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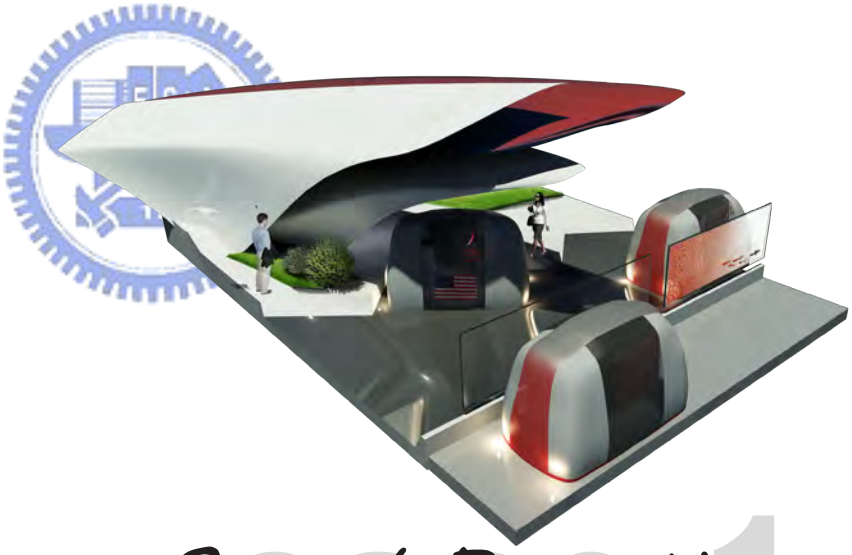
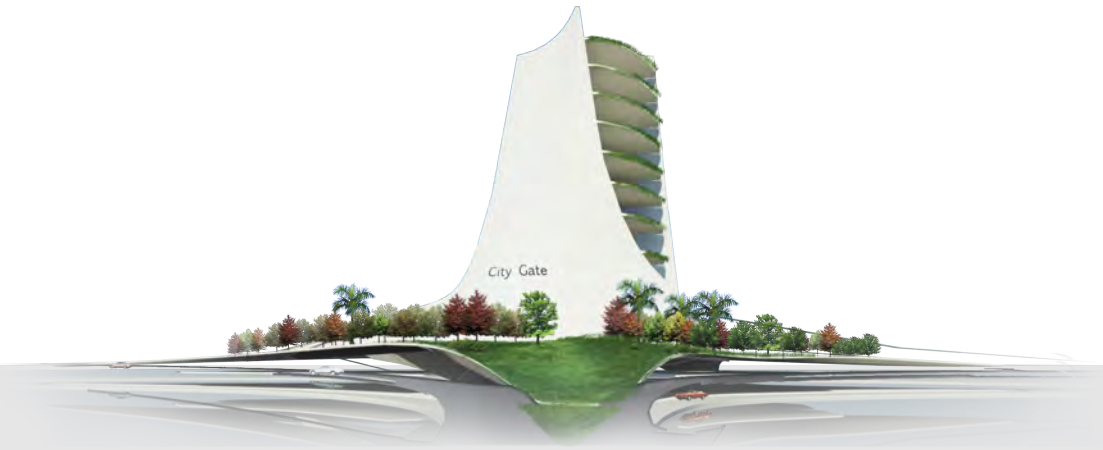


case 1

Smart Boarding

Boarding system to create a smooth passenger experience and save time

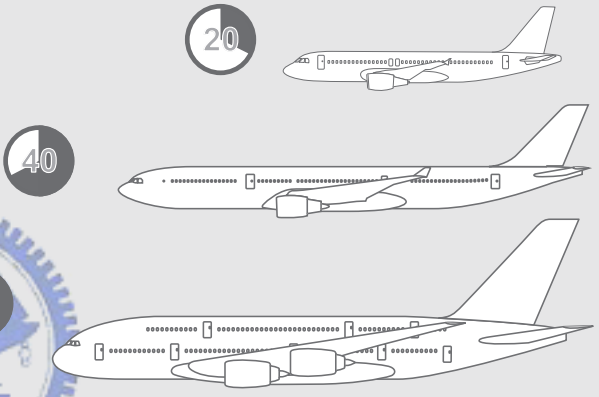
Digital Architecture Studio
(Networked Architecture)/ Personal



Smart Boarding

Issue

機場承載非常大量的訊息從地勤、空服人員和乘客的登機轉機等訊息，也為國際旅客對這個城市最直接的印象，隨著航空業的發展使的機場規模越大，機場本身已成為一大運具， 未來20年，亞太地區商務空中交通需求，將使得飛機機隊成長為目前的三倍，也就是新飛機增加近9000架，機場面臨航空業發展快速， 機場需往海上或土地價值低的郊區發展，使得城市搭機旅客需要花很多時間在前往機場的路程上，911事件和流行疾病之後機場的設計程序轉向安全為優先考量,也導致搭機等候的時間越來越長。

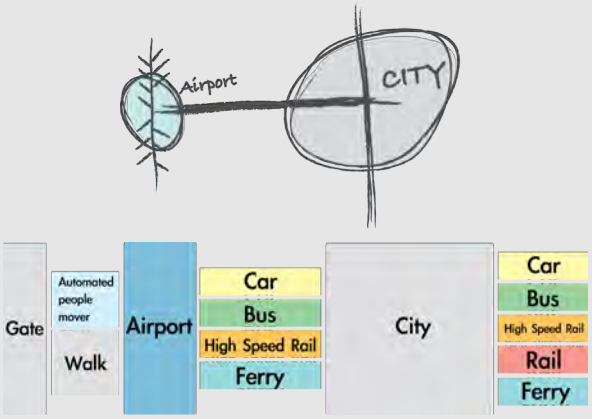


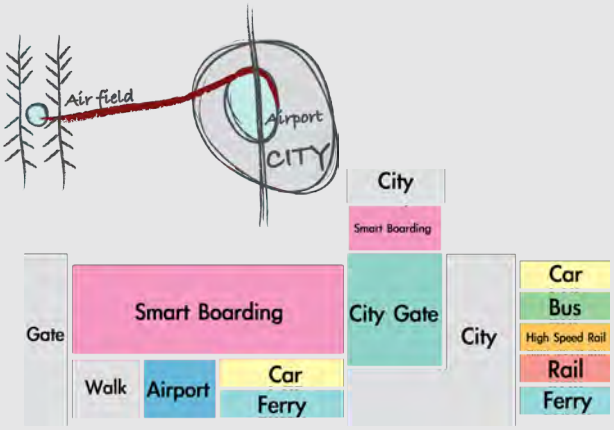
Smart Boarding

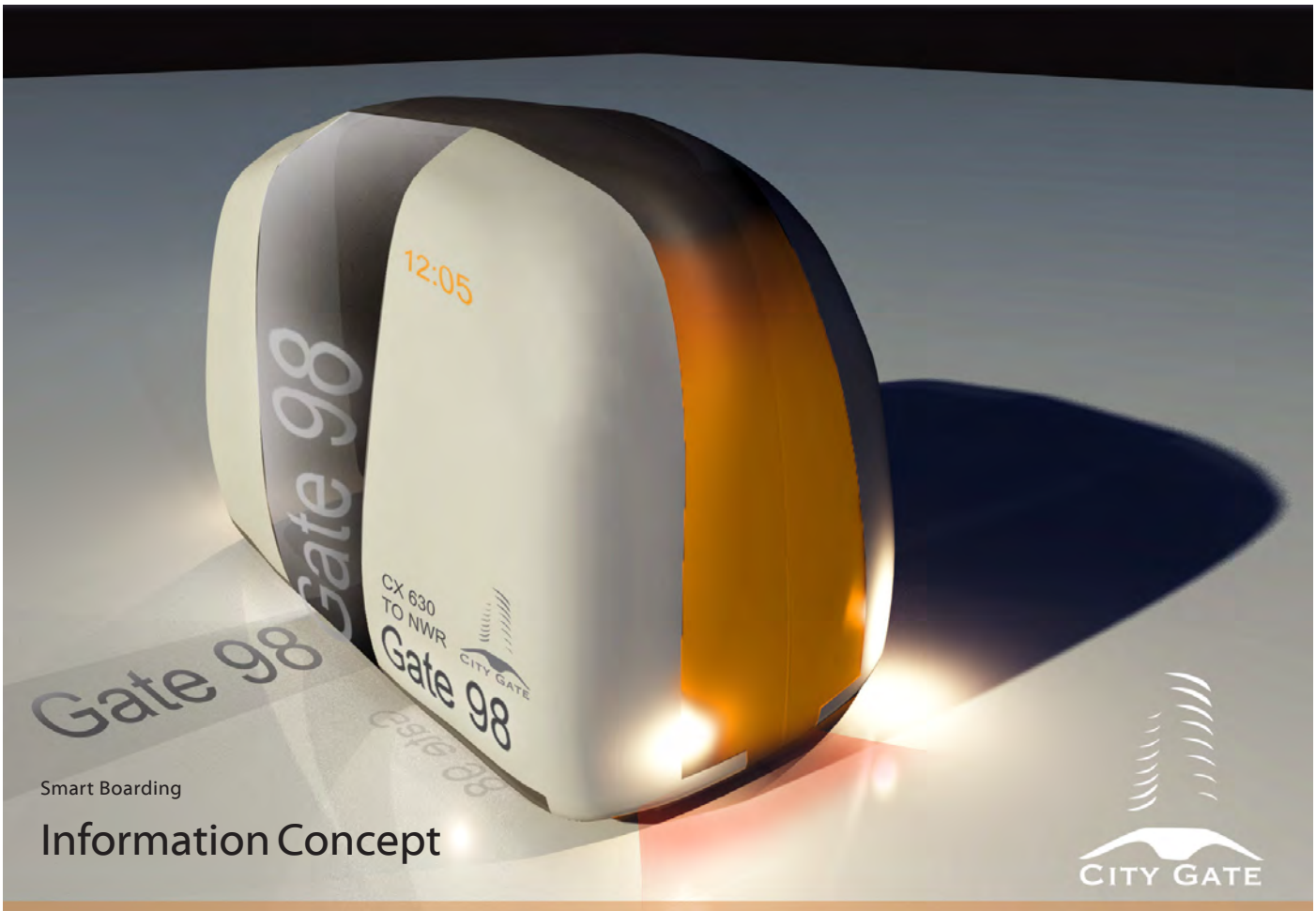
Concept

大多數旅客浪費時間在不確定機場動線和長距離散步和拖延及排隊上，根據統計，線上預辦登機已節省原本傳統劃的30%~40%，構想利用smart boarding ，將原本傳統機場搭機模式轉換，並運用 RFID 辨識儲存大量登機資訊、乘客資訊、行李託運紀錄並展示健康狀況、目的地、旅行目的及使用語言拉近人的距離，同時記錄行李X-ray提升飛行安全，並於登機門展示目的地氣溫和時間及即時影像。

創造順暢的旅客經驗和節省登機時間。







登機資訊、乘客資訊、行李託運紀錄、健康狀況、目的地、旅行目的、使用語言、行李X-ray，於登機門展示目的地氣溫和時間及即時影像

呈現資訊內容 – 形式

1、City Gate

機場外觀顏色改變來告知現在機場的營運情況（誤點或機場關閉） – 利用建築立面來投射光

機票顯示現在時間和列車到站通知 – 電子機票

2、Smart Boarding

車輛顯示目的地國家國旗 – 列車側身

乘客使用語言、語系 – 列車底盤顏色(中文紅色、英文藍色...)

欲前往之登機門號碼 – 列車前方數字

旅遊目的 – 列車顏色（觀光、商務、入境...)

Smart Boarding

Departures Procedures

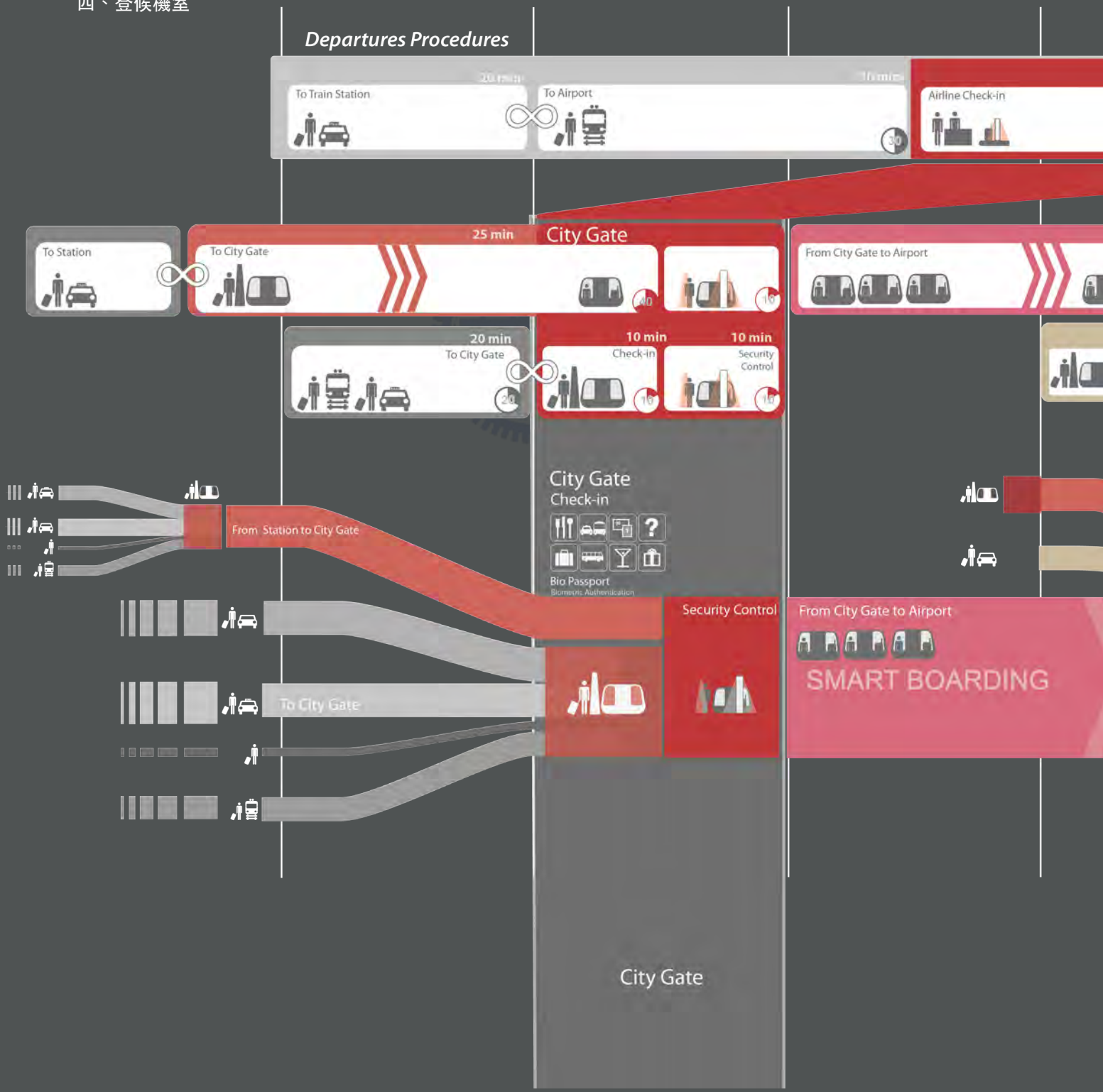
透過Smart Boarding的登機程序將簡化成圖（一）所顯示，改善現行登機方式以下幾個所產生的問題節點：

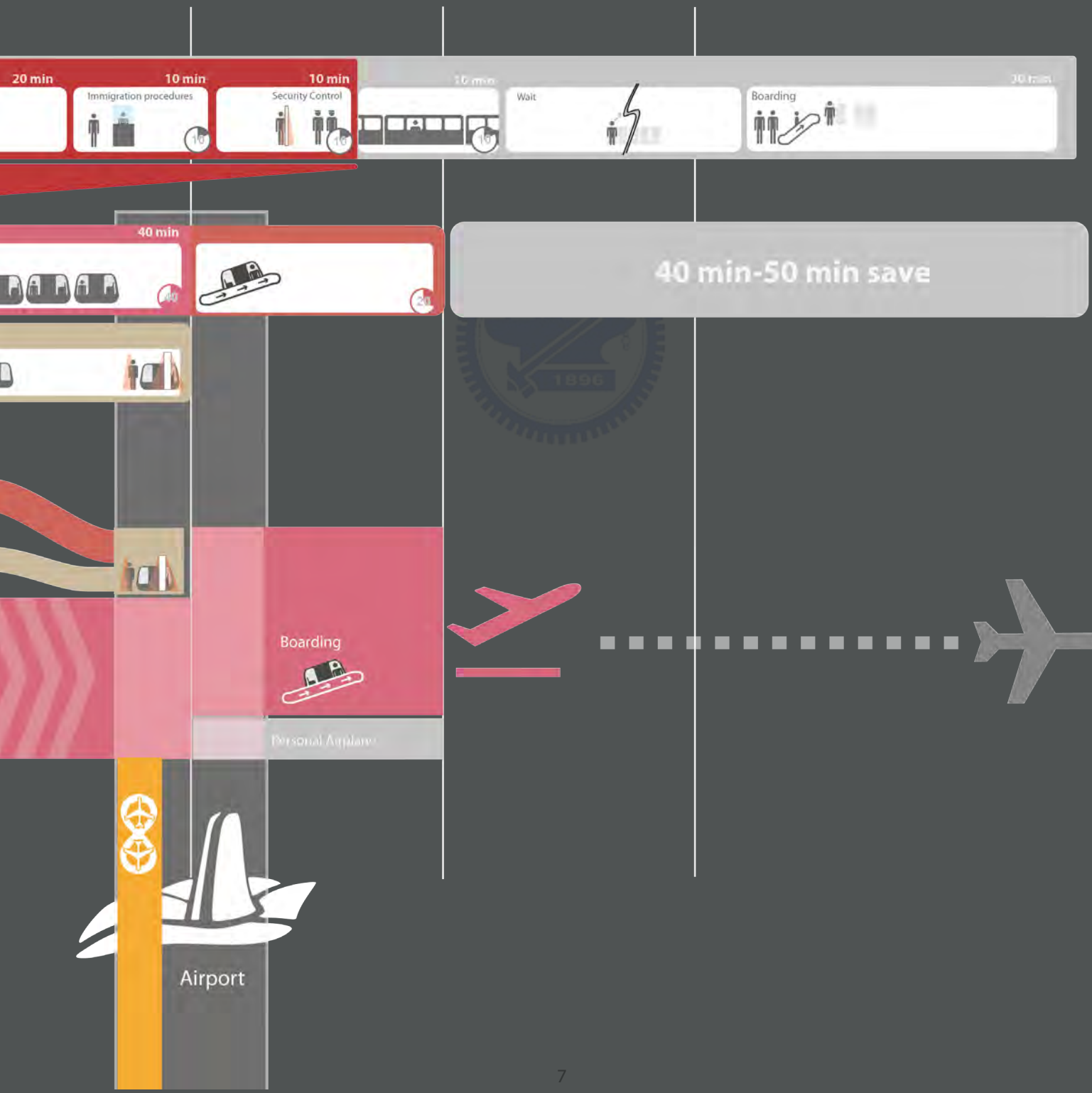
一、抵達機場時搭乘交通工具

二、機場內動線

三、機場離境及安全檢查等行政程序

四、登候機室




20 min
10 min
Immigration procedures
10 min
Security Control
Wait
Boarding
40 min
40 min-50 min save
Boarding
Airport

Smart Boarding

Arrival Procedures

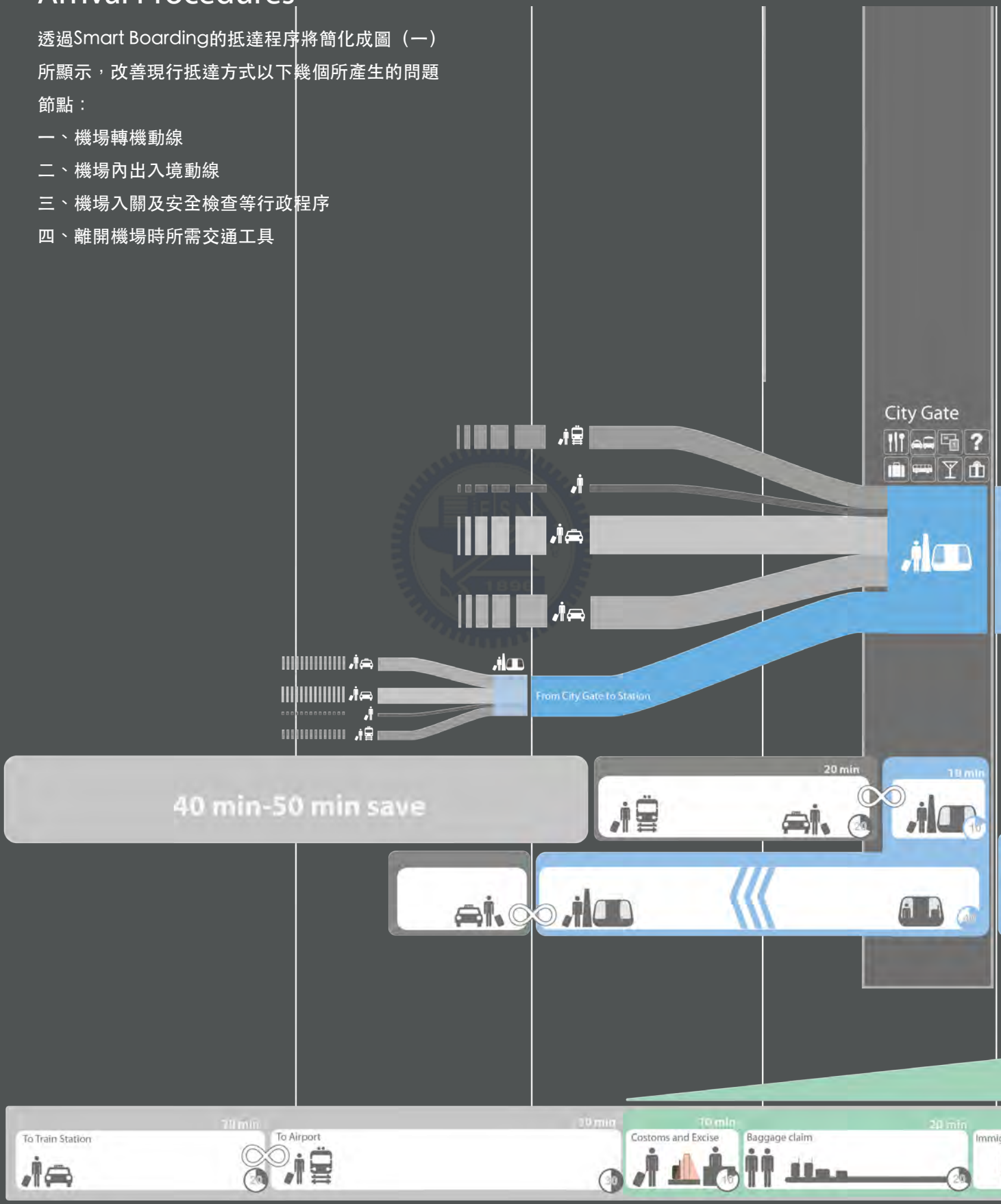
透過Smart Boarding的抵達程序將簡化成圖（一）所顯示，改善現行抵達方式以下幾個所產生的問題節點：

