

# Project pilot

The exemple of the swimming pool of Dijon



- First meeting with the owner, december 2017 :

The bim-coach explains the project BIMplement, and collect these informations

What is important :

This owner hat a lot of renovations projects in the town of Dijon

His strategical interest is the improvement of the small and medium sized enterprises who works for her.

He understands the definitiv evolution of the building industry in the BIM process

He wants integrate better the BIM process with this project, and be aware to the use of BIM for facility management.



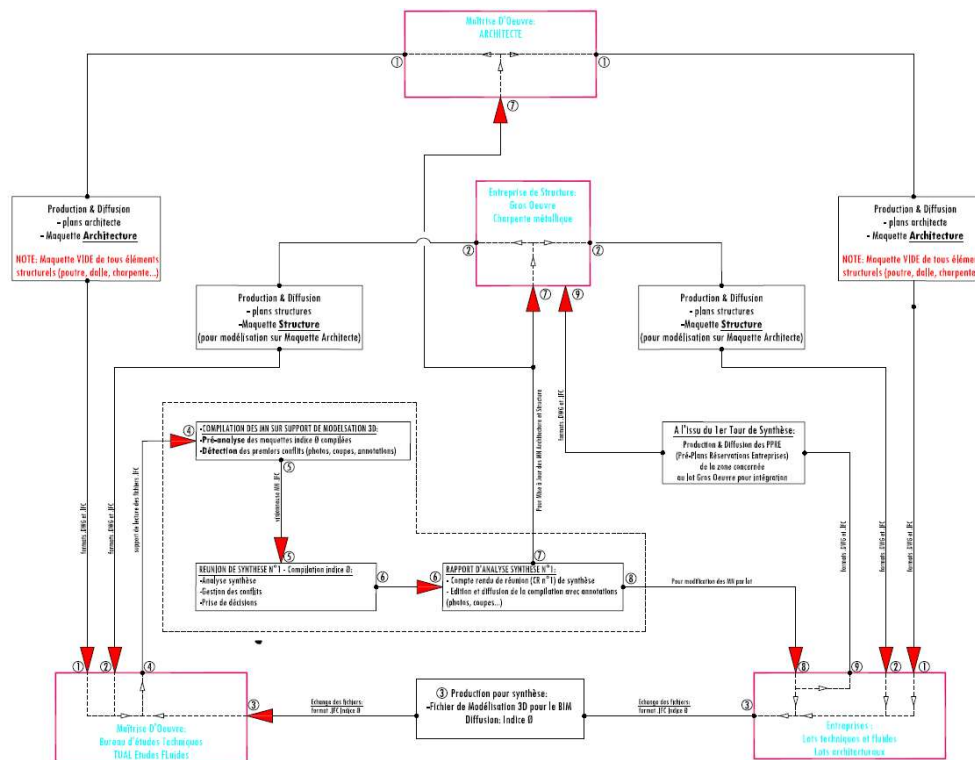
- The architect provide her to realize this swimming pool with the use of BIM models
- The team of architect and the engineer produce two bim models
  - An architectural model
  - An MEP model
- Some enterprise have to produce their own model (most of them don't create themselves these models but outsource this work)



- Second meeting with the project management with all the different enterprises on the site

January 2018 :

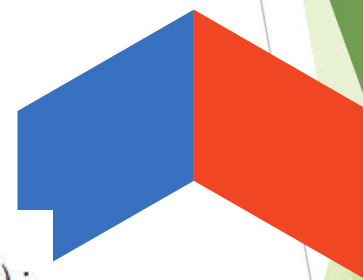
It was the first meeting for the presentation of the BIM methodology



First presentation by the BIMcoach of the project BIMplement to all the actors of the building constructions.

There is about twenty building companies but only some of them concern directly with the production of a BIM model

- lot N° 02 Terrassement VRD (Aller, Gaudry, Duc et Preneuf) :
- lot N° 03 Fondation, gros œuvre, charpente métallique (Curot, Brisar Dampierre) :
- lot N° 04 Couverture étanchéité (SMAC) :
- lot N° 07 Métallerie Serrurerie (Alkimia) :
- lot N° 09 Plafonds suspendus (Bonglet, SDP) :
- lot N° 10 Plafonds tendus (ACS production) :
- lot N° 13 Carrelage (Vinet, Del Toso) :
- lot N° 14 Bassins inox couverture thermique (BC Inoxeo) :
- lot N° 15 Bassins inox revêtu (Myrthapools) :
- lot N° 16 Pentagloss (Altrex) :
- lot N° 18 PB CH TA TE (Engie, Axima, Aquatech, Boeuf) :
- lot N° 19 Electricité courants forts et courants faibles (SA Relec) :
- lot N° 20 Ascenseur (Koné) :



- Third meeting with the owner, the project management and five enterprises who have to realize a BIM model

februar 2018 :

We discuss to implement the different training with four of the enterprises.

I explain the methodology.

We have a meeting in the beginning of the construction to define the first trainings

(we have later a meeting with the other enterprises)



Some example to understand what we have to explain for this sort of training :

### **3 - Use BIM in the workplace**

Target group : white and blue collar workers

Objective : Give the participants the practical know-how to understand and use, with a tablet, the BIM model for their works.

Duration : 0,5 day

Place : the workplace.

Content : (more details to come) :

What is BIM

The use of a viewer with a tablet

The use of a 4D planning

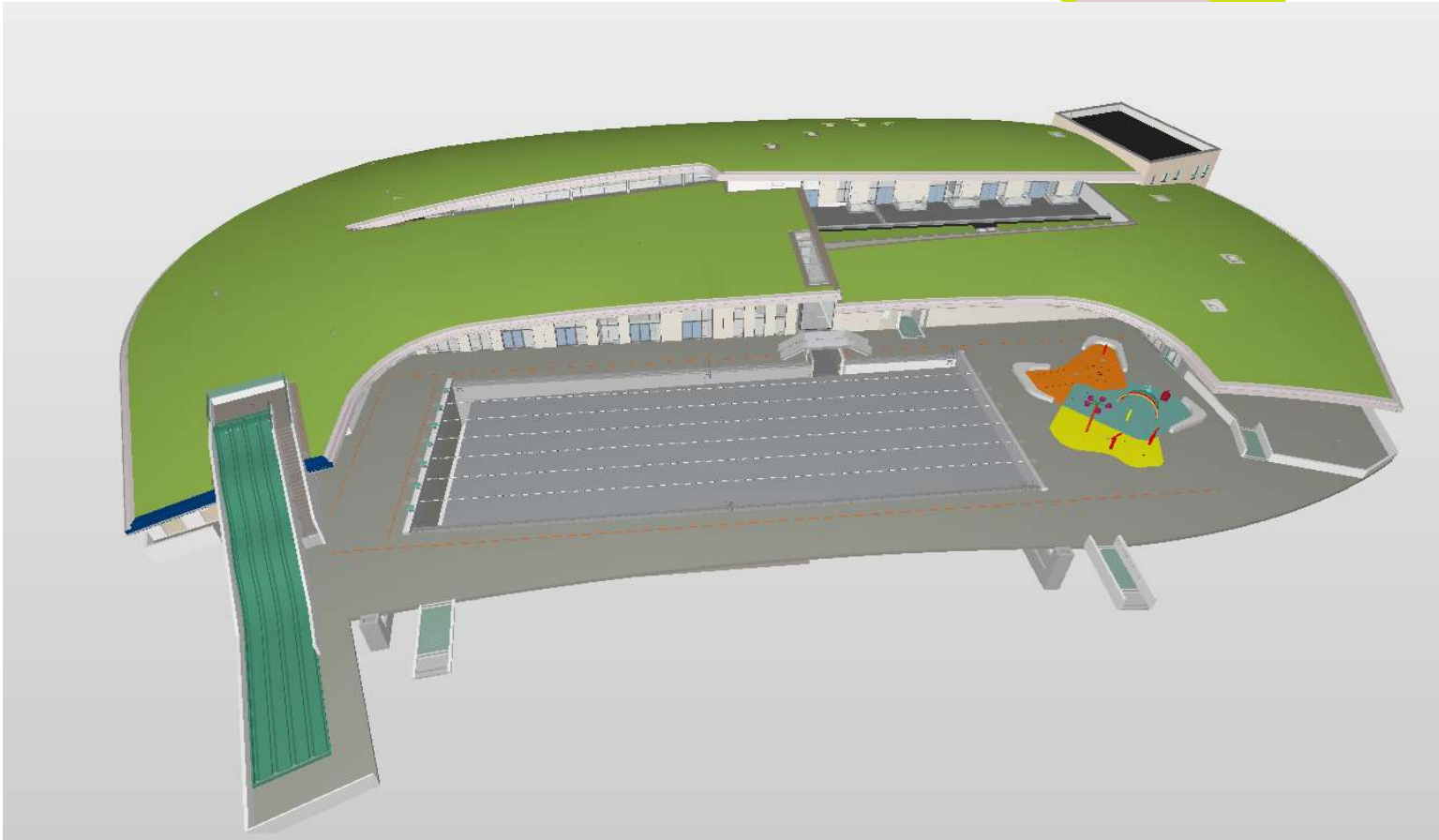


1. it is the use of the existant BIM Model to understand the project.
2. the possibility to use the BIM model to implement the different MEP circuit and the verification on the site
3. The planning of the building construction with the BIM Model
4. All the informations a blue-collar worker needs for his work :  
notes, documents ..
5. A proposition to communicate from blue-collar workers to white collar workers with the uses of the notes in a model.

