ARCHITECTURE PORTFOLIO

Napas Wansophark (2017 - Present)

About me...

NAPAS WANSOPHARK

POSITION : JUNIOR ARCHITECT

Tel : +66 64 736 9387 | E-mail : napas.wansophark@gmail.com | Line-id : napas-wan

SKILLS

6+ Years of Education
Desk Research + Indepth Interview Research
Academic Articles Publishing
Feasibility Study
BOQ
Sustainable Design (LEED, WELL)
EIA Report
Organizing Seminar (Research + Graphics)
Software
- *Microsoft Office Word*
- *Microsoft Office Excel*
- *Microsoft Office Powerpoint*
- *Photogrammetry (Metashape)*
- *ChatGPT*

4+ Years of Education
Hand Sketching & Drawing
Model Making
Site Survey + Site Analysis
Architectural Design
Interior Design
Construction Drawing + Detailing
Laser Cutting
Presentation
Collaboration
Software
- *AutoCAD*
- *SketchUp + Enscape*
- *Rhino*
  - *Mass/ Form Modeling*
  - *Basic Grasshopper*
- *Autodesk Revit*
  - *Mass/ Form Modeling*
  - *Sun Path Diagram*
  - *Solar Analysis*
  - *Illuminance Analysis*
- *Autodesk Flow Design*
- *Lumion*
- *Adobe Photoshop*
- *Adobe Illustrator*
- *Adobe InDesign*

Activities /Hobbies
Hand Sketching
Architectural Competition

Other Languages
English

EXPERIENCE

Urban Research Intern | MQDC, Nebular Team
May 2022 - July 2022 (2 Months)
I participated in team-based internship alongside students from various majors, years, and universities, with a focus on urban-scale projects. My responsibilities included studying Metaverse-related data as a primary task to collaborate with the team on sketch design.

Architectural Design (Part-time) | Element Of Design Co., Ltd.
August 2021 - 2022 (1 Year)
The tasks are similar to internship duties. Additionally, I have also created lifelike models for the craftsmen to inspect and designed buildings with greater diversity.

Architectural Design Intern | Element Of Design Co., Ltd.
May 2021 - July 2021 (2 Months)
Practical on-site construction observation and hands-on experience, including engaging in actual construction activities, interacting with contractors, rendering three-dimensional images, with a primary focus on assignments involving home renovation.

EDUCATION

Master Degree of Architecture (Management) | Thammasat University
2021 - 2022 (2 Years)
In pursuing this master's degree, the skills that have been developed focus on research and academic writing. In the field of architectural management, the emphasis is on the business aspects, particularly real estate, sustainability, and a holistic view of the project development process, from land acquisition and project feasibility analysis to post-construction stages.

Bachelor of Science (Architecture) | Thammasat University
2017 - 2020 (4 Years)
In this undergraduate program, there is a diverse range of learning experiences in architectural design and its applications, including various building sizes and purposes such as residential buildings, public structures, condominiums, kindergarten schools, airports, high-rise buildings, and even structures that have yet to be constructed. This education involves blending knowledge from various fields, such as architectural psychology, business, observation, phenomenology, structural engineering, history, and more.

RECOGNITION & AWARDS

Thesis : Thammasat University
2023
Topic : Factors Influencing the Adoption of Digital Twin for Building Operation and Maintenance During the Occupancy
Advisor : Associate Professor Chaiwat Riratanaphong, Ph.D.

Academic Articles Publishing | BERAC (Thammasat University)
2023
Topic : Factors Influencing the Adoption of Digital Twin for Building Operation and Maintenance During the Occupancy
Advisor : Associate Professor Chaiwat Riratanaphong, Ph.D.

3rd Prize (B) : 2021 Bamboo Architectural Design and Construction Competition
2021
Team Member : Napas Wansophark and Tamonwan Virotkun
Advisor : Associate Professor Supreedee Rittironk., Ph.D.

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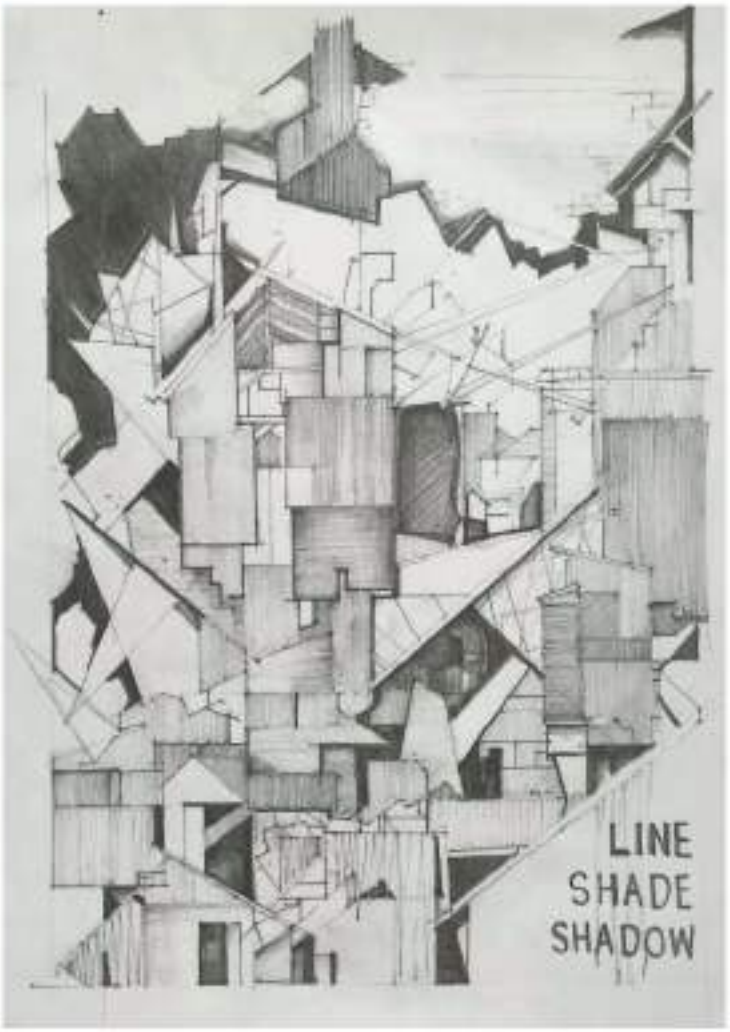
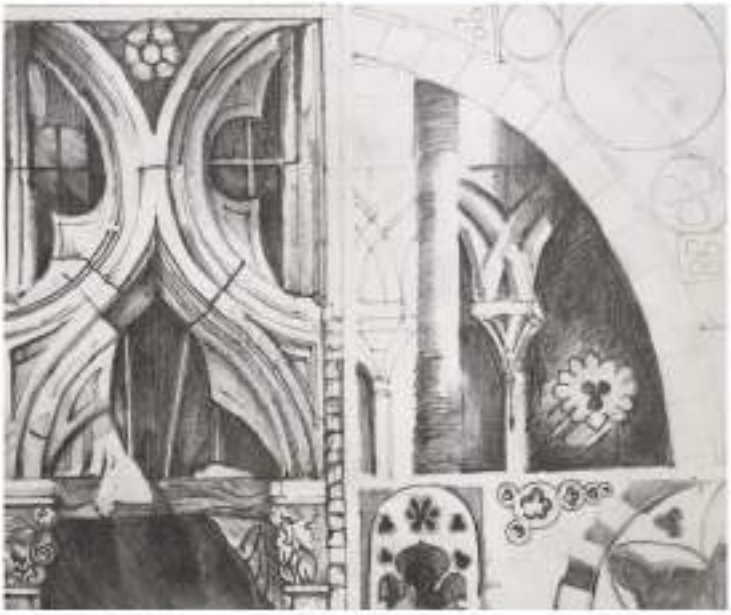
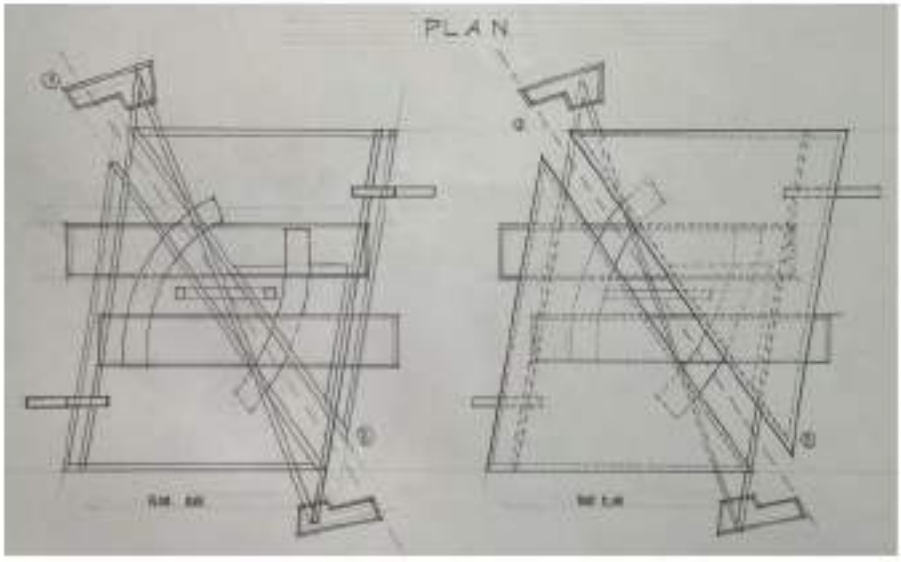
HAND SKETCHING

Pre-Academic Work

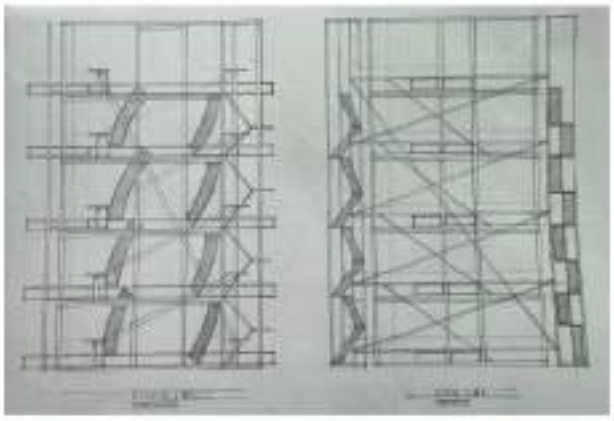


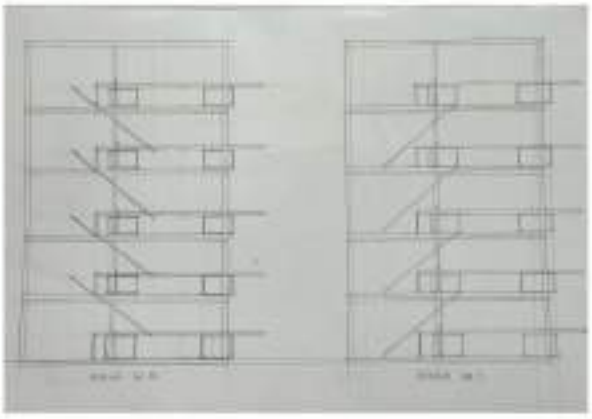


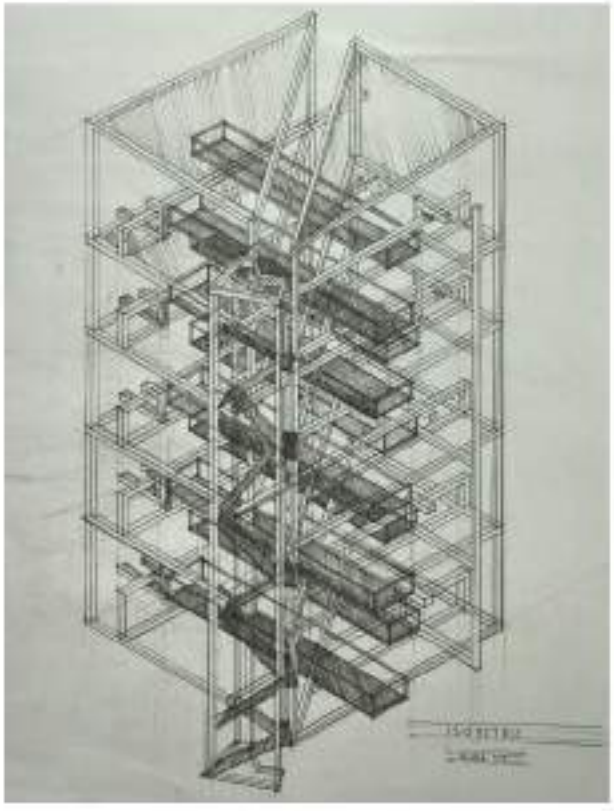
Academic Work

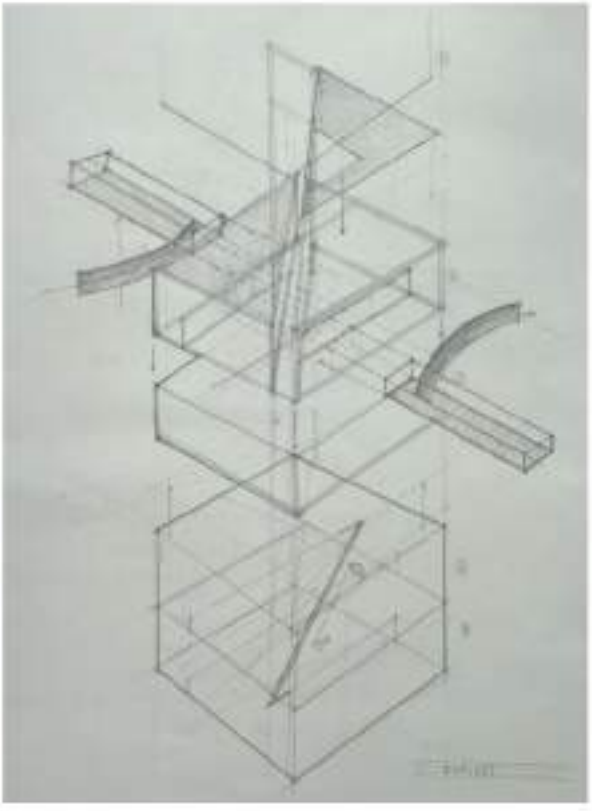


This hand sketch is a crucial component of the final production work in the AR102 Visual Studio design studio. In this project, students are tasked with dissecting physical attributes from paintings created by artists and architects and translating them into a single spatial representation. It exemplifies the application of creative thinking in the design process. The specific artwork provided to the designer as a reference for this piece is "Proun 12E" by El Lissitzky.









