

LEARNING CENTER OF SUSTAINABLE INDUSTRIAL TEXTILE AND FASHION SAHA-UNION

Union Textile Industries Public Company Limited, Bangpoo Mai, Samut Prakarn Province, Thailand

Area : 211 rai (337,600sq.m)



Country / City	THAILAND
University / School	KASETSART UNIVERSITY
Academic year	2019 - 2020
Title of the project	LEARNING CENTER OF SUSTAINABLE INDUSTRIAL TEXTILE AND FASHION SAHA-UNION
Authors	THANUT NGAMDECHO

TECHNICAL DOSSIER

Title of the project	LEARNING CENTER OF SUSTAINABLE INDUSTRIAL TEXTILE AND FASHION SAHA-UNION
Authors	THANUT NGAMDECHO
Title of the course	FINAL GRADUATE PROJECT
Academic year	2019 - 2020
Teaching Staff	Asst. Prof. M.L. Vudipong Davivongs, Ph.D
Department/Section/Program of belonging	FACULTY OF ARCHITECTURE, LANDSCAPE ARCHITECTURE
University/School	KASETSART UNIVERSITY



Written statement, short description of the project in English, no more than 250 words

Nowadays, environmental impacts are becoming more attention and awareness to people. As a result, various businesses pay more attention to social responsibility to serve modern consumers. The textile and fashion industry is the second largest environmental impact industry in the world. In addition, capitalism dominates consumers with excess demand, leading to "Disposable society" which is the root cause of problems in many areas. Sustainable Textile and Fashion Industry Learning Center is a project that aims to give knowledge about sustainable fashion and environmental friendly to people of all ages to change their mind and realize the value of resources. The renovation of the utility both inside and outside the building creates activities and relationships between people and the ecosystem in terms of quality of life, economic and environment. By using the circular economy concept. It focuses on maximize resource benefits such as reuse, recycle and reduce the purchase of new unnecessarily clothes. In addition, the project also focuses and supports the participation of volunteers in campaigning, education and environmental conservation activities in many areas. Participants can absorb and use it in daily life. Moreover, it promotes interaction between people in the project and surrounding communities.

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CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

Barcelona September 2020
SCHOOL PRIZE



SITE LOCATION

Union Textile Industries Public Company Limited, Bangpoo Mai Samut Prakarn Province, Thailand Area : 211 rai (337,600sq.m)

The project is located in the old industrial zone on the outskirts of Bangkok Metropolitan Region. The site is on one end attached to the highway which make travel to central Bangkok convenient, on the other end connected to muddy beach and boardwalk to nearby Bangpu Recreation Center and mangrove forest.

