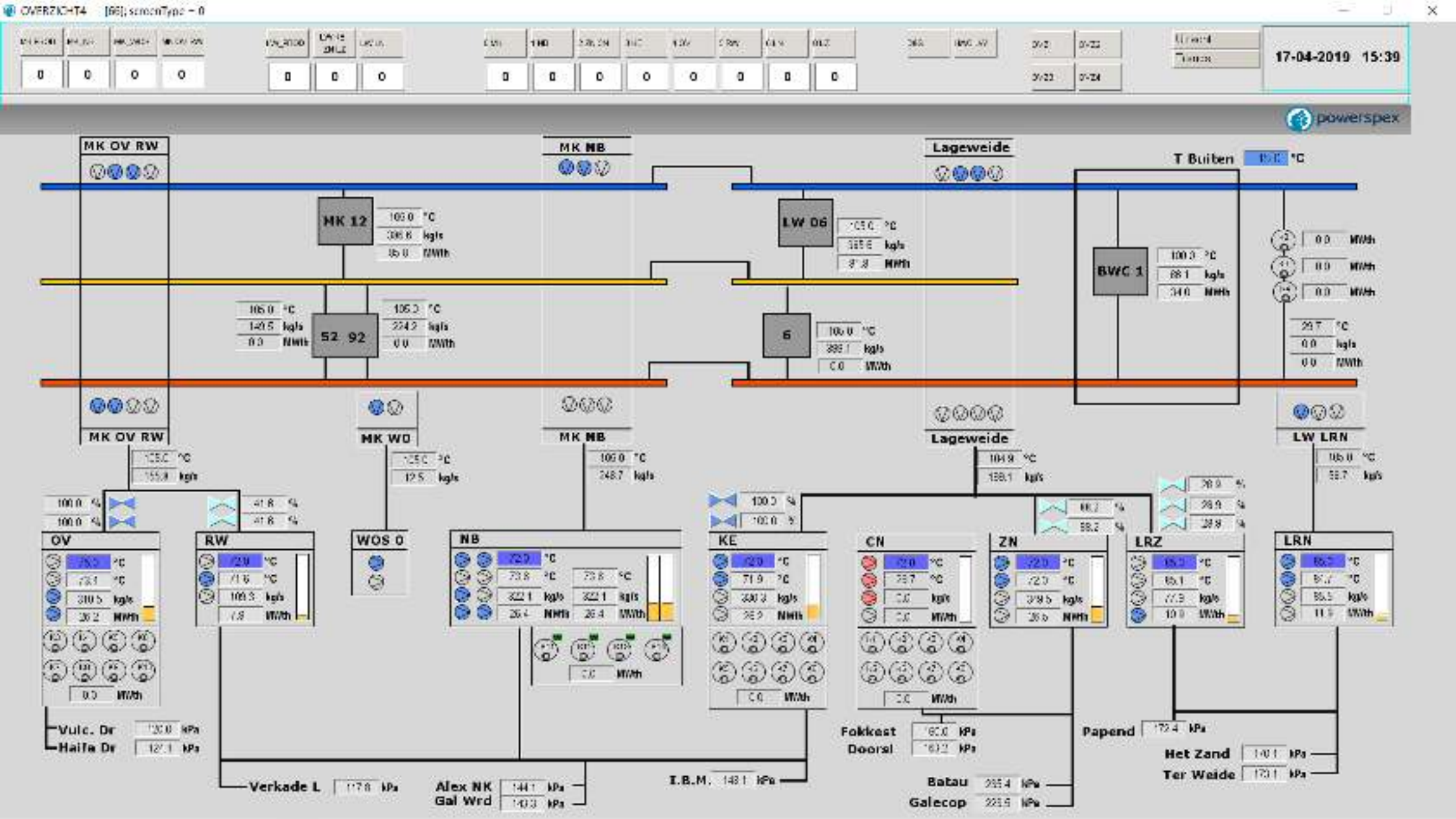
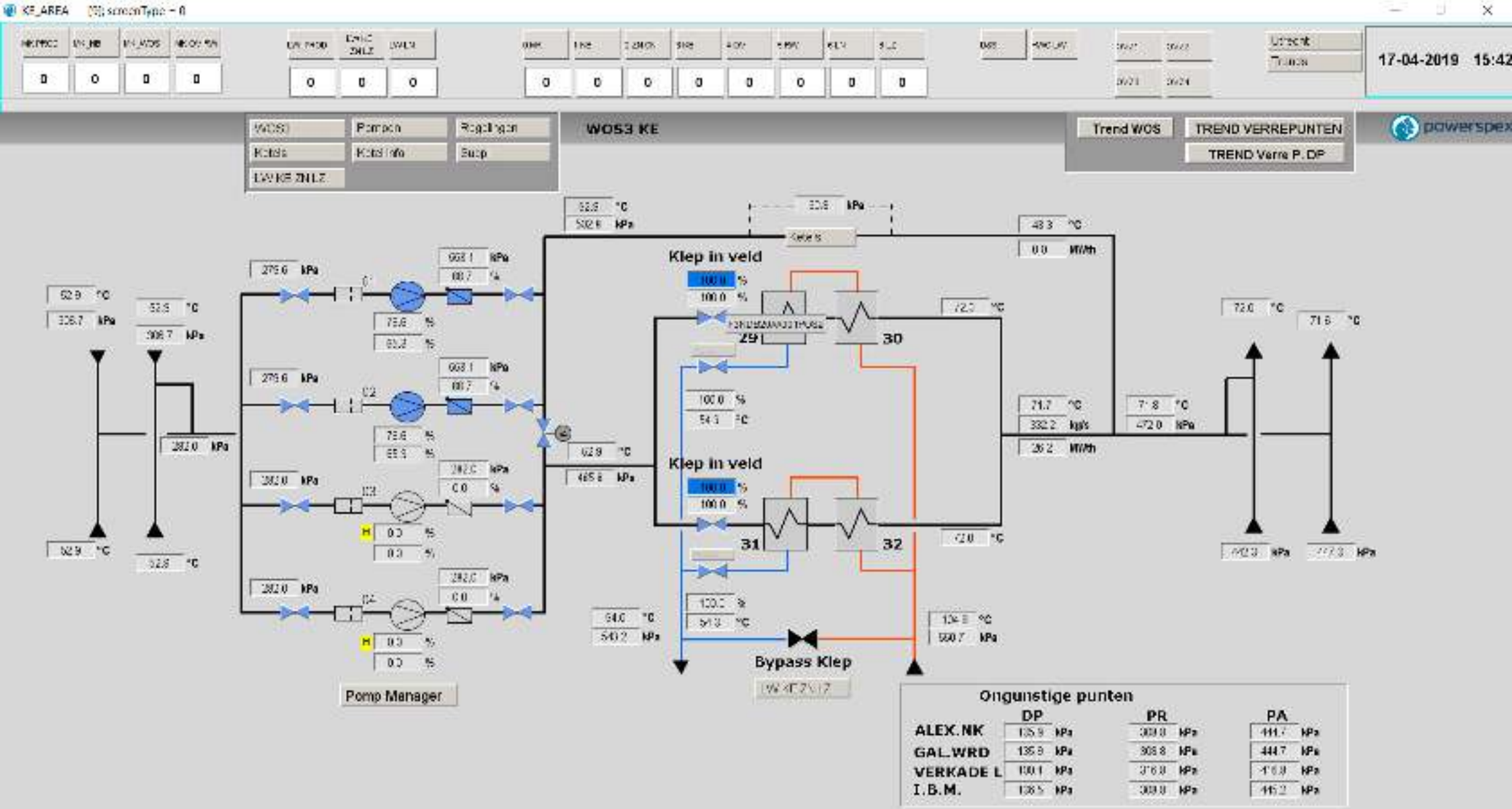
Warmtenetten



Warmtenetten



Warmtenetten



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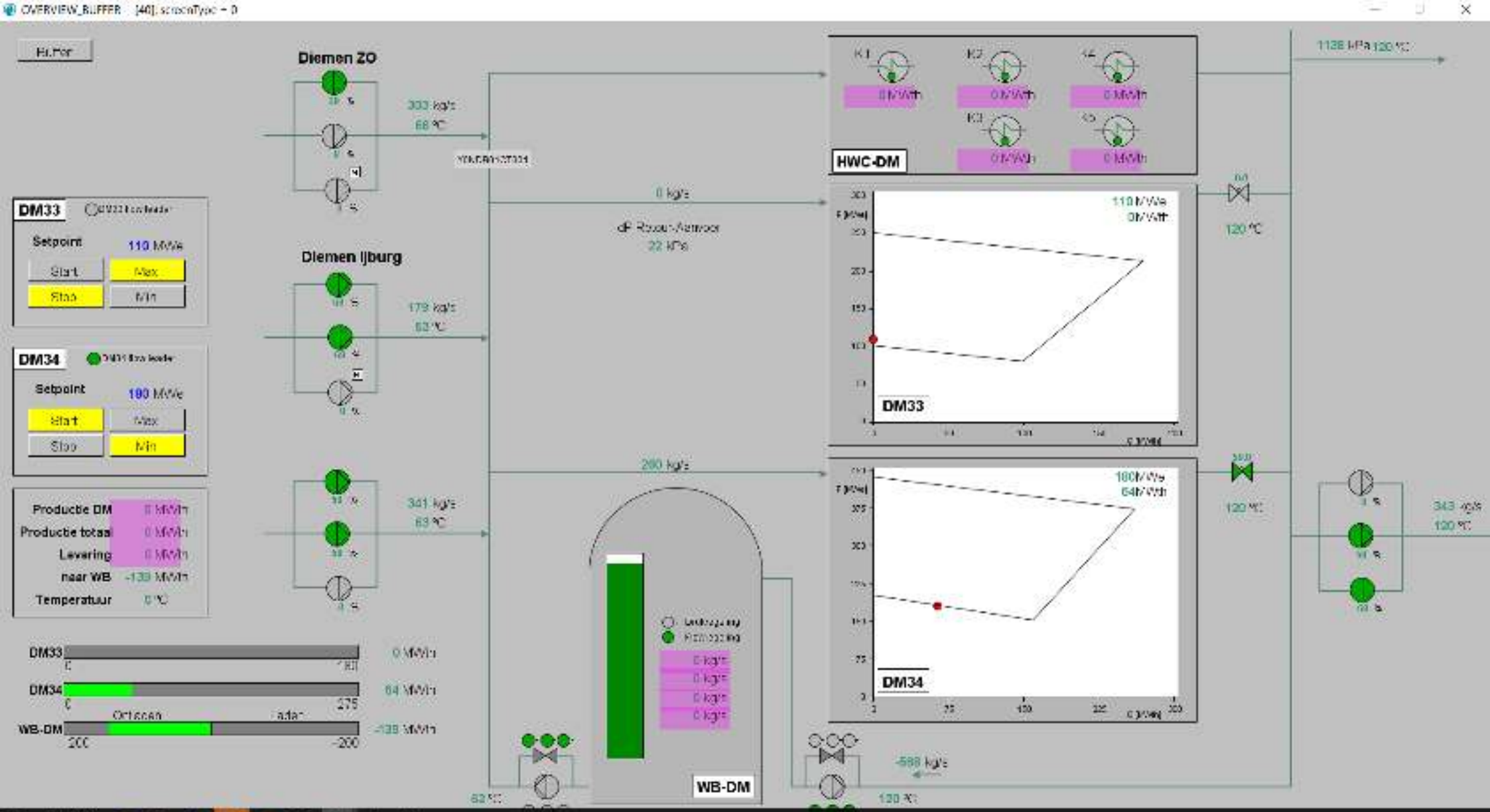
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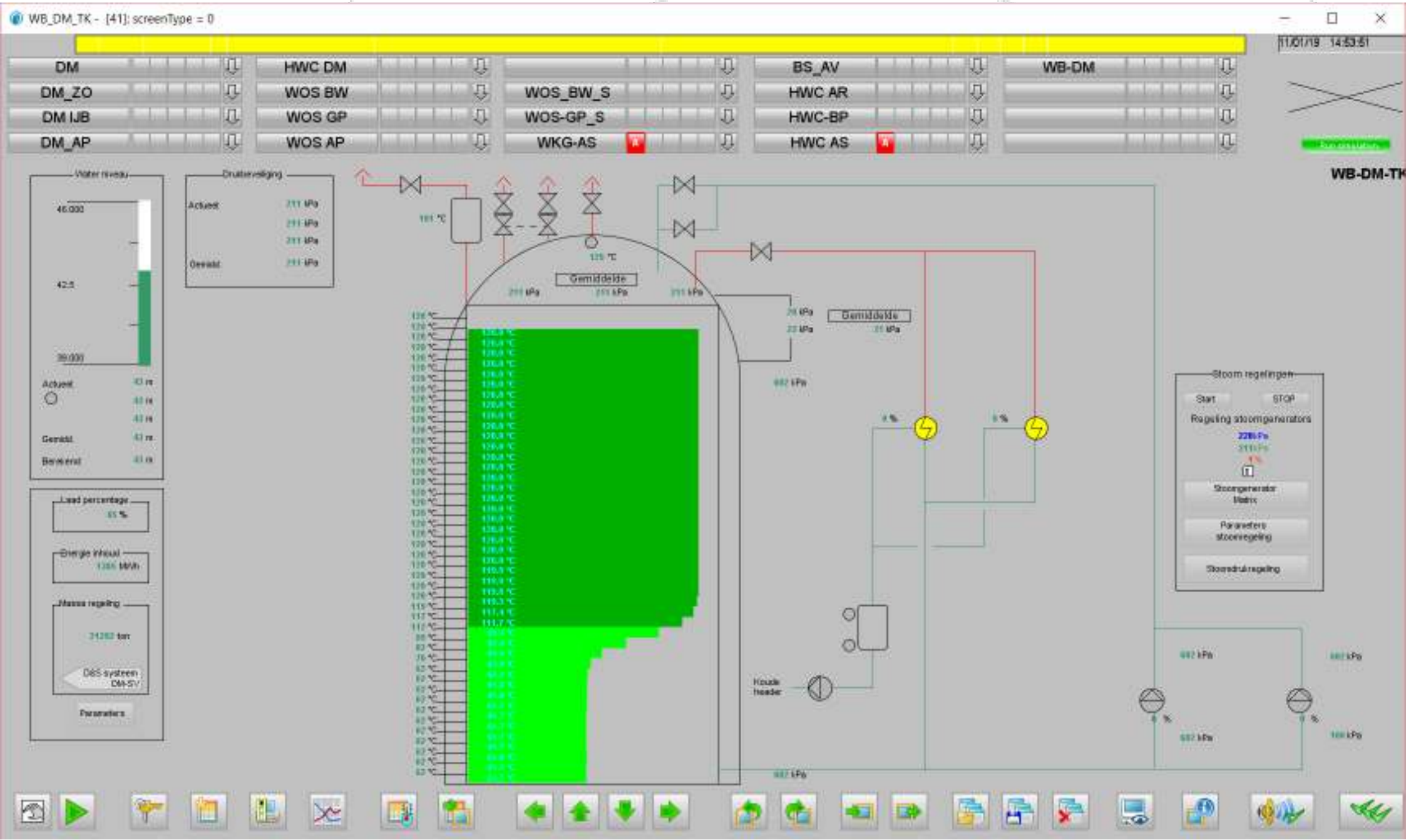