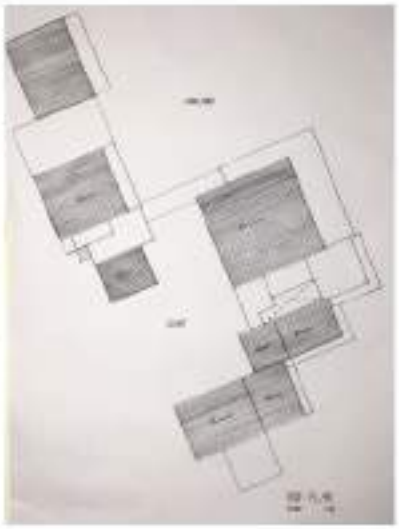
RESIDENTIAL PROJECT

Designer : Napas Wansophark
Academic Year : 2018
Skill : House Design
(Hand Sketching and Modeling)

AR215 is a studio project focused on designing a residential house with a 500-square-meter area located at 99 Phahon Yothin Rd, Khlong Nueng, Khlong Luang District, Pathum Thani 12120. Students are tasked with defining the users or homeowners to carry out the design. In this case, the selected users are a nuclear family consisting of a father, a mother who works as a tailor, and two children. Their daily life requires the home to serve both as a living space and a workspace, specifically for the tailoring business. Therefore, it is essential to have a functional area within the house to support the tailoring activities.

The house is strategically positioned near the entrance to accommodate a separate private zone for customers and delivery vehicles. This family places a strong emphasis on self-sufficiency in terms of dining, and during long holidays, the house also serves as a comfortable retreat for close relatives.

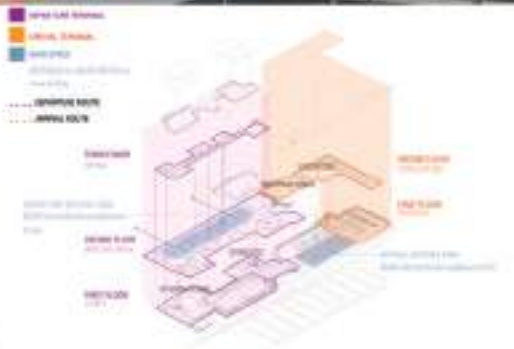
The homeowners (father and mother) desire the architectural design to evoke a sense of nostalgia, reminiscent of the rural origins where they began their life together. I incorporates the homeowners' specific needs and preferences into the design guidelines, encompassing space utilization, design concepts, layouts, and spatial connections as follows: [Followed by a description of the design guidelines.]



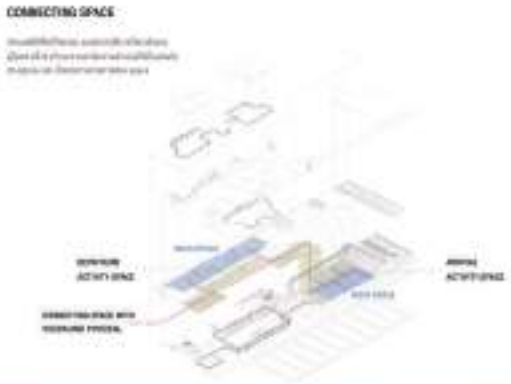
The usable space of this house on the ground floor consists of a car parking area, a workspace, a transportation vehicle parking space, a hallway, an entrance foyer, a dining room, a Western kitchen, a Thai kitchen, a living room, a sitting area, a laundry room, and the mother's bedroom with an en-suite bathroom. On the second floor, there are two bedrooms, one for the parents and one for the two children, a shared bathroom, and a prayer room. The architectural design of the house has been created in response to the homeowners' specific needs, as mentioned earlier. I have skillfully blended these requirements with an innovative approach to the building's layout and façade. This design incorporates elements that resemble the folding and unfolding of fabric, which directly relates to the homeowners' profession as tailors.

AIRPORT

Designer : Napas Wansophark
Academic Year : 2019
Skill : Airport Design
2D Drawing : Autodesk Revit + AutoCAD
3D Modeling : Autodesk Revit
Rendering : Autodesk Revit
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator

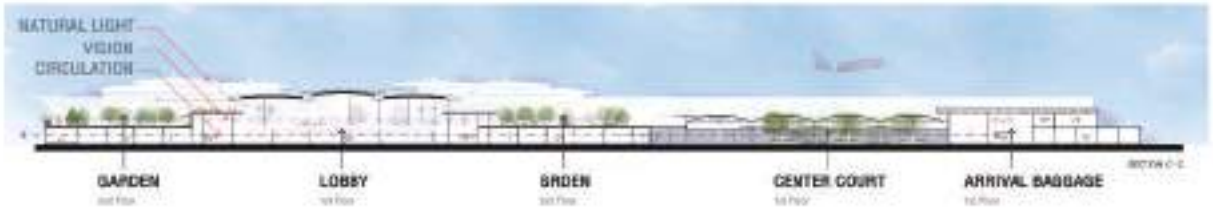


This airport project is a part of the Thai architectural design studio. I was assigned to design an airport in Rayong province to accommodate both Thai and international tourists. I reinterpreted Thai elements in a new way, not through overt symbols but by drawing inspiration from the surrounding context and evoking a sense of lightness, openness, and a close connection with nature and sunlight. The design features a representation of a traditional Thai umbrella, signifying Rayong province, known for its eight months of rain and four months of sunshine. The main structure and the overhead canopy are integrated to allow natural light to filter through, creating a sense of openness and lightness. Additionally, natural elements are incorporated into the building, using materials such as wood and fired clay tiles to infuse the Thai essence.



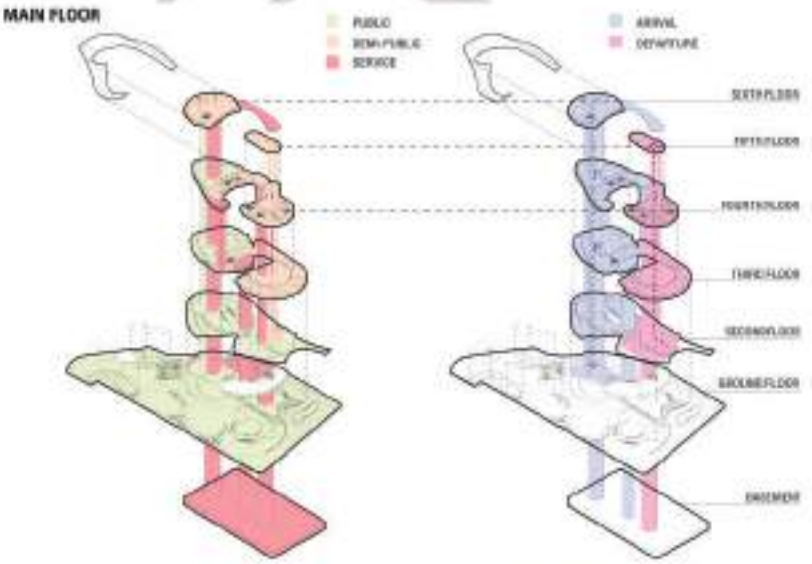
SECTION A - A

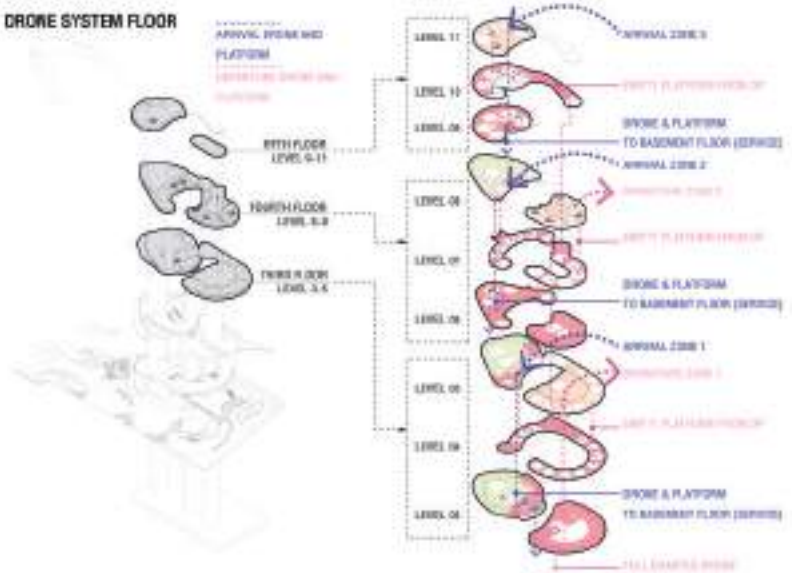
SECTION B - B



URBAN AIR MOBILITY HUB

Designer : Napas Wansophark
Academic Year : 2020
Skill : Urban Air Mobility Hub Design
2D Drawing : AutoCAD
3D Modeling : Rhino
Rendering : Lumion
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator



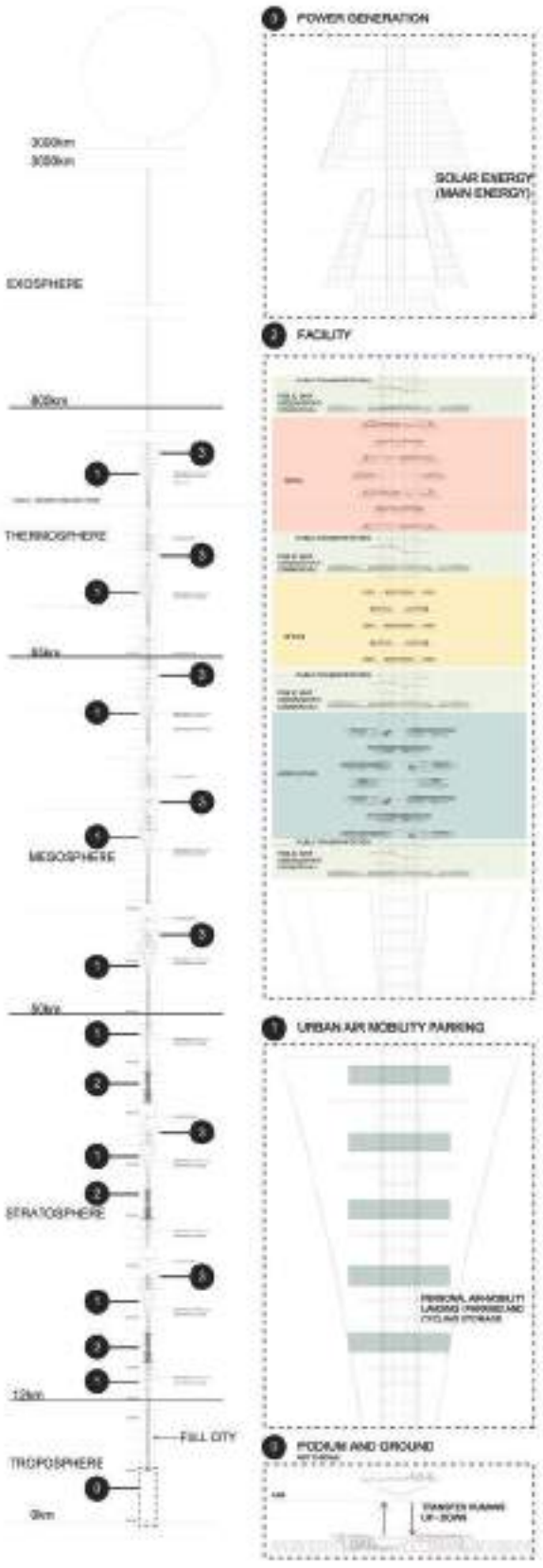


The design of this urban air mobility hub is part of the Future Studio design project, undertaken by fourth-year students. The project focuses on designing a building that does not currently exist.

What I haved learned from designing this public drone transport station is the prediction of functions and flight loops. This includes predicting drone functions based on current drone specifications, as well as considering the continuous rotation of drones in response to traffic predictions.

I have created scenarios of usage by applying a flow concept for airport-like passengers and designing a platform for drone swapping after flights for recharging and quick turnaround for users.

URBAN AIR MOBILITY GRAND STATION



Designer (5) : Napas Wansophark /Nattana Promma / Tasith Javisooth / Thanakorn Putduang /Napatsorn Meekunthong
Academic Year : 2020
Skill : Urban Air Mobility Hub Design
2D Drawing : AutoCAD
3D Modeling : Rhino
Rendering : Lumion

From the team's research, we have identified several current and future problems in Bangkok, which are accumulating and leading to various challenges:

1.The continuous expansion of tall and large buildings is causing the subsurface to compact, leading to land subsidence in Bangkok, which is already prone to flooding. This subsidence could worsen in the future, potentially causing the city to sink further.

2.Thailand relies on unsustainable sources of electricity, including fossil fuels, which contribute to air pollution. Renewable energy sources like solar, wind, and nuclear power are limited due to factors such as weather conditions, wind speed, and public opinion.

3.Current issues, such as PM 2.5 air pollution and the ongoing COVID-19 pandemic, raise concerns about future health risks. It's uncertain if more epidemics will occur in the future.

4.Hotels and office spaces in Bangkok have remained fixed in their designs and locations for decades, leading to congestion and a lack of innovation in urban planning.

5.The absence of agricultural and livestock areas within Bangkok makes the city vulnerable to food supply disruptions, especially during unforeseen circumstances like the COVID-19 pandemic. This situation also negatively impacts farmers and leads to various socio-economic challenges.

To address these issues, our design concept, "INVERTED CITY," involves a central axis structure suspended from a satellite-like cable system. This central axis serves as the main energy transmission hub within the building, distributing

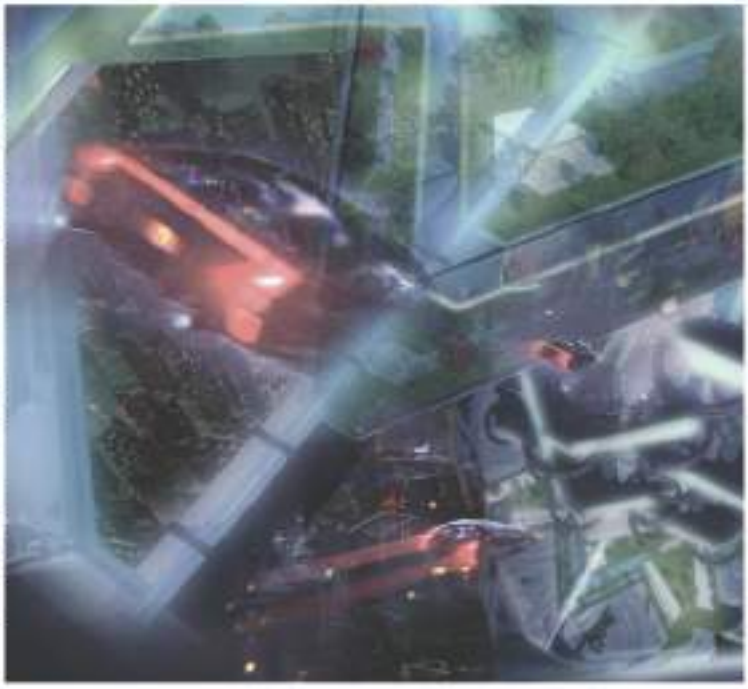
power throughout the underground city. It connects various modes of transportation, including waterways (to prevent flooding), land-based transportation (linked to the central station in Bang Sue), air transportation (UAM GRAND STATION), and potential future space travel.

