

Graduate Institute of Architecture , NCTU  
國立交通大學 建築研究所

碩士論文

波動 - 區域事件與空間的互動影響  
WAVE - Regional events with the interaction of space



研究生:曾景明  
指導教授:張基義 教授

中華民國九十六年七月

## /摘要/

自後現代建築思潮濫觴至今，建築的多樣貌、空間型態與本質，以一種奇觀化現象展演著，過去建築歷史中討論的材料、機能、構造…現在一一地被重新定義、詮釋，似不再是研究所謂“建築”的唯一方法！

當代思潮興起、網路化普及、資訊遍佈…，全球化不再咫尺天涯，全球化議題架構下討論單一價值不再顯的那麼重要，反倒是地方文化議題起而倣尤，姑且不論“全球化”或“區域性”的操作策略為何？！充其量是論述下企圖堆砌、分類、收編的詞彙。

試圖以自身文化底蘊、空間環境與歷史脈絡為背景出發，已更貼近人、環境與區域回歸屬於建築文化空間在當前未來的前瞻性提出看法和省思。

### 一、烏石港海水浴場活動基地規劃設計

企圖改變原有人與海的介面元素現存的規則，創造一個充滿活動能量與流動感的空間，並且將新的生活方式由地方原有的海洋經驗為起點延伸，將風、地形，及各式各樣的社交生活交織在一起，融入大地景色與其變化之中，同時可以以體驗地景變換及“生活事件融入地景”的場所。

### 二、台灣地貌改造運動特展設計創作工作坊 I - 水都台北

一個偉大的城市該有的城市願景，透過經驗分析、規劃開發、建築設計、景觀規劃、基礎設施以整合的概念作為重新建構、想像“水都台北”為主的設計目標…。

### 三、荷蘭國際第二屆鹿特丹建築雙年展 - 海洋臺灣

運用「阻隔」與「跨越」的觀點，互為矛盾卻又同時存在的現象，重新詮釋出一個新的台灣輪廓，重新畫出一張屬於生活的、屬於結合海洋與陸地價值的台灣地圖，並進一步提出海岸空間的發展觀點，如此我們已將自己從「NOWhere」的狀態帶往「NOWhere」的狀態，認識並且知道該如何走下一步。

### 四、交通大學應用數學系 \_ COPMPUTER LAB

最習以為常的空間，往往是最令人忽略…藉由實際案例的操作，實踐人與空間中互動的關係…。在設計概念發想過程中，透過分析、觀察人(使用者)的習性，並利用互動的概念重新定義人在空間只能被動地接受資訊，並進一步地創造資訊而與空間產生互動。

## ABSTRACT

Since the post-modern architecture till now, it shows a spectacular ways of development in variability, spacing and essentiality. In the past history of architecture we defined it according to it's use of materials, function and structure ...ect. But now architecture seems to be re-defined and reinterpret gradually and this is no longer the only method to study the so-called "architecture" anymore.

Due to the rising of modern theory 、 Internet popularity 、 information standardize, globalization is not so far away from us anymore. Therefore under the globalization issues, the discussion on specific value is no longer as important. This topic has been replaced by the local culture. However no matter what the strategy of globalization and the meaning of local area is, it's just a new vocabulary that people attempted to add on, categorize and classified in their own way.

This project is starting from my cultural background 、 historical background 、 and the thoughts on environment space arrange. Trying to be more intimate with people, environment and local area, at the same time returning back the culture of architectural spacing .Also looking from my own point of view on environment spacing of now and the future.

### **1. WuShu harbor -The beach activity center planning**

In this case it's about changing the original rules on the elements between people and the sea. The idea is to create a new space that filled with activities, movement and energy .The starting point is to blend up from original local marine extended experience with the new life style, and combine the natural wind, landscape, and various of social life together. Then fuse up all these elements into the nature and the natural changes of landscape, at the same time people can also be able to experience the transform of landscape and the space that “blends the events of daily life into the landscape”.



### **2. Taiwan New Landscape campaign Exhibition**

It's a vision that a great city need to have. By analyzing the past experience, and through the city's develop planning, architecture design, basic public construction, and the landscape planning. This project is combined the concept of reconstruction and imagination to create the design of " The water city in Taipei ".

### **3. International Architectural Biennale Rotterdam**

It's applying from the point of "blocking" and "over crossing". The appearance that contradict but does existing at the same time. This concept is to re-analyze a new outline of Taiwan and at the same time to re-paint the map of Taiwan that belong to nature, and belong to the combination value of ocean and land.

Also trying to propose the further concept on development of the coast line space arrange. Therefore we are able to lead ourselves from the state of "No Where" to "Now Here", as well as understanding and knowing what is the next step.

### **4. COPMPUTER LAB Department of Applied Mathematics , NCTU**

The most used space that we often un-notice. Through the operation of actual cases, this case is to operate the relationship between human and practical space. The whole design concept process is about to analyze and observed the behavior of the users, and using the concept of interaction to redefine that the space can only be accept information passively, it can also create further information and interact with the space.



**Introduction** , DESIGN PAPER

<b>SUMMER 2004</b> 國內套裝旅遊線地景改造運動競圖 烏石港海水浴場活動基地規劃設計	01-18
<b>FALL 2004</b> 台灣地貌改造運動特展設計創作工作坊 I - 水都台北	19-44
<b>SPRING 2005</b> 荷蘭國際第二屆鹿特丹建築雙年展 - 海洋臺灣	45-70
<b>SPRING 2006</b> 交通大學應用數學系 _ COPMPUTER LAB	71-82



**SUMMER 2004**



觀光局繼地景及門戶系列國際競圖活動後，再次辦理國內競圖活動，有計畫的改造台灣的城鄉風貌。

本次「套裝旅遊線地景改造運動國內競圖」包含北海岸、桃竹苗、脊樑山脈、阿里山、雲嘉南、馬祖、花東、恆春半島及高屏山麓等九條旅遊線，共十個設計案。

其規劃方向可分別為兩類

(一) 規劃設計類：

1. 北海岸旅遊線烏石海水浴場活動基地規劃設計
2. 北海岸旅遊線白沙灣海水浴場及週邊環境改善計畫
3. 桃竹苗旅遊線南庄旅遊入口資訊站及週邊環境改造工程
4. 脊樑山脈旅遊線谷關溫泉區街道景觀改善工程
5. 阿里山旅遊線觸口管理服務中心暨龍美轉運服務設施新建工程
6. 雲嘉南旅遊線北門遊客服務區暨景觀遊憩區風華重現
7. 馬祖旅遊線北海坑道據點地景再造

(二) 社區總體營造與規劃構想書類：

8. 花東旅遊線鯉魚潭遊憩區環境改善計畫
9. 恆春半島旅遊線小琉球白沙港舊碼頭景觀改善及商店街休閒意象塑造
10. 高屏山麓旅遊線新威苗圃暨茂林國家風景區管理處週邊環境改善

2008年觀光客倍增計畫  
套裝旅遊線地景改造運動  
國內競圖

NEW TAIWAN BY DESIGN



圖1-1 北部海岸線觀光休憩系統圖



圖1-2 基地位置圖

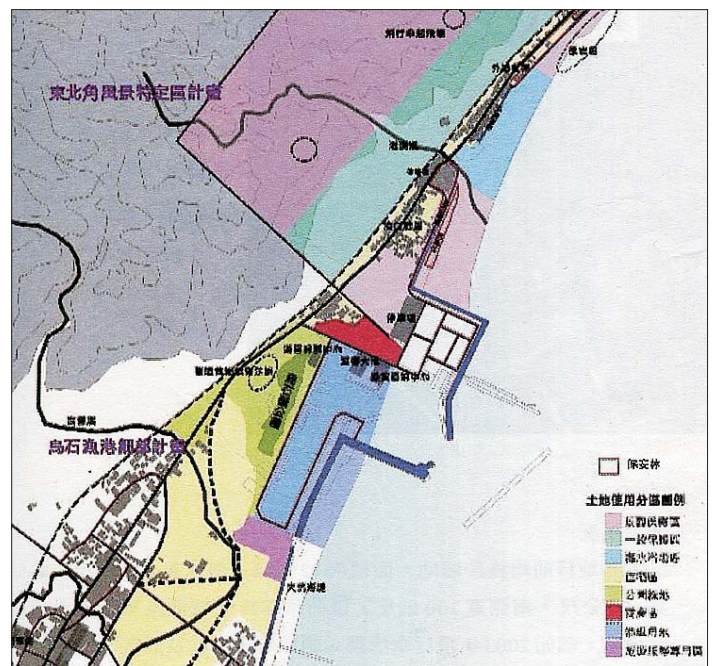


圖1-3 土地使用分區圖



壹、設計主題

一、設計目標

規劃成為台二線景觀道路路廊上東北角海岸風景區南入口，並塑造北部濱海海水浴場新樣貌。

二、範圍及現況分析

(一)、位置及範圍

本基地位於蘭陽平原東北端，西靠雪山山脈，東面太平洋，南鄰烏石漁港，為蘭陽平原進入頭城沿海地帶地形上開始變窄之處。行政區域屬於宜蘭縣頭城鎮，跨外澳及港口兩里，土地使用計畫位於「東北角國家海岸風景特定區」，範圍內，詳圖1-1，圖1-2

基地範圍西至港口社區堤防及外澳社區堤防所形成的堤線，南、北分別以港澳溪、外澳溪為界。基地約12公頃，包括海堤與外灘，南北約800公尺，寬度南、北側約分別為200公尺及100公尺，為一狹長形區塊的海灘。

(二)、地權與地用

本基地都市計畫分區均為海水浴場，該土地使用分區管制與條例詳表一，目前均為未登錄地，基地現況詳圖1-4所示之沙灘地



圖1-4 外澳沙灘空照圖

三、設計內容需求

項目	標地	說明
海濱浴場區	1.海濱浴場淋浴與換洗空間	區內土地使用規範依照都市計畫書辦理
	2.公廁	
	3.停車場	
	4.人行動線規劃	
	5.簡易餐飲服務設施區	
	6.休憩區	
	7.入口意象規劃	
飛行傘降落專用區	開放空間及飛行傘降落專用區相關設施	配合飛行傘基地於沙灘規劃一處專用降落區以區隔海水浴場之遊客活動

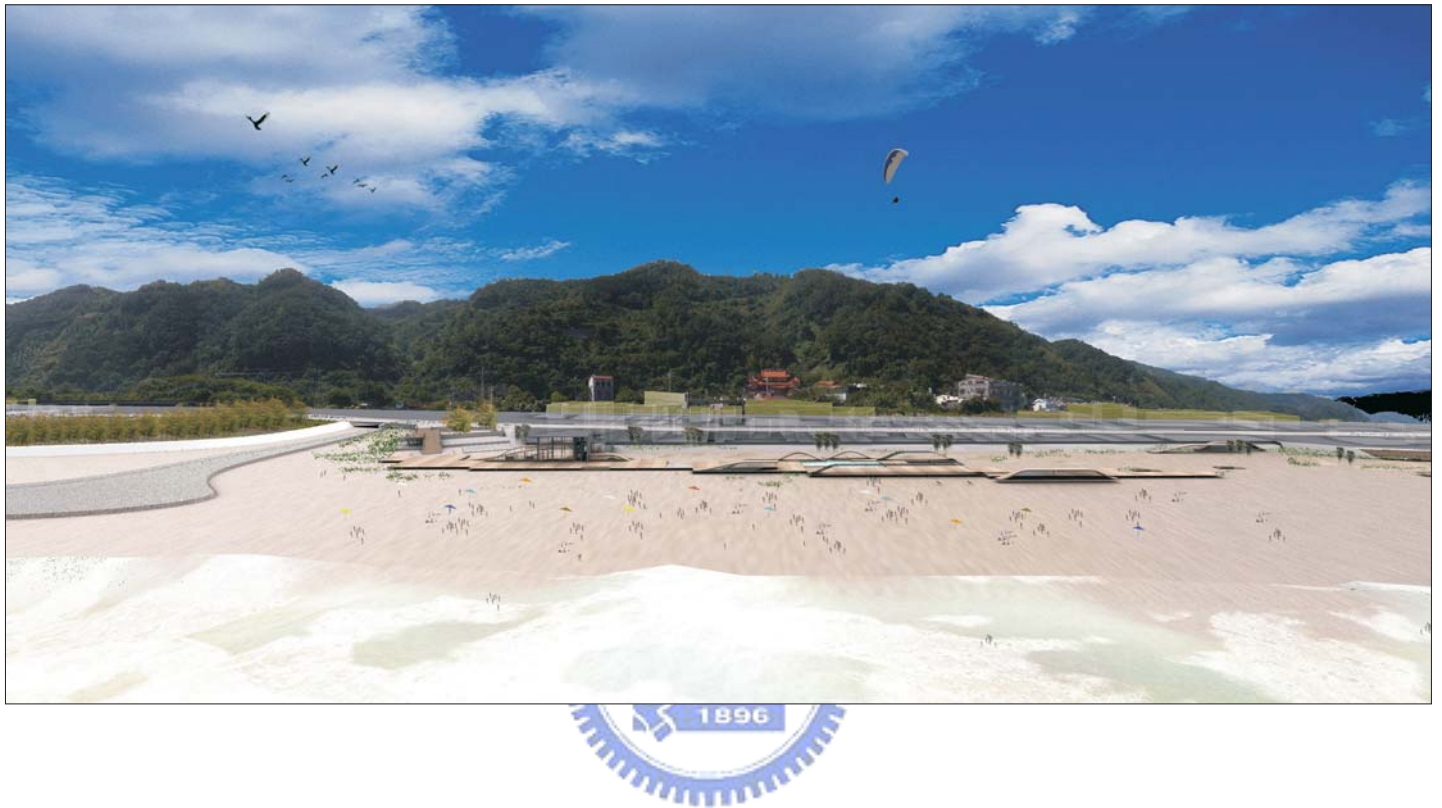
表一 海濱浴場區土地使用分區管制

項目	海濱浴場
性質	海濱浴場區內之土地，以供設海水浴場及其附屬設施為主
開發限制	(一) 建蔽率不得大於百分之三。
	(二) 建築物之簷高除救生眺望設施外，不得超過二層樓或七公尺。
	(三) 為維護遊客之安全良好視域，各種設施之申請應先送該風景特定區管理機構會同核准。
	(四) 本區內得興建管理室、儲藏室、休息室、更衣室、沖洗室、冷熱飲販店、廁所等有關設施。
	(五) 龍門溪之出海口部分，得兼供划船使用。

四、經費

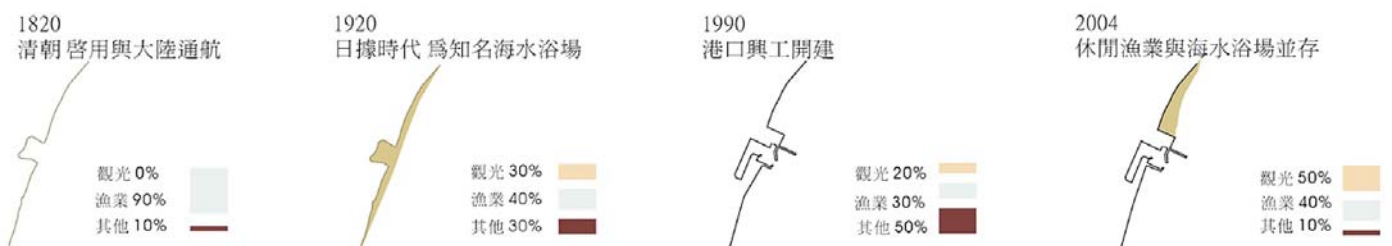
建設經費：約新台幣4千萬元

### 基地分析 | 概念



這一片因開闢漁港而再生的海水浴場，在漁業衰退的同時竟成了當地產業及生活方式改變的**契機**：

我們由基地這片沙灘所蘊藏的豐厚地景生命潛能得到啟發，將之視為後漁業時代台灣生活中的一個充滿生命、休閒與成長活力的**重要目的地**。在設計提案中，我們企圖改變原有人與海的介面元素現存的規則，創造一個充滿活動能量與流動感的空間，並且將新的生活方式由地方原有的海洋經驗為起點延伸，將風、地形、及各式各樣的社交生活交織在一起，融入大地景與其變化之中。在未來，基地不再僅是短暫停留的戲水海灘.....而是一個同時可以**體驗地景變換及“生活事件融入地景”**的場所。





基地分析 | 概念

>> 30KM

在2005年北宜公路通車後，基地與台北市通行時間將大幅縮減，並使原本就位於北海岸旅遊端點的基地同時與國內和國際相接軌。

>> 10KM

結合附近的景點：頭城老街、烏石漁港、烏礁石遺址公園、蘭陽博物館、龜山島等資源，基地週邊將形成完整的旅遊網絡。

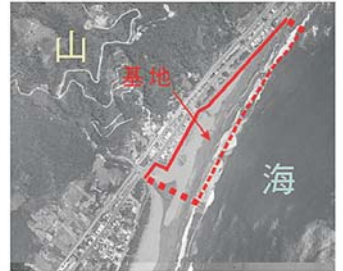
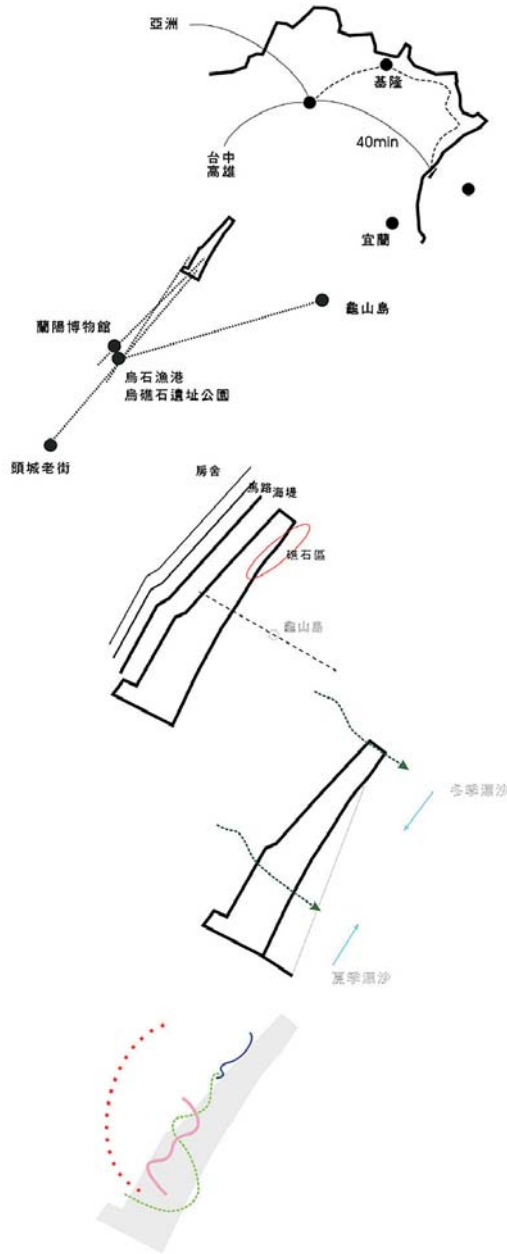
>> 5KM

背山望島以及基地狹長的地形塑造了流動的空間感，在基地的每個角落都可以看到及體驗到山或海的自然景觀，而北端的礁石區更將訪者帶入如畫的自然景色中。

基地不僅位於山與海的交會位置，更是由山間而來的河川與洋流帶來的沙地而組成，充滿著豐富而多元的生態。

>> 1KM

基地內，人們與自然生態自由的活動，留下了行動的痕跡。

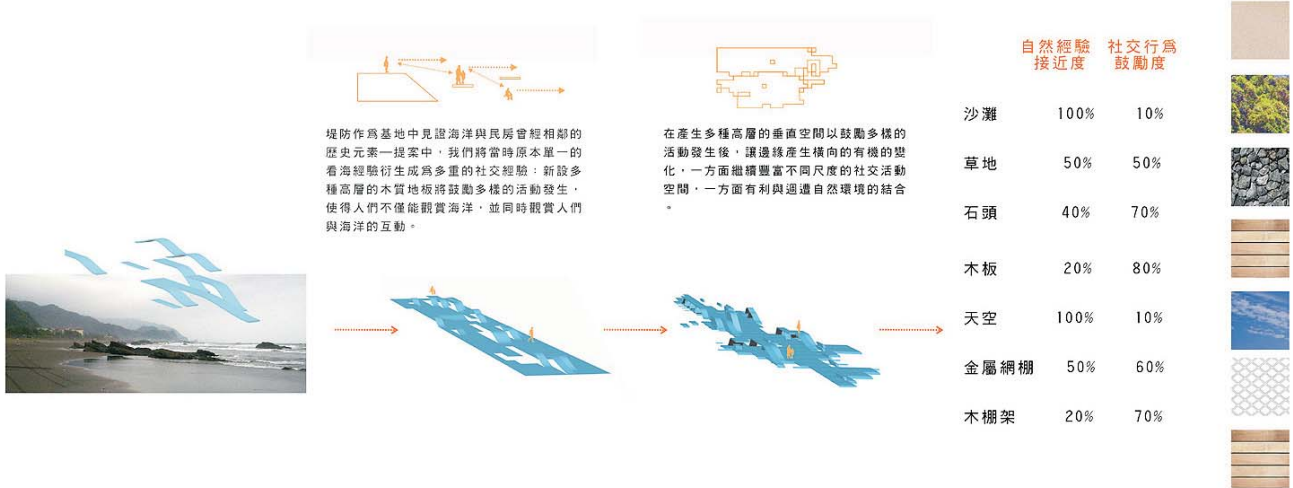


由山到海洋的材質轉換。

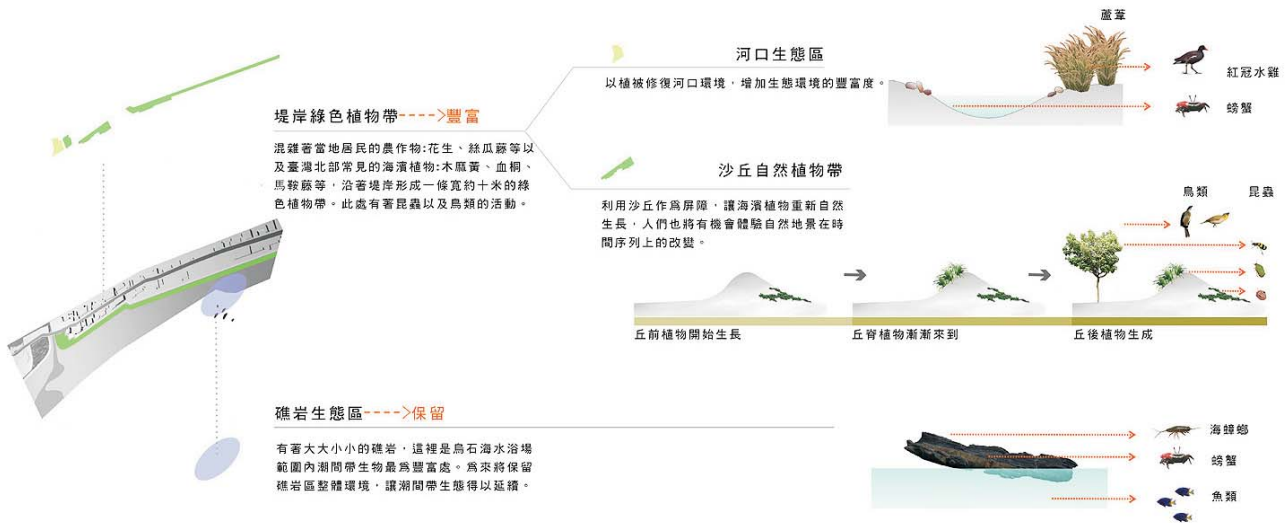


概念 | 願景

>> A. 一個延伸海洋經驗的沙灘- 擷取地景中元素共通的形式語彙及既有人與海的介面，配合不同材質的選擇創造多層次的地景感受經驗，為一個有變化的社交空間。



>> B. 多元的海灘自然生態-保留海灘上現有的重要生態環境，並透過自然元素的運用進而豐富生態成為一個動態、成長的系統。



>> C. 一個容納彈性、自主的休閒活動空間-以多種空間尺度來滿足訪者多樣的空間需求。

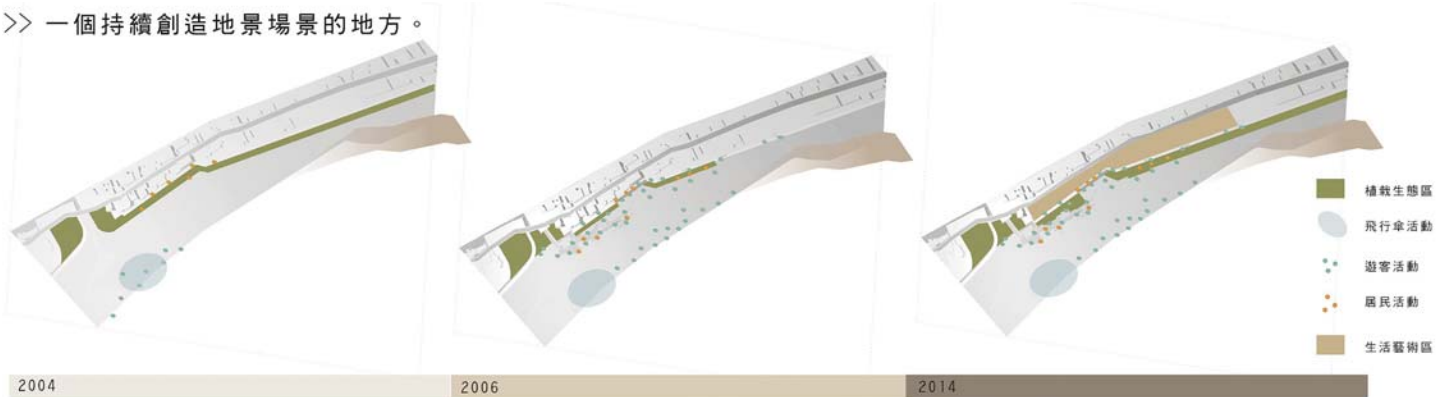




願景 | 設計原則



>> 一個持續創造地景場景的地方。



2004

現況的海水浴場遊客的活動集中在固定的範圍內，遊憩行為較為單一，飛行傘活動為一特色。

2006

設施物建置後，同時提供遊客以及居民多元的遊憩選擇，遊客及居民的活動場域重新交織。同時，植栽生態亦透過生態手法重新復原。

2014

居民及遊客活動場域持續豐富，進而帶動堤防上房舍的重新發展。精緻民宿、餐廳、茶館、藝術工作室，沿堤防形成一處充滿生活藝術的觀海大道。





### 設計說明

#### >>入口區



入口木棧道

機車停車場

汽車停車場

遊客服務中心

**串連：** 創造平行於海岸線的軸線，用最大的觀海面將長型的基地串聯。

堤防海濱步道 將原本的堤防邊界轉換為海濱步道軸線，而熱鬧的住宅區，自然風景及景觀平台，將創造整條沿線豐富的韻律。

木平台休憩區 木平台休憩區的動線則形成了另一與海等高的軸線。而軸線的視覺端點消逝在的觀景梯台，將兩個軸線結合在一起。

**島嶼：** 以分散的分散的小型活動空間，配合動線一同創造多元完整的休閒設施空間。

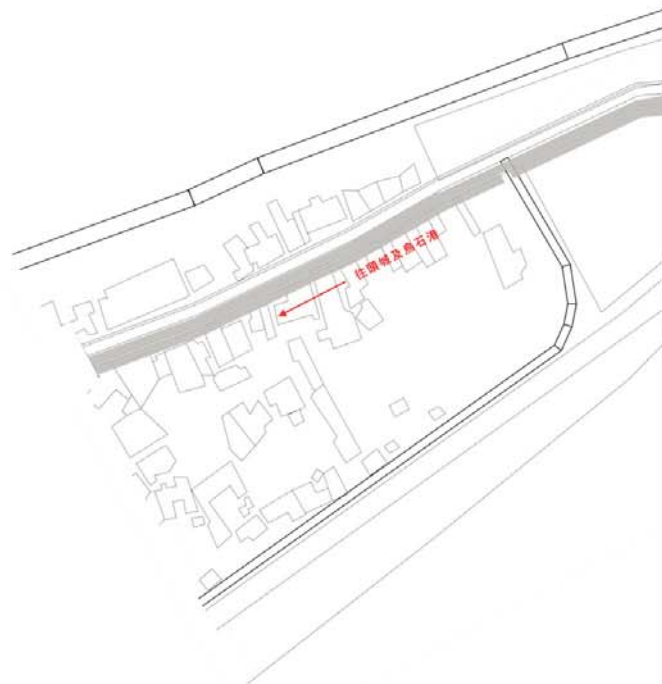
沙丘植栽 形成一塊塊植栽島嶼，位於木平台區與堤防之間，形成沙灘邊得以乘涼的休憩點，由居民與遊客一同共享。觀景平台及與沙灘的連結 沿著堤防設置住宅區與沙灘的連結，另於接近礁石區的基地北端設置眺望平台和觀景梯台，提供靜態空間的場所。

