PT. Omah Architecture's Strategy to Achieve Ideal Design

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ABSTRACT
To be able to compete successfully with other competitors, an interior architecture design company should have its own strategies. PT. Omah Architecture, as one of the interior architecture design companies, focuses on modern tropical design concepts and using technology during the design process as their strategies. These strategies are applied in the design process to achieve the ideal design, that can anticipate the climate well, meet the needs and desires of clients, and have their own uniqueness. This paper will discuss how the strategies play a role and applied in the design process of PT. Omah Architecture and the process itself until the ideal design is achieved. The analysis was carried out through a qualitative research method, ethnography, in which the data were collected by interviewing principal and workers of PT. Omah Architecture, as well as having semi-structured interviews with informants to obtain in-depth data while keeping the topic on track. This research also uses a case study method that focuses on the design process of one of the PT. Omah Architecture projects. For data acquisition, researcher undertook a 10-month internship and conducted field research.

Keywords: Strategies, Design Process, Modern Tropical, Technology

INTRODUCTION
As time went on, architectural and interior design services are increasingly recognized by the public. Public demand growth for architectural and interior design services has led to the increasing number of architectural and interior design companies from time to time. With the large number of architectural and interior design companies, each company must have its own strategy to be able to compete.

PT Omah Architecture or commonly known as 2M Design Lab is an interior architecture company that was established since 2018, has two main strategies: 1) PT. Omah Architecture focuses on modern tropical design concepts to respond to site conditions (anticipating climate change and construction issues). The tropical design style is also lifted from the area where PT. Omah Architecture itself is Bali,

with its tropical climate. Meanwhile, modernism is lifted from the background of the principal who comes from Italy so that it brings a modern design style, 2) The use of technology as a means of communication and design coordination in the design process. In supporting design communication and coordination with clients, internal design teams, and other stakeholders, the use of technology plays an important role. Technologies such as computing systems, 3D printing, and the use of drones play an important role. Apart from that, the use of VR (Virtual Reality) also plays a big role, VR presents new experiences for users to be able to experience space through more realistic design visualizations. This will make it easier for clients and parties concerned to understand and take part in the design process of a project, so that communication and design coordination run more smoothly.

With the application of modern tropical style, good communication and coordination, the company will produce an ideal design, design that can anticipate the climate well, meet the needs and desires of clients, and have their own uniqueness. Therefore, this paper research question is how the two strategies of PT.Omah Architecture can play a role and applied in the design process, hence, PT. Omah Architecture can achieved ideal design, by knowing the advantages obtained from implementing this strategy.

LITERATURE REVIEW

According to Siagian (1995) strategy is a series of basic decisions and actions made by top management and implemented by all levels of an organization in order to achieve the goals of the organization. According to the business dictionary, strategy is a method or plan chosen to bring about a desired future, such as achieving a goal or a solution to a problem. According to Glueck and Jauch (1989) strategy is a unified, broad and integrated plan that links the company's strategic advantage with environmental challenges, designed to ensure that the main goals of the company can be achieved through proper implementation by the organization. Based on some of the definitions of strategy above, it can be said that strategy is a series of decisions and actions, as well as plans made and implemented by an organization to achieve goals and solve existing problems. Thus, as written in the introduction, PT. Omah Architecture has a strategy of implementing Tropical Modern Architecture and using technology in its design process.

Tropical Modern Architecture is architecture that: [1] Considers a tropical climate, high rainfall, high solar radiation, high air temperature, high humidity, and relatively low wind speed (Jamila, 2020). [2] Have many openings, easily lit by natural light throughout the day that enters through wide door openings, have light ventilation windows around the building, skylights, and other openings. [3] Considering building orientation, building orientation influences user comfort with the sun's path (Tyas et.al., 2015). [4] Provide green open space. Green open spaces are needed in the tropics as an effort to reduce the temperature around buildings and reduce noise levels from the streets and as air absorption during the rainy season (Babo et. al., 2017). [5] Paying attention to the use of materials that are resistant to tropical climate conditions, able to show the characteristics of local materials

(tropical areas) that are more suitable and environmentally friendly (Jamila, 2020). [6] Protection from excess sun and heavy rain, by using a secondary skin and overhang. The overhang needed for tropical buildings is the one that has a surface that is wide enough to be able to control the angle of sunlight and prevent raindrops from directly entering the room which can cause damage to objects in the room. [7] The use of a flat roof, this will be one of the highlights to bring out modernism in the design.

