



DTplan Demodagen

3 oktober 2023





Honeywell



The net-zero imperative & Honeywell solution

FREDERIK DELANGHE

SR ACCOUNT MANAGER

October 2023

Honeywell

HBSM | INTELLIGENT BUILDING OPTIMIZATION

INPUT PARAMETERS



Collects and analyzes real-time occupancy sensor data, IAQ parameters, weather conditions, temperature, humidity and pollution levels



Optimizes HVAC system to reach the desired outcome to meet sustainability goals and create an optimal indoor environment

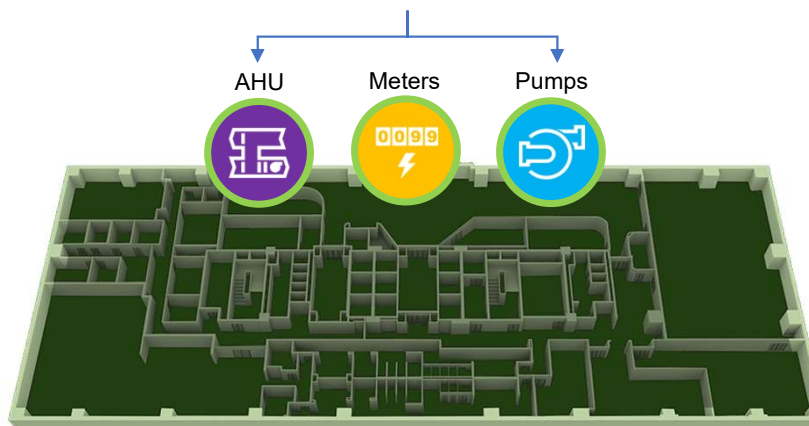
USES MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

Analyzes historical and real-time data and IAQ parameters and autonomously adjusts systems to meet desired parameters

REDUCES NEED FOR MANUAL INTERVENTION

Extends asset performance and lifecycle

CONTROLLED PARAMETERS



OPTIMIZES ENERGY-INTENSIVE ASSETS

Manages and optimizes chillers, boilers, fans, pumps, air-handling units, lighting and more

PROVIDES FLEXIBILITY TO SET MODE FOR DESIRED OUTCOMES

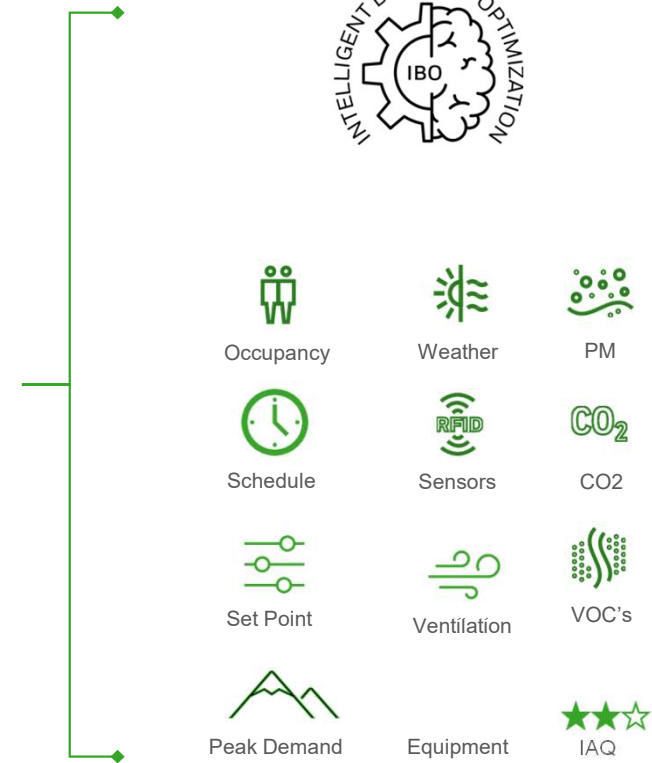
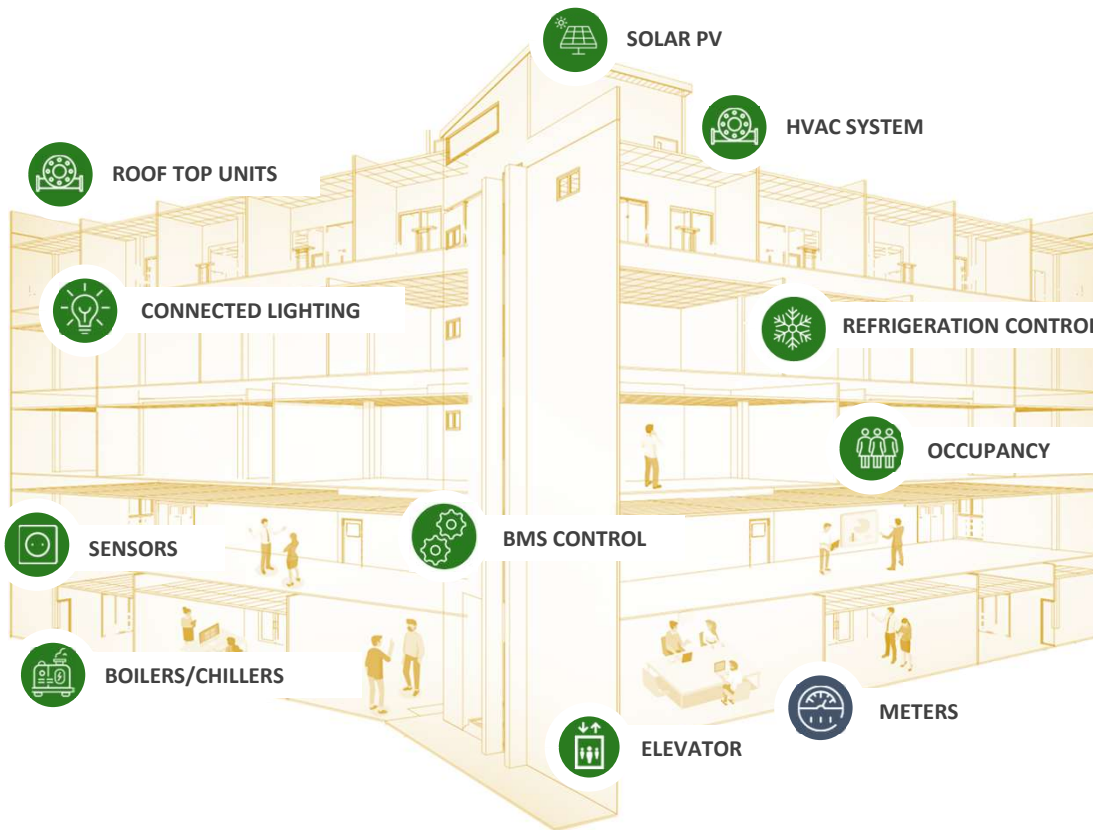
Features four modes to support optimal facility operations