The lowest zone of this central axis, between 5km and 12km altitude, serves as a TeleportoSphere, allowing people to interact as they would on the surface of the Earth. The intention is to create an environment that minimizes overcrowding, similar to the congestion-free communities of the future.

The primary use areas within the building will not be fixed to their locations, but rather will resemble drones, albeit larger, allowing them to fly anywhere. These structures are referred to as "Mothercrafts" and will be powered by sustainable electricity generated from the central axis.

Before users can access the Mothercrafts, they must pass through screening zones from outside each zone to enter the city and ensure a disease-free environment. This design approach not only addresses the mentioned problems but also offers a new and unique experience for users, departing from conventional architectural theories and contexts.

By breaking away from traditional architectural paradigms that rely on support structures like columns and beams and adopting a drone-inspired design, we aim to create a structure that can levitate without the need for traditional support mechanisms. This innovative approach combines architecture and technology to address the pressing issues in Bangkok and pave the way for a sustainable and resilient urban future.



WELLNESS CONDOMINIUM

Designer : Napas Wansophark
Academic Year : 2019
Skill : Condominium Design
2D Drawing : AutoCAD
3D Modeling : SketchUp
Rendering : Lumion
Graphic & Post Production :
Adobe Photoshop and Adobe Illustrator

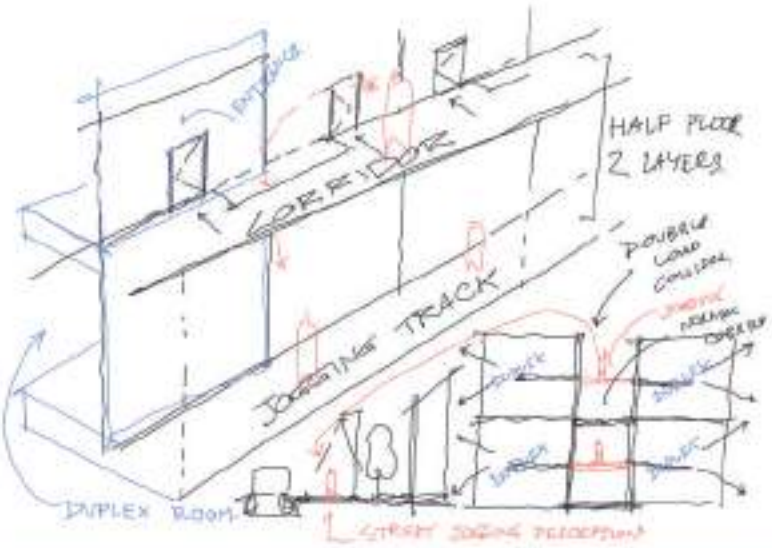
The design studio project in the AR315 course focuses on designing a condominium with a wellness concept, which promotes holistic well-being for its residents, encompassing physical, mental, dietary, emotional, and more aspects. The objective of this project is to create a condominium that can transcend the conventional definition of condominiums, allowing for flexibility in its use.

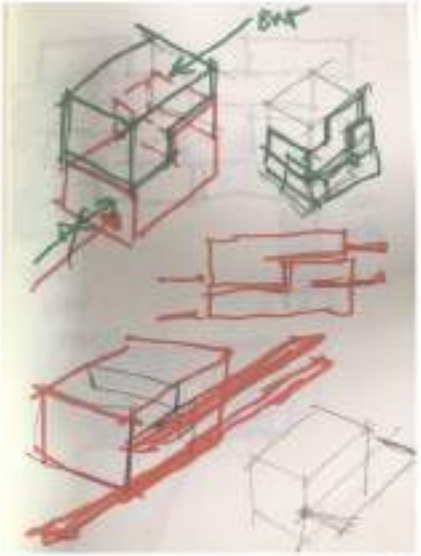
The inspiration for this design approach is drawn from the designer's daily routine, which involves running along the streets immediately after leaving home and being able to seamlessly connect with various sporting activities that are not typically found in traditional condominiums. These activities include basketball courts, football fields, and more.

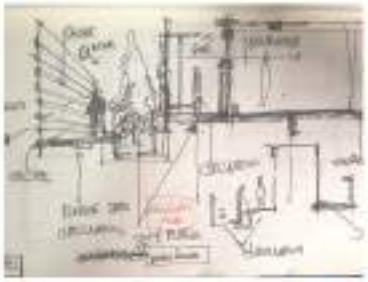
I envisions that by emphasizing these objectives, it is possible to redefine the traditional concept of condominiums, which often consist of rectangular buildings with rows of identical living units. The design concept aims to break away from this conventional model, offering a unique living experience.

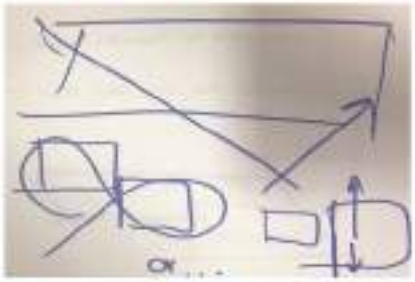
This design approach, focusing on holistic well-being and versatile outdoor activities, will be evident in the two facing pages of this project's space.

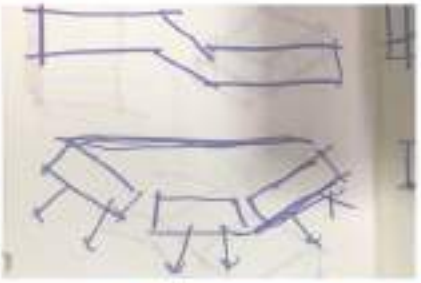
IDEA DEVELOPMENT











PHENOMENOLOGY

Studio 216 is tasked with working on public spaces and architectural designs intended to accommodate these public areas. The inaugural project focuses on the creation of a pavilion situated within the Khao Laem Ya vicinity. The core objective is to fashion this pavilion in a manner that enables users to apprehend the natural phenomena taking place within the area through its design, thereby instilling in them an awareness of the emotions and experiences the designer seeks to evoke.

The intended user demographic for this project comprises tourists who visit Khao Laem Ya National Park during its official operational hours, which span from 9:00 AM to 4:30 PM. Whether they are en-route to the cape or in the process of returning, their journey traverses the eastern bridge of Khao Laem Ya. The pavilion has been thoughtfully architected to provide a sanctuary where visitors can unwind, attune themselves to the rhythm of the undulating waves, and genuinely connect with the coastal surroundings. Its primary purpose is to offer a moment of respite, facilitating relaxation and mental rejuvenation prior to continuing their sojourn towards the cape. Those inclined may also partake in leisurely interludes at the pavilion.

The strategic placement of the pavilion lies approximately midway between the initial embarkation point and the cape itself, serving as an interlude for mood-setting before embarking on the final leg of the journey. The considerable distance to the cape can, at times, engender fatigue, underscoring the necessity for visitors to fully immerse themselves in the encompassing vistas and natural phenomena that unfold along the way.

Upon observing the waves flowing through the rocky outcrops in the designated area chosen as the location for the pavilion, it was noted that the characteristics of the waves closely approximated the experiences the designer aimed to create for users. These experiences are intended to instill a sense of serenity and awareness in users. The waves referenced are those depicted in figures numbered 6, 7, 8, 9, and 10. Consequently, the designer decided to incorporate the qualities of these waves into the experimental design process to achieve a final design that aligns with the intended objectives.

1.Strike 2.Batter 3.Merge 4.Fallback 5.Sea of milk

6.Travel throught the rock 01 7.Travel throught the rock 02 8.Travel throught the rock 03 9.Whitpool 10.Orbit







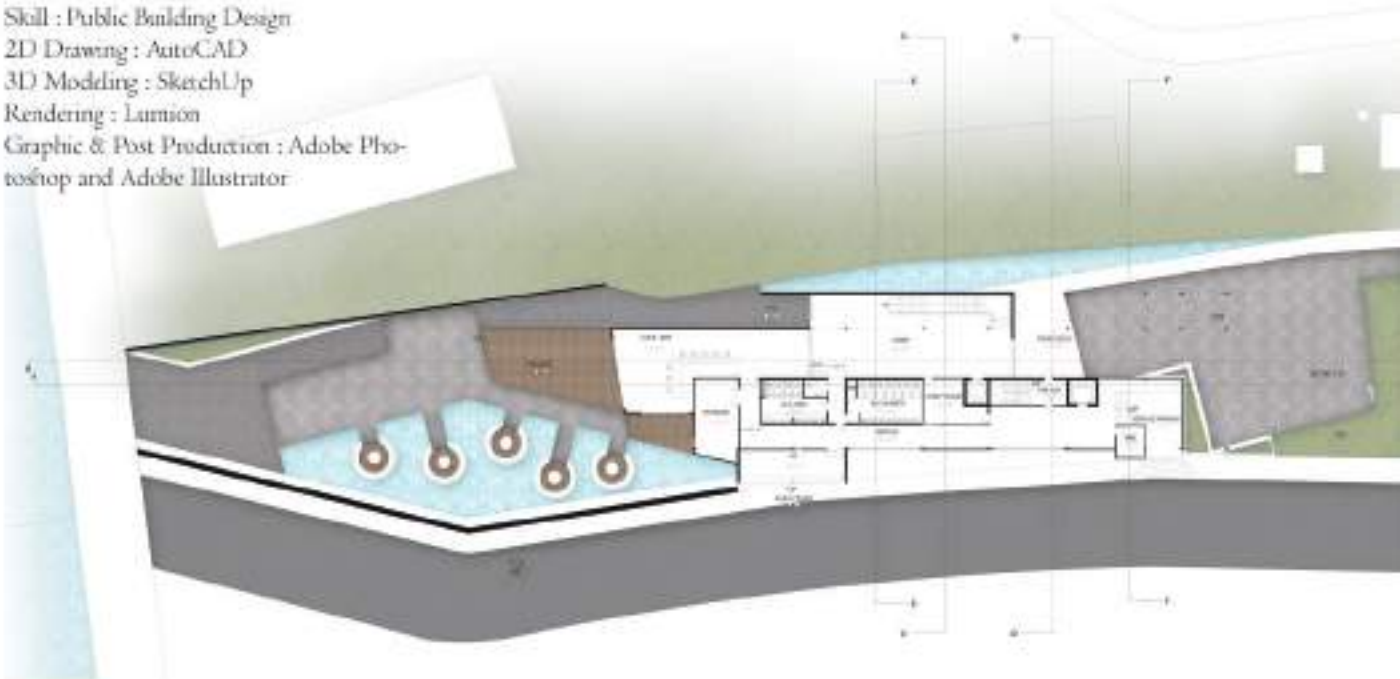





PAVILION

URBAN INTERVENTION

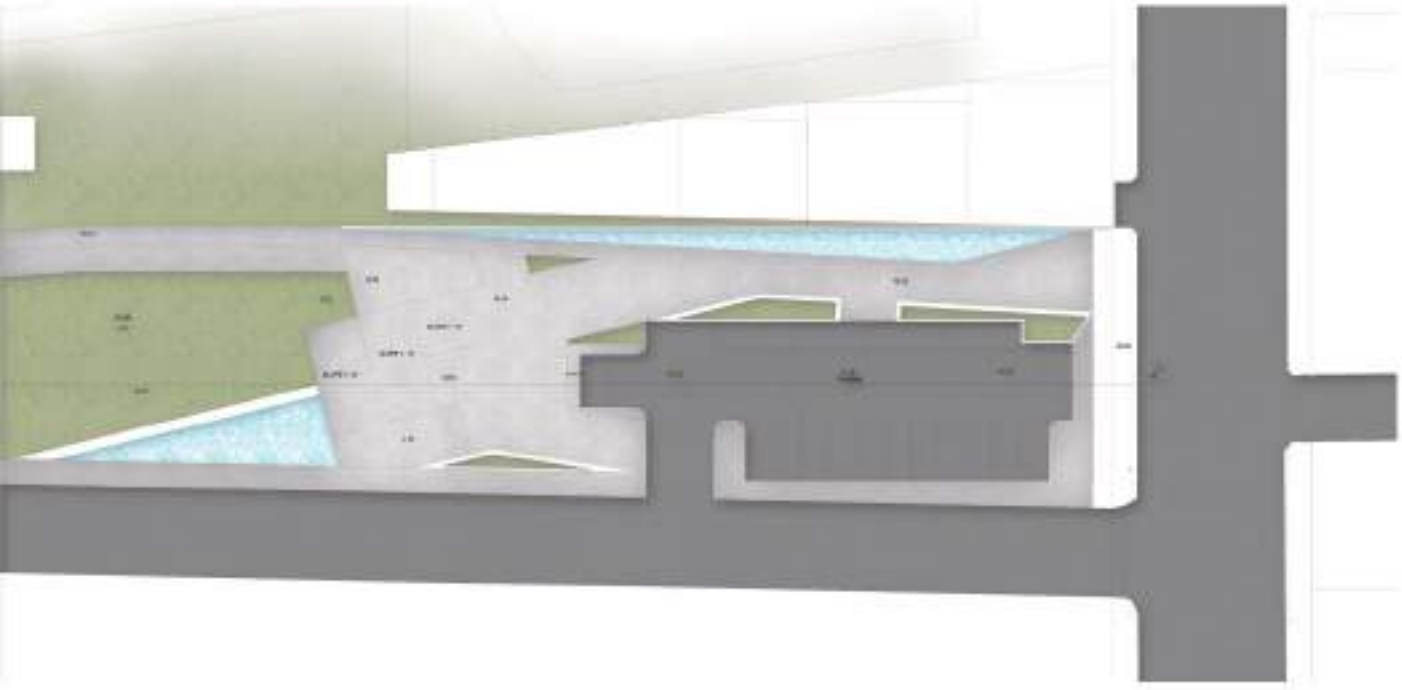
Designer : Napas Wansophark
Academic Year : 2018
Skill : Public Building Design
2D Drawing : AutoCAD
3D Modeling : SketchUp
Rendering : Lumion
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator



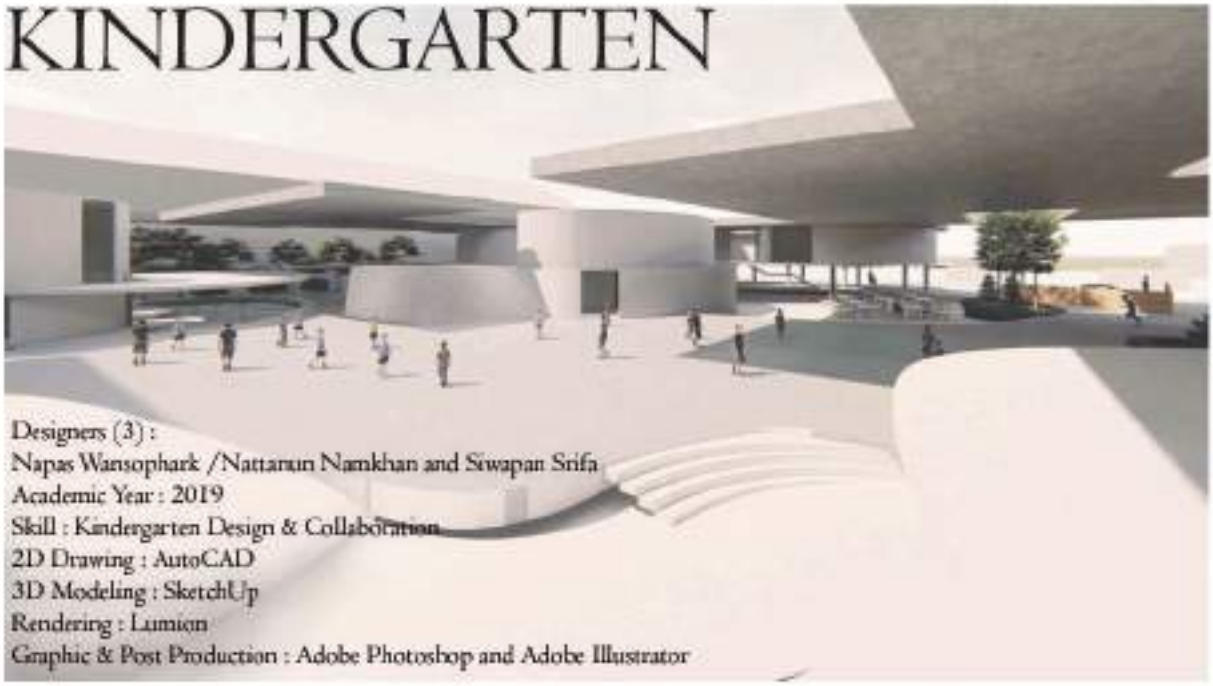
The public building design studio project is situated in a strategic location, adjacent to the Taksin Bridge BTS Skytrain station and the Wat Yan Nawa Temple. The site boasts dimensions of 25 meters in width and 200 meters in depth. In order to determine the project's programming for the design phase, I conducted a comprehensive analysis of the site in collaboration with a group of over 30 individuals.

Following the site analysis and during the design phase, I designated the building as an architectural landmark. This decision was made because the area around Sathorn-Bang Rak will serve as the primary venue for the annual Bangkok Design Week, which occurs twice a year. Moreover, a significant portion of the exhibition space will extend to the Bang Rak district, reaching as far as the Saphan-Chai MRT Station.

Additionally, I recognized the potential of the Yan Nawa area as a hub for historic architecture and a vibrant community. This community thrives, particularly around the lower levels of the Shop house. To draw tourists and visitors from Bang Rak and Icon Siam, located on the opposite side, I envisioned this building as an Architecture Center. It will serve as a public relaxation space and a platform for experiencing architectural works, contributing significantly to the creative industry and economic stimulation in the extended Yan Nawa district.



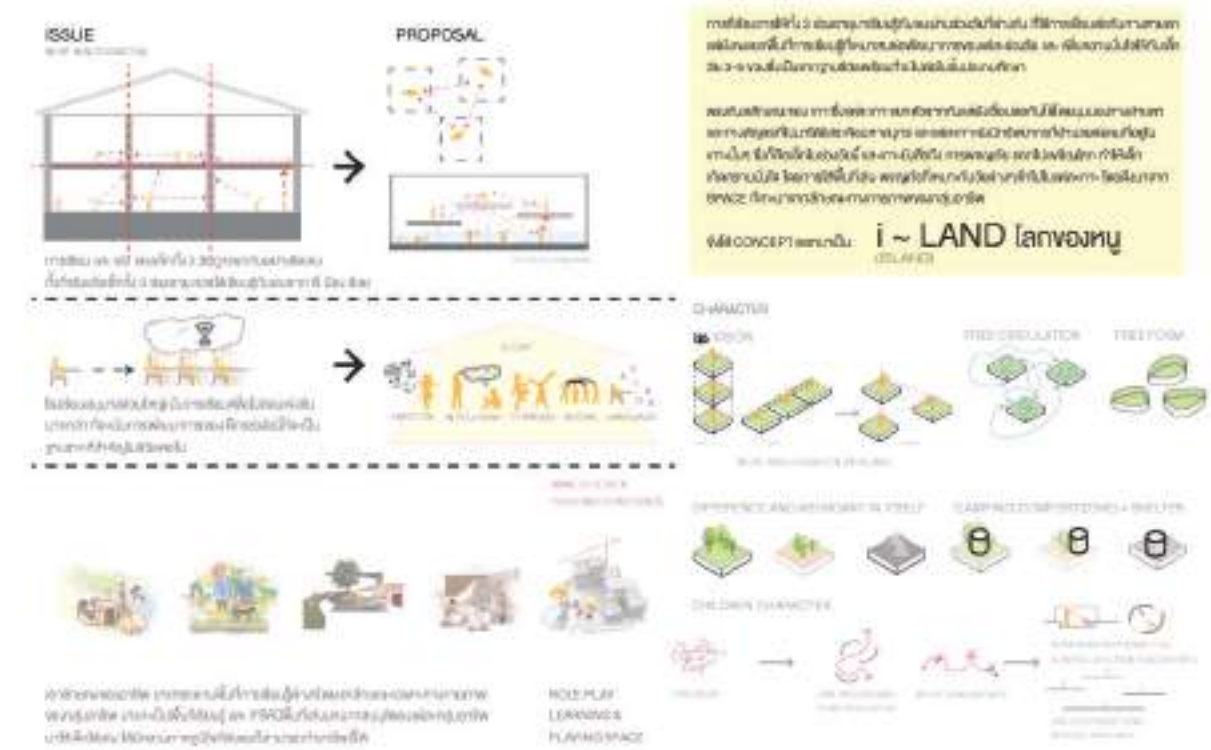
KINDERGARTEN



Designers (3) :
Napas Wansophark /Nattanun Namkhan and Siwapan Srifa
Academic Year : 2019
Skill : Kindergarten Design & Collaboration
2D Drawing : AutoCAD
3D Modeling : SketchUp
Rendering : Lumion
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator

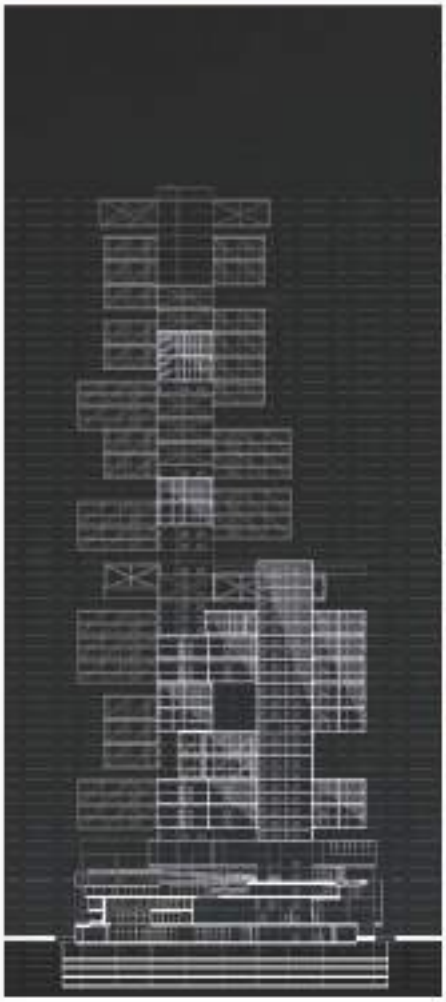
The project involves designing a kindergarten school located within the premises of Thammasat University. In this project, the designers and the team conducted a study on the various aspects of child development at this age. The aim was to create an environment that is conducive to age-appropriate learning and supports the children's developmental needs.

The designers presented a novel concept for the kindergarten school, inspired by the idea of i-land, "The World of Kids." This concept incorporates physical features inspired by islands, where children of different age groups can engage in enjoyable learning experiences. It also encourages interactions among children from different age groups and enhances their overall development in various aspects.


ISSUE
PROPOSAL
i ~ LAND โลกของหนู
CHARACTER
TREE CIRCULATION
TREE FORM
ROLE PLAY
LEARNING &
PLAYING SPACE

HIGH RISE MIXED-USE BUILDING

Designers (2) :
Napas Wansophark : Exterior Design, Overall Space Planning, 3D Modeling and Presentation
Prattana Kadsanuk : Interior Design, Detailing, Rendering & Physical Model Making
Academic Year : 2020
Skill : High-rise Building Design & Collaboration
2D Drawing : Revit
3D Modeling : Revit
Rendering : Lumion
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator

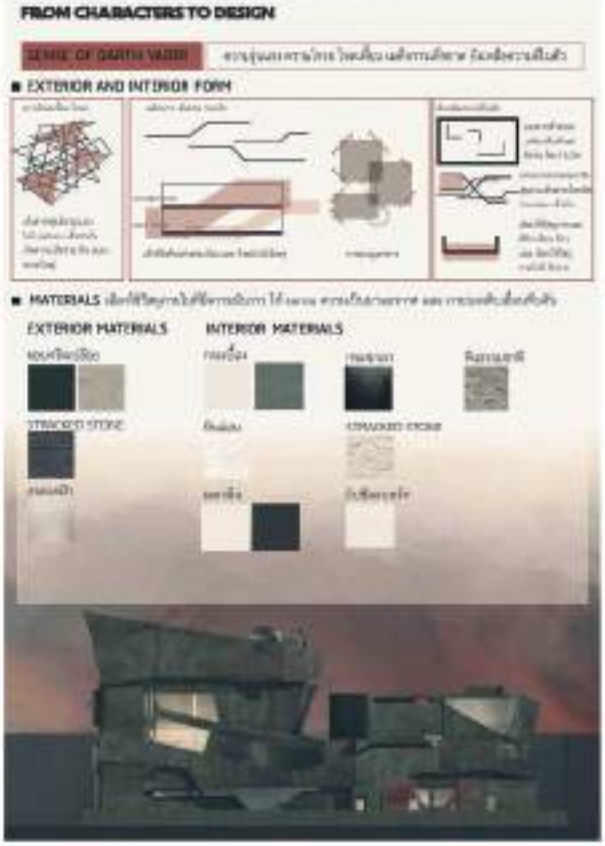


Studio AR415 is a design studio that specializes in high-rise mixed-use building designs. The designers were given a project site located in the Thonglor neighborhood near Petchaburi Road. The design program includes health care facilities, retail spaces, a hotel, and service apartments.

The designers drew inspiration from the dynamic nature of the Thonglor neighborhood. In the morning, it serves as a hub for health clinics and beauty centers, while in the evening, it transforms into an entertainment hotspot. Thonglor is a vibrant, 24-hour neighborhood with diverse and unique characteristics. It is a place where people can freely express their true desires.

To reflect this diversity and liveliness, the designer aimed to create a distinctive building where each part of the structure strives to stand out and extend in various directions, symbolizing the fun, diversity, and vitality of the neighborhood. Once the design concept was established, the designer explored the possibility of using a Super truss structure, attached to the main core, which acts as a load-bearing wall and accommodates circulation, escape routes, and compliance with regulations in each part of the building.

DARTH VADER'S HOUSE



I was tasked with a project by the interior architecture design studio, Celebery House. I was given the freedom to choose a well-known personality, whether it's a real person or a fictional character. I chose Darth Vader from the "Star Wars" movie franchise, who happens to be their favorite character, to be the owner of the house.

I incorporated the distinctive attributes of Darth Vader, where there is an external display of malevolence and villainy to others, but internally, he is simply Anakin Skywalker who has suffered and transformed from being in the wrong. This duality is portrayed through the architectural design of the house. The exterior of the building may appear rough and rugged, drawing inspiration from the brutalist architectural style. I amplified the raw and edgy characteristics, accentuating the angular lines and emphasizing the rough textures.

Conversely, the interior of the building is in stark contrast to the exterior, with a design that resembles something out of a spaceship but primarily employs bright, white themes. Furthermore, I aligned the interior functions of the building with the essence of Darth Vader. The main entrance serves as the "Hall of Fame," showcasing his achievements and pride since his days as Anakin Skywalker. Additionally, there are rooms for meditation, practice, and vehicle parking.