遮陽棚架 由木平台區升起的棚架形成沙灘上有遮蔭的小型活動區域和烏石海水浴場的獨特意象。

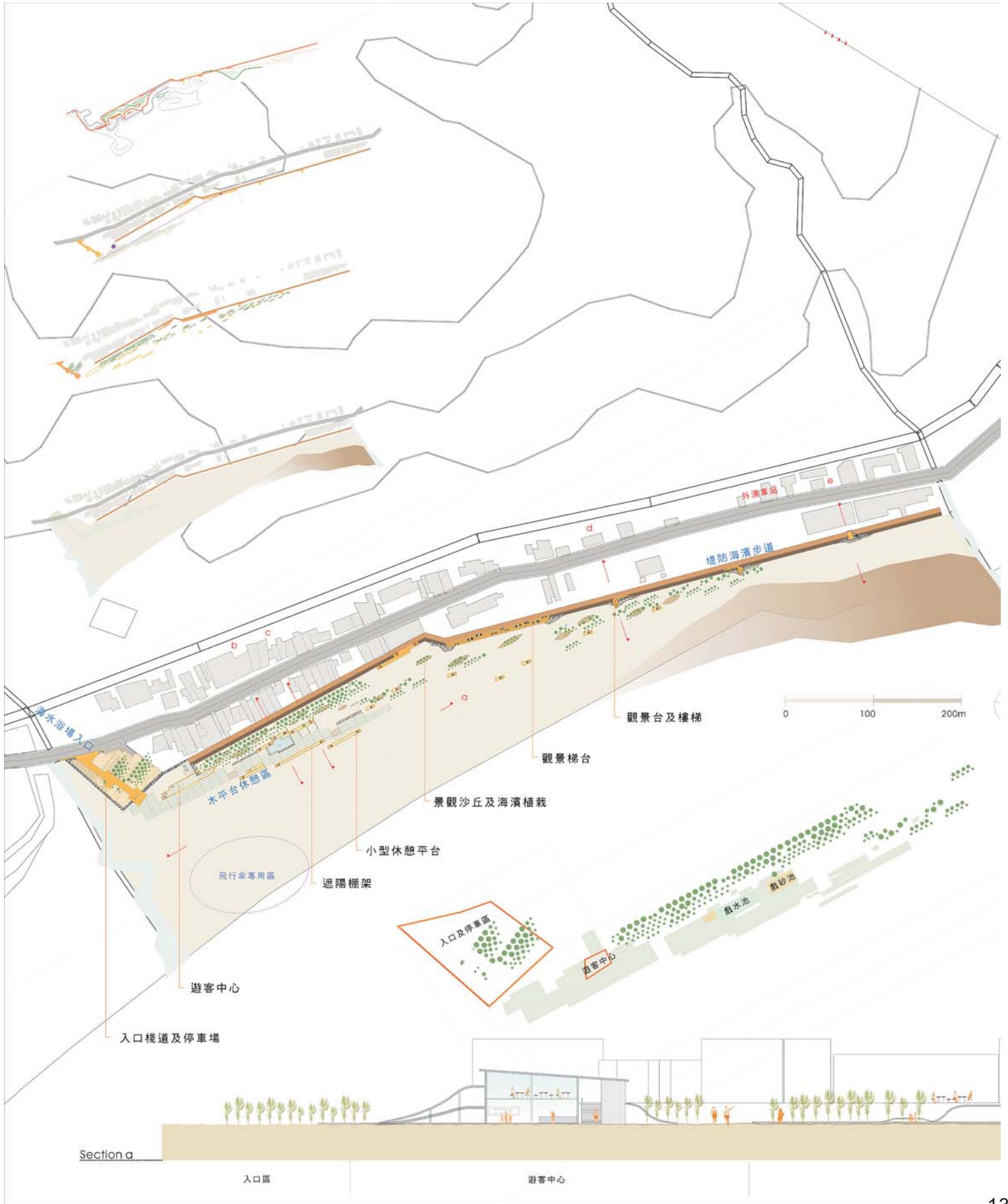
**區位：** 在都市與沙灘間配合的環境條件加入及轉換出不同人們活動的區域場所。

木平台休憩區 由入口連結到活動較頻繁的南端沙灘上，在其上增加木頭鋪面，提供主要的活動區域。

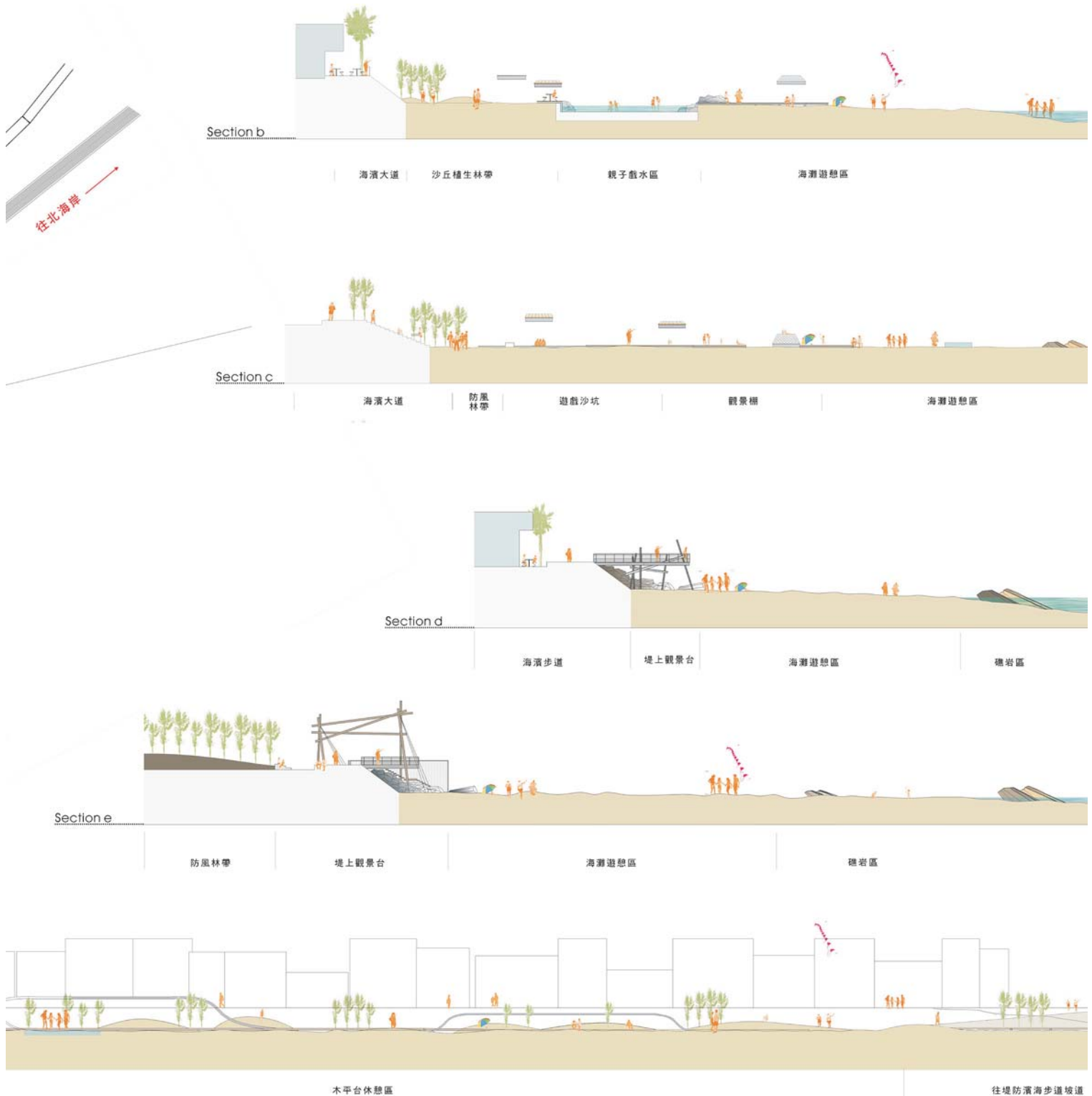
堤防海濱步道區 活動將隨海屋舍的正面轉向海洋，而堤防則將成為動線的主要幹道。將原本的邊緣轉化為居民與沙灘間的媒介與提供靜態的觀賞空間。



設計說明



### 設計說明





設計說明 | 木平台休憩區





設計說明 | 木平台休憩區

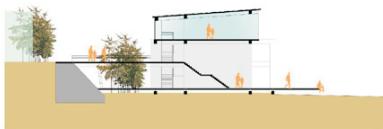
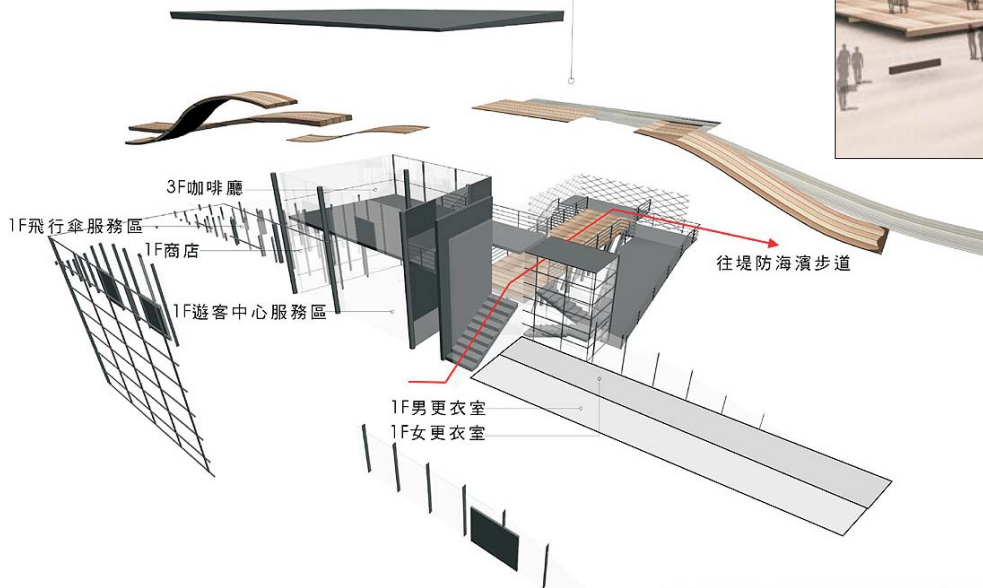
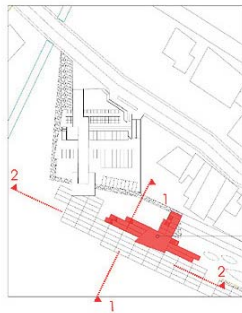
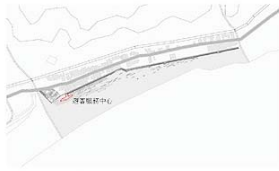




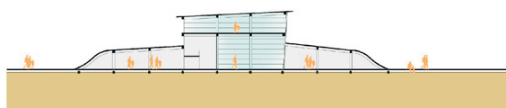
設計說明 | 堤上觀景平台



>> 遊客服務中心



Section 1 遊客中心短向剖面圖



Section 2 遊客中心長向剖面圖





FALL 2004





水都台北  
DESIGN WORKSHOP | TAIPEI-CITY OF WATER

本工作坊藉由設計研究的方式，來探討大台北地區水資源開發利用、再生、人與水等題目，希望藉由能台灣水土、森林、人文脈動，"尋找出台灣水資源的多樣風貌"，堪稱台灣的河殤。

在賀伯颱風及林肯大郡、汐止淹水事件等一連串水土災難事件的創傷後，「水」已成為目前最熱門的環保話題。生活在台灣的每一個人，都應該共同學習保育我們永續生存的空間。

傳統的水利工程僅針對防洪治水等議題提出保守防禦性的基礎工程，未能將生態、環境的永續價值整合於水岸空間，甚至提出與水共生的積極空間創意。台北城的歷史與水有過密不可分的關係，但是伴隨著城市發展與人口密度的提高，台北卻以兩百年堤防標準違逆自然的方法來「治水」，高聳的提防將台北城圍成一座孤島，社子島與汐止還是躲不掉淹水的惡夢。

因此本工作坊借重低於海平面的荷蘭建築師分享荷蘭人在過往的歷史中，如何學習與水共存的永續空間創意的經驗。舉凡國土規劃、都市開發、建築設計、景觀規劃、基礎設施都以整合的概念發揮高度的空間創意。

這次工作坊選定基隆河與淡水河交接的社子島與潮汐最上游的汐止鎮，作為重新建構水都台北的想像設計目標區。台北須加強水域鄰接空間的圖，讓每一個台北人真正地享受水岸空間，才是一個偉大的城市該有的城市願景。

臺灣地貌改造運動特展  
TAIWAN

NEW LANDSCAPE MOVEMENT

DESIGN WORKSHOP | TAIPEI-CITY OF WATER

**PARTICIPATING PARTIES:**  
**DUTCH ARCHITECTURE FIRM STUDIO SPUTNIK:**  
**Architect:** Jaakko E. Van'tSpijker, Henk J. Bultstra  
**GRADUATE INSTITUTE OF ARCHITECTURE N.C.T.U**  
**Professors:**  
Chang, Chi-Yi、Hou, June-Hao



臺灣地貌改造運動特展  
TAIWAN  
NEW LANDSCAPE MOVEMENT



清。雍正。台灣輿圖 A Old Map of Taipei in the “清” dynasty,

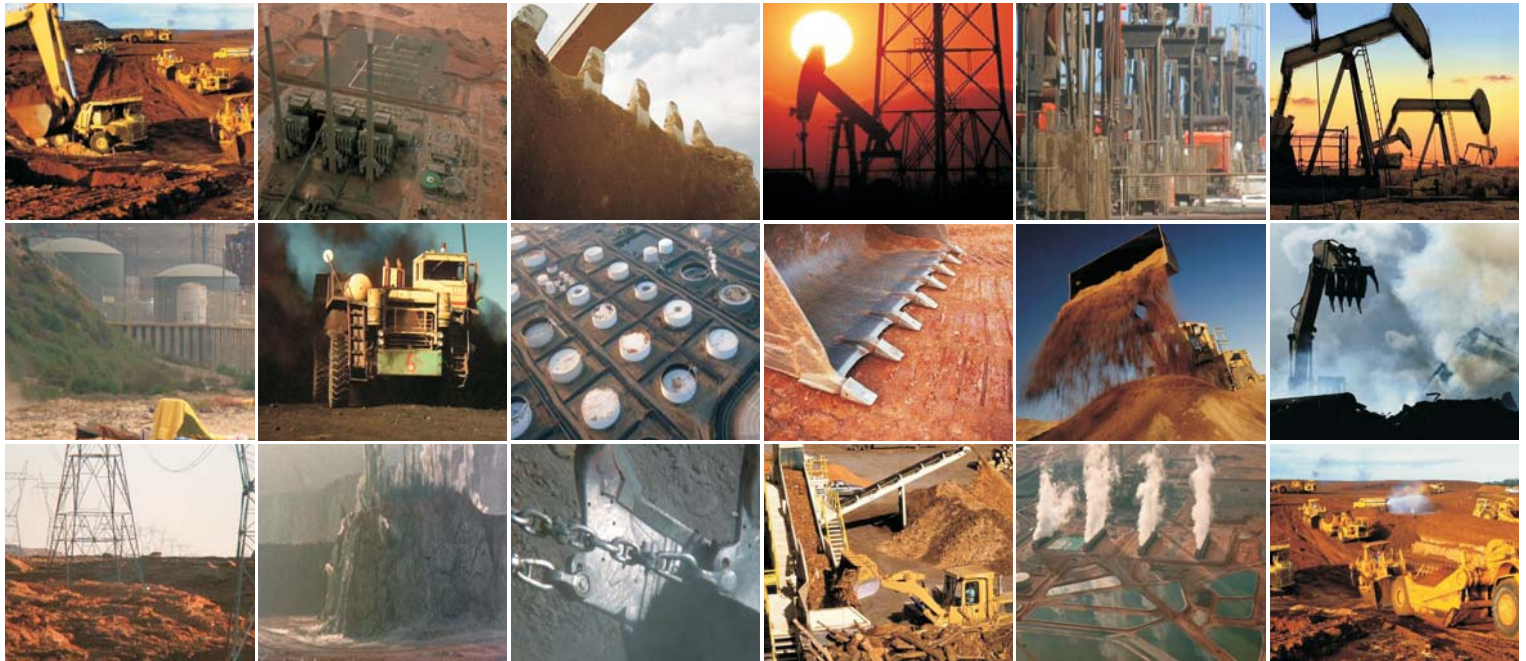
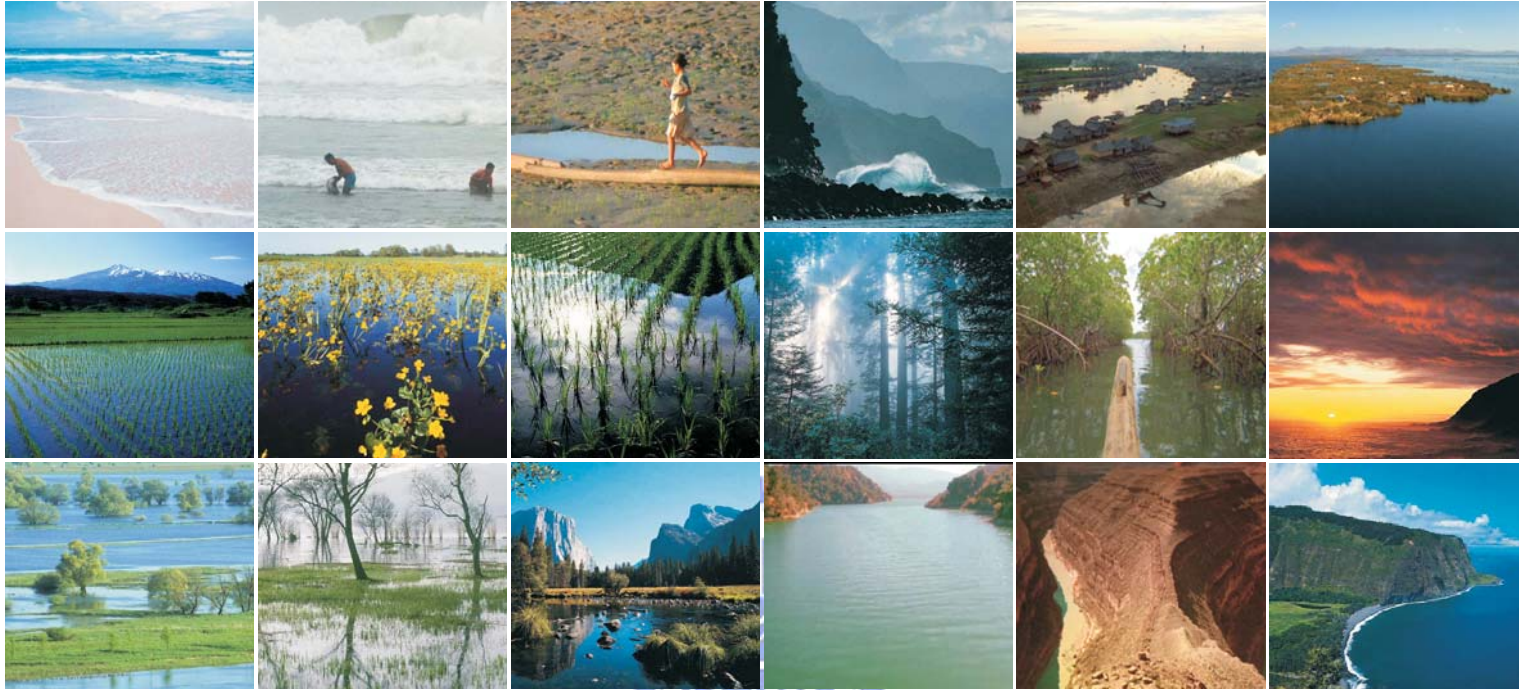


台灣土地故事。台北盆地 The Taipei Basin



台灣土地故事。台北盆地 The Taipei Basin









寄生蟲？ 宿主？  
失序的關係

Human civilizations have been parasitized on Earth for many centuries.

The word "parasitize" means we used to do more harm than good.

We can see this in Taipei now a days.

We DID do something wrong to the Tamsui River, used to take it's

Advantages for granted and thought it as a threaten.

Everyone knows that Cities can't survive without surface water, then why

we thought the river as a threaten in Taipei?

That attitude is VERY WRONG.

人類(寄生蟲) 宿主(自然)

為何人類會短視到爲了個人的慾望將賴以生存的世界,視如糞土,極盡的壓榨殊不知,對宿主的破壞就是提前結束自己的生命!!

被壓榨後的環境造成水循環失序,而產生的自我治癒行爲卻引來人類的不斷在破壞,形成惡性循環!!

為何寄生蟲會覺得宿主對自己有害呢!?!?

人定勝天 ？

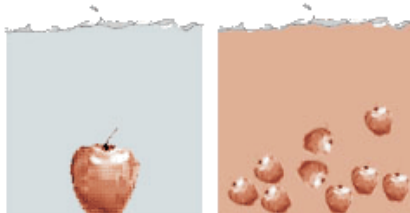
人類一次又一次深陷在自已所創造的災難，越是顯現脆弱。

人類將自己賴以生存的環境破壞的滿目瘡痍，自然資源也面臨消耗殆盡，對於永續環境的呼聲日益強烈；然而，與水失序的關係，究竟會爲人類未來的命運演奏出什麼變調的樂章呢？



Stand point

We should find out **NEW** relationships with water !!



When you put apples and water into a same glass. It could be apples and water or apple juice.

In apple juice, the apples have changed into something new and so has the water



When you put a city and water into a same place. It could be city and water or city juice.

In city juice, the city have changed into something new and so has the water



There is water in our buildings, bounded by pipes and only allowed to go to some particular places when we people need them. Maybe it's some how a reversible relationship, the buildings and infrastructures are for waters, we people walking in pipes and only allowed to go to places where water needs us



Why can't we stand on water surface? Why don't we work out some ways to stand and walk and make our lives "on" the water?



