

An architectural rendering of a modern, circular conference room. The room features a large, curved wall of red chairs surrounding a central white circular table. The ceiling is dark with a prominent, glowing white curved light fixture. Large glass windows on the right side offer a view of an adjacent multi-story building. Silhouettes of people are visible walking around the room.

UNEC

United Nations Environmental Council

A new building for a new council

contents

assignment

location - urban plan

users of the building

building

installation

materialisation



assignment

new building for a new council

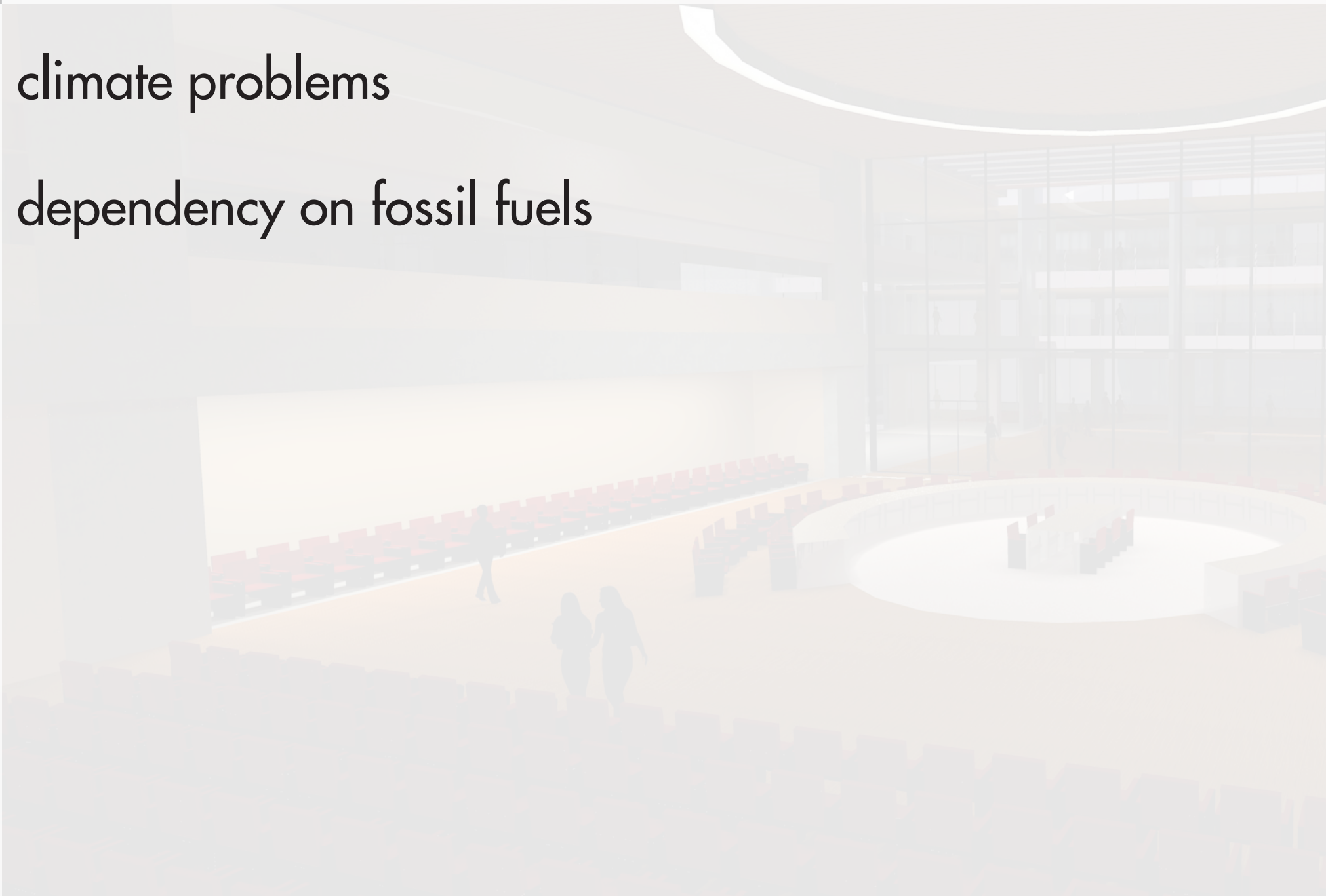


new urban masterplan

the council

climate problems

dependency on fossil fuels



goals of the council

- solving the waste problem
- solving energy problem
- secure biodiversity

thereby creating a sustainable world....

the council

Which way can the council contribute to these goals

- **Inform:** communicate knowledge
- **Motivate:** give the people an impulse
- **Inspire:** role model for new sustainability.

the building

Which way the building can contribute to these goals

- facilitate
- image for new architecture

requirements of the building

what should be the requirements of such a building

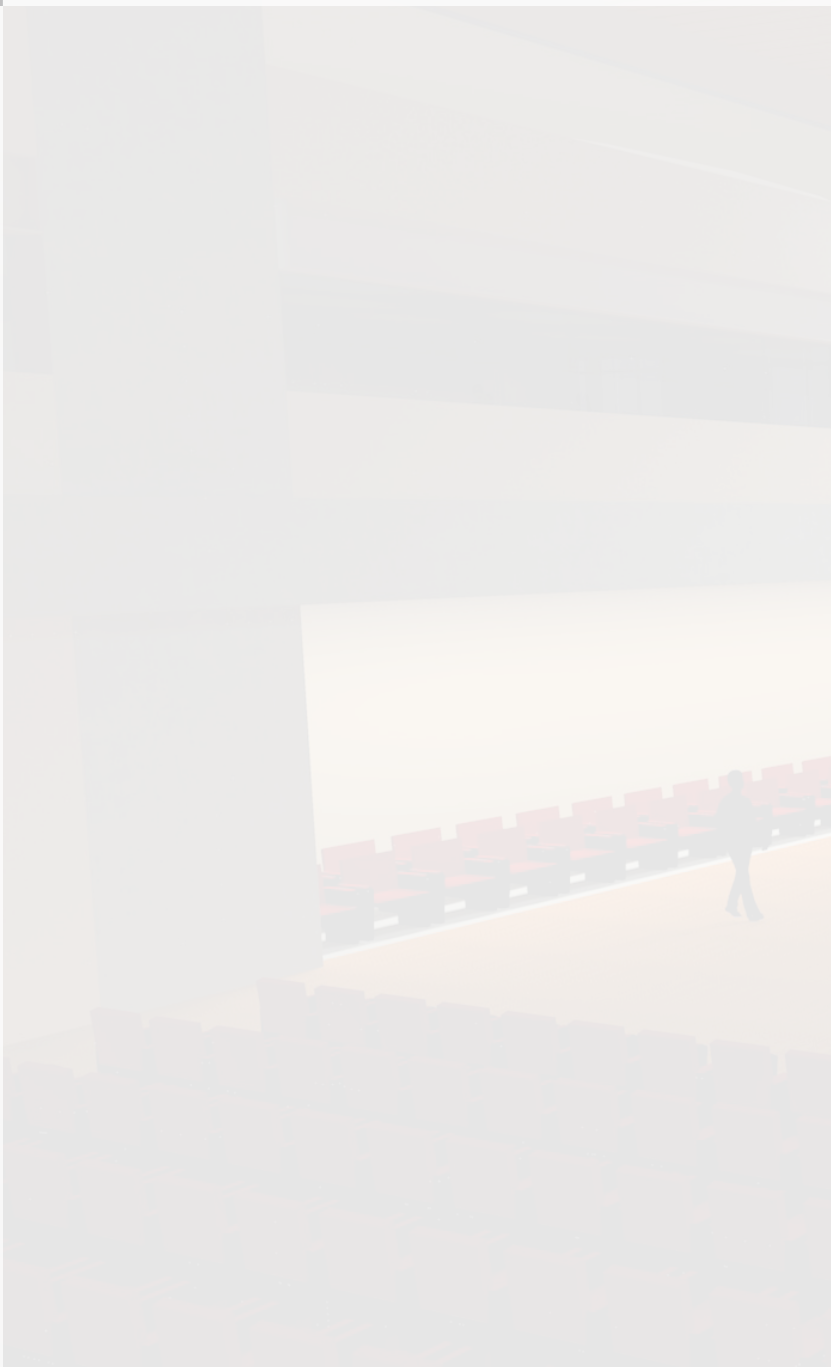
- **security**
- **zero-energy**
- **it should generate energy**
- **image for the council**

programme

In order to fulfill the goals:

- the council room
- library & expositions
- auditoriums & meeting rooms
- offices - 7000 m²

the location in New York





United Nations area

United Nations Headquarters



East river



Roads



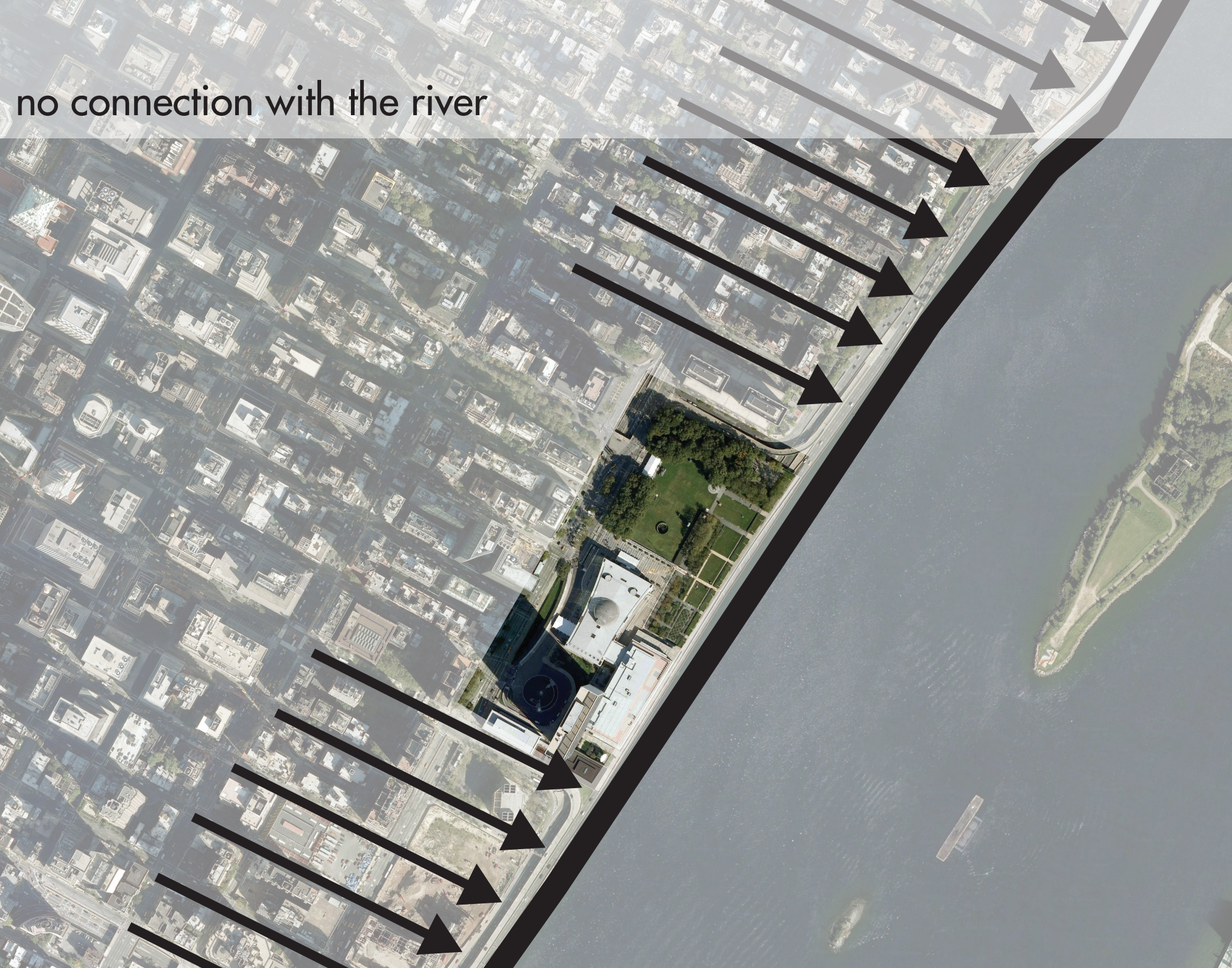
1st Avenue



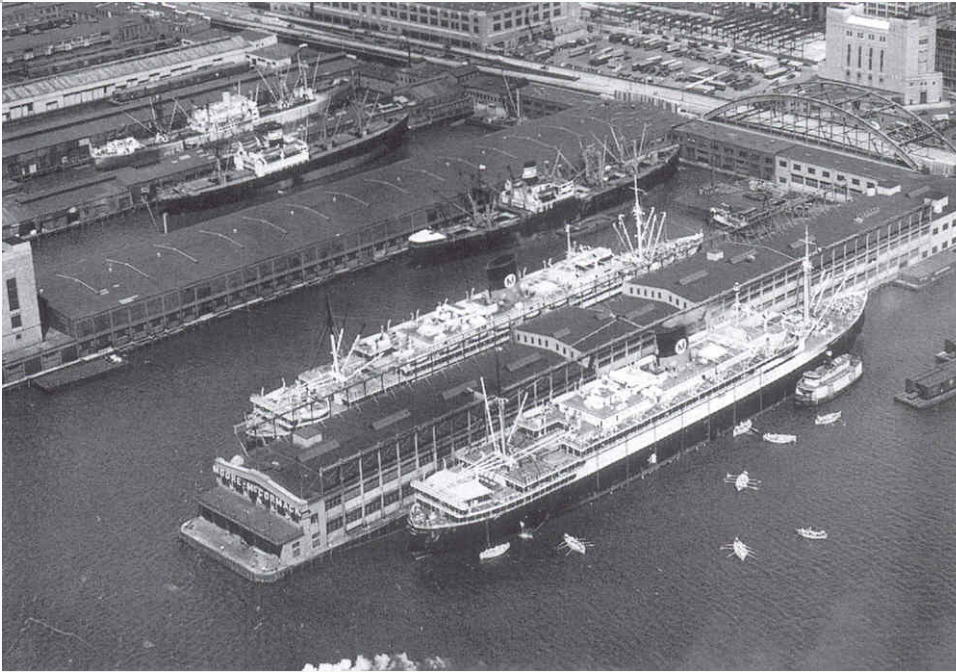
FDR drive



no connection with the river



New York Waterfront



New York has a history with piers

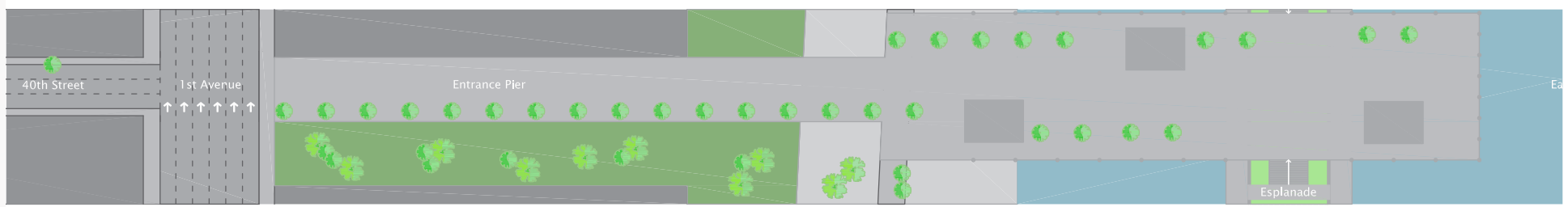
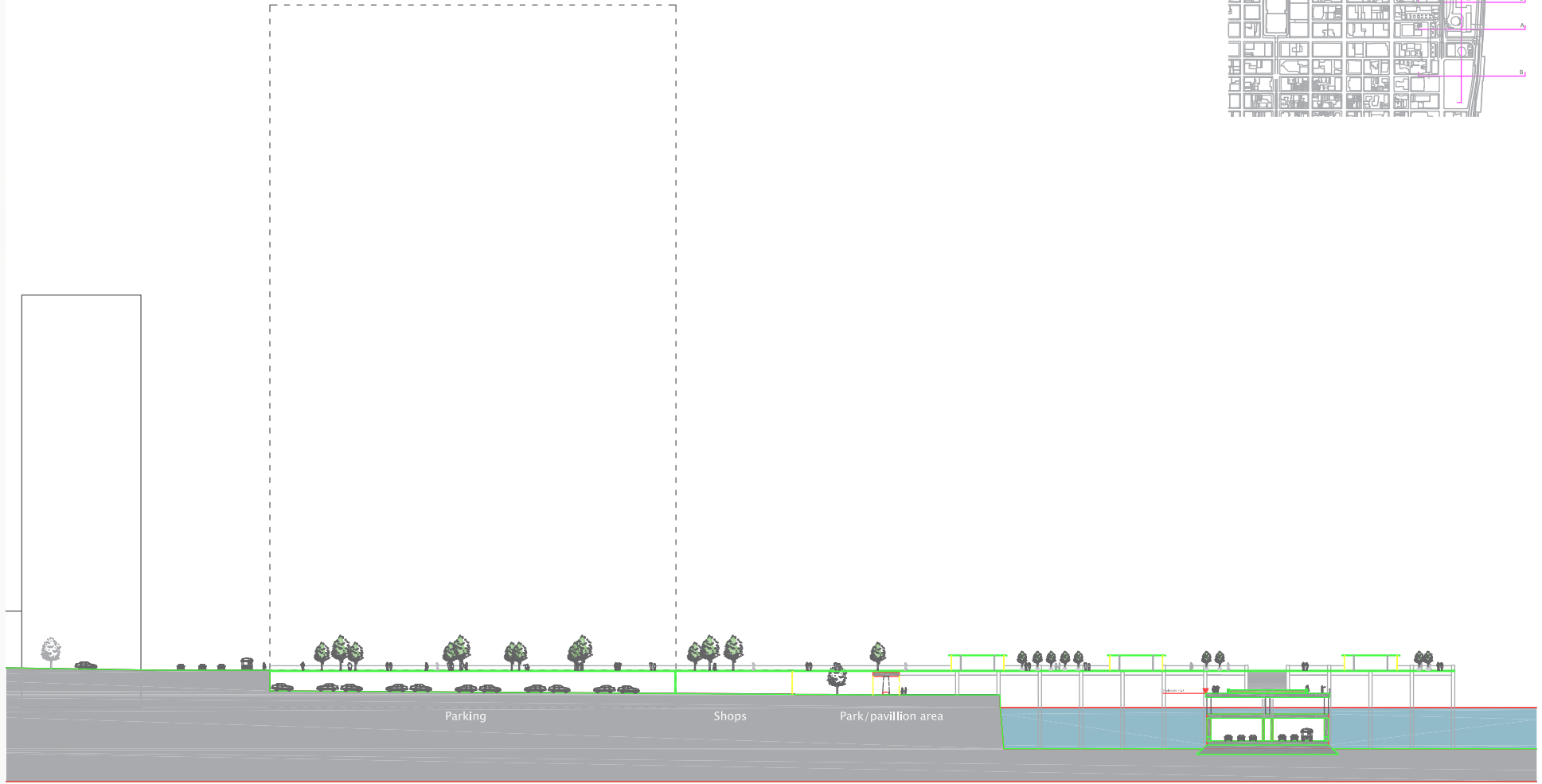
Waterfront West side Manhattan



