Honeywell | Partner Channel

TREND sbc SAIA BURGESS CONTROLS CENTRA LINE by Honeywell Ex-Or by Honeywell Enacto

Honeywell/TREND Niagara: Pump it up & Analysér det!

INDLEDNING

MOTOR

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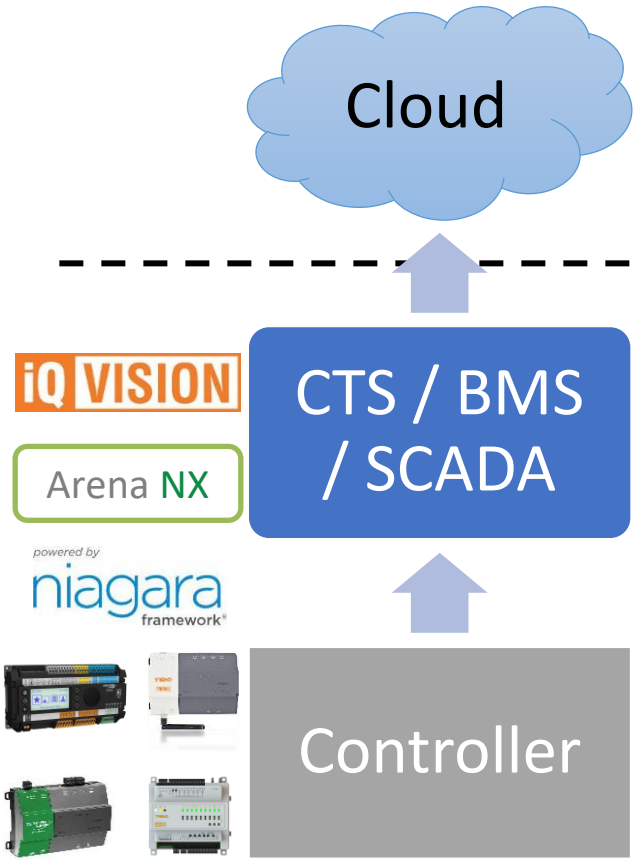
CLOUD VS. EDGE



Cloud Udfordringer:

- IT, adgang til server
- Tilslutnings proces – ”reverse engineering”
- Abonnement
- Ventetid for historikopsamling / effekt
- Ejerskab af data, evt. ”offboarding”

Edge Analytics:

- Både på kontroller og supervisor niveau
- Eksisterende installation
- One-off licens omkostning
- Punkterne tælles kun en gang
- Analysen strækker tilbage i tiden
- Al data opbevares hos kunden
- Høj fleksibilitet

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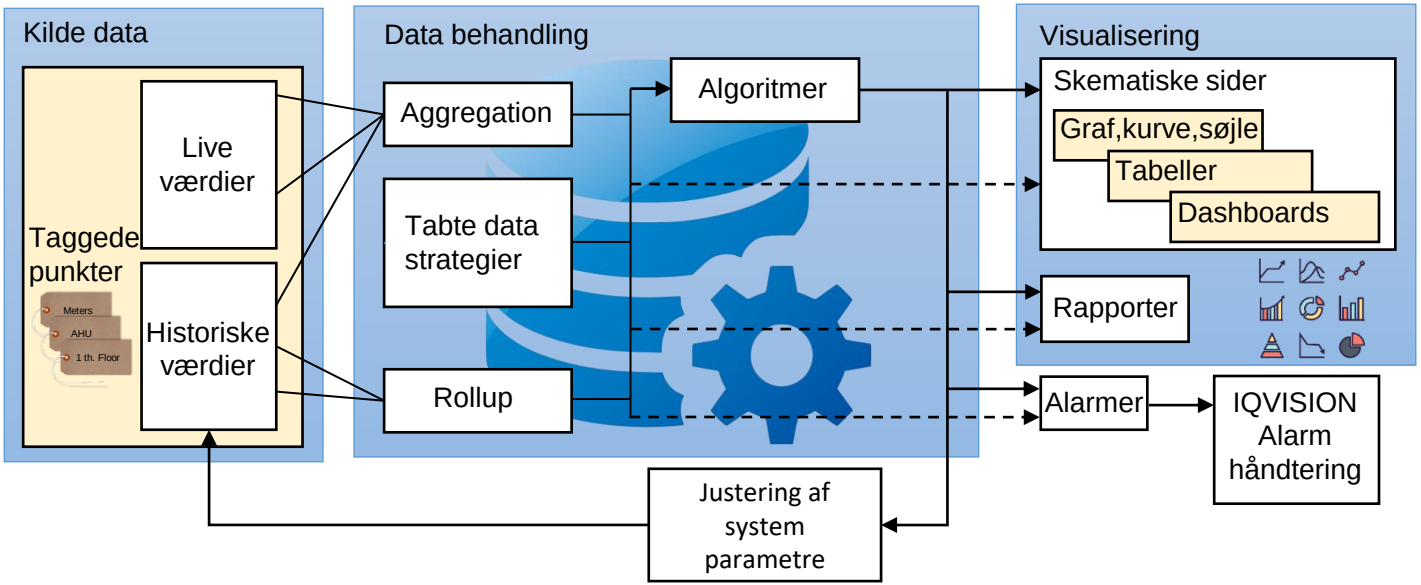
NIAGARA ANALYTICS ARKITEKTUR