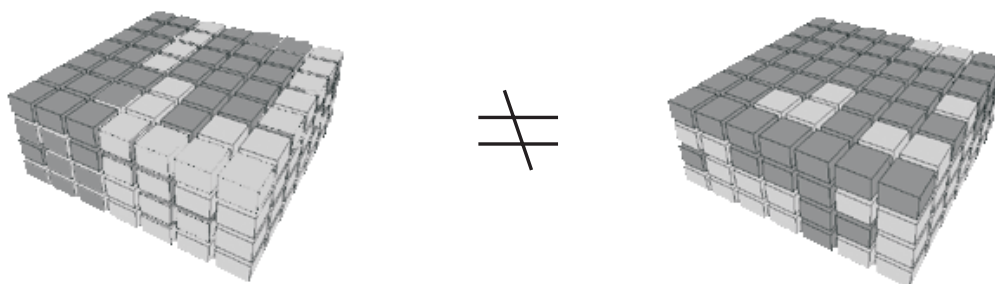
There are emergency life boats on the roof top in this city, So that whenever the water returned, citizens can surrender the city to the floods. Go somewhere and wait till the water is gone.



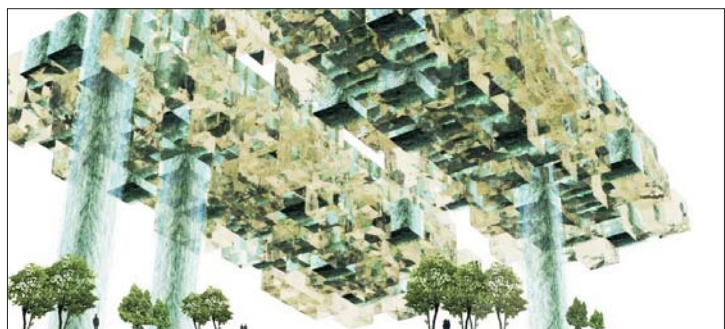
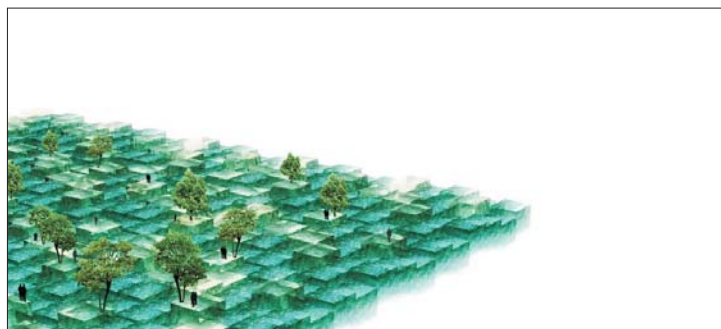
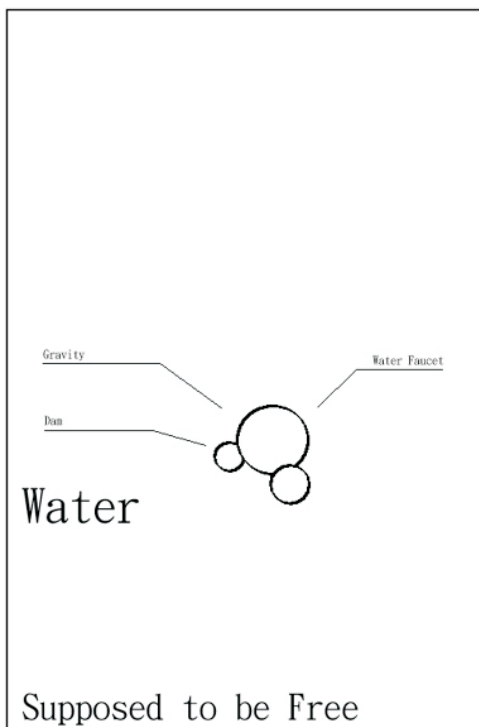
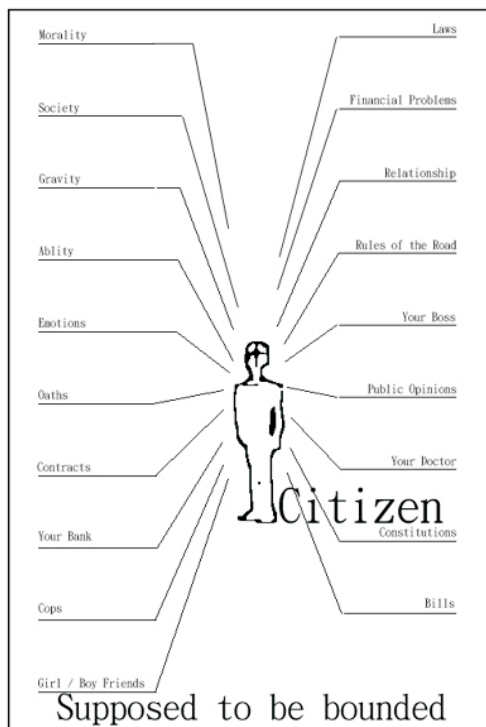


都市的使用應以容積來計算,而非面積來思考  
當水流泛起,水流在意的也是容積,而非面積。  
我們和水共用的是容積,而非土地。

In a place as crowded as Taipei,  
we should count our territory by volume, not coverage.  
When water flows in to a place, cubage also means more then area.  
We share the cubage with water, not land.

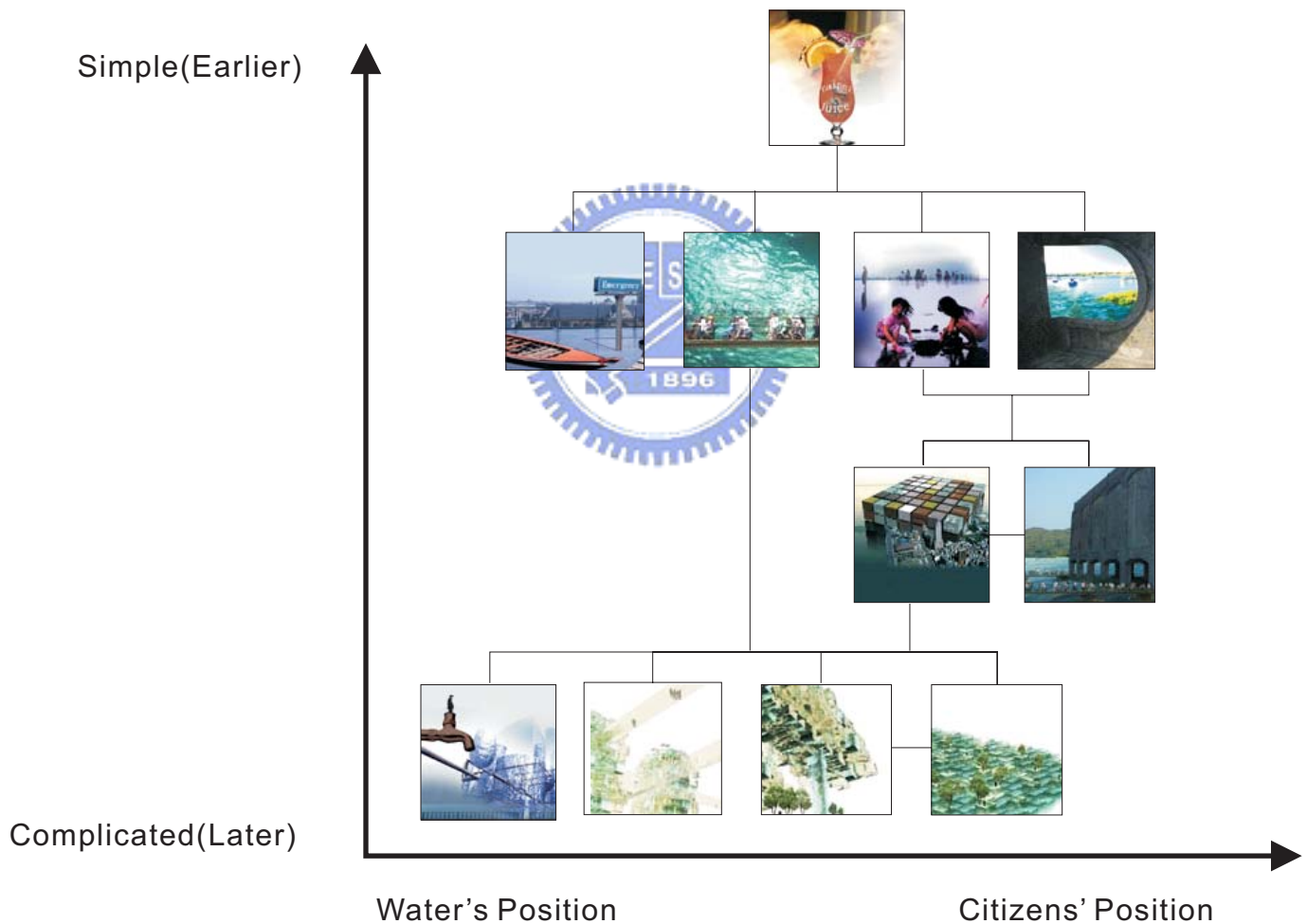






Here is a simple arrangement of all ideas we have shown in today's presentation. Being a generator of ideas is an interesting thing but however, being a responsible designer, there must be some way to pick up the strategy in which they carry it out. That's why we show the "family tree."  
 "We believe everyone has one's favorite dream of water and city."  
 Through process like this graphic, we can understand the relationship, the common grounds, and the antinomies.

## The Family Tree of the Ideas



In our following process, we'll going to find out our own concern with in our team. I believe you can also find yours by the same approach. It's easy. Find your favorite dream, locate it on the graphic, and look at the proposals linked with it, and see if They are what you want.



**Something for FUN**  
To make citizens close to the water.

**Something for how we drink it**  
To solve the increasing problem of water supply.

**Something we MIXED with water**  
Create more space both for the river and the people.

**Something for SAFETY**  
Secure our supply and traffic system.

## What are there about "JUICE" ..



### Our dreams about water and city Statements



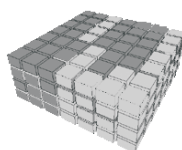
We should produce spaces in which people will have fun with water's participation.



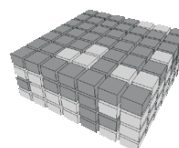
We should keep water with in our city, in our landscape or buildings, not only in the dam of "翡翠"



We share cubage with water, not land

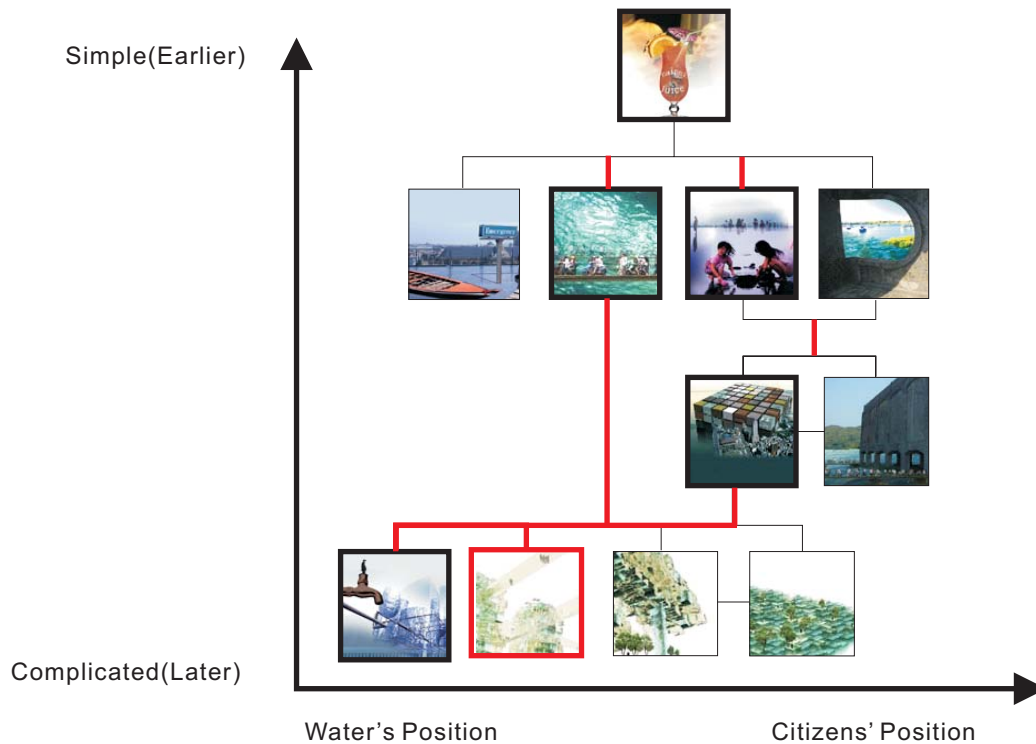
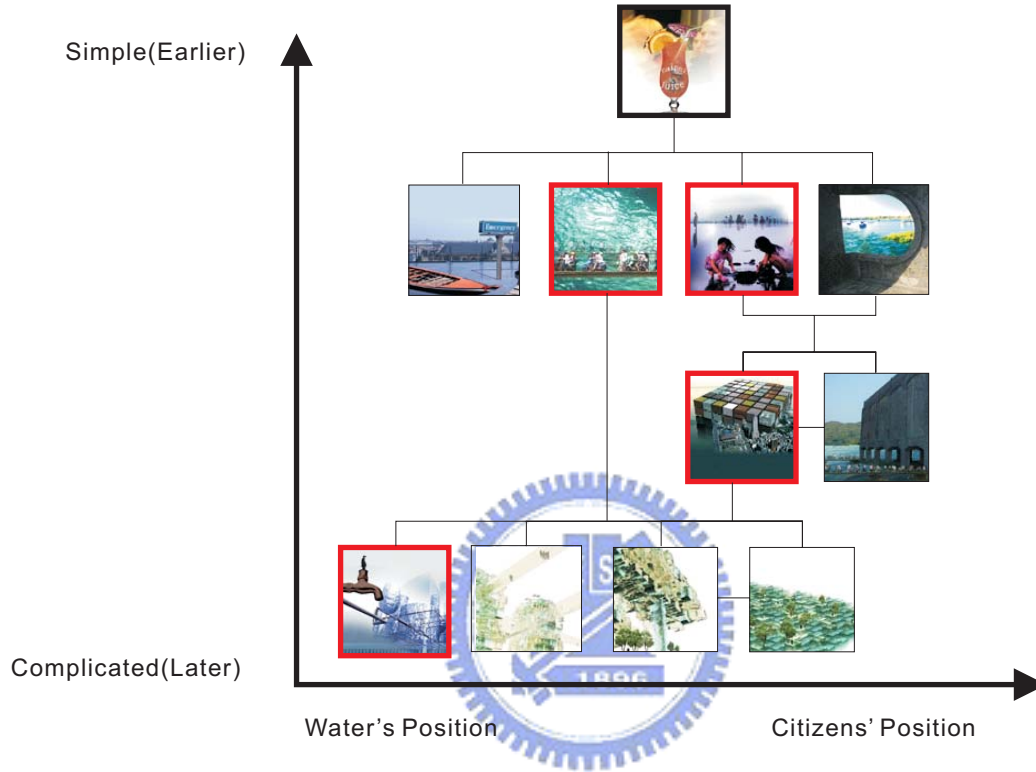


≠

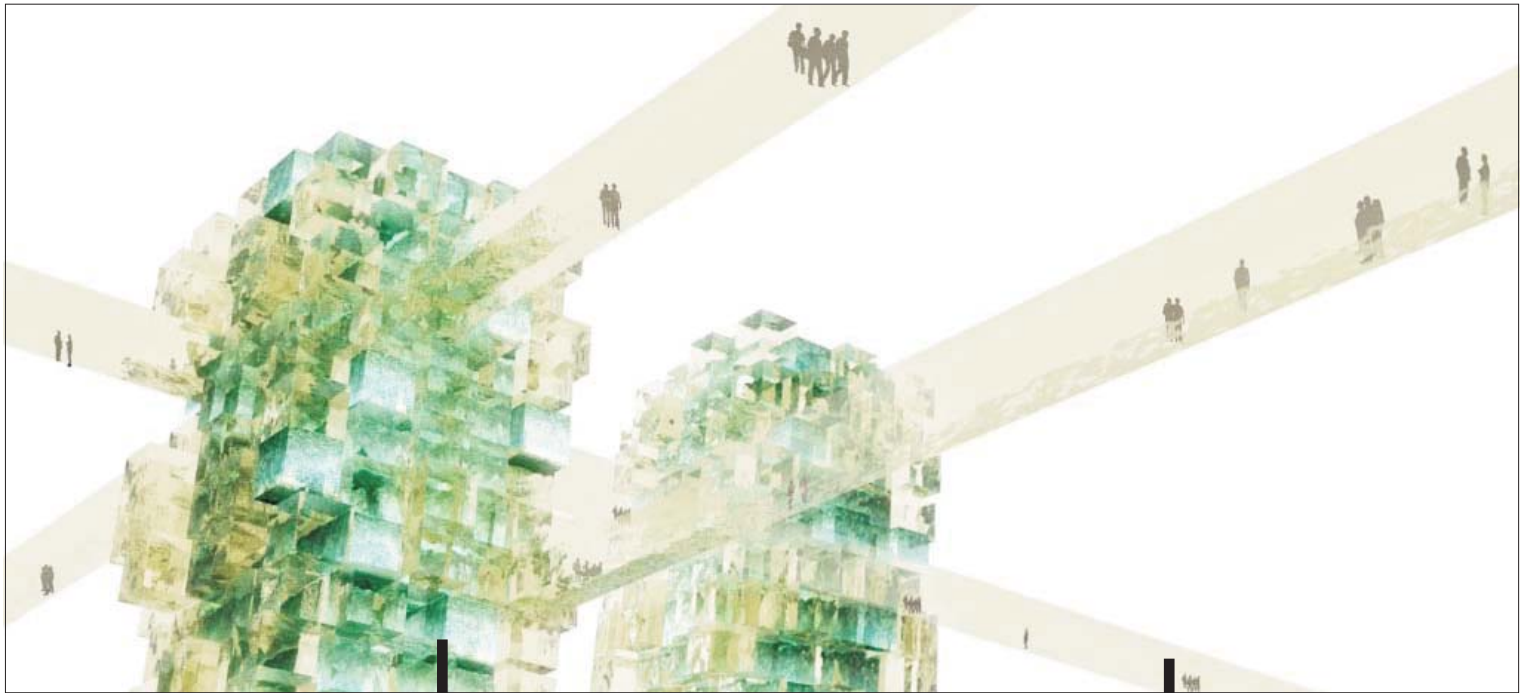


If we can't count on dams, we can secure them in pipes.

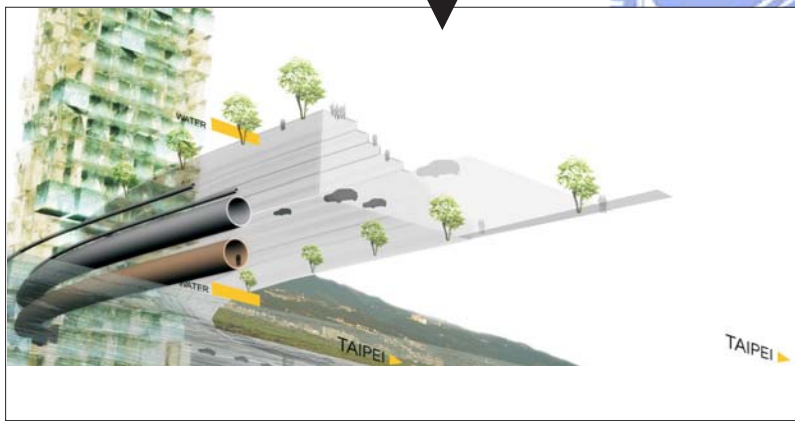
# The Family Tree of the Ideas





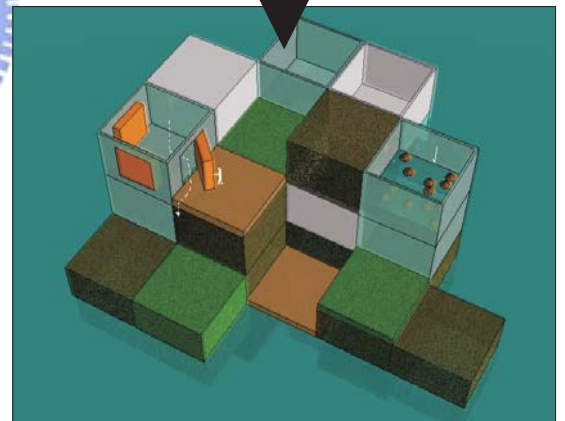


Pipes

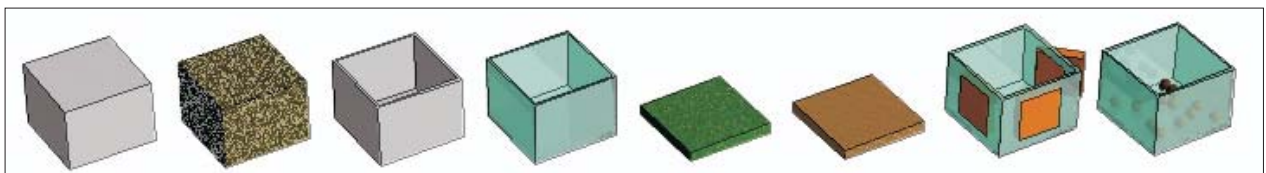


Pipes ensure the safety of supplying and traffic system, protect important buildings and any other things can't be contained in a water-proofed cub but could be damaged by water.

Cubes

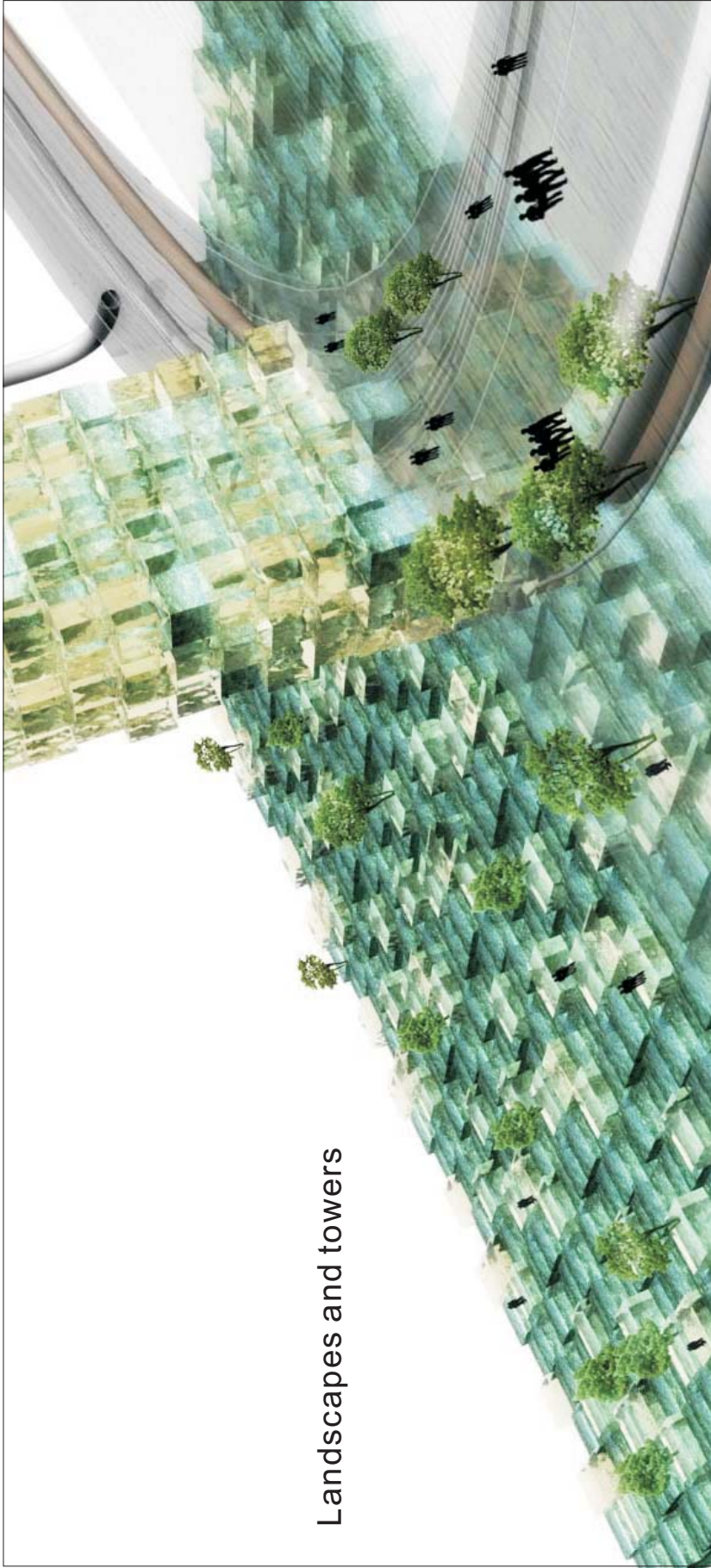


We cut the city into cubes with different characters. Some of them are water-proofed, some are not. Through the cubes city interact with water, create interesting lifestyles and keep water with in the city.



Citizen :	solid	solid	passage	box	wall	hyalo-box	hyalo-wall	openspace	passage	openspace	boalt	chageable	unchangeable	changeable
Water :	solid	solid	passage	wall	wall	hyalo-wall	hyalo-wall	passage	passage	boalt	boalt	unchangeable	unchangeable	changeable

Landscapes and towers



# Taipei

There are high-rise buildings stand out from the surface, huge pipes connect to other areas of the city, lower lever mixes living spaces with water.

# Taipei



- Pipe (Water-proofed)
- Water-in Structure
- Solid Structure
- Dry
- Wet
- Water



## Water community of “社子”

Inhabitation, Commercial, Relaxation”

“社子” is where all the water goes before it leave Taipei.  
In some meanings it could be said as a Center of water in Taipei City.