68 °C
Diemen IJburg
179 kg/s
62 °C
341 kg/s
63 °C
0 kg/s
dP Rooiu-Netwoor
22 kPa
260 kg/s
HWC-DM
DM33
Setpoint
110 MWe
Start
Max
Stop
Min
DM34
Setpoint
180 MWe
Start
Max
Stop
Min
Productie DM
Productie totaal
Levering
naar WB
Temperatuur
DM33
DM34
WB-DM
WB-DM
1128 kPa 120 °C
120 °C
343 kg/s
120 °C
-588 kg/s
120 °C

powerspex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11/01/19 14:53:51
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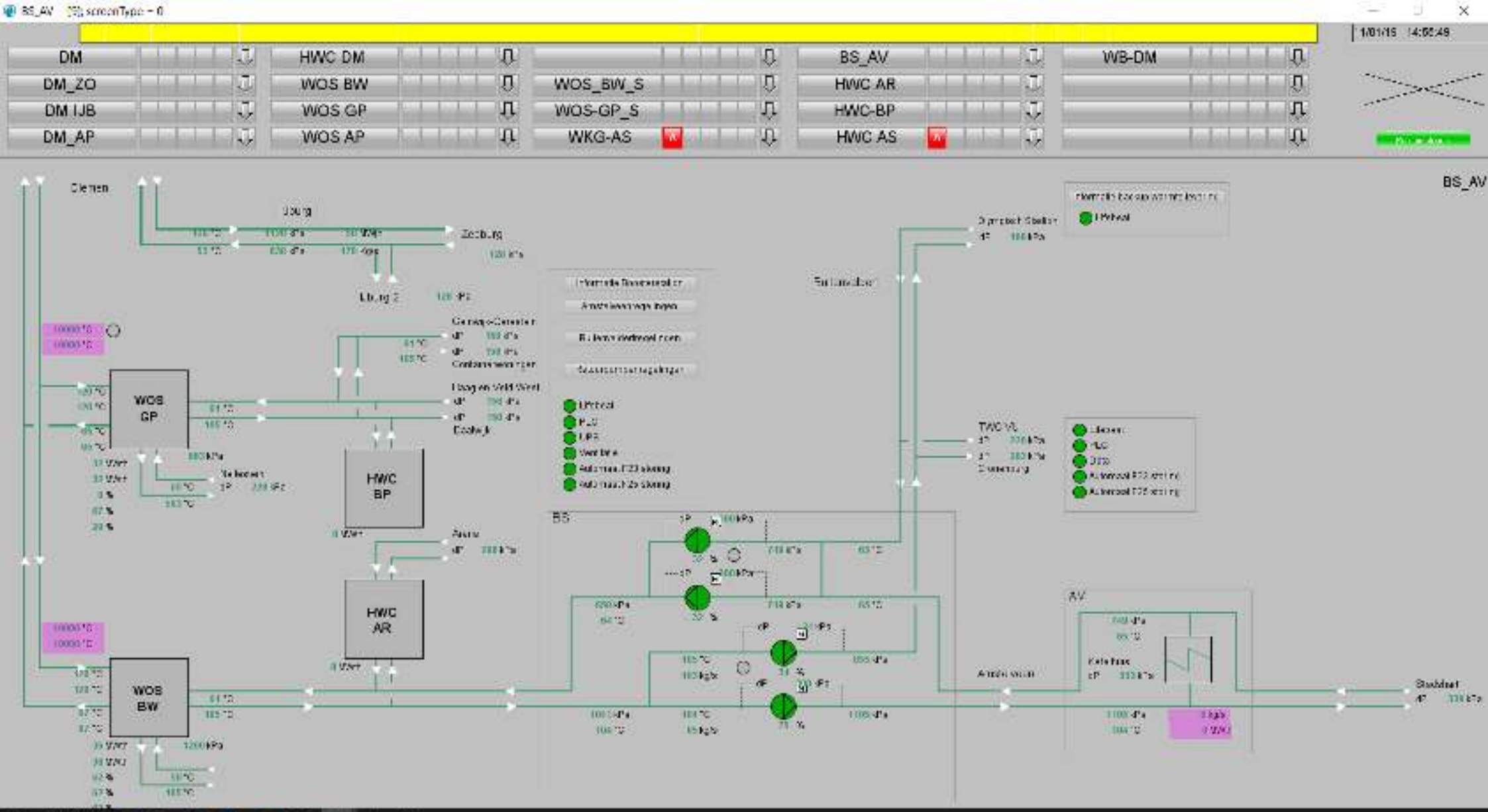
HWC DM
BS_AV
WB-DM
DM_ZO
WOS BW
WOS_BW_S
HWC AR
DM IJB
WOS GP
WOS-GP_S