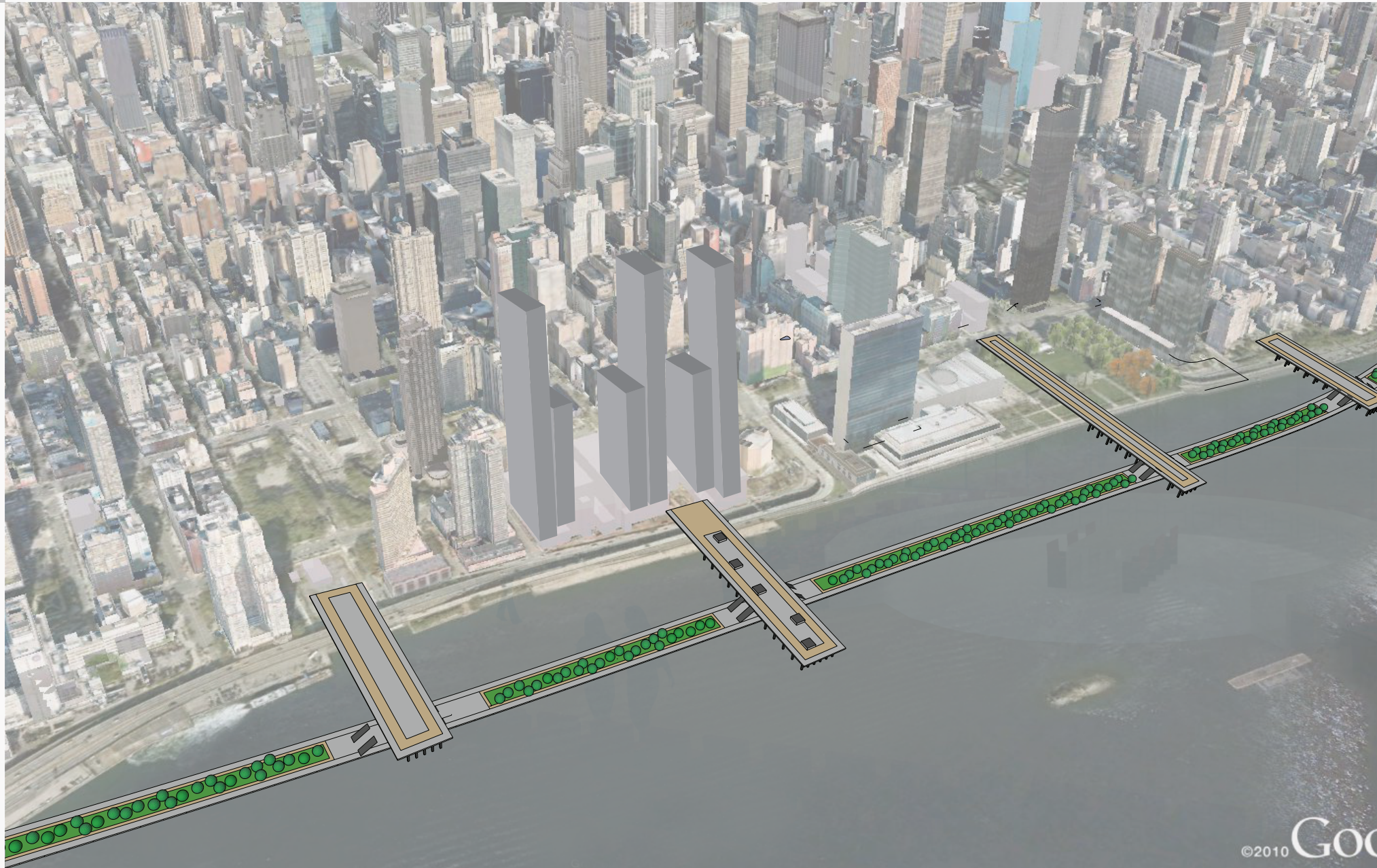
New Situation



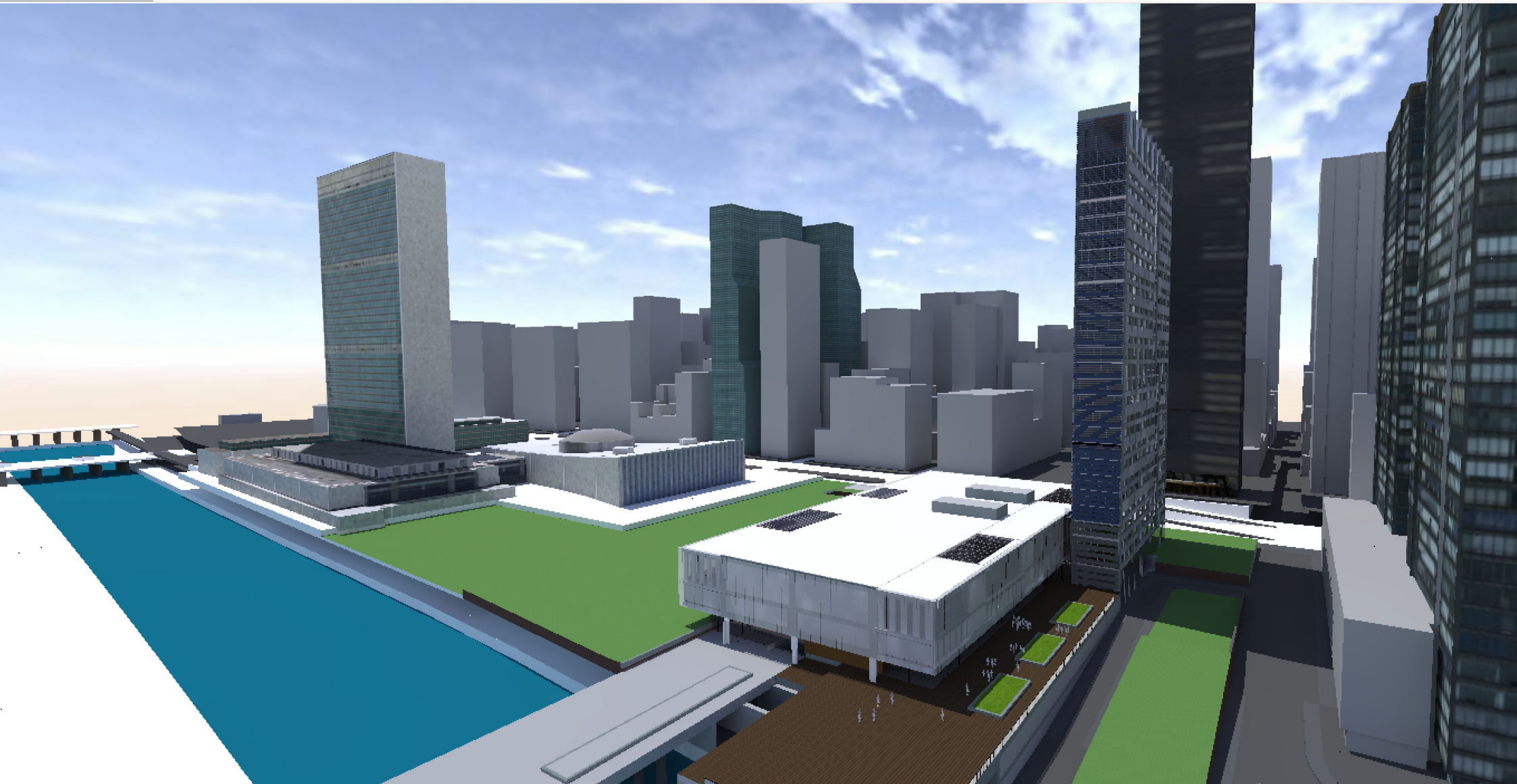
New FDR Drive



FDR drive will be moved



Use of pier in building

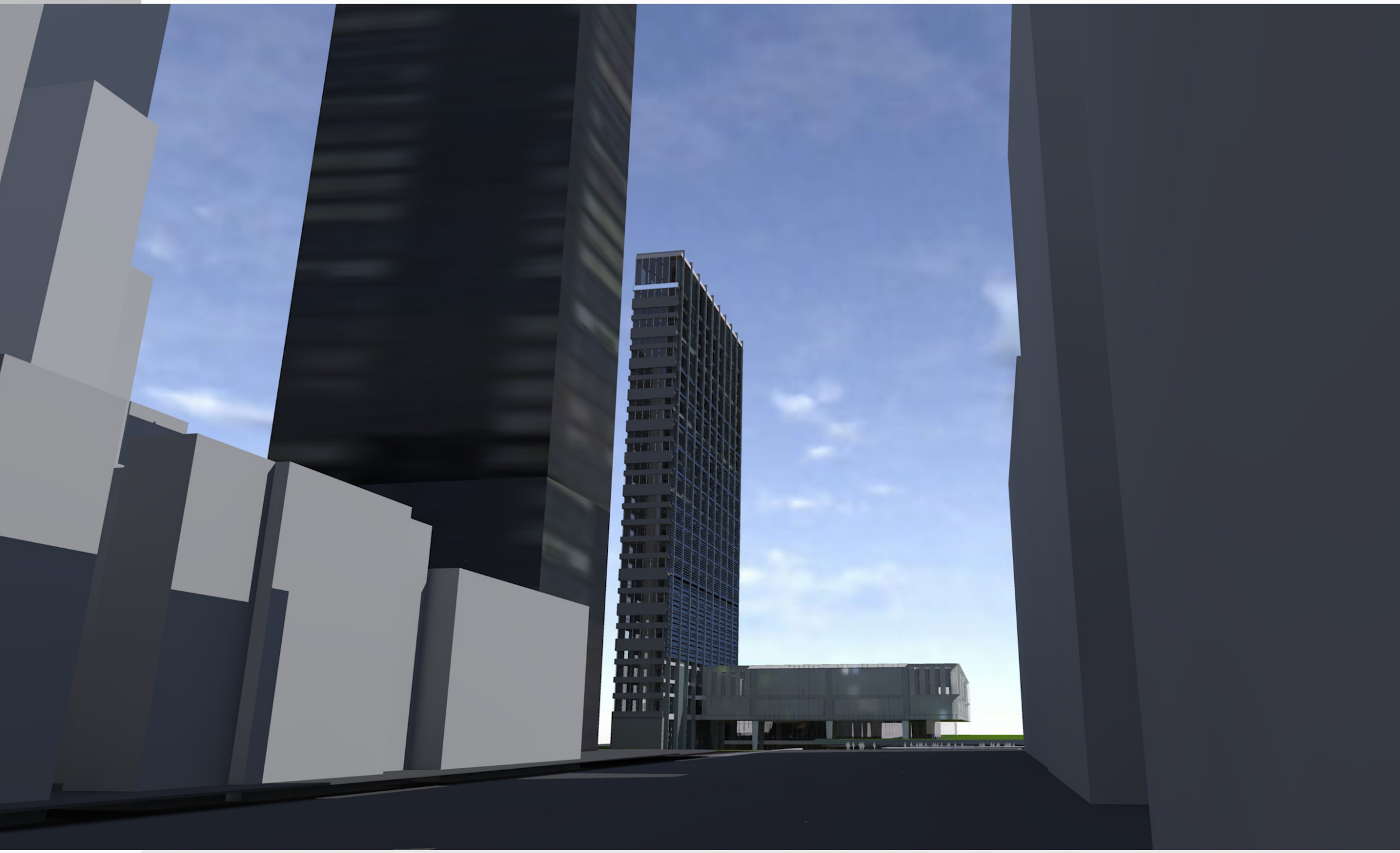


Dag Hammarskjold Plaza





render vanaf plaza

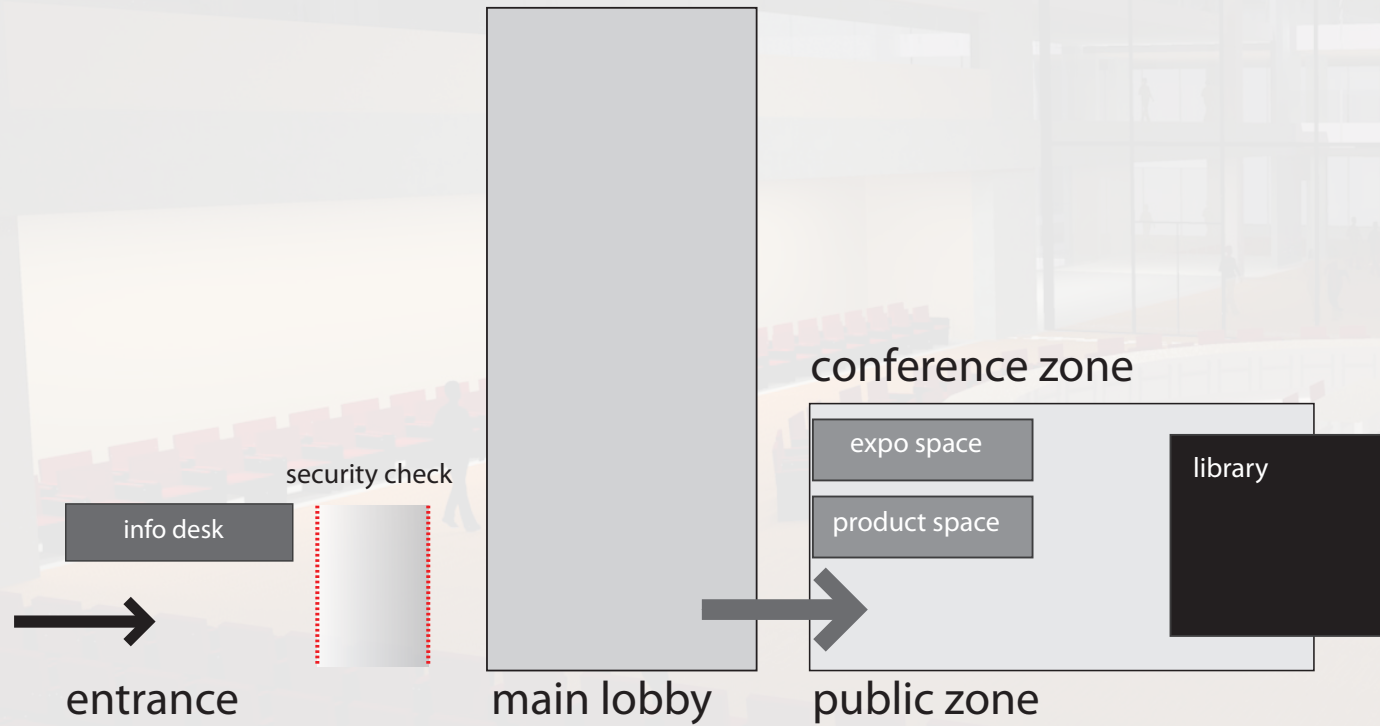


Users

- Visitors
- Press & Businessmen
- Employees
- Delegates

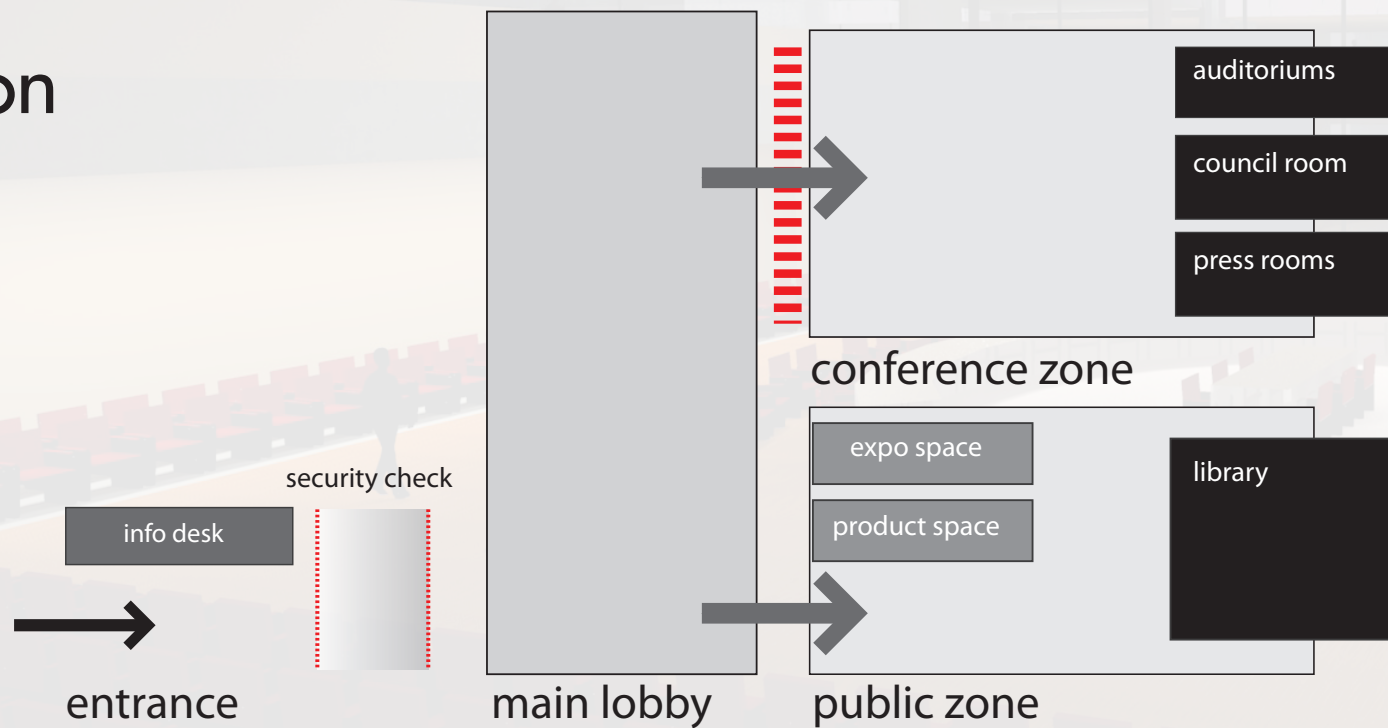
Visitors

- unannounced
- expositions
- library



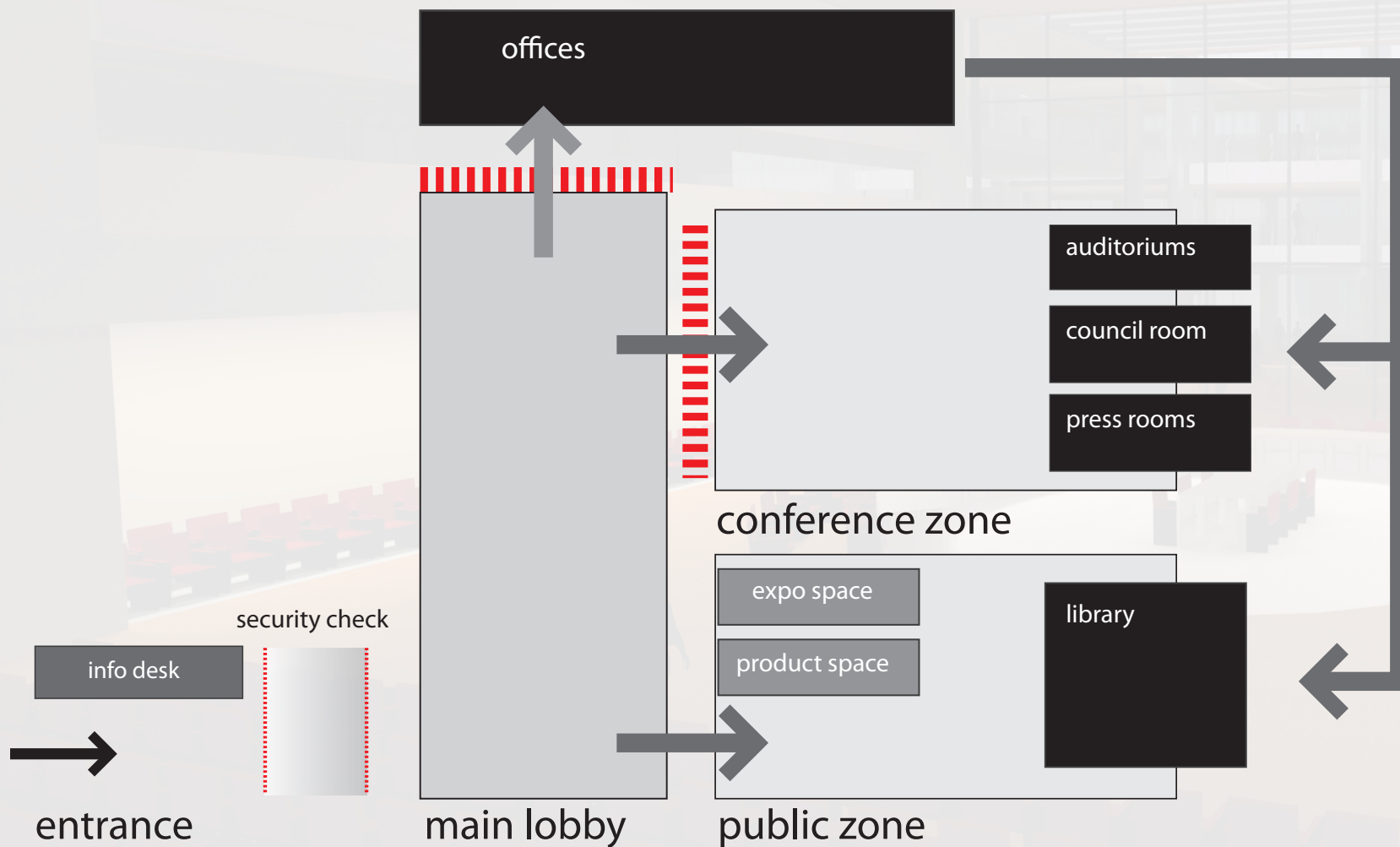
Press & Bussinessmen

- meetings
- conferences
- information



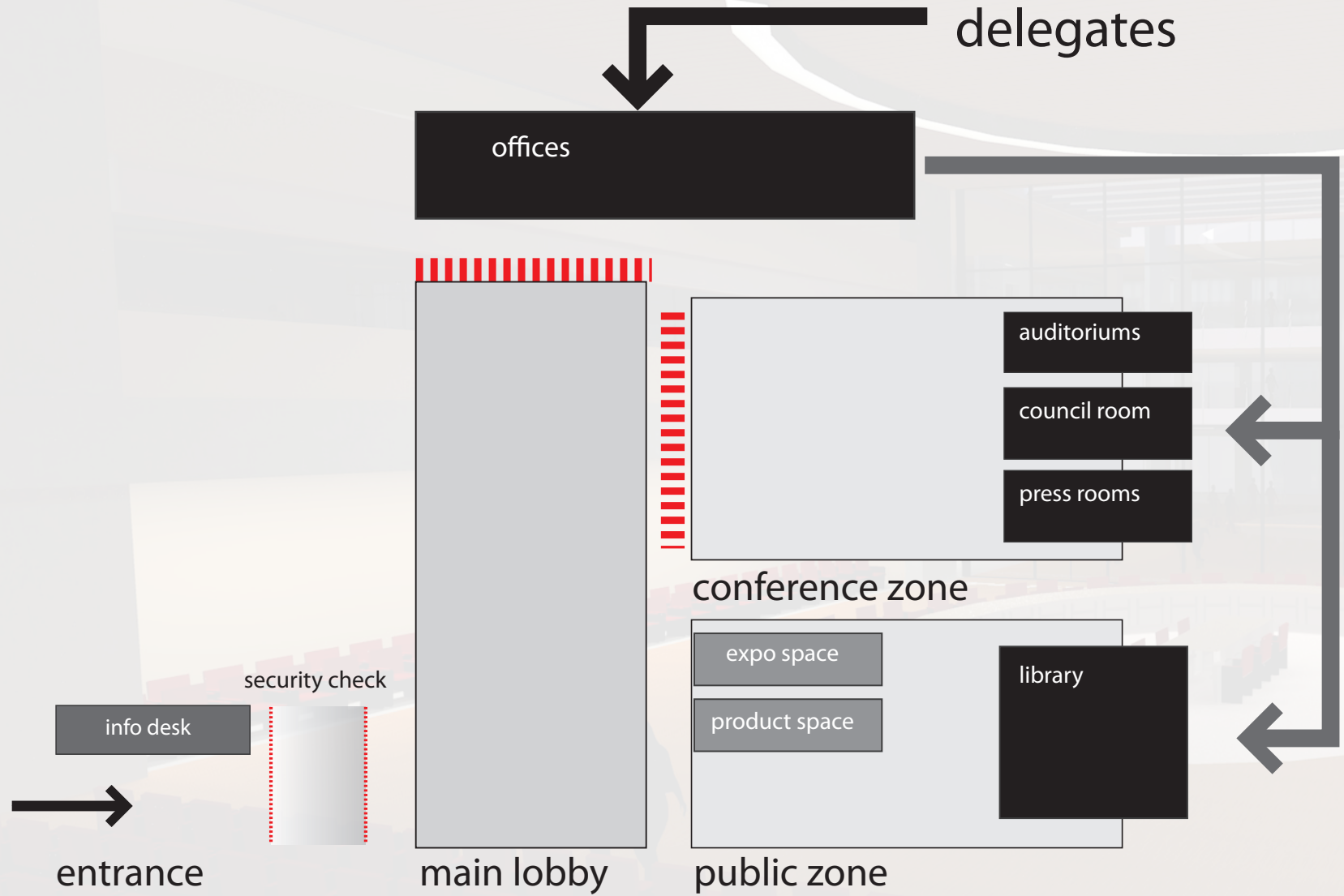
Employees

■ working



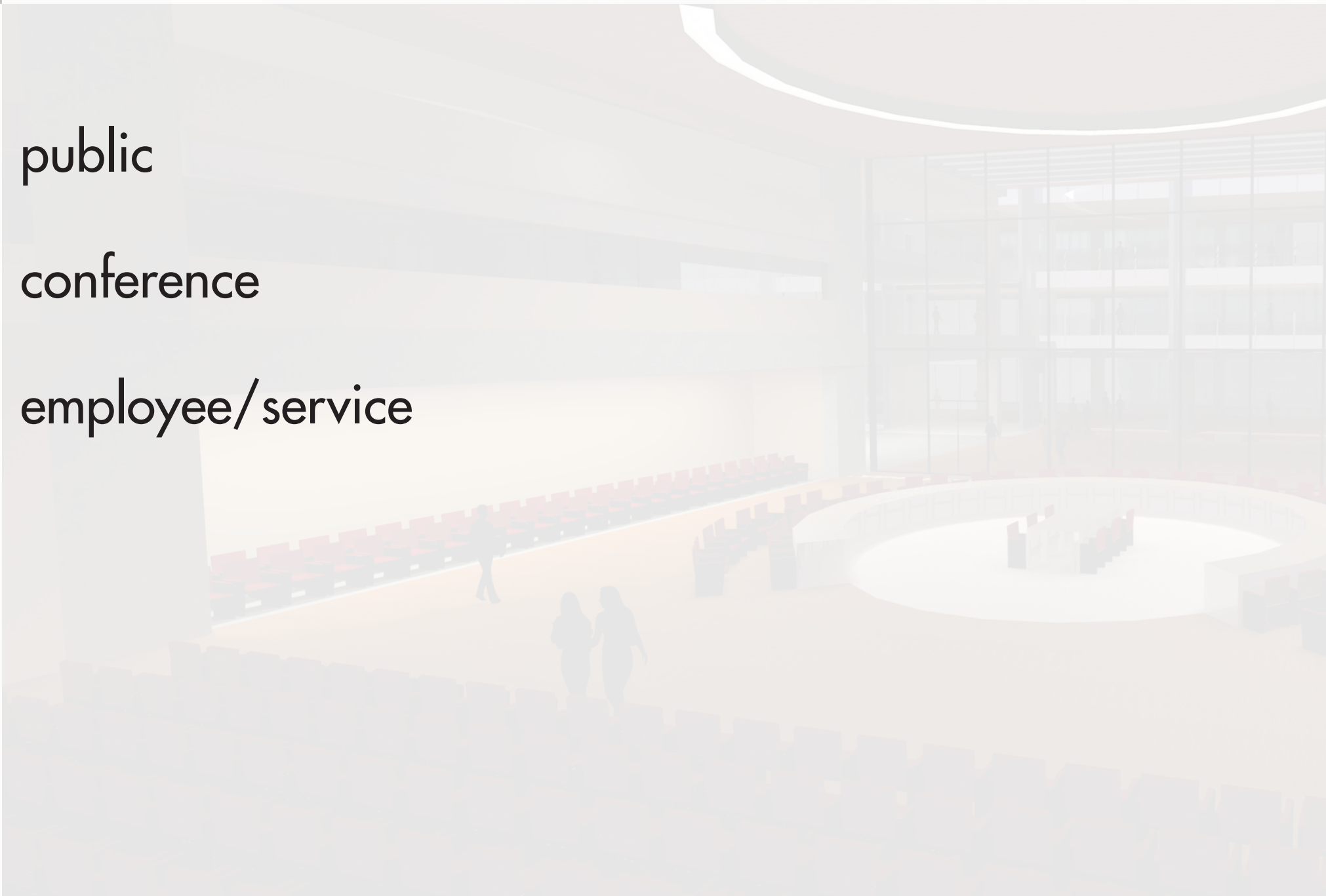
Delegates

- entourage
- council meetings
- (in)formal meetings
- backdoor entrance to most rooms

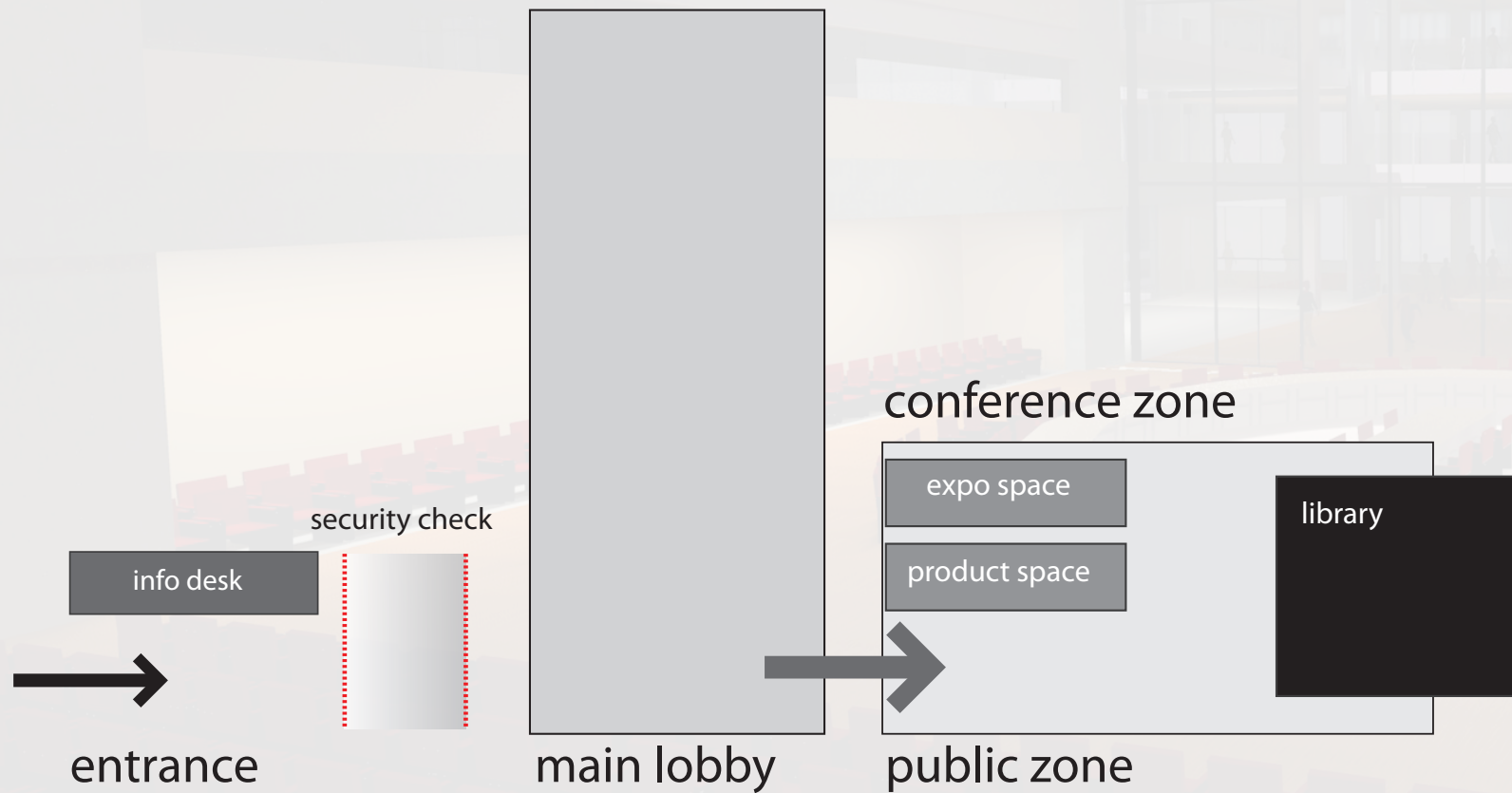


three circuits

- public
- conference
- employee/service



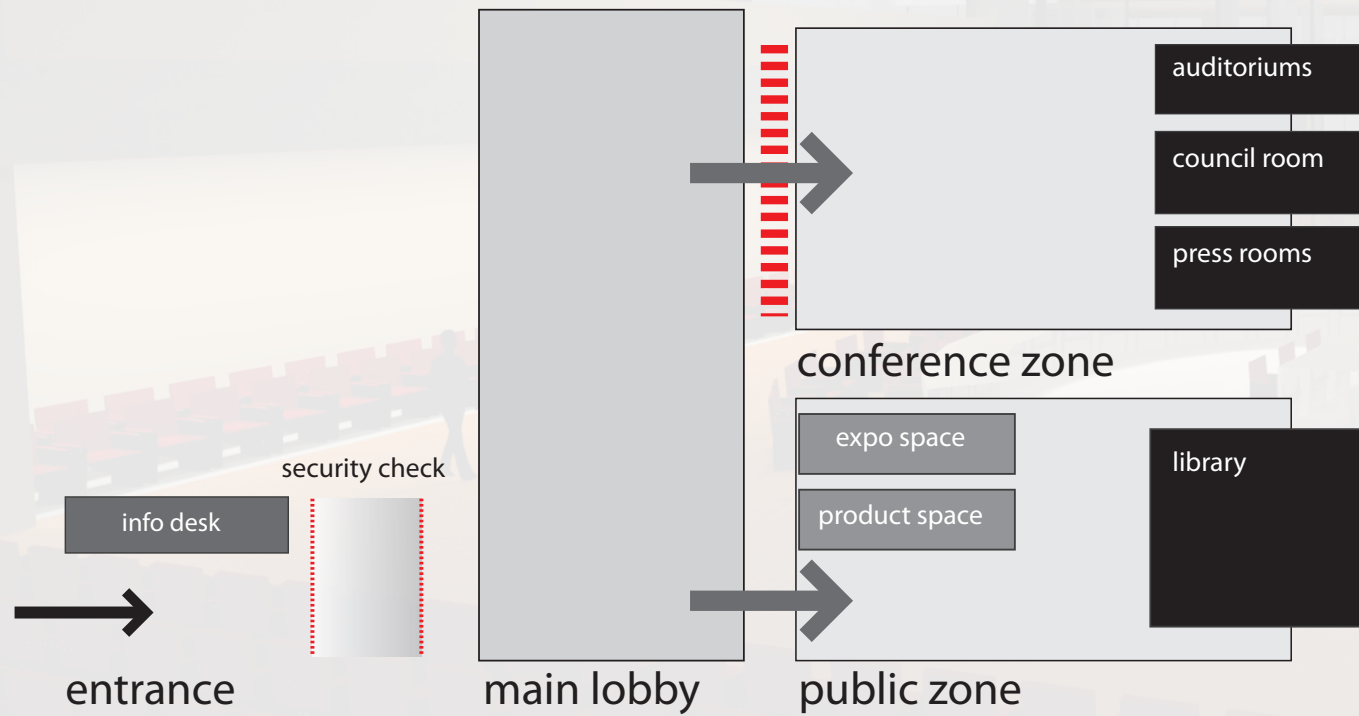
public circuit



public circuit

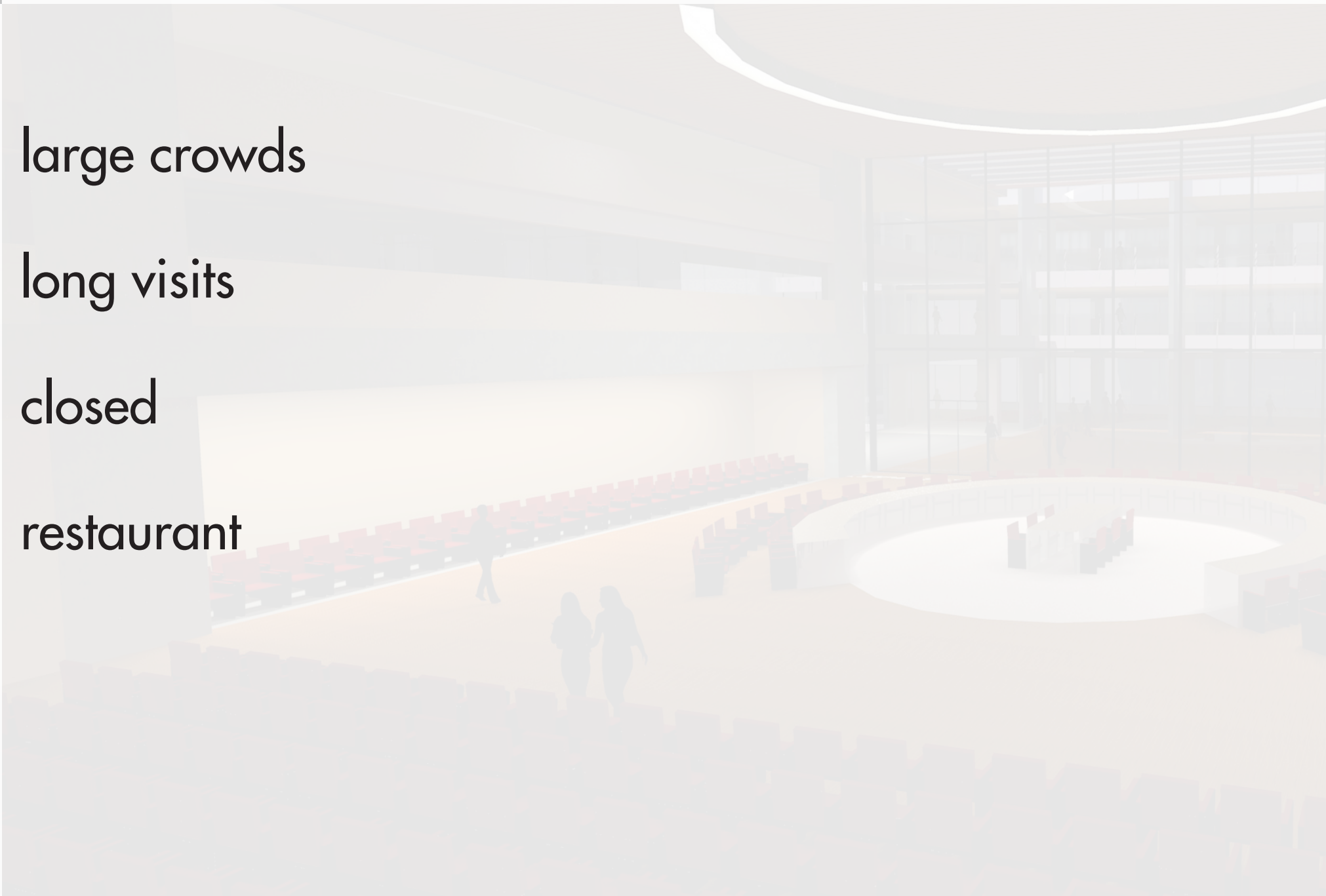
- large crowds
- short visits - easy access
- open
- connection with the pier