Rethinking energy efficiency

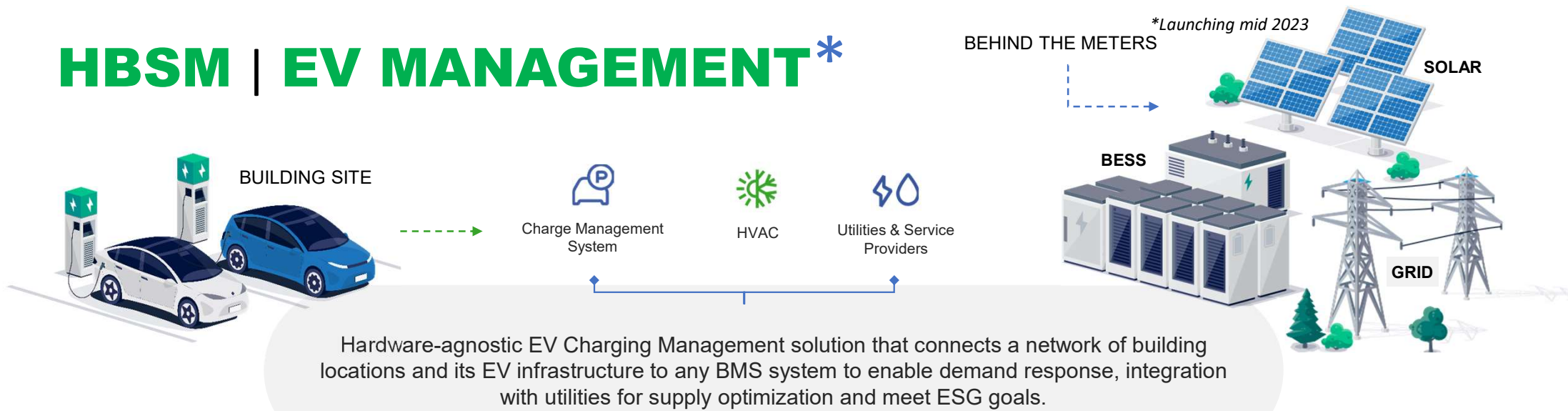
Assets

Controls

Optimization



HBSM | EV MANAGEMENT*

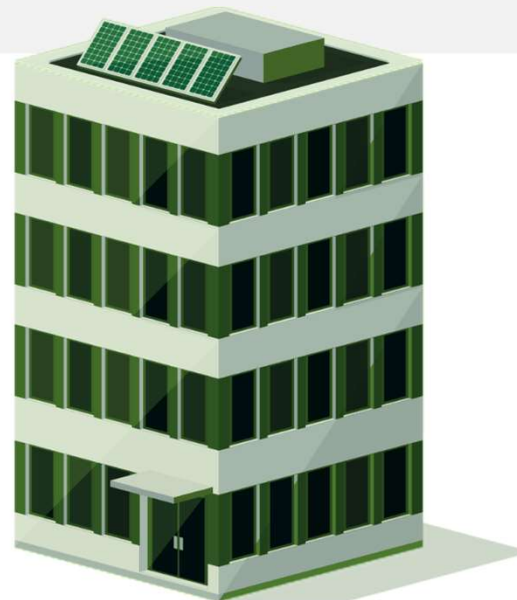


SUPPORTS CAPEX MANAGEMENT

Automated power switching enables better cost control

REDUCES ENERGY USE AND COSTS

Leverages dynamic load balancing to help lower energy use and costs



ENABLES GRID RESILIENCY

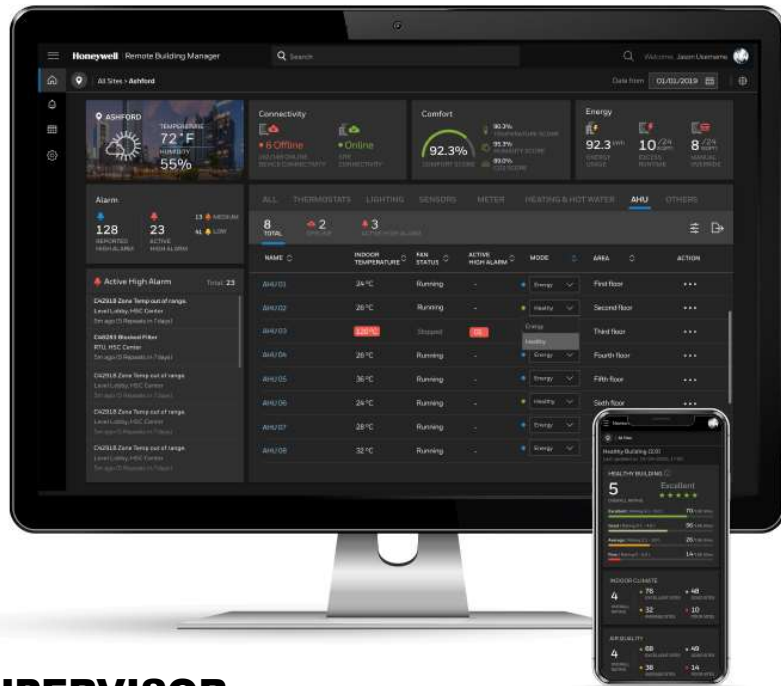
Demand response

SCALE FOR GROWTH

Compatible with any new adds-on such as microgrids

HONEYWELL REMOTE BUILDING MANAGER

MAIN INGREDIENTS



SUPERVISOR

- Cloud-based Web UI available on Desktop, Laptop, Mobile
- Multi-language Management Platform
- Points list view, alarms, energy consumption and schedules
- Long term storage and visualization of all values in combined Trend graphs



SMART GATEWAY

- Central point for aggregating site data from Plant controllers
- Connected to controllers via BACnet
- Other protocols supported via Expert Mode configuration
- Secure communication to and from the site location
- Data securely routed across the internet to the Forge



PLANT CONTROLLERS

- Honeywell/ Non-Honeywell plant controllers connected to field sensors/ devices
- BACnet controllers fully supported via the onboarding wizard
- Other protocols supported via Expert Mode configuration
- Running control strategies to operate HVAC/ Lighting



THANK YOU

October 2023

Honeywell





100 years
OF SHARED ENERGY

100
jaar

3900
werknemers

12
productieve
stijgingen

725
miljoen € omzet

8%
van omzet in R&D

30
dochterondernemingen



Vermogensschakelaars

Power switching

- Lastscheidingsschakelaars
- Zekeringen combinatieschakelaars
- Beveiliging
- Omschakelaars
- Behuizingen en systemen

aanbod van
16 tot 6000 A

2M
schakelapparaten
jaarlijks verkocht



Bewaking van vermogen

Power monitoring

- Energiemeters
- Multifunctionele meters
- Meting en multi-circuit bewakingssystemen
- Meetapparaten
- Software voor energiebewaking en -beheer
- Systemen om vermogensfactor te corrigeren



DIRIS
al 25 jaar de norm



Energieconversie

Power conversion

- UPS (Uninterruptible Power Supply) van 600 VA tot 4,8 MVA
 - > Ruime reeks UPS met hoge efficiency
 - > Modulaire en schaalbare systemen
 - > 19 inch in rack geïnstalleerde UPS
 - > Op transformator gebaseerde UPS
 - > Industriële robuuste UPS voor veeleisende omgeving
- Statisch omvormersysteem (STS)



Energieopslagsystemen

De combinatie van onze 4 expertisegebieden

- Opslagomzetters
- Li-ion batterijen
- Fotovoltaïsche wisselrichters
- Verdeelkasten



The logo for WAGO, featuring the word "WAGO" in a bold, green, sans-serif font. The letter "W" is stylized with two green arrows pointing upwards and outwards from its top corners. The logo is positioned on a white, rounded rectangular background that overlaps the bottom left corner of the image.

