byNEURON

MASTER BUILDING MANAGEMENT SYSTEM

For advanced analytics and smarter building energy management

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Founding Partner

odree
Gastdocent
Lid resonantieraad
Lid toetscommissie

& Human Rights Defender

AMNESTY INTERNATIONAL
Voorzitter

memisa Together for health
Vrijwilliger
Consultant

ARTSENZONDERVAKANTIE
MEDECINSSANSVACANCES
MEDICSWITHOUTVACATION
KENNIS GENEEST

BTC
Docent
infocyclus

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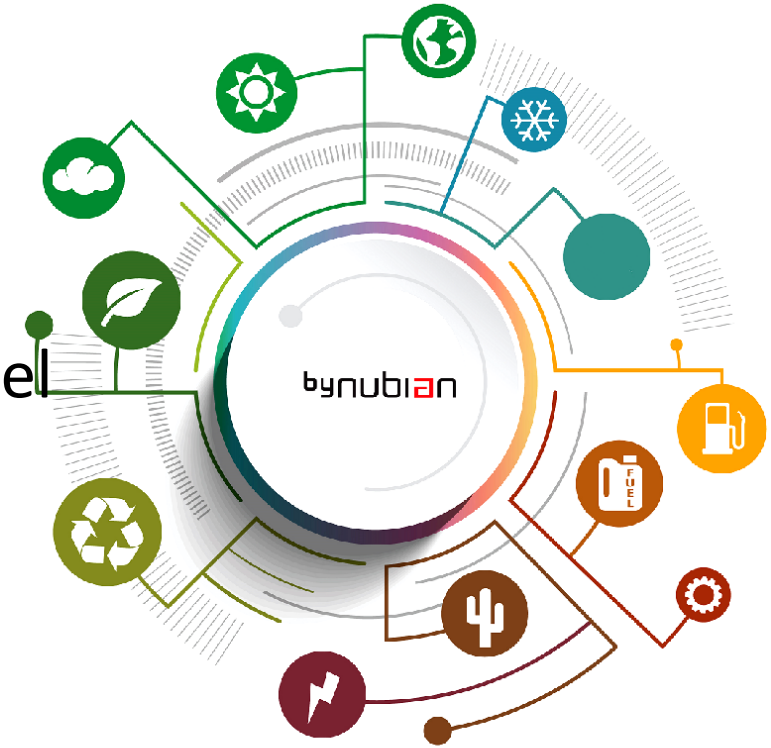
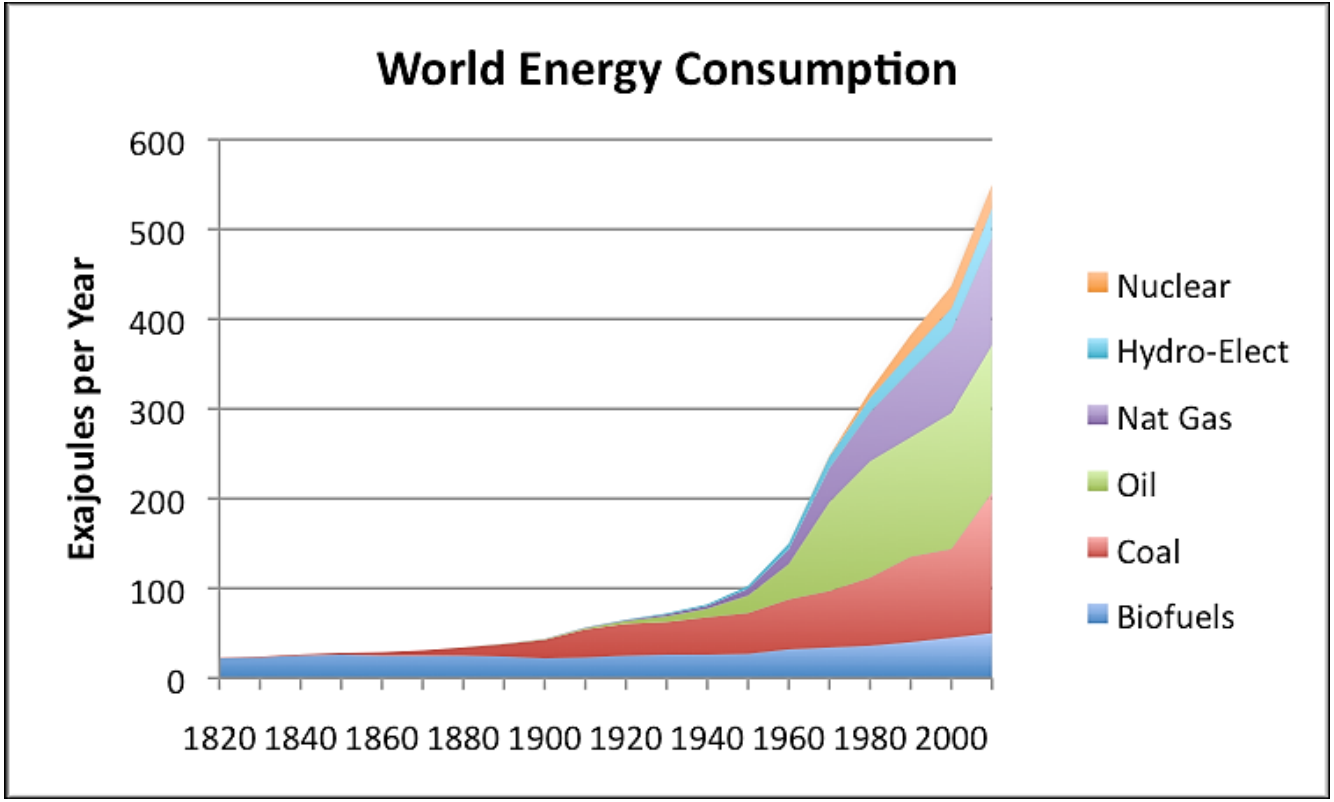
1. **Challenge**
2. Internet of Things
3. What we do & offer
4. BIOT Business Maturity Model
5. Exclusieve aankondiging!



