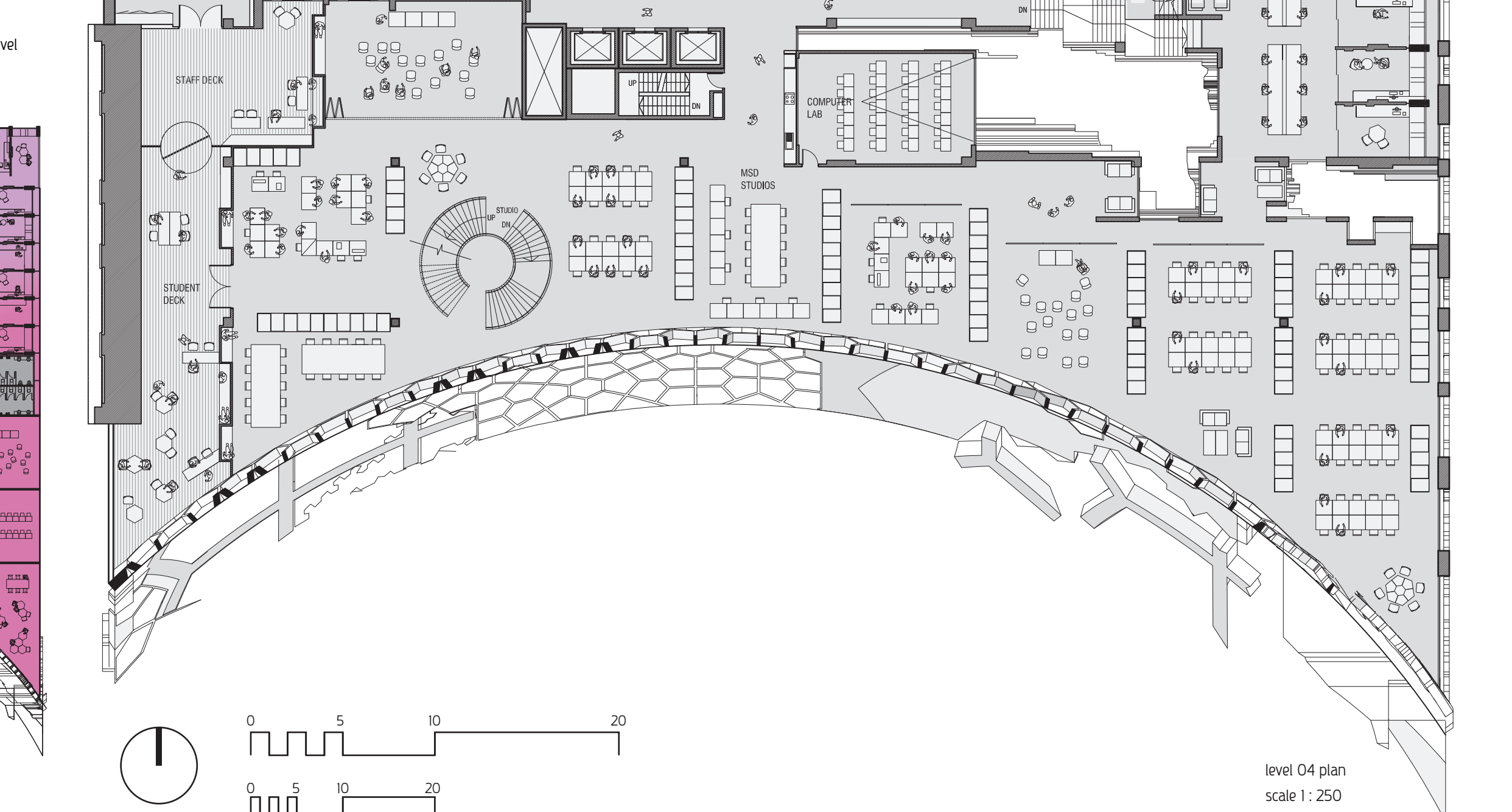
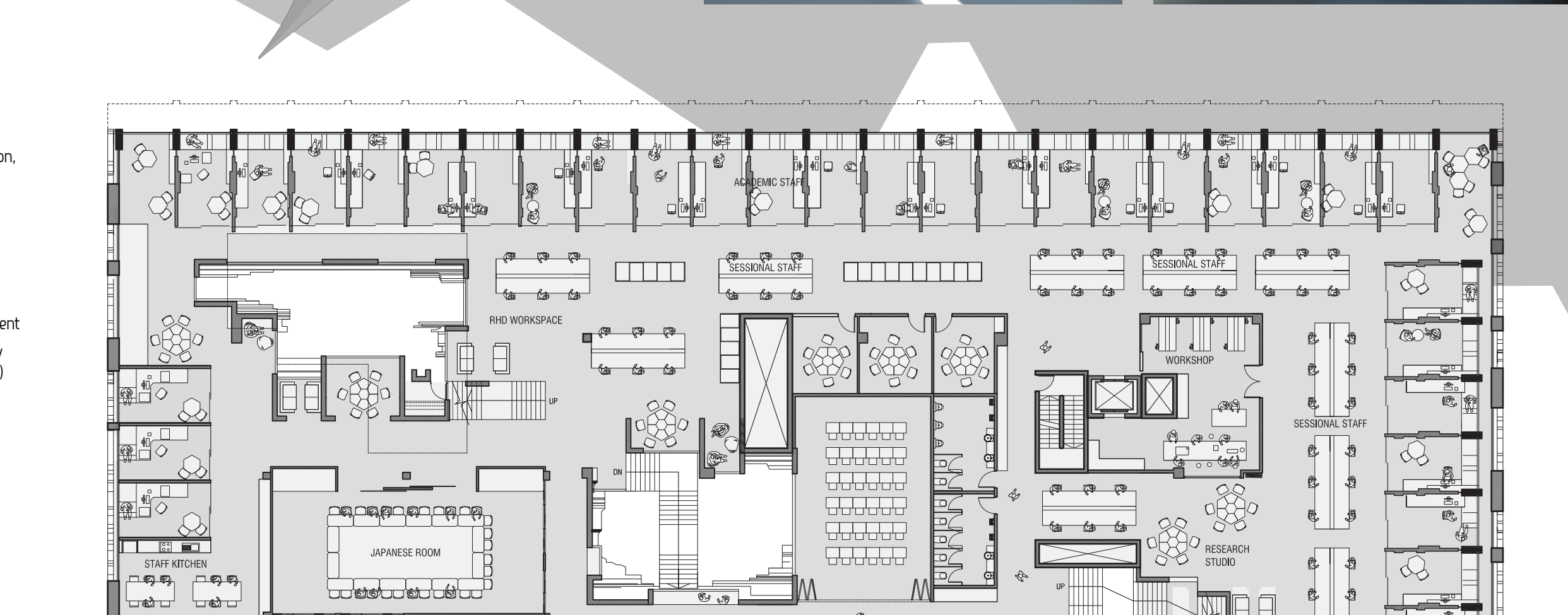
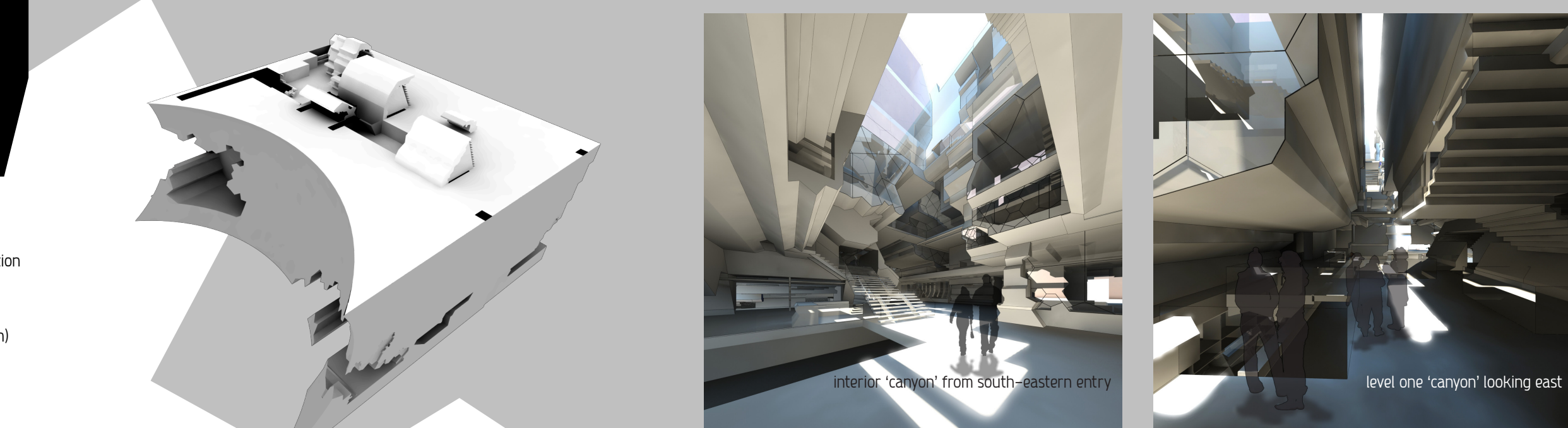
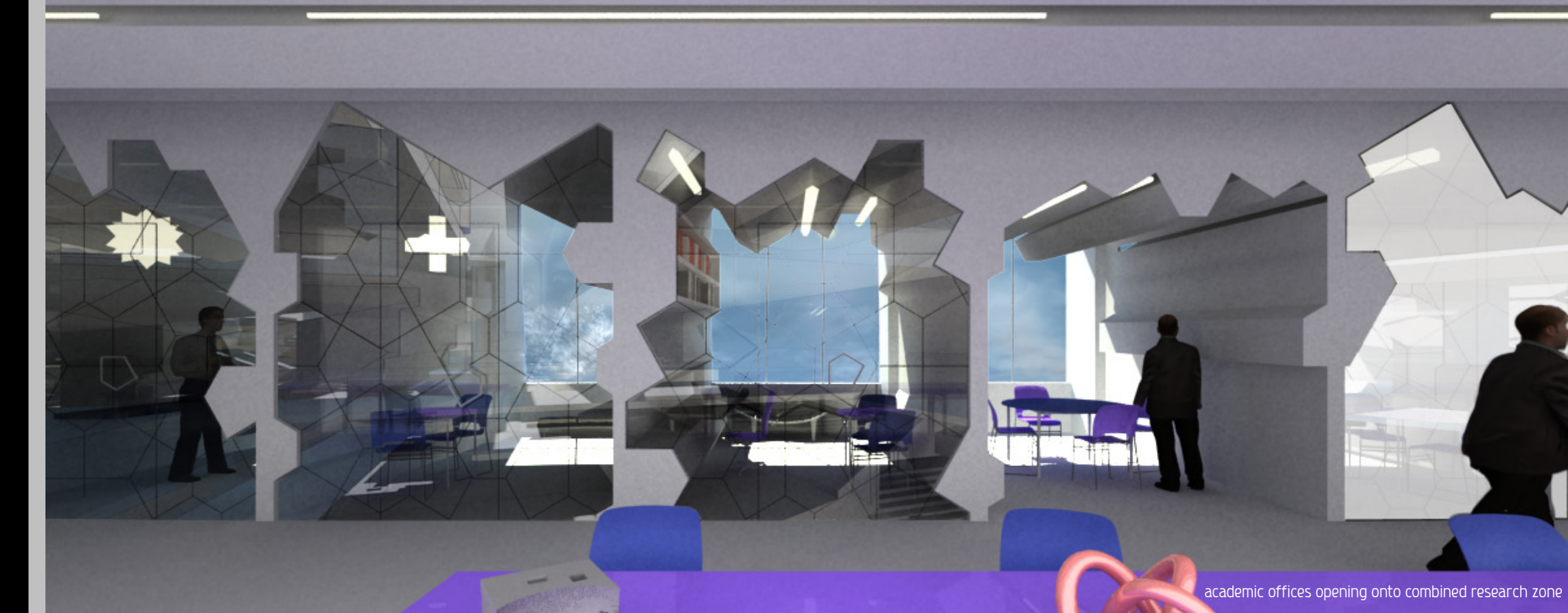
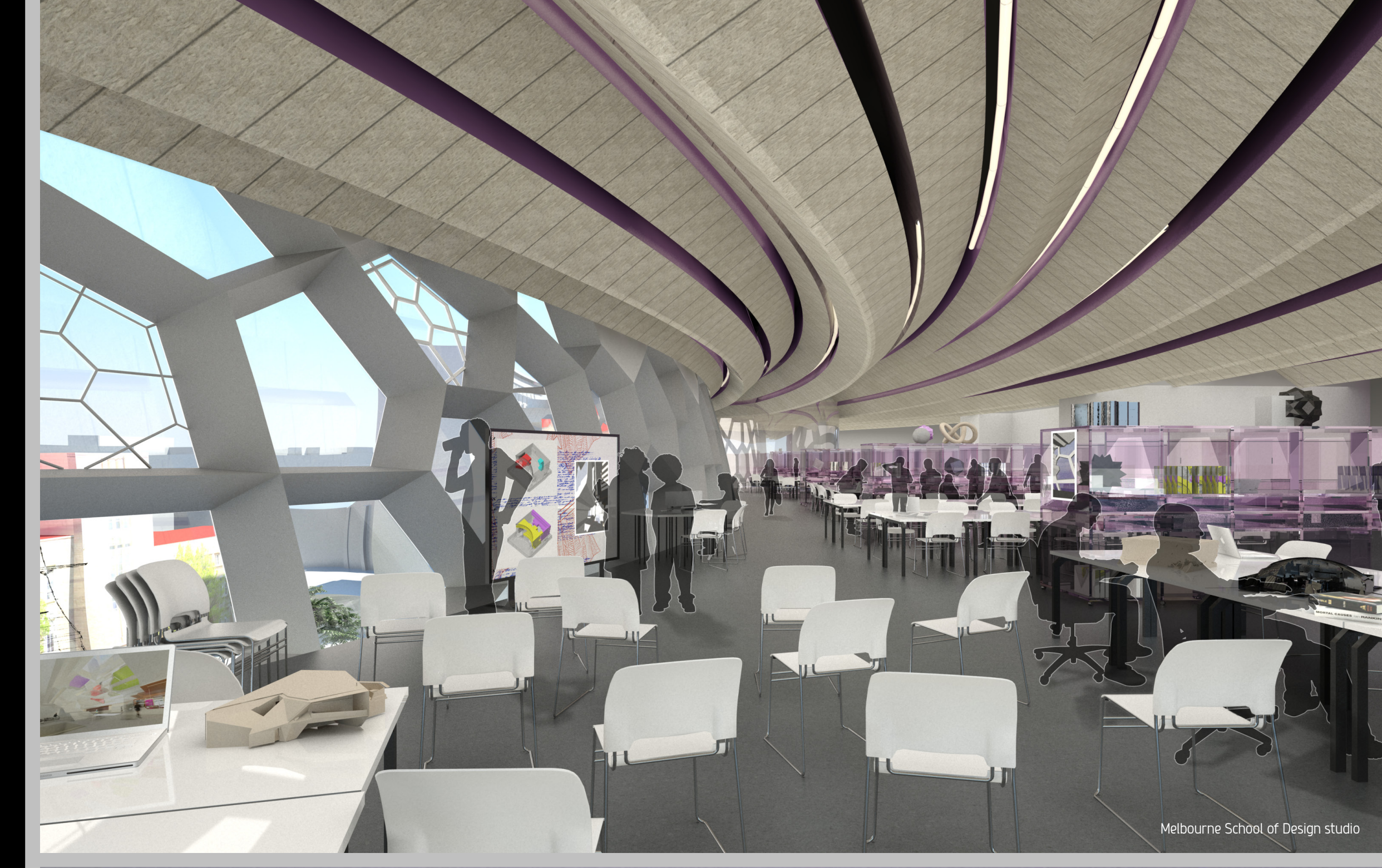