Nowadays it's just a Traffic Center of Water  
But in some chance maybe we could let them stay a little bit longer.

So This is the story: “Water and People lived here, and be happy forever after.....”



Facts and Dates we calculated about Water-supply:

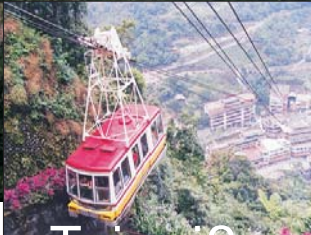
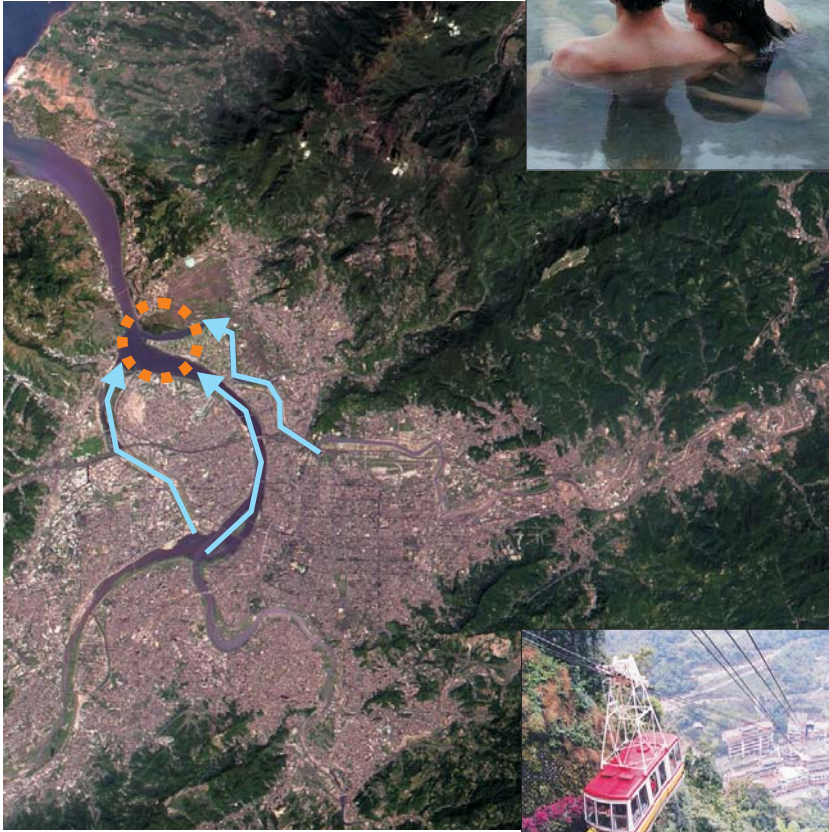
The dam of “翡翠” has a capacity of 327,000,000(m<sup>3</sup>), support 3,280,000(m<sup>3</sup>) / per day of clean water to Taipei. If our project wants to produce tap water in the same way, we can produce 250,000(m<sup>3</sup>) / per day (the number comes from a simple formula only concern about capacities.)



Facts and Dates we calculated about Water-control:

The total area of the rivers in Taipei is about 45,662,600(m<sup>2</sup>);  
The alarm height of water level is 6.7(m). Total amount of the flood is about 305,939,420(m<sup>3</sup>)  
After our project built, it'll going to contain up to 19,804,085(m<sup>3</sup>) of flood,  
lower Taipei's water level up to 0.4~1(m) in the during the flood.



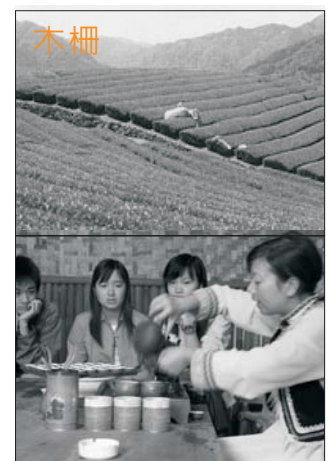


### What Have We Got about Water in Taipei?

Taipei has it's potential to become a city of water life. But the water experiences Taipei (or north Taiwan) provided are now just snippets, and can't make a life style.





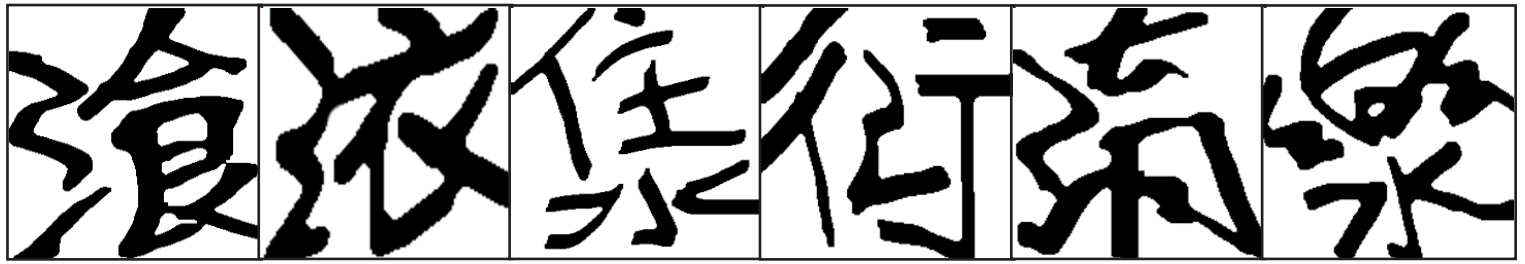


From City to Coast:

The site of “社子” is at an important position to link Taipei and several of the most beautiful areas in north Taiwan.





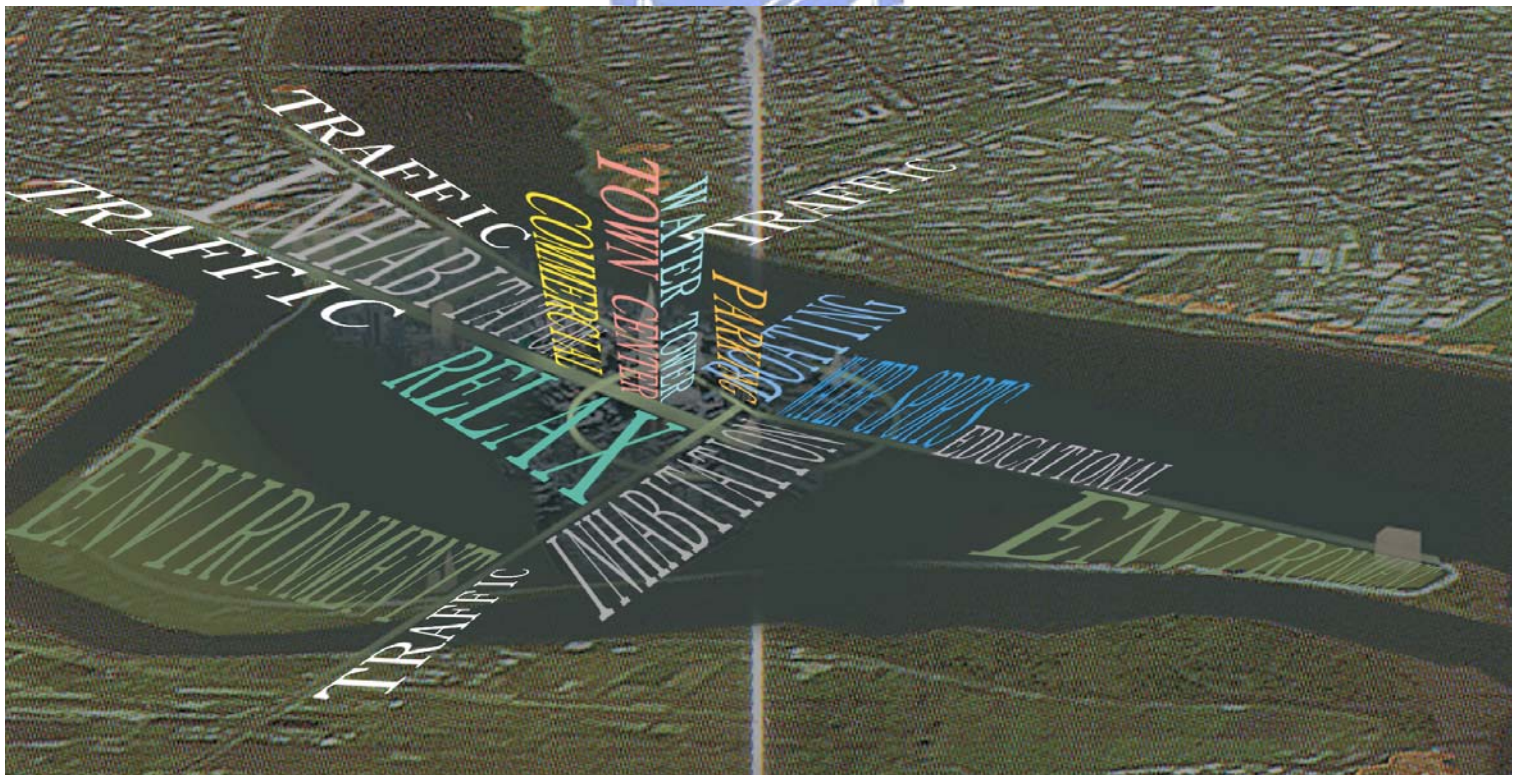


Food/Drink    Style/Fashion    Inhabitation    Transportation    Caring/Education    Relax/Fun



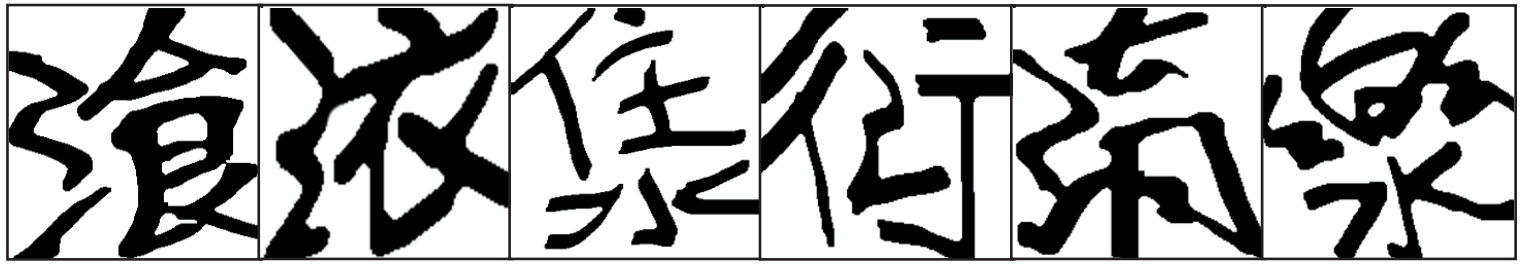
## Create the full circle of Water-Life

The project we're going to do could be a chance, to collect and connect the snippets into a complete experience of water



There're different function programs we put in our site, some of them can be found in old Taipei, Others are not. But most important difference we made is to make people LIVE here besides just Visit here. The town center will be for both visitors and locals, and outer zone of inhabitation is not just supplying the town center or "viewpoints," it create it's own life style of water it self





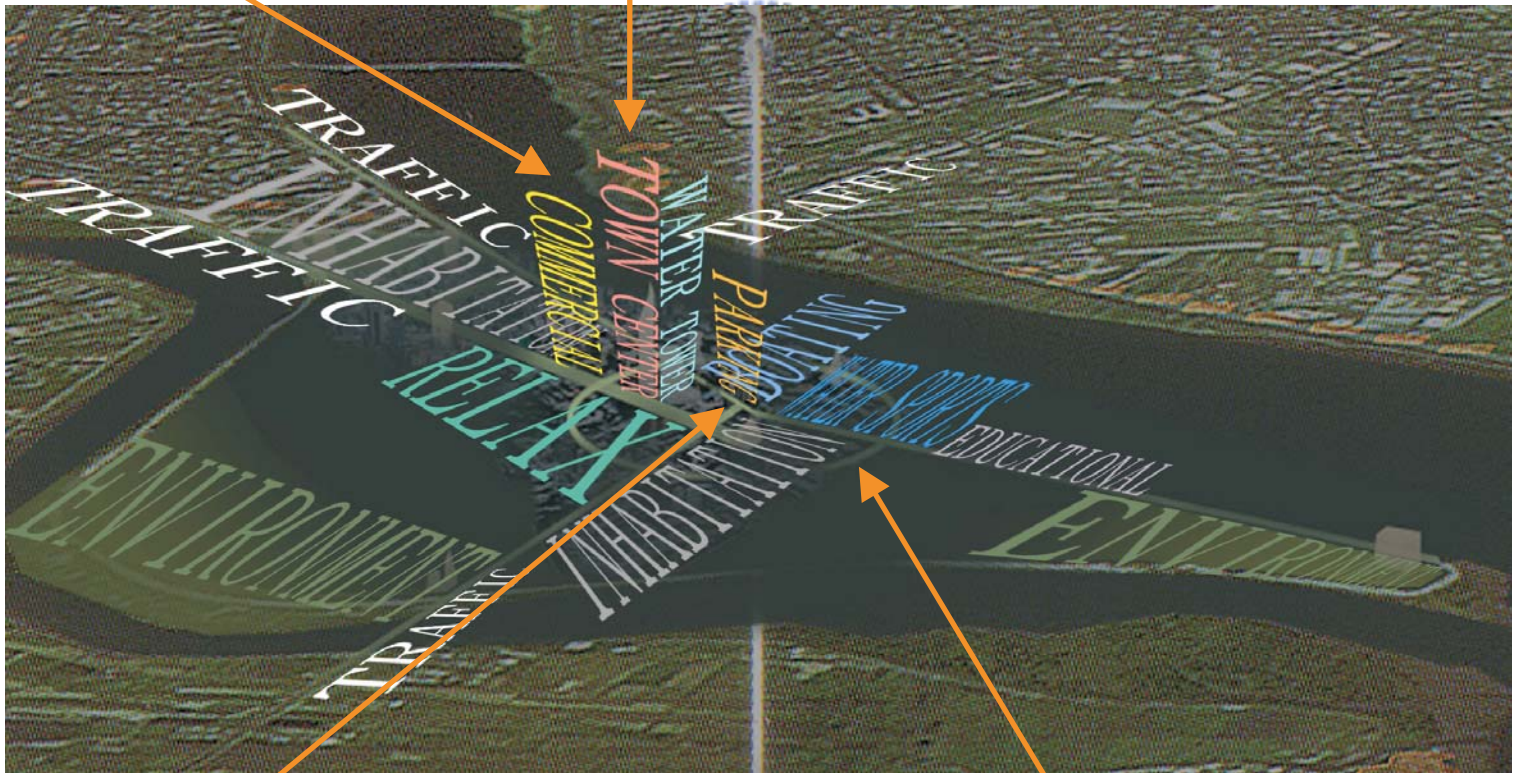
Food/Drink    Style/Fashion    Inhabitation    Transportation    Caring/Education    Relax/Fun

**Commercial:**

We are doing water as a fashion in the site. It encourage people consume for the Water-style and support the town financially.

**Town center:**

To create amazing land marks, new and fresh impression divided from old Water-cities like Venice



**Parking:**

We recommend you to park here and walk through the town. The tower will protect your vehicles from flood. Maybe you should try

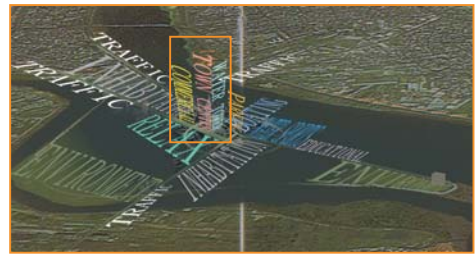
**Water sports:**

Water sport is something you can hardly found in north Taiwan.





Food/Drink    Style/Fashion    Inhabitation    Transportation    Caring/Education    Relax/Fun



The Pleasure of Eating:

People in Taiwan have their own way of foods and drinks and we're not going to change that.

Accept one thing: "they always eat the best food at the worse place."

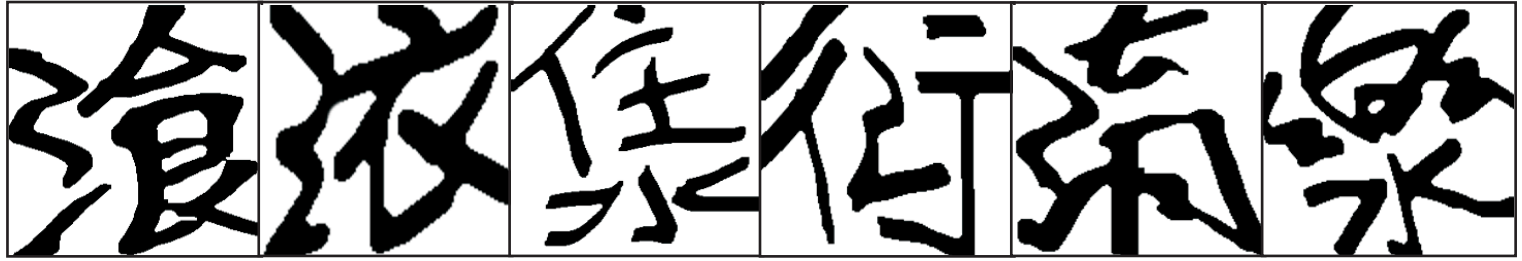


Opportunities to sell the lifestyle by the way of fashion:

to approach that goal, we need high quality commercial programs in site.





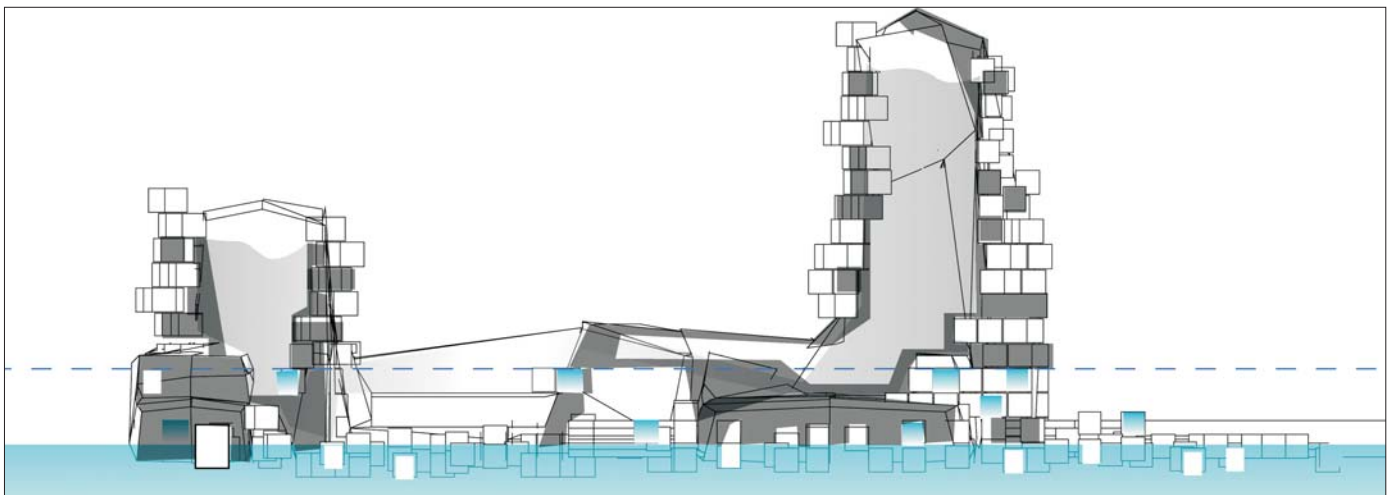
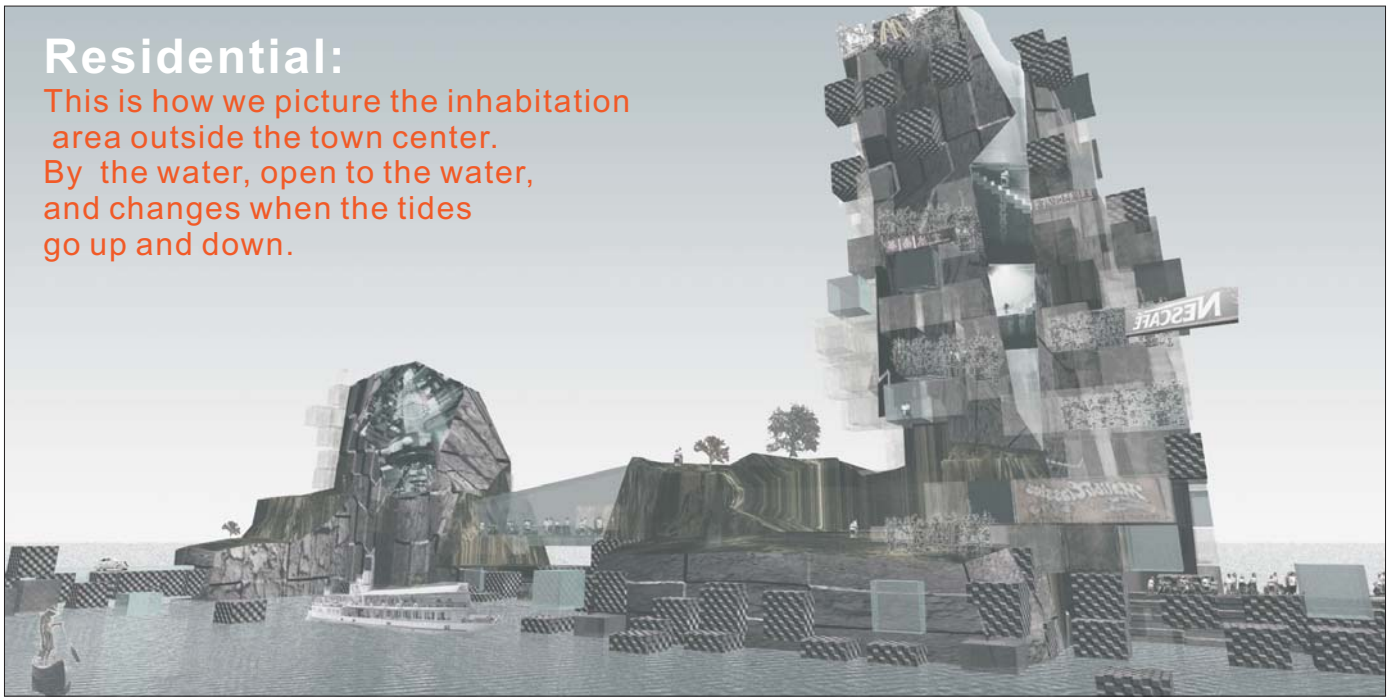


Food/Drink    Style/Fashion    Inhabitation    Transportation    Caring/Education    Relax/Fun



### Residential:

This is how we picture the inhabitation area outside the town center. By the water, open to the water, and changes when the tides go up and down.





