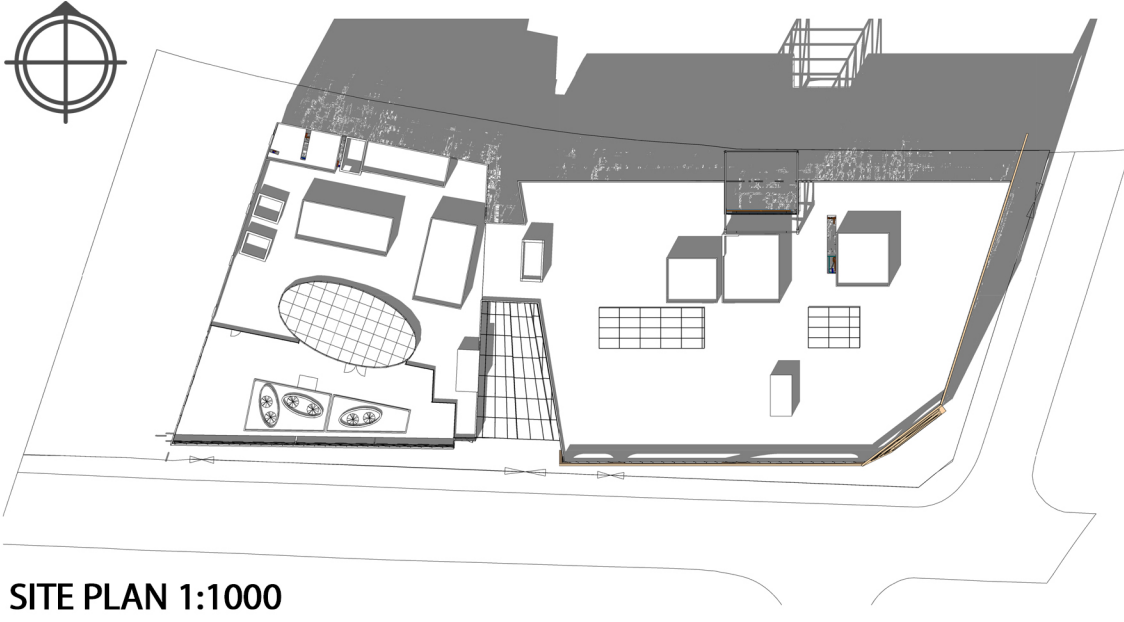


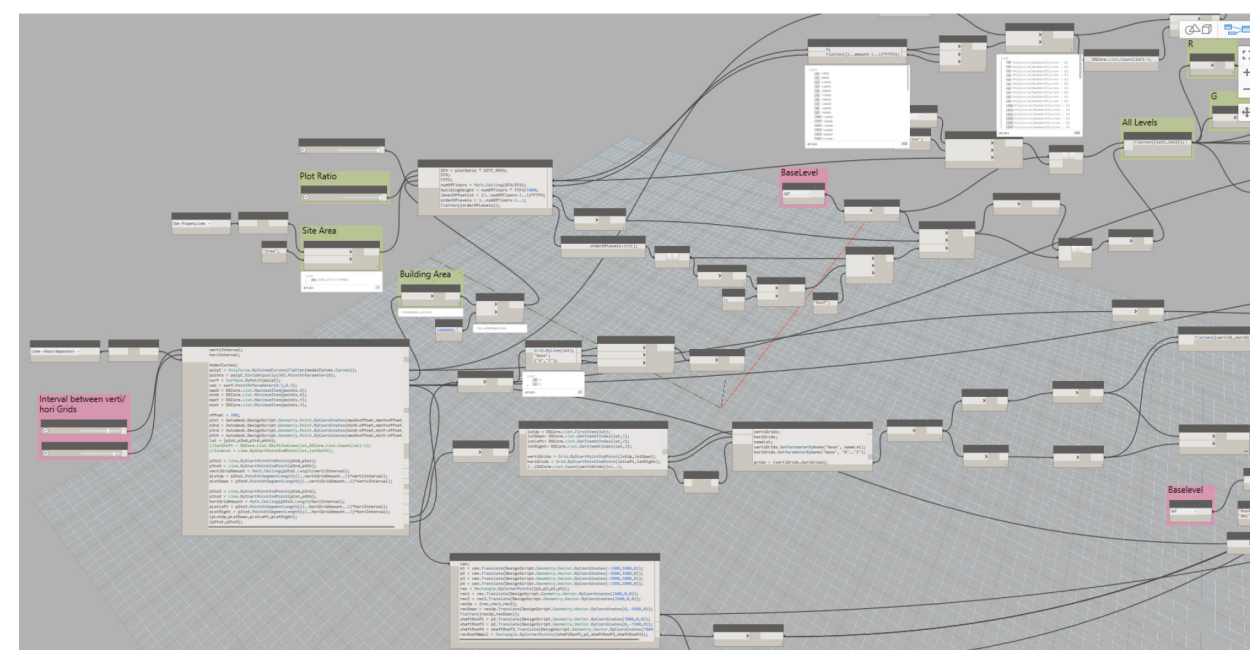
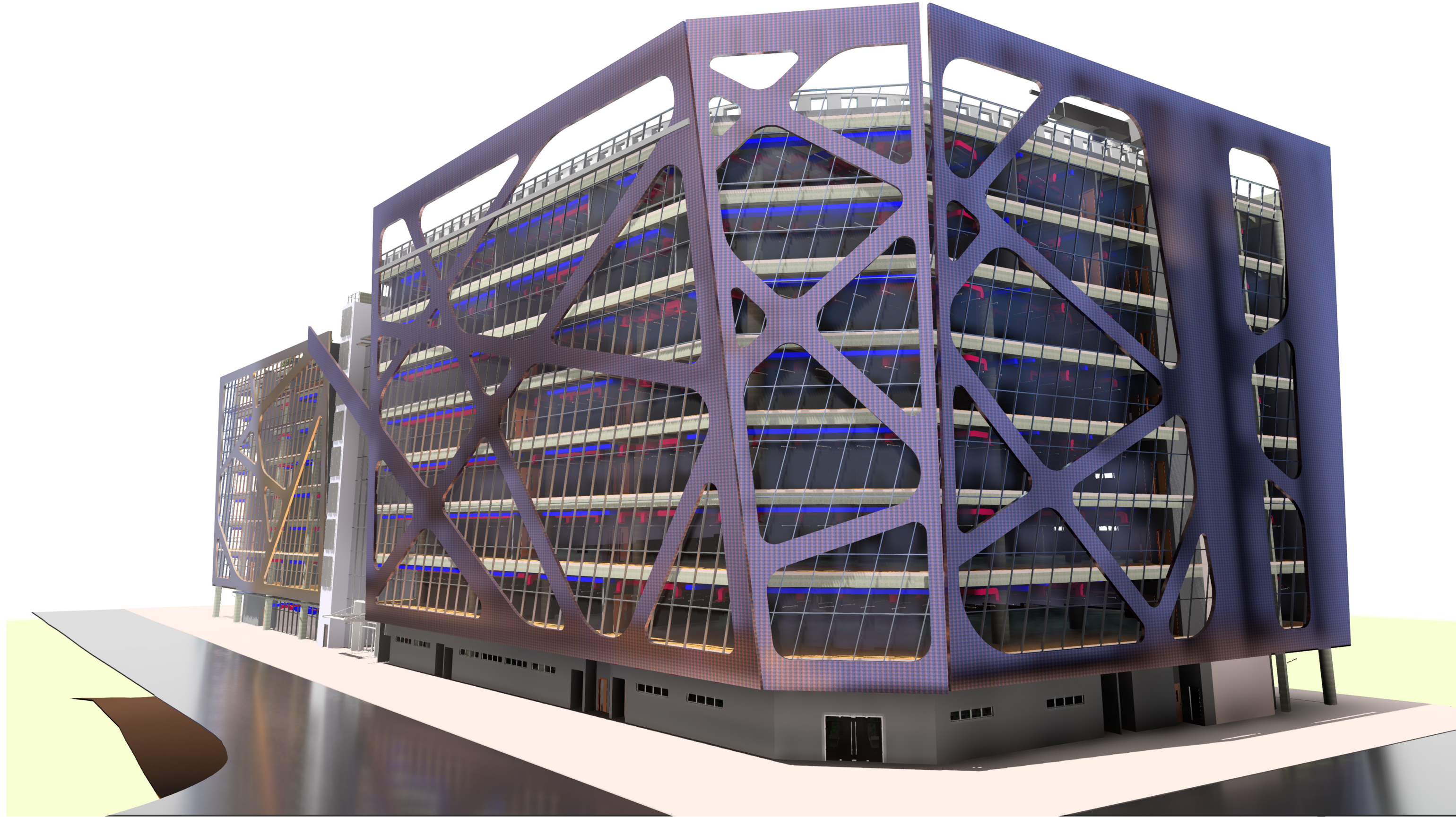
The design for Digital Design & Construction Centre (DDCC) is not only about the excellent outcome, but also showcase the overall workflow and approach of the very feasible fully adoption of Building Information Modelling (BIM) process from the very beginning of the project life cycle.



