



ID_100582

LEARNING

NATIONAL UNIVERSITY OF SINGAPORE CENTRAL LIBRARY

Location of Project: Singapore

Project Stage: Concept Stage

INTRODUCTION

Within the precinct of the National University of Singapore (NUS), the Central Library is a multi-disciplinary library serving all NUS staff and students, primarily those from the Faculty of Arts and Social Sciences, the Faculty of Engineering, the School of Computing and the School of Design and Environment.

For decades, the Central Library has been serving the knowledge and information needs to the University Community; and is the principle campus' resource for human creativity and learning. It has long been viewed as the centre of academic life on campus; and often has deep association and forms part of the students' journey during their time in NUS.

Many academic libraries around the world have been dramatically reinventing their physical spaces. Libraries of today and tomorrow demand versatile spaces that support a wide range of users' learning and research activities while accommodating rapid advances in information technology. In response to the foregoing trends, to remain relevant and even to stay ahead by anticipating users' needs, NUS Central Library is re-inventing, revamping itself in order to continue in its upward trajectory. The future of Central Library shall be an activity hub for limitless discovery, exchange of ideas, knowledge creation, scholarly engagement, communication, collaborations and innovation.

The brief and objective of this project is to retrofit six levels, approximately 30,000 square metre of area, of the existing NUS Central Library building. The Client wanted to revitalise interior spaces that will catalyse experiential learning, research and knowledge creation; while respecting the exterior façade by adapting a conservative approach to retain library's identity.

The Consultant Team tackles the brief and derived the following design guidelines: (a) an overarching theme of "The Modern contemporary timeless, mindful of Asian essence", (b) Reimagining spatial experience for Learning Commons, and (c) Versatile in space planning and design. The embrace of local tradition and culture takes precedent in this project, especially within the context of Singapore's multi-cultural community. The designs of library interior seek simplicity, minimalistic and functional traits through its form and overall aesthetic expression. The bold architectural expression of lines and forms can be seen from the exterior façade, to the interior harmonies of elements of verticality against horizontality. Another key design model for library spaces is to redefine Learning Commons, into full service hubs for learning, research, engagement, and collaboration all within the library. Versatility is a top priority for spatial design for Central Library. It is essential to the planning and design of such library learning spaces. The usage of spaces should be easily reconfigured into gathering/event spaces, workshops/meeting rooms, or computer lab/makerspaces to support a wide variety of learning activities that facilitate collaborations and discoveries.

In summary, the future NUS Central Library will be a neutral arena equipped with rich technology-enabled flexible spaces, where every NUS staff and student can gather and engage in diverse activities, connecting with resources, both digitally and physically. This will enable and sustain the advancement of research and the creation of new knowledge.

