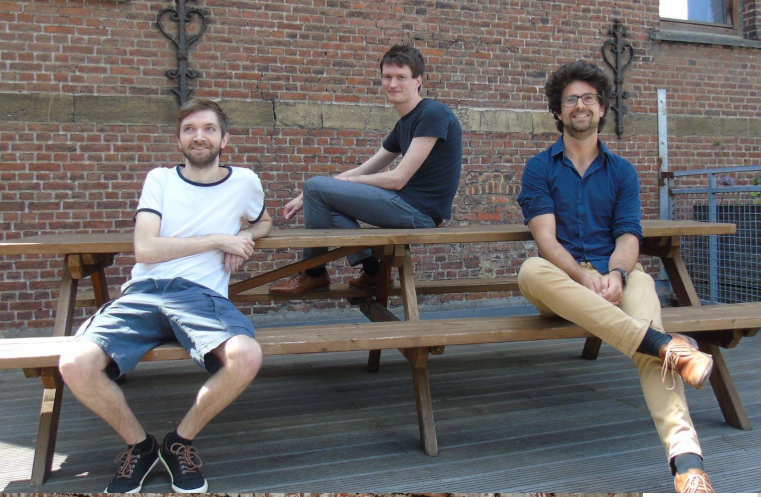


# Know Your Project Inside Out





☰ Trusted by



**Oosterweel  
verbinding**



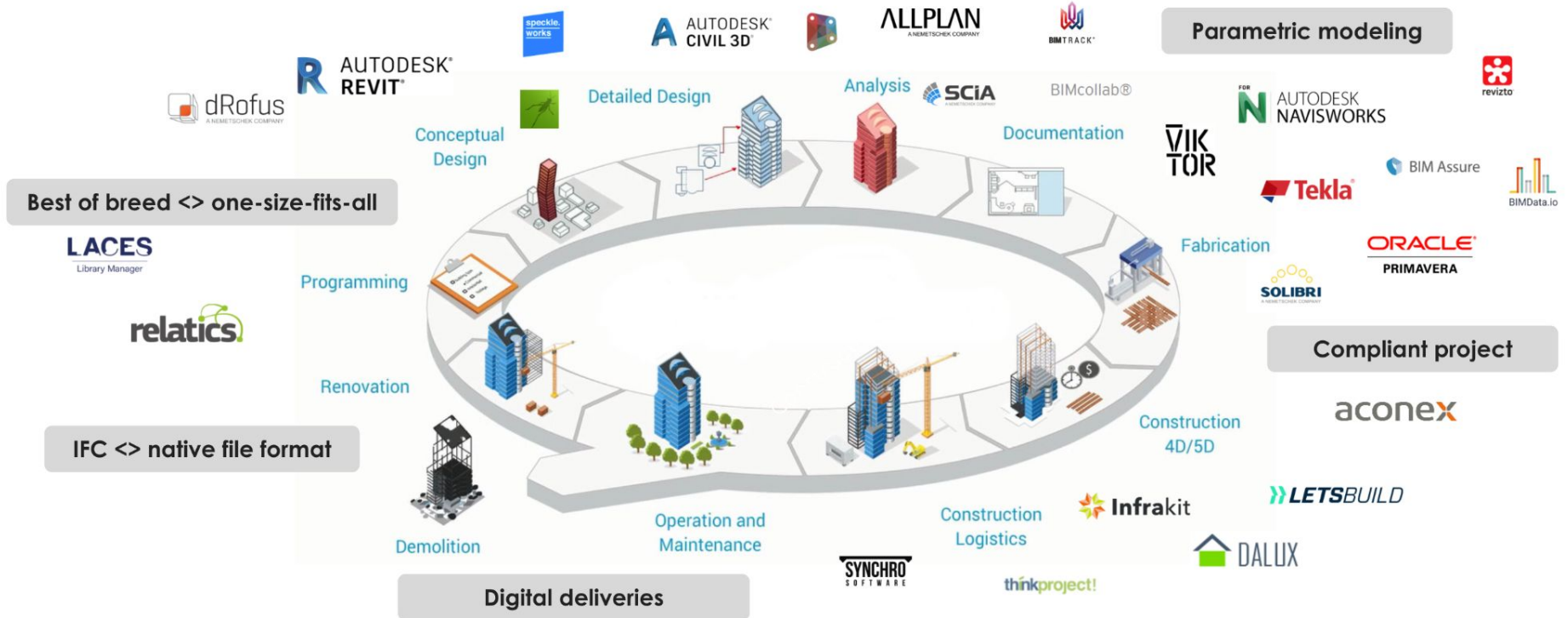
**DURA VERMEER**



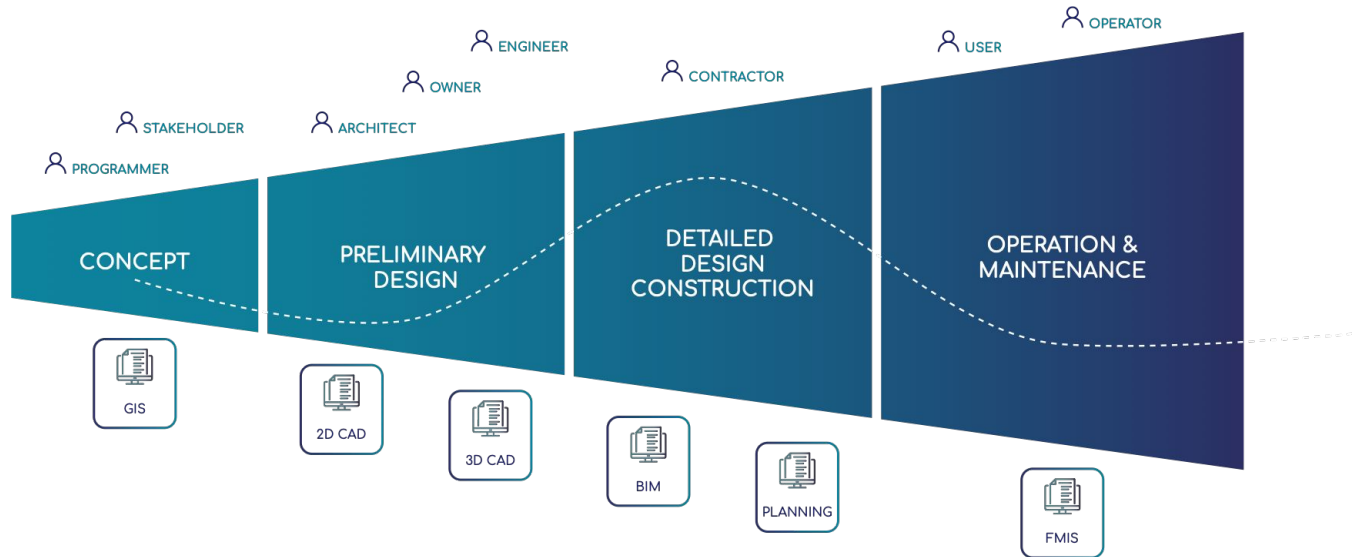
## ≡ Agenda

- What is the **challenge** of a digital landscape in construction projects today?
- How does **Neonex** want to shape the future of information management in construction?
- **Use Cases**
  - Connecting the world of requirements/contract & design :  
Goal : Data Driven Digital As Built
  - Quantity Take Off with Neanex Portal on COTU
  - Digital Process for Design Review with Tennet
  - Material Passport for Heijmans