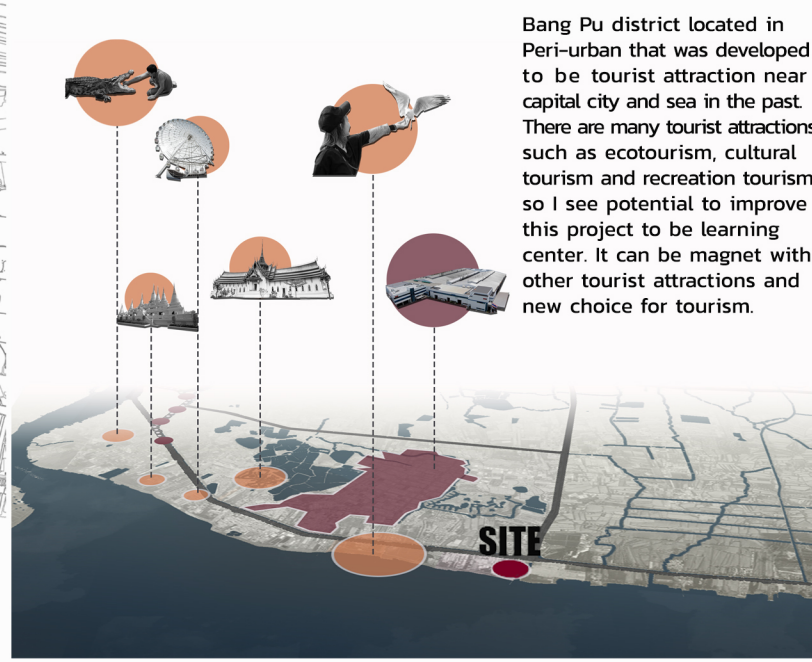
MASTER PLAN



- Legend**
- 1 Reception & Gate
 - 2 Land Fill Display
 - 3 Hall
 - 4 Multi Purpose
 - 5 Common Building
 - 6 Micro-plastic Sculpture
 - 7 Sustainable Fashion Museum
 - 8 Trend Cycle
 - 9 Information & Office
 - 10 Auditorium
 - 11 Workshop Building & Outlet
 - 12 Restaurant & cafe
 - 13 Caha Union Learning Building
 - 14 Office
 - 15 Storage
 - 16 Sewing Factory
 - 17 Spinning factory
 - 18 Learning Proceed Trail
 - 19 Weaving factory
 - 20 Skywalk
 - 21 Boarding House
 - 22 Sport club
 - 23 Mini Football Field
 - 24 Football Field
 - 25 Pavilion
 - 26 Designer Shop Building
 - 27 View Point Roof Garden
 - 28 Flea Market & Multi Purpose
 - 29 Toilet
 - 30 Amphitheater
 - 31 Retention Pond
 - 32 Wetland
 - 33 Mangrove Swamp
 - 34 Natural Trail
 - 35 Guardhouse
 - 36 Service
 - 37 Parking
 - 38 Water Treatment Plant

Scale 1 : 1000

LANDMARK



Bang Pu district located in Peri-urban that was developed to be tourist attraction near capital city and sea in the past. There are many tourist attractions such as ecotourism, cultural tourism and recreation tourism so I see potential to improve this project to be learning center. It can be magnet with other tourist attractions and new choice for tourism.

EXISTING CONDITIONS

WATER RESOURCE

- Canal
- Retention Pond
- Old Water Treatment Pond
- Pit

VEGETATION

- Flowering and Ornamental plants
- Copse
- Plant for Windscreen
- Mangrove

BUILDING USAGE

- Office
- Weaving Factory
- Spinning Factory
- Storage
- Sewing Factory
- Male Dormitory
- Family Dormitory
- Female Dormitory
- Abandoned Dormitory
- Water Treatment Plant
- Old Dyeing Factory

BUILDING

- Boarding House
- Operating Factory
- Abandoned Factory

CIRCULATION

- Main Circulation
- Sub Circulation
- Service
- Dirt Road

IMAGE IN SITE



SYSTEMATIC PLAN

ZONING

- LEARNING
- COMMERCIAL
- INDUSTRY
- RESIDENTIAL
- EVENT / EXHIBITION
- WATER RESOURCE
- PARK / RECREATION
- WELCOME
- SERVICE

CIRCULATION

- WALK CIRCULATION
- SLOPE CIRCULATION
- COVERWAY CIRCULATION
- CAR CIRCULATION
- INDUSTRIAL CIRCULATION
- SERVICE CIRCULATION

BUILDING

- FACTORY
- BOARDING HOUSE
- COMMERCIAL
- COMMON BUILDING
- LEARNING BUILDING
- SERVICE

PLANTING

- FEATURE PLANTING
- LOCAL PLANTING
- MANGROVE FOREST
- WETLAND PLANTING

WATER MANAGEMENT

- WATER TREATMENT PLANT
- CONSTRUCTED WETLAND
- MANGROVE FOREST FILTRATION

PROJECT STRATEGY

This project was developed from the problems after closing silk factory where it was abandoned within the project and taxation of vacant land from the government. The solution was created for modifying the organization by using areas and elements in the project. The developing project's method is a new trade of marketing that concerns about environment and stakeholders more than business profits. This method is called CSR IN PROCESS – CSR is included production, distribution and marketing.