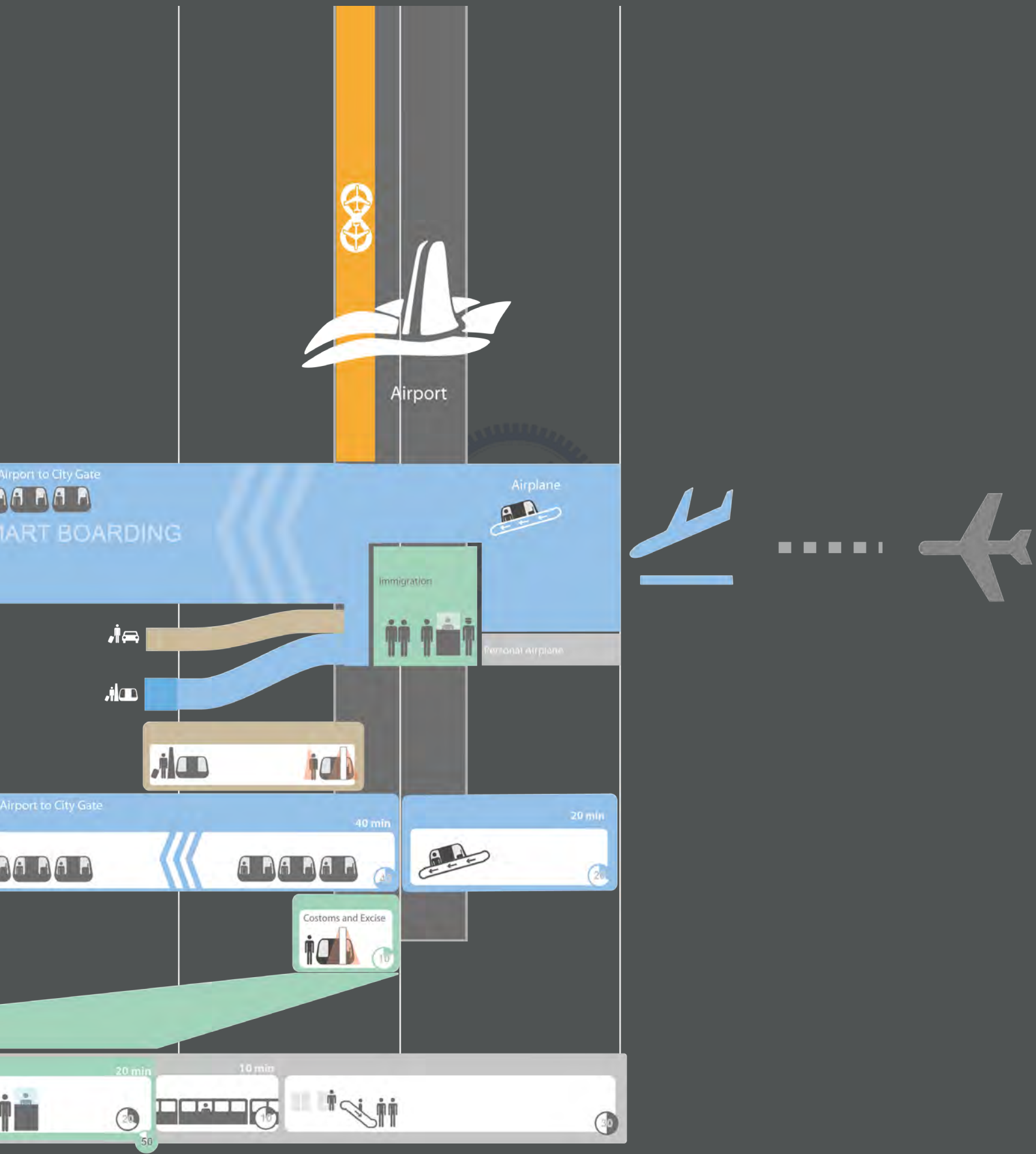
一、機場轉機動線

二、機場內出入境動線

三、機場入關及安全檢查等行政程序

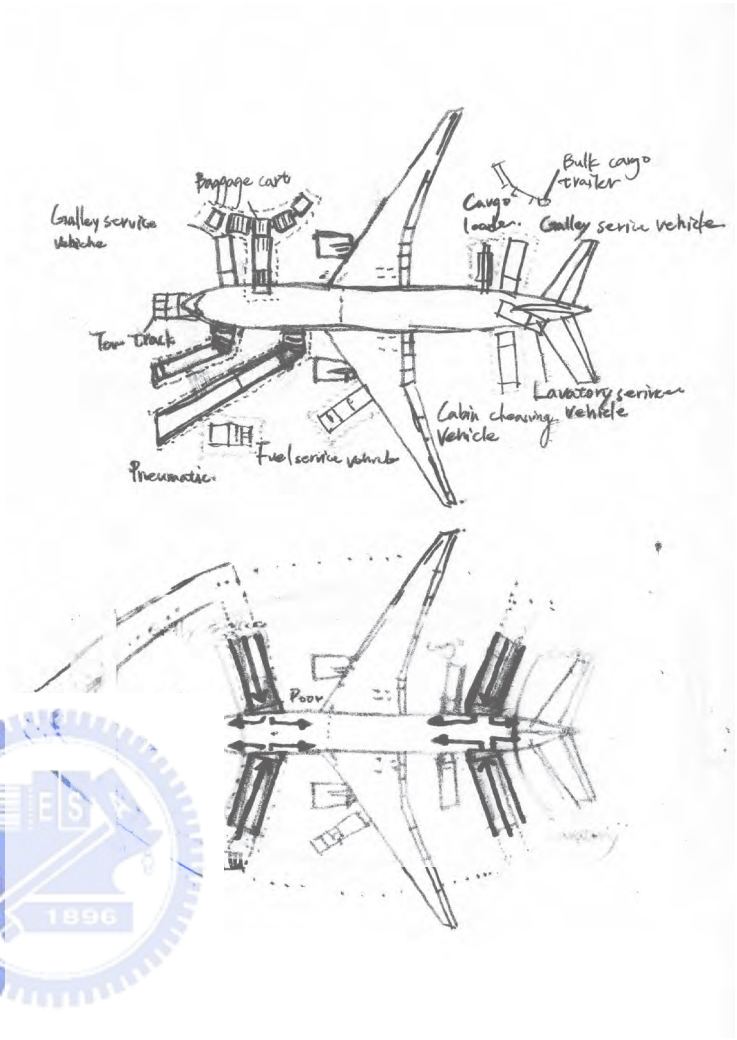
四、離開機場時所需交通工具



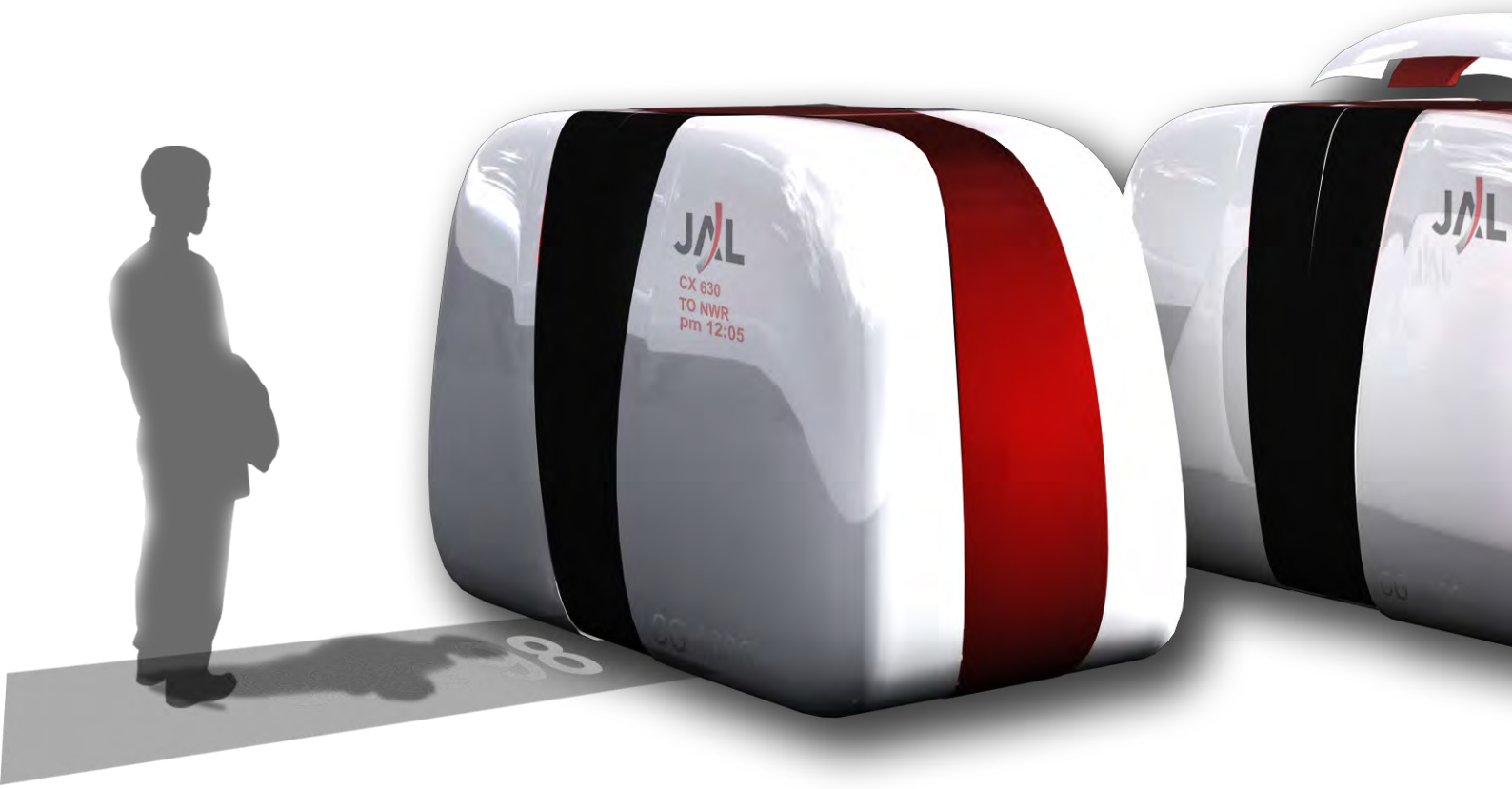

Airport
Airport to City Gate
Airplane
MART BOARDING
Immigration
Personal airplane
Airport to City Gate
40 min
20 min
Costoms and Excise
20 min
10 min

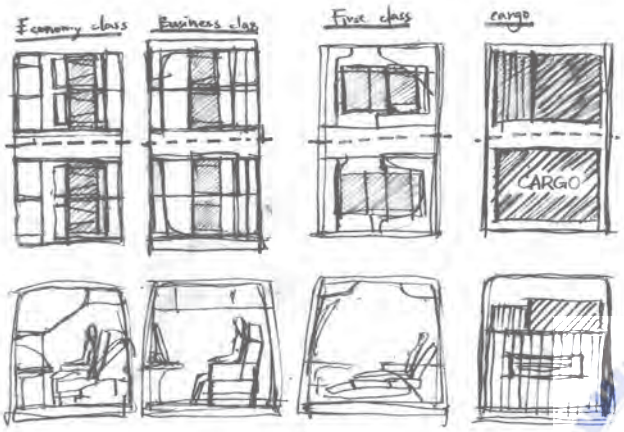
Smart Boarding

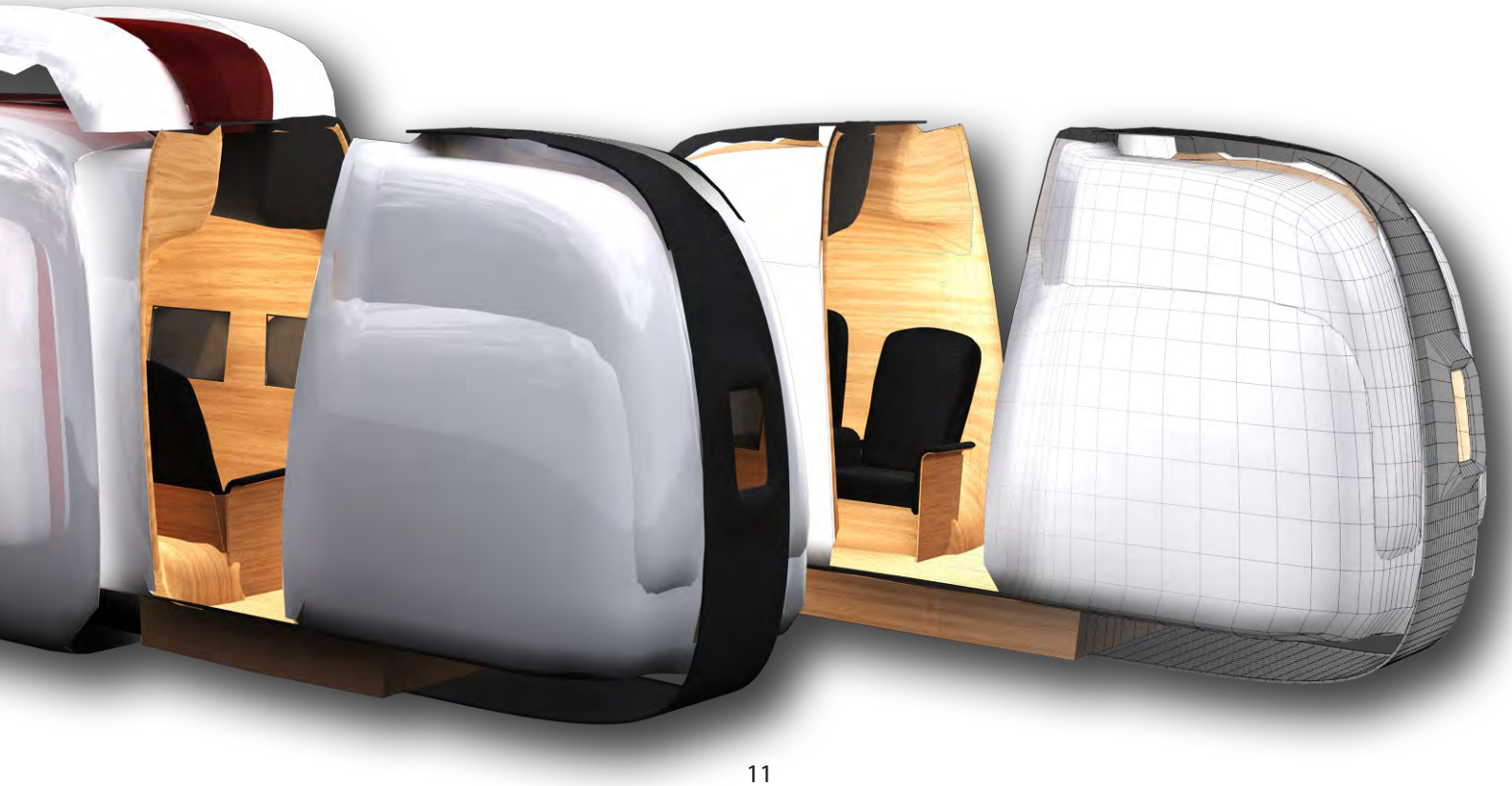
Vehicles design



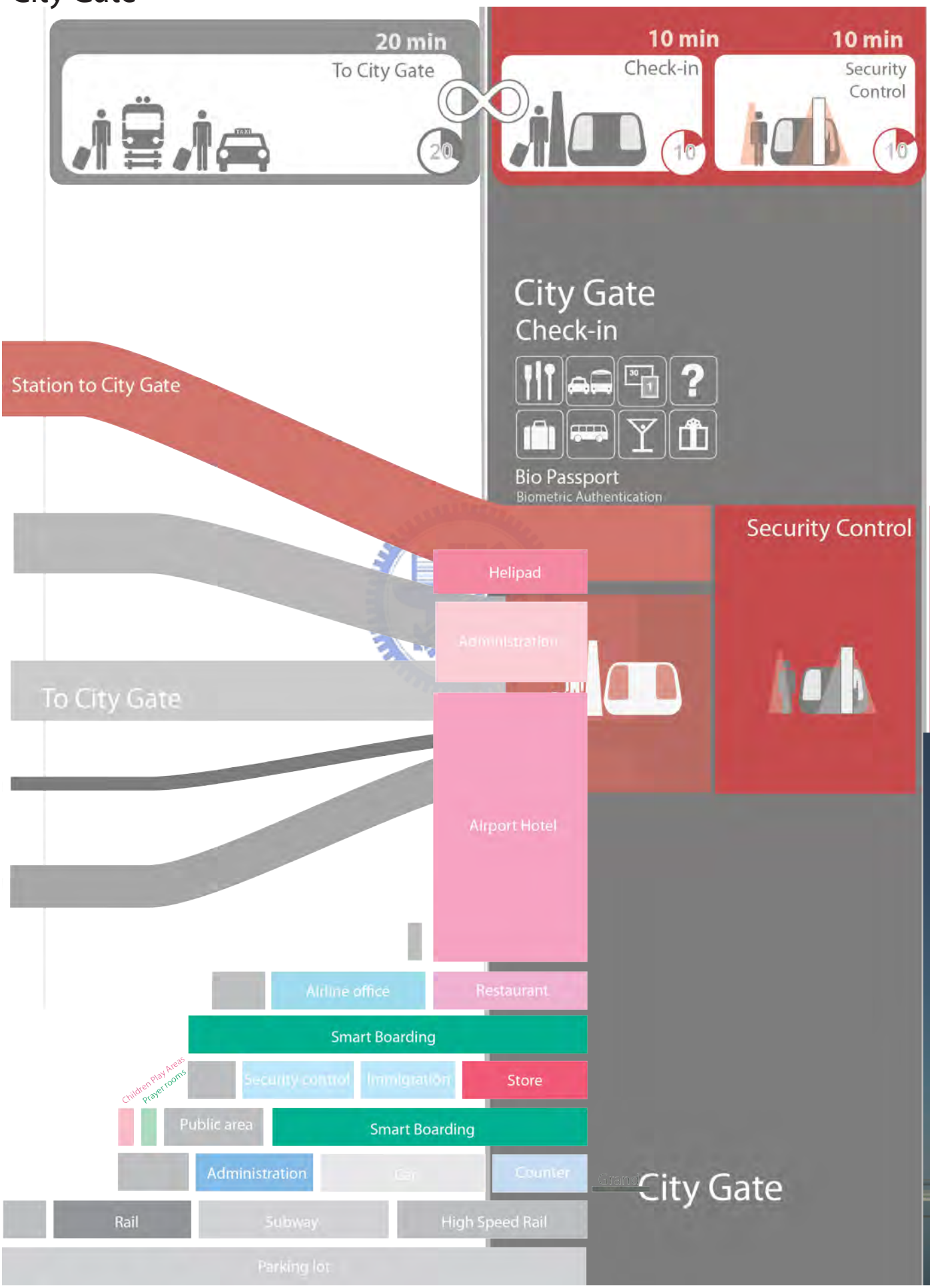
透過研究目前機場運送貨物的方式，及達到簡化安全檢查等問題設計出以下Smart Boarding Car，對航空公司而言可以自由組合飛機內部形式及客運和貨運的比重，減少空間之浪費，對乘客而言達成旅客移動的舒適性並更效率的移動，對機場安全人員而言更能掌握機場安全。



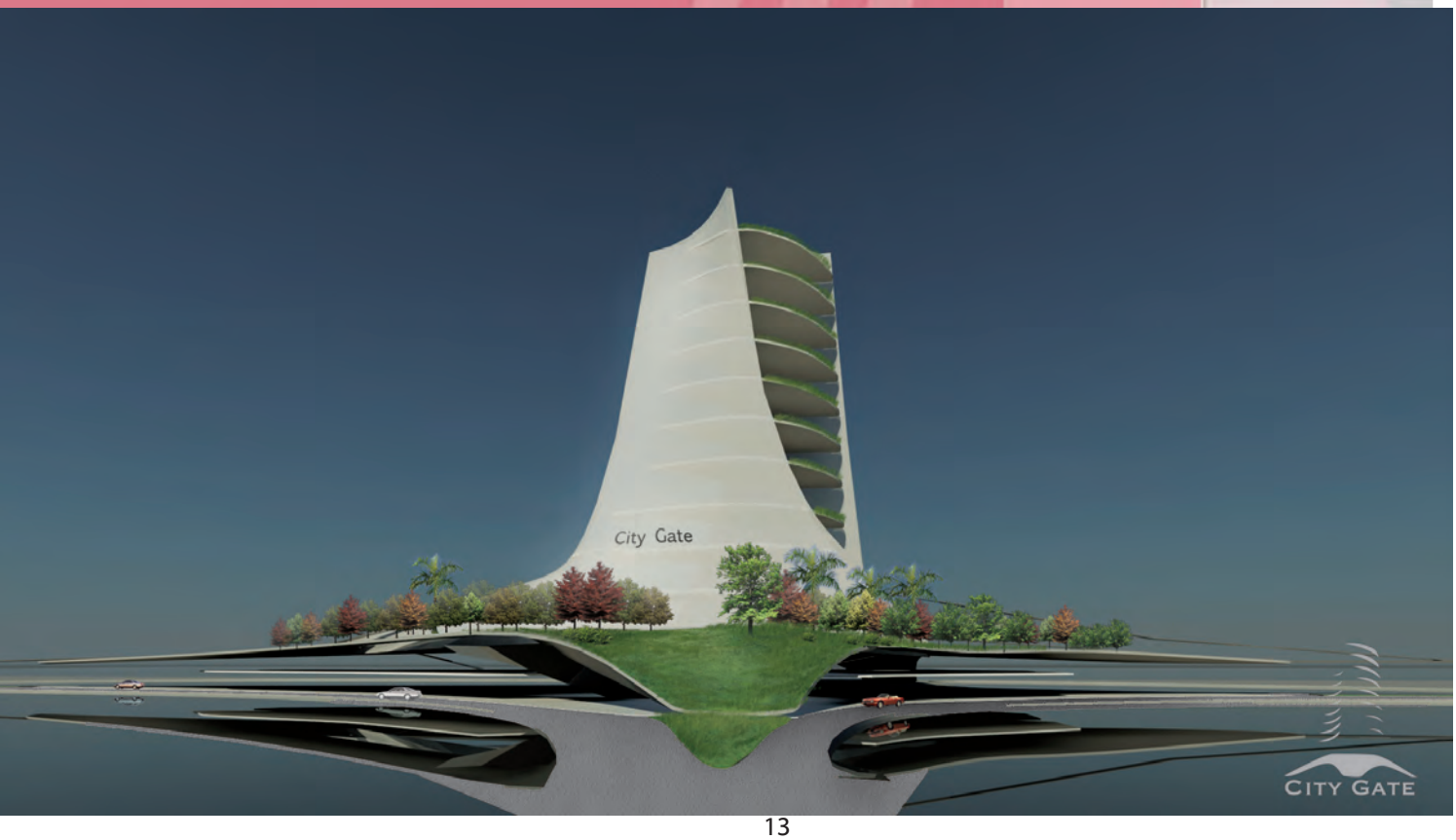

Economy class
Business class
First class
cargo
CARGO



City Gate

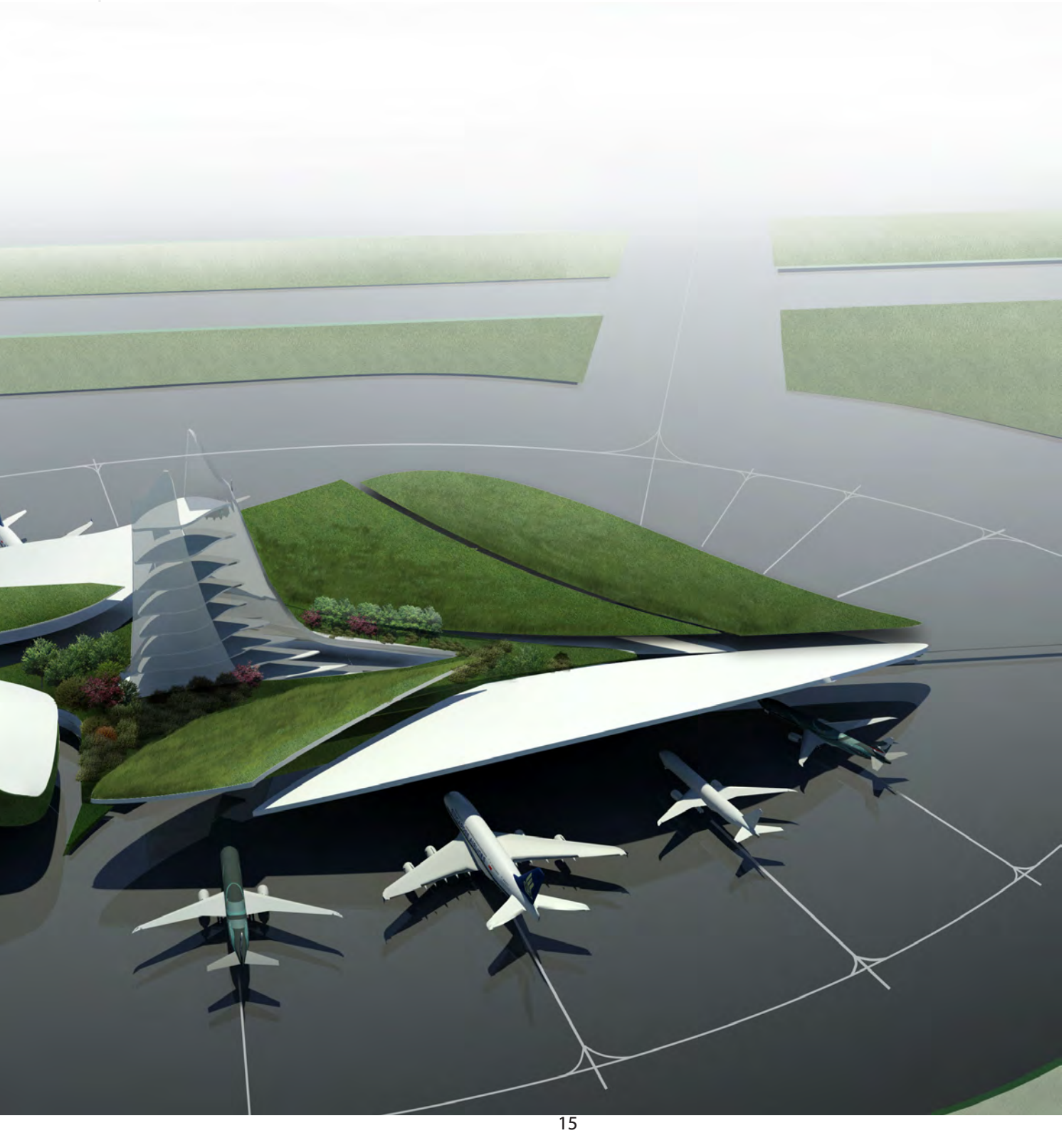

20 min
To City Gate
20
10 min
Check-in
10
10 min
Security Control
10
City Gate
Check-in
Bio Passport
Biometric Authentication
Station to City Gate
To City Gate
Helipad
Administration
Airport Hotel
Security Control
Airline office
Restaurant
Smart Boarding
Children Play Areas
Prayer rooms
Security control
Immigration
Store
Public area
Smart Boarding
Administration
Counter
Rail
Subway
High Speed Rail
Parking lot
City Gate


