1.issue

One of the more critical issues facing outdoor urban human habitat is the paucity of space for humans to rest, relax, or just do nothing.

For example, more than[a] 48% of Taipei city outdoor space is dedicated to the private vehicle, while only a fraction of that space is allocated to the public realm.

The Taipei city, each assigned an area of residents about 5.19m^2, about[b] 25% of[c] IUCN's standard.

"Instead of parking, we do nothing in our parking lots."

note

Green in Taipei city: a
Planning and non-urban areas planned total area of approximately 970 green parks, a total area of 1800 hectares.

Global green standard: b
According to IUCN's statistics show that among advanced countries in the residents living in the city's green area per capita has more than 20m2.

IUCN: c
International Union for Conservation of Nature

park-ing?
the metapolis dictionary of advanced architecture
p471

The appearance of the car in the last century eventually gave birth to a new place: parks of cars, carparks, which have become a point of reference in cities, rapidly moving on from a question of functionality and practicality to something more symbolic. Carparks have transgressed from only needing to be used (or known to exist) to needing to be seen. We should reflect on whether this has come about parallel to another, quite opposite transformation: natural parks, once symbolic, have become more functional and practical. From only needing to be seen (or known to exist); today, they need to be used. The history of these two parks is an X: unknown, encounter, contradiction. While parking is no longer simply architectural (such and such a floor in such building). Park-ing is a self-park, the fusion of two complementary landscapes.



residential parking type

“do we still need traditional parking lots to satisfy tradional transportation in the future?”

transportation energy

“In the future, transport energy consumption will be more than 50 % of total energy. Now nearly 10 million cars, continues to grow, and all rely on oil.

If the future continues to increase cars, trucks and airplanes , their emissions will poison us.
If we continue to the present state, then the amount of carbon dioxide produced by more than 5 times now, air transport increased 7 times.

The biggest problem is the transportation of human highly dependent on oil, 8,000 barrels of oil daily human is estimated at about mid-20th century, the oil can no longer supply the demand of mankind.”
-discovery

note

trip:
home-trip:
87%total traffic
&unhome trip

home-trip:
1.offices(schools)
52.0%
2.visit & pick up
3.entertainments

parking peak hour
suply-demand ratio:
81.41%
(supply>demand)

都市交通計畫-理論、實務
國立編譯館
茂昌圖書有限公司
施鴻志
段良雄
凌瑞賢 合著
p42

小型車停車格供需比81.41%(供>求)
只有大同士林北投:供<求
北投:132.82%
信義區最低:33.31%
(和大眾運輸有關)
台北尖峰小時供需比:
中正:66.86%
大同:104.98%
中山:92.64%
松山:91.29%
大安:79.39%
萬華:76.26%
信義:33.31%
士林:106.42%
內湖:93.21%
南港:64.81%
文山:78.76%
平均每星期行駛4.5天
每車9193km/year

Donald shoup, the high cost of free parking, p6

汽車高達95%的時間處於停車狀態。

City of copenhagen, traffic and environmental plan, 2004, p16

哥本哈根於
1994-2005
減少停車格→
改成公園與自行車道，
使1/3市民以
自行車上班。

commerciall parking type

TAIPEI MAIN CITY 24HR

2. [key word] parking

parking peak hour:

parking in ...

residential area
parking peak hour: 6pm-7am

business and schools' area
parking peak hour: 9am-5pm

unuse parking area in peak hour:

32% /residential parking lots
20% /business & school parking lots

“In 2020, Public transport to reduce consumption of 6 million liters of oil equivalent. =reduce using 3,752,595 cars/year”

.by government, cars’ numer: by yuantzu

According to EPA data indicating that, in 2006 Taiwan's total emissions of carbon dioxide as 25,598 million tones, the global ranking for the first 22. Average annual growth rate of 4.85% for the highest in the world. Currently in Taiwan, transport energy consumption has accounted for 14% in 2006 , while the transport of air pollution accounts for the second.

note

EPA:
United States Environmental Protection Agency.

car:
5 L oil/day
44000 KJ /L oil

1 liters of oil equivalent
=9,000,000 Kcal
10,000 liters of oil equivalent
= 28,000 tons CO2

6 million liters of oil equivalent
=2.26x1014 KJ

produced by fuel cell

traditional car
using car ‘s weight tp create mechanical energy to pump CO2 into energy system, increase energy resource.

{ PUBLIC TRANSPORTATION }

The energy system produced by a private transportation is mainly responsible for the energy required for public transport and parking spaces of local community use.

PRIVATE HYDROGEN CAR

CATALYZER: hydrogen car
parking in:bring weight, air, hot, shadow, renewable energy(solar.wind)

when car is parking in parking lot, it makes parking lot cool dwon and bring to mechanical energy to catalye renewable energy system which can get high efficiency.

03.energy/parking [system]

impotant unit

germs:

暗醱酵產氫比光合作用和光醱酵產氫之代謝速率快，操作條件要求也較低。
目前逢甲大學
所開發之顆粒污泥/固定化細胞系統醱酵產氫技術，使用大分子料源(澱粉)之產氫速率達48 L/L/d，居世界領先，並被國際評估為未來生物氫能開發最具經濟及產業效益之技術。
逢甲大學發現包含「梭狀芽苞桿菌」的厭氧菌在內三種細菌配方，放入混合垃圾或廢棄物的發酵槽，可提升產生氫氣效能。 逢甲能源與資源研究中心副研究員朱正永舉例，該系統以一公斤有機廢棄物放入發酵槽，可產生二百五十公升氫氣。

以六碳糖或五碳糖為基質時厭氣菌產氫之反應式如下：
.. 六碳糖
$C_6H_{12}O_6 + 2H_2O \rightarrow 2CH_3COOH + 4H_2 + 2CO_2$
$C_6H_{12}O_6 \rightarrow CH_3COOH + 2H_2 + 2CO_2$
.. 五碳糖
$3C_5H_{10}O_5 + 5H_2O \rightarrow 5CH_3COOH + 5CO_2 + 10H_2$
$6C_5H_{10}O5 \rightarrow 5CH_3COOH + 10CO_2 + 10H_2$

物理雙月刊(卅卷四期)
2008 年八月
生物氫能面面觀
文/
林秋裕、
張逢源

algae:

台電公司研究發現一公頃面積，植樹一年可補捉25噸二氧化碳，但微藻一年卻可捕捉58至90噸二氧化碳。

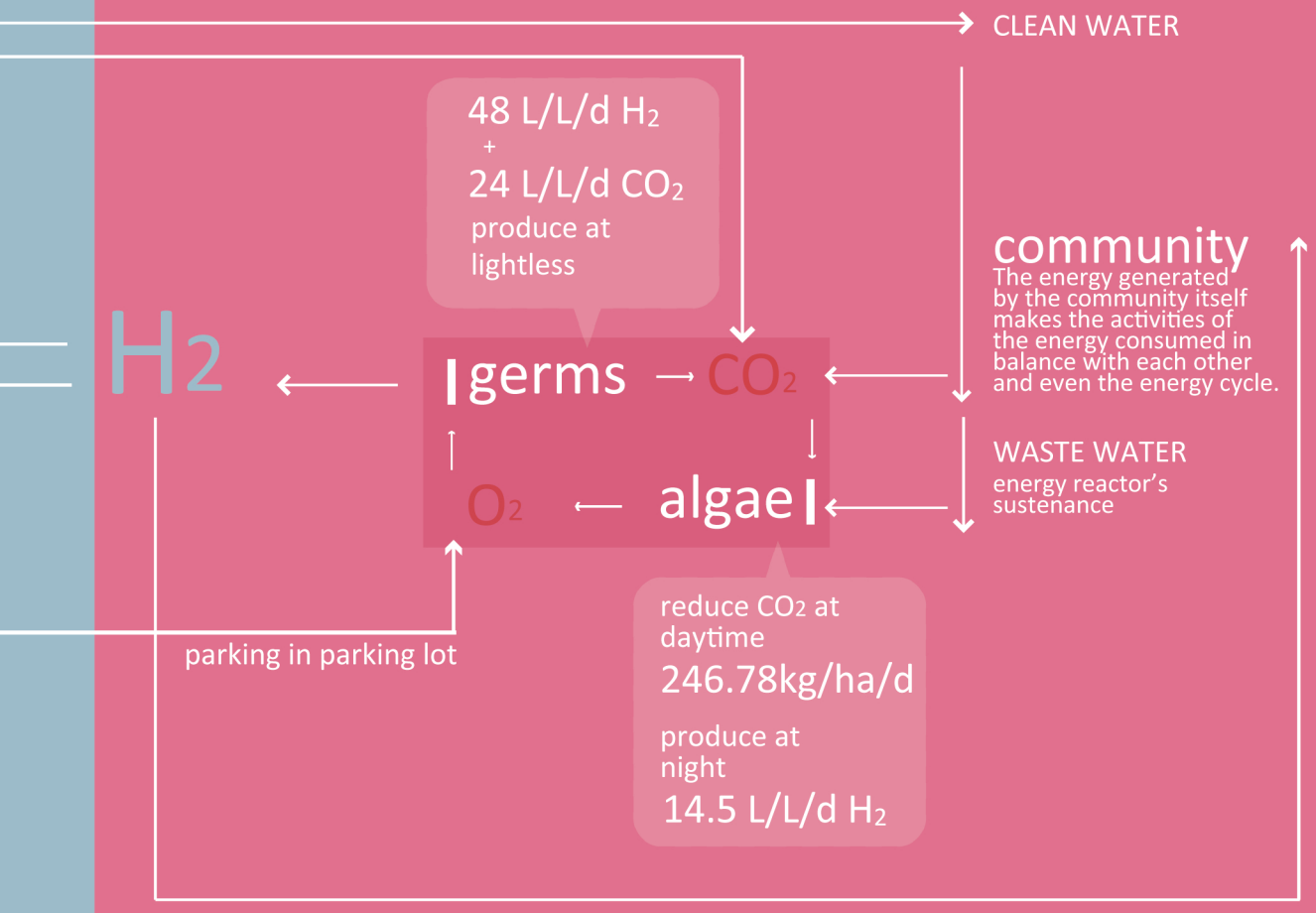
構成微藻主要元素以碳、氮、磷、矽(矽藻)為主，其中碳是構成生物體內化合物重要骨幹，以化學分析顯示微細藻細胞內碳含量超過50%。因此以生產100噸微藻類而言，將需要有183噸二氧化碳供應。

因此光合作用需提供充分陽光、營養成分及適當生長環境，以促進藻類生長，其中二氧化碳濃度與光照，更是藻類主要生長限制因子。

大規模藻類培養
吸附二氧化碳探討

文 /
陳國帝
盧文章
白明德
林昀輝

main renewable energy reator



public transportation energy tube

parking buffer space



car passing path



turn 3 :

48 L /L/d X 5 L H2+
car's weight push H2
into public tansportation
tube to storage,
and breate CO2 into
algae place make air
recycling.
car stay times:<5 min/day
other use: plaza, shop,
movie theater place...

passing



parking lot



pass 2 :

park 7 x5 algae+ x2 germs

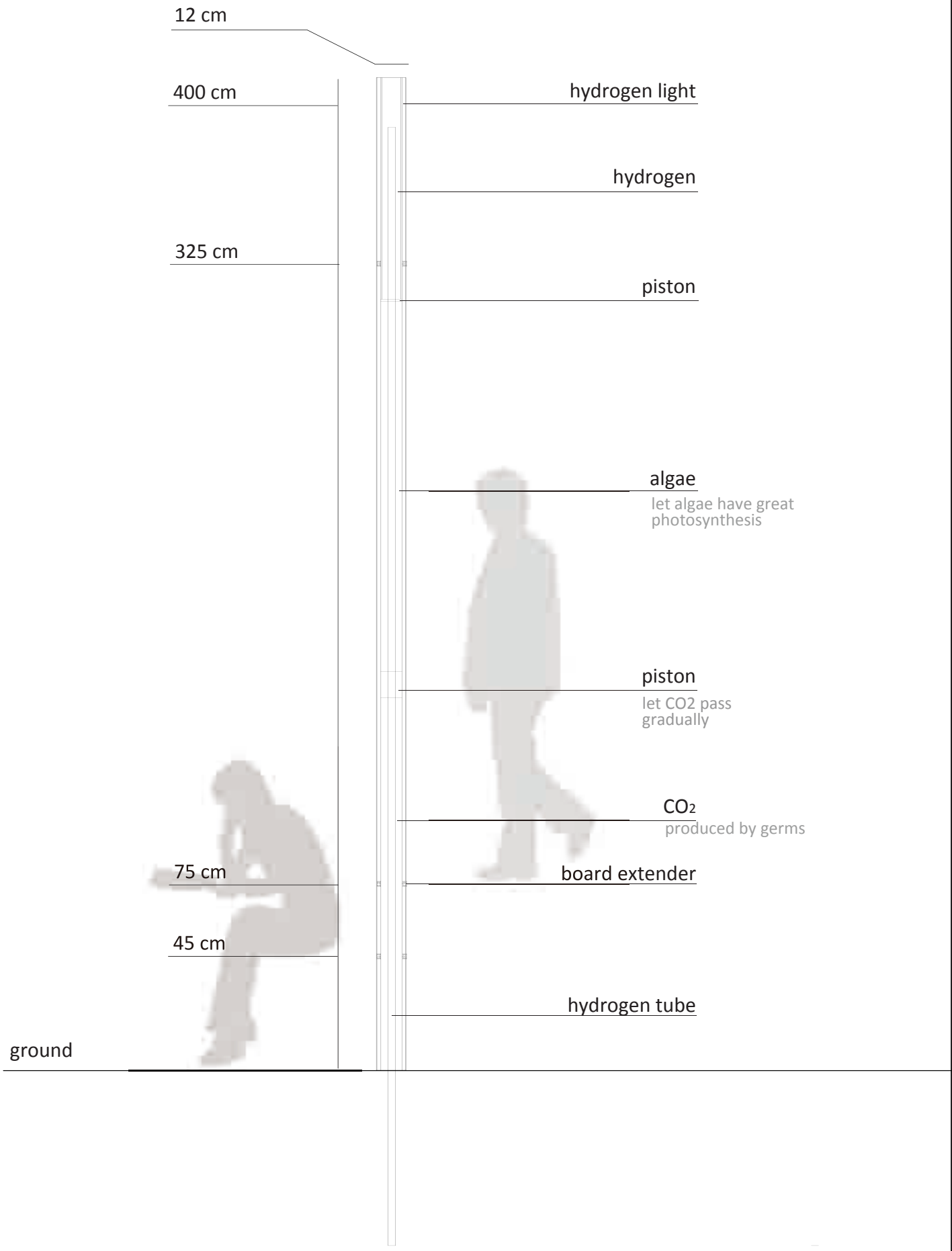
car stay times:<2 min/day
only for passing path