The IDEA of Engagement Digital & Construction drive the core idea of the Design with BIM Platofrm.

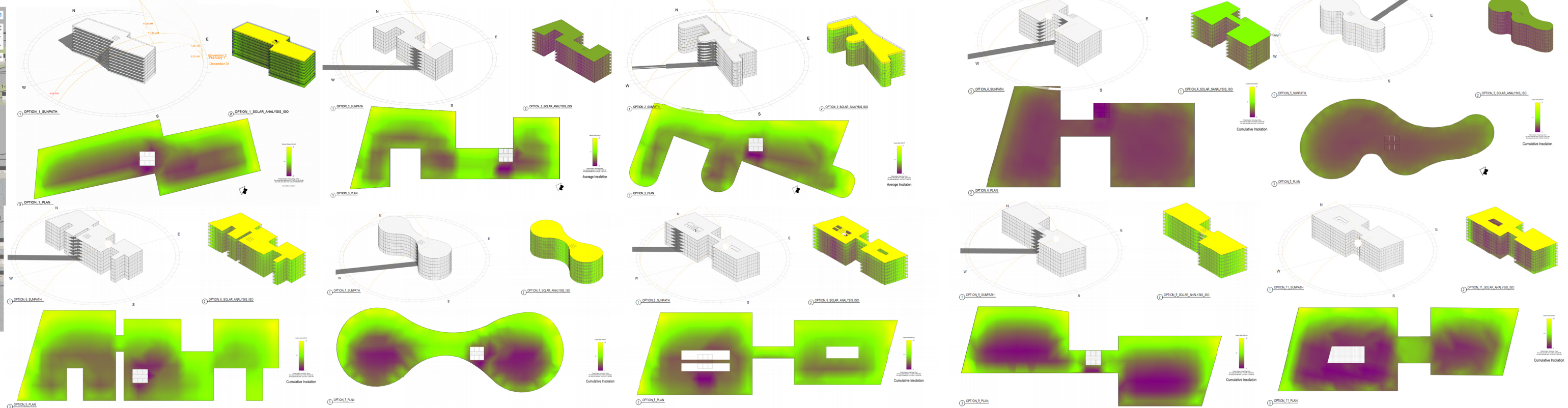
The massing have been divided into two parts with bridges connection, a void Entrance Atrium divided the different space uses for the programme.

The capacity of BIM does not only focus on 3D modelling, but also the ability to produce proper industry common form of documentation, e.g. 2D drawings, schedules from "Single Source of Truth (SSOT)", i.e., the same BIM model The team has fully utilised the capacity of BIM which basically the whole package of submission are directly