Analytics bruger både historiske og real-time data fra systemet og bruger Algoritmer, Diagnose, Matematiske formler, Logik og Filtre



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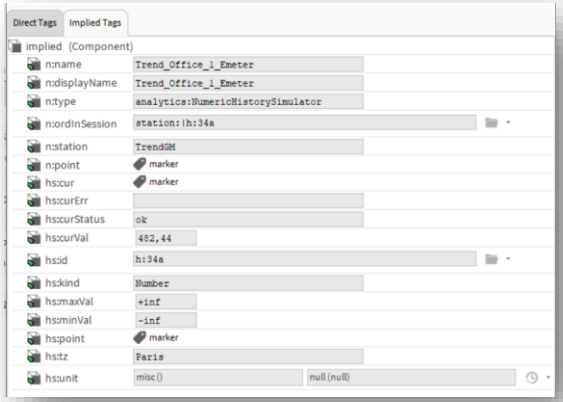
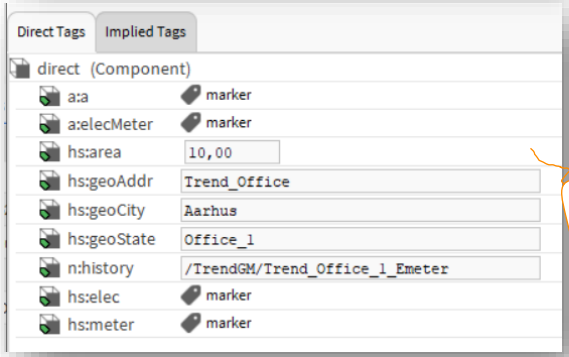
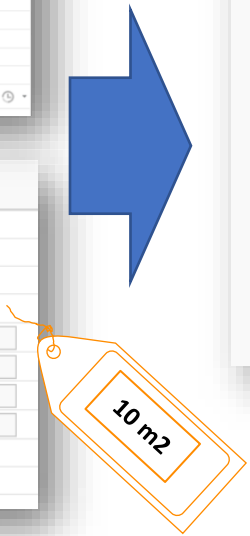
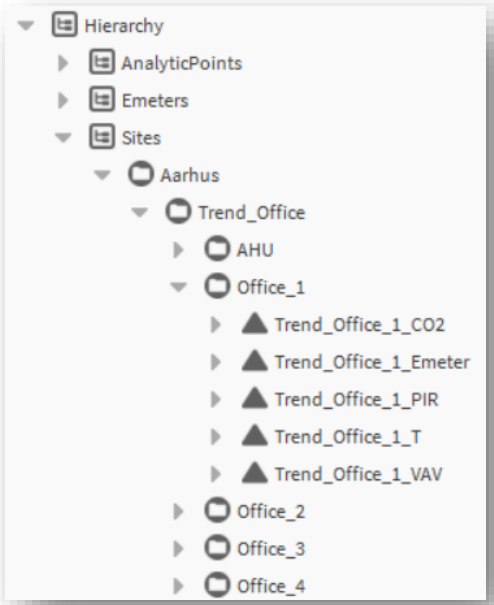
METADATA – TAGGING, HIERARCHY









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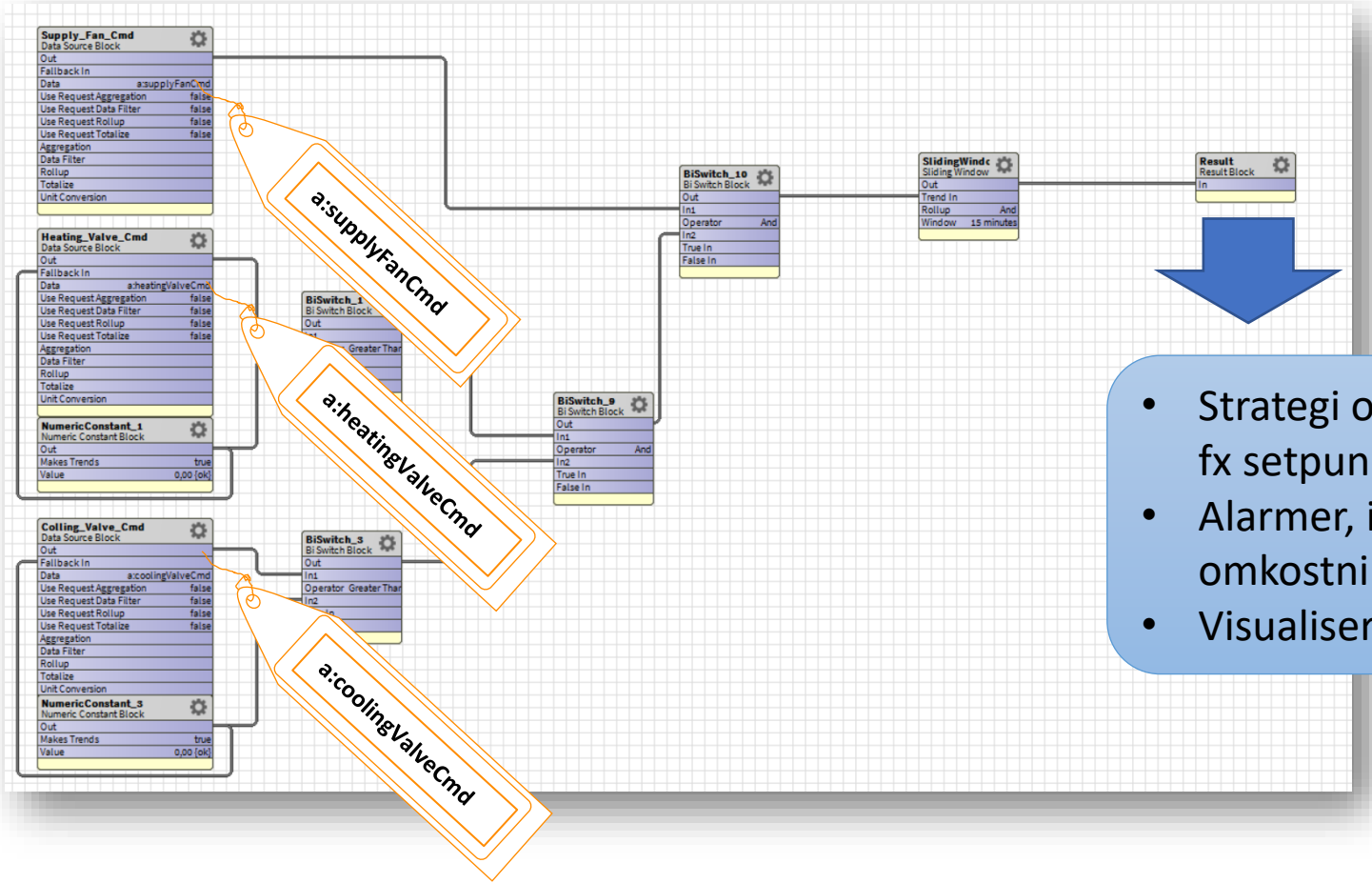
ALGORITMER PGA. METADATA