Production - Production process can recycle waste and reduce using virginplastic in the product

Distribution - Distribution process that was considered about the circular economy focuses on maximize resource benefits such as selling surplus fabric form the production process, clothing repair and rental service.

Marketing - Marketing focuses on value creation through place by creating story about environment impact, solution and new image of organization.

CONCEPT

The concept is a new marketing tool for showing sincerity of the organization to consumer. We question for criticizing " the effects of the fashion industry are caused by its scale that is very small or it's concealed".

A design concept is "Reveal" because this word reflects image of industry like a hidden and concealed place. The concept was designed by adapting existed areas and elements in the project. For examples, creating the space for people to achieve knowledge and relax. Design process of learning are revealed through landscape by story sequencing which connecting visual between site and context.

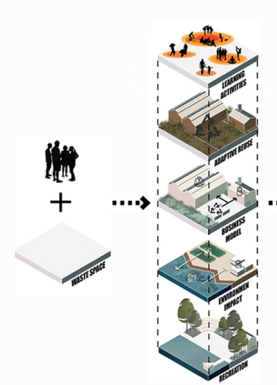
ISSUE : INVISIBLE IMPACTS SCALE / CONCEALED ?



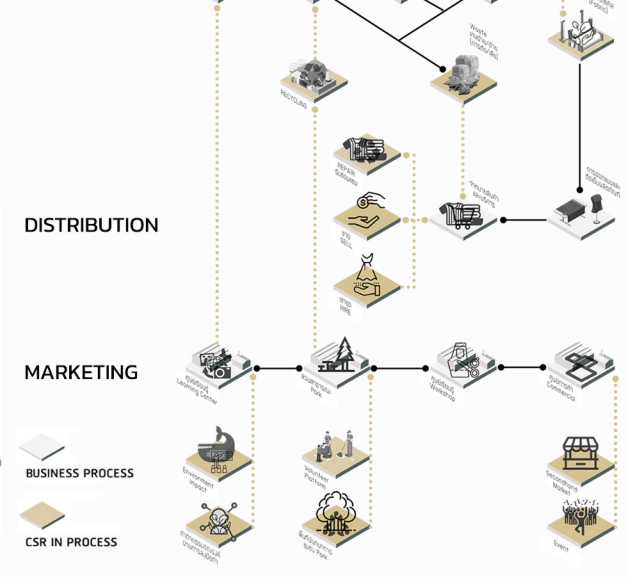
CSR IN PROCESS



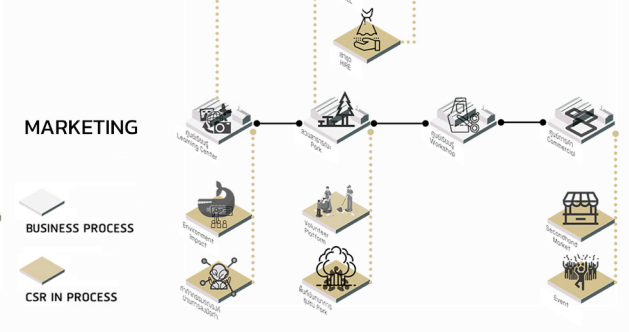
OUTPUT & OUTCOME



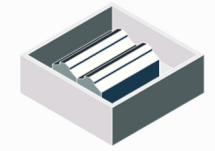
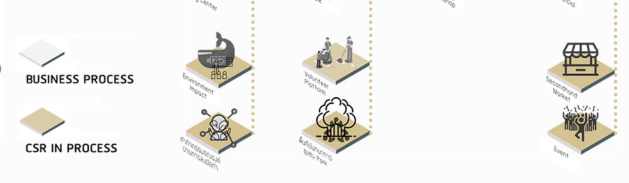
PRODUCTION