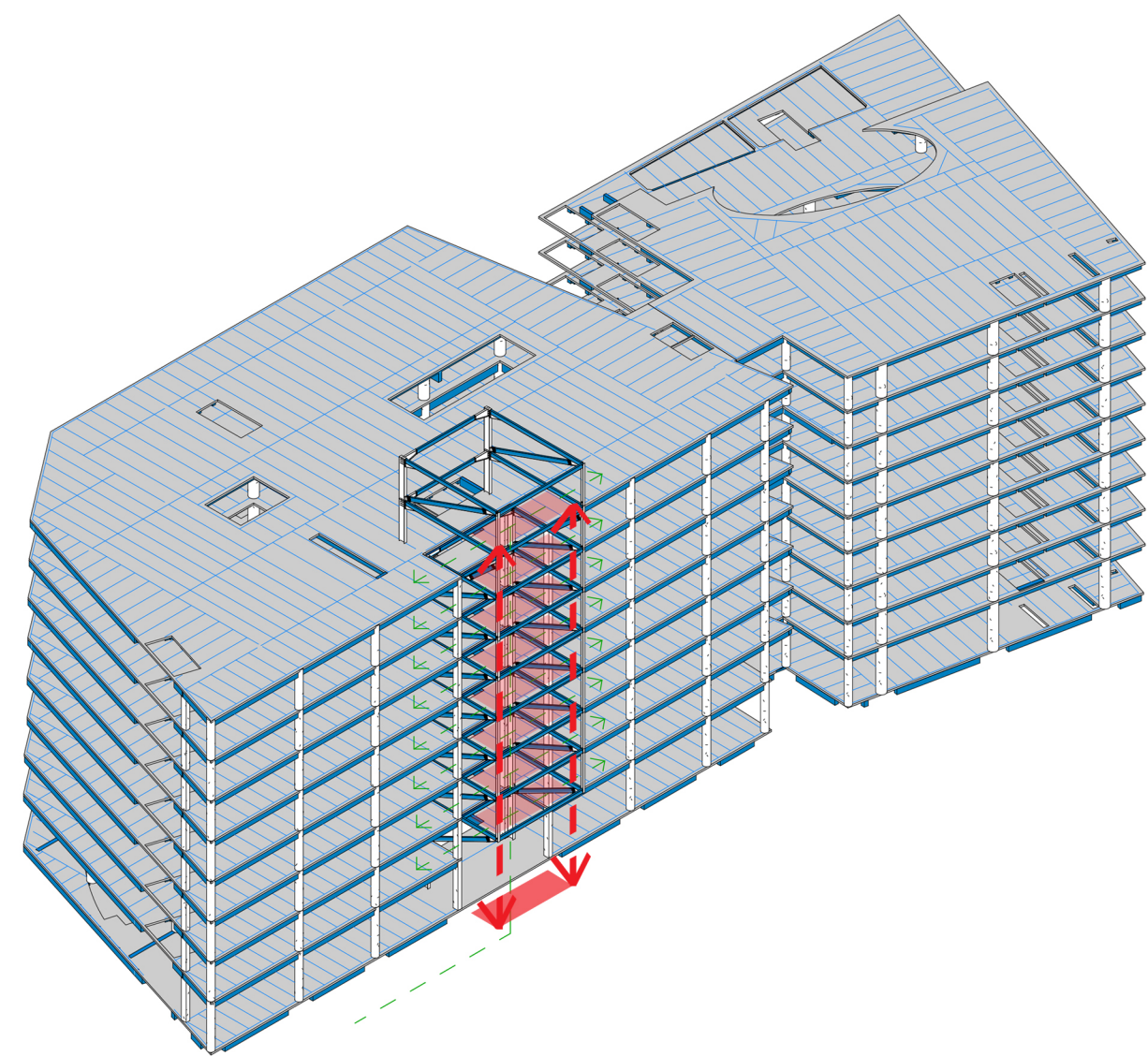


Design Methodology
Dynamo Script to create Massing in 10 Options with maximize the Site Coverage and GFA.

Solar Analysis in order to develop the Building Form.



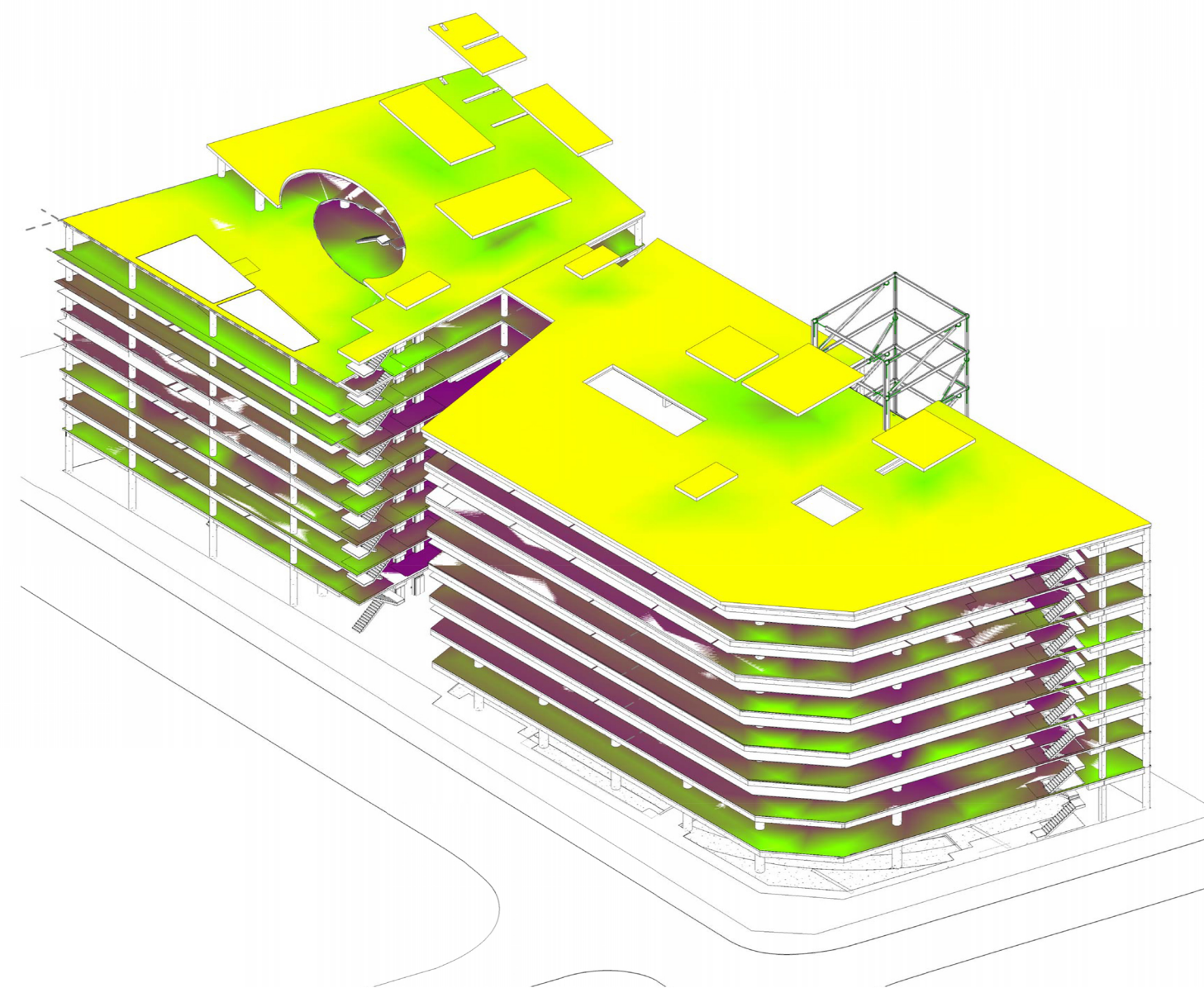
10 Design Options Solar Analysis



Materials Vertical Transportation

Since the Workshop will be used for different building materials, an external Steel Structure with Lifting Platform Machine can be served for vertial transporation.

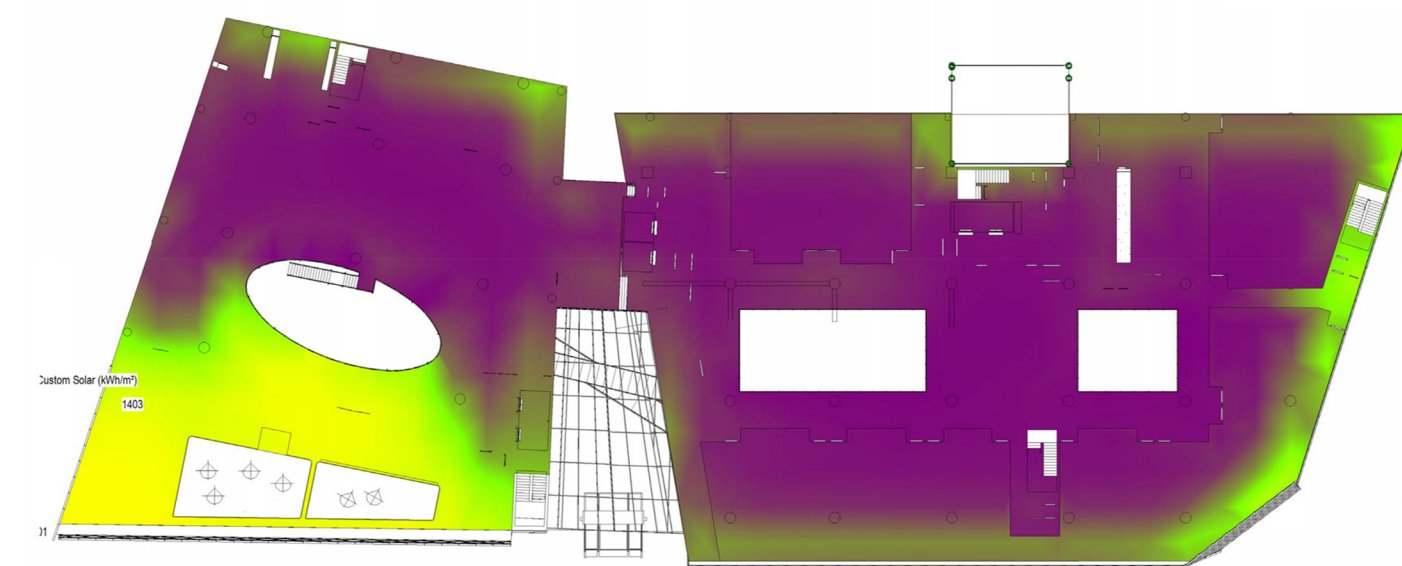
It is placed on the back of the building facade.



