BIM Checking with IDS

Clive Pasi Paul Akos

plannerly + SOLIBRI
A NEMETSCHEK COMPANY

30-Minute Webinar

Learn about the Information Delivery Specification (IDS)

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My Project Name

Docs

Scope

Verify

File Manager

Clive Jordan

3D Coordination | Cost Estimation | Asset Information Model

Model Responsibility Matrix

- Architectural
- Structural
- Mechanical
  - HVAC Supply & Return Air Duct — LOD 300 MEC | LOD 300 MEC
  - HVAC Exhaust Air Duct — LOD 300 MEC | LOD 300 MEC
  - HVAC Supply Air Supports — LOD 300 MEC
  - HVAC Equipment — LOD 300 MEC | LOD 400 MEC
    - Component.BarCode — Any value
    - Component.WarrantyStartDate — Any date
    - System.Category — Value is one of (comma separated values)
  - HVAC Supply Air Terminals — MEC
  - Fire Dampers — MEC
- Electrical
- Plumbing
- Telecommunications

1. CREATE IDS (Plannerly)

System.Category

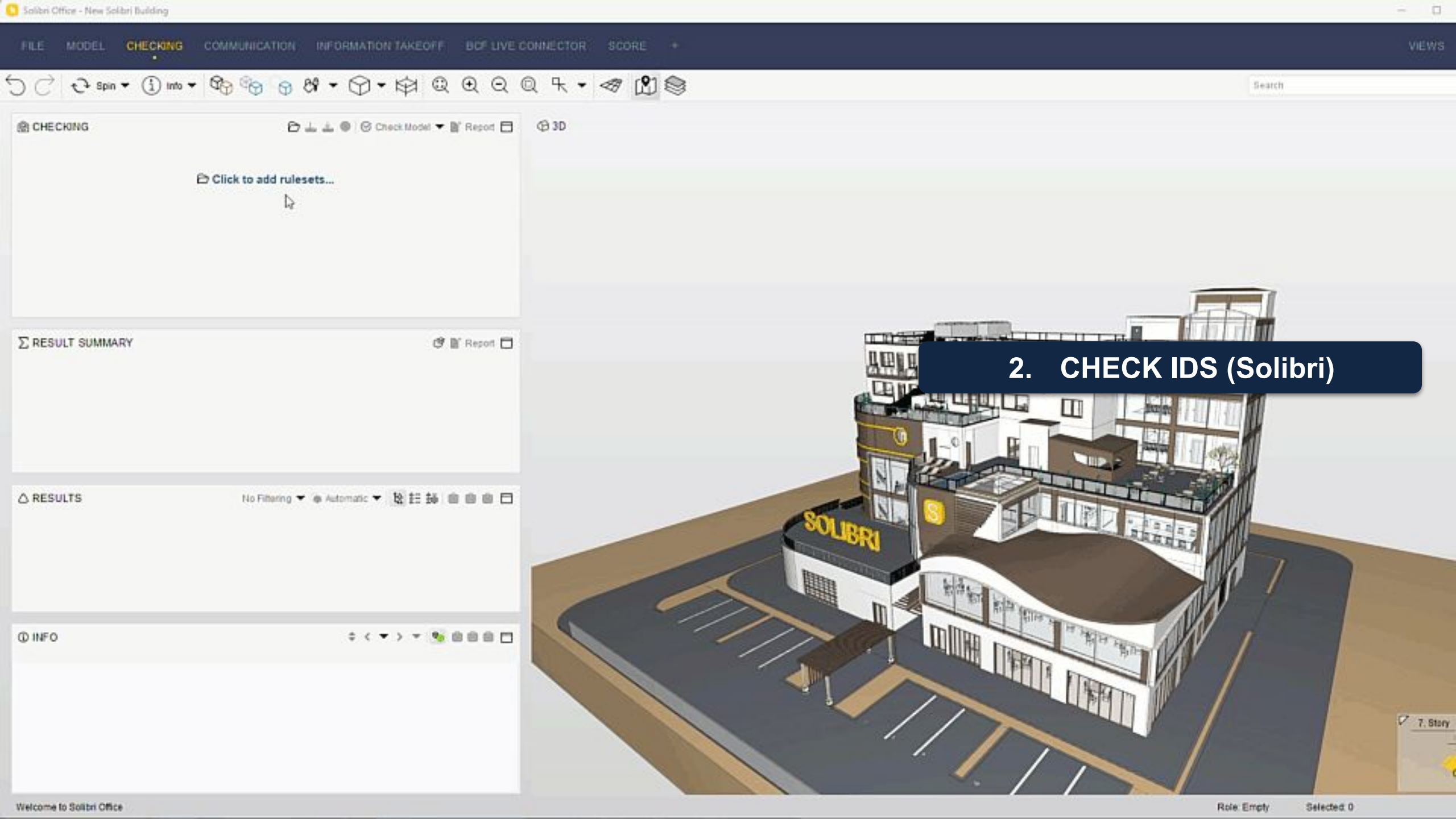
Description The category of the system described by the COBie data set. If allowable values are not specified by contract, the default value for this information is the current OmniClass Table 21.

Tags 08-System

Verification Rule Value is one of (comma separated values)

Value Supply Air,Return Air,Exhaust Air,Cold Water,Hot Water, Domestic Water,Sanitary,Hydronic Water Return, Hydronic Water Supply,Fire System, Electrical,Lighting

Units None


Solibri Office - New Solibri Building
FILE
MODEL
CHECKING
COMMUNICATION
INFORMATION TAKEOFF
BCF LIVE CONNECTOR
SCORE
VIEWS
Spin
Info
Search
CHECKING
Check Model
Report
Click to add rulesets...
RESULT SUMMARY
Report
RESULTS
No Filtering
Automatic
INFO
3D
2. CHECK IDS (Solibri)
SOLIBRI
7. Story
Welcome to Solibri Office
Role: Empty
Selected: 0

Traditional Information Requirements approach?

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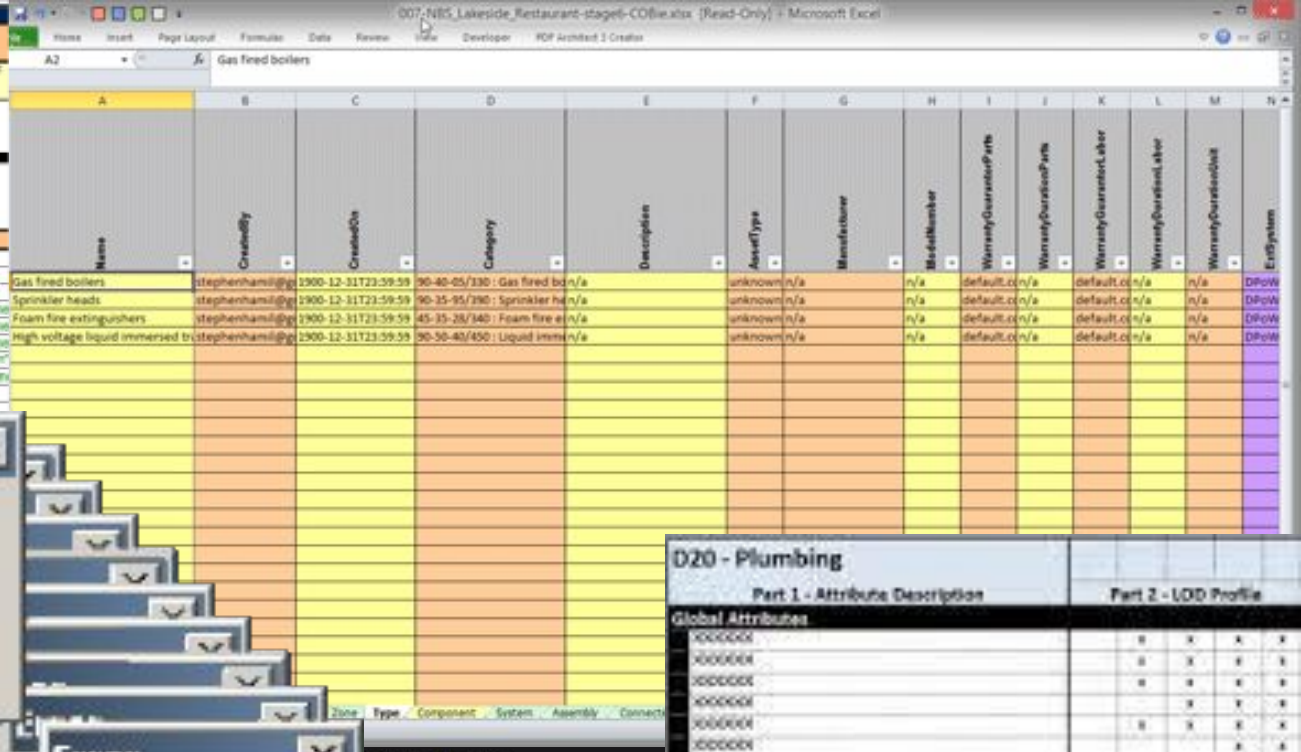
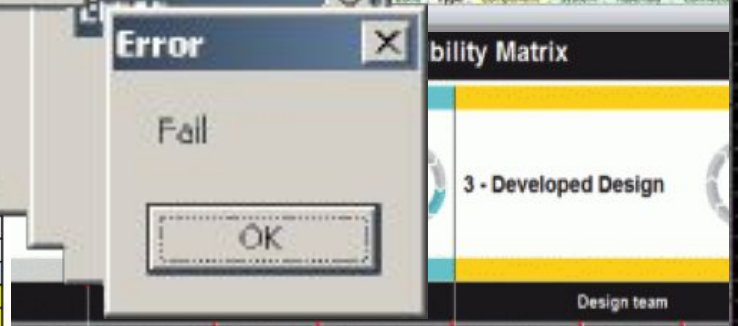
Floor System	BIM Object or Element		General Information Use			
	Item Catergory - Floor		Basic Tool Features	Derived Data	Selection Agent	Building System
	Description: A 2D and 3D element. A horizontal surface element most commonly attributed to the structural support system for a building.		Structural System, Assembly Information	Material Volume, Material Surface Area	Primary Creator: Architect Secondary Creators: Structural Engineer	Item System Category - Uniformat

Level of Development AIA Document E202 - 2008 Developed by Graphisoft 2001	Information Category for Information Item (See Master Information Tab)	Information Item (information about the specific object or element)	Model Element Author	Information Classification Origin	Required by Client Data	IFC Support
LOD 100 - Conceptual						
Overall Building Massing indicative of Area, Height, Volume, Location, and Orientation.	Building Program & Project Meta Data	Facility ID			File Properties	IfcSite->IfcBuilding.Name
	Building Program & Project Meta Data	Facility Name			File Properties	IfcSite->IfcBuilding.LongName
	Building Program & Project Meta Data	Facility Description			File Properties	IfcSite->IfcBuilding.Description
	Physical Properties of BIM Objects & Elements	Overall Length				IfcSite->IfcQuantityLength.Name
	Physical Properties of BIM Objects & Elements	Overall Width				IfcSite->IfcQuantityLength.Name
	Physical Properties of BIM Objects & Elements	Overall Height				IfcSite->IfcQuantityLength.Name
	Physical Properties of BIM Objects & Elements	Overall Area				IfcSite->IfcQuantityArea.Name
	Physical Properties of BIM Objects & Elements	Overall Volume				IfcSite->IfcQuantityVolume.Name
	GeoSpatial and Spatial Location of Objects &	Position Type				IfcSite.ObjectPlacement
	GeoSpatial and Spatial Location of Objects &	Location Constraint				IfcRel[...].IfcConstraint
	GeoSpatial and Spatial Location of Objects &	Code Constraint				
	Costing Requirements	Conceptual Cost				
	Costing Requirements	Conceptual Unit Cost				
	Costing Requirements	Future Cost Assumptions				
	Sustainable Material LEED or Other Requirements	Green Assumptions				
	Sustainable Material LEED or Other Requirements	Green Strategies				
	Sustainable Material LEED or Other Requirements	LEED Initiatives Bronze,Silver,Gold				
	Project Environmental & Site Conditions	Utility Data				
	Phases Time Sequencing & Schedule Requirements	Phasing (OmniClass Table -32)				
	Phases Time Sequencing & Schedule Requirements	Overall Duration				
LOD 200-Approximate Geometry						
Generalized Systems or Assemblies with Approximate Quantities, Size, Shape, Location, , and Orientation.	Physical Properties of BIM Objects & Elements	Length				
	Physical Properties of BIM Objects & Elements	Width				
	Physical Properties of BIM Objects & Elements	Height				
	Physical Properties of BIM Objects & Elements	Area				
	Physical Properties of BIM Objects & Elements	Volume				
	Physical Properties of BIM Objects & Elements	Maximum Size				
	GeoSpatial and Spatial Location of Objects &	Story Number				

Time of Exchange (SD, DD, CD, Construction)		DD	
Model Reciever	N/A	C, TC	
Reciever File Format			
Application & Version			

Model Element Breakdown		Info	Resp Party	Notes	Info	Resp Party	Notes	Info	Resp Party	
B	**SHELL**									
	Superstructure									
	Floor Construction	B	A		B	A		B	A	
	Roof Construction	B	A		B	A		B	A	
	Exterior Enclosure									
	Exterior Walls	B	A		A	A		B	A	R Value
	Exterior Windows	B	A		B	A		A	A	Rvalue
	Exterior Doors	B	A					C	A	
	Roofing									
	Roof Coverings	B	A							
	Roof Openings	B	A		A	A		B	A	
C	**INTERIORS**									
	Interior Construction									
	Partitions	B	A		B	A		B	A	
	Interior Doors							C	A	
	Fittings	B	A		B	A			A	
	Stairs									
	Stair Construction	B	A		B	A		B	A	
	Stair Finishes									
	Interior Finishes									
	Wall Finishes							B	A	Reflectance
	Floor Finishes							B	A	Reflectance
	Ceiling Finishes							B	A	Reflectance
D	**SERVICES**									





SOMETHING WENT WRONG

Agenda:

1. Intro to IDS
2. How to Create IDS
3. How to Check IDS
4. Live Demo!

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1. Intro to IDS

(Information Delivery Specification)

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What is IDS?

The **Information Delivery Specification** is a standard for defining Information requirements in a way that **both humans and machines** can understand!

What is bSDD?

The **buildingSMART Data Dictionary** is an **online service** that stores classes (terms) and properties, allowed values, units, translations and relations.

Agenda:

1. ✓ Intro to IDS
2. **How to Create IDS**
3. How to Check IDS
4. Live Demo!

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Untitled Project

Plan

Scope

Verify

Exports

Clive Jordan

Drag+Drop

Suggested image ratio 2:1

Untitled Project

Project Type

Address

Description

Project Standard: ISO 19650

bSDD Classifications: Uniclass 2015 1.0

bSDD Properties: IFC 4.3

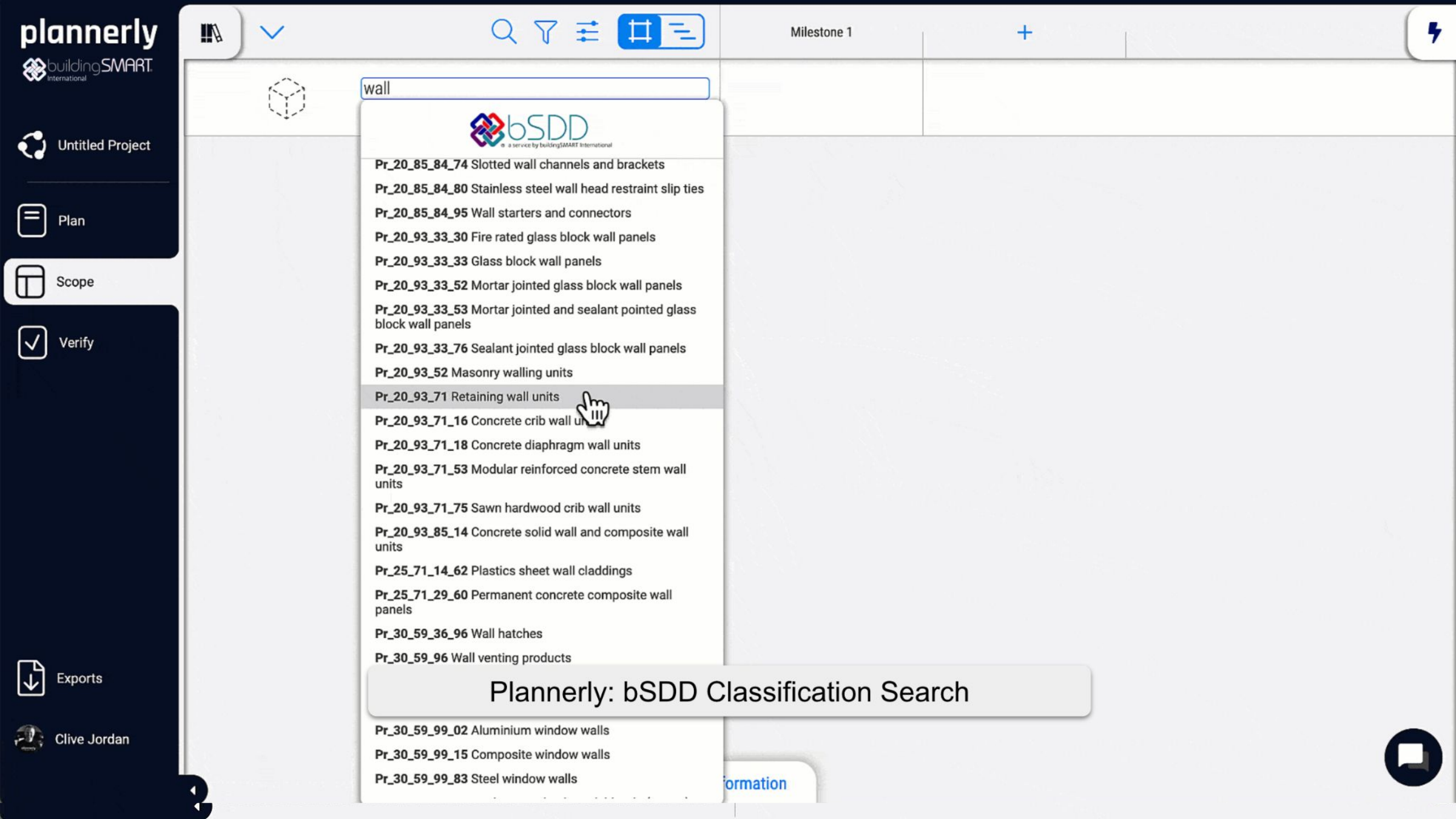
QUICK LINKS

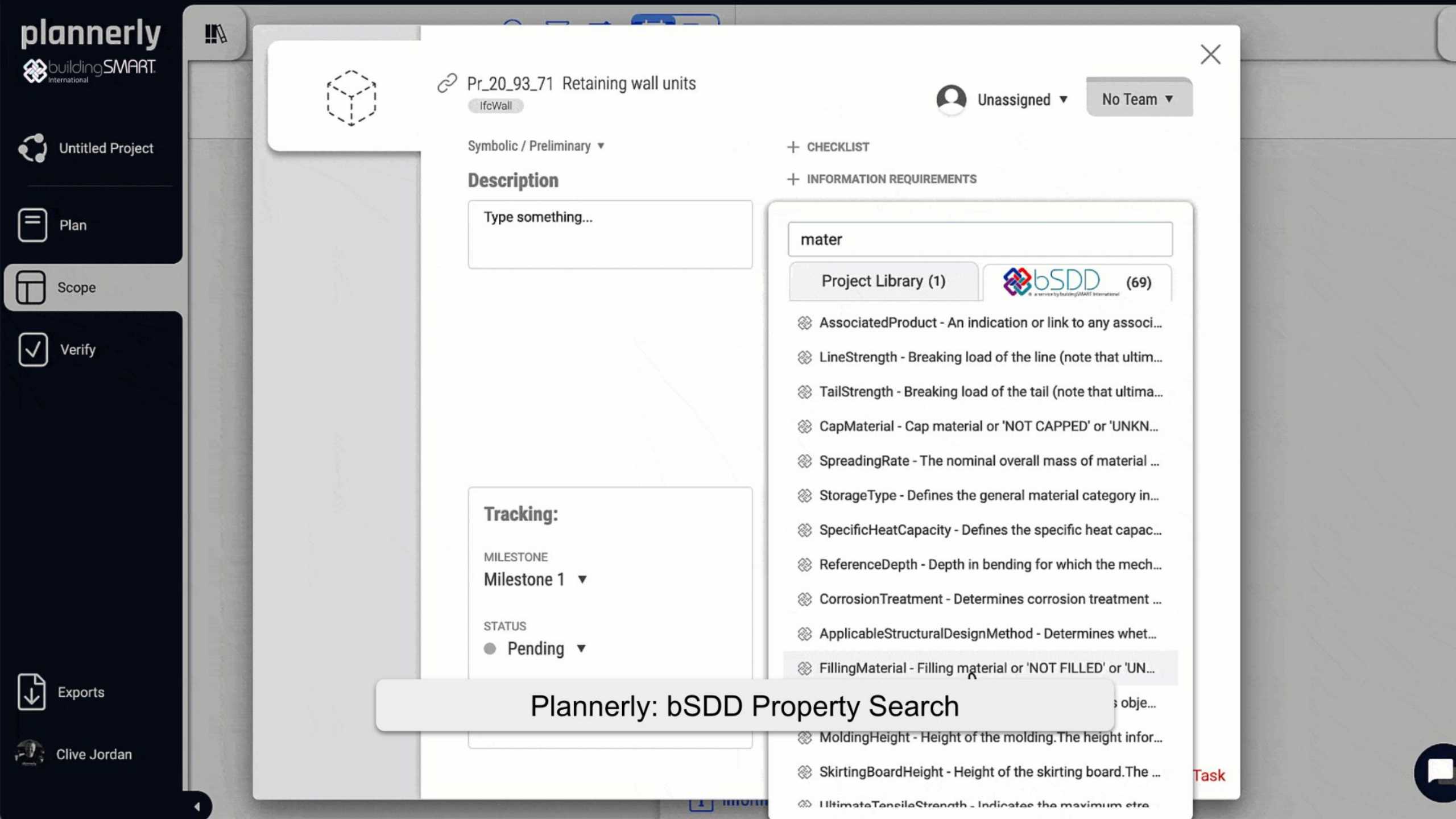
Teams

Add Team

Drag+Drop	My Team	Manager	ABC
Drag+Drop	Untitled Team	Architect	ARC
Drag+Drop		Structural Engineer	STR

Plannerly: bSDD Classifications + Properties


plannerly
buildingSMART International
Untitled Project
Plan
Scope
Verify
Exports
Clive Jordan
Milestone 1
wall
bSDD
a service by buildingSMART International
Pr_20_85_84_74 Slotted wall channels and brackets
Pr_20_85_84_80 Stainless steel wall head restraint slip ties
Pr_20_85_84_95 Wall starters and connectors
Pr_20_93_33_30 Fire rated glass block wall panels
Pr_20_93_33_33 Glass block wall panels
Pr_20_93_33_52 Mortar jointed glass block wall panels
Pr_20_93_33_53 Mortar jointed and sealant pointed glass block wall panels
Pr_20_93_33_76 Sealant jointed glass block wall panels
Pr_20_93_52 Masonry walling units
Pr_20_93_71 Retaining wall units
Pr_20_93_71_16 Concrete crib wall u
Pr_20_93_71_18 Concrete diaphragm wall units
Pr_20_93_71_53 Modular reinforced concrete stem wall units
Pr_20_93_71_75 Sawn hardwood crib wall units
Pr_20_93_85_14 Concrete solid wall and composite wall units
Pr_25_71_14_62 Plastics sheet wall claddings
Pr_25_71_29_60 Permanent concrete composite wall panels
Pr_30_59_36_96 Wall hatches
Pr_30_59_96 Wall venting products
Plannerly: bSDD Classification Search
Pr_30_59_99_02 Aluminium window walls
Pr_30_59_99_15 Composite window walls
Pr_30_59_99_83 Steel window walls
ormation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Untitled Project
Plan
Scope
Verify
Exports
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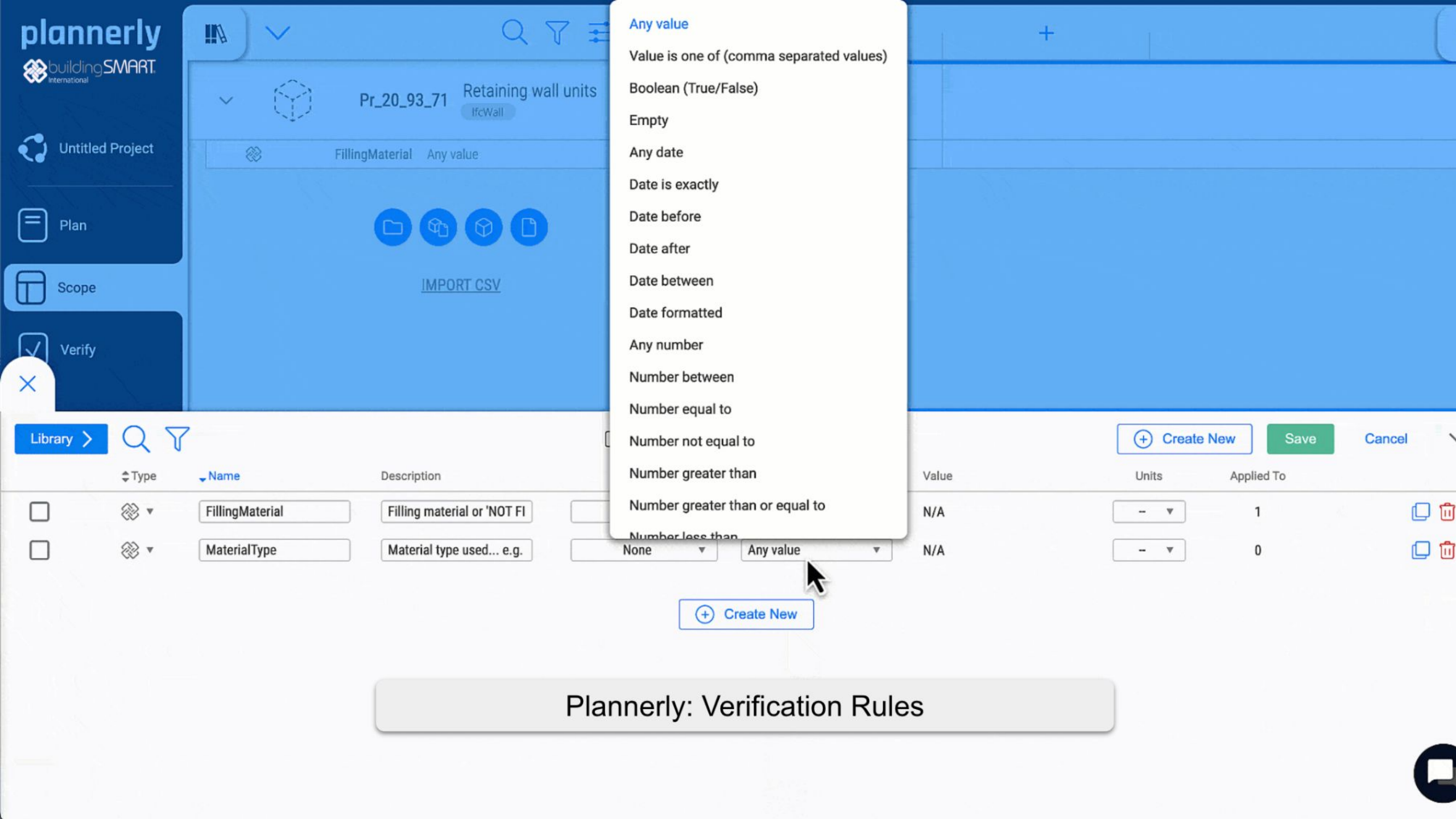
Pr_20_93_71 Retaining wall units
IfcWall
Unassigned
No Team
Symbolic / Preliminary
CHECKLIST
INFORMATION REQUIREMENTS
Description
Type something...
Tracking:
MILESTONE
Milestone 1
STATUS
Pending
mater
Project Library (1)
bSDD
(69)
AssociatedProduct - An indication or link to any associ...
LineStrength - Breaking load of the line (note that ultim...
TailStrength - Breaking load of the tail (note that ultima...
CapMaterial - Cap material or 'NOT CAPPED' or 'UNKN...
SpreadingRate - The nominal overall mass of material ...
StorageType - Defines the general material category in...
SpecificHeatCapacity - Defines the specific heat capac...
ReferenceDepth - Depth in bending for which the mech...
CorrosionTreatment - Determines corrosion treatment ...
ApplicableStructuralDesignMethod - Determines whet...
FillingMaterial - Filling material or 'NOT FILLED' or 'UN...
MoldingHeight - Height of the molding.The height infor...
SkirtingBoardHeight - Height of the skirting board.The ...
Task
Plannerly: bSDD Property Search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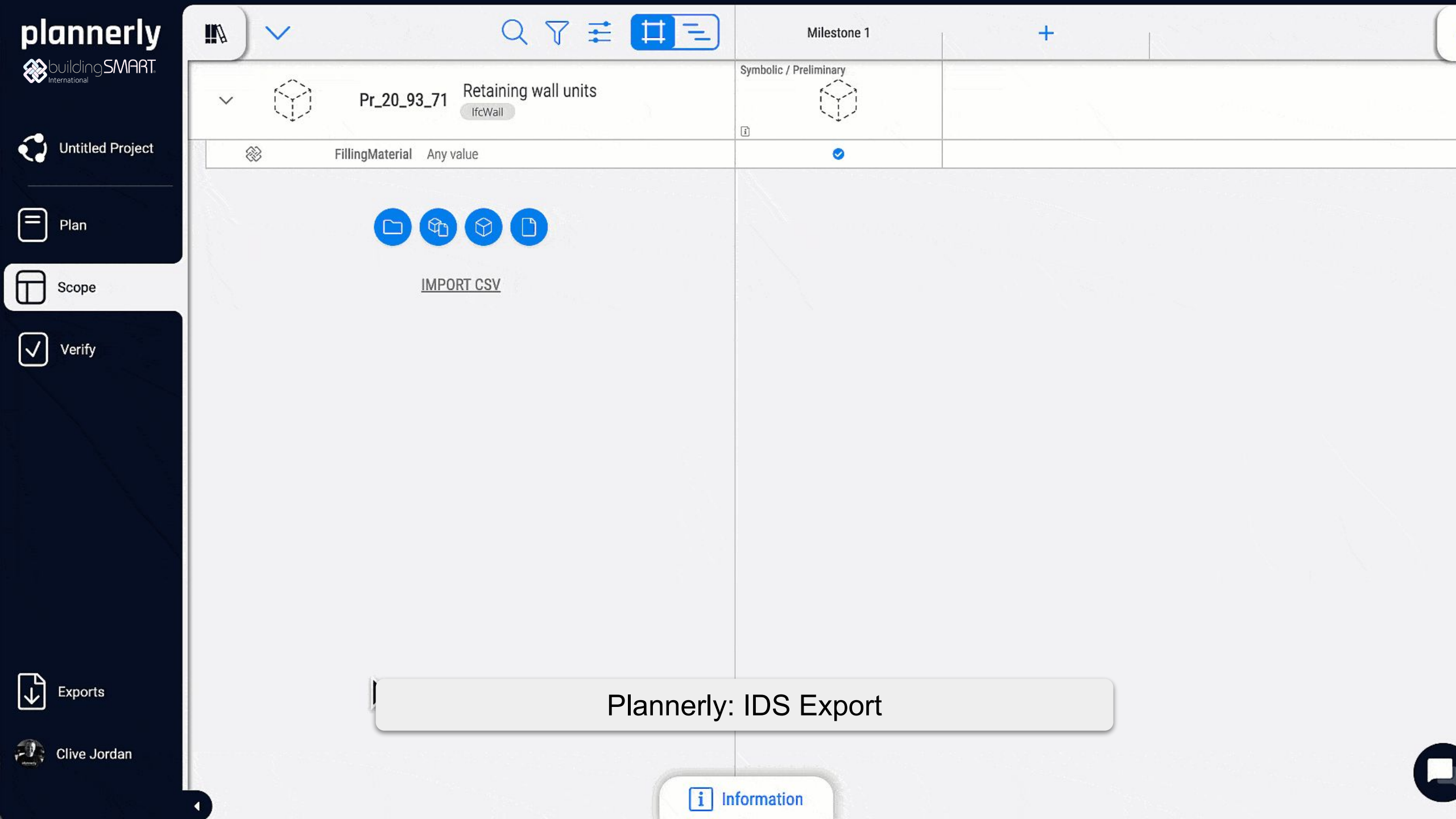
Untitled Project
Plan
Scope
Verify
Pr_20_93_71
Retaining wall units
IfcWall
FillingMaterial
Any value
IMPORT CSV
Any value
Value is one of (comma separated values)
Boolean (True/False)
Empty
Any date
Date is exactly
Date before
Date after
Date between
Date formatted
Any number
Number between
Number equal to
Number not equal to
Number greater than
Number greater than or equal to
Library
Create New
Save
Cancel
Type
Name
Description
Value
Units
Applied To
FillingMaterial
Filling material or 'NOT FI
None
Any value
N/A
1
MaterialType
Material type used... e.g.
None
Any value
N/A
0
Create New
Plannerly: Verification Rules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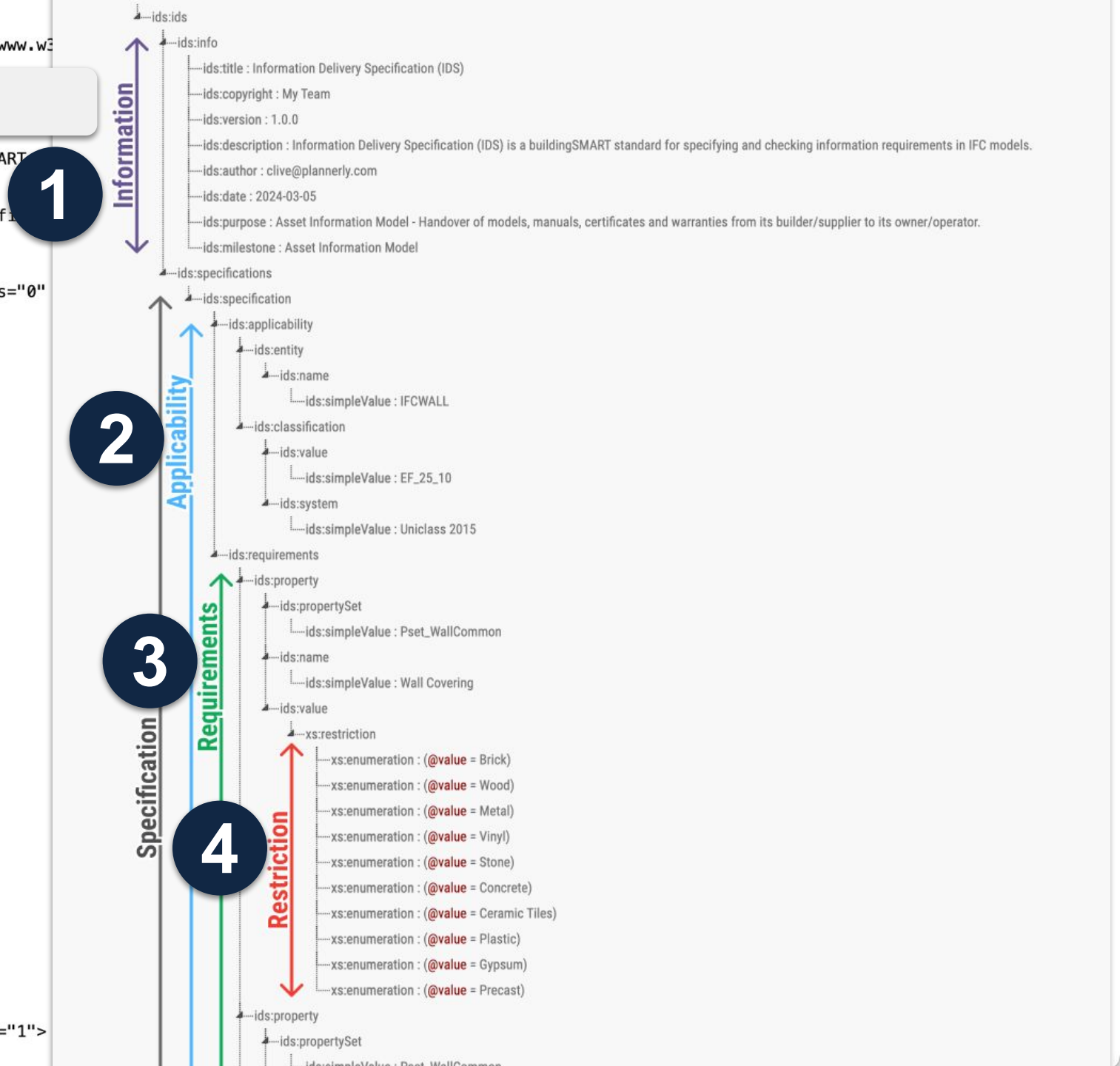
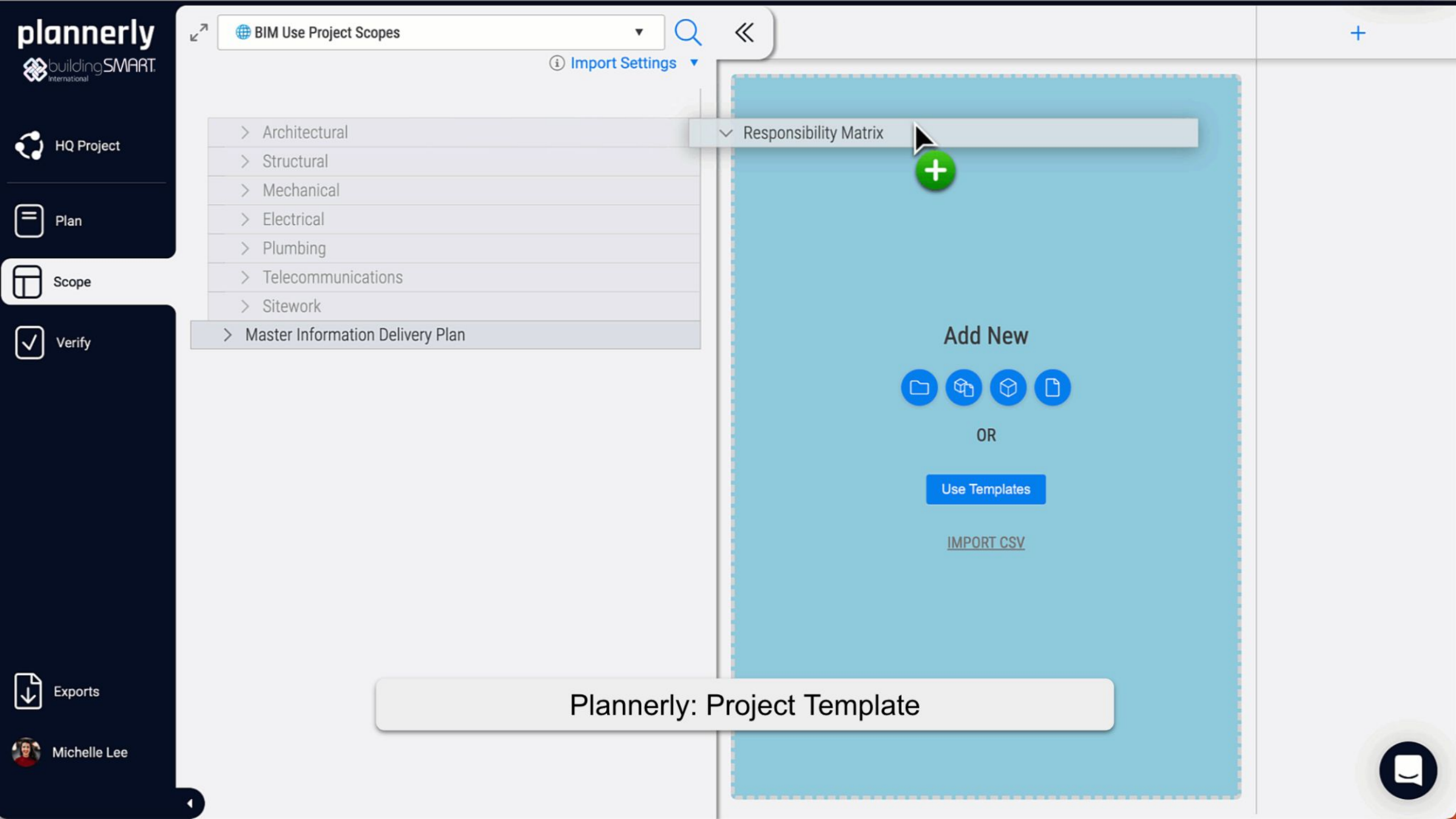
Clive Jordan
Milestone 1
Symbolic / Preliminary
Pr_20_93_71
Retaining wall units
IfcWall
FillingMaterial
Any value
IMPORT CSV
Plannerly: IDS Export
Information

Information Delivery Specification (IDS)

```
<?xml version="1.0"?>
<ids:ids xmlns:ids="http://standards.buildingsmart.org/IDS" xmlns:xs="http://www.w3
xsi:schemaLocation="https://standards.buildingsmart.org/IDS/1.0">
    <ids:version>1.0.0</ids:version>
    <ids:description>Information Delivery Specification (IDS) is a buildingSMART
    <ids:author>clive@plannerly.com</ids:author>
    <ids:date>2024-03-05</ids:date>
    <ids:purpose>Asset Information Model - Handover of models, manuals, certifi
    <ids:milestone>Asset Information Model</ids:milestone>
  </ids:info>
  <ids:specifications>
    <ids:specification name="Walls" ifcVersion="IFC4" description="" minOccurs="0"
      <ids:applicability>
        <ids:entity>
          <ids:name>
            <ids:simpleValue>IFCWALL</ids:simpleValue>
          </ids:name>
        </ids:entity>
        <ids:classification>
          <ids:value>
            <ids:simpleValue>EF_25_10</ids:simpleValue>
          </ids:value>
          <ids:system>
            <ids:simpleValue>Uniclass 2015</ids:simpleValue>
          </ids:system>
        </ids:classification>
      </ids:applicability>
      <ids:requirements>
        <ids:property datatype="IfcLabel" minOccurs="1" maxOccurs="1">
          <ids:propertySet>
            <ids:simpleValue>Pset_WallCommon</ids:simpleValue>
          </ids:propertySet>
          <ids:name>
            <ids:simpleValue>Wall Covering</ids:simpleValue>
          </ids:name>
          <ids:value>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Brick"/>
              <xs:enumeration value="Wood"/>
              <xs:enumeration value="Metal"/>
              <xs:enumeration value="Vinyl"/>
              <xs:enumeration value="Stone"/>
              <xs:enumeration value="Concrete"/>
              <xs:enumeration value="Ceramic Tiles"/>
              <xs:enumeration value="Plastic"/>
              <xs:enumeration value="Gypsum"/>
              <xs:enumeration value="Precast"/>
            </xs:restriction>
          </ids:value>
        </ids:property>
        <ids:property datatype="IfcSoundPowerMeasure" minOccurs="1" maxOccurs="1">
          <ids:propertySet>
```

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HQ Project
Plan
Scope
Verify
Exports
Michelle Lee
BIM Use Project Scopes
Import Settings
Architectural
Structural
Mechanical
Electrical
Plumbing
Telecommunications
Sitework
Master Information Delivery Plan
Responsibility Matrix
Add New
OR
Use Templates
IMPORT CSV
Plannerly: Project Template

plannerly

buildingSMART International

HQ Project

Plan

Scope

Verify

Exports

Michelle Lee

Responsibility Matrix	Design Reviews	3D Coordination	Handover
Architectural			
Structural			
Mechanical			
HVAC Supply Air Duct		Detailed Elements / Proposed MEG — COMPLETE	
System Type Text contains *Supply Air*		✓	
Flow Any value *N/A*		✓	
System Classification Text is exactly *Supply Air*		✓	
Pressure Drop Number less than *1*		✓	
Length Number between *0 - 5000*		✓	
HVAC Air Distribution	Generic / Preliminary ARC — VERIFIED	Detailed Elements / Proposed MEC — APPROVED	Fabrication Components / Coordinated DN — PROPOSED
Outside Air System	Generic / Preliminary ARC — VERIFIED	Detailed Elements / Proposed MEC — COMPLETE	Fabrication Components / Coordinated DN — PROPOSED
Electrical			
Plumbing			
Telecommunications			
Sitework			

Plannerly: Project Template

IMPORT CSV

Information

Agenda:

✓ Intro to IDS
✓ How to Create IDS
3. **How to Check IDS**
4. Live Demo!

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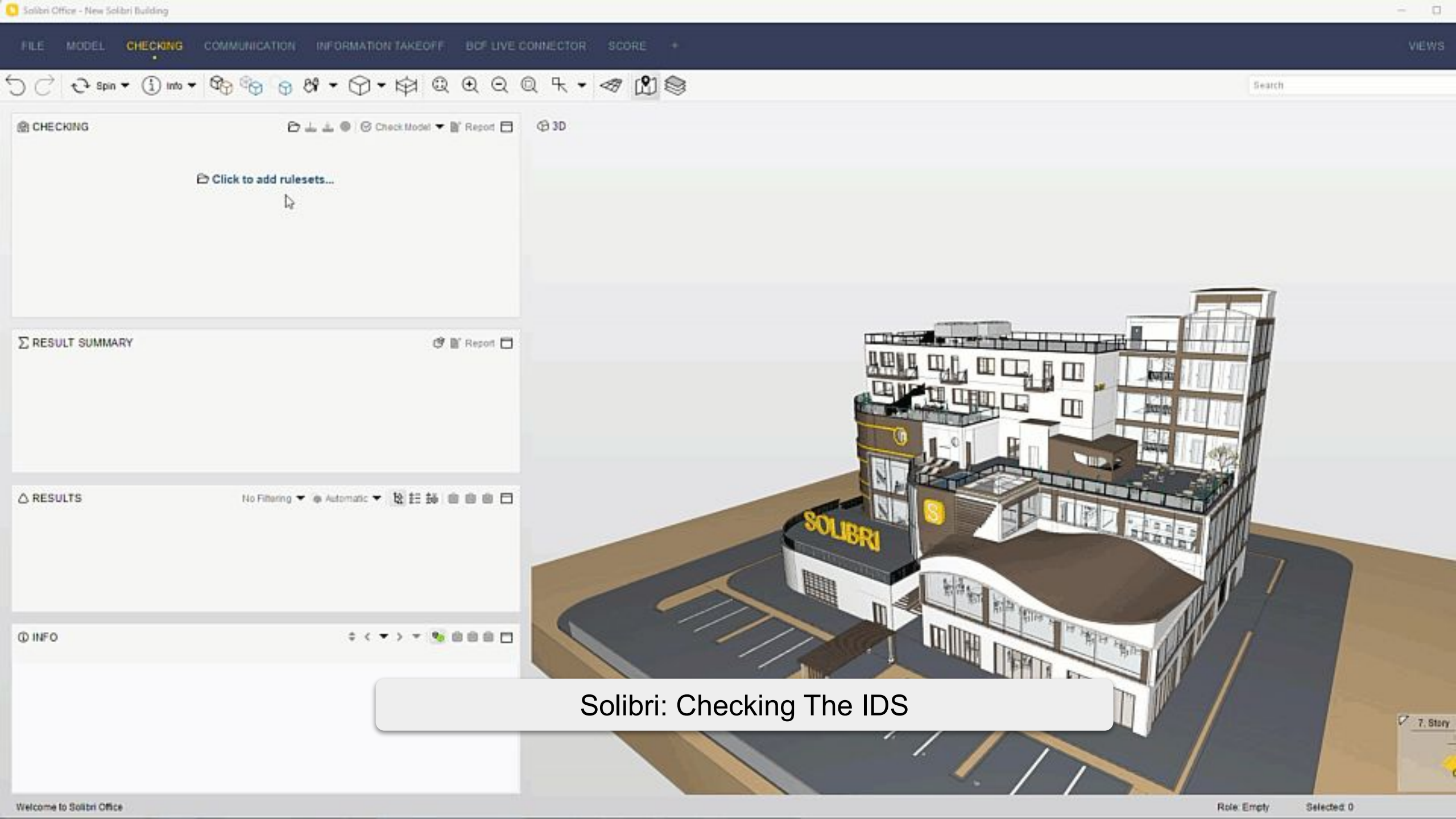

Solibri: Checking The IDS

Agenda:

- ✓ Intro to IDS
- ✓ How to Create IDS
- ✓ How to Check IDS
- 4. **Live Demo!**

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4. Live Demo

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Agenda:

- ✓ Intro to IDS
- ✓ How to Create IDS
- ✓ How to Check IDS
- ✓ Live Demo!

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Q&A

Clive Jordan

Plannerly
Co-founder

Pasi Paasiala

Solibri
Co-founder

Paul Linder

Product
Manager

Akos Hamar

Plannerly
Co-founder

Maya Chabab

Marketing
Communications
Manager

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