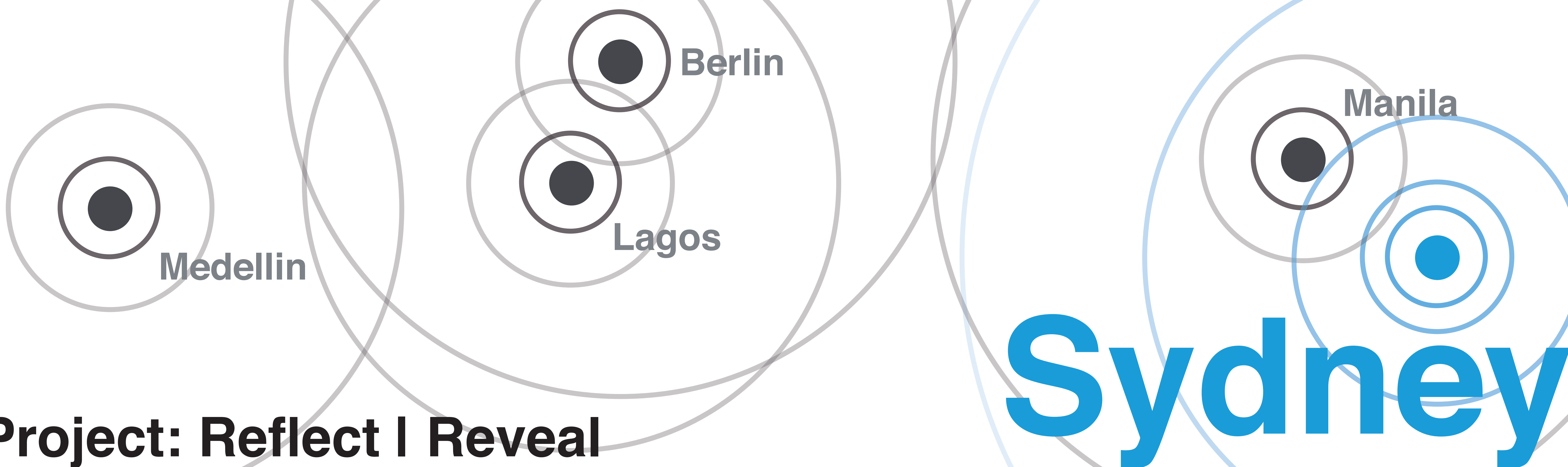


LIGHTING THE GLOBAL WORKSPACE



Project: Reflect | Reveal

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CURRENT SITUATION

As a leading business incubator, the ATP Innovations Accelerator Hub partners entrepreneurs with business professionals to assist in the development of their businesses. The ATP Innovations Office is situated in a heritage listed warehouse in Eveleigh, an old industrial district just south of Sydney's Central Business District (CBD). In recent years, the district has developed predominantly into a residential and commercial area with a heavy focus on artistic industries. Because of its' heritage status, the facades and original elements of the building cannot be altered. The current 3 storey fit out of the originally 2 storey warehouse is designed to maximise the total volume of the building whilst severely compromising the access to natural light as the floors do not line up with the windows. The 1st floor ATP Innovations office is worst effected by this problem and when interviewed, all employees identified that the lack of natural light was the main problem with the office space. Other problems with the space include the inability to control lighting and a complete lack of flexibility within the layout and work stations. Given that the office is largely used for collaborative work, this problem is one that potentially hinders productivity.

