

From Drawings to Data

CS501195

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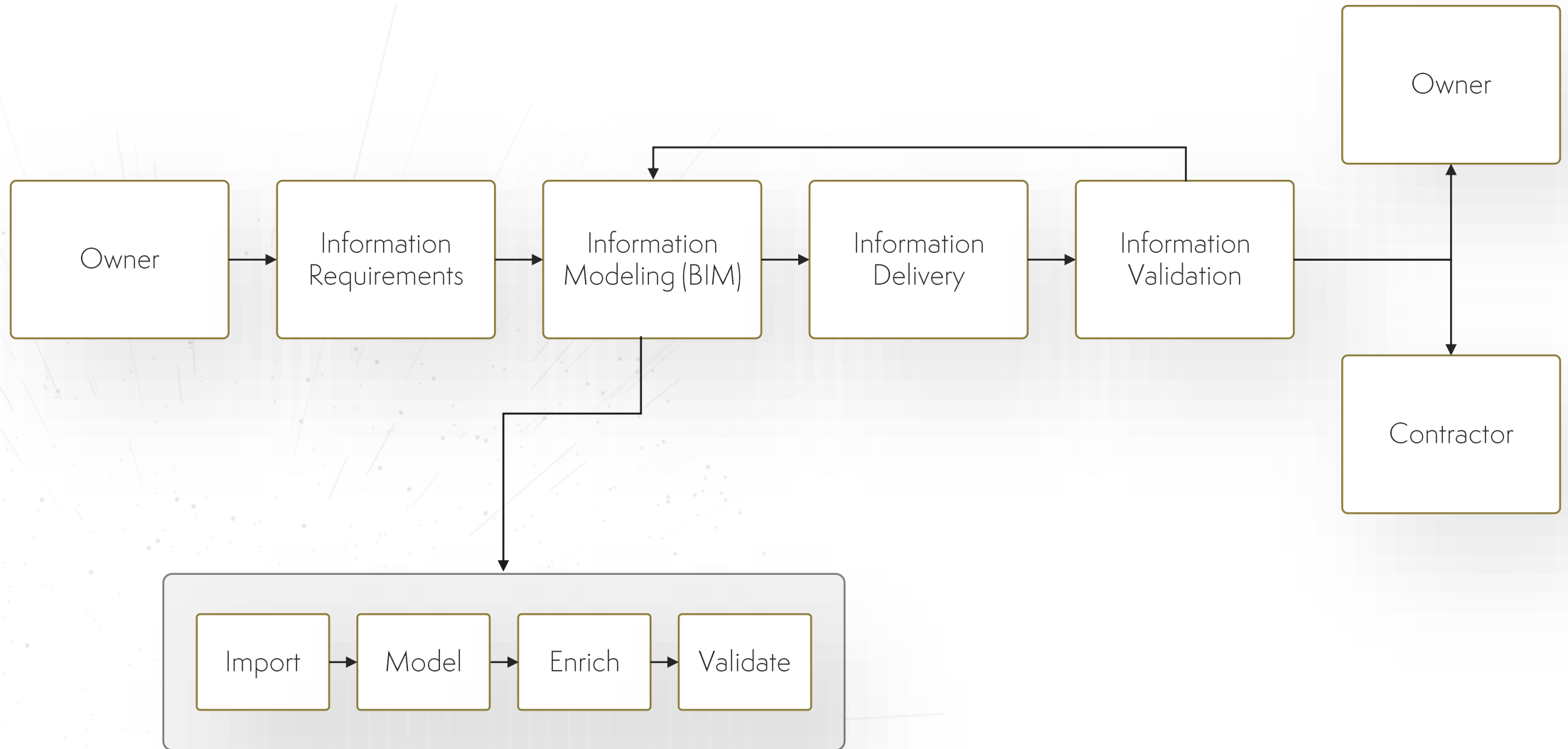


[illegible]

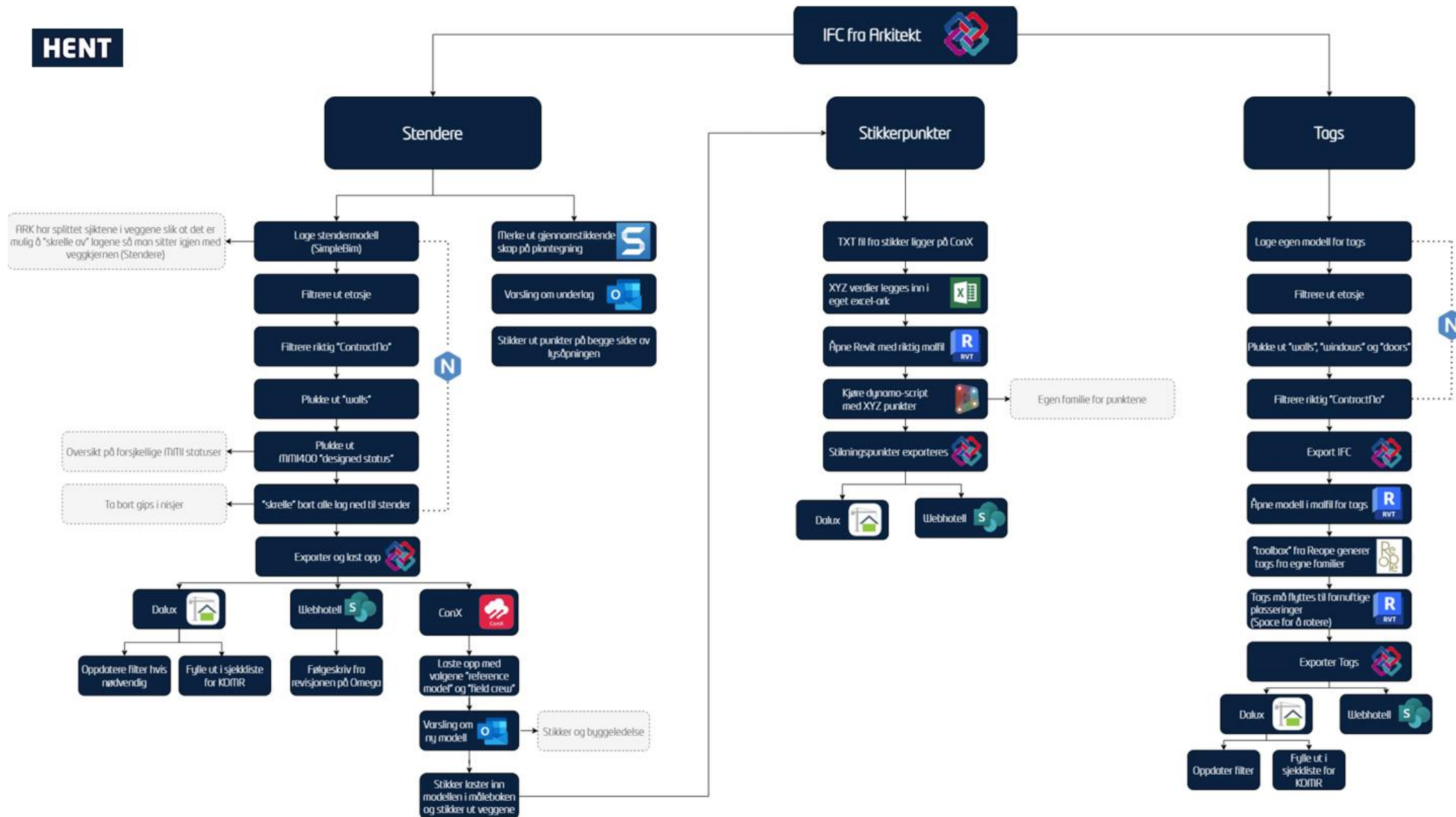
The background of the entire image is a dense, chaotic pile of jigsaw puzzle pieces. The pieces are in various colors including yellow, orange, red, green, blue, and grey. They are scattered in all directions, creating a complex, textured pattern. The lighting is even, highlighting the interlocking shapes of the pieces.