conference circuit

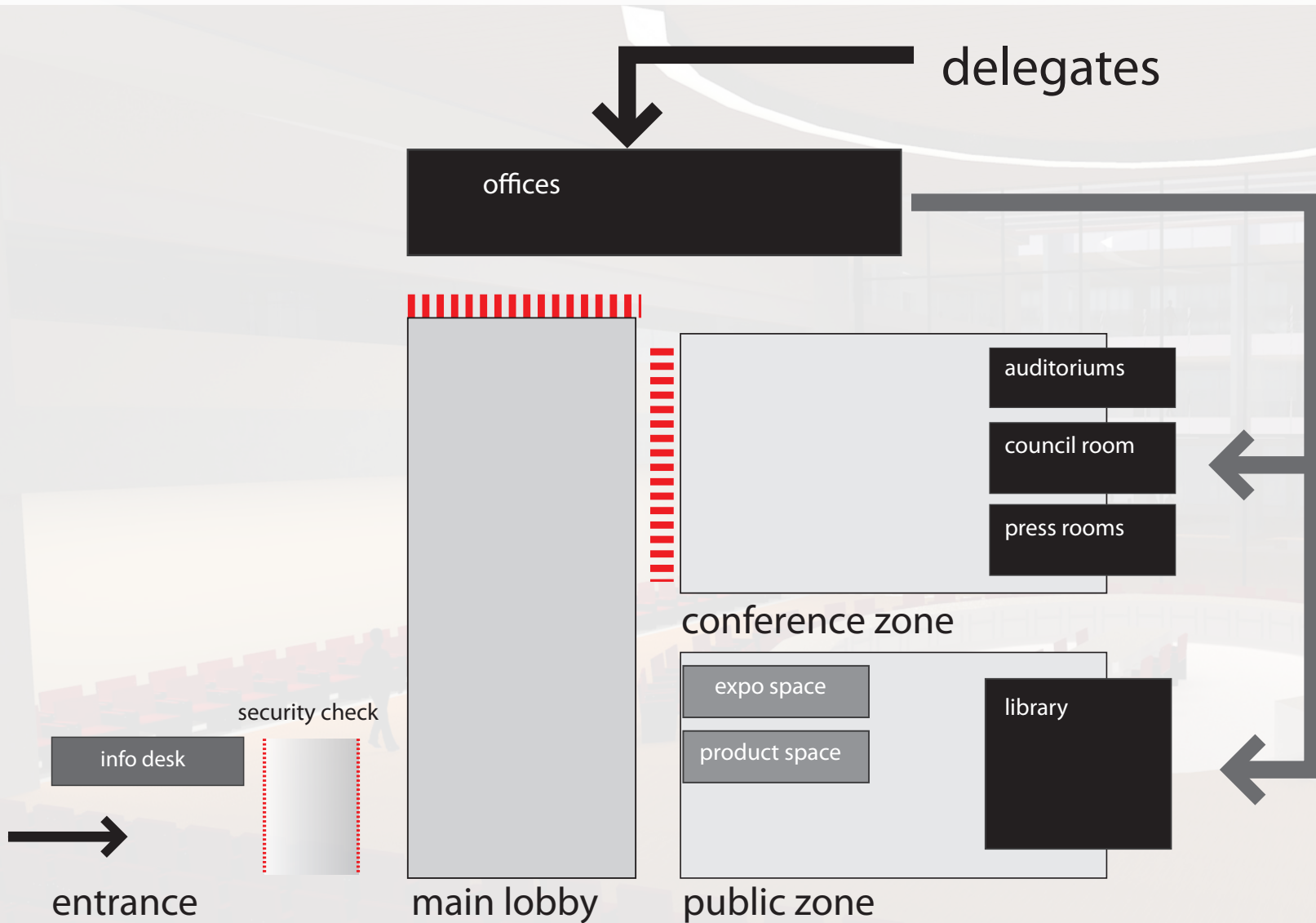


conference circuit

- large crowds
- long visits
- closed
- restaurant

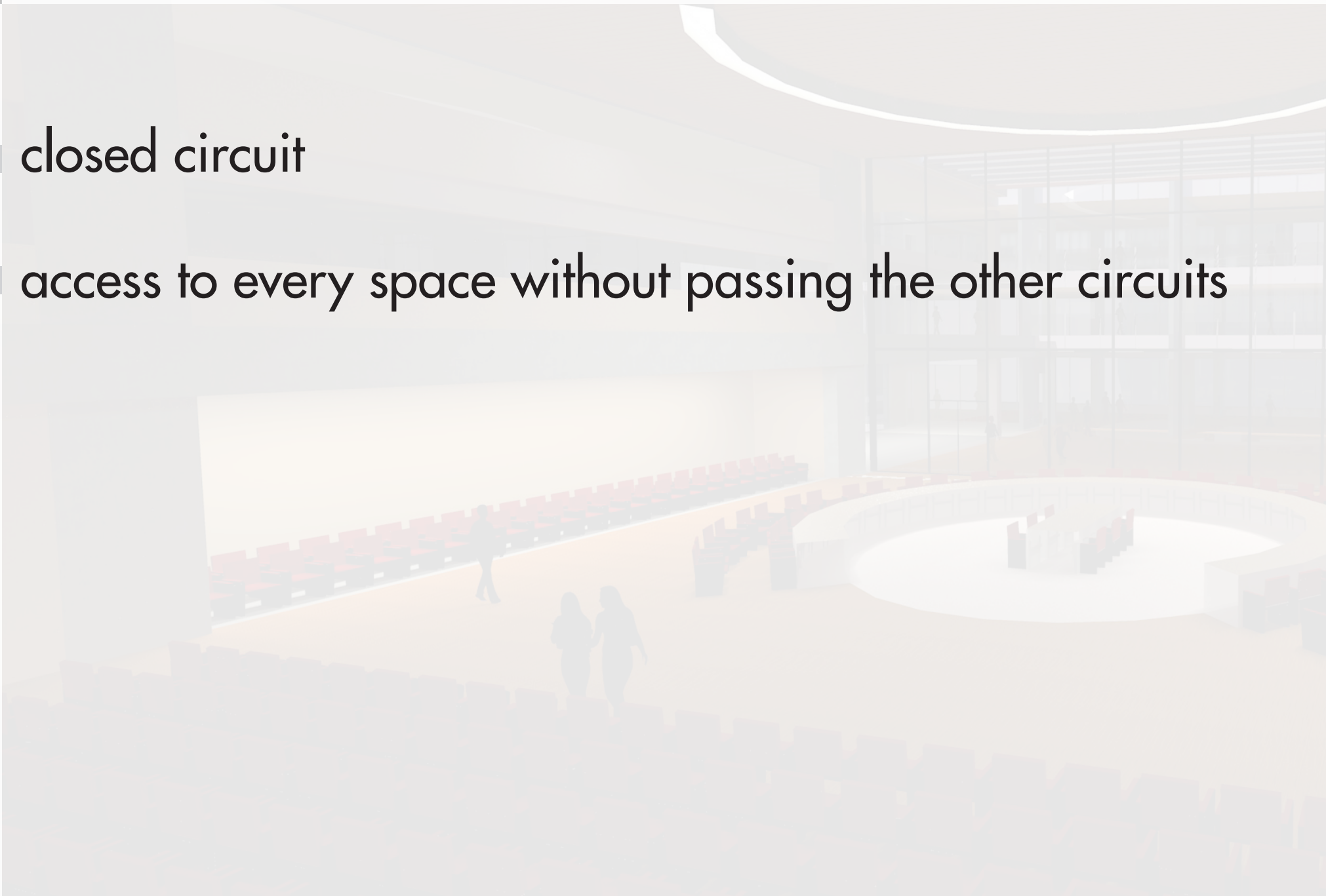


employee/delegate circuit



employee/delegate circuit

- closed circuit
- access to every space without passing the other circuits



concept

employee,
delegate circuit

conference area

public-zone

concept

public intensive on lower floors

offices spaces on higher floors

landmark/headquarter image

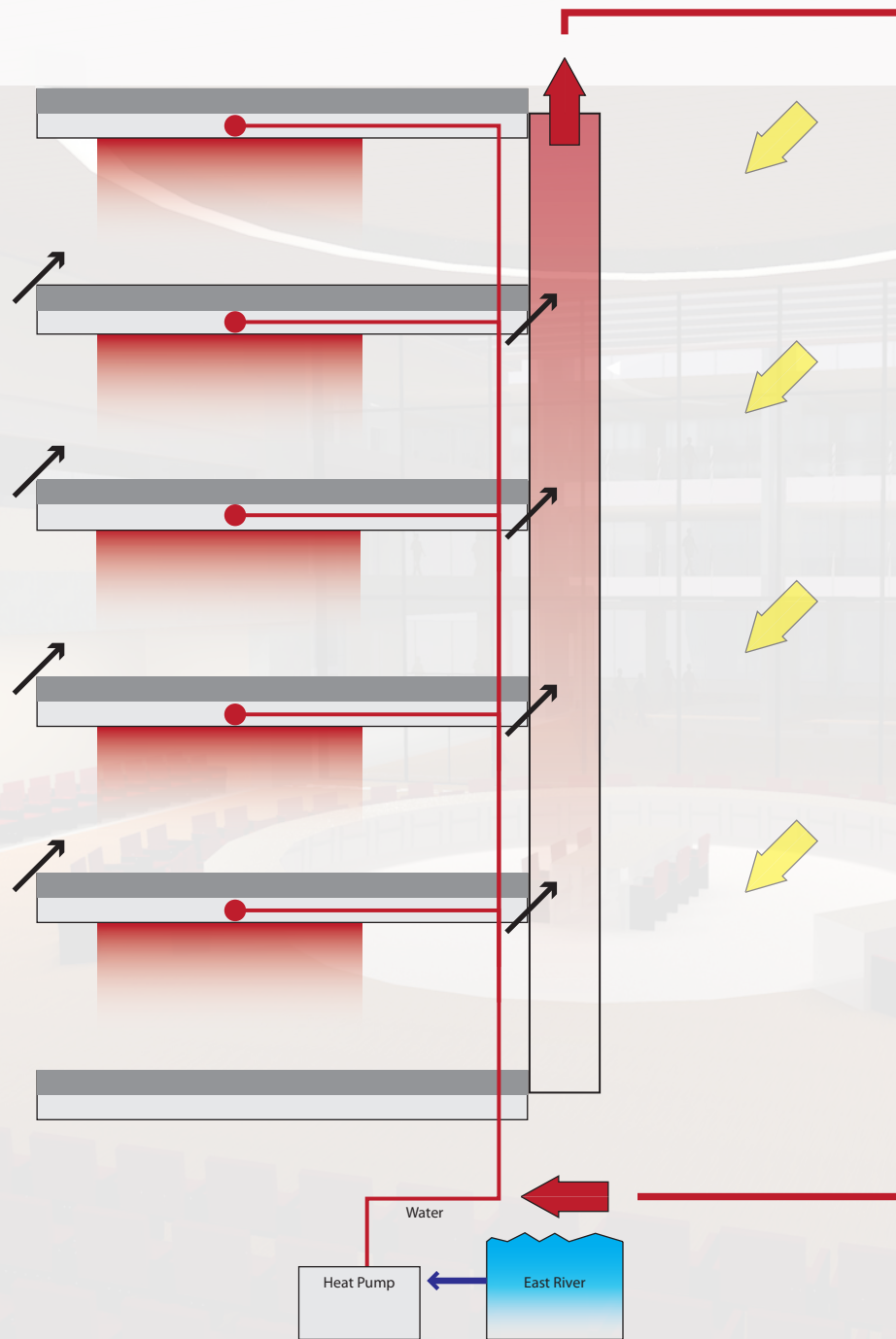


energy concept

combine office space with
energy-tower concept

natural ventilation

pv cells



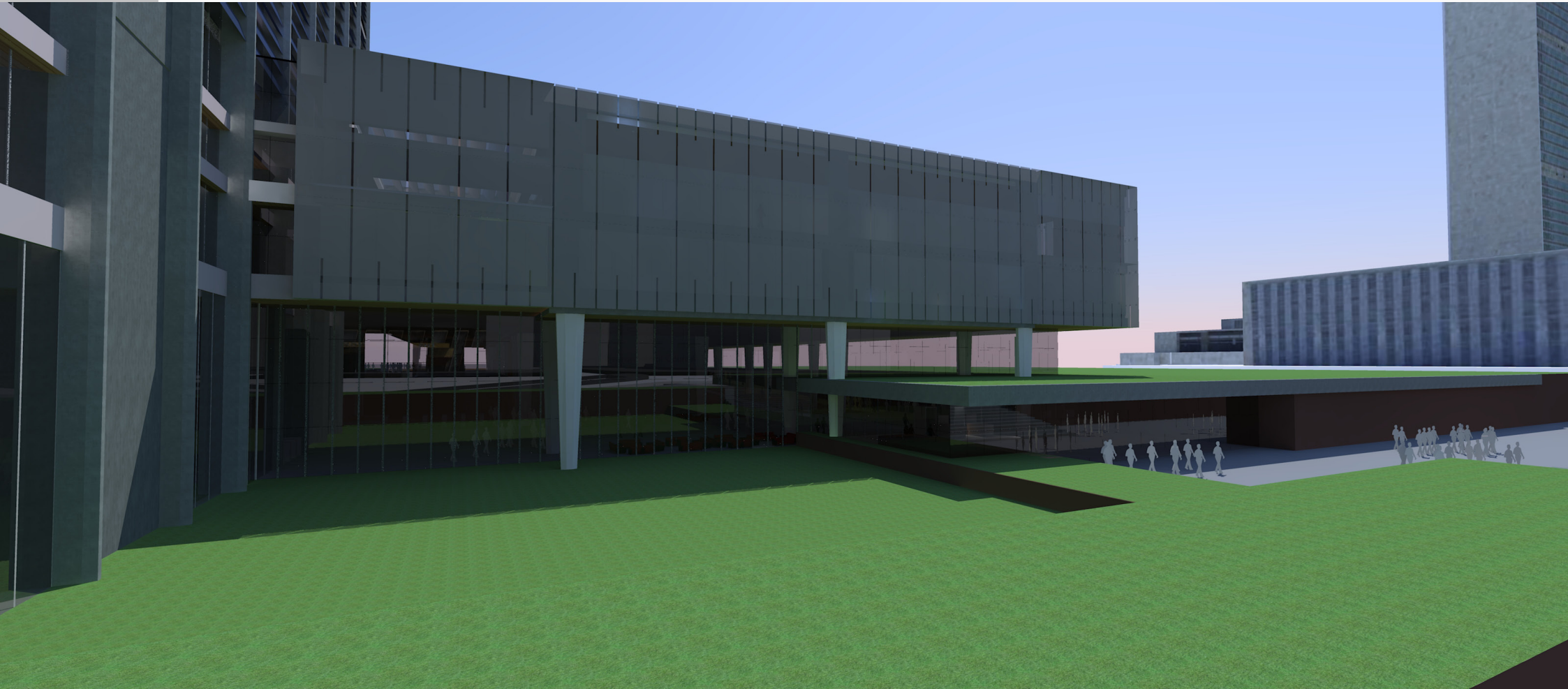
employee &
delegate
circuit

conference area

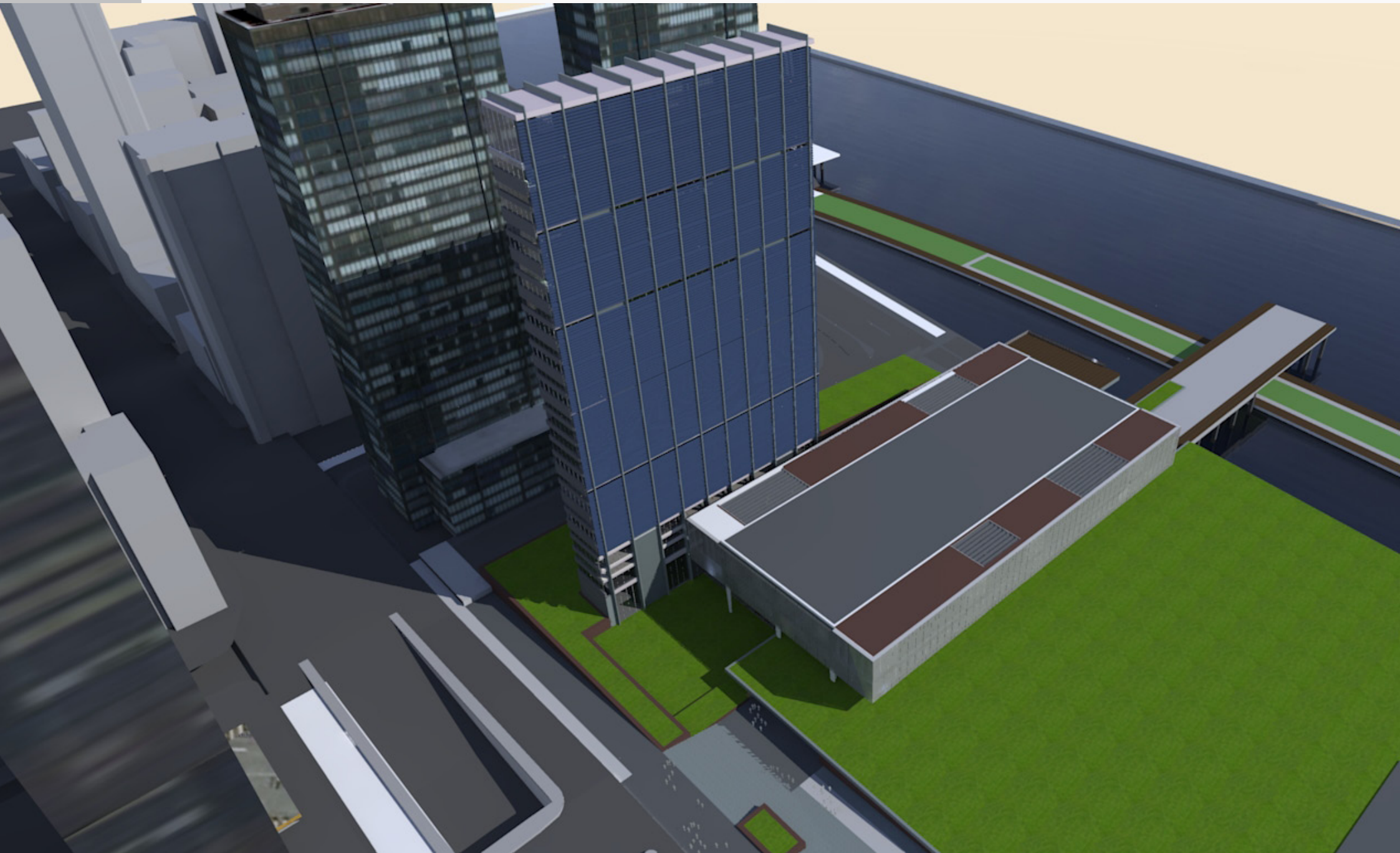
service zone

public-zone

impression



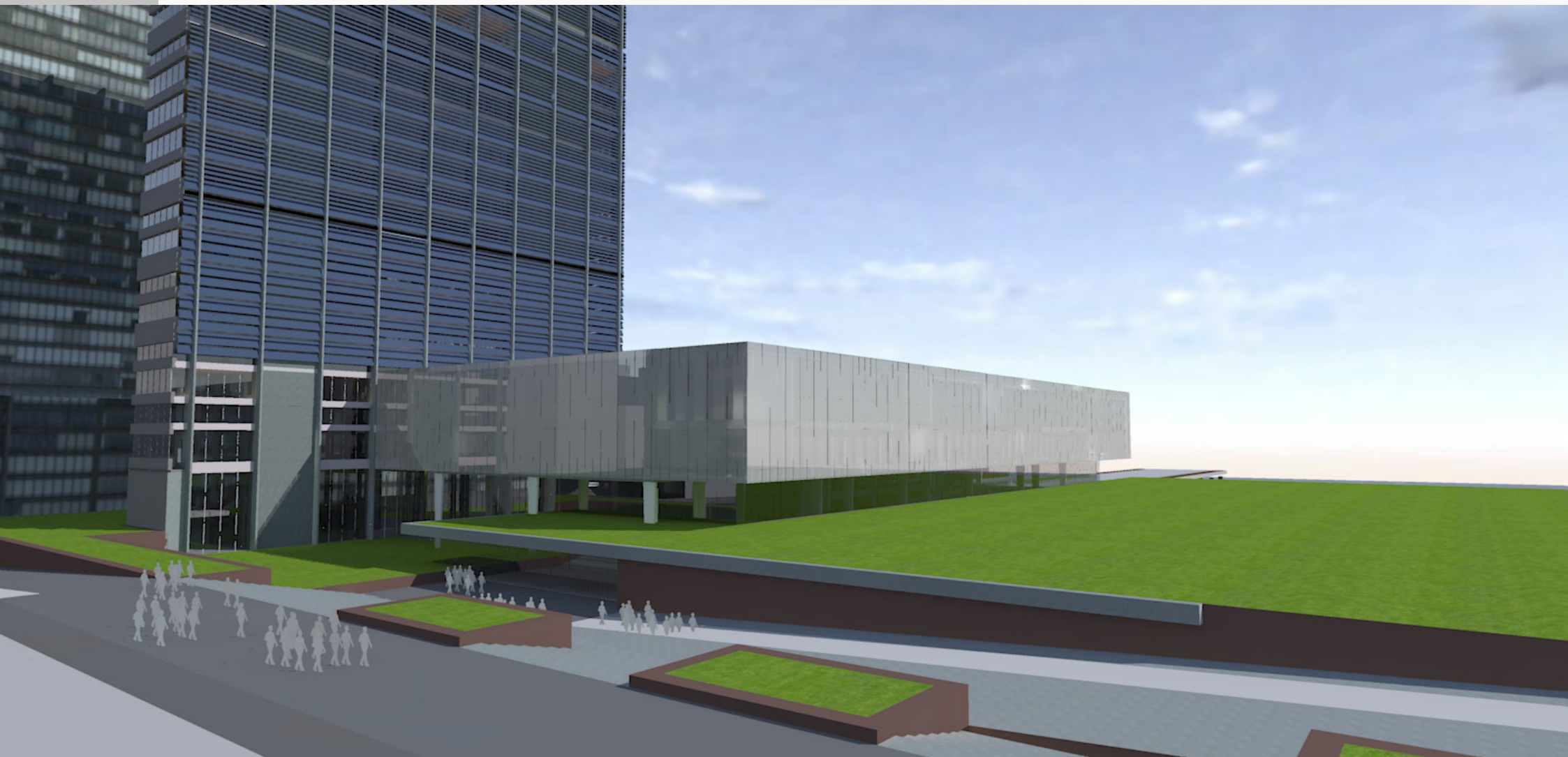