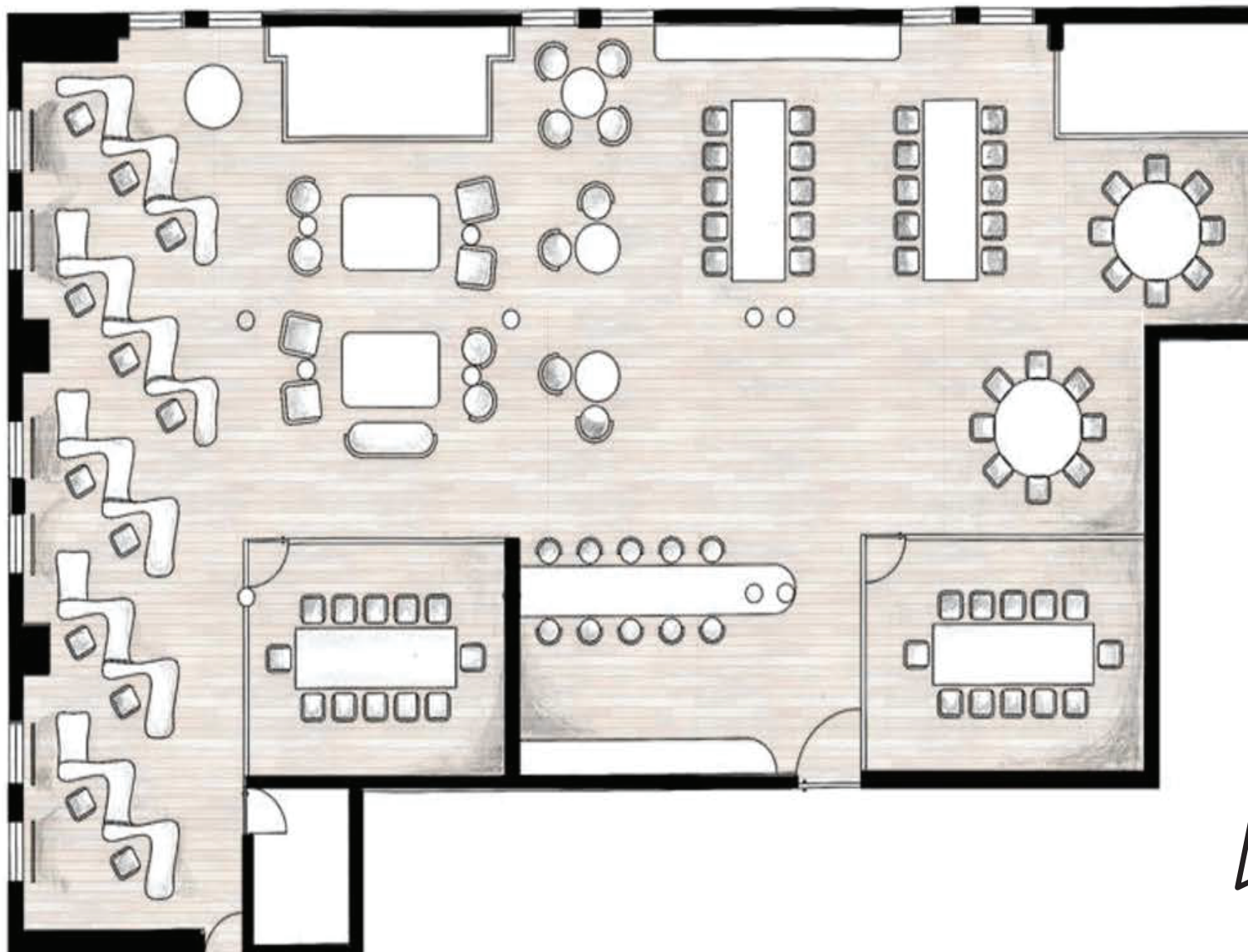
THESIS

The current challenges of the ATP innovations office include the lack of natural light being filtered into the space, the rejection of the original heritage skin of the warehouse building and the current floor plan lacking flexibility by being divided into many small, dark rooms. We therefore propose to use three strategies to improve and enhance the productivity and wellbeing of the employees. These strategies include: the development of an open plan office space to allow for flexibility of work spaces, the development of a lighting strategy including both natural and artificial lighting concepts and the development of an app that will allow employees to control the lighting above their work space.

CONCEPT

Whilst ATP Innovations as a company is at the forefront of its' industry, its' office does not support a growing and ever changing business. In designing an office space with such a heavy focus on collaborative work, developing it into an open plan space was a logical progression. Implementing an open plan will simultaneously return the space to it's warehouse origins whilst also allowing for more flexibility as the company heads into the future. Within the open plan layout, the space is divided into different zones defined by furniture, lighting and materials. A veil of artificial light from the ceiling will serve as a visual but not physical partition between the different zones. Employees and visiting entrepreneurs will be able to choose from a variety of workspaces tailoring their lighting to the type of work being conducted. The layout features a communal core that includes a kitchen and a lounge space that can be used for informal meetings, breaks and comfortable spaces to work. The proposal sees zoning along with the lighting scheme as a major innovative development. Natural light will be integrated with artificial light to assist in the employees well-being, work ethic, comfort and productivity. The materials selected will aim to reflect the aesthetic of the original warehouse through the integration of industrial materials and these will be paired with eclectic pieces of furniture.