- Strategi optimering, fx setpunkter
- Alarmer, inkl. omkostning
- Visualisering

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ALGORITME BIBLIOTEK

1. Low Chilled Water Temp
2. High Chilled Water Temp
3. Chilled Water Mixing
4. Simultaneous Heat/Cool
5. High Supply Temperature
6. Low Supply Temperature
7. High Supply Static Pressure
8. Low Supply Static Pressure
9. Electricity Usage 5% Less Than Last Year
10. Electricity Usage 5% More Than Last Year
11. Water Usage 5% Less Than Last Year
12. Water Usage 5% More Than Last Year
13. Heating Valve Open 100%
14. Cooling Valve Open 100%
15. Low Outside Air Intake
16. High Outside Air Intake
17. Unscheduled Operation
18. Prolonged 100% VAV Damper
19. Electric EUI Exceeds Month Target
20. Electric EUI Exceeds Yearly Target
21. Chilled water usage minus 10% of last month
22. Chilled water plus 10% of last month
23. Chilled water usage minus 5% of last month
24. Chilled water usage plus 5% of last month
25. Non-conformance space temperature
26. Non-conformance space humidity
27. Space exhaust flow is high
28. Space supply flow is high
29. Low hot water temperature
30. High hot water temperature
31. Hot water mixing
32. Pump not meeting setpoint
33. Pump exceeding setpoint
34. Space differential pressure high or low
35. Economizer not running based on temperatur
36. Economizer not running — enthalpy based
37. Damper open during warmup
38. Unscheduled operation efan

+ **Logic blocks**

- Data Source
- Result block
- Constant blocks
- Filter blocks
- General blocks
- Math blocks
- Switch blocks

Roll-up and Aggregate by:

- Average
- Min
- Max
- Sum
- Load Factor
- First
- Last
- Median

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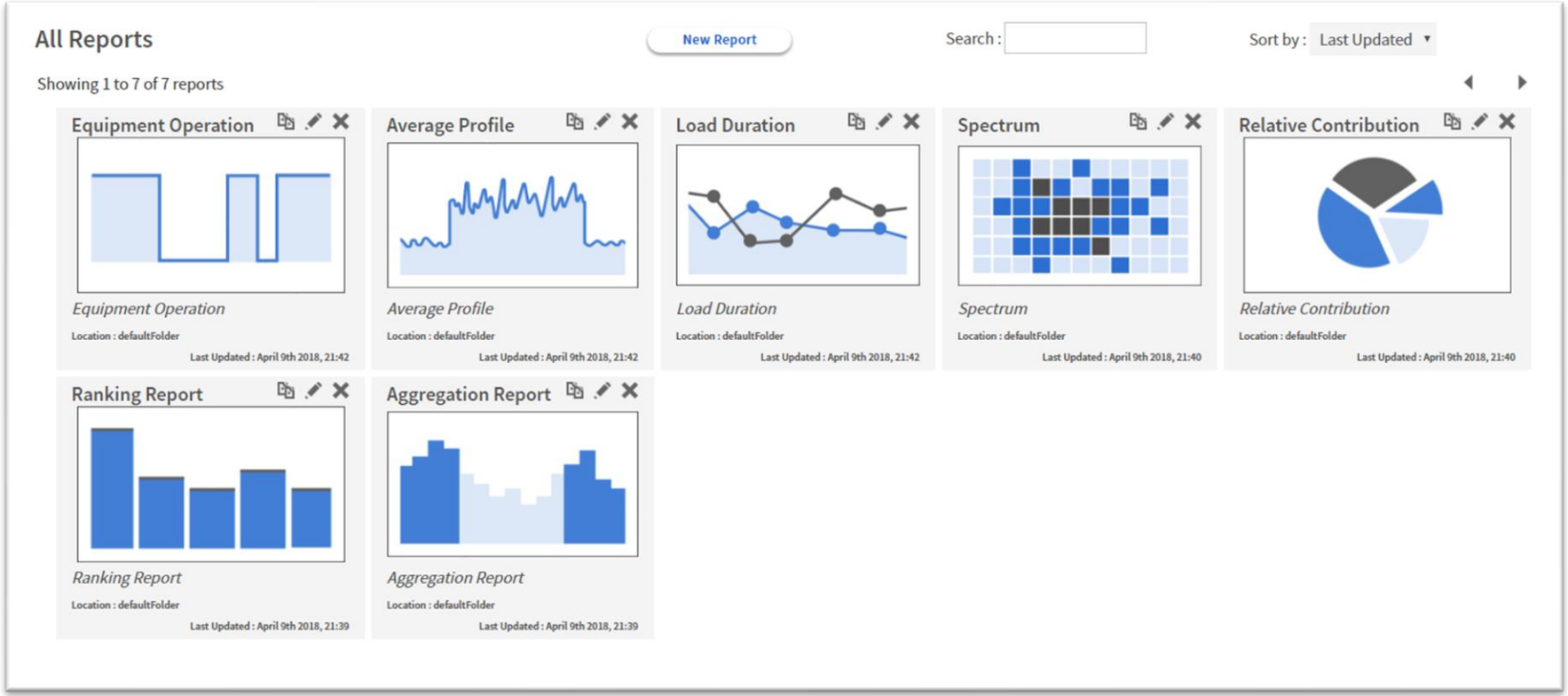
ANALYTISKE RAPPORTER



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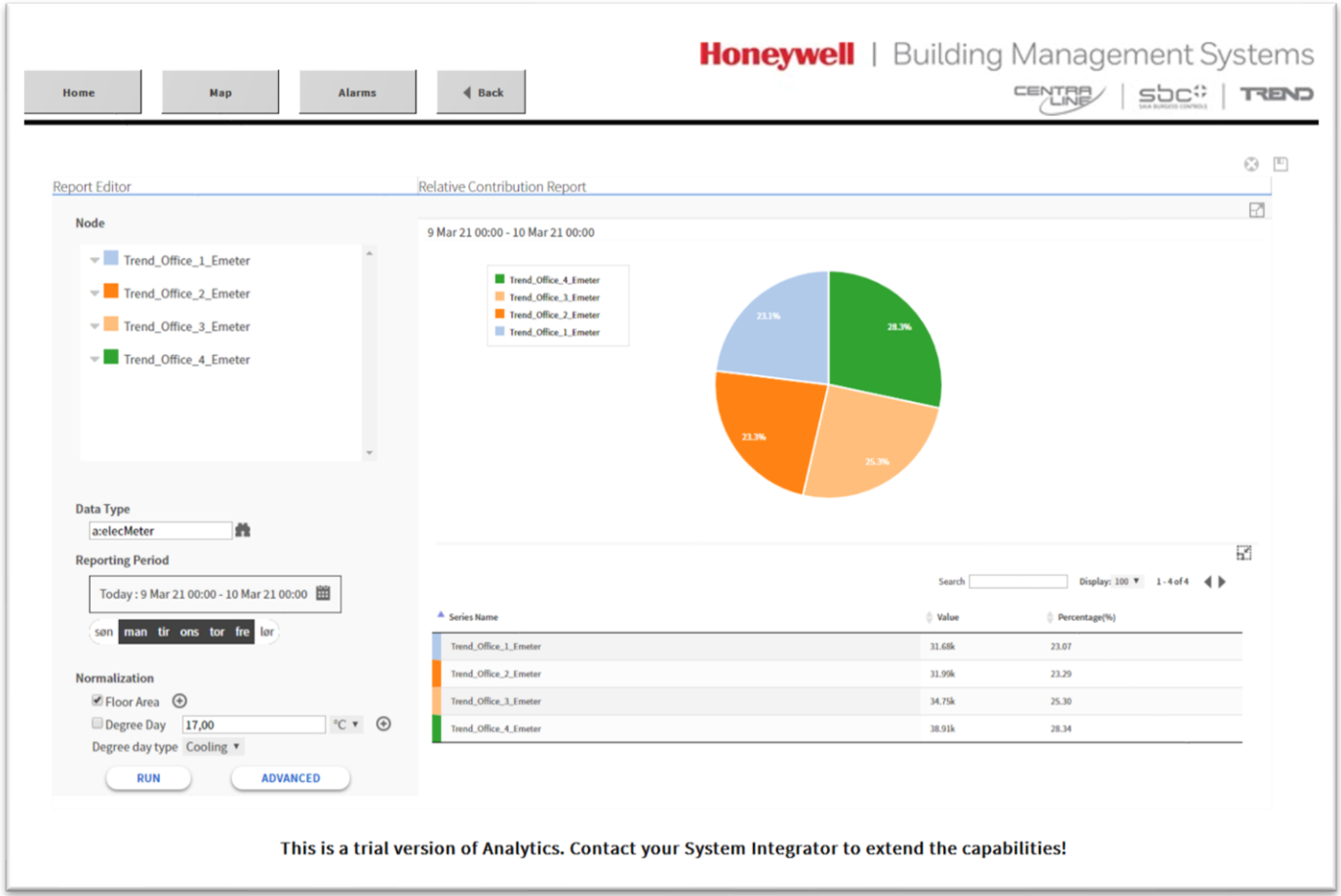
BRUGERDEFINERET ANALYSE