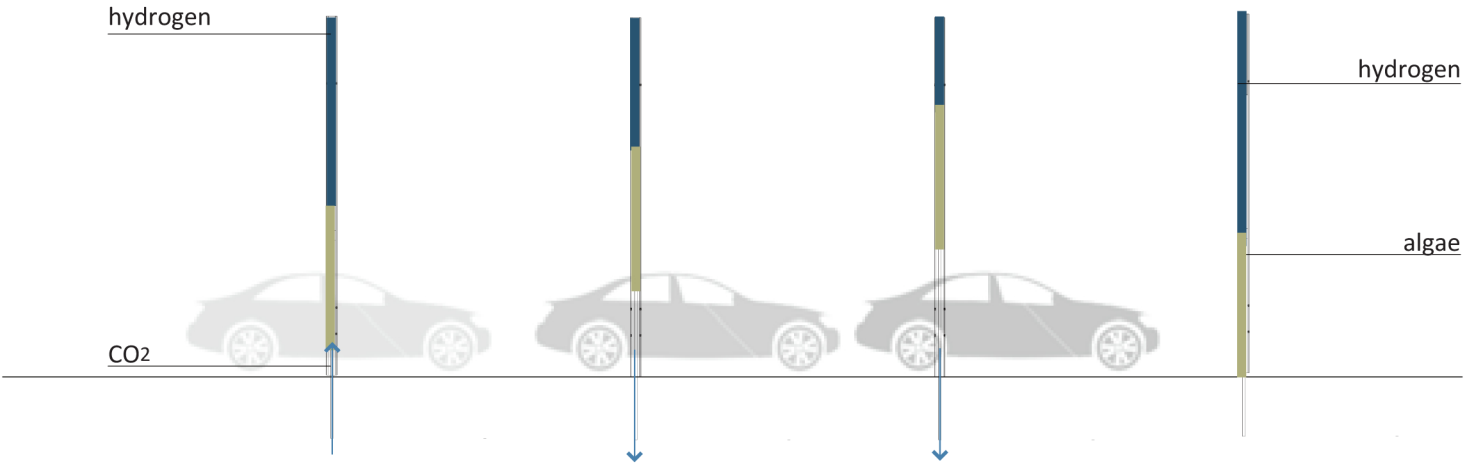
parking



car stay times:< 1308 min/day
when parked in, shadow could made germs and algae produce Hydrogen faster, and car provides it own weight make it have great air recycle.
when car stay it will open tube, making hydrogen flow to public trasportatio storage.
other use: it could make two layer, to be temporary building for activities,shop, stairs, stage....

O2


12 cm
400 cm
hydrogen light
hydrogen
325 cm
piston
algae
let algae have great photosynthesis
piston
let CO2 pass gradually
CO2
produced by germs
75 cm
board extender
45 cm
hydrogen tube
ground



10 min

producing hydrogen quickly,
H2 P:↑

120min

H2 P:↑> CO2 P:↑

480min

H2 P:↑< CO2 P:↑
push hydrogen storage under ground

parking time



5:00pm

producing hydrogen quickly,
H2 P:↑

8:00pm

H2 P:↓> CO2 P:↑
let shop using
(system still producing hydrogen)

11:00pm

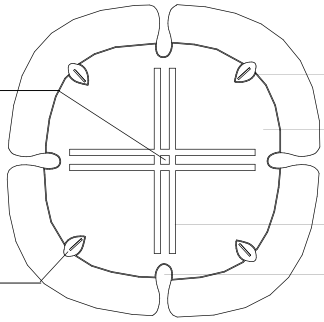
H2 P:↓< CO2 P:↑
about time to start to close shops...
quiet park

2:00am

H2 P:↑< CO2 P:↑
start to storage hydrogen

360 cm

cover



120 cm

handle

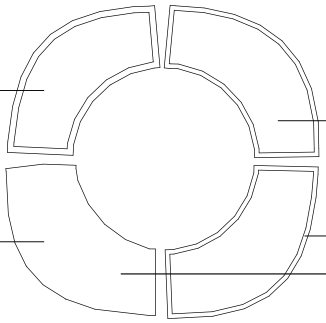
movable cover

track

60cm

pole's track

a



2.5L X 15.4L/L/day H_2

algae reactor

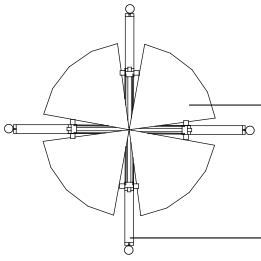
could be photosynthesis

5L X 48L/L/day H_2

H: 80cm

germs reactor

b



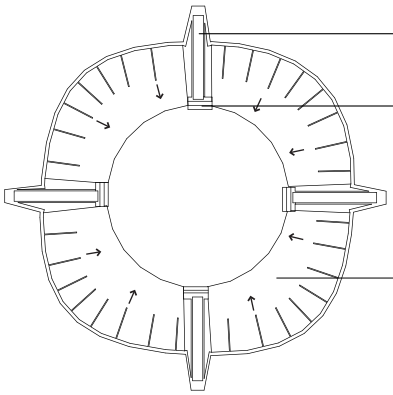
hydrogen storage

use gravity converted into mechanical energy

hydrogen pipe

c

420 cm



hydrogen pipe

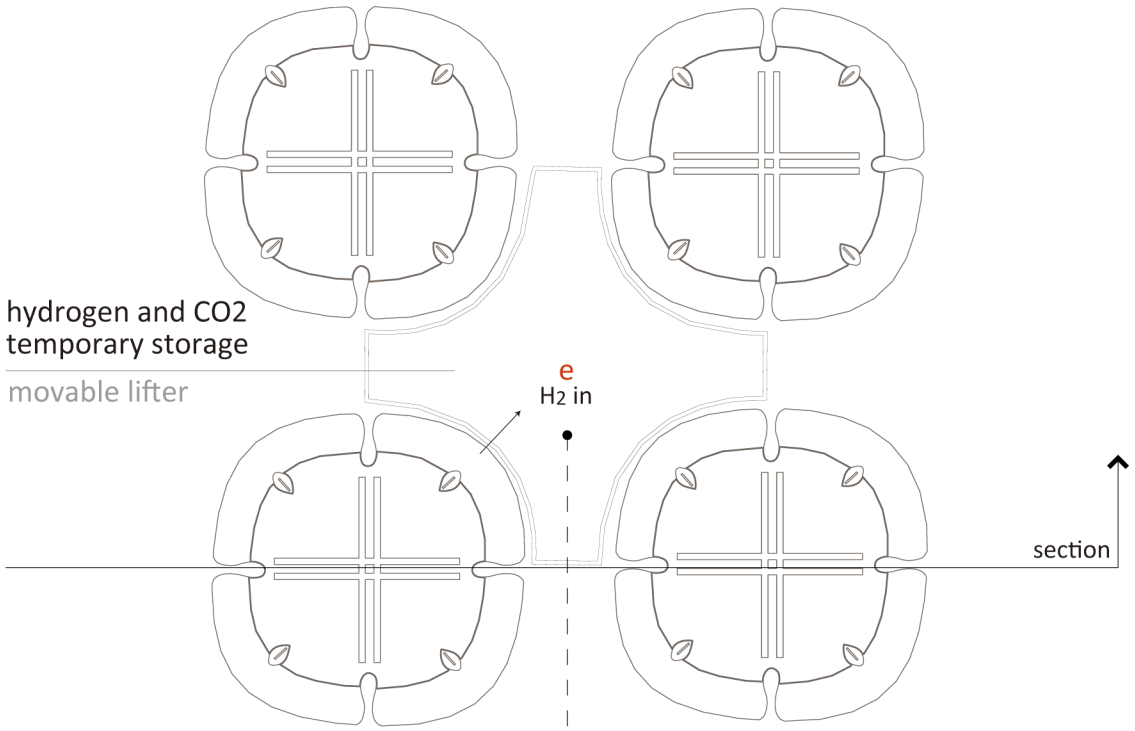
CO_2 pipe

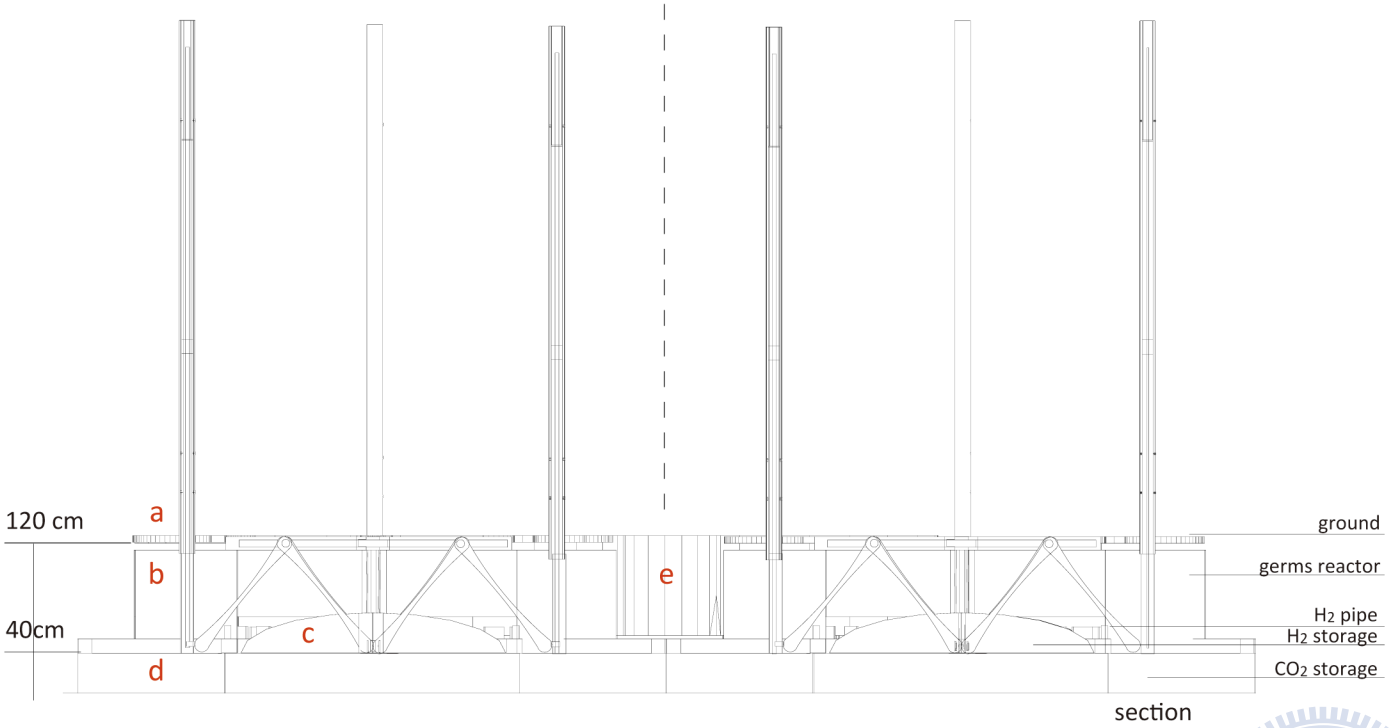
germs reactor

need in lightless place

d

04


hydrogen and CO2
temporary storage
movable lifter
e
H2 in
section


120 cm
a
b
40cm
c
d
e
ground
germs reactor
H2 pipe
H2 storage
CO2 storage
section

