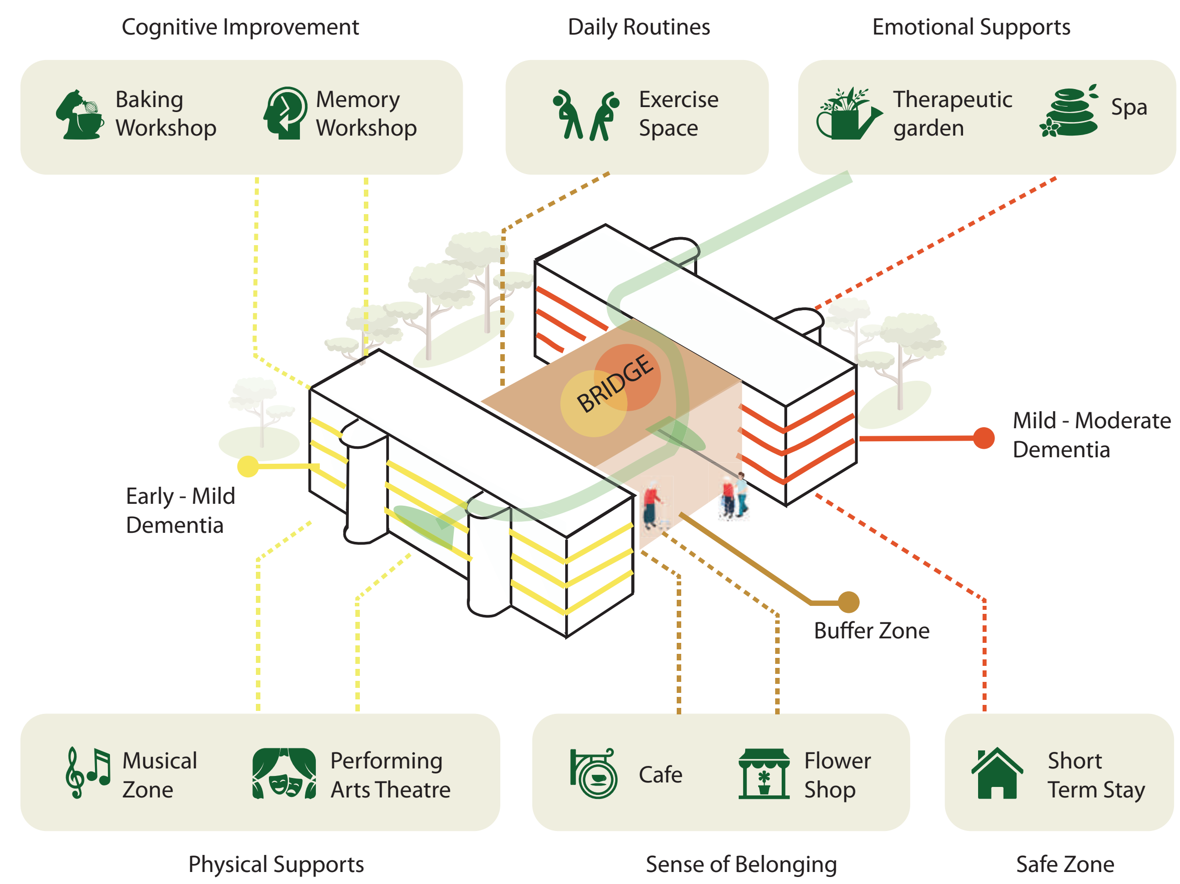
Communal Indoor Garden

The garden were integrated into the communal space, and it acts as a space for contemplation, pauses, their recreation space. Plantation, water elements, and lights, are arranged to make elderly feel like they are moving around the area through their sight. Even from the second floor, one can still gaze across the garden's beauty.

Reception Area

The design combines transparency and solidity to enhance wayfinding and curiosity. With a double door locking system and a security post at the reception, the safety of elderly individuals with dementia is ensured.

Programmes



The Bridge

With dementia rates increasing in Singapore and projected to rise further by 2030, there is a shortage of patient-centered day care centers tailored for individuals with dementia. The Bridge addresses this gap by offering a therapeutic and sensory-stimulating day care center designed with Neuro Biophilic Architecture.