Food/Drink

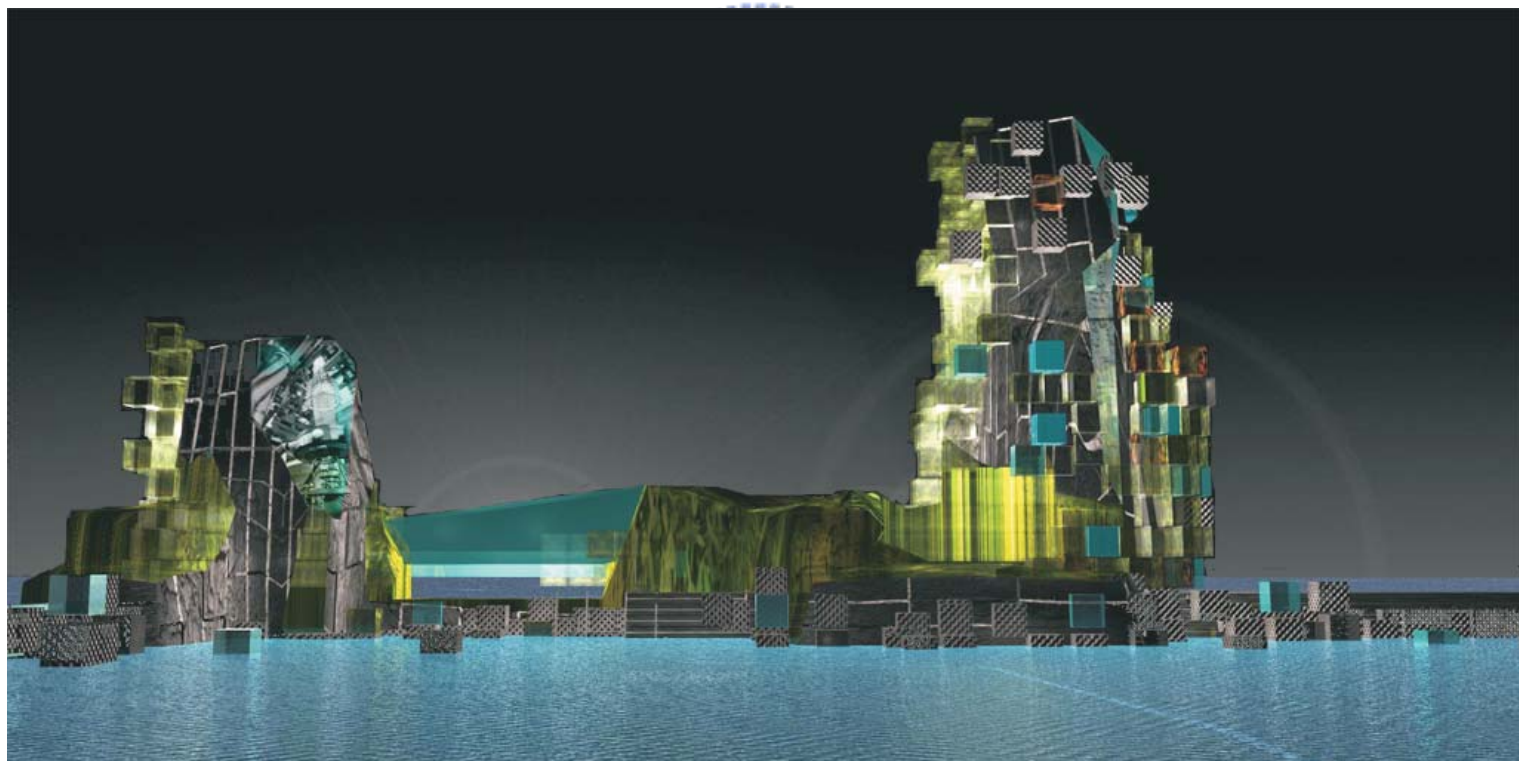
Style/Fashion

Inhabitation

Transportation

Caring/Education

Relax/Fun

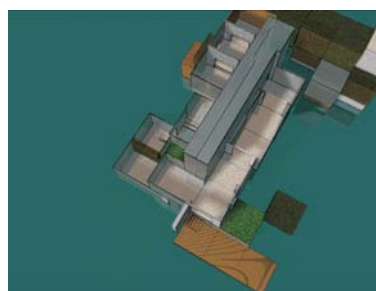


LEVEL01

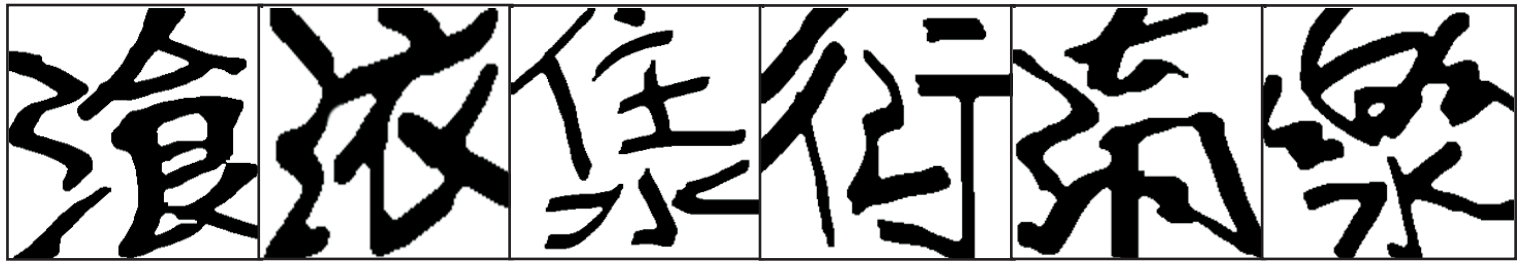
LEVEL02

LEVEL03

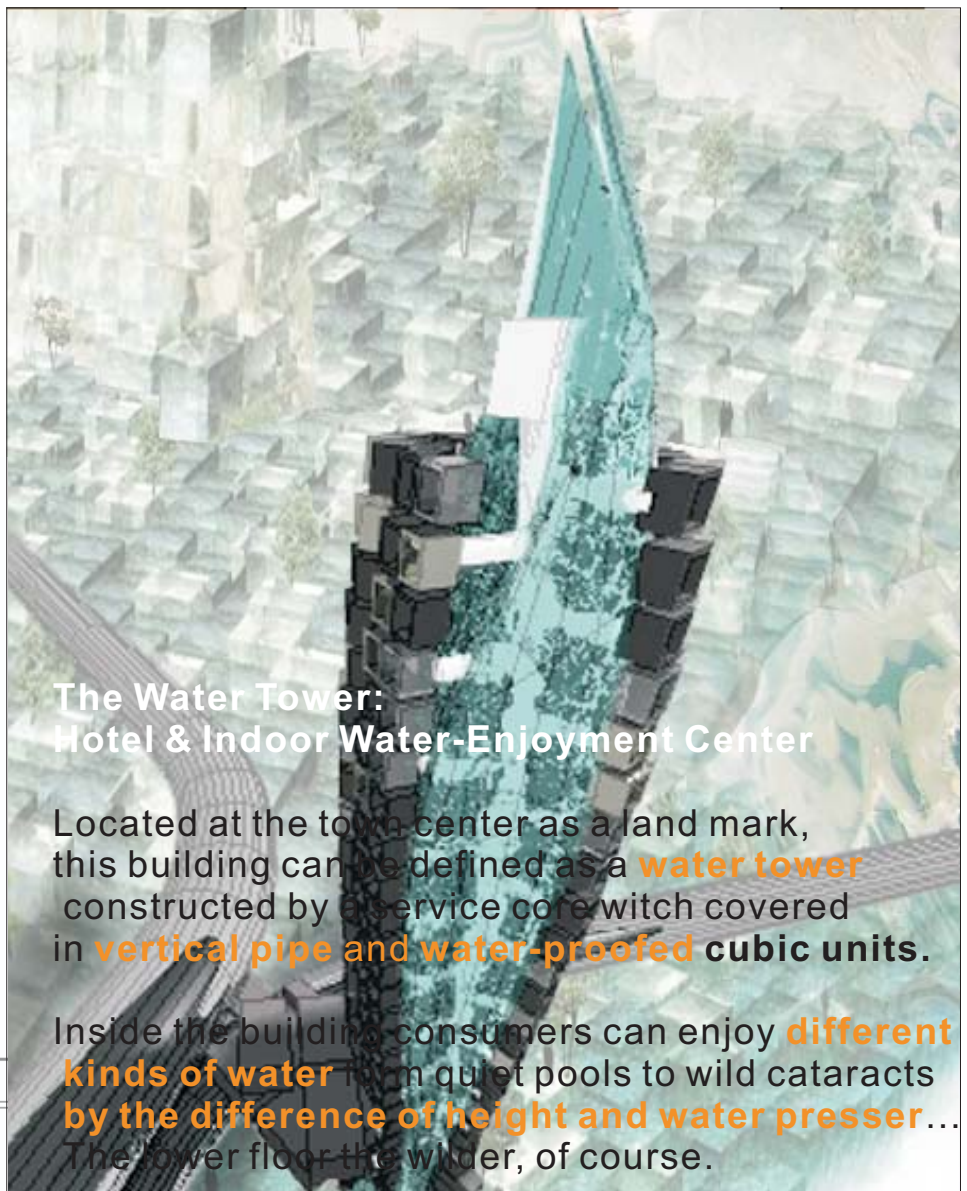
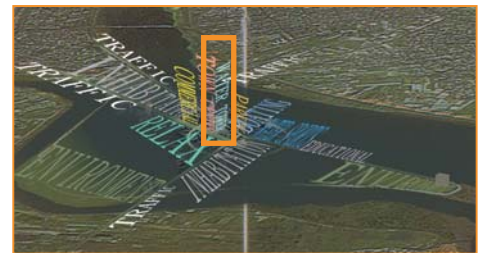
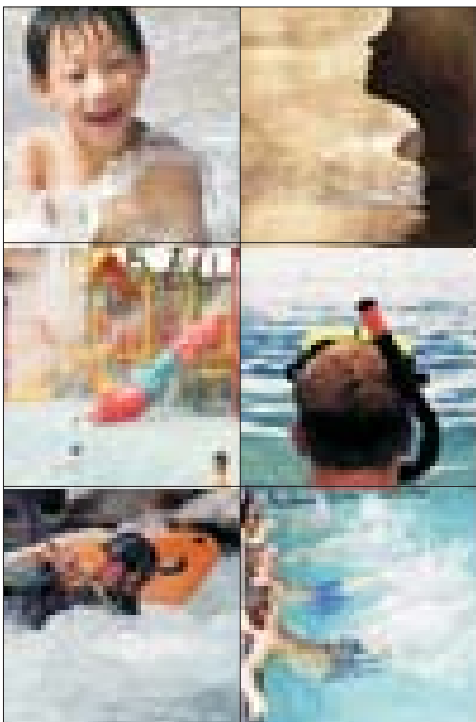
LEVEL04







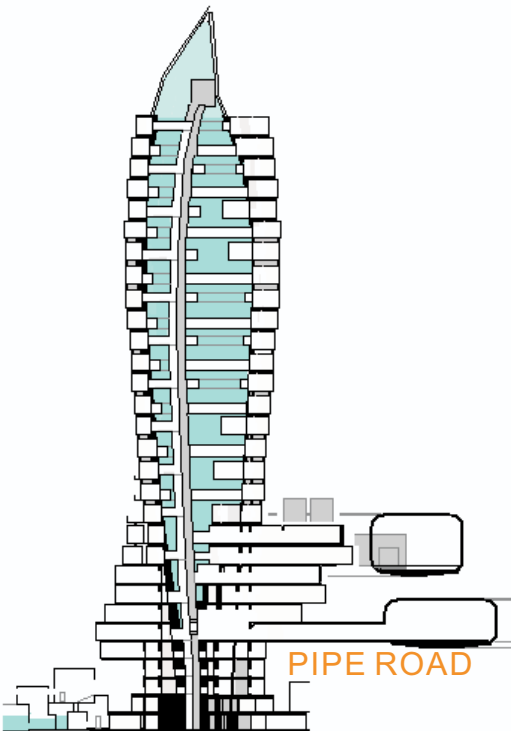
Food/Drink    Style/Fashion    Inhabitation    Transportation    Caring/Education    Relax/Fun



**The Water Tower:  
Hotel & Indoor Water-Enjoyment Center**

Located at the town center as a land mark, this building can be defined as a **water tower** constructed by a service core with covered in **vertical pipe and water-proofed cubic units.**

Inside the building, consumers can enjoy **different kinds of water** from quiet pools to wild cataracts **by the difference of height and water presser...** The lower floor the wilder, of course.









Food/Drink

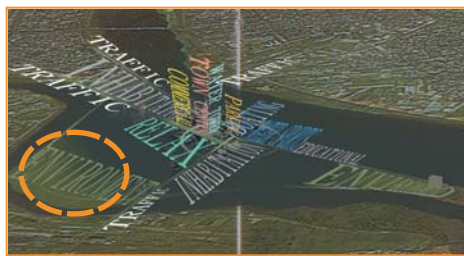
Style/Fashion

Inhabitation

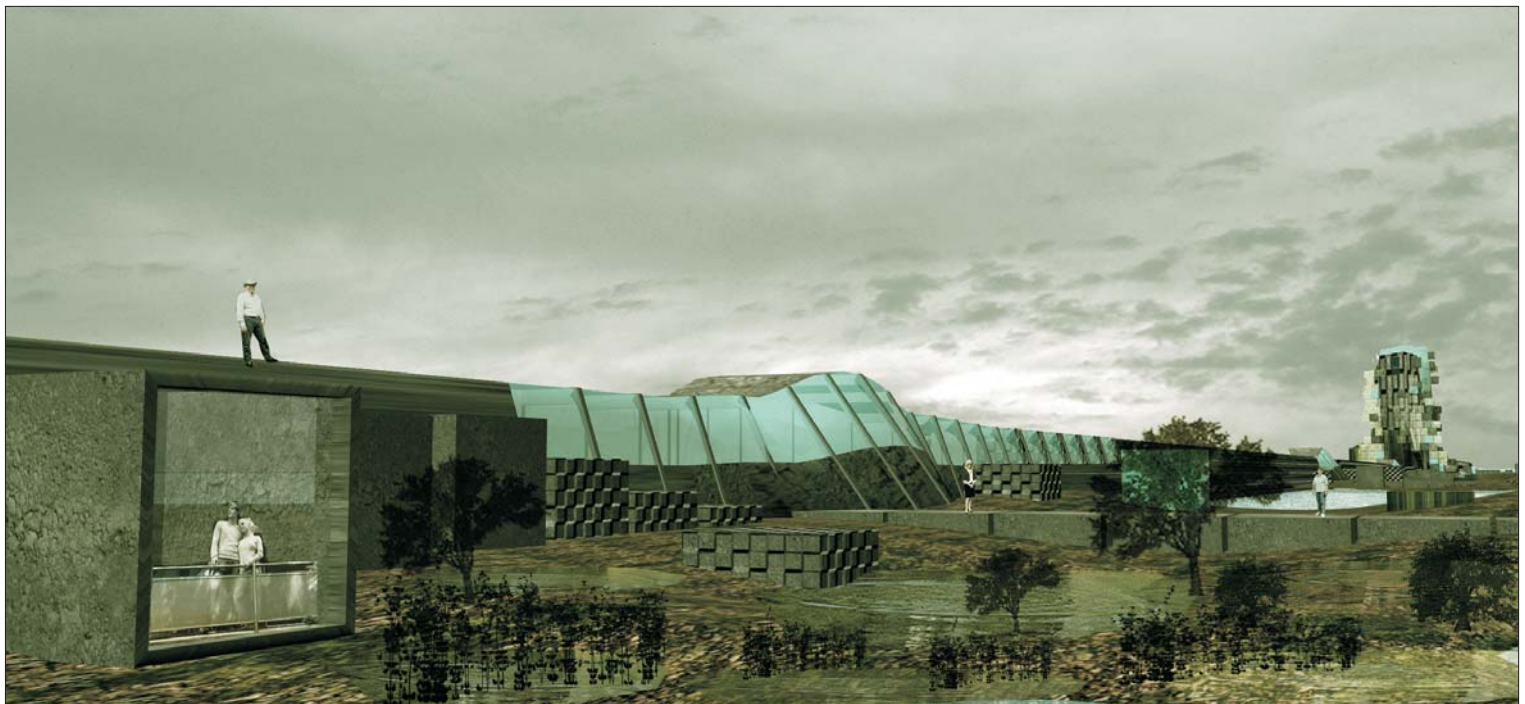
Transportation

Caring/Education

Relax/Fun



At the outer area of the site, the pipes reconstruct with the base of the old dam become a new kind of landscape. In this area, most of the open spaces will be preserved as everglades, only a few cubes there to provide minimum activities.





Food/Drink

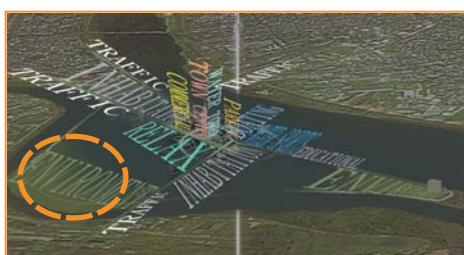
Style/Fashion

Inhabitation

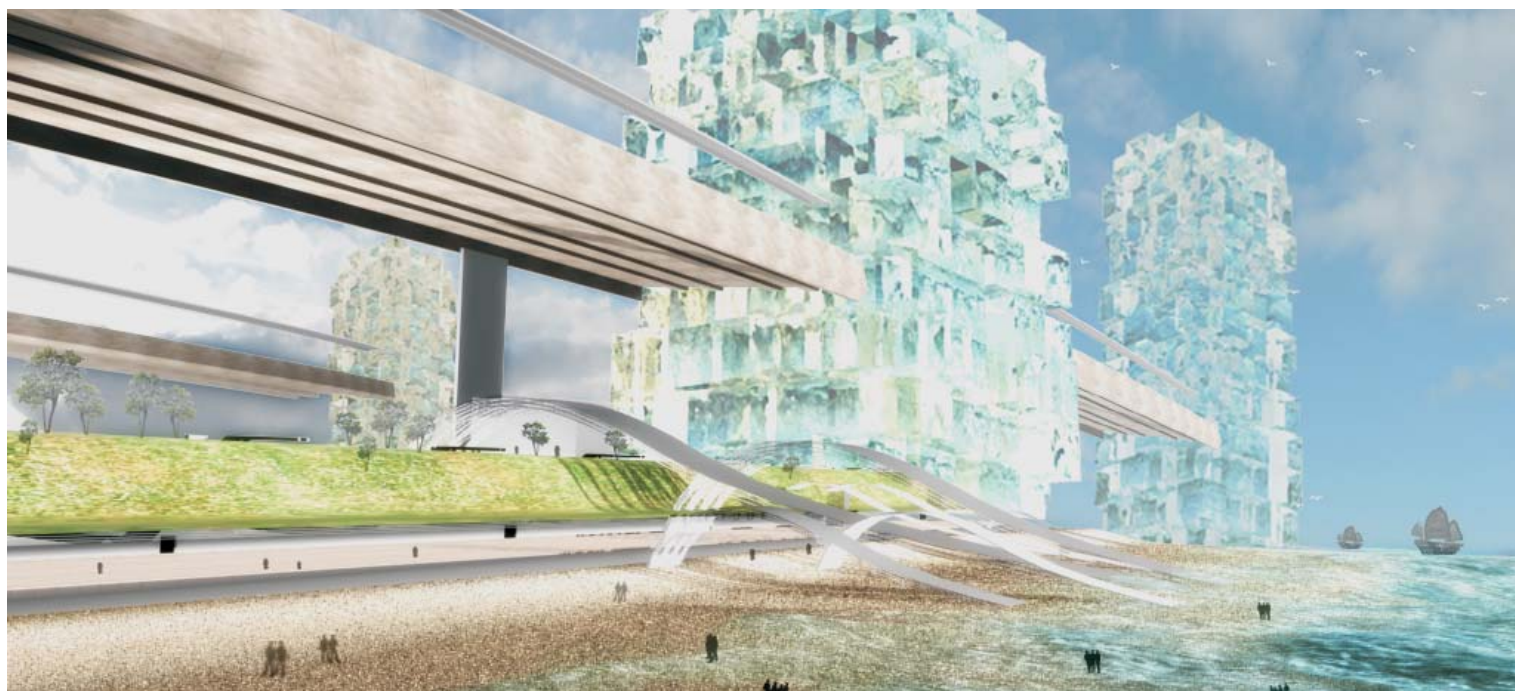
Transportation

Caring/Education

Relax/Fun



Water sports:  
**Water sport is something you can hardly find in north Taiwan.**

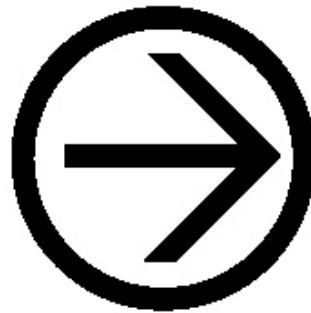




**SPRING 2005**



# 2nd International Architecture Biennale Rotterdam



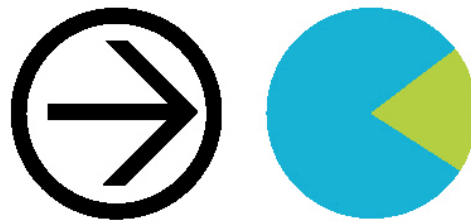
海洋台灣  
From NoWhere to NowHere

J.M.Lin Architect / The Observer Design Group + Graduate Institute of Architecture , NCTU , Taiwan



→ ABOUT IABR

# 2nd International Architecture Biennale Rotterdam



## Why The Flood ?

Because a flood is upon us. Sea level is rising and increased precipitation is expected because of climate changes, causing more (and more serious) floodings. In a country like The Netherlands, a large part of which lies below sea-level, the problem is particularly acute. The Dutch have been coping with floods as long as anyone can remember. Things might appear stable now, but the Dutch government has calculated that by 2070 it will be impossible to guarantee that large areas of the land will not be flooded. Many other countries face similar problems.

The 2nd International Architecture Biennale Rotterdam aims to raise (and, if possible, find answers to) questions, such as: What kind of solutions can we come up with? How can we respond in time and in a creative way? What will our version of The Ark look like? And above all: how can we welcome this Flood as a chance to reinvent ourselves -and re-design the land we live on? There is another side to the theme as well. Water has a significant chance for the world economy, of which the IABR has chosen two examples. One is the pull of coastal areas, where more and more people will be travelling to or settling in, creating coastal metropolitan cities. The second is the way container handling in major ports is growing ever more, turning these port cities into container metropolises. **The Flood** is, of course, a reference to the biblical story (and common myth in many cultures) of a great flood which washes everything and everyone away, making a fresh start from **tabula rasa** -and serving as a marker that divides old and modern times. The 2nd IABR wants



→ ABOUT IABR



The Flood is the title of the 2nd International Architecture Biennale Rotterdam (IABR).

This international manifestation will be curated by Adriaan Geuze, founder and partner of West 8 urban design and landscape architecture, based in Rotterdam,

The Netherlands. The program includes major exhibitions, lectures, congresses and debates -and several other events.



**May 26 - June 19, 2005**  
**curator: Adriaan Geuze**  
[biennale.rotterdam.nl](http://biennale.rotterdam.nl)





→ ABOUT IABR

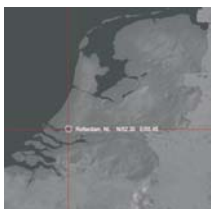


THE ARK WILL HOST FOUR EXHIBITIONS:

## The Dutch Water City

An overview of the rich tradition and future of ingenious Dutch civil engineering, of building cities along coasts, rivers and canals, which the Dutch have been doing since the early middle ages. A purely functional approach to building has led to town plans both beautiful and durable, that show inventive ways of dealing with water through dams, dikes, moats, ditches and canals. The unique Dutch way is shown with a great number of models of different types of historic water towns, as well as the newer polder cities. These can be compared with water cities in other parts of the world like Venice, Chicago and Tokyo, whose simultaneous but different development is shown in scale models. The exhibition looks at the future as well, with specially made designs by architects and engineers for The New Dutch Water City, applied to twenty different locations in the Netherlands. These designs offer innovative new approaches to urban planning that go beyond problem-solving, preferring to see the problems facing us as a challenge and an opportunity to re-think the old ways.

## Mare Nostrum



A look at the rise of coastal areas as attractive places to settle or visit, for wealthy pensioners and plane hopping young people. Water and a temperate climate are the main attractions in what seems to be developing into a new economy. Coastal areas all over the world are starting to look the same: the same kind of high-rise buildings, the same shops, the same food, the same music. The IABR has invited international guest curators to present their views on European coasts. Also: a look at coastal metropolitan cities in, amongst others, Brasil, Australia and South Africa, and their future developments.