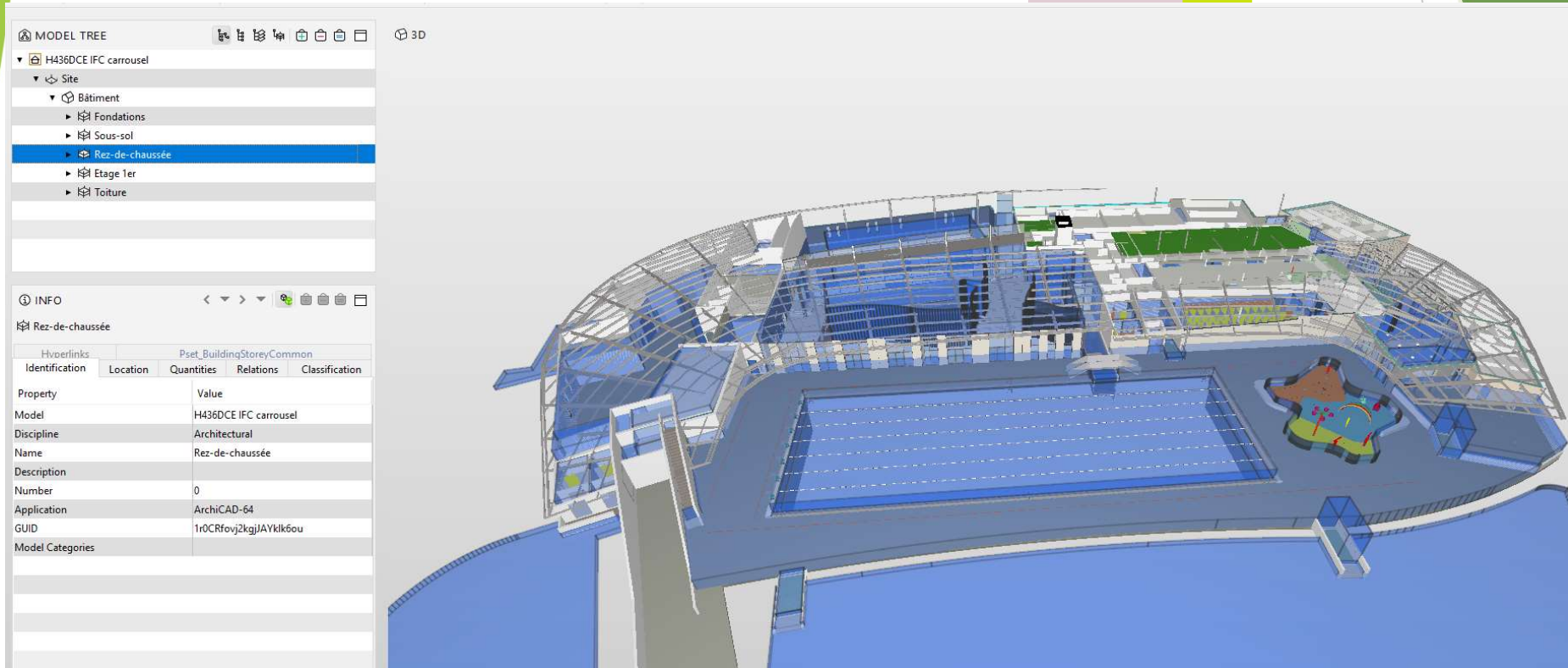




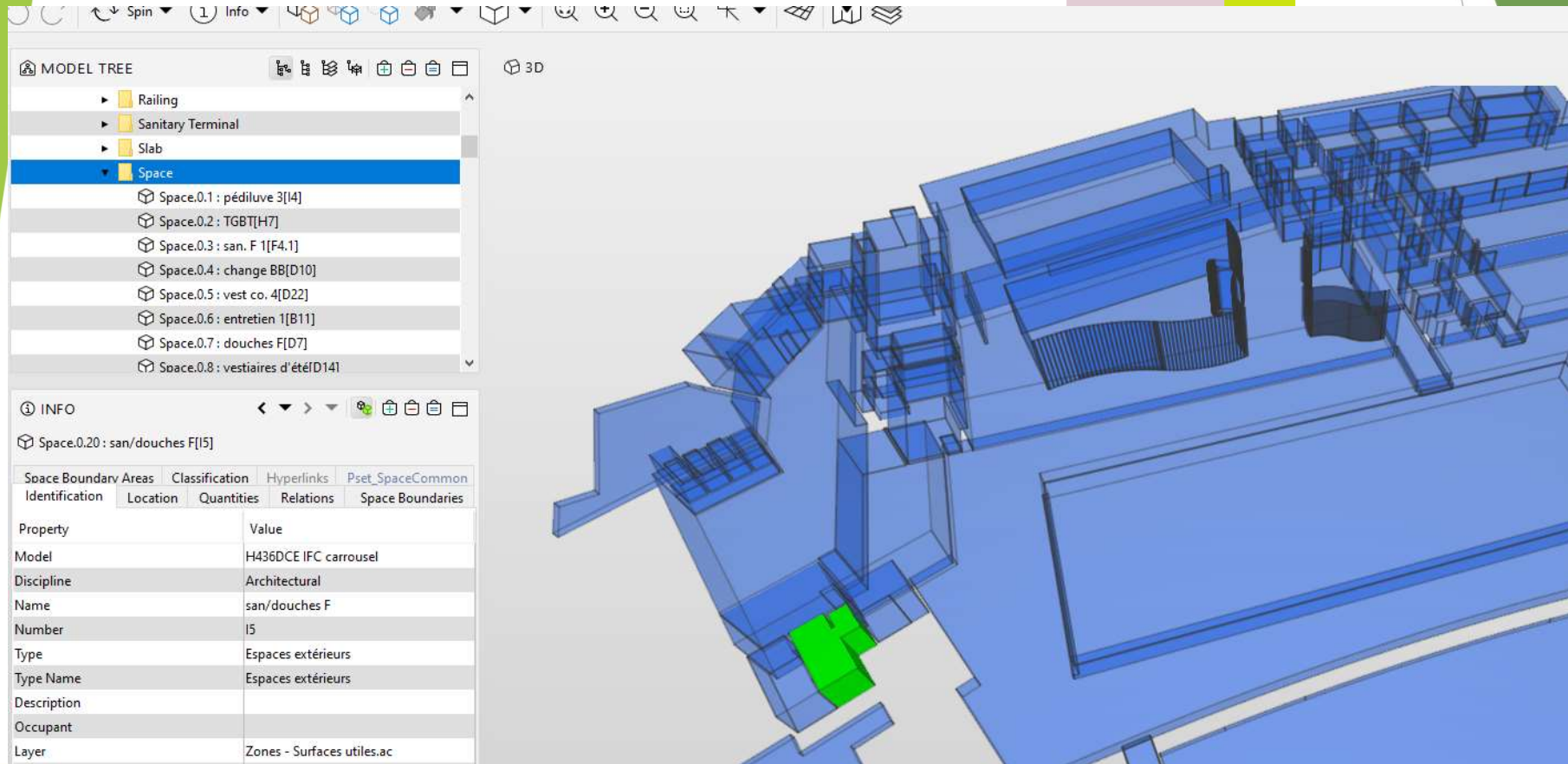
First part is the use of the existant BIM Model to understand the project.