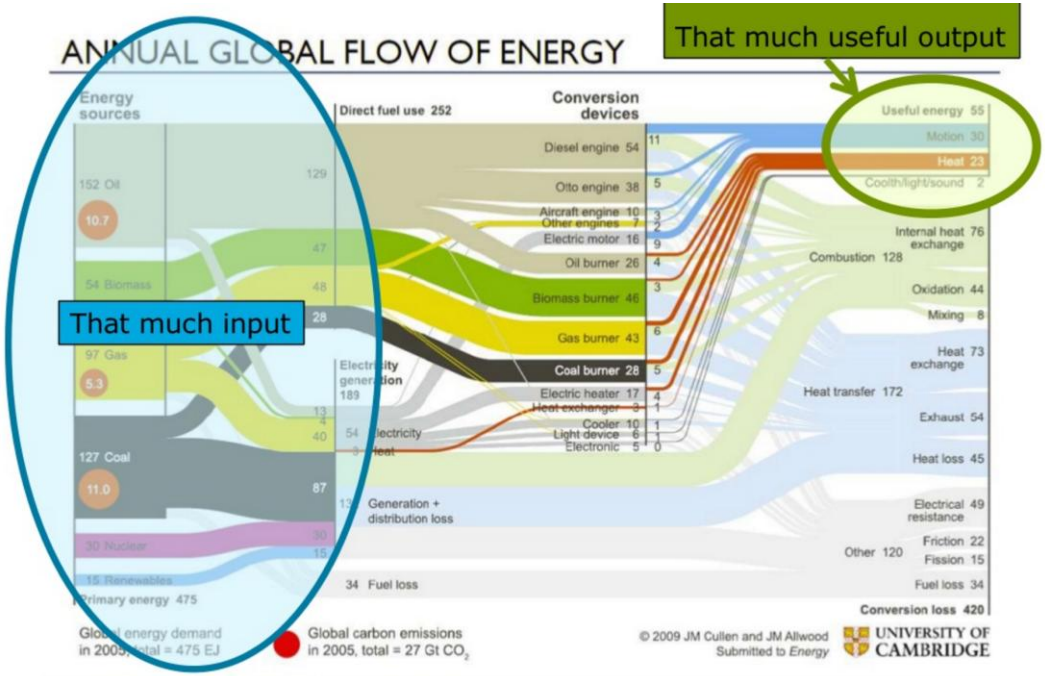
Our Challenge

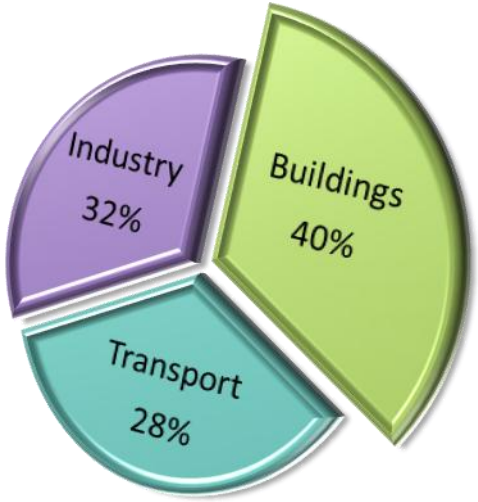
Energy Consumption

100 Exj = 27.778 TWh



Energy Challenge: work on both sides





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Your Challenge

Buildings/industries/Energy/…

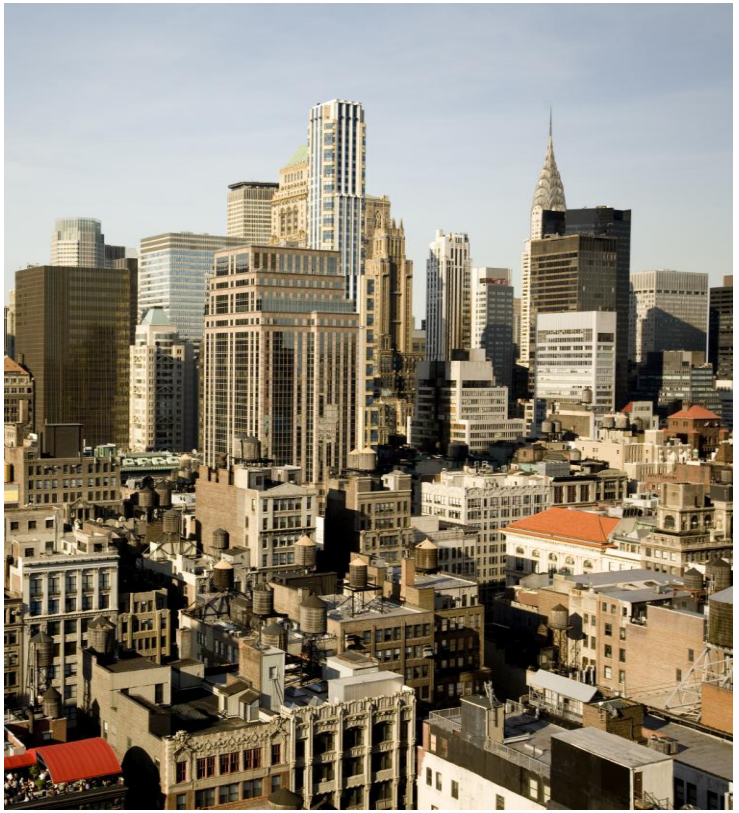
have become complex eco-systems with:

- A growing number of sensors and things that perform services, communicate, can be controlled and/or generate data.

- But these things seldom work together & use many different incompatible protocols

- Are seldom measured on actual efficiency

- Almost none of them have some Internet of Things intelligence (IoT)



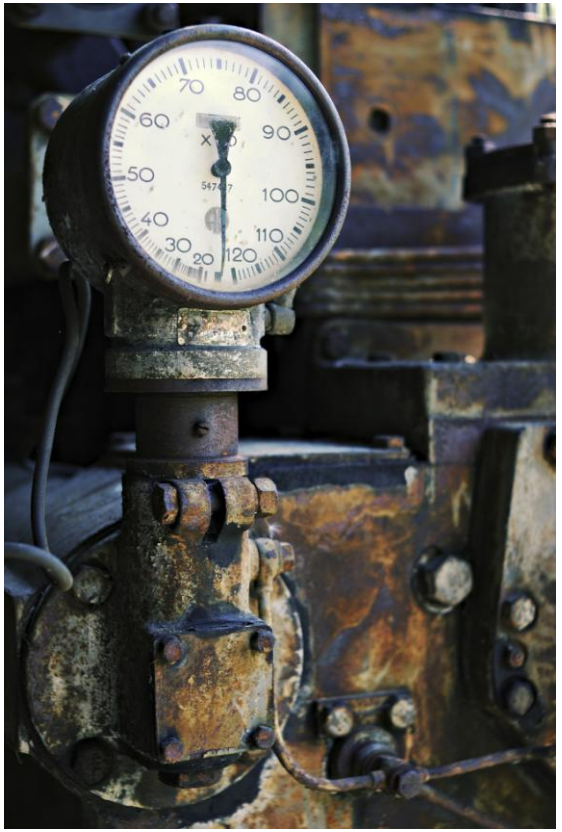
Your Challenge

3 Major obstacles

In a world of sensors, DATA MANAGEMENT rules !
How to deal with tons of figures ?

FALSE FRIENDS are everywhere !
Real figures do not match technical promesses

Too low CONNECTIVITY :
Creating professional Internet of Things



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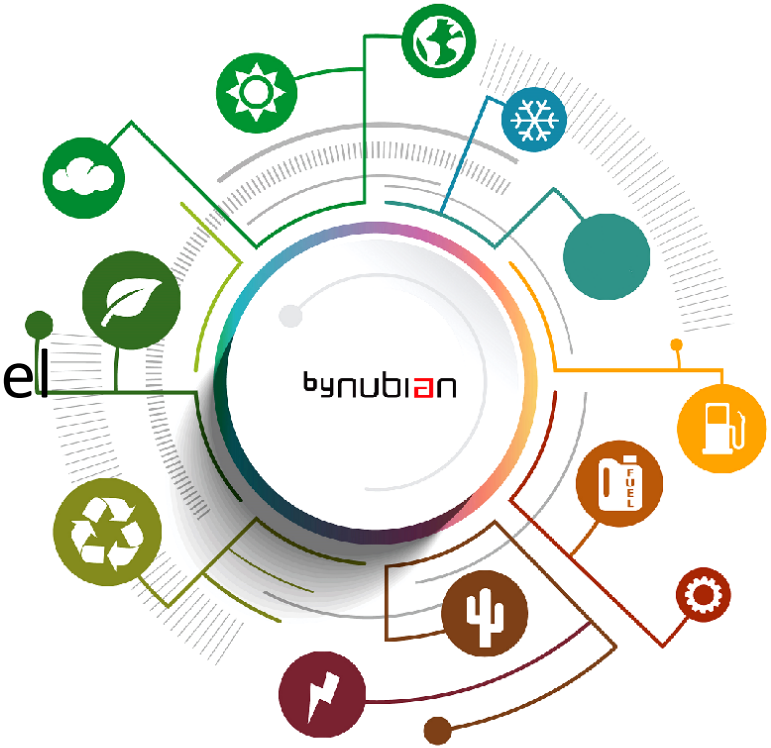
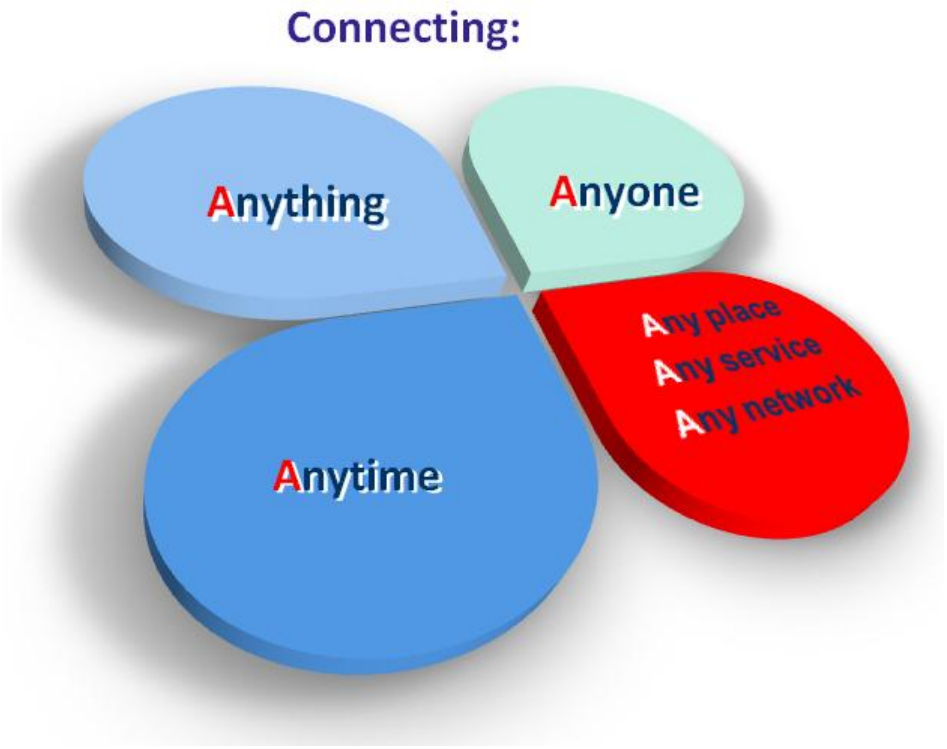


The Internet of Things isn't coming soon.
It's already here...