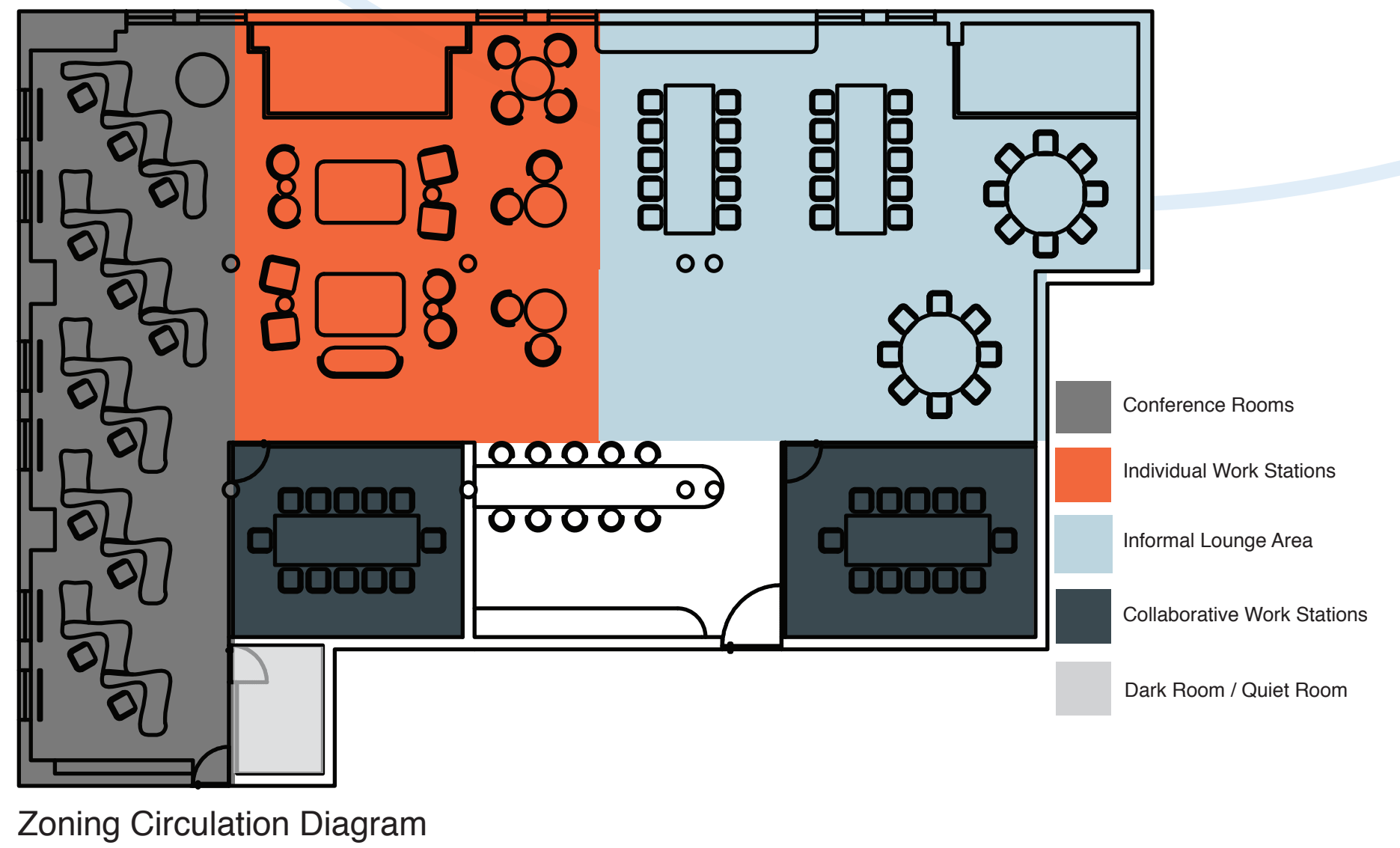
FLOOR PLAN / CEILING PLAN



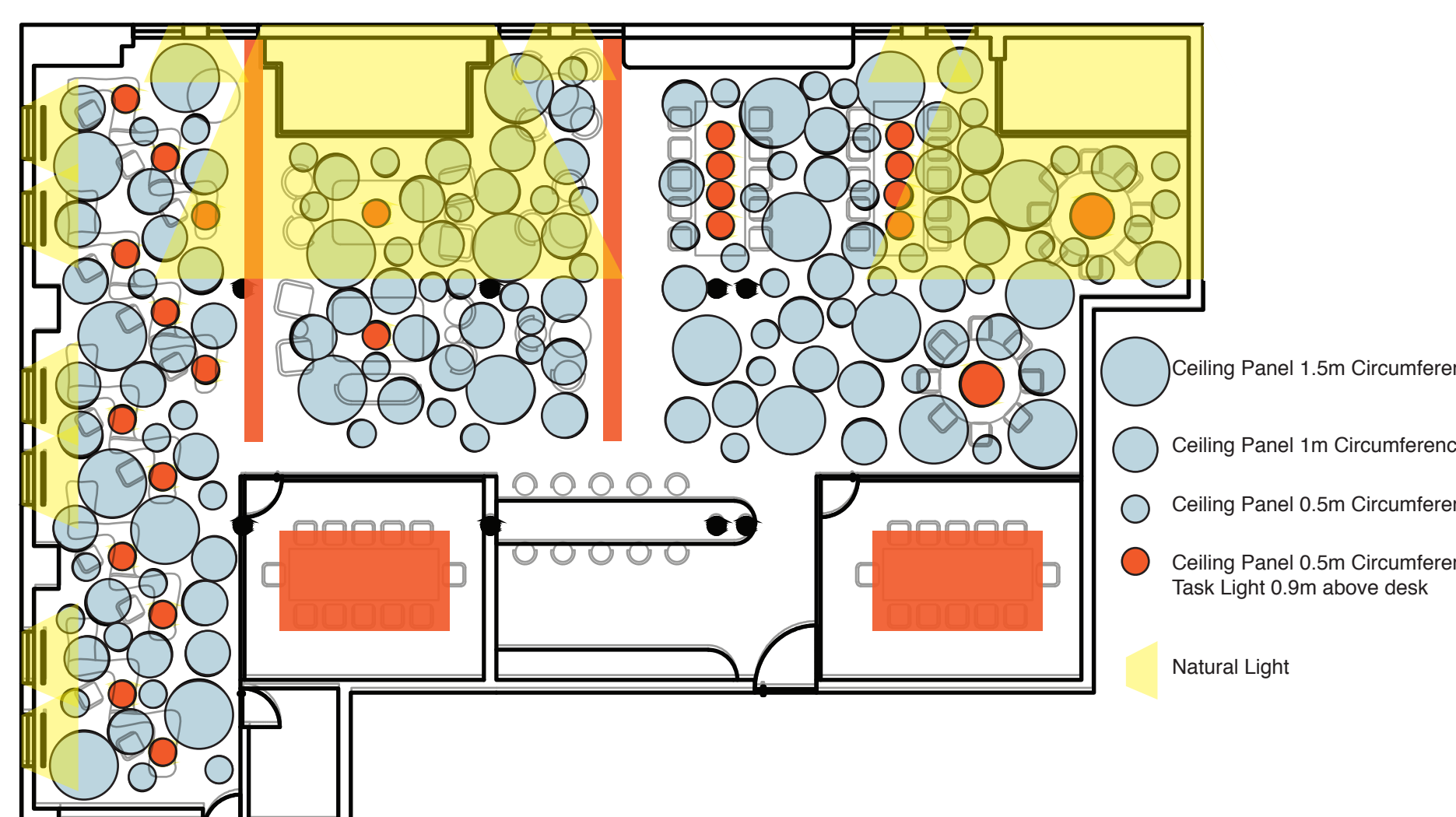
CEILING PLAN



DIAGRAMS

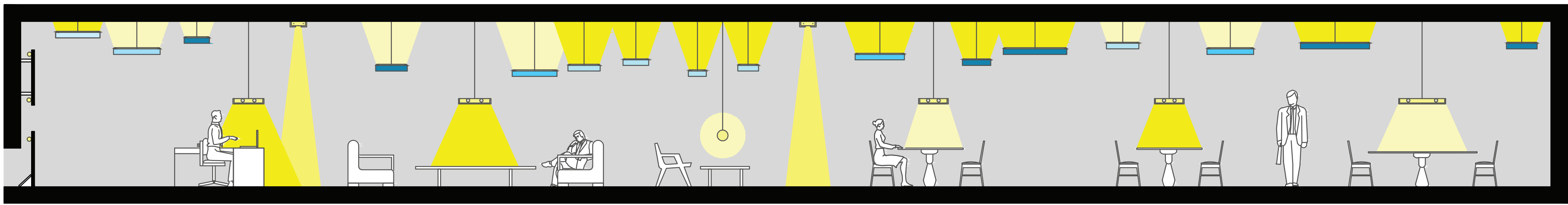


Zoning Circulation Diagram