## Container Metropolis

An exhibition about the development of major ports into Container Metropolises. This is witnessed in places like Shanghai and Los Angeles, which develop into a seaside with automated container handling coupled with a landside featuring a large distribution centre

## 海洋台灣

From NoWhere to Now Here

2nd International  
Architecture Biennale

Rotterdam



## 研究內容簡介

### 緣起

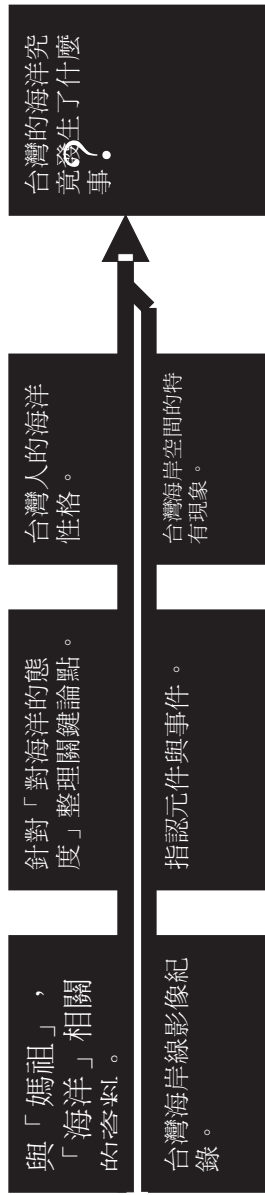
環繞台灣超過1500公里的海岸線上蘊含著豐富的資源以多元的特質，整體而言，台灣海岸有其不容忽視的獨特性，對於海洋的發展也提供許多機會與條件。但是儘管台灣海岸有其迷人之處，一旦小尺度地逐一觀察沿海空間，很快會發現台灣海岸充斥許多奇異的現象，在水陸交界處展現出各事件詭異且奇特的共存與平衡，例如：被切割剩餘的自然資源共處與輕率而為的人為環境，這可能是缺乏完整且健全的規劃所帶來的產物...等，這些現象清楚地反映出長久以來台灣人民對於海岸景觀、都市景觀的做法與態度，也正是這些矛盾的景況引發出我們想要對台灣海岸線進行研究的動機。

### 研究方法

我們從兩個方向破題：一、台灣土地上的人其性格，文獻研究試圖找尋跟「人」有關的論述，亦即跟「性格」有關的發掘。我們以「媽祖」為切入點，用以尋找知識面上與海洋元素有關的議題，而這些議題代表著這塊土地上的人對於海洋的理解與態度，亦即台灣海洋文化裡的心理層面觀點。「媽祖」在浩瀚無涯的資料庫裡，為我們扮演著篩子的角色並且篩出極具代表性的觀點。二、空間的痕跡，經由空間的實地訪查建立一連串跟「地」有關的課題，藉此閱讀隱藏在海岸空間、城市、人為活動、自然資源等不可見的實質物件之間的關係；同時我們也試圖發掘未來發展的可能介入方式，或者值得進一步探討的空間議題。



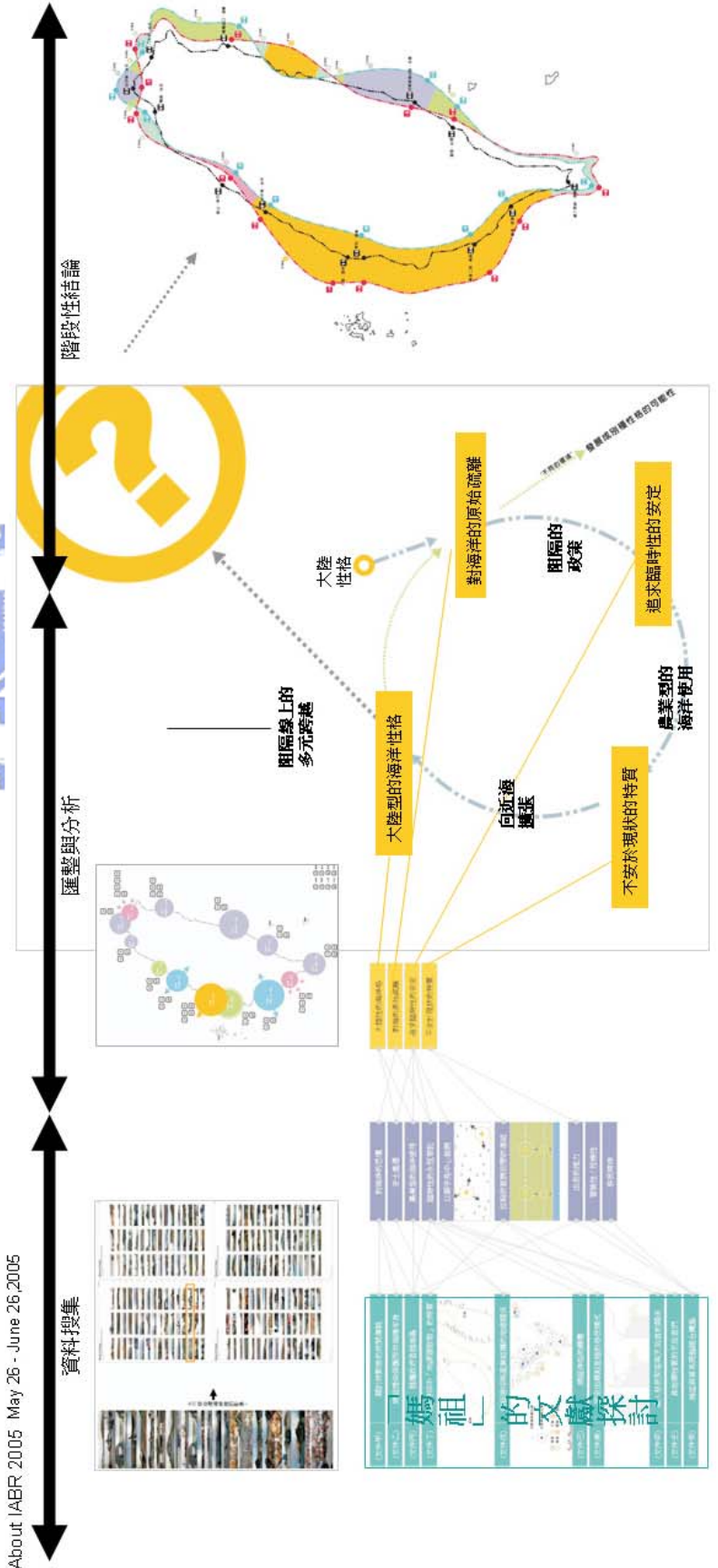


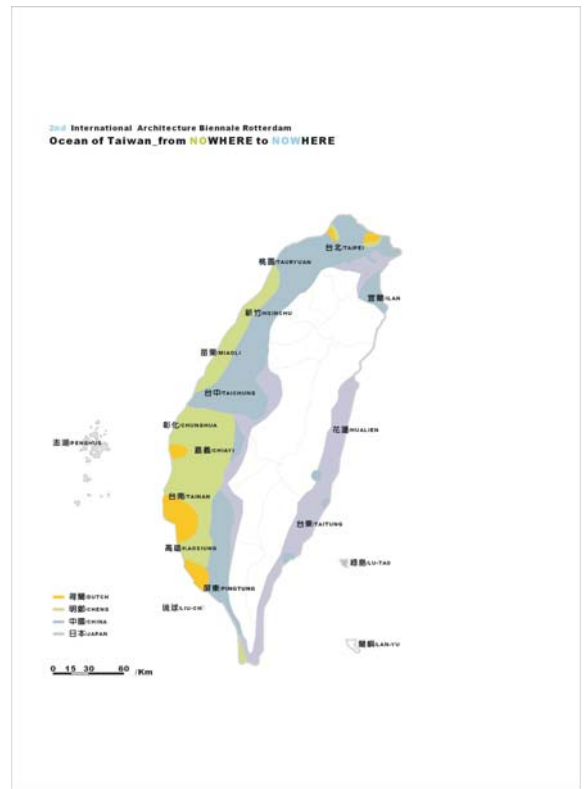
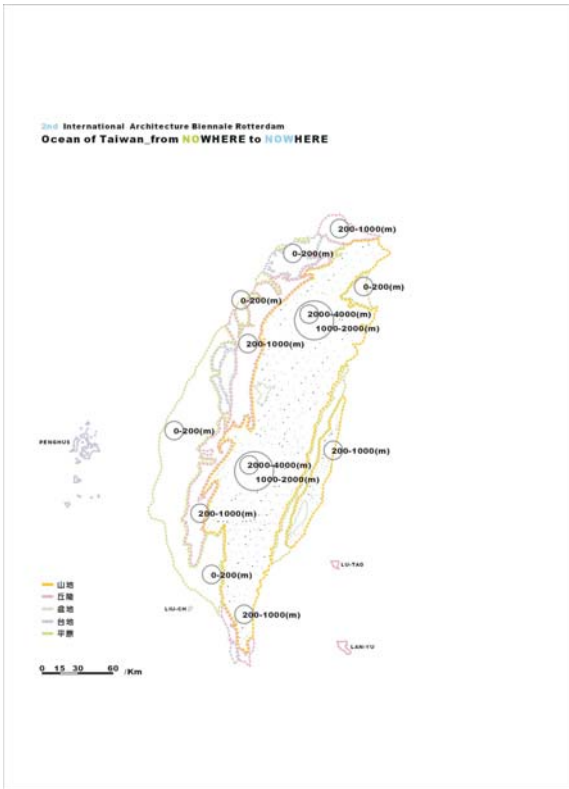


為了釐清台灣海洋的特質，我們分別從軟體硬體兩路平行進行，最後再透過交叉比對來回答“台灣的海洋究竟發生了什麼事？”這個巨大的問題。

一邊是透過文獻探討來研究台灣人的海洋性格：我們以「媽祖」為切入點，用以尋找知識面上與海洋元素有關的議題，而這些議題代表著這塊土地上的人對於海洋的理解與態度，亦即台灣海洋文化裡的心理層面觀點。第一步先以“媽祖”與“海洋”的交集蒐集資料，接著把每份資料重新以心理層面的角度解讀，然後按照解讀的結果提出我們的觀點。

文獻資料研究的同時，也對台灣海岸空間進行實地的調查，藉此閱讀隱藏在海岸空間、城市、人為活動 自然資源等不可見的實質物件之間的關係；同時我們也試圖發掘未來發展的可能介入方式。

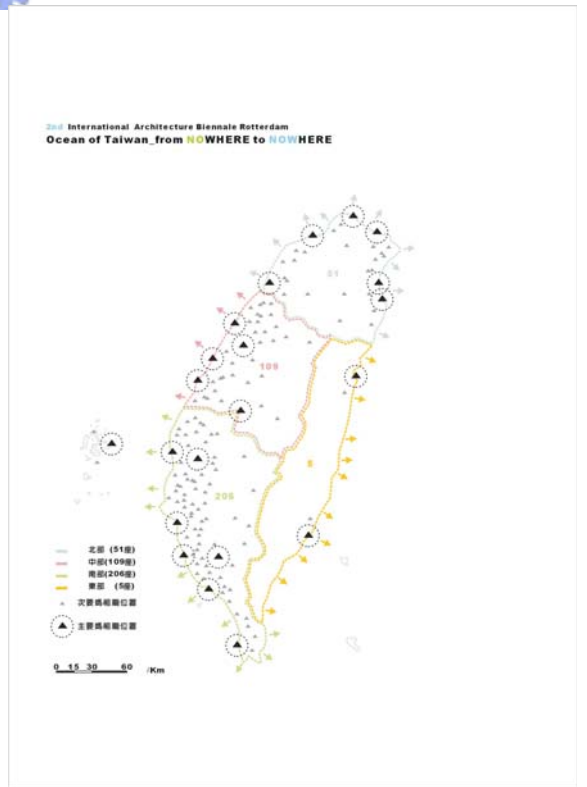
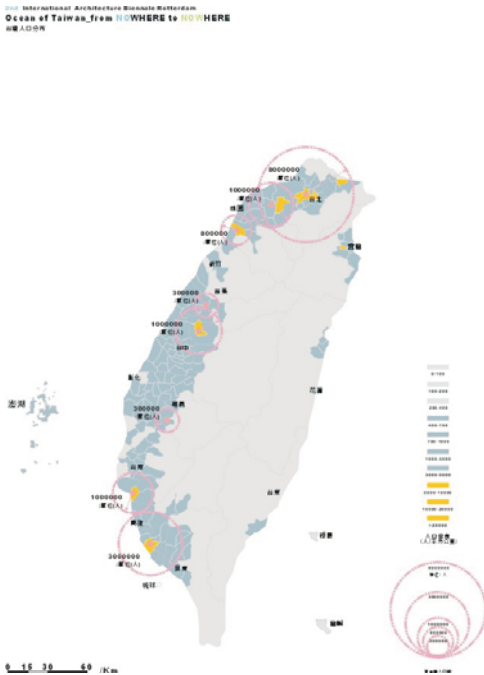




台灣島平地與山地分布圖

台灣島面積僅約36,000平方公里，其中三分之二以上是高山，垂直高差將近4,000公尺。平坦可居之處全數環繞在台灣海岸線周圍，島上絕大多數居民都居住在沿海總長約1600公里的帶狀土地上，從人口數與可居土地面積的比例上來看，可謂極為稠密的國家。

台灣島曾多次易主，先後有荷蘭人、明鄭、清廷、日本政府與現在的國民政府等政治勢力，這些政權在經營台灣的態度上各自有其主張。但有意思的現象是：每個「新」政府都大致繼承上個政權的建設，因此儘管各有立場、目標互異，但在政權遷移的紋理上，仍可看見由西南海岸開始，接力往北逐漸開發台灣的情況。



由於地理上的先天條件，總數超過2.3億的台灣人口大部分都居住在沿海1600公里的帶狀土地上，幾個重要的都會區，如台北、台中、高雄，都位在腹地較為寬廣的平原或台地上，從人口數、可居土地面積比來看，人口密度過高並導致土地使用問題是台灣難以逃離的宿

媽祖信仰是台灣境內最重要的信仰之一，其由「出海神」至「過海神」再升格為「主神」的特性尤為本研究重視。台灣西海岸的媽祖廟分布幾乎與早期漢人移民的聚落完全重疊，而媽祖的分靈、分香、巡境等活動也隱約暗示了某種移民勢力的變遷。



## 掃描台灣 Scanning Taiwan



2nd International  
Architecture Biennale  
Rotterdam



### 隨機性

對應以一種「低敏銳度的客觀」之態度找尋到「媽祖」做為文獻研究的切入點，在搜尋海岸空間現象上，我們也試圖以客觀的方式去蒐集田野資料，用以網羅最多樣的空间樣態活動行為，然後從其中觀察歸納出具代表性的台灣海岸線現象。「隨機性」於是成為我們決定前往觀察地點的操作概念。將整個台灣從南到北以每三公里的間隔橫一線，在這條線與海岸線的交界處即是我們的觀察地，這樣的方法我們稱之為「掃描台灣」(scanning Taiwan)。隨機性的概念即是從偶然性中探求必然性，亦即在大量蒐集的田野資料中找出足以呈現出具代表性的現象，也是隨機性概念所提供的客觀事實，因為單一事件裡有其不確定性不可預測性，但多次取樣之後即能顯現出規律性，也是統計學所稱的隨機現象的統計規律，在這個統計

規律下的成果就是我們要找的對象。

### 海洋台灣，64種跨越，1134公里

環島攝影的影像經過建檔與分類之後，透過空間元素、活動行為的指認，我們找到三種海域與陸域的關係：

#### 1. 海陸的串接

海域與陸域空間原本處於分離或隔斷的狀態，透過線性物件的出現而將兩者的關係串連起來，例如道路、階梯、橋樑等，把原本空間性不連續的海域與陸域連結起來，使人的活動與行為因此跨越在兩個區域之間。

#### 2. 海陸的連結

相鄰的海域與陸域空間因為新物件的介入而在某個時間點發生緊密的交流，這個物件通常是點狀的、具有功能的，例如吊具的升降或是輸油設備的運作等，在片段時間裡將兩個原本疏離的空間連結成一體。

#### 3. 海陸的交疊

海域與陸域空間處在一種重疊的狀態，在交集的範圍產生新的空間使用，這種使用模式以一種長期而固定的方式存在海陸的交疊面上，例如漁塭、鹽田、卸貨空間等。

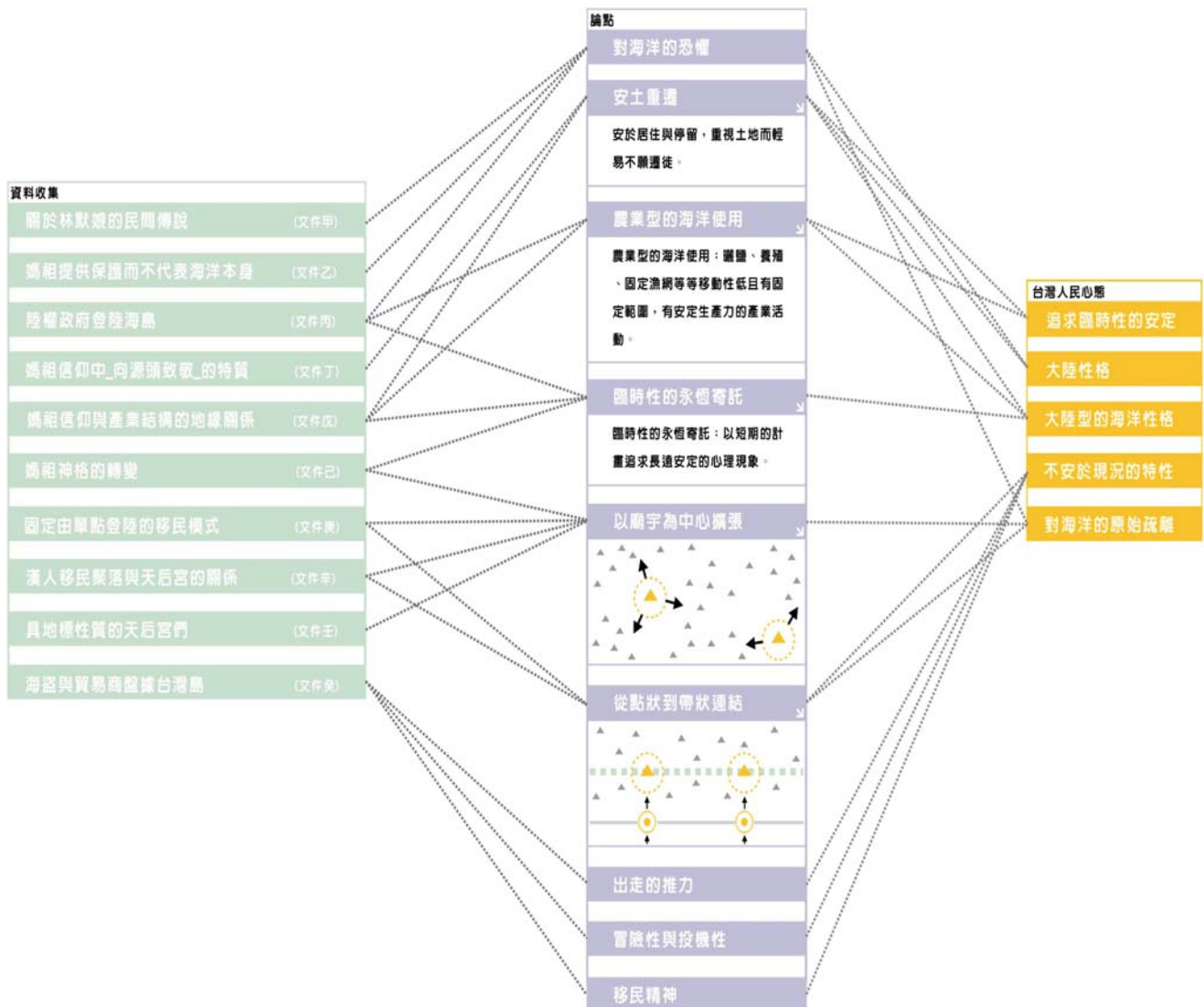
透過這三個海與陸的關係，我們看到一個很重要的特性：台灣的陸與海、生活與海洋是相當程度被阻隔的，因為政治、國防、水利、護岸等理由，造成人們生活上對海洋的疏離，因此我們會在海邊看見大量的堤防、海巡哨所、禁止跨越的告示牌甚至防風林、鐵絲網，這些都是刻意阻隔海與陸的交流的元素。其他如濱海道路、大面積不易通過的鹽田漁塭、因為內陸土地不易取得而設置在堤防外的垃圾掩埋場、大型工業區等等，都是因其他目的而「無意地」造成阻隔。

### 東、西岸的差異

西海岸的產業呈現過飽和狀態，且大部分產業都具有相當的「農業性格」，相較於西岸的高密度使用，東海岸由於受到地形侷限的關係，沿岸腹地的使用因此得以與溪海岸區別開來，以提供海岸觀光為主要活動。東、西海岸的差異除了地形造就不同產業型態之外，還存在著不同因素影響之後所形成的不同型態的「阻隔線」，東海岸的阻隔線則大多因為地理因素所形成的與海的阻隔；而西海岸由於是平軟沙岸，對於海洋本來應該具有相當程度的可性，但由於海防、人工堤防、南北向快速道路等物件造成阻隔，加上農業型的產業使用佔據大部分的海岸空間，因此在海與陸之間出現明顯的人為隔斷。

# 海洋台灣

From NoWhere to Now Here



做過相關資料的蒐集與整理之後，所得到的看法。文獻資料被分為十個討論群，十個討論群交叉得到我們的論點，最後提出五個試圖回答“台灣人對海洋的心態到底是什麼”的看法：“大陸性格”，“對海洋的原始疏離”，“追求臨時性的安定”，“不安於現況的特質”和“大陸行的海洋性格”。這五個看法彼此之間看起來是有某些矛盾的；但是其中似乎隱含了某種隨著時間與外在因素改變而轉換的關係性。

我們認為這五個現象單獨都不能解釋台灣自古與海洋之間的複雜心結，而且正是這種並存的矛盾心態，才造成台灣如此多樣的文化現象。



# 海洋台灣

From NoWhere to Now Here



## A Field Reserch on the Coast Line of Taiwan

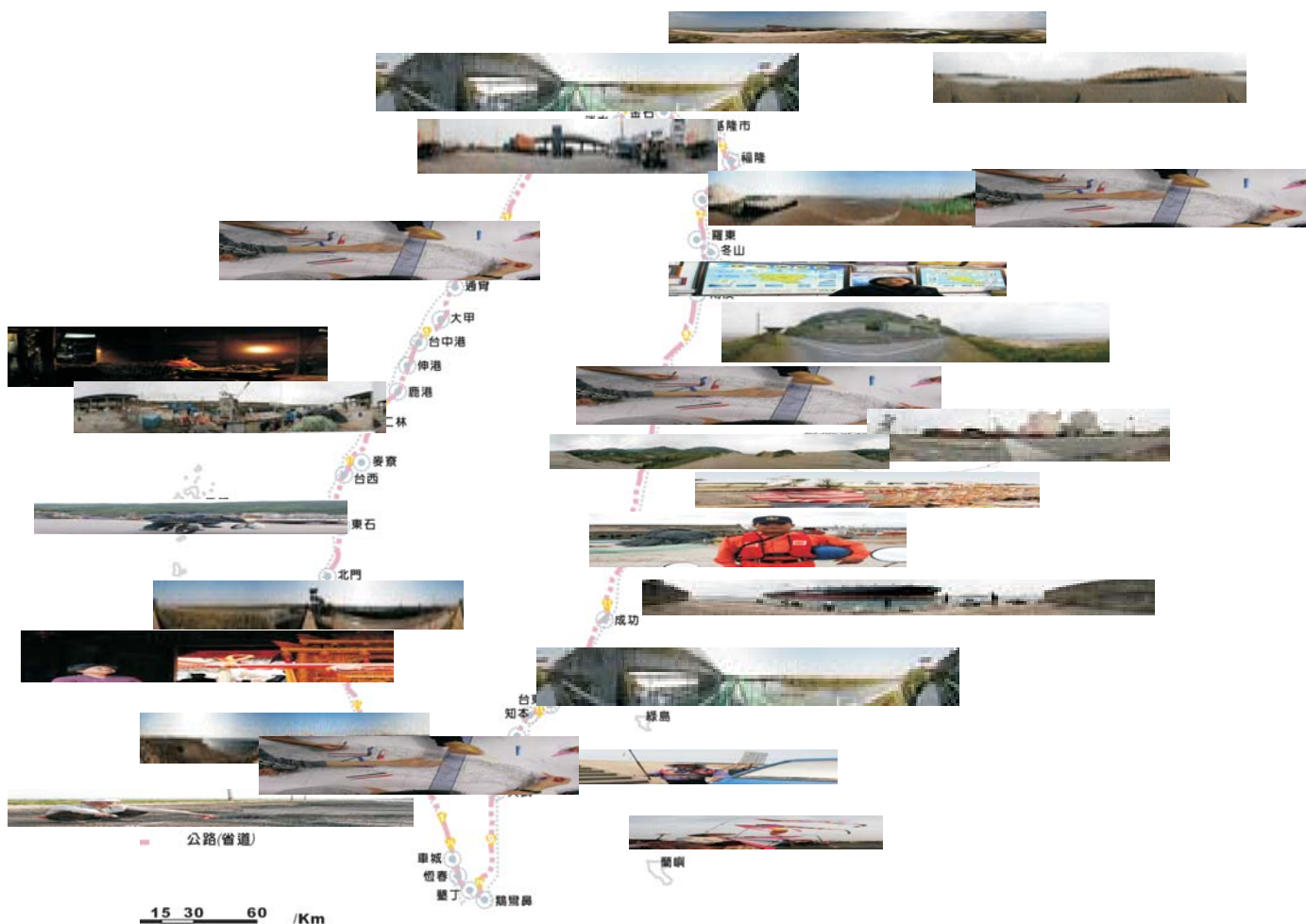
在探討過與媽祖信仰有關的文獻之後，為深入瞭解台灣海岸線的狀態，我們進行了實際的田野調查等等工作。

我們對台灣海岸線的調查基本上，是儘可能以隨機取樣的方式選擇地點，進行以環場照片為主，單張攝影，動態影片與聲音還有簡單的訪談為輔的海岸線空間調查。

除了控制單位長度海岸線上取樣的密度之外，我們調查的地點以其「深入內陸」的程度可以分為三種：「徒步可 靠近海岸的地點」、「開車可 靠近海岸的地點」與「靠海的城鎮」等等，共約480張環場影像。



2nd International Architecture Biennale Rotterdam  
Coast of Taiwan\_from NOWHERE to NOWHERE



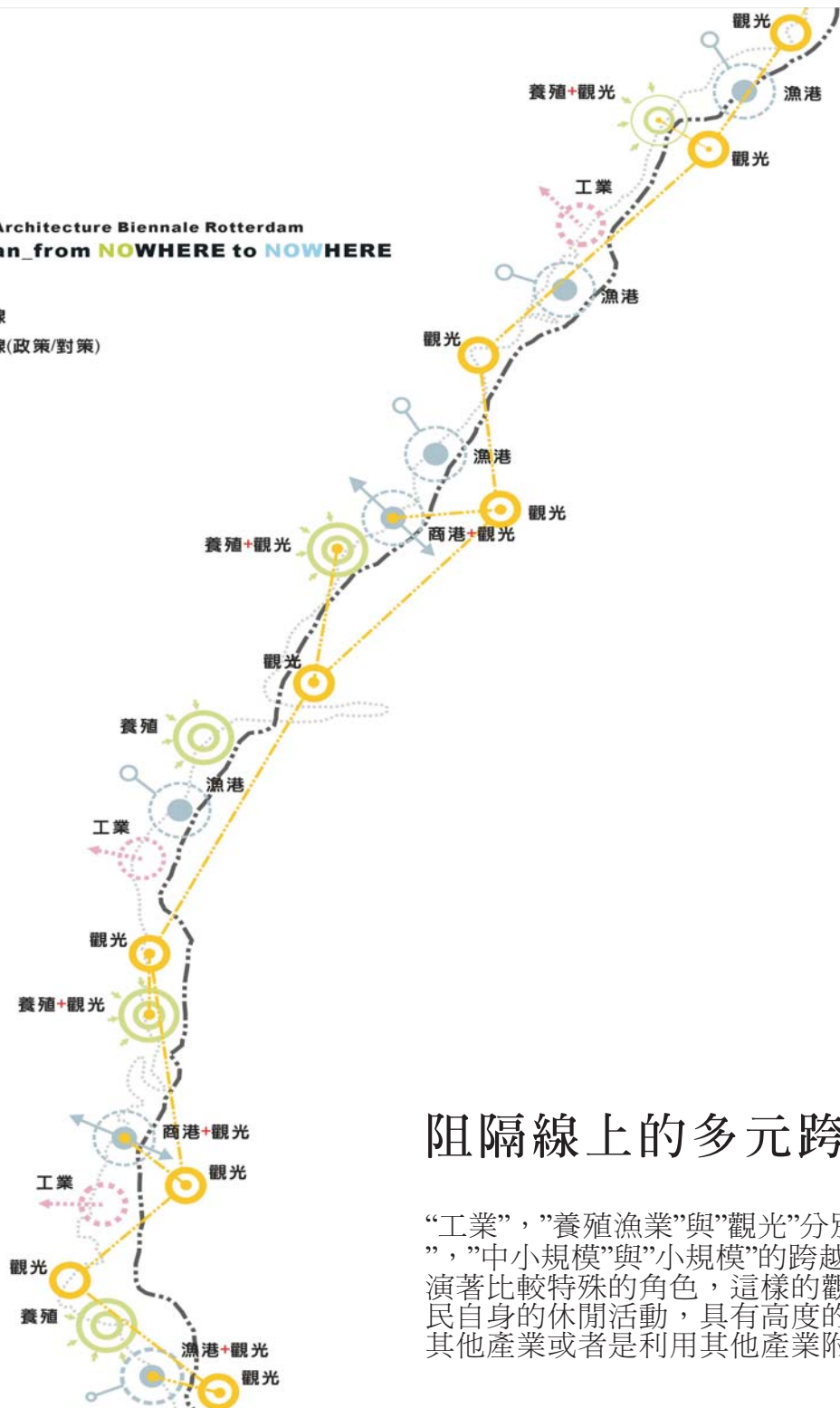
# 海洋台灣

From NoWhere to Now Here



2nd International Architecture Biennale Rotterdam  
Ocean of Taiwan\_from NOWHERE to NOWHERE