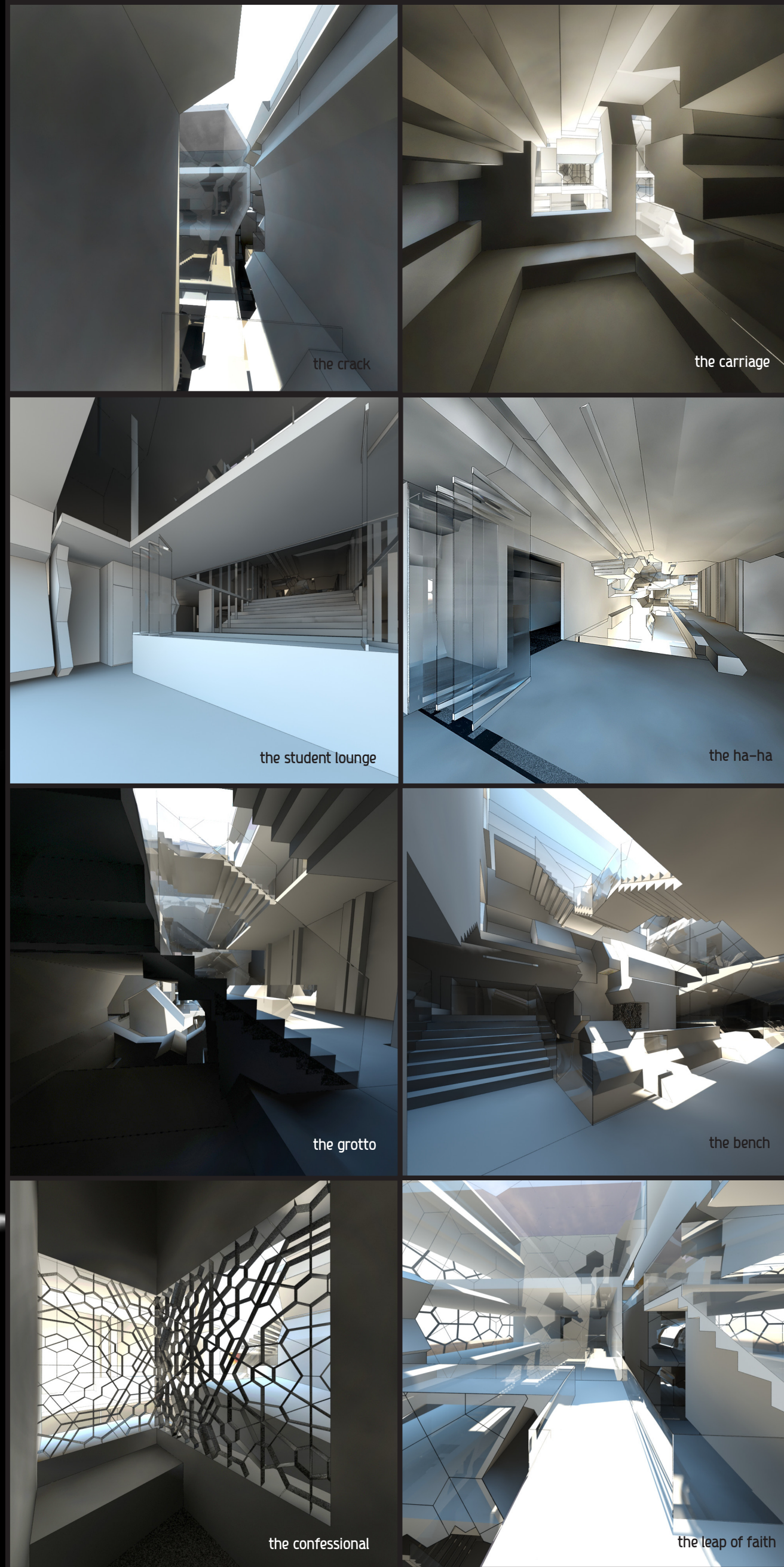
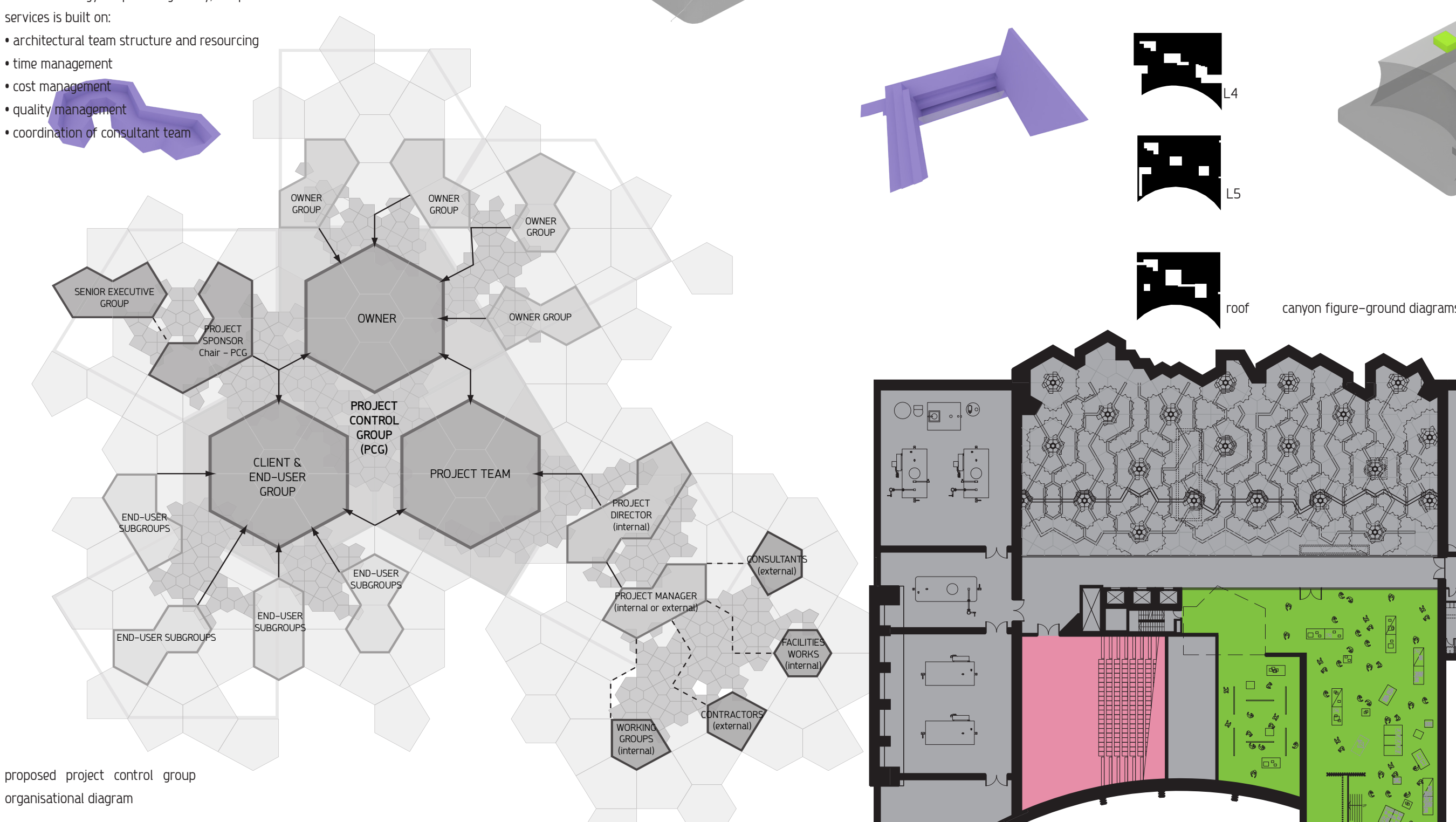
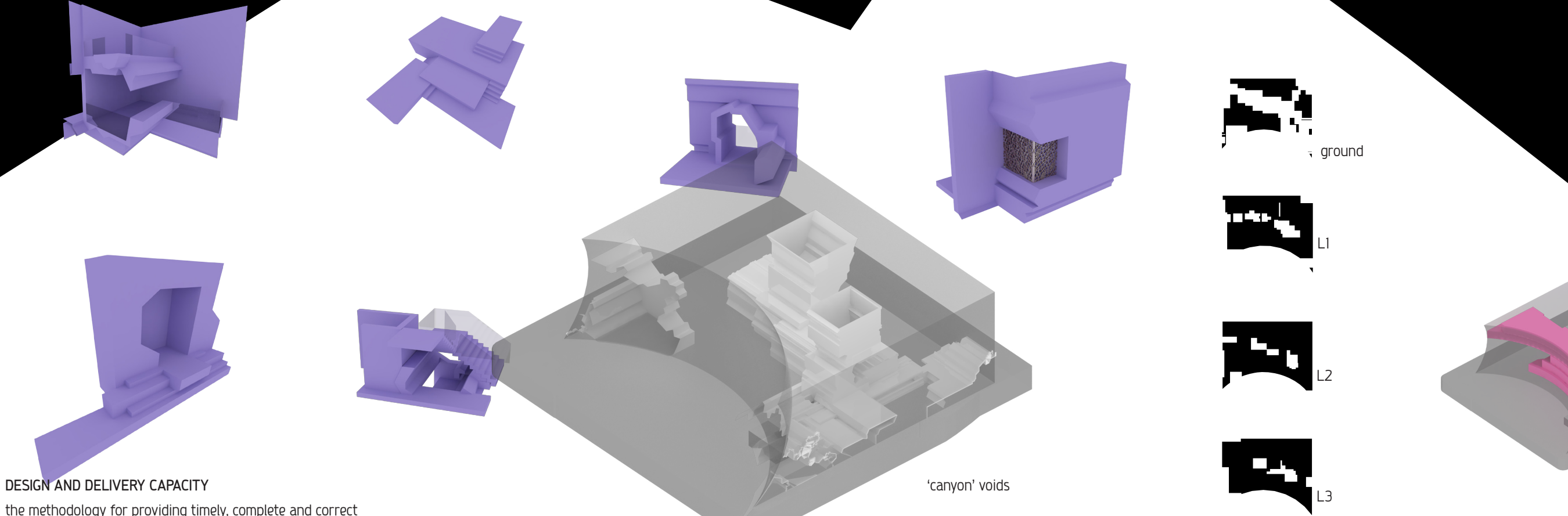
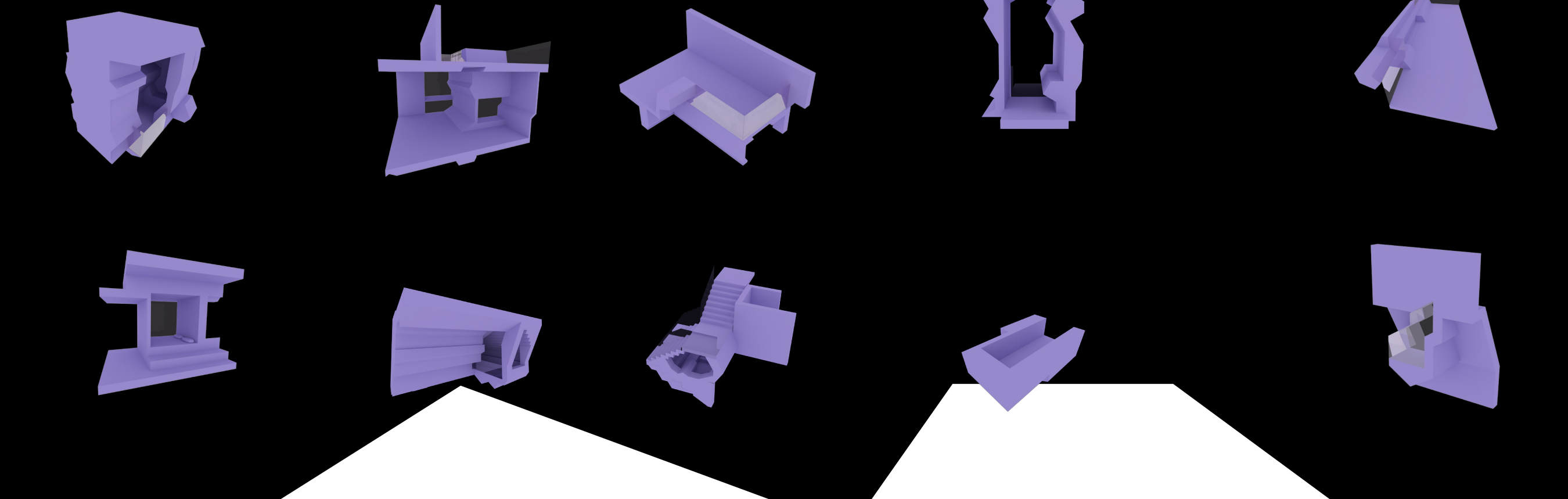