building in context



public entrance



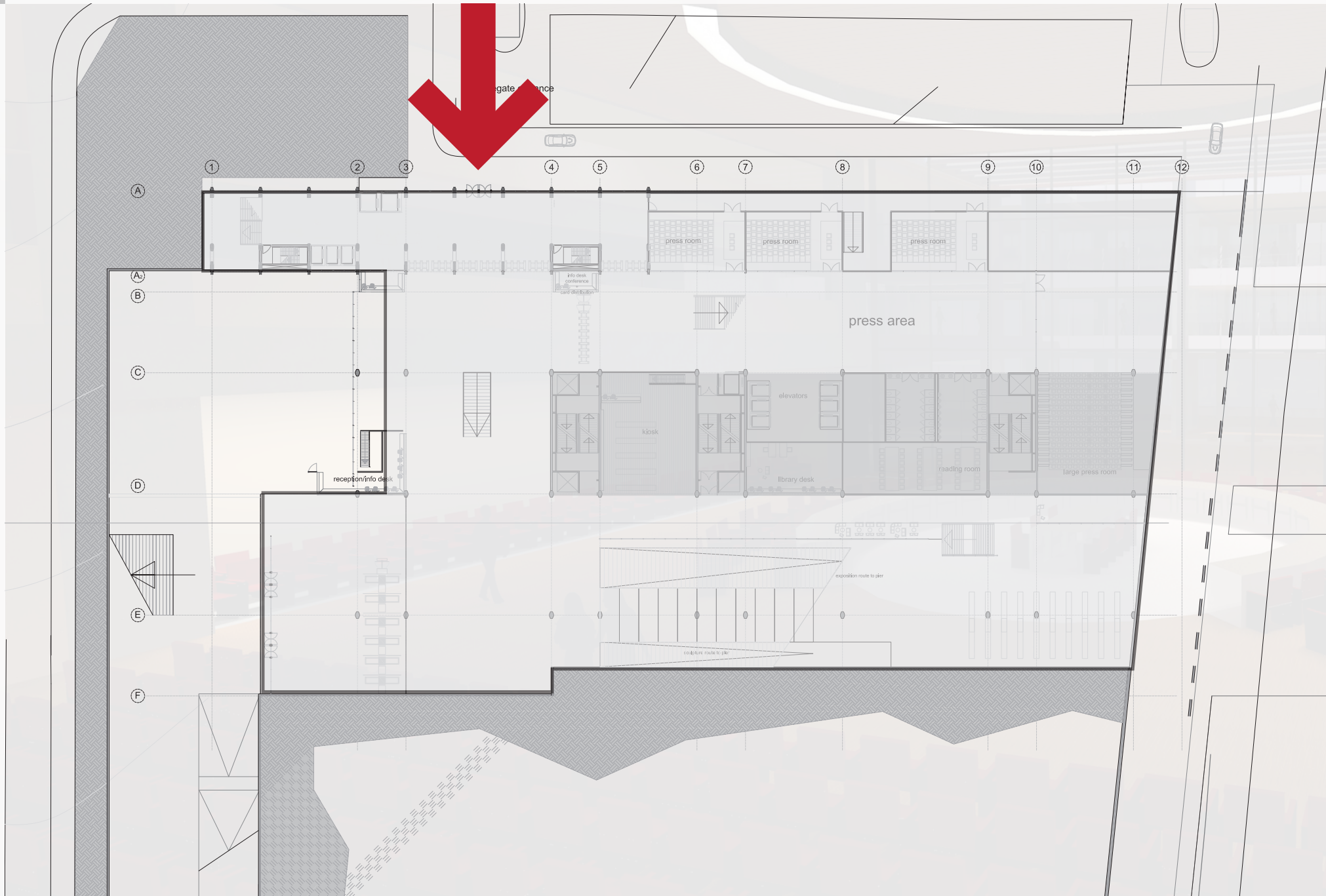
impression



impression



Delegate entrance



public zone

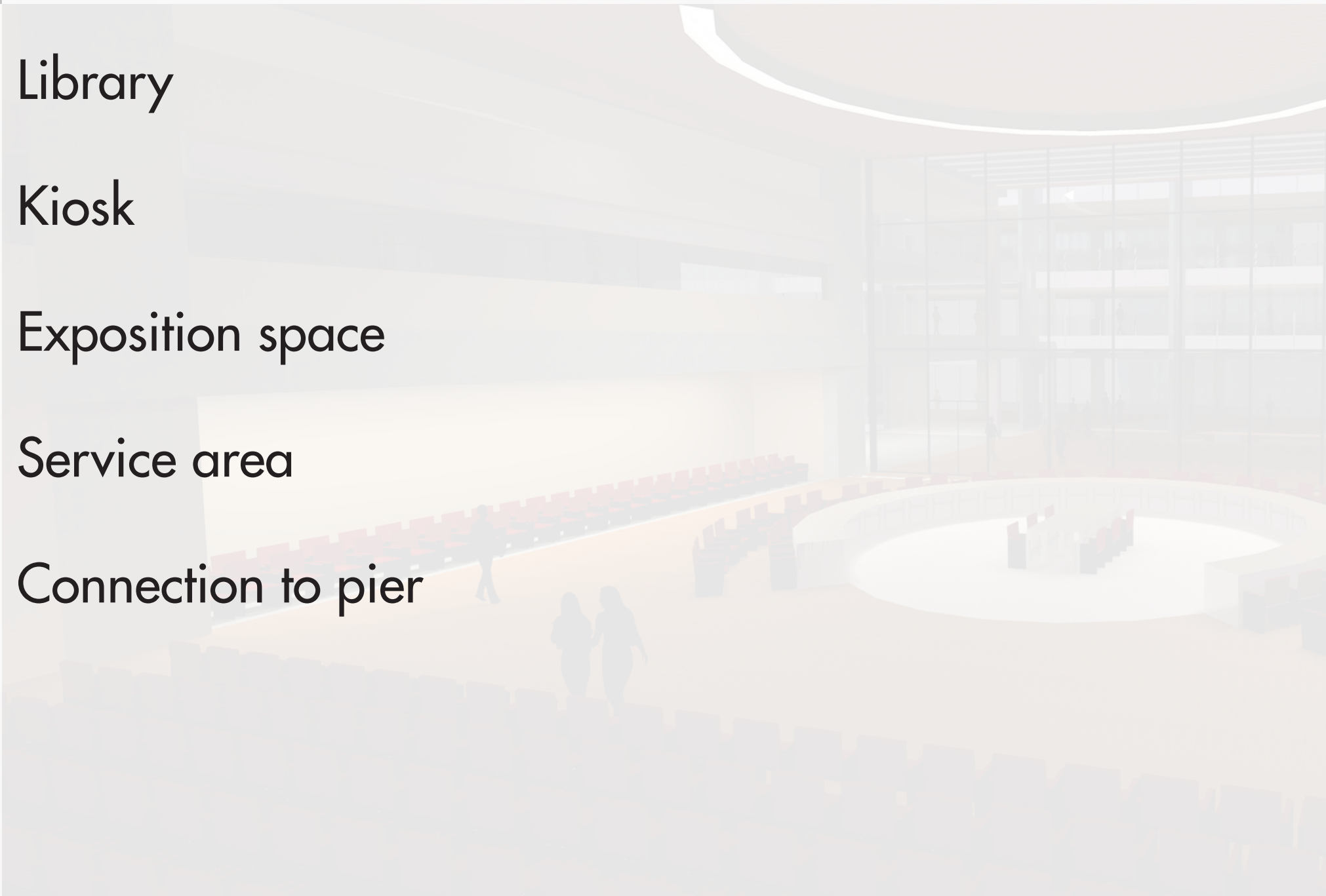
Library

Kiosk

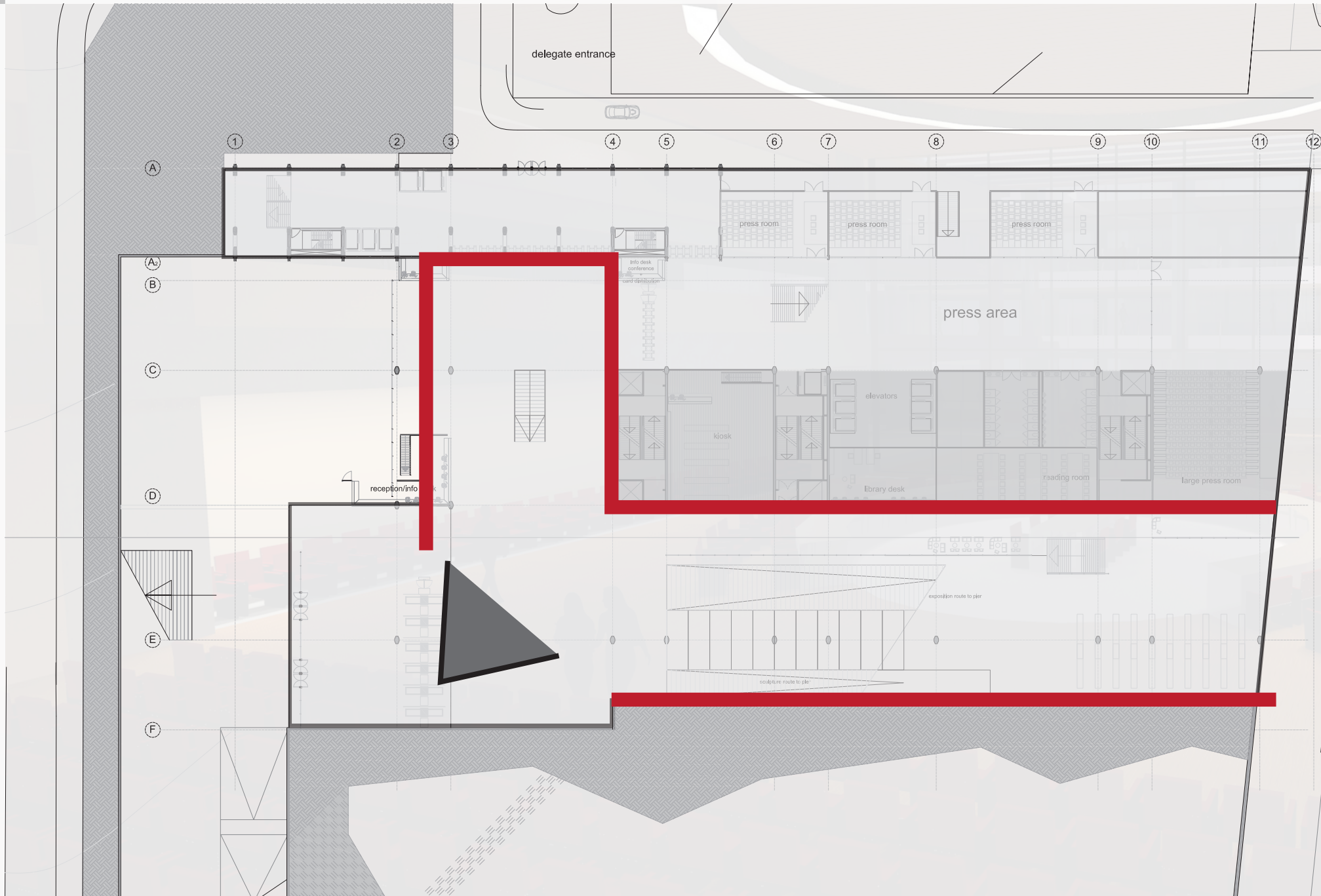
Exposition space

Service area

Connection to pier



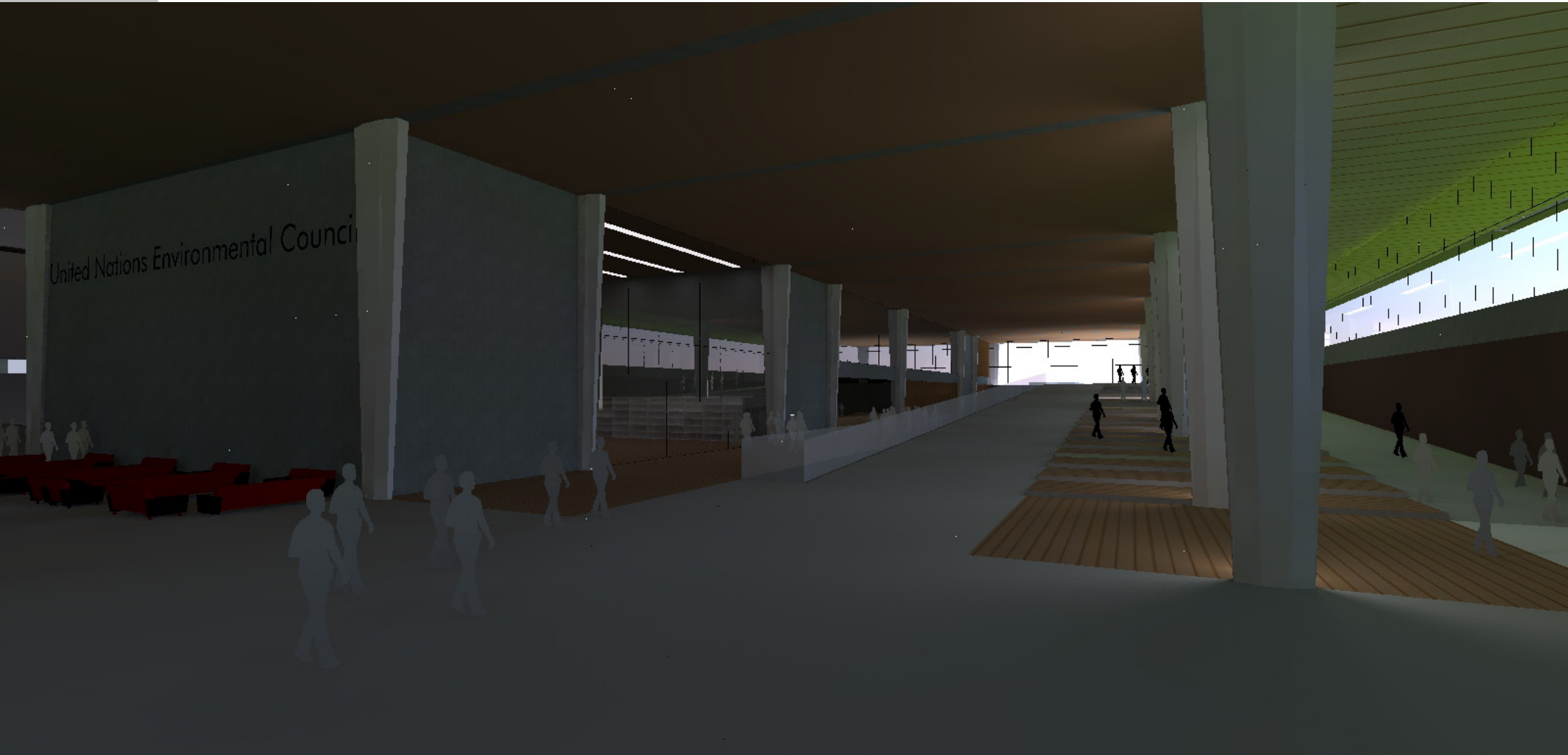
Public zone



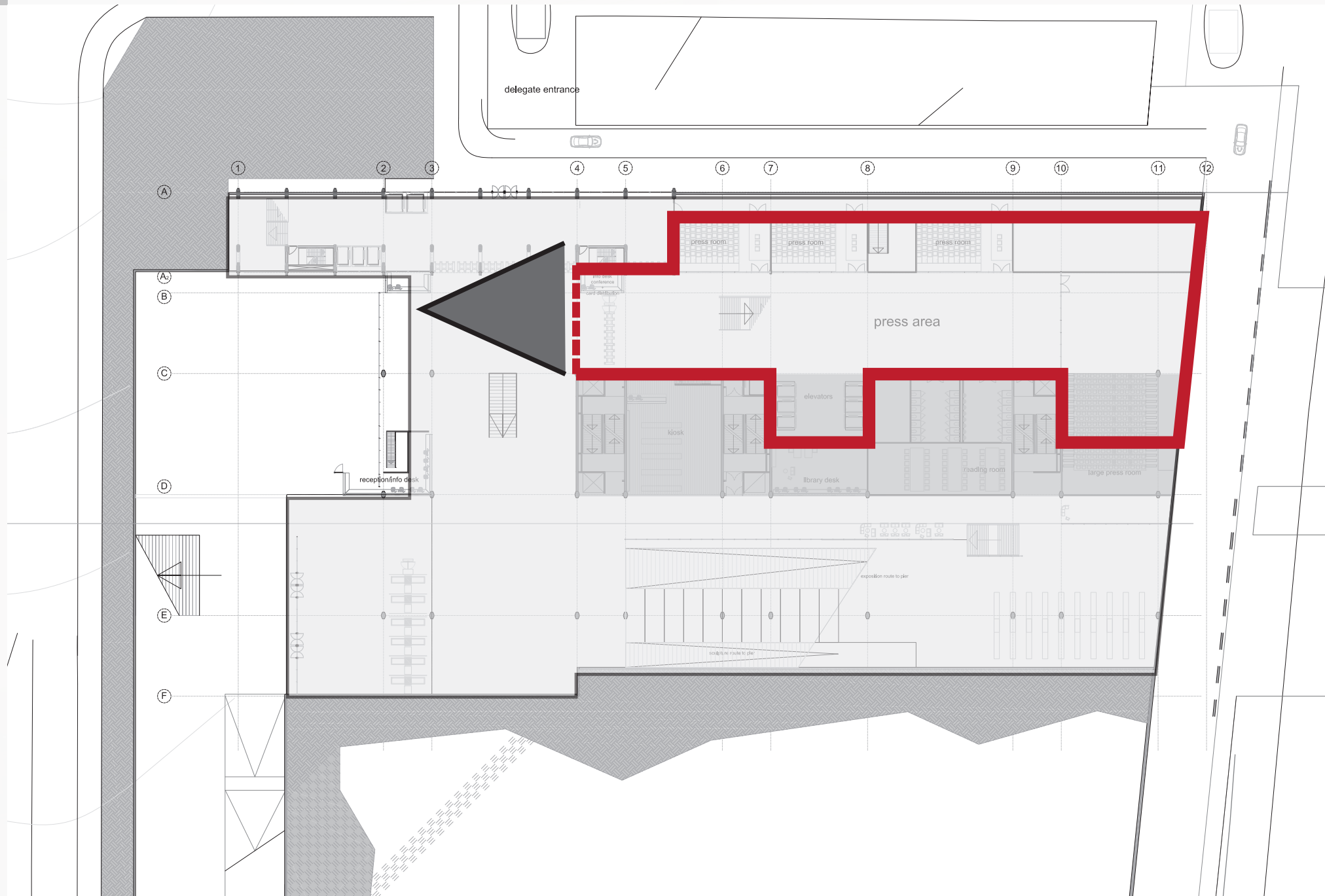
Impression



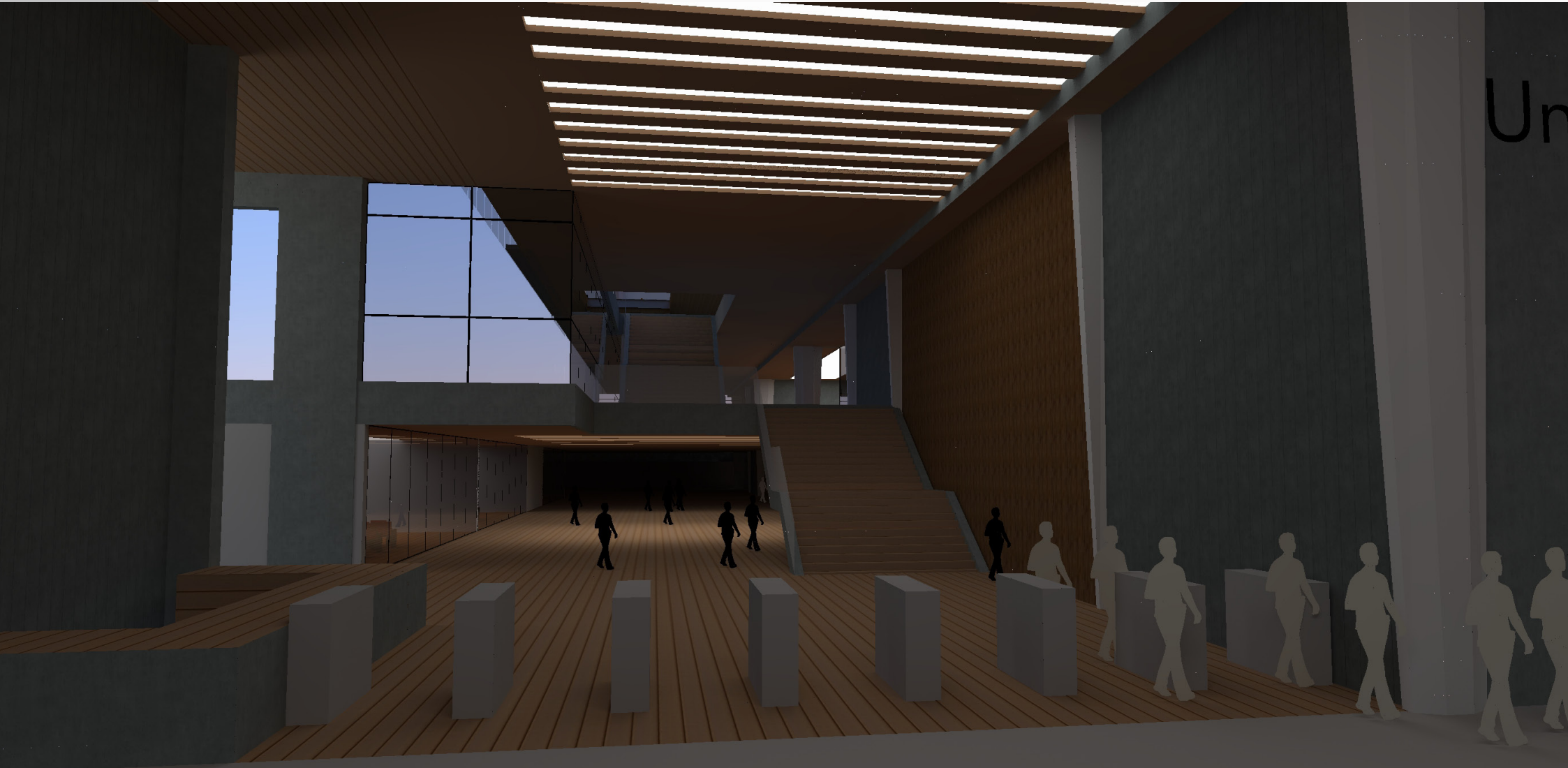
Impression



Conference zone entrance - ground floor



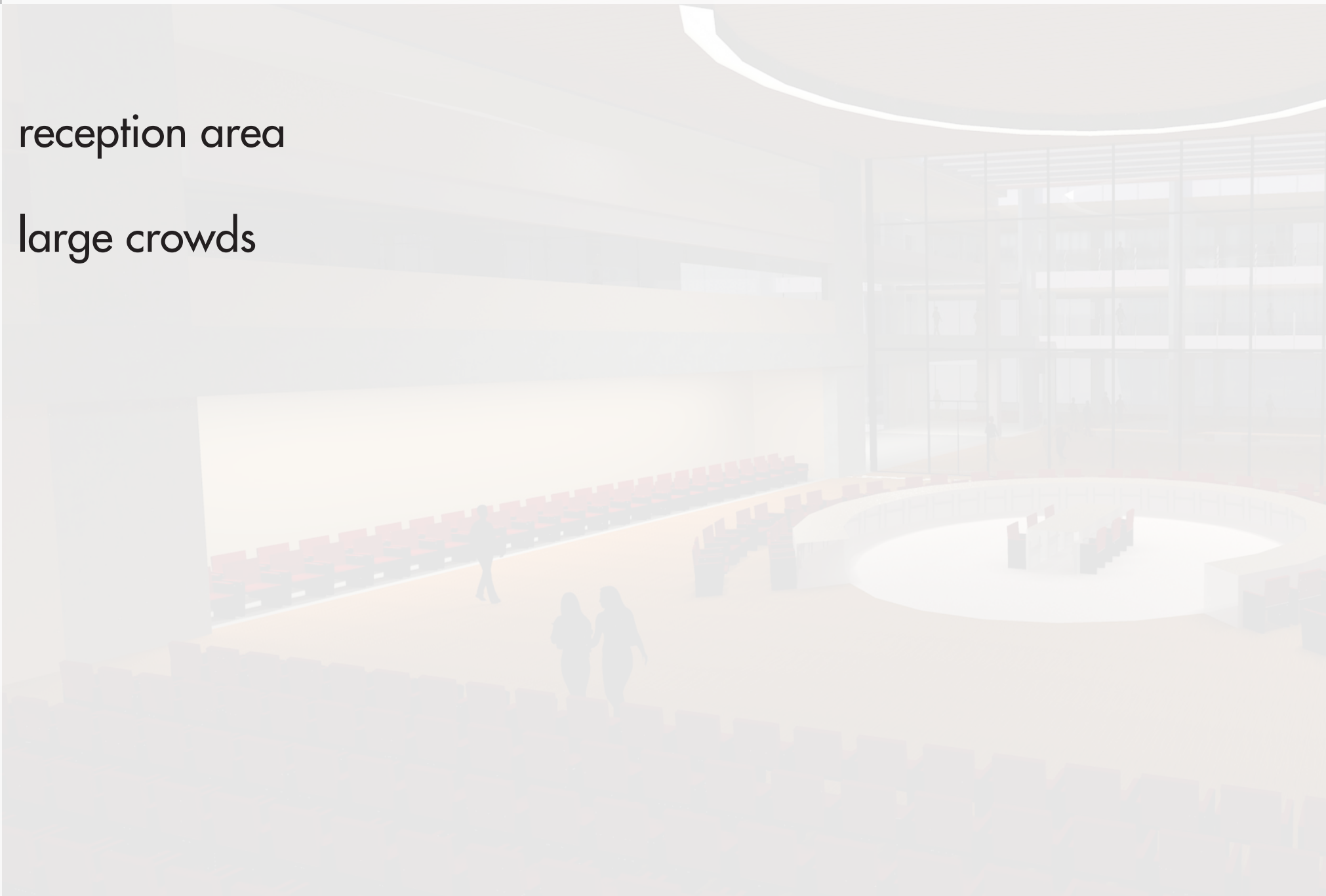
Impression



delegate zone - ground floor

reception area

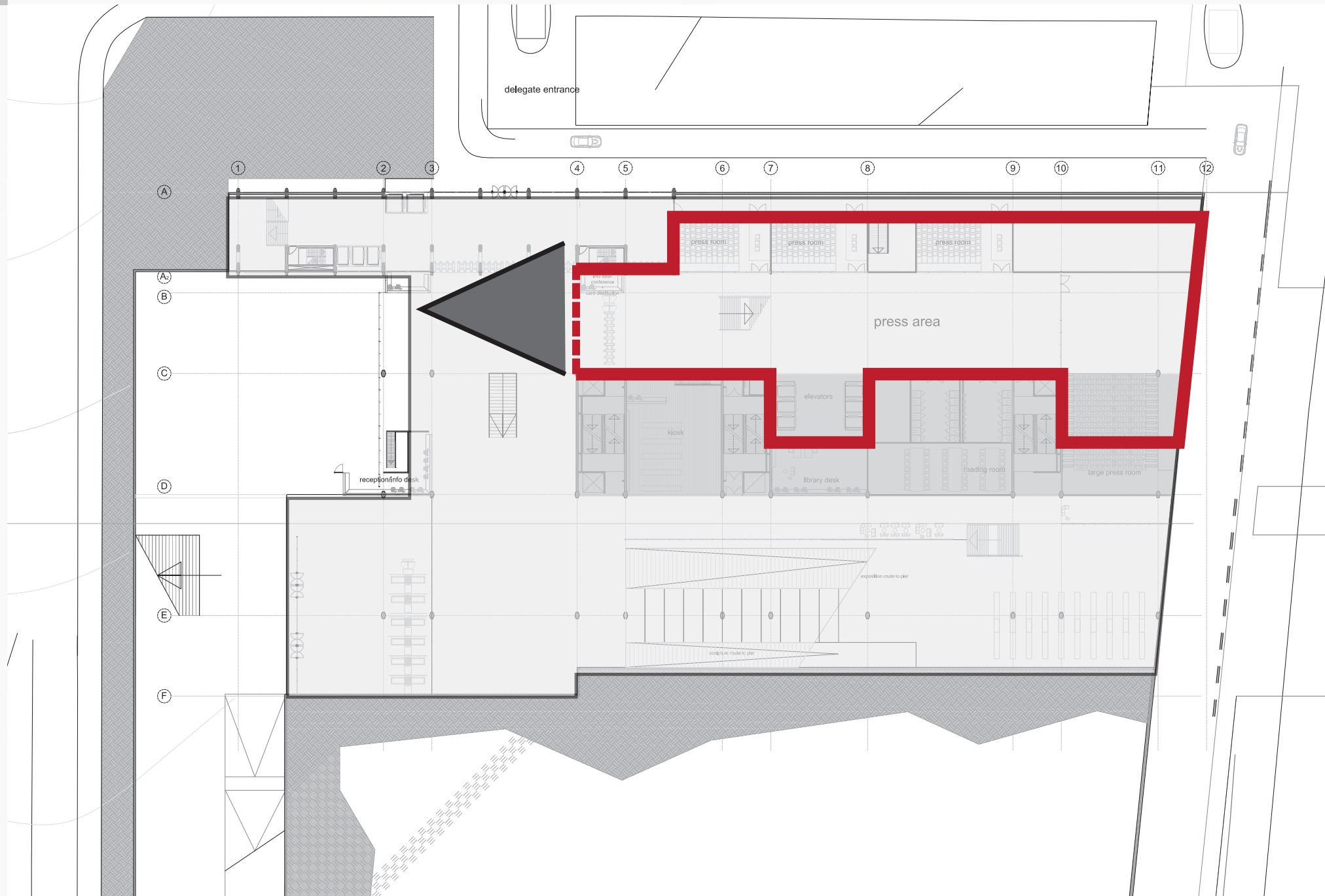
large crowds



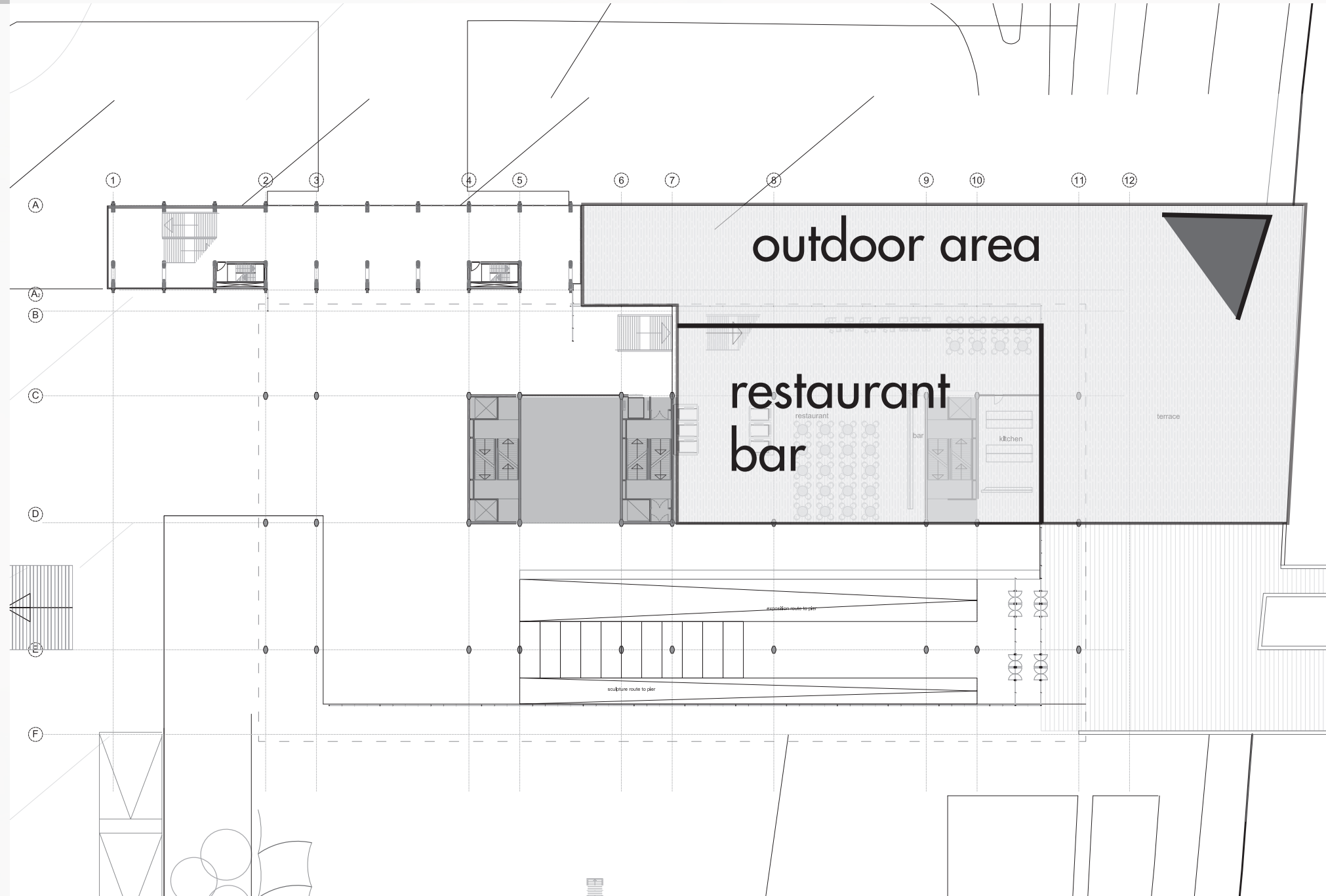
delegate zone - ground floor



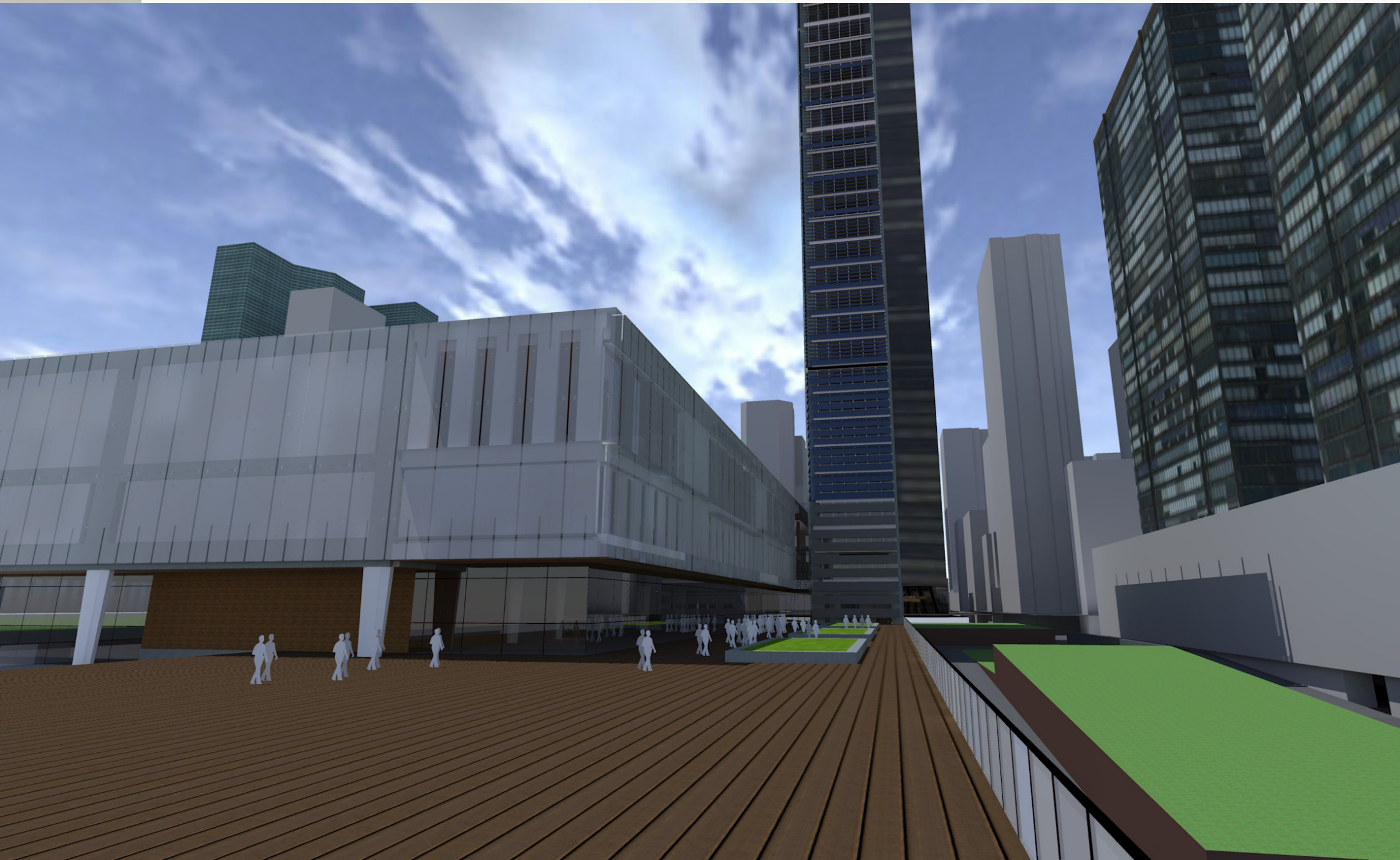
Conference zone - ground floor