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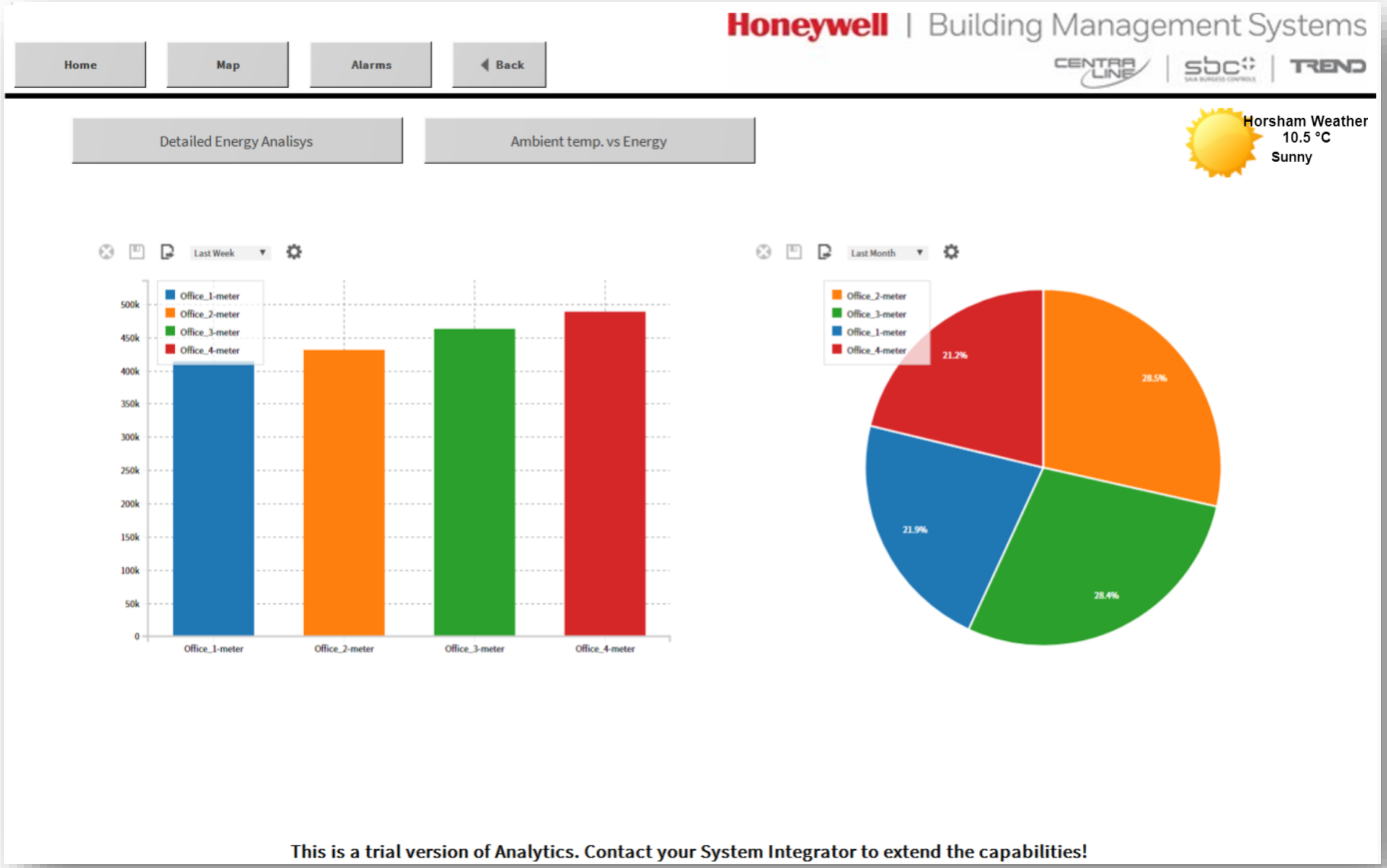
LANDING PAGE



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- Vejrdata
- Alarmoversigt
- MQTT/JSON
- Integration