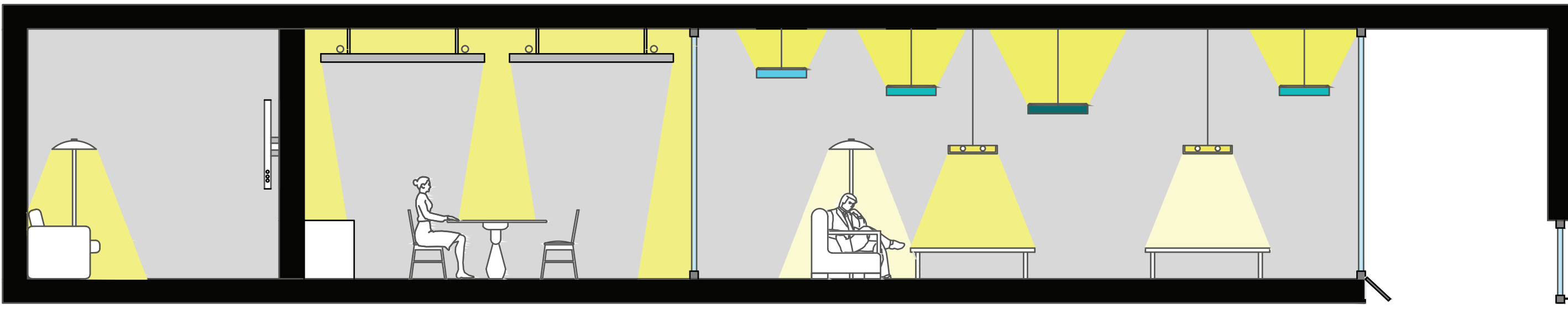


False Ceiling Diagram

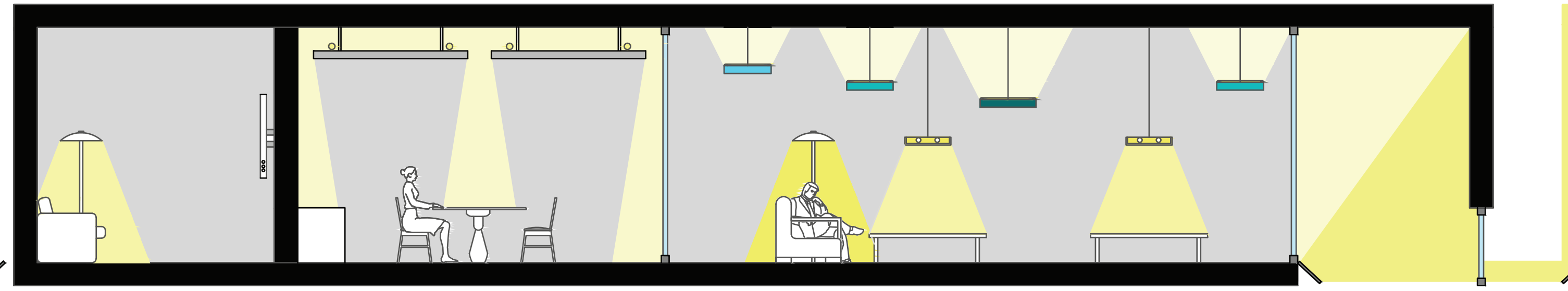
SECTIONS



Section 1: South Wall - the variation in general light is due to the amount of daylight and personal light in the particular zones



Section 2: North Wall



Section 3: North Wall showing the level of the general light adjusting in order to balance with the personal light and amount of natural light pouring in through the void