WAGO



Backbone of a smart connected world

WAGO Building Cloud Services



Building Management System

Operation and Control

Environmental Reporting

Alarming and Ticketing

Energy Management



WAGO Lighting Management



#WAGO Applications



WAGO Application Load Management



WAGO Feed In management

Applications

Plug & Play

Configurable

No code, low code



tempolec



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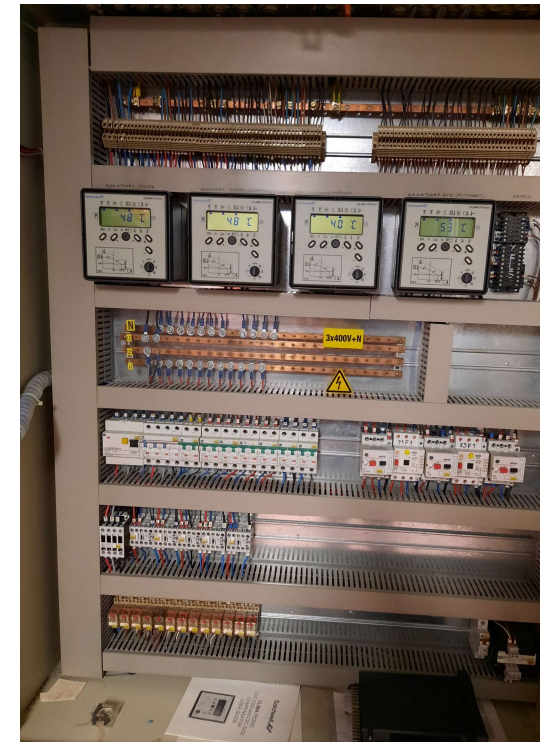
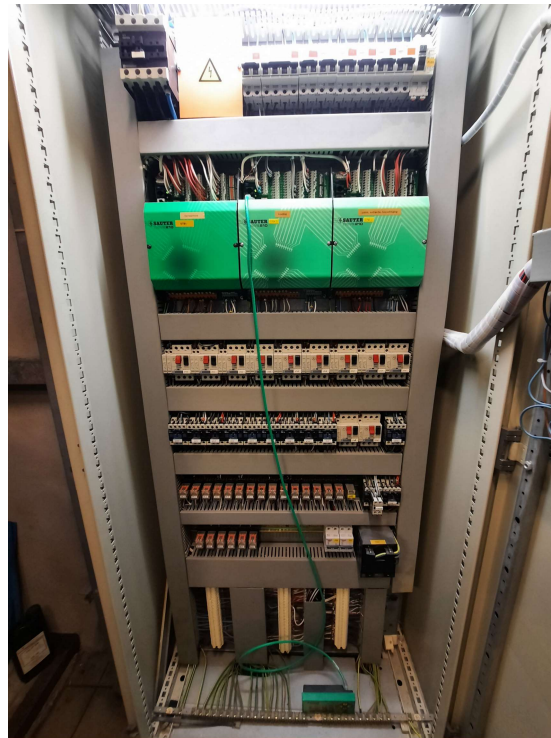




**WE ZIJN
BENIEUWD
NAAR JULLIE
MENING &
GEDACHTEN!**



Wat is volgens jou de levensduur van een automatische regeling HVAC?



Is jullie kantoor/gebouw al uitgerust met digitale elektriciteit en gasmeter(s)?





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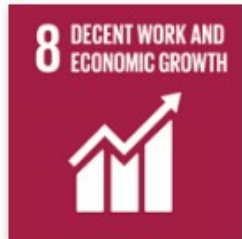


DTplan/Bopro

Sam Tytgat/Ruben van Daele

 **DT PLAN**
ENERGY SOLUTIONS

bopro[®]







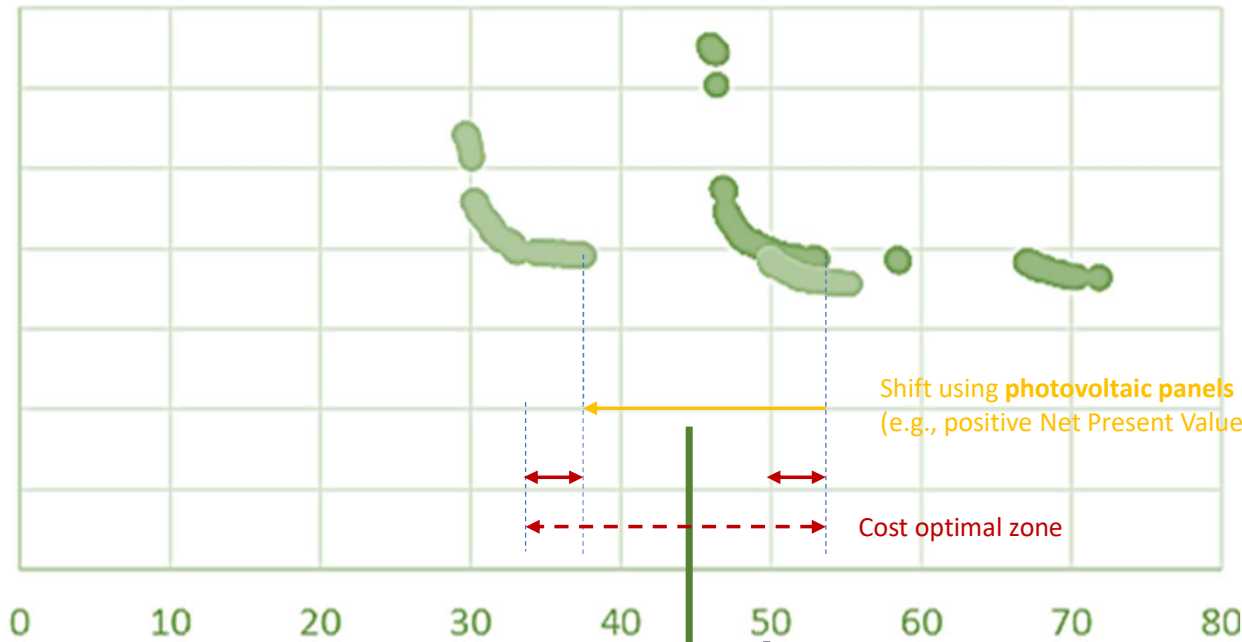


GREEN BUILDINGS DON'T COST MORE IF YOU DESIGN THEM AS SUCH.

- No higher costs on average.
- larger variance, increasing with ambitions.