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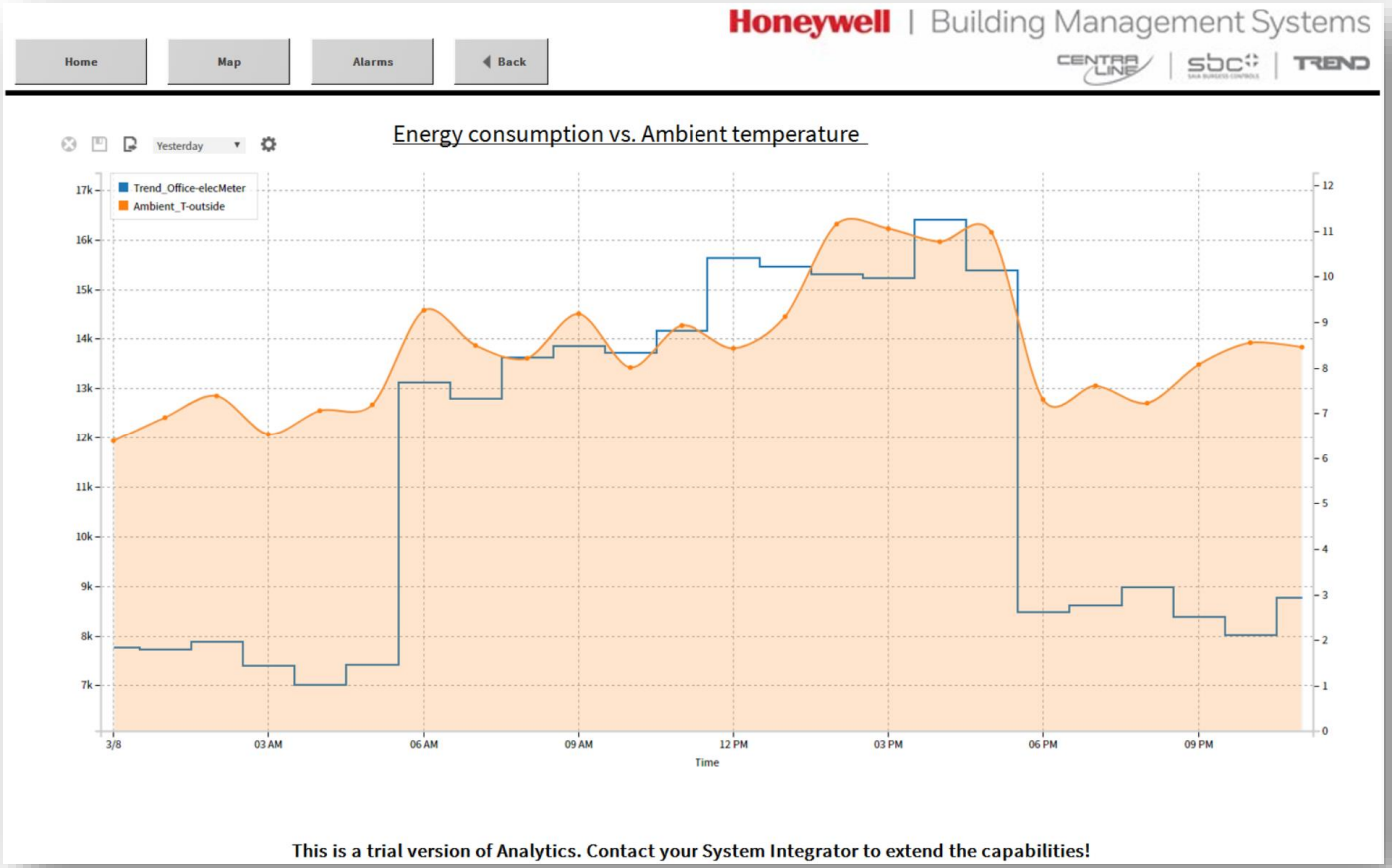
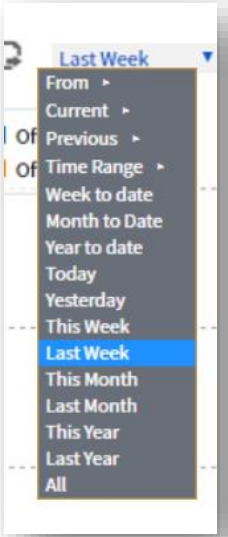
ENERGIFORBRUG VS. UDETEMPERATUR