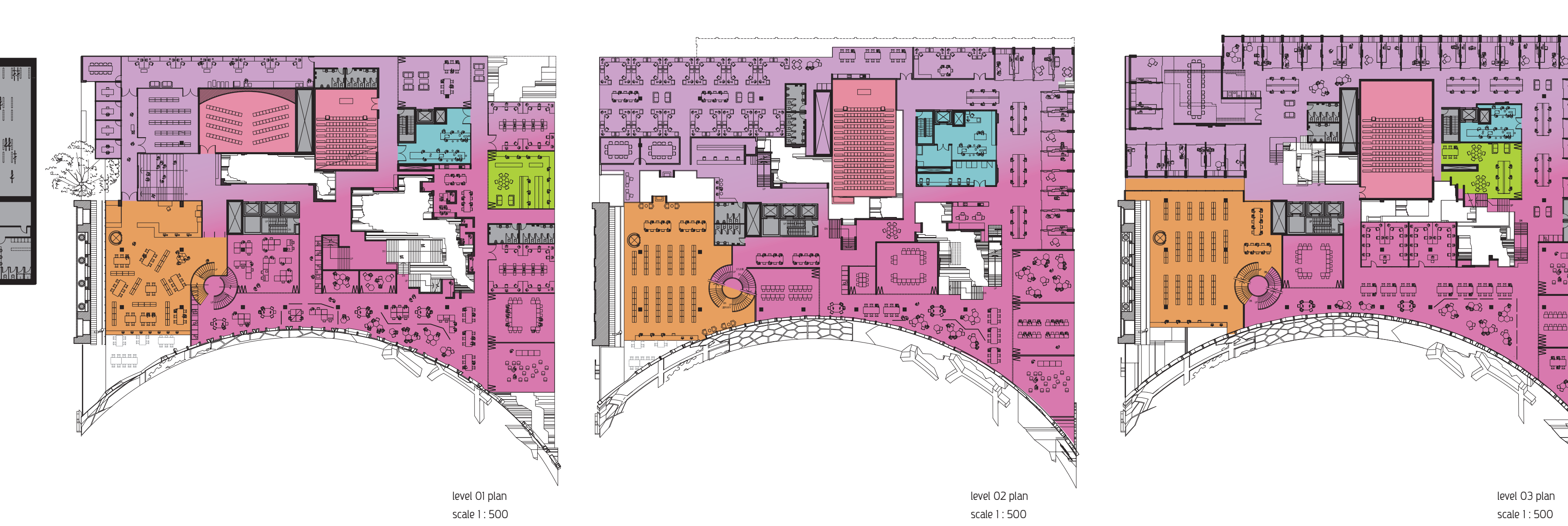
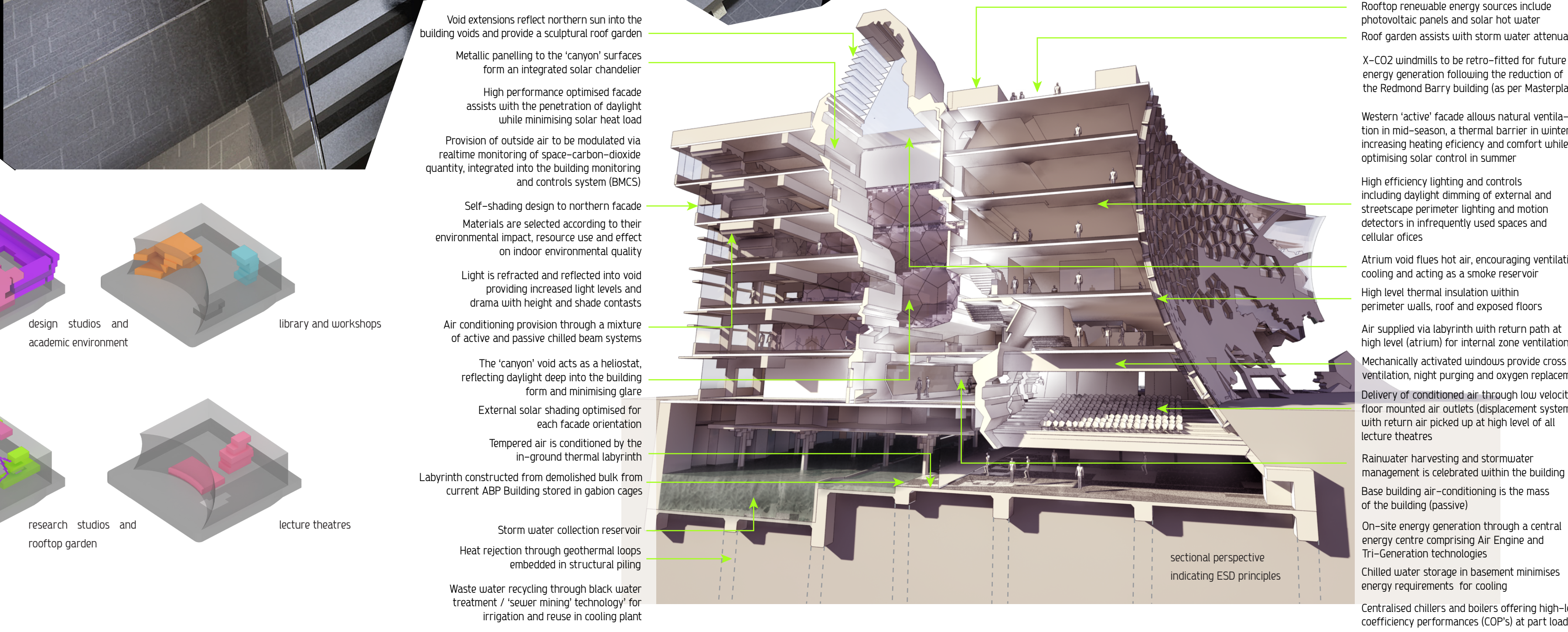
'canyon' atmosphere concept