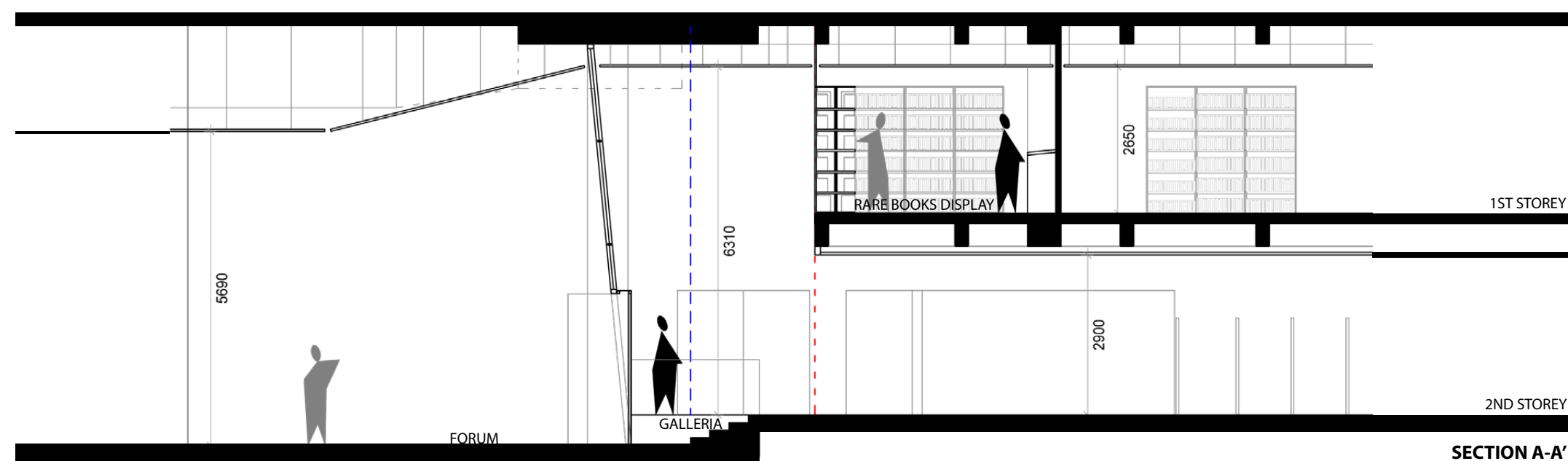
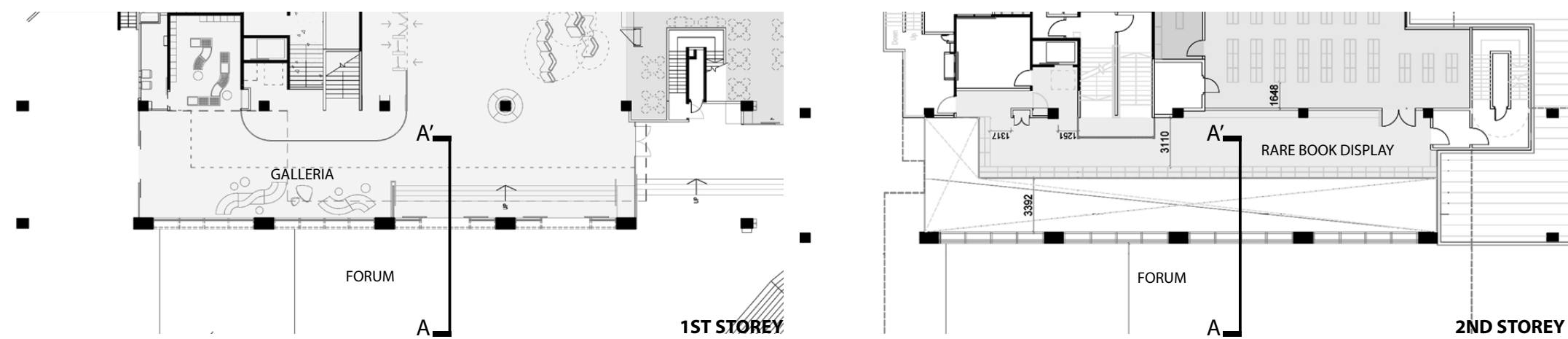


EVALUATION CRITERIA #1: SPATIAL DESIGN

In the Central Library, the ground floor is designed by keeping in mind the seamless connectivity from the main road (Kent Ridge Crescent) and Forum (an outdoor public space). It has to be designed to enable students, staff or public, as well as the physically disabled, to have easy and safe access to or through the library.

Accessing from the main entrance, visitors and users are immediately welcome by the double volume Galleria space, flooded with natural light from the two ends of facades. Spanning the whole length of frontage facing the Forum, attention is drawn to the Rare Books Display above at the second floor. The full height glass maintains visual connection not only with the Galleria, but also people at the Forum area.

The first floor space is also to be creatively reconfigured into a library “living room”. Such multi-purpose library spaces are welcoming, warm, safe and intended to support the social aspects of formal and informal learning, for example temporary exhibition, events etc. The architecturally complete design should reflect the desires of the students and faculty for collaborative and innovative learning, through the combination of social interaction and research.



EVALUATION CRITERIA #2: COMFORT

Comfortableness is one of the most important indicators when designing spaces for the Central Library. The proposed designs created good working environment, taking into considerations of factors like lighting, colour, acoustics and furniture.

The quality of lighting can effect motivation, emotion and even physical health of users. The type of lighting fixtures and lighting arrangement were designed based on usage of space and as much as possible integrated with ceiling services like air diffusers and exhaust ducts. Gentle lighting on the centre of the shelves were proposed for Stacks; while dramatic lightings are avoided for Study areas. The designs always relate to the overarching theme of - Modern contemporary timeless, mindful of Asian essence, the wall and floor remain in neutral light colours while using bright furnishings to add vibrancy to the environment. For localized areas such as reading lounges and carrels, warm colours are proposed which have the effect of stimulating thought, but not distracting the users.

The future of Central Library no longer follows the stereotype of providing a quiet haven for book lovers. It is going to be a collaborative centre of student activity and research. It shall hosts a variety of activities such as group and individual studying, book launch event, exhibition, seminars, etc, and the level of noise could be quite high. Solutions to lessen acoustical problems are to separate "loud" and "quiet" activity areas, where first, third and fourth floors are for collaborative activities; while fifth and sixth floors are for quiet reading/studying. Acoustical materials for ceiling and flooring were also carefully selected to absorb a percentage of noise.