(BRE Research)

THE REQUIREMENTS DO NOT ADD ADDITIONAL COST (NET PRESENT VALUE) TO THE PROJECT



Shift using photovoltaic panels
(e.g., positive Net Present Value investment)

Cost optimal zone

Requirement by Flanders' energy performance regulation for new construction (here: office buildings): E50

Requirement by EU Taxonomy energy performance regulation for new construction: NZEB - 10%

STUDIE NAAR KOSTENOPTIMALE NIVEAUS VAN DE MINIMUMEISEN INZAKE ENERGIEPRESTATIES VAN NIET-RESIDENTIELE GEBOUWEN

Klant: Vlaams Energieagentschap
Contactpersoon: Marjke De Meulenaer
Adres: Graaf de Ferrarisgebouw
Koning Albert II-laan 20 bus 17
B-1000 Brussel
VK Referentie: B117026
VK Contact persoon: Valerie Vergaert (VK), Wout Pays (Bauphi), Sybe de Jong (RH)
Datum: 2011/2017
Status: Finale versie



Needs Programme Energy



In this document, we review the approach to the issue of Energy. Starting from the sustainable development objectives and the EU Taxonomy, we use a systemic set of guiding principles within the BREEAM reference scheme to define the needs to be met by the project. Specifically for the topic of energy, we then hold these starting points against the light of future-proofing using the Carbon Real Estate Risk Monitoring tool.

1A. SUSTAINABLE DEVELOPMENT OBJECTIVES

Objective 7 focuses on clean and affordable energy, available to all. This is translated into the following sub-objectives:

- a. Objective 7.1 By 2030, ensure universal access to an affordable, reliable and modern energy supply.
- b. Objective 7.2 By 2030, significantly increase the share of renewable energy in the global energy mix.
- c. Objective 7.3 By 2030, double the rate at which energy efficiency is improving on a global scale.

By 2030, strengt research and te advanced and ck infrastructure an

By 2030, expand sustainable ener developed count countries, in acc

In this project we aim to avoid a negative impact the Trias Energetica: av and maximise efficiency

1B. EU TAXONOMY (NEW)

The European Commiss programme "Fit for 35" concrete measures via th ambitions is linked to co concerned.

The sustainability perfor climate mitigation; (b) c must be made to one, as is always based on a def

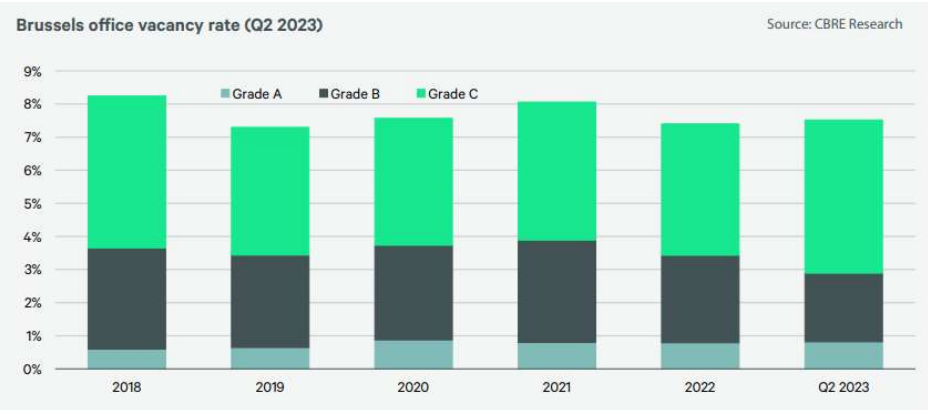


Updated methodology & Updated Technical Screening Criteria
March 2020

Energy									
Ene 01	Reduction of energy use and carbon emissions		13	13	4	4	5	12	
	All	Energy Performance	9	9	4	4	5	6	
		Operational Energy	4	4	0	0	0	0	4
	All	Exemplary: Low Carbon Sources (additional to Energy Performance)	3	3	0	0	0	0	0
Exemplary: monitor energy consumption (additional to Operational Energy)		2	2	0	0	0	0	2	
Ene 02a	Energy monitoring		2	2	1	1	2	2	
	Non-Residential only	Sub-metering of major energy-consuming systems	1	1	1	1	1	1	
Sub-metering of high energy load and tenancy areas		1	1	0	0	1	1		
Ene 03	External lighting		1	1	1	1	1	1	
Ene 04	Low carbon design		3	3	0	2	3	3	
	All	Passive design analysis	1	1	0	1	1	1	
		Free cooling	1	1	0	0	1	1	
		Low zero carbon feasibility study	1	1	0	1	1	1	
Ene 05	Energy efficient cold storage		3	0	0	0	0	0	
	Non-residential only	Energy efficient design, installation and commissioning	1	0	0	0	0	0	
		Energy efficiency criteria	1	0	0	0	0	0	
		Indirect greenhouse gas emissions	1	0	0	0	0	0	
Ene 06	Energy efficient transportation systems		3	3	0	0	0	3	
	All	Energy consumption	1	1	0	0	0	1	
		Energy efficient features	2	2	0	0	0	2	
Ene 07	Energy efficient laboratory systems		5	5	0	0	0	0	
	Pre-requisite	Safe containment in laboratories	-	-	0	-	-	-	
		Design specification	1	1	0	0	0	0	
	Non-residential & Fully Fitted only	Best practice energy efficient measures	4	4	0	0	0	0	
Energy efficient equipment - Fully Fitted only		2	0	0	0	0	0		
Ene 10	Flexible demand side response		1	1	0	0	0	0	
	All	Flexible demand side response	1	1	0	0	0	0	



GREEN BUILDINGS BRING IN MORE, AND MORE STABLE RETURNS



- Capital values on average 20.6% higher as a result of BREEAM certification, with a single step improvement in EPC ratings on average produces a corresponding premium of 3.7%.
- Average rent increases associated with BREEAM certificates and a step improvement in EPC were 11.6% and 4.2% respectively.
- Vacancy rates show a growing difference between grade A, B and C offices.

(JLL Research)



Real Case !!! BREEAM excellent



Meerwaarde

ANALYSE

Lawine van groene rapportering komt op bedrijven af: 'Wie gaat dat lezen?'

Strengere Europese regels dwingen grote bedrijven weldra hoger te schakelen in de manier waarop ze rapporteren over hun duurzaamheidsbeleid en hun klimaatimpact. Ook voor kleinere ondernemingen komt dat huiswerk eraan. 'Als je nu alles nog moet voorbereiden, wordt dat een enorme opdracht.'

De Europese bedrijfswereld maakt haar borst nat voor een nieuwe set regels die ondernemingen verplicht duidelijk te maken hoe duurzaam hun activiteiten zijn.

Europa verplicht grote ondernemingen - de facto de meeste beursgenoteerde bedrijven en bedrijven met meer dan 500 werknemers - nu al om te melden welke sociale en ecologische effecten hun activiteiten hebben, hoe ze de mensenrechten eerbiedigen en corruptie en omkoping bestrijden. Tegelijk moeten ze duidelijk maken hoe hun omzet en hun uitgaven de klimaatverandering afremmen of in welke mate ze zich daaraan aanpassen.

<https://www.tijd.be/dossiers/de-verdieping/lawine-van-groene-rapportering-komt-op-bedrijven-af-wie-gaat-dat-lezen/10485419.html>

Meerwaarde

- Wat gaan we doen met de certificaten?
 - Wat is de waarde van het document?
 - Wie gaan we bereiken met de resultaten?
-
- Het certificaat is binnen, YES. Zijn we klaar? Zijn we nu “green”?