These intimate spaces distributed around the 'canyon' are places of reflection, offering respite from the active student and staff studio spaces.

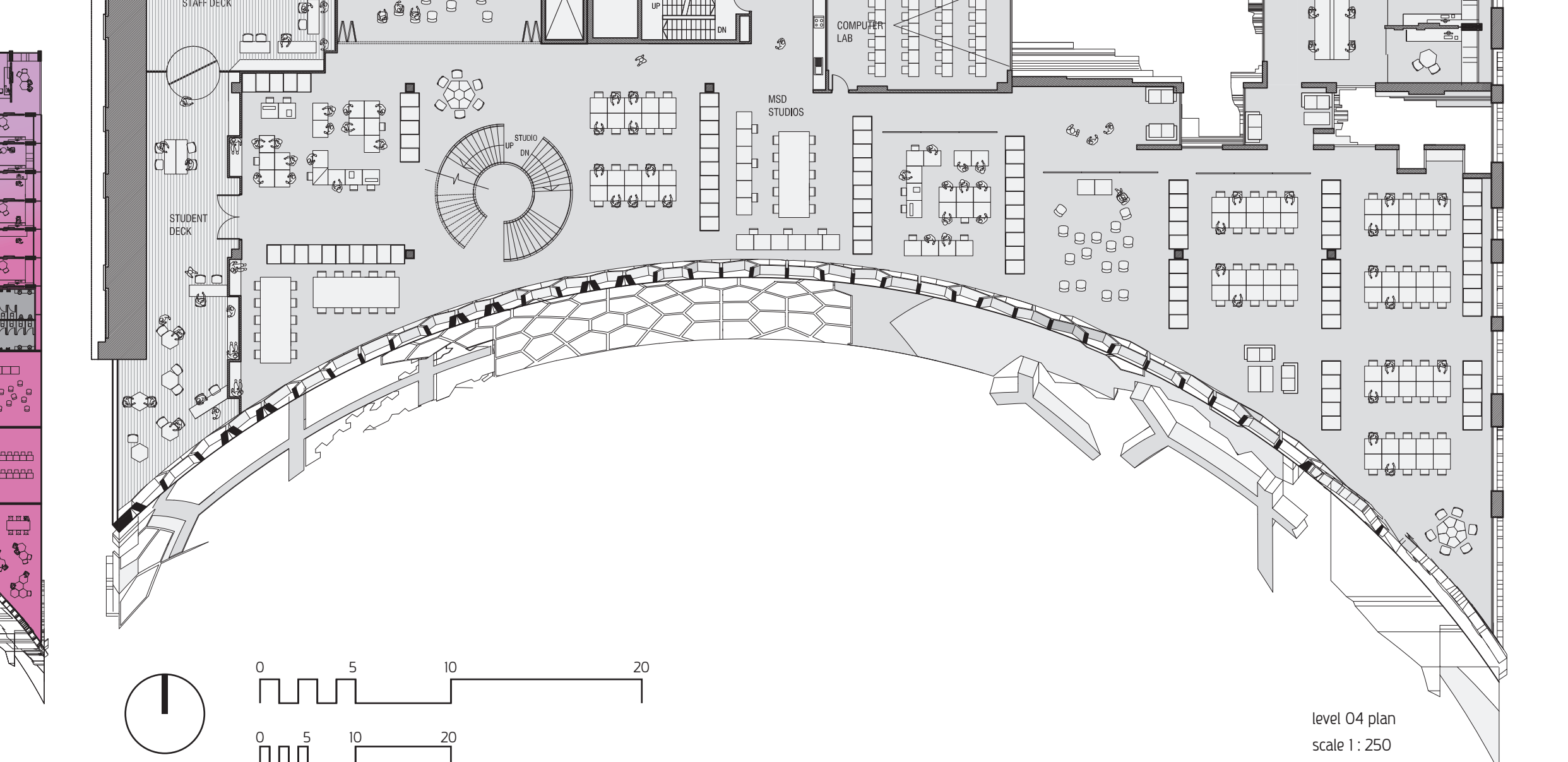


the university of melbourne
NEW BUILDING FOR THE FACULTY OF ARCHITECTURE BUILDING AND PLANNING