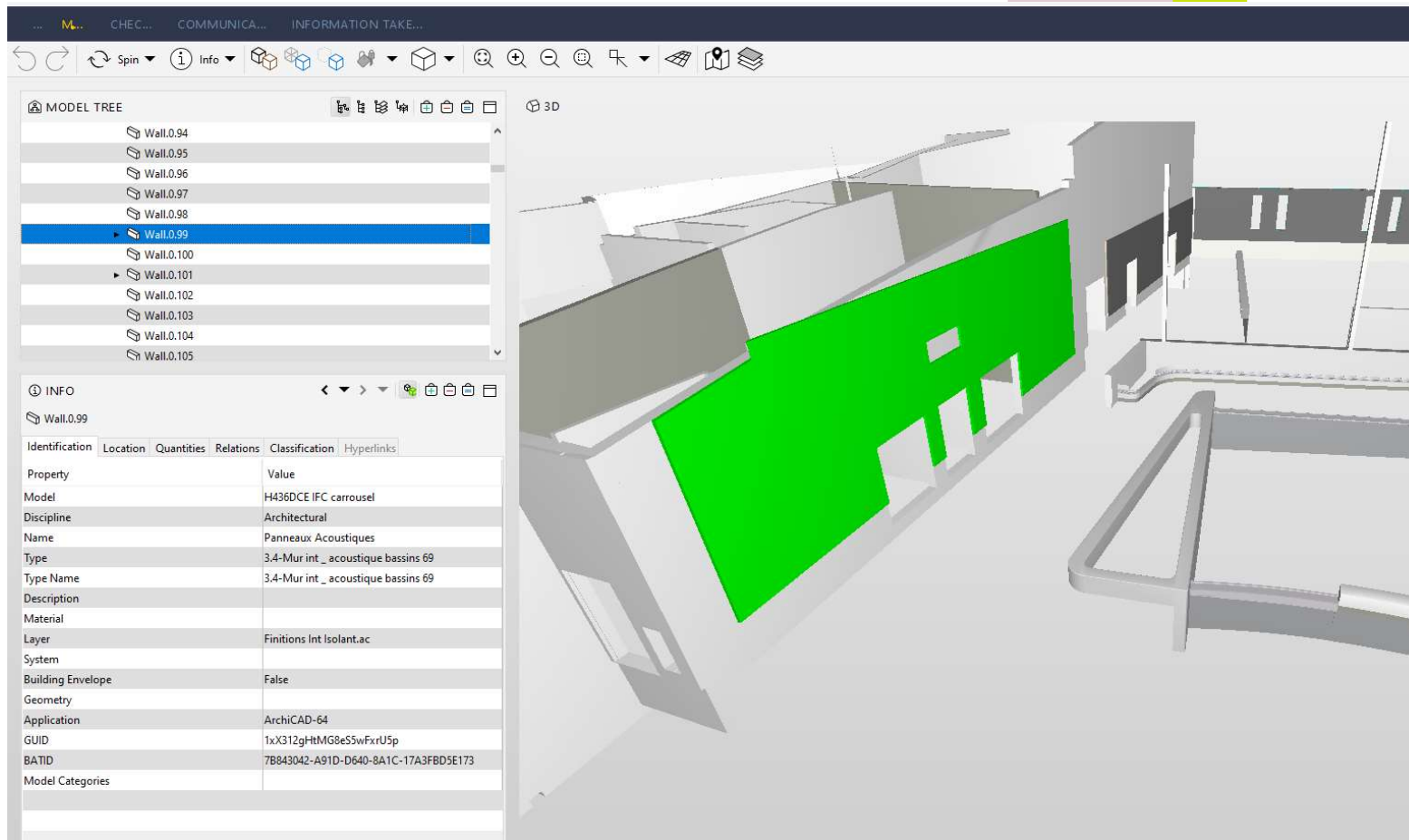
# 1. Understand each floor of the project



## 2. Understand where is a space in the project

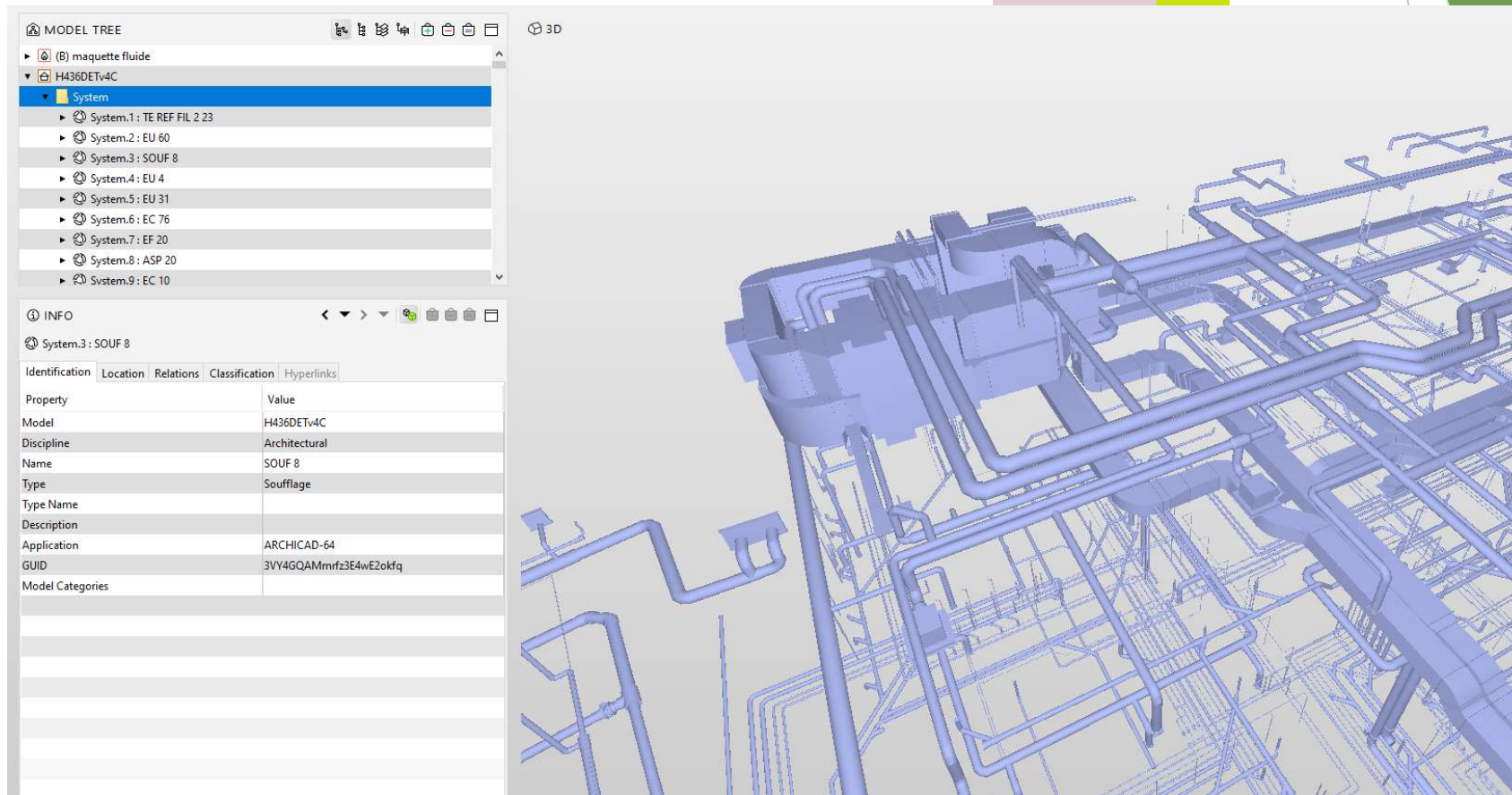


3. Understand which is the wall with an acoustic insulation .....

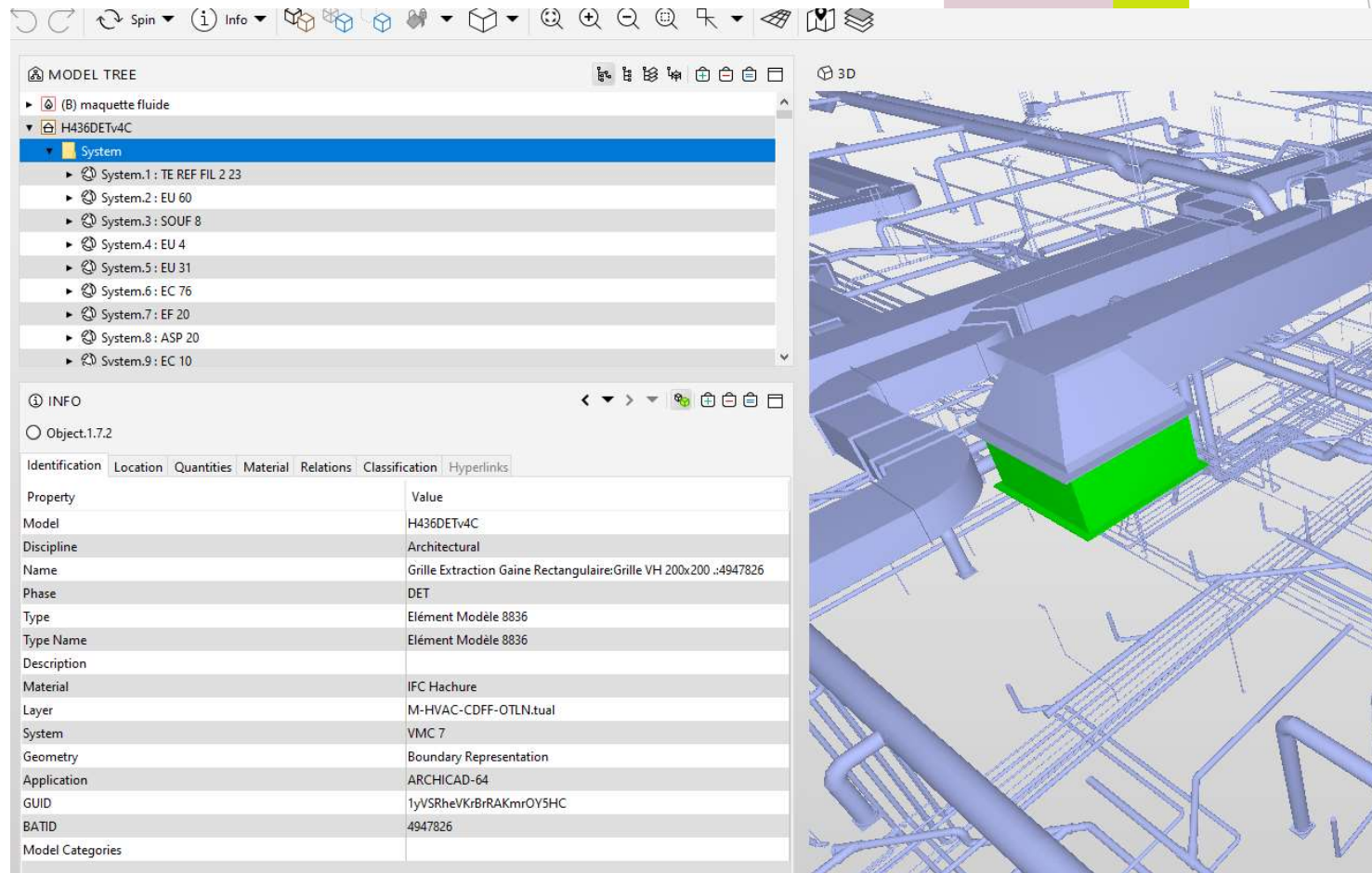




## 4. Understand the complete MEP model.....



## 5. Know to search information for an object.....



The screenshot displays a 3D architectural software interface. On the left, the 'MODEL TREE' panel shows a hierarchy of objects. The 'System' folder is expanded, listing various systems. The 'INFO' panel on the right provides detailed information for the selected object, 'Object.1.7.2'.