# ≡ Challenge of Digitalisation



# ≡ Situation | an asset's life cycle

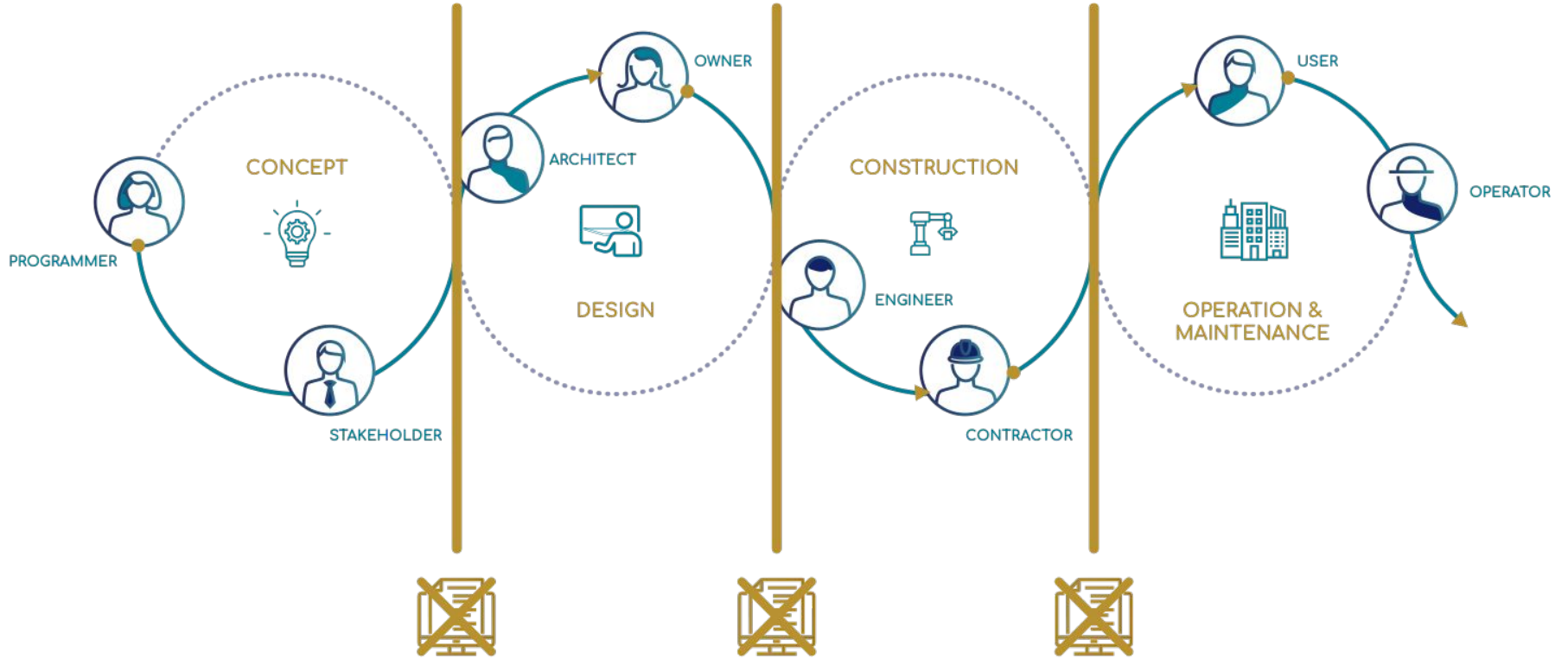


Different **companies** need to share information

Different **information** needs by different disciplines in different stages

Different **software** is used by different companies

# ≡ Problem | Information is scattered in tools, teams and stakeholders



## ≡ Pains



### LOCKED IN

**> 90%**  
of companies claim  
not to change  
because of  
dependency by  
people or software



### RISK of FAILURE

**> 50%**  
of information gets  
lost in different tools,  
lifecycles & teams



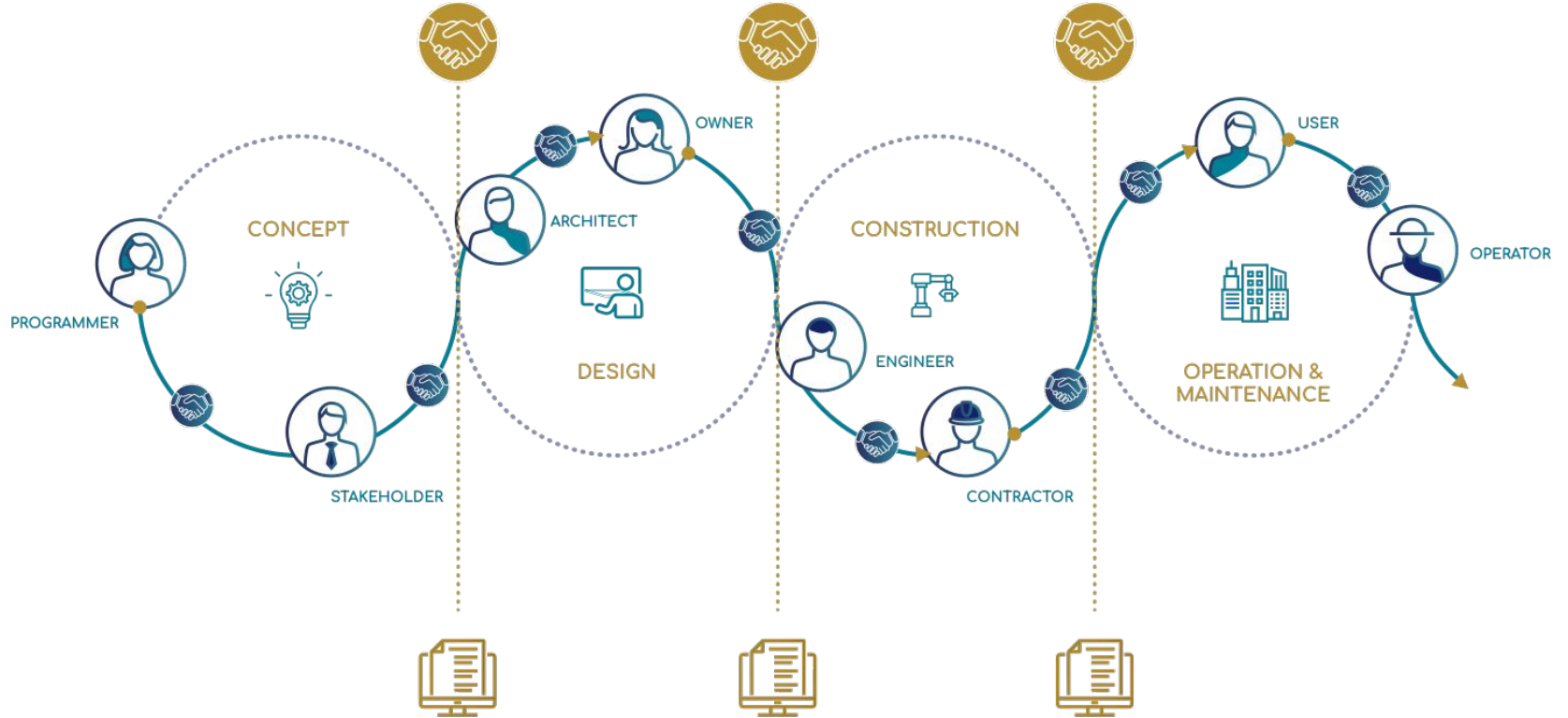
### COST EXPLOSION

**> 30%**  
off stafftime  
= looking for  
information