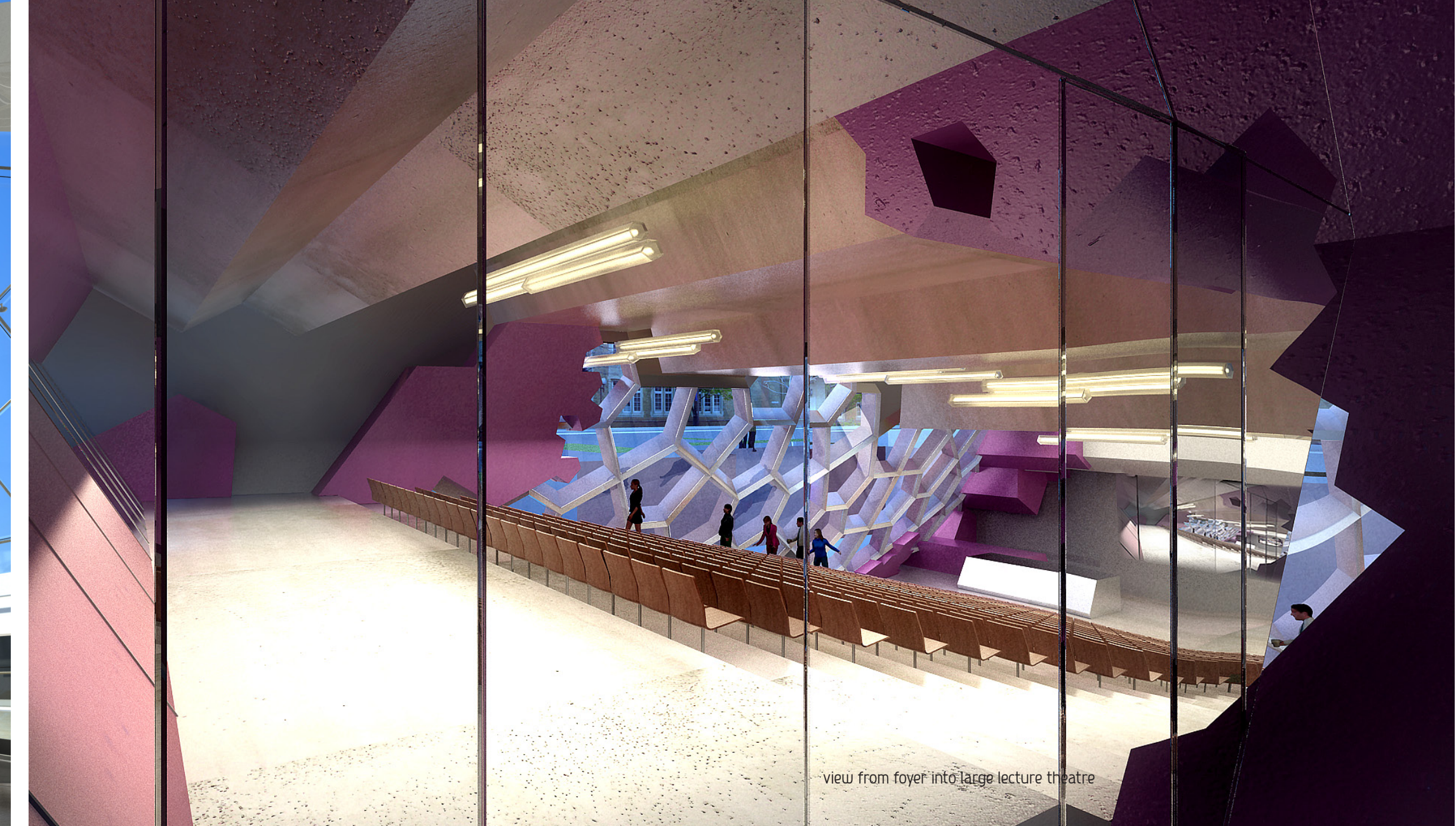
LIBRARY LECTURE STAFF STUDENT WORKSHOP ATTRACTORS RESEARCH

Void extensions reflect northern sun into the building voids and provide a sculptural roof garden. Metallic panelling to the 'canyon' surfaces form an integrated solar chandelier. High performance optimised facade assists with the penetration of daylight while minimising solar heat load. Provision of outside air to be modulated via realtime monitoring of space-carbon-dioxide quantity, integrated into the building monitoring and controls system (BACS). Self-shading design to northern facade. Materials are selected according to their environmental impact, resource use and effect on indoor environmental quality. Light is refracted and reflected into void providing increased light levels and drama with height and shade contrasts. Air conditioning provision through a mixture of active and passive chilled beam systems. The 'canyon' void acts as a heliostat, reflecting daylight deep into the building form and minimising glare. External solar shading optimised for each facade orientation. Tempered air is conditioned by the in-ground thermal labyrinth. Labyrinth constructed from demolished bulk from current ABP Building stored in gabion cages. Storm water collection reservoir. Heat rejection through geothermal loops embedded in structural piling. Waste water recycling through black water treatment / 'water mirror' technology for irrigation and reuse in cooling plant. Rooftop renewable energy sources include photovoltaic panels and solar hot water. Roof garden assists with storm water attenuation. X-CO2 units will be retro-fitted for future energy generation following the reduction of the Redmond Barry building (as per Masterplan). Western 'active' facade allows natural ventilation in mid-season, a thermal barrier in winter increasing heating efficiency and comfort while optimising solar control in summer. High efficiency lighting and controls including daylight dimming of external and streetcape perimeter lighting and motion detectors in infrequently used spaces and cellular offices. Atrium void flues hot air, encouraging ventilation, cooling and acting as a smoke reservoir. High level thermal insulation within perimeter walls, roof and exposed floors. Air supplied via labyrinth with return path at high level (atrium) for internal zone ventilation. Mechanically activated windows provide cross ventilation, high purging and oxygen replacement. Delivery of conditioned air through low velocity floor mounted air outlets (displacement system) with return air picked up at high level of all lecture theatres. Rainwater harvesting and stormwater management is celebrated within the building. Base building air-conditioning is the mass of the building (passive). On-site energy generation through a central energy centre comprising Air Engine and Tri-Generation technologies. Chilled water storage in basement minimises energy requirements for cooling. Centralised chillers and boilers offering high-level coefficient performance (COPs) at part load.





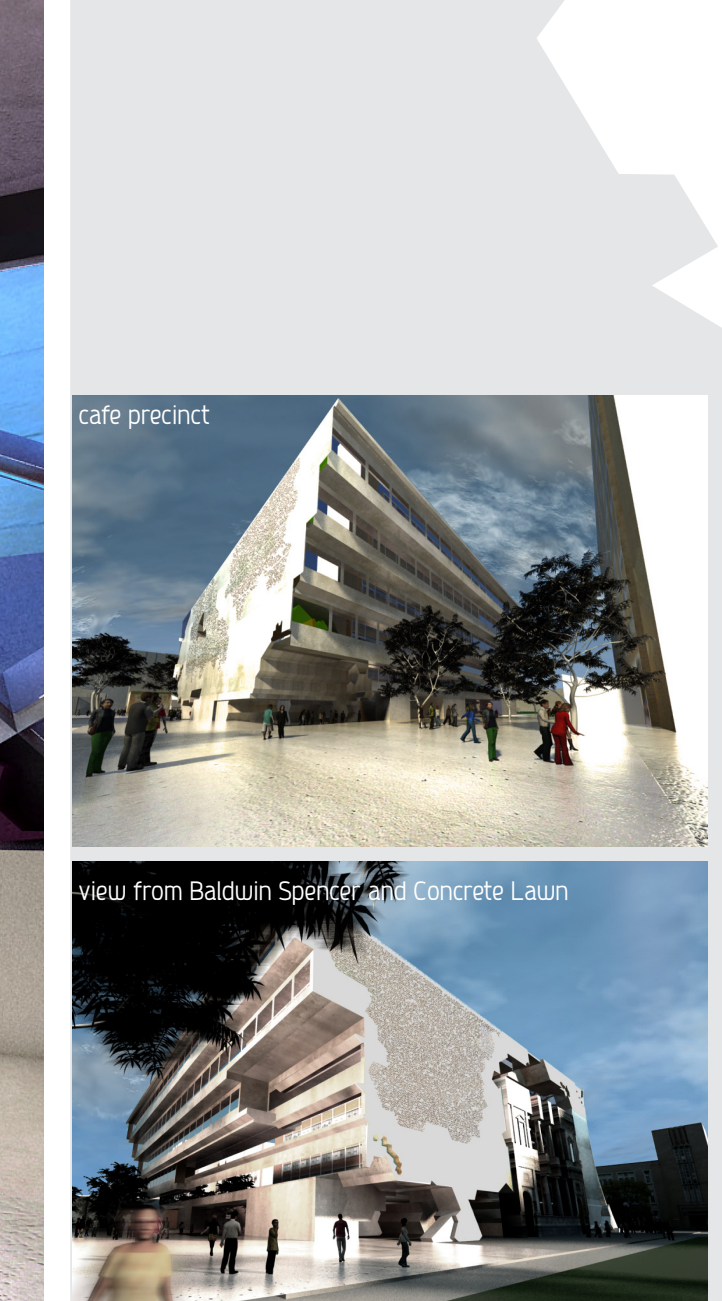
student learning environment connected to library and design studios