HWC-BP
DM_AP
WOS AP
WKG-AS
HWC AS
WB-DM-TK
Water niveau
Druktreiliging
Actueel
Gemiddeld
Gemiddelde
Load percentage
Energie inhoud
Massa regeling
Parameters
Stoom regelingen
Start
STOP
Regeling stoomgenerators
Stoomgenerator Matrix
Parameters stoomregeling
Stoomdrukregeling
Koude header

powerspex


BS_AV
DM
HWC DM
BS_AV
WB-DM
DM_ZO
WOS BW
WOS_BW_S
HWC AR
DM IJB
WOS GP
WOS-GP_S
HWC-BP
DM_AP
WOS AP
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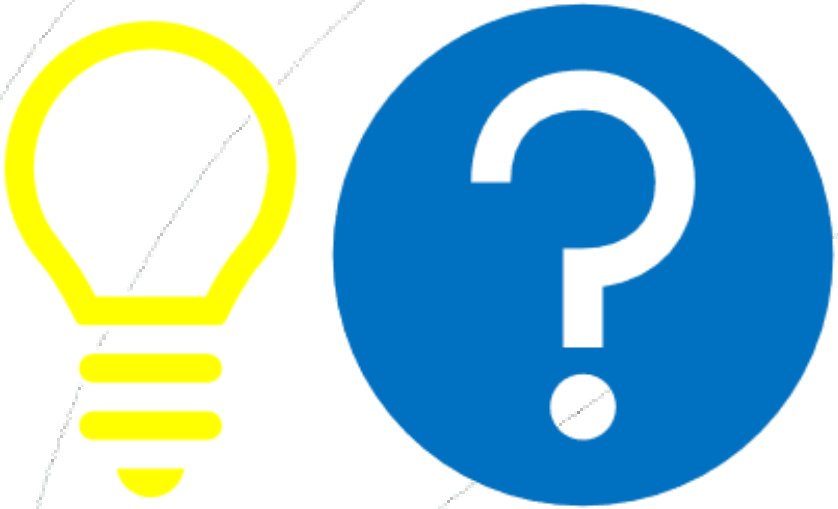
HWC BP
HWC AR
WOS BW
BS
AV

powerspex



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