# Solution

# ≡ Neanex enables data driven insight throughout the complete asset lifecycle



# ≡ Neanex principle : Digital Asset Register

COMBINE

ENRICH

HANDOVER

From Other Digital Tools  
Material & Product Information  
Business & Domain Standards

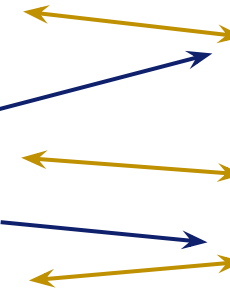
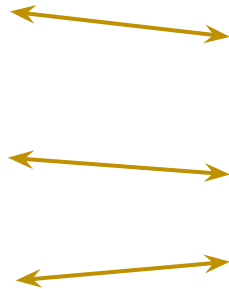
Design



Contract



...



Maintenance

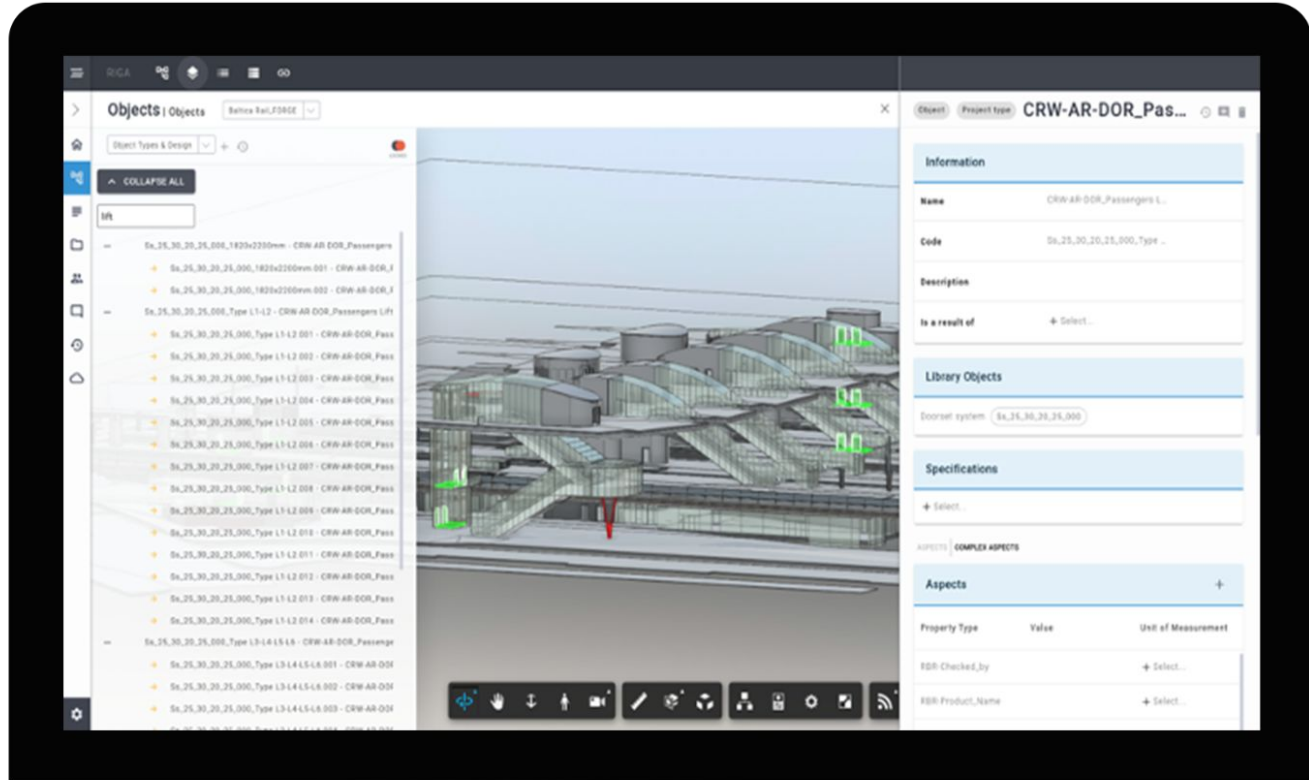


Digital Twin  
Services



Digital  
handover

# ≡ Look and Feel | simple and user friendly





**FUTURE PROOF**

scalable  
flexible  
independent



**AVOID  
RISK & FAILURE**

information becomes  
insight  
contract compliance  
transparency



**COST CONTROL**

quality insurance  
sustainable business  
competitive  
advantage

# Use Cases Neanex Portal

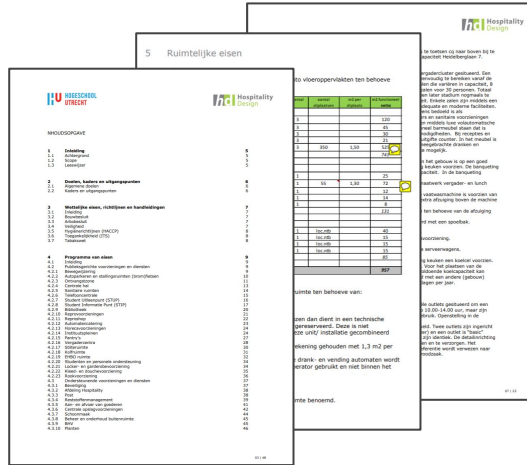
# Towards a Data Driven As Built Delivery