Currently technology is very helpful in the design process, VR plays an important role in it. Compared with traditional communication methods, VR-based environments can support synchronous communication with shared 3D visualization of information, which reduces coordination latency and avoids misunderstanding caused by different interpretations of 2-dimensional (2D) documents made by different stakeholders (Carlsson and Hagsand, 1993; Kalay, 2004). VR also used for: [A] Increase the value of company services. [B] Help communication in the design stages. [C] Preview of finishing application in the design. [D] As coordination through the model. [E] Previewing users' line of sight. On the other hand, computer's abilities such as interlinking, managing information, visualizing, and connecting data, also help with the process design.

These strategies will be examined through the design process run by PT. Omah Architecture to know how the strategies applied and have a role so that the ideal design can be achieved. Furthermore, knowing the advantages obtained by implementing it in the design process.

METHODOLOGY

This research used ethnographic methods with taking field notes as tools (Geertz, 1973) to understand, research, and interpreting PT. Omah Architecture's work culture and design processes.

The researcher's field notes were a collection of 10-months data with detailed description on both PT Omah Architecture's work culture and design process. The data then analyzed using intrinsic case study method, focusing on one of the PT Omah Architecture's projects: SEVVA Villa, Bali. A case study is a research design that can be used to track the events in question and base itself on the same techniques as are commonplace by adding two sources of evidence, namely observation and systematic interviews (Yin, 2014).

RESULT & DISCUSSION

A. Analysis of the Application of Tropical Modern Architectural Design in the SEVVA Project Design Process

Tropical architecture is very connected with the surrounding environment, so site analysis is very crucial in the design process to achieve good tropical modern architecture. From the results of site analysis on the SEVVA project, the results of solar movement and wind movement are as follows:

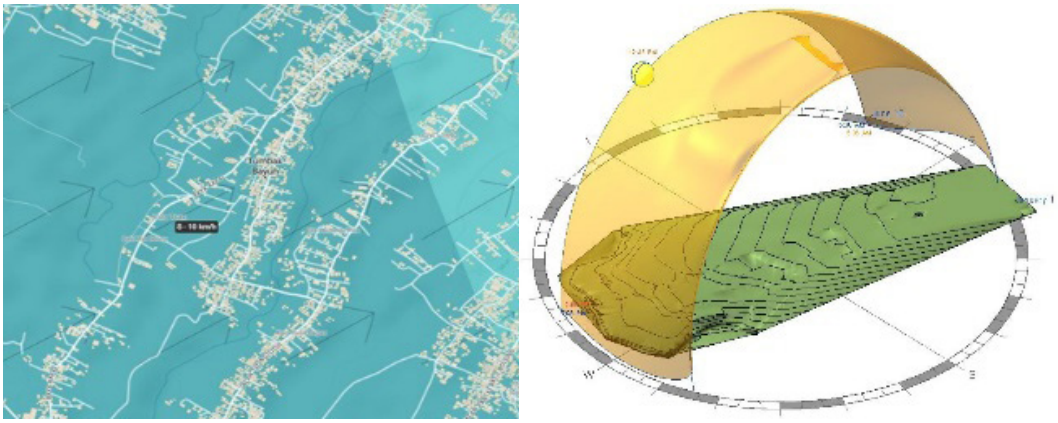

Image 1 Solar and Wind Analysis: SEVVA. (Source: Omah Architecture, 2022)

From the site analysis results, the design team decided to place the building facing west. This is done to maximize natural ventilation with cross ventilation, by adjusting the wind movement at the location, from the Southwest to the Northeast. Facing west means that the room also faces a view of the rice fields, accompanied by a sunset view in the afternoon. The researcher considers that the placement of the building chosen by the design team of PT.Omah Architecture has made maximum use of the potential of the project location in accordance with tropical architectural considerations. This is indicated by the placement of buildings that maximize the use of natural light and ventilation. The building also faces the view so that users can enjoy the view from every room and supports the impression of being one with nature. However, because the building and space face west, the design team had to be able to anticipate excessive heat and sunlight coming in at any given time. As stated by Tyas et.al. (2015) that the west direction as the direction of the sunset emits maximum heat between one in the afternoon and three in the afternoon. The sun produces radiation that affects buildings. The heat and glare can also be annoying to users.