**MODEL TREE**

- (B) maquette fluide
  - H436DETV4C
    - System
      - System.1: TE REF FIL 2 23
      - System.2: EU 60
      - System.3: SOUF 8
      - System.4: EU 4
      - System.5: EU 31
      - System.6: EC 76
      - System.7: EF 20
      - System.8: ASP 20
      - System.9: EC 10

**INFO**

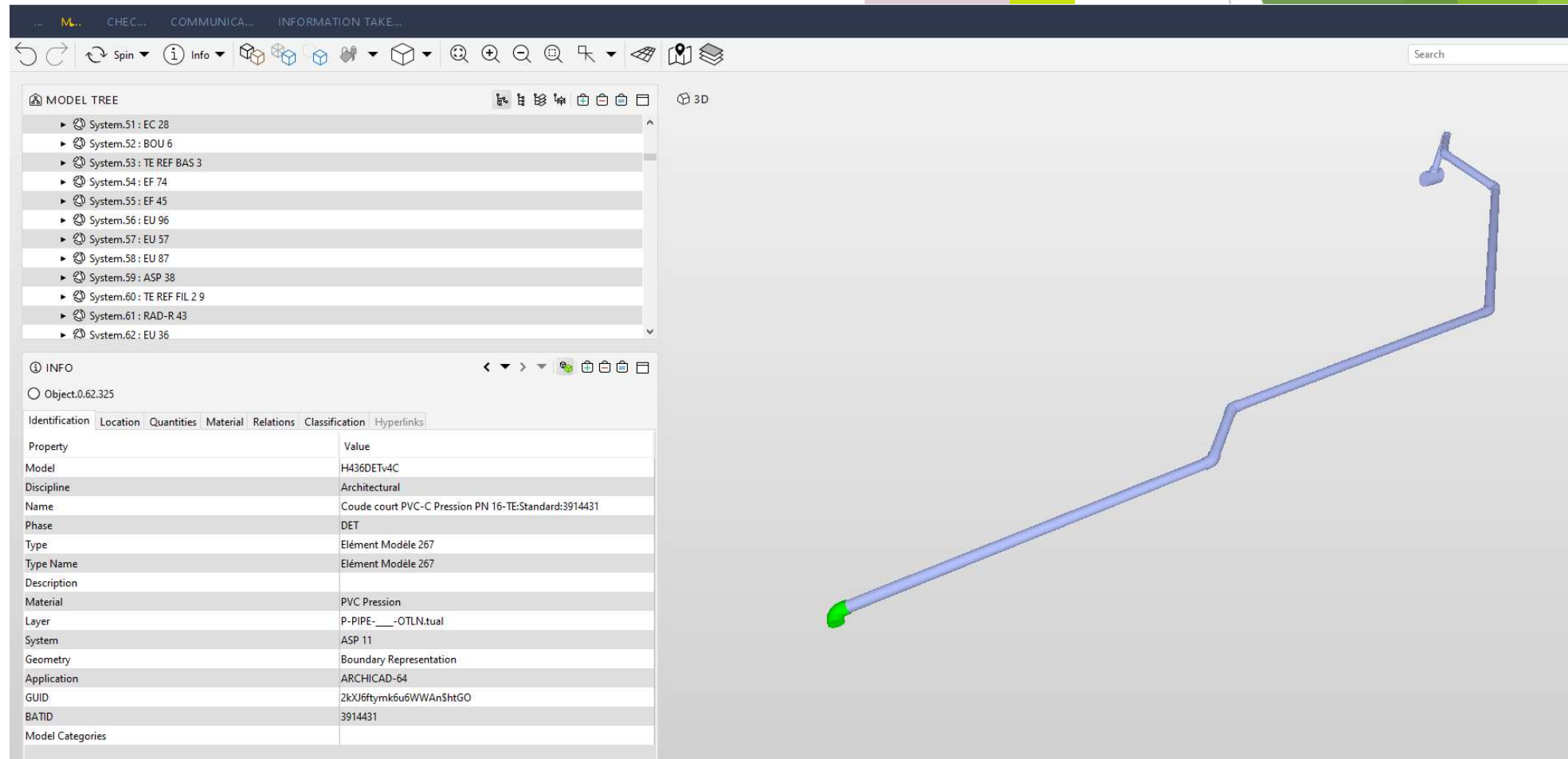
Object.1.7.2

Property	Value
Model	H436DETV4C
Discipline	Architectural
Name	Grille Extraction Gaine Rectangulaire:Grille VH 200x200 .4947826
Phase	DET
Type	Elément Modèle 8836
Type Name	Elément Modèle 8836
Description	
Material	IFC Hachure
Layer	M-HVAC-CDFF-OTLN.tual
System	VMC 7
Geometry	Boundary Representation
Application	ARCHICAD-64
GUID	1yVSRheVKrBrRAKmrOY5HC
BATID	4947826
Model Categories	

The 3D view on the right shows a complex network of pipes and ducts. A specific rectangular duct is highlighted in green, corresponding to the object selected in the model tree.



## 6. Understand a part of a MEP circuit .....Prefabrication ?



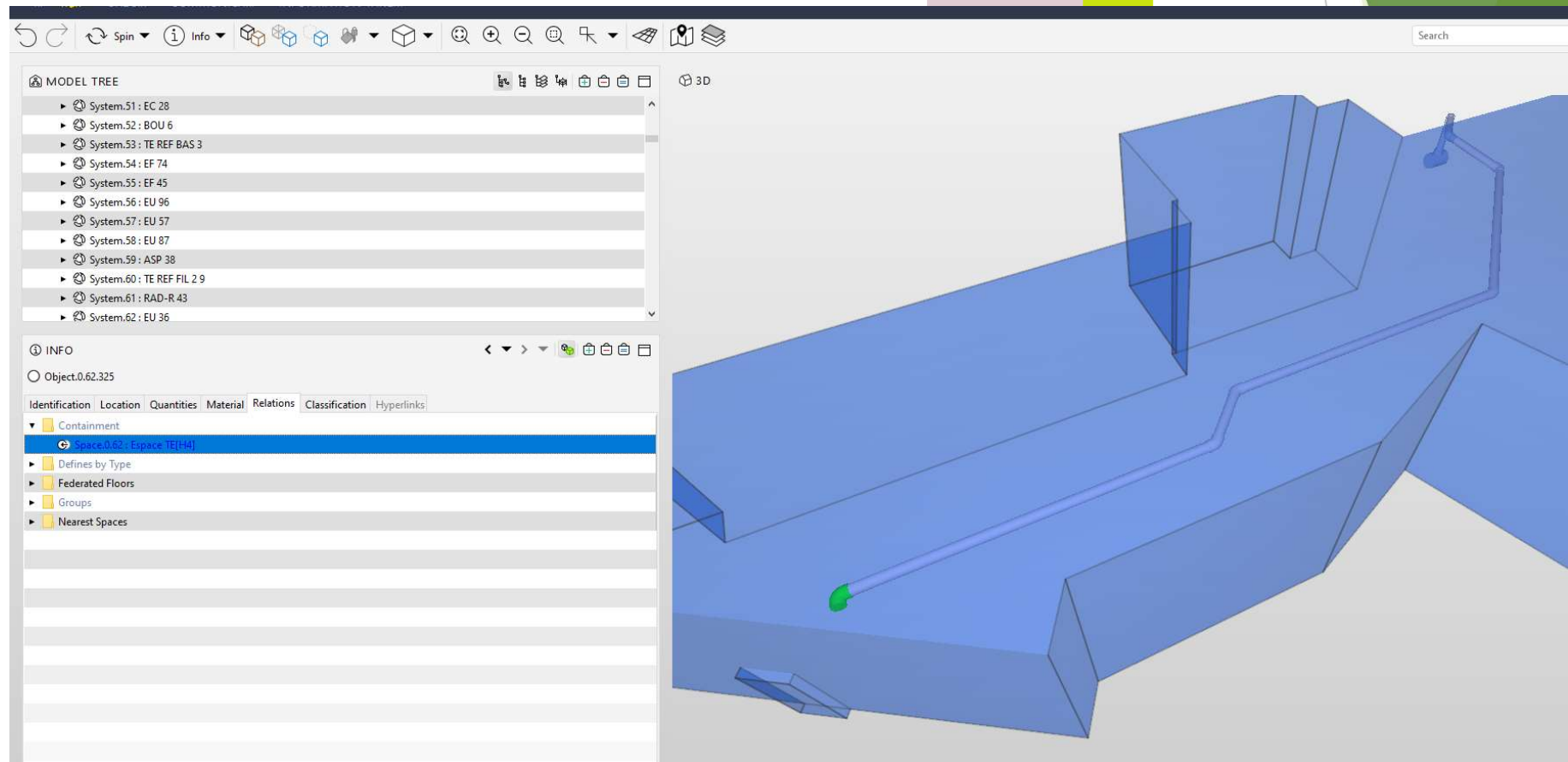
The screenshot displays a software interface for MEP circuit design. The top menu bar includes options like 'M...', 'CHEC...', 'COMMUNICA...', and 'INFORMATION TAKE...'. Below the menu is a toolbar with various icons for navigation and editing. The main workspace is divided into three sections:

- MODEL TREE:** A list of systems including System.51 (EC 28), System.52 (BOU 6), System.53 (TE REF BAS 3), System.54 (EF 74), System.55 (EF 45), System.56 (EU 96), System.57 (EU 57), System.58 (EU 87), System.59 (ASP 38), System.60 (TE REF FIL 2 9), System.61 (RAD-R 43), and System.62 (EU 36).
- INFO:** A detailed information panel for the selected object (Object.0.62.325). It includes tabs for Identification, Location, Quantities, Material, Relations, Classification, and Hyperlinks. The 'Identification' tab is active, showing the following data:
- 3D View:** A 3D rendering of a blue pipe segment with a green cap, showing its orientation and connection points.

Property	Value
Model	H436DETV4C
Discipline	Architectural
Name	Coude court PVC-C Pression PN 16-TE:Standard:3914431
Phase	DET
Type	Elément Modèle 267
Type Name	Elément Modèle 267
Description	
Material	PVC Pression
Layer	P-PIPE-___OTLN.tual
System	ASP 11
Geometry	Boundary Representation
Application	ARCHICAD-64
GUID	2kXJ6ftymk6u6WWAn\$htGO
BATID	3914431
Model Categories	

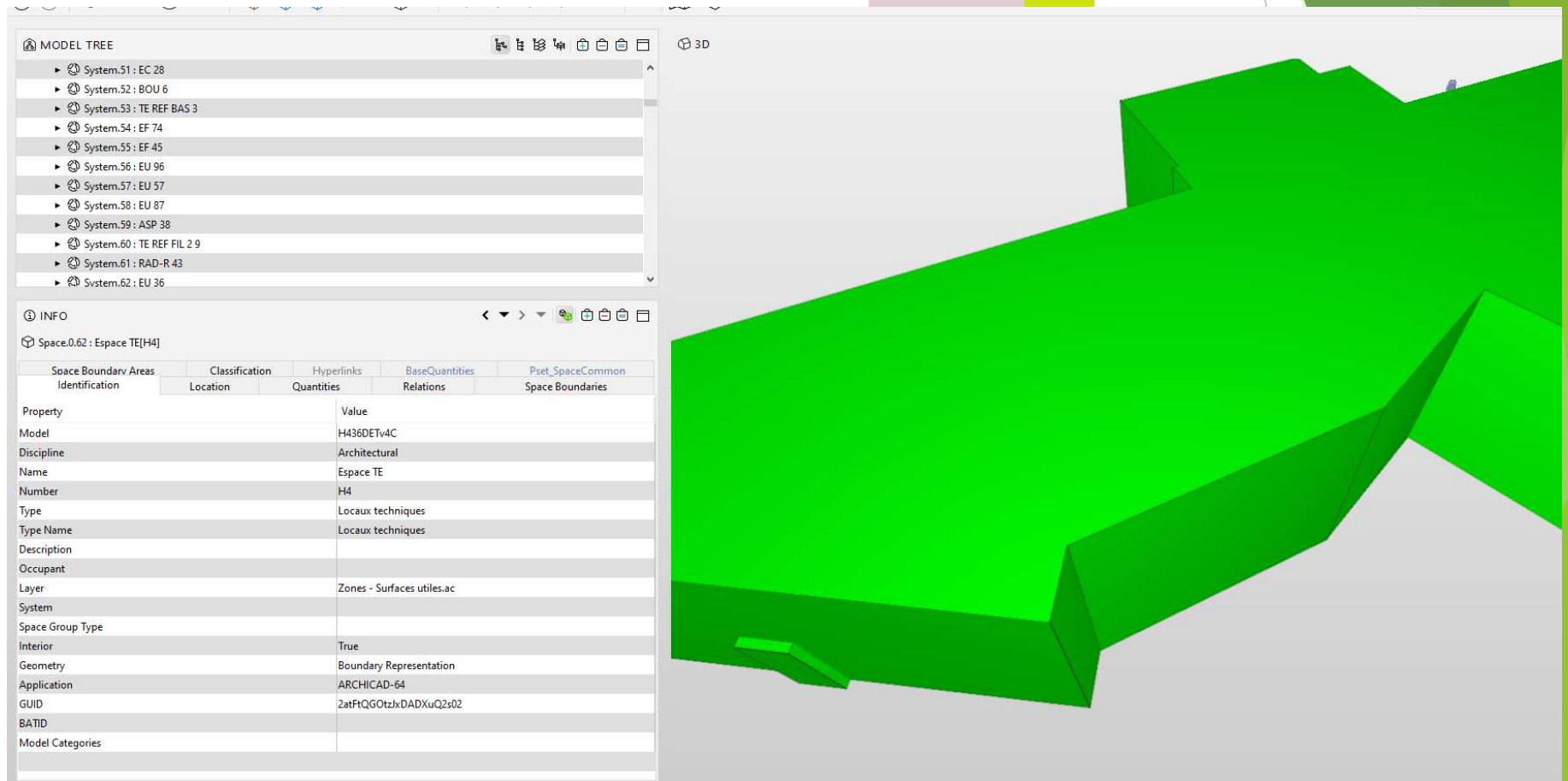


## 7. Understand a part of a MEP circuit In which space ?





## 8. Understand a part of a MEP circuit In which space ?



The screenshot displays a BIM software interface with a 3D model of a building on the right and a detailed property table on the left. The table provides information about a specific space, including its classification, location, and various properties.

**MODEL TREE**

- System.51 : EC 28
- System.52 : BOU 6
- System.53 : TE REF BAS 3
- System.54 : EF 74
- System.55 : EF 45
- System.56 : EU 96
- System.57 : EU 57
- System.58 : EU 87
- System.59 : ASP 38
- System.60 : TE REF FIL 2 9
- System.61 : RAD-R 43
- System.62 : EU 36

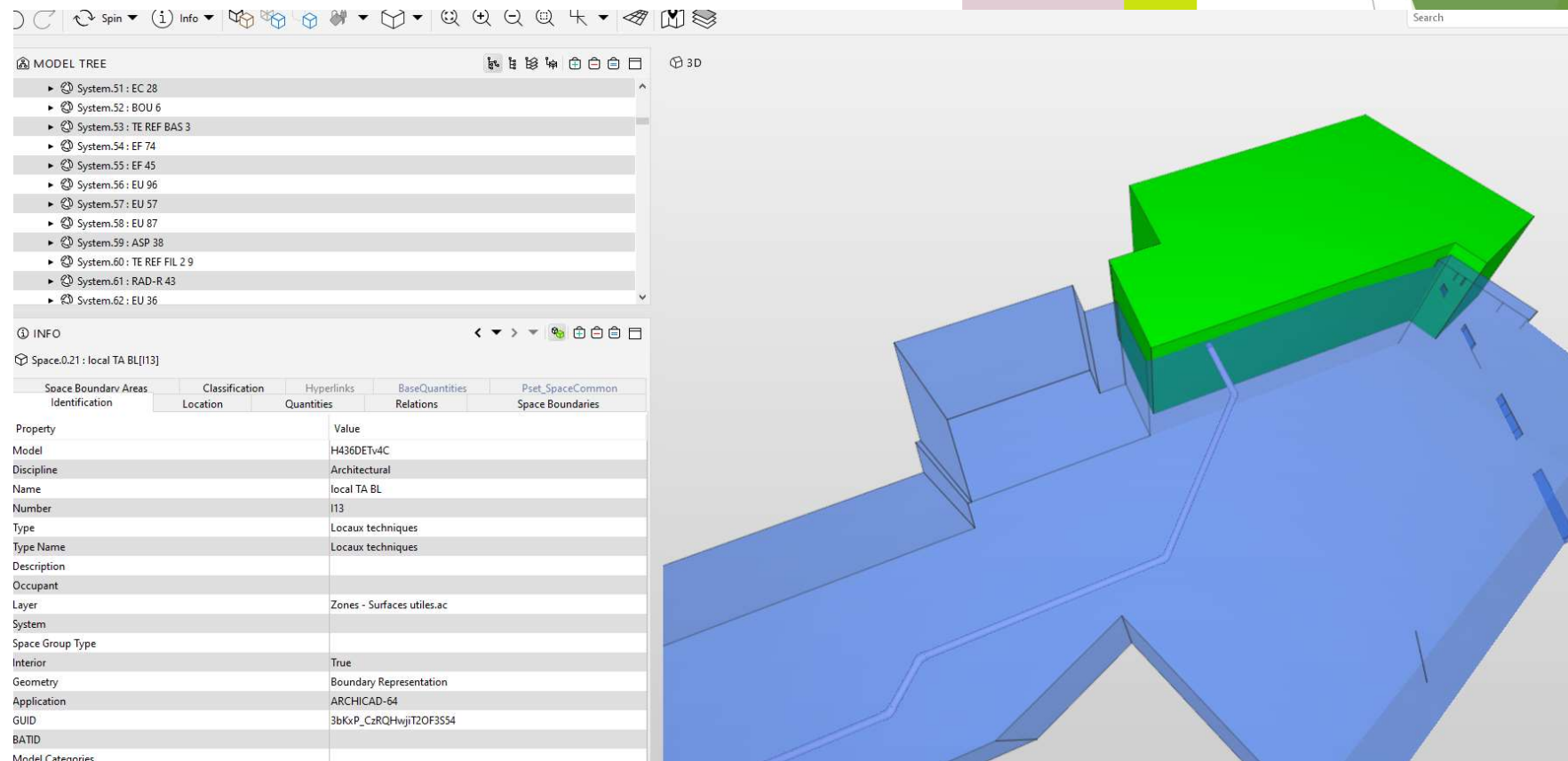
**INFO**

Space.0.62 : Espace TE[H4]