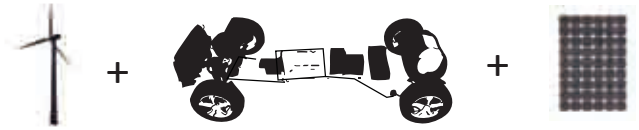
05

circulate itself

lack of power to connect out

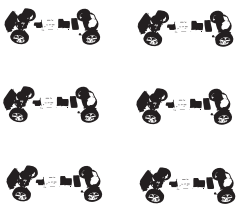
could not circulate itself

hydrogen energy in



wind power
fuel cell
solar Cell

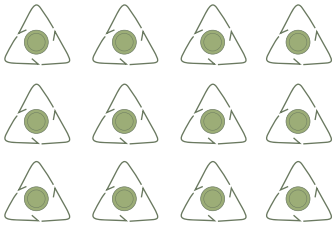
台北市汽車總量為703,573輛，
目前停車格數共488,723格，
所占面積約16,518,837.4m2。
總人口約3,600,000人，平均每5人/車。



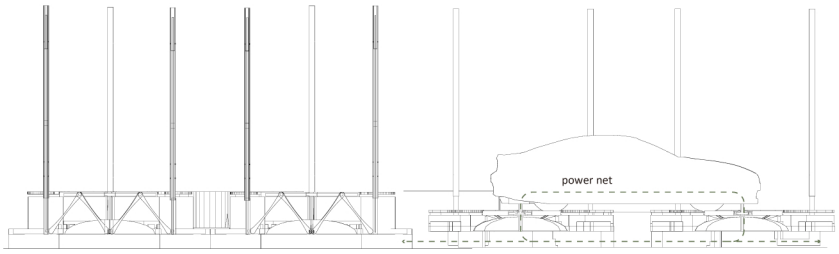
use hydrogen:
hydrogen car



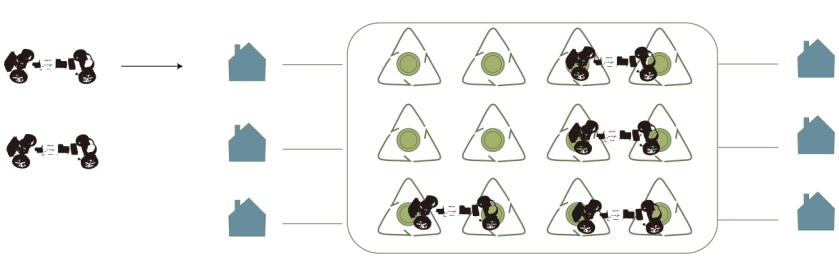
use hydrogen:
green houses



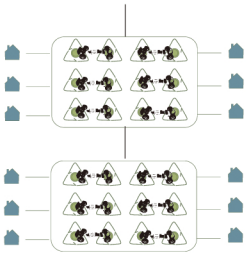
energy circulatory system, create hydrogen:
parking lot



15-40˚C
when car park here,make good temperture to produce hydrogen.



using car's power connect all :
power circulatory net
parking lots produce hydrogen to car and community and feedback source.



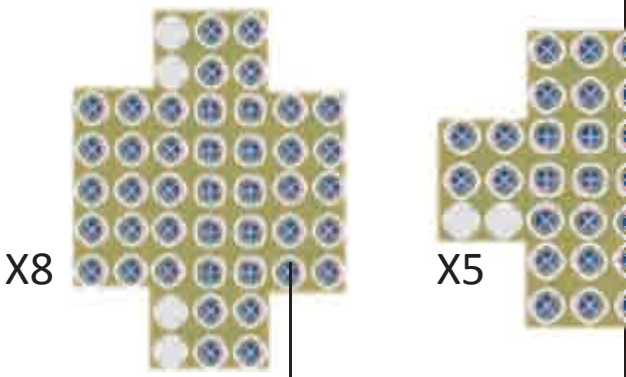
when car park full, power could connect other parking space.



each activity use hydrogen produced by the other parked parking lot.
ex: work a vendor need 2 parked parking lot revenue and expenditure are balanced.

[index]





Aly. 2, Ln. 236, Sec. 5,
Zhongxiao E. Rd.,
Xinyi Dist.,
Taipei City 110,
Taiwan (R.O.C.)

original:
381 parking lots
Xinyi Dist.:33.31%
(oversupply)

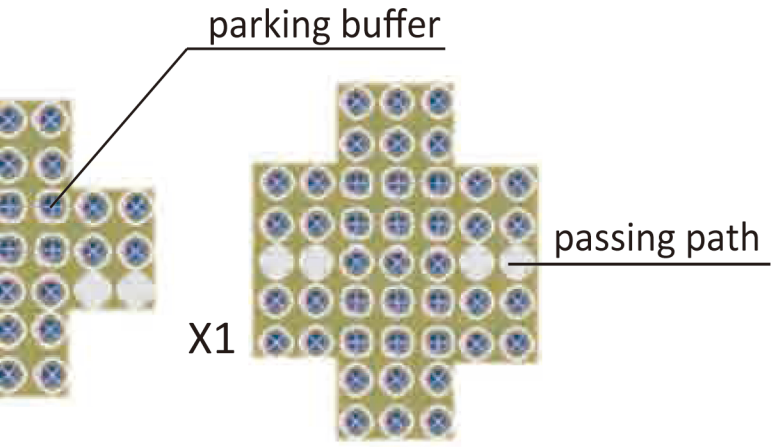
totally
12609 m2
parking space:
6934.2 m2

381 parking lots
X 33.31% (the most time)
<127 parking lots occupation
only using < 2311.4 m2

12609 - 2311.4
= 10297.6 m2
be wasted

a 36 X 28 m
14 parking lots
12 X 20 m plaza
or 12 X 8 m plaza X2
448 m2 second layer

b 28 X 28 m
10 parking
8 X 12 m pl
320 m2 sec



m
ing lots
n plaza
second layer

c 36 X 36m
14 parking lots
8 X 20 m plaza
448 m^2 second layer

5

[urban]
.park(ing)

[win]

381 parking lots X 81.4%
= 310 parking lots

new park(ing) space:
296 parking lots
+
10297.6 - 9790.32
=507.28 m^2 park
+
3840 m^2 plaza could use
+
5632 m^2 second layer could use
+
678 energy sys. unit
=162720 H^2
+
become have
9.95 m^2 park/person in Taipei
+
many activities
start

note

PARKING PEAK HOUR
SUPPLY-DEMAND RATIO:
81.41%
(supply>demand)

POP MUSIC

動人的故事
來自唱出生命的我們



放在我想要你聽見的地方，
等著你來分享我將要跟你說的故事。

當音樂響起
看見與聽見我緩緩道出的那刻。
讓我們沉浸在相同的氛圍裡，
一同呼吸感受彼此心靈的跳動。

那一刻，你聽見我了嗎?

音樂的幕簾已悄悄拉開
屬於我們的饗宴正將開場...

OUR STREET VOICE,
LIVE. IN TAIPEI CITY



POP MUSIC BETWEEN US

1 web+ STREET VOICE, .research

我們從現實與網路上，
可以輕易的聽見他人的音樂故事。
而現實生活與網路分享上各有其優缺點，
或許我的流行音樂中心會是將兩項相互結合，
甚至再增加不同的使用經驗感受。
讓音樂人與聆聽者
擁有更好的平台一同享受音樂的洗禮。

http:tw.beta.streetvoice.com music/
http:www.musicovery.com

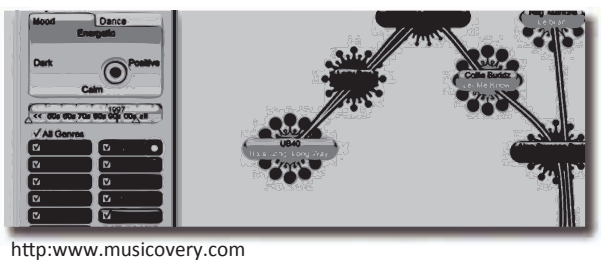
musician be heard
listener hear



be heard
給音樂人發表的平台

讓音樂被聽見的運作方式

1.分類音樂曲風
2.推薦次數



http:www.musicovery.com

hear
給一般人聽音樂人的平台

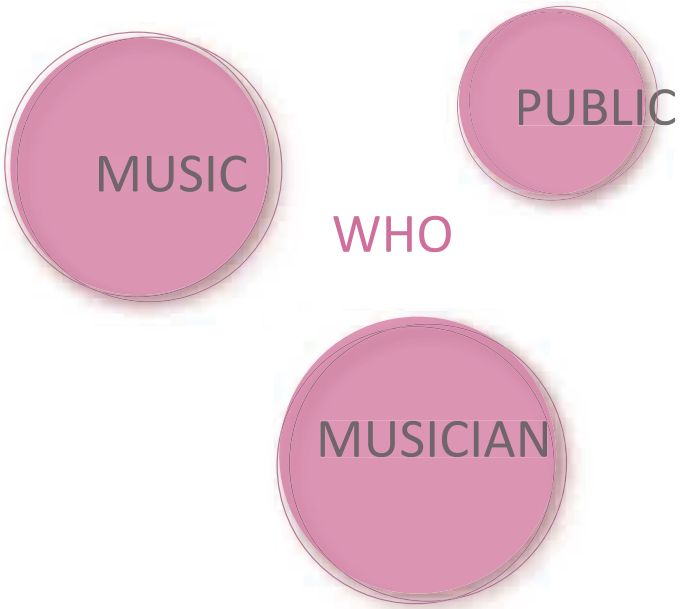
聽見不同音樂的運作方式

1.根據情緒
2.想聽的風格



http:tw.beta.streetvoice.com music


SHUP UP !!
〔note〕
PLAY ON STREET
ADVANTAGES
聲音容易被影響
DISADVANTAGES
當有聲音時更容易被聽見
即興度高
場景關係性強
互動性高
被聽見的公平性
reality+
NOT EVERYONE LIKE YOUR MUSIC
SHUP UP !!
SHUP UP !!
I LIKE IT!!!



HEAR

IN THE SAME TIME

PLAY

SEE

IN THE SAME TIME

S + V +

my pop music center

PLACE 2.concept

CHARMING THING IS ALL WE CAN TELL STORIES AT THAT CHARMING MOMENT.