Final Design Solar Analysis

The result shows void areas with atrium design is suitable for the building form.

The Building have divided into two massing in connection with bridges under glass covered.



L Block

R Block

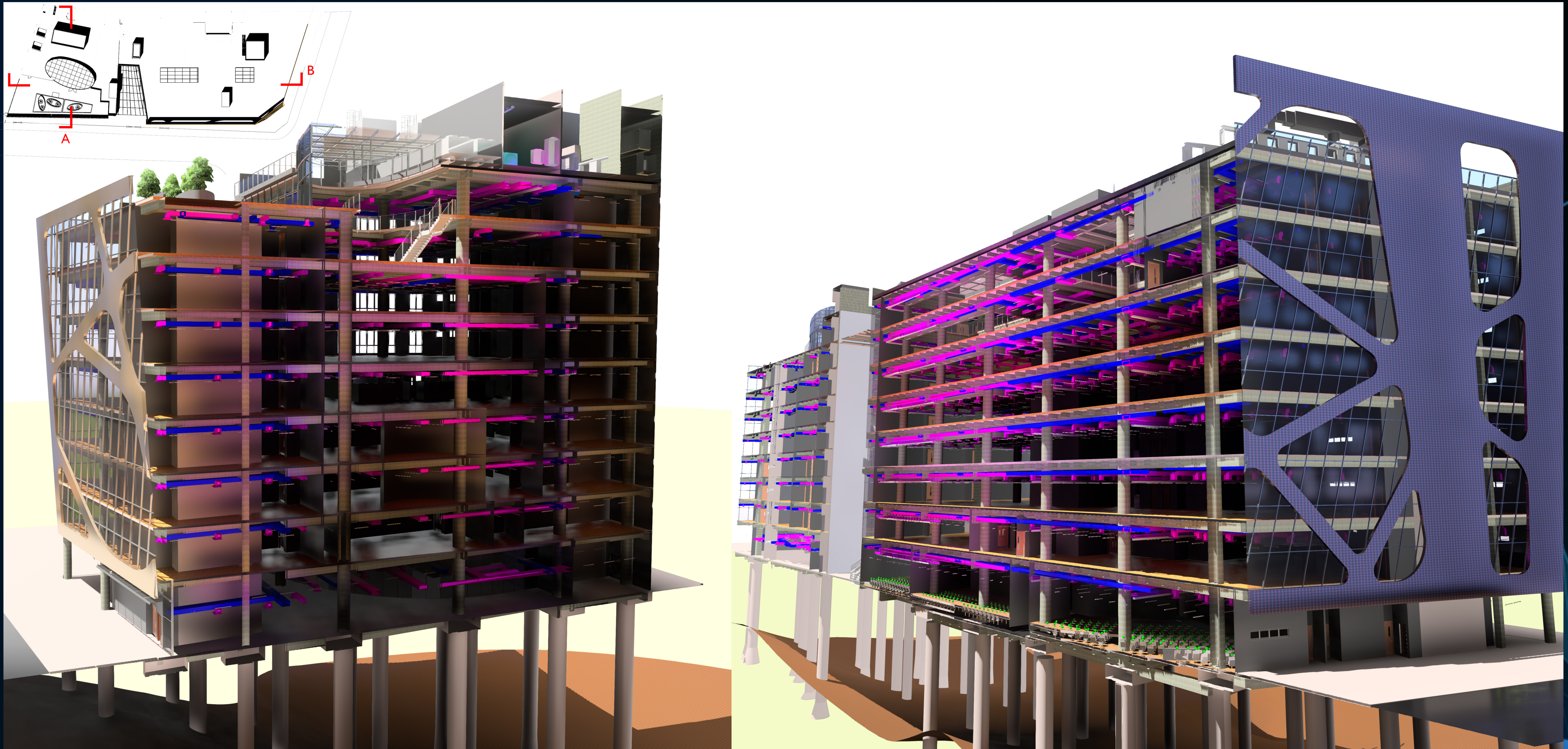
Planning Development

In order to maximize the natural lighting effect on both building block, void ares have placed on different parts along the center of the massing.

However, due to the large workshop area required the R Block have less performance compare to the L Block.

BIM Collaboration

The core objective of the competition is to promote the practical usages of BIM through collaborative and competitive learning approach in construction industry. Architectural, Structural & Building Services had been working together since the beginning of the design progress, the close collaboration reveal the BIM platform can be served as a better way compare to the traditional method of WORKING ALL TOGETHER.