Space Boundary Areas Identification	Classification Location	Hyperlinks Quantities	BaseQuantities Relations	Pset_SpaceCommon Space Boundaries
Property				Value
Model				H436DETV4C
Discipline				Architectural
Name				Espace TE
Number				H4
Type				Locaux techniques
Type Name				Locaux techniques
Description				
Occupant				
Layer				Zones - Surfaces utiles.ac
System				
Space Group Type				
Interior				True
Geometry				Boundary Representation
Application				ARCHICAD-64
GUID				2atFtQG0tzJx DADXuQ2s02
BATID				
Model Categories				



## 9. Understand a part of a MEP circuit To an other space ?

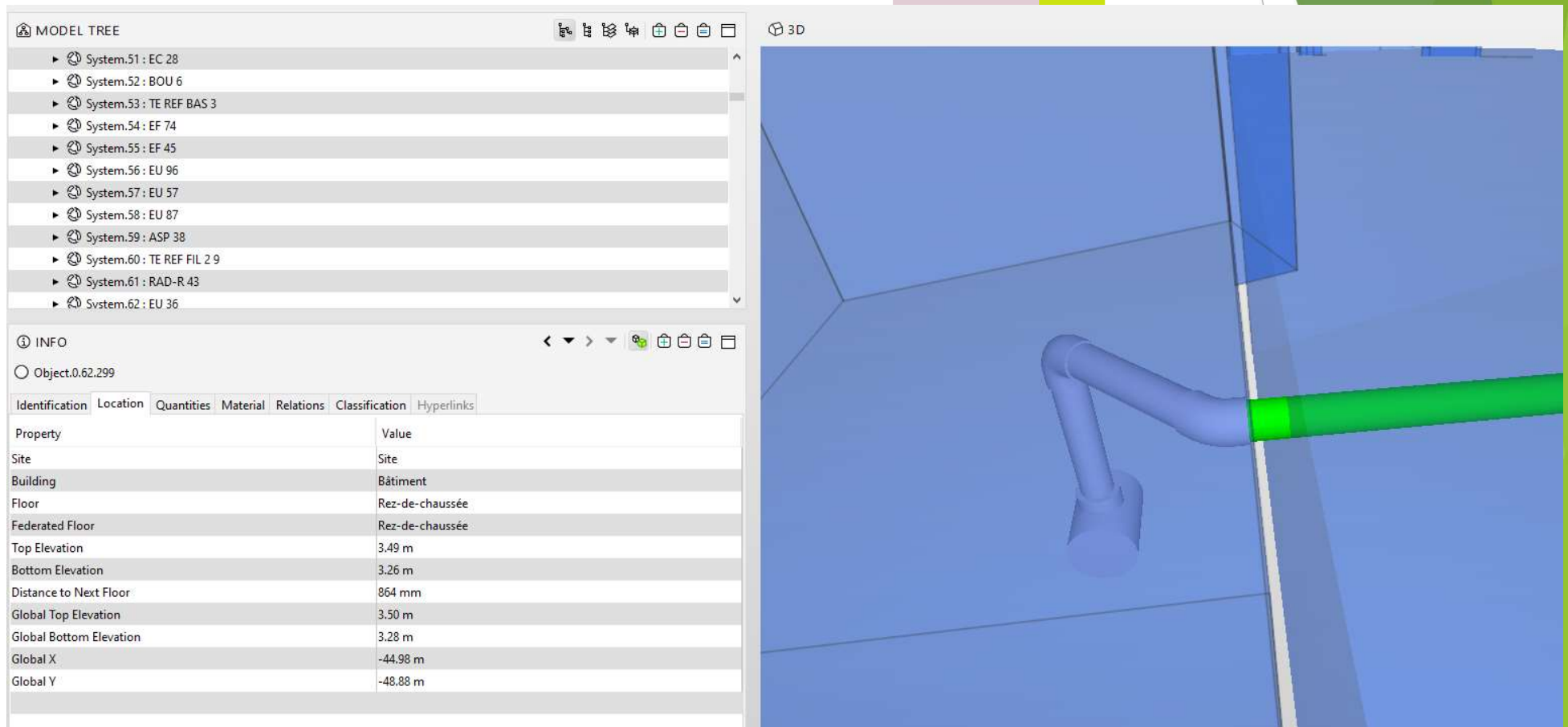


The screenshot displays a 3D architectural software interface. On the left, the 'MODEL TREE' lists various systems, including 'System.51 : EC 28', 'System.52 : BOU 6', 'System.53 : TE REF BAS 3', 'System.54 : EF 74', 'System.55 : EF 45', 'System.56 : EU 96', 'System.57 : EU 57', 'System.58 : EU 87', 'System.59 : ASP 38', 'System.60 : TE REF FIL 2 9', 'System.61 : RAD-R 43', and 'System.62 : EU 36'. Below the model tree is the 'INFO' panel for 'Space.0.21 : local TA BL[113]'. The 'INFO' panel contains a table with columns for 'Space Boundary Areas Identification', 'Classification', 'Hyperlinks', 'BaseQuantities', and 'Pset\_SpaceCommon'. The table lists various properties and their values.

Space Boundary Areas Identification	Classification	Hyperlinks	BaseQuantities	Pset_SpaceCommon
Location	Quantities	Relations	Space Boundaries	
Property	Value			
Model	H436DETV4C			
Discipline	Architectural			
Name	local TA BL			
Number	113			
Type	Locaux techniques			
Type Name	Locaux techniques			
Description				
Occupant				
Layer	Zones - Surfaces utiles.ac			
System				
Space Group Type				
Interior	True			
Geometry	Boundary Representation			
Application	ARCHICAD-64			
GUID	3bKxP_CzRQHwjT2OF3S54			
BATID				
Model Categories				



## 10. Understand a part of a MEP circuit Cross which wall ?



The screenshot displays a BIM software interface with a 3D model of a pipe and a list of systems. The 3D model shows a blue pipe with a green section, representing a cross-section of a wall. The list of systems is as follows:

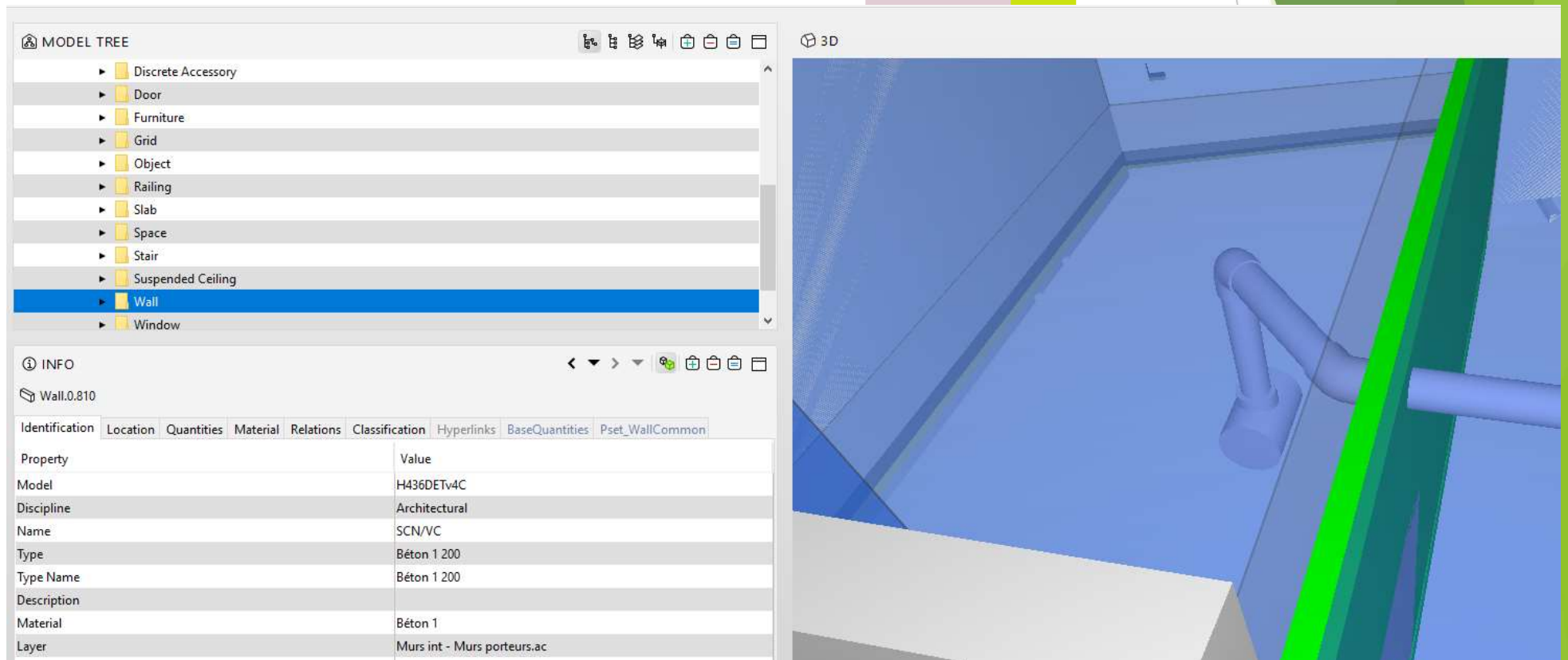
- System.51 : EC 28
- System.52 : BOU 6
- System.53 : TE REF BAS 3
- System.54 : EF 74
- System.55 : EF 45
- System.56 : EU 96
- System.57 : EU 57
- System.58 : EU 87
- System.59 : ASP 38
- System.60 : TE REF FIL 2 9
- System.61 : RAD-R 43
- System.62 : EU 36

The interface also includes an 'INFO' panel with the following data:

Property	Value
Site	Site
Building	Bâtiment
Floor	Rez-de-chaussée
Federated Floor	Rez-de-chaussée
Top Elevation	3.49 m
Bottom Elevation	3.26 m
Distance to Next Floor	964 mm
Global Top Elevation	3.50 m
Global Bottom Elevation	3.28 m
Global X	-44.98 m
Global Y	-48.88 m



## 11. Understand a part of a MEP circuit Cross which wall ?



The screenshot displays a BIM software interface. On the left, the 'MODEL TREE' panel lists various building elements, with 'Wall' selected. Below it, the 'INFO' panel shows the properties of the selected wall, 'Wall.0.810'. The right side of the interface shows a 3D view of the wall and an MEP circuit, with a green line indicating the path of the circuit through the wall.

**MODEL TREE**

- Discrete Accessory
- Door
- Furniture
- Grid
- Object
- Railing
- Slab
- Space
- Stair
- Suspended Ceiling
- Wall**
- Window

**INFO**

Wall.0.810

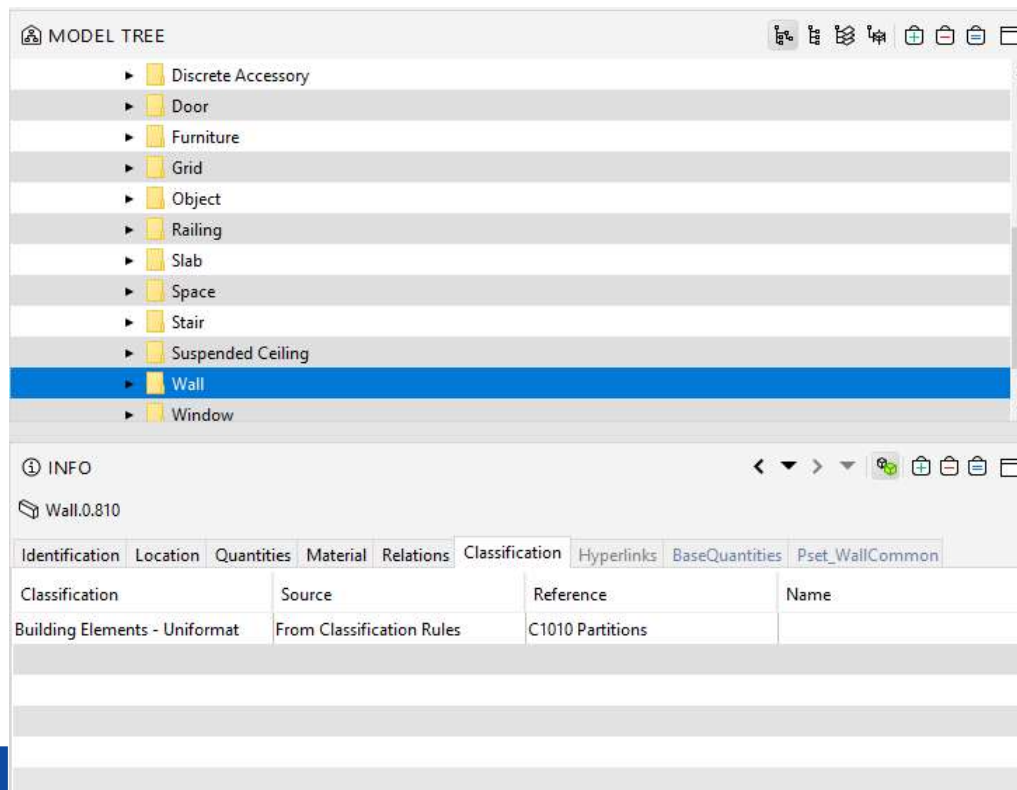
Property	Value
Model	H436DETV4C
Discipline	Architectural
Name	SCN/VC
Type	Béton 1 200
Type Name	Béton 1 200
Description	
Material	Béton 1
Layer	Murs int - Murs porteurs.ac

**3D**



## 12. Understand a part of a MEP circuit

What is the classification of this wall and what are the consequences ?



The screenshot shows the 'MODEL TREE' on the left, with 'Wall' selected. Below it, the 'INFO' panel for 'Wall.0.810' is displayed, showing various tabs and a table of classification data.

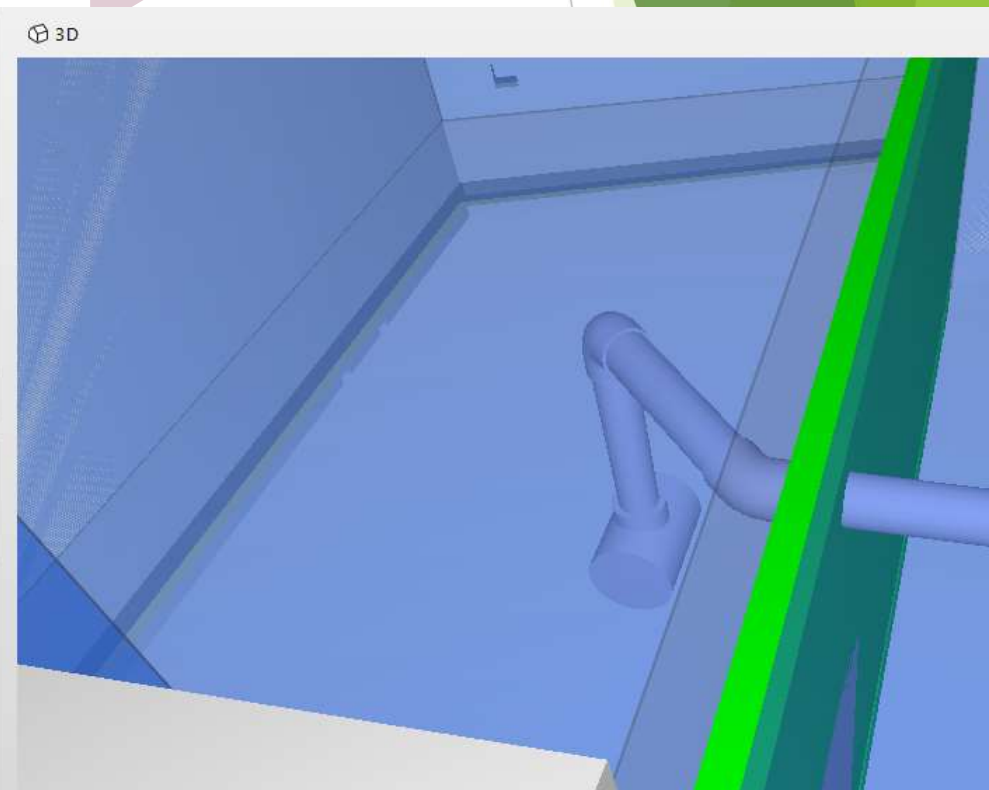
**MODEL TREE**

- Discrete Accessory
- Door
- Furniture
- Grid
- Object
- Railing
- Slab
- Space
- Stair
- Suspended Ceiling
- Wall**
- Window

**INFO**

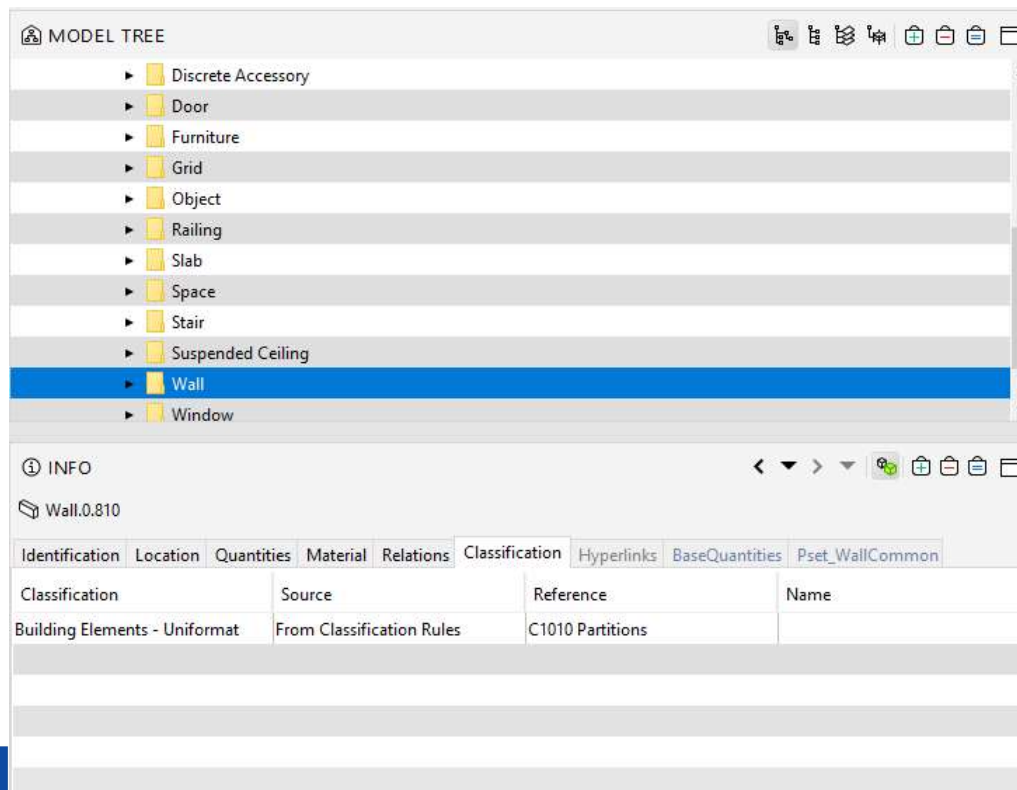
Wall.0.810

Identification	Location	Quantities	Material	Relations	Classification	Hyperlinks	BaseQuantities	Pset_WallCommon
Classification	Source	Reference	Name					
Building Elements - Unifomat	From Classification Rules	C1010 Partitions						



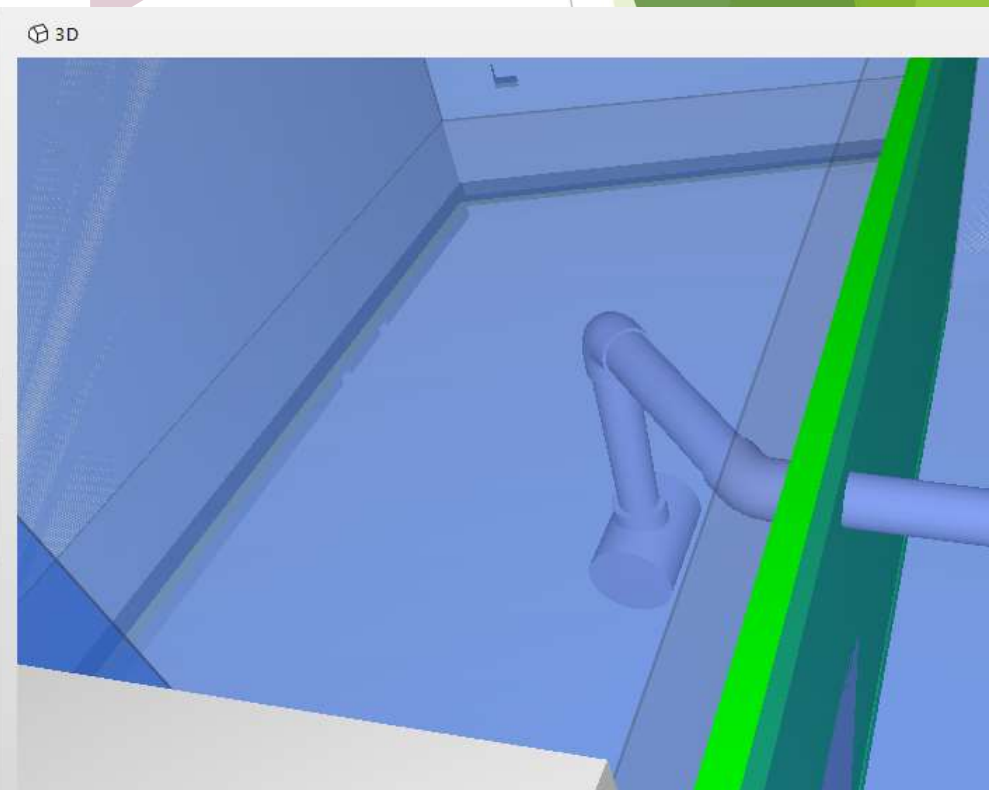
### 13. Understand a part of a MEP circuit

What is the classification of this wall and what are the consequences ?



The screenshot shows the 'MODEL TREE' on the left, with 'Wall' selected. Below it, the 'INFO' panel displays the 'Classification' tab for 'Wall.0.810'. The classification details are as follows:

Classification	Source	Reference	Name
Building Elements - Unifomat	From Classification Rules	C1010 Partitions	





Part two : the possibility to use the BIM model to implement the different MEP circuits



Part two : the possibility to use the BIM model to implement the different MEP circuits



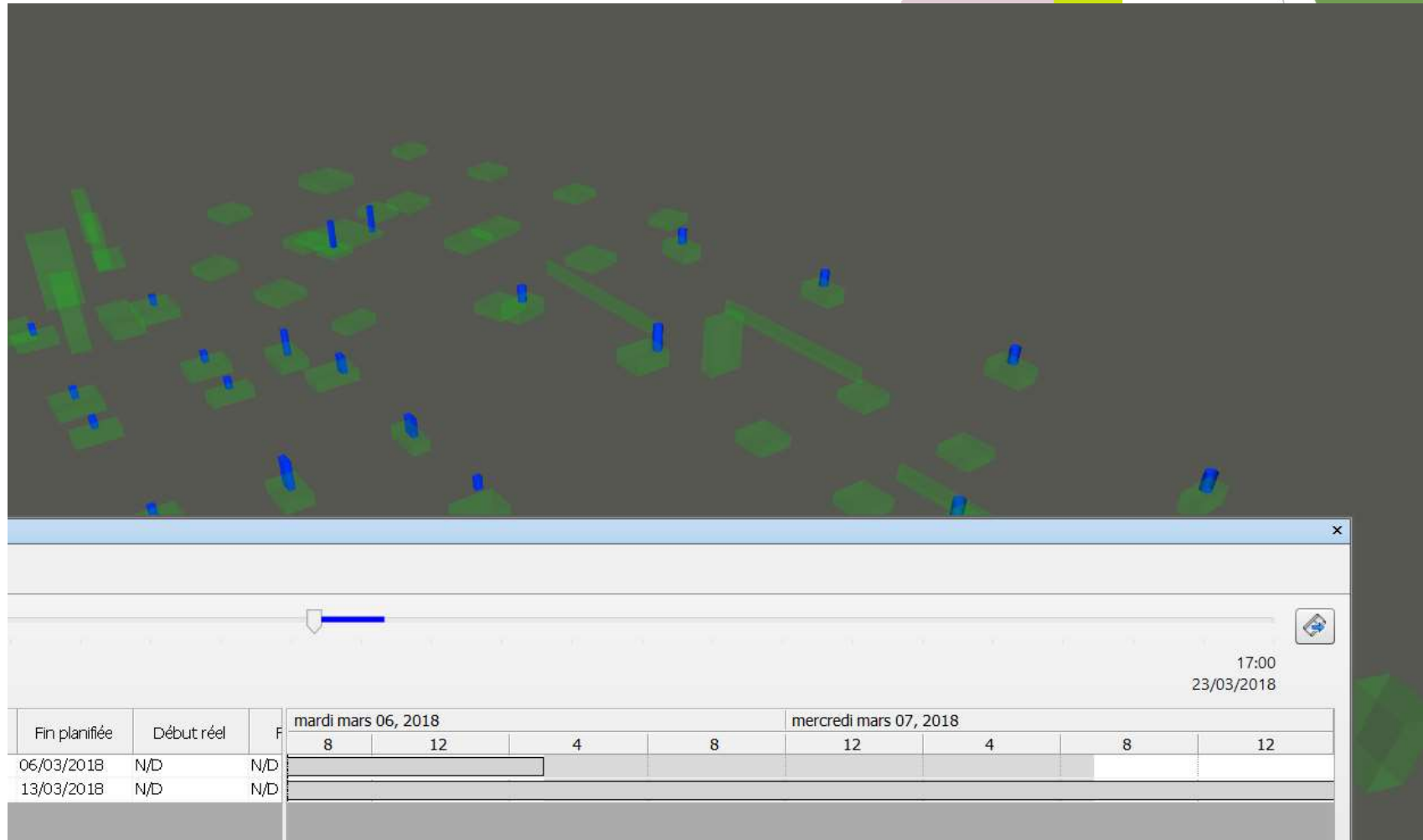


Part two : the possibility to use the BIM model to implement the different MEP circuits and verify also ....





## Part three : The planning of the building construction with the BIM Model



## Part three : The planning of the building construction with the BIM Model