THE PROBLEM

.....



HENT

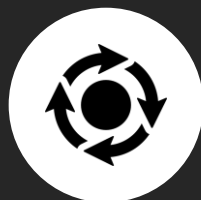


THE PROBLEM

DATA QUALITY



REQUIREMENTS
Broken workflow



CONSISTENCY
Manual humans



VALIDATION
Nobody knows

BROKEN WORKFLOW REQUIREMENTS

PARAMETERS



DOCUMENTS



Autodesk Revit 2023 - 1148703-A03C08-8888-0000-AE1-200-03-001 (1).rvt - 3D View: (3D - havard.reope)

File Architecture Structure Steel Precast Systems Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins Modify

Modify Wall Door Window Component Column Roof Ceiling Floor Curtain System Curtain Grid Mullion Railing Ramp Stair Model Text Model Line Model Group Room Room Separator Tag Room Area Area Boundary Tag Area By Face Shaft Wall Vertical Dormer Level Grid Set Show Ref Plane Viewer

Properties (3D - havard.reope)

3D View

3D View: (3D - havard.reope) Edit Type

RNO_TFM_Tillegsinfor...
RNO_TFM_Toppnodeide...

Phasing
Phase Filter Show Complete
Phase New Construction

IFC Parameters

RefCompClass	
RefCompOccNo	
RefCompTypeNo1	
RefCompTypeNo2	
RefPriSysClass	
RefPriSysLoc	
RefPriSysNo1	
RefPriSysNo2	
RefString	
BUSCommunicationType	
BUSProtocolType	
ControlledBy	
ControlSystemType	
DesignedStatus	
ElectricalPower	
ElectricalSupplySystem	
HasBuildingControlCon...	
HasDataConnection	☒
HasElectricalConnection	☒
HasInternalAutomation	☒
IK_Code	
IP_Code	
IsDuplicate	
IsPluggableOutlet	☒
NominalFrequencyRange	
RefSecSysOcc	
IfcDescription	
IsExternal	
ConstructedStatus	
OperationalStatus	
IsProcured	
ControlArea	
IfcExportAs	
IfcName	

Properties help Apply

Perspective

Click to select, TAB for alternates, CTRL adds, SHIFT unselects.