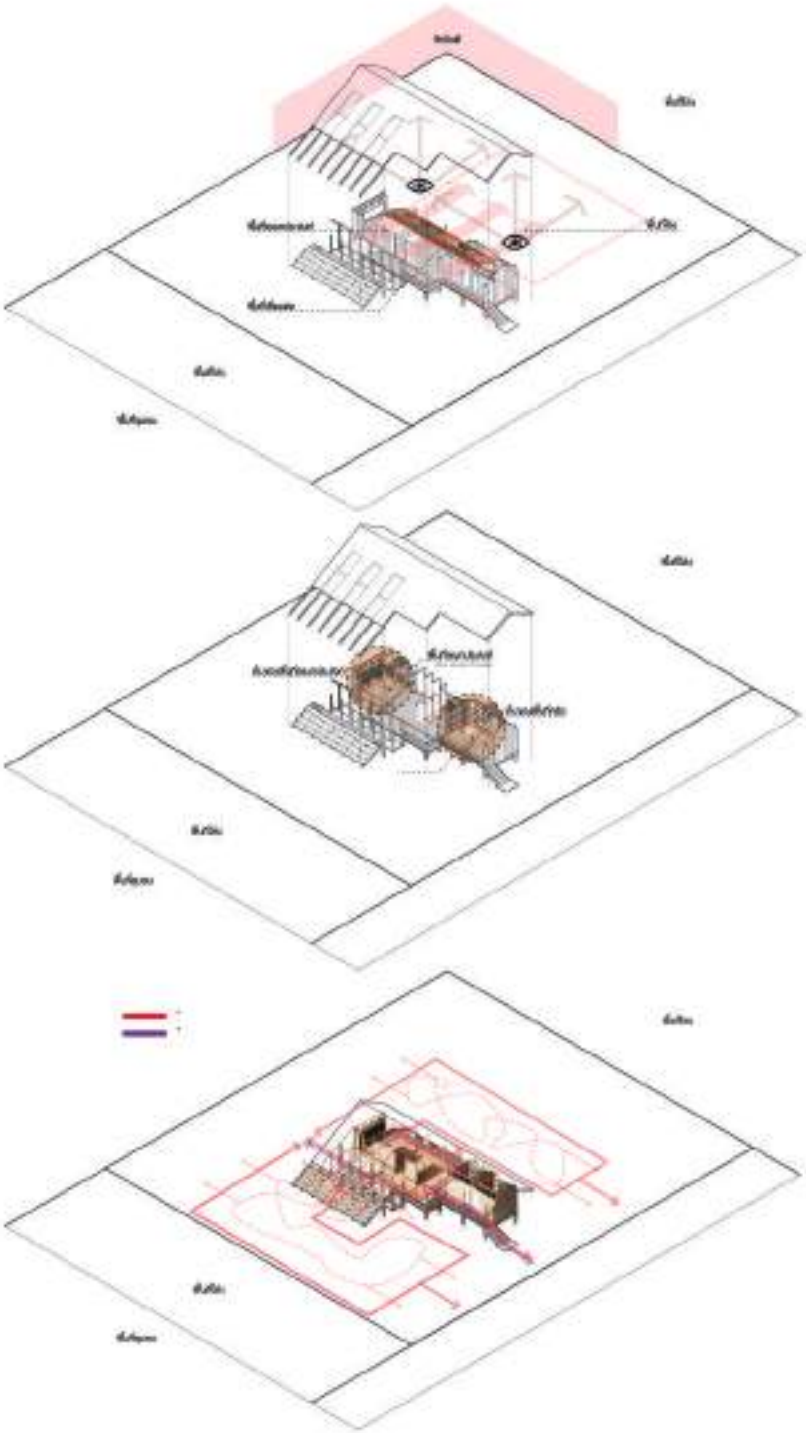






FIRST FLOOR PLAN
SCALE 1 : 75
SECOND FLOOR PLAN
SCALE 1 : 75
THIRD FLOOR PLAN
SCALE 1 : 75
ROOF PLAN
SCALE 1 : 75

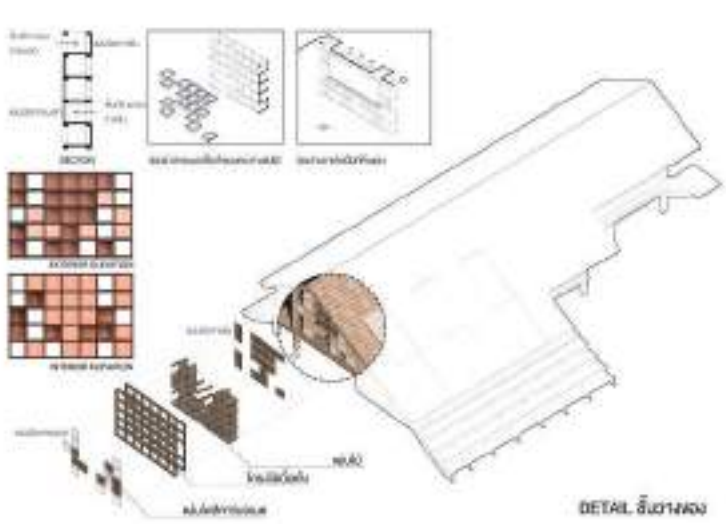
APTU BUILT CAMP



The designer participated in a volunteer architecture camp club, where members seek out communities or areas in need of buildings for collective use. It's a club where anyone interested from various faculties in the university can come together to support these initiatives. The designer was part of the design team that aimed to immerse ourselves in the local community for three days to gather firsthand knowledge about their way of life and their unique context.

For this project, the designer received input from the community to create a multi-purpose structure, primarily catering to children in the kindergarten age group. This building would serve as a central gathering point for the local residents and accommodation for teachers who come from different areas. Our team developed a playful and interactive design by integrating recreational spaces. We extended parts of the roof down to the ground, creating a seamless connection between the building and the outdoor space. This design respects local traditions and utilizes materials sourced locally.

Ultimately, the structure was not constructed as originally planned due to the COVID-19 pandemic that hit in 2020 and 2021. The local craftsmen adopted the proposed design, allowing the project to continue even without the official club's involvement. This experience was a valuable lesson for us, emphasizing the importance of engaging with the community directly, listening to their needs, and creating a design that truly meets those needs. It was an opportunity that couldn't have been gained through classroom learning alone.



BAMBOO COMPETITION 2021

3RD PRIZE (B)

Team Member : Napas Wansophark and Tamonwan Virotkun

Advisor : Associate Professor Supreedee Rittironk., Ph.D.

MASHAVANU

มัจฉาวานุ

It starts with Fishy idea

The design of the pavilion was inspired by fish, the iconic symbol of prosperity of life and well-being. A fish indeed is considered the blessing animal for Chinese. According to Feng Shui, a fish represents wealth and prosperity because the actual word in Chinese for fish, in Pinyin: yú, 鱼, also translates to "abundance" 余 Pinyin: yú. The twin golden carp swimming atop a golden coin is the great meaningful sign. Furthermore, not only wealth, abundance, but love, domestic felicity, partnership, tenacity, hence fertility, hence renewal is symbolized. Chinese also believe that there is respectful angel within fish, so they can protect people from bad things. A pair of fish is also one of the Eight Buddhist Symbols. In Thai notion as well, Thai people feels that they owed fish a big favor to give them food, work, and wealth. Two nations share fish figure with respect, especially twin fish. Being together in pair also raise aspects of fertility and continuity of life, so we commonly see fish images come in a pair. Fish also appear in history of Thai literature, such as the golden Goby (Pla Boothong), Supanmasah in Ramayana etc. These evidences show that fish and its blessing are embedded within Thai and Chinese culture. This pavilion is then named "Mashavanu". Masha is a Thai word meaning a fish, while vanu is a Sanskrit word meaning bamboo.

BAMBOO COMPETITION 2021

3RD PRIZE (B)

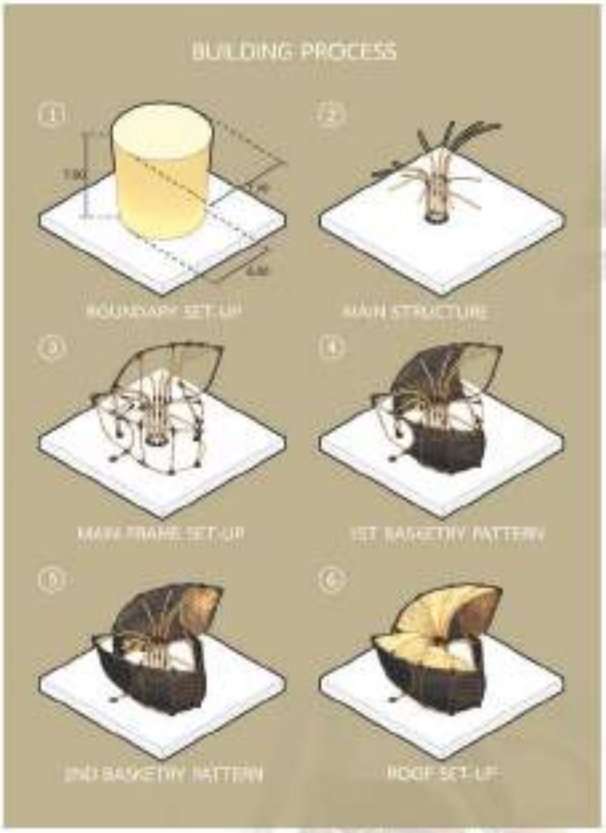
Team Member : Napas Wansophark and Tamonwan Virotkun

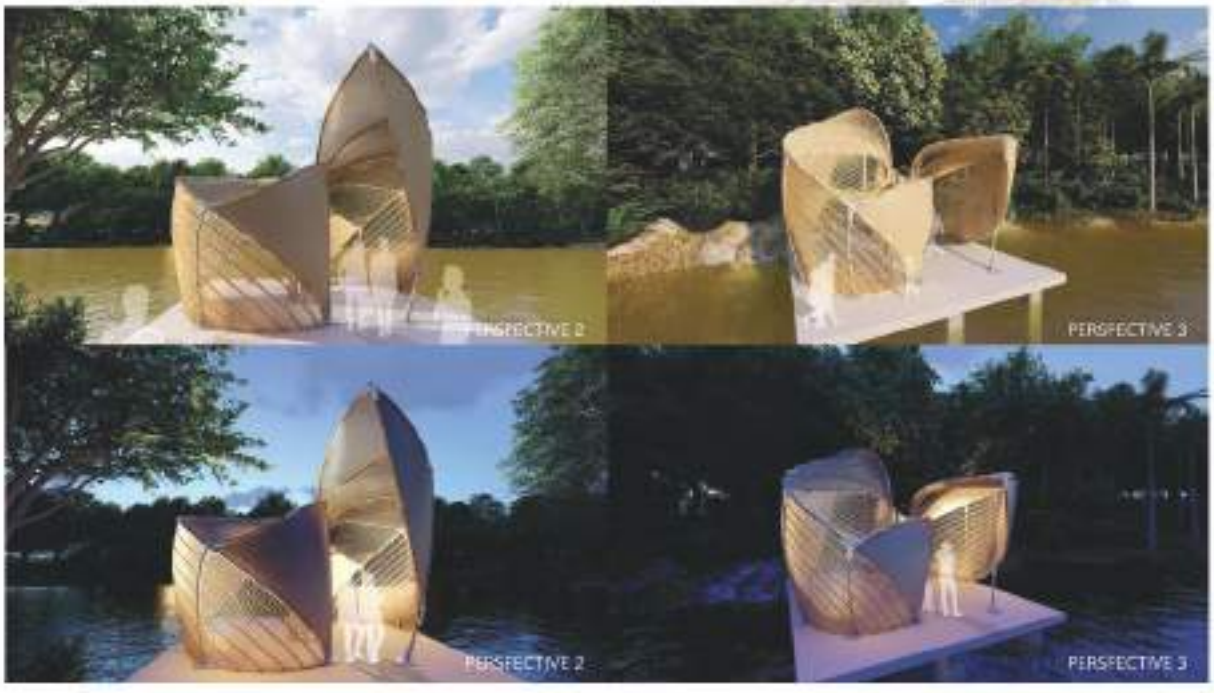
Advisor : Associate Professor Supreedee Rittironk., Ph.D.

CONCEPTUAL DESIGN

Fish then share the common symbol of cultural enrichment among two nations, Thailand and China. Project site also is located in prosperous delta area in Southern China; Guangzhou, Shenzhen, Hong Kong, and Macau. It is also where the urban economy outspread, yet there is still the greenery wetlands of Nansha to preserve the natural enrichment. It is quite a contrast, but in harmony. China in Thai perspective can be referred as predecessor that was used to be trades and cultural exchanges in history. The reciprocity of two nations are shown as twin fish swimming around each other, to present ideas of togetherness and hope to over the crisis together. One fish is pushing its head upward to simulate the anticipation of peace and normal-life will return. Hope is set that mankind will be able to unite again.

The design is rather simplified to simulate fish configuration using bamboo craving and weaving. Bamboo is the greatest material that offer many designed geometries to become possible, due to its flexibility and strength. Fish are shown partially their head, body, and tail, not in full body. The missing parts are left for audiences to use their imagination and experience while walking through. The perception of fish forms can be different in different angles. While experiencing the pavilion, audiences can feel that they are also part of fish dancing around. The round





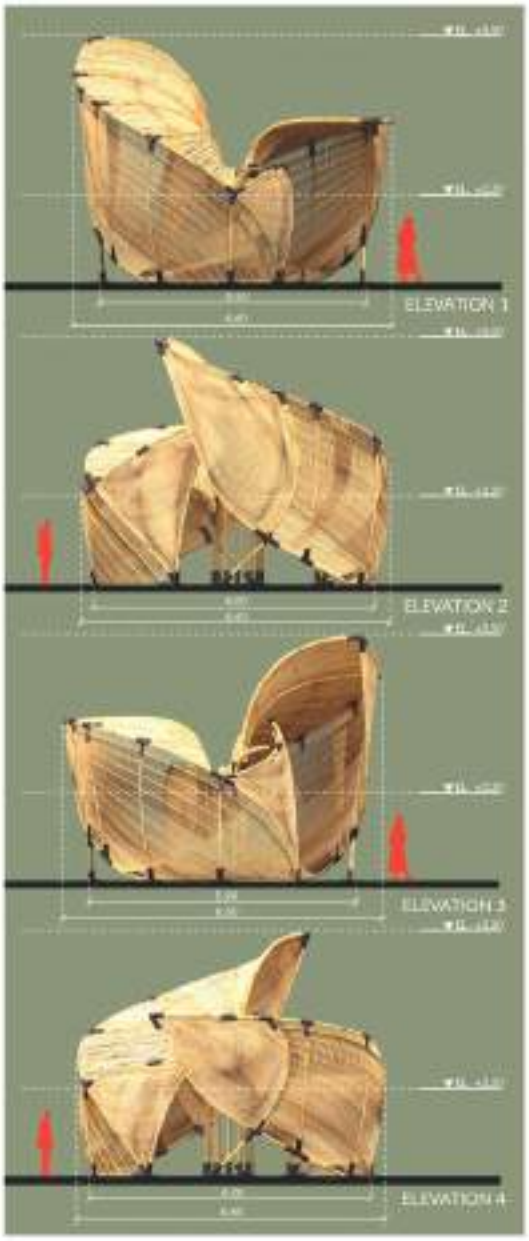
BAMBOO COMPETITION 2021

3RD PRIZE (B)

Team Member : Napas Wansophark and Tamonwan Virotkun

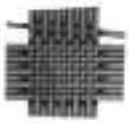
Advisor : Associate Professor Supreedee Rittironk., Ph.D.

DRAWING



TRADITIONAL FOLK ART

The creation of bamboo architecture is like making the bamboo craft, which is the same knowledge of local wisdom. Local people in Thailand produces many kinds of crafts using bamboo for their everyday objects. The craftsmanship is un-replicatable, however, products are created to serve basic function, and without any artistic knowledge. Interestingly they are the Art of itself in their vernacular language. It is also interesting to look at the local weaving patterns, such as cross pattern, hexagon pattern, circular pattern, and spiral pattern. The design of pavilion is also influenced by those patterns of local creation.