Internet of Things (IoT)


Connecting:
Anything
Anyone
Any place
Any service
Any network
Anytime

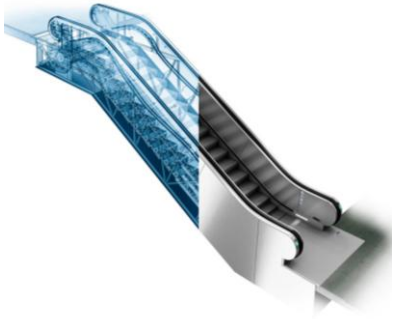
Things

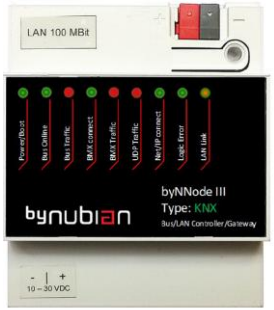
Connectivity

Data

10101
01010
00100

Analytics





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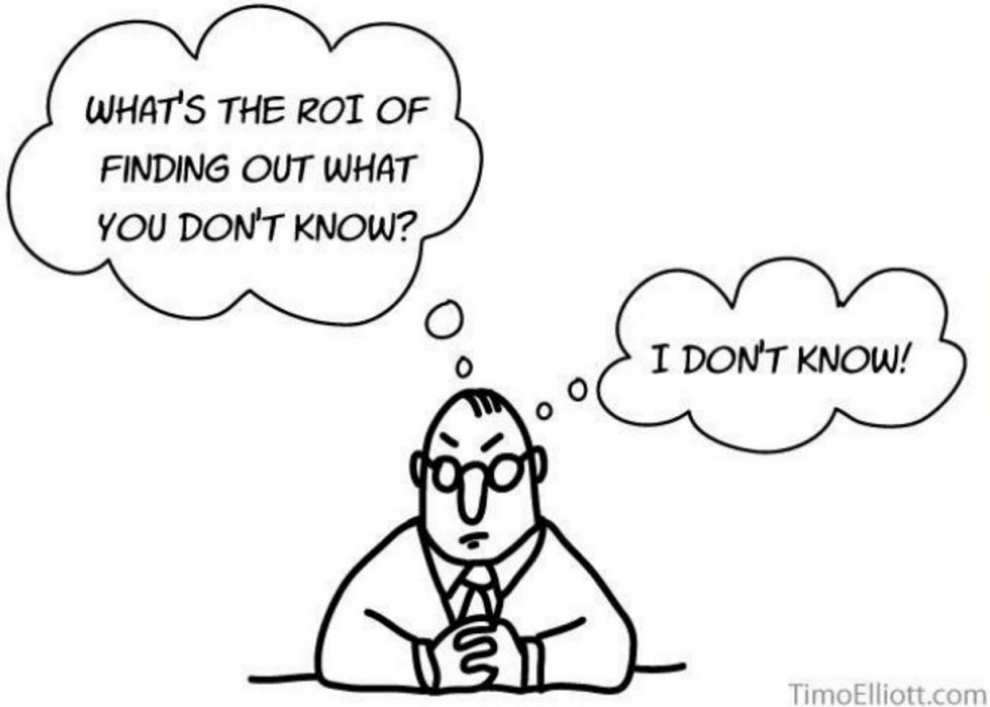
IoT; Powerful but…

It is crucial to look upon the IoT with both an open mind and a certain level of skepticism

Some changes enabled by the Internet of Things will be incremental, while others will be transformative.

Yet the need to capture value remains acute as ever.

And what about… Big data?



“Big Data is not magic. It doesn’t matter how much data you have if you can’t make sense of it.”

Reliability of data: the bad Data Breakup

Information creates value: the ∞ value-loop:

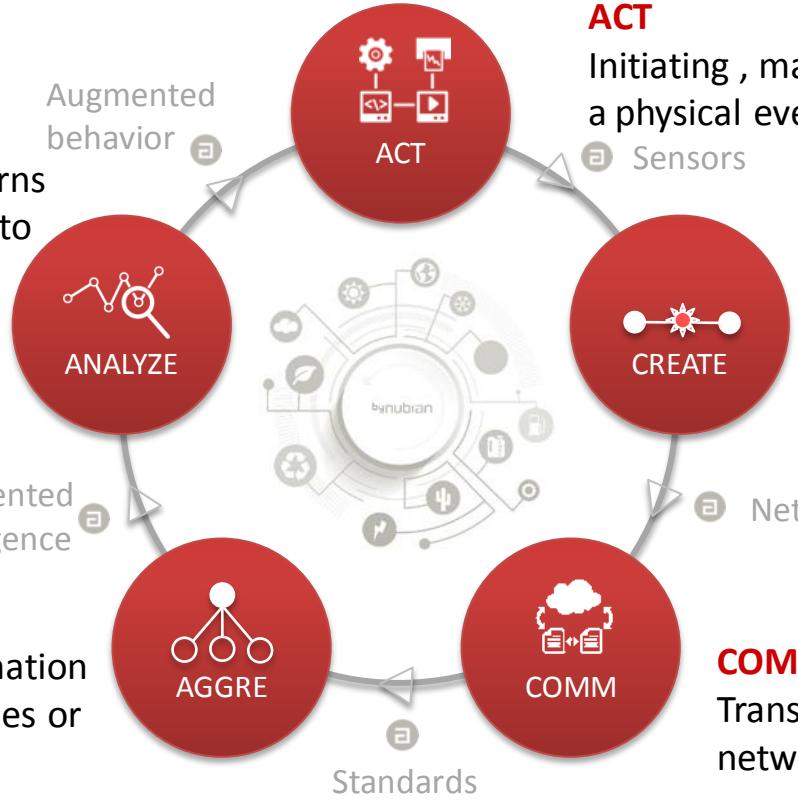
ACT
Initiating , maintaining, or changing a physical event or state

CREATE
Sensors generate information about a physical event or state

COMMUNICATE
Transmission of information across networks from one place to another

AGGREGATE
The gathering of information created at different times or from different sources

ANALYZE
The discernement of patterns or relationships that leads to descriptions, predictions, or prescriptions for action



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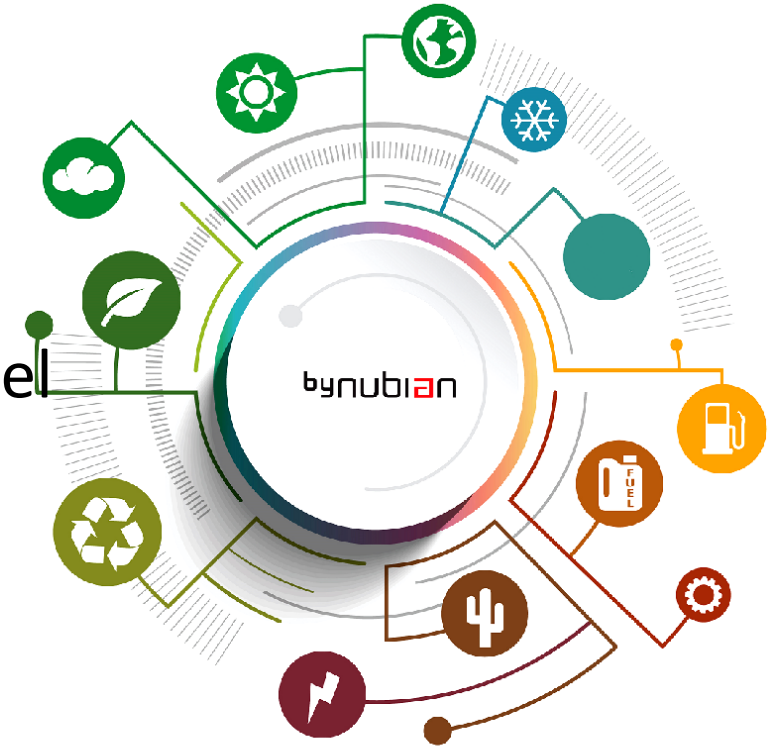

bynubian
Cloud services
SMS
SALE
SEARCH

For

Integrators | Engineering | Facility Managers | Owners & Users

Services

Building Measurement & Configuration	Data Capturing	Building Monitoring	Building Intelligence	Building Analytics	Building Control	Building Automation

Products

KNXNode KNXVision ...	byNode Gateways & Sensors KNX-Modbus-Mbus-Lorawan...	BusMonitor	Intelligence & Dashboards	Analytics, Patterns, Ref Data	Control & Access	Automated Control & Alerting Services

byNeuron Event Factory & Cloud Platform

API's (MQTT, Rest) & Connectors (eg for PowerBI)