Workset1 :0 Main Model Editable Only

MANUAL HUMANS CONSISTENCY



TOOLS

File based drawing
production systems



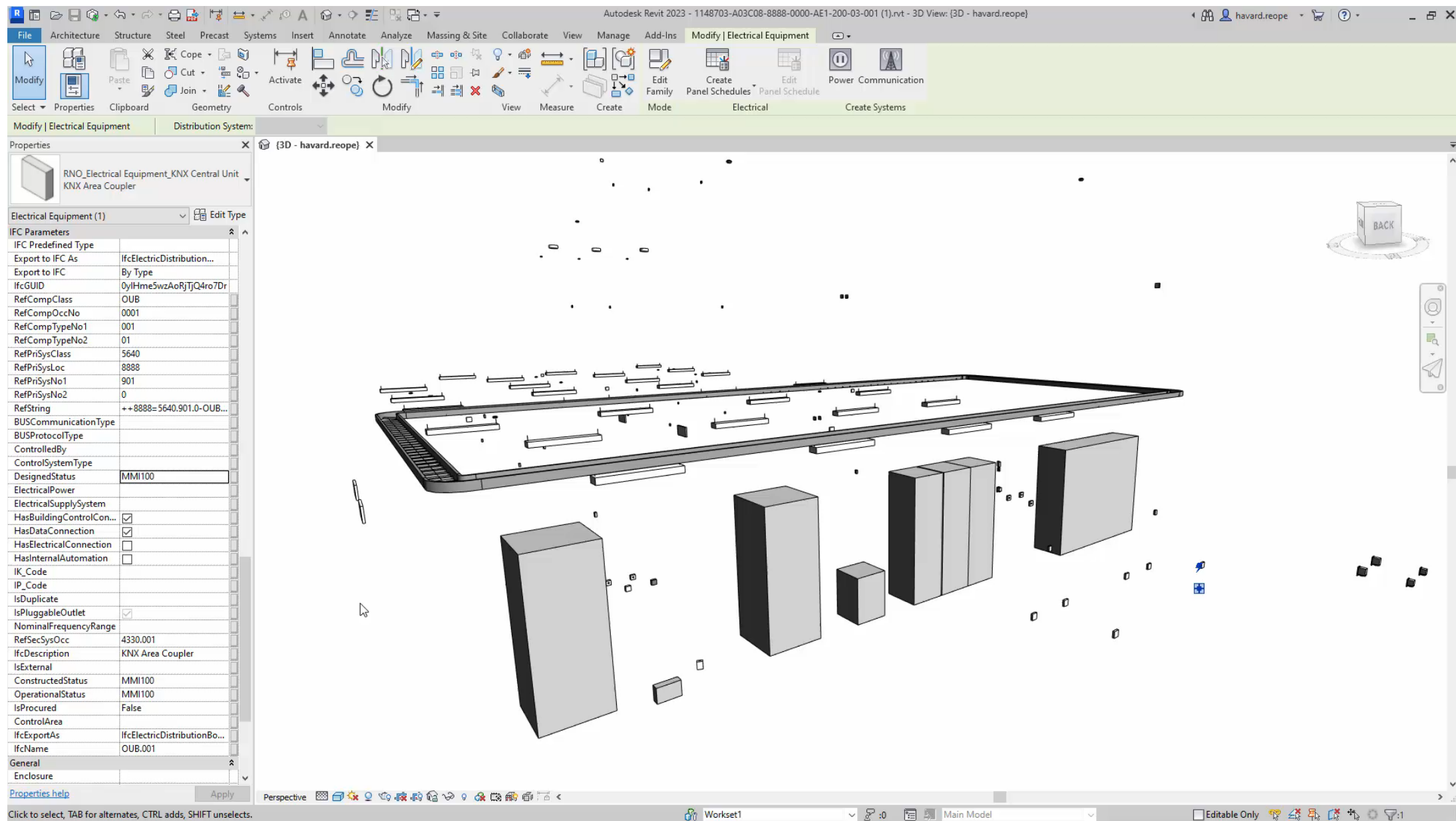
PEOPLE

Should an architect make
a digital twin?



AUTOMATION

Metadata automation
does not exist in Revit



NOBODY KNOWS VALIDATION

SENDER



RECEIVER



Autodesk Revit 2022.1 - 1148703-A03C08-8888-0000-AE1-200-03-001 (1)_detached.rvt - Schedule: TFM											
File Architecture Structure Steel Precast Systems Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins Sykehusbygg RKV Modify Modify Schedule/Quantities											
Modify Schedule/Quantities New Delete											
3D - havard.roepe TFM X											
<TFM>											
A	B	C	D	E	F	G	H	I	J	K	L
Family and Type	Type Mark	RefCompClass	RefCompOccNo	RefCompTypeNo1	RefCompTypeNo2	RefPriSysClass	RefPriSysLoc	RefPriSysNo1	RefPriSysNo2	RefString	RefSecSysOcc
Cable Tray with Fittings: Kabelstiger	CRB	CRB	0005	001	01	4110	8888	001	01	++8888=4110.001.01-CR80005%CRB.001.01	
Cable Tray with Fittings: Kabelstiger	CRB	CRB	0007	001	01	4110	8888	001	01	++8888=4110.001.01-CR80007%CRB.001.01	
Cable Tray with Fittings: Kabelstiger	CRB	CRB	0009	001	01	4110	8888	001	01	++8888=4110.001.01-CR80009%CRB.001.01	
Cable Tray with Fittings: Kabelstiger	CRB	CRB	0011	001	01	4110	8888	001	01	++8888=4110.001.01-CR80011%CRB.001.01	
RNO_Cable Tray Fittings_Ladder Horizontal Bend: Kabelstiger	CRB	CRB	0006	002	01	4110	8888	001	01	++8888=4110.001.01-CR80006%CRB.002.01	
RNO_Cable Tray Fittings_Ladder Horizontal Bend: Kabelstiger	CRB	CRB	0008	002	01	4110	8888	001	01	++8888=4110.001.01-CR80008%CRB.002.01	
RNO_Cable Tray Fittings_Ladder Horizontal Bend: Kabelstiger	CRB	CRB	0010	002	01	4110	8888	001	01	++8888=4110.001.01-CR80010%CRB.002.01	
RNO_Cable Tray Fittings_Ladder Horizontal Bend: Kabelstiger	CRB	CRB	0012	002	01	4110	8888	001	01	++8888=4110.001.01-CR80012%CRB.002.01	
RNO_Data Devices_Data Outlet: 1xData Outlet	UDA	UDA	0005	002	01	5200	8888	001	01	++8888=5200.001.01-UDA0005%UDA.002.01	
RNO_Data Devices_Data Outlet: 1xData Outlet	UDA	UDA	0006	002	01	5200	8888	001	01	++8888=5200.001.01-UDA0006%UDA.002.01	
RNO_Data Devices_Data Outlet: 1xData Outlet	UDA	UDA	0007	002	01	5200	8888	001	01	++8888=5200.001.01-UDA0007%UDA.002.01	
RNO_Data Devices_Data Outlet: 1xData Outlet	UDA	UDA	0008	002	01	5200	8888	001	01	++8888=5200.001.01-UDA0008%UDA.002.01	
RNO_Data Devices_Data Outlet: 2xData Outlet	UDA	UDA	0001	001	01	5200	8888	001	01	++8888=5200.001.01-UDA0001%UDA.001.01	
RNO_Data Devices_Data Outlet: 2xData Outlet	UDA	UDA	0002	001	01	5200	8888	001	01	++8888=5200.001.01-UDA0002%UDA.001.01	
RNO_Data Devices_Data Outlet: 2xData Outlet	UDA	UDA	0003	001	01	5200	8888	001	01	++8888=5200.001.01-UDA0003%UDA.001.01	
RNO_Data Devices_Data Outlet: 2xData Outlet	UDA	UDA	0004	001	01	5200	8888	001	01	++8888=5200.001.01-UDA0004%UDA.001.01	
RNO_Electrical Equipment_Access Control Central: Access Control Central	OUG	OUG	0014	001	01	4330	8888	001	02	++8888=4330.001.02-OUG0014%OUG.001.01	
RNO_Electrical Equipment_Fire Alarm Central: Fire Alarm Central	OUE	OUE	0013	001	01	4330	8888	001	02	++8888=4330.001.02-OUE0013%OUE.001.01	
RNO_Electrical Equipment_KNX Central Unit: KNX Area Coupler	OUB	OUB	0001	001	01	5640	8888	901	0	++8888=5640.901.0-OUB0001%OUB.001.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Area Coupler	OUB	OUB	0003	001	01	5640	8888	902	0	++8888=5640.902.0-OUB0003%OUB.001.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Gateway, DALI	XZA	XZA	0007	001	01	5630	8888	901	0	++8888=5630.901.0-XZA0007%XZA.001.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Line Coupler	OUB	OUB	0002	002	01	5640	8888	903	0	++8888=5640.903.0-OUB0002%OUB.002.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Line Coupler	OUB	OUB	0004	002	01	5640	8888	904	0	++8888=5640.904.0-OUB0004%OUB.002.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Line Coupler	OUB	OUB	0005	002	01	5640	8888	905	0	++8888=5640.905.0-OUB0005%OUB.002.01	4330.001