Alarm Management



Nachtelijk
sluimer
verbruik

Bewaking tss
middernacht en
4AM

Alarm Type

- Alarmeer bij de afwezigheid van een datapunt
- Alarmeer bij het overschrijden van een minimale waarde

Alarmeer bij het overschrijden van een maximale waarde

Thresholds

Maximale waarde (m3/h)
0.2

Minimale waarde (m3/h)

Maximum duration of no data or delayed data (minutes)
120

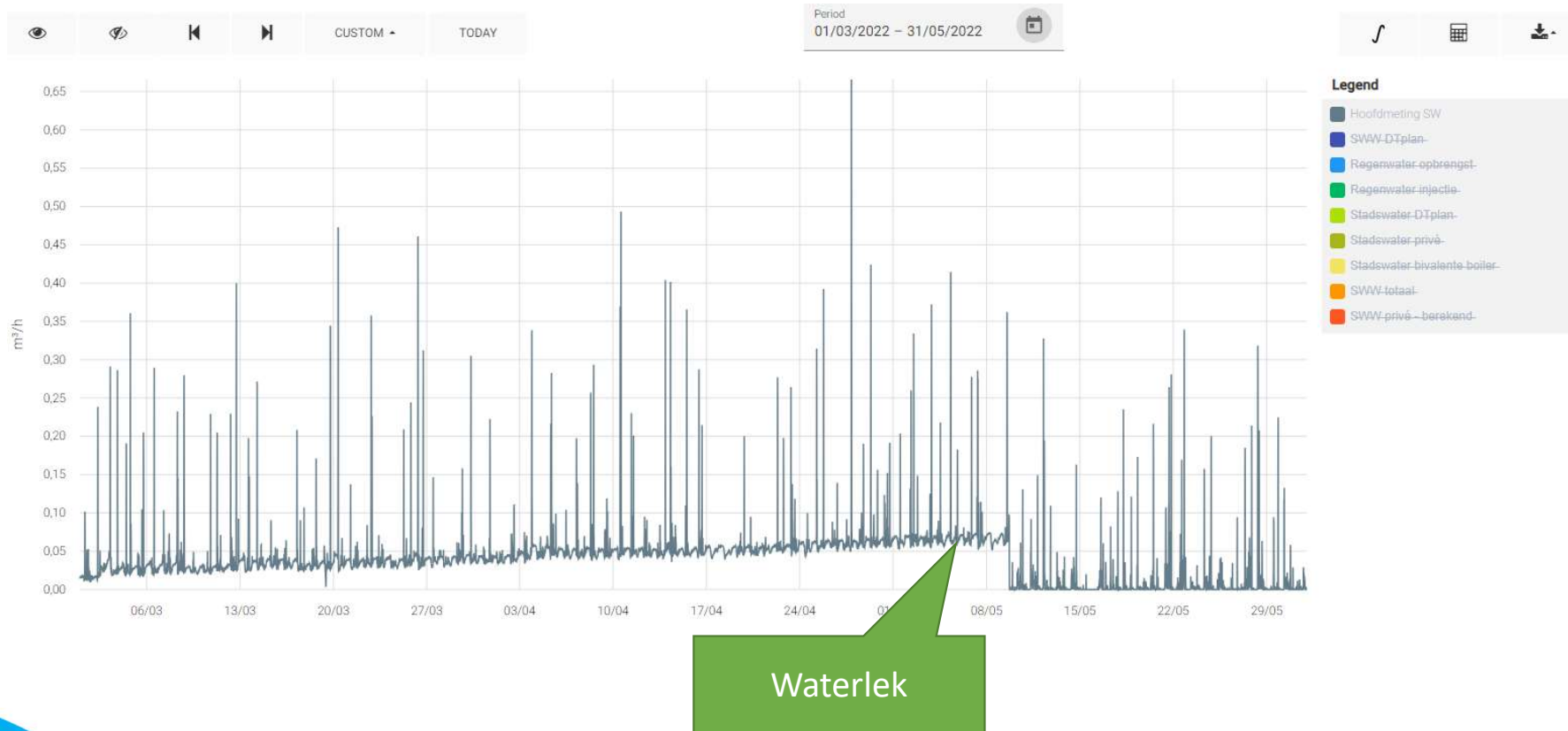
Window

Overwaken van
00:00

tot
04:00

Alarm Severity
High

Alarm Management



Aanbeveling rapporten

Pieken, aandacht voor cap tarief

Sluimer verbruik van 20% van het totaal

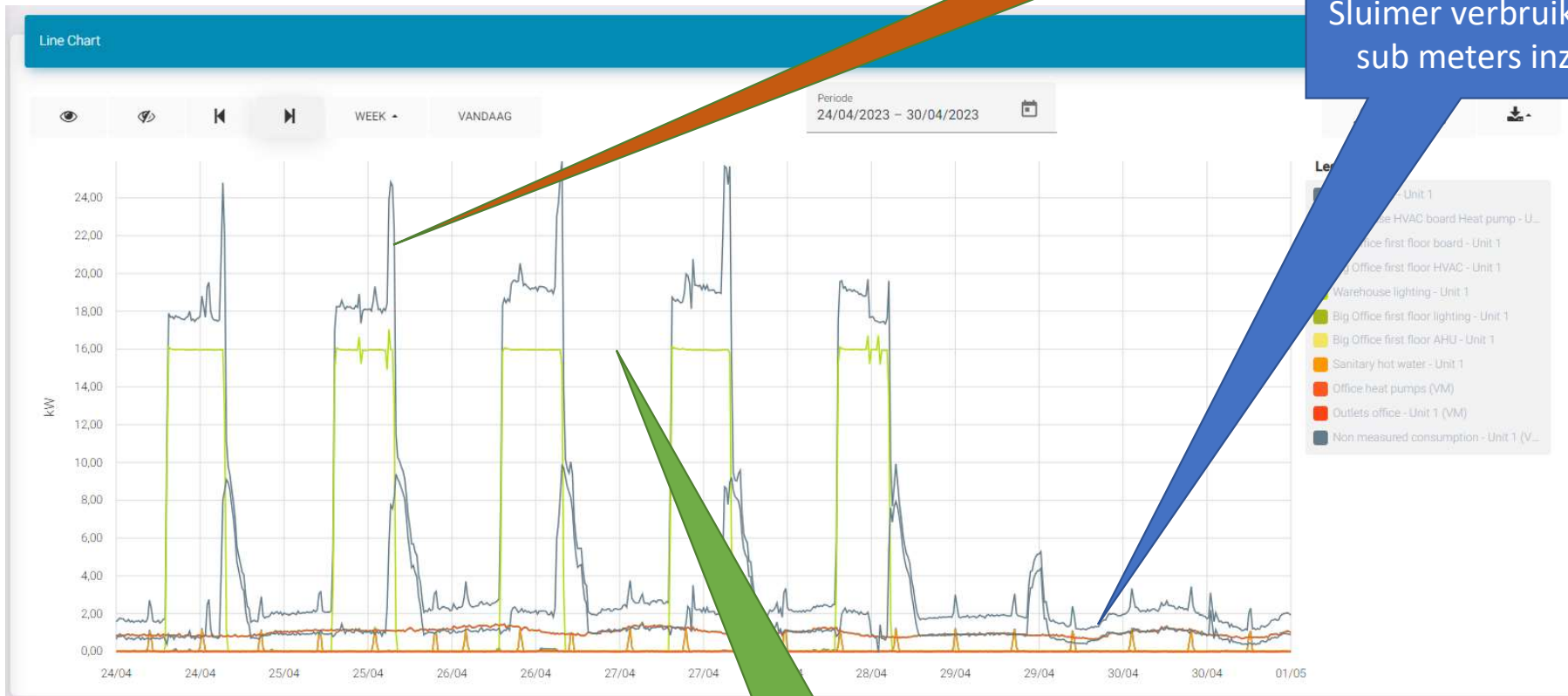


Verlichting niet uitgeschakeld