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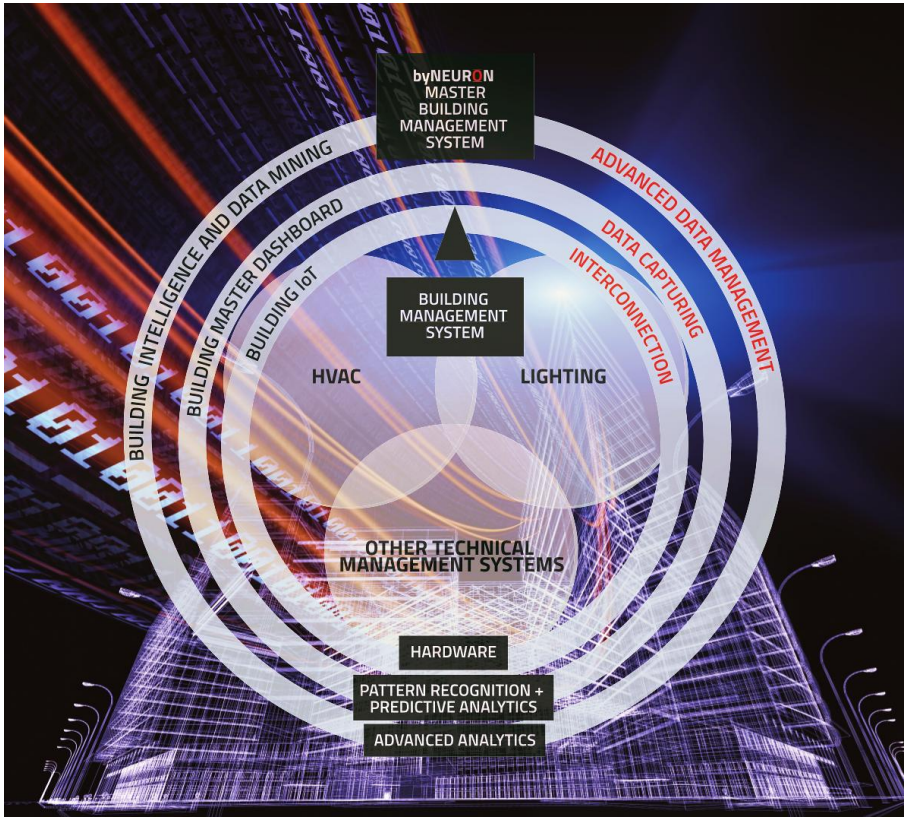
byNEURON MASTER BUILDING MANAGEMENT SYSTEM

AGILE METHODS AND TOOLS TO EFFICIENTLY RUN YOUR BUILDING ENERGY



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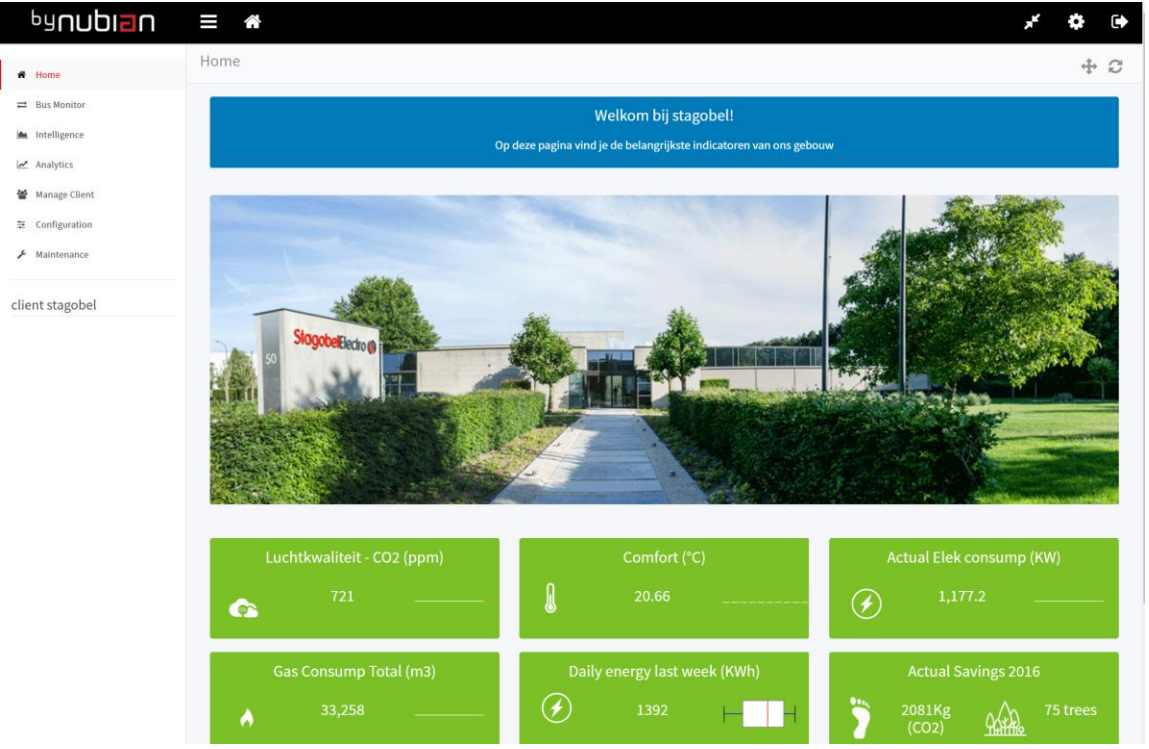
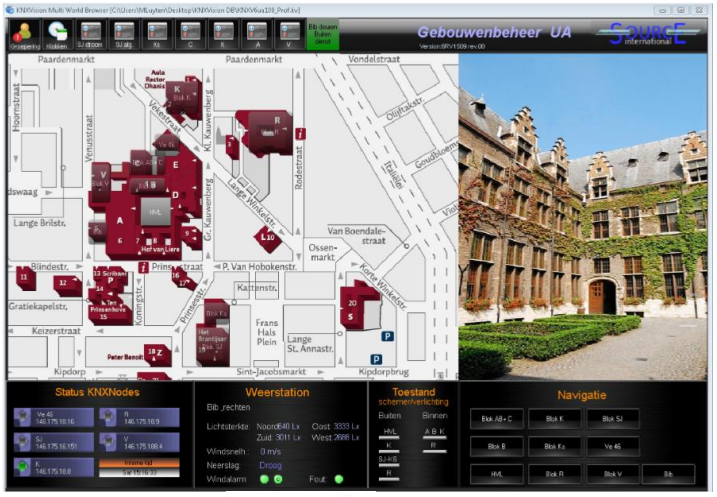
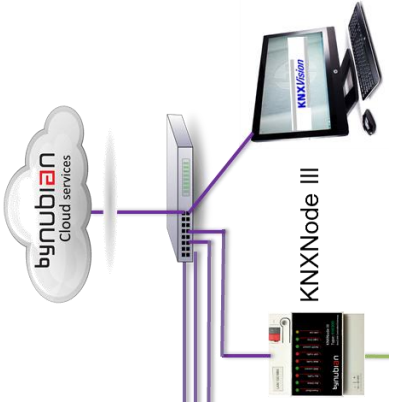
Cloud services
byNNode KNX
KNXNode III
KNXNode III
KNXNode III
KNXVision
1.1
1.1.0
1.1.101
1.2
1.2.0
1.2.101
1.9
1.9.0
1.9.101
2.1
2.1.0
2.1.101
2.2
2.2.0
2.2.101
2.9
2.9.0
2.9.101
3.1
3.1.0
3.1.101
3.2
3.2.0
3.2.101
3.9
3.9.0
3.9.101
4.1
4.1.0
4.1.101
4.2
4.2.0
4.2.101
4.9
4.7.0
4.7.101


bynubian
Home
Bus Monitor
Intelligence
Analytics
Manage Client
Configuration
Maintenance
client stagobel
Home
Welkom bij stagobel!
Op deze pagina vind je de belangrijkste indicatoren van ons gebouw
Luchtkwaliteit - CO2 (ppm)
721
Comfort (°C)
20.66
Actual Elek consump (KW)
1,177.2
Gas Consump Total (m3)
33,258
Daily energy last week (KWh)
1392
Actual Savings 2016
2081Kg (CO2)
75 trees