Furniture is one of the most costly expenditures for the revamping of Central Library, and is expected to be durable. Therefore, ample consideration was given to the quality and construction of each individual piece as well as its aesthetic value. Furniture selected are classic, simple designs that are more prudent, with a decorative element to pick up an architectural element of the library interior.



CAFE SPACE



READING SPACE



CAFE SPACE

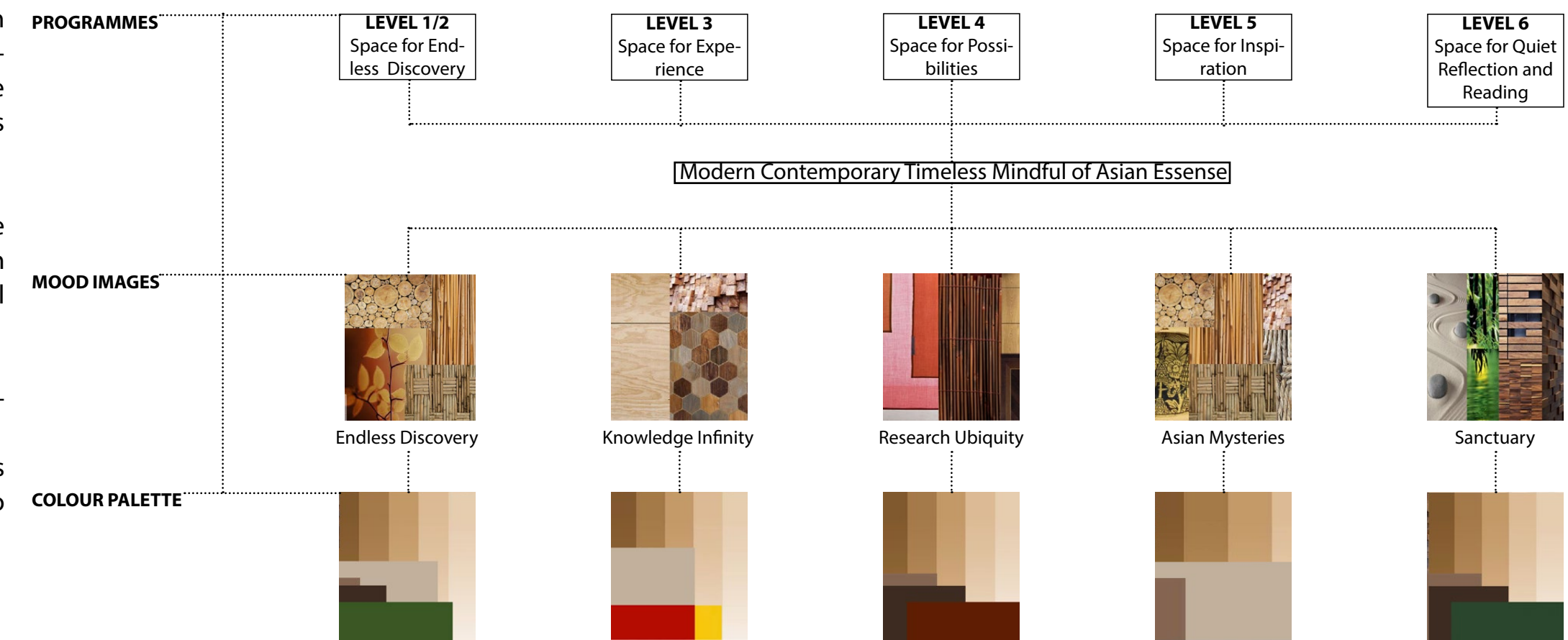
EVALUATION CRITERIA #3: AESTHETICS

The ideas/designs developed for re-envisioning Central Library spaces went beyond thinking of library as just a space for engaging with literature or intent of independent or group work. Consistent themes emerge from design charrettes and interior design workshops conducted with the users, informed a set of concept, the mood images and final colour palette for each level. The proposed strategies were that all the levels shall reflect a set of base neutral colour, while injecting essence colours through furnishings to highlight individual level's character and spatial experience.

The proposed programmes are: Level 1 (Main entrance)-Space for endless discovery, Level 2-Space for building Legacies, Level 3-Space for experiences, Level 4 (Secondary entrance)-Space for possibilities, Level 5-Space for inspiration, and Level 6-Space for quiet reflection and reading. While the derived concepts are: Level 1 and 2-Endless discovery, Level 3-Knowledge Infinity, Level 4 Research Ubiquity, Level 5-Asian Mysterious, and Level 6-Sanctuary.