音樂最具有魅力的
是當所有人都凝視著傾聽的我們道出生命的那一刻

我用那真正的情感揮灑於我們所在的地方

PLACE

以原有經驗的
生活空間元素，
去增加有趣的新經驗

當音樂開始時，
空間才擁有各自的個性與生命。

空間是音樂發生時,
才存在。

STREET

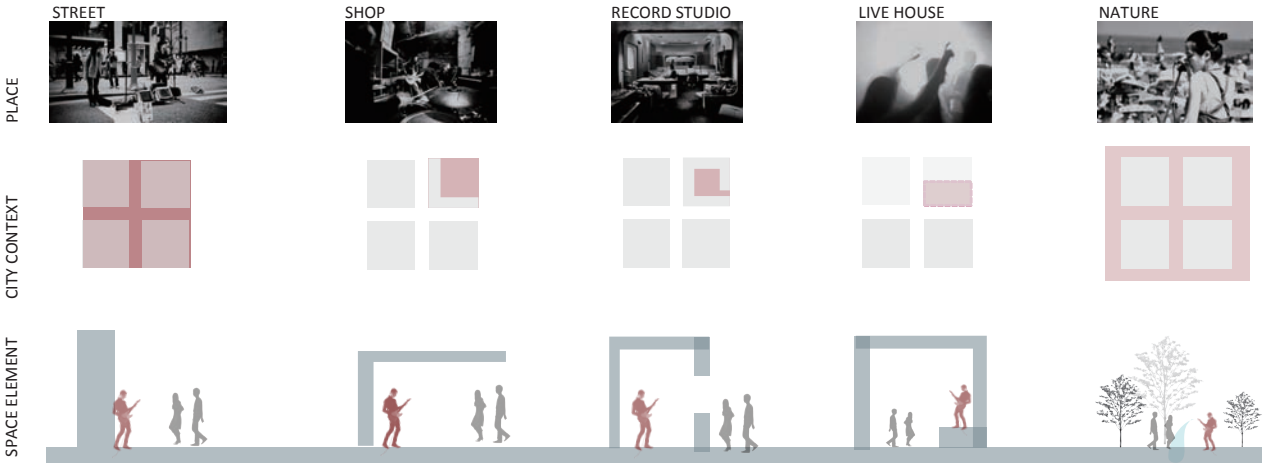
我們會找尋
適合我們音樂的地方



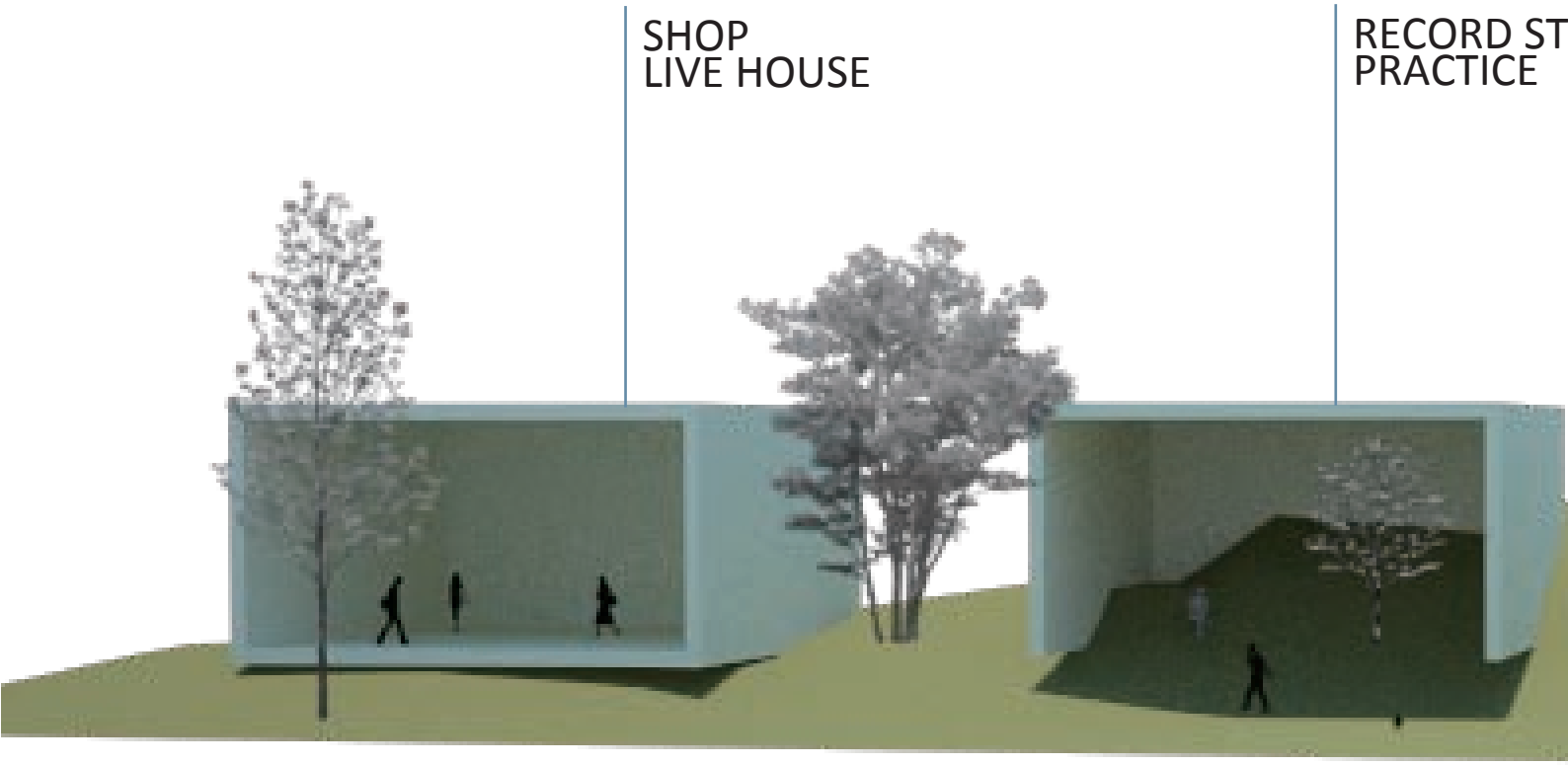
創出新的空間使用經驗，
開啟我們熟悉的音樂場所的自我新生命。

STREET VOICE, LIVE. IN TAIPEI CITY

WHERE WE USED TO
PLAY, SEE, HEAR IN THE SAME TIME.



PROTOTYPE



HEAR

PLAY

IN THE SAME TIME

SEE

3.pop music




百貨公司前面人好多唷，
在這裡表演應該比較會被看到吧!
樓下的LIVE HOUSE
好像有大活動耶，
等等我們下去看看!
後面的表演好像不錯，
去瞧瞧!
蠻好聽的耶，
也不會受打擾，真好!
後面表演的不錯，
把後門直接打開好了!
今天有個演耶!!


音樂選擇自己適合的角落，
單元的隨機組合創造更多
音樂表演場地的可能。
UNIT
4
我們在這裡表演吧，
很適合今天這些歌:)
天團表演場地超神秘!
趕快過去，超興奮的!!

5


path
record studio
back plaza
see live house
live house entrance
b1
固定式的表演場所
live house
2f
THE PLACE WHERE
play, hear, see
not
in the same time
exhibition
3f
設備支援路線
path
1f
活動遊戲式的表演場所
play, hera, see
in the same time
street
聽說等等這裡好像會有一場神秘驚實表演耶!
這邊可以看見樓下有表演耶!我們下去聽聽看!
今天在這裡練習好了!!不受打擾可以好好想想!
A區錄音室好像需要幫忙，趕快過去看一下好了!!!
這間商店好有趣唷!!買來送朋友好了!!
好阿!沒問題!對了，你有看到樓下表演嗎?感覺還不錯耶!去交流一下!
後天表演，先住在這邊，看看環境，等等來練習!
就在這裡表演吧!我喜歡這裡的氛圍 :)