DISTRIBUTION



MARKETING



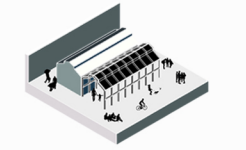
CLOSE SITE



OPEN SITE - INSIDE OUT



UNRAVEL



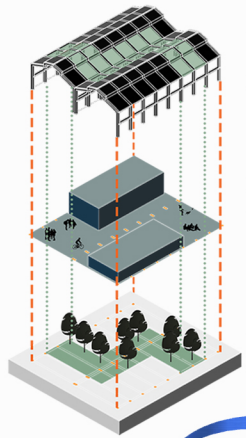
ACTIVITIES & RECREATION



ENCLOSURE SUNKEN



BERM

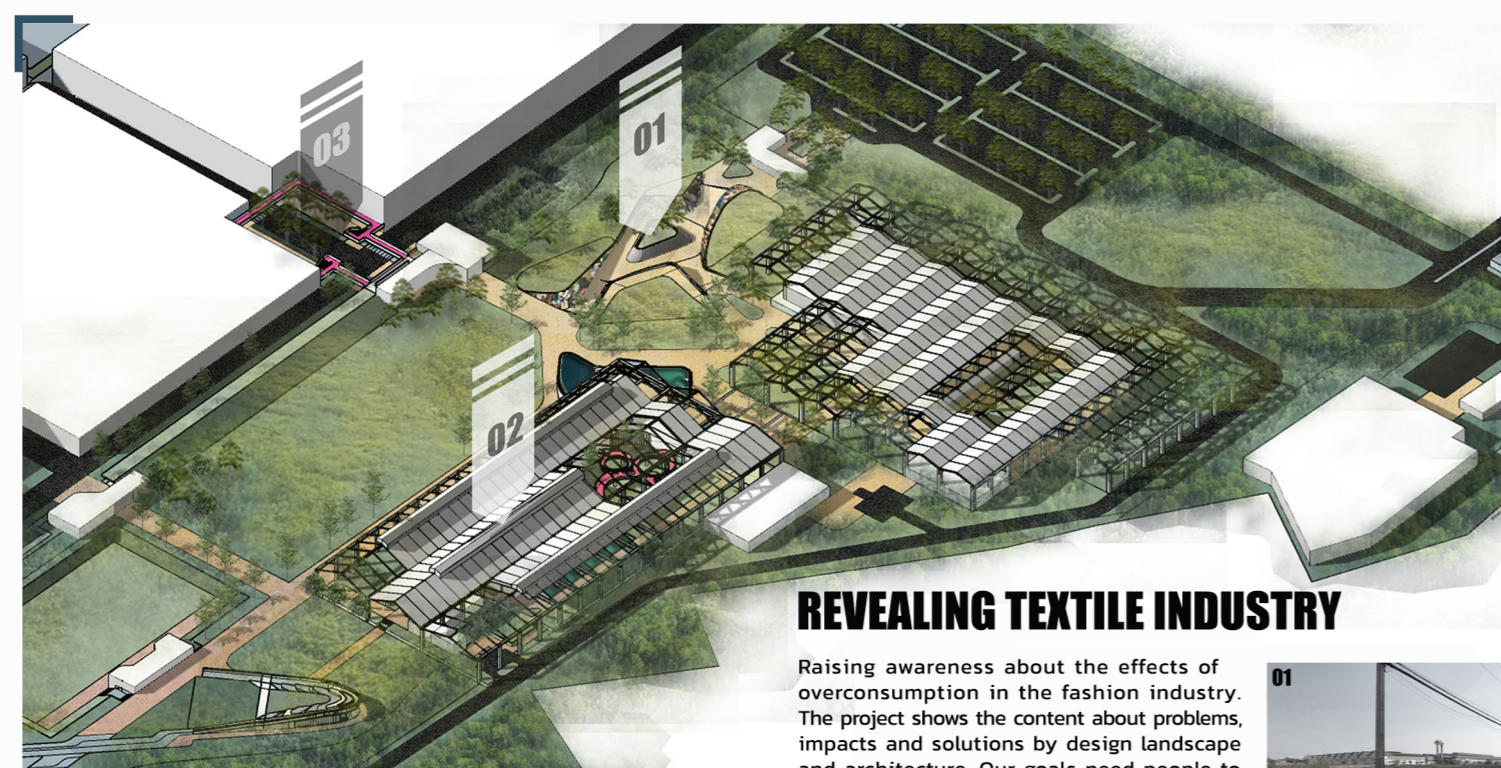


SKYLIGHT & FACADE

EXPLODE STRUCTURE

GREEN INTERPENETRATION





REVEALING TEXTILE INDUSTRY

Raising awareness about the effects of overconsumption in the fashion industry. The project shows the content about problems, impacts and solutions by design landscape and architecture. Our goals need people to understand and adapt knowledge with their daily life. Revealing textile industry is to show sincerity of the organization for responsible effects of our business operation. There are 3 zones for learning.

- 01 - Awareness Environmental impacts**
This area was improved from waste space to be outdoor exhibition.
- 02 - Sustainable fashion museum**
The building was old dyeing factory. It was developed to be learning building by adaptive reuse.
- 03 - Saha Union industry**
The factories are operating that was renovated some phase of the factory for learning production proceeds.



Land Art : Artificial Landfill from clothes