# Step 1: Prepare your contract for design & pre-design

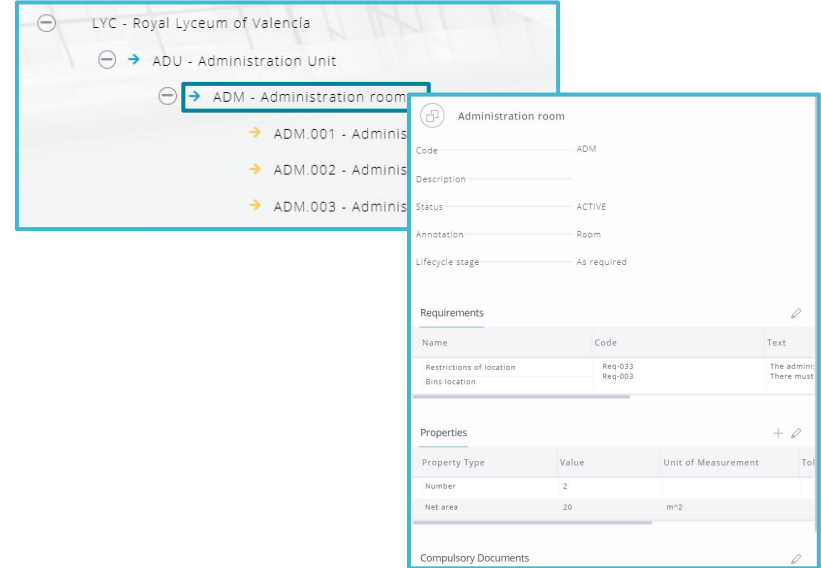
## Before

- references in document annexes
- references in PDF (at best)



## After

- references are directly accessible
- reference data is usable in Portal







# ☰ Ensure contract compliance straight into your process



BIM

Contract  
Requirement  
Programming



Systems  
Engineering

The screenshot shows a BIM software interface with a 3D model of a building. A teal double-headed arrow connects the 'Contract Requirement Programming' text to the software. A teal double-headed arrow also connects the 'BIM' logo to the software. The software interface includes a left-hand 'Objects | objects' tree view, a central 3D view, and a right-hand 'Physical Object' details panel. Three numbered callouts (1, 2, 3) highlight specific elements: 1 points to an 'ADM - Administration room' in the tree, 2 points to the 'Administration room' header in the details panel, and 3 points to the 'Requirements' table in the details panel.

**1** ADM - Administration room

**2** Administration room

**3** Requirements

Name	Code	Unit
Restrictions of location	Req-033	Th...
Blms location	Req-003	Th...

Property Type	Value	Unit of Measurement
Number	2	
Net area	20	m <sup>2</sup>

# Step 3: Enrich with other data sources

Domain Standards

Product Codes

Internal Classification



Object Type Library



Objects | objects: Vuilertunnel

06 Objects hybride

vuil

VT - BEHEEROBJECT: 01 - Velsverkeerstunnel onder het Noordzeekanaal

0 - VTTI

30 - vuilwaterpompinstallatie

30-005 - Vuilwaterpompinstallatie\_EP Noord\_1

30-006 - Vuilwaterpompinstallatie\_EP Noord\_2

30-007 - Vuilwaterpompinstallatie\_EP Noord\_3

30-008 - Vuilwaterpompinstallatie\_EP Noord\_FF1

30-009 - Vuilwaterpompinstallatie\_EP Noord\_FF2

30-010 - Vuilwaterpompinstallatie\_EP Zuid\_1

30-011 - Vuilwaterpompinstallatie\_EP Zuid\_2

30-012 - Vuilwaterpompinstallatie\_EP Zuid\_3

30-013 - Vuilwaterpompinstallatie\_EP Zuid\_FF1

30-014 - Vuilwaterpompinstallatie\_EP Zuid\_FF2

30-015 - Vuilwaterpompinstallatie\_MPK\_1

30-016 - Vuilwaterpompinstallatie\_MPK\_2

30-017 - Vuilwaterpompleiding EP-N

30-018 - Vuilwaterpompleiding EP-Z

30-019 - Vuilwaterpompleiding MPK

30-020 - Vuilwaterpompleiding\_Tunnel

30KK2011 - Klemmenkast Vuilwaterpomp zuid 1

30KK2012 - Klemmenkast Vuilwaterpomp zuid 2

30KK5011 - Klemmenkast Vuilwaterpomp noord 1

30KK5012 - Klemmenkast Vuilwaterpomp noord 2

Physical Object

Vuilwaterpompinstallatie\_EP Noord\_1

Code: 30-005

Description:

Status: ACTIVE

Annotation: Object

Lifecycle stage: As designed

Classification Objects

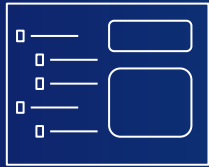
Relation	Name	Client
IS CLASSIFIED BY	Bouwenwerk Client	6735

Properties

Property Type	Value	Unit of Measurement
Capacity	100	
Unbounded height		m

Compulsory Documents

Name: Vuilertunnel



Contract & BIM

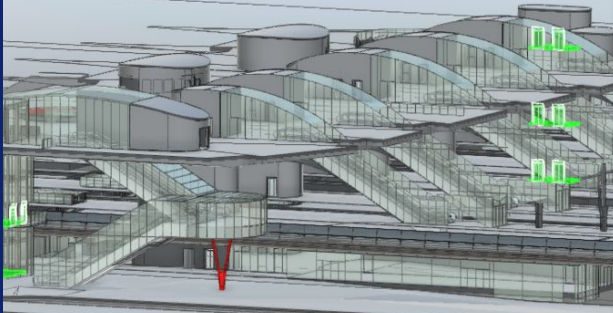
## ☰ Benefits of using Neanex Portal

- Ensure contract **compliance**
  - Low tech to high tech possibilities :
    - DIY in the Neanex Portal > easy
    - Import Data from Excel or other
    - Import from Laces / Library Environment
    - Synchronise from requirement management tool
- Directly start with a **consistent** way of handling information
- **Low boundary** to start
- Easily to be compliant with existing IT set up of a project
- Bring Information from specific process and tools towards a broader user field > **scale out your information**
- Bring information from specific process and tools in your own common work space (for example CAD) > **scale up information**