n City Gate to Airport
MART BOARDING


City Gate
CITY GATE

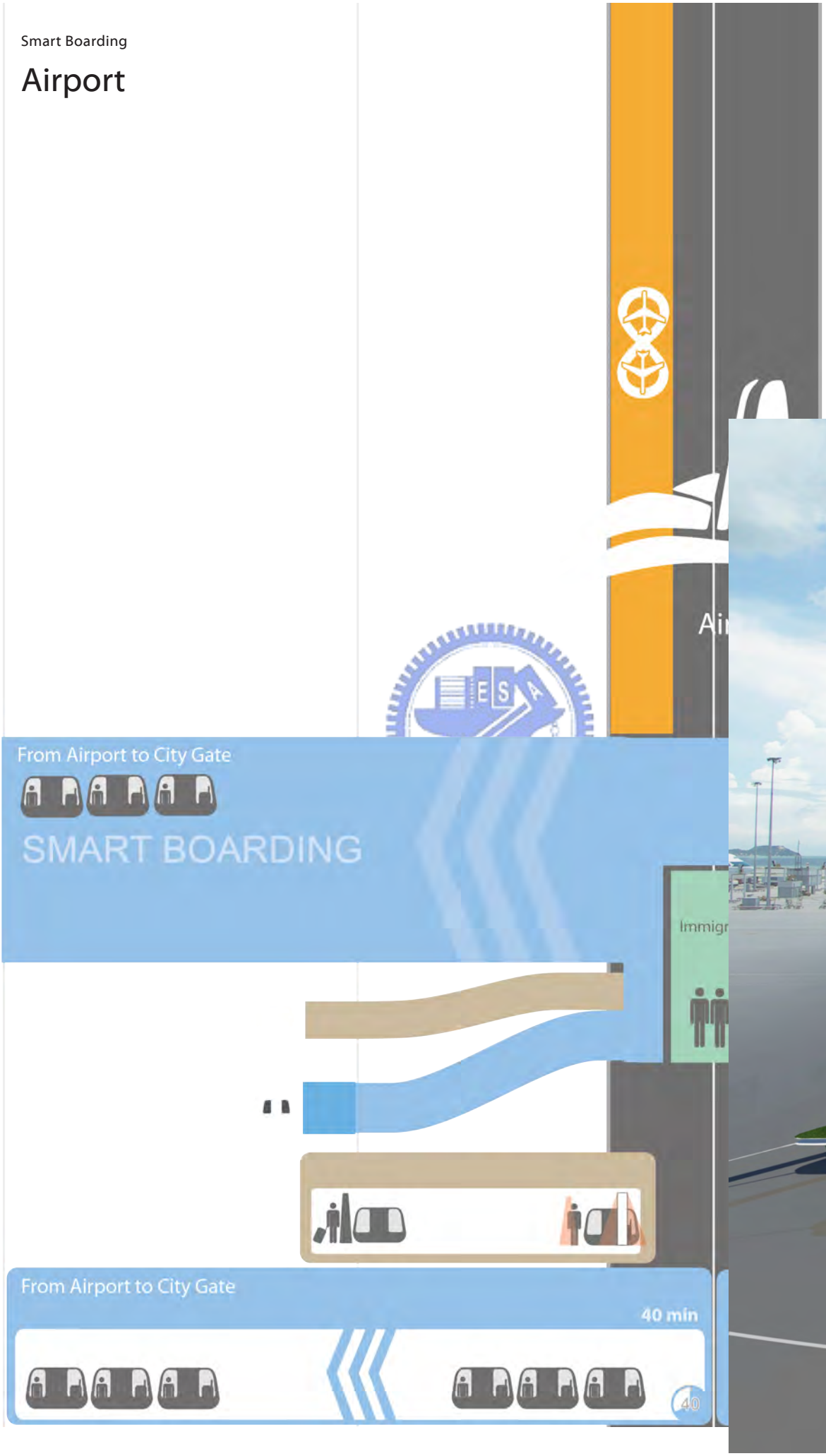
Airport

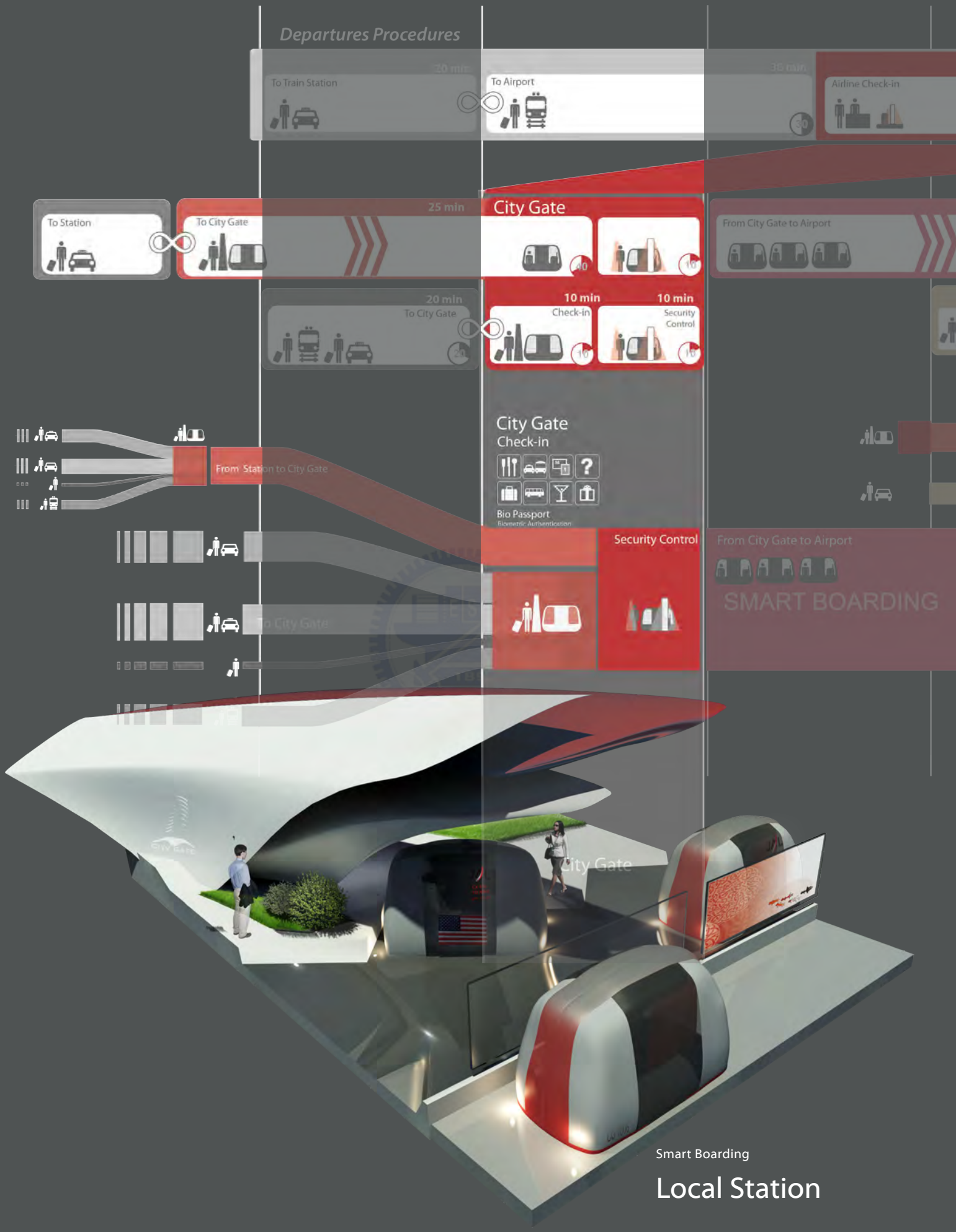

40 min
From City Gate to Airport
40
From City Gate to Airport
SMART BOARDING



Smart Boarding

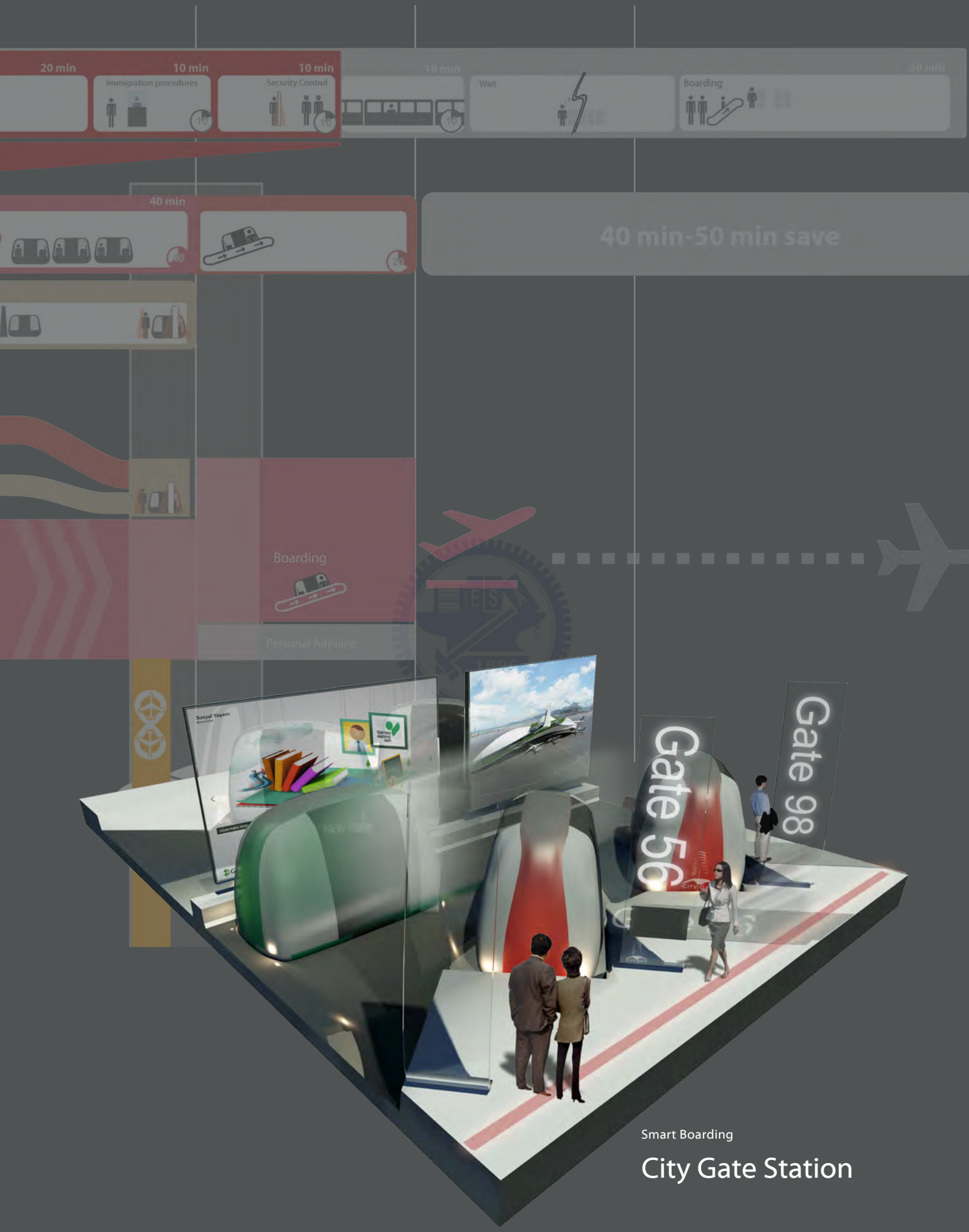
Airport





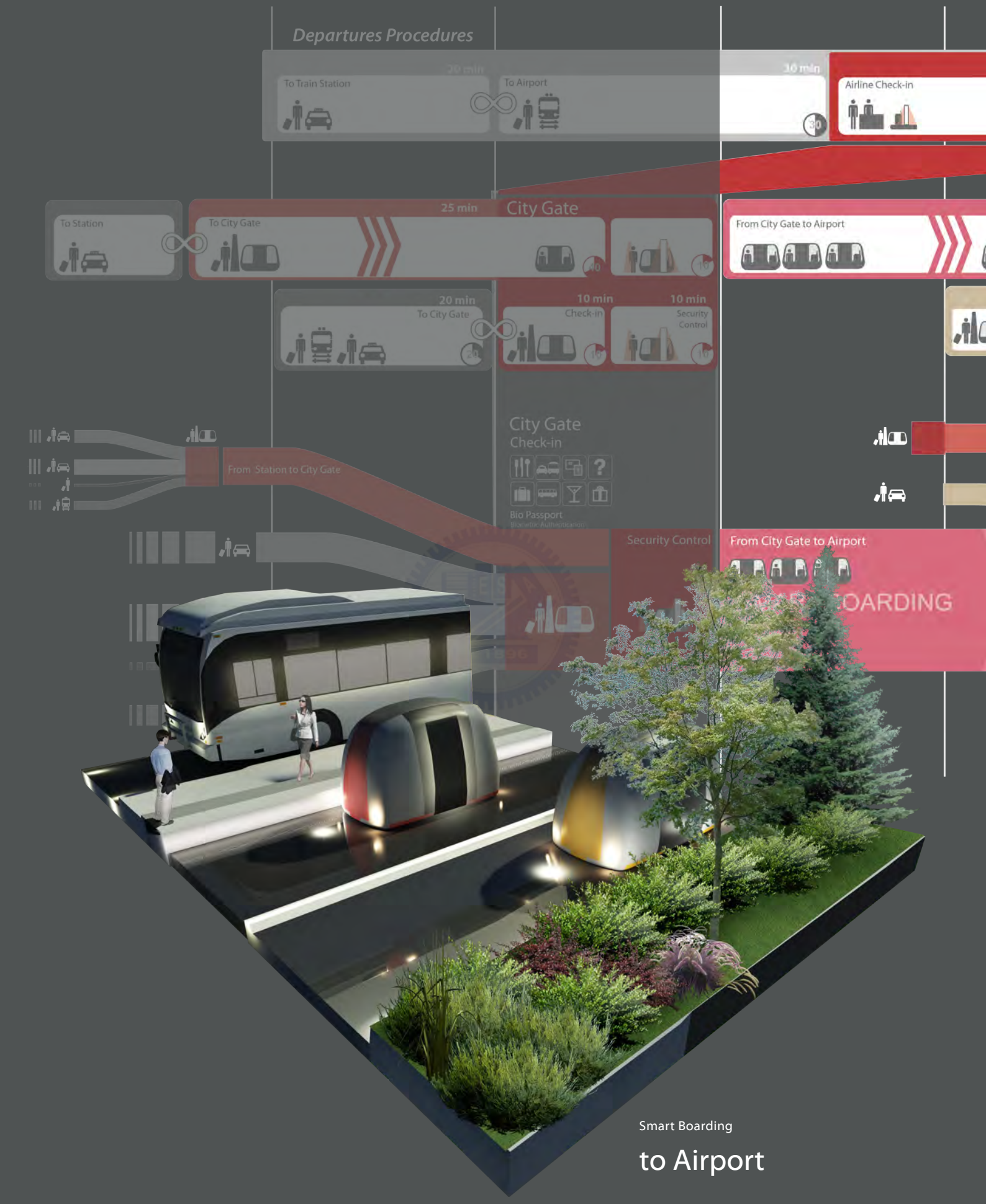
Smart Boarding

Local Station



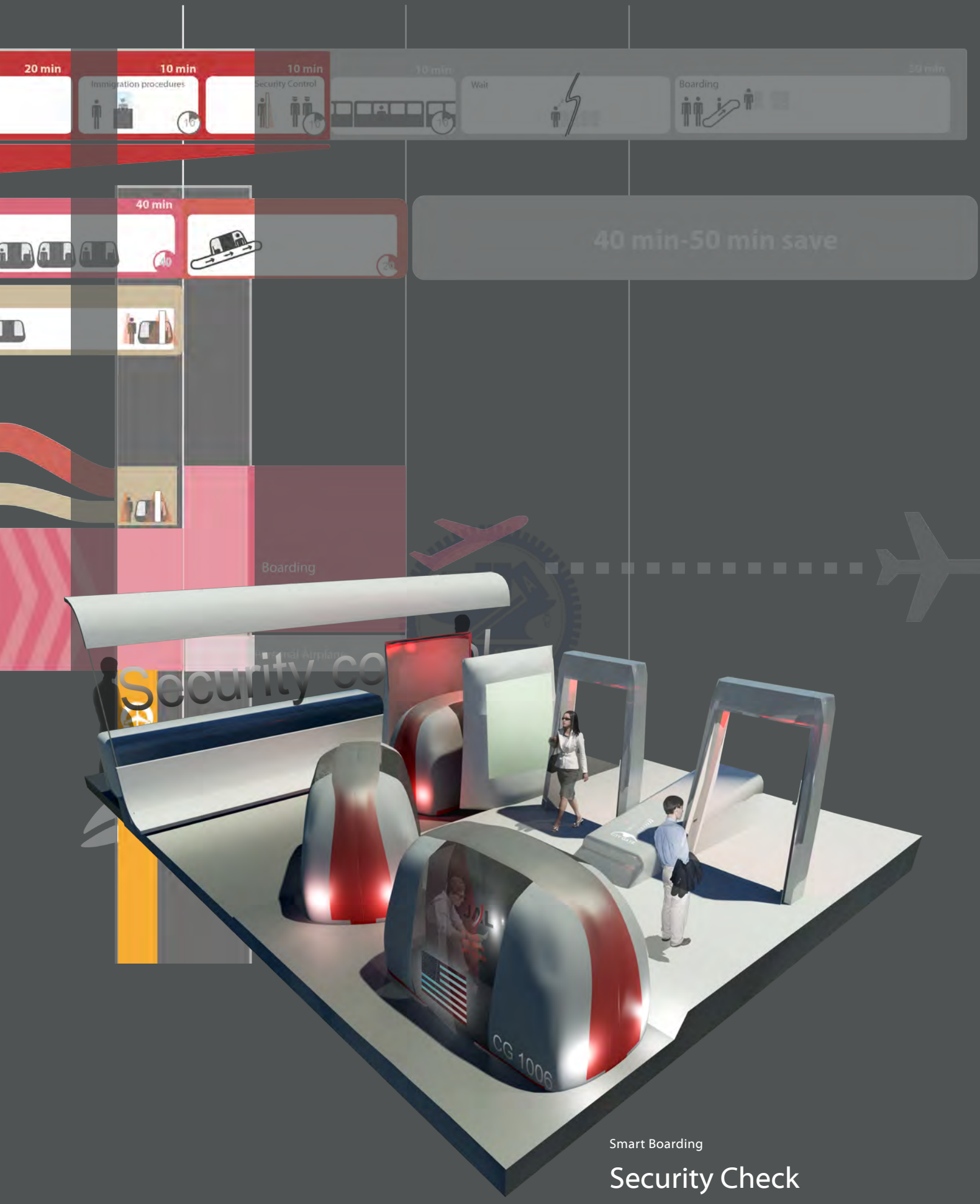
Smart Boarding

City Gate Station



Smart Boarding

to Airport



Smart Boarding

Security Check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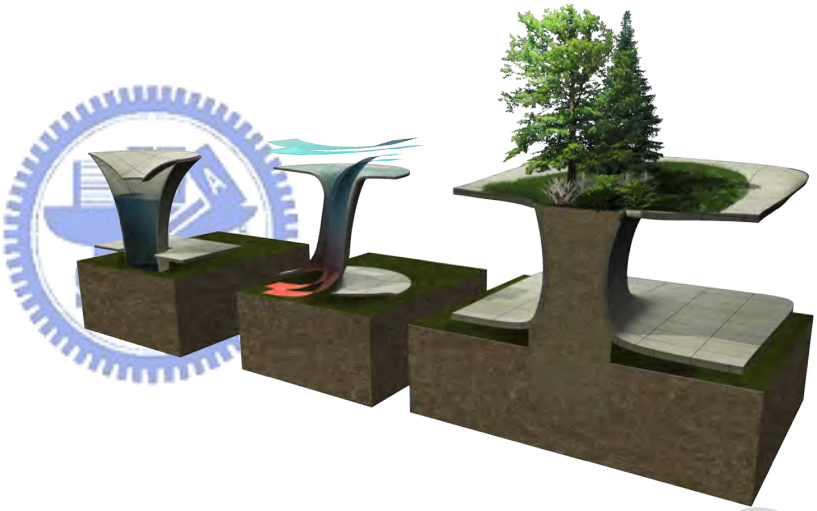


Vegetation House

Case 2

House for Being the Medium of Plant Growth

Digital Architecture Studio (Physical Architecture) / Teamwork

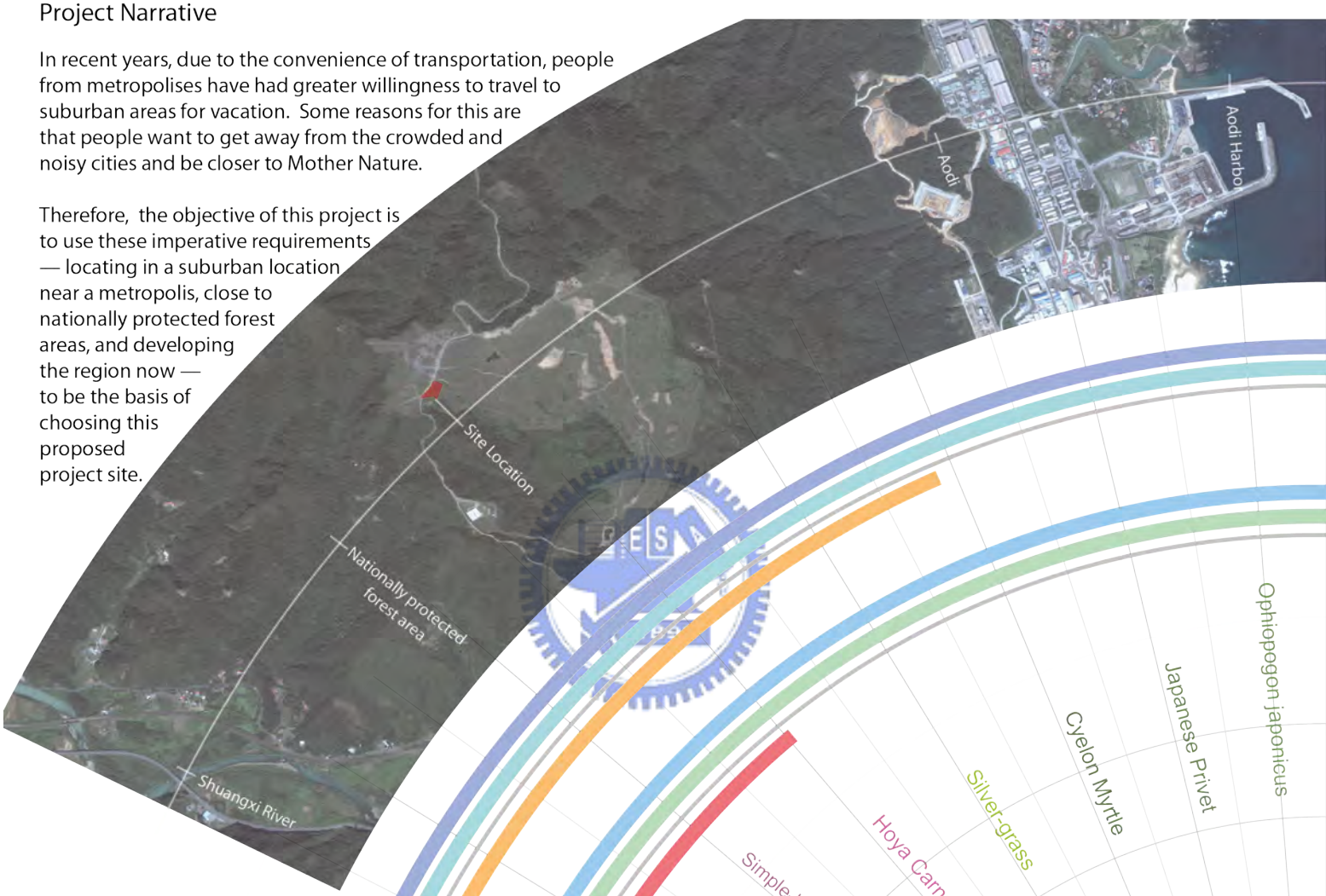
Vegetation House:

House for Being the Medium of Plant Growth

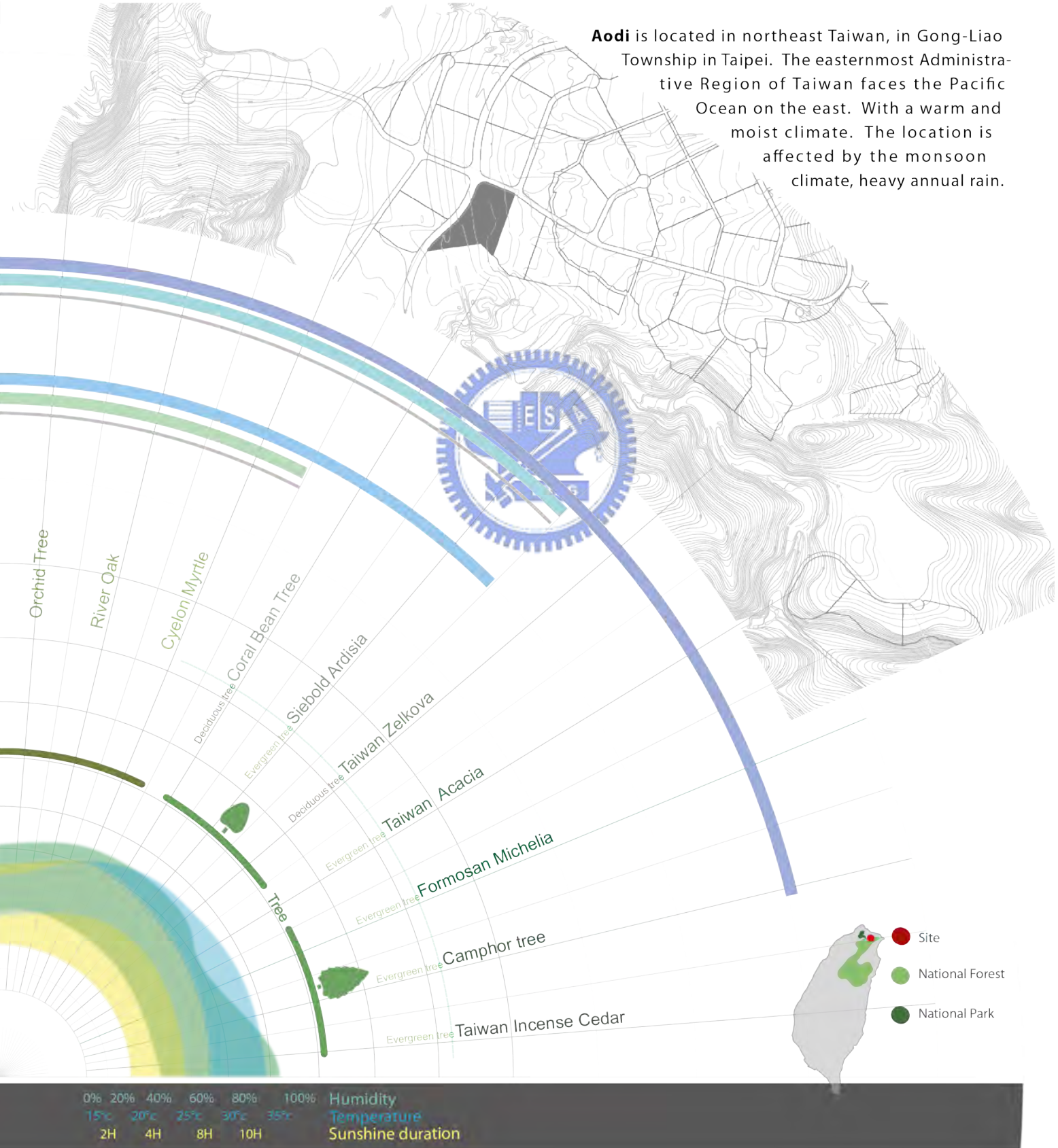
Project Narrative

In recent years, due to the convenience of transportation, people from metropolises have had greater willingness to travel to suburban areas for vacation. Some reasons for this are that people want to get away from the crowded and noisy cities and be closer to Mother Nature.