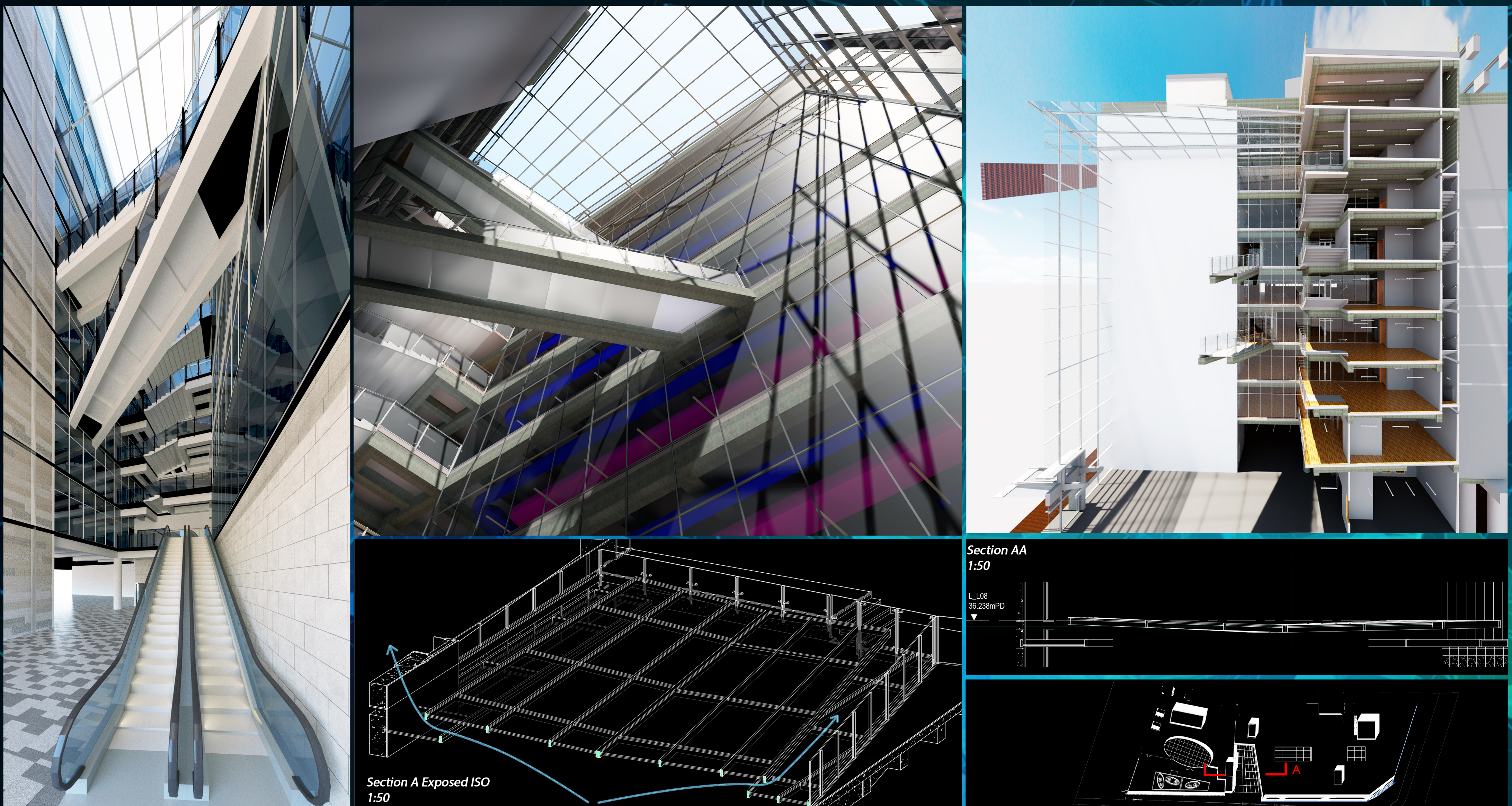


Section AA

The Section shows the collaboration in different discipline in the BIM platform. With the information of structural elements, some areas such as sunken slab with solid for planting, MVAC system to cooperate with structural beam can be revealed.

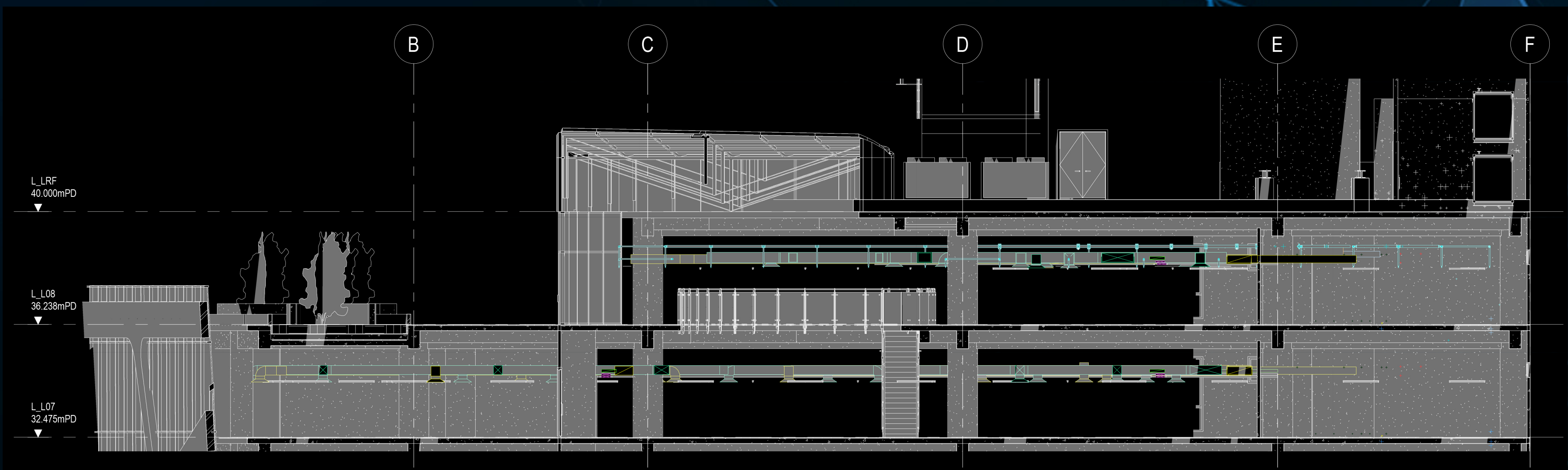
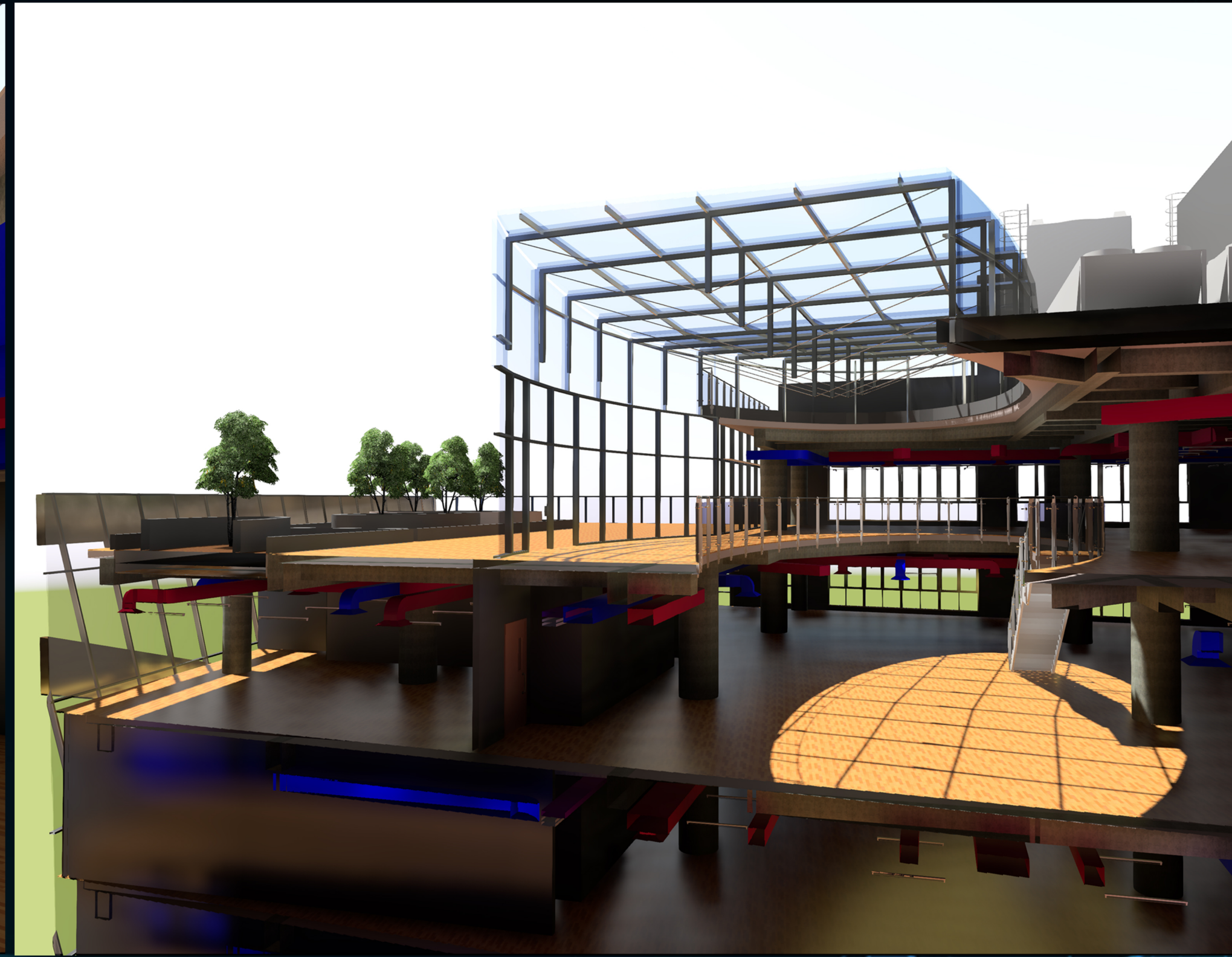
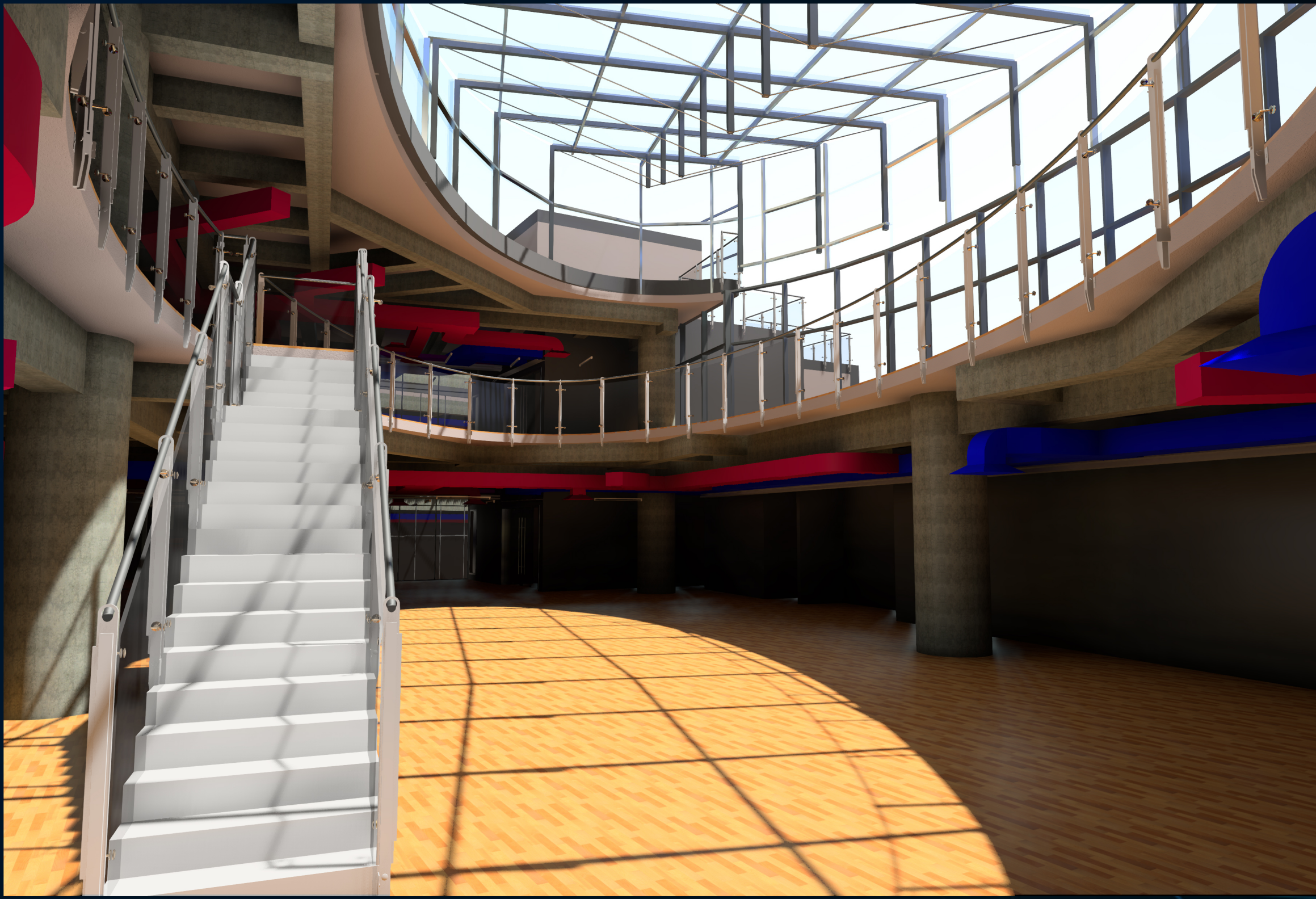
Entrance Atrium