CROSS

HEXAGON

CIRCULAR

SPIRAL

BAMBOO COMPETITION 2021

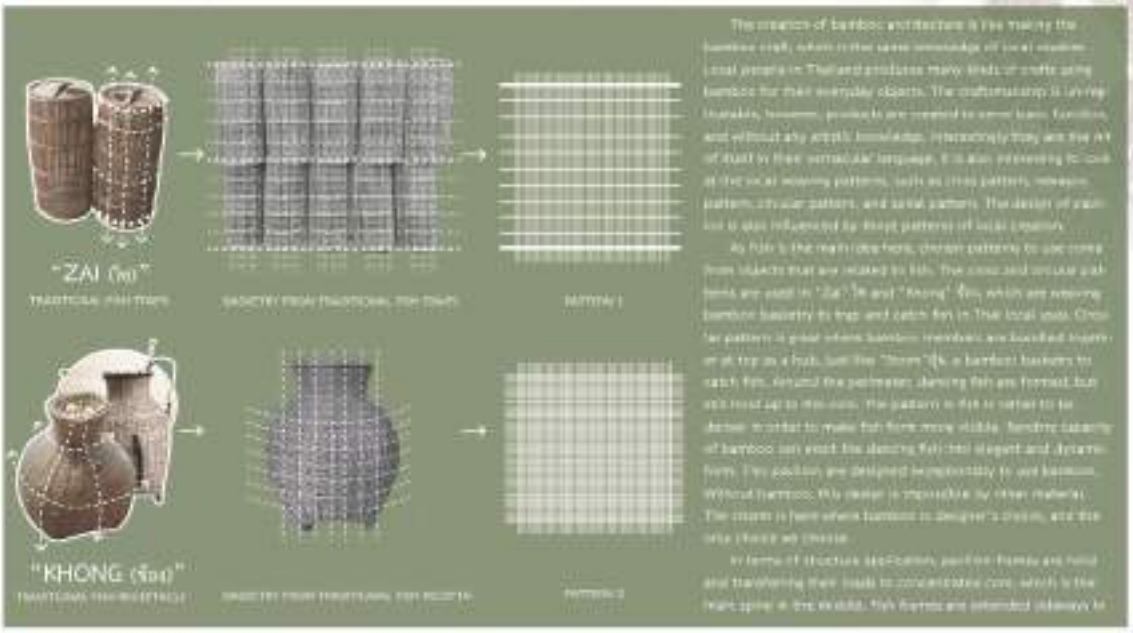
3RD PRIZE (B)

Team Member : Napas Wansophark and Tamonwan Virotkun

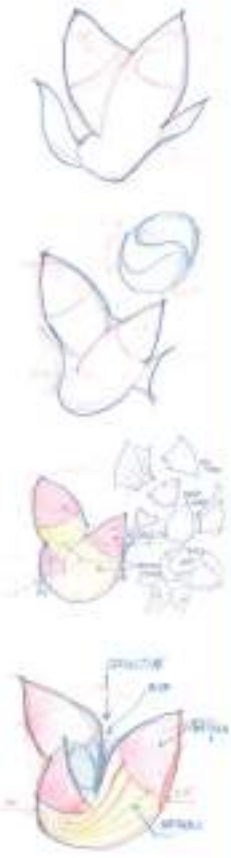
Advisor : Associate Professor Supreedee Rittironk., Ph.D.

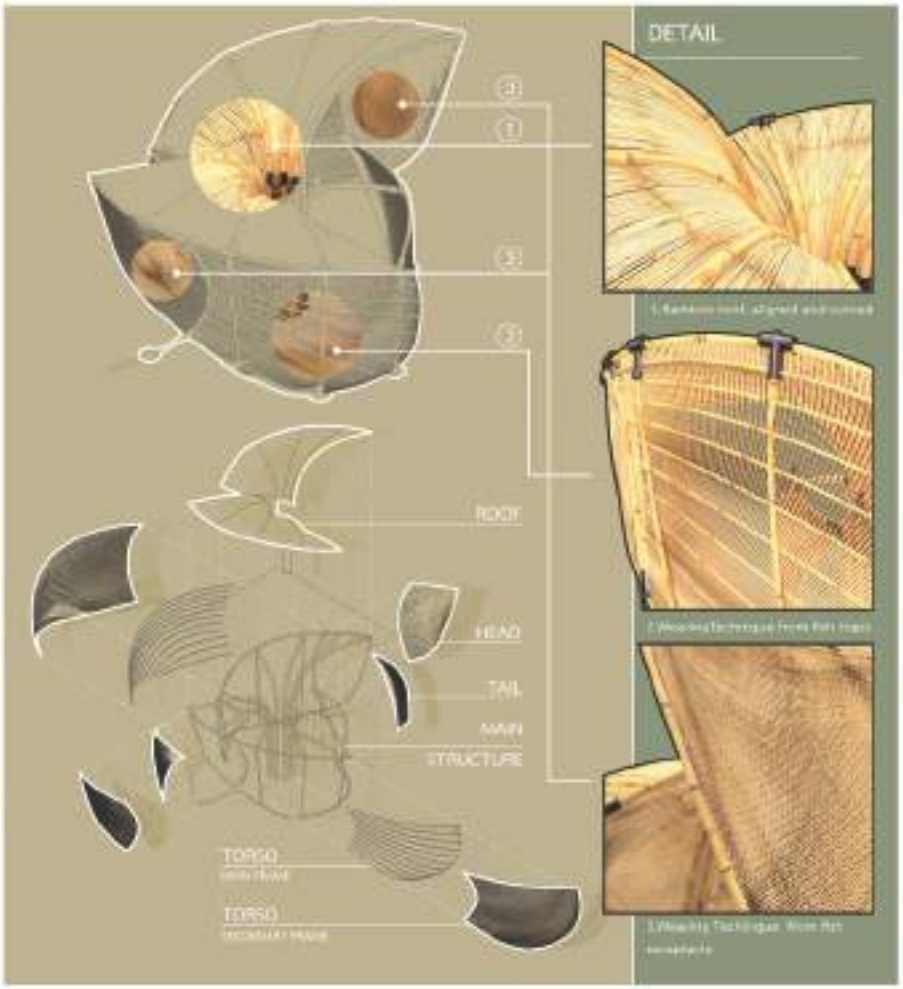
APPLICATION OF FOLK ART IN PAVILION : BASKETRY

Craftsmanship, Vernacularism and Bamboo Structure

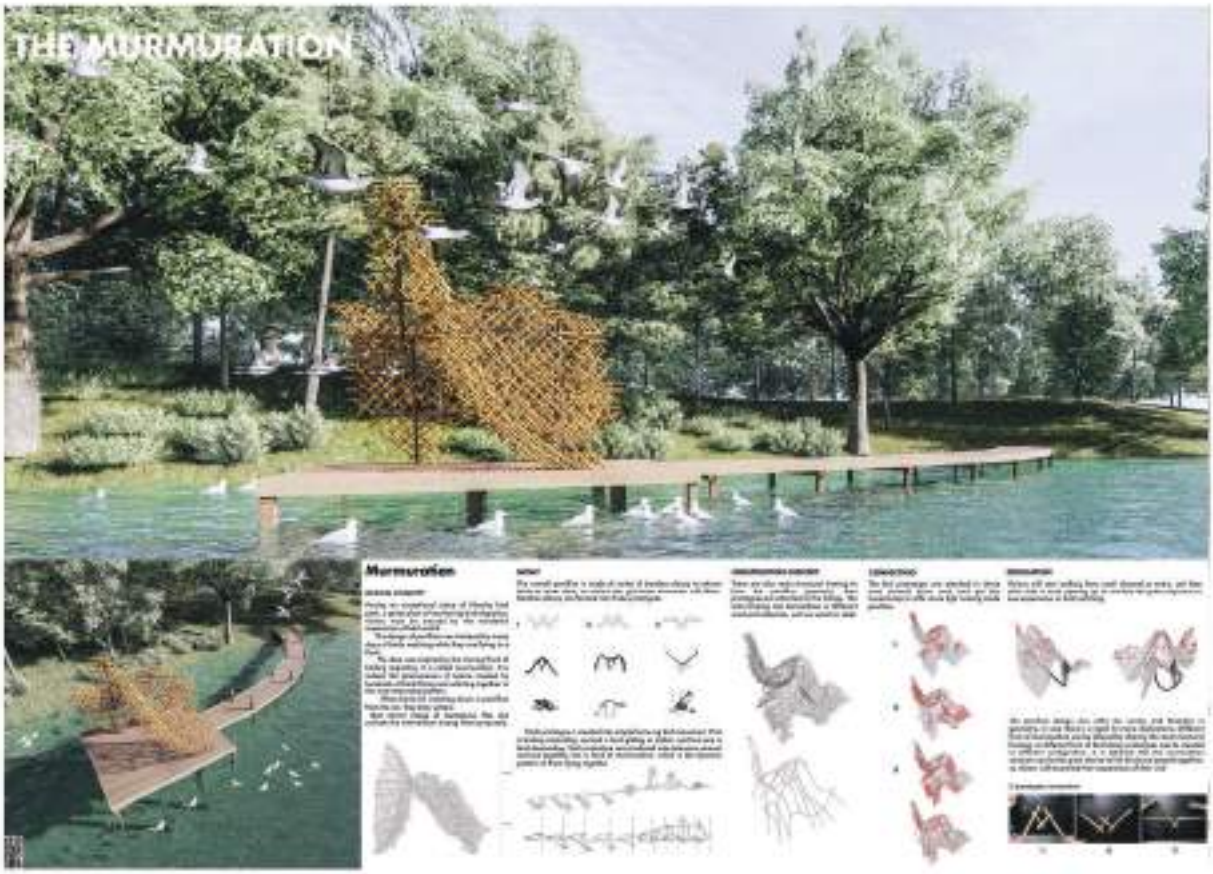


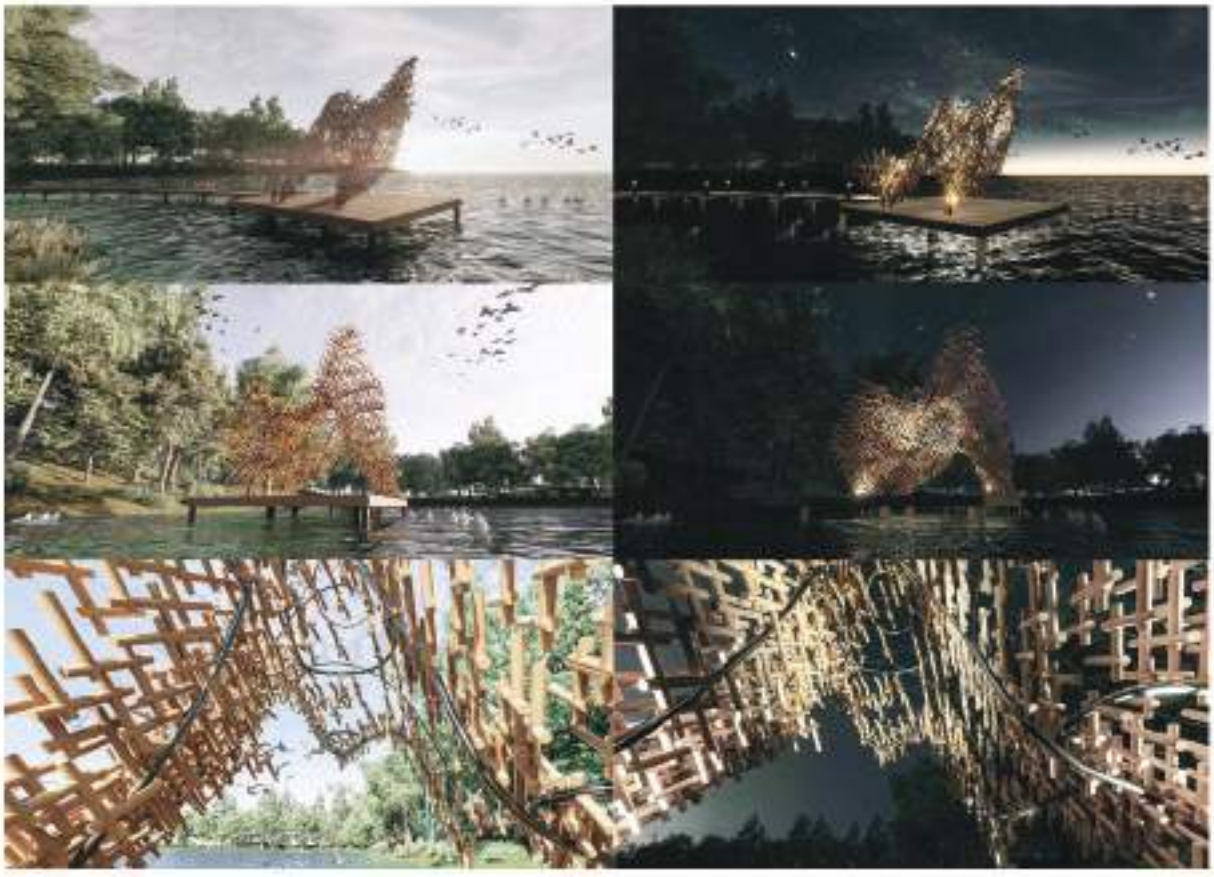
SKETCH





BAMBOO COMPETITION 2020





CEVIC CENTER COMPETITION 2021

ASDA COMPETITION 2022

ARCHITECTURAL INTERN

Element Of Design Co., Ltd.
May 2021 - July 2021 (2 Months)

Astroberry's Office Renovation

Designers (2) :
Napas Wansophark /Poomchart Janmeka
Project Involvement : engaging in actual construction activities, interacting with contractors, to review and oversee construction work, renovations, design specifications, and to communicate with contractors, as well as to compile post-renovation assessments.