1. OPEN PLAN



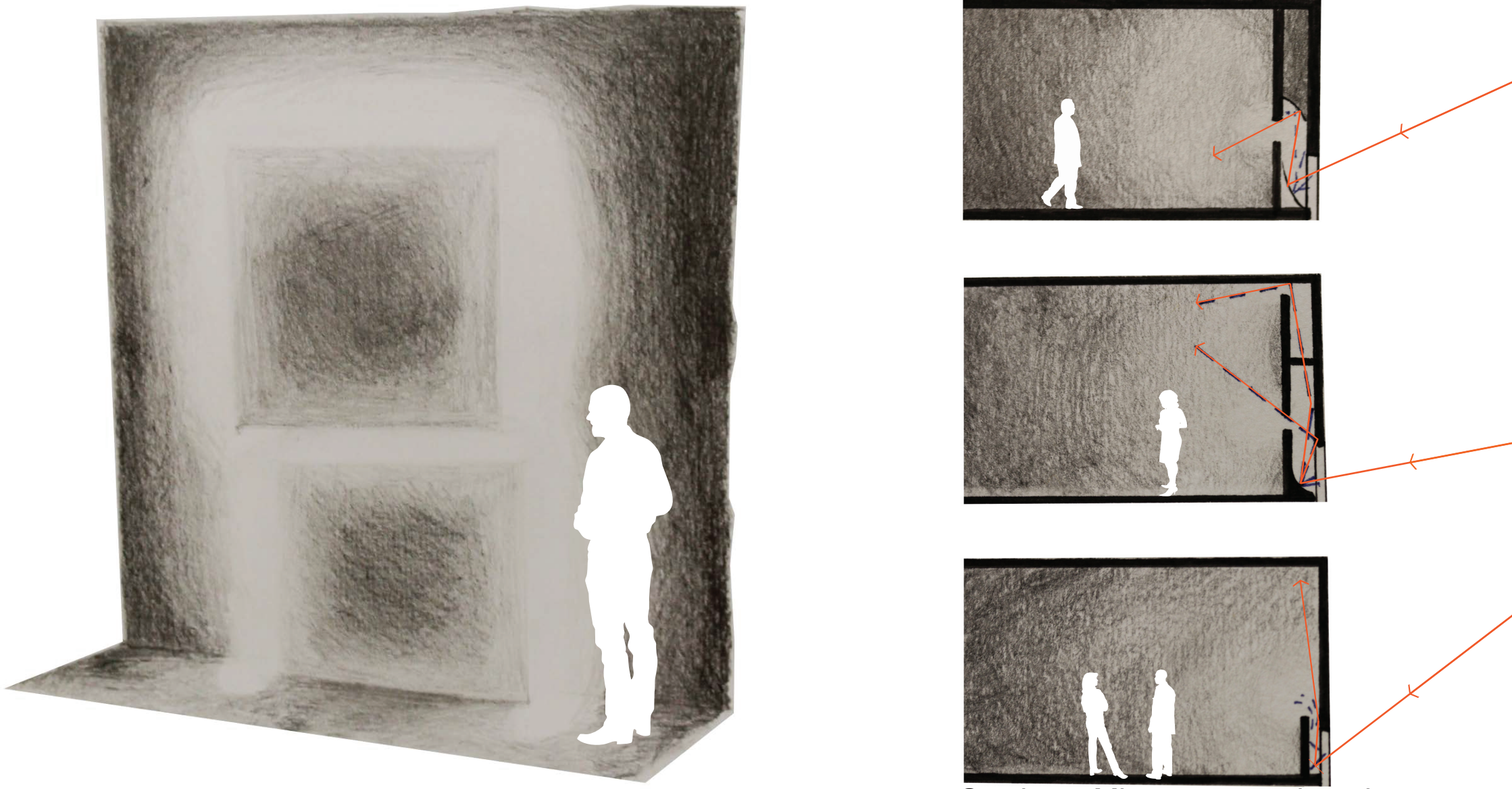
Perspective 1: Kitchen and collaborative work spaces