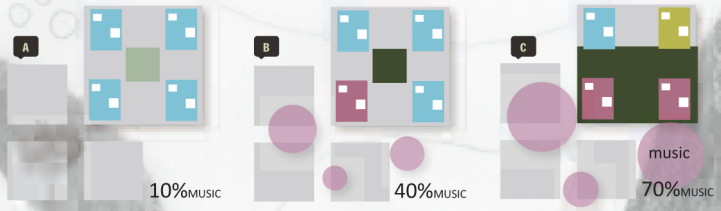
section

TYPES-SHOP



unit

MUSIC CREATE SPACE A LIVE



MUSIC CREATE SPACE ALIVE
shops



plan
niche music → popular music



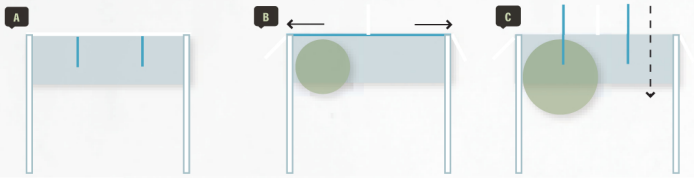
section

LAYER 1
固定式單獨表演區

LAYER 2-GROUND
隨機組合表演場所
商店層

LAYER 3
連結所有空間機能
展覽層

LAYER 4
設備支援
設備層

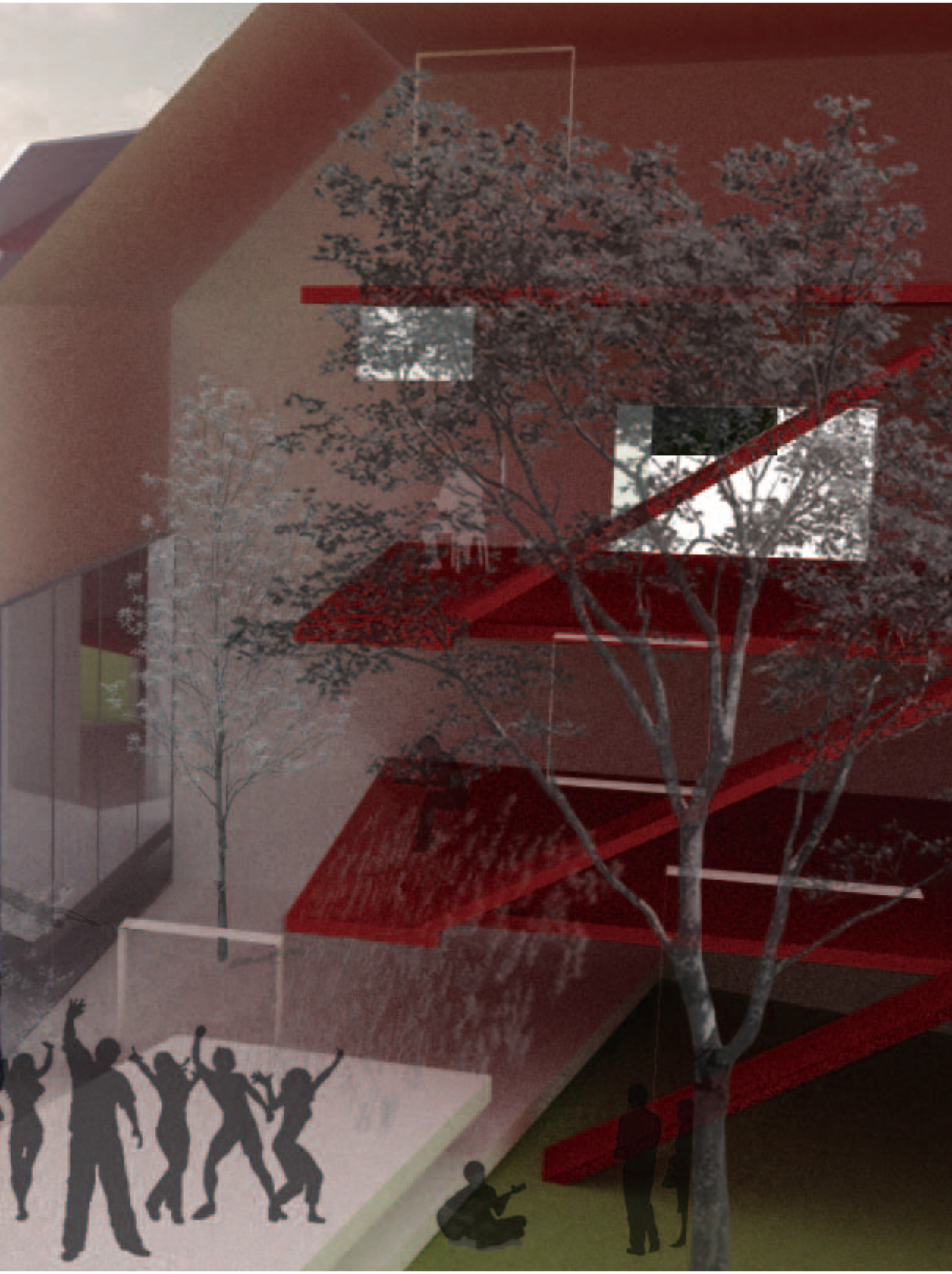


close → open
back door

6

enjoy in our
street voice

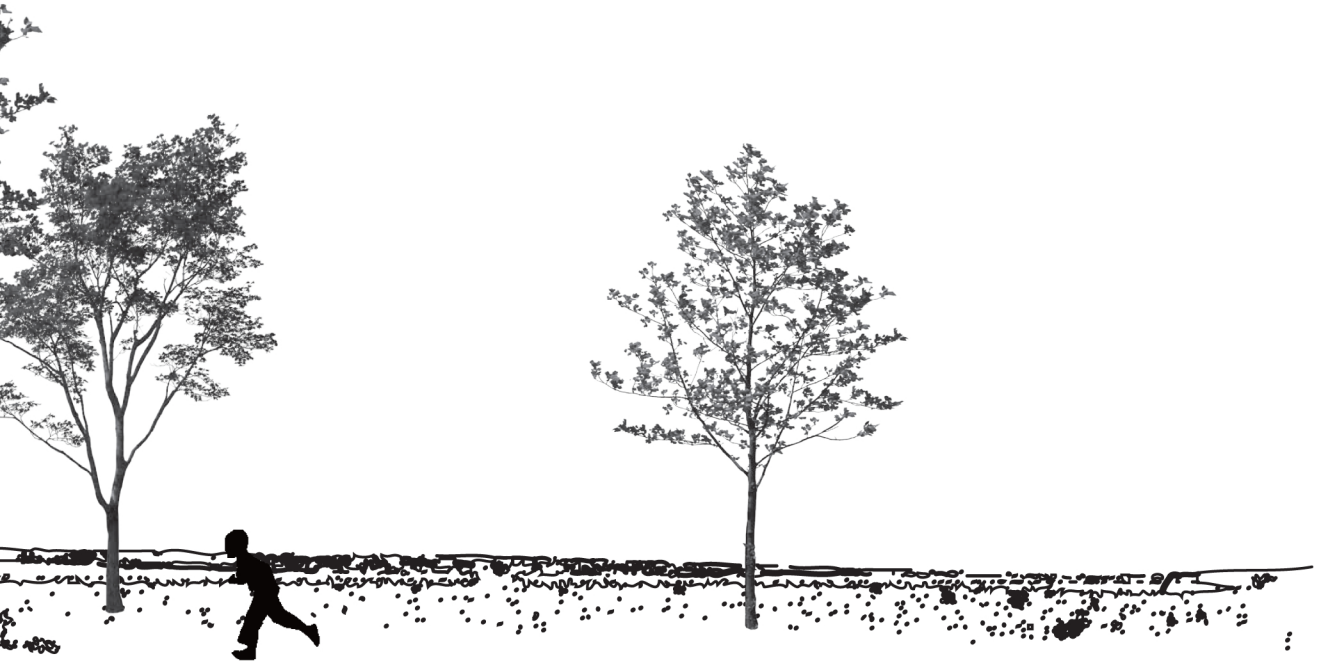


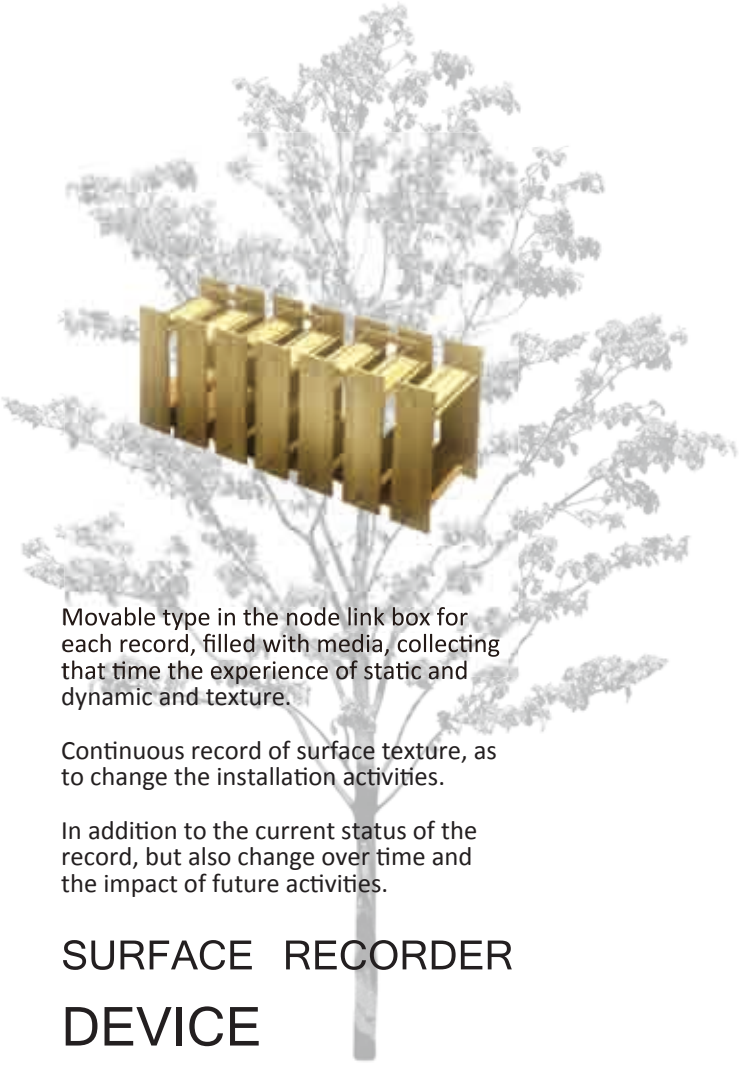


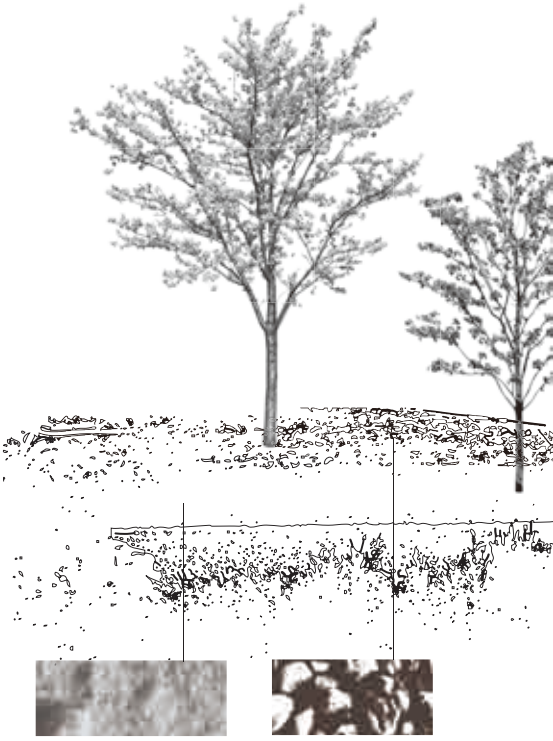


new NCTU

Time will change the way the school
until we do not need huge amounts
of concrete classroom that day.







TEXTURE

STEP a



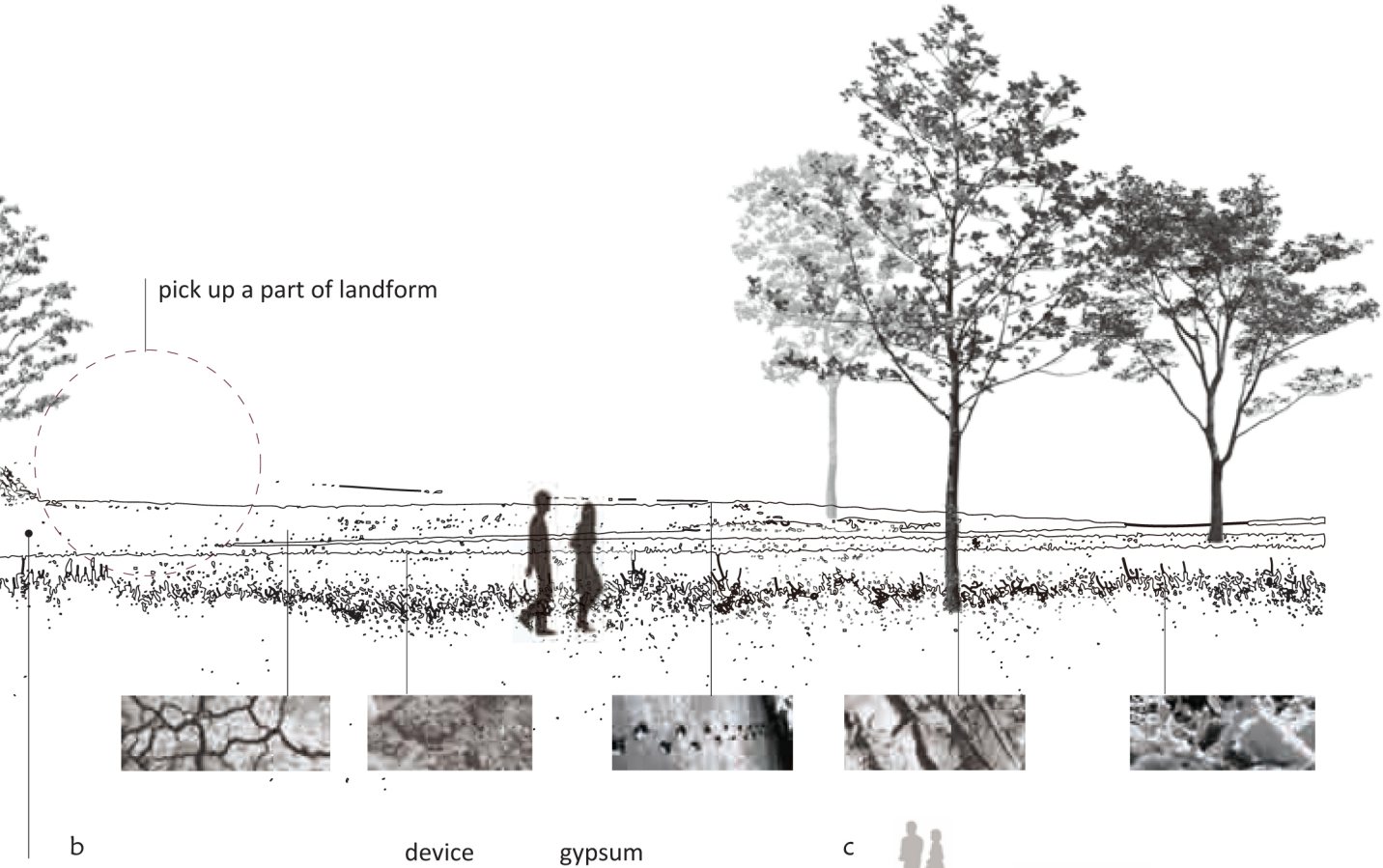
Movable type in the node link box for each record, filled with media, collecting that time the experience of static and dynamic and texture.

Continuous record of surface texture, as to change the installation activities.

In addition to the current status of the record, but also change over time and the impact of future activities.

Pick up a part of landform, starting to record and collect its.

1 SURFACE RECORDER DEVICE



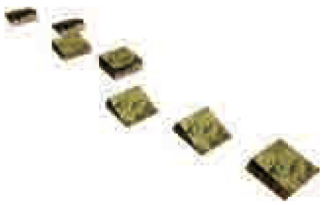
b

device



To take away from the surface placed in the room.