Transition space between the building and outdoor



Outdoor exhibition in the museum



Trail for walk and see the factory

01 - AWARENESS ENVIRONMENTAL IMPACTS



- LEGEND**
- 1 MIRROR
 - 2 LAND ART
 - 3 WALKWAY
 - 4 POOL
 - 5 SCULPTURE

OUTDOOR EXHIBITION / LANDMARK

DESCRIPTION
One garbage truck of textiles is thrown away every second.

DESCRIPTION
35 % microplastic in the world are made from our clothes.

INVISIBLE BULLET **ANIMALS NEVER TAKE MORE THAN THEY NEED** **YOU ARE WHAT YOU EAT**



LAND ART
DESCRIPTION
One truck of textiles in landfilled or incinerated every second as a result of black friday weekend.

SCULPTURE
DESCRIPTION
Each time an item of clothing is washed up to 700,000 microscopic fibres make their way into our oceans, where they are swallowed by sea life and become incorporated into the food chain, potentially ending up on our plates.

GREEN SPACE

WHALE TAIL FABRIC
Animals never take more than they need.

WINDOW DISPLAY

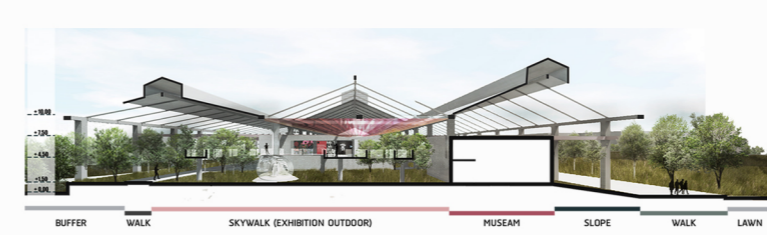
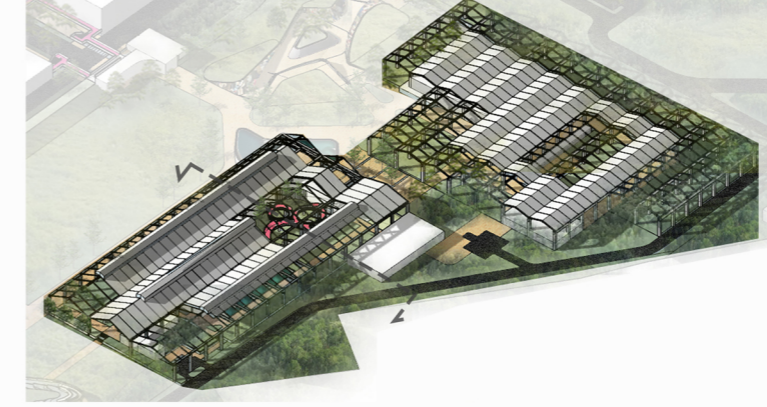
WATER FALL
A wall of water fall is like a landfill from clothes.

SUNKEN SLOPE

SCULPTURE
Our clothes are made of plastic just washing them can pollute the oceans.