Gebouwenbeheer UA
SourcE
Status KNXNodes
Weerstation
Toestand
Navigatie

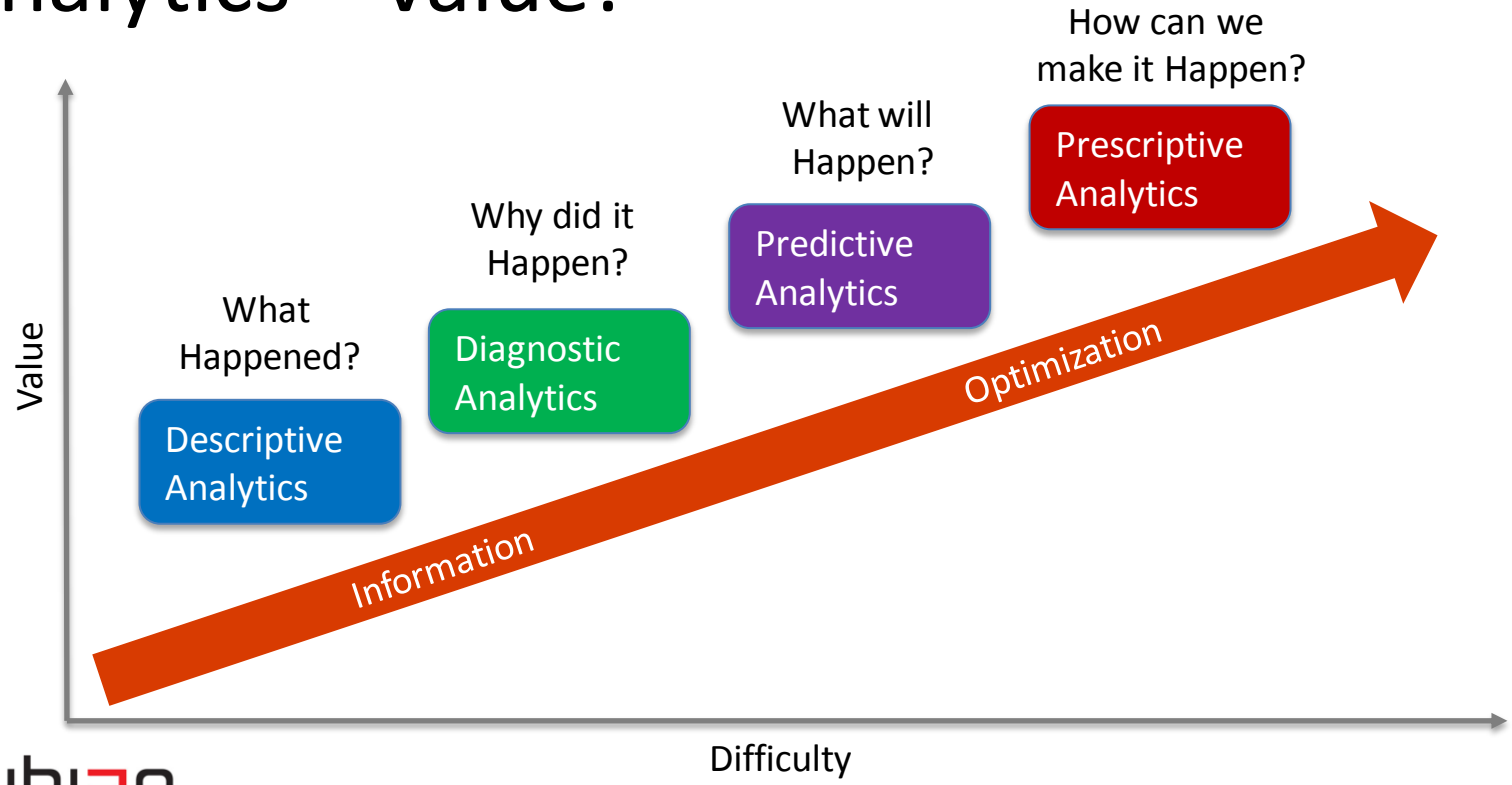

bynubian
Cloud services
KNXVision
KNXNode III

bynubian

Analytics ≠ Alarms

Analytics enables you to find patterns and issues you weren't aware of – patterns that you didn't expect or couldn't have imagined. Analytics provide results that show how your building systems really operate versus how you thought they were operating.

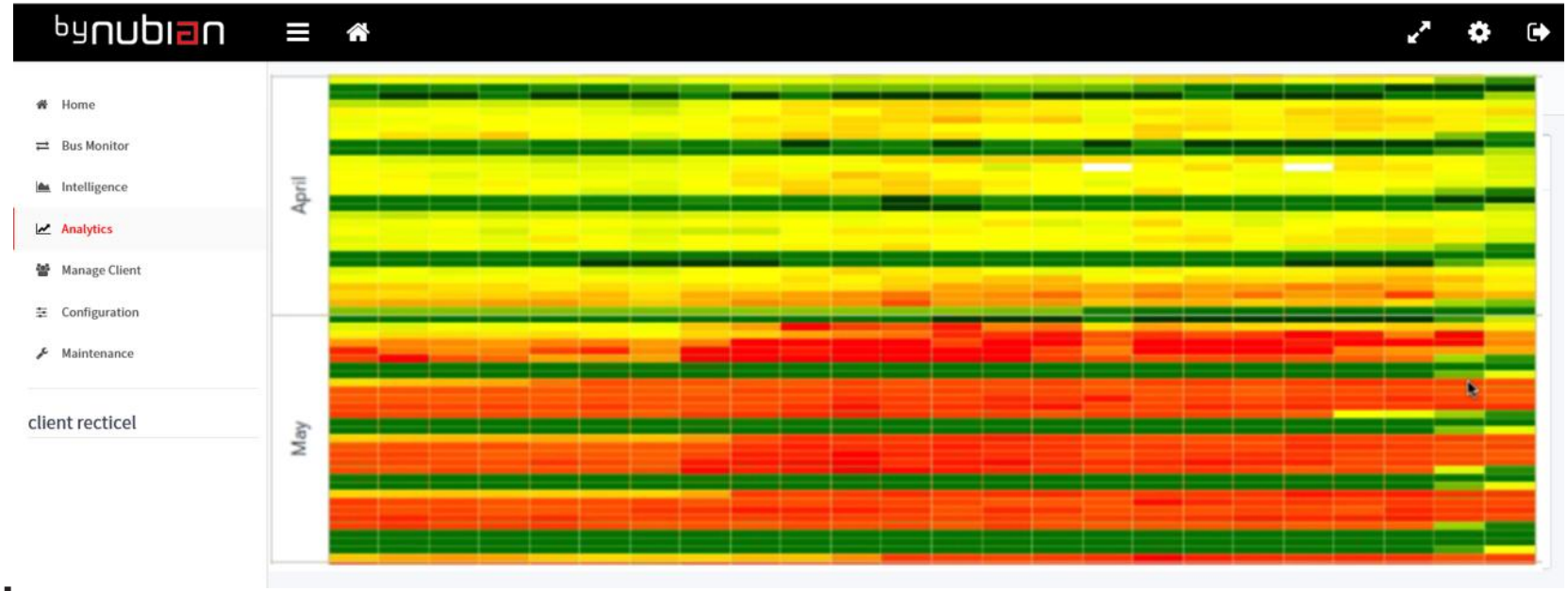
Analytics = value!



bynubian
Home
Bus Monitor
Intelligence
Analytics
Manage Client
Configuration
Maintenance
client stagobel
run
Intelligence
energy
light
temperature
analytics
heating
CO2
Verbruik KWH/uur - energie
KWh
30
20
10
0
28. Sep
30. Sep
2. Oct
4. Oct
6. Oct
8. Oct
10. Oct
12. Oct
14. Oct
16. Oct
18. Oct
20. Oct
22. Oct
24. Oct
26. Oct
Tijdsas
HVAC
Magazijn
Kantoren Aux.
Kantoren verlichting
byNubian
Interactive

KWH Elektriciteit subteller in Fabriek:

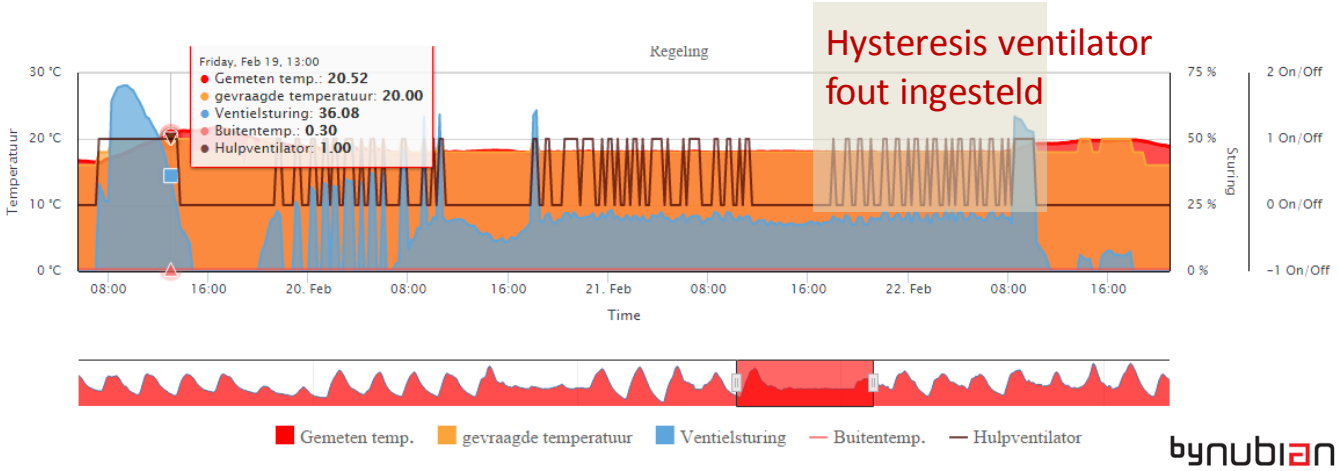
- Stijging verbruik
- In weekends wordt niet gewerkt.