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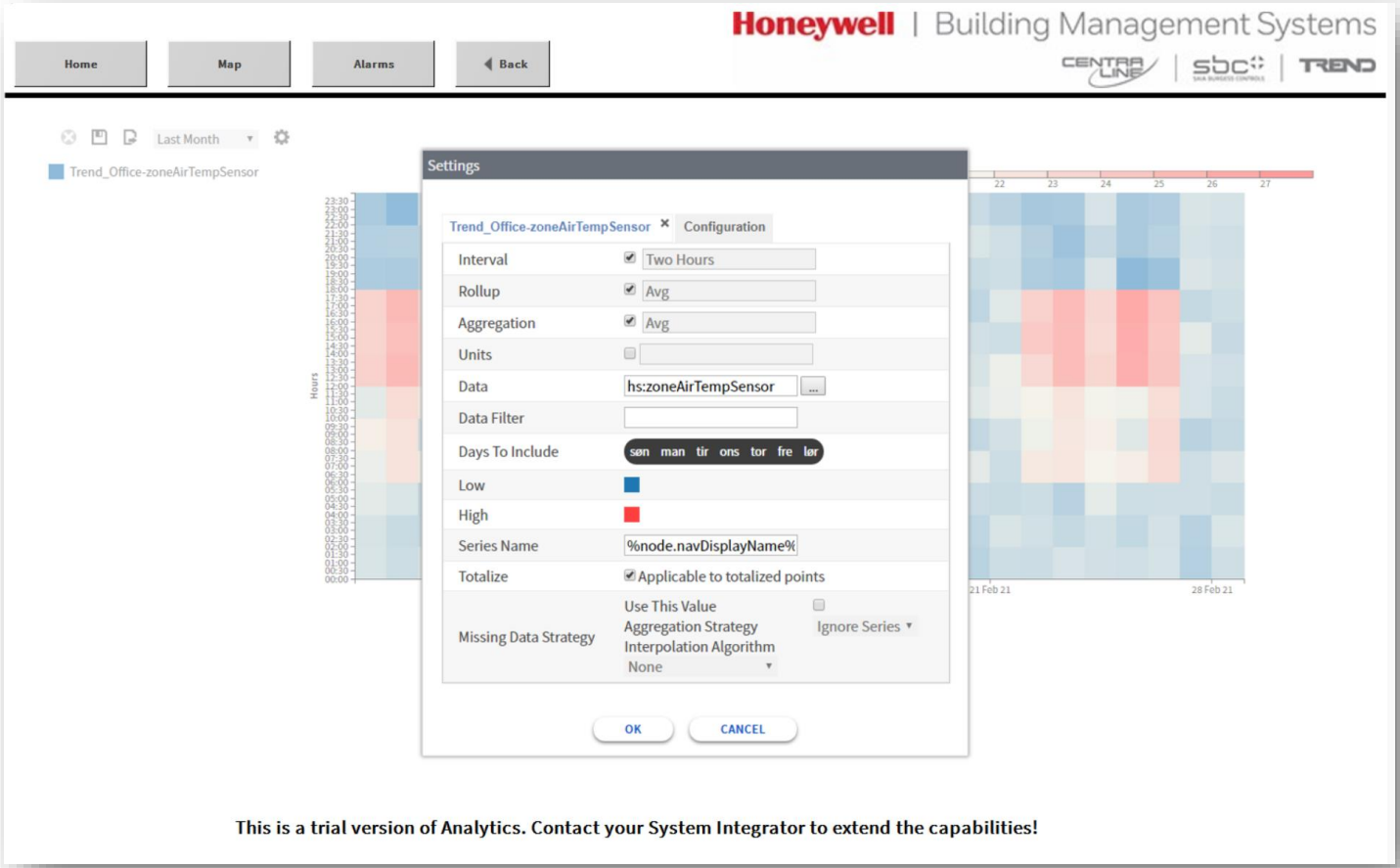
HEAT MAP / SPECTRUM CHART



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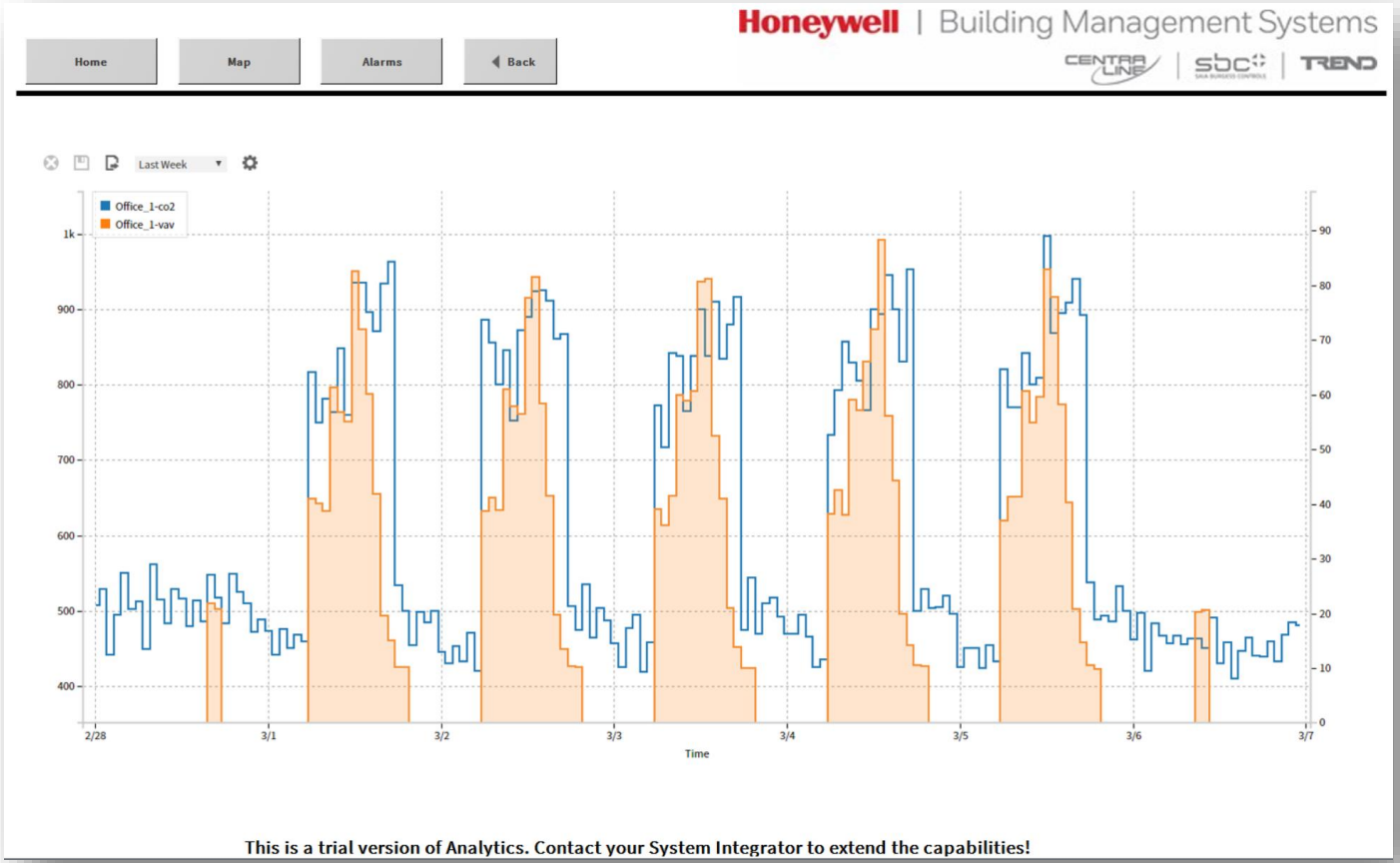
CO2 VS. VAV SPJÆLD