conference zone - 1st floor



impression



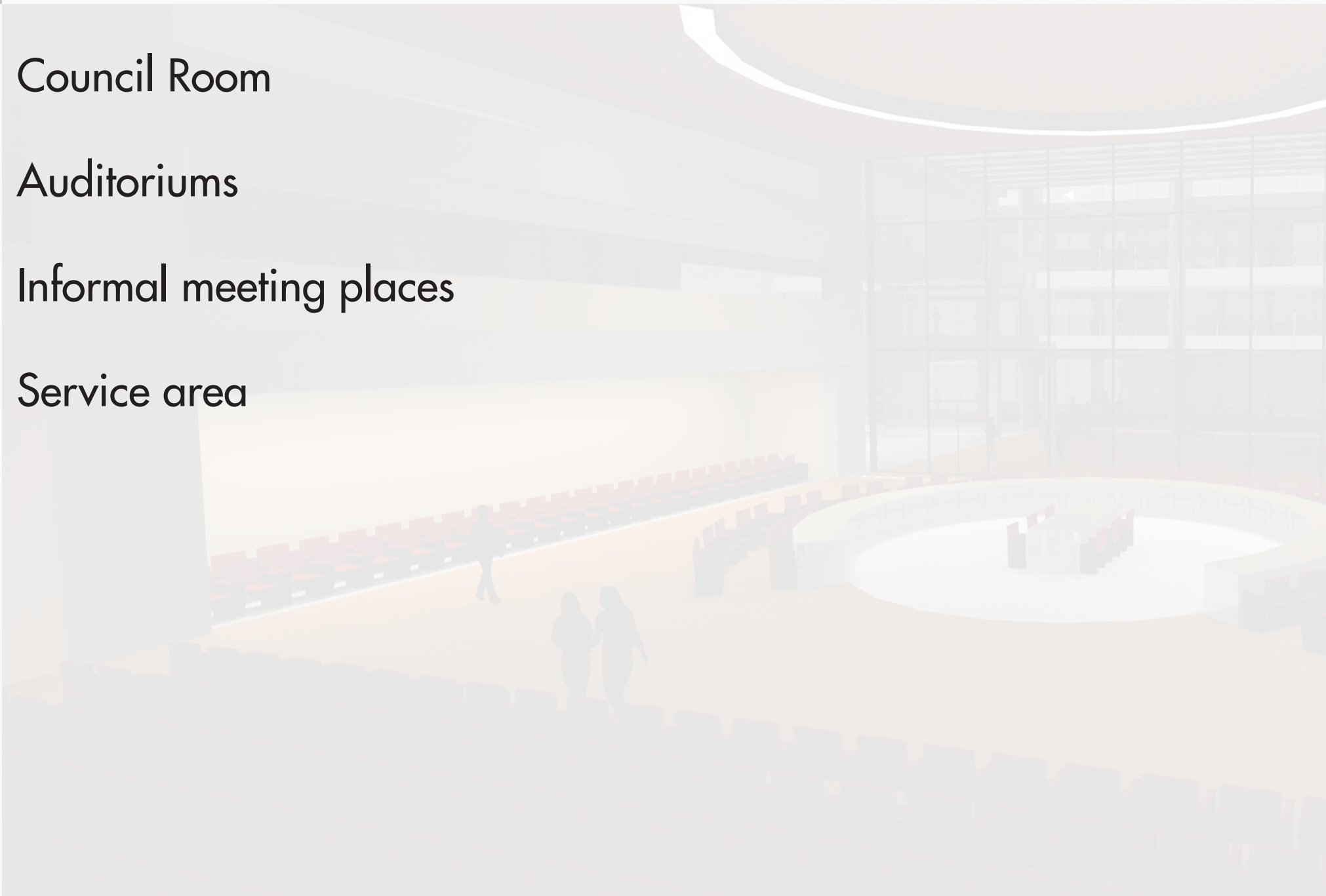
conference area - Main floor

Council Room

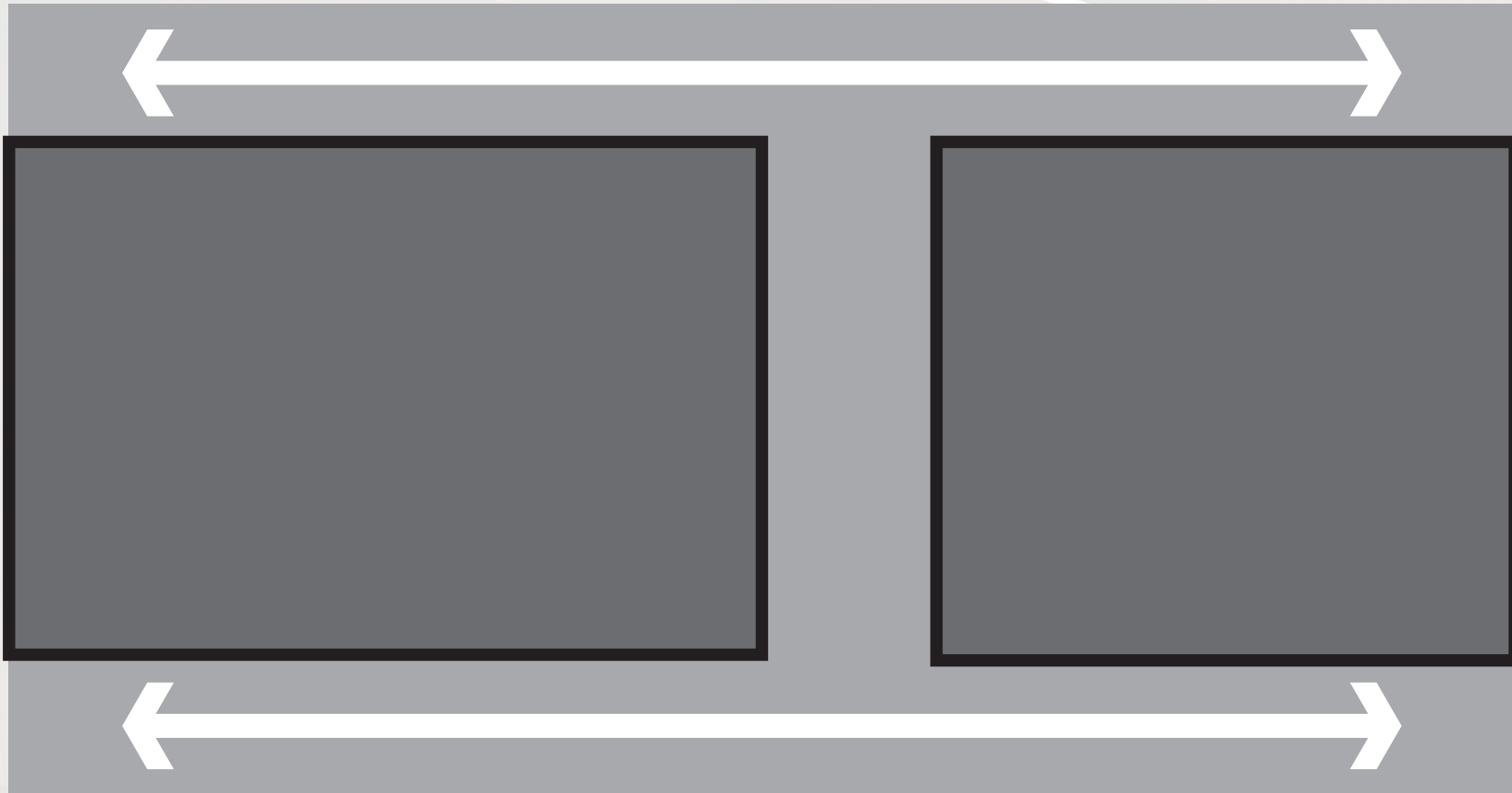
Auditoriums

Informal meeting places

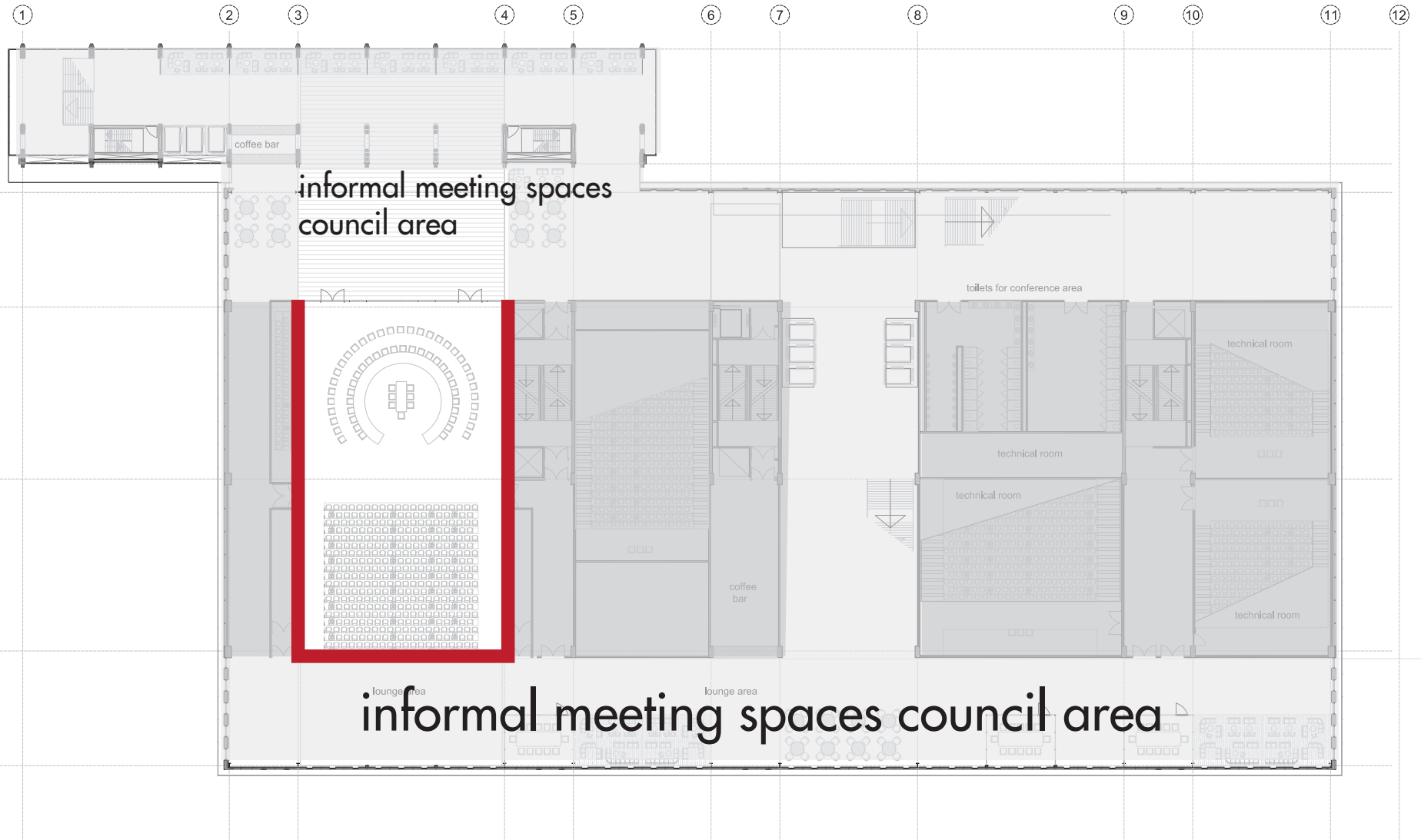
Service area



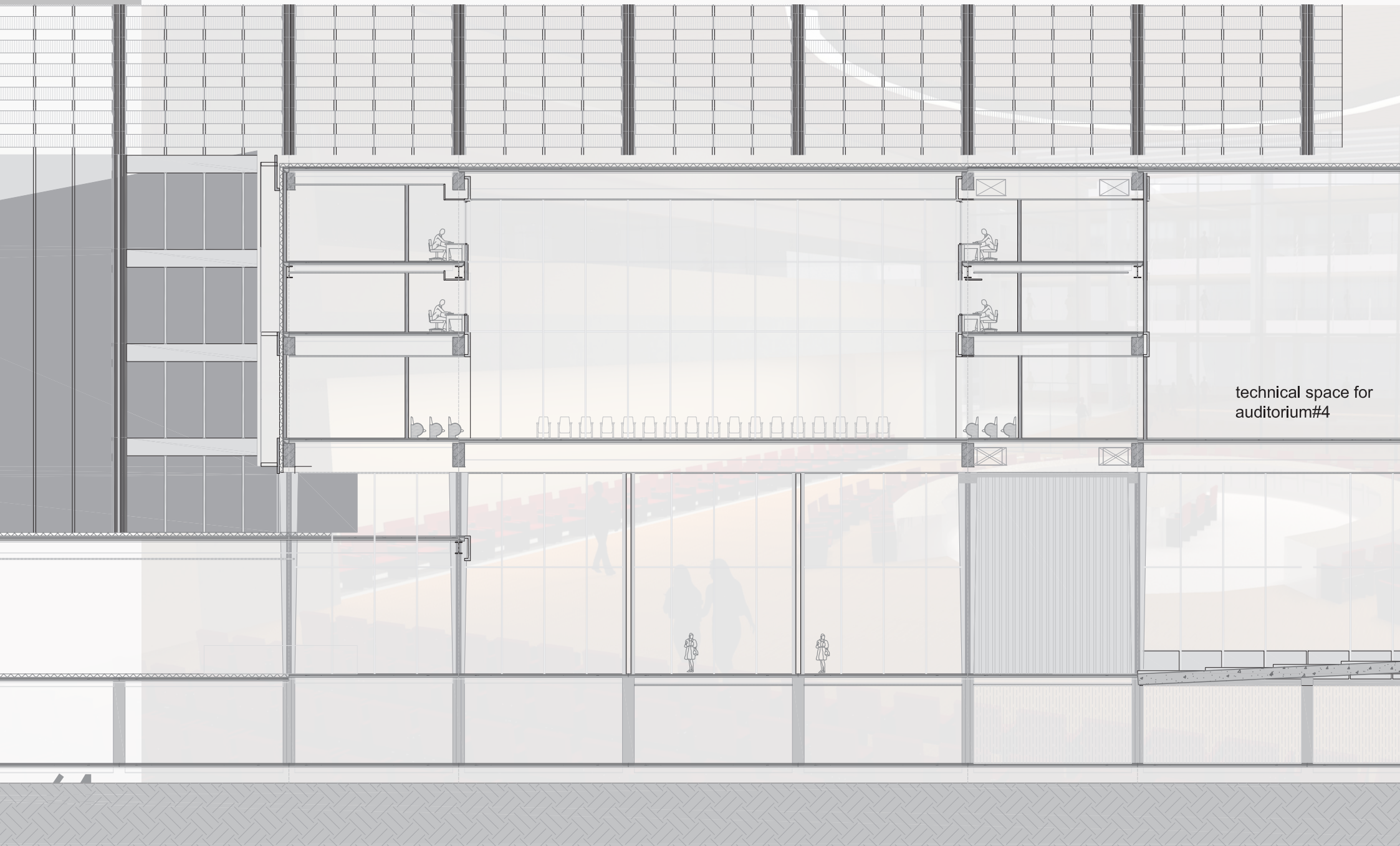
conference area concept



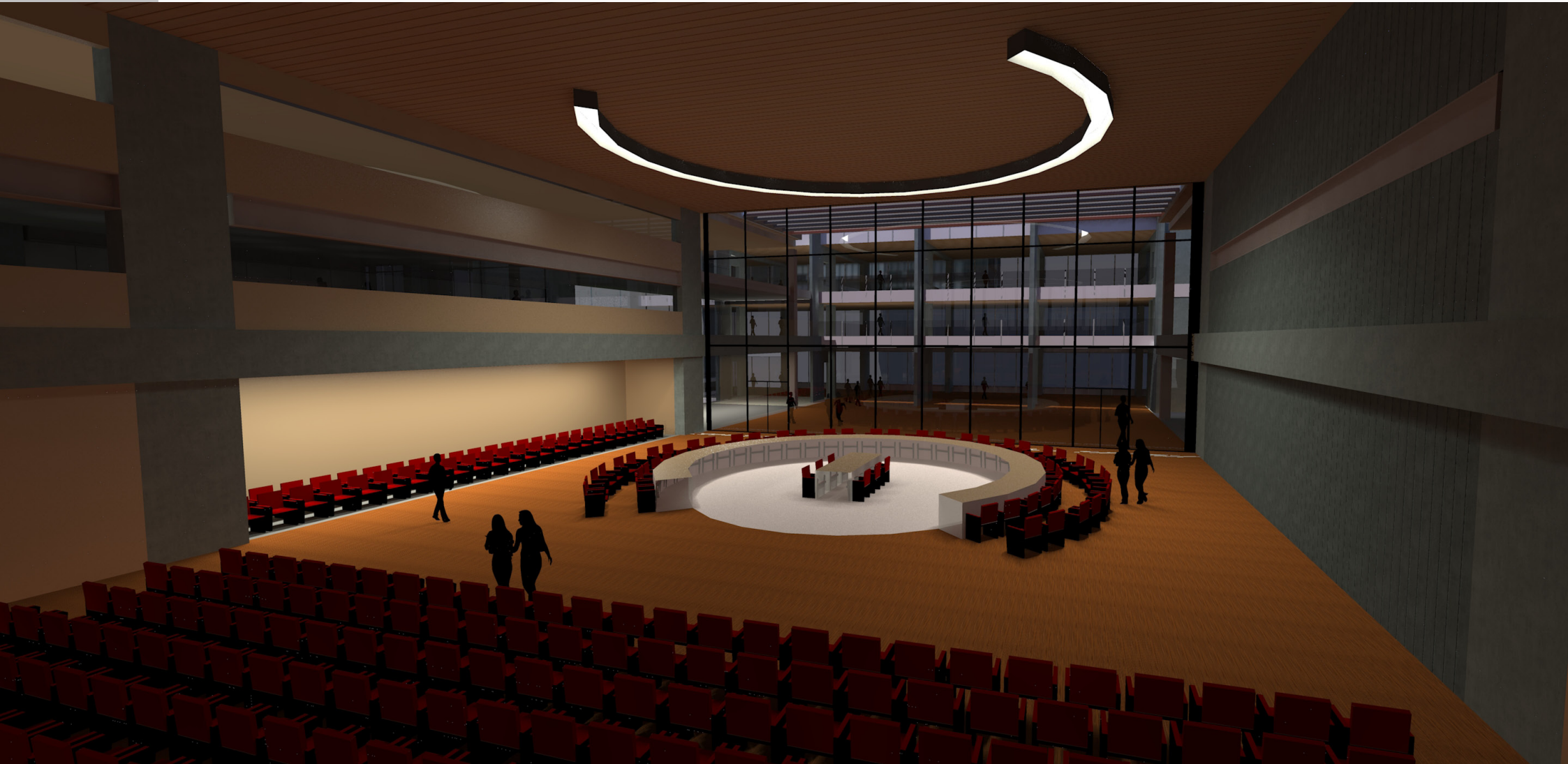
main floor - council room

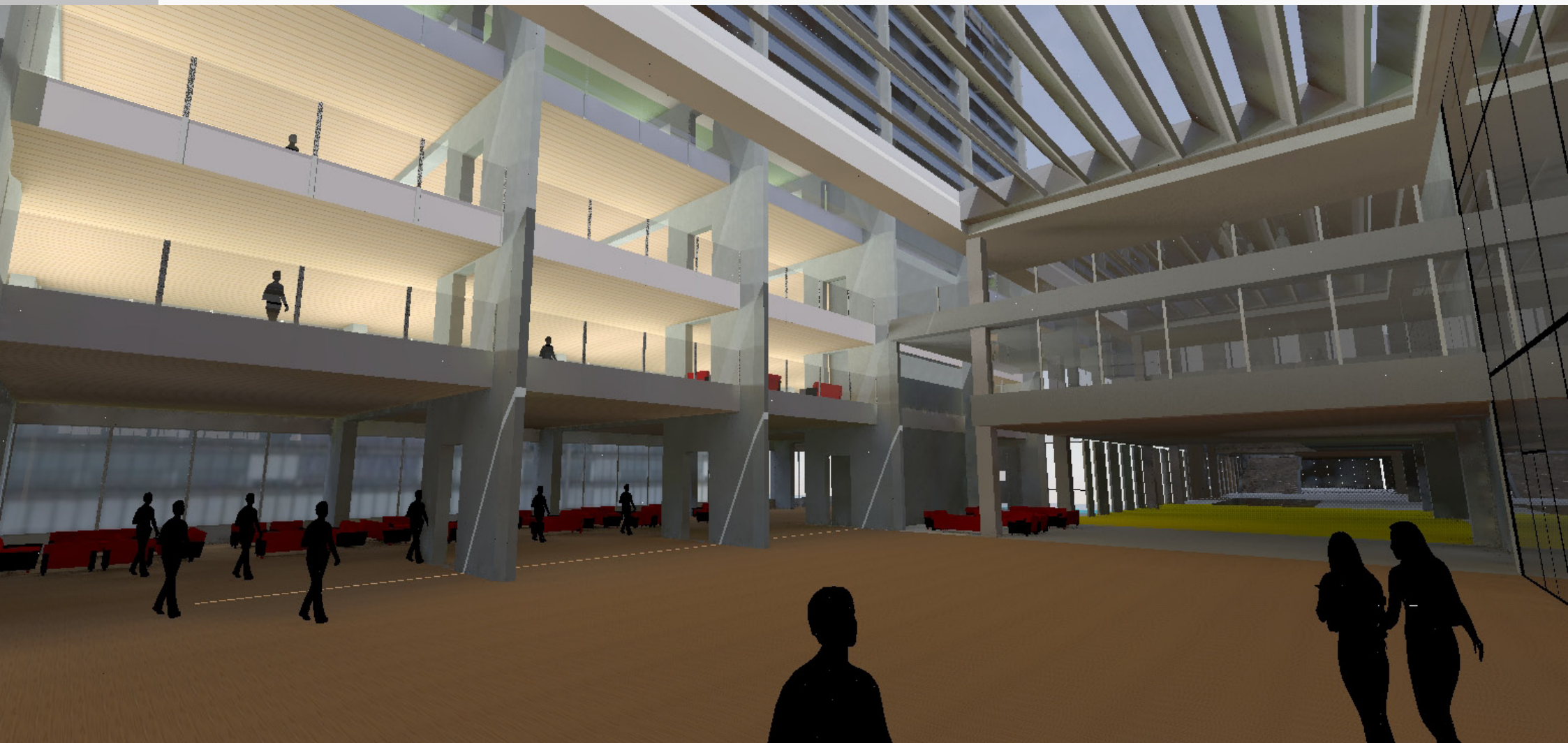


Section Council room

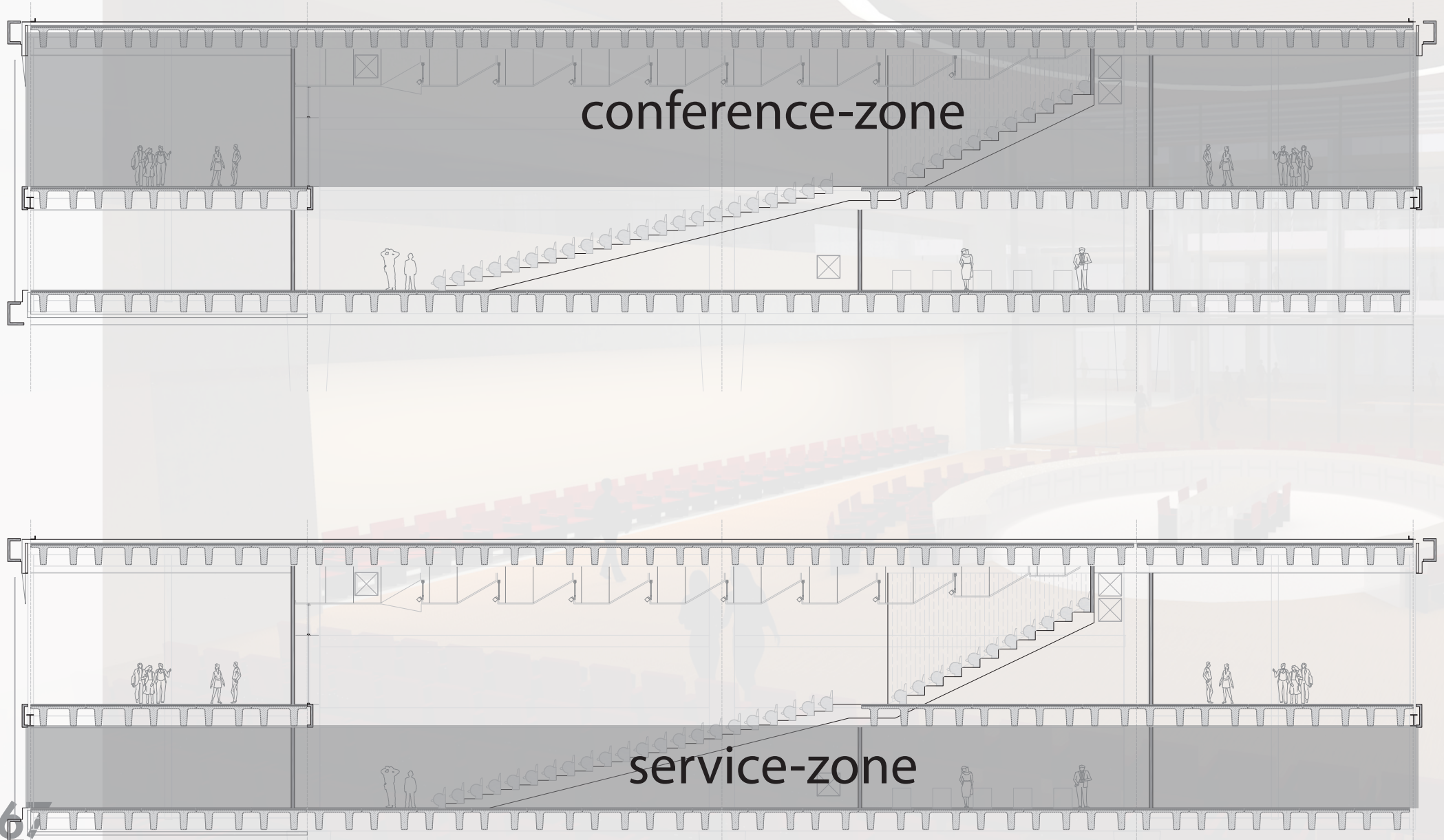


impression council room

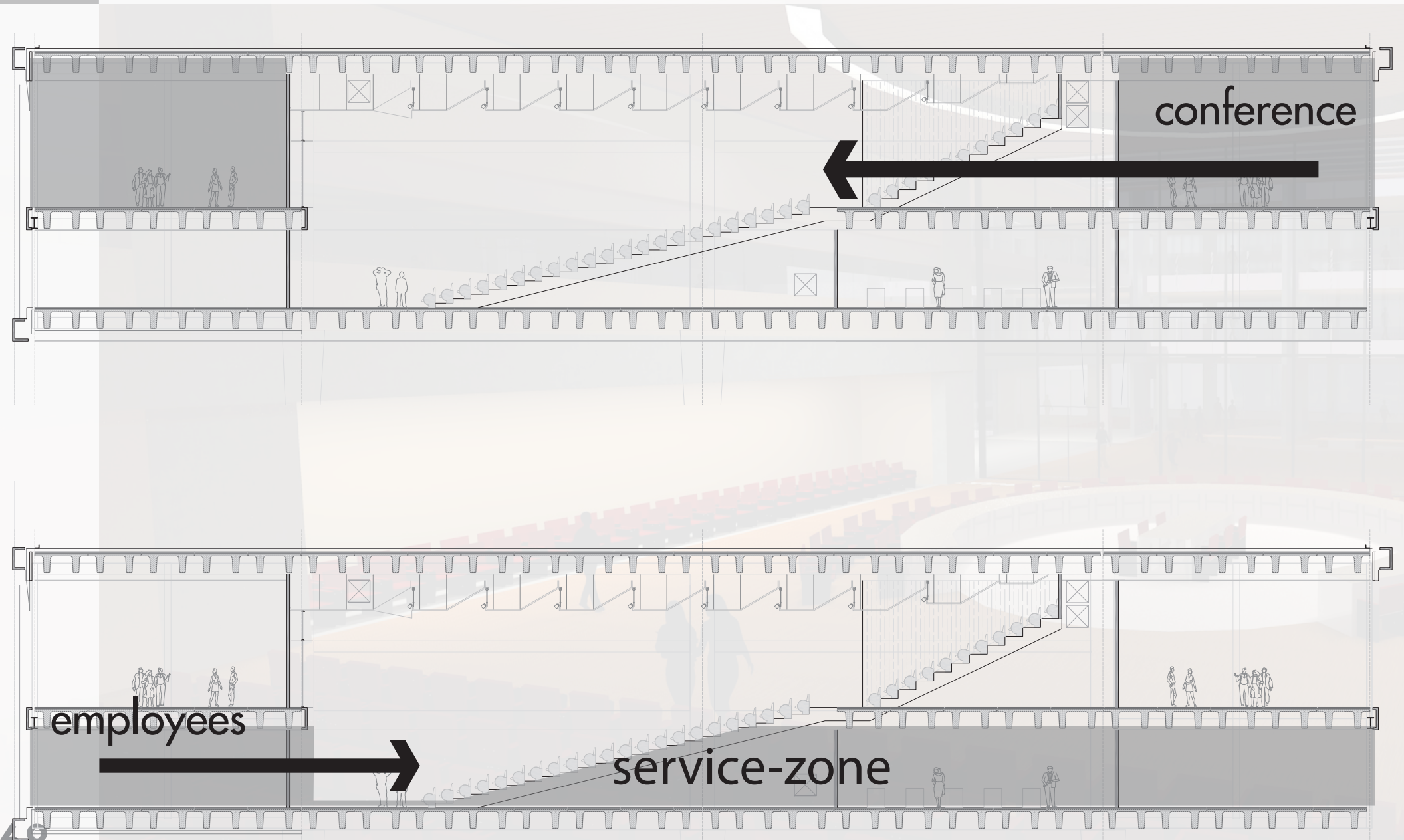




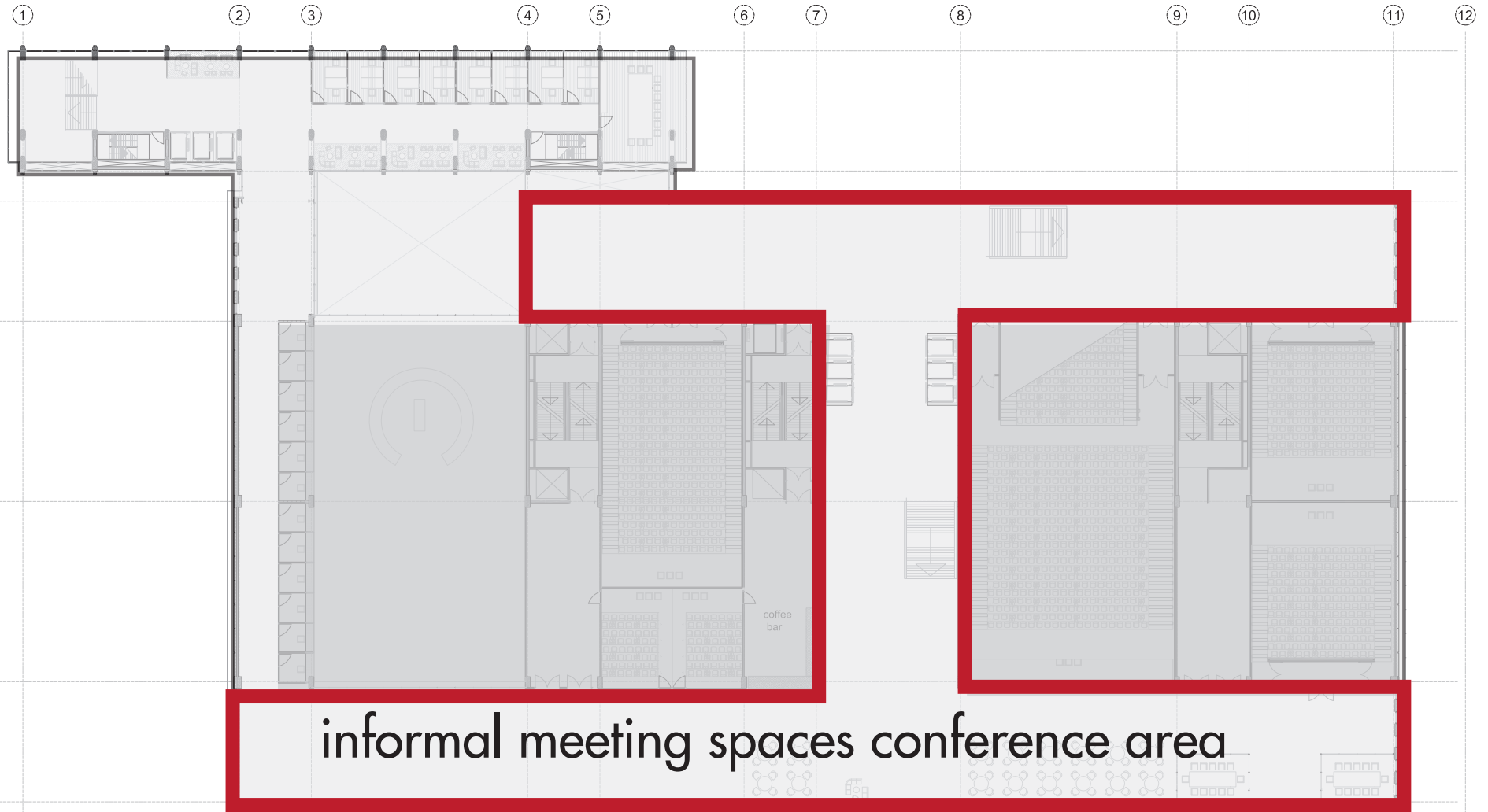
conference area - service concept



conference area - service concept



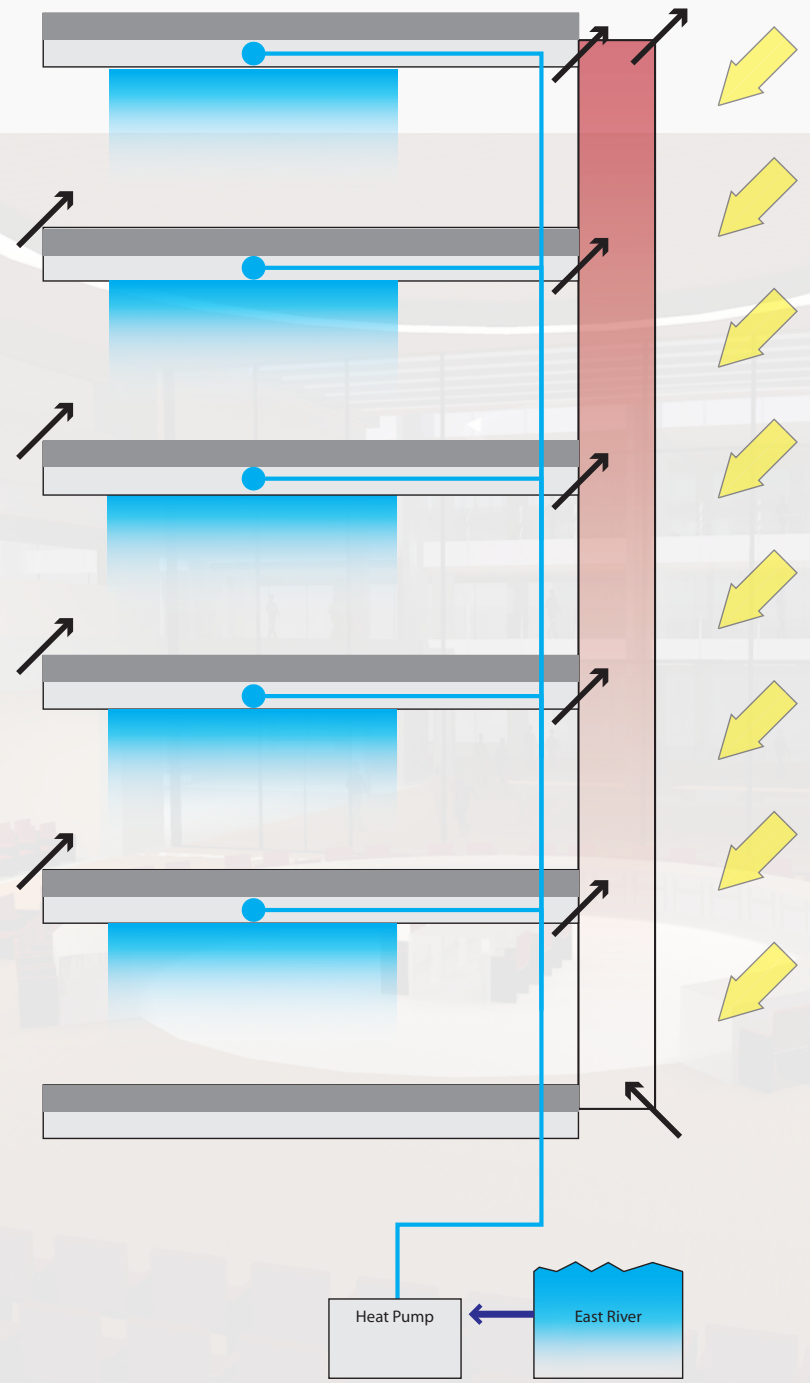
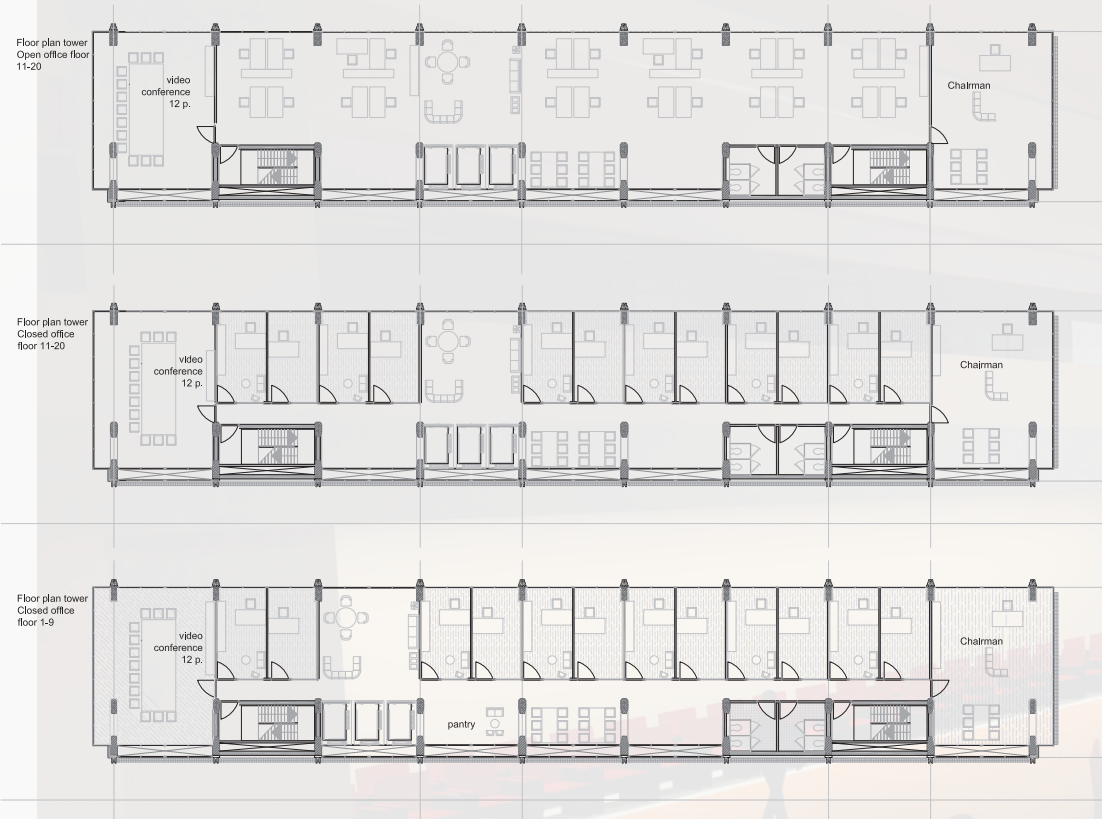
main floor - conference area