Therefore, the objective of this project is to use these imperative requirements — locating in a suburban location near a metropolis, close to nationally protected forest areas, and developing the region now — to be the basis of choosing this proposed project site.

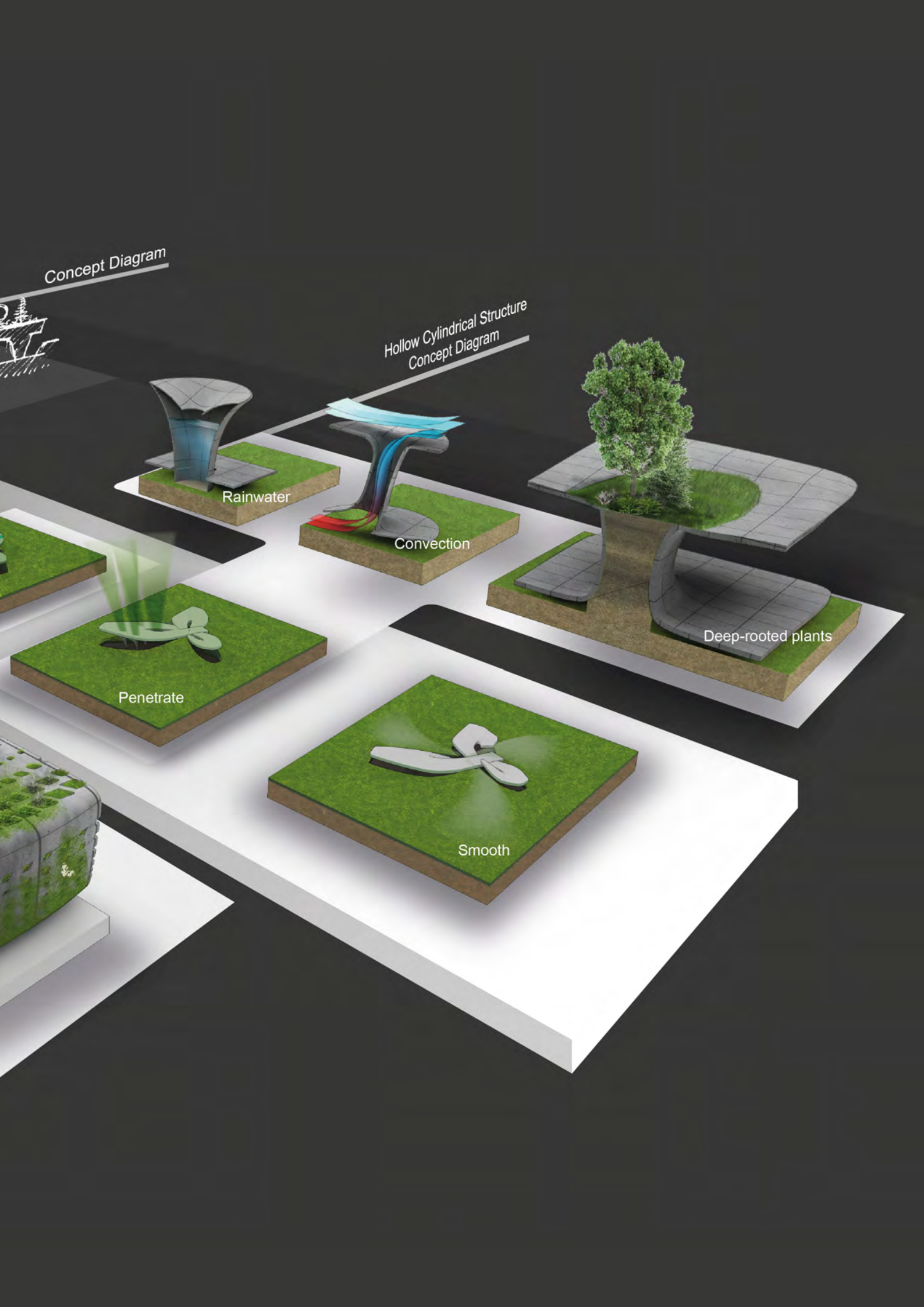


Aodi is located in northeast Taiwan, in Gong-Liao Township in Taipei. The easternmost Administrative Region of Taiwan faces the Pacific Ocean on the east. With a warm and moist climate. The location is affected by the monsoon climate, heavy annual rain.



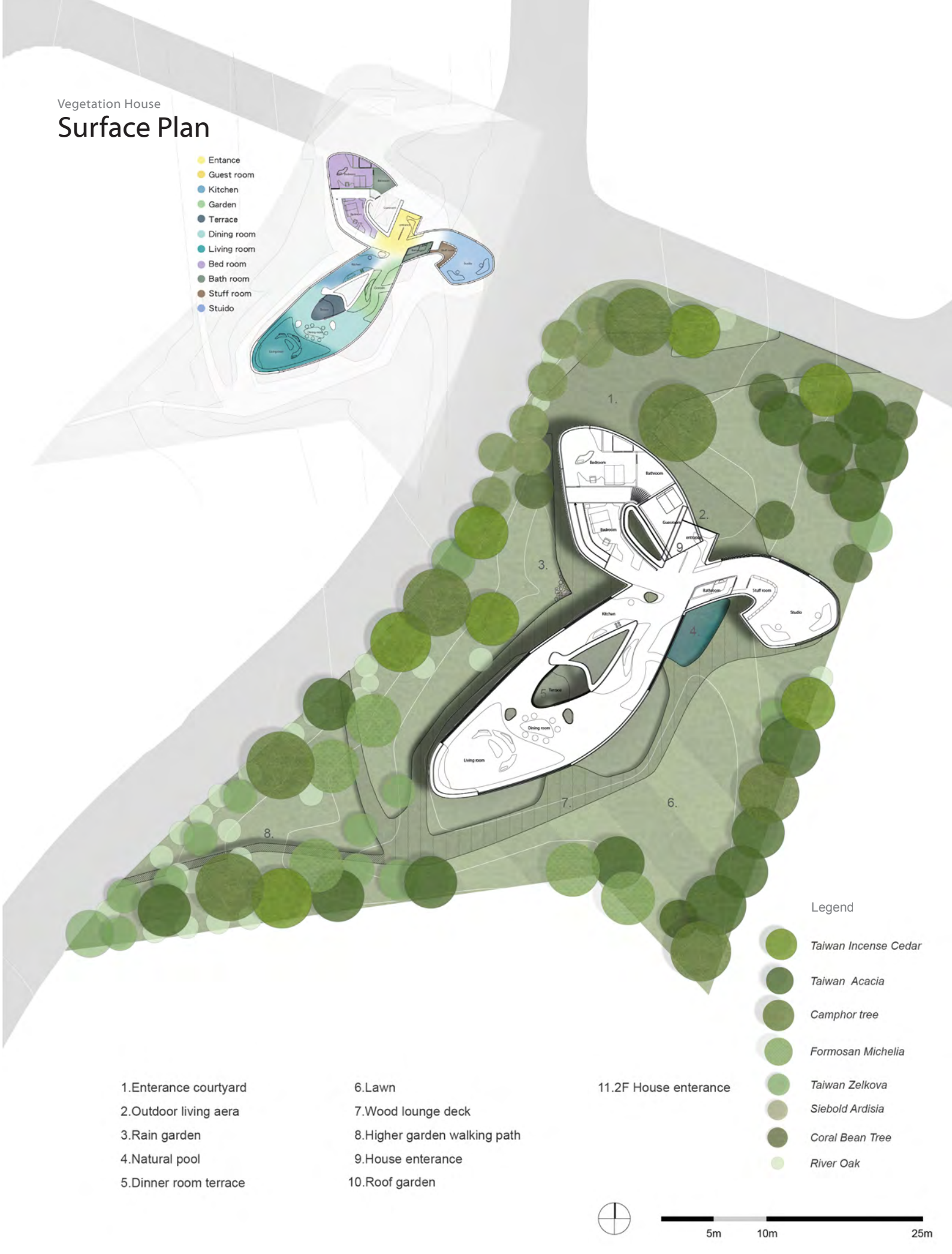
Vegetation House

Design Program and Intent


Concept Diagram
Hollow Cylindrical Structure
Concept Diagram
Rainwater
Convection
Deep-rooted plants
Penetrate
Smooth

Vegetation House

Surface Plan

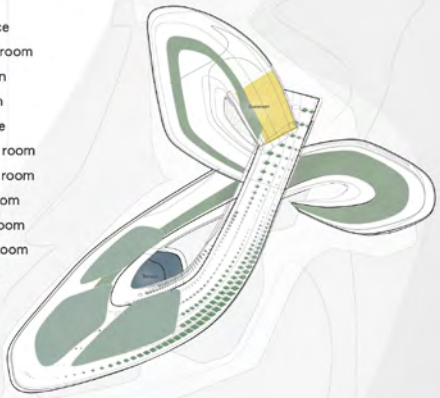


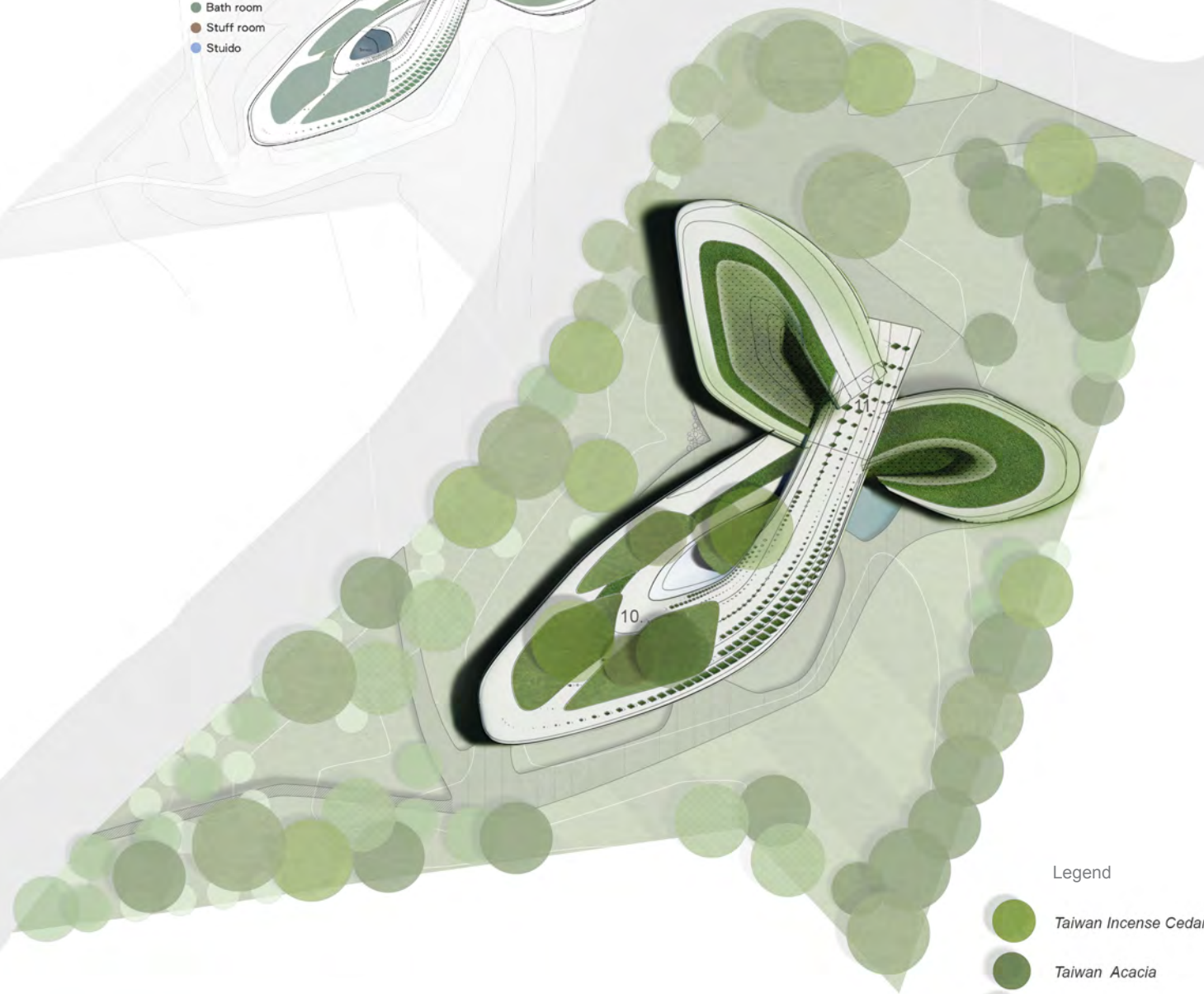
1.Enterance courtyard
2.Outdoor living aera
3.Rain garden
4.Natural pool
5.Dinner room terrace
6.Lawn
7.Wood lounge deck
8.Higher garden walking path
9.House enterance
10.Roof garden
11.2F House enterance

Vegetation House

2nd Floor Plan

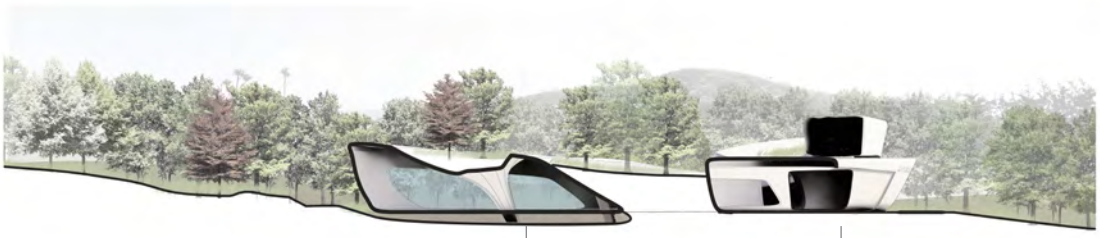
- Entance
- Guest room
- Kitchen
- Garden
- Terrace
- Dining room
- Living room
- Bed room
- Bath room
- Stuff room
- Stuido





Legend

- *Taiwan Incense Cedar*
- *Taiwan Acacia*
- *Camphor tree*
- *Formosan Michelia*
- *Taiwan Zelkova*
- *Siebold Ardisia*
- *Coral Bean Tree*
- *River Oak*

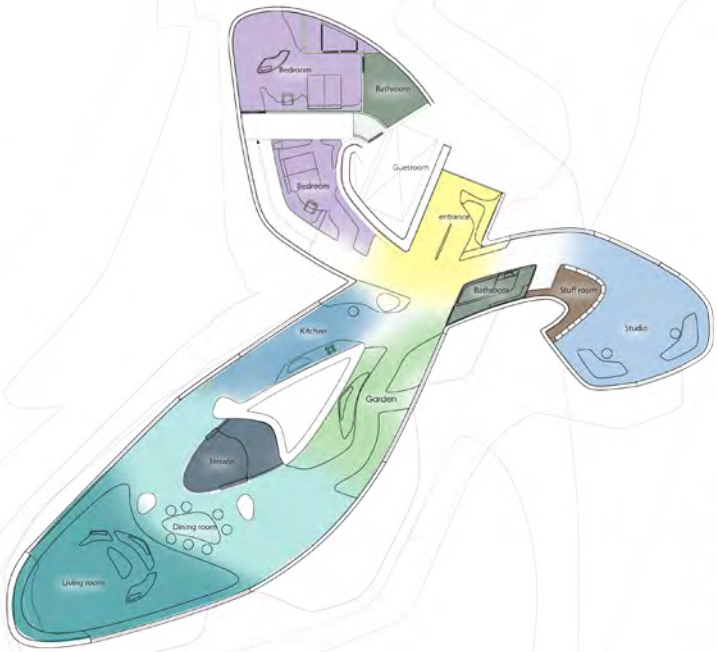


2nd floor Plan

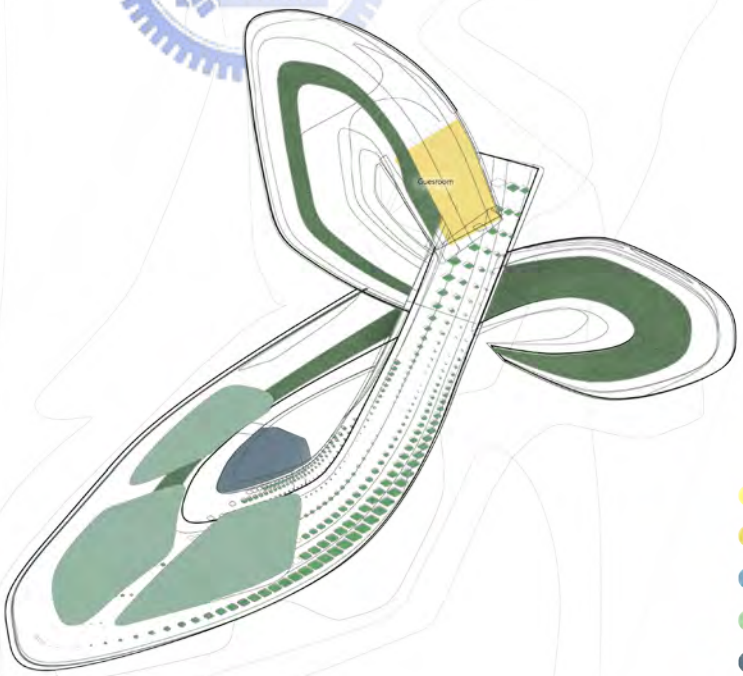
5m 10m 25m

Vegetation House

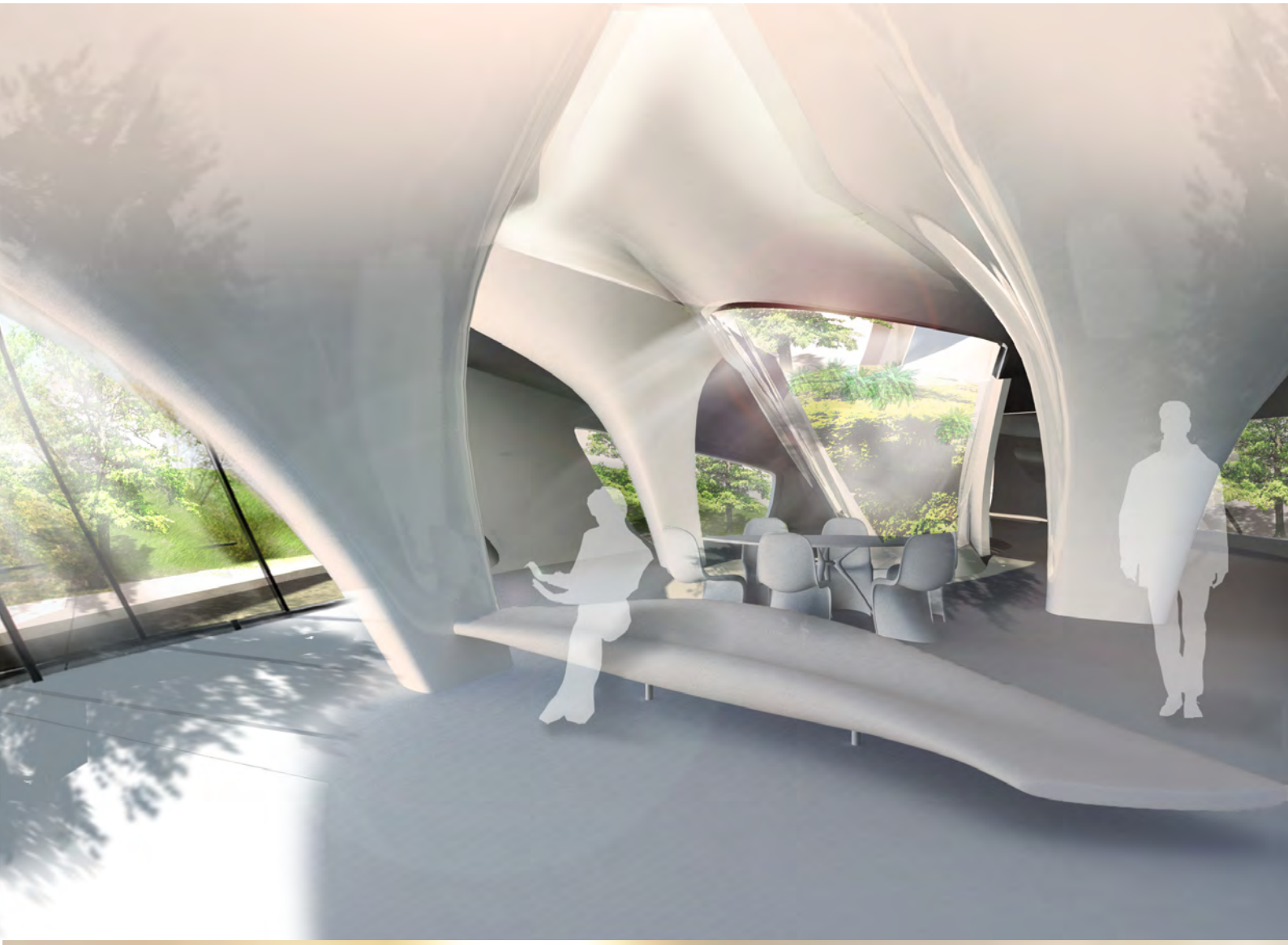
Surface Plan



- Entance
- Guest room
- Kitchen
- Garden
- Terrace
- Dining room
- Living room
- Bed room
- Bath room
- Stuff room
- Stuido



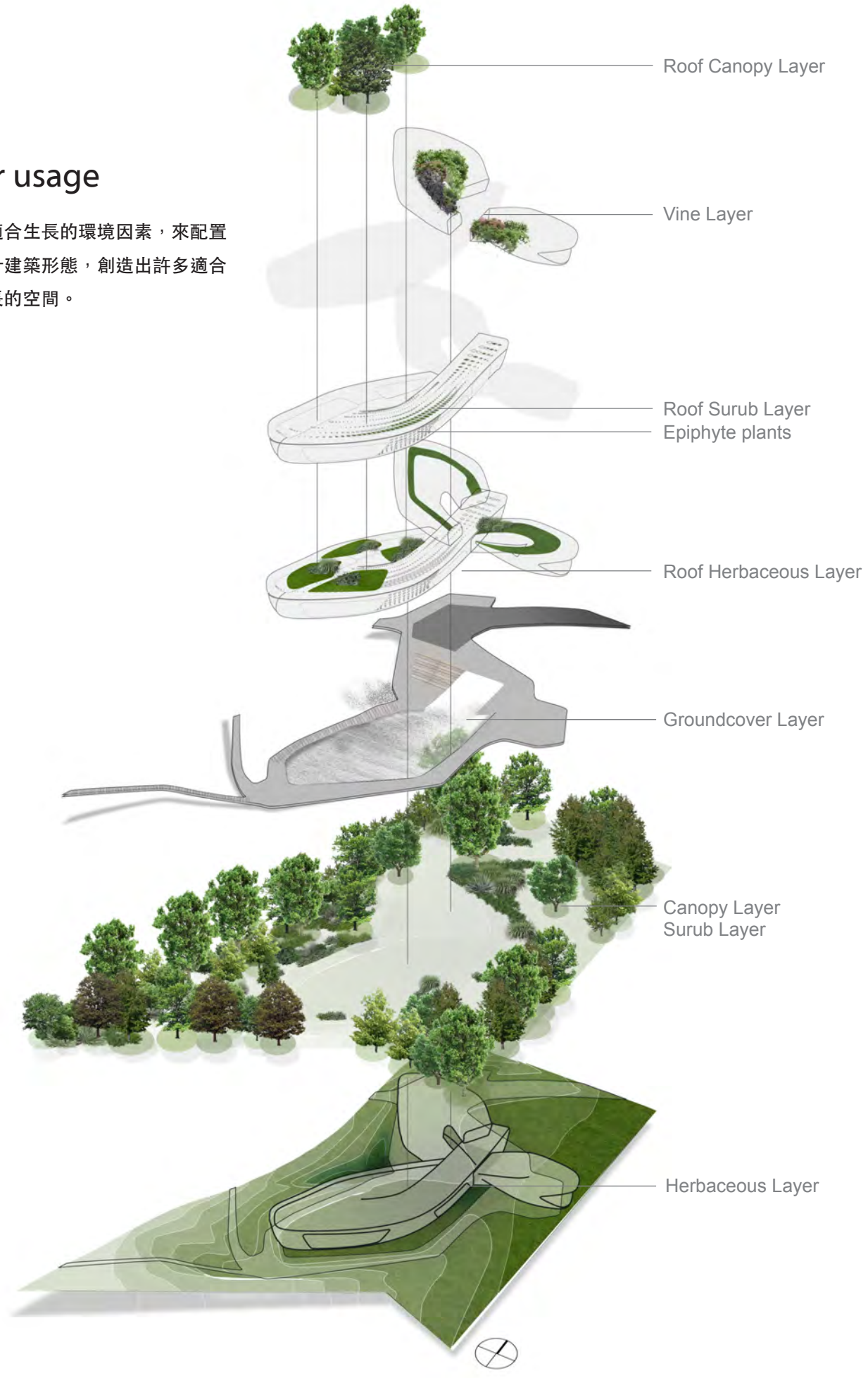
- Entance
- Guest room
- Kitchen
- Garden
- Terrace
- Dining room
- Living room
- Bed room
- Bath room
- Stuff room
- Stuido