RNO_Electrical Equipment_KNX Central Unit: KNX Line Coupler	OUB	OUB	0006	002	01	5640	8888	906	0	++8888=5640.906.0-OUB0006%OUB.002.01	4330.001
RNO_Electrical Equipment_Rack: Patching Rack	FSF	FSF	0002	001	01	5200	8888	001	0	++8888=5200.001.0-FSF0002%FSF.001.01	
RNO_Electrical Equipment_Switchboard Panel: Distribution Board 400V	FSC	FSC	0001	002	01	4330	8888	001	0	++8888=4330.001.0-FSC0001%FSC.002.01	
RNO_Electrical Equipment_Switchboard Panel: Distribution Board 400V	FSC	FSC	0001	002	01	4330	8888	002	0	++8888=4330.002.0-FSC0001%FSC.002.01	
RNO_Electrical Equipment_Switchboard Panel: Distribution Board 400V	FSC	FSC	0001	002	01	4330	8888	003	0	++8888=4330.003.0-FSC0001%FSC.002.01	
RNO_Electrical Equipment_Switchboard Panel: Main Distribution Board 400V	FSC	FSC	0001	001	01	4330	8888	001	01	++8888=4330.001.0-FSC0001%FSC.001.01	
RNO_Electrical Equipment_UPS: UPS 400V 10kVA	NBA	NBA	0015	001	01	4330	8888	001	02	++8888=4330.001.02-NBA0015%NBA.001.01	
RNO_Electrical Fixtures_Heating: Heating Cable 120 W/m2	LZB	LZB	0001	001	01	4330	8888	001	016	++8888=4330.001.016-LZB0001%LZB.001.01	
RNO_Electrical Fixtures_Heating: Heating Cable 120 W/m2	LZB	LZB	0001	001	01	4330	8888	001	017	++8888=4330.001.017-LZB0001%LZB.001.01	
RNO_Electrical Fixtures_Heating: Panel Heater 2000W	LHB	LHB	0001	001	01	4330	8888	001	018	++8888=4330.001.018-LHB0001%LHB.001.01	
RNO_Electrical Fixtures_Heating: Panel Heater 2000W	LHB	LHB	0002	001	01	4330	8888	001	018	++8888=4330.001.018-LHB0002%LHB.001.01	
RNO_Electrical Fixtures_Heating: Panel Heater 2000W	LHB	LHB	0003	001	01	4330	8888	001	018	++8888=4330.001.018-LHB0003%LHB.001.01	
RNO_Electrical Fixtures_Heating: Panel Heater 2000W	LHB	LHB	0004	001	01	4330	8888	001	018	++8888=4330.001.018-LHB0004%LHB.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0001	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0001%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0002	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0002%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0003	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0003%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0004	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0004%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0005	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0005%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0006	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0006%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0007	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0007%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Lux Sensor	RBA	RBA	0008	001	01	5640	8888	903	01	++8888=5640.903.01-RBA0008%RBA.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0009	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0009%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0010	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0010%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0011	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0011%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0012	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0012%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0013	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0013%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0014	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0014%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat	RTC	RTC	0015	001	01	5640	8888	903	01	++8888=5640.903.01-RTC0015%RTC.001.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat Recessed	RTC	RTC	0001	002	01	5640	8888	904	01	++8888=5640.904.01-RTC0001%RTC.002.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat Recessed	RTC	RTC	0002	002	01	5640	8888	904	01	++8888=5640.904.01-RTC0002%RTC.002.01	
RNO_Electrical Fixtures_KNX Registrators: KNX Thermostat Recessed	RTC	RTC	0003	002	01	5640	8888	904	01	++8888=5640.904.01-RTC0003%RTC.002.01	