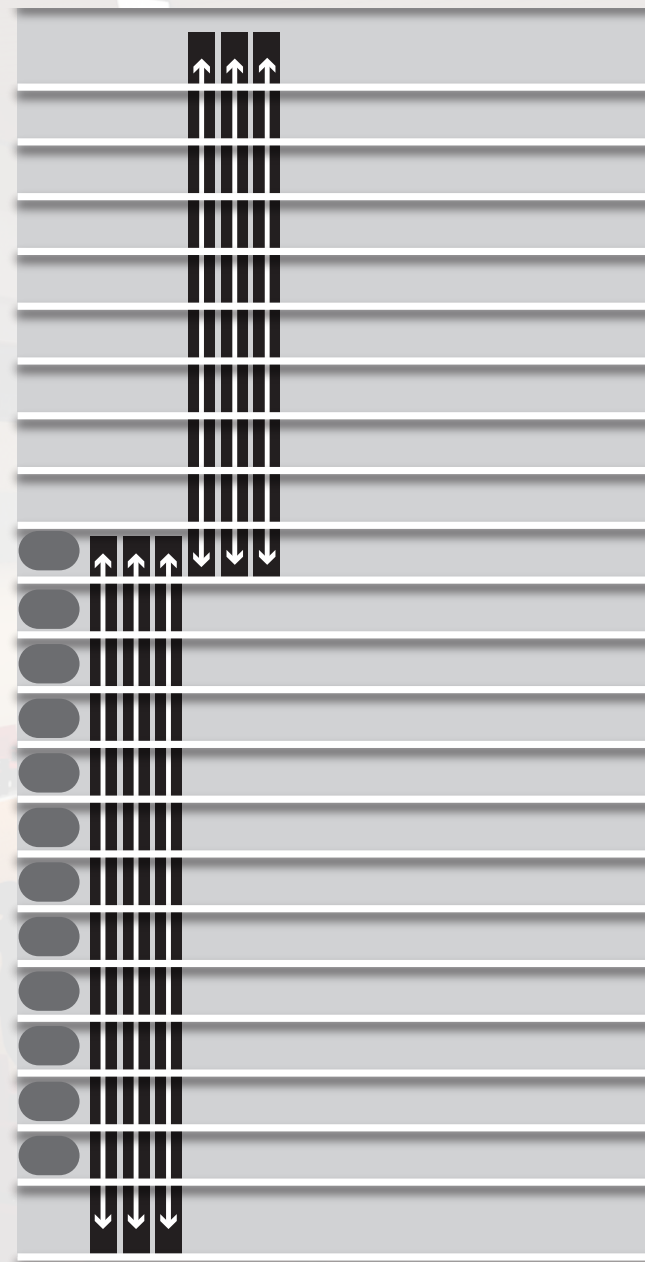
impression



concept office tower



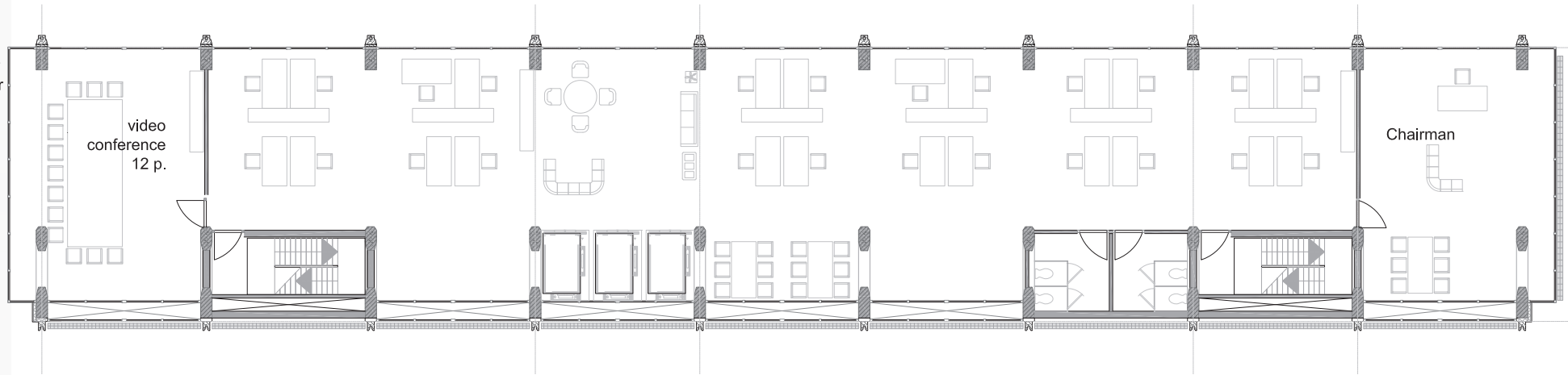
organization



concept



Floor plan tower
Open office floor
11-20



Floor plan tower
Closed office
floor 11-20



impression open office floor



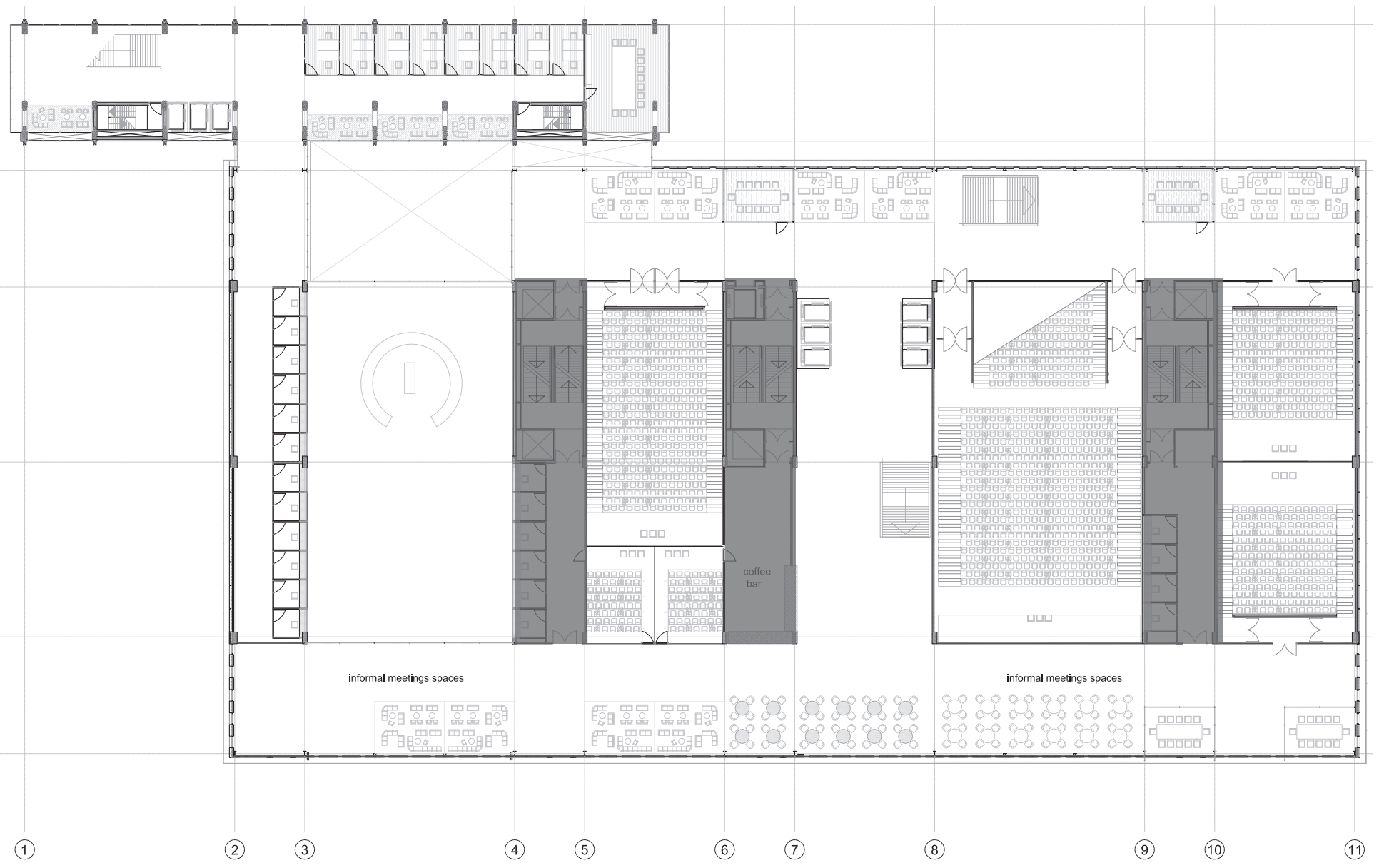
installations

Air-to-Air system for large crowds

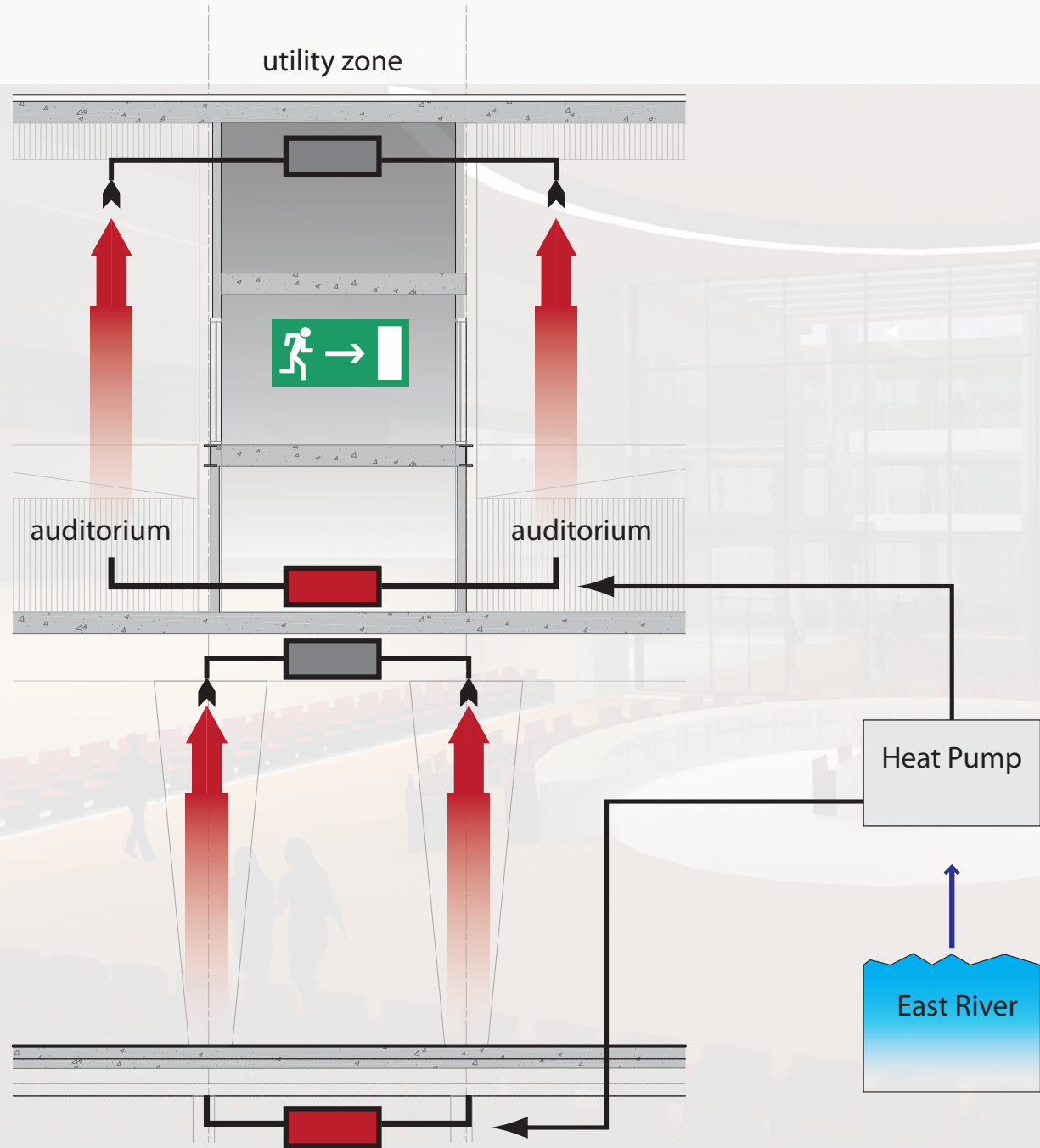
Water-to-Air for office space



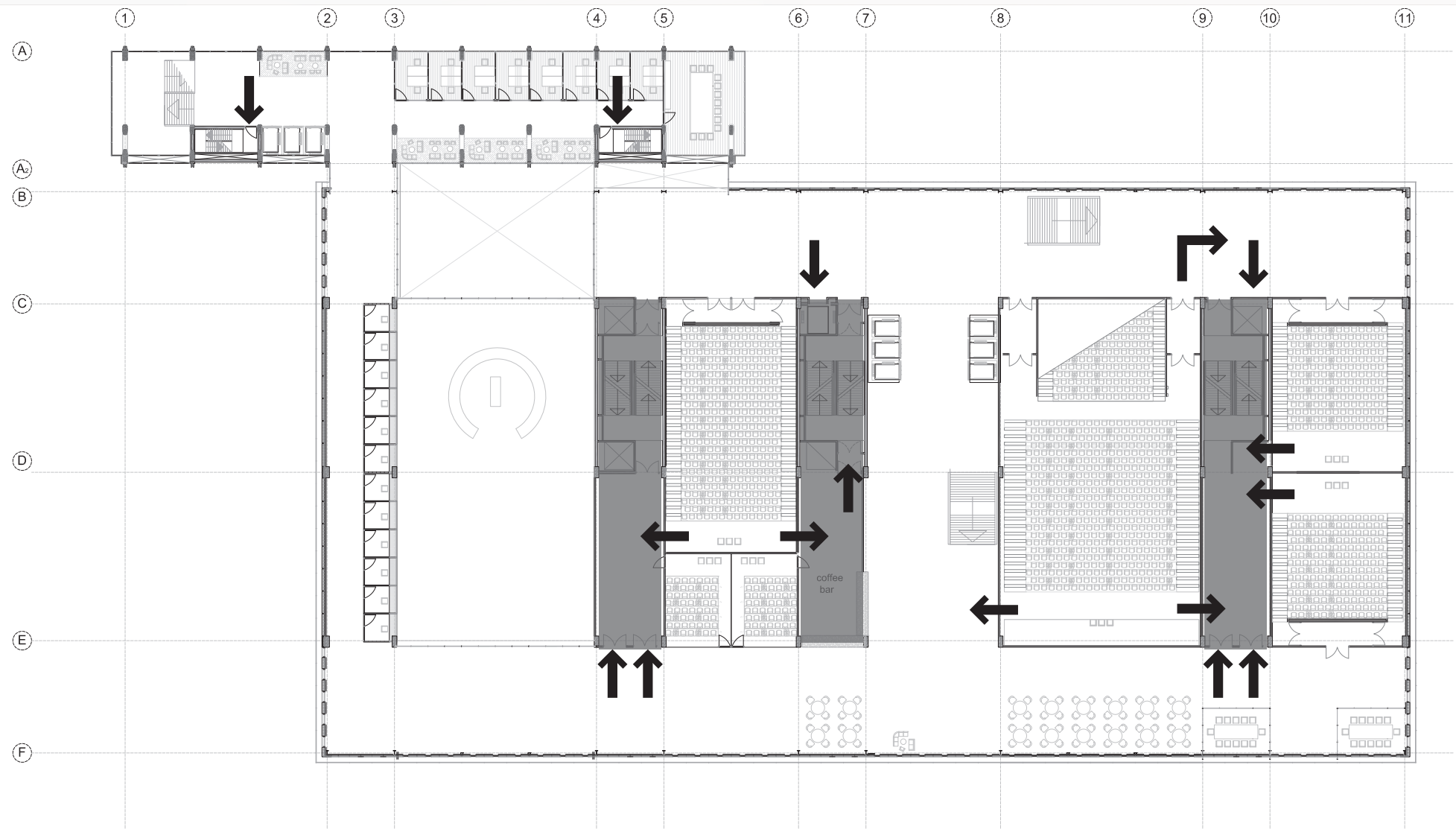
installations



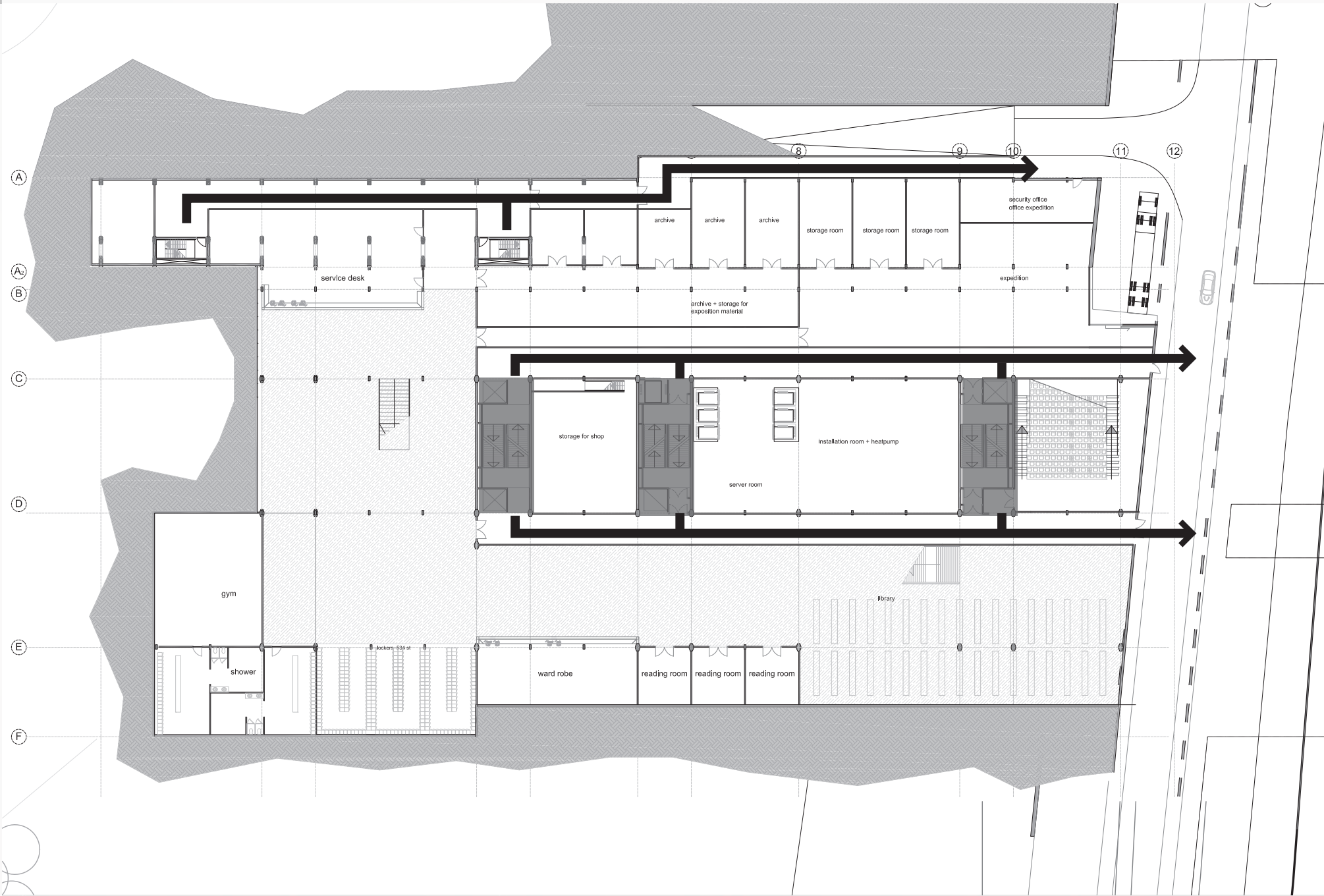
utility zone



emergency plan

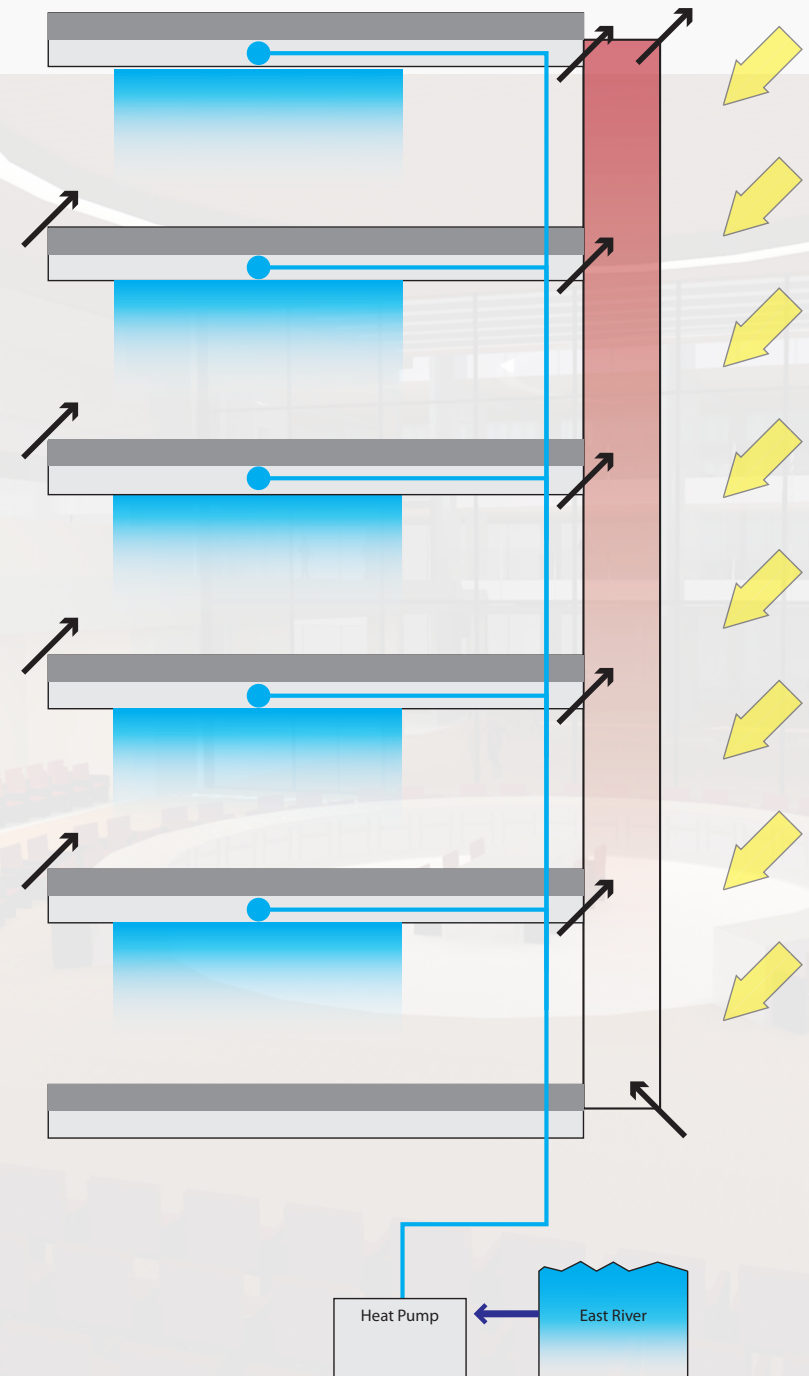


emergency plan



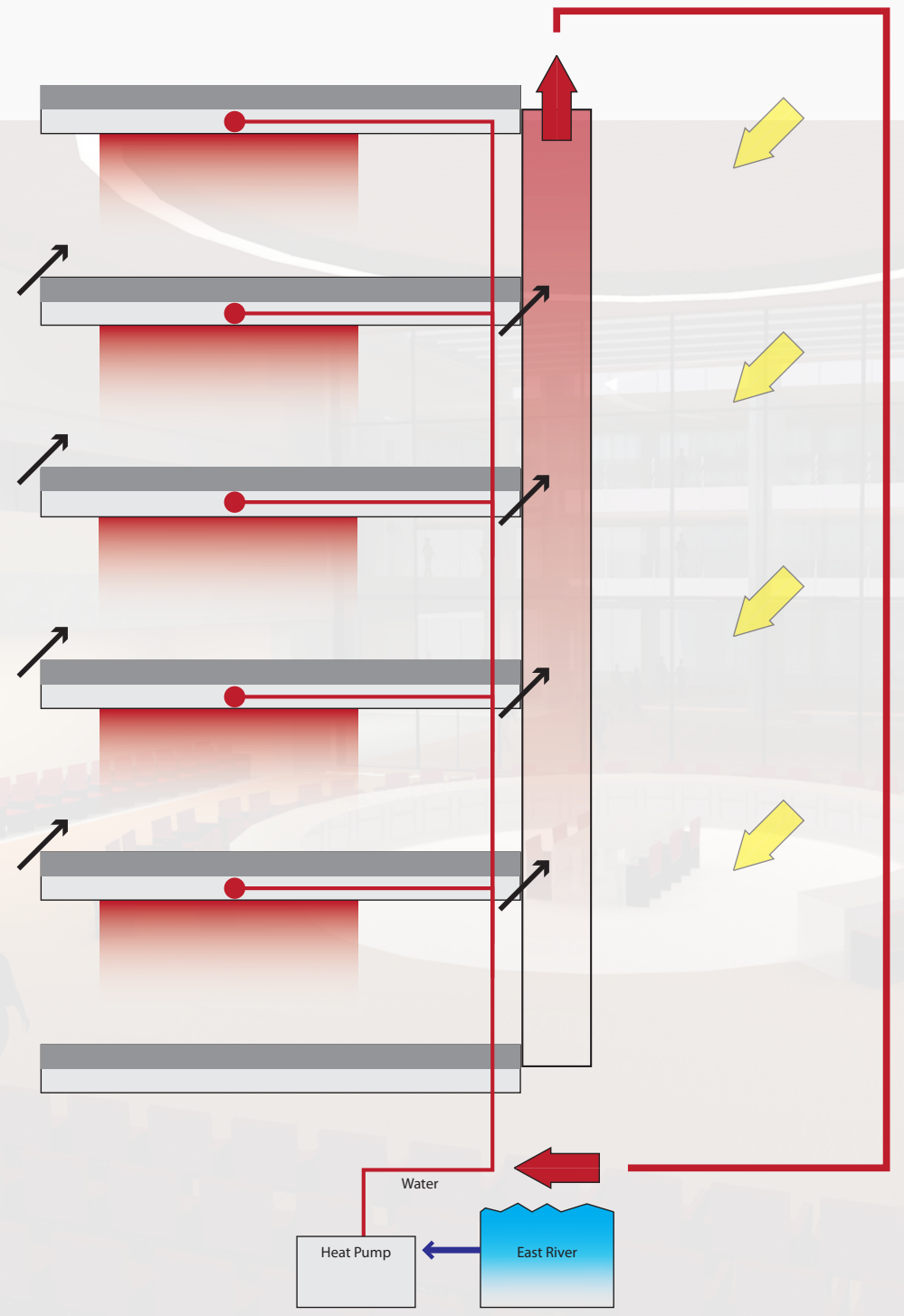
energy system tower

summer situation



energy system tower