Vegetation House

Plants layer usage

我們根據不同植物適合生長的環境因素，來配置植物分布區域與設計建築形態，創造出許多適合不同型態的植物生長的空間。



Vegetation House

Plant list

Roof Tree Layer

Taiwan Incense Cedar Evergreen tree
Camphor tree Evergreen tree
Taiwan Zelkova Deciduous tree

Vine Layer

Hoya Carnose
Simple-leaf chaste tree
Formosan medinilla
Jasmine
Bontham cable creeper

Roof Shrub Layer

River Oak
Orchid Tree
Ophiopogon japonicus

Epiphyte

Collabiopsis formosanum

Shrub Layer

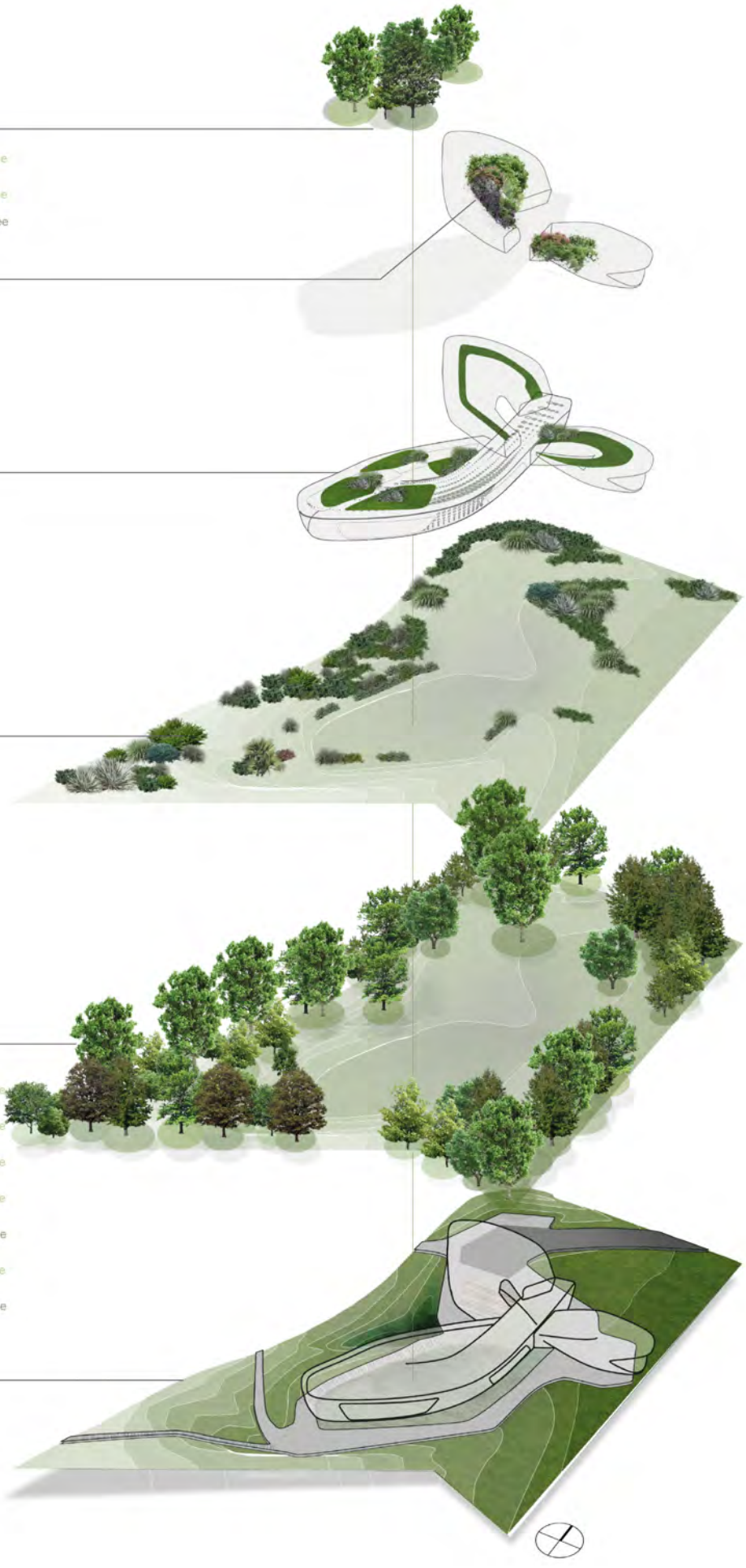
Cyelon Myrtle
River Oak
Orchid Tree
Ophiopogon japonicus
Japanese Privet
Cyelon Myrtle

Tree Layer

Taiwan Incense Cedar Evergreen tree
Camphor tree Evergreen tree
Formosan Michelia Evergreen tree
Taiwan Acacia Evergreen tree
Taiwan Zelkova Deciduous tree
Siebold Ardisia Evergreen tree
Coral Bean Tree Deciduous tree

Grass Layer

Japanese lawngrass
Silver-grass



Vegetation House

Create the Diversity of Vegetation

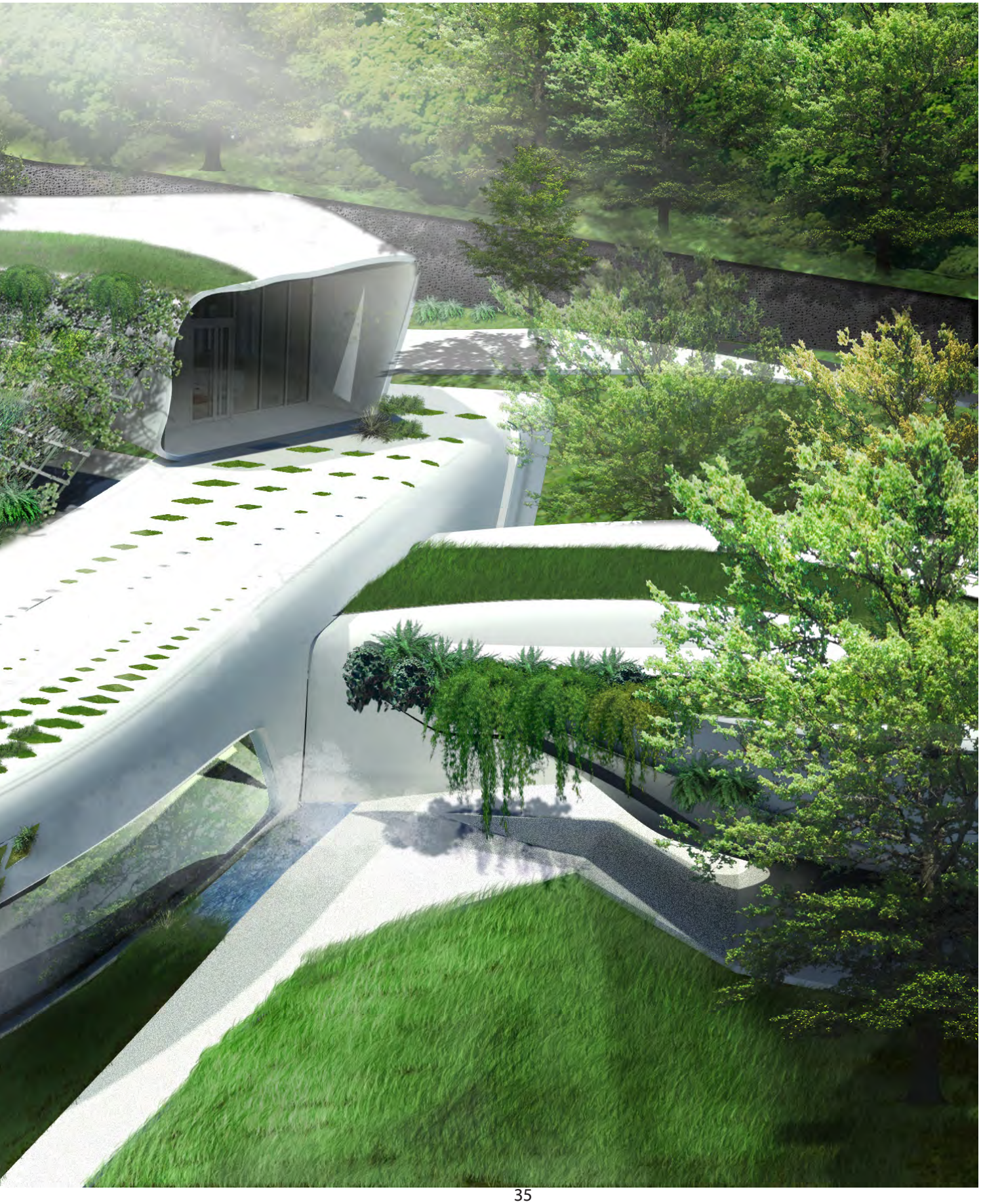
針對基地上現有的植栽與台灣原生植物做出的植物分析圖中，我們根據不同植物適合生長的環境因素，找出以下四種主要植物型態：

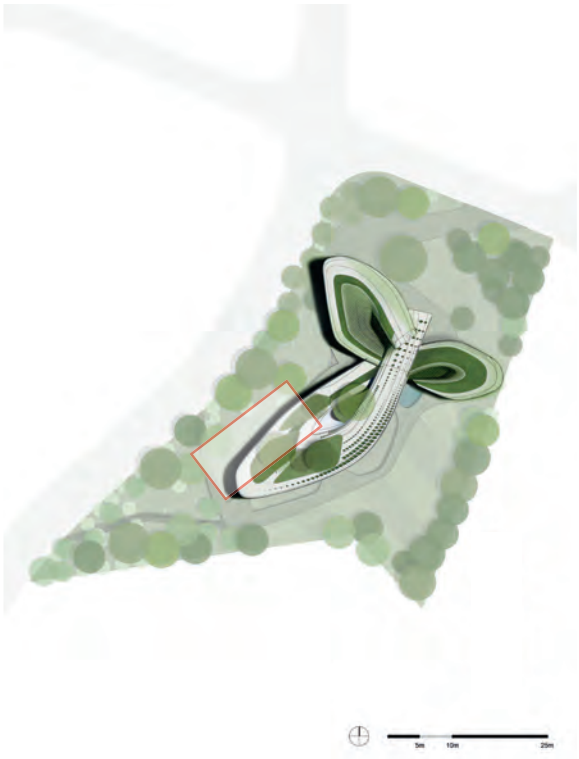
一、深根性植物

二、攀藤類植物

三、灌木類植物

四、著生植物（Epiphyte）

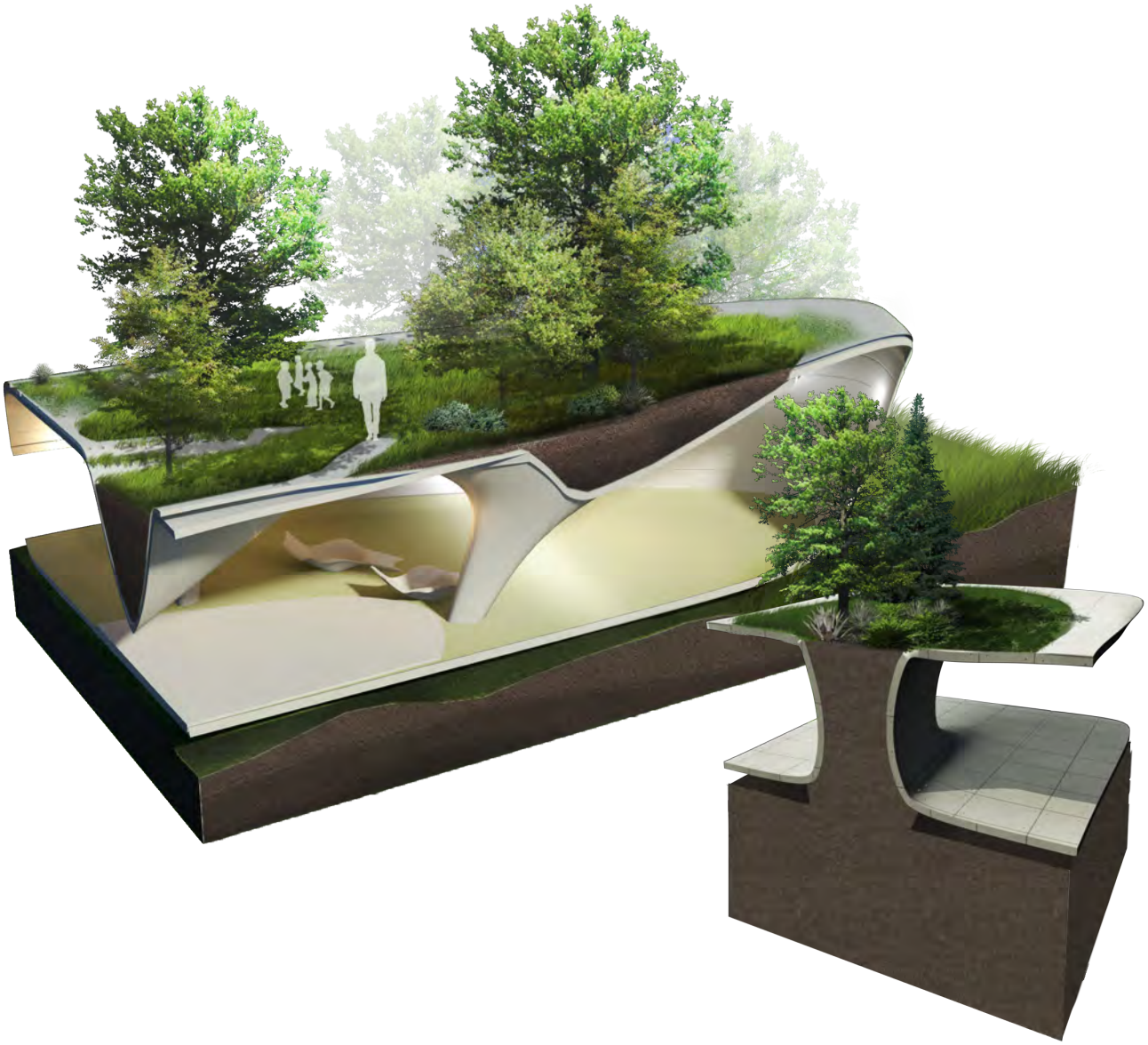




Vegetation House

Deep-rooted plants

深根性植物生長環境需要厚實的土壤結構，對於溼度敏感度較低，高日照時數。配置於開闊的建築屋頂中央，提供深根性植物通足的陽光與生長空間；藉由柱形的空心結構連接大地，提供深根性植物厚實的土壤與充足的水分。



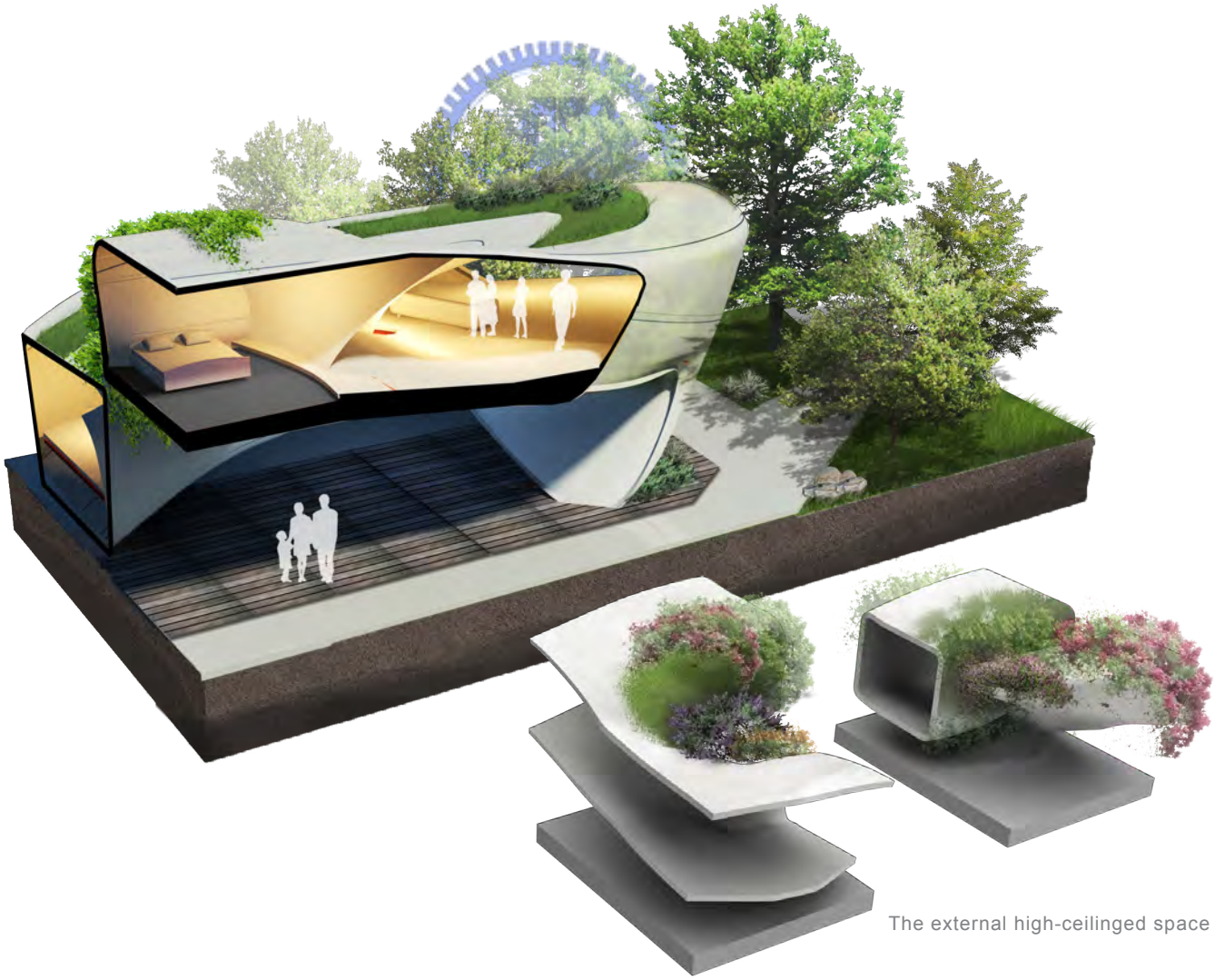
Hollow cylindrical structure

Vegetation House

Climbing rattan plant

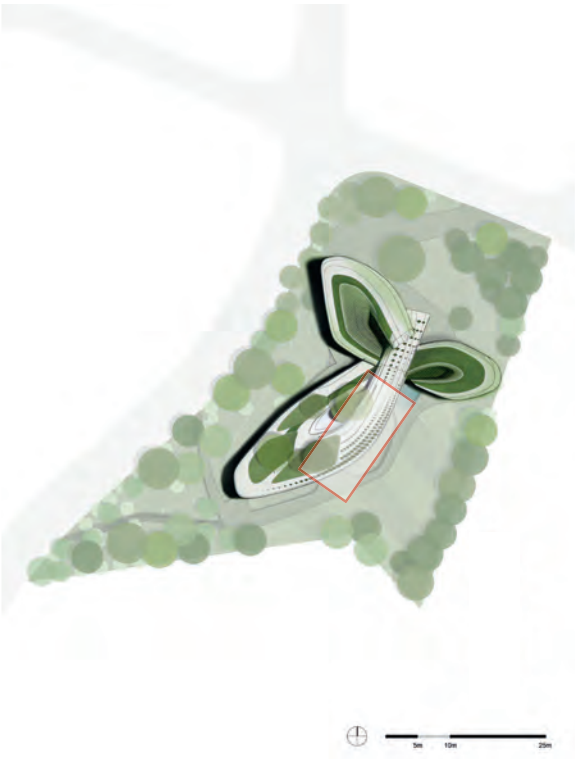
攀藤類植物生長環境所需的土壤層較薄，對於溼度敏感度較高，低日照時數。

藉由建築體高低樓層的錯位關係與建築外部挑高空間，創造出可以單面相遮蔽陽光的半日照空間，提供攀藤類植物陰涼濕潤的生態環境。



The external high-ceilinged space

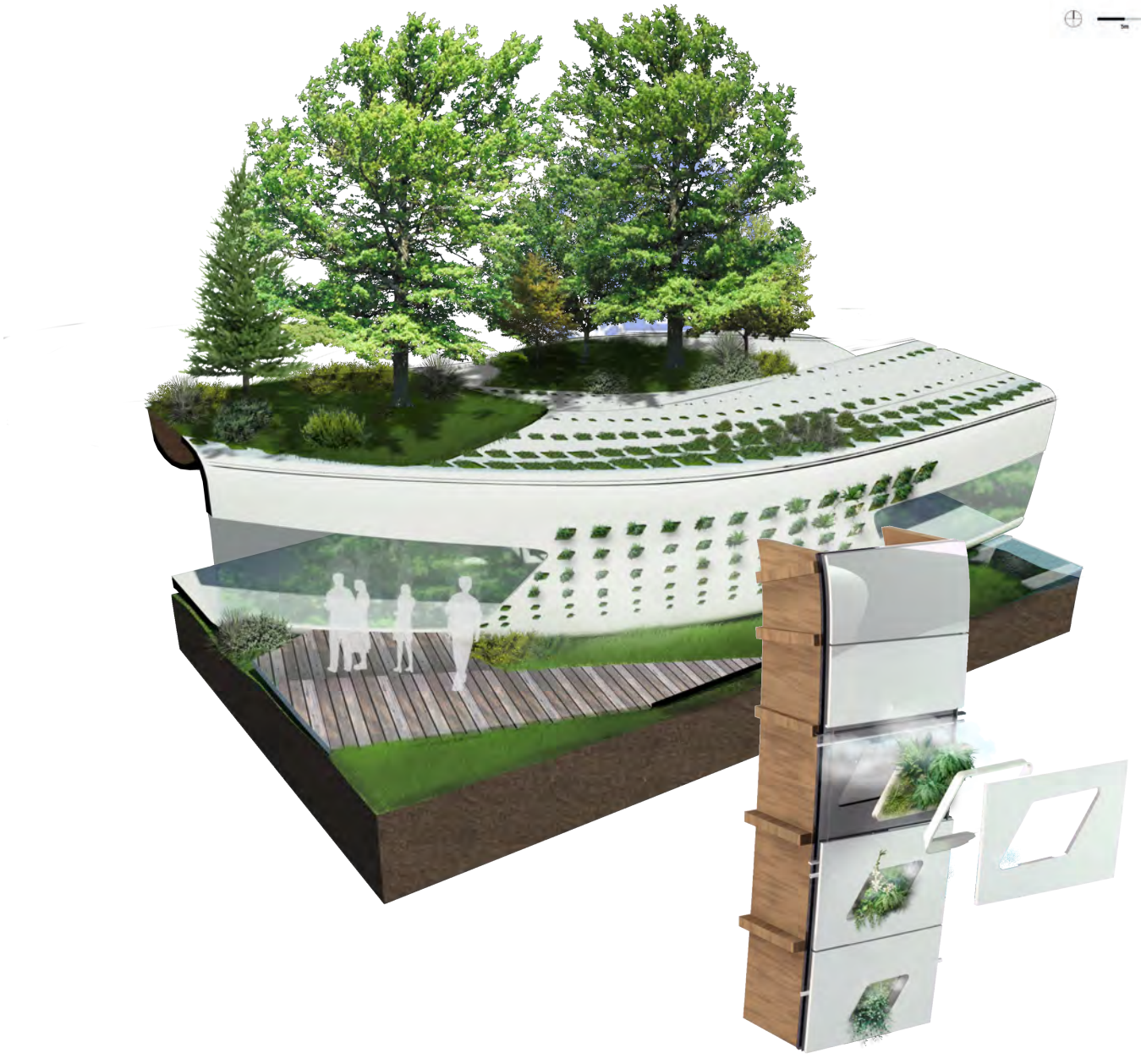
Dislocating the height of the building floors