Building Intelligence

Building Measurement & Configuration | Data Capturing | Building Monitoring | Building Intelligence | Building Analytics

byNeuron Intelligence & Dashboards



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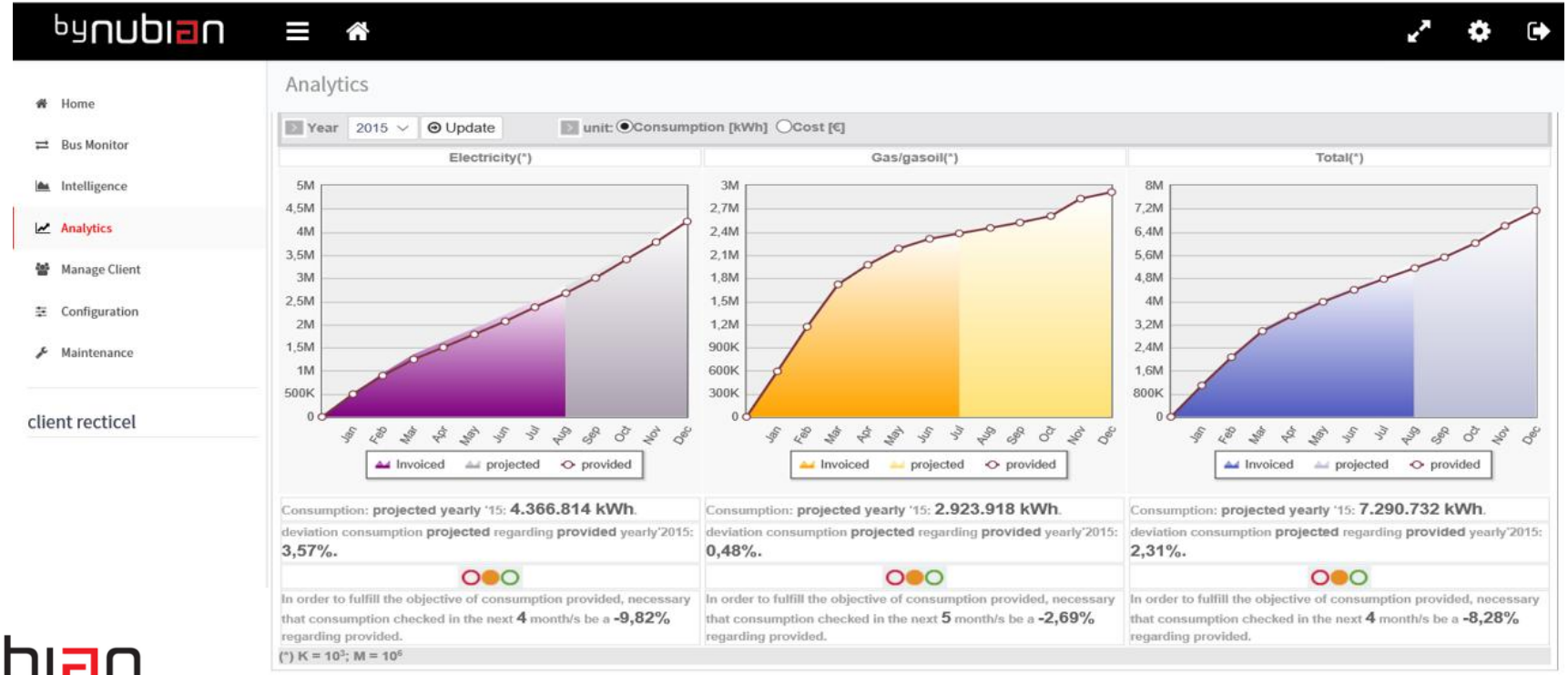
Real Consumption vs projected vs invoiced



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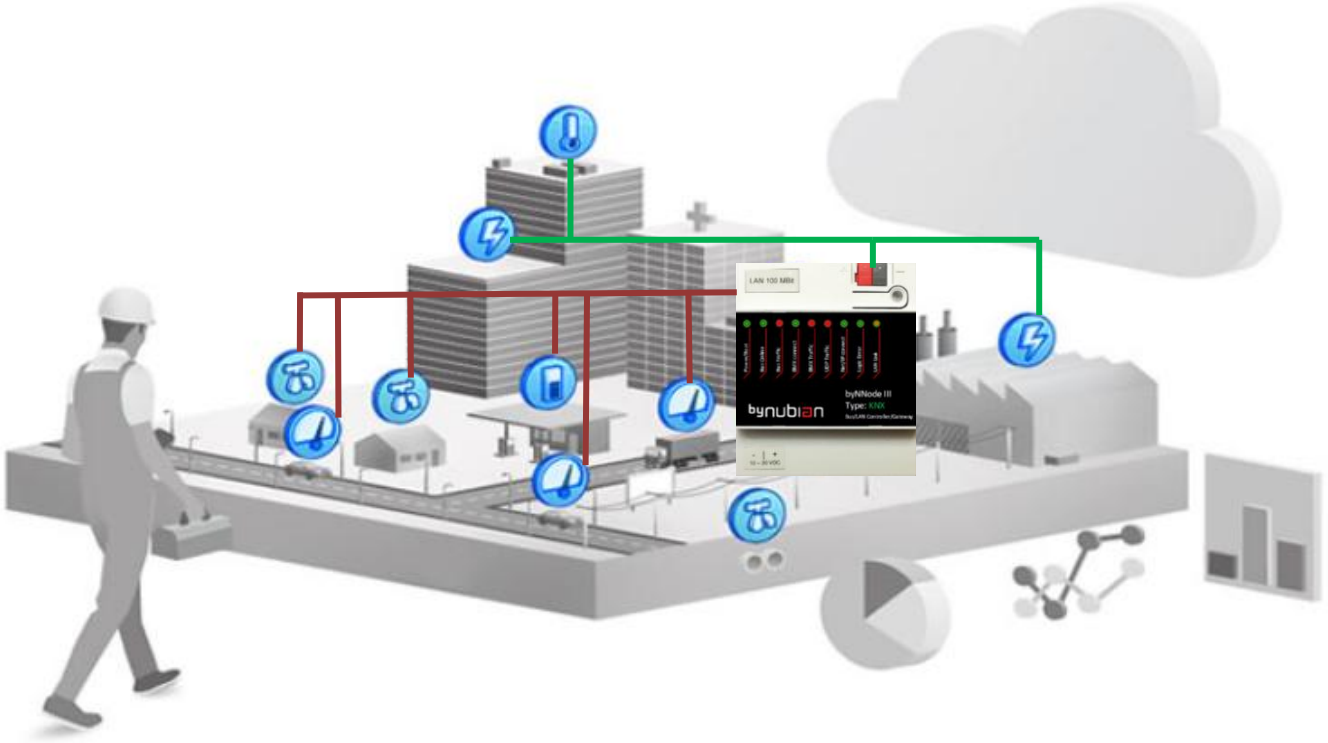
How to start? 4 steps to your byNeuron solution