gypsum



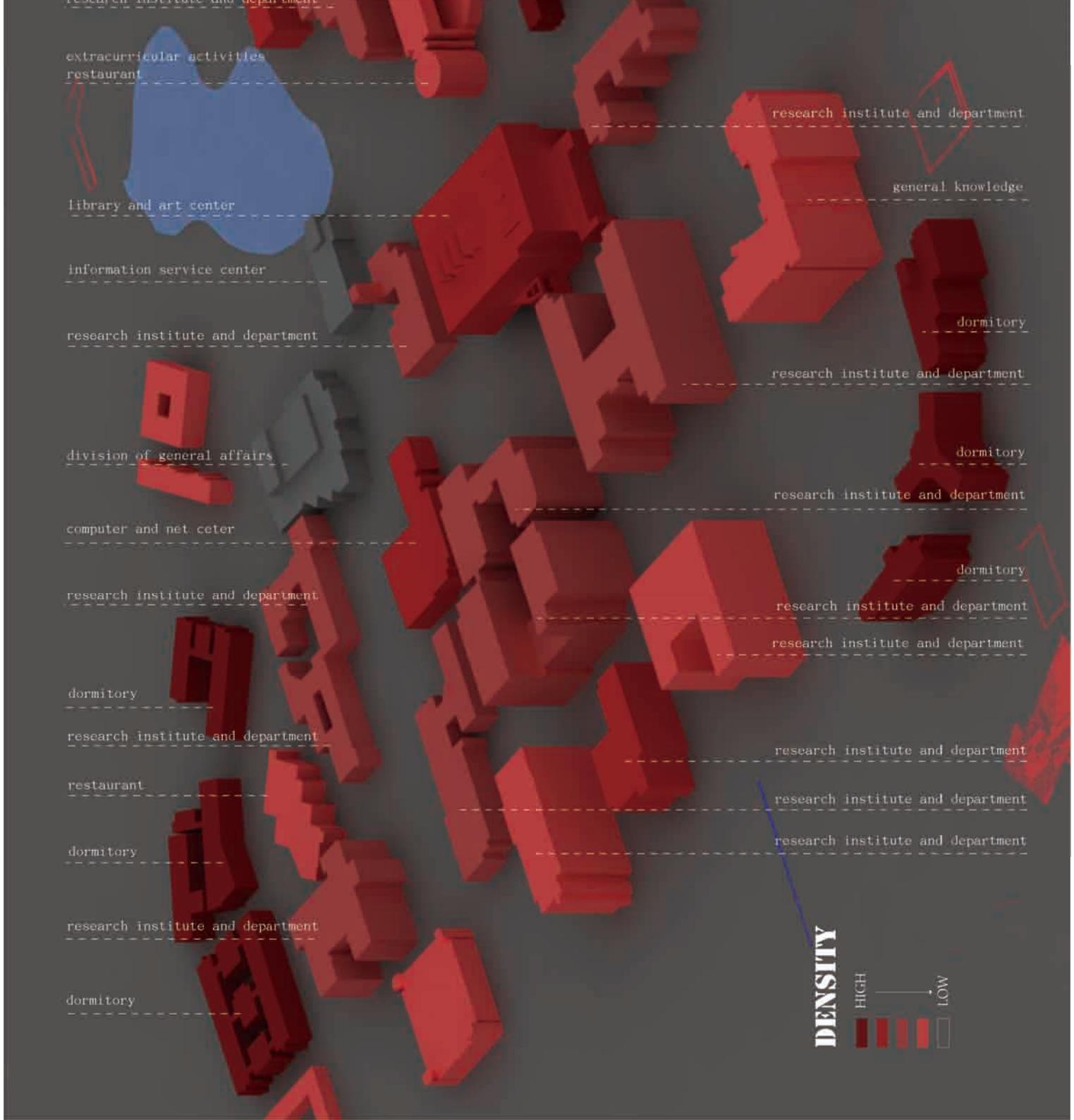
+

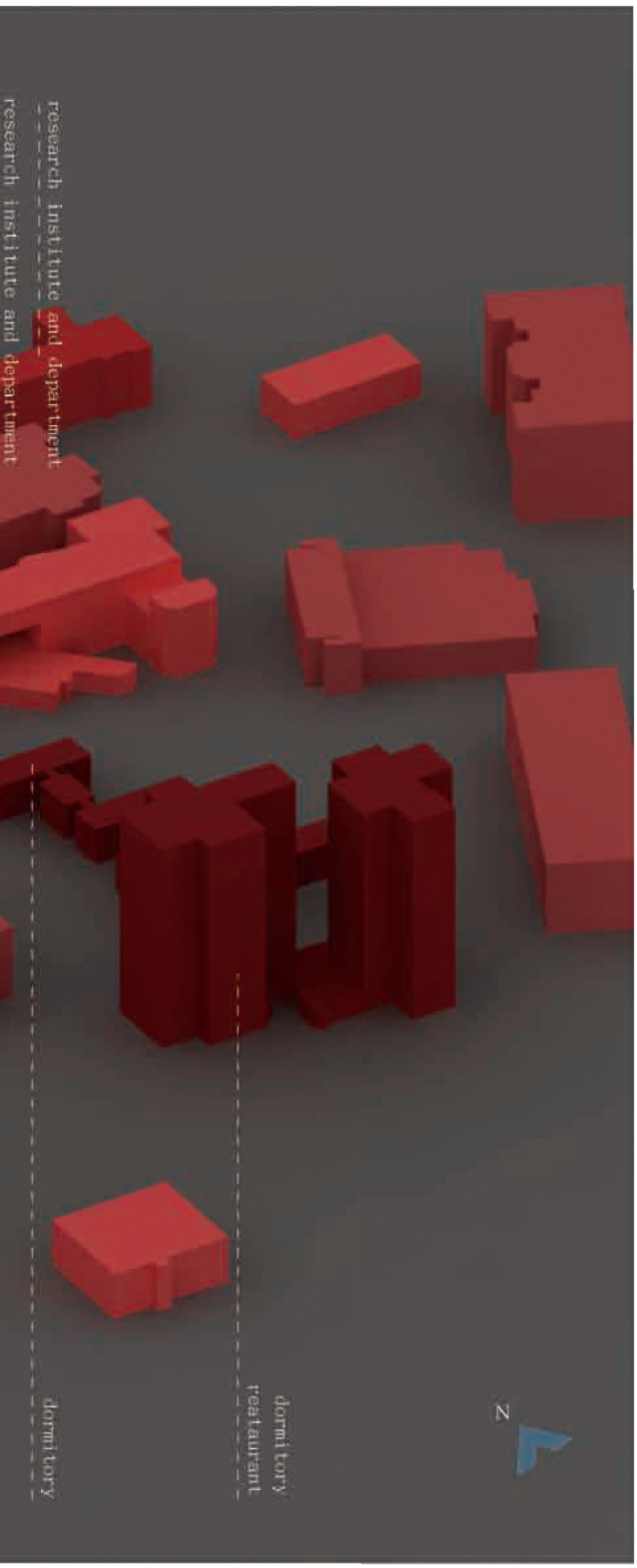
To take away from the surface placed another place.

c



Gypsum rotten over time,and gradually change the surface activity.


extracurricular activities
restaurant
research institute and department
general knowledge
library and art center
information service center
research institute and department
dormitory
research institute and department
division of general affairs
dormitory
research institute and department
computer and net ceter
dormitory
research institute and department
research institute and department
dormitory
research institute and department
research institute and department
restaurant
research institute and department
dormitory
research institute and department
DENSITY
HIGH
LOW



2

University in Taiwan,
students often focus on the indoor activities,
especially the more serious in NCTU University.

However, with digital information
and the world's demands for improvement
in the natural environment,
schools have begun to change the structure.

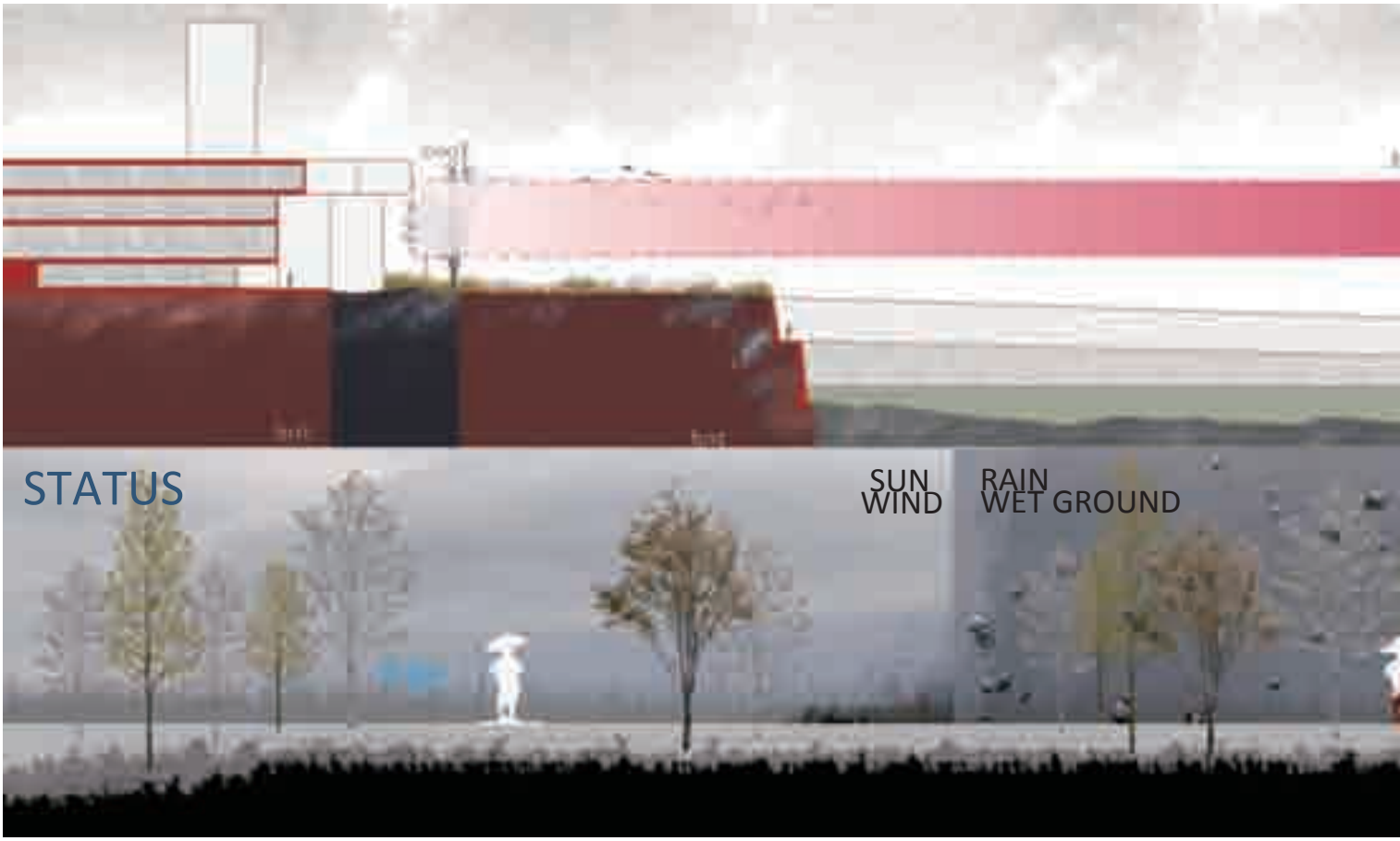
BUILDING SCHOOL
NCTU.now

DISCONTINUOUS

ABOVE
BELOW

Campus there are many faults
which do not link with space activities,
and hinder the changes in the structure of the campus.

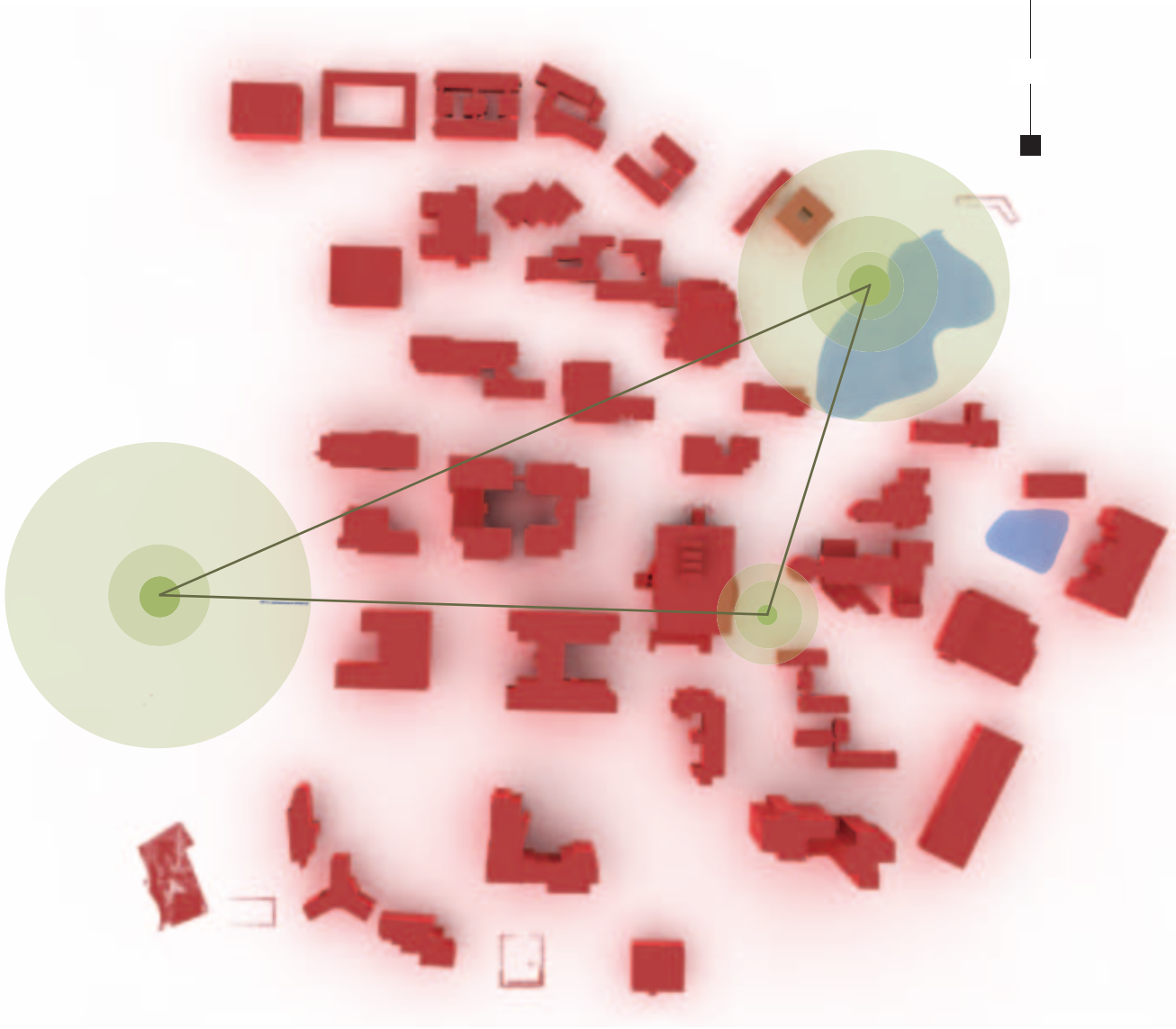
3 BUILDING SCHOOL NCTU.now



road system
obstruct field
REASON

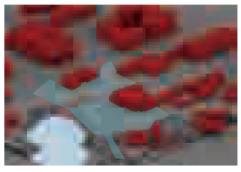


CONTINUOUS
TREES



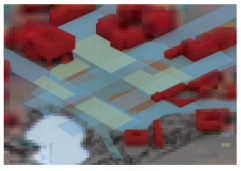
OPEN
BY DEGREE

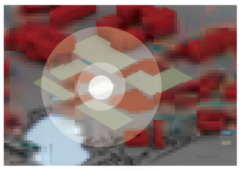

2010


2011


2012


2013


2014
connect


2015

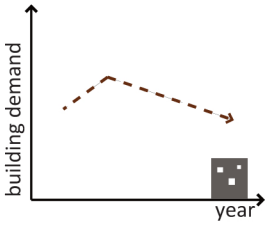
year

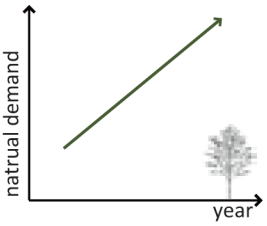
There are many schools in Europe and firmly close to the nature of education, green environment and value in recent years began to grow.

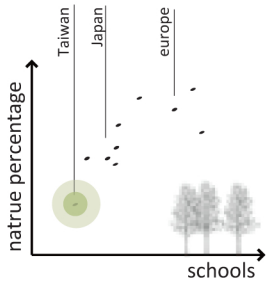
NCTU, compared with other schools, more opportunities to develop digital information Pure Green Campus.

4

NATRUAL & TECH. SCHOOL
NCTU.FUTURE







5

Zelkova serrata (THUNB.) MAKINO

MAJOR TREE

Vertical tree trunks,
branches to the oblique growth of the Quartet,
multi-branching,
crown inverted triangle was carried out.
Deep root.

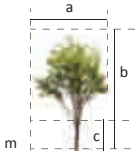
8 ~ 25 meters height,
crown width from 3 to 12 meters.
Moderate to fine texture.

Large trunk,
the bark was taupe, brown or white.

Positive tree growth robust.
Rapid growth,
long life.
Wind power,
the budding power.