winter situation



concept tower energy

Netto Office space 14 484 m²

Energy needed 125kWh/m² year = 1 810 500 kWh

irradiation level New York = 1 550 kWh/m² year

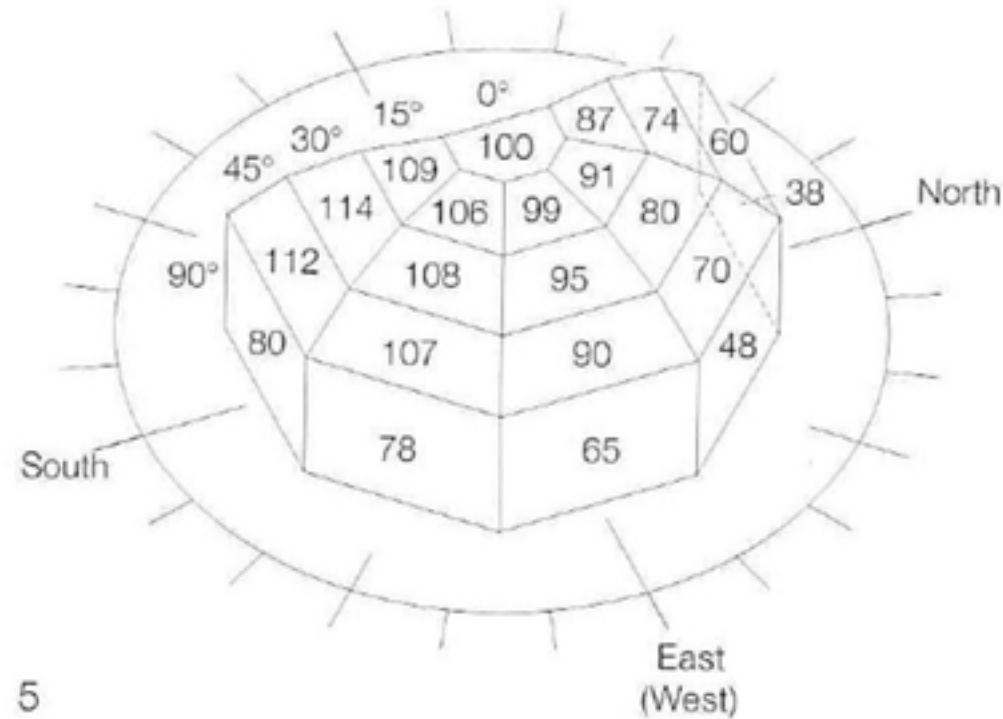
max yield 19% - average sun hours 4.08

surface factor when placed 40 degree angle = 107%

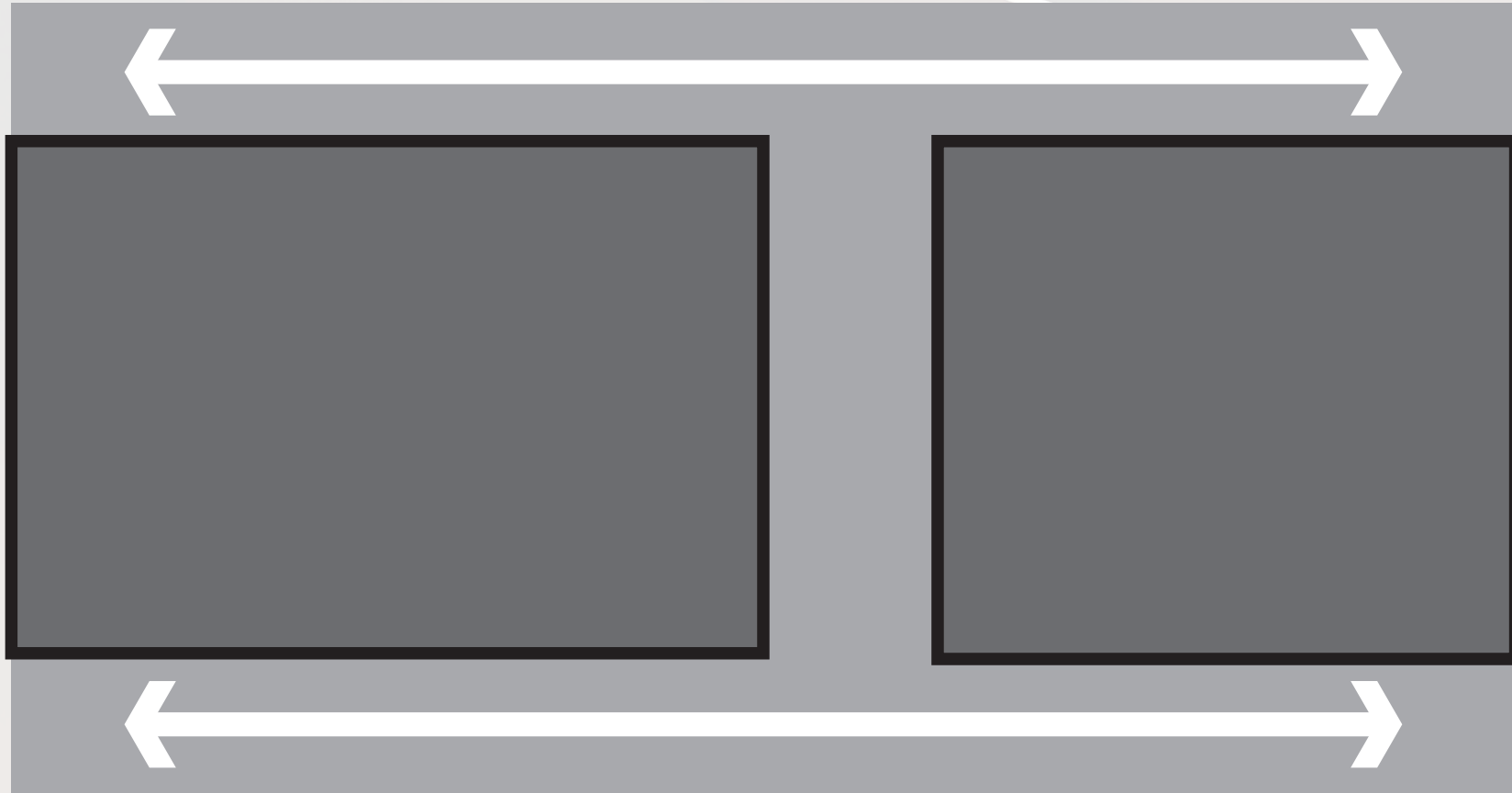
performance ratio 90%

pv cell surface -> 6247 m²

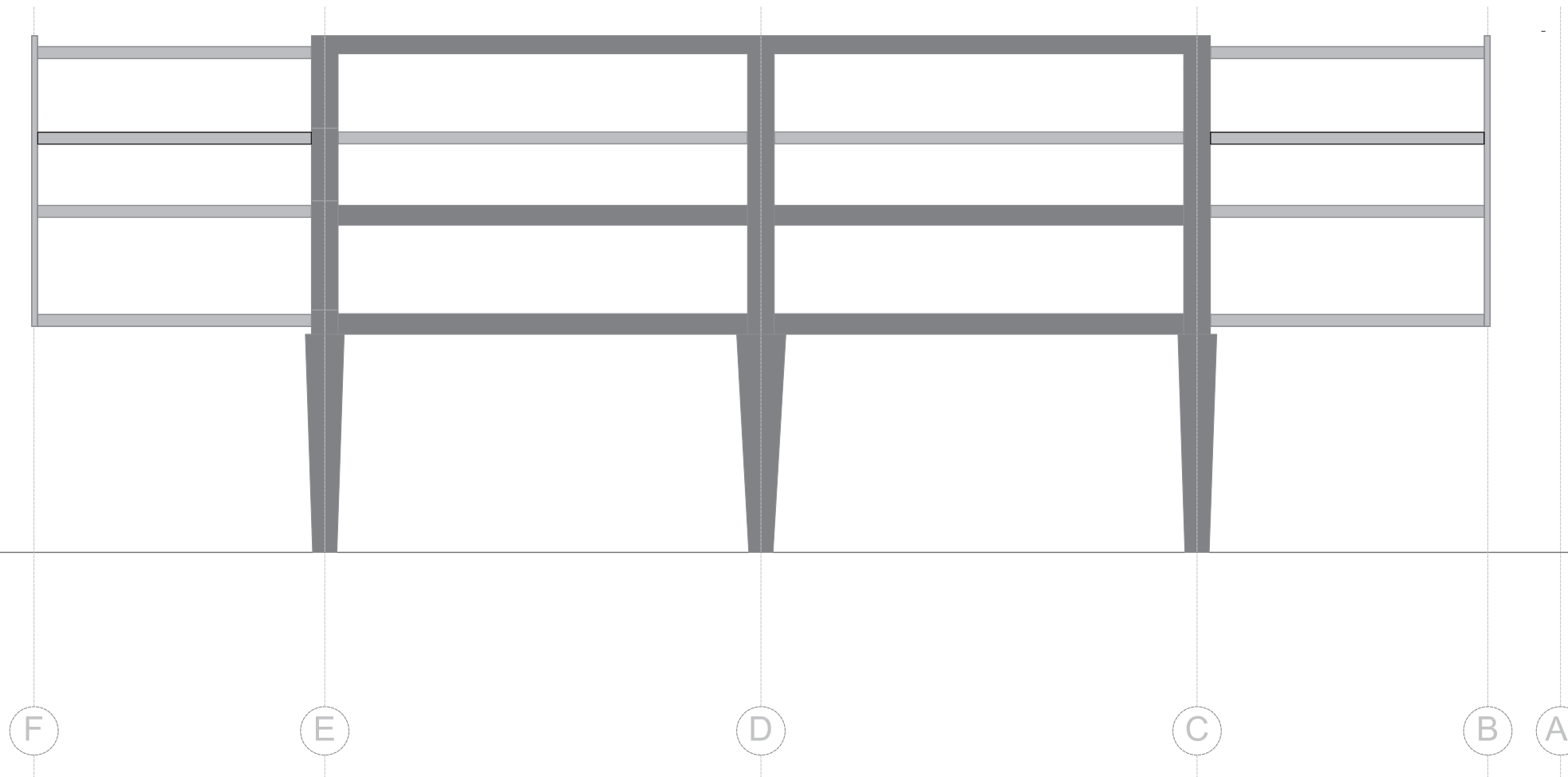
$1550 * 1.07 * 0.19 * 0.90 * 6247 = 1\,771\,671 \text{ kWh}$

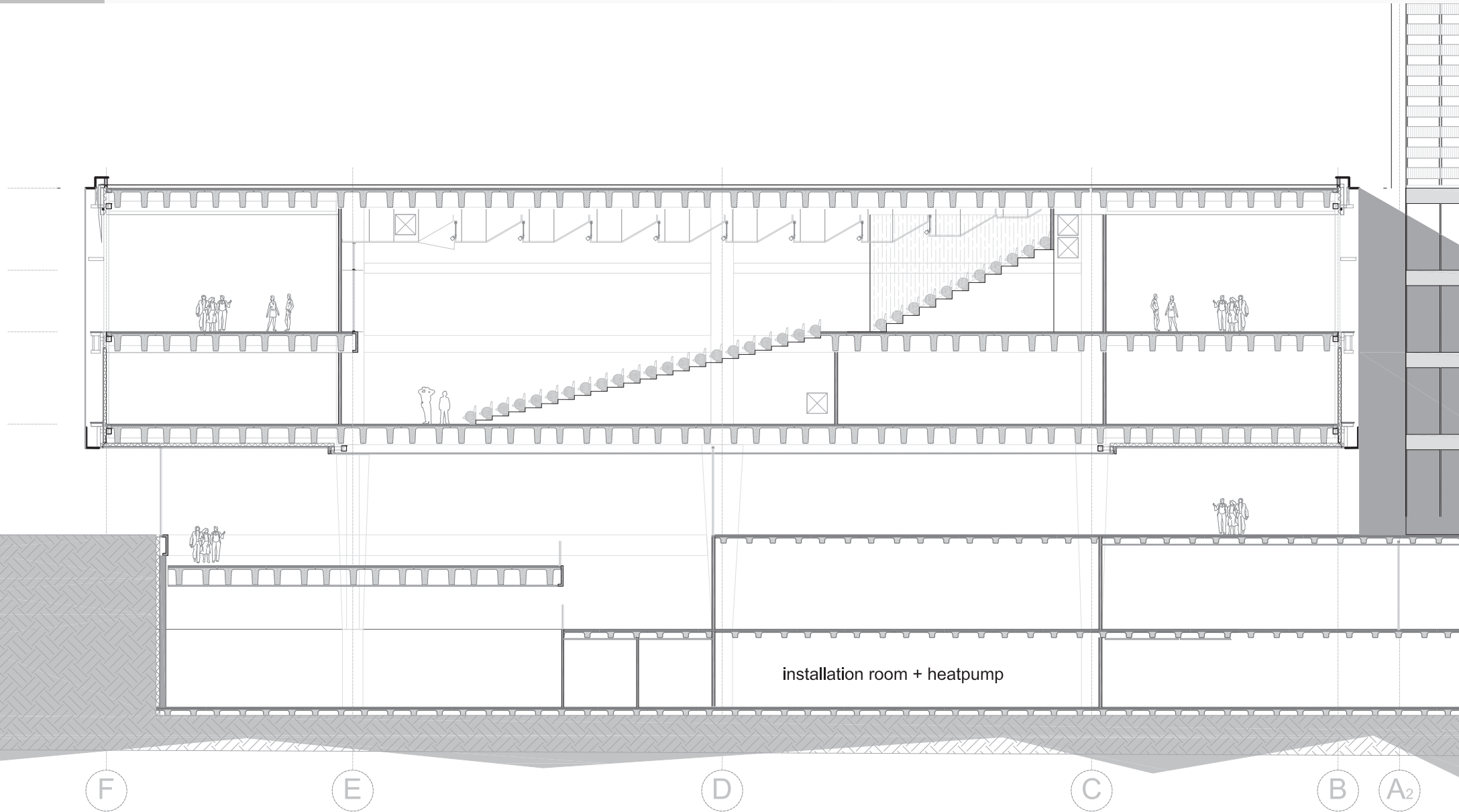


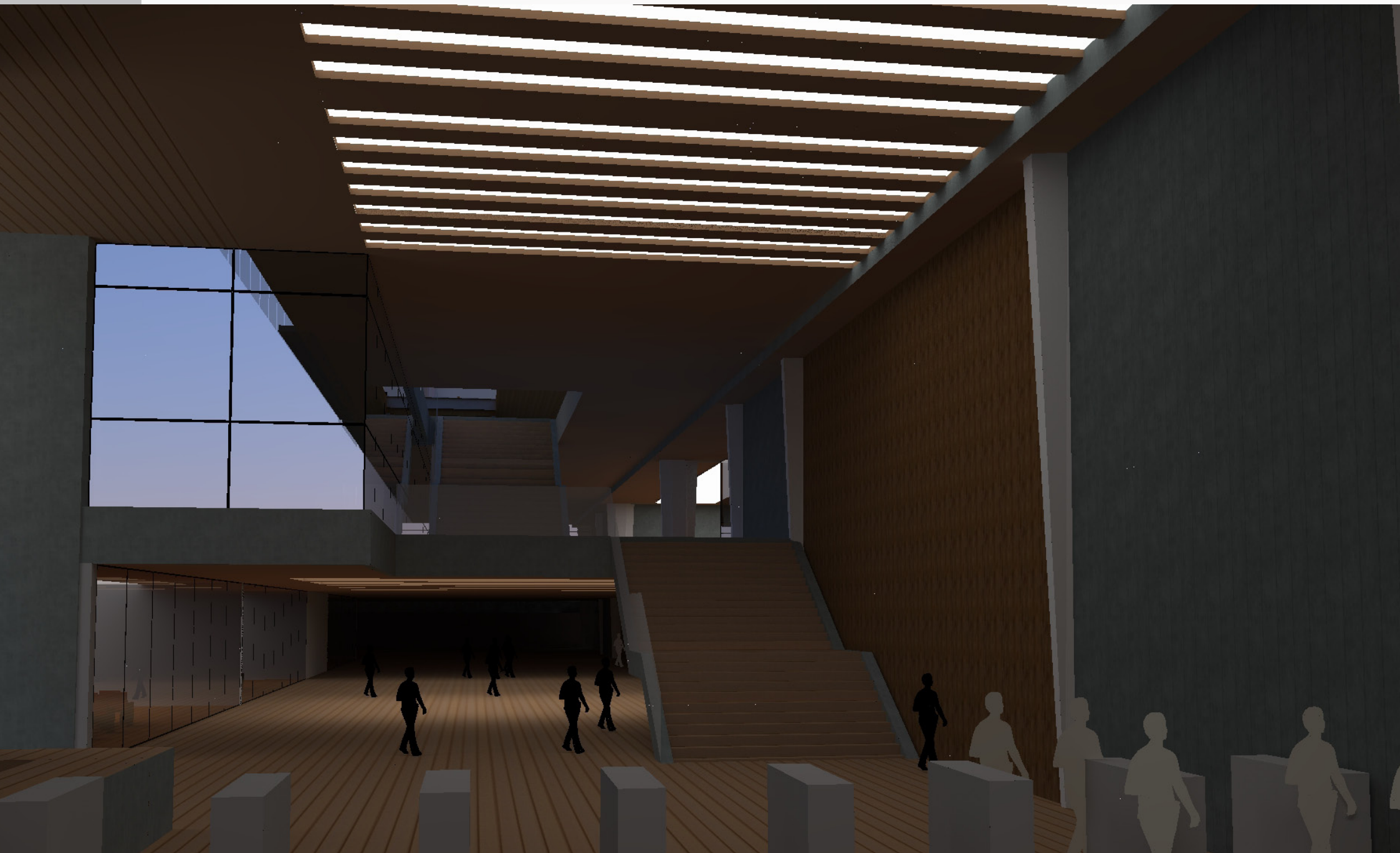
construction principle conference building



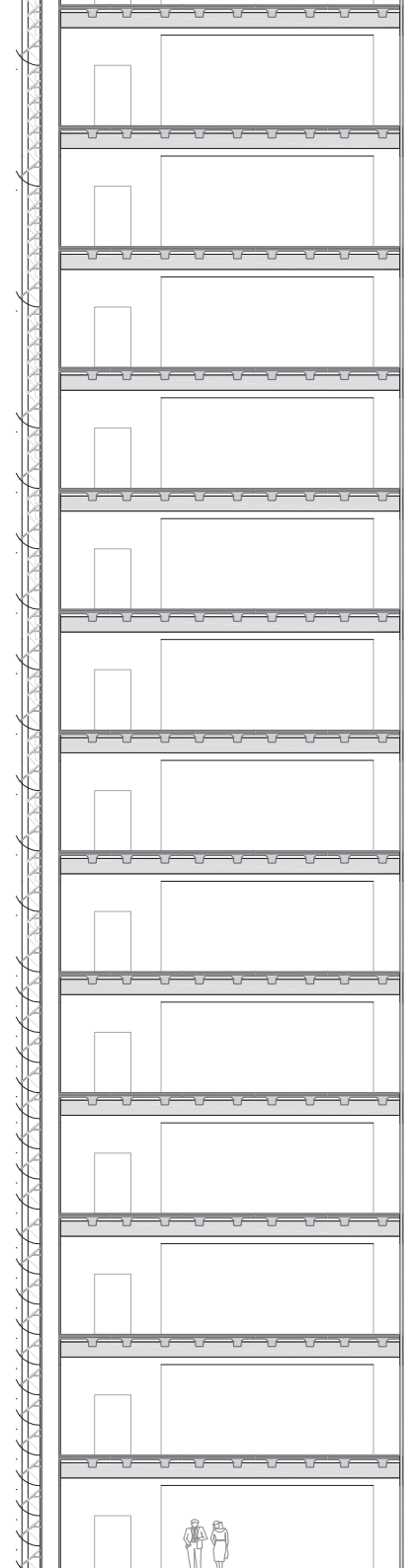
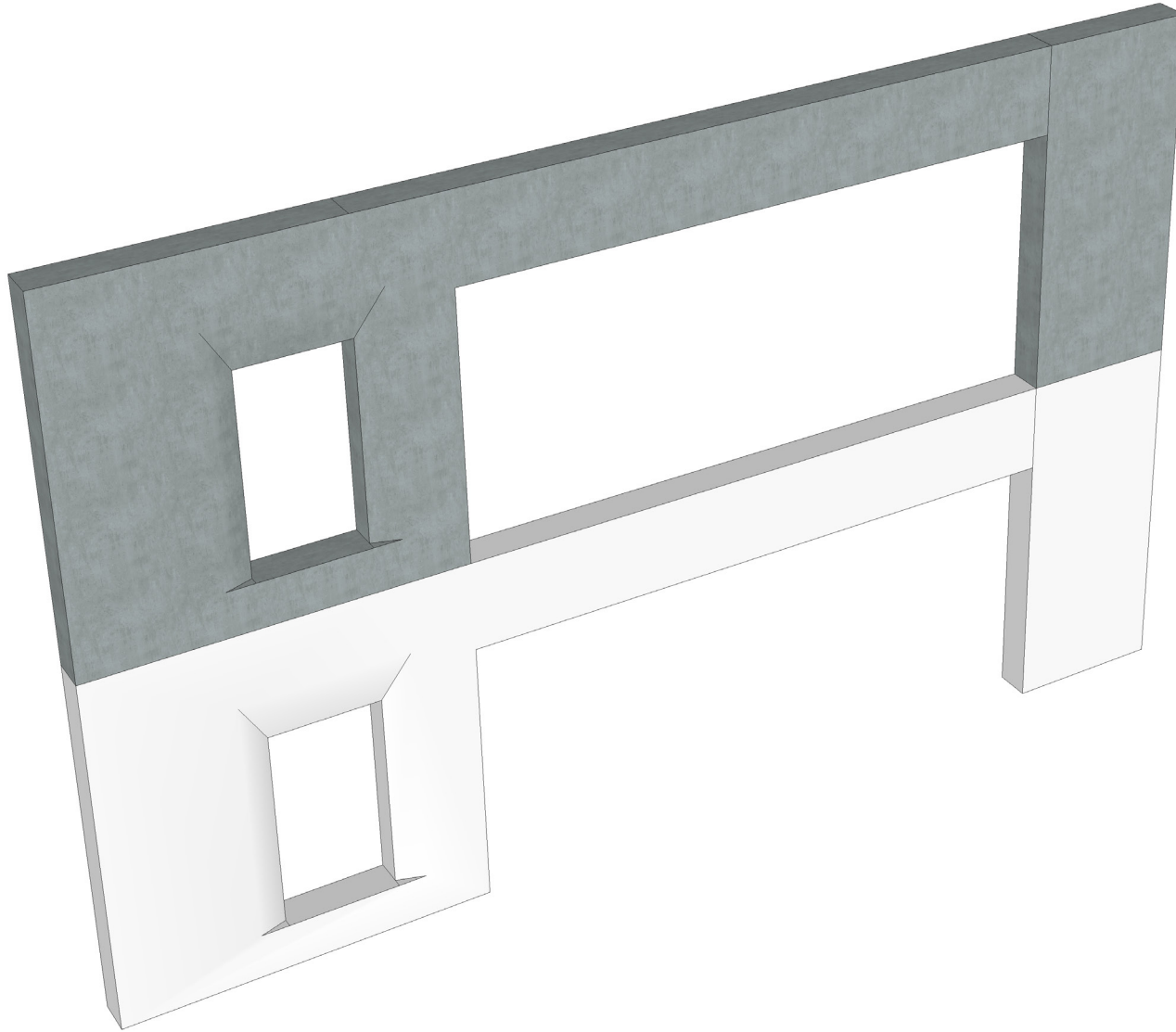
construction principle