1. Connect



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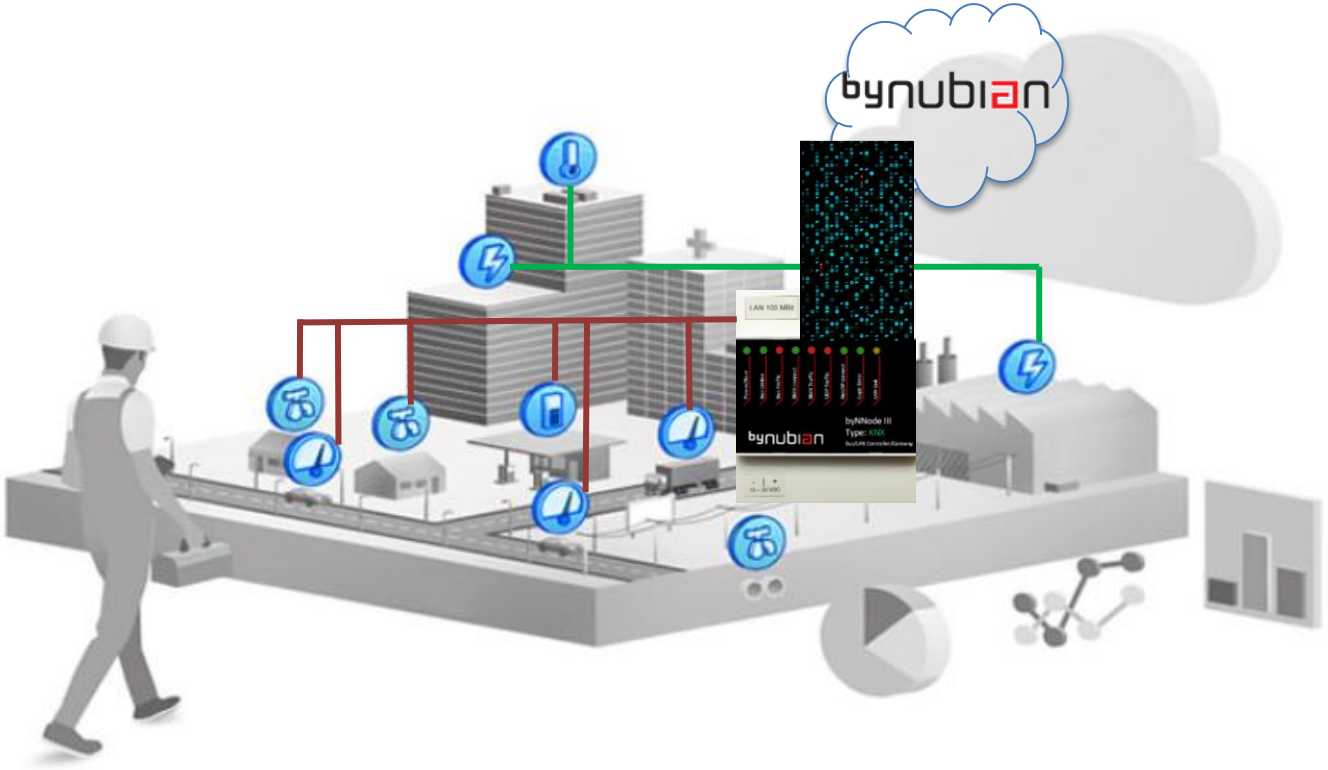
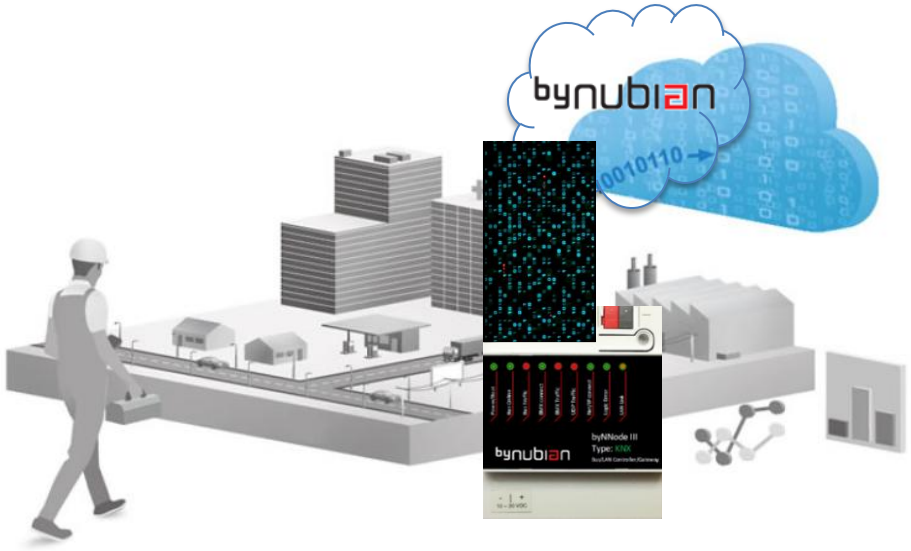


1. Connect

How to start? 4 steps to your byNeuron solution

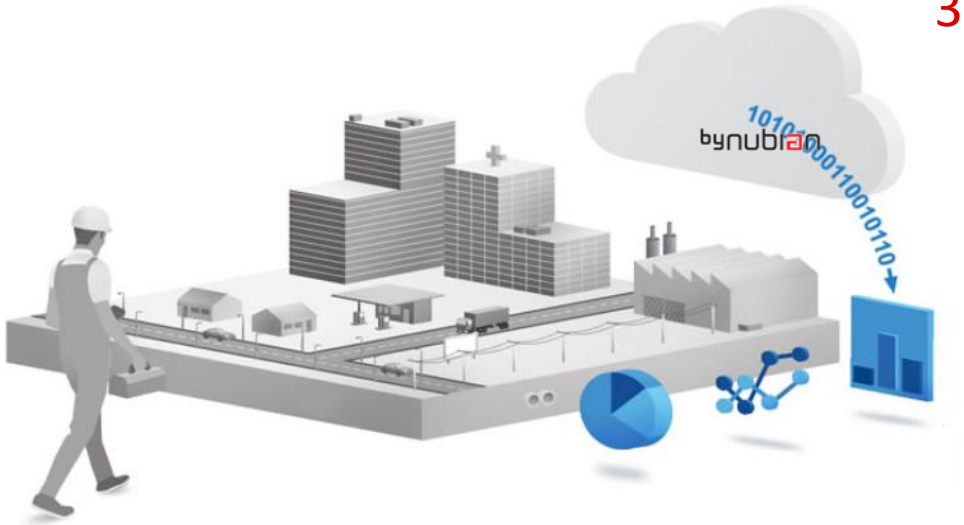


2. Analyze and act on untapped data

Capture alarms and alerts from all of your connected assets. Spot issues before they become operational problems.

Take advantage of advanced analytics and machine learning to increase reliability and uptime.
Take preventive actions.

How to start? 4 steps to your byNeuron solution

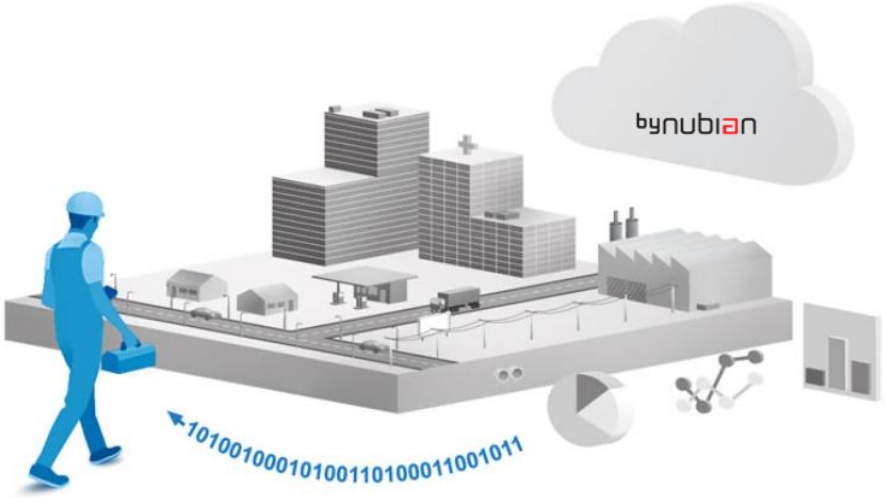


3. Visualize what's important

Create rich dashboards and reports to show anything from high-level performance KPI's to the details of an individual asset.
Customize visualization so the right people have acces to the metrics that matter to them, real-time.

Acces data and reports from any device, anywhere, and publisch reports to your organization.

How to start? 4 steps to your byNeuron solution



4. Integrate with your business proces

Automate previously manual processes by integrating (IoT) data with your existing business systems.

Example: if a asset (whatever it is) goes down, a service ticket will be auto-generate in your CRM, from which several actions can be assigned, such as notifying technician to fix issue or shipping a replacement to the costumer.

Now, get started!