Zoom in or out using the Ctrl + mouse wheel or Ctrl + [+/-]. To reset to the original zoom level (100%), press Ctrl + 0.

Worksheet1 :0 Main Model 100%

MODEL TREE

1148703-A03C08-8888-0000-AE1-200-03-001 (1)_det

CLASSIFICATION

SELECTION BASKET

No Selection Sets

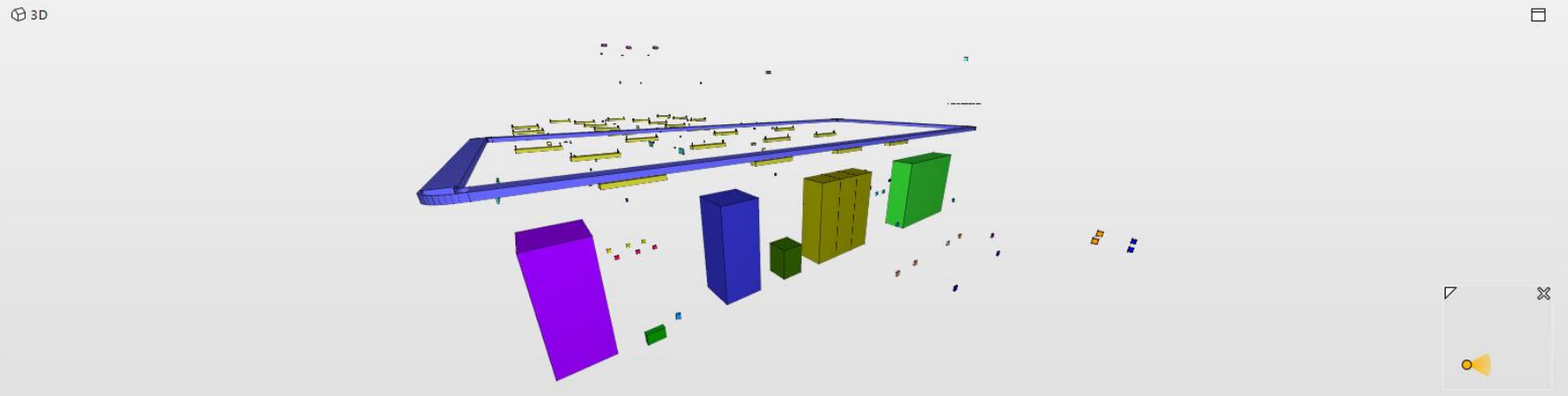
No Selection

INFO

Electric Distribution Point.1.68

Relations	Classification	Hyperlinks
Identification	Location	Quantities
Pset_EnvironmentalImpactIndicators		
Pset_ElectricDistributionBoardTypeCommon		
NOSSB_Process		
NOSSB_ReaTriagers		
NONS_BuildingControls		
NONS_Reference		

Property	Value
RefCompClass	OUB
RefCompOccNo	0004
RefCompTypeNo1	002
RefCompTypeNo2	01
RefPriSysClass	5640
RefPriSysLoc	8888
RefPriSysNo1	904
RefPriSysNo2	0
RefSecSysOcc	4330.001
RefString	++8888=5640.904.0-OUB000...