It prioritizes cognitive, emotional, and physical development to reduce and slow the progression of dementia, while creating a supportive environment for elderly residents. In addition, engaging programs promote active participation in the community through volunteering, gardening, art performances, and collaborative activities. This involvement fosters empathy, reliance, and connection for individuals with dementia, preventing feelings of isolation.

Overall, The Bridge empowers elderly individuals with dementia, embracing dignity, promoting independence, and social equity. It emphasizes the fundamental importance of treating individuals with dementia with unwavering respect and dignity, recognizing their unique qualities and inherent worth as precious human beings.

Scan or click here:

Research | Animation

Background

- 1 in 10 seniors aged above 60 in Singapore has dementia
- Dementia are the fifth leading cause of disability in Singapore
- To support government's strategy on increasing awareness and early detection for dementia

Targeted Audiences

Primary:
- Elderly with dementia (60-75 Years old)
- Elderly without dementia (50-75 Years old)

Secondary:
- Family
- Nurse, caregiver, staffs

Research Question

1. How might the neuroarchitecture theory help designers create a space that reduces the risk of dementia?
- How does the brain of dementia patients work?
- In what ways neuroarchitecture and dementia can be connected?
- How does multi-sensory space help to stimulate the brain of dementia?
- What if the building itself had "a brain and nervous system"?

2. How do designers create a safe environment design for the elderly?
- In what ways elderly and dementia patients can be function the most?
- How might one design a building that helps the elderly to stay mentally and physically active?
- What are the current issues the elderly often face in one building?

3. How might we utilise the great relation between Neuroarchitecture and Biophilic design into one united design?
- In what ways designer can increase human connectivity to nature?

Site Analysis

Block 28 & 29 Tiong Bahru Road, Singapore, 163028

Site Potentials

Elderly neighbourhood
Easy access and convenient
Rich of history and unique

Site Constraints

URA Conservation area
Noise of transportation
Narrow building and columns

Opportunities

Government's ongoing plan of looking for Dementia Care Village in Singapore.

History of Tiong Bahru

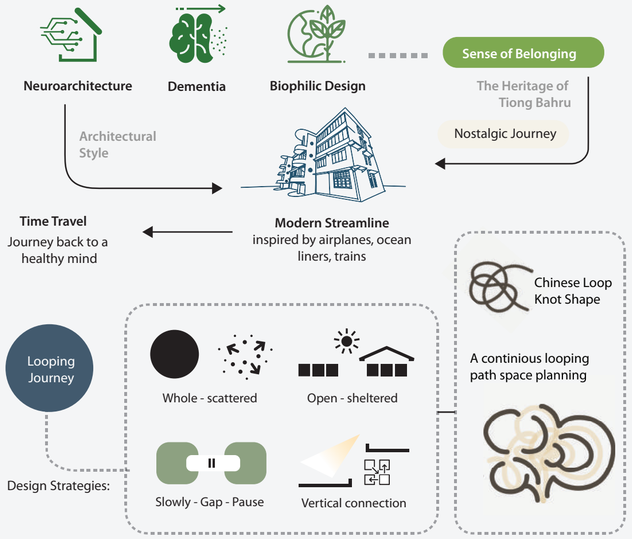
Tiong Bahru was constructed in the 1920s by Singapore Improvement Trust. Tiong Bahru used to be a burial ground, but today it is known as the oldest housing estate in Singapore.

It is also called "an elderly estate" since many residents moved out to newer HDB in the 70s and 80s.

