BIM4ENERGY
ERASMUS +

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BIM digital competencies to evaluate and improve the energy efficiency of European buildings.
A digital way towards positive energy districts

BIM tool overview. Cype Open BIM Workflow

Speaker: UPCT

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BIM tool overview. Cype Open BIM Workflow

Summary :

- Open BIM workflow with Cype
- CYPECAD
- Cype Architecture
- Open BIM Construction systems
- Open BIM quantities
- CypeTherm EPlus

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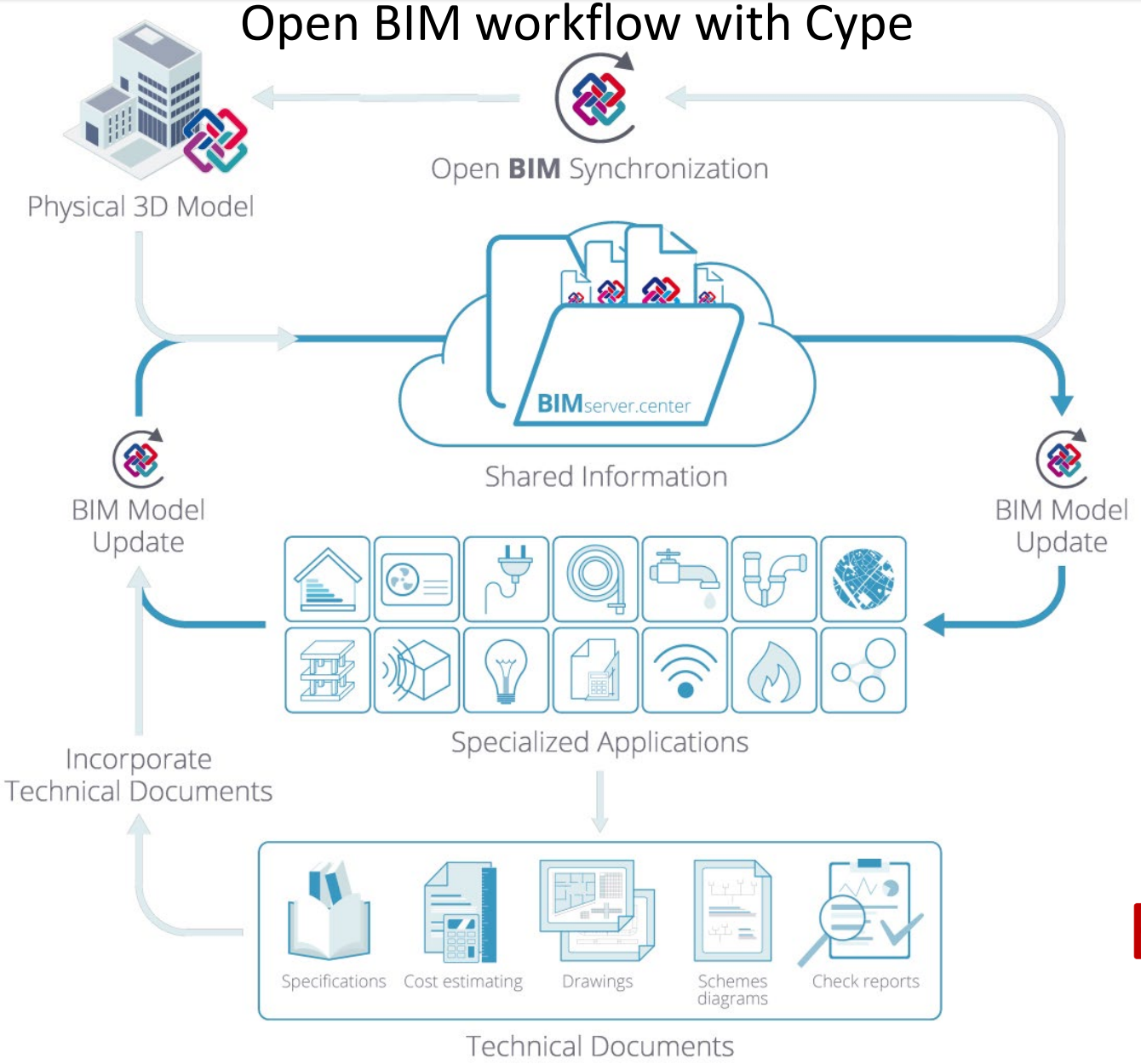
Open BIM workflow with Cype



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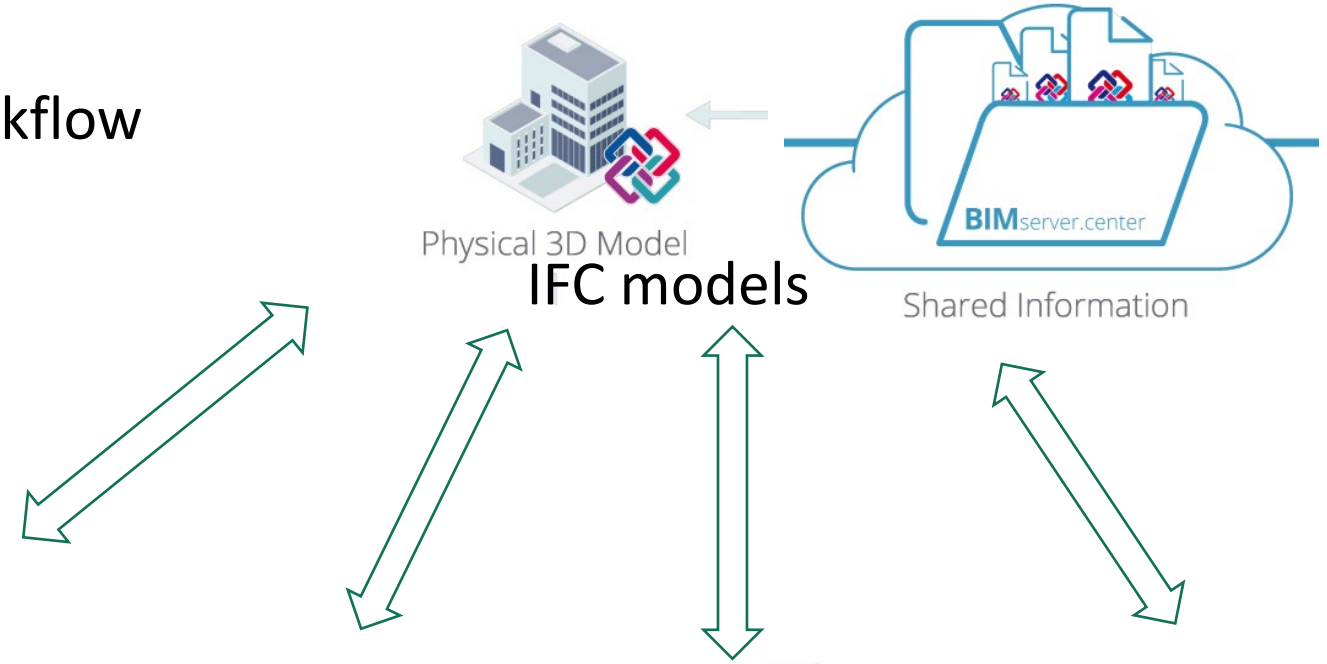
Open BIM workflow with Cype

5D Open BIM workflow



CYPECAD

Structure designer

CYPE Architecture

Architectural

BIM modeller

Open BIM Construction Systems

BIM library of envelopes and partitions

Open BIM Quantities

Quantities and budget

Open BIM workflow with Cype

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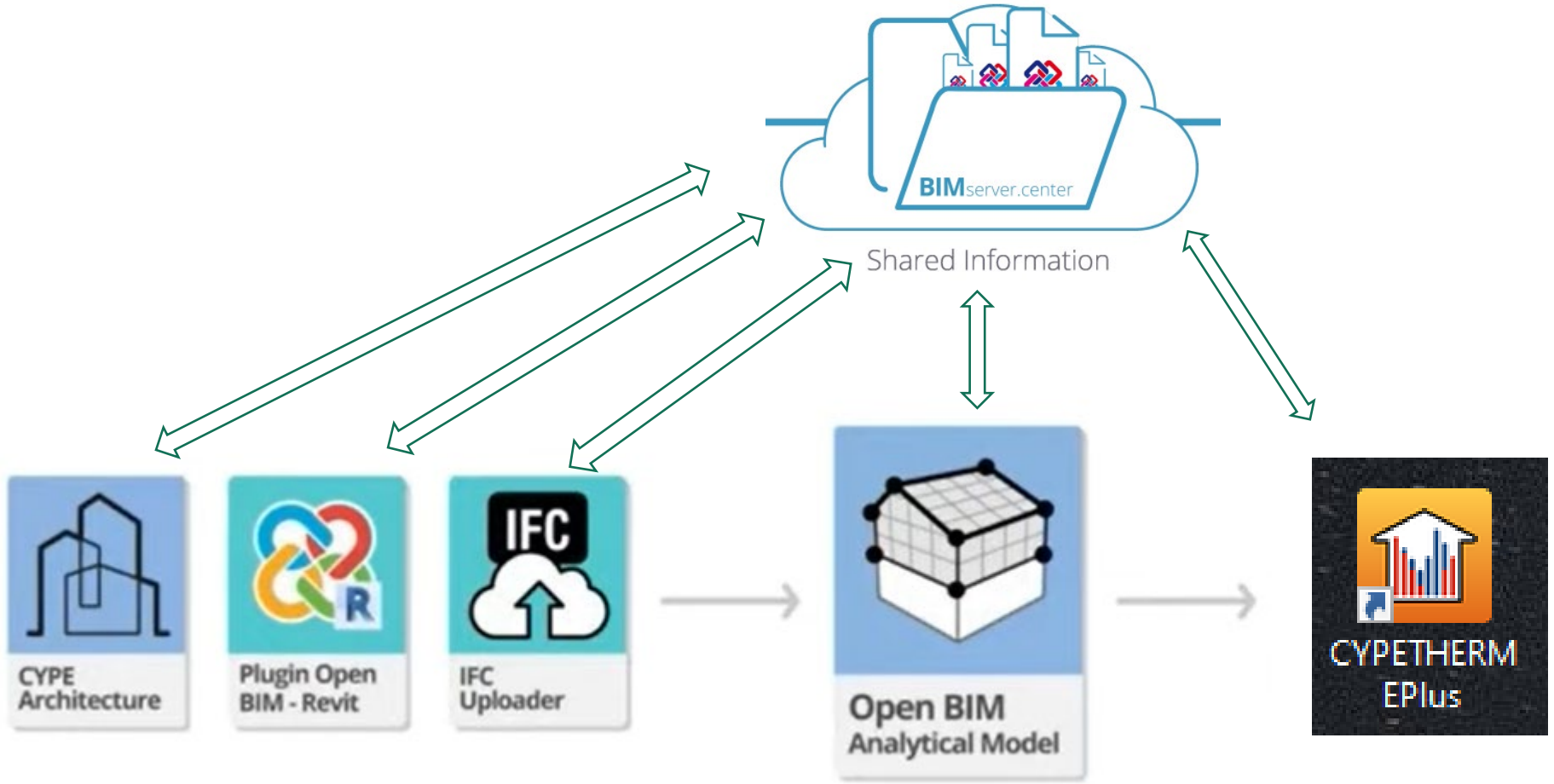
Energy analysis workflow



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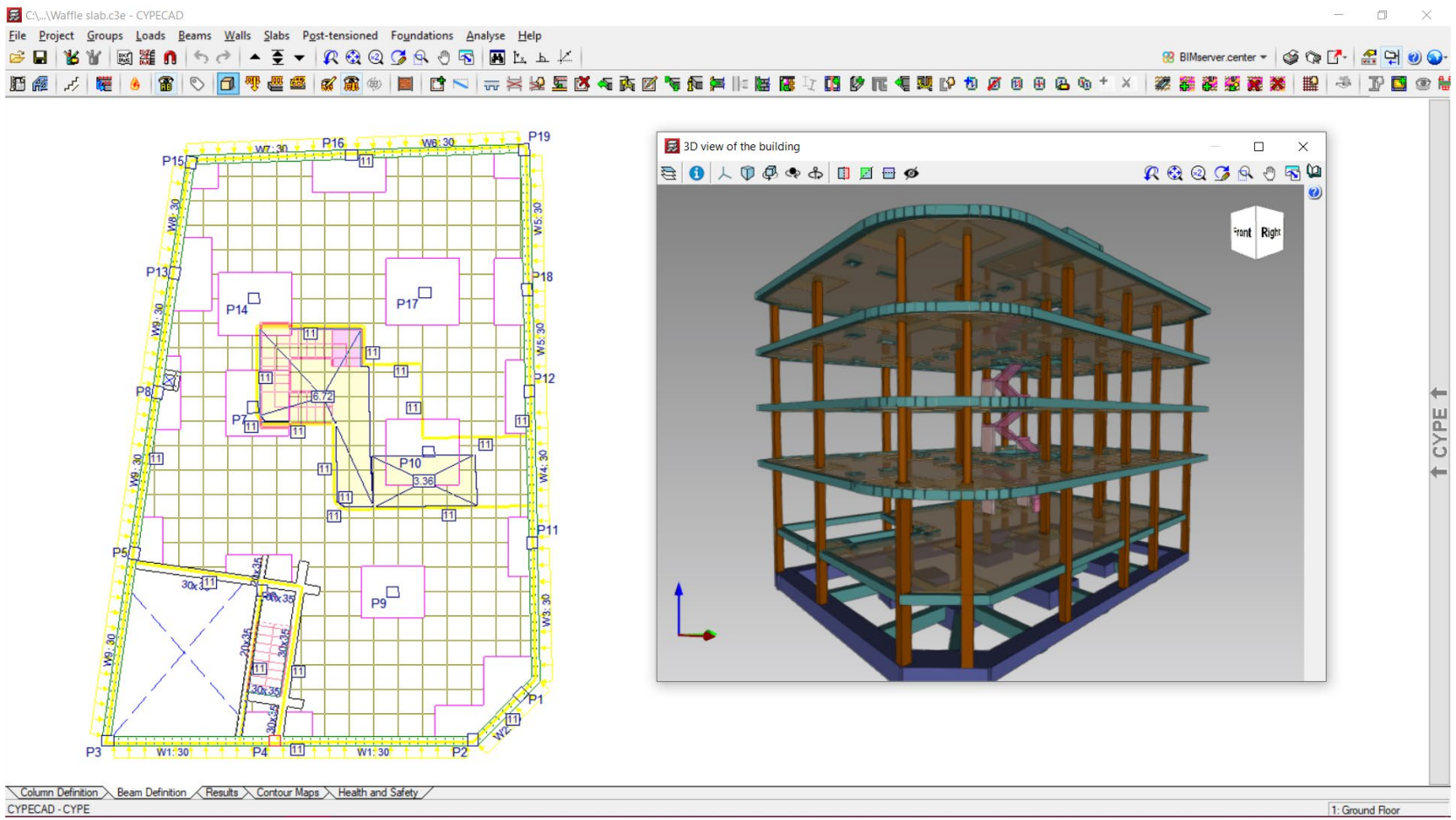
CYPECAD

Analysis and Design of Building Structure

CYPECAD



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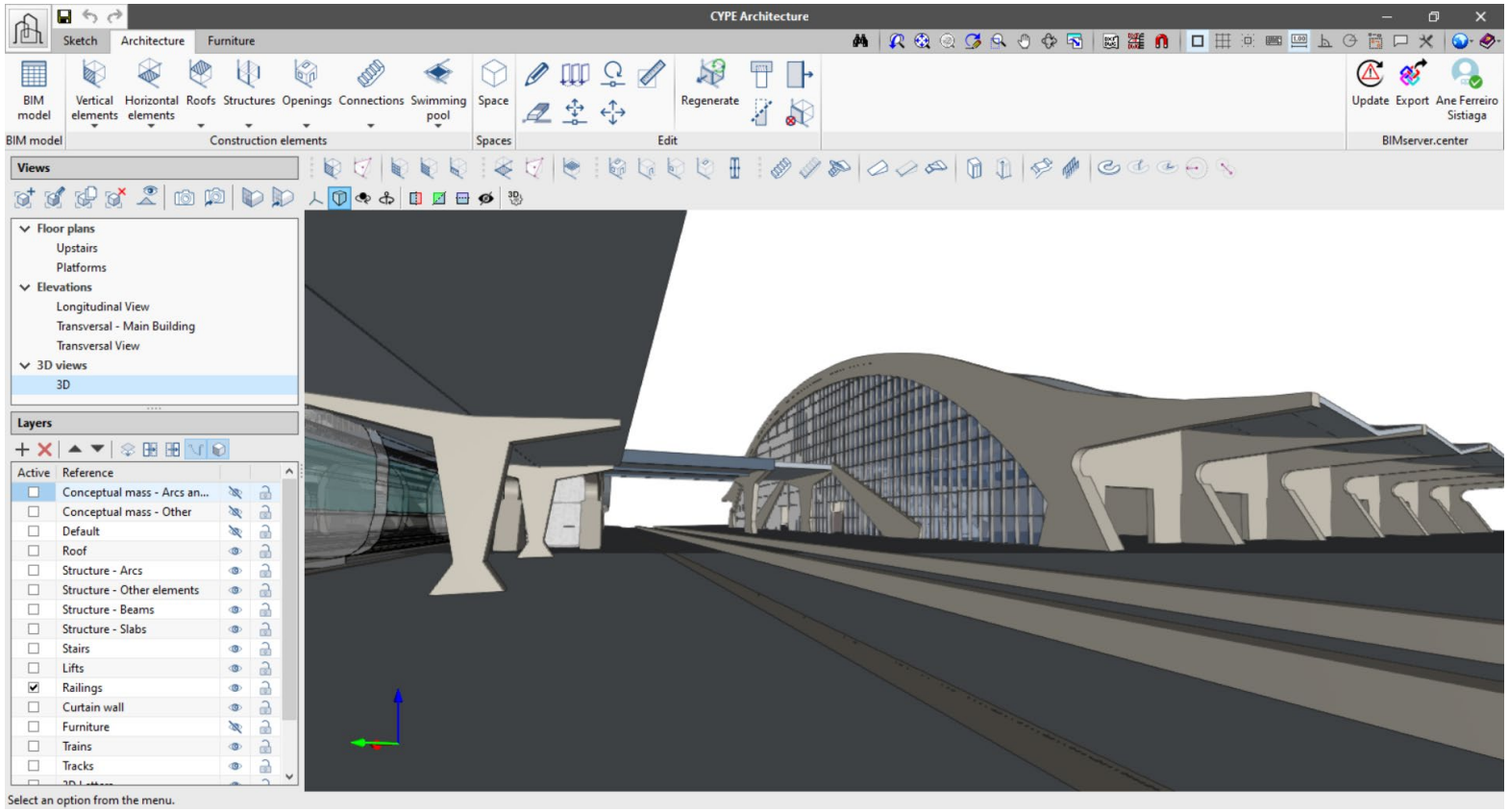
CYPE Architecture

Architectural

BIM modeller

[CYPE Architecture]



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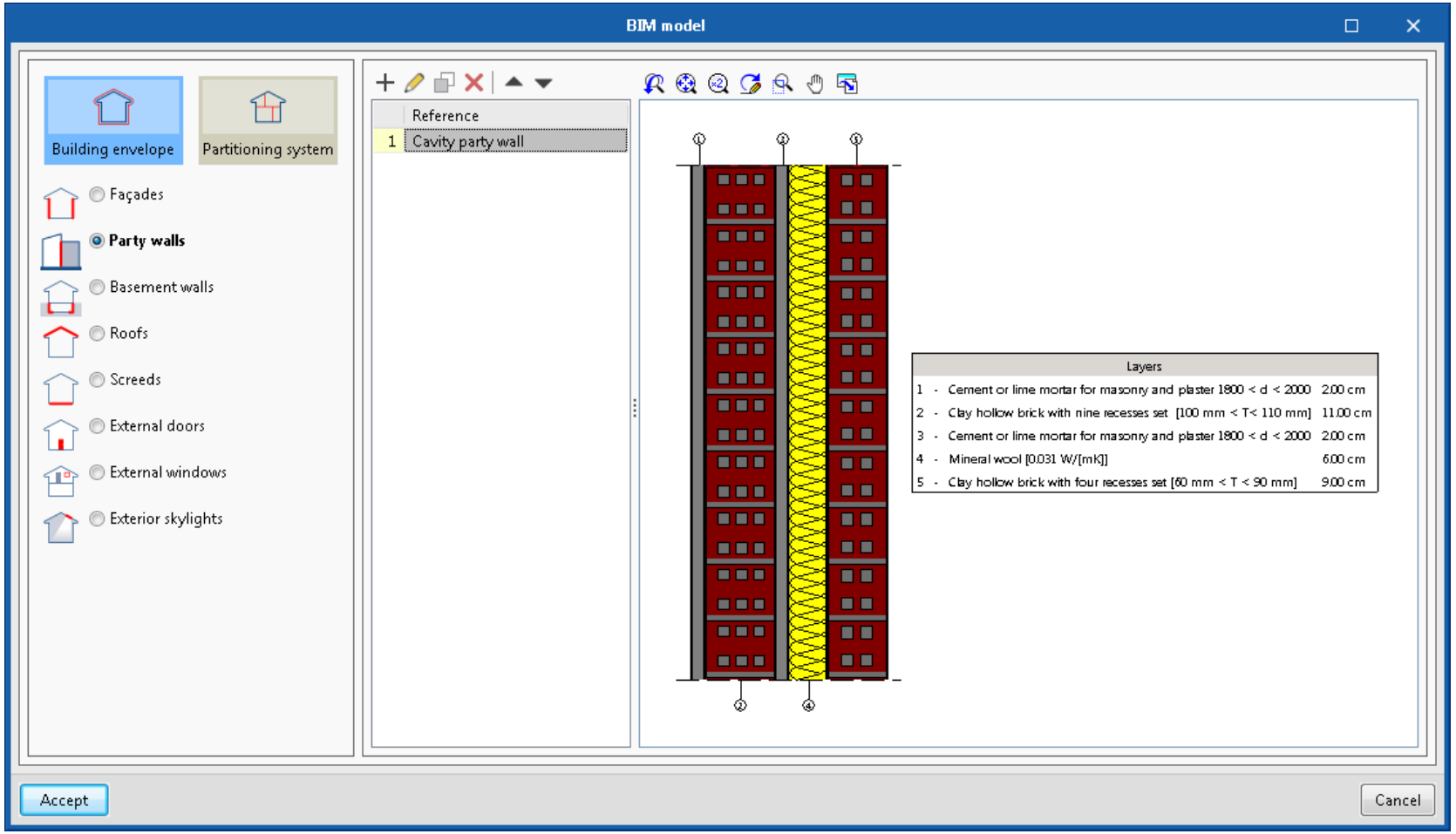
Open BIM Construction Systems

[Open BIM Construction Systems (cype.com)]



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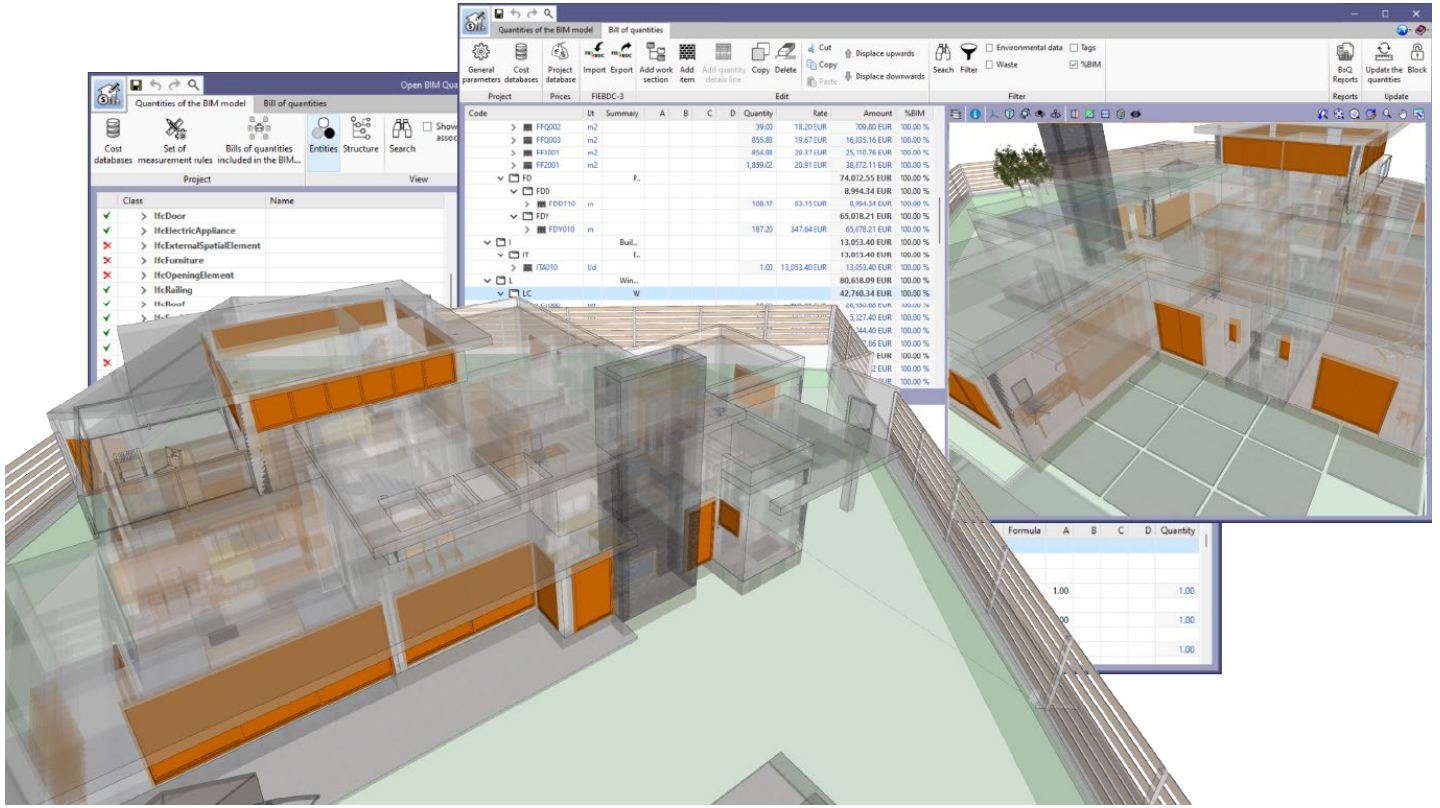
Open BIM Quantities

[Open BIM Quantities (cype.com)]

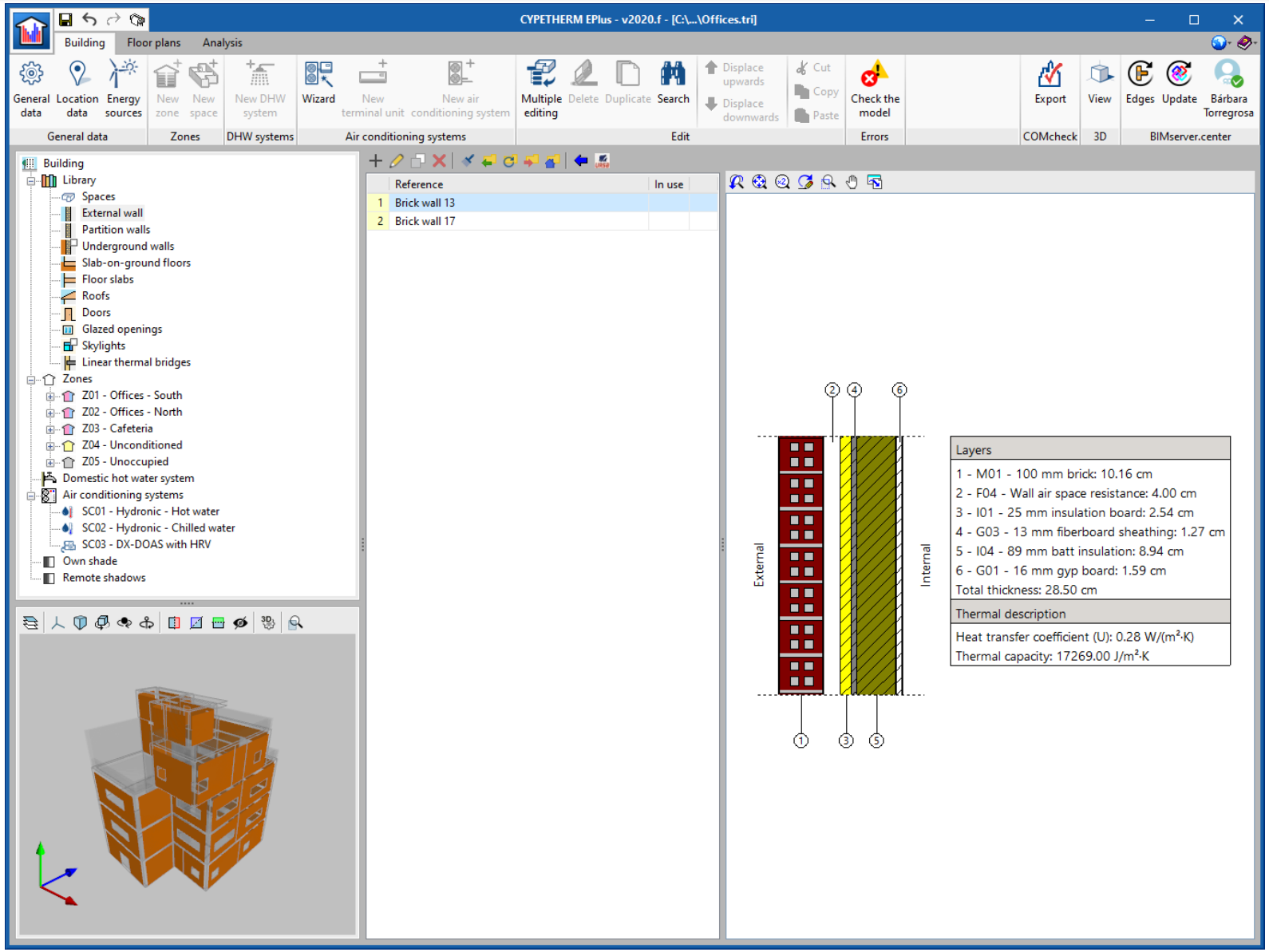
Bill of Quantities - IFC model



CYPETHERM EPlus

Building Energy Analysis

CYPETHERM EPlus



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CYPETHERM EPlus

Building Energy Analysis

CYPETHERM EPlus

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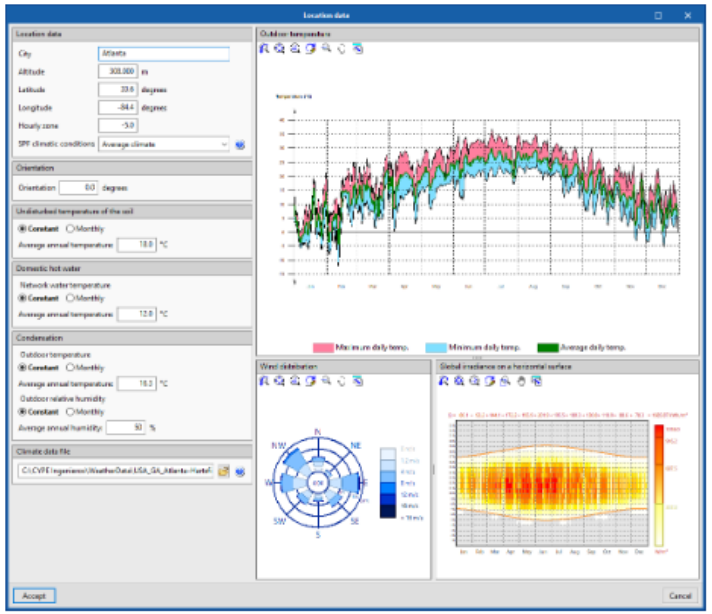
Features and results output

Among the main features of CYPETHERM EPlus the most important ones are highlighted in the following sections:

Climate data

The program allows users to work with any EnergyPlus Weather Format (EPW) climate data file, available on the official EnergyPlus™ website.



Predefined data and libraries

- **Materials**
  Materials from different international libraries such as ASHRAE or those of France, Portugal, Italy or Spain.

- **Thermal bridges**
  Import of lineal thermal transmittance values from different international libraries, including the Atlas of thermal bridges of the ISO 14683 standard, the Spanish code CTE DA DB-HE / 3, or those defined in the French standard RT2012, as well as the calculation of lineal thermal transmittance by numerical analysis in accordance with ISO 10211, integrating the calculation performed by the CYPETHERM BRIDGES program.

- **HVAC systems**
  Selection of HVAC equipment with data defined by the manufacturers Daikin, Fujitsu, Saunier Duval, Toshiba and Vaillant.

- **Internal loads and schedules**
  Import of internal loads (occupation, ventilation, lighting and equipment) from ASHRAE manuals.

CYPETHERM EPlus

Building Energy Analysis

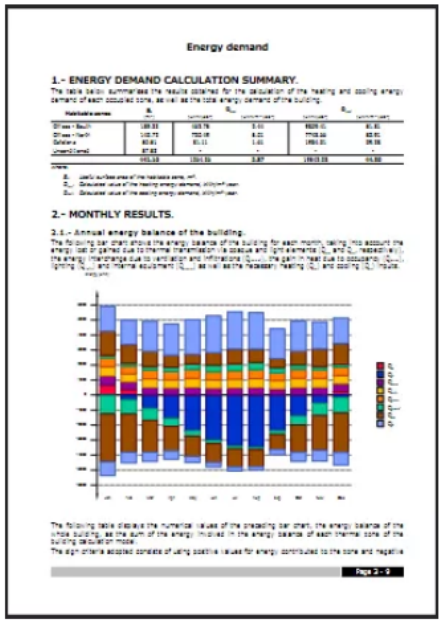
CYPETHERM EPlus

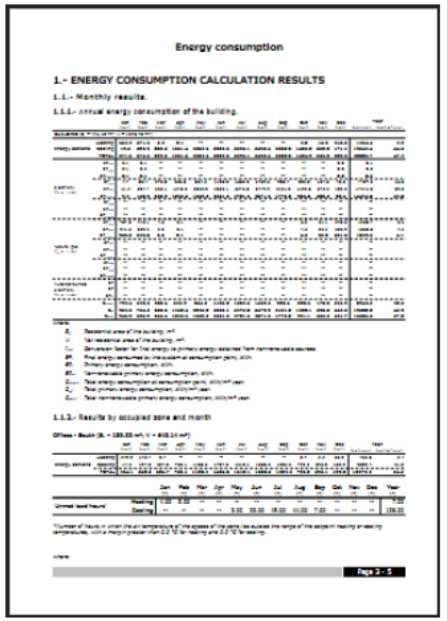
Calculation results

Some of the calculation results offered by the program include:

- **Energy demand report**
  Results of the energy demand calculation, detailed by thermal zone.

- **Energy consumption report**
  Results of the energy consumption calculation, detailed by thermal zone and energy vector.





Complementary reports and calculations

CYPETHERM EPlus also offers a series of additional features that broaden the results obtained by the program:

- **Condensation**
  Allows users to check for the presence of surface and interstitial condensation in accordance with ISO 13788, integrating the calculation carried out by the CYPETHERM HYGRO program into each construction system of the building's thermal envelope.

- **Description of materials and construction elements**
  Report of the different construction elements present in the job along with their materials, quantities, transmission coefficients, etc.

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That’s all

Thanks for your attention