Tree trunk width: 3cm/year
The first year to the seventh year grow up slowly
After 1.44m/year height

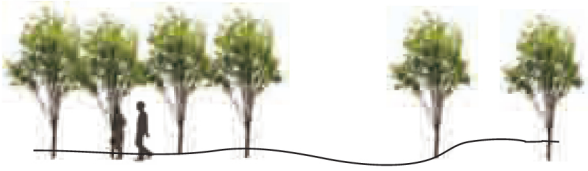
	a	b	c
old	2.4	3.6	0.6
6	2.8	4.2	0.7
7	3.6	5.6	0.9
8	4.64	7.0	1.16
9	5.6	8.4	1.4
10	6.52	9.8	1.63
11	7.64	11.2	1.86
12	8.4	12.6	2.1
13	9.33	14	2.3
14	10.26	15.4	2.56
15	11.2	16.8	2.8
16	12	18.2	3.06
17	12	19.6	3.2
18			



4yr.
path



9yr.
corridor



15yr.
space

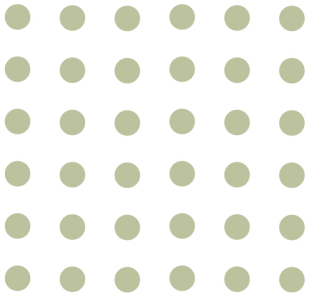


corridor

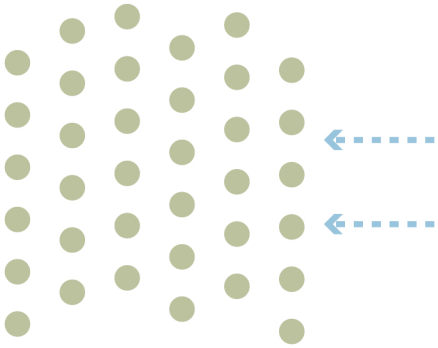
relax

new classroom

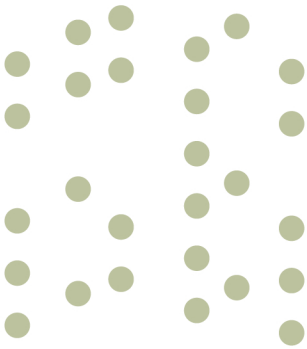
chat



ORIGIN



MOVE
BY NATRURL REASON
WIND



MOVE
BY ACTIVITIES

杜英



tree	a	b	c
2	0.84	1.4	0.35
3	0.96	2	0.4
4	1.36	2.6	0.65
5	1.92	3.2	0.8
6	2.28	3.8	0.95
7	2.64	4.4	1
8	3	5	1.25
9	3.36	5.6	1.4
10	3.72	6.2	1.55
11	4.08	0.8	1.7
12	4.44	7.4	1.35
13	4.8	8	2
14	5.16	8.6	2.5
15	5.7	9.5	2.38
16	6.66	11.1	2.78
17	7	11.9	2.93
18	7.38	12.3	3.08

鳳凰木



tree	a	b	c
2	1.3	2.6	1.3
3	2	4	2
4	2.8	5.6	2.8
5	3.5	7	3.5
6	4.2	8.4	4.2
7	4.9	9.8	4.9
8	5.6	11.2	5.6
9	6.3	12.6	6.3
10	7	14	7
11	7.7	15.4	7.7
12	8.4	16.8	8.4
13	9.1	18.2	9.1
14	9.8	19.6	9.8
15	10.5	21	10.5
16	11.2	22.4	11.2
17	11.9	23.8	11.9
18	12.5	25	12.5

烏心石



tree	a	b	c
2	0.46	1.4	0.46
3	0.73	2.2	0.73
4	1	3	1
5	1.26	3.8	1.26
6	1.53	4.6	1.53
7	1.8	5.4	1.8
8	2.06	6.2	2.06
9	2.3	7	2.3
10	2.6	7.8	2.6
11	2.86	8.6	2.86
12	3.13	9.4	3.13
13	3.4	10.2	3.4
14	3.6	11	3.6
15	3.93	11.8	3.93
16	4.2	12.6	4.2
17	4.46	13.4	4.46
18	4.73	14.2	4.73
19	5	15	5

無患子



tree	a	b	c
2	1	2	0.4
3	1.6	3.2	0.64
4	2.2	4.4	0.83
5	2.8	5.6	1.12
6	3.4	6.8	1.36
7	4	8	1.6
8	4.6	9.2	1.84
9	5.2	10.4	2.08
10	5.8	11.6	2.32
11	6.4	12.8	2.56
12	7	14	2.8
13	7.6	15.2	3.04
14	8.2	16.4	3.28
15	8.8	17.6	3.52
16	9.4	18.8	3.76

楓香



tree	a	b	c
2	0.63	1.9	0.95
3	1.06	3.2	1.6
4	1.5	4.5	2.25
5	1.93	5.8	2.9
6	2.36	7.1	3.55
7	2.8	8.4	4.2
8	3.23	9.7	4.85
9	3.6	11	5.5
10	4.1	12.3	6.15
11	4.53	13.6	6.8
12	4.96	14.9	7.45
13	5.4	16.2	8.1
14	5.83	17.5	8.75
15	6.26	18.8	9.4
16	6.7	20.1	10.05
17	7.3	21.4	10.7
18	7.56	22.7	11.35
19	8	24	12

雀榕



tree	a	b	c
2	1.2	2	0.4
3	1.92	3.2	0.64
4	2.64	4.4	0.88
5	3.36	5.6	1.12
6	4.08	6.8	1.36
7	4.8	8	1.6
8	5.52	9.2	1.84
9	6.24	10.4	2.08
10	6.96	11.6	2.32
11	7.68	12.8	2.56
12	8.4	14	2.8
13	9.12	15.2	3.04
14	9.84	16.4	3.28
15	10.56	17.6	3.52
16	11.28	18.8	3.76
17	12	20	3.8

紅楠



tree	a	b	c
2	1	2	1.2
3	1.6	3.2	1.2
4	2.2	4.4	1.2
5	2.8	5.6	1.2
6	3.4	6.8	1.2
7	4	8	1.2
8	4.6	9.2	1.2
9	5.2	10.4	1.2
10	5.8	11.6	1.2
11	6.4	12.8	1.2
12	7	14	1.2
13	7.6	15.2	1.2
14	8.2	16.4	1.2
15	8.8	17.6	1.2
16	9.4	18.8	1.2
17	10	20	1.2

流疏樹



tree	a	b	c
2	1.2	1.6	0.4
3	1.88	2.5	0.63
4	2.55	3.4	0.85
5	3.23	4.3	1.08
6	2.9	5.2	1.3
7	4.58	6.1	1.53
8	5.25	7	1.75
9	5.93	7.9	1.98

台灣欒樹



tree	a	b	c
2	1.25	2.1	0.53
3	1.6	3.2	0.8
4	2.15	4.3	1.07
5	2.7	5.4	1.35
6	3.25	6.5	1.63
7	3.8	7.6	1.9
8	4.35	8.7	2.18
9	4.9	9.8	2.45
10	5.45	10.9	2.73
11	6	12	3

檸檬樹



tree	a	b	c
2	1	5	1.2
3	1.5	7.5	1.8
4	2	10	2.4
5	2.5	12.5	3
6	3	15	3.6
7	3.5	17.5	4.2
8	4	20	4.8
9	4.5	22.5	5.4
10	5	25	6

山黃麻



tree	a	b	c
2	2.4	1.6	0.48
3	2.53	3.8	0.76
4	3.46	5.2	1.04
5	4.4	6.6	1.32
6	5.3	8	1.6
7	6.2	9.4	1.88
8	7.2	10.8	2.16
9	8.13	12.2	2.44
10	9.06	13.6	2.72
11	10	15	3

山櫻花



tree	a	b	c
2	1.27	2.4	0.8
3	2.04	3.8	1
4	2.756	5.2	1
5	3.498	6.6	1
6	4.24	8	1
7	4.982	9.4	1
8	5.724	10.8	1
9	6.466	12.2	1
10	7.208	13.6	1
11	7.95	15	1

樟樹



tree	a	b	c
2	1.2	1	0.2
3	2.4	2	0.4
4	3.6	3	0.6
5	4.8	4	0.8
6	6	5	1
7	7.2	6	1.2
8	8.4	7	1.4
9	9.6	8	1.6
10	10.8	9	1.8
11	12	10	2
12	13.2	11	2.2
13	14.4	12	2.4
14	15.6	13	2.6
15	16.8	14	2.8
16	18	15	3
17	19.2	16	3.2

相思樹



tree	a	b	c
2	1	3	1
3	1.5	4.5	1.5
4	2	6	2
5	2.5	7.5	2.5
6	3	9	3
7	3.5	10.5	3.5
8	4	12	4
9	4.5	13.5	4.5
10	5	15	5

黃絲風鈴木

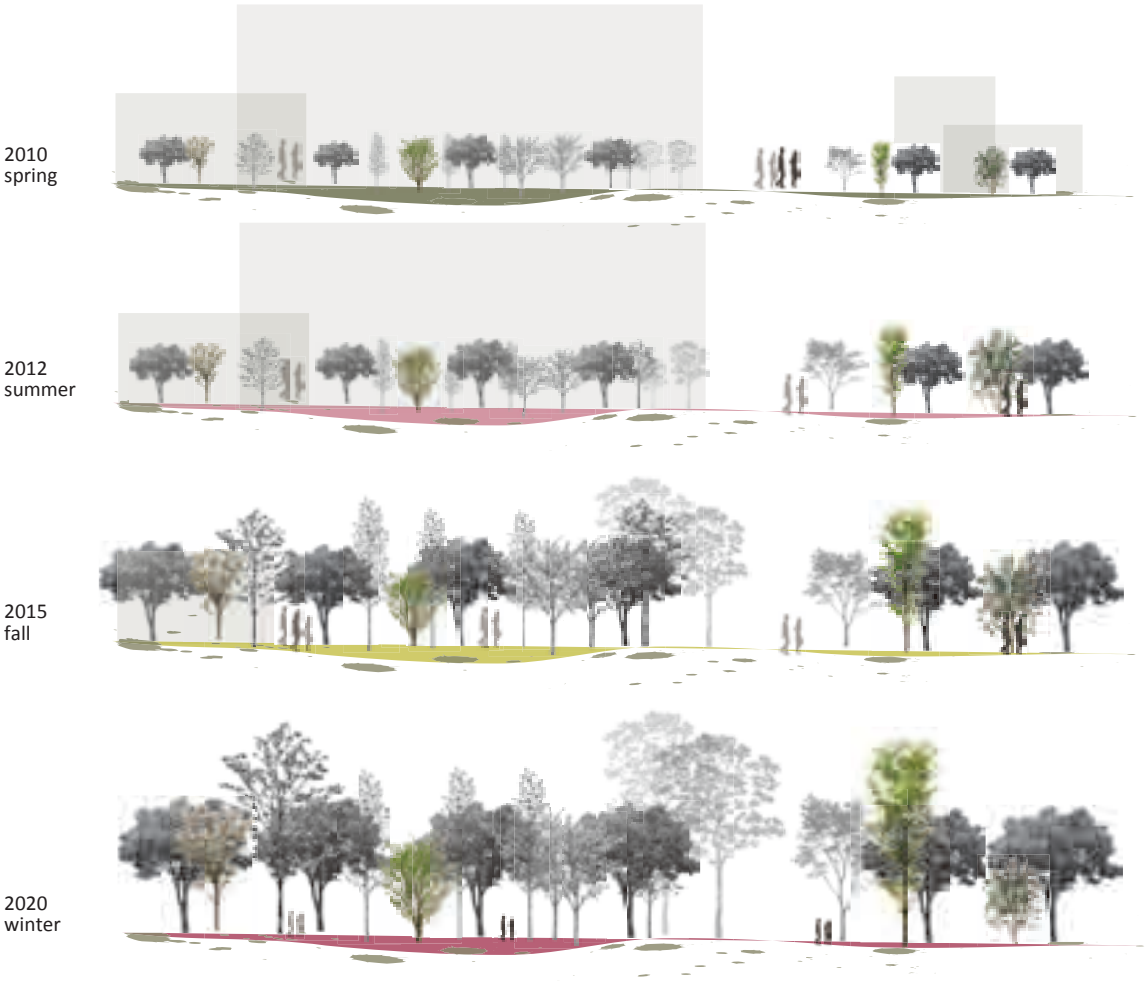


tree	a	b	c
2	0.96	1.2	0.48
3	1.6	2	0.8
4	2.24	2.8	1.12
5	2.88	3.6	1.44
6	3.52	4.4	1.76
7	4.16	5.2	2.08
8	4.8	6	2.4
9	5.44	6.8	2.72
10	6.08	7.6	3.04
11	6.72	8.4	3.36
12	7.36	9.2	3.68
13	8	10	4.4

season	cokor	name
winter	pink	Prunus campanulata MAXIM
summer	yellow	Acacia confuse MERR.
winter	red	Liguidambar formosana HANCE
winter	red	Persea thunbergii
spring	red	Elaeocarpus sylvestris (Lour.)Poir.
	green	Koelreuteria henrji DUMM
fall	yellow	Sapindus mukorossii
summer	red	Delonix regia
	green	Eucalyptus maculata Hook. var. citriodora (Hook) F. Muell.
spring	yellow	Tabebuia chrysantha (Jacq.) Nichols.
	green	Trema orientalis L. Bl.Tr.
	green	Ficus superba (Miq.) var japonica (Miq.) Miq.
	green	Cinnamomum camphora (L.) Presl.
spring	white	Chionanthus retusus Lindl.&Pext. var.serrulatus (Hay.)Koidz.
winter	white	Michelia compressa (Maxim.) Sargent.