view from foyer into large lecture theatre

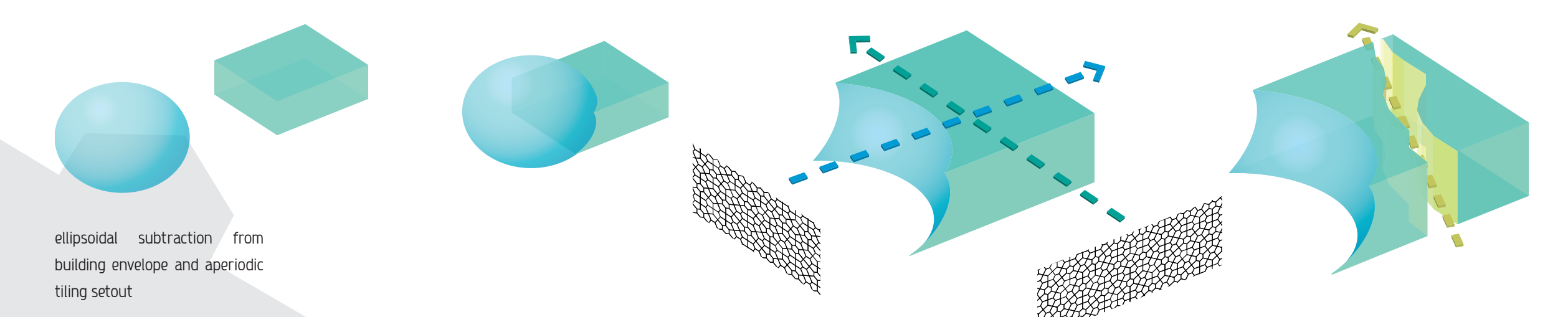


large lecture theatre

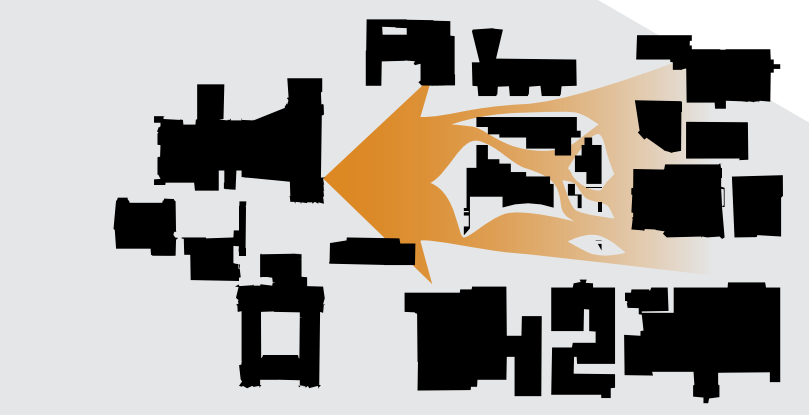


cafe precinct

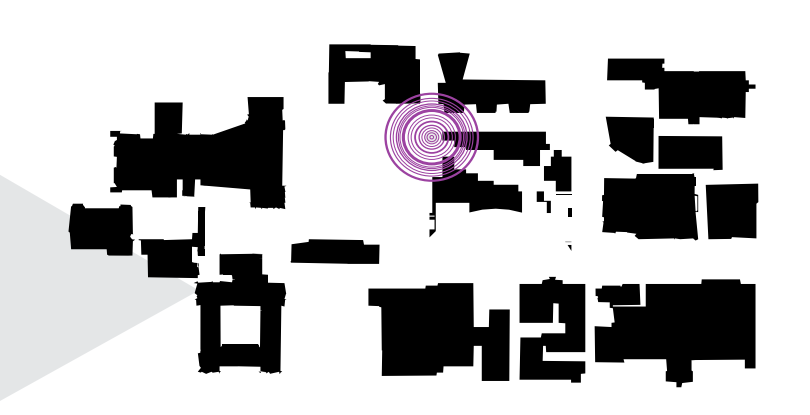
view from Baldwin Spittle and Concrete Lavan



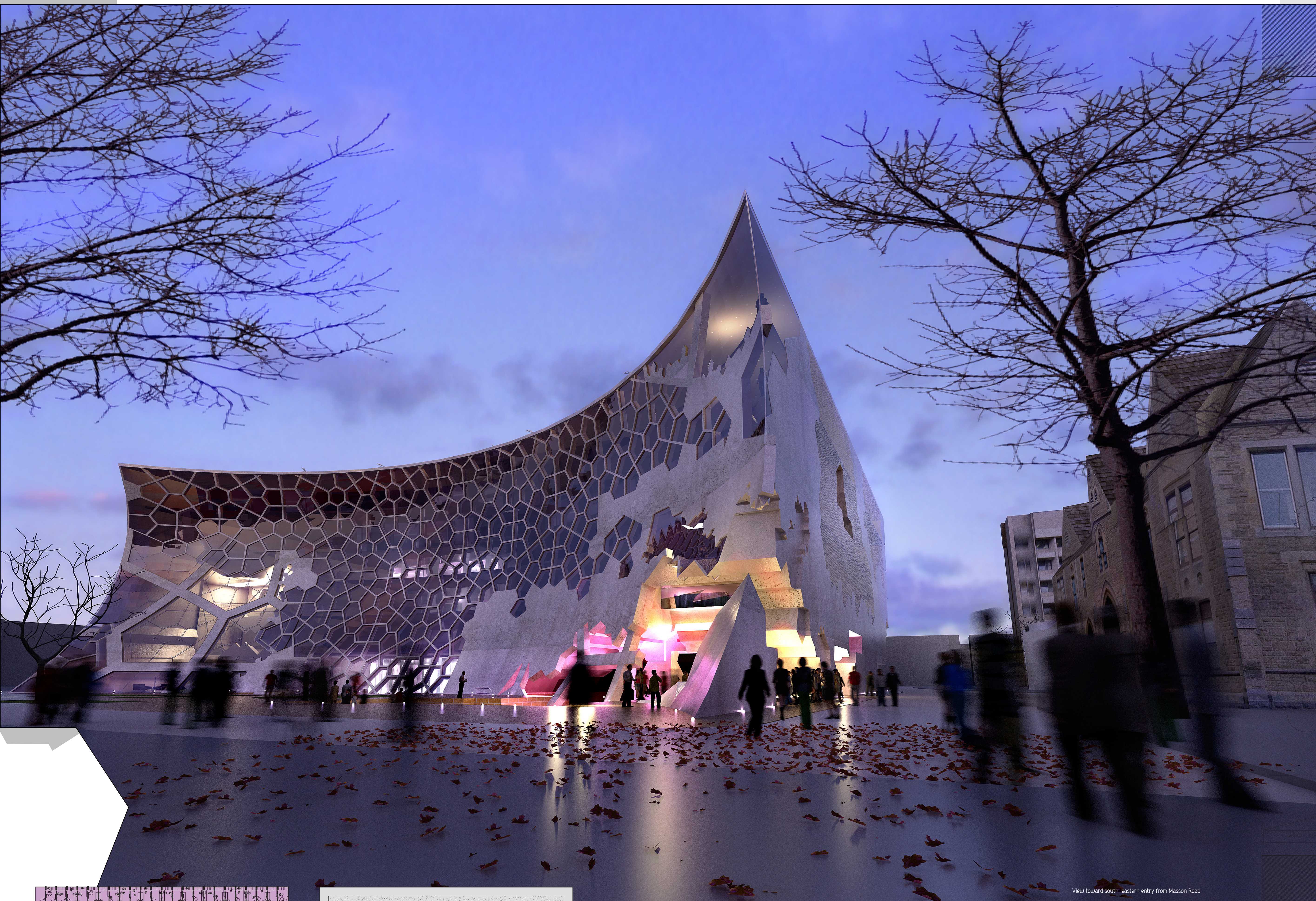
ellipsoidal subtraction from building envelope and aperiodic tiling setup