02 - SUSTAINABLE FASHION & CIRCULAR LIVING



MUSEUM / AUDITORIUM

ADAPTIVE REUSE

PRODUCTION

SHIPMENT

ELIMINATION

SUSTAINABLE FASHION ?

Eco-material

Durable

local production

LANDSCAPE IN BUILDING

ROOF

STRUCTURE

OUTDOOR EXHIBITION

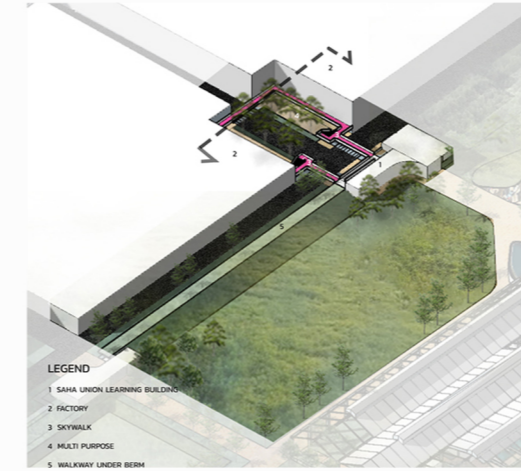
DESCRIPTION
20 Year Rule - Trend Cycle
This rule expresses the concept that something popular now will be popular again in 20 years, give or take a few years.

Trend Cycle - 20 Year Rule

AUDITORIUM

MUSEUM

03 - SAHA UNION INDUSTRY



- LEGEND**
- 1 SAHA UNION LEARNING BUILDING
 - 2 FACTORY
 - 3 SKYWALK
 - 4 MULTI PURPOSE
 - 5 WALKWAY UNDER BERM

LEARNING INDUSTRY TRAIL

CONTENT
The production proceed of Saha-Union industry, know-how and new image of the organization.

