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BENJAMIN GONZALEZ

Corporate Development Director, CYPE



TIMEPA 

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International Workshop

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Integration of Open BIM and EPC: lessons learned

Benjamín González

Corporate Development Director, CYPE, Spain



**40 YEARS
OF SOFTWARE
DEVELOPMENT
+150 TOOLS**

**200
PROFESSIONALS
+30 DEALERS**

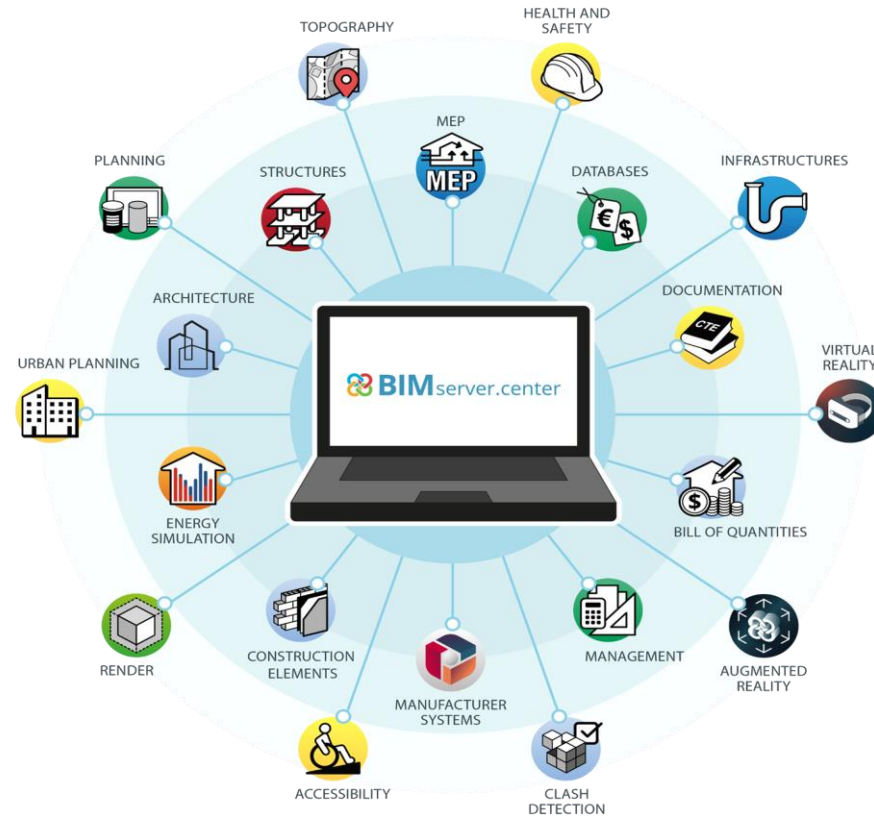
**+100.000
CUSTOMERS
+65 COUNTRIES**

Architecture

MEP

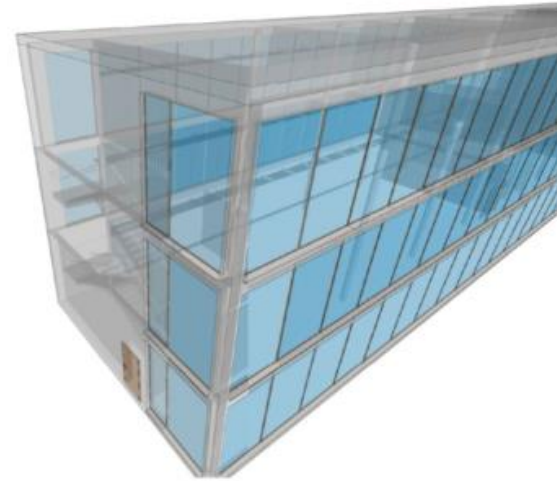
Structures

Management



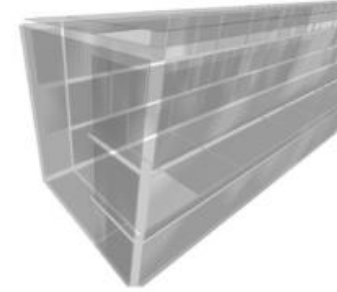
How to use BIM to generate Energy Performance Certificates?

How to connect a BIM architectural model with the EPC

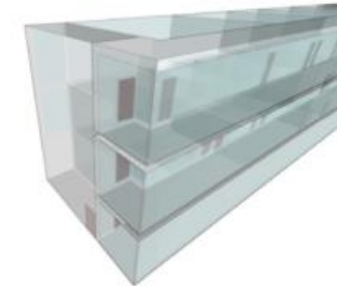


ARCHITECTURAL MODEL

ANALYTICAL MODEL
External Surfaces



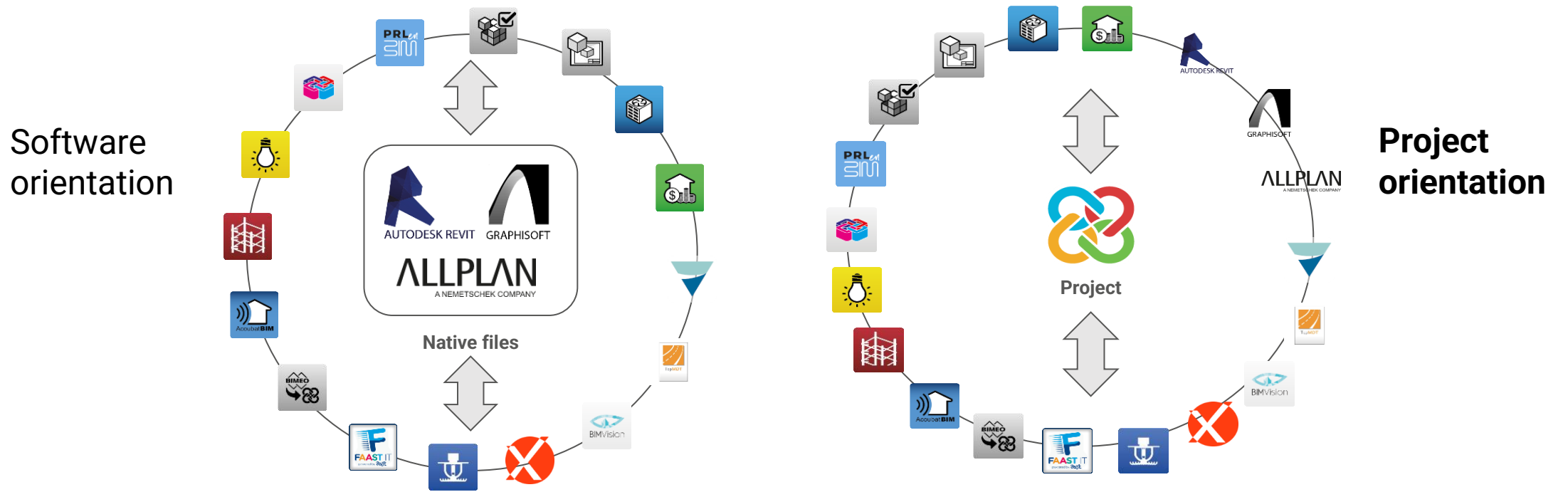
ANALYTICAL MODEL
Internal Surfaces



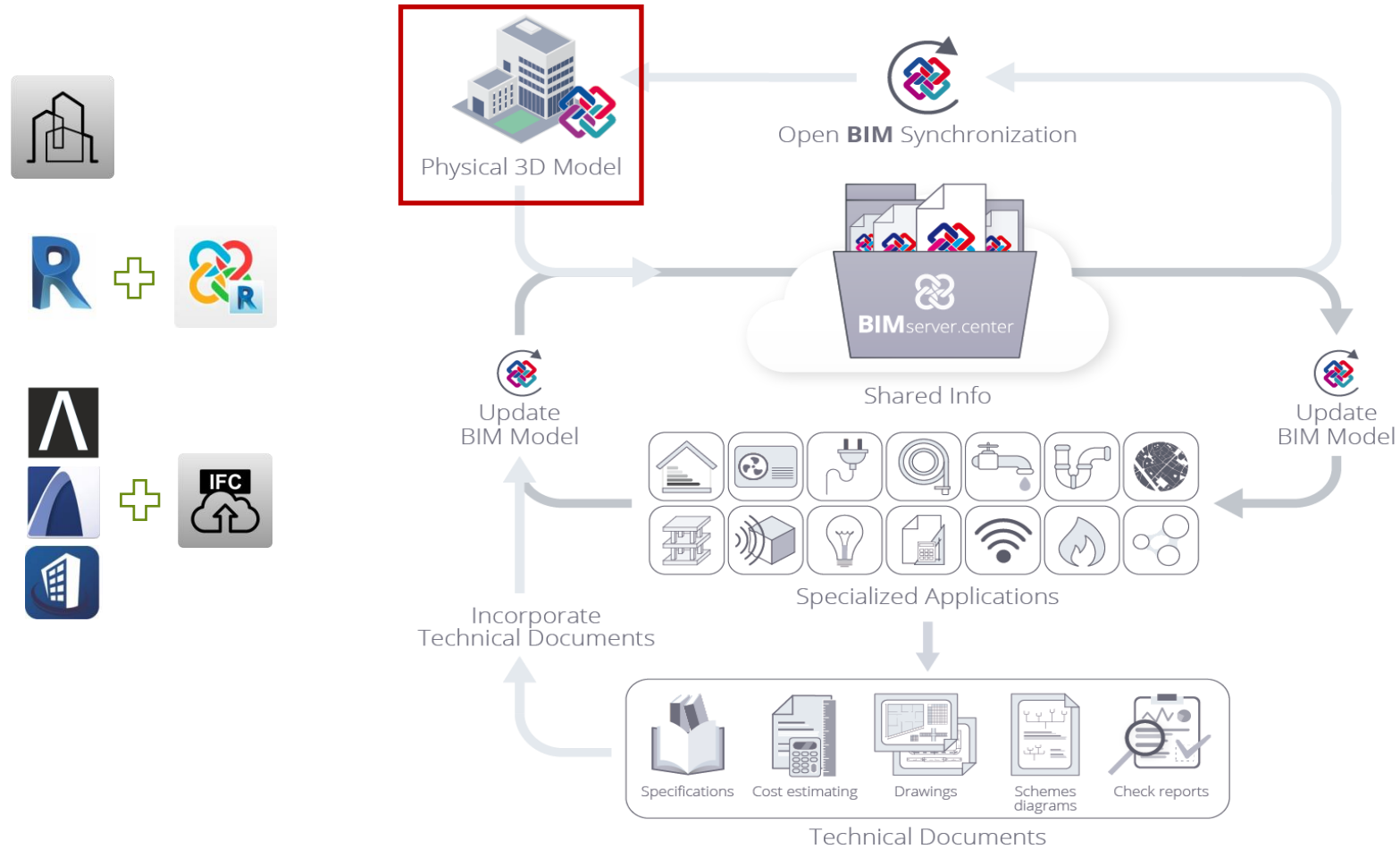
ANALYTICAL MODEL
Edges



How to connect a BIM architectural model with the EPC



Open BIM Workflow

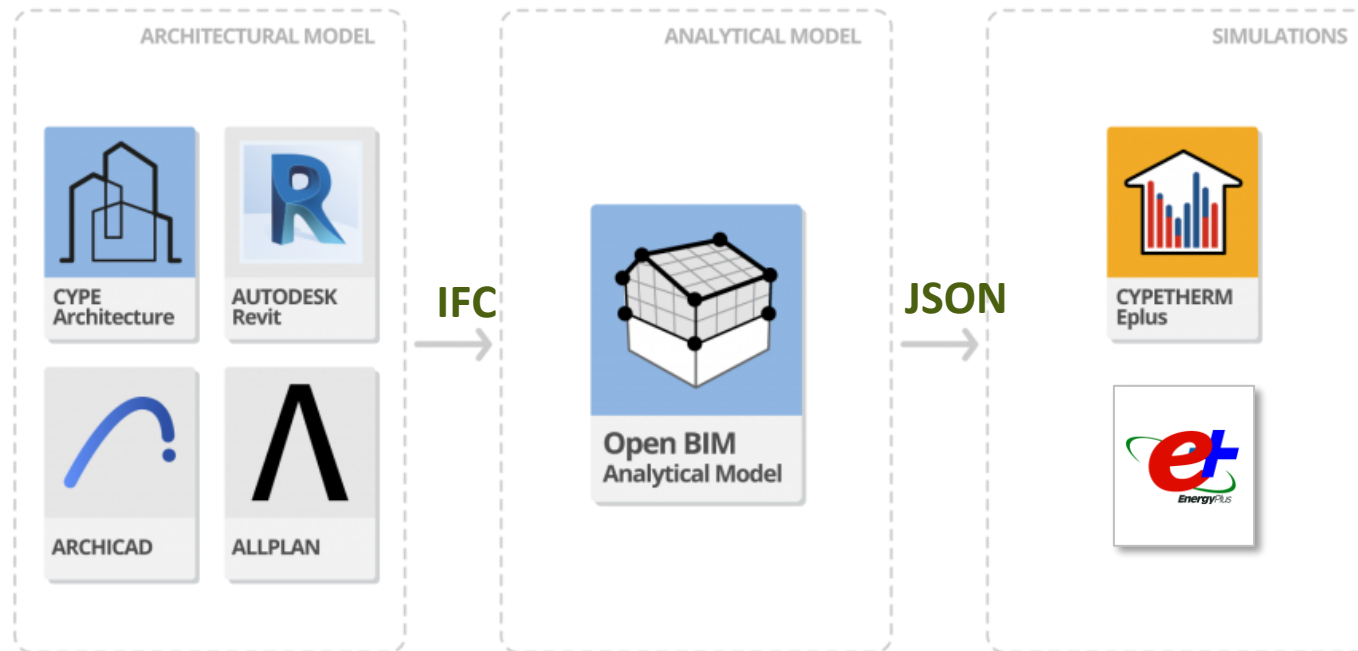


Open BIM Workflow

**Option 1. IFC exchange using BIM tools
(CYPE Architecture, Revit, Archicad, Allplan,...)**

**Option 2. IFC exchange using a simulation 3D modeler
(IFC Builder)**

Open BIM Workflow. Option 1



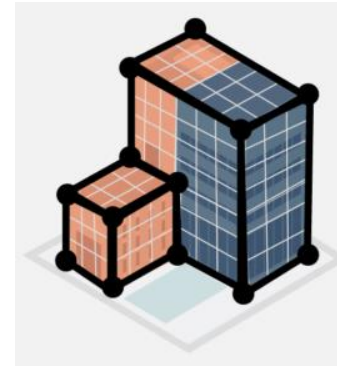
Open BIM Workflow. Option 1

ARCHITECTURAL MODEL



✓ Walls, floors, windows...

ANALYTICAL MODEL

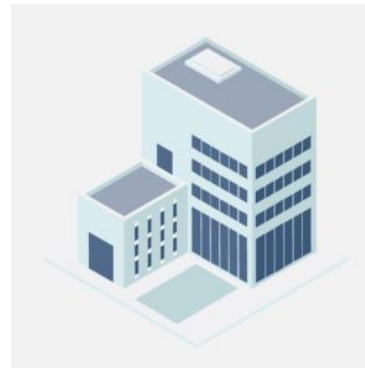


✓ Surfaces, edges, boundaries ...

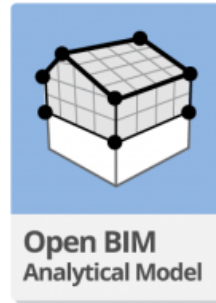
VS

Open BIM Workflow. Option 1

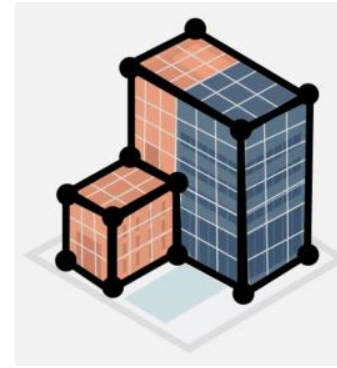
ARCHITECTURAL MODEL



✓ Walls, floors, windows...

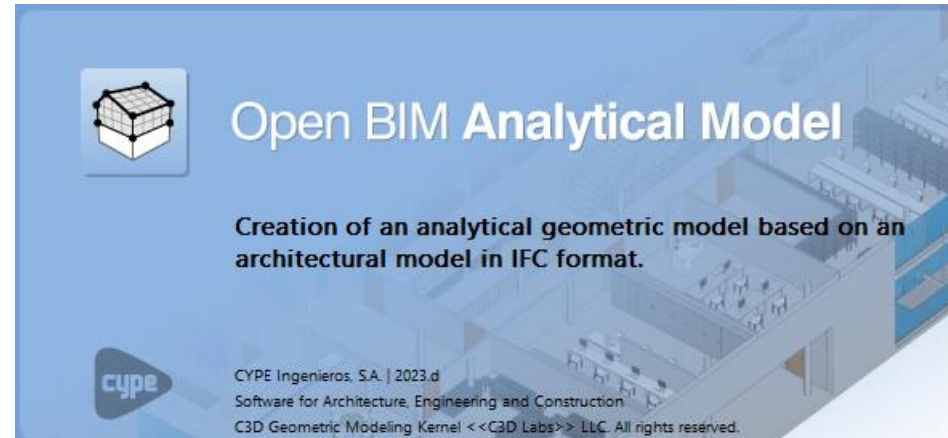


ANALYTICAL MODEL



✓ Surfaces, edges, boundaries ...

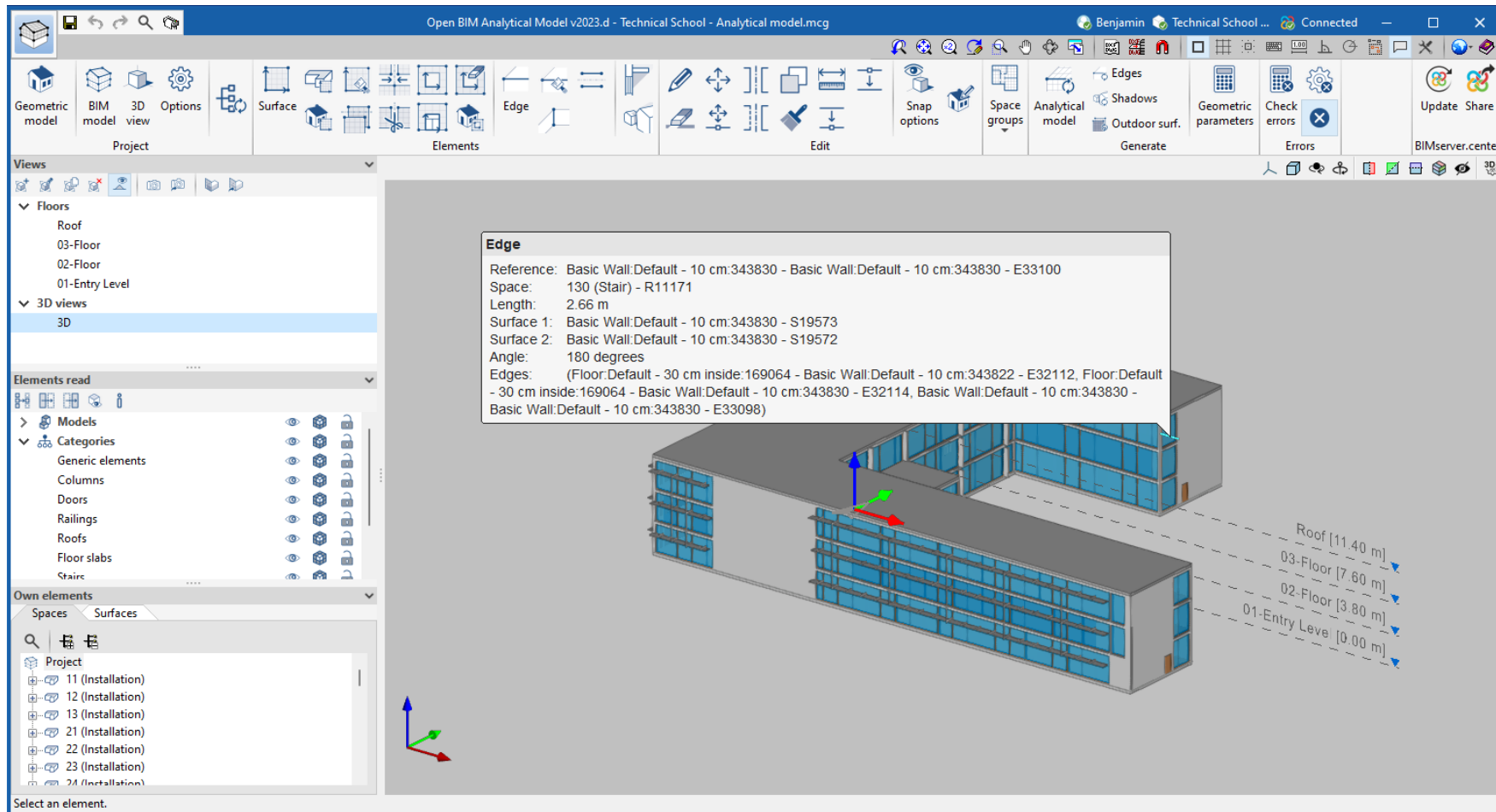
Open BIM Workflow. Option 1



<https://info.cype.com/en/software/open-bim-analytical-model/>

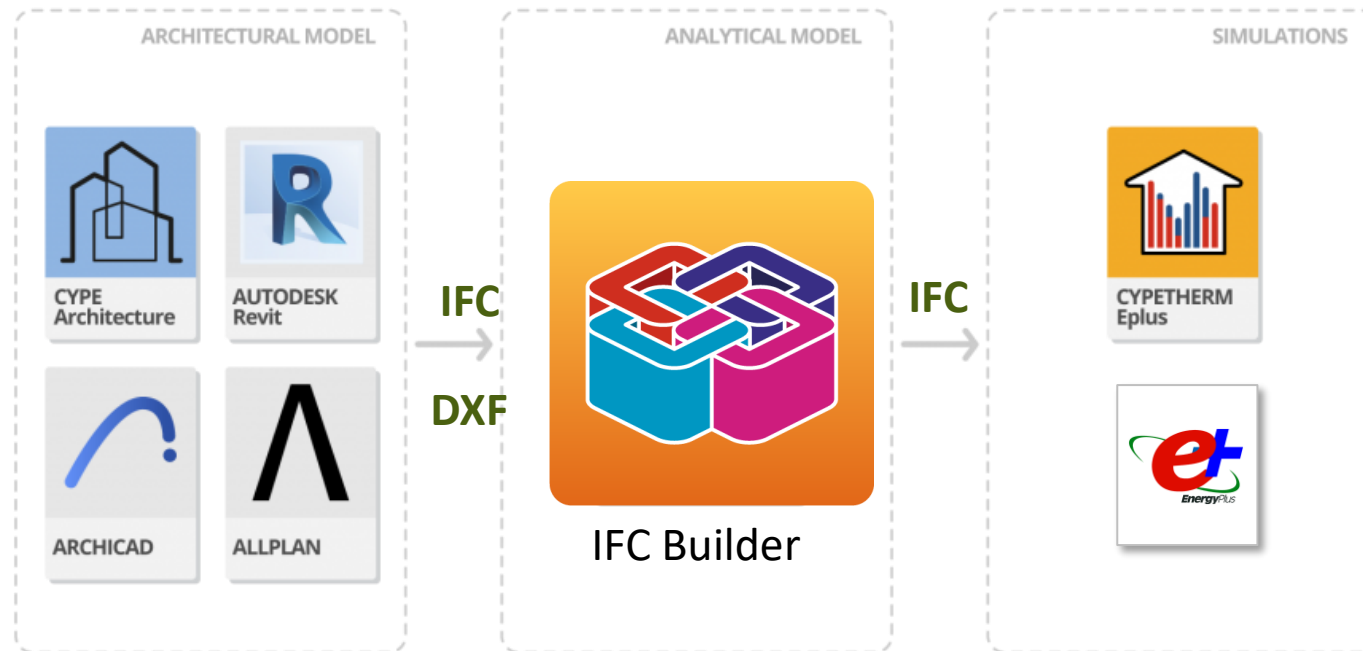
<https://learning.cype.com/en/video/open-bim-analytical-model/>

Open BIM Workflow. Option 1

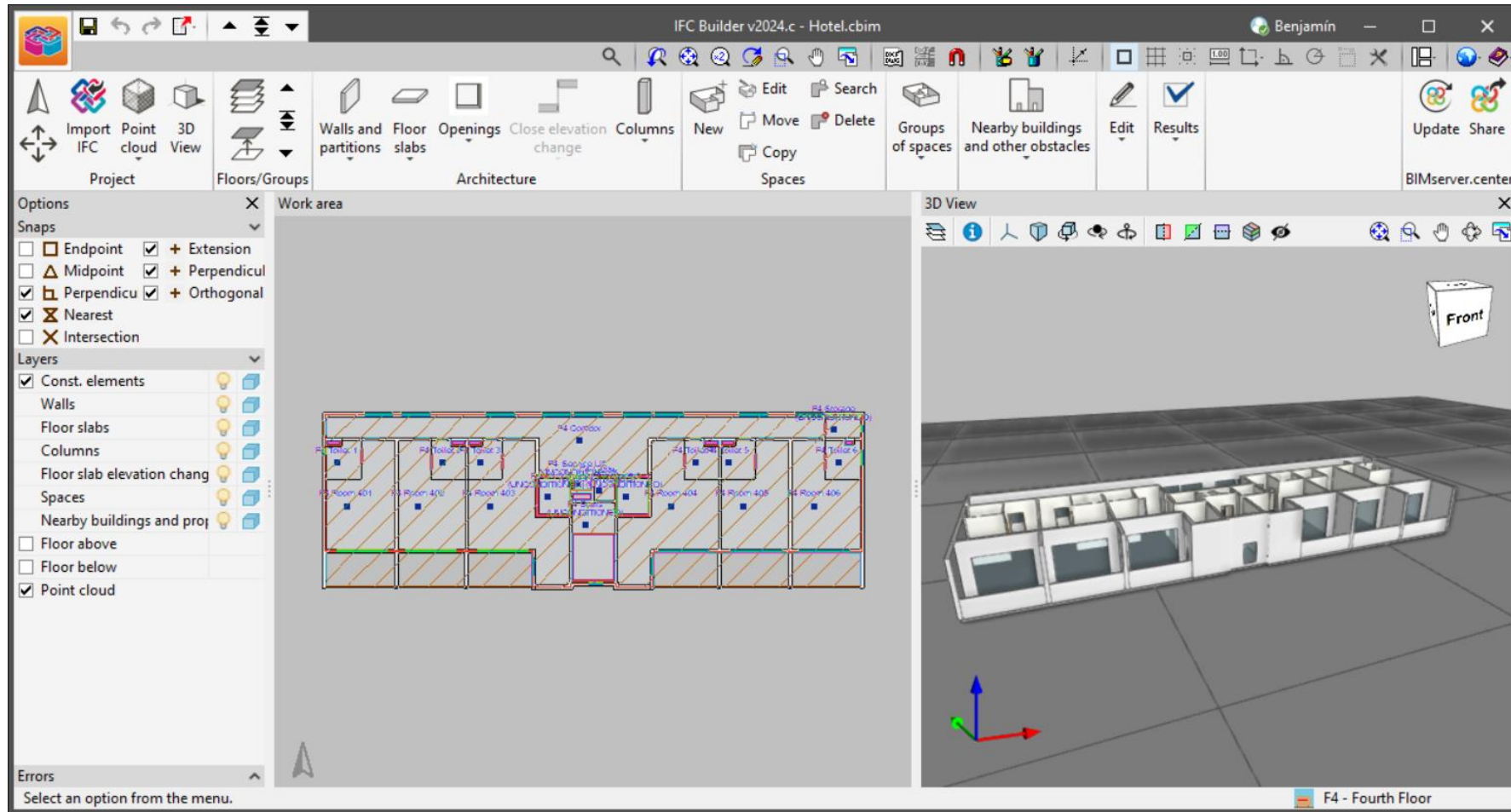


Open BIM Workflow. Option 2

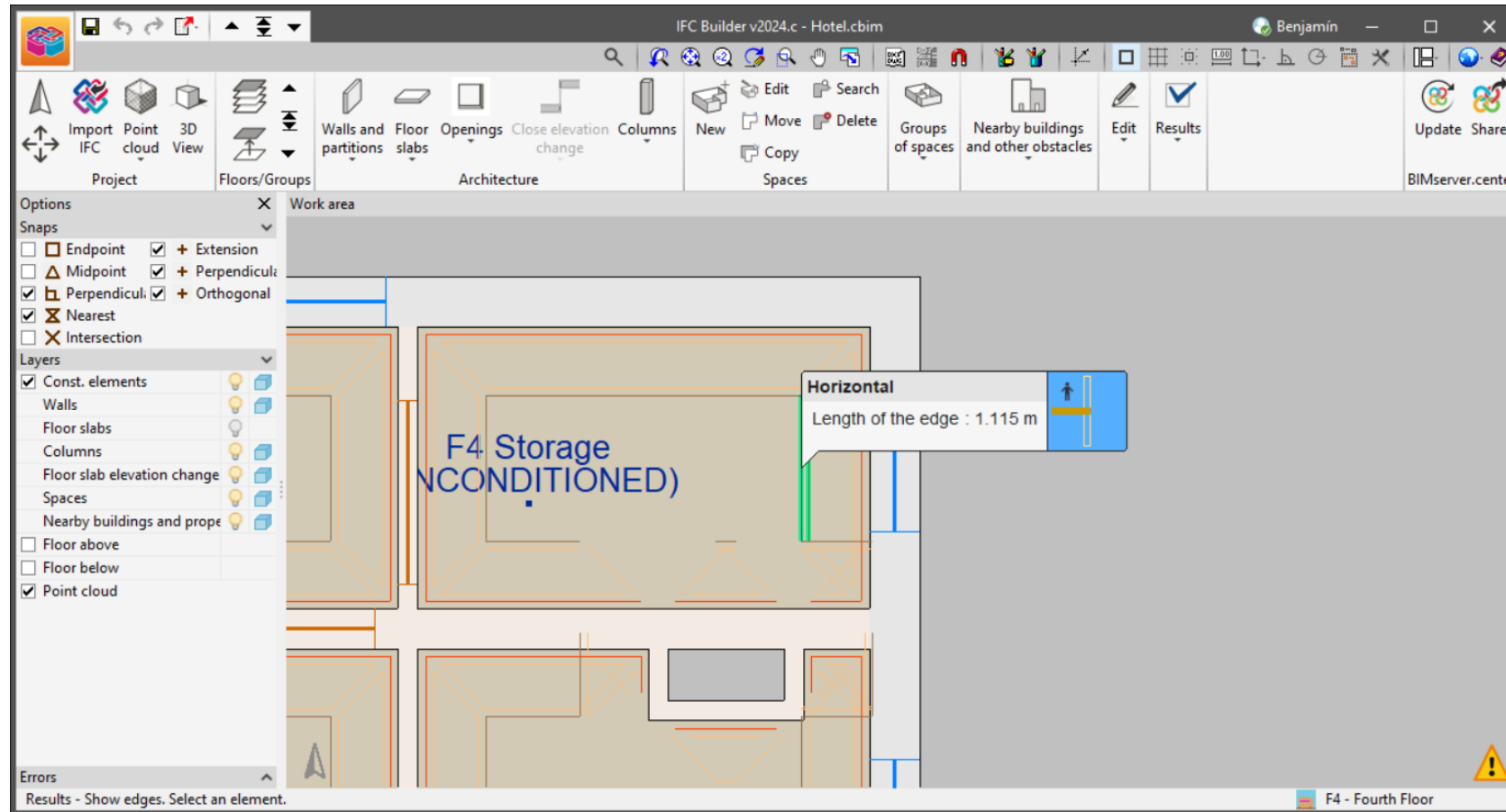
IFC exchange using a simulation 3D modeler (IFC Builder)



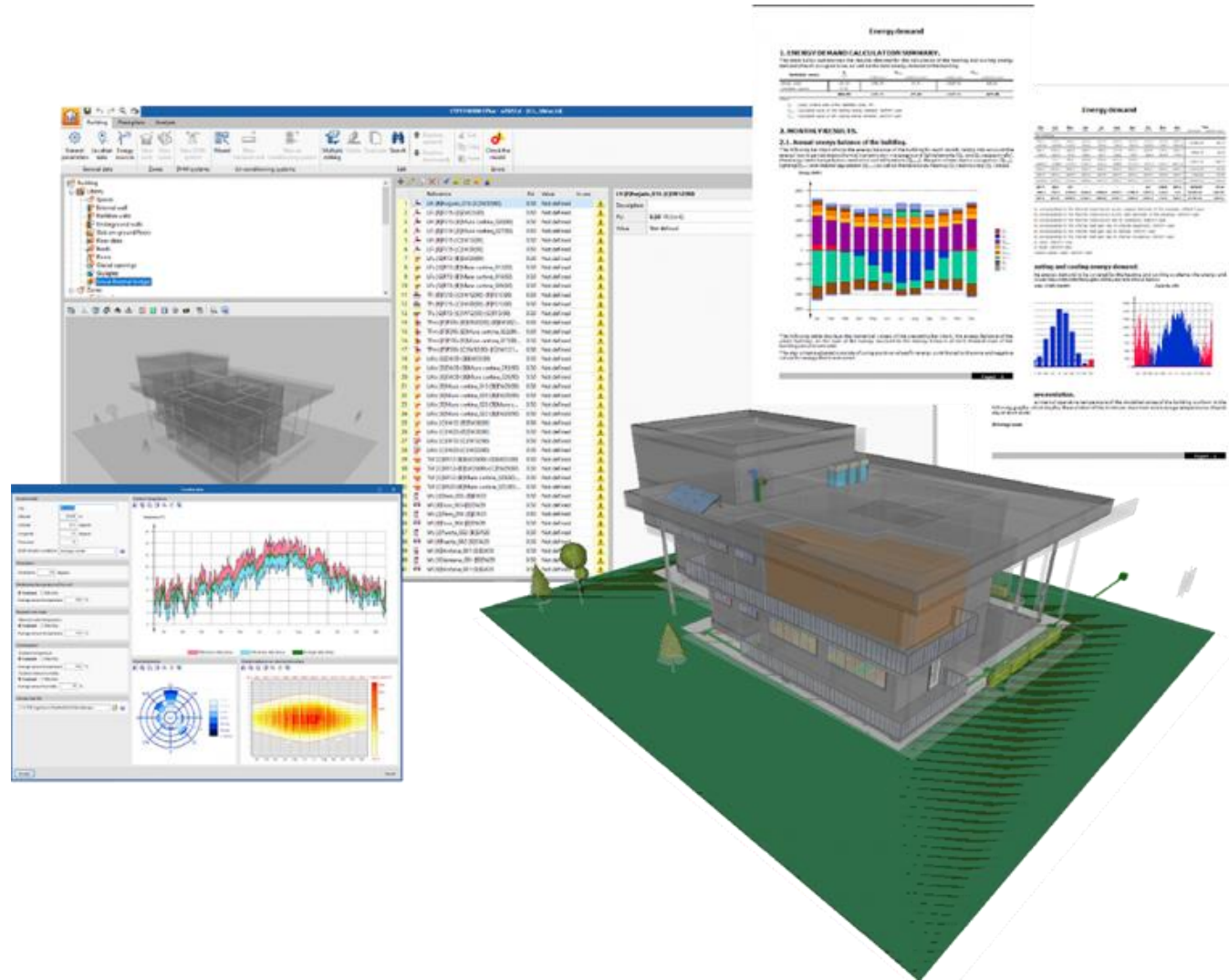
Open BIM Workflow. Option 2. IFC Builder



Open BIM Workflow. Option 2. IFC Builder



Open BIM Workflow. CYPETHERM Eplus



Conclusions

- There is no single path and no single model.
- The architectural BIM model should be simplified to be used in an energy simulation model and EPC generation.
- It is possible to use 100% 3D models for EPC generation.
- It is possible to generate 3D models from drawings and IFCs.
- Both workflows are productive. Depends on the user.

**If you would like more information,
please contact us at**

benjamin.gonzalez@cype.com

Thanks for your attention!