Work in many tools but own **one source of truth**



Rail Baltica

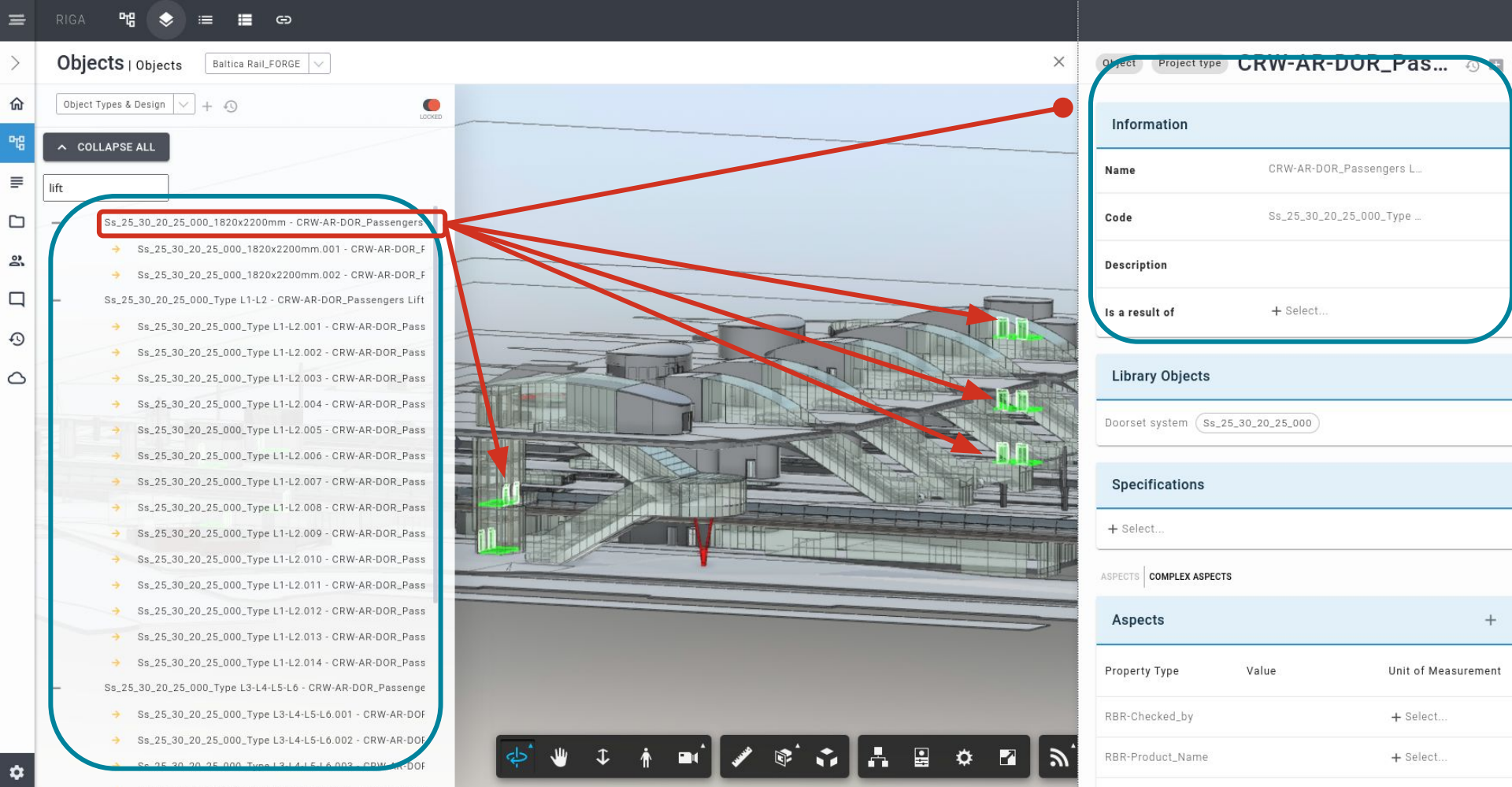


≡ neanex

@Riga Central Station



**BESIX**



Ss\_25\_30\_20\_25\_000\_1820x2200mm - CRW-AR-DOR\_Passengers

- Ss\_25\_30\_20\_25\_000\_1820x2200mm.001 - CRW-AR-DOR\_F
- Ss\_25\_30\_20\_25\_000\_1820x2200mm.002 - CRW-AR-DOR\_F
- Ss\_25\_30\_20\_25\_000\_Type L1-L2 - CRW-AR-DOR\_Passengers Lift
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.001 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.002 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.003 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.004 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.005 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.006 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.007 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.008 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.009 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.010 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.011 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.012 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.013 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L1-L2.014 - CRW-AR-DOR\_Pass
- Ss\_25\_30\_20\_25\_000\_Type L3-L4-L5-L6 - CRW-AR-DOR\_Passenge
- Ss\_25\_30\_20\_25\_000\_Type L3-L4-L5-L6.001 - CRW-AR-DOF
- Ss\_25\_30\_20\_25\_000\_Type L3-L4-L5-L6.002 - CRW-AR-DOF
- Ss\_25\_30\_20\_25\_000\_Type L3-L4-L5-L6.003 - CRW-AR-DOF

Information

Name	CRW-AR-DOR_Passengers L...
Code	Ss_25_30_20_25_000_Type ...
Description	
Is a result of	+ Select...