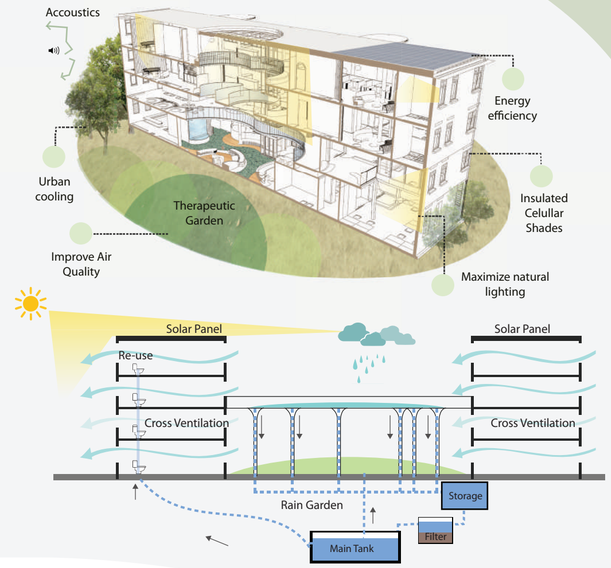
Tiong Bahru Architectural Style

Tiong Bahru Architecture was inspired by Art Deco and the influence of the International style, which focused on simple, clear lines and planes. And today, Tiong Bahru is famous for it's nostalgic charms.