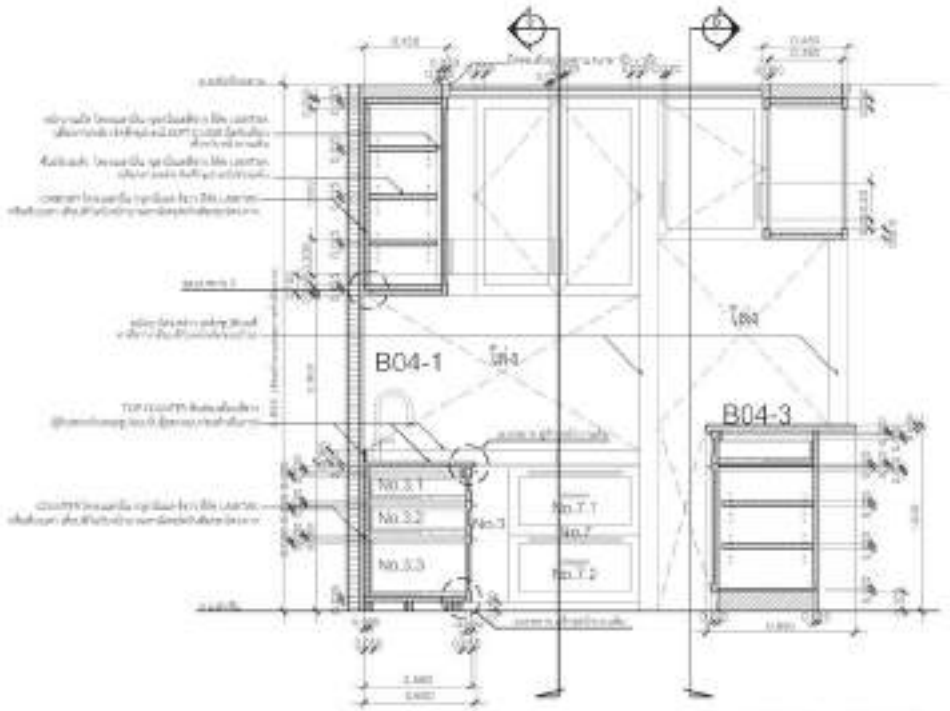




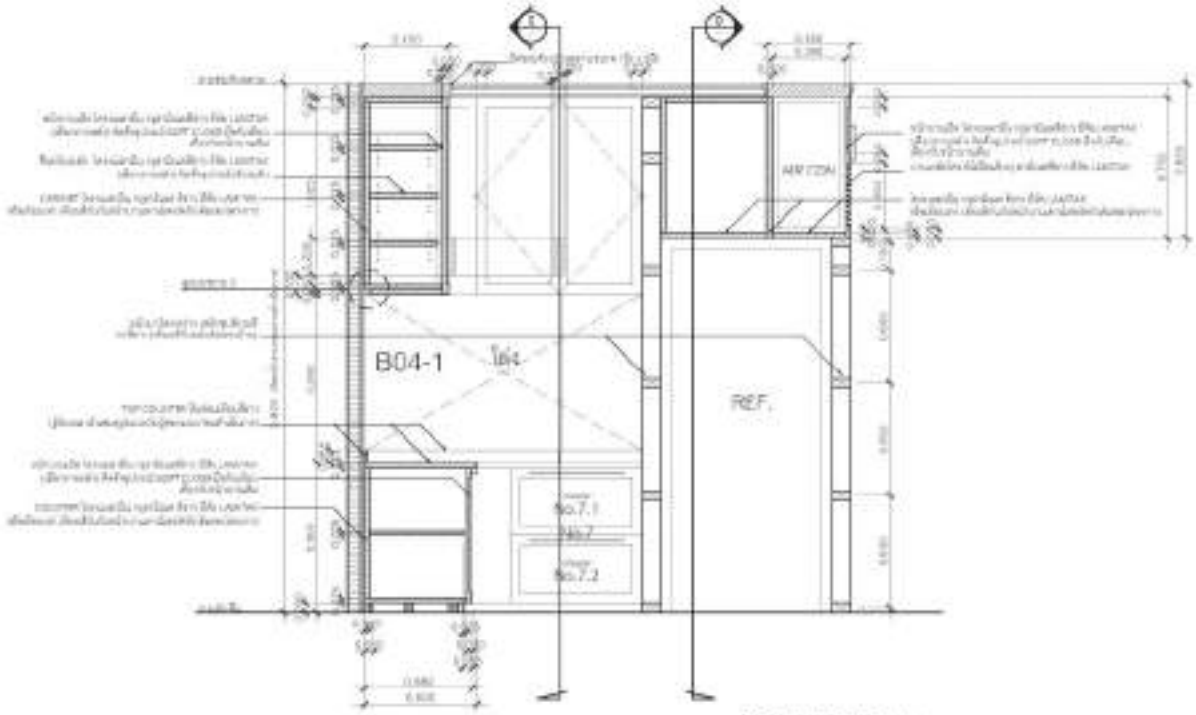
Drone Storage : Air-force base

Designers (2) :
Napas Wansophark /Poomchart Janmeka
Project Involvement : Conducting schematic design, creating 3D models, and rendering model simulations.

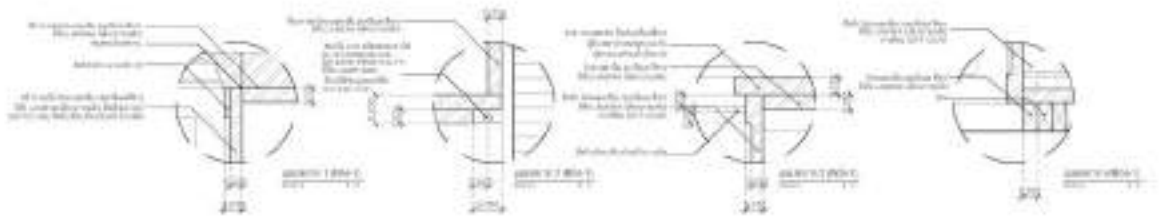
Lard-Pao House Furniture detailing



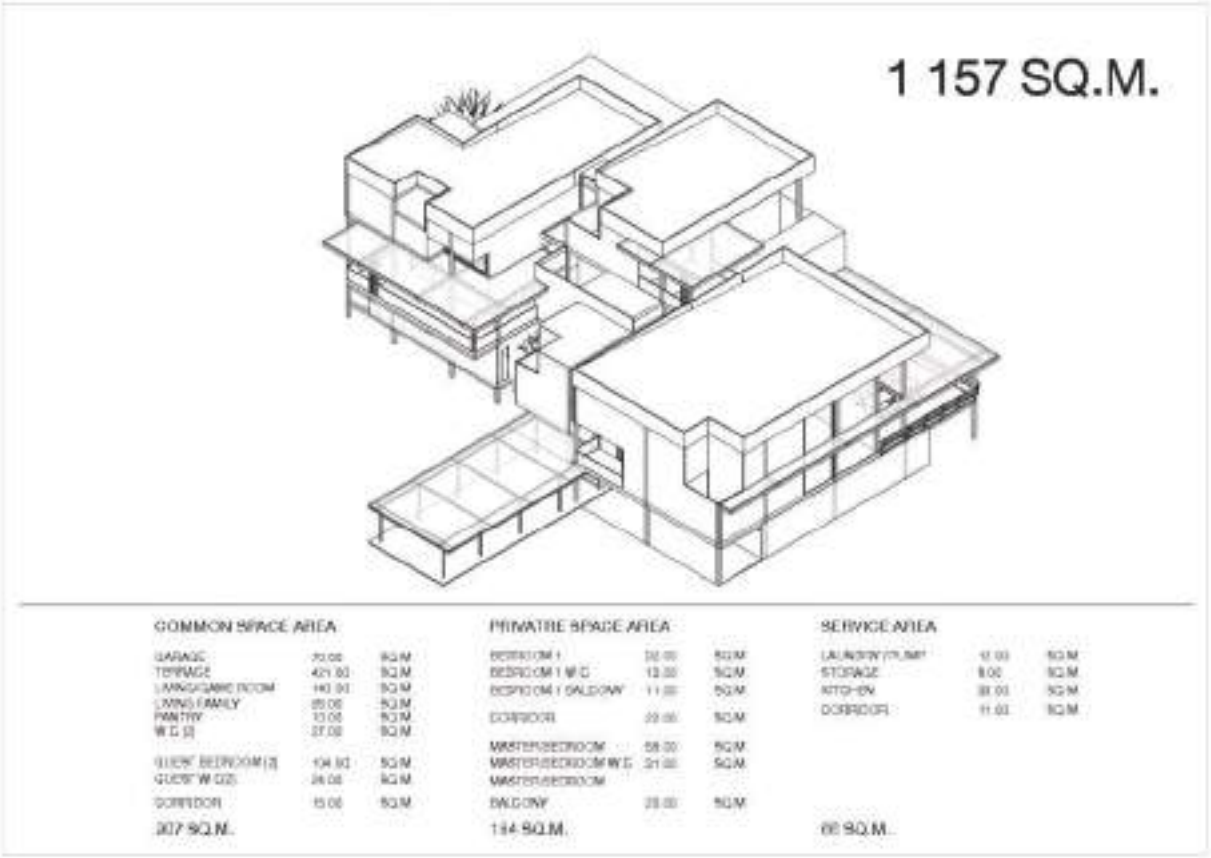
SECTION A (B04-1)
SCALE 1 : 20



SECTION F (B04-1)
SCALE 1 : 20



Baan Khao-Yai Schematic Design



Bangkok-nont. 44 Home Renovation

Designers (2) :
Napas Wansophark /Poomchart Janmeka
Project Involvement : Conducting schematic design, creating 3D models, and rendering model simulations.

Clubhouse 3D modeling & Rendering

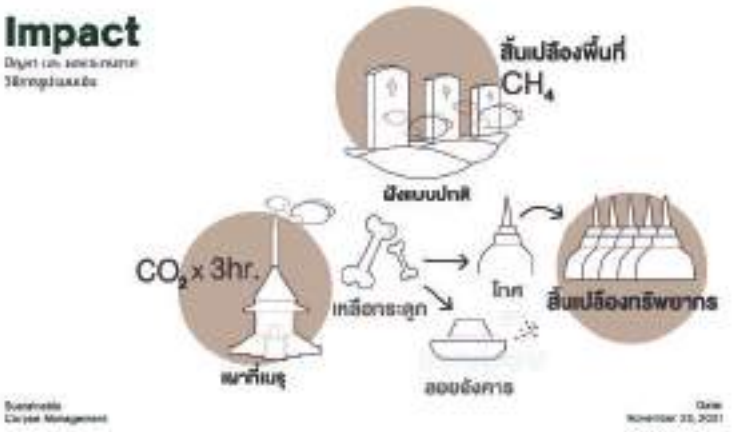
Designers (2) :
Napas Wansophark /Poomchart Janmeka
Project Involvement : Creating three-dimensional models and rendering.

Meditation Center

Designers (2) :
Napas Wansophark /Poomchart Janmeka
Project Involvement : Conducting schematic design, creating 3D models with rendering model simulations and construction drawing.

Sustainable Corpse Management

Group members : Napas Wansophark/Patipan Paparesasmee/Surirak Settachairi/Napatsorn Meekunthong/Tasith Javisooth
Academic Year : 2021
Skill : Research/ Design & Collaboration
2D Drawing : AutoCAD
3D Modeling : SketchUp
Rendering : Lumion
Graphic & Post Production : Adobe Photoshop and Adobe Illustrator



The course AR611 is a research-oriented course for the first design project at the master's level, and it is conducted in groups. Each group is required to incorporate three essential components into their research: sustainability, the current context, and architecture. These three components are mandatory in every group's research. In our group, we identified the issue of managing human remains, especially with traditional burial practices that do not contribute to sustainability and have adverse effects on urban areas already facing increasing congestion. We studied and explored alternative methods of managing human remains, although we encountered challenges in terms of energy consumption, which wasn't entirely sustainable. As a result, our design group conducted experiments with natural decomposition, concluding that EM (Effective Microorganisms) was the most efficient way to facilitate natural decomposition. Furthermore, we proposed a new concept rooted in spiritual rejuvenation by returning human remains to nature, particularly trees. This concept aims to revive spirits by returning to nature (trees) and providing a sustainable source of nutrients for their growth from the decomposed bodily substances.

CONCEPT COLLAGE **01**

CONCEPT COLLAGE **02**

CONCEPT COLLAGE **03**

Seminar Organizing

Group members : All in the class
Academic Year : 2021
Involvement : Graphic Design, Research and Questioning

Guest

In the event

Real-estate Marketing

Group members : Napas Wansophark/Patipan Paparrsasmee/Sirirak Settachaisri/Napatsorn Meekunthong/
Academic Year : 2021
Skill : Real-Estate (Condominium Development), Real-Estate Marketion and Branding

Studying at the master's level, in the real estate marketing course, involves learning about marketing and branding for condominium properties. Designers are required to conduct case studies of real estate development companies, such as Supalai, to understand their branding strategies aimed at attracting customers from different generations. The work is carried out in groups of five people. After completing the case study, the groups are given a project area near the ARL (Airport Rail Link) station for designing a project based on the knowledge gained from the case study. The challenge for the groups is to create a brand for their project, focusing on a unique selling point that may not necessarily be the project's primary feature but rather something similar to the living space that allows for personal gardening.

Special Topic In Architecture

Napas Wansophark / Academic Year : 2021

Skill : Proficiency in using Photogrammetry techniques to capture objects and convert them into point clouds. Subsequently, importing these into the MAYA software to transform them into various shapes and utilizing Unity 3D for creating interactive models that users can engage with through VR devices, all achieved through coding.

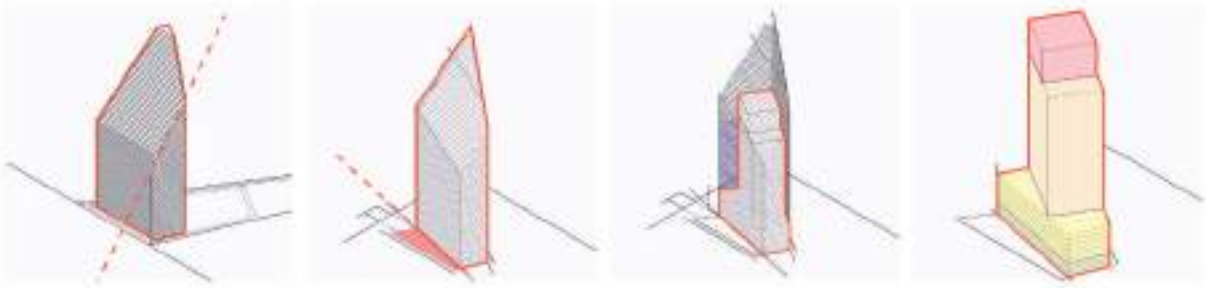
In the course "Special Topics in Architecture," especially during this semester, the trend of Metaverse has been gaining momentum. This has led the instructors to merge the existing curriculum, which focuses on learning the Photogrammetry technique to create models and transform them into various forms, with techniques for creating interactive models that users can engage with using Unity 3D, primarily for designing immersive experiences through VR devices. In this context, the designer employed the Photogrammetry technique on old buildings and objects (sewing machines) to design spaces that evoke feelings of fear, akin to a nightmare. This involved studying the components that induce fear and transforming the models accordingly. Furthermore, the interior was organized, and furniture was placed in alignment with the studied space.