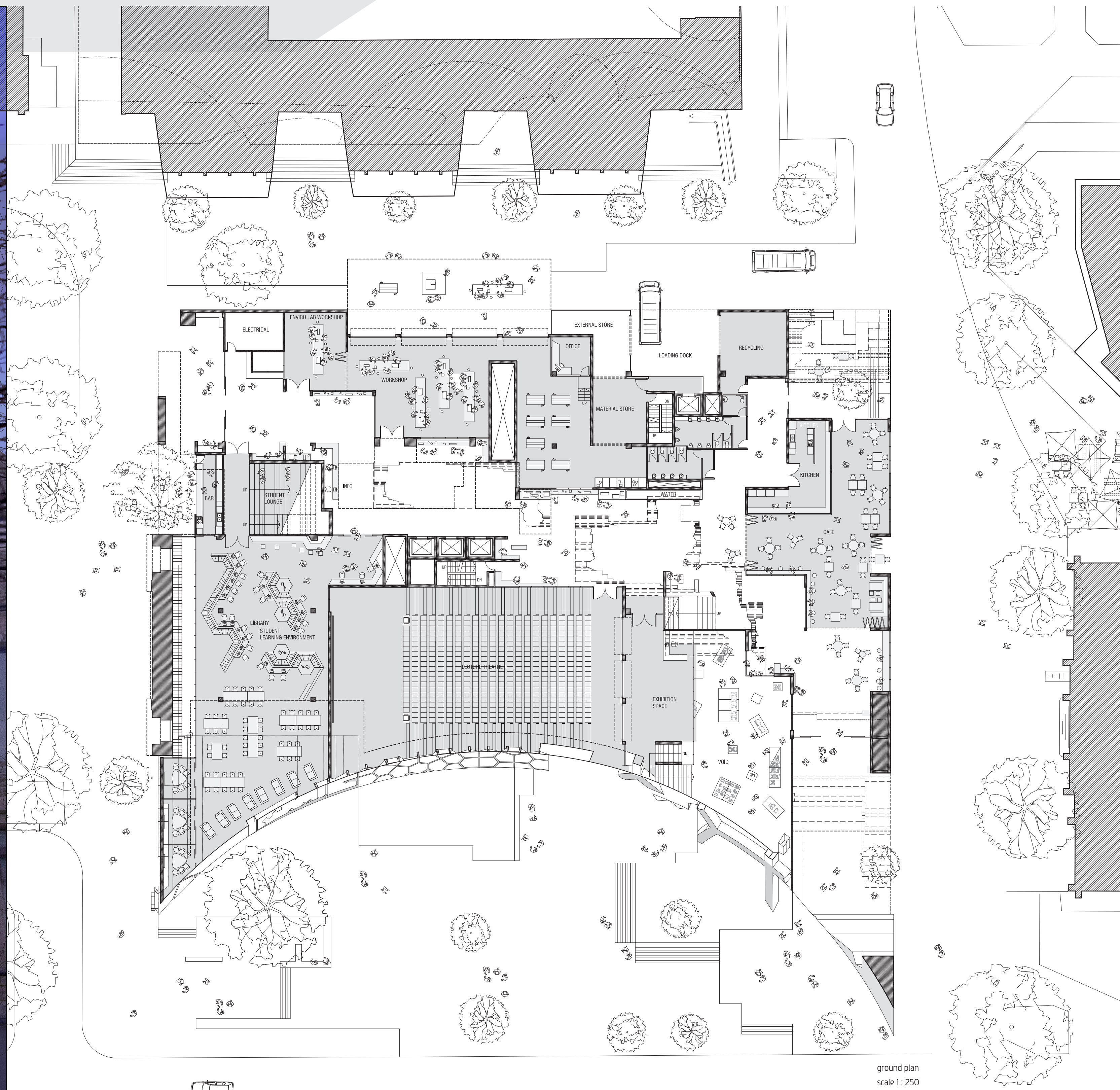
organisational diagram: porosity / pedestrian amenity



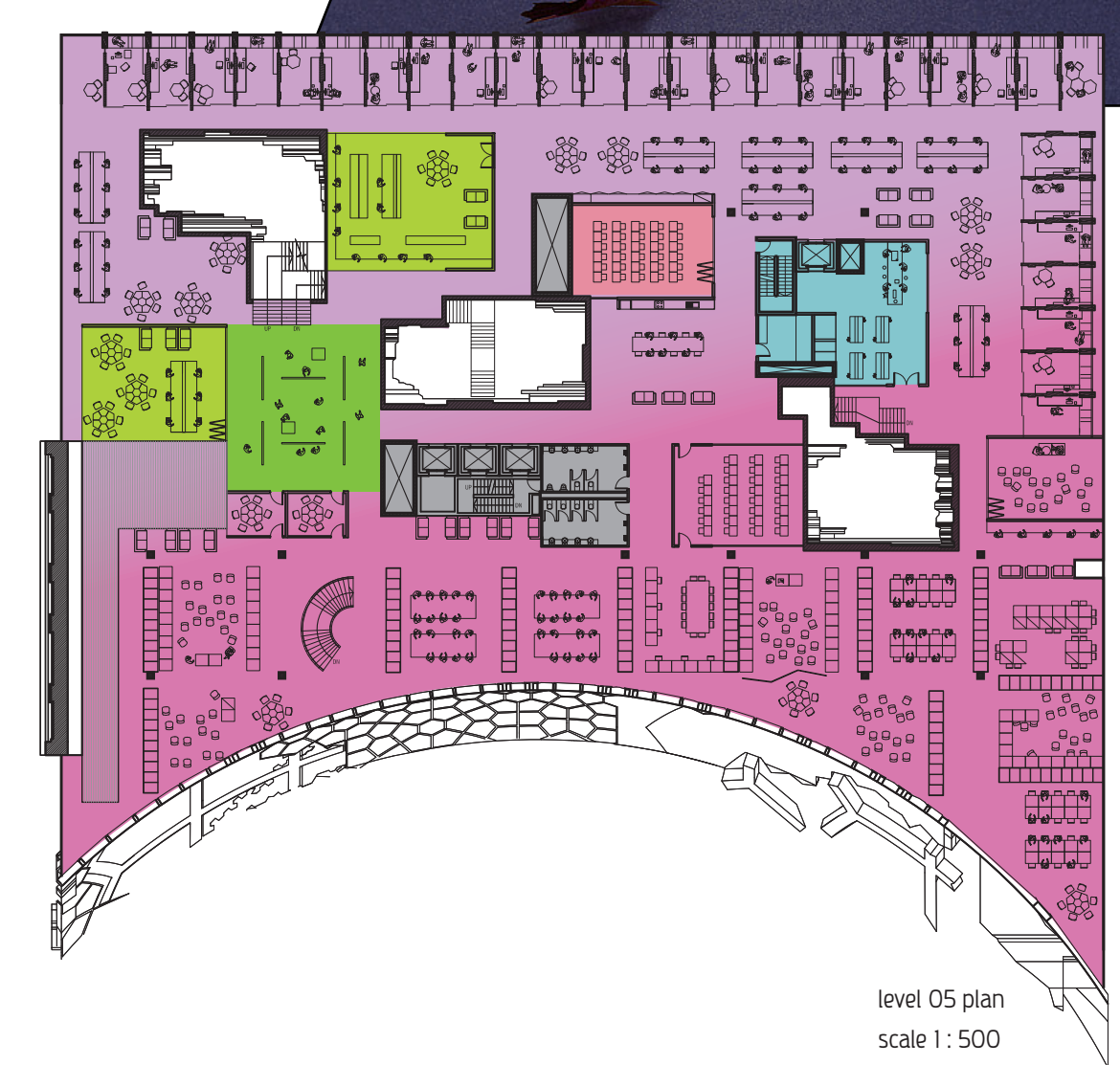
organisational diagram: 'environments' precinct



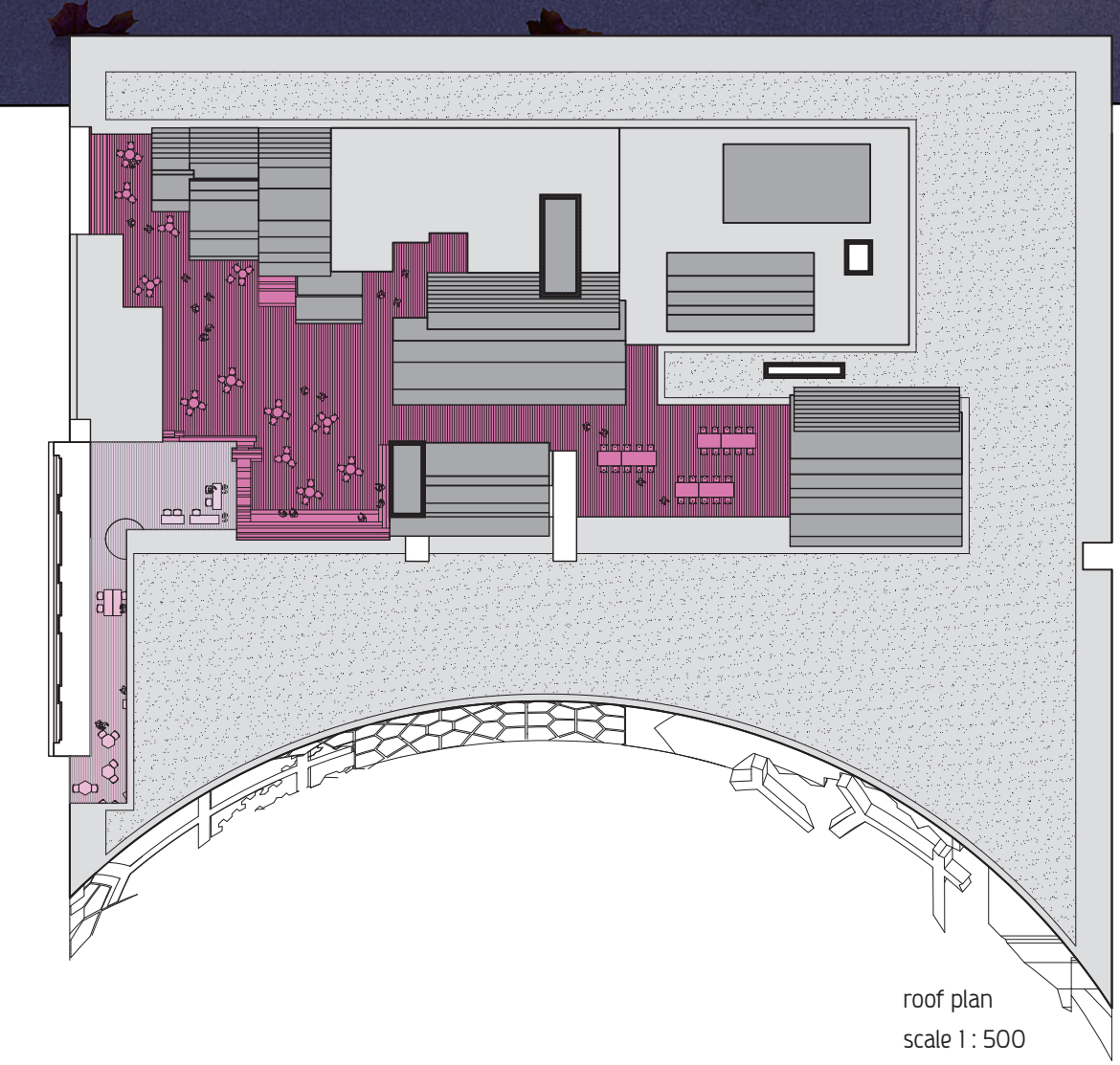
View toward south-eastern entry from Mason Road