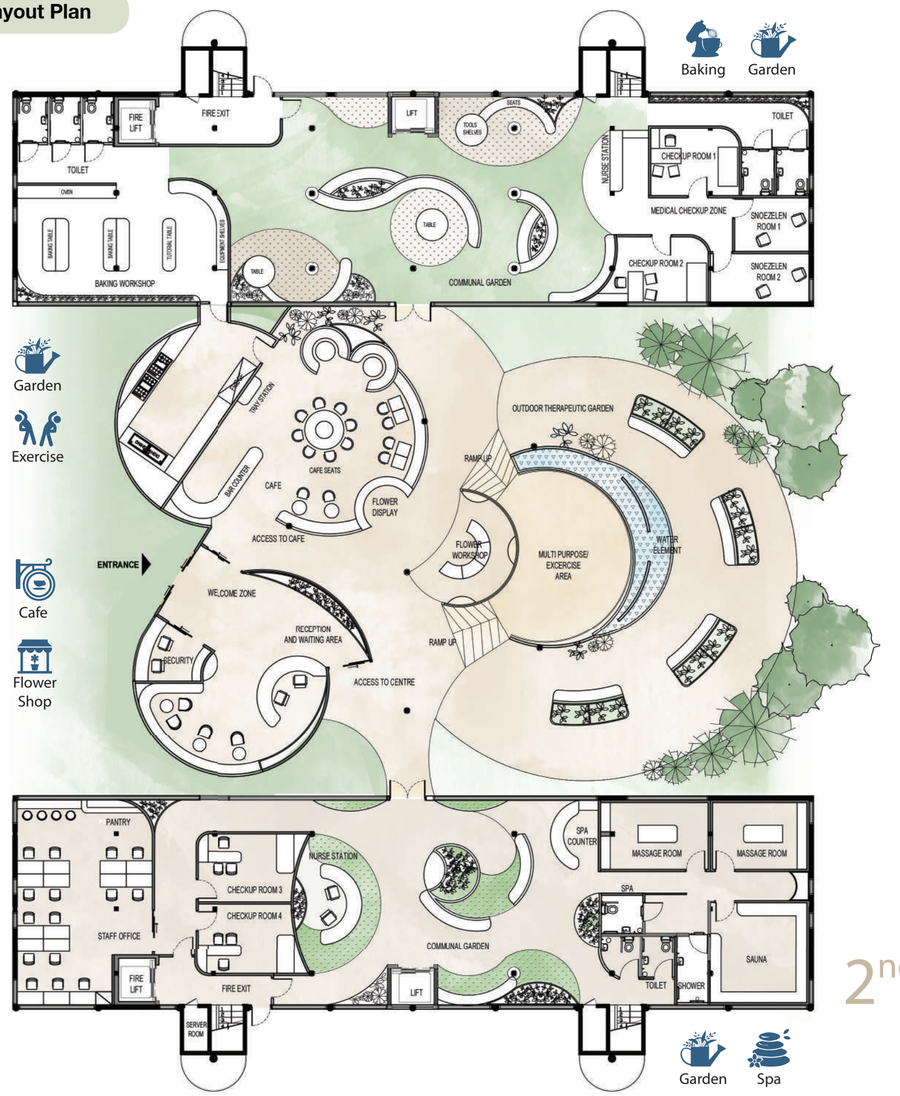
Design Concept

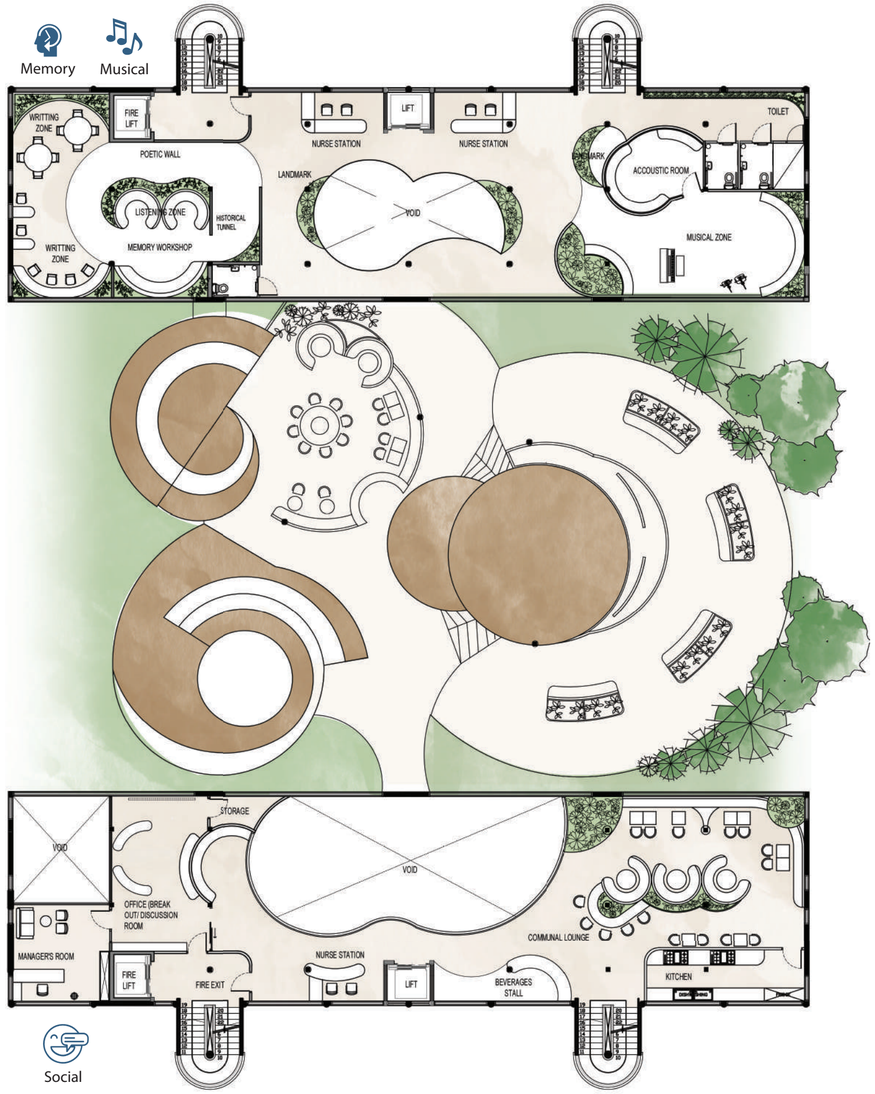


Sustainable Features



Layout Plan





Material Board

How Therapeutic Garden Benefits Dementia?

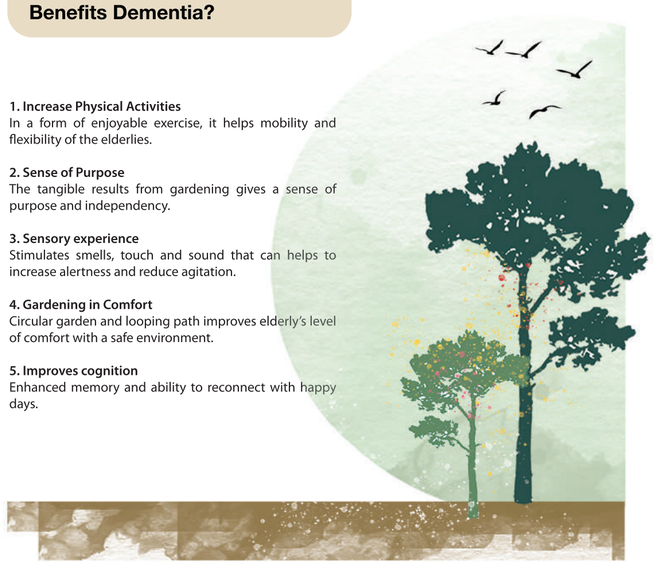
1. Increase Physical Activities
In a form of enjoyable exercise, it helps mobility and flexibility of the elderlies.