INFORMATION TAKEOFF

Takeoff All NONS_Reference

Component	Type	NONS_Reference.RefCompClass	NONS_Reference.RefCompTypeNo1	NONS_Reference.RefCompTypeNo2	NONS_Reference.RefPriSysClass	NONS_Reference.RefPriSysLoc	NONS_Reference.RefPriSysNo1	NONS_Reference.RefPriSysNo2	NONS_Reference
Electric ...	1xData Outlet UDA		002	01	5200	8888	001	01	
Electric ...	1xOutlet (1-... UEA		002	01	4330	8888	001	06	
Electric ...	1xOutlet (1-... UEA		002	01	4330	8888	001	07	
Electric ...	1xOutlet (1-... UEA		003	01	4330	8888	001	08	
Electric ...	1xOutlet (1-... UEA		003	01	4330	8888	001	09	
Electric ...	1xOutlet (3-... UEA		004	01	4330	8888	001	010	
Electric ...	1xOutlet (3-... UEA		004	01	4330	8888	001	011	
Electric ...	1xOutlet (3-... UEA		005	01	4330	8888	001	012	
Electric ...	1xOutlet (3-... UEA		005	01	4330	8888	001	013	
Electric ...	2xData Outlet UDA		001	01	5200	8888	001	01	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	019	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	04	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	05	
Electric ...	4xOutlet (1-... UEA		007	01	4330	8888	001	015	
Electric ...	4xOutlet Fl... UEA		006	01	4330	8888	001	014	
Electric ...	Access Con... OUG		001	01	4330	8888	001	02	
Electric ...	Connection... UXZ		001	01	8888				
Electric ...	Distribution... FSC		002	01	4330	8888	001	0	
Electric ...	Distribution... FSC		002	01	4330	8888	002	0	

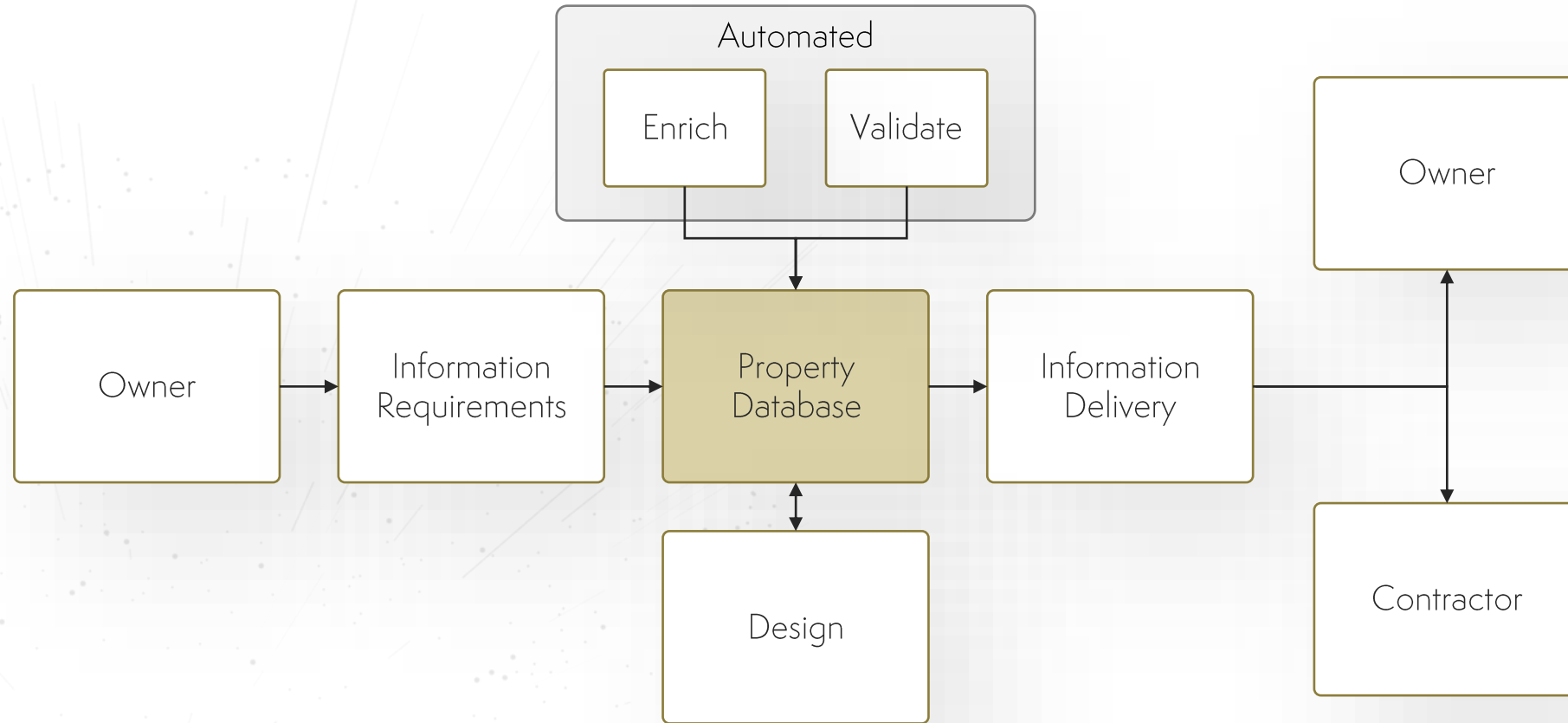
A large, gnarled tree trunk is the central focus. A wooden sculpture of a hand is carved into the trunk, with the fingers wrapped around it. The hand is positioned as if it is holding or supporting the tree. Below the hand, a wooden post with a purple and white zigzag pattern is visible. The background shows a paved path, a bench, and a white van parked on a street. The scene is set in a park-like area with green grass and trees.