Aanbeveling rapporten

Sub meters, laad punten voor heftruck

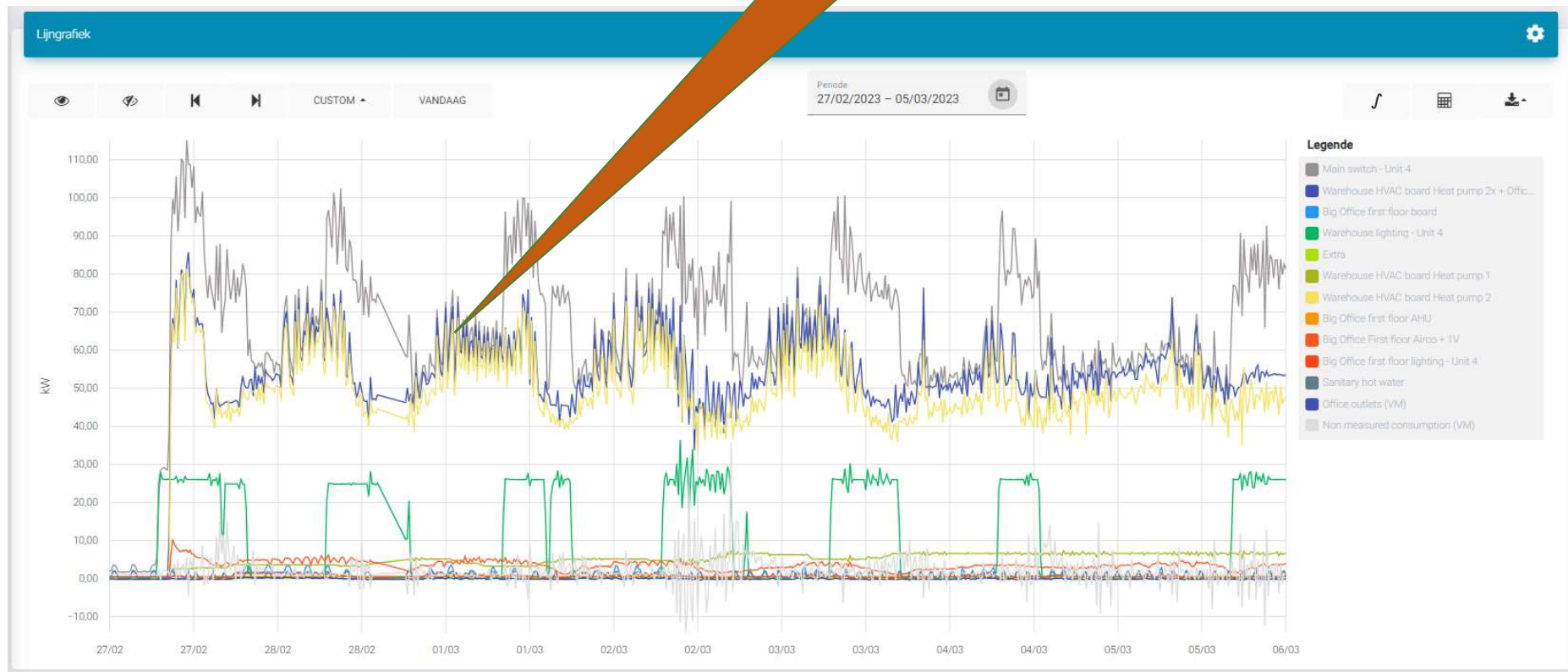
Sluimer verbruik 10%, sub meters inzicht



Automatisatie op verlichting

Klimatisatie

Warehouse 4, 50kW
continue basis last



Klimatisatie

Warehouse 3A, 30kW
pendel verbruik



Merk op, de loads is
niet in gebruik,
verlichting is 0kW !!!

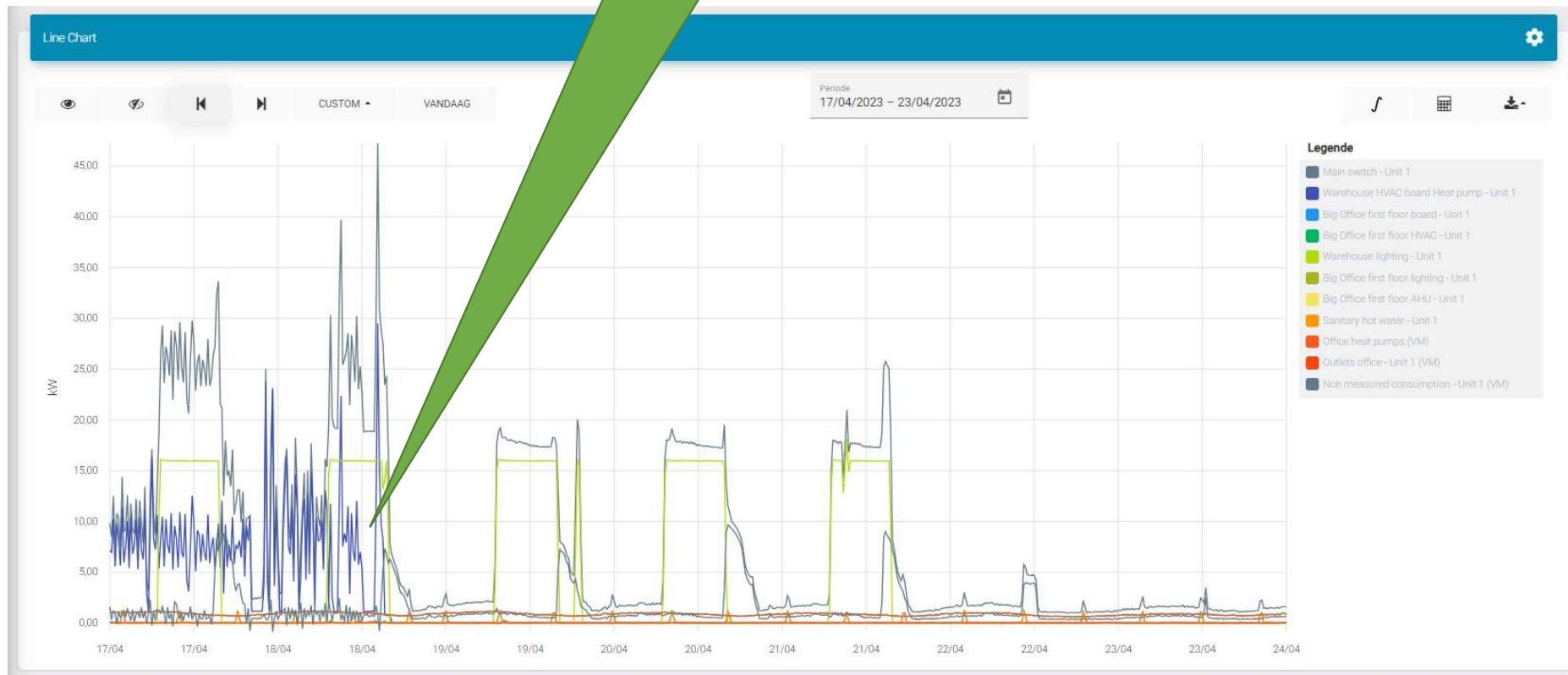
Klimatisatie

Warehouse 1, 15kW
pendel / basis last



Klimatisatie

Uitschakelen verwarming
WH1: dinsdag 18 april



Klimatisatie

Uitschakelen verwarming
WH2: dinsdag 20 juni



Klimatisatie

Uitschakelen verwarming
WH3A: dinsdag 4 april



Merk op, de loads is
niet in gebruik,
verlichting is 0kW !!!