2. Sense of Purpose
The tangible results from gardening gives a sense of purpose and independency.

3. Sensory experience
Stimulates smells, touch and sound that can helps to increase alertness and reduce agitation.

4. Gardening in Comfort
Circular garden and looping path improves elderly's level of comfort with a safe environment.

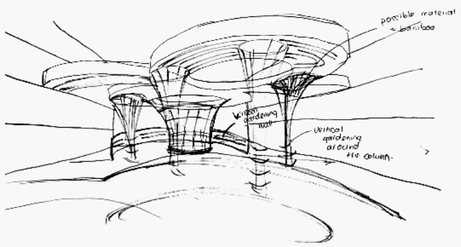
5. Improves cognition
Enhanced memory and ability to reconnect with happy days.

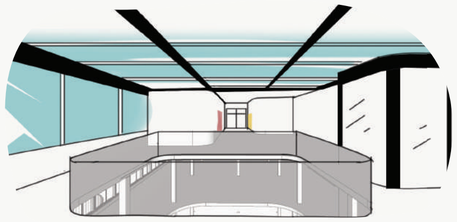


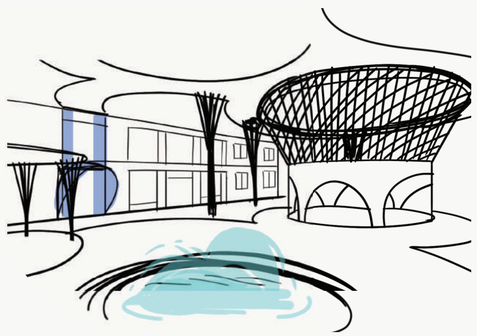
Atrium Zone

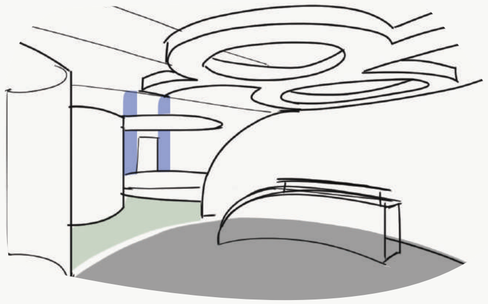
The skylight enhances natural light and visual connection, promoting a sense of freedom and independence for residents with dementia. The atrium fosters engagement, social interaction, enhancing well-being and quality of life.