6

IMPACT ACTIVITIES & MEMORY TREES

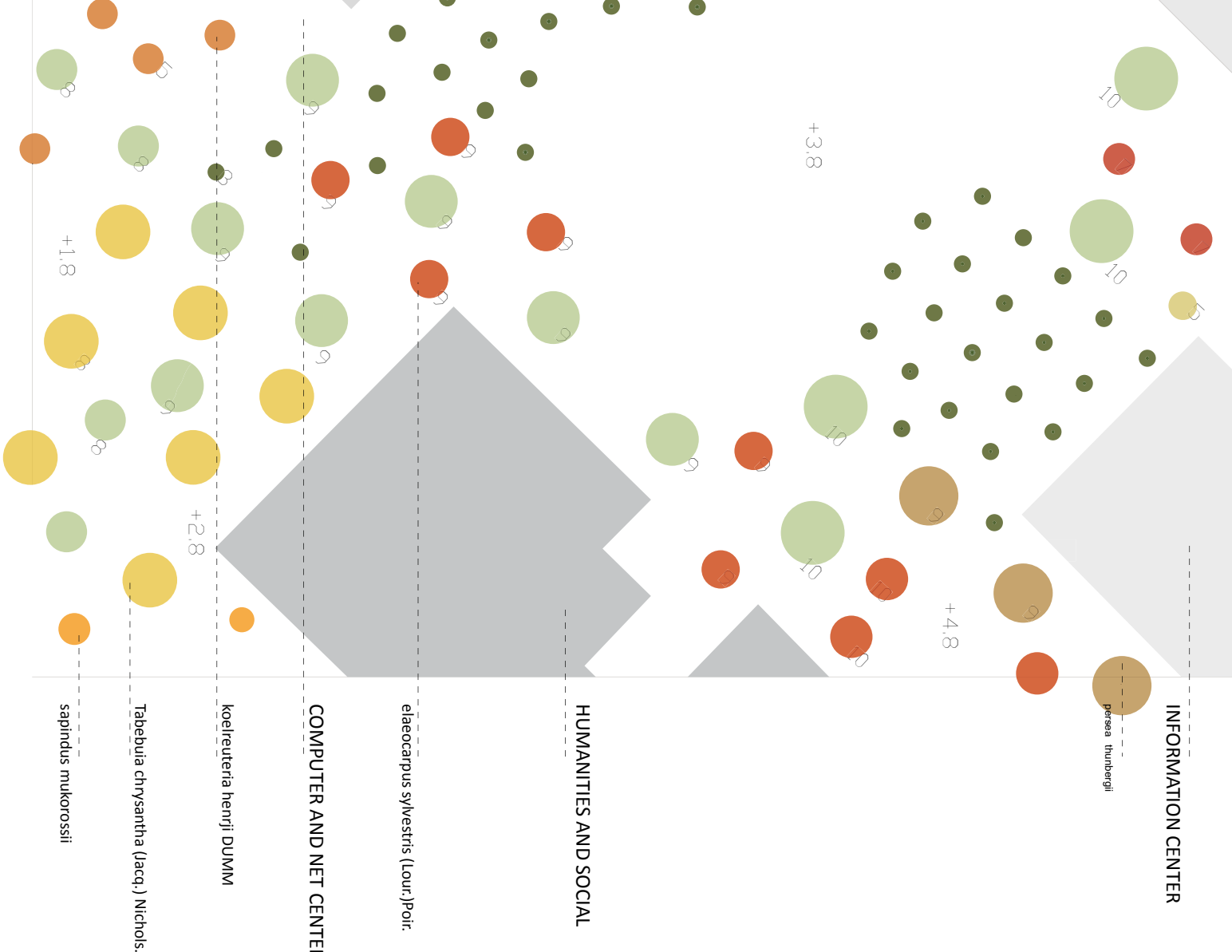

2010
spring
2012
summer
2015
fall
2020
winter

7 section



SPACE OPEN BY DEGREE
TREES GROW UP

Technology and virtual technology developed in the era, the campus gradually building does not require a large number of entities. When the tree began to grow higher, gradually dismantling the old building, the tree began to replace the building by the play position. We do not need off the classroom but everyplaces are the classrooms, everyplaces are we discussing. As time and seasons change, we note with color under the sun are the new campus life.



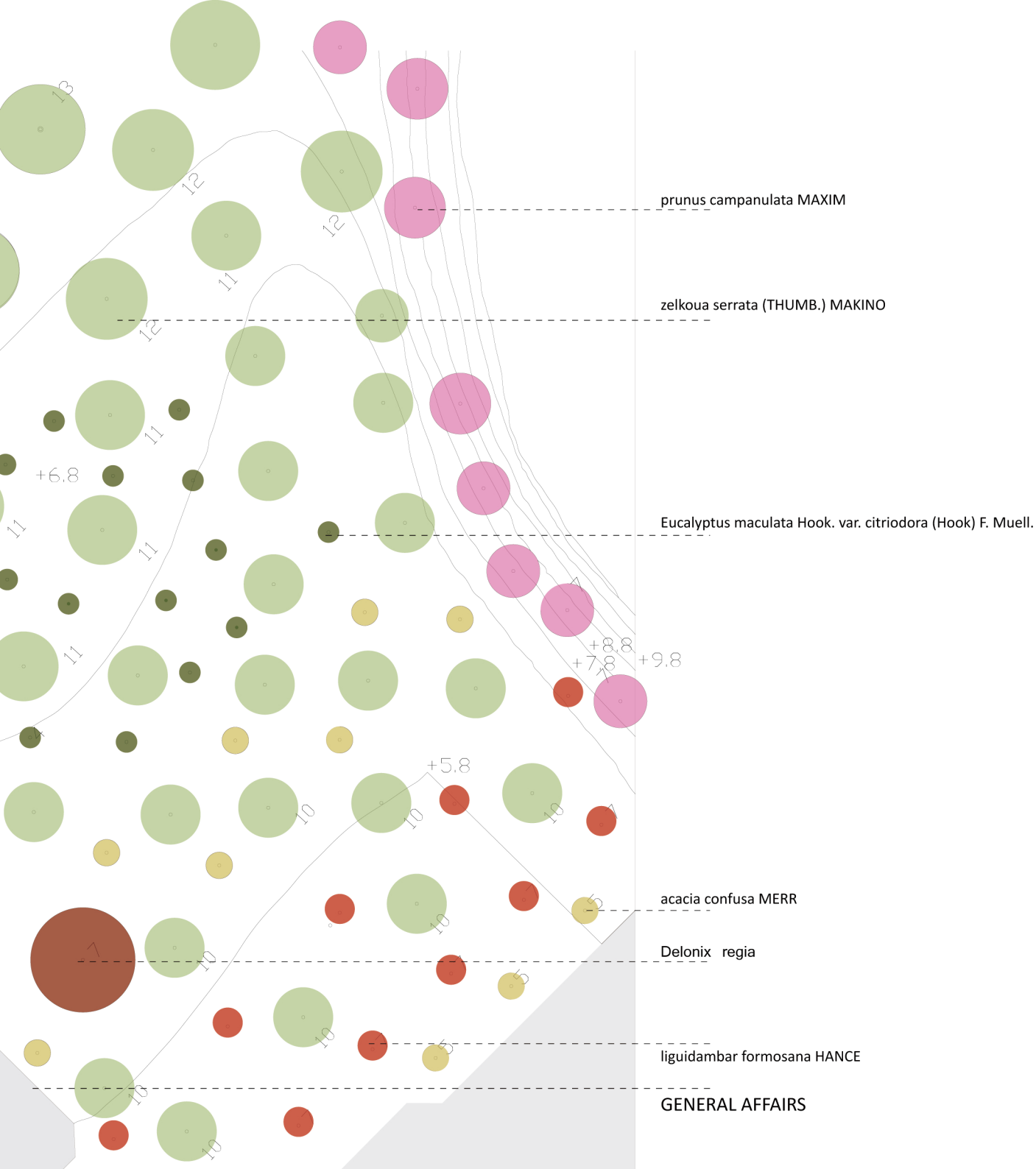
8

SET UP 2010



LIGHT COLOR AXIS
SURFACE TEXTURE
SKY VIEW
FLOWER LEAVES

As the season changes,
the impact of soil texture and color.


prunus campanulata MAXIM
zelkoua serrata (THUMB.) MAKINO
Eucalyptus maculata Hook. var. citriodora (Hook) F. Muell.
acacia confusa MERR
Delonix regia
liguidambar formosana HANCE
GENERAL AFFAIRS
+6.8
+5.8
+7.8
+8.8
+9.8

2011

9

2011-15

DIFFERENT LEVEL
VARIOUS GROWTH RATE

The level of the density of leaves,
resulting in under the shadow of
different spatial and activities.

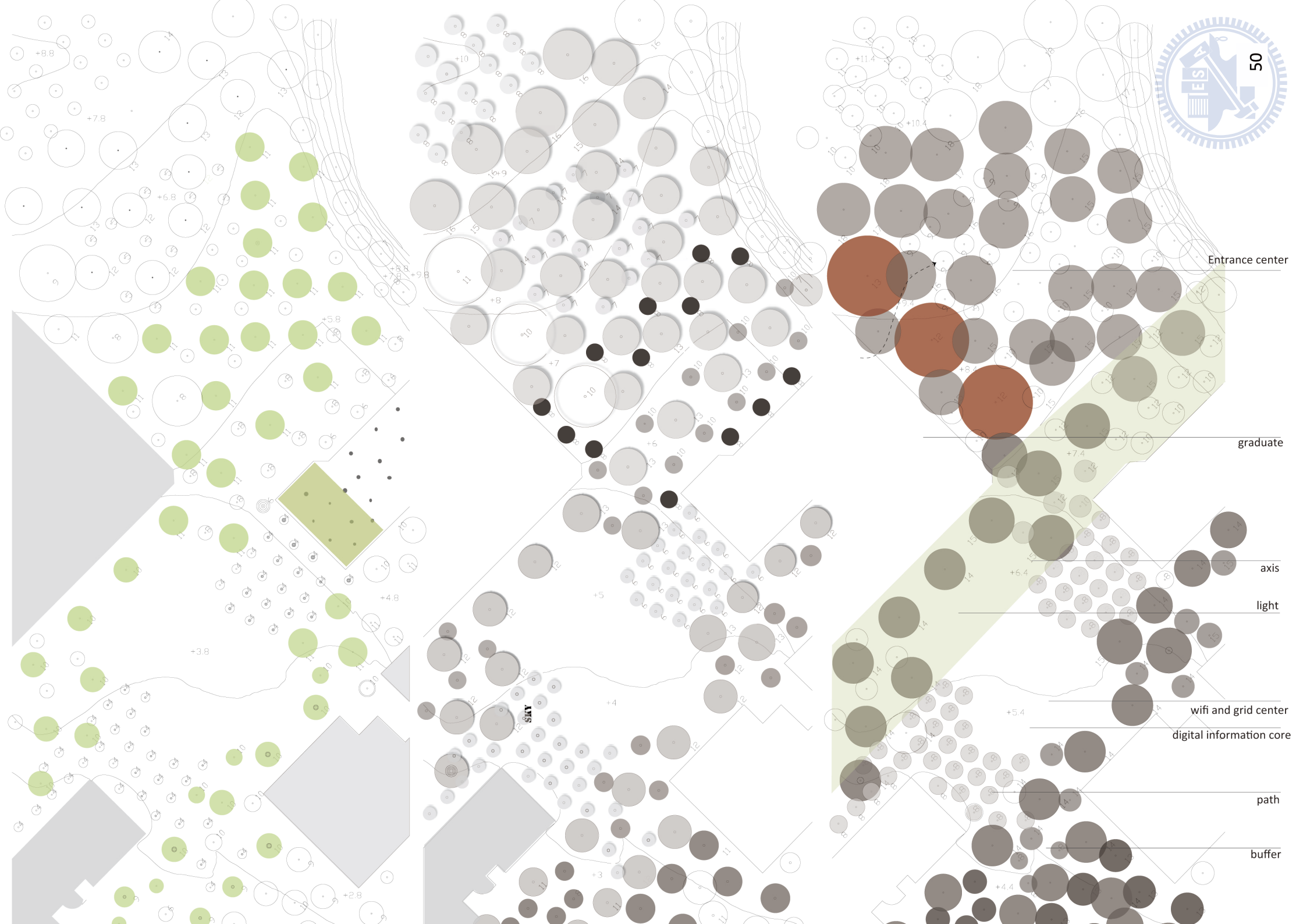
2013

TREES GROW UP TO CONNECT
ACTIVITIES SET UP COMPLETE

Create many school experiences and memory

The first pure green campus

2015


Entrance center
graduate
axis
light
wifi and grid center
digital information core
path
buffer