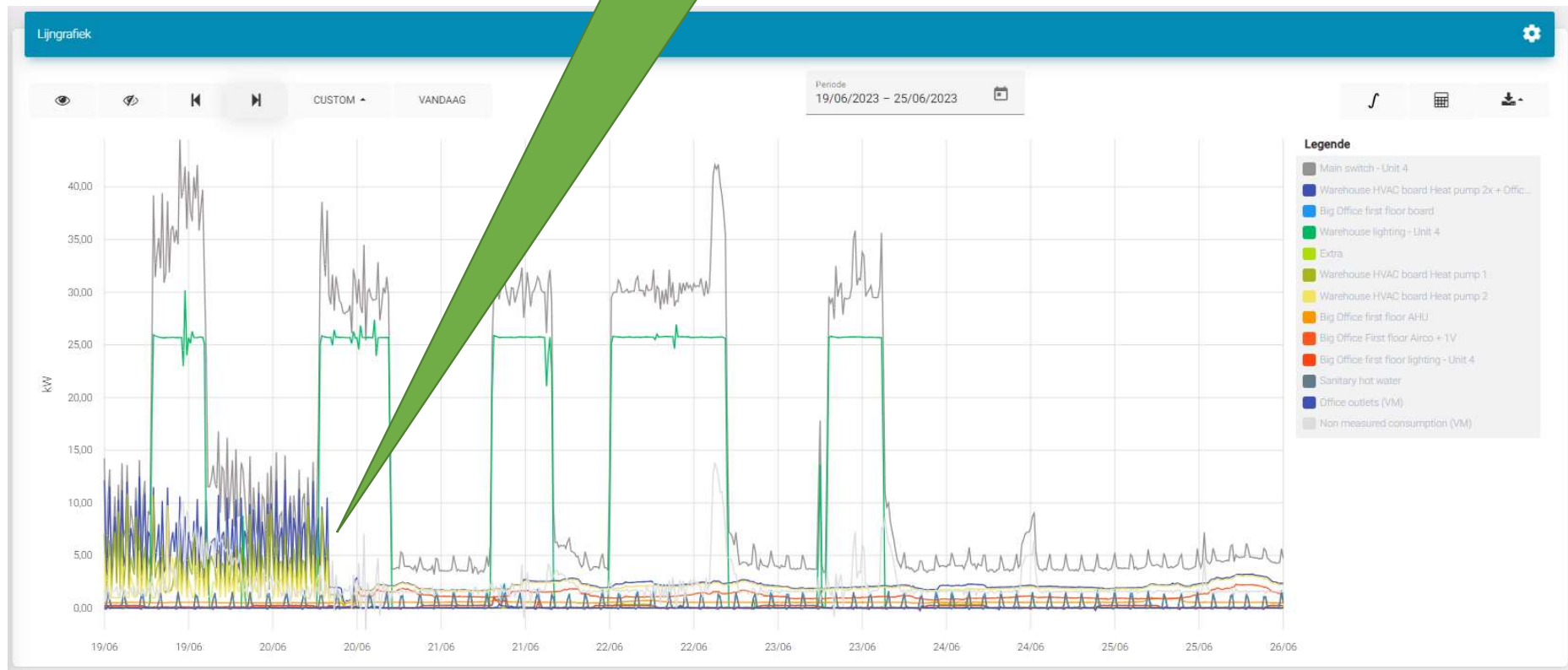
Klimatisatie

Uitschakelen verwarming
WH3B: dinsdag 20 juni



Klimatisatie

Uitschakelen verwarming
WH4: dinsdag 20 juni

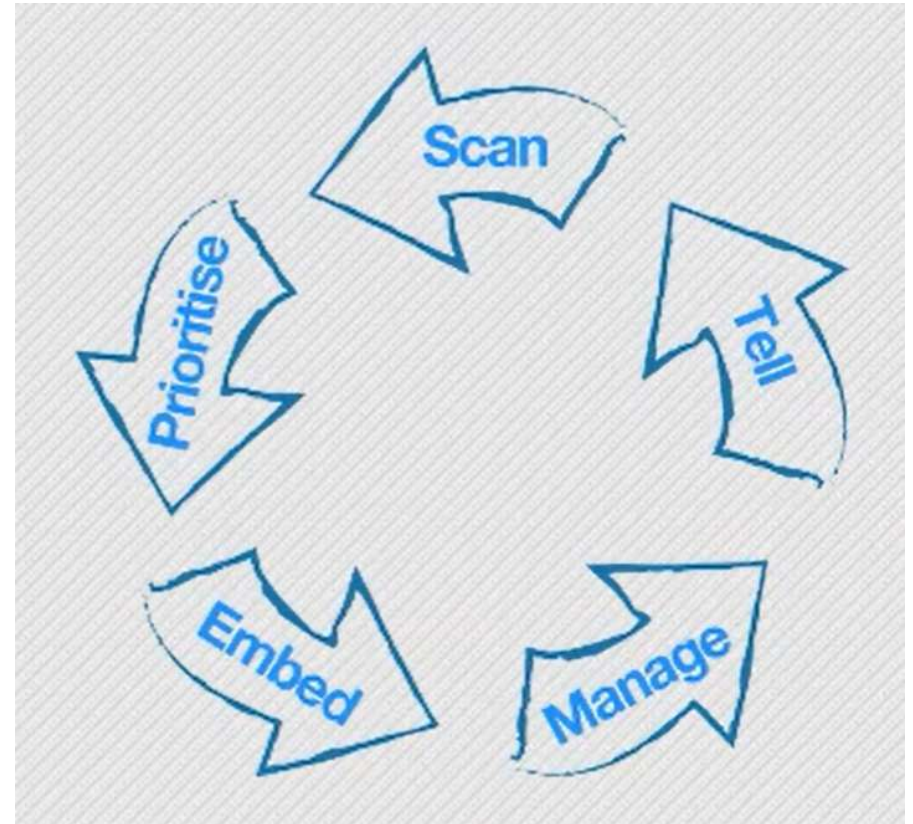


Automatisatie

- Automatisatie verlichting
- Automatisatie laad punten heftrucks
- Automatisatie klimatisatie
- En automatisatie ...