Sustainable Office

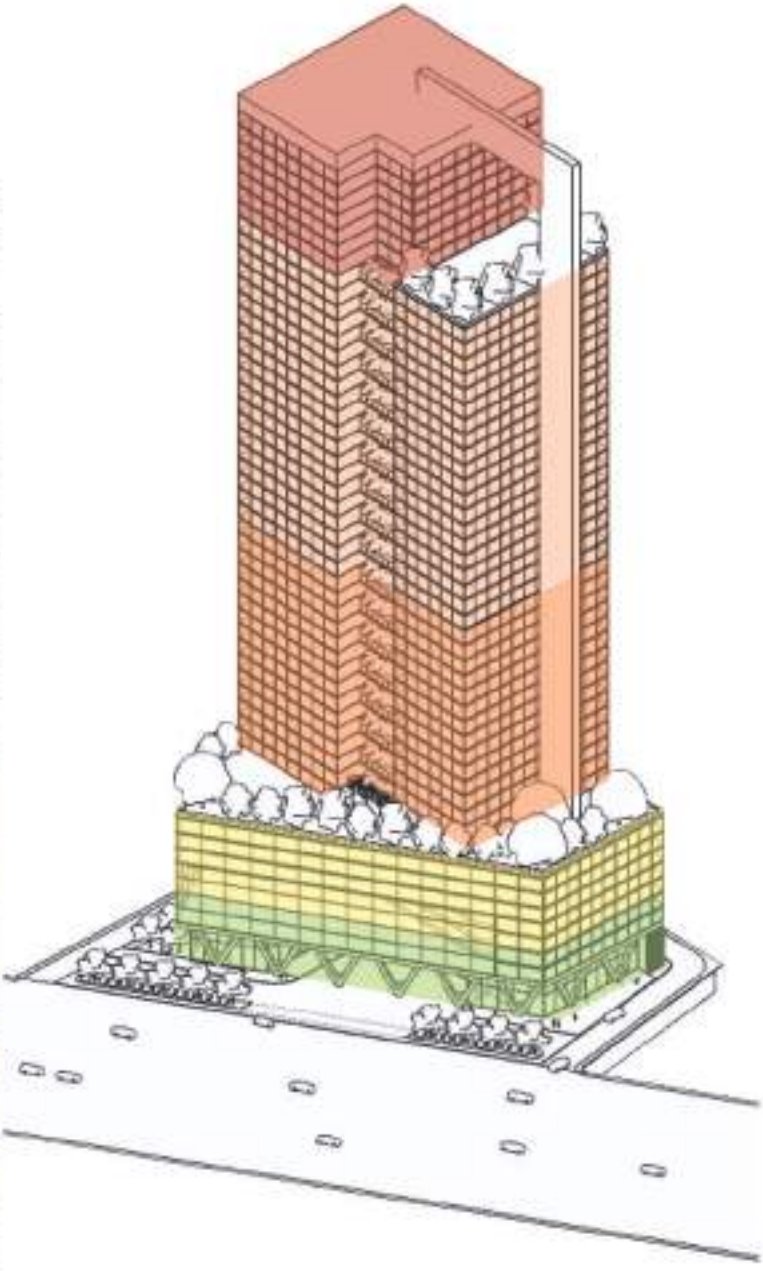
Group members : Napas Wansophark/Patipan Paparrsasmee/Sirirak Settachaisri/Napatsorn Meekunthong/Kotchakorn Seedown/Tanyarak Iampittayarat

Academic Year : 2022

Skill : Business Development in real-estate, Land acquisition, Feasibility Study and Desiging to accommodate LEED standard



This course involves working in groups, with each group typically consisting of 6-7 students. Each group is required to select a design program and a thematic direction for project development. Before commencing the project, the group conducts a case study on office buildings in Thailand that are both Grade A and LEED-certified. In this project development process, the chosen site will be used to simulate a real estate transaction at a price conducive to further study. The group has selected the Bangna area for development, which is a residential hub with a growth potential spreading from suburban to downtown areas. The ideal development for this project is envisioned as a mixed-use type, primarily incorporating office spaces and retail components.



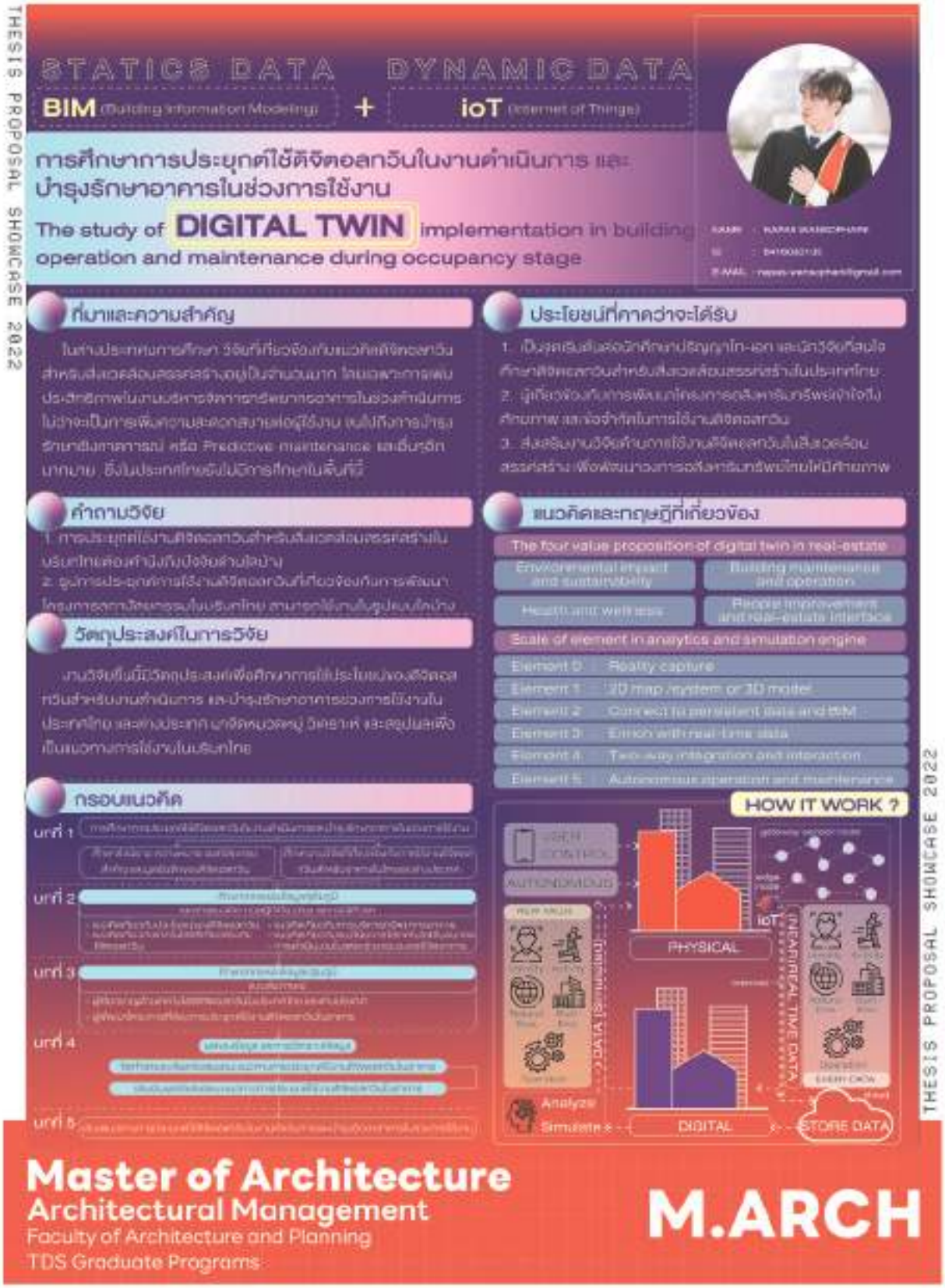
THESIS

FACTORS INFLUENCING THE ADOPTION OF DIGITAL TWIN FOR BUILDING OPERATION AND MAINTENANCE DURING

Author : Napas Wansophark
Degree : Master of Architecture
Major Field/Faculty/University : Architecture and Planning
Thammasat University
Thesis Advisor : Associate Professor Chaiwat Riratanaphong, Ph.D.
Academic Year : 2022

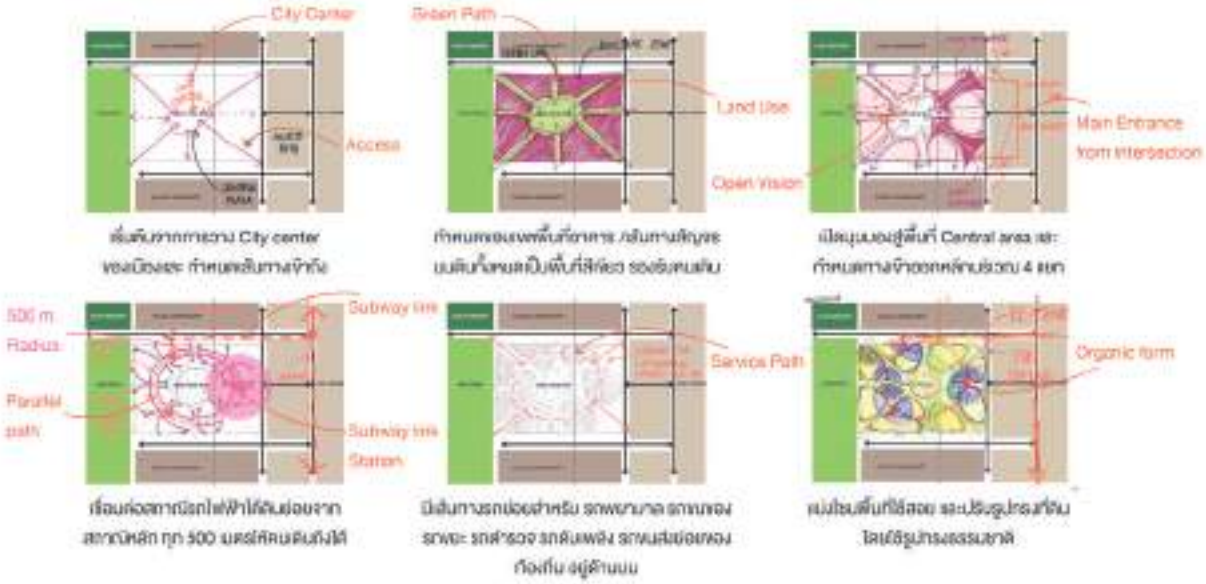
Abstract

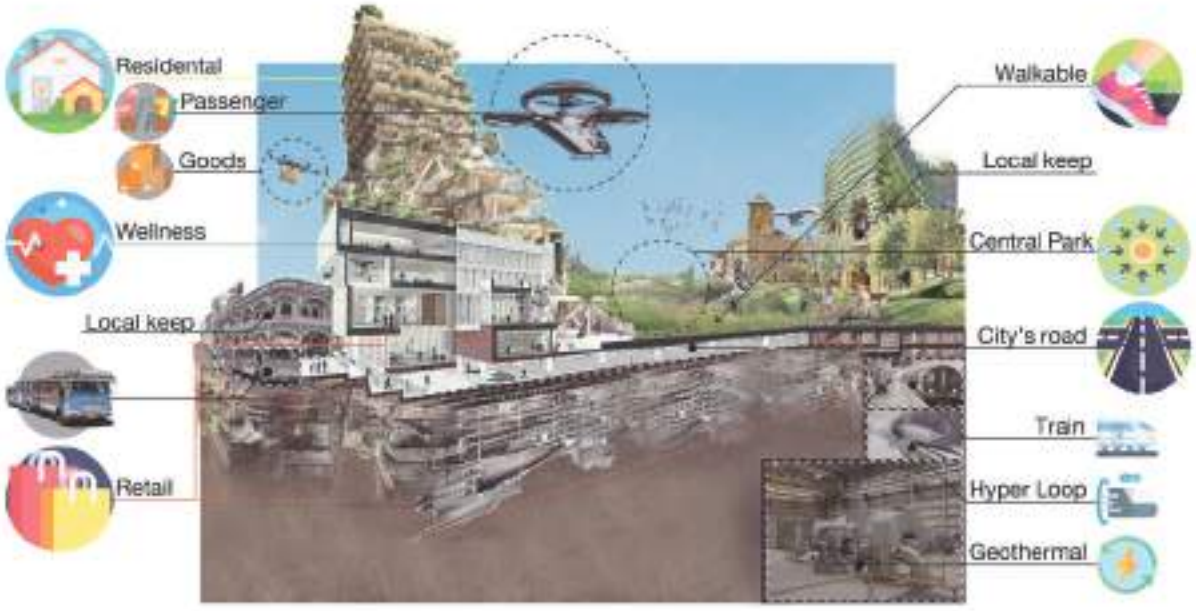
The application and research on the utilization of digital twin technology for the design and construction industry have been extensively explored in various countries. However, the majority of research primarily focuses on investigating specific aspects of the technology's benefits in different domains. Moreover, there is a dearth of studies concerning the physical resource management aspect, and no such research has been found in Thailand. The objective of this research is to examine the key factors that motivate building operators in Thailand to consider incorporating digital twins into their operational and maintenance practices. By systematically gathering scholarly articles from the Scopus database using the search term "Digital Twin Building," the study investigates the benefits to be gained and the overall utilization of digital twins. The findings indicate a total of 1,256 relevant research works, out of which 106 studies pertain specifically to operations and maintenance at the building level. These studies are thoroughly reviewed and synthesized, resulting in six distinct areas of summarization, including identified challenges, research methodologies, utilized variables, outcomes, benefits, and the corresponding areas where benefits are derived. Subsequently, the outcomes are further scrutinized through discussions with digital twin experts and professionals closely associated with building management. The analysis concludes that two primary factors contribute to the interest of building operators in Thailand regarding the adoption of digital twins for operational and maintenance practices. These factors encompass external aspects beyond organizational control, as well as internal factors that can be controlled, with a particular emphasis on clearly defined objectives for utilization and the selection of appropriate digital twin components, along with necessary data standards essential for supporting ongoing operational and maintenance tasks, despite prevailing limitations. The wide-scale implementation of digital twins is anticipated to occur when triggered by external factors, such as government policies that provide support, as well as tangible benefits that can be discerned through case studies. The findings of this research lay the foundation for future explorations, particularly regarding the establishment of data standards to be utilized in digital twins for facilitating operational and maintenance activities, as well as fostering knowledge and understanding among building operators and relevant stakeholders. This aims to enhance the efficacy of future operational and maintenance endeavors through the integration of digital twin technologies.


THESIS PROPOSAL SHOWCASE 2022
STATICS DATA
BIM (Building Information Modeling)
+
DYNAMIC DATA
IoT (Internet of Things)
การศึกษาการประยุกต์ใช้ดิจิตอลทวินในงานดำเนินการ และบำรุงรักษาอาคารในช่วงการใช้งาน
The study of DIGITAL TWIN implementation in building operation and maintenance during occupancy stage
ที่มาและความสำคัญ
ประโยชน์ที่คาดว่าจะได้รับ
คำถามวิจัย
แนวคิดและทฤษฎีที่เกี่ยวข้อง
The four value proposition of digital twin in real-estate
Environmental impact and sustainability
Building maintenance and operation
Health and wellness
People improvement and real-estate interface
Scale of element in analytics and simulation engine
Element 0 Reality capture
Element 1 2D map /system or 3D model
Element 2 Connect to persistent data and BIM
Element 3 Editor with real-time data
Element 4 Two-way integration and interaction
Element 5 Autonomous operation and maintenance
วัตถุประสงค์ในการวิจัย
กรอบแนวคิด
บทที่ 1
บทที่ 2
บทที่ 3
บทที่ 4
บทที่ 5
HOW IT WORK ?
PHYSICAL
DIGITAL
IoT
Analyze
Simulate
STORE DATA
Master of Architecture
Architectural Management
Faculty of Architecture and Planning
TDS Graduate Programs
M.ARCH
THESIS PROPOSAL SHOWCASE 2022

ARCHITECTURAL INTERNSHIP 2022

Project-South Phuket





EEC Development - Chachoengsao

KEY POINT : ผู้คนจะออกมาข้างนอก ใช้พื้นที่สาธารณะมากขึ้น ได้พบปะผู้คน และกระตุ้นการใช้จ่าย