BIM

What is a BIM?

BIM might be viewed both as a technology with production processes and as a model

BUILDING INFORMATION MODELLING

A set of technologies, processes and regulations that allows to develop a digital representation of buildings of any category and difficulty.

BUILDING INFORMATION MODELS

Digital representation of a building. Contains all the necessary information about geometric, physical, functional and other characteristics of the facility.

WHY BIM?

What do we need it for?

Reduction in the time of project implementation

Decrease in the project implementation costs

Controlling of construction documentation

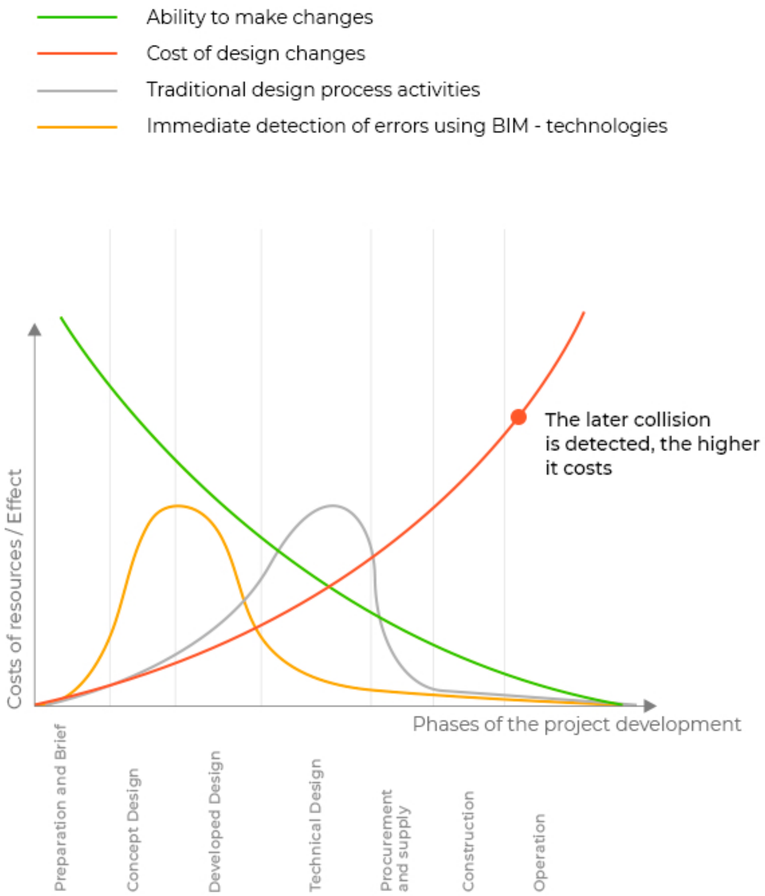
Looks familiar?

Existing problems:

1. Unplanned expenses
2. Delays in the project completion
3. Problems relating to the submitting papers for receiving approvals
4. Lack of coordination between project participants

THERE IS A SOLUTION!

Graph showing the use of resources over the building life-cycle stages (MacLeamy curve)



APPLICATION

Increase in the quality of the projects and cost reduction
due to the integrated interaction between participants of the project
at all phases of the facility life-cycle