PARTITION
new facade Hide 3m Visual linkage

SKYWALK

LEARNING TRAIL

- SKYWALK แสดงให้เห็นถึงกระบวนการทางอุตสาหกรรมที่ทันสมัยและมีความยั่งยืน

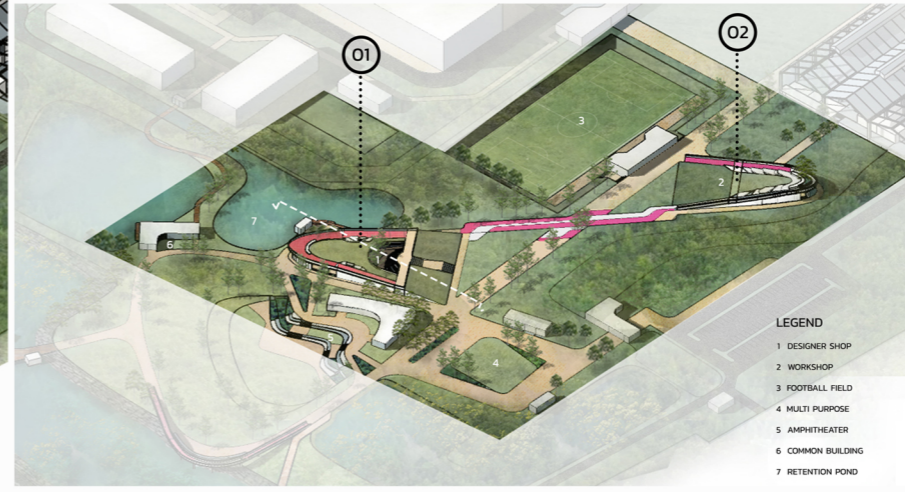
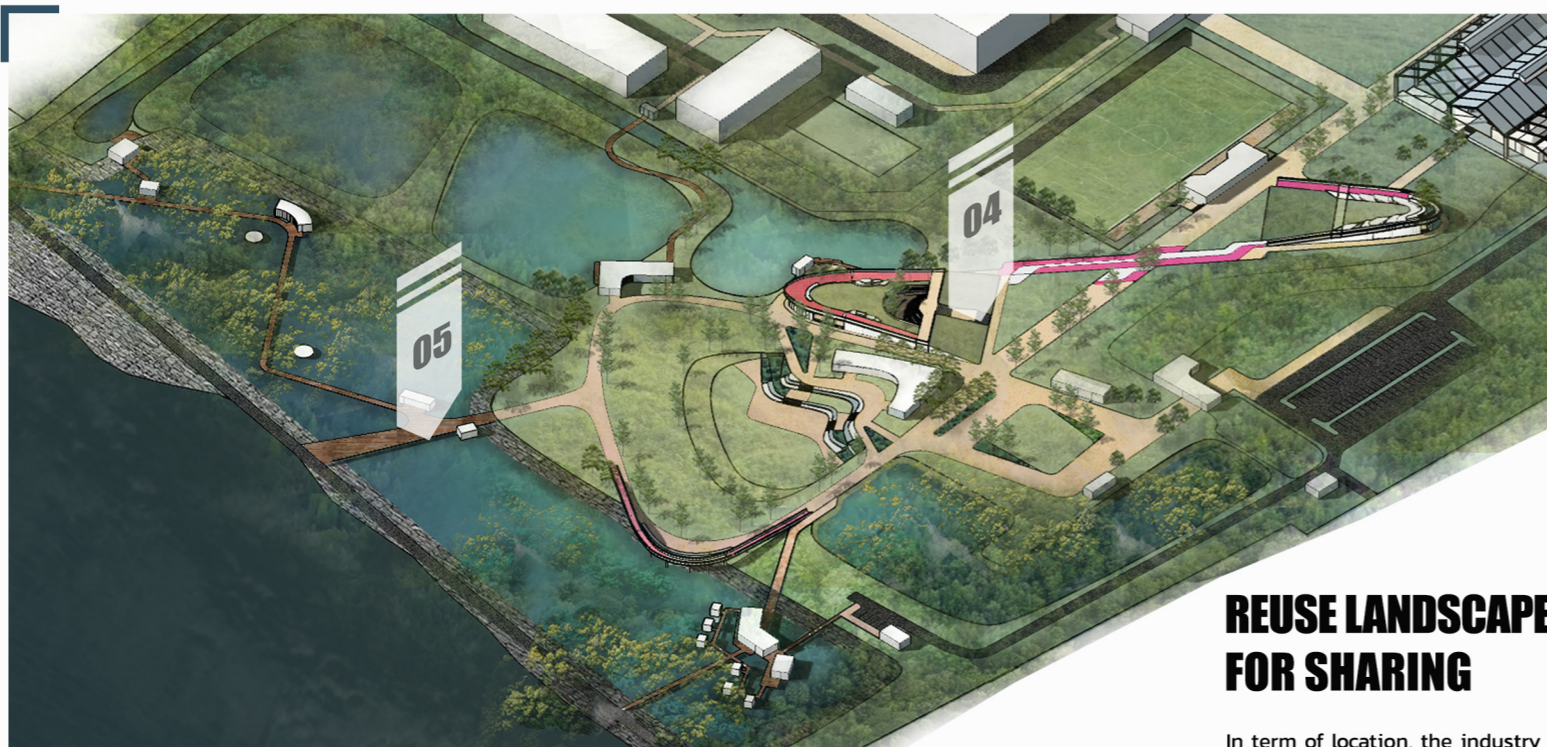
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WEAVING FACTORY SKYWALK MULTI PURPOSE STREET MULTI PURPOSE SKYWALK SPINNING FACTORY

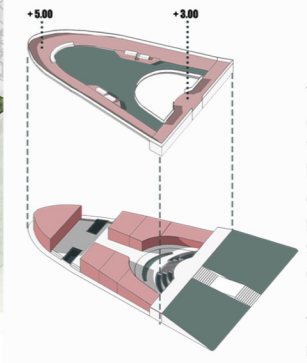




04 - CIRCULAR ECONOMY COMMUNITY



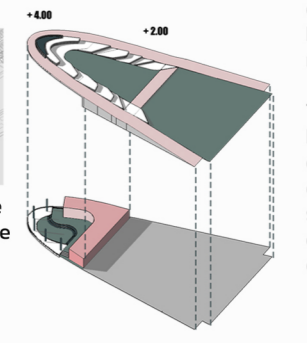
01: DESIGNER SHOP BUILDING



The designer shop building and the workshop building were designed blending with landscape. Building's roofs are garden that slope to the ground. People can relax and see view both inside and outside the project.