The Entrance Atrium is located in between two Building Blocks with natural lighting and function as a “STACK EFFECT” ventilation zone for both of the buildings.



BIM Experience in the Virtual Reality

We are not only use BIM as a Design Platform to produce drawings, but also use it to review the design in the Virtual Reality. Fuzor have been using to reveal the design in the virtual platform to facilitate the design team during the development. Adjustment of design can be reflected immediately in the virtual world,.



Section
1:100

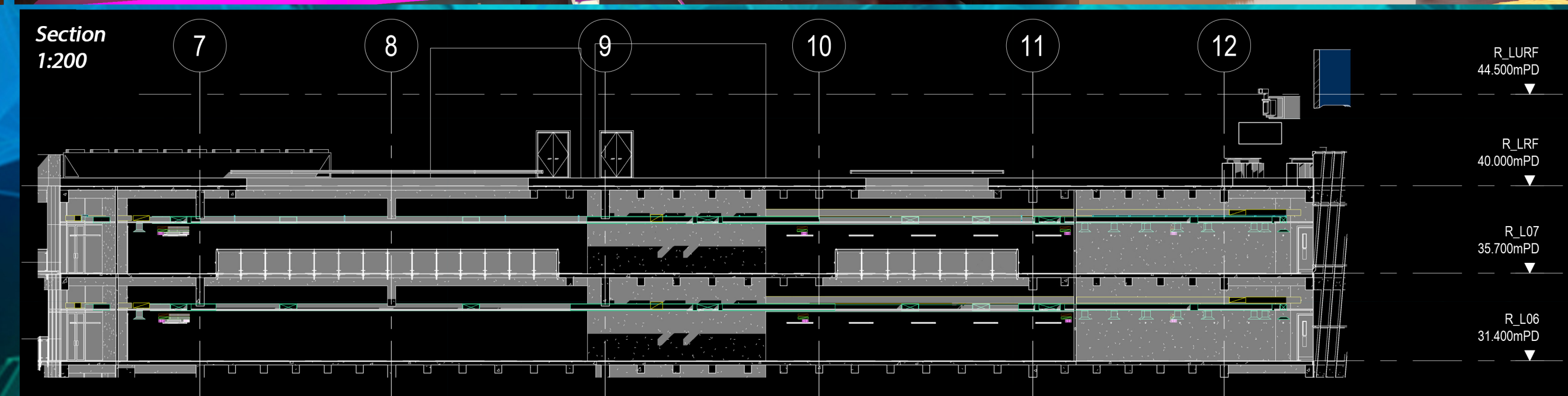
Office

An Atrium with Interlocking form to absorb Skylight with Glass Roof located on the L Block 8/f with roof garden. With the BIM platform and collaboration with the structural discipline, an outdoor garden with solid in sunken slab can be achieved easily.