Conclusie

- Belang van duurzaamheid voor commercieel succes! **Scan-Prioritise** => Warehouse met het BREEAM label.
- Materialiteit: een duurzaamheidsvraagstuk is relevant en belangrijk voor zowel een organisatie als haar stakeholders. Dubbele materialiteit.
- Na het implementeren (**Embed**) van BREEAM is het werk niet af. Vervolg waarde komt met **Manage en Tell**.





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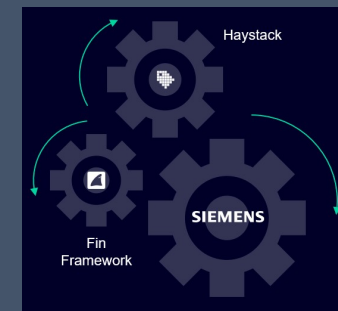
The image features a low-angle, upward-looking view of a modern skyscraper with a glass facade, set against a clear blue sky. The building's lines create a strong sense of height and perspective. In the bottom right corner, there is a large, dark blue circular graphic element. The Siemens logo is positioned in the lower-left area, overlaid on a white, rounded rectangular shape that also has a blue gradient on its left side.

SIEMENS

Digital transformation with Siemens Xcelerator Edge Building Management Systems

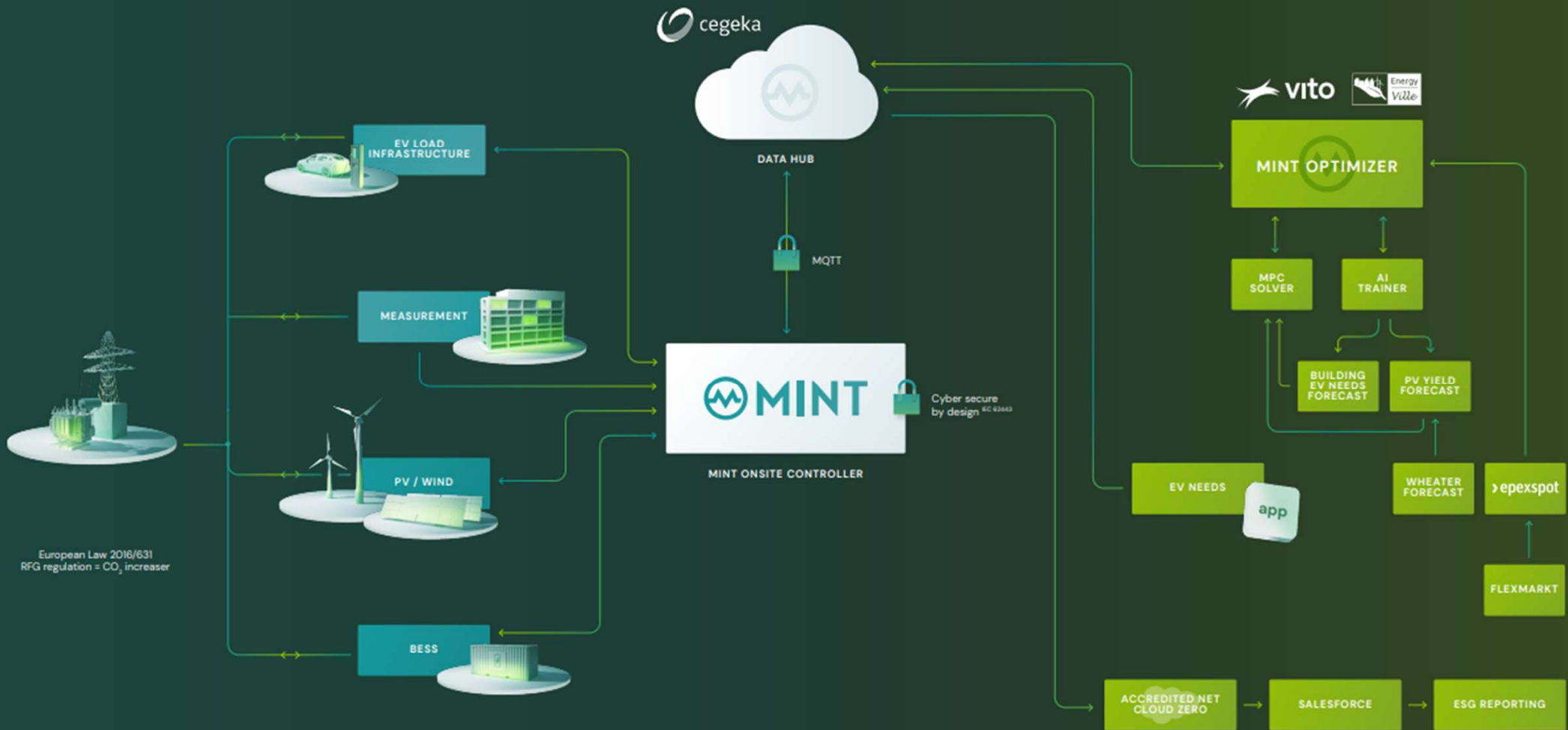


- Interoperable
- Flexible
- Open
- As a service
- + Cybersecure



Associate members	Founding members







BATTERY  SUPPLIES

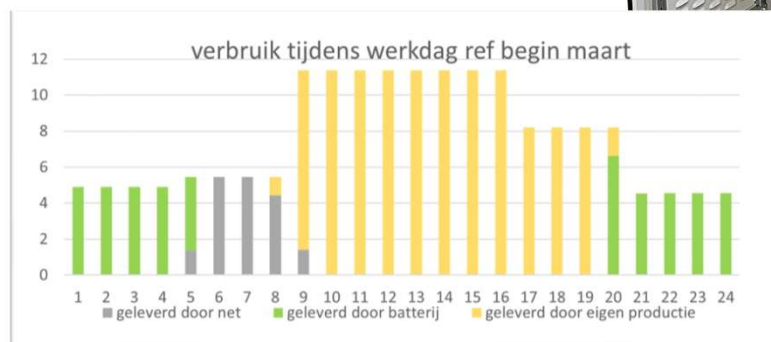
- ✓ 10 jaar garantie
- ✓ Lange levensduur: LIFEP04
- ✓ 5 - 15 - 20 - 29 - 48 - 67 - 77 - ... tot 308 kWh
- ✓ > 8.000 cycli @ 25°C
- ✓ Geventileerde kast
- ✓ Dienst na verkoop
- ✓ Analysetools voor optimale dimensionering



3 VUISTREGELS:

- Voldoende verbruik 30.000 – 500.000 kWh/j
- Voldoende PV 50 – 70% van het jaarverbruik
- Nachtverbruik

Exceptioneel -> stroomtekort (peakshaving)





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3 oktober 2023





**WENST U
MEER INFO?
EEN
AFSPRAAK
INPLANNEN?**



INDUmation.be
The Belgian **Factory » Process » Infrastructure** automation show **2024**
Kortrijk Xpo
31 Jan &
1-2 Feb

SMART & INTEGRATED SOLUTIONS FOR INDUSTRY!

DT PLAN
ENERGY SOLUTIONS

oktow
EXPERTS IN DATAFLOW



**BEZOEK DTPLAN & OKTOW
OOK OP INDUMATION 2024**

KORTRIJK XPO | STAND 523

JAN | **31** | **2024**
FEB | **1 & 2**



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3 oktober 2023