The interior attractiveness of the library was emphasized through usage of timber laminate, soft fabric, woven floor vinyl and pleasing colours combination that would always remind users of its Asian inspirations.

These are important reflections to the appearance of a learning environments where comfort, concentration, and the reduction of stress are essential. The ceiling, columns and walls (without laminate) are deliberately selected to be in white colour (or light colours), not only to make the space appear larger, but also to direct users attention to the rich texture, gradient and interaction of different materials.



EVALUATION CRITERIA #4: INNOVATION

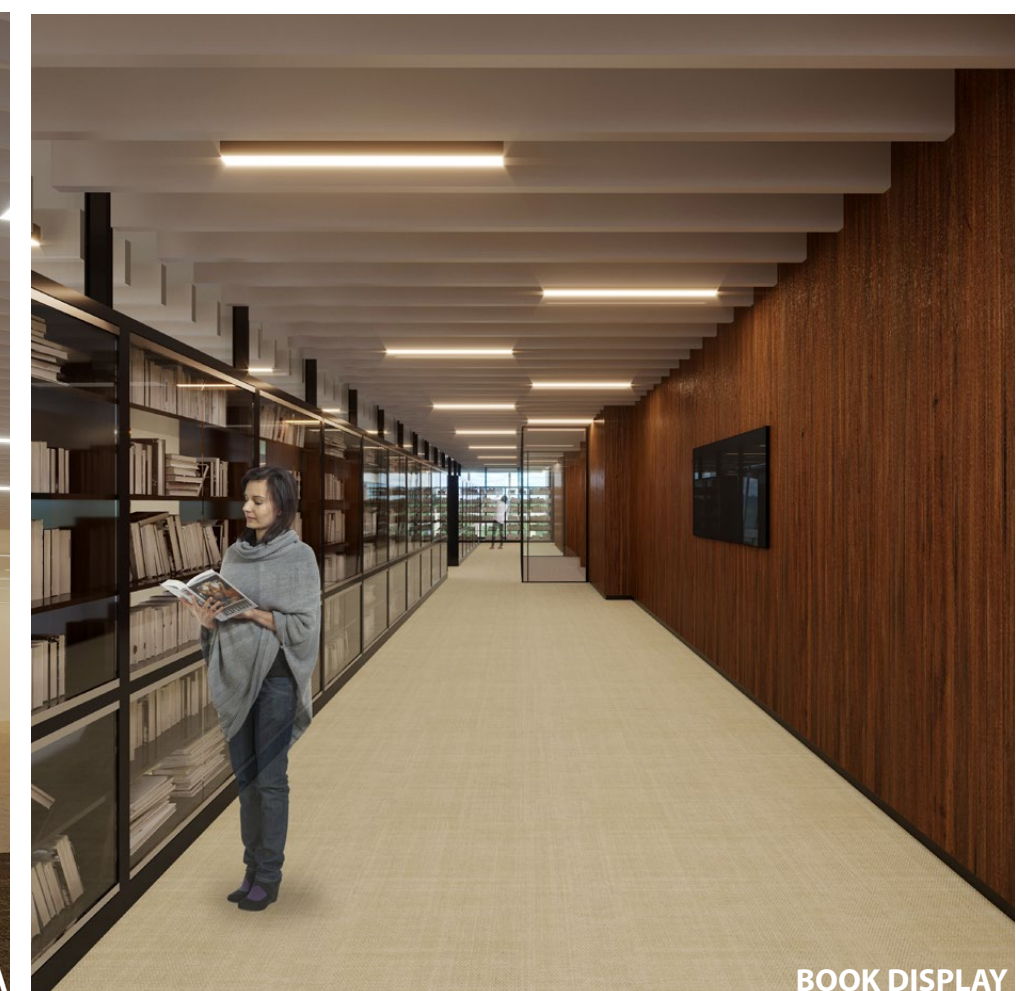
The Client wanted the library to be both a desirable destination on campus as well as a “symbol of learning”. To re-create a source of inspiration and a statement for NUS, its existing rare Singapore-Malaysia Collection of over 61,000 titles located at second floor of the library, is to be transformed into a shopfront of a fascinating display of rare books. To achieve this innovative transformation, the front façade was extended out to create a double volume Galleria space, and the wall of second floor was replaced with full height glazing offering extensive view of the Collection.