Vegetation House

Epiphyte plants

著生以蕨類植物、苔蘚植物較多。 在建築的立面上，設計具有灌溉系統的植生磚(The Planter Brick)，讓植物種子自然依附於垂直的建築牆面上。

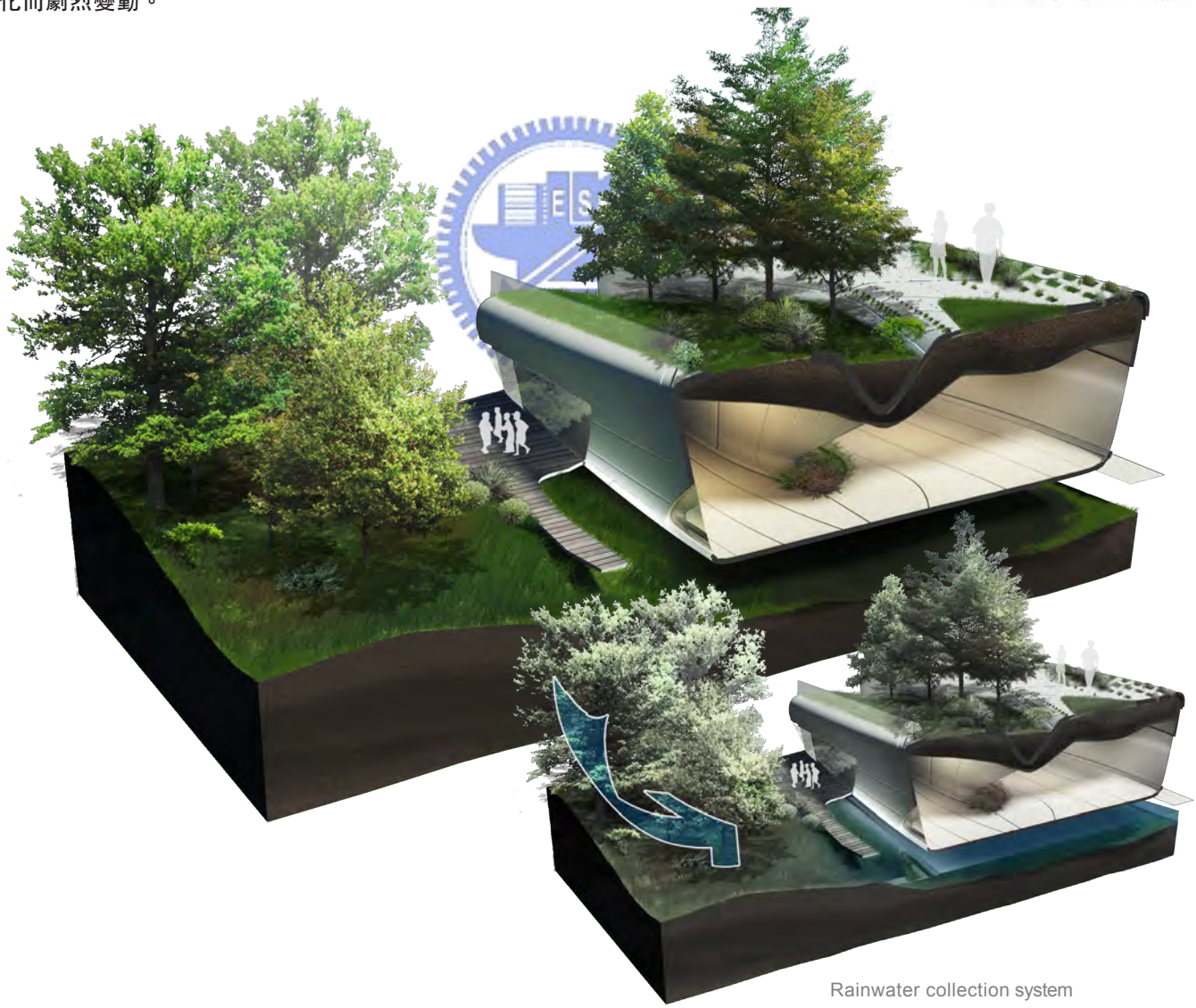


Deatial of the facade

Vegetation House

Recycle and reuse rainwater

基地上、冬季長時間陰雨綿綿、夏季瞬間降雨量大， 山坡地地形導致雨水流失迅速，土壤不易留住水分。我們在基地地勢最低、雨水匯集的低窪處配置生態池，用以保留當地雨水，有助於建築周遭環境的微氣候控制，生態環境不易受不穩定的氣候變化而劇烈變動。



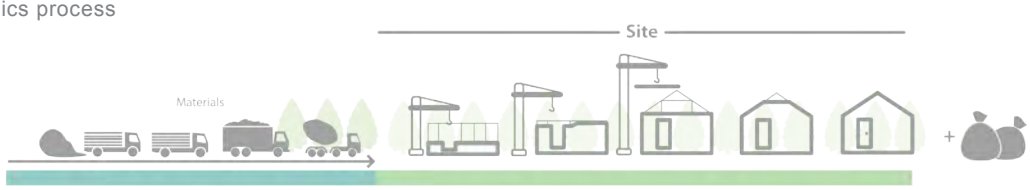
Rainwater collection system

Vegetation House

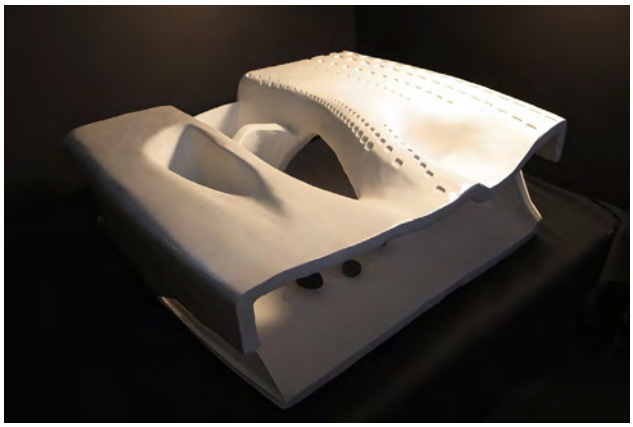
New tectonics

利用CAD/CAM (computer-aided design and computer-aided manufacturing)技術，能夠製造有別以往的垂直水平系統結構，配合曲面結構，能夠搭建順應植物生長的地勢環境。為求減少在大地上搭建施作工程的時間，避免施工廢料殘留在當地環境，我們規劃都數的建材都在工廠生產並加工完成後，再送往當地施工組裝。

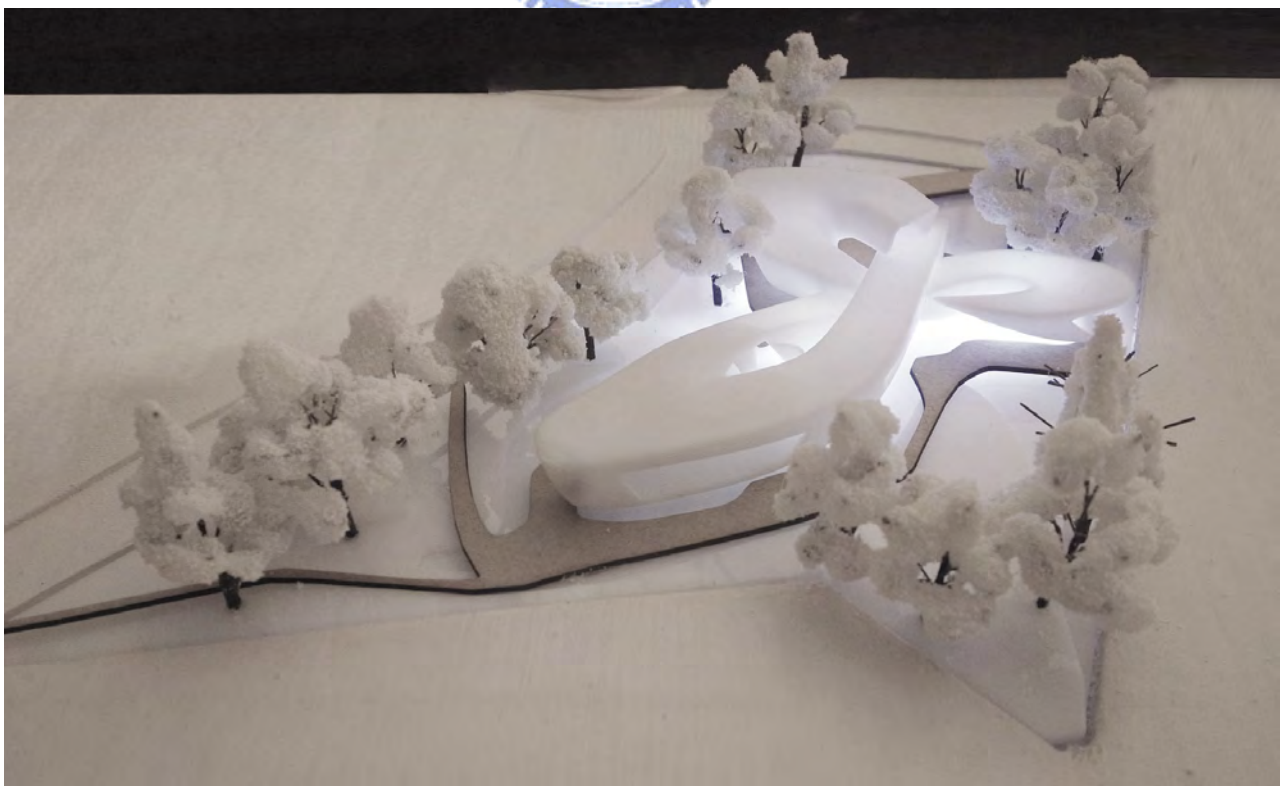
New tectonics process



Past construction process




Testing situation of plants growth.



Vegetation House

Coexist with the ecosystem

運用此方式，可以達成建築與環境的和平共生，保持當地的生物多樣性，在不破壞大地的前提之下興建住宅，維持國家風景區的生態系，就像是長滿了植物的石頭，雖然存在，卻能夠將自然的原始面貌還給大地。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1896

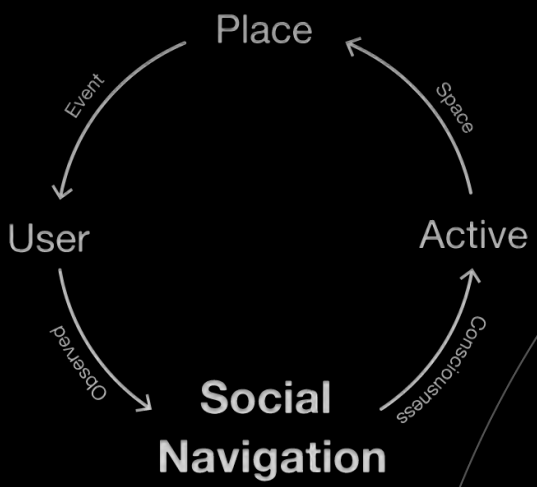
Designing Information Place

The Museum of Modern Art Information Navigation

Digital Architecture Studio (Virtual Reality Space)/ Teamwork

Designing Information Place

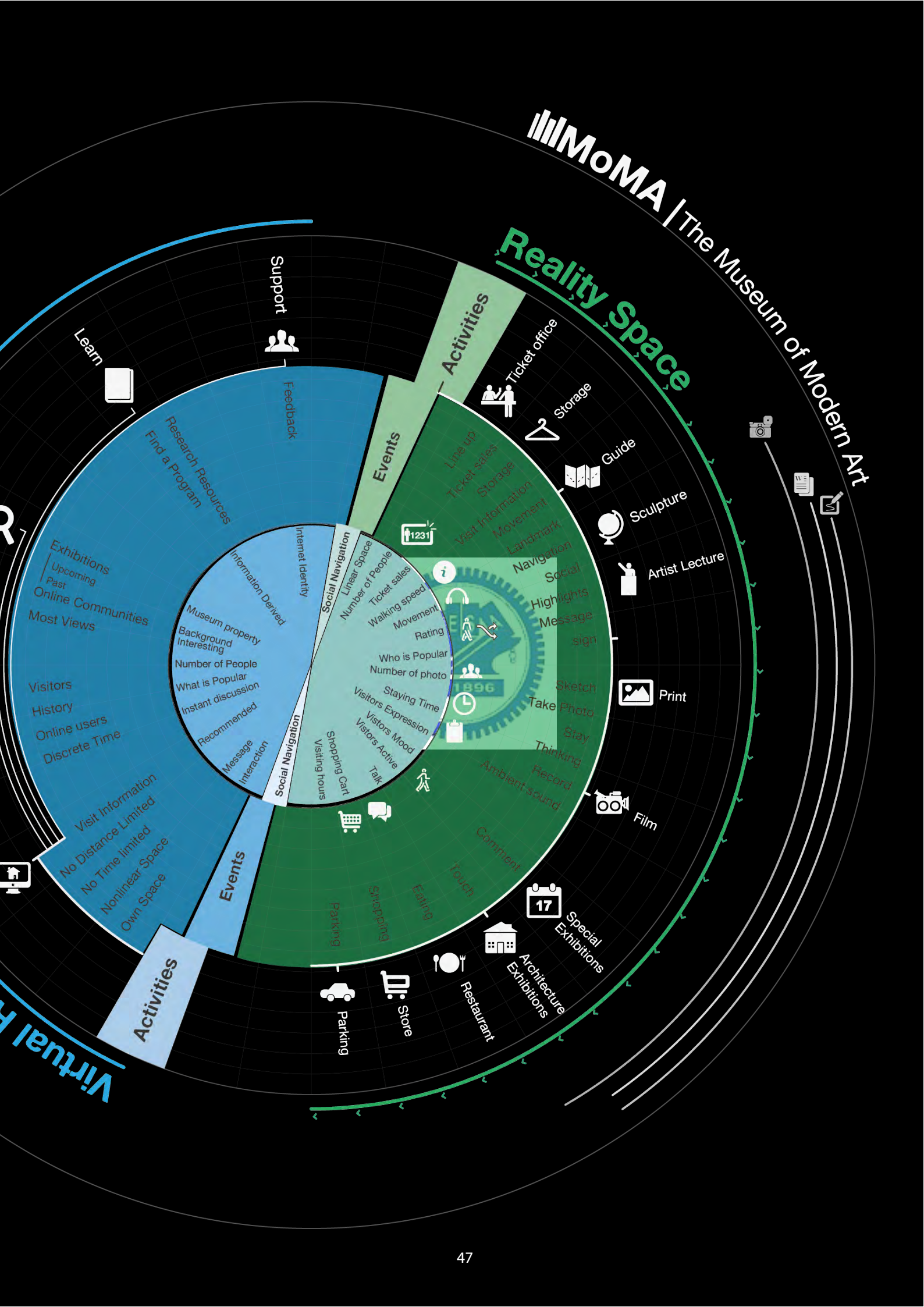
Social Navigation



面對虛擬空間導覽的議題，我們探討出虛擬空間中缺乏真實場所中的社會導覽經驗(Social Navigation)，在設計虛擬空間活動行為的同時，思考著如何在虛擬空間中增強使用者對於空間的認同感與存在感，介面設計是利用實體書本的閱讀經驗傳達參訪現在藝術館的體驗行為，在藝術館欣賞藝術品的行為就像是閱讀書本時翻頁所體驗的嶄新感受。另外，當發生虛擬現代藝術館導覽的情況，我們克服了真實空間的物理限制，參訪者在觀看不同形式作品的同時，能夠有多少種不同觀賞的可能性呢？

場所與空間的不同在於場所會因使用者的不同而改變性質。使用者來到場所之後，會做出此場[illegible]出來的氛圍與特性選擇性做出適當的行為，這些行為將會被其他使用者觀察到而影響，選擇[illegible]後做出與之前不一樣的行為，場所就隨著使用者的行為改變而成長。

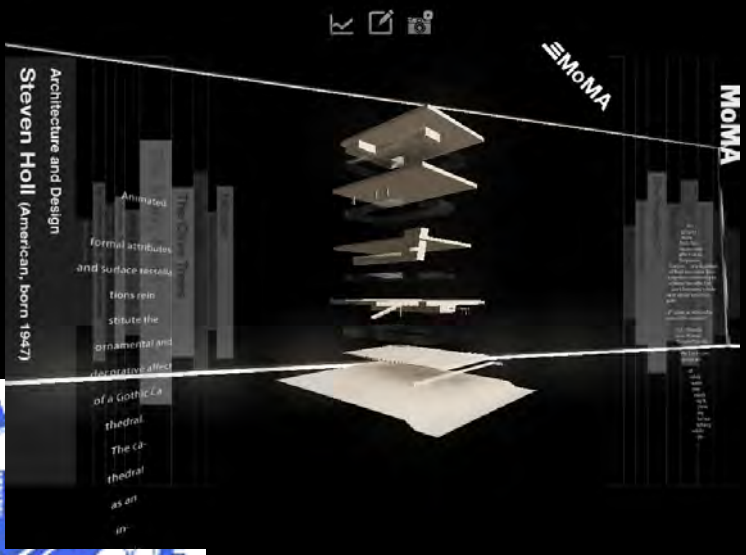
在探討真實空間中瀏覽藝術館的行為後，分[illegible]哪些行為是會被其他使用者所觀察到的，這些行為與事件都會產生社會導覽，並增加使用者在場所之中的存在感與參與感。利用分析後的資料，加入虛擬空間打破真實空間的時間與物理性質的特性，設計出不同形態的藝術館導覽體驗。


MoMA | The Museum of Modern Art
Reality Space
Activities
Events
Ticket office
Storage
Guide
Sculpture
Artist Lecture
Print
Film
Special Exhibitions
Architecture Exhibitions
Restaurant
Store
Parking
Line up
Ticket sales
Storage
Visit Information
Movement
Landmark
Navigation
Social
Highlights
Message
sign
Sketch
Take Photo
Stay
Thinking
Record
Ambient sound
Content
Touch
Eating
Shopping
Parking
Social Navigation
Linear Space
Number of People
Ticket sales
Walking speed
Movement
Rating
Who is Popular
Number of photo
Staying Time
Visitors Expression
Vistors Mood
Vistors Active
Talk
Shopping Cart
Visiting hours
Information Derived
Museum property
Background Interesting
Number of People
What is Popular
Instant discussion
Recommended
Message Interaction
Internet Identity
Feedback
Research Resources
Find a Program
Exhibitions
Upcoming
Past
Online Communities
Most Views
Visitors
History
Online users
Discrete Time
Visit Information
No Distance Limited
No Time limited
Nonlinear Space
Own Space
Events
Activities
Support
Learn
Virtual

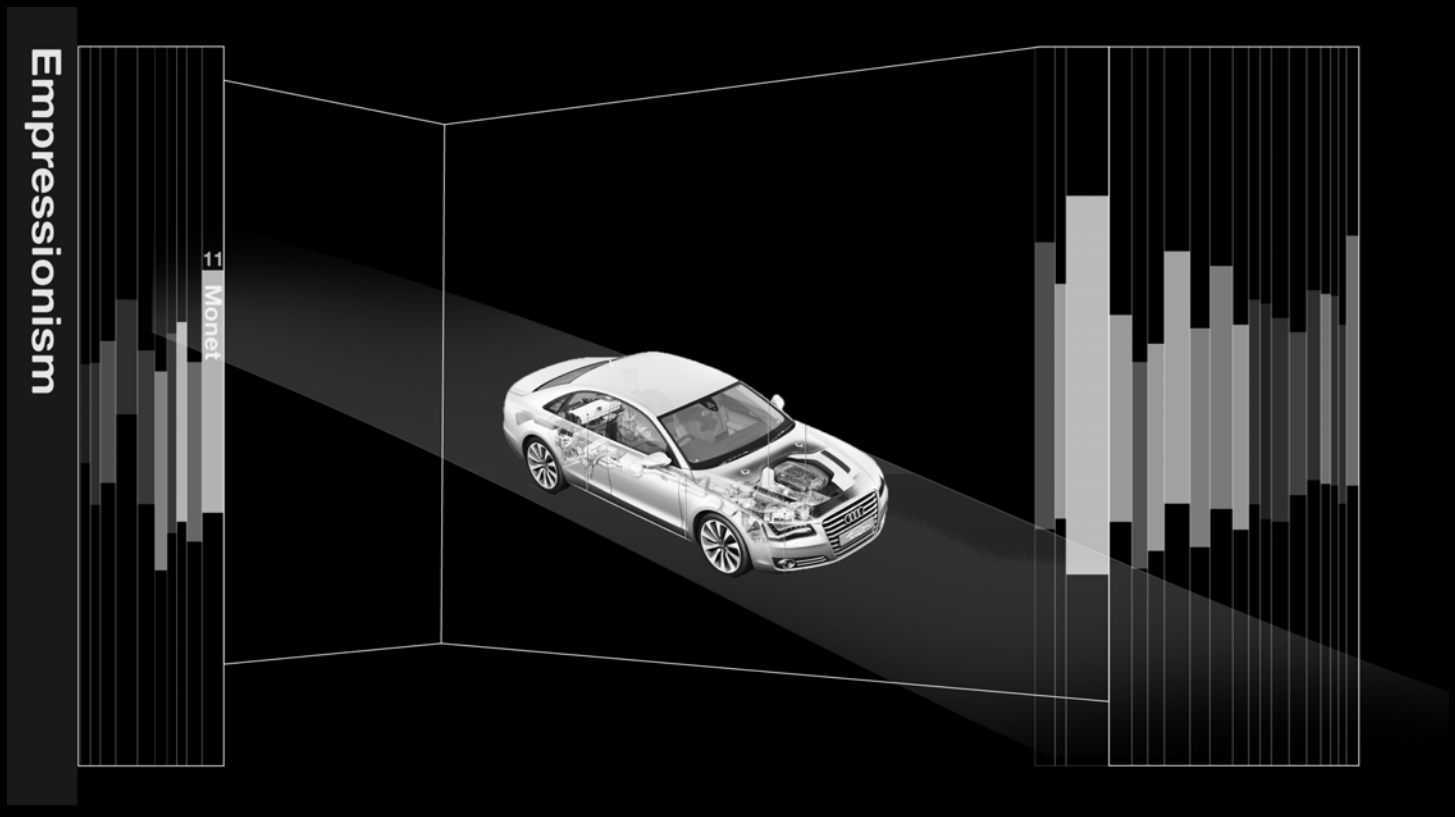
Designing Information Place

Sculpture

對於實體藝術品或3D作品區的構想，除了呈現基本的作品作者介紹之外，3D的實體物件會隨著觀察者的欣賞位置而做分解與旋轉的動作，改變在一般藝術館中無法觸碰作品的狀態，竟而讓作品所有的細部一覽無遺。



如果3D作品最好的傳達方式不是欣賞而是體驗的話呢？在虛擬空間中，體驗作品是可以被發生的事情。觀賞建築模型時，與其想像建築的空間感不如真實地走進建築空間中遊走，體驗將更貼實



Empressionism
11 Monet

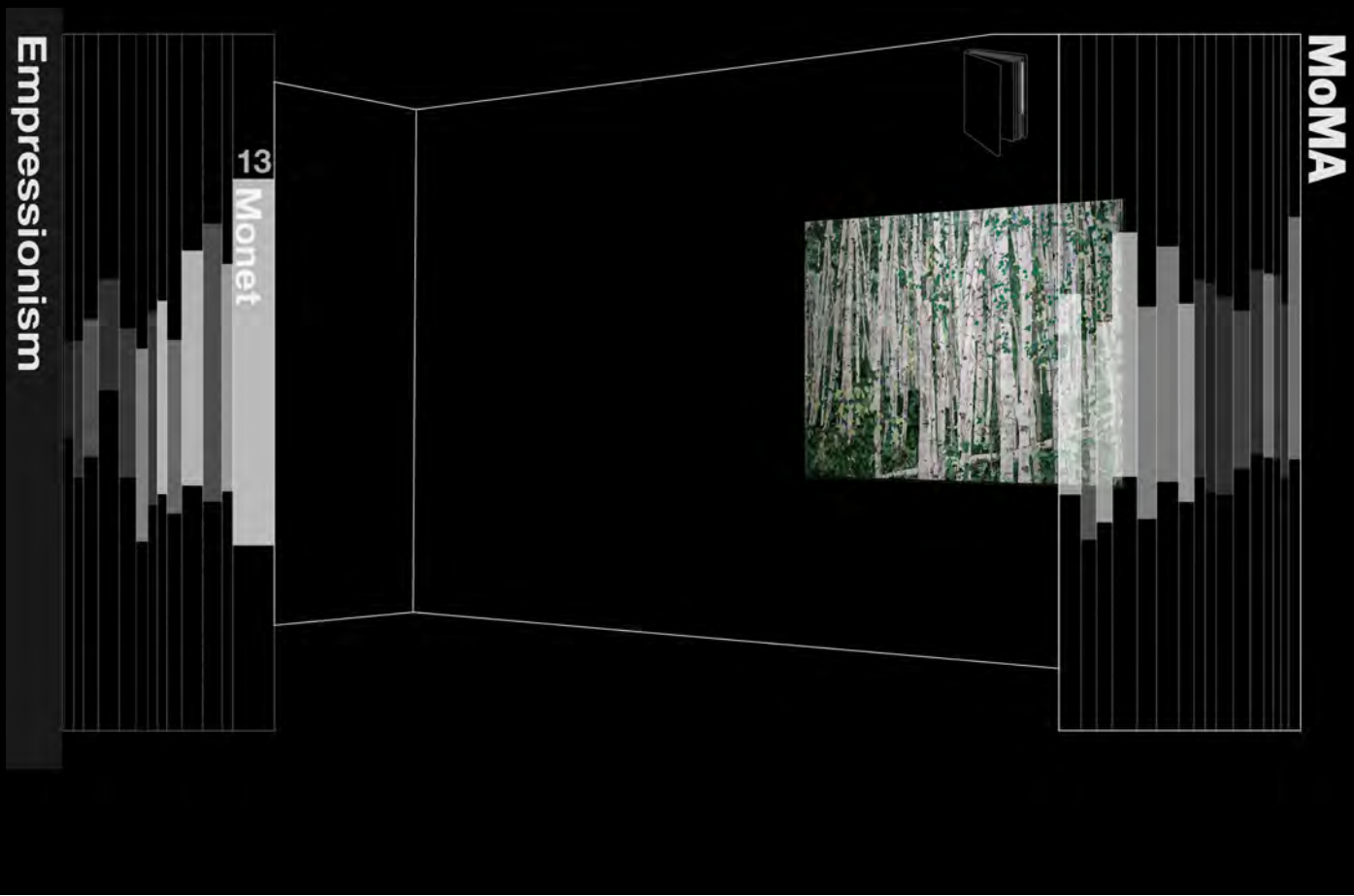
Empressionism
11 Monet

Designing Information Place

Drawing

第一層的資訊，如：作品名稱、作者、作品介紹等等。對於作品有較高興趣的觀賞者，則提供展現出作者如何完成作品的過程，利用解構分離的呈現方式更能感受作者創作時的心境。

當觀賞者貼近作品觀察時，則呈現衍生資訊，例如介紹作者生平年代與經歷，並提供藝術館中此作者的其他作品供觀賞者做更深入的瞭解與瀏覽。



MoMA
Empressionism
13
Monet
On the occasion to the 6th FESTIVAL OF THE LIVELY ARCHITECTURES in MONTPELIER, Champ Libre association throws a call for applications to realize 10 interventions.
The Festival is part of the city heart of Montpellier; it will take place in the heart of Montpellier and more specifically in the courtyards of certain town house. At the same time it will be proposed a course to the visitors, goes out of architectural discovery in the city heart.