ground plan scale 1:250



level 05 plan scale 1:500



roof plan scale 1:500

The new building for the Faculty of Architecture, Building and Planning is a potent manifestation of a new student culture at the University of Melbourne. Emblematic of the recently implemented 'Growing Eastern' strategy and promoting the aspirations of the Melbourne Model, the new ABP is a public-spirited and internationally engaged institution in which a variety of spaces act as a mnemonic to students, rich with the possibility for spatial articulation and experience.

The multiple varieties of space evident within the new ABP promote a sense of identity and belonging among its population of students, academics and support staff, resonating across cultures and through history while highlighting the role of the experiential in the creative act. Students, staff and academics appropriate their environment to their immediate ends, negotiating and respecting the interfaces between groups in a fundamental and fluid restructuring of what architectural pedagogy can be.

Teaching in the new ABP is a public act. Pedestrians pass through the building along a journey that is both informative and memorable. The building is cleaved by a beautiful canyon, a sectional cut that 'reveals' the act of learning in progress and exhibits the products of architectural endeavour in curated displays.

The canyon is the building's lungs; its thermal chimneys naturally ventilate the main volume, while the passage of storm water is celebrated internally along its path to a visible cistern in the building's basement. A thermal labyrinth consisting of the demolished fabric

of the old ABP stored in gabion walls is located in the building's basement. Here, the university's tradition of beautiful and mystical underworlds is extended. Together, the cistern and the labyrinth temper the building's internal air environment. When it rains, it quite literally pours.

This is an urban building, a miniature of Rome, Venice, or even Melbourne. The richness of its density offers a site of engagement and chance encounter, a mixing zone for staff and students, a respite from more intense adjacent workplaces and a place to exchange ideas. A key planning principle is to ensure adjacencies. The 'new studio' requires equal access to workshops (action), printing (output) and library resources (reflection). Design studios, research higher degree and academic workspaces, as well as workshops and libraries are extruded vertically through the building to maximise their adjacencies on each level. Special places, such as the exhibition rooms, lecture theatres and Japanese room are distributed elsewhere throughout the building's volume while research studios are positioned adjacent to the public stair. A fine balance is pursued to provide for the needs of sense: academics for reflective, private space; while simultaneously blurring boundaries and hierarchy, particularly in the MSD.

In devising an ordering principle, we considered the integration of fractal and self-similar patterning. Our investigations suggested an affinity with the Gothic, and the closer we looked at the Gothic and its revival, the more we desired its complex beauty. We traced

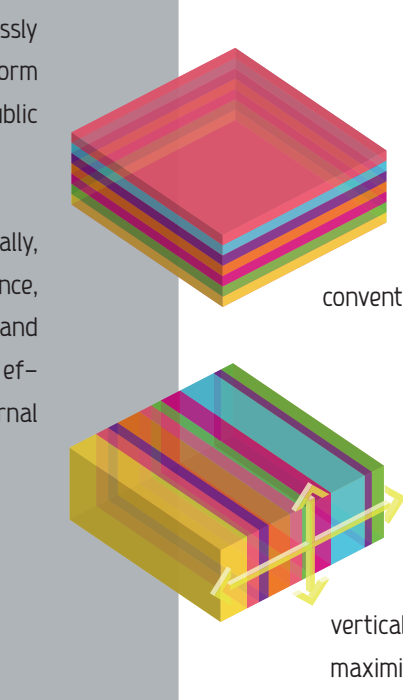
the rose window of Chartres, Wesley, Amiens and more, and felt the urge for a contemporary pattern; a new order representing fundamental restructure. An aperiodic fractal pattern compelled us, and as we only had a fragment, we pulled a few favours for a script to fill the missing links. This pattern is engaging. Symmetry appears and evaporates with alluring fascination.

We used the pattern as an ordering system – a neo-neo-gothic, if you will. Endlessly adaptable, we used it to carve the canyon, create discrete places, shape spaces, and form objects and furniture. The crystallised subtraction reflects light, rendering the public space of the canyon with sharpness and shadow.

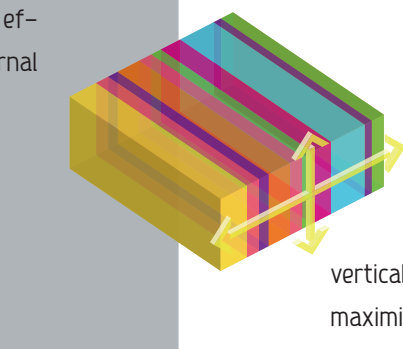
The pattern is further used to order the external expression of the ABP. Conceptually, the expression of the Northern facade is glazed and rational – in architectural parlance, it is 'nuts and bolts'. The Eastern and Western facades, in comparison, are state and responsive to their immediate adjacencies, while the Southern facade is complex and effusive – a giant lantern and spherical absence, whose illumination spaces of the nocturnal behaviour of architecture students, especially toward semester's end.

Everyone knows how hard they do it. Such passion is to be celebrated.

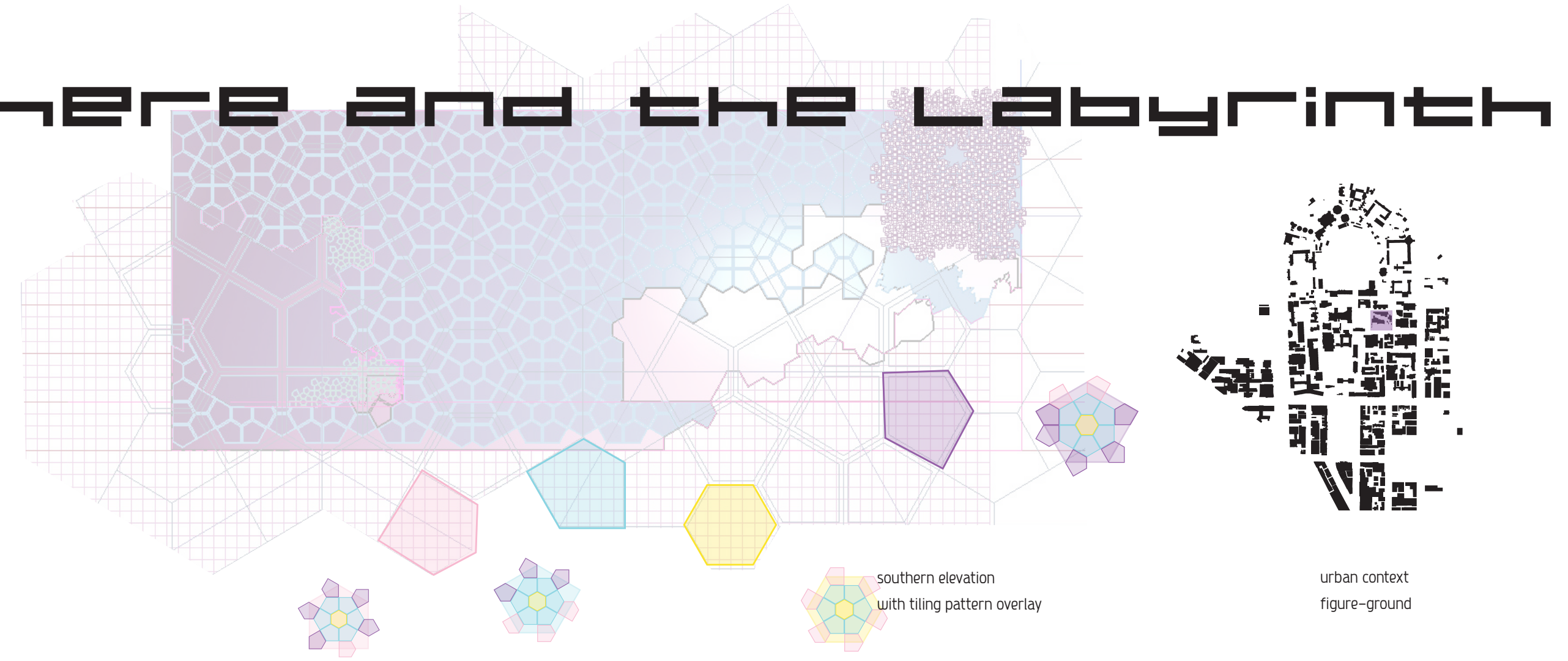
THE SPHERE AND THE LABYRINTH



conventional programmatic stratum



vertical programmatic distribution maximises adjacencies



southern elevation with tiling pattern overlay



urban context figure-ground