The concept design stage begins with massing, the concept mood board, and determining the main material. The tropical architecture uses materials that are resistant to tropical climate conditions, as well as materials that can show the characteristics of local materials (the tropics) that are more suitable and environmentally friendly (Jamila, 2020). The researcher observes that the selection of *ulin* wood with the above-mentioned considerations was chosen according to the material criteria used in tropical architecture. In tropical climates, certain times allow the entry of excess sunlight into the room. So, the use of materials with good heat absorption has a pretty good effect on buildings. The use of rough-textured dark colors helps reduce sunlight (Tyas et.al. (2015). Based on this theory to be a solution to excess solar heat, the researcher examines that choosing limestone as one of the main materials is the right thing to do to anticipate excess heat in tropical climate buildings. In the rooms with wide openings and a bed facing the opening will have excess sunlight at certain times, so the walls used as backdrops for the bed are applied with natural limestone material which has a rough texture.

In schematic design, the researchers conclude that the spatial design, selection, and placement of materials in space are made based on anticipation considerations for the tropical climate. The design is designed to be a solution to the deficiencies of other aspects of the entire design process, such as choosing limestone material as a backdrop against the sun's rays. Designs that meet the criteria of good tropical architecture can be achieved by continuously considering the criteria of tropical architecture at each stage, as well as reviewing the previous steps to ensure the relationship between the concept and the design, and what client wants.

The modern style applied to areas with tropical climates is different from the modern style applied to other architectures. Modern styles in tropical climates cannot be applied without considering high rainfall, hot sun, and other things that are different than only tropical climates have. Designers must see where modern and tropical styles similarities have so that they can support each other in their designs. Not only that, but designers also must see where modern and tropical styles conflict with each other so that adjustments must be made in their application. One of them is how, with a minimalist modern style, buildings and spaces can be more easily designed to blend with nature. Hart (2015) stated regarding modern style in tropical areas: *"Modernism is about being minimal, and in a land where nature is the dominant feature, a house that stands in contrast to nature seems out of character. Designing to be subservient to nature – incorporating and integrating it – makes for a more harmonious dwelling".*

As discussed above, the researcher considers that the overhang design with the material, as well as the large glass sliding door design are used to display a modern style in the building. This was applied by the design team because it can support a modern style while anticipating a tropical climate. The flat roof design can be applied with adjustments so that the building remains in accordance with the provisions of tropical architecture. Based on this, it can be seen that the PT.Omah Architecture team applies a modern style while still considering the criteria of modern tropical architecture in order to anticipate a tropical climate. When applied with careful consideration, modern style can help designs achieve an ideal design by bringing a new touch to tropical architecture and supporting buildings and spaces to blend with nature with their minimalist aspects.

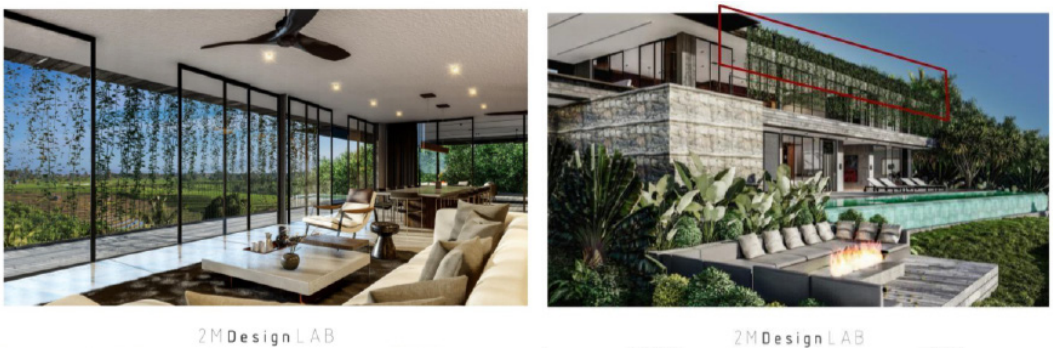

Image 2 Application of Tropical Modern Architecture: SEVVA.
(Source: Omah Architecture, 2022)

B. Analysis of the Role of Technology as a Coordination and Communication Tool in the SEVVA Project Design Process

In the client meeting process, the principal explained to the client an outline of how the design process would be carried out at PT. Omah Architecture. The principal would introduce the design team and explain the technology tools used, and how these tools will play a role in the design process stages. Based on the client's feedback and what was done in the PT. Omah Architecture office, the researcher believes that the introduction of how technology will be used and plays a role in the design process of PT. Omah Architecture, has a positive impact on clients. Clients become more enthusiastic and know that they themselves will take part and play an active role in the design process that will be carried out with the support of existing technology. With this the client will be more open to conveying what they want and need and have more trust in the design team of PT.Omah Architecture. These facilitate the flow of communication between the client and the design team during the design process so that what is ideal in design and what the client wants can be achieved.