..... 海岸線  
- - - - - 阻隔線(政策/對策)



## 阻隔線上的多元跨越示意

“工業”，“養殖漁業”與“觀光”分別是最常見的”大規模”，“中小規模”與“小規模”的跨越行爲。其中“觀光”扮演著比較特殊的角色，這樣的觀光通常只限於當地居民自身的休閒活動，具有高度的流動性並且常常依附其他產業或者是利用其他產業附近的崎零地來進行。



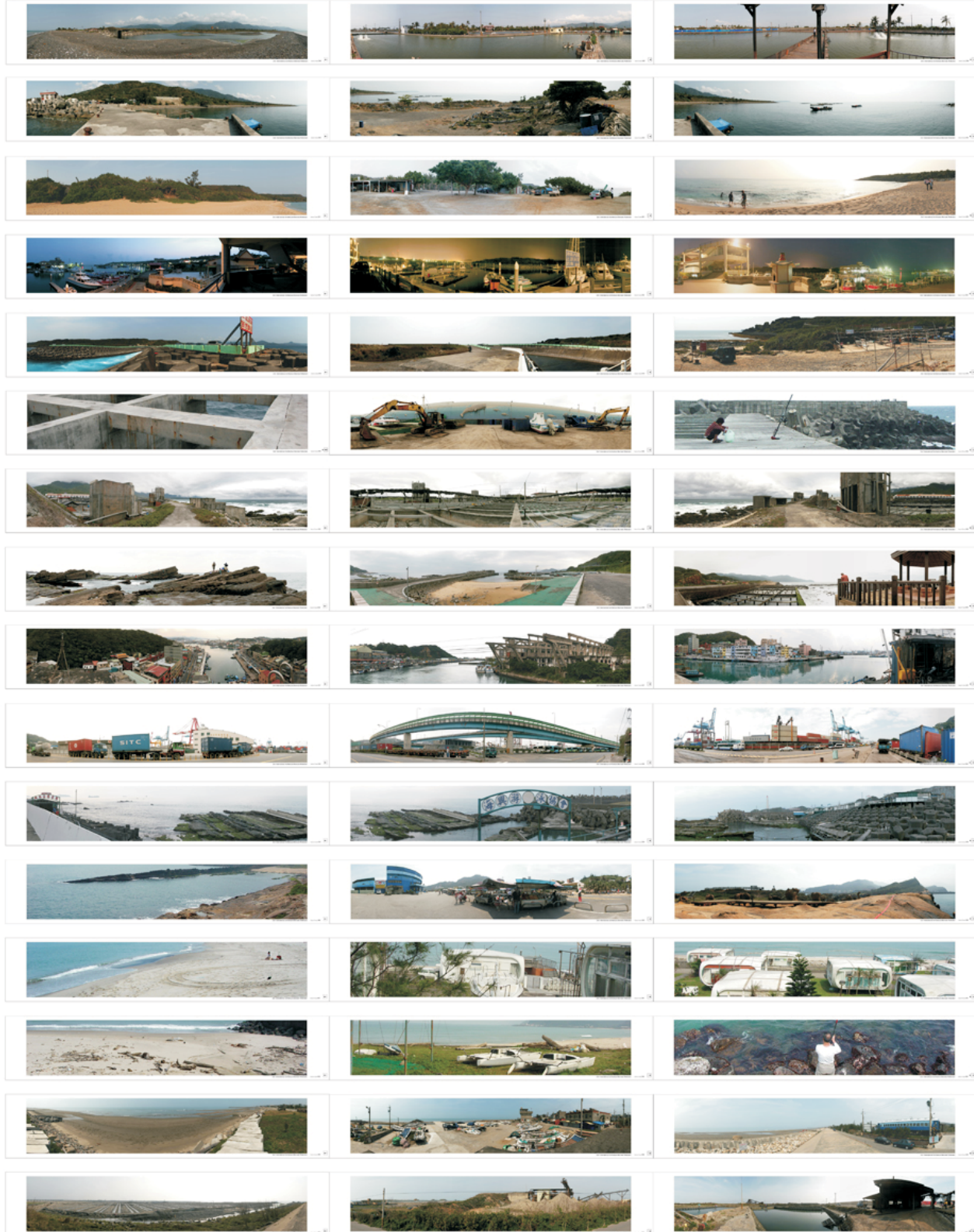


### Ocean of Taiwan

Mare Nostrum

2nd International Architecture Biennale Rotterdam

from NOWHERE to NOWHERE



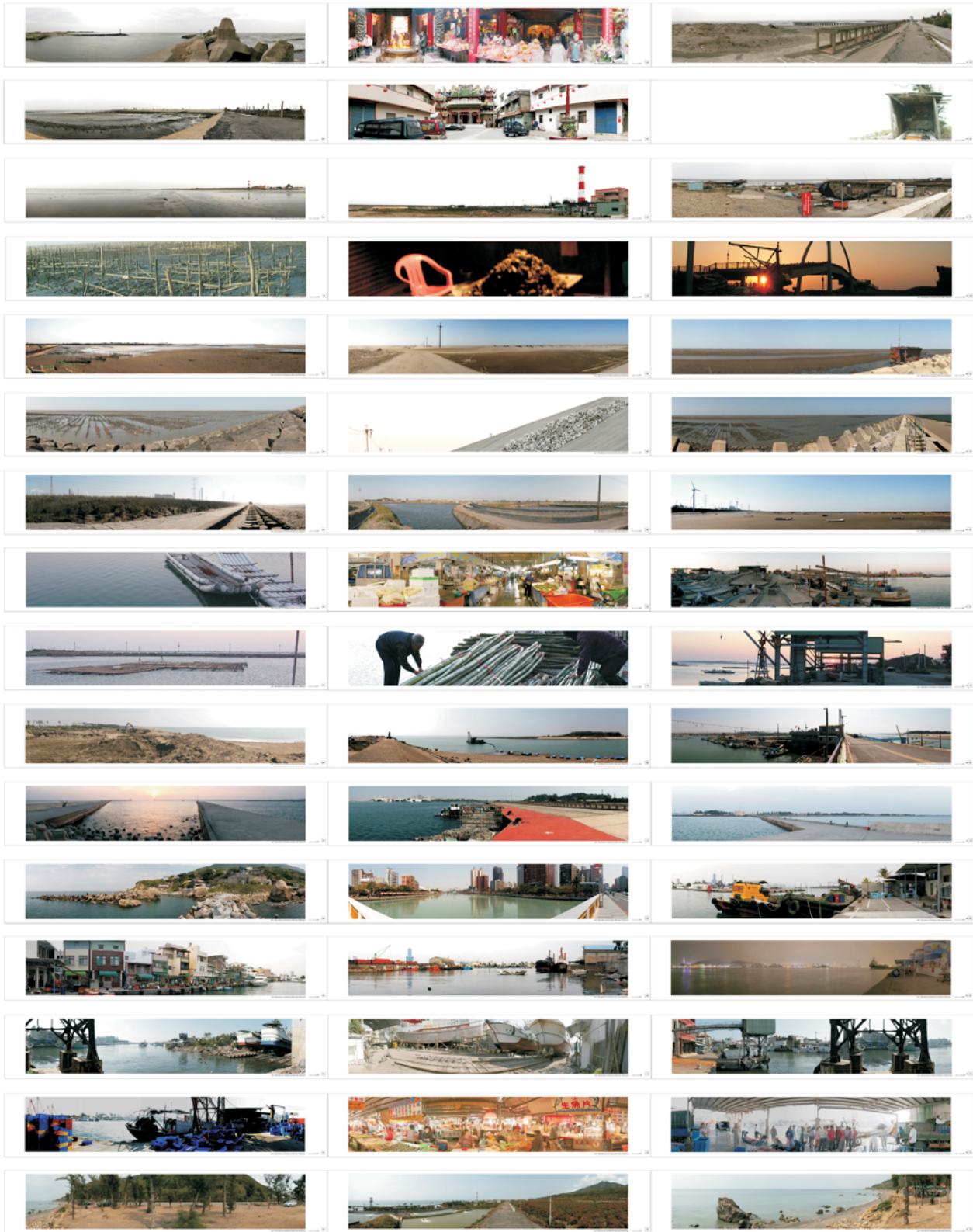


### Ocean of Taiwan

2nd International Architecture Biennale Rotterdam

Mare Nostrum

from NOWHERE to NOWHERE



33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48

### 001 高雄港・高雄

產業Industry

- I1: 漁業
- I2: 工業
- I3: 養殖
- I4: 航運
- I5: 觀光

地質geology

- g1: 溼地
- g2: 沙岸
- g3: 岩岸

空間關係relation

N21, E35

1.1 no. 1435

1.2 no. 1435

1.3 no. 1435

1.1 no. 1435

1.2 no. 1435

1.3 no. 1435

2nd International Architecture Biennale Rotterdam  
Ocean of Taiwan\_from NOWHERE to NOWHERE

### 002 濁水溪・彰化

產業Industry

- I1: 漁業
- I2: 工業
- I3: 養殖
- I4: 航運
- I5: 觀光

地質geology

- g1: 溼地
- g2: 沙岸
- g3: 岩岸

空間關係relation

1.1 no. 1435

1.2 no. 1435

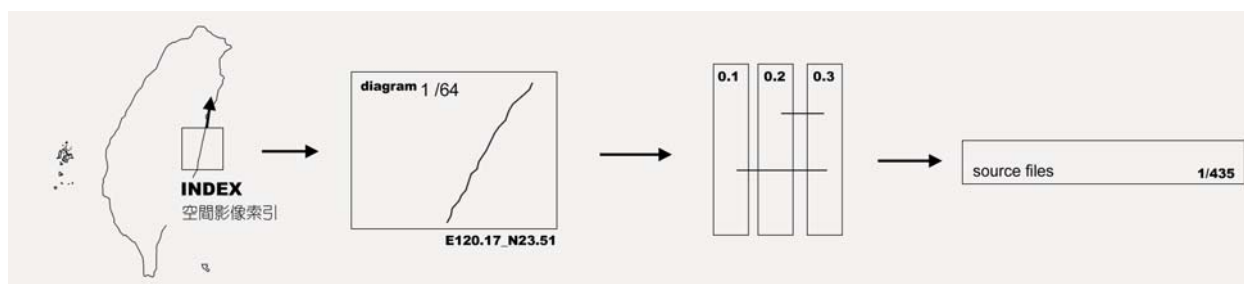
1.3 no. 1435

1.1 no. 1435

1.2 no. 1435

1.3 no. 1435

2nd International Architecture Biennale Rotterdam  
Ocean of Taiwan\_from NOWHERE to NOWHERE

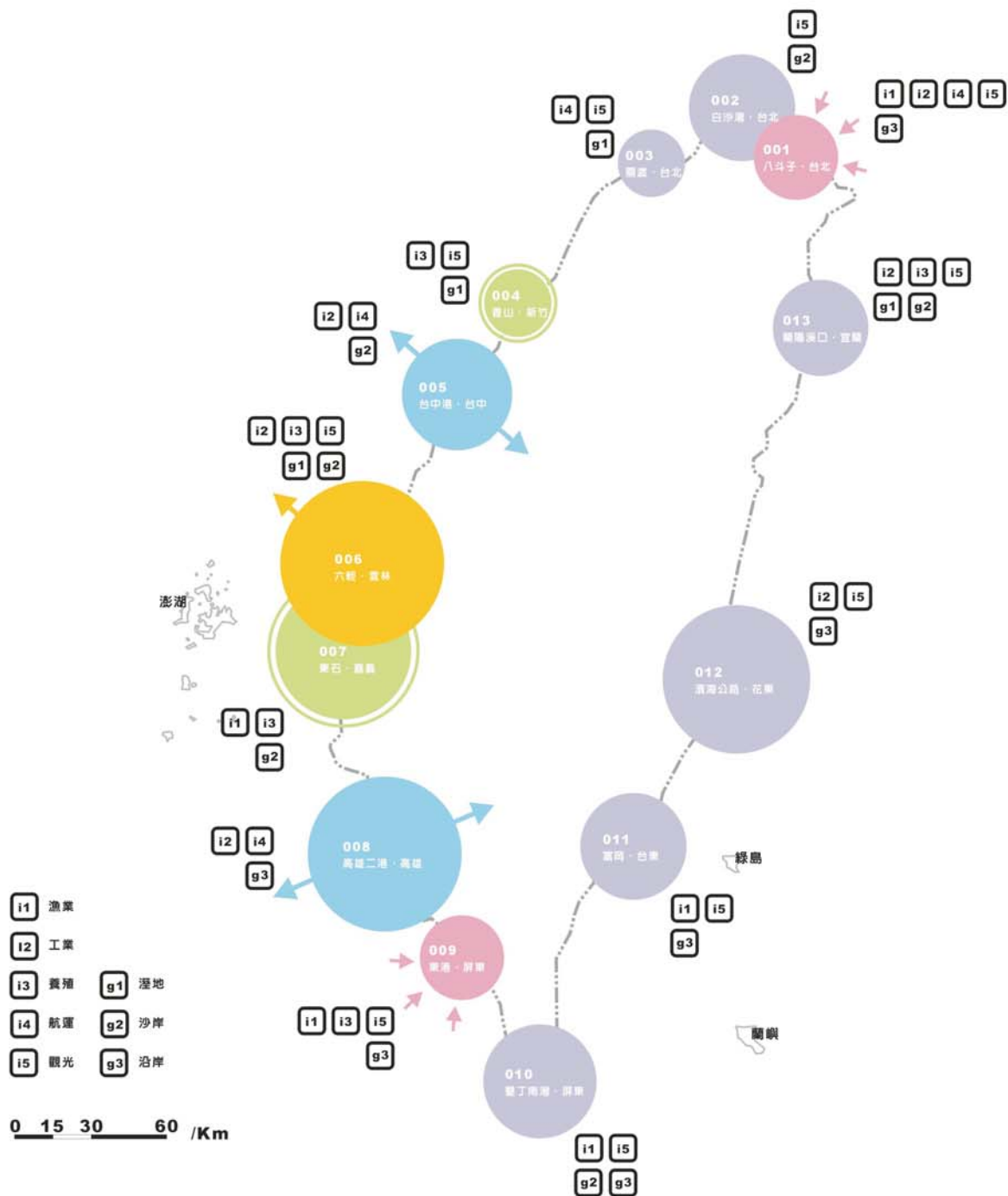





海洋台灣

From NoWhere to Now Here

2nd International  
Architecture Biennale  
Rotterdam



0001
海鮮便利店：
八斗子·台北
2nd International Architecture Biennale Rotterdam  
Ocean of Taiwan\_from NOWHERE to NOWHERE



**ANYSIS/ 01 BORDER 02 BYPASS 03 BEHAVIOR 04 BACKGROUND**

阻礙為何?

行為與目的

**BORDER 01**

沒有漁船的漁港。

**BEHAVIOR 03**

海鮮店將漁獲裝在水族箱中，供人觀看選擇食用，所以需將清澈的海水作為水族箱循環使用，在碧沙觀光魚市開發之後，海鮮店需求大增，如今已發展成東北角重要觀光點。

**BYPASS 02**

海鮮店將抽水管拉至防波堤。

**BACKGROUND 04**

現在漁船作業常發生兩岸糾紛、漁業資源亦日趨減少，基隆地區漁船從二○○○艘減到八○○艘，已全然改變，目前公海捕魚需要配額，漁人休漁需求調整，休漁期觀光方向發展。海科館大計畫將有效整合八斗子漁港與碧沙漁港，形成國家級海洋觀光帶。

ANYSIS/ 01 BORDER 02 BYPASS 03 BEHAVIOR 04 BACKGROUND

阻礙為何?

行為與目的

**BORDER 01**

沒有漁船的漁港。

**BEHAVIOR 03**

海鮮店將漁獲裝在水族箱中，供人觀看選擇食用，所以需將清澈的海水作為水族箱循環使用，在碧沙觀光魚市開發之後，海鮮店需求大增，如今已發展成東北角重要觀光點。

**BYPASS 02**


海鮮店將抽水管拉至防波堤。

**BACKGROUND 04**

現在漁船作業常發生兩岸糾紛、漁業資源亦日趨減少，基隆地區漁船從二○○○艘減到八○○艘，已全然改變，目前公海捕魚需要配額，漁人休漁需求調整，休漁期觀光方向發展。海科館大計畫將有效整合八斗子漁港與碧沙漁港，形成國家級海洋觀光帶。

.001

0002
黑心渡假村：
白沙灣·台北
2nd International Architecture Biennale Rotterdam  
Ocean of Taiwan\_from NOWHERE to NOWHERE



**ANYSIS/ 01 BORDER 02 BYPASS 03 BEHAVIOR 04 BACKGROUND**

阻礙為何?

行為與目的

**BORDER 01**

濱海無人居住的廢墟。

**BEHAVIOR 03**

半月型白色沙灘，長達1500公尺讓優良的海水浴場條件，形成優良的度假條件。

**BYPASS 02**

建造度假中心(碧翠灣福華渡假飯店)。

**BACKGROUND 04**

根據海水所含化學物質而指出，沙灘、洲子灣與碧翠灣之海水水質檢出「超量」的大腸桿菌，極可能與鄰近河口有關，因為河水隨洋流而把河水中的污染物帶到海水浴場，與之混合，再者，有些河川附近有垃圾掩埋場，污水滲透進入河川而污染海水浴場。因氣候季風還有交通的因素，本區的海景住宅多半以無人居住。

ANYSIS/ 01 BORDER 02 BYPASS 03 BEHAVIOR 04 BACKGROUND

阻礙為何?

行為與目的

**BORDER 01**

濱海無人居住的廢墟。

**BEHAVIOR 03**

半月型白色沙灘，長達1500公尺讓優良的海水浴場條件，形成優良的度假條件。

**BYPASS 02**

建造度假中心(碧翠灣福華渡假飯店)。

**BACKGROUND 04**

根據海水所含化學物質而指出，沙灘、洲子灣與碧翠灣之海水水質檢出「超量」的大腸桿菌，極可能與鄰近河口有關，因為河水隨洋流而把河水中的污染物帶到海水浴場，與之混合，再者，有些河川附近有垃圾掩埋場，污水滲透進入河川而污染海水浴場。因氣候季風還有交通的因素，本區的海景住宅多半以無人居住。