THE SOLUTION

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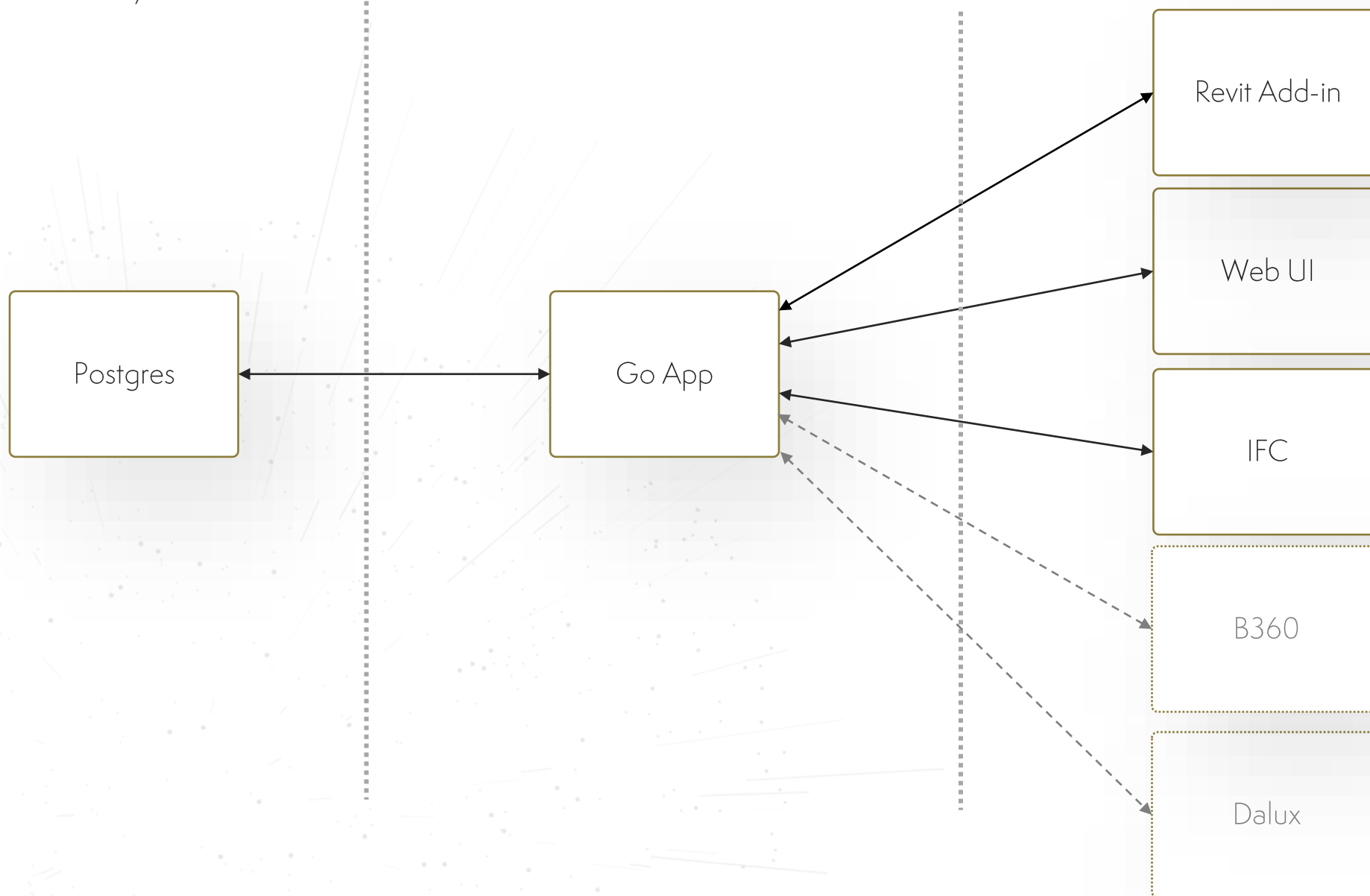
A PROPERTY **DATABASE**
OUTSIDE REVIT WITH BUILT IN
AUTOMATION AND
VALIDATION



Database
Layer

API Layer

Clients / UI

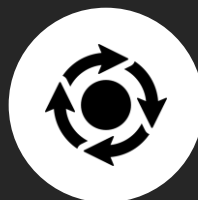


THE SOLUTION DATA QUALITY



REQUIREMENTS

Easy Imports



CONSISTENCY

UX and
Automation



VALIDATION

Actionable
Feedback


Anker

harsh+design@reope.com

Projects

Team

Projects

> SIMBA

Properties

Anker

Revit

IFC

LOG OUT

Cool Design Firm / / Manage Properties

Anker Properties

Search

ADD

IMPORT

EXPORT

DELETE

☐	Name	Type	IFC PSet Name	IFC Property Name
No data available				

Rows per page:

5

-

<

>

Anchor

harsh@reope.com

Projects

Team

Projects

> Anker House

< DG13

< Tables

Building A

Ceiling

Columns

Doors

Everything

Infill

Level 7 Walls

MMI Check

Walls

Walls MMI

Window

> Populate

Validate

Automations

Manage

> Dronningens gate 13

> Gol

> IFC Import

> IFC Import 2

> KapFunk B360

> NK

> PKV

> PullParameters

> RAD Test

> ...

Everything

Count	Category	File	Fire Rating	MMI	AcousticRating	Contract
21747	REVIT	CORE	ANKER	ANKER	ANKER	ANKER
2	Plantevegg.dwg	DG13_forprosjekt_Pakkhuset				
3	8x14.dwg	DG13_forprosjekt_Onfill				
3	10x14.dwg	DG13_forprosjekt_Onfill				
3	10x16.dwg	DG13_forprosjekt_Onfill				
3	8x16.dwg	DG13_forprosjekt_Onfill				
3	8x18.dwg	DG13_forprosjekt_Onfill				
456	Areas	DG13_forprosjekt_Pakkhuset				
203	Areas	DG13_forprosjekt_Onfill				
203	Areas	DG13_forprosjekt_Infill				
2	Cable Trays	DG13_forprosjekt_Pakkhuset				
2	Cable Trays	DG13_forprosjekt_Onfill				
2	Cable Trays	DG13_forprosjekt_Infill				
459	Casework	DG13_forprosjekt_Pakkhuset				
179	Casework	DG13_forprosjekt_Onfill				
332	Casework	DG13_forprosjekt_Infill				
643	Ceilings	DG13_forprosjekt_Pakkhuset				
94	Ceilings	DG13_forprosjekt_Onfill				
96	Ceilings	DG13_forprosjekt_Infill				
41	Columns	DG13_forprosjekt_Pakkhuset				
2	Conduits	DG13_forprosjekt_Pakkhuset				
2	Conduits	DG13_forprosjekt_Onfill				
2	Conduits	DG13_forprosjekt_Infill				
431	Curtain Panels	DG13_forprosjekt_Pakkhuset				
335	Curtain Panels	DG13_forprosjekt_Onfill				
75	Curtain Panels	DG13_forprosjekt_Infill				
1	Curtain Systems	DG13_forprosjekt_Pakkhuset				
1	Curtain Systems	DG13_forprosjekt_Onfill				
1	Curtain Systems	DG13_forprosjekt_Infill				
1236	Curtain Wall Mullions	DG13_forprosjekt_Pakkhuset				
564	Curtain Wall Mullions	DG13_forprosjekt_Onfill				
172	Curtain Wall Mullions	DG13_forprosjekt_Infill				
874	Doors	DG13_forprosjekt_Pakkhuset				
245	Doors	DG13_forprosjekt_Onfill				