In the site analysis, the drone helps communication between the client and the designer team by displaying images that can be viewed together on the screen. This will reduce the occurrence of miscommunication that occurs when both parties express their respective opinions. The researcher believes that with drones the client can better understand how the design team plans from the initial stage. This can be seen from how the client can participate in discussions and provide opinions during a visit to the project site. That way, the client's input and opinions are obtained at an early stage so that the design process can run better in the following stages. The researcher also observes that the use of drones in the site analysis process allows the design team to maximize the potential of the existing site. Drones act as a tool to collect more relevant data. Drones help minimize the occurrence of human negligence in considering location conditions. With this, the design team can make designs with more precise consideration of project site conditions and maximize the use of the existing site based on drone capture images.

The schematic design stage is the stage where the designer explains and expresses to the client what the design plans and solutions look like in the future (Coleman, 2001). By using VR clients can better understand space and distance through VR fictional space. Designers can explain more clearly with the help of VR. In addition, VR helps achieve the objectives of the schematic design stage by giving the client the opportunity to understand more about the space design and feel the overall atmosphere of the room, including natural lighting simulation and artificial which has also been displayed in a 3D model. This helps achieve the ideal design according to the client's wishes by giving the client the opportunity to experience the entire design of the space in the process, as well as minimizing the misunderstandings that occur which can cause the client to doubt the design team.

In the concept design process, after completing the massing and placing openings in the building, the design team used VR to be able to re-check whether the space

placement and mass fabrication had been properly designed to get views and maximum spatial arrangement. Principals use VR to review designs that have been made by the design team, provide input, and discuss while doing VR. The design team can review how to design the massing and position of the openings against the existing conditions from various sides so that the design can be developed optimally. At the concept design stage, with VR other stakeholders can understand the design being discussed earlier, with this the design team, clients and other stakeholders can be in the same line of thought so that miscommunication can be minimized. Other stakeholders can design designs based on their respective roles with clearer and more aligned goals after understanding space and buildings in 3 dimensions. This is supported by the statement of Carlsson and Hagsand (1993): *"Compared with traditional communication methods, VR-based environments can support synchronous communication with shared 3D visualization of information, which reduces coordination latency and avoids misunderstandings caused by different interpretations of 2-dimensional (2D) documents made by different stakeholders."*

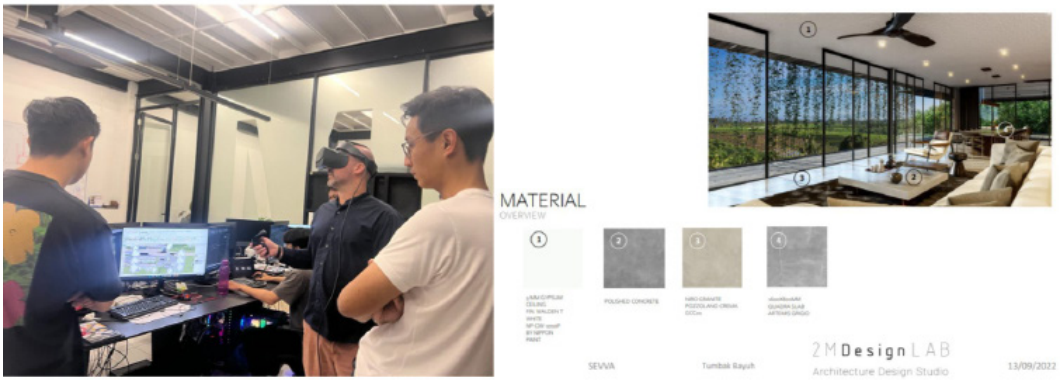

Image 2 Use of Technology: SEVVA (Source: Omah Architecture, 2022)

In the SEVVA project, because there were many interior details and decorations that had to be designed and determined for placement with the decorator, the interior work took quite a long time. The interior designer works with 3D artists and the update is sent to the decorator for feedback. However, because this process took too long and there was often miscommunication, it was decided for the internal design team, specifically the interior designer and 3D artist to work with the