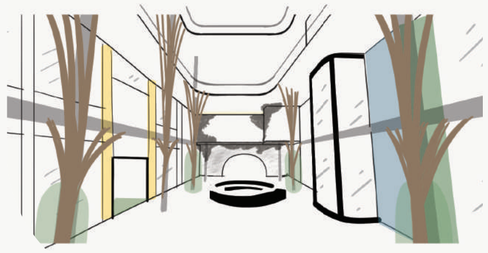
Design Development











Neuro Architecture: Sense of Belonging

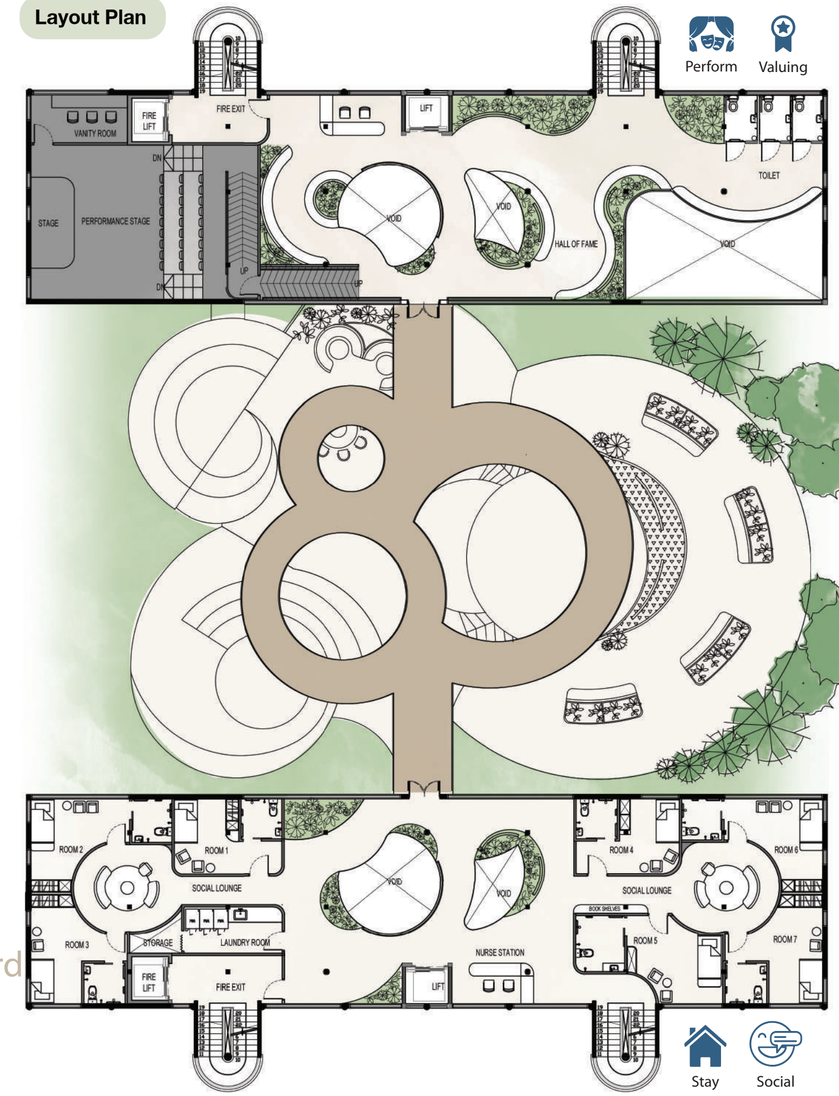
Barrier-free designated space

Adequate seats to rest

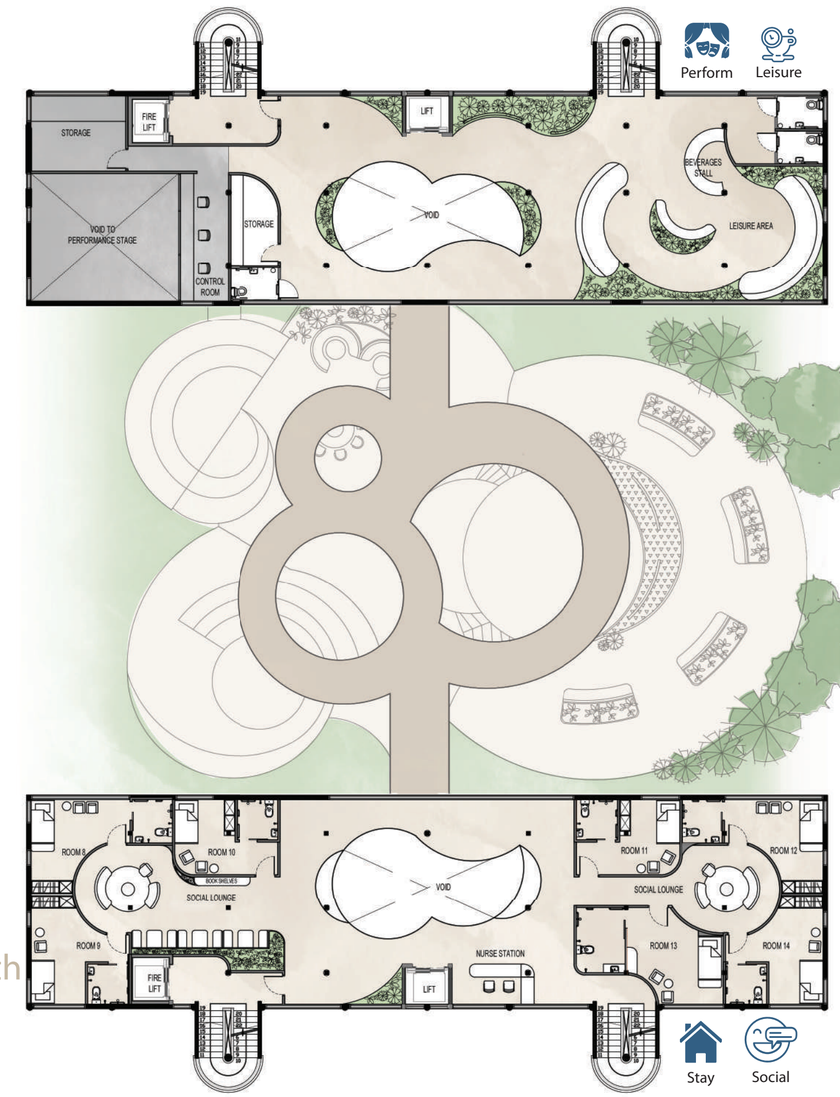
Nostalgic Theme

Therapeutic Sensory

Layout Plan



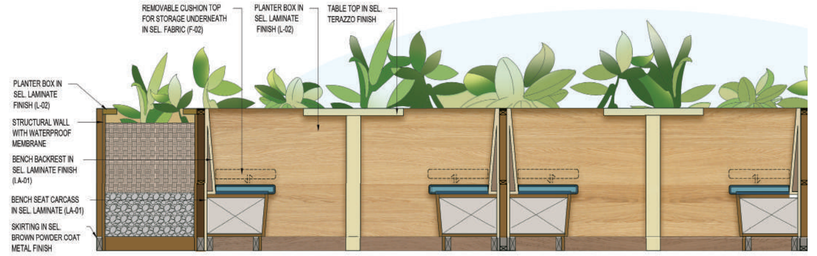
3rd



4th

Detailed Drawings - Typical Railing

Detailed Drawings - Lounge Set with Planter



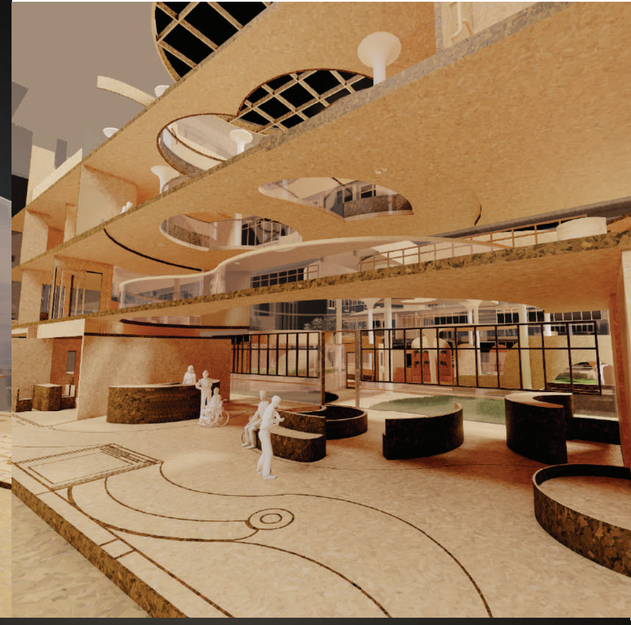
Sensory Stimulation and Wayfinding

Visual cues and natural wayfinding elements like indoor gardens and skylights help residents navigate the space with ease. Sounds of nature create a soothing atmosphere, reducing anxiety and agitation. Fragrant plants, green walls, and water feature provide olfactory stimulation, evoking positive memories and improving mood.

Sustainable and Accessible Design

Energy-efficient systems, water conservation measures, and environmentally friendly materials. Universal design principles are applied to ensure accessibility for individuals with mobility challenges. Barrier-free pathways, handrails, and accessible facilities are seamlessly integrated throughout the facility.