The design of the front façade is purposely tilted to embrace the rectangular columns, create dynamism to the entrance. When approaching the Central Library from the Forum, together with the careful position and selection of lighting ambience, users will be able to appreciate the full view of the rare books collection on display and the continuation of tubular ceiling flowing from the Forum into the Galleria.

The customised rotatable vertical screen located at the fifth level is a featured proposal that separates the South East Asia Collection and Singapore-Malaysia Collection. As both spaces fall under the category of Asian Collections, the screen is designed to blur the boundary separating them. Cladded in textured timber veneer, these vertical elements can be rotated manually according to users’ need of different degrees of privacy. An innovative device that allows multi-functional usage of one single space.



GALLERIA



BOOK DISPLAY

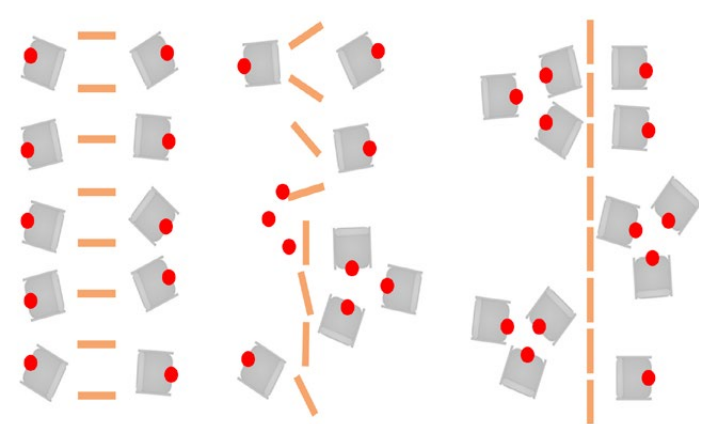


ENTRANCE FRONT

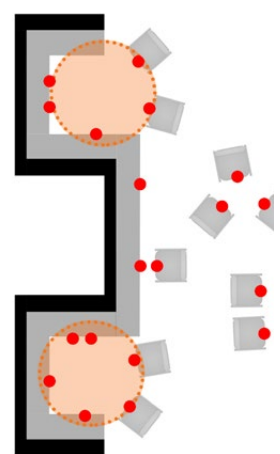
EVALUATION CRITERIA #5: REALISATION EFFICIENCY

As the NUS Central Library has stopped being book-dominated and in the future towards more user-orientated, more attention is paid to the user's experience and services spaces. Because of the changes in library functions, the library spaces need to be adjusted to accommodate the new activities. The concept of flexibility is a core necessity shared frequently by the Client, to propose and design furniture that is movable in order to support the multi-functional use of space. Rotatable vertical screens, pocket of collaborative spaces and movable/modular furniture, are some good examples proposed to Central Library to cater for more varied needs from various groups of users.

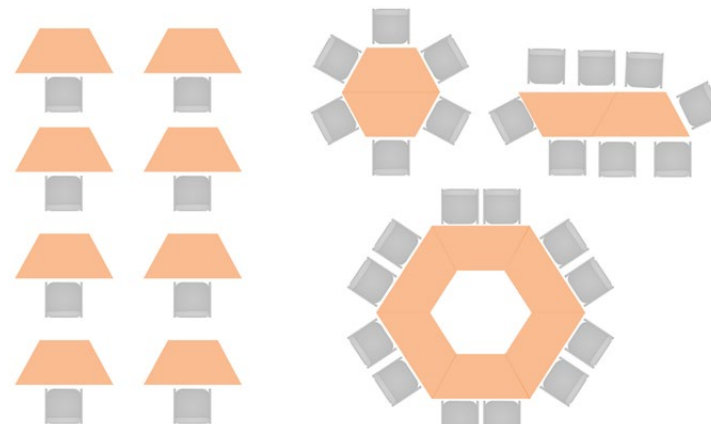
The challenge for revamping the Central Library is the ability for the proposed conceptual designs to adapt to the actual/existing space and constraints. Planning and designing strategically in this case meant anticipating change, which may ease construction process on site. From ceiling panel size to floor vinyl tiles, façade glazing to integrated air diffusers, as much as possible they are designed in modules or standard sizes to increase productivity and efficiency during installation. Not only did the Consultant Team worked closely with users (librarians) to formulate clear design goals, they worked to ensure that the goals were achievable and affordable. Consultants also made certain that this project is meeting the practical needs of the library, translated the language and meaning of designs, so that the proposal took shape and project could move forward.



Rotatable Louvre creates different degrees of privacy. A simple device allows multi-function of one single space.



Portable furniture makes it easy to transform the space for other functions.



Combinable furnitures allow students to create different settings of groups.