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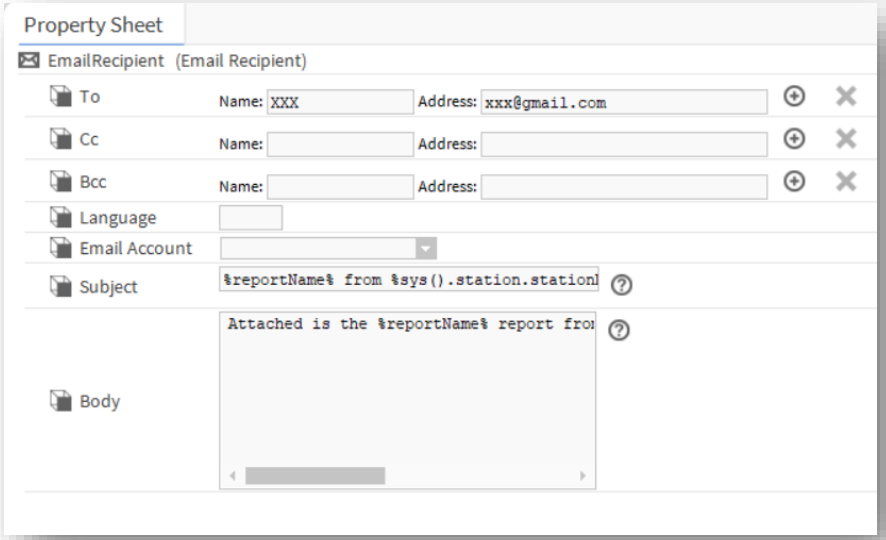
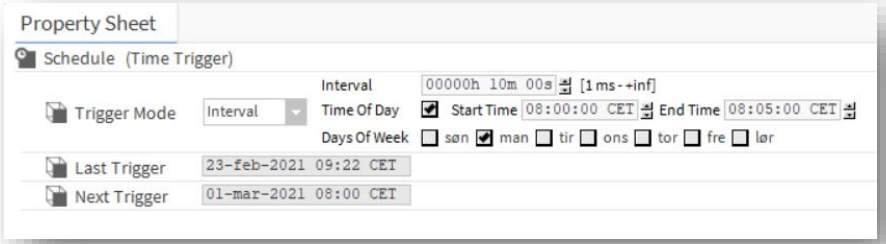
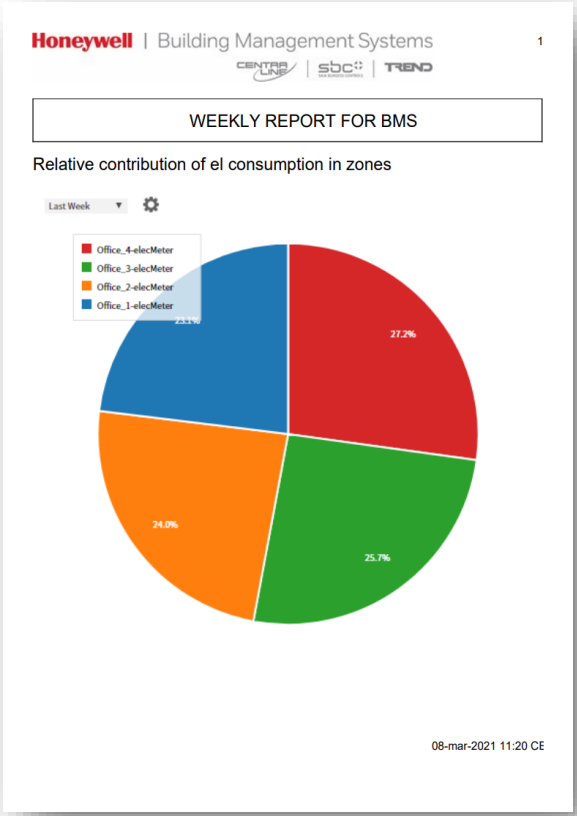
RAPPORTER I PDF PÅ E-MAIL







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OPENING THE BLACK BOX

Slut-bruger:
- Nem og hurtig gradvis implementering
- Ingen IT begrænsninger
- Data ejerskab
- Fleksibel leverandørvalg, partner koncept
- Tilpasning, indflydelse

System Integrator:
- ”Added Value”
- Organisk del af Niagara Framework
- Skræddersyede løsninger
- Let opskalering, templating

Rådgiver:
- Krav til Metadata
- Gennemgang af eksisterende systemer
- Et værktøj for Commissioning
- Mulighed for at imødekomme de nye krav i Bygningsreglementet BR 18 - §298A

Uddannelses institutioner:
- Forskningsprojekter
- Udarbejdelse af fælles algoritmer

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