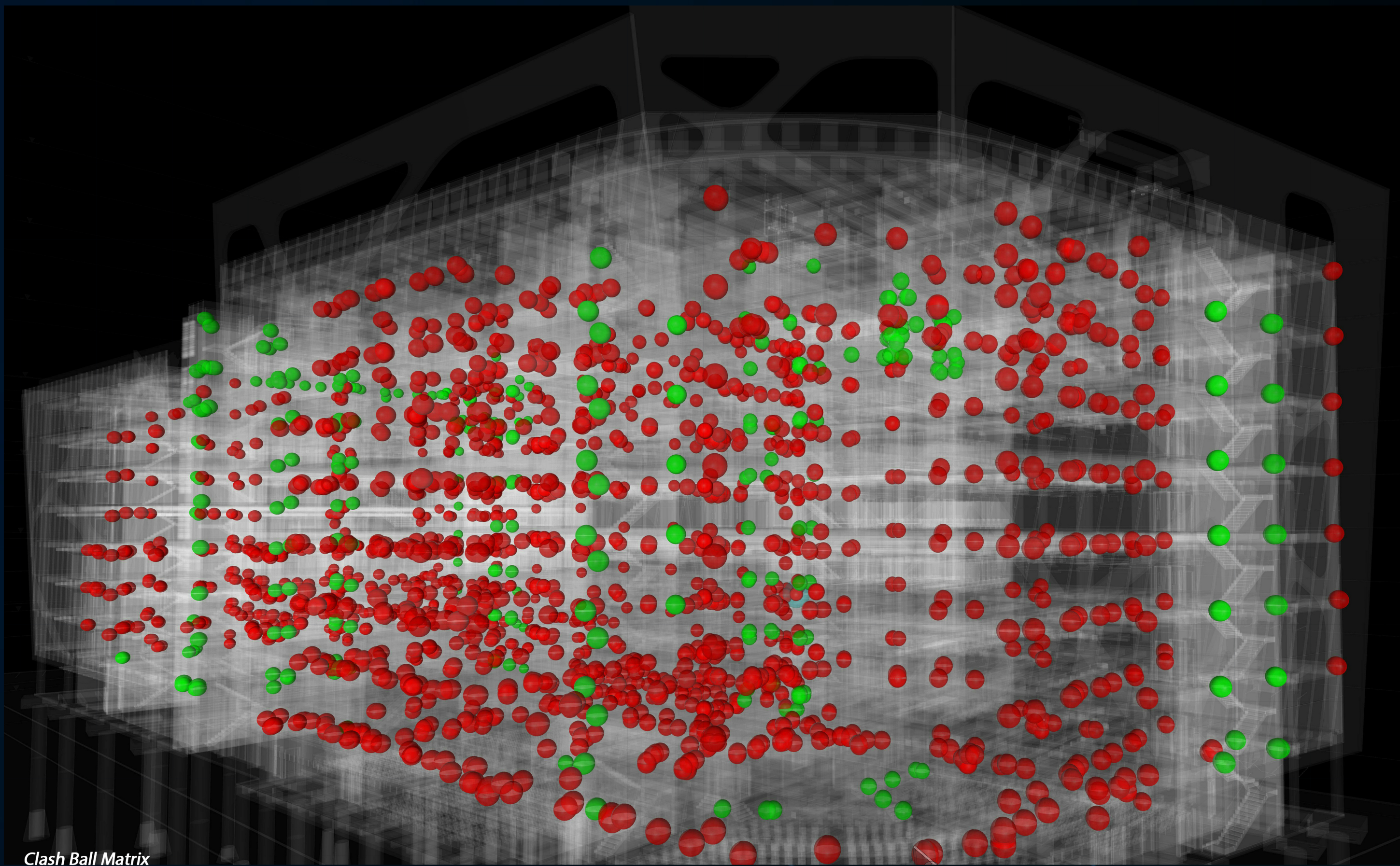
Workshop

Two Skylight located on the workshop to allow Exhibition Areas for stuent to gather and review.

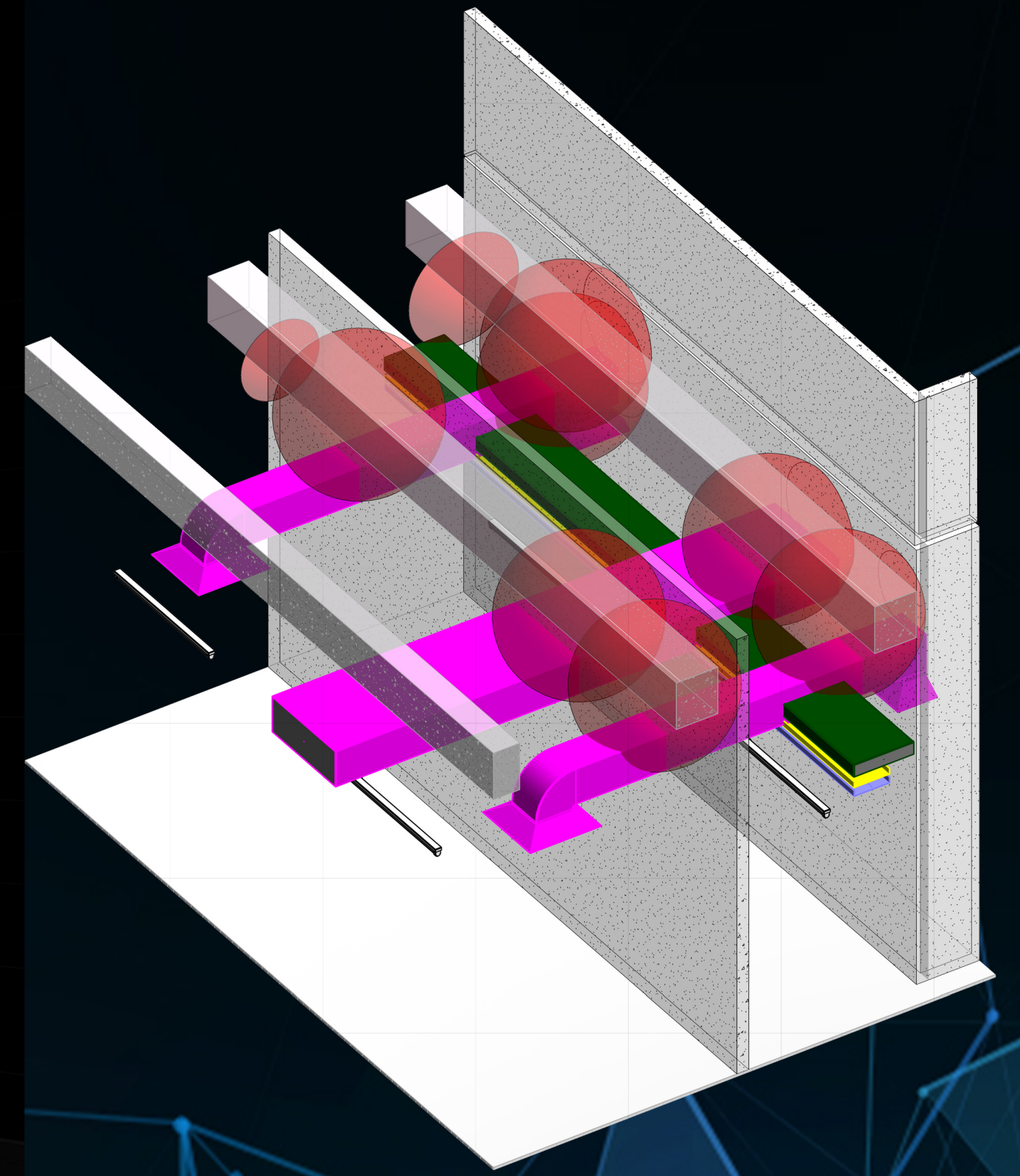


Clash Prioritization

Although the BIM platform provide a comprehensive method to construct the building, Clash areas are still not yet can be seen easily without professional judgement. We have developed a Clash Prioritization in order to review the most important part of the conflict in between different discipline. Clash ball can be reviewed as a marks for designer to review their input which save time and reslove issues before construction stage.