Quality control

Cross-functional
interaction

Complex design
solutions in 3D

Information
management

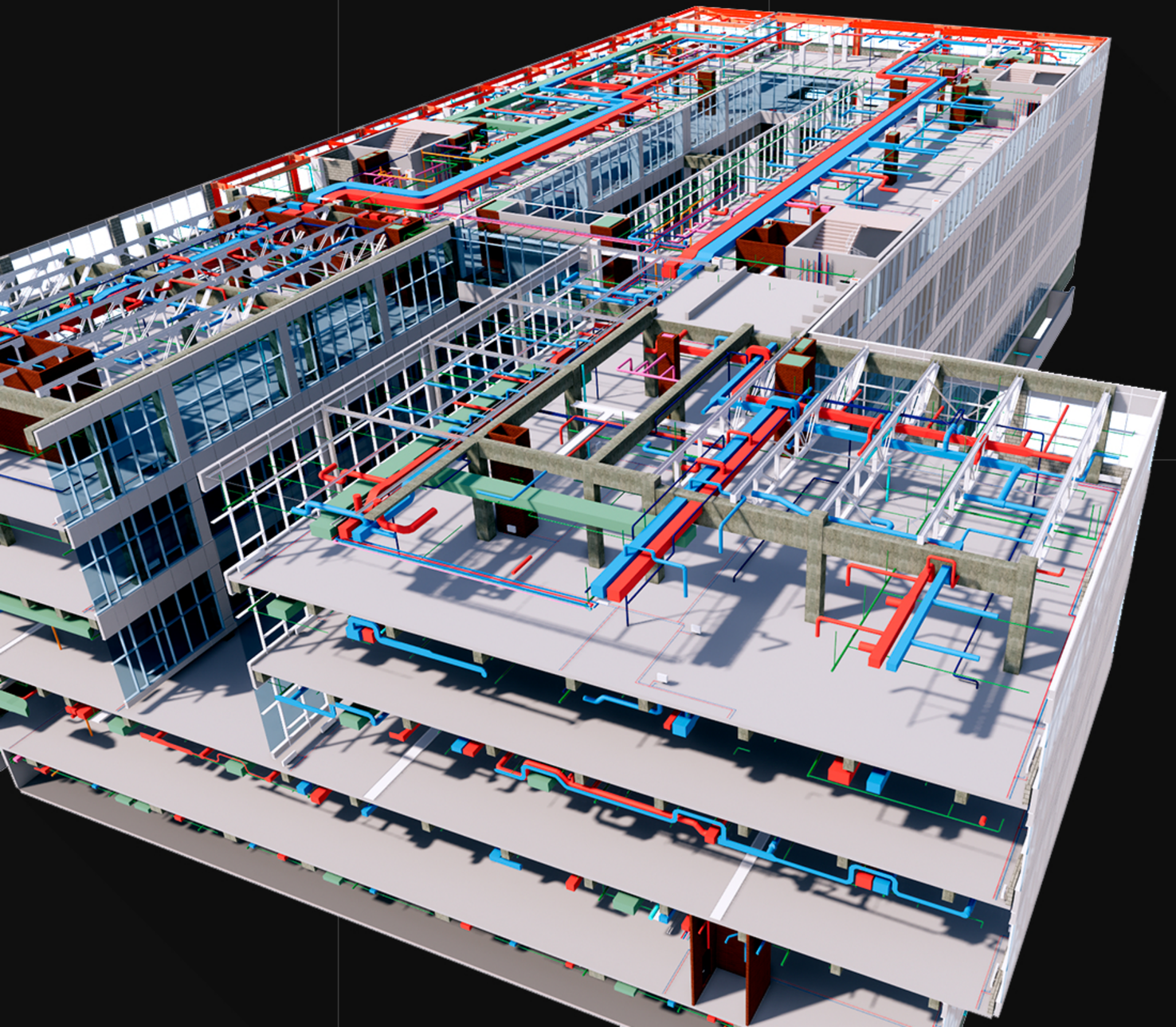
Level of detail
(LOD)