The project collaborate with many fashion designer for creating campaign - Circular Fashion. Many shop use concept about circular economy to do their business. For example, dress rental, sell and buy second hand clothes, mending and upcycling clothes.

02: WORKSHOP BUILDING

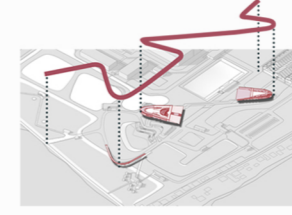


The workshop building give knowledge about how to extend the life of your clothes. People are practiced sewing clothes for using in daily life and re-design their clothes.

REUSE LANDSCAPE FOR SHARING

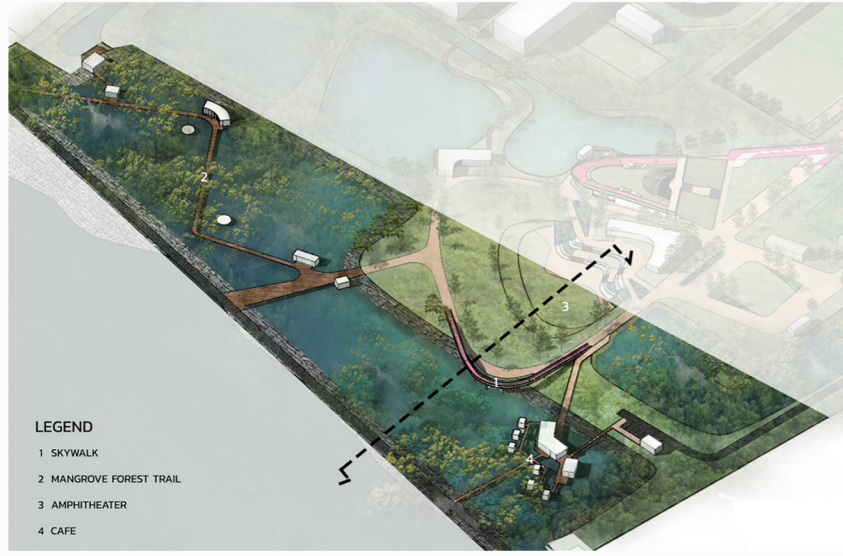
In term of location, the industry is close to seashore that it has the potential to improve surrounding area to reduce environmental impact and maximize benefits to ecosystem and society.

The design was considered about potential and suitable context, such as developing the sea at the backside of the project to be mangrove forest and recreation area for local people.

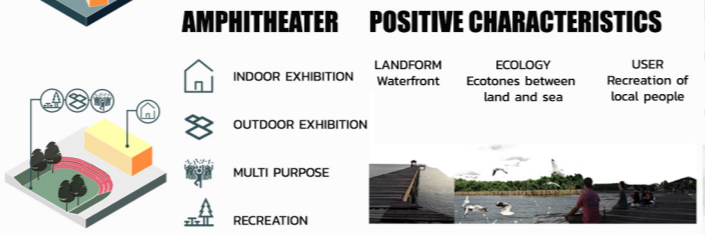


The form of buildings relate with circulation which is like a rhythm.

05 - MANGROVE FOREST & SEA VIEW



POSITIVE CHARACTERISTICS



- LEGEND**
- 1 SKYWALK
 - 2 MANGROVE FOREST TRAIL
 - 3 AMPHITHEATER
 - 4 CAFE



The viewpoint - the project and seaview

The installation arts in the mangrove trail