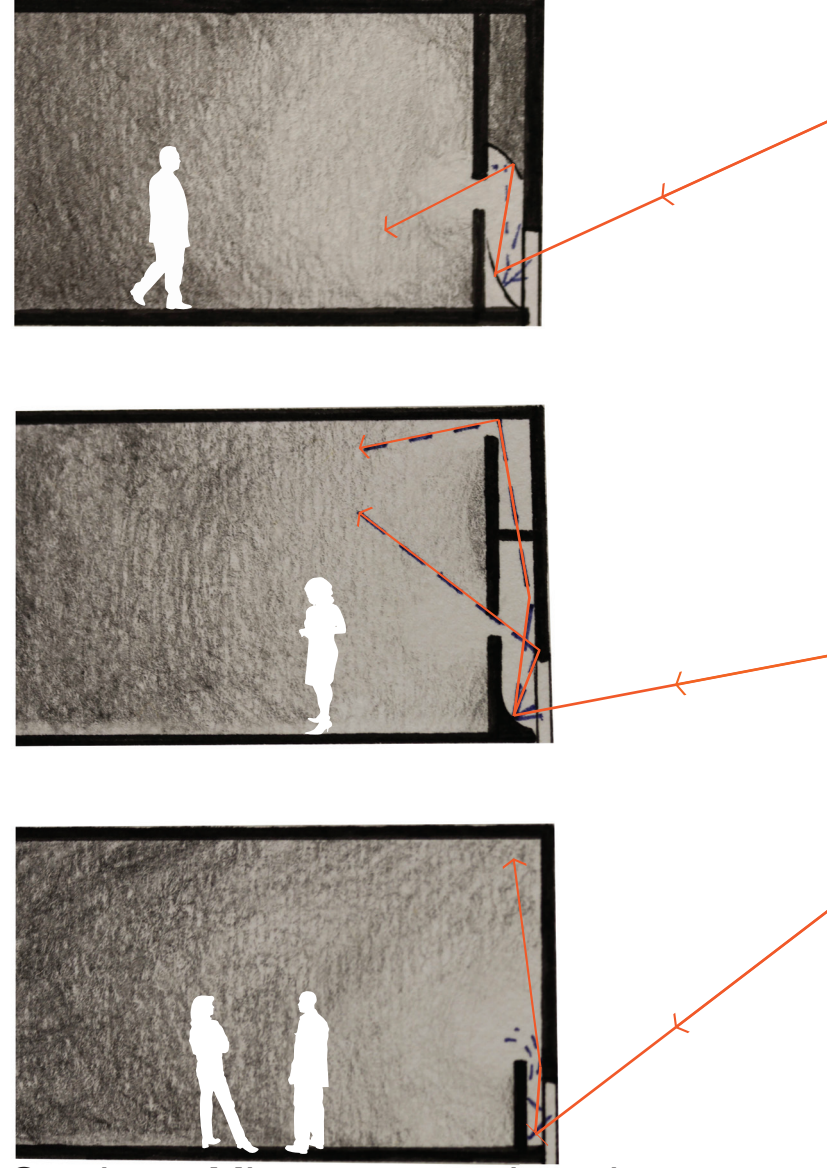
Perspective 2: Lounge area and individual work spaces

2.1 LIGHTING SCHEME: NATURAL

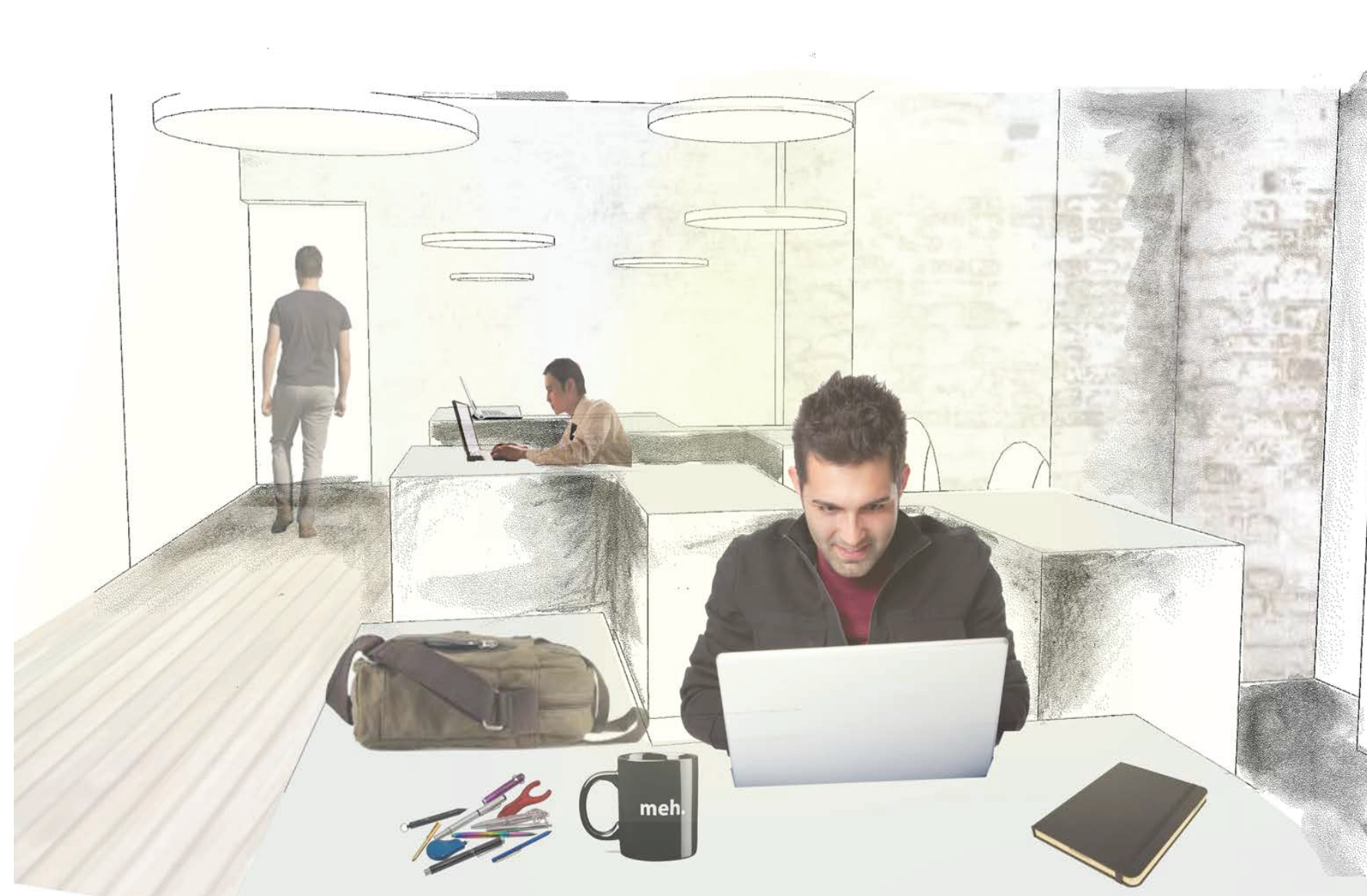
The general lighting is uniform across the expanse of the office and is created through the back and uplighting of acoustic ceiling panels. The task lighting in the individual work spaces can be specifically tailored to the needs of the employee working there, whether it be the brightness, colour temperature or direction. The lack of natural light proved a challenge to the design solution and will be resolved through the use of mirrors that will reflect and redistribute the light. Using Steven Holl's Church of St. Ignatius as a precedent, these mirrors will be concealed behind panels that will diffuse the natural light around them, creating ambience and potentially event lighting in the evening.