MoMA
Empressionism
13
Monet
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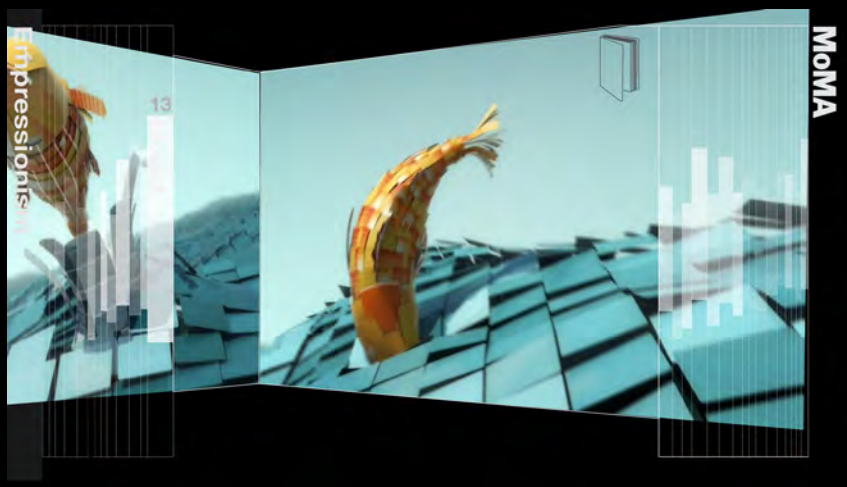
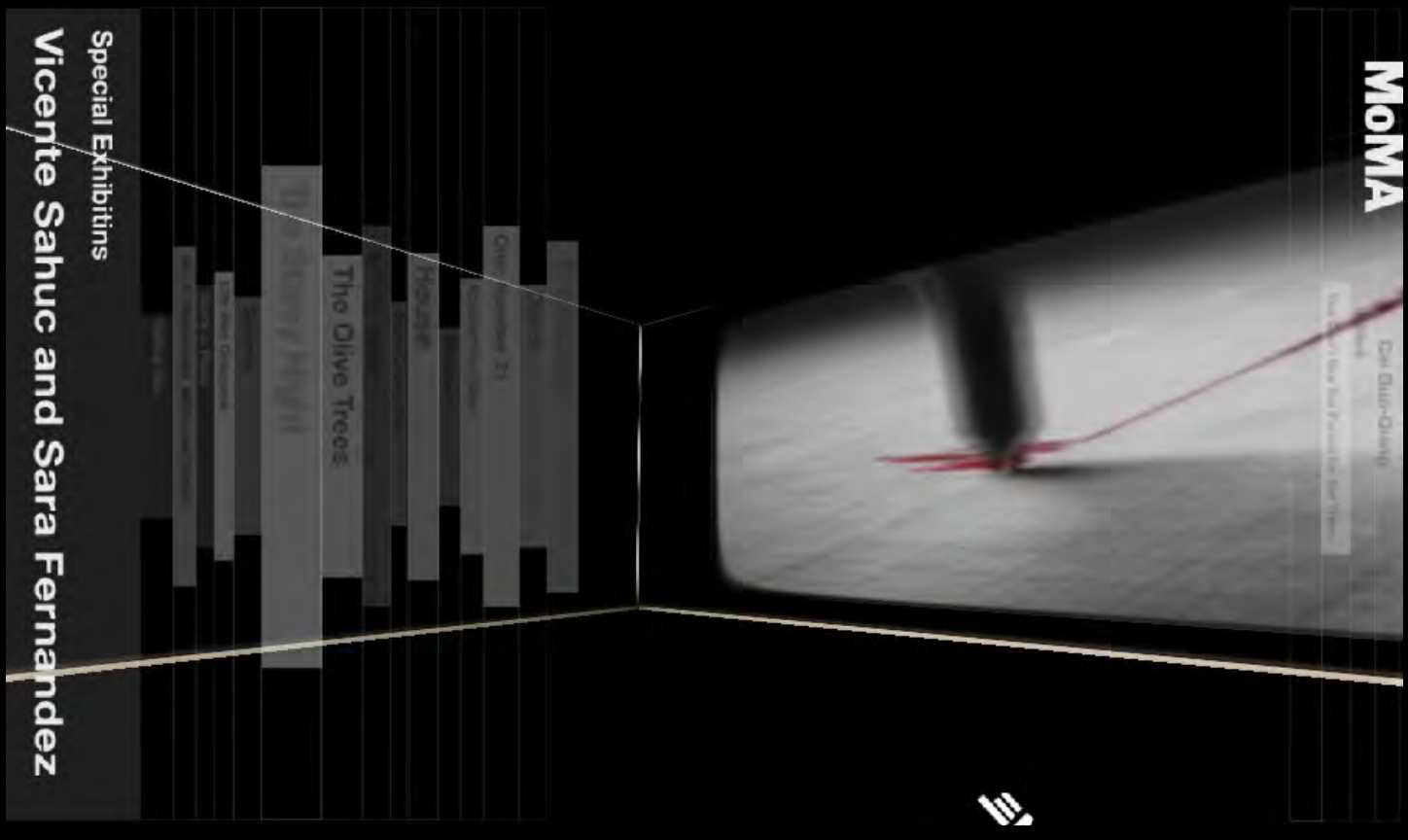
Designing Information Place

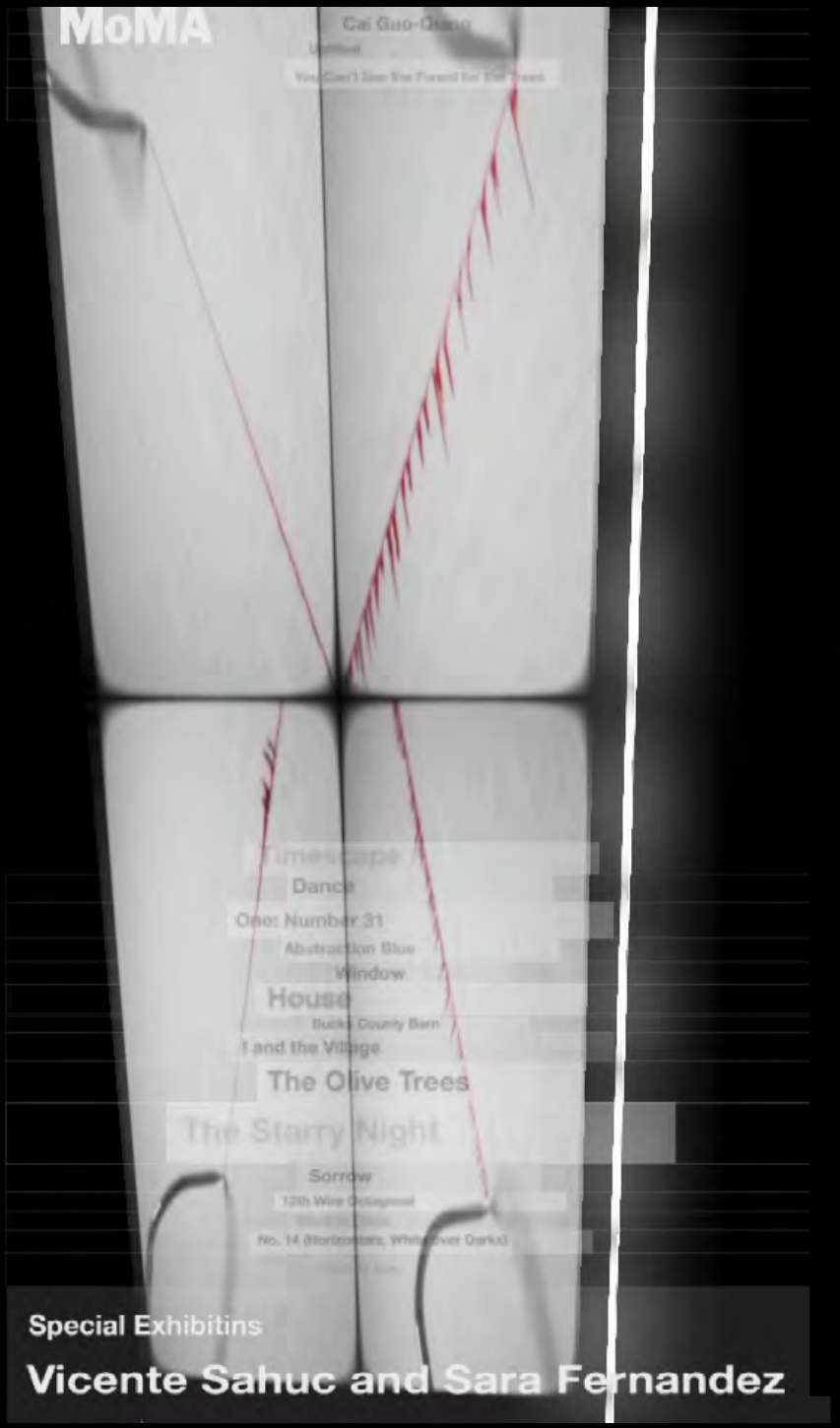
Motion

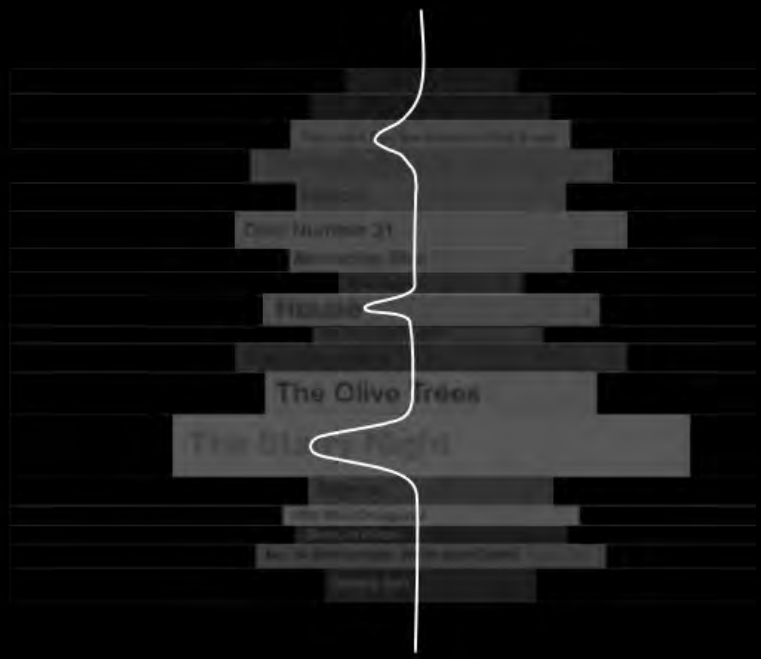
在影像作品的呈現方式中，利用了空間的特性，在觀看不同方向的壁面時，彷彿是更換不同角度去觀賞影片，亦或是可以一次看見不同時間點事件發生的畫面，讓參訪者可以藉由更多視角去接受影像呈現。

離開藝術館時，這次參訪的痕跡將會被紀錄下來，成為藝術館歷史資料的一部份，如：觀看過的作品、各個空間停留的時間、留言次數等等，這些資料都會成為之後所有參訪者的參觀導覽依據。






MoMA
Cai Guo-Qiang
Dance
One: Number 31
Abstraction Blue
Window
House
Bucks County Barn
The Olive Trees
The Starry Night
Sorrow
Special Exhibitins
Vicente Sahuc and Sara Fernandez


MoMA
The Olive Trees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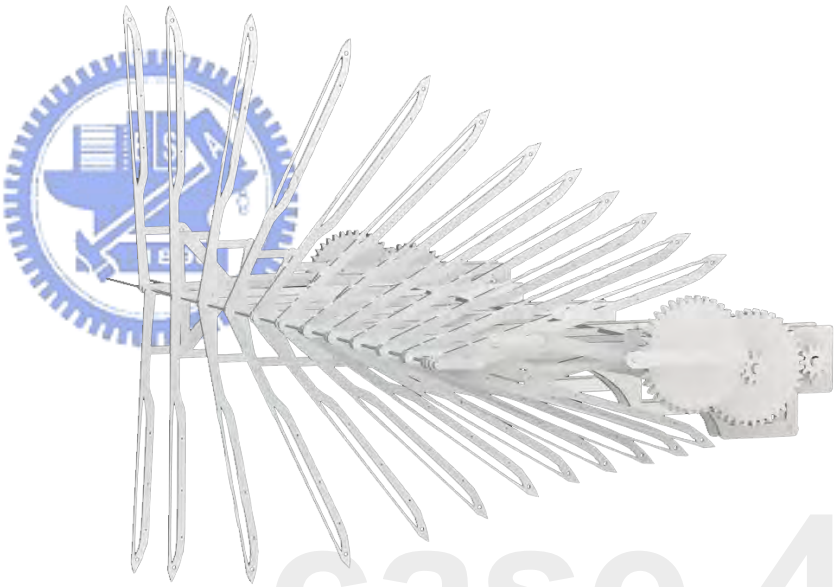
1896



case 4

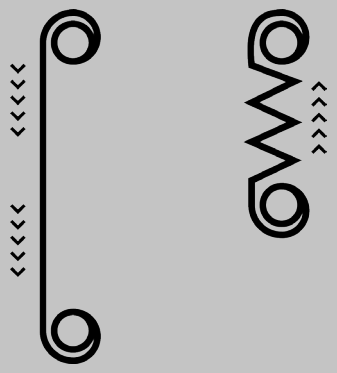
Wave Wall

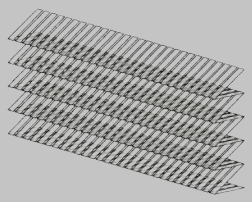
Digital Architecture Studio (Interactive Architecture)/ Personal

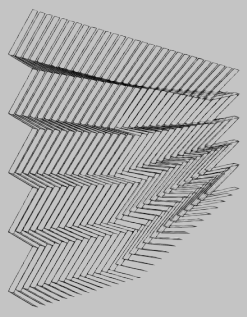
Wave Wall

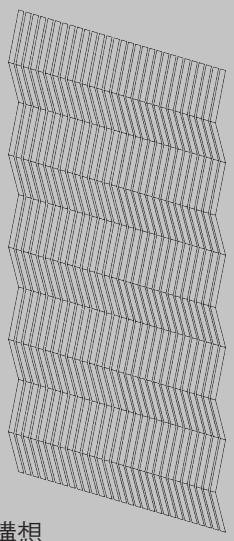
Concept

思考辦公空間裡，人與人互動時所產生的社交空間的重疊與衝突，構想利用Wave Wall創造空間的可動性及多樣性，並考慮成本問題透過機構設計使資訊可以變動調整，呈現新的空間型態。

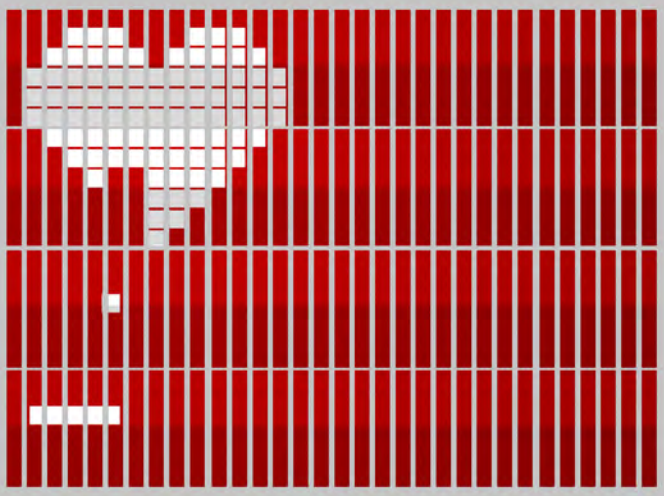


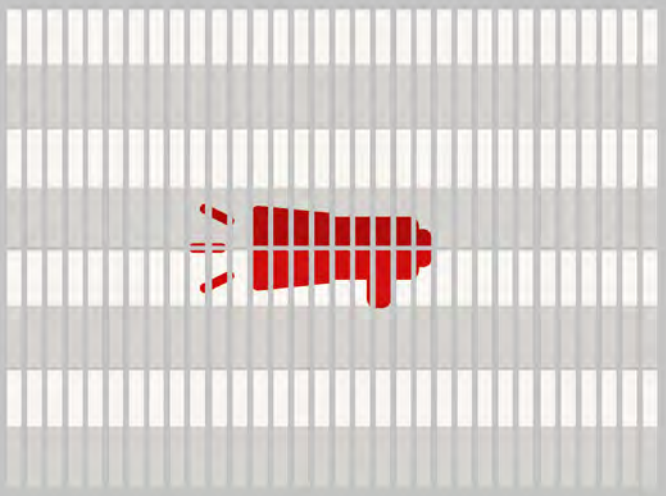


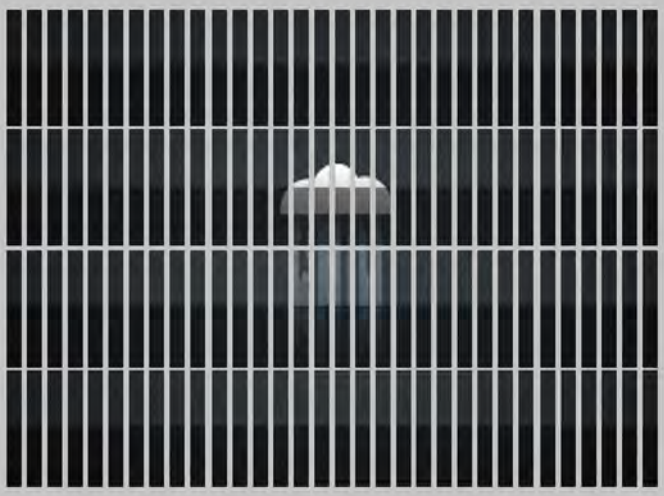


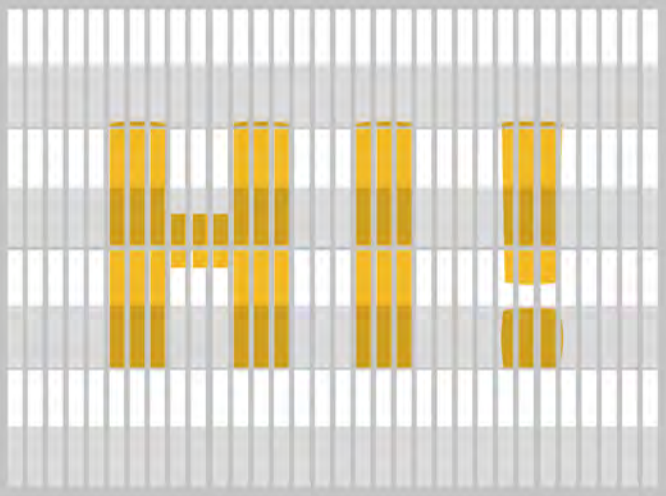


機構構想



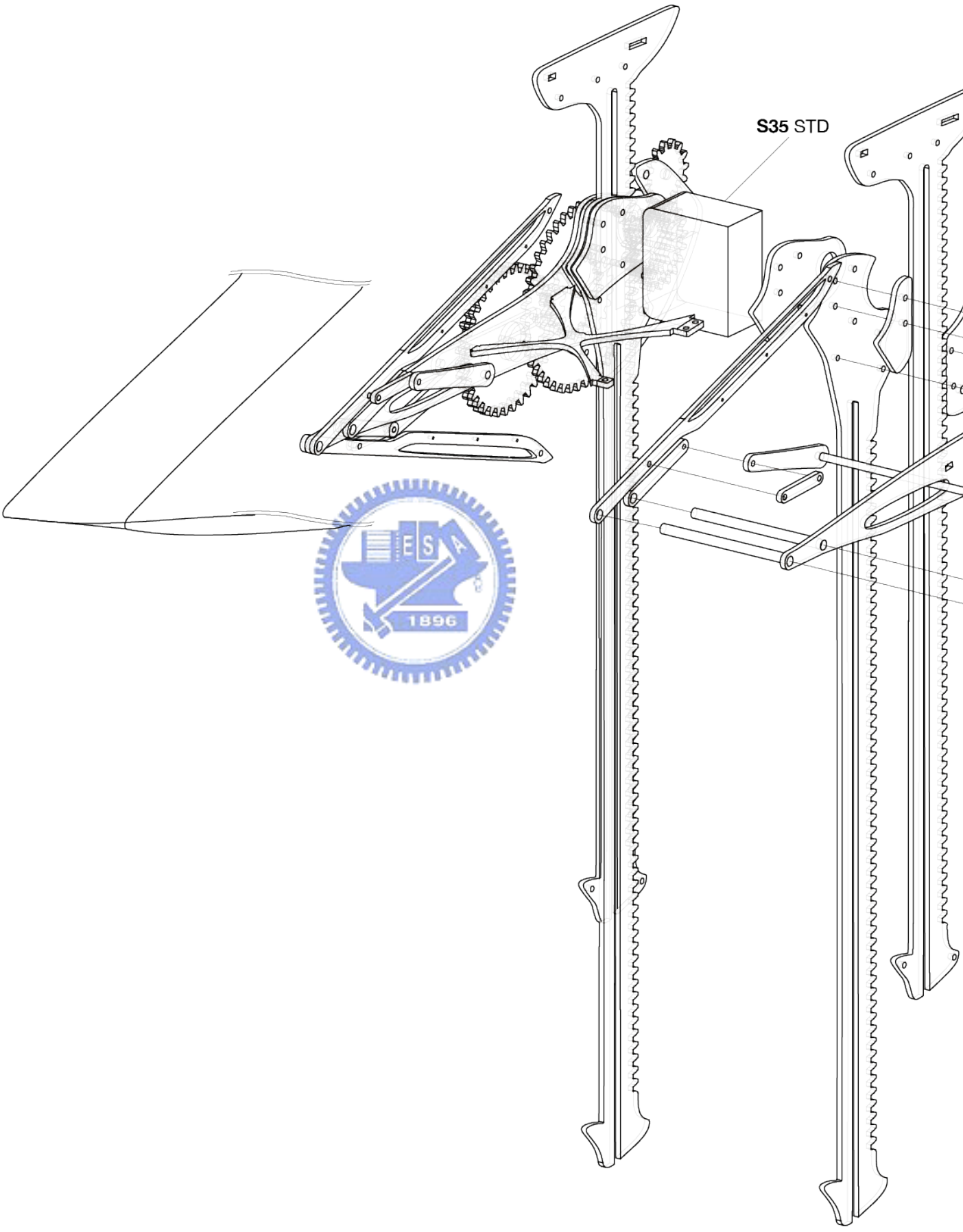




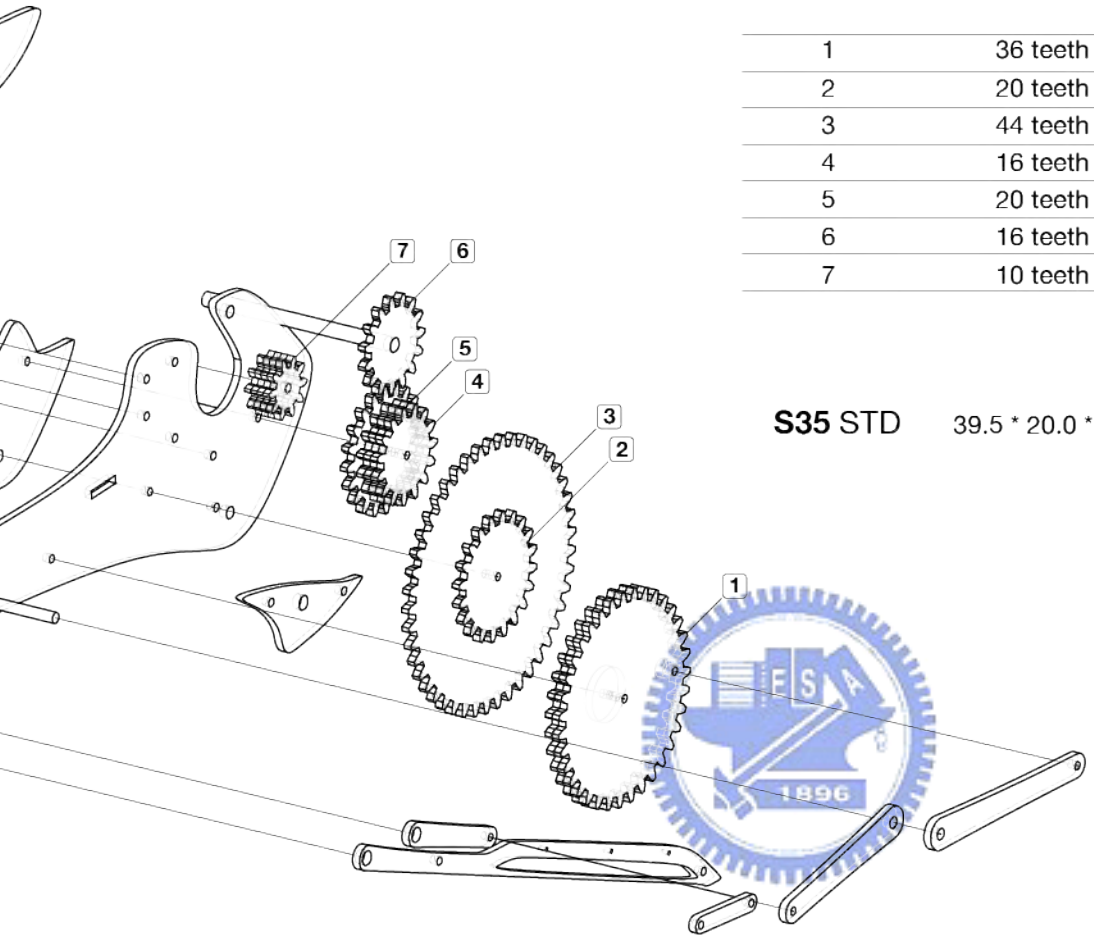


Wave Wall

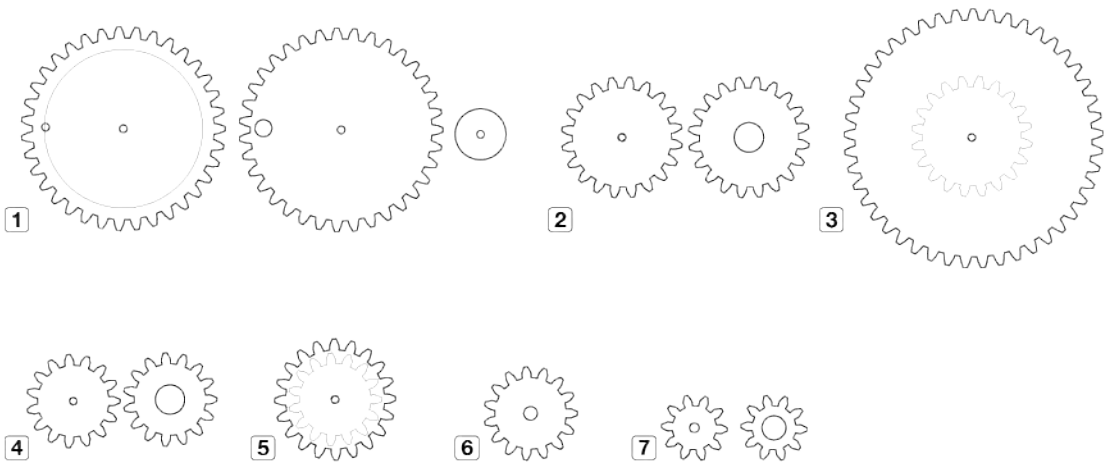
Mechanical details



Item NO.	Part NO.
1	36 teeth
2	20 teeth
3	44 teeth
4	16 teeth
5	20 teeth
6	16 teeth
7	10 teeth