construction principle tower

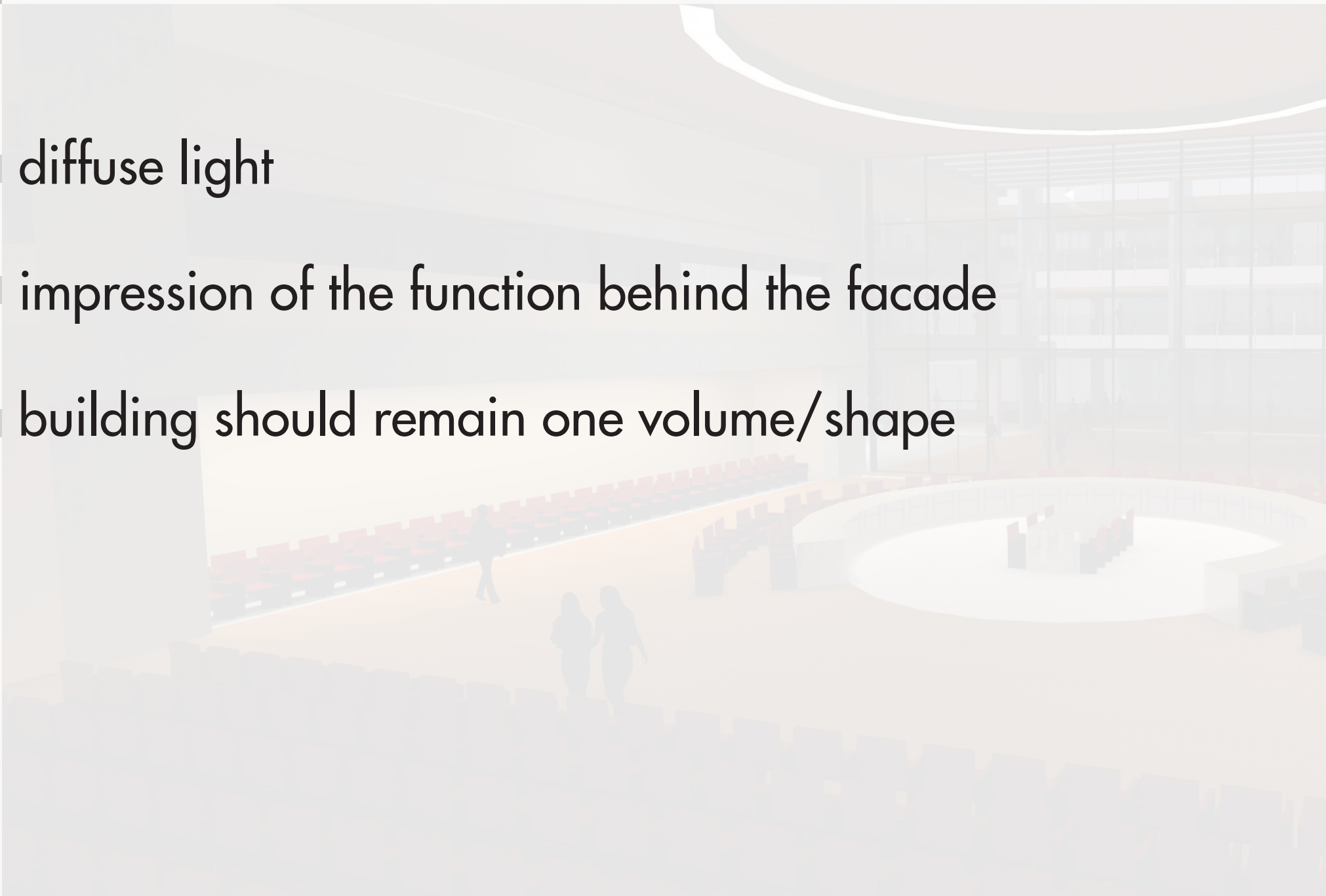


impression open office floor

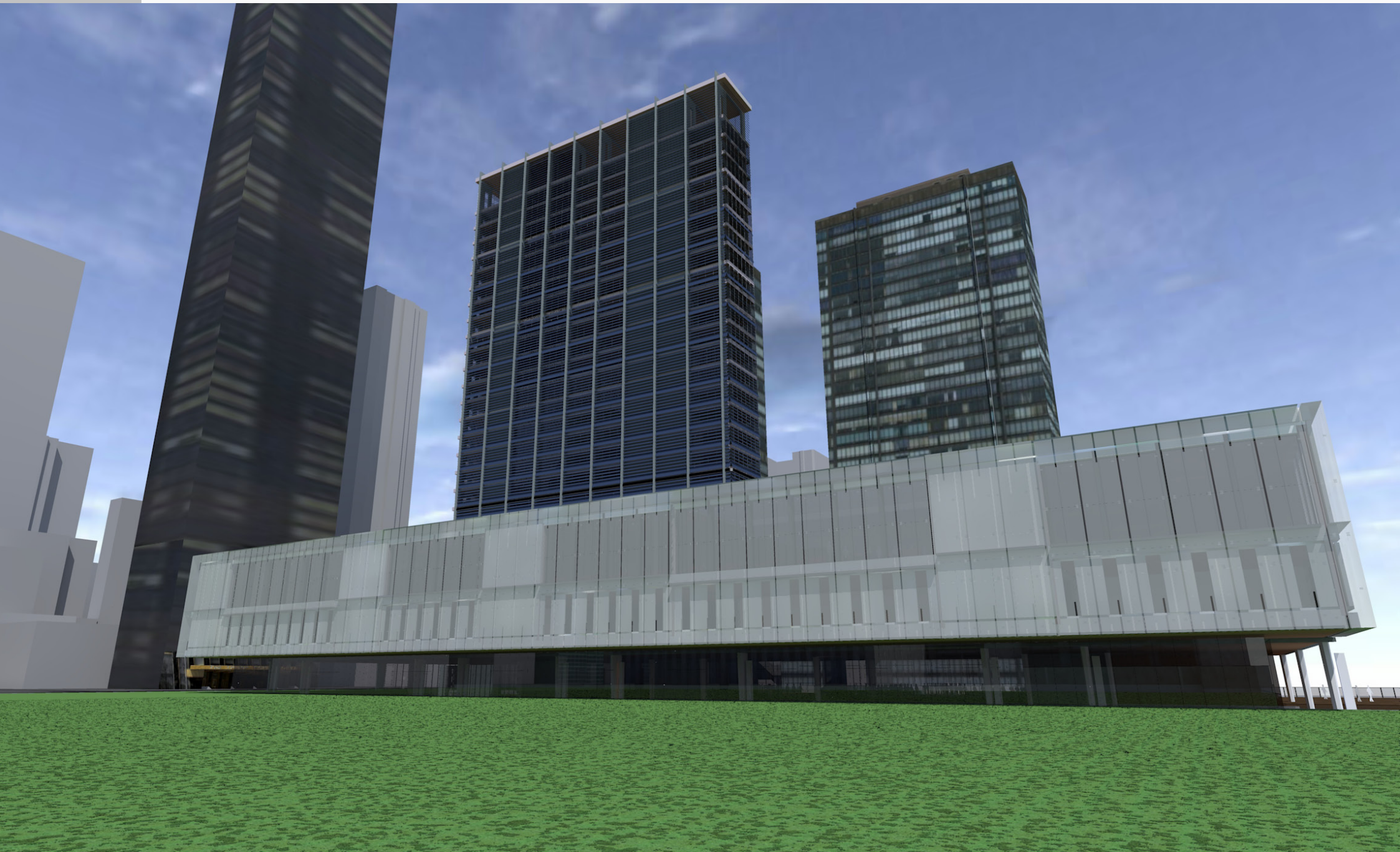


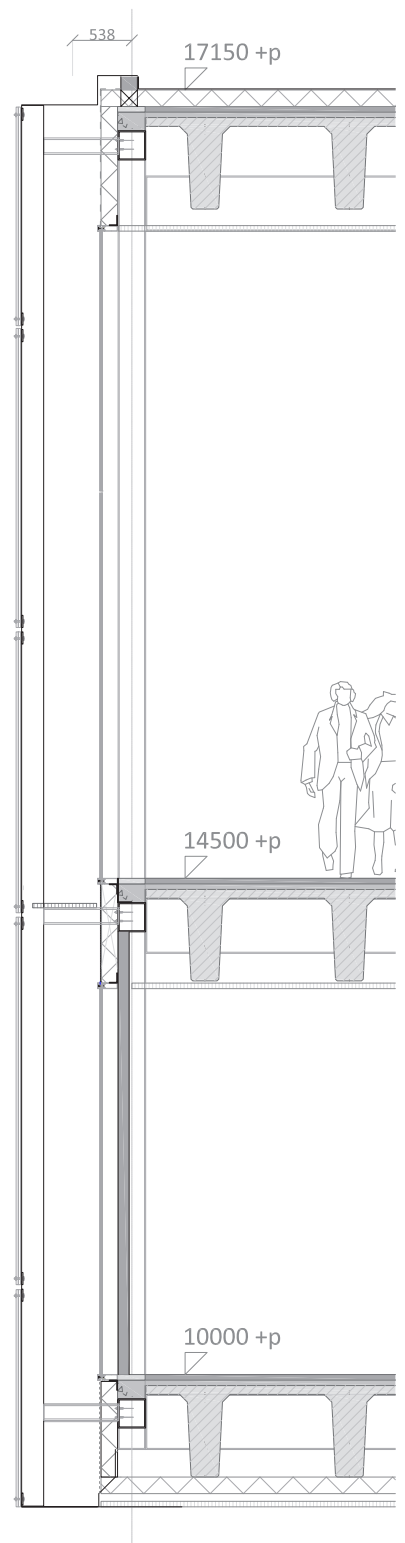
starting points of the facade

- diffuse light
- impression of the function behind the facade
- building should remain one volume/shape



diffuse light



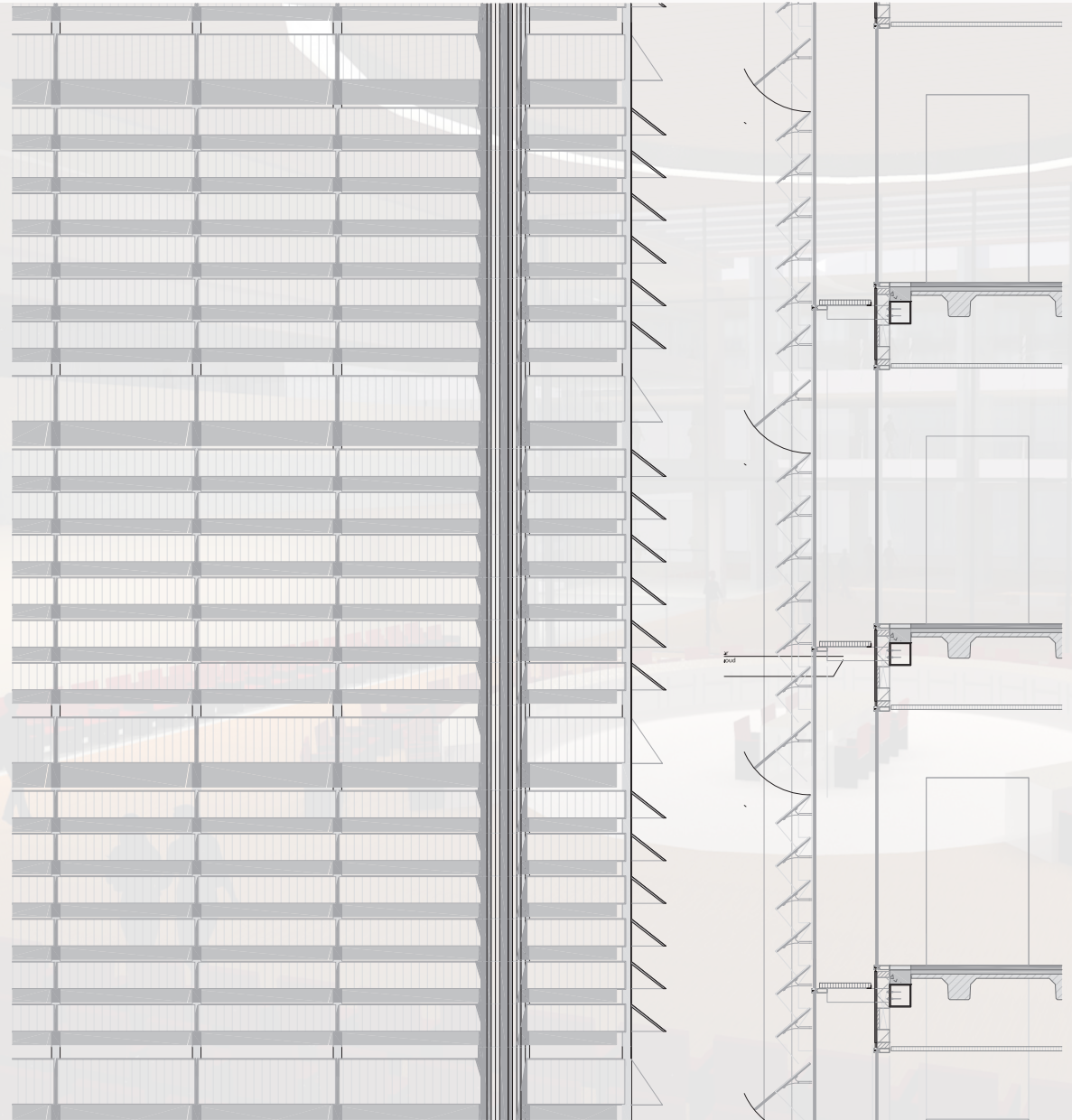


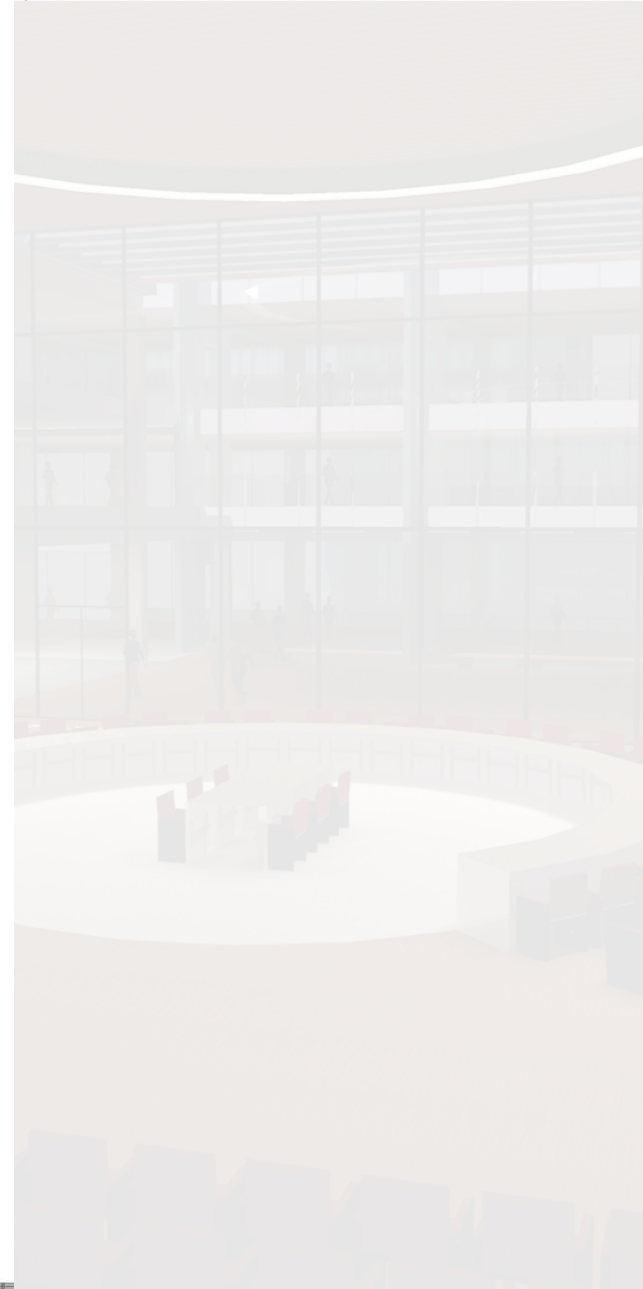
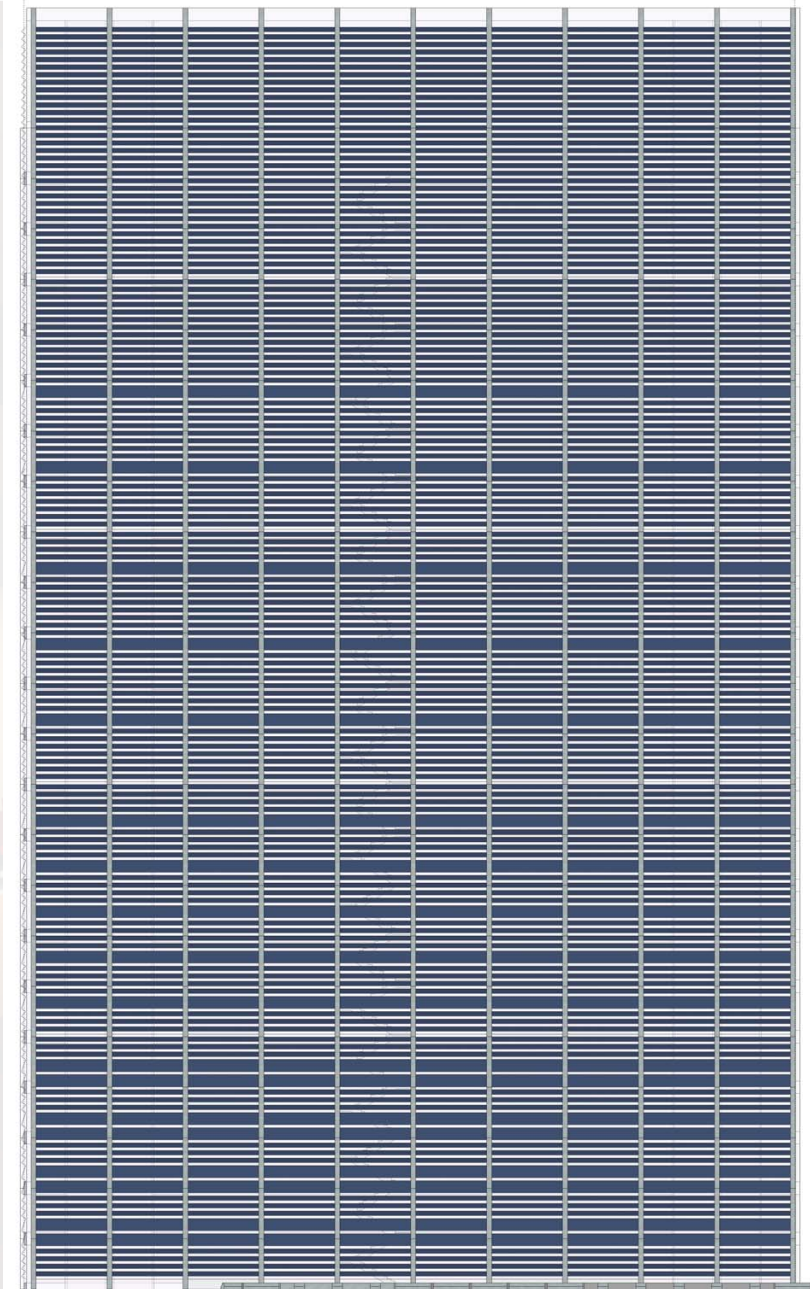
facade tower

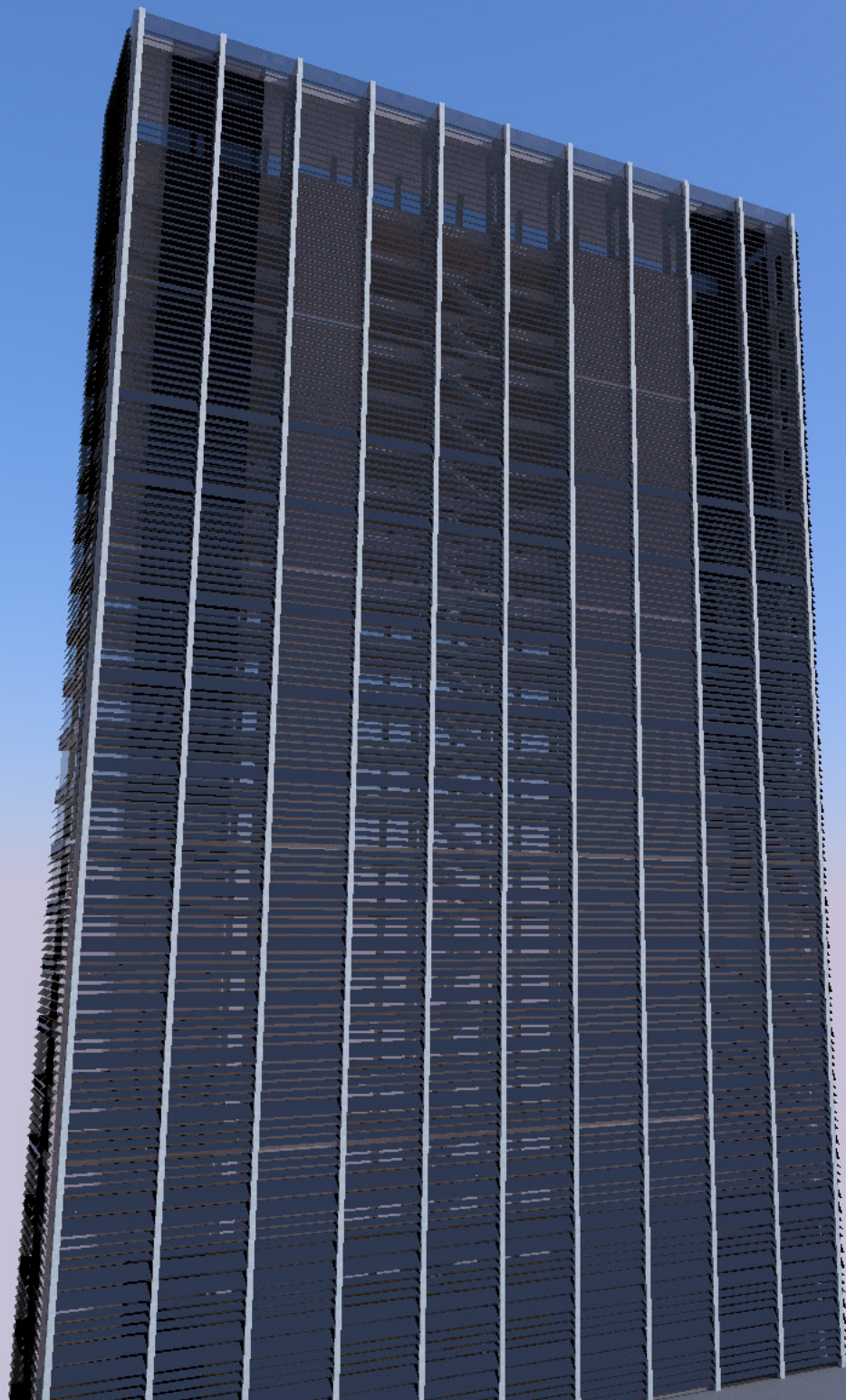
moving parts

blocking view

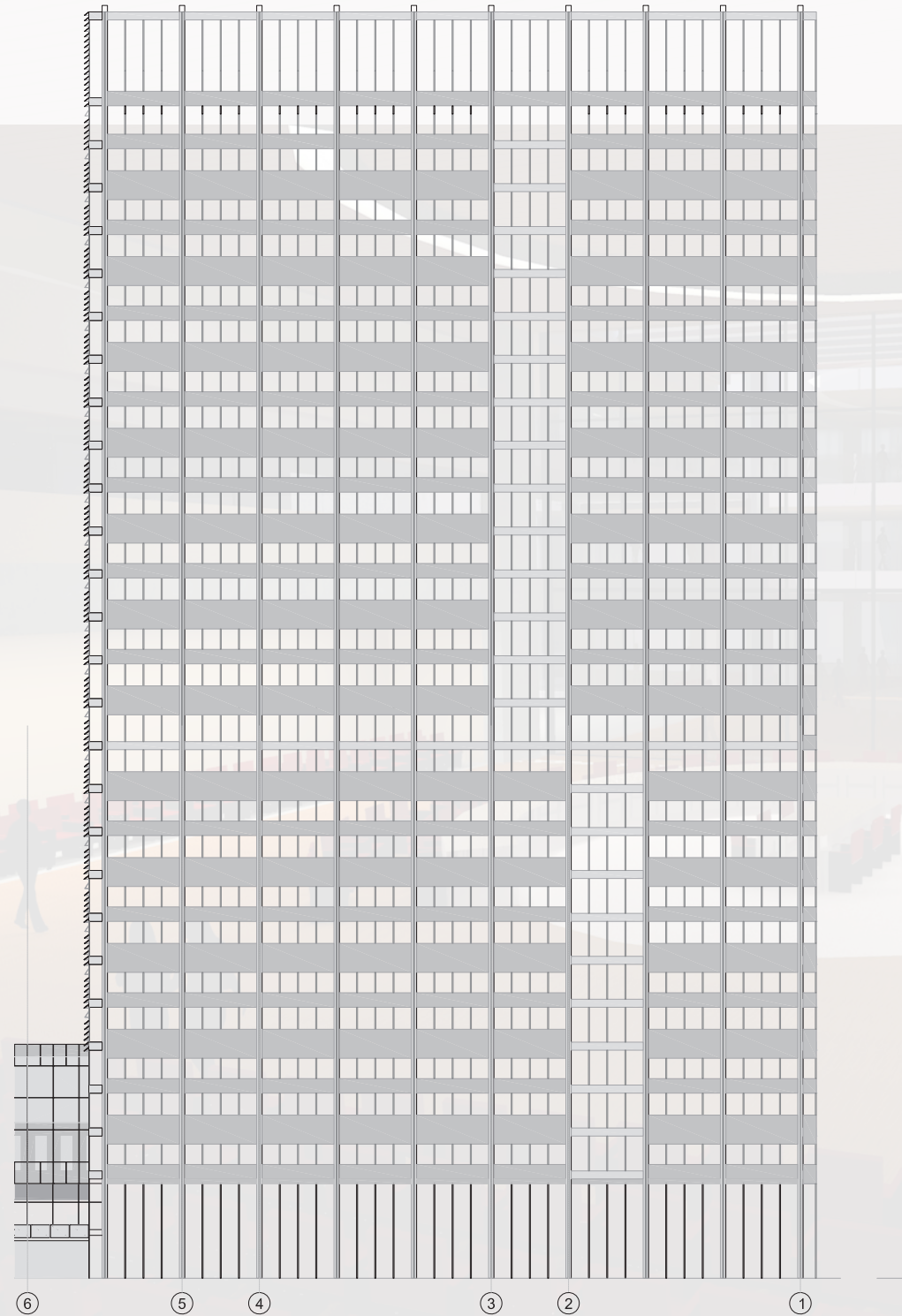
vulnerable

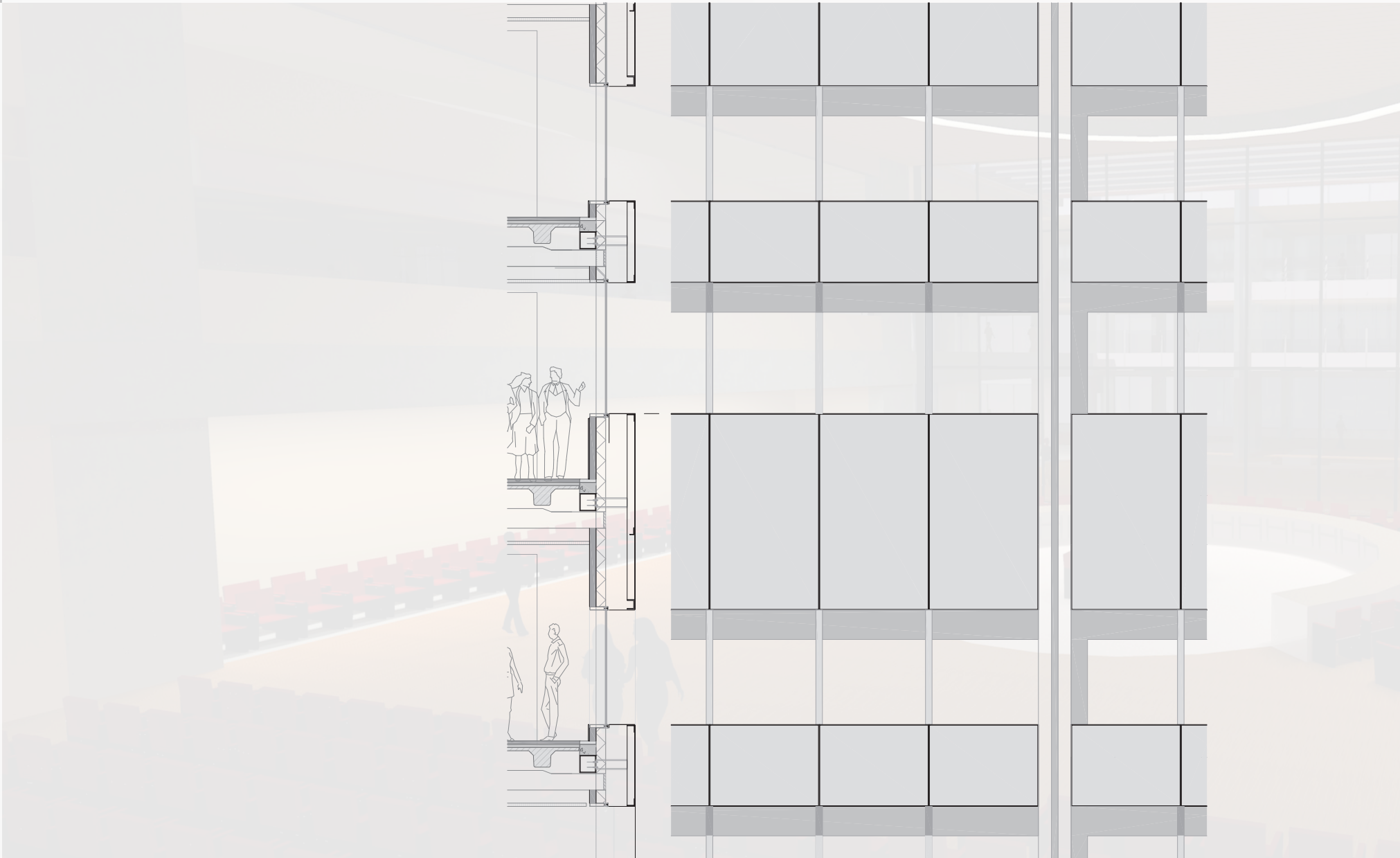






north facade





North facade tower



Questions?