Model
verification

Preparing and correlation
of construction documentation

Scripting for
process optimization

BIM

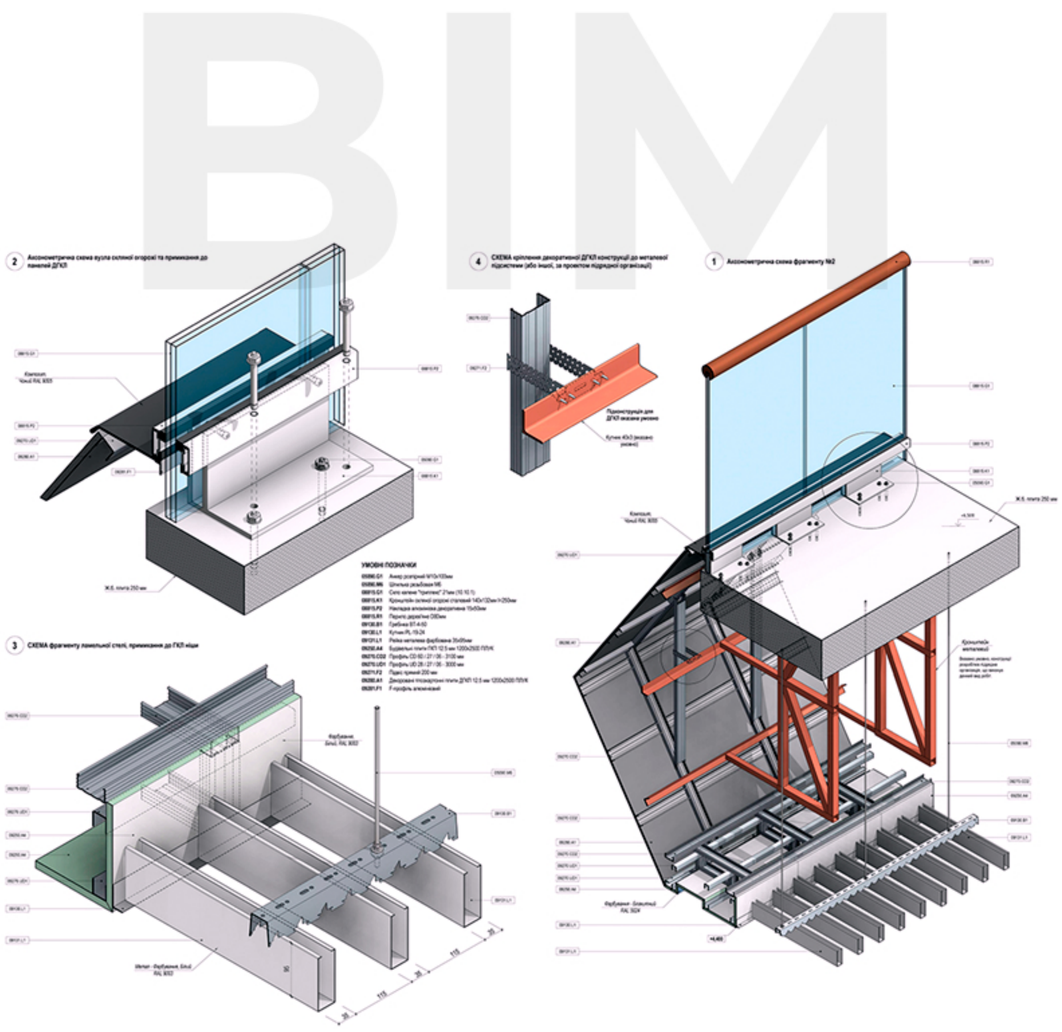


Multidisciplinary interaction

> As a result, information exchange between all departments participating in the project secures both fast and correct decision making.

- Model is divided in links.
- Designer using referrals to input models of adjacent modules in the real-time mode.
- Changes are seen not only by members of the team making them, but also by the rest of participants of the project.

COMPLEX
DESIGN SOLUTIONS
IN 3D



Level of development

LOD

Every project requires certain degree of detail level

LEVEL OF **DETALIZATION**

Level of detailzation is indicated in EIR (Employer's Information Requirements) and depends on type of the module, which is developed and determined separately.