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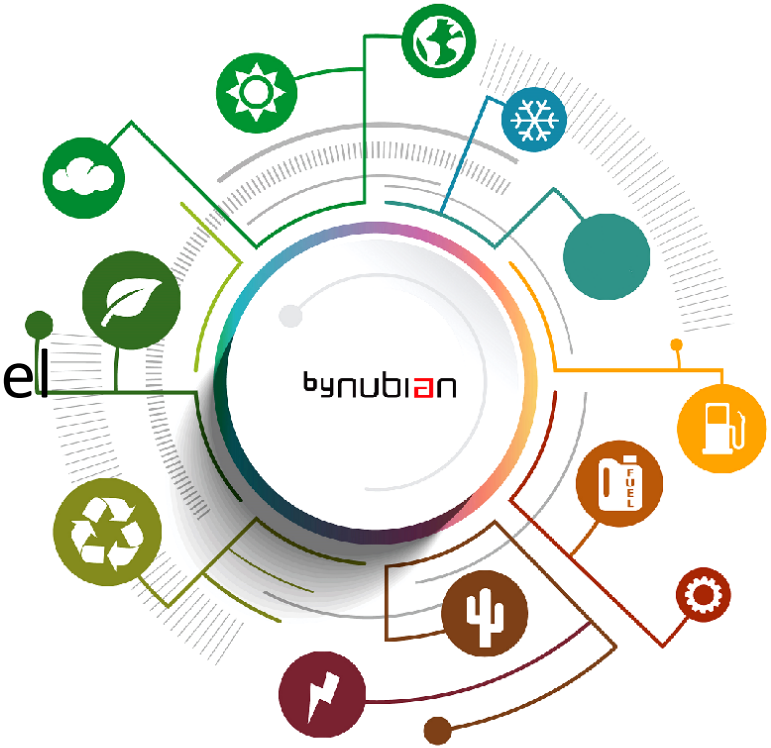
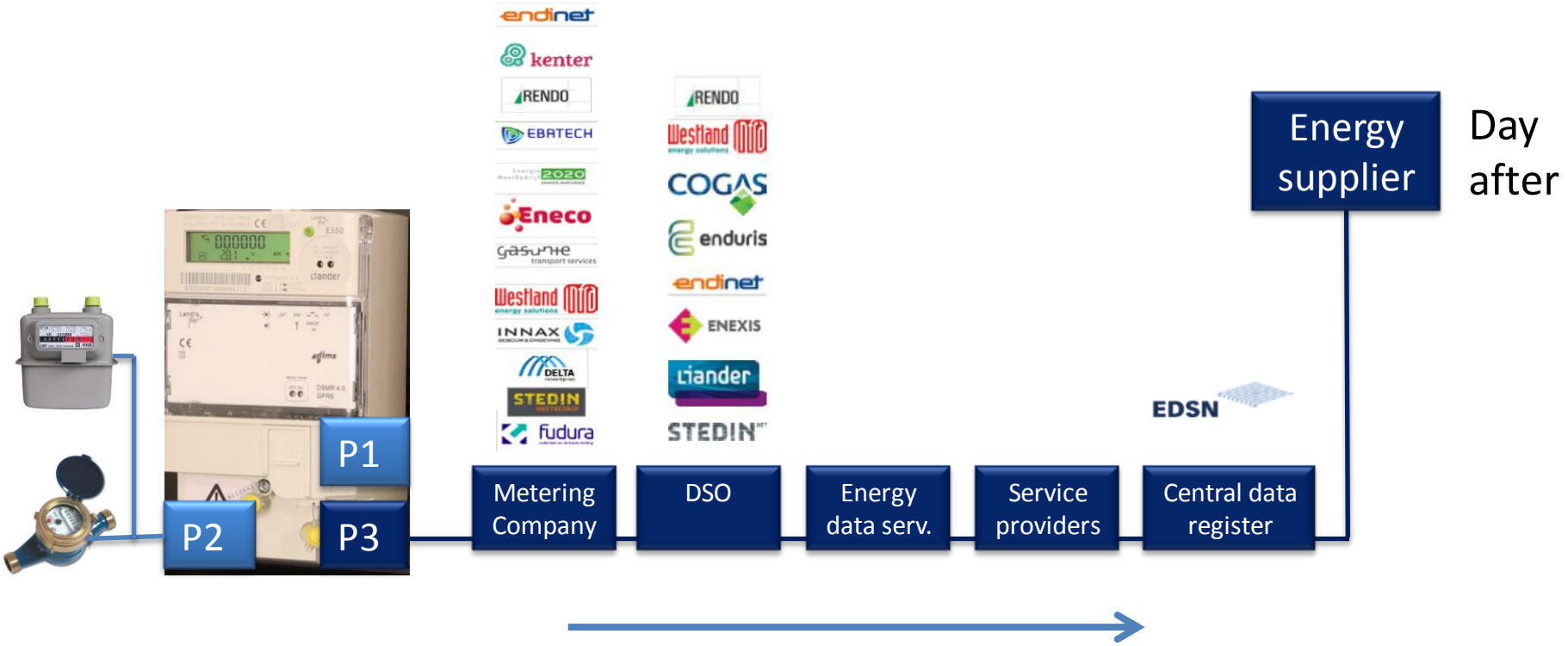


Actual data chain in energy.

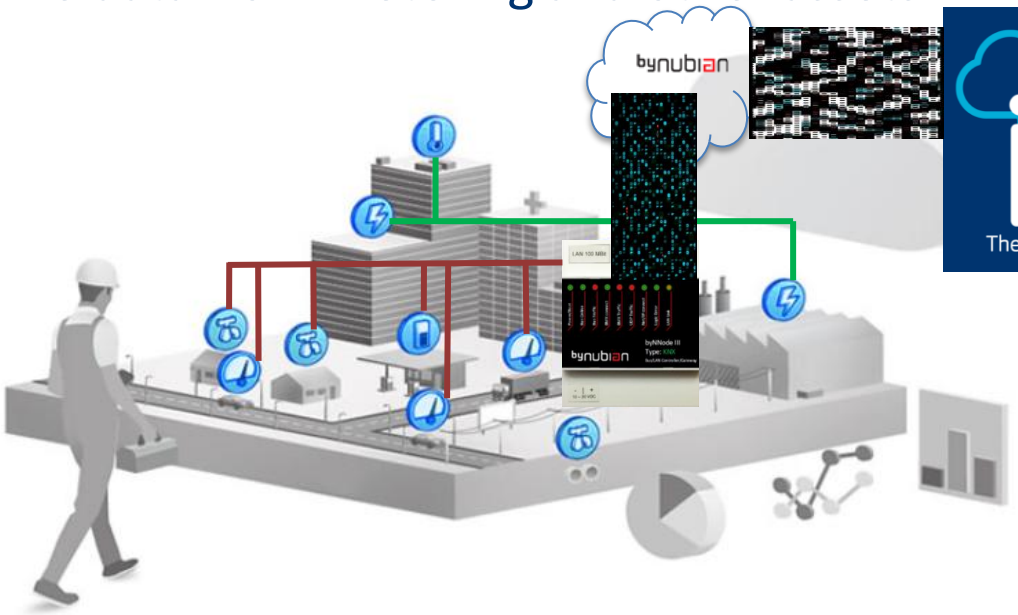


Het **Powerhouse Energy Platform** is een innovatieve benadering voor de levering van uw zakelijke energie. Hiermee hebt u altijd en overal toegang tot de belangrijke energiehandelsmarkten, ook via de Powerhouse-app. U kunt elke 15 minuten **elektriciteit** en **gas** in- of verkopen zodat u controle over uw zakelijke energie hebt.

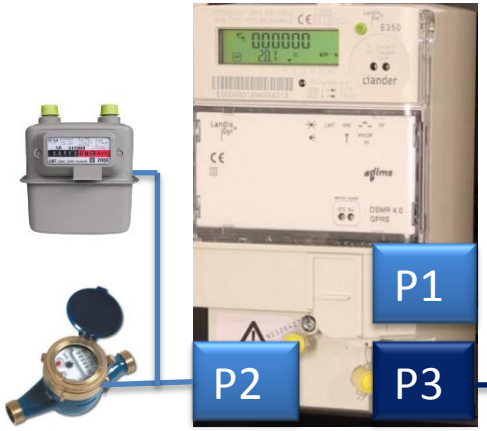
Krachtig instrument, maar:

- Beperkte voorspellingskracht
- Geen inzicht momentaan
- Geen correlatie met andere parameters

Direct acces to real time data from metering and other assets



inni
The Digital Backbone for Utilities



Metering Company

DSO

Energy data serv.

Service providers

Central data register

Energy supplier

ByNubian has signed a partnership contract with Powerhouse to create the first End2End data chain in energy.

Who is Powerhouse?

- Energy company (2005) in NL and BE
- Solution provider (2013)
- Part of **Essent/ Innogy**
- Core is the E2E automated energy platform
- Focus B2B-sector

About the Partnership

- Powerhouse branded Bynode (IoT device)
- Customerized interface ByNeuron – Powerhouse
- Data intelligence
- Mutual software development for new Inni platform of Powerhouse

New Services/Improvements

- Easy flex product
- Sub-metering
- Improvement forecasting (consumption)
- BI on metering data
- Consumption and load forecasting services
- Real time energy insights

powerhouse
the new normal in business energy

inni
The Digital Backbone for Utilities

bynubian

Don’t protect ideas.
We WANT feedback.
Bedankt voor uw aandacht,
Rik