Perspective 3: Using mirrors and panels against the east wall, the natural light will be redistributed into the space of the office



Sections: Mirror concept iterations



Perspective 4: Individual work stations with individual task lighting



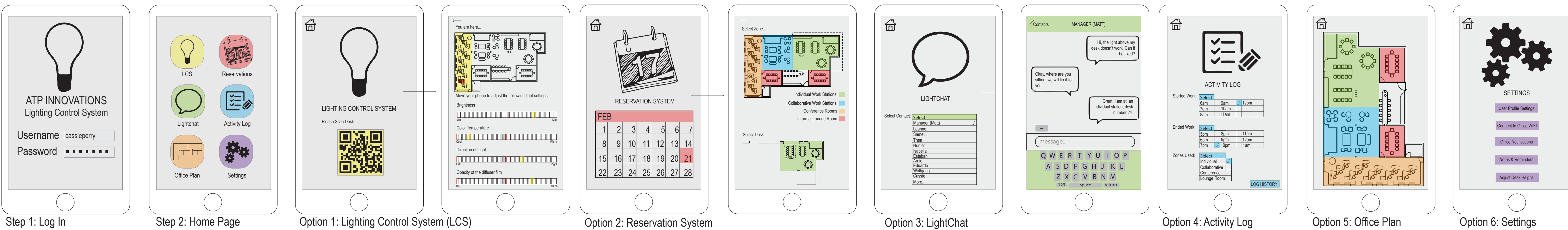
Perspective 5: Collaborative work stations with controllable lighting above desks

2.2 LIGHTING SCHEME: ARTIFICIAL

Given Australia's geographical location and distance to other business and financial centres, globalisation will see a rise in 24 hour offices in order to work on international projects. The use of controllable light will accommodate a 24 hour office scheme that will also enable flexible working hours as effective ambient and task lighting will be available at all hours of the day. Furthermore, seasonal lighting will become more of a feature as data collected by the app over time will enable the system to predict future presets for general lighting as conditions change throughout the year. This general data collected by the app will also allow office management to further understand the needs and desires of its' staff.

3. LIGHTING CONTROL SYSTEM APP

The development of the ATP Innovations lighting control system App will allow employees to control the task lighting in all zones of the office. Each employee will scan the desk that they are sitting at to determine which lights in the surrounding vicinity that they can control. They will then be able to alter qualities of light including the brightness, the colour temperature, the direction of light and the opacity of the diffuser. Other options on the App will include being able to reserve desks and spaces within the office, the ability to communicate with managers and other employees about office issues and the ability to save data which will enhance the understanding of managers as to the needs and desires of their employees over the course of the year. The App is able to utilise the inbuilt accelerometer in smart phones to manually control the brightness of a particular luminaire with a simple up down motion of the arm.



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