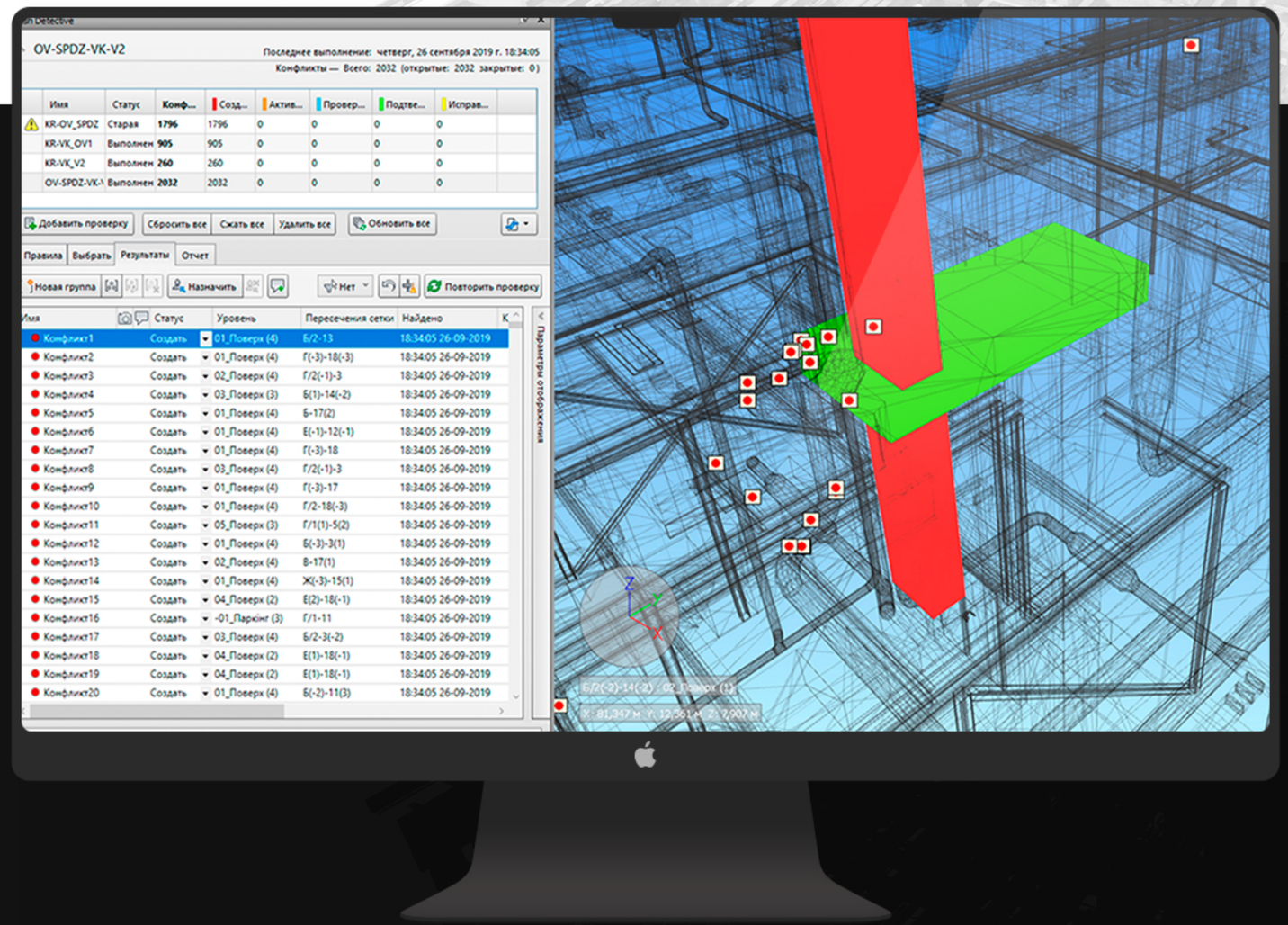
Model verification

TYPES OF COLLISIONS

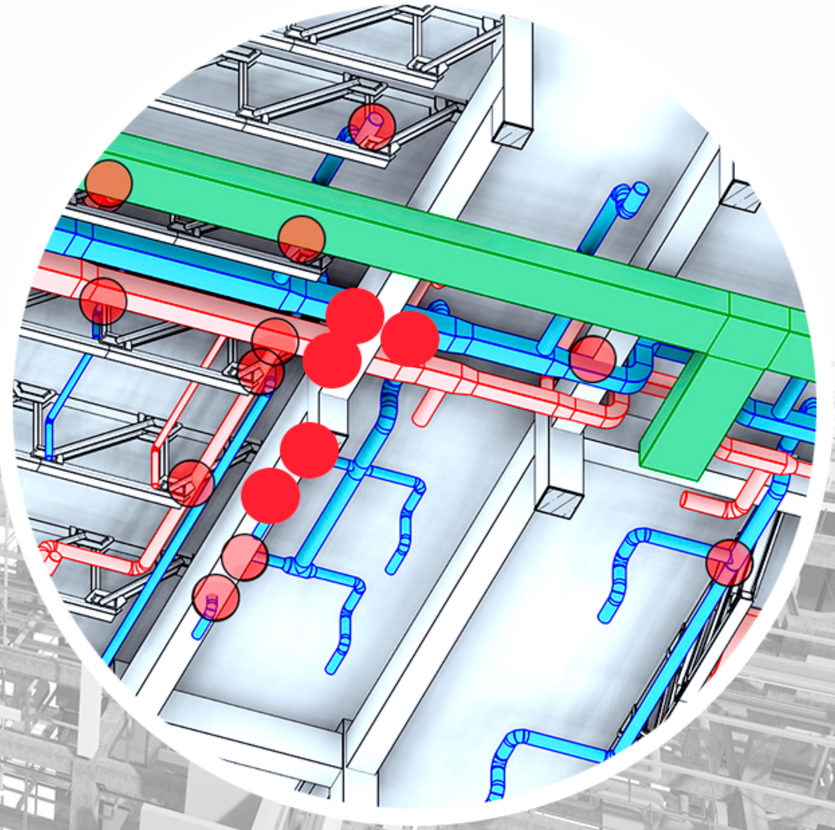
Physical
Crossing of static elements in the model

Intellectual
Elements are placed not correctly regarding the process of interaction with them

Space-time
Placement of workers and machinery at certain period of time is not taken into the consideration and they are crossing, which interferes the construction process



Correlation of the project documentation



Comprehensive solution

- In 60% of the cases BIM technologies led to the reduction of costs
  National BIM report 2019

- In 55% of the cases BIM technologies led to the projects implementation was expedited
  National BIM report 2019

- High quality (correlated) construction documentation is formed
  AVG experience

- Conducting analysis (energy efficiency of the buildings, air mass movement, light analysis, insolation computations)
  AVG experience

High - quality instruments lead to a high – quality results

Incorporating and using BIM will reduce costs and riskiness of the projects

BIM

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