Search

DELETE

Properties

Find Properties

Filter Properties

CORE ANKER IFC REVIT

Properties in the elements Refresh

CORE Is Type

CORE External Id

CORE Name

CORE Updated At

CORE Updated By

ANKER NS8351 - Navn

ANKER U-Verdi

ANKER TverrsnittID

ANKER Materialer

ANKER Dørskjema

ANKER Automated Shades

Columns

Collapse Filters

REVIT Category

CORE File

ANKER Fire Rating

ANKER MMI

ANKER AcousticRating

ANKER Contract Number

 Anker

harsh@reope.com

 Projects

 Team

Projects

> Anker House

> DG13

> Dronningens gate 13

> Gol

> IFC Import

> IFC Import 2

> KapFunk B360

> NK

> PKV

> PullParameters

> RAD Test

> RKV

> RPBW Hospital

> RPBW Hospital IFC

> Test 1

Properties

 Anker

 Revit

 IFC

LOG OUT

Reope AS / Gol / Validations

✓ Validations

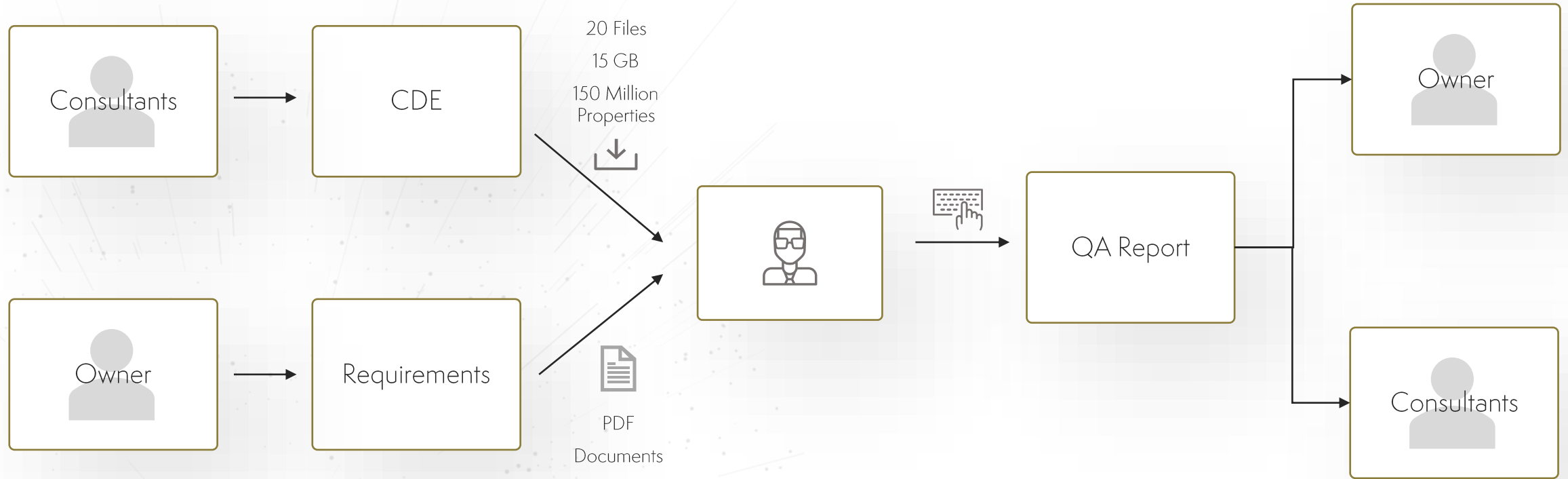
ADD

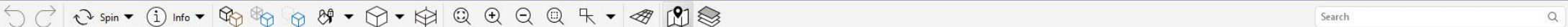
IMPORT

Search

A STORY







MODEL TREE

1148703-A03C08-8888-0000-AE1-200-03-001 (1)_det

CLASSIFICATION

SELECTION BASKET

No Selection Sets

No Selection

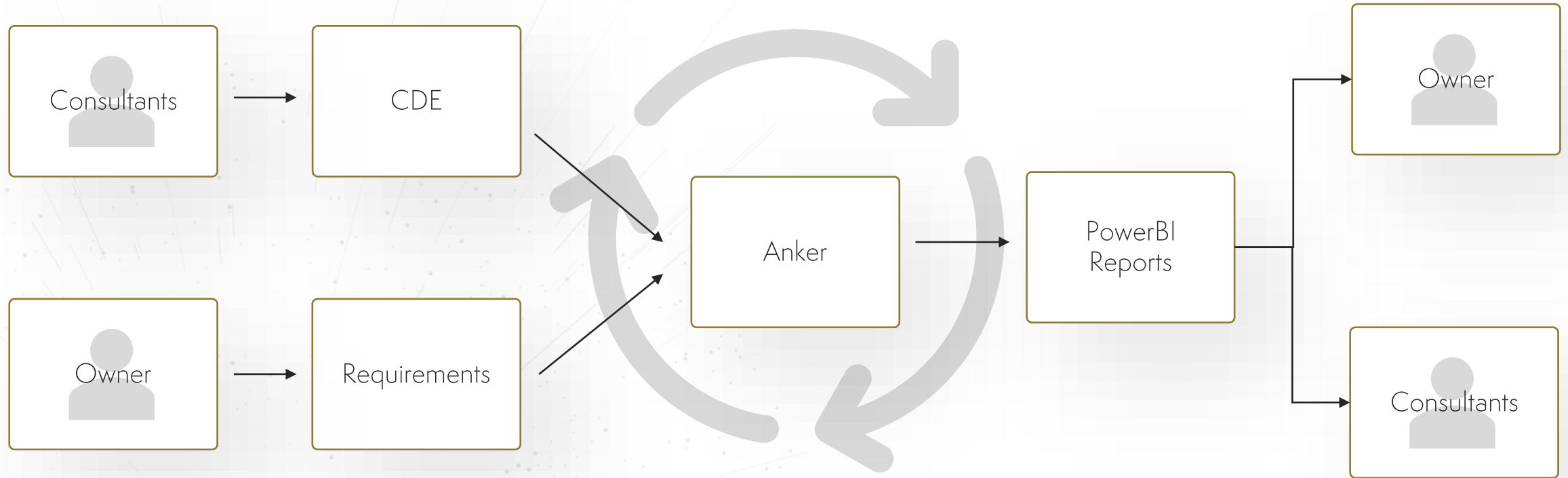
INFO

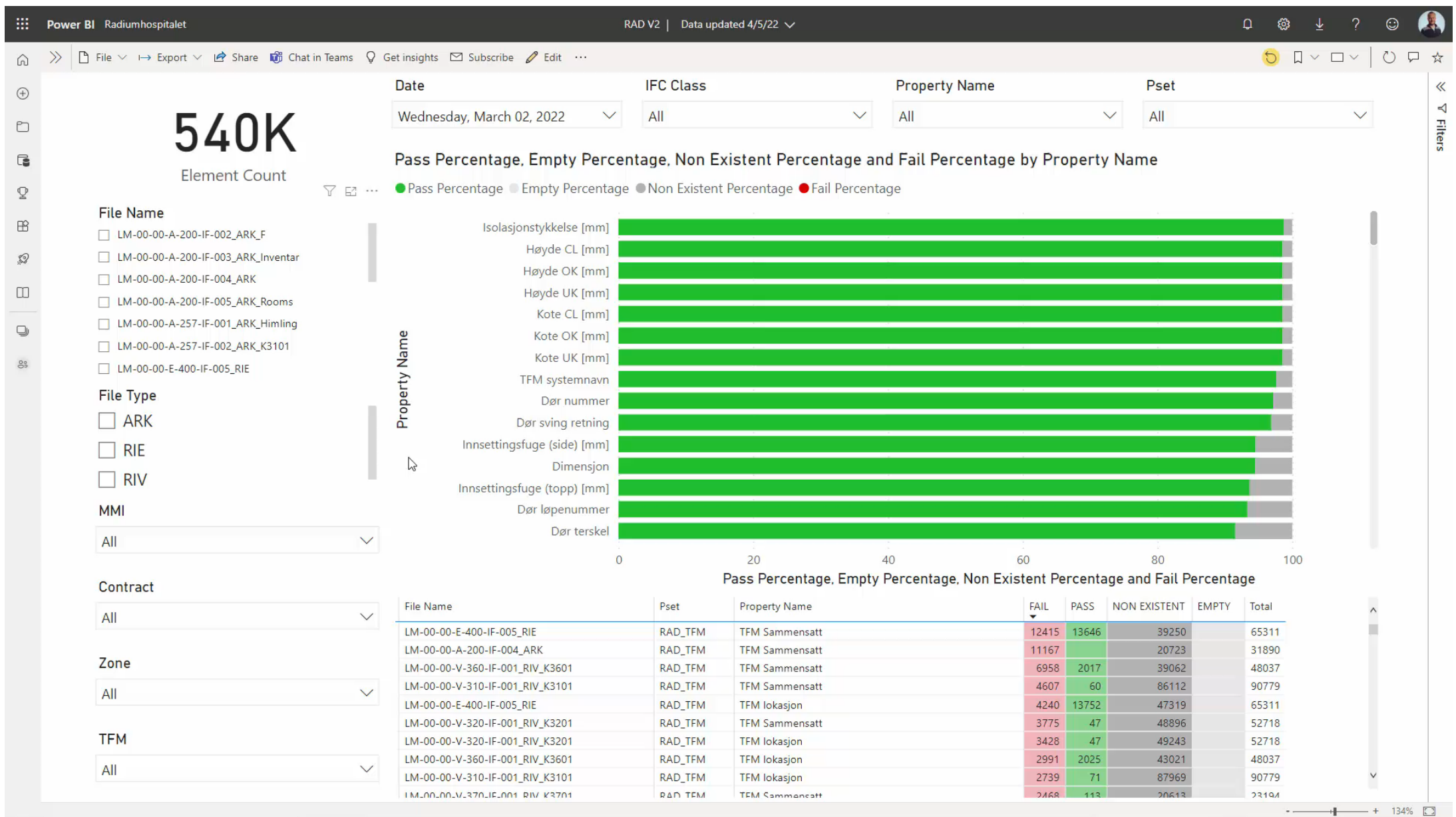
Electric Distribution Point.1.68

Relations	Classification	Hyperlinks
Identification	Location	Quantities
	Material	Profile
Pset_EnvironmentalImpactIndicators		
Pset_ElectricDistributionBoardTypeCommon		
NOSSB_Process		
NOSSB_ReaTriaers		
NONS_BuildingControls		
NONS_Reference		

Property	Value
RefCompClass	OUB
RefCompOccNo	0004
RefCompTypeNo1	002
RefCompTypeNo2	01
RefPriSysClass	5640
RefPriSysLoc	8888
RefPriSysNo1	904
RefPriSysNo2	0
RefSecSysOcc	4330.001
RefString	++8888=5640.904.0-OUB000...

INFORMATION TAKEOFF									
Takeoff All NONS_Reference									
Component	Type	NONS_Reference.RefCompClass	NONS_Reference.RefCompTypeNo1	NONS_Reference.RefCompTypeNo2	NONS_Reference.RefPriSysClass	NONS_Reference.RefPriSysLoc	NONS_Reference.RefPriSysNo1	NONS_Reference.RefPriSysNo2	NONS_Reference
Electric ...	1xData Outlet UDA		002	01	5200	8888	001	01	
Electric ...	1xOutlet (1-... UEA		002	01	4330	8888	001	06	
Electric ...	1xOutlet (1-... UEA		002	01	4330	8888	001	07	
Electric ...	1xOutlet (1-... UEA		003	01	4330	8888	001	08	
Electric ...	1xOutlet (1-... UEA		003	01	4330	8888	001	09	
Electric ...	1xOutlet (3-... UEA		004	01	4330	8888	001	010	
Electric ...	1xOutlet (3-... UEA		004	01	4330	8888	001	011	
Electric ...	1xOutlet (3-... UEA		005	01	4330	8888	001	012	
Electric ...	1xOutlet (3-... UEA		005	01	4330	8888	001	013	
Electric ...	2xData Outlet UDA		001	01	5200	8888	001	01	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	019	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	04	
Electric ...	2xOutlet (1-... UEA		001	01	4330	8888	001	05	
Electric ...	4xOutlet (1-... UEA		007	01	4330	8888	001	015	
Electric ...	4xOutlet Fl... UEA		006	01	4330	8888	001	014	
Electric ...	Access Con... OUG		001	01	4330	8888	001	02	
Electric ...	Connection... UXZ		001	01	8888				
Electric ...	Distribution... FSC		002	01	4330	8888	001	0	
Electric ...	Distribution... FSC		002	01	4330	8888	002	0	







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