Model Making Structure



Baking Zone

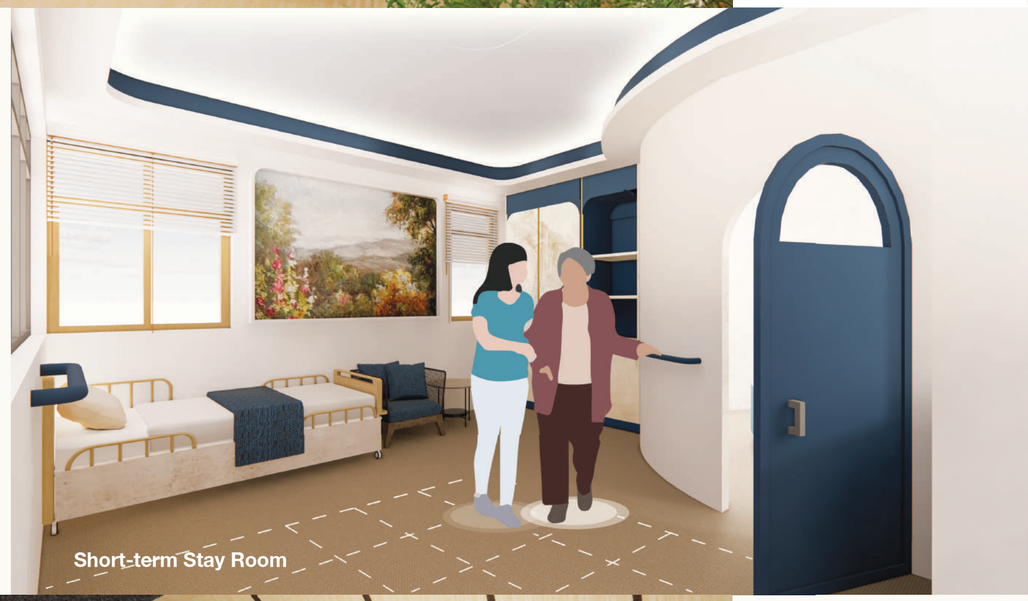
The Baking Workshop is specifically designed for individuals in the early stages of dementia, providing a safe and enjoyable environment for them to experience the joy of baking. Expert coaches and dedicated volunteers will be available to assist and support them throughout the activity.

Short Term Stay Room

The room design for elderly with dementia includes falling detectors and a barrier-free layout, ensuring safety, independence, reducing accidents, and enhancing well-being and quality of life.

Performance Stage

The performance stage design for elderly individuals to explore their skills and stay active. With acoustics materials and incorporates principles of neuroarchitecture. This enhances the auditory experience and promotes a soothing atmosphere.



Sens Floor Features

Sens Floor installed below the carpet to detects falls, motion, or programmed alert activity.

Device receives and forwards alert

Linked with the care team on site, to ensure all elderlies are safe.

Flexible and Multi-functional Spaces:

The flexible spaces ensuring a dynamic and engaging environment for the elderly residents. Indoor rooms can be used for social gatherings, therapeutic activities, and educational programs. Outdoor spaces are for residents to enjoy nature, engage in gardening, or outdoor exercises.

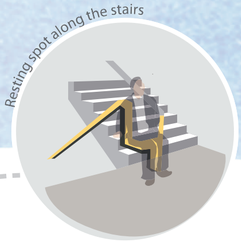
Person - Centred Care Design

The layout and organization of the centre promote social interaction, engagement, and a sense of belonging. The incorporation of private spaces allows for quiet retreats, while communal areas encourage socialization and peer support.

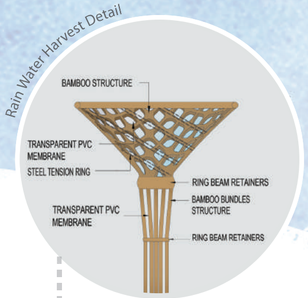
Main Entrance

Cafe and Flower Retail

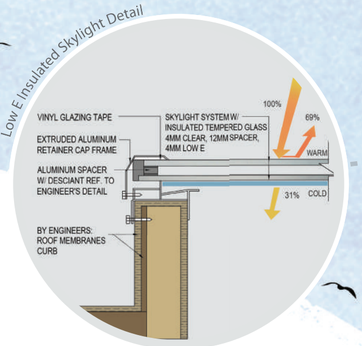
Resting spot along the stairs



Rain Water Harvest Detail



Low-E Insulated Skylight Detail



Sectional Elevation