Clash Ball Matrix



Clash between Structural Beams and Ducts

Clash to be resloved

Within the limited of time, the clash between different discipline is yet to be relosved. However, with the BIM platform and Clash Prioritization, there have sufficient evident to review and understand the problem to be reviewed and carry on to the next stage.

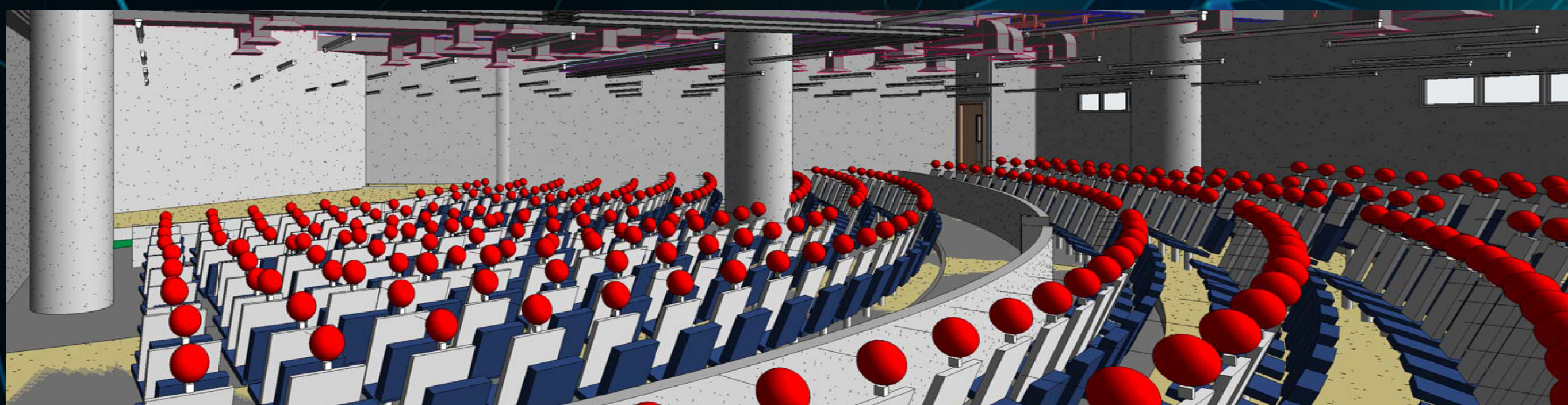
There may have no PERFECT answer to reslove conflict yet, but we believe by using the BIM platform, apperance clashes can be relosved in the early design stage of the project.



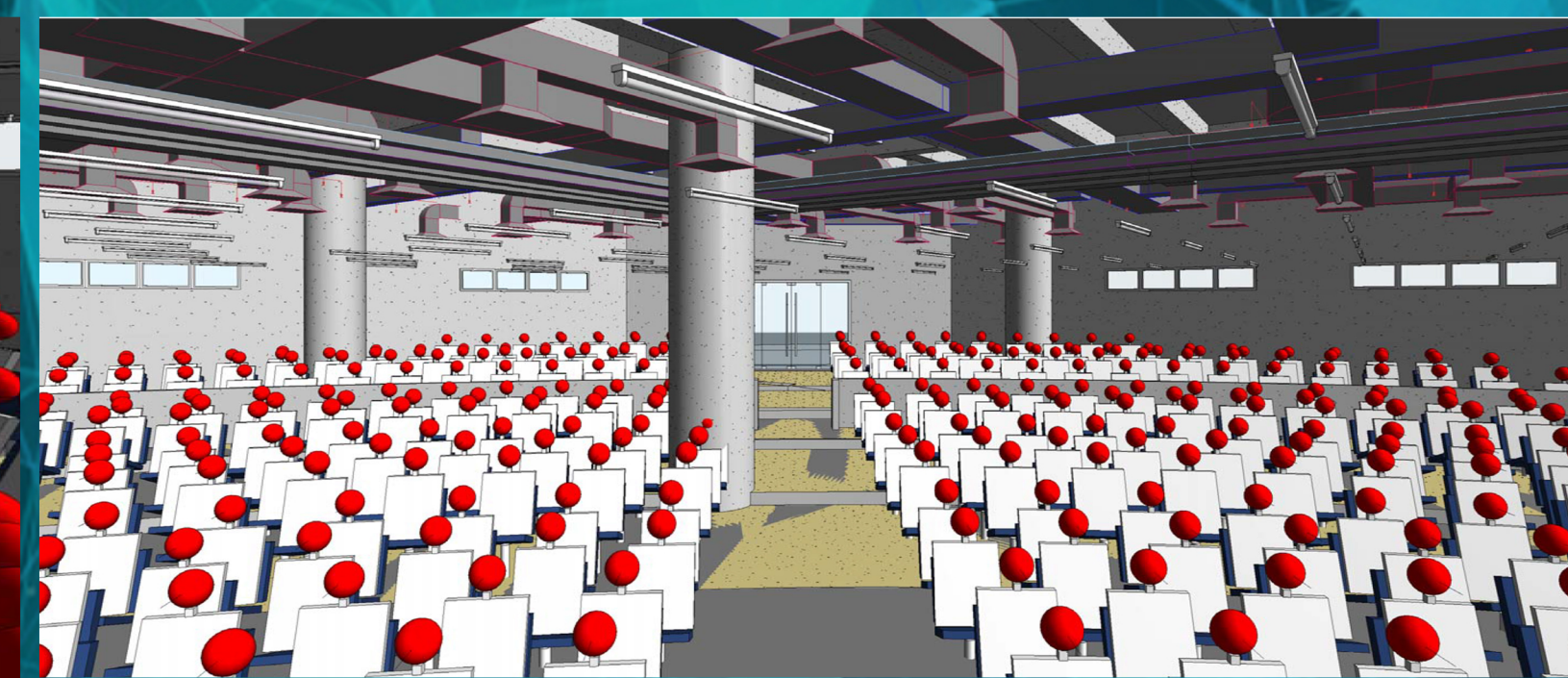
2/F Floor Clash Ball

Theatre

How can we ensure the audiences to get the best views in the theatre? By using the family component with the HEAD of the human figure, the view analysis can be seen in the theatre during the design stage.



View to the performance stage



View to the audiences



Theatre Section