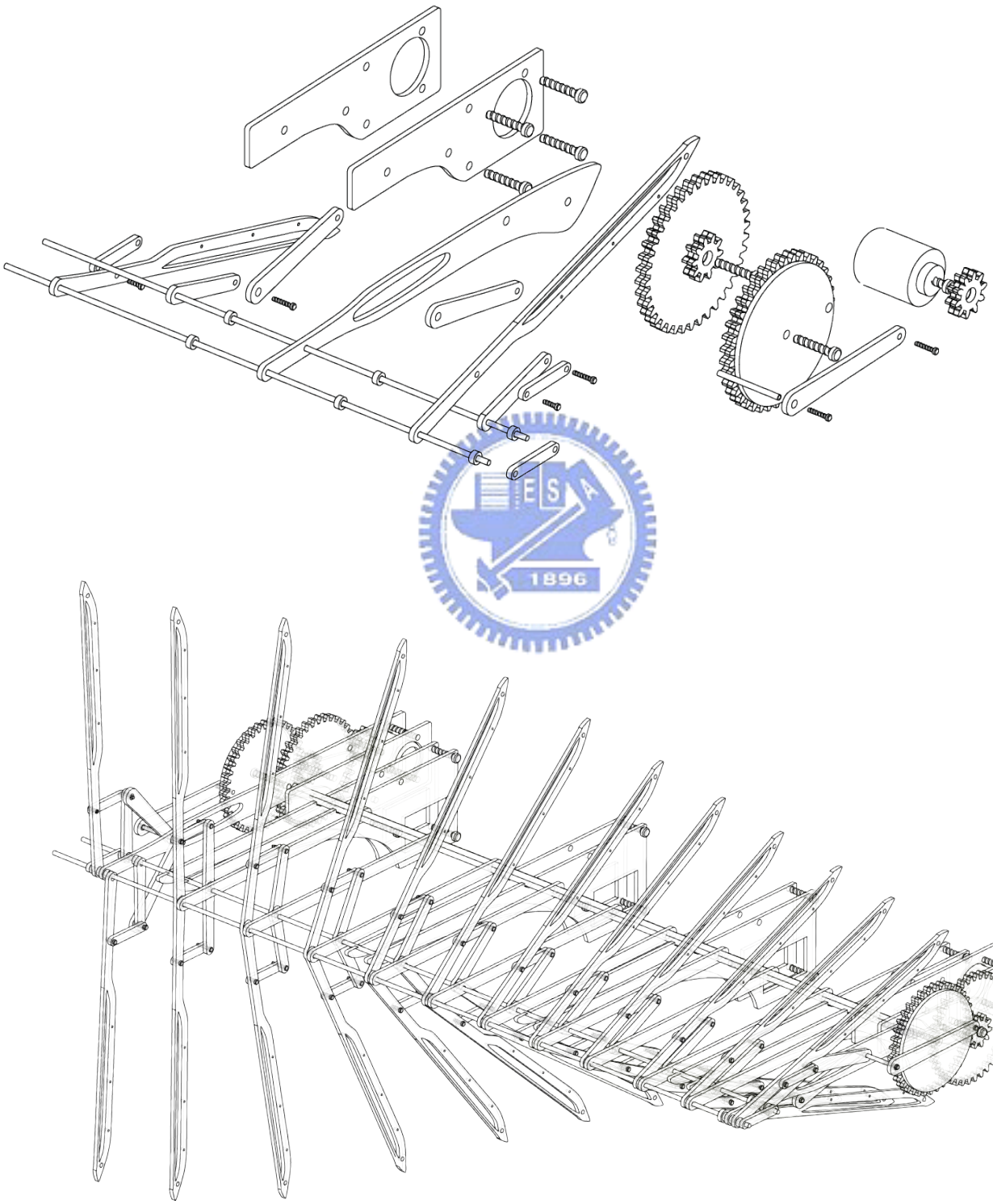


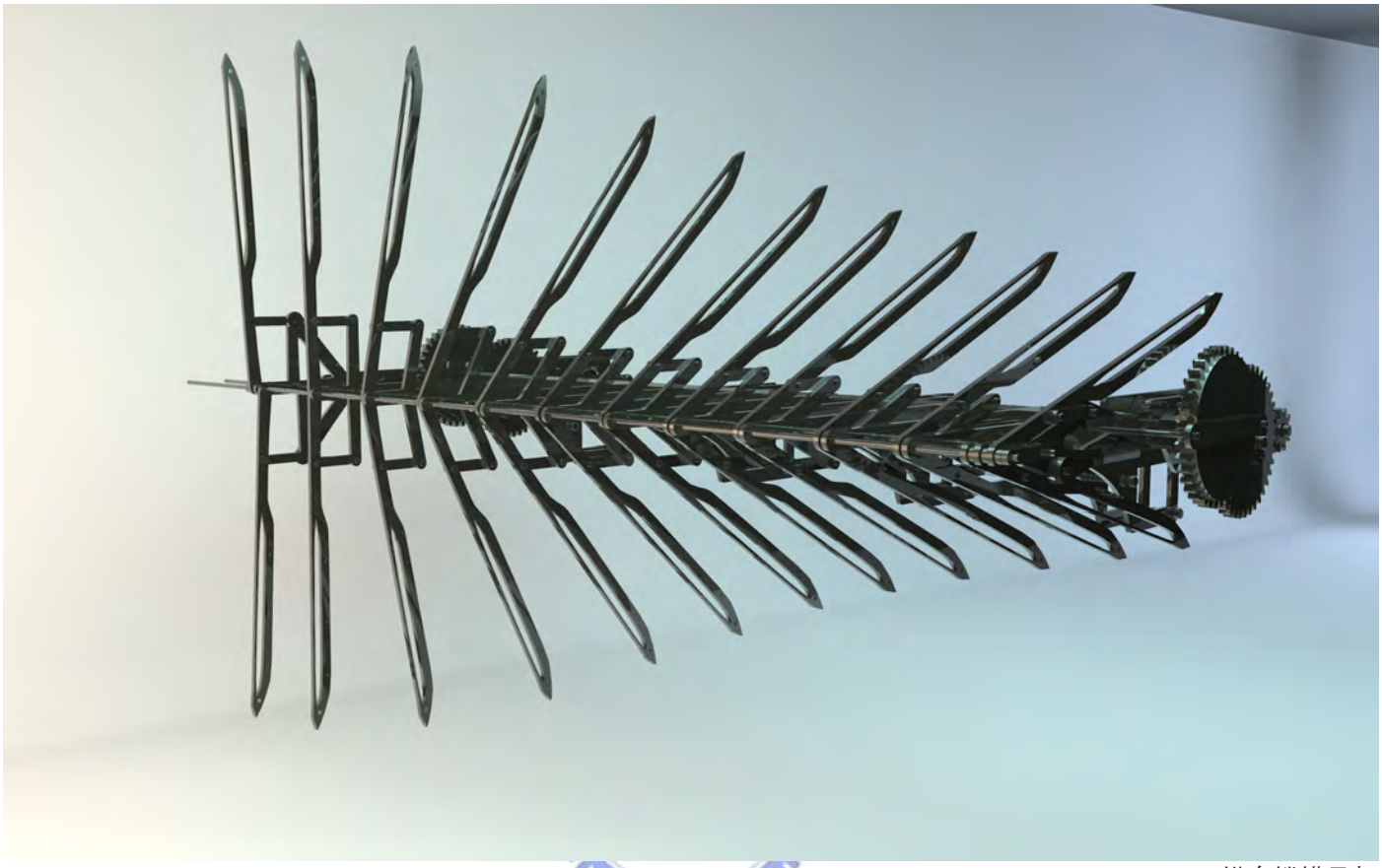
S35 STD 39.5 * 20.0 * 35.6



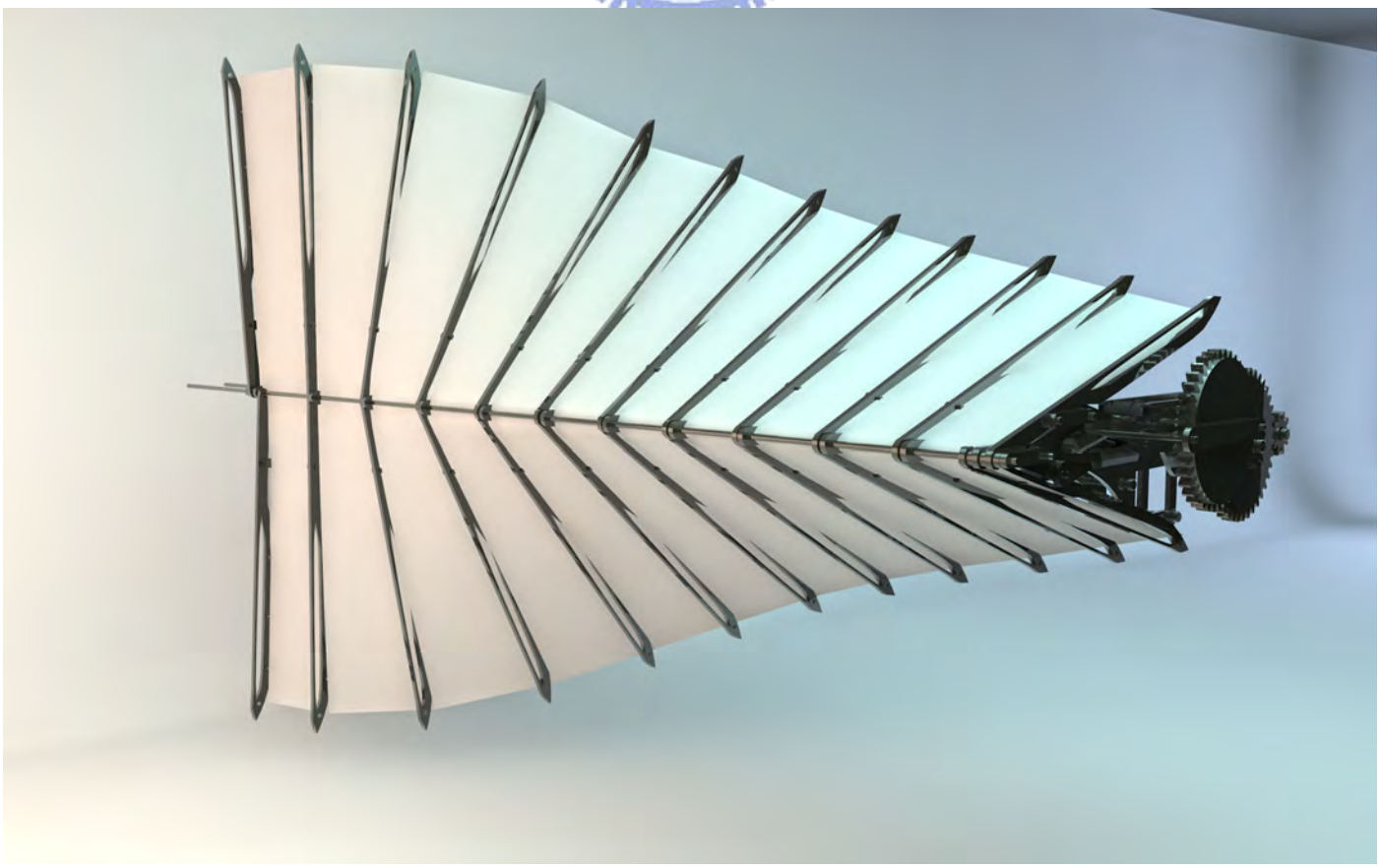
Wave Wall

Mechanical details

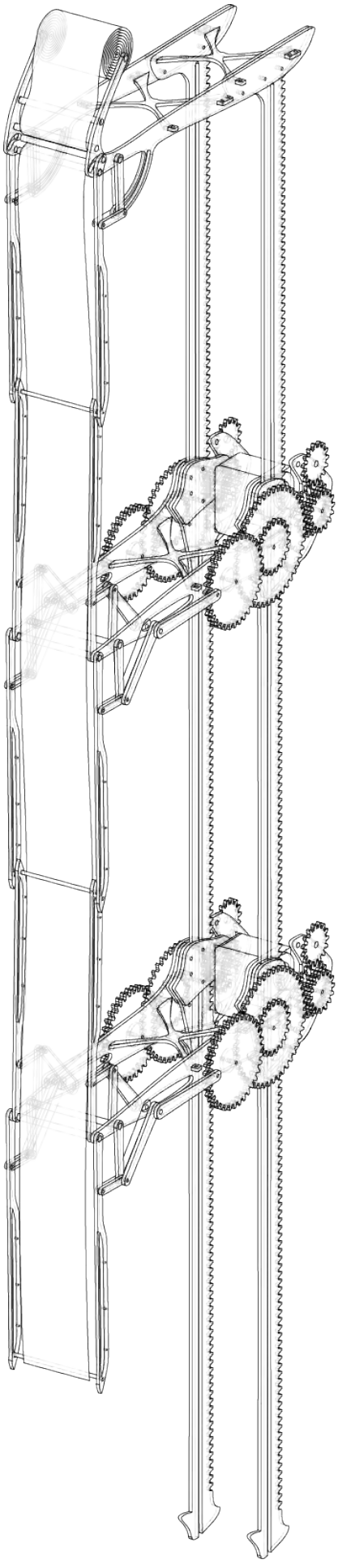


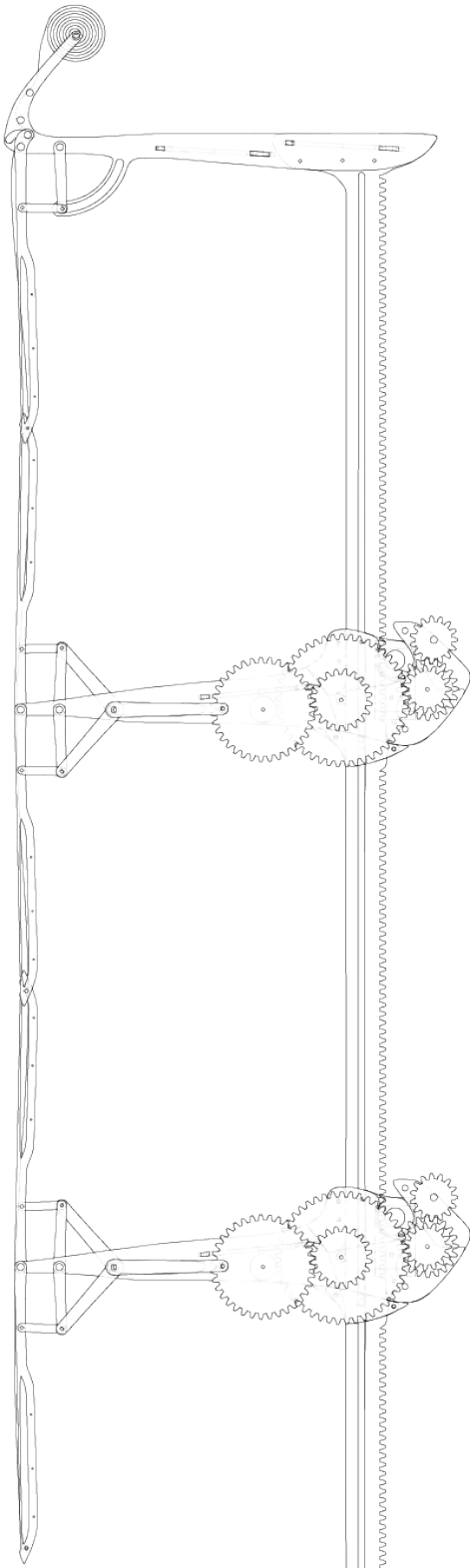


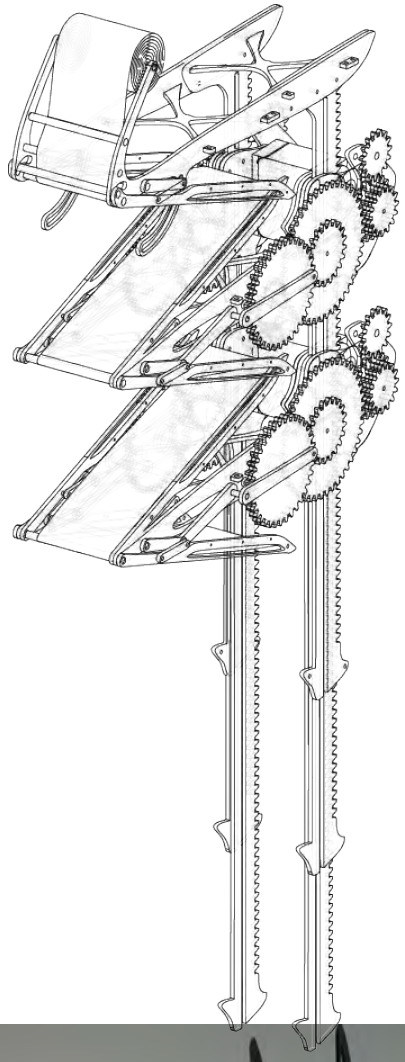
橫向機構骨架

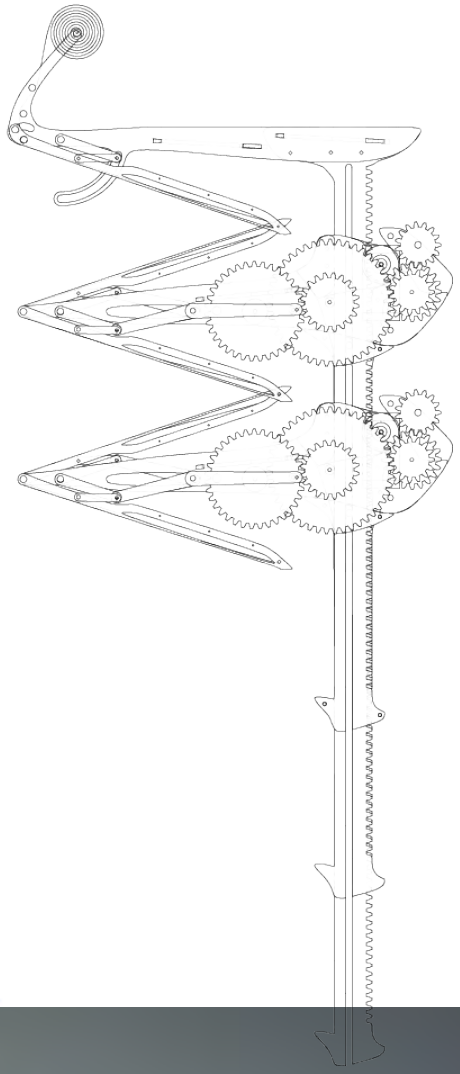


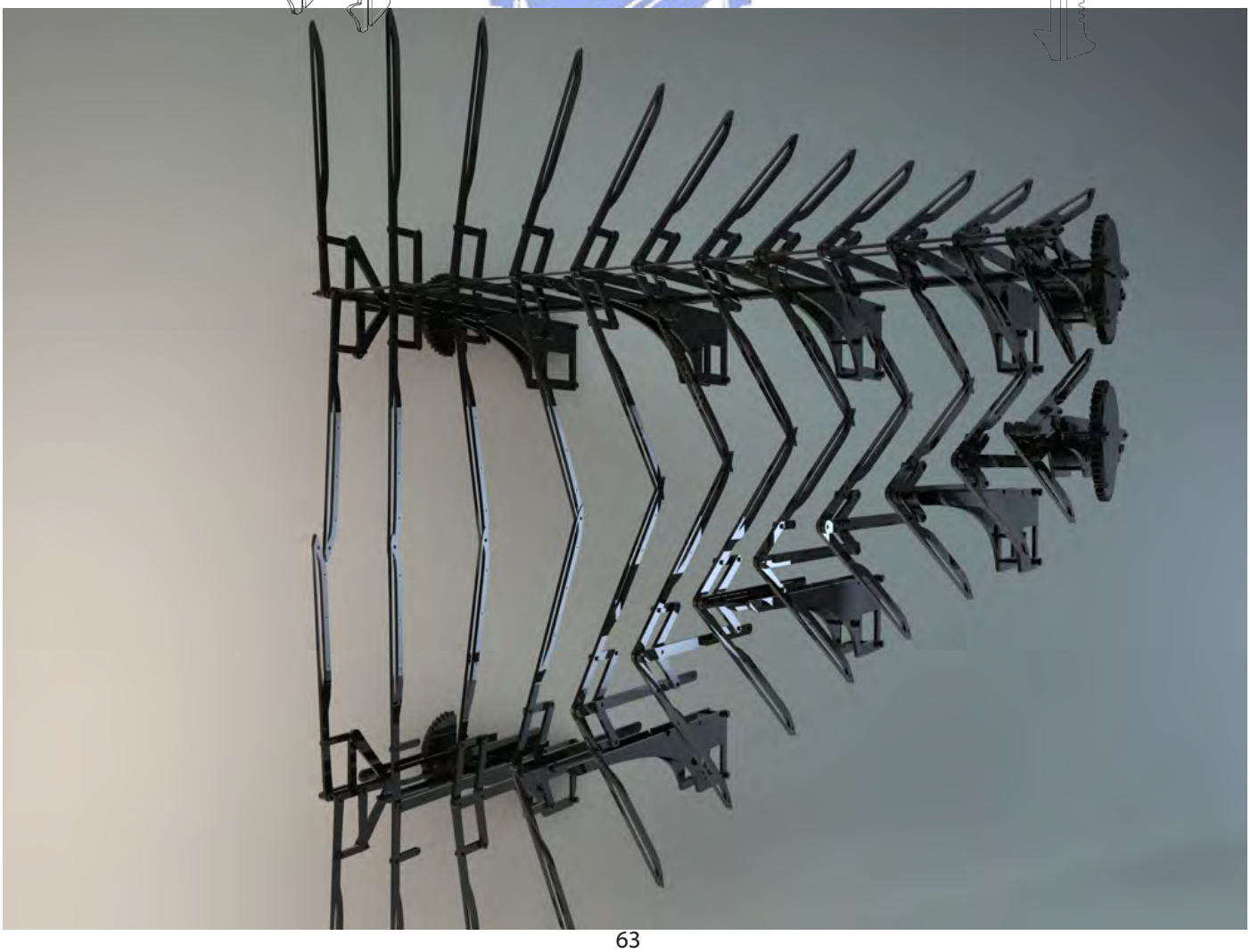
橫向機構











Wave Wall

Mechanical details