DIAL

HCNE Region: Designing and building lighting projects in a smart and digital way

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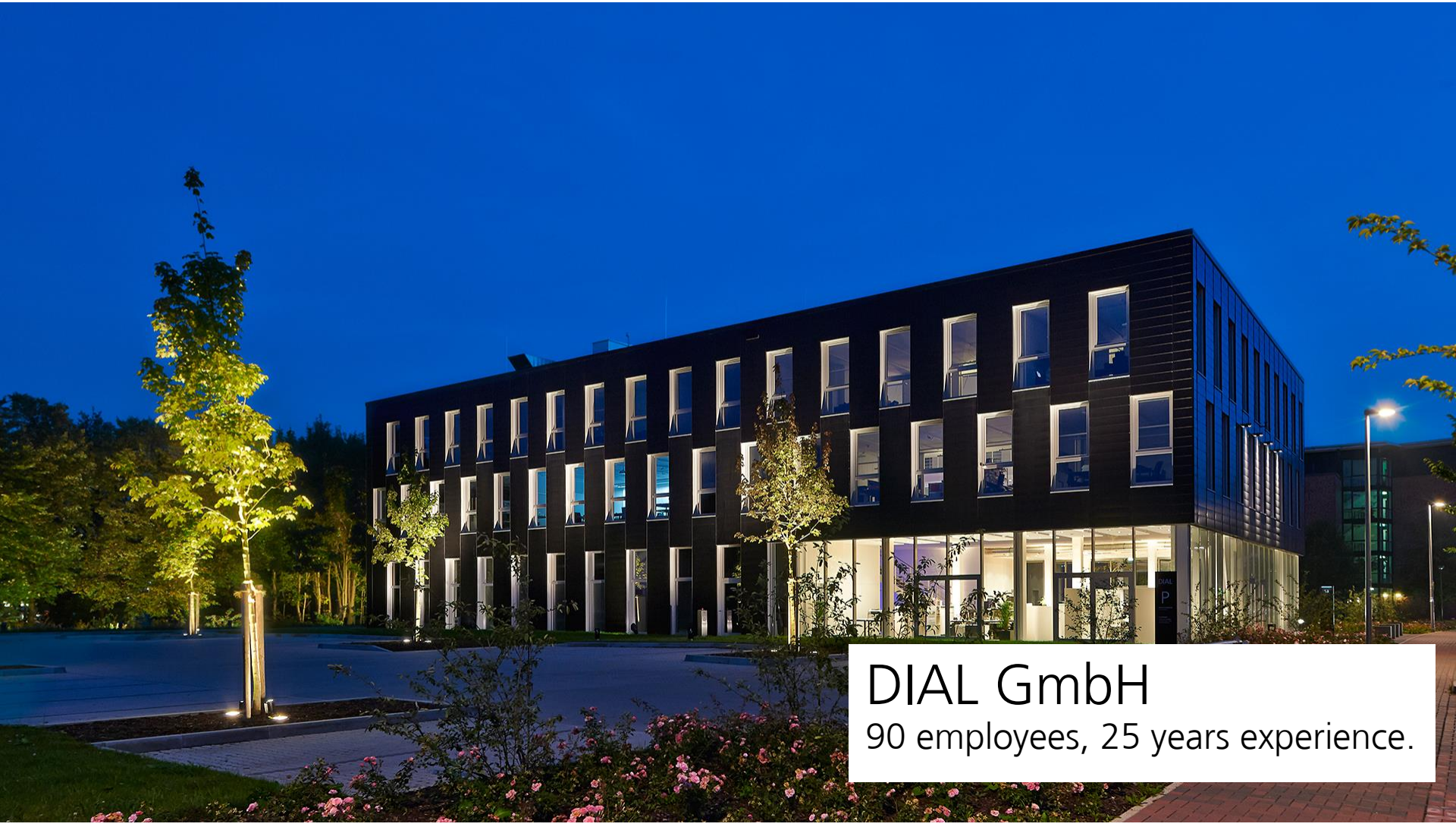

DIAL GmbH
90 employees, 25 years experience.

Some definitions

→ BIM (Building Information Modeling)

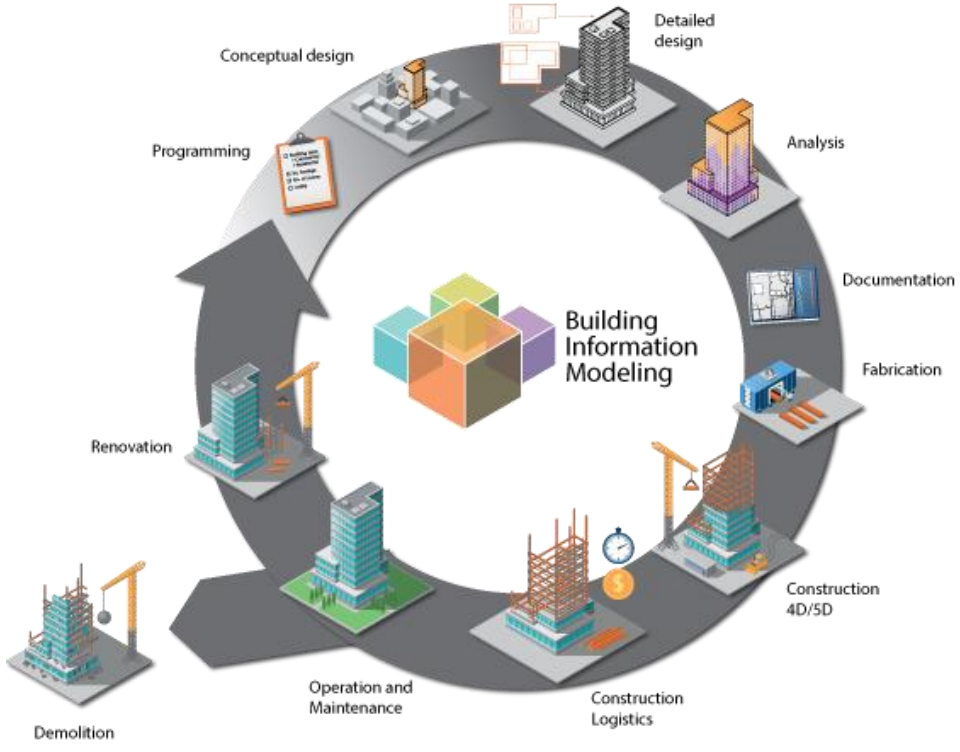
working method for planning and realizing of building projects, based on active networking