.002



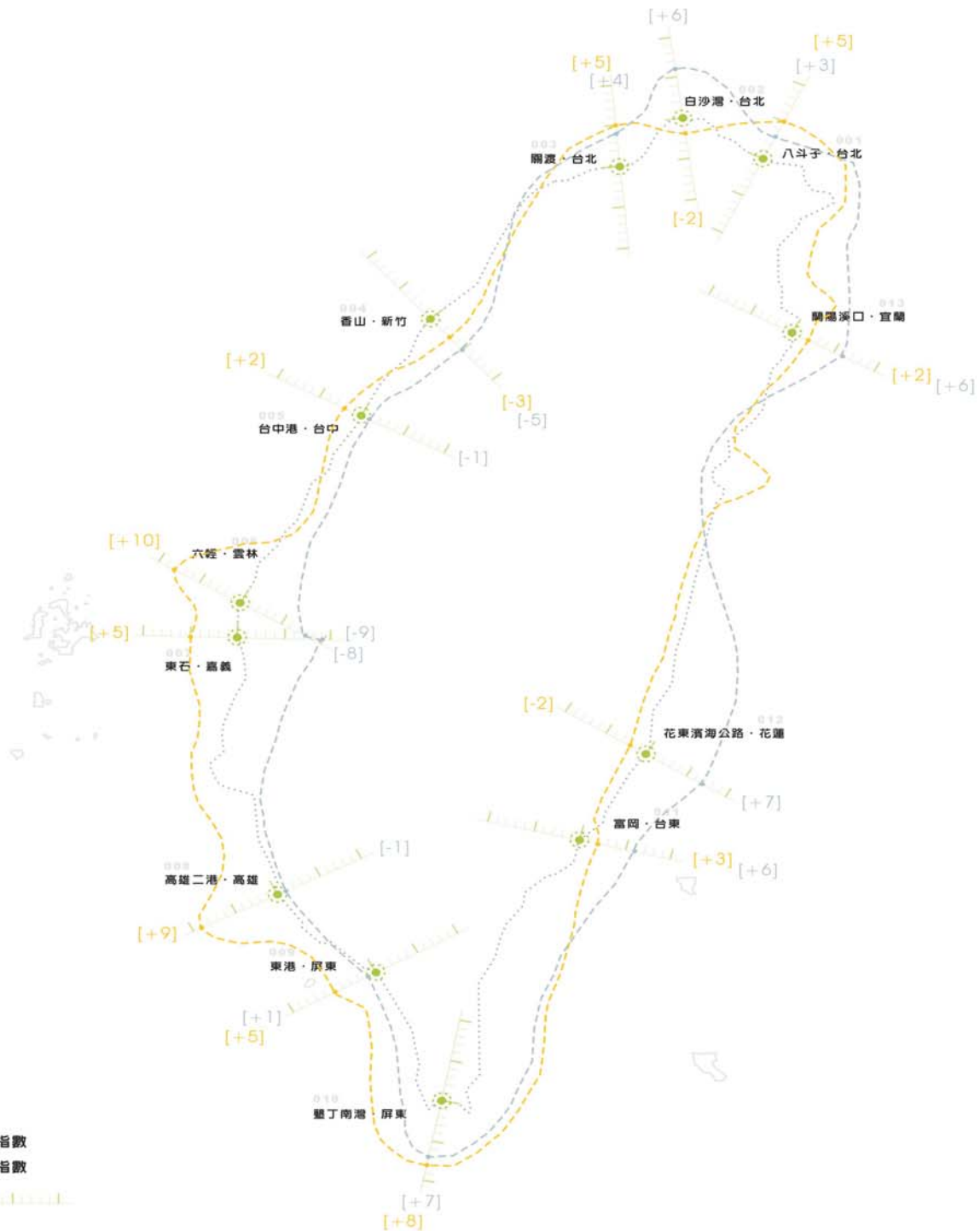
# 海洋台灣

From NoWhere to Now Here

2nd International  
Architecture Biennale  
Rotterdam

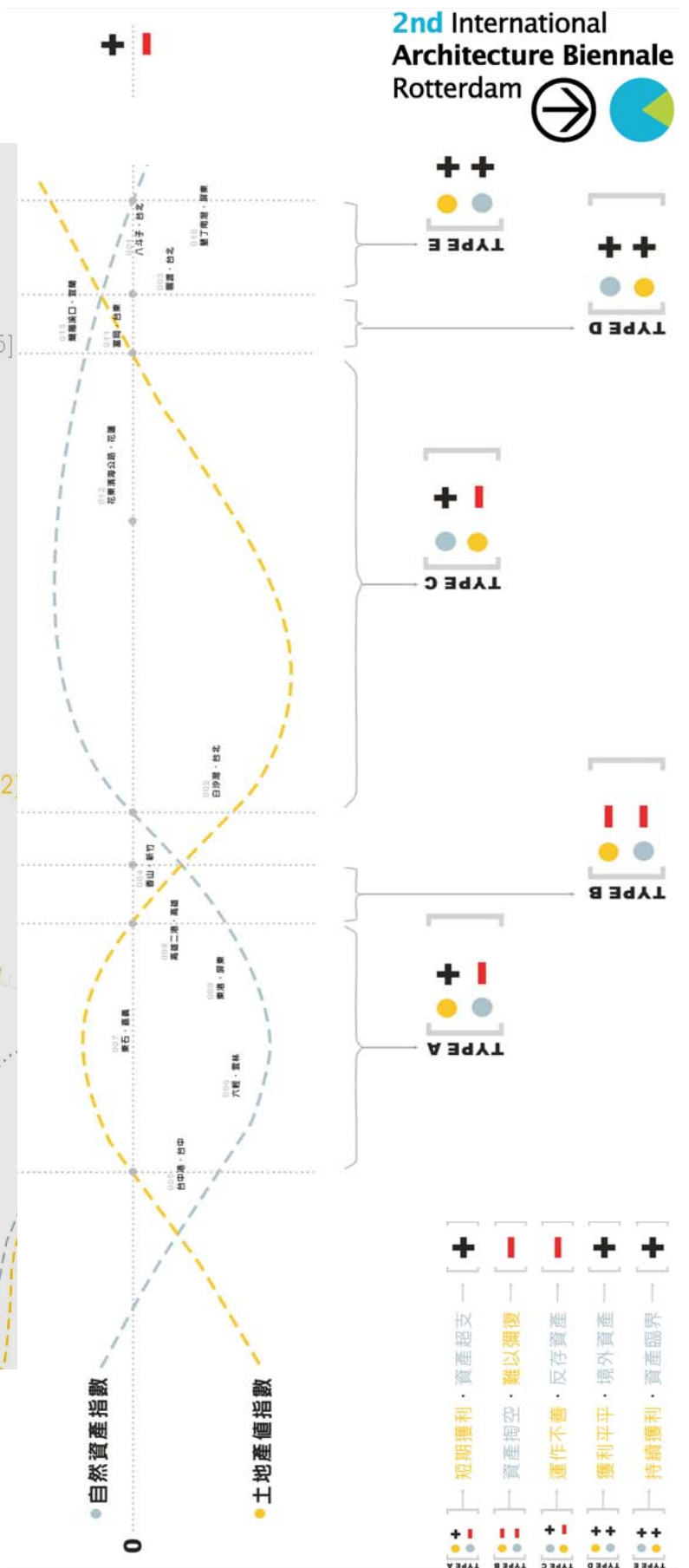
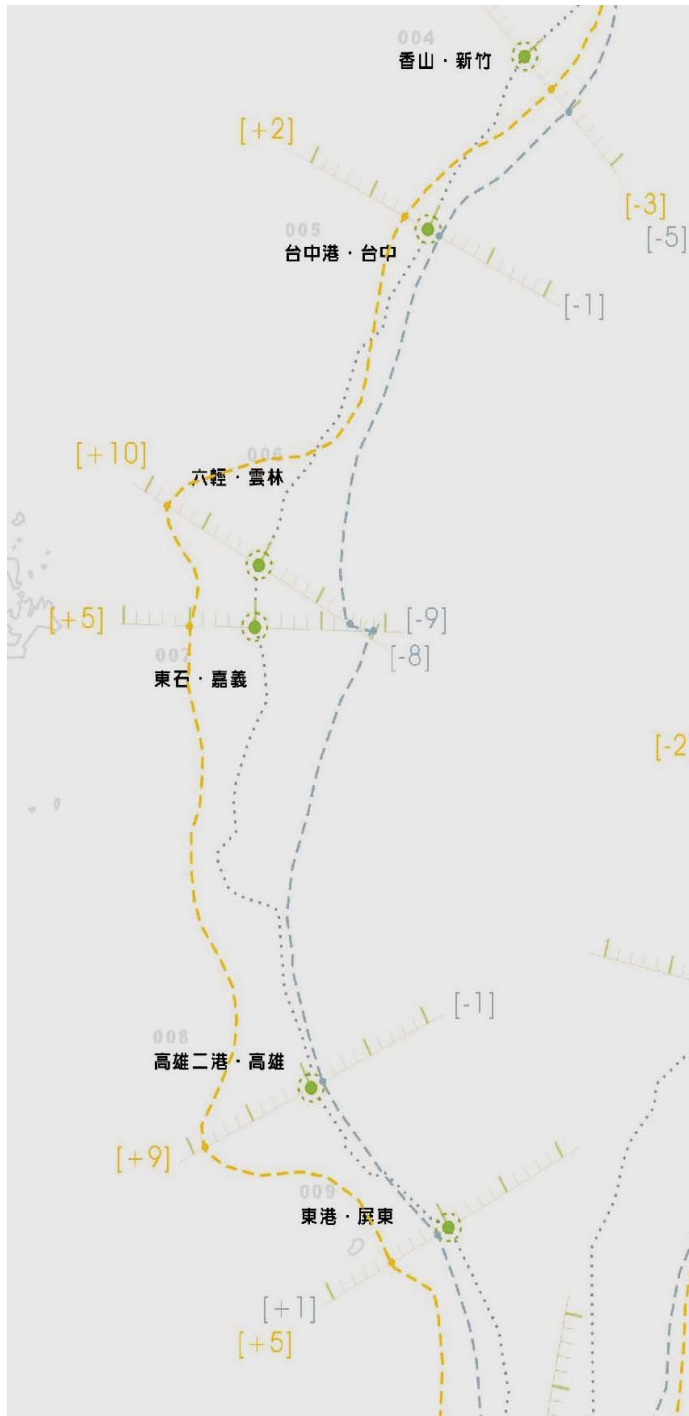


## 以盈虧認知的台灣海岸線



# 海洋台灣

From NoWhere to Now Here





# 海洋台灣

From NoWhere to Now Here

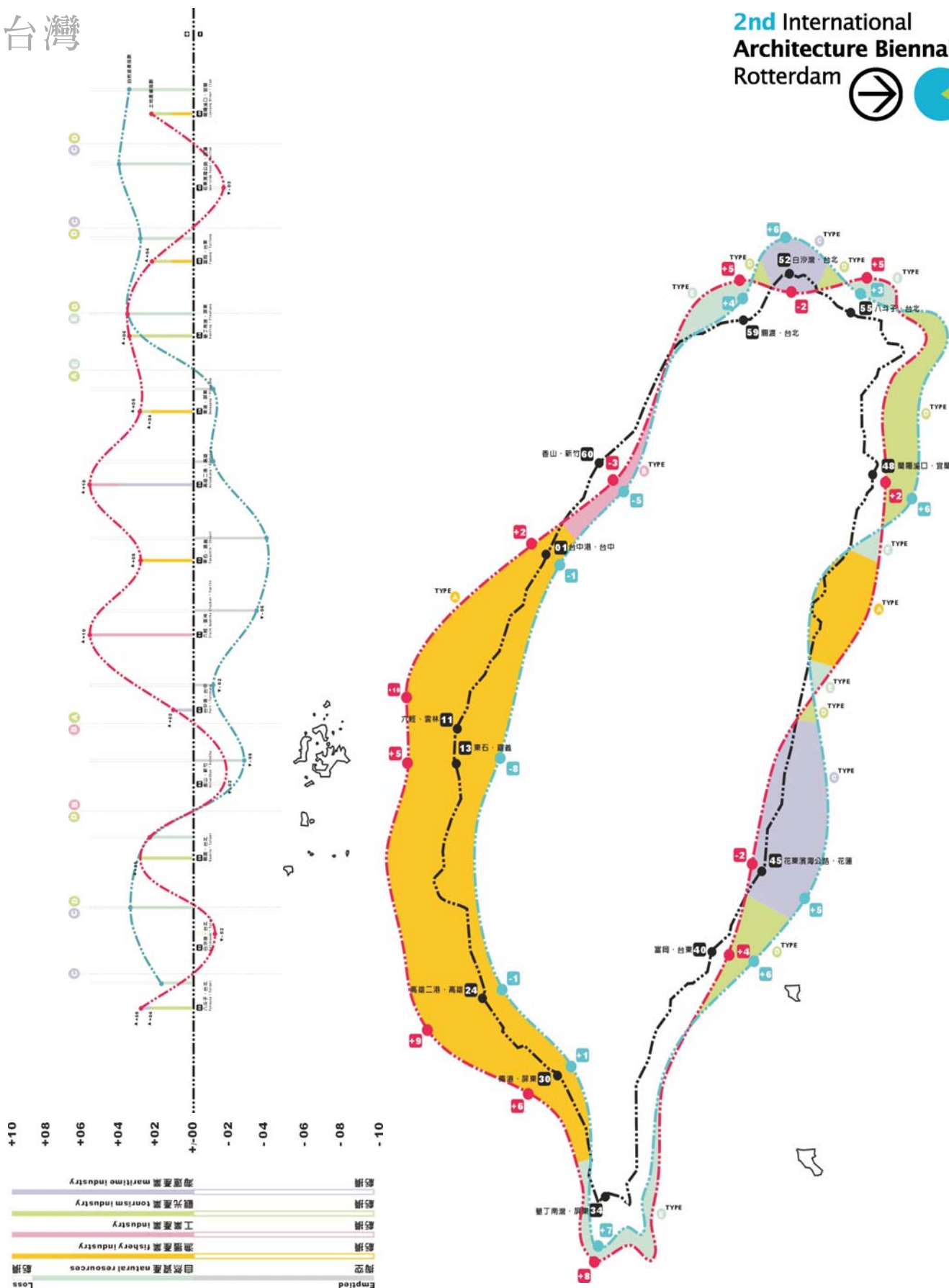
2nd International  
Architecture Biennale  
Rotterdam



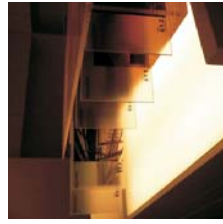
- A** TYPE A TYPE A TYPE A → 短期獲利 · 資產超支 → [ + ]
- B** TYPE B TYPE B TYPE B → 資產掏空 · 難以彌償 → [ - ]
- C** TYPE C TYPE C TYPE C → 運作不善 · 反存資產 → [ - ]
- D** TYPE D TYPE D TYPE D → 獲利平平 · 境外資產 → [ + ]
- E** TYPE E TYPE E TYPE E → 持續獲利 · 資產臨界 → [ + ]

海洋臺灣

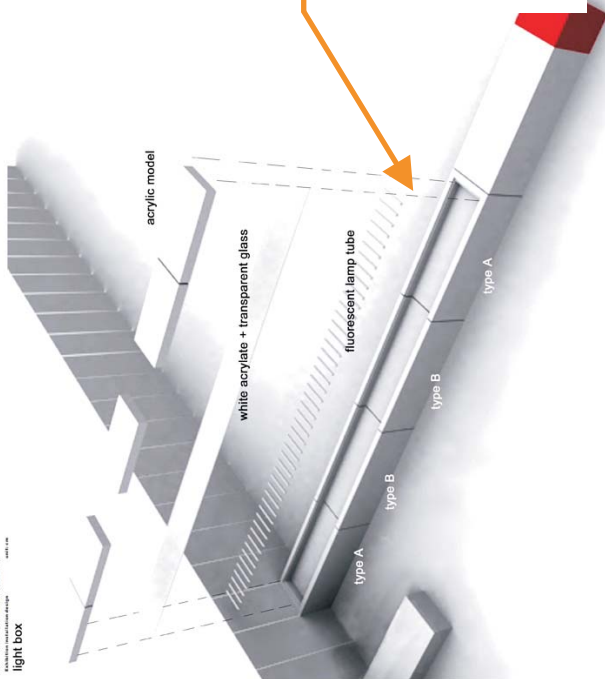
2nd International  
Architecture Biennale  
Rotterdam







Type\_A x2 + Type\_B x2



white acrylate + transparent glass

fluorescent lamp tube  
white painted  
holes for ventilation

Type\_A x2

Type\_B x2

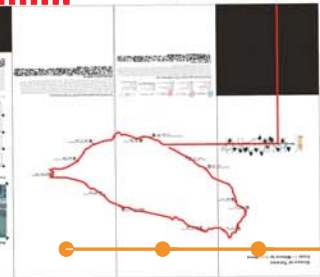
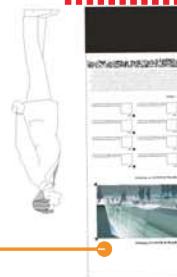


內容: 案例分析  
呈現: 投影 + 彩色輸出 (90\*240cm)  
設備: 投影機

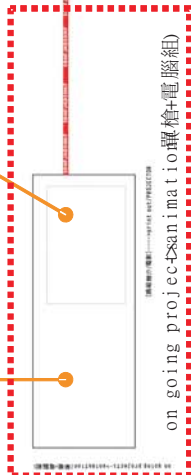
內容: 媽祖文字  
呈現: 彩色輸出 (90\*240cm)  
設備: 無

內容: 海洋故事影片  
呈現: 上投影  
設備: 投影機

內容: 阻隔紅纖文字  
呈現: 噴漆上去或紅色膠帶與電腦刻字  
設備: 紅色封口膠帶 / 電腦刻字 / 電腦刻字背板



內容: 台灣新輪廓  
呈現: 投影 + 彩色輸出 (90\*240cm)  
設備: 投影機 + 電腦組



on going projection + animation 電腦+電腦組

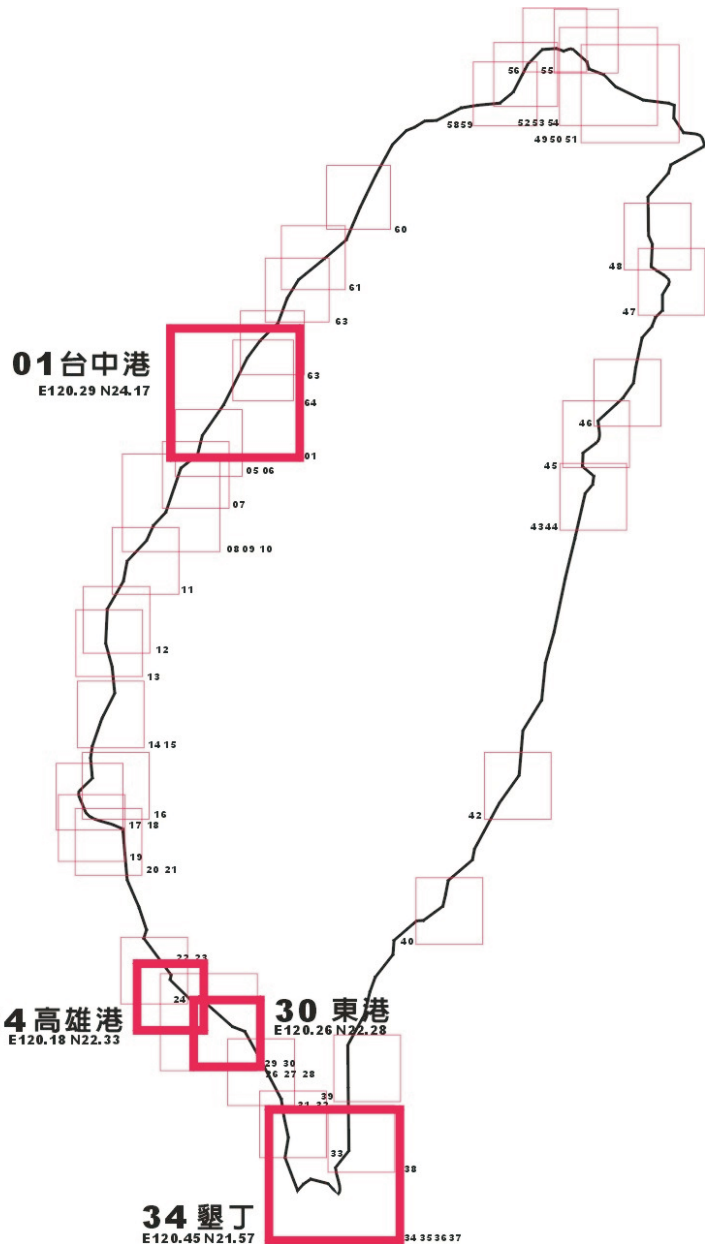
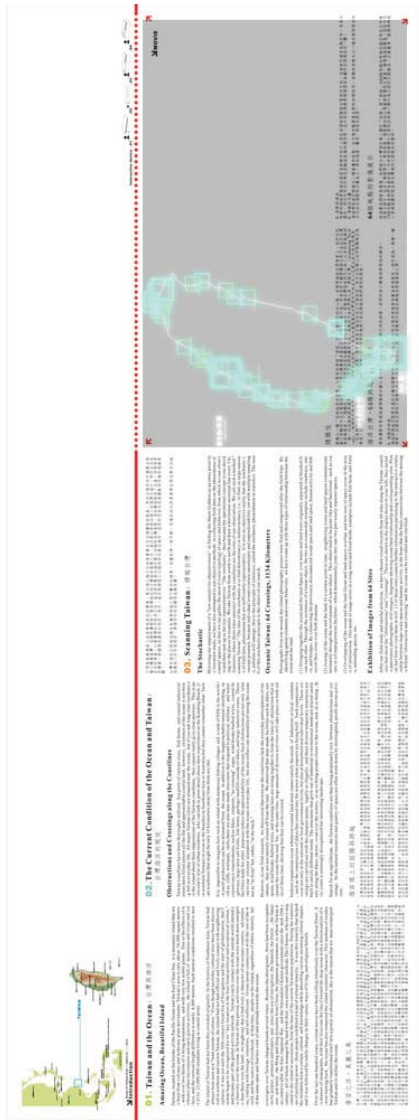
內容: 1組典型互動  
呈現: 動畫  
設備: 投影機

內容: 台灣簡介  
呈現: 輸出版面  
設備: 投影機

內容: 6組跨越1組典型-5  
呈現: 壓力箱體燈箱  
設備: 無

內容: 台灣輪廓展開  
呈現: 動畫  
設備: 投影機

海洋台灣 DEMO SYSTEM  
From NoWhere to Now Here



interactive animation key

+



interactive RFID

+



Animation



# MArch II Architecture Design Studio | SPRING 05

荷蘭國際第二屆鹿特丹建築雙年展 - 海洋臺灣











**SPRING 2006**



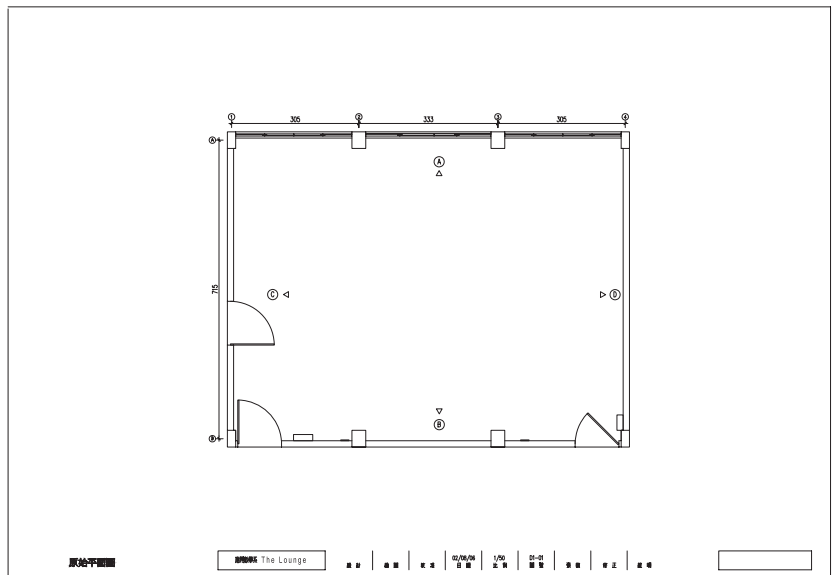




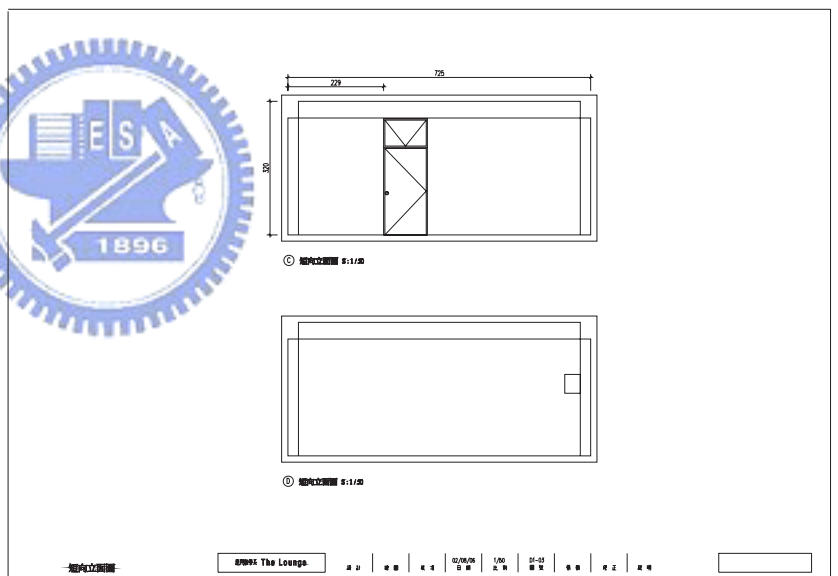
應用數學系\_COMPUTER LAB 外觀



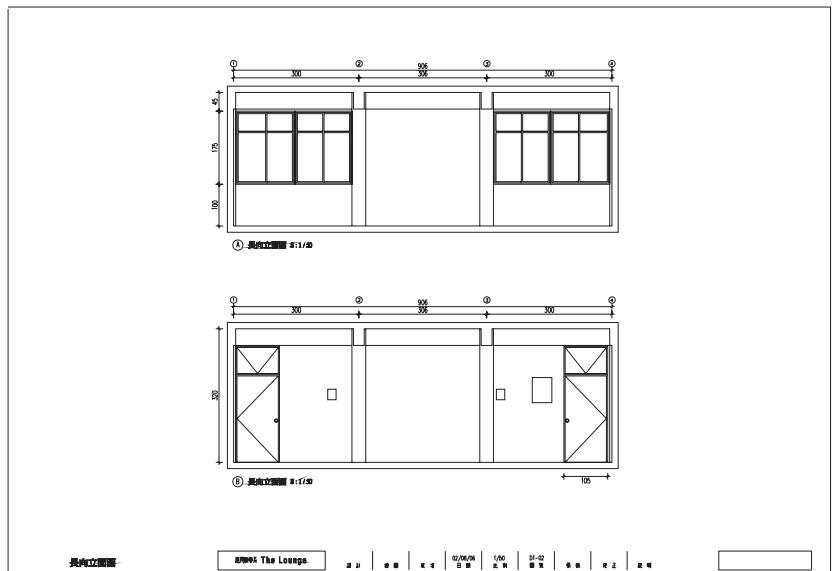
交通大學應用數學系  
COPMPUTER LAB SITE



現況平面圖

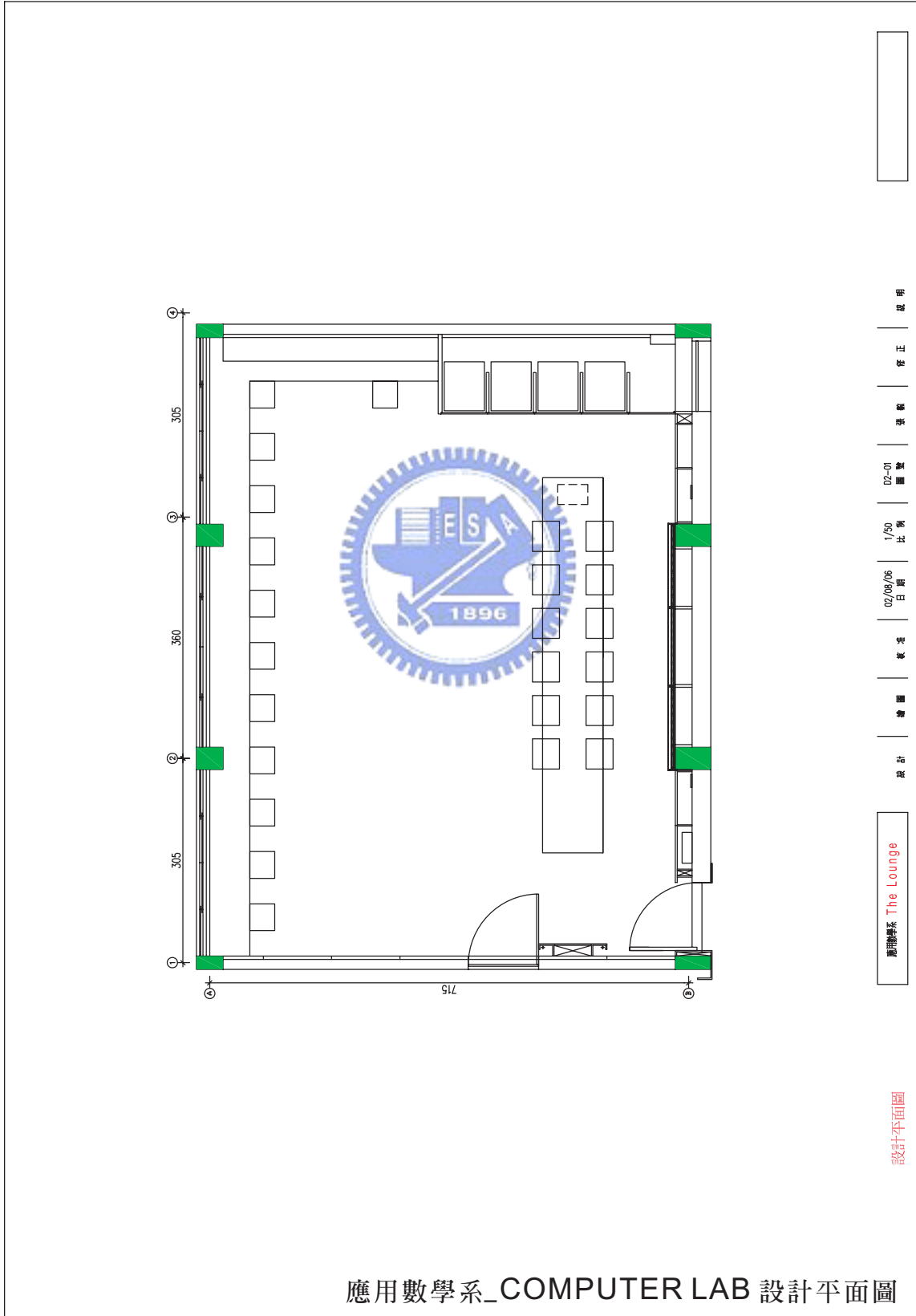


短向立面圖



長向立面圖







最習以為常的空間，往往是最令人忽略...藉由實際案例的操作，實踐人與空間中互動的關係..。

在設計概念發想過程中，透過分析、觀察人(使用者)的習性，並利用互動的概念重新定義人在空間只能被動地接受資訊，並進一步地創造資訊而與空間產生互動。