Library Objects

Doorset system Ss\_25\_30\_20\_25\_000

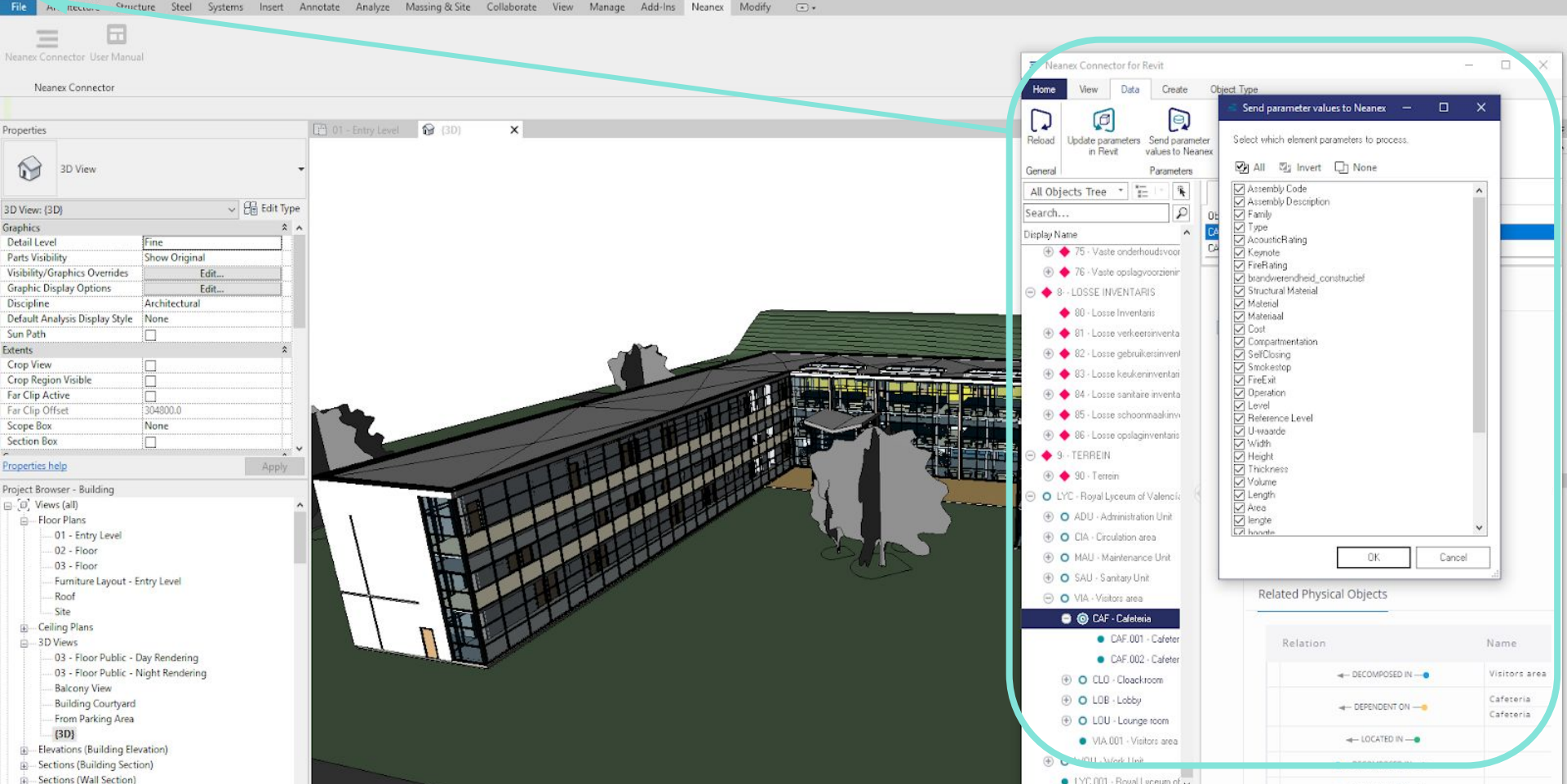
Specifications

+ Select...

ASPECTS COMPLEX ASPECTS

Aspects

Property Type	Value	Unit of Measurement
RBR-Checked_by		+ Select...
RBR-Product_Name		+ Select...



- Enrich the Building information model in an **easy** way
  - via Neanex CAD connector
  - via manual input in the Neanex Portal
  - via integration with other tooling like QA/QC
- **Deliver as-built** as the client demands
- **Support BIM team** to focus on their job and be able to manage information by a broader number of users and subcontractors
  - traceability
  - responsibility
- Huge amount of data > need for **control**





**Oosterweel  
verbinding**



**Quantity Take Off**  
@COTU Scheldetunnel

## ≡ Goal of Quantity Take Off: Project Monitoring

### **Sustainable Business through better decisions**

- Track Progress Forecast vs Progress Actuals
- Decisions based on up to date information
- Decisions based on different types of information : cost, time, activities,..
- Information needs to be objective & standardized
- Enhance your bidding process
- Avoid Rework
- Be Proactive & Lean



# ≡ 6 ways to improve QTO with Neanex Portal

Automated & Generic

Standardization

Domain Standards  
Open Data Platform  
Linked Data  
Vendor Agnostic



Connected Information

2D, 3D, cost, time, activities, so we understand the context and impact better

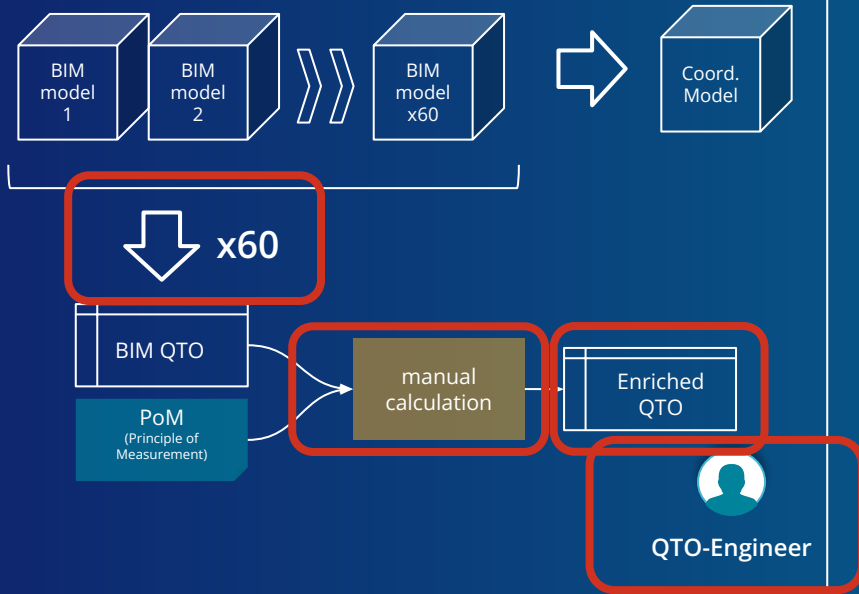
Single Source of Truth

Improve Data Accuracy

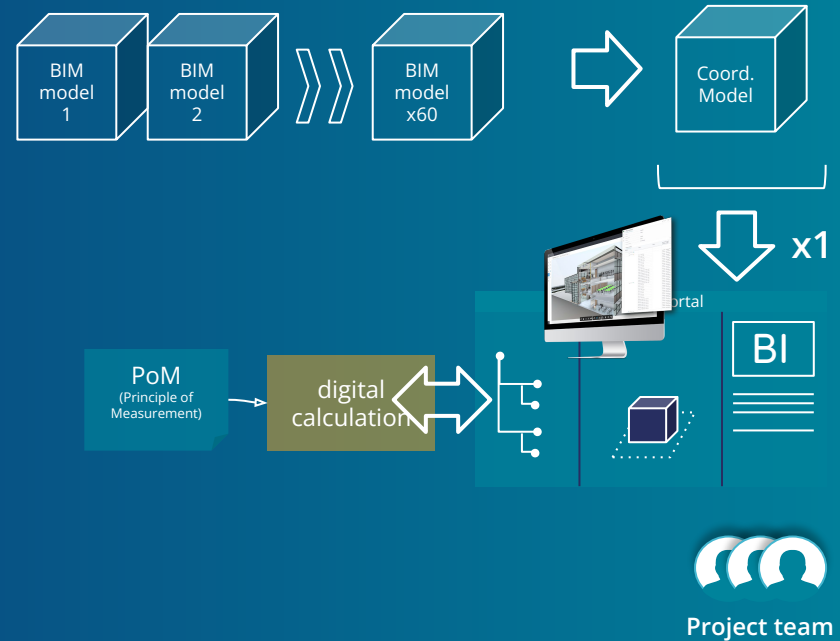
Up to data  
Garbage in > Garbage Out  
Data Quality Insurance

# Quantity Take off process | Automated & Quality Control

BEFORE



AFTER



# ≡ Feed BI as control on Quality of BIM models & Data

The screenshot displays a software interface with several panels:

- Left Panel:** A search bar with 'cad' and a list of items with IDs like 'OWL2-02175-COT-BMO-W58-000024\_Tijdelijk...'. Below it is a search for 'attributeName' with results like 'BIM Fasening', 'COTU SE LBS', 'QTO 0', etc.
- Center Panel:** A table with columns 'typeCode' and 'typeName'. The first row shows 'OTL-1254' and 'Cement-bentonietwand'. A search dropdown is open for 'Cement', listing items like 'Bescherming van cementering', 'Cement-bentonietwand', 'CementbetonLaag', etc.
- Right Panel:** A gauge chart showing '100% % Completed' with a blue arc. Text next to it reads '# Aspects 92k' and '# Expected values 1.92k'.

# Digital Handover



## ≡ Digital Asset Management to ensure Critical Asset Availability & Safety

- **Independency** from partners
  - no discussions on tooling
  - no high cost for custom development
  - no issues with different forms of data & data migration costs
- Create a **scalable** approach for the projects :
  - budget & operational
- Get **control** over how information is delivered to asset mgt
  - garbage in / garbage out
- Be **future proof** by going for standards
  - cross domain collaboration
  - new business
- Control extensive one-off costs & developments

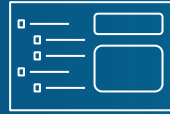


# ≡ Digital handover - Owner



OPDRACHTNEMER

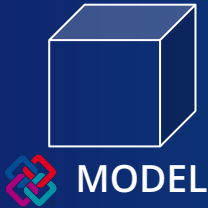
COMMUNICATIE



(Object Type) Library



DATA

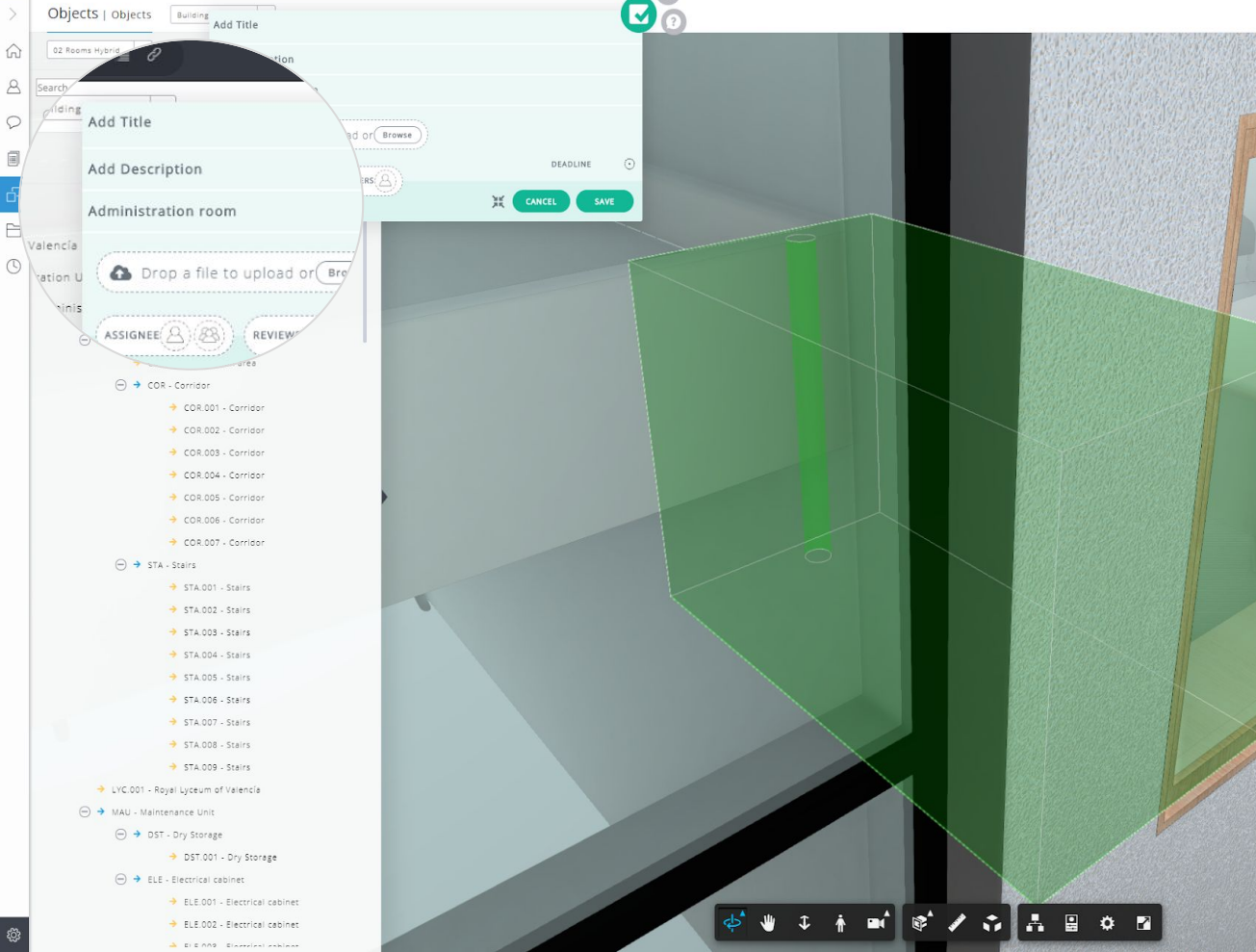


MODEL

The screenshot shows the TenneT software interface. On the left, a tree view lists objects under 'Station Haaksbergen (Portal Demo)', including 'Lijnveld 1' and various 'Disconnector' and 'Earthing switch' components. The central 3D model shows a power station layout with a green disconnector highlighted. On the right, a detailed view of 'Disconnector 1' is shown, including its name, code (AR-0025), description, status (ACTIVE), and specifications (Aarden deuren en zwenkramen (02), Circuits voor stroomtransformatoren (02), Spanningsniveau bekabeling (02)).

Type Aspect	Value	Unit of Measurement
Start VNB	2020-11-17 14:00	Timestamp





### Physical Object

Administration room

Code: ADM.001

Description:

Status: ACTIVE

Annotation: Room

Lifecycle stage: As designed

Properties

Property Type	Value	Unit of Measurement	Tolerance
Number (Revit)	126		
Area	15.709	m <sup>2</sup>	

Related Physical Objects

Relation	Name	Code
— IS PART OF →	Administration Unit	ADU.001
— IS LOCATION FOR →	Single-Flush: 0915 x 2134mm 60min	0059.003 0059.006 0017.002
	Single-Flush: 0915 x 2134mm 60min	0061.001
	Sofa: 1830mm	0068.001 0016.010
	Table-Dining Oval: 0915 x 1820mm	0004.174
	Desk Seat: Default	0004.175
	Big Seat: Colour - (Black)	ES.51.P51 ES.51.E51
	Big Seat: Colour - (Black)	ES.51.PL1
	Power socket 1	
	Electrical Switch 1	
	Pendant Light 1	
— IS LOCATED AT →	Ground floor	01
— IS A RESULT OF →	Administration room	ADM

Cad connections

Name	Status	Cad ID	Cad file	Cad file
Room	ACTIVE_CONNECTION	177311.5038	Building.rvt	Active
Administration room 126	ACTIVE_CONNECTION	Building.rvt.	Building.NWF.nwf	Active
Administration room 126	ACTIVE_CONNECTION	Building.rvt.	Building.NWD.nwd	Active
Administration room 126	CAD_ELEMENT_NOT_FOUND	11039	Building.NWD.nwd	Active
Administration room 126	ACTIVE_CONNECTION	Building.rvt.	Building.NWD.nwd	Active
Administration room 126	ACTIVE_CONNECTION	11039		

# ☰ Communicate issues through BCF

The screenshot displays a software interface for communicating issues through BCF. The interface is divided into several sections:

- Tree Panel (Left):** Contains a search bar, an "EXPAND" button, and a list of objects. One object is listed: "AR-0023 - Station Healsbergen (Portal Demo)".
- Model Viewer (Right):** Displays a 3D model of a power station structure, labeled "SuedLink demo". The model shows various components, including towers, insulators, and power lines, connected by a network of white lines.
- Bottom Left:** A circular video feed shows a man with a beard, likely the user or a collaborator.
- Bottom Center:** A toolbar with various icons for navigation and interaction, including a hand, a mouse, and a checkmark.
- Bottom Right:** A "Show Markups" button with a blue cube icon.

# ≡ Digital handover : easy to prepare as a contractor

(Object Type)  
Library



OPDRACHTNEMER

COMMUNICATIE



OPDRACHTGEVER

The screenshot displays the Neanex software interface. On the left, a tree view shows a project structure for 'Station Heaksbergen (Portal Demo)'. The main area features a 3D model of a power station with a disconnector highlighted in green. On the right, a detailed view of the 'Disconnector 1' object is shown, including its name, code, description, and specifications. The specifications table is as follows:

Type Aspect	Value	Unit of Measurement
Start VNB	2020-11-17 14:00	Timestamp



DATA  
(bv. NTA 8035)



MODEL

# Material Passport

heijmans

# ≡ Materials Passport



Specs



NLsfB/ BBSfB  
/  
classification

Asset  
Management

Material  
Register

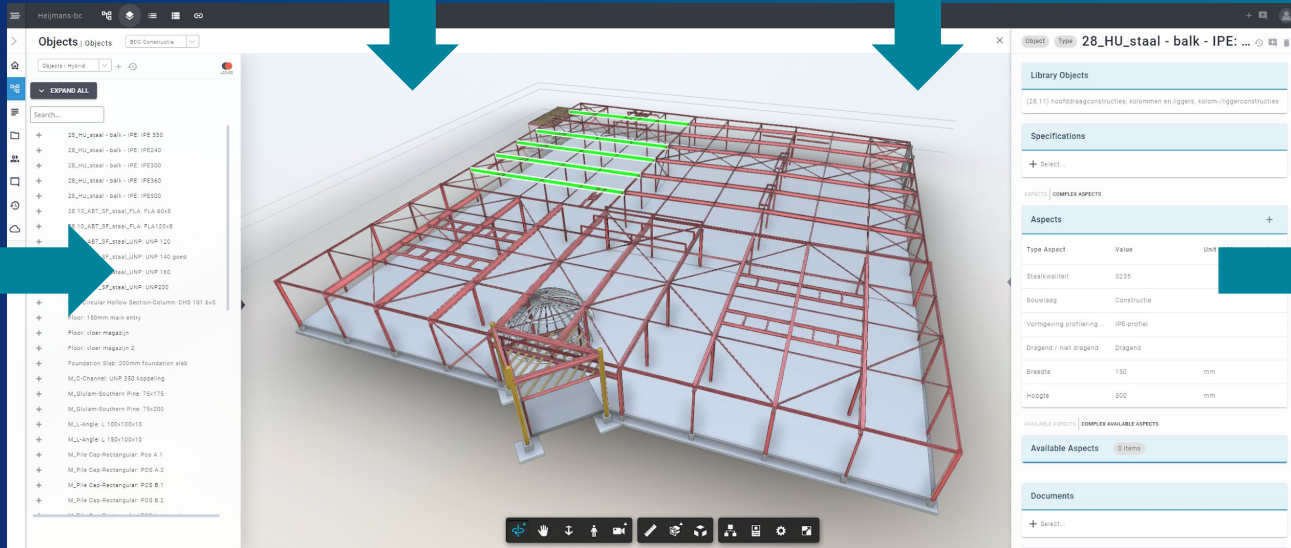


Life Cycle  
Assessment

Circularity  
Calculator



BIM



Let's talk!



## Contact

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CCO @Neanex

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