→ IFC (Industry Foundation Classes)

A general data scheme, which enables interchanging of data between different proprietary software applications. (ISO16739)

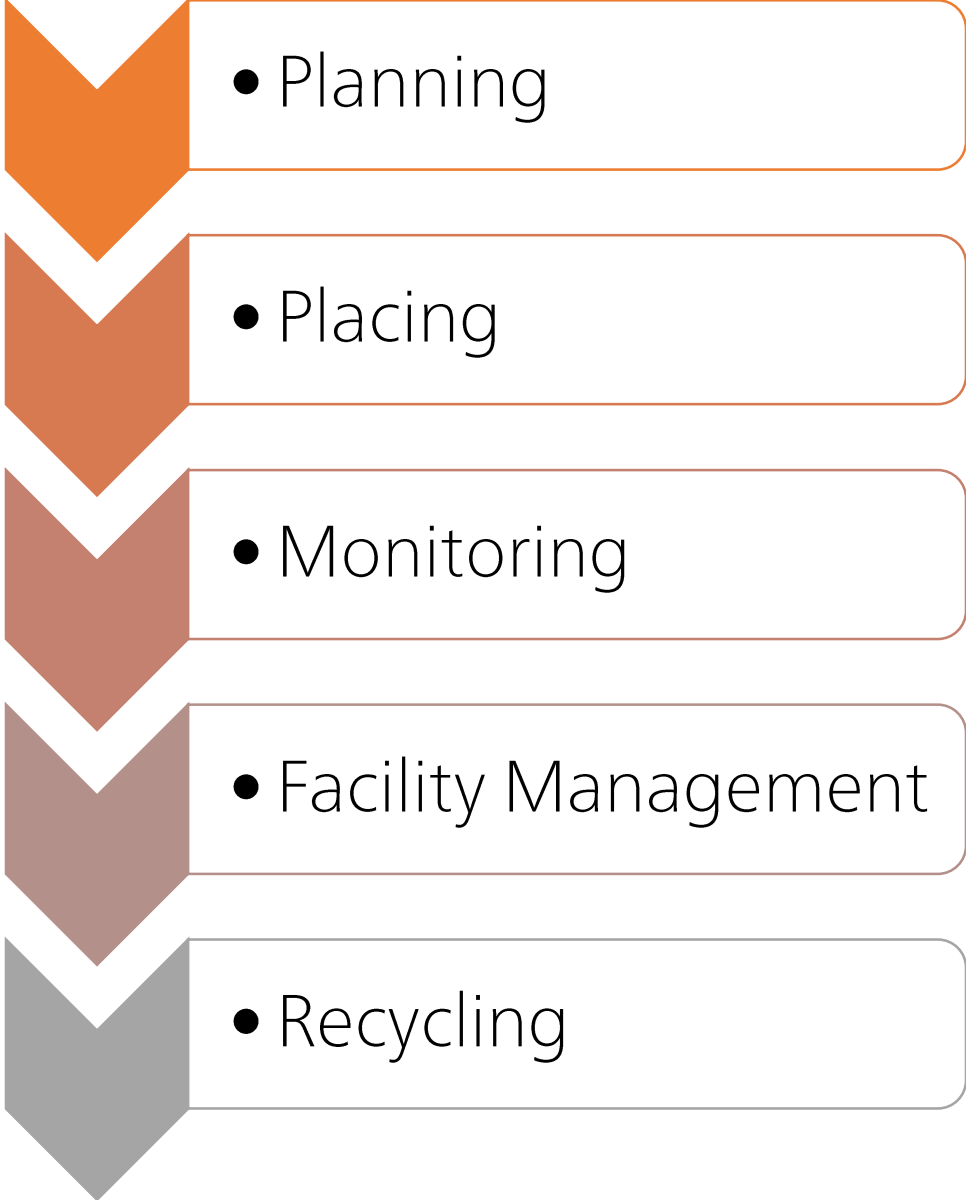
→ bSDD (BuildingSMART Data Dictionary)

bSDD enables a networking of terms and expressions, their dependencies and definitions (type of data, units, parameters,…) across several languages.



Aims of BIM

- → Look at the complete life cycle
- → Assists in investment decisions
- → Energy-, environment-, life cycle- and other analyses
- → Visualization and proof of producibility
- → Data exchange and quality control
- → Cost reduction, planning reliability



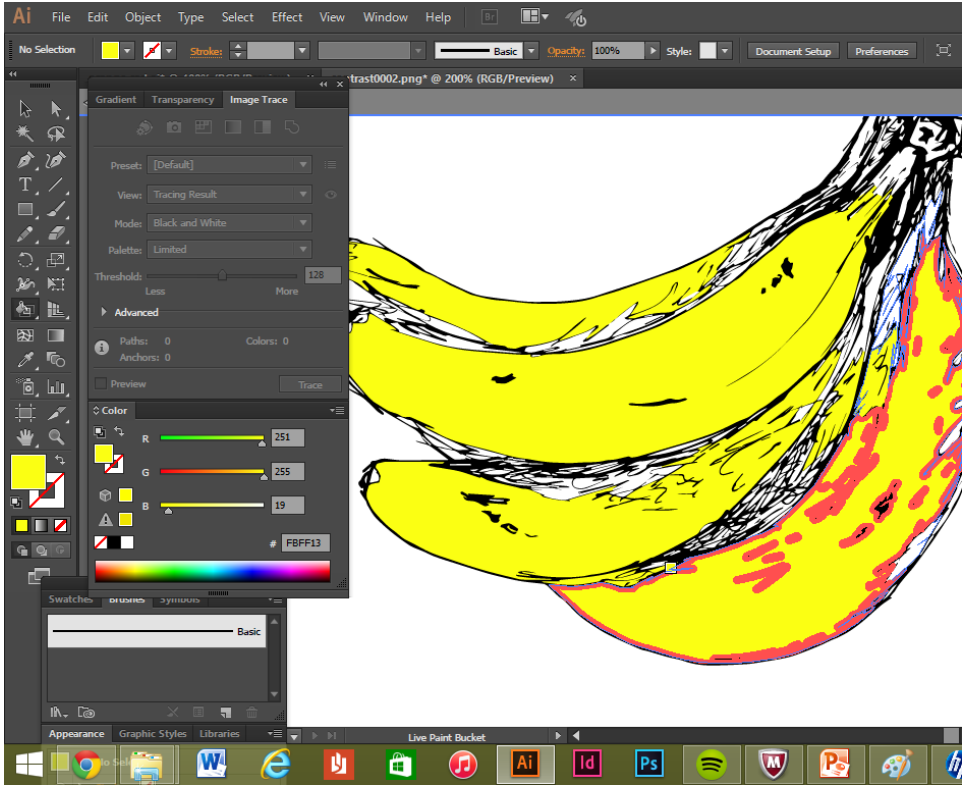
Banana Information Modelling (BIM)

→ Included in 3D model:

shape and colour

→ Not included:

sugar content, calories, vitamin content, date of expiry, freshness, producing country, Fair Trade Label, etc.



BIM vs CAD, Modeling or Drawing

CAD:

- Lines, Layer

BIM:

Definition:

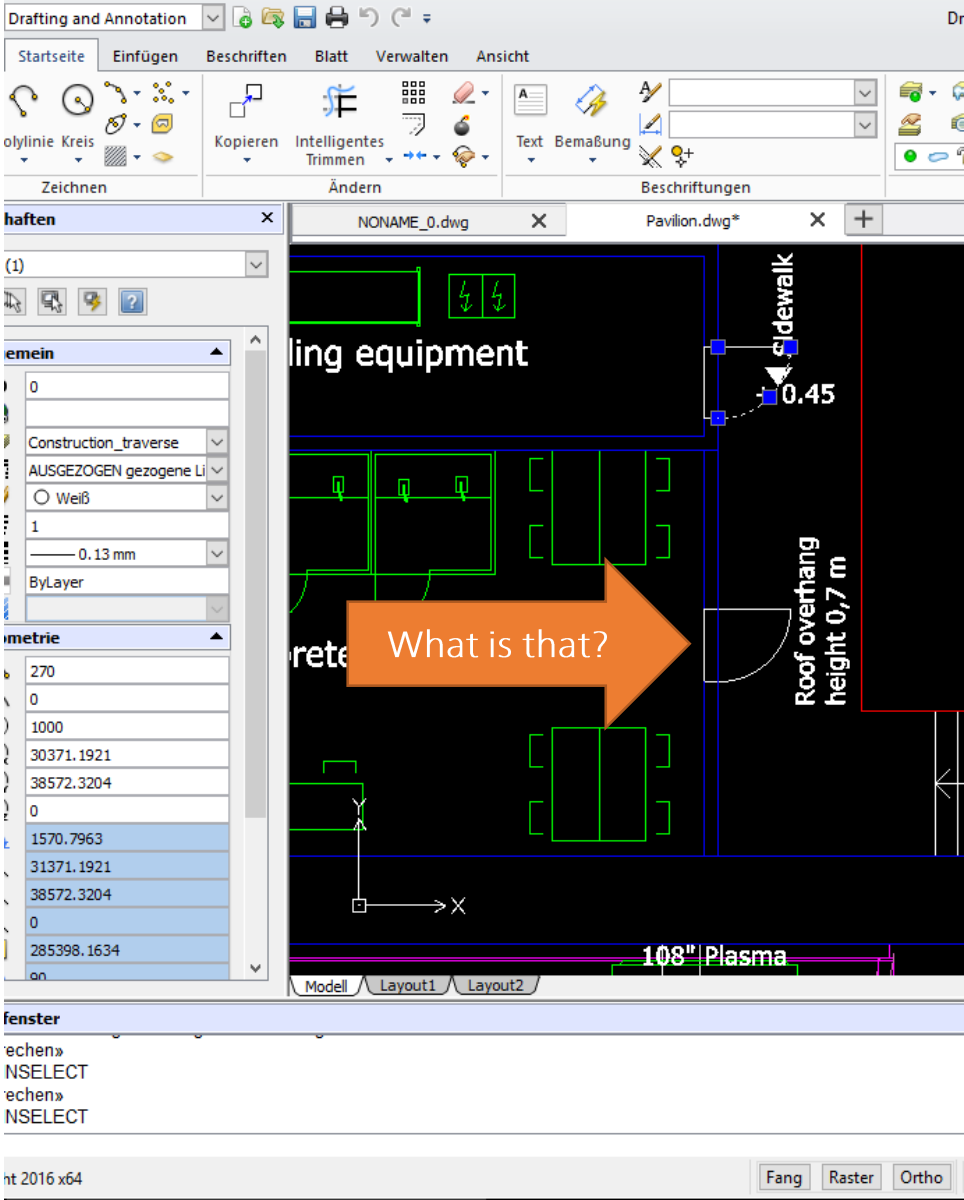
- What do we mean with “door”?

Function:

- What are the properties of a „door”?

Performance:

- What has a „door” to performe?



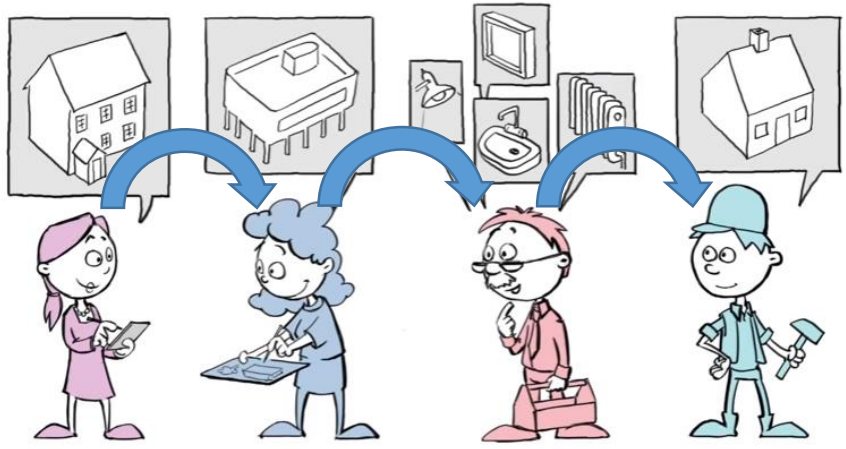
Building Information Modeling (BIM)

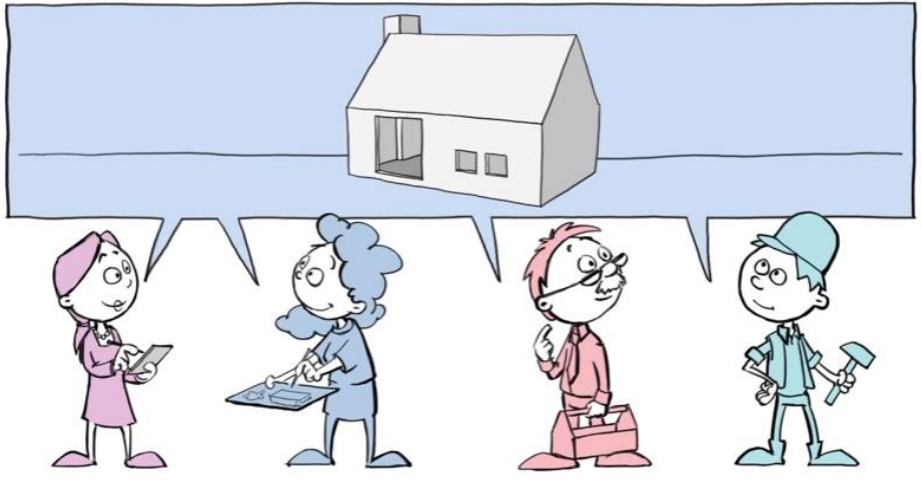
→ Digital image of a real building

→ Each real object will be represented by a digital object

→ Complete information will be exchanged by open interfaces

→ Each participant of the process can access the information which is relevant for him



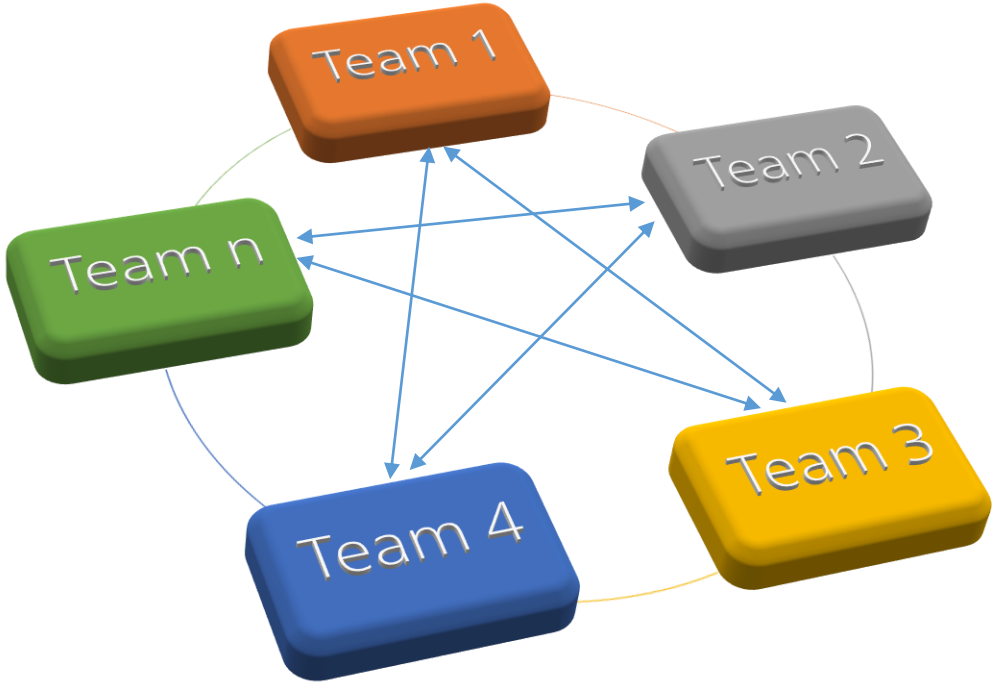


Interoperability

→ That's what it is all about

→ Interoperability ensures, that the results of one flows into the plans of the others

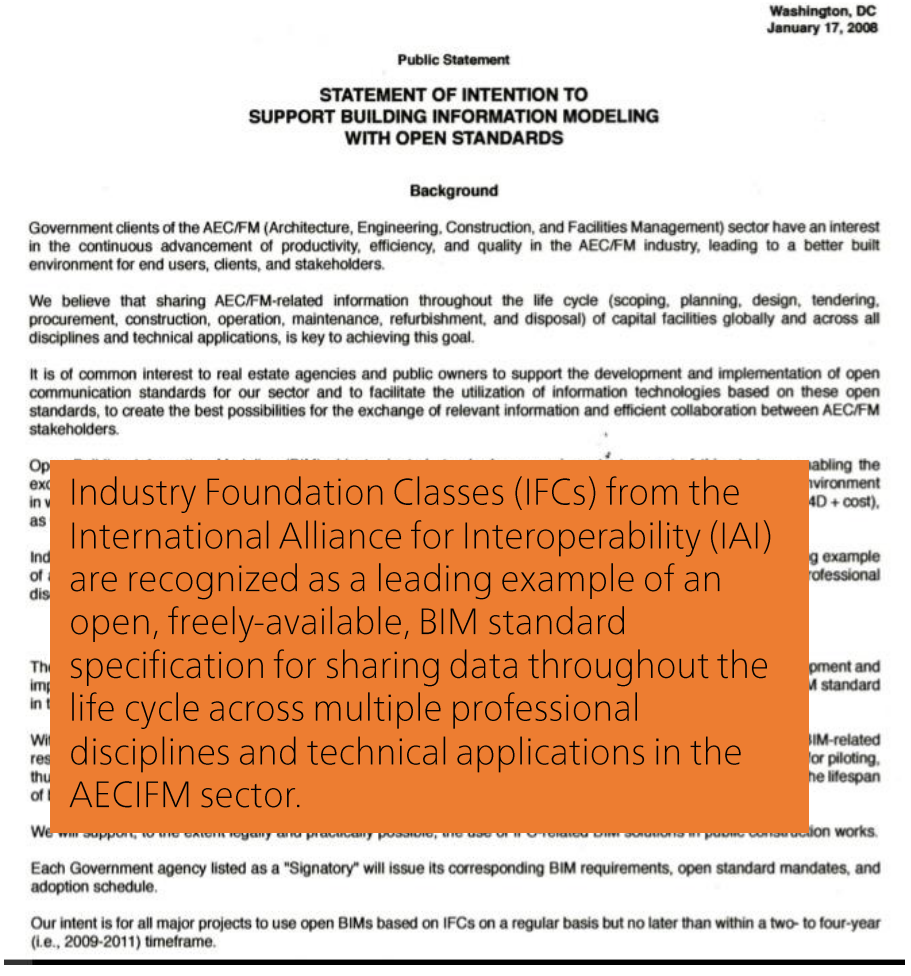
→ Basic requirement is the use of a common agreed standard



Importance of IFC in BIM

- → Tender documents should be neutral, without specification of a proprietary software solution
- → Availability of standardized interface IFC (ISO 16739)
- → Requirements for open interfaces by public and private owners and operators

  - → How long will my software be maintained?
  - → Can I import/export my file in 15 years?
  - → Is any software on the market to solve ALL problems?



Washington, DC
January 17, 2008

Public Statement

STATEMENT OF INTENTION TO SUPPORT BUILDING INFORMATION MODELING WITH OPEN STANDARDS

Background

Government clients of the AEC/FM (Architecture, Engineering, Construction, and Facilities Management) sector have an interest in the continuous advancement of productivity, efficiency, and quality in the AEC/FM industry, leading to a better built environment for end users, clients, and stakeholders.

We believe that sharing AEC/FM-related information throughout the life cycle (scoping, planning, design, tendering, procurement, construction, operation, maintenance, refurbishment, and disposal) of capital facilities globally and across all disciplines and technical applications, is key to achieving this goal.

It is of common interest to real estate agencies and public owners to support the development and implementation of open communication standards for our sector and to facilitate the utilization of information technologies based on these open standards, to create the best possibilities for the exchange of relevant information and efficient collaboration between AEC/FM stakeholders.

Industry Foundation Classes (IFCs) from the International Alliance for Interoperability (IAI) are recognized as a leading example of an open, freely-available, BIM standard specification for sharing data throughout the life cycle across multiple professional disciplines and technical applications in the AECIFM sector.

Each Government agency listed as a "Signatory" will issue its corresponding BIM requirements, open standard mandates, and adoption schedule.

Our intent is for all major projects to use open BIMs based on IFCs on a regular basis but no later than within a two- to four-year (i.e., 2009-2011) timeframe.

The Light

- → And what does this mean for a lighting designer / manufacturer?
- → What's about „my" luminaires? Is EULUMDAT/IES also BIM?
- → Do I have to buy Revit, Archicad, Vectorworks, Bentley and Allplan now?
- → How to calculate LG7, UGR and TI in my BIM software?

BIM for lighting designers

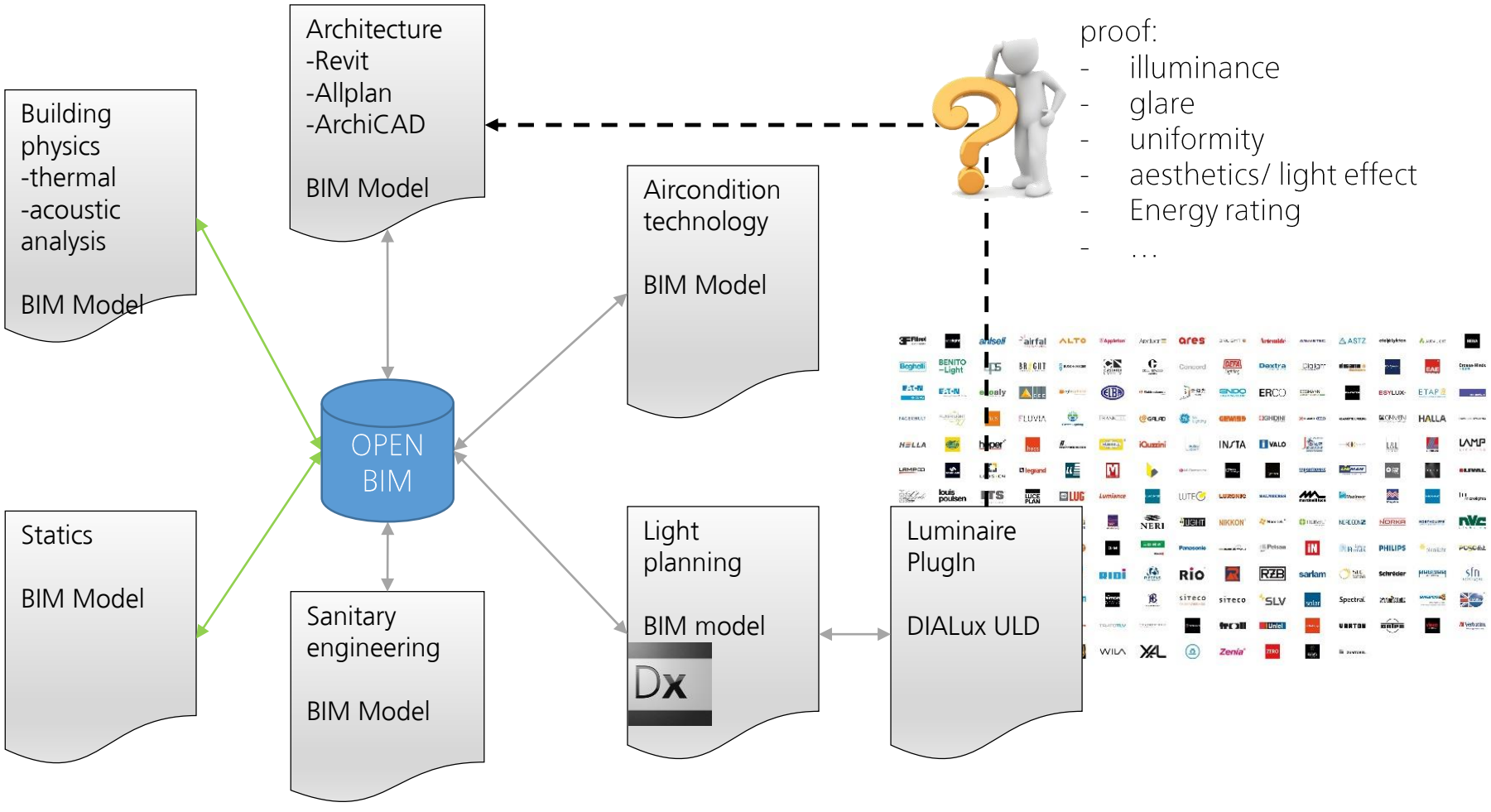
→ Lighting design is one sectoral planning in building process

→ The lighting designer needs the geometry of building/architecture/area

→ The lighting designer develops the lighting concept

→ The lighting design includes information about products and positions

Lighting consultant in the BIM Process



Recognizing BIM Objects

→ Remember that you use BIM to implement a product, not to manufacture it

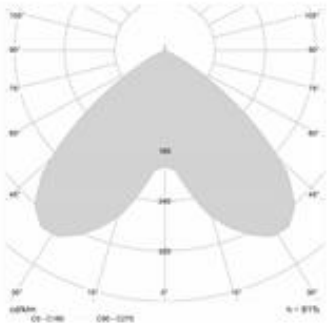
→ Key is providing the right information that is relevant at the right time

→ Example fixture:
no ballast, no screw, no socket
but power, voltage, size,
mounting type, maintenance data

Product Details

Description	SBH-O 250W SHP-S IP20 Aluminium Reflector
Article no.	9043941 + 9043976
Mounting	Suspended
Housing	Die-cast aluminium body
Lamp included	No
Notes	Order Lamp Separately
LOR (%)	81 %
IP rating	20
IK rating	02
Place of use	Interior Luminaire
Voltage	220-240V

Light Distribution



Open BIM

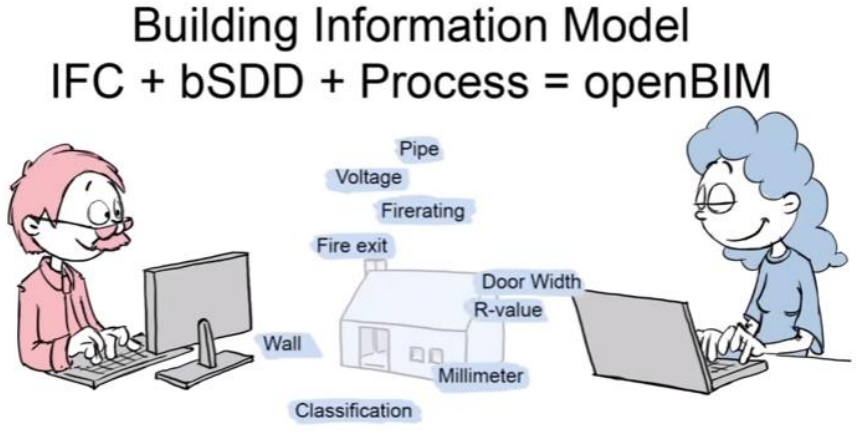
→ Standardized information

→ Uniform data format

→ Standardized processes

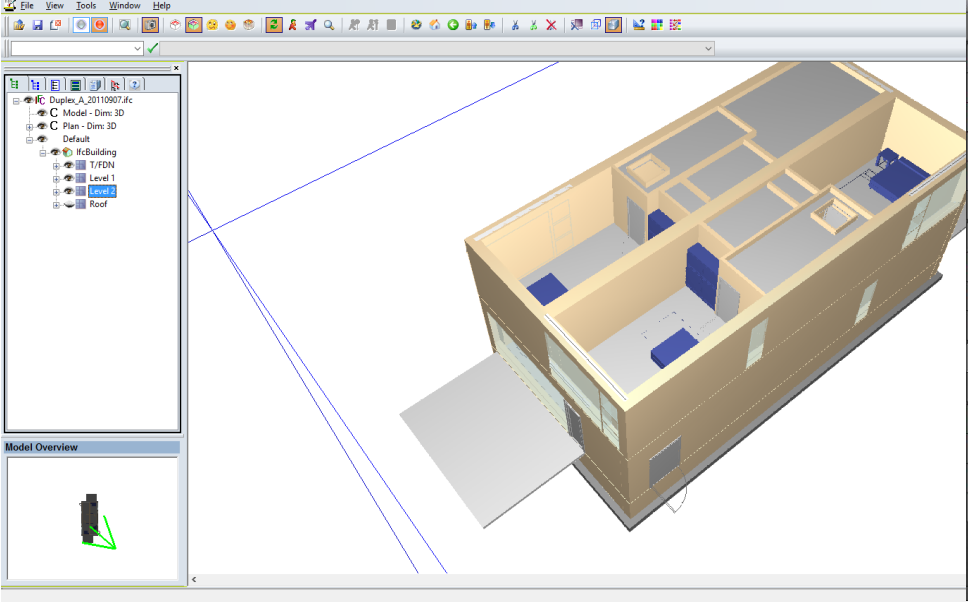
→ Any software can use it

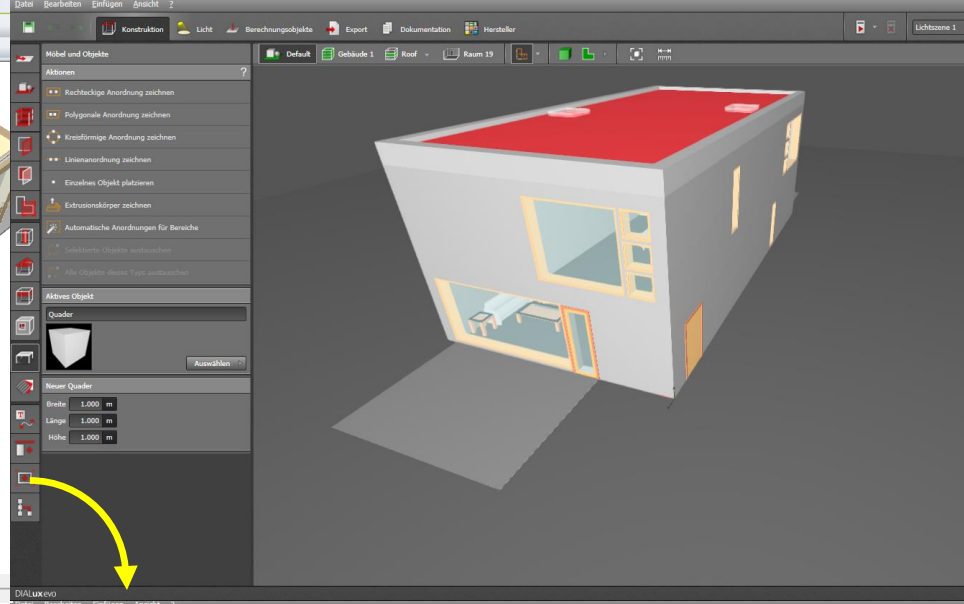
→ https://www.youtube.com/watch?v=2m_IL99WOzQ

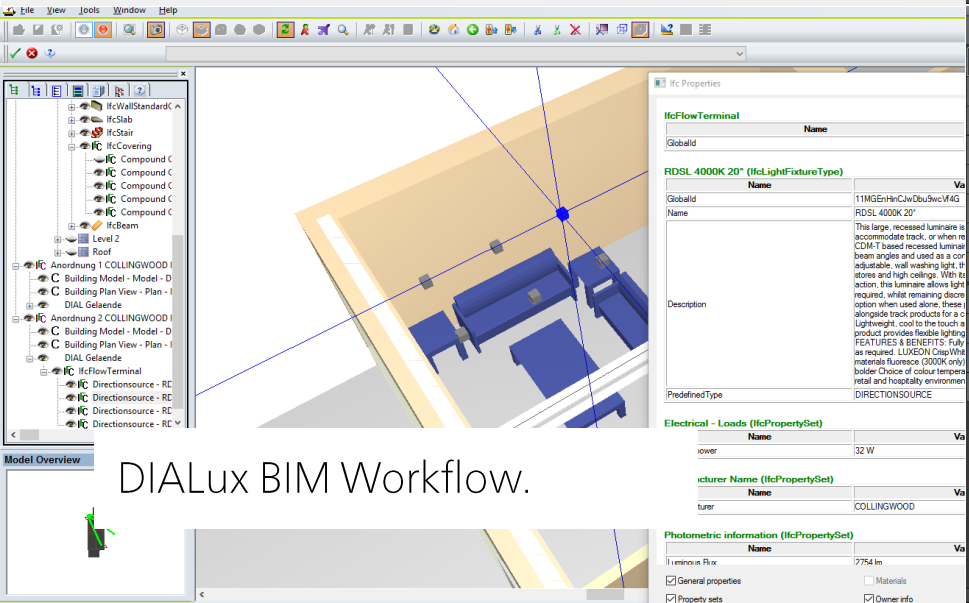


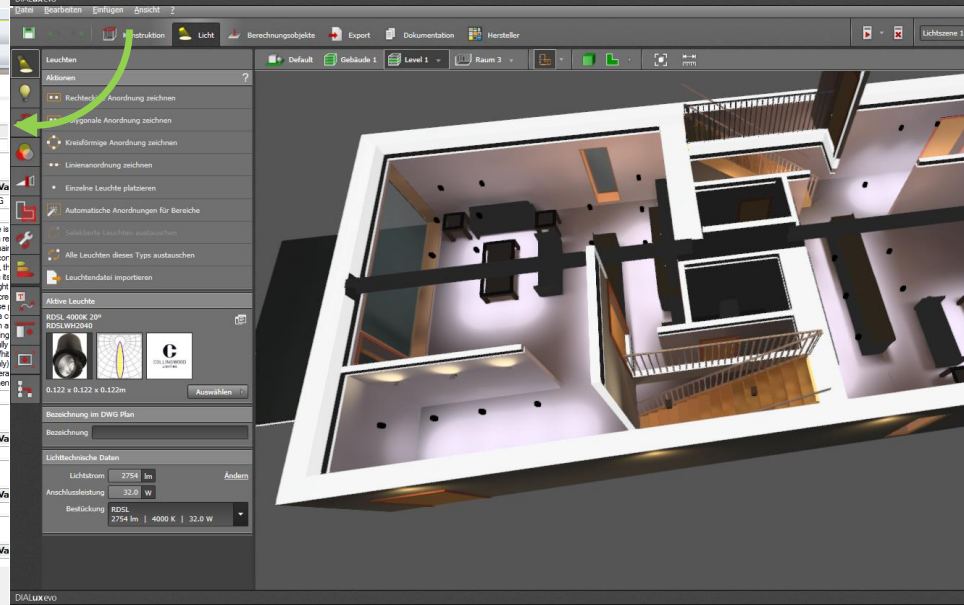
buildingSMART
International Alliance for Interoperability

OPEN BIM™









DIALux BIM Workflow.

Questions and problems

→ Who is the owner of the design?

→ Who pays for the lighting design?

→ With transfer of the planning results into IFC / BIM everyone has access to the data

→ Complete design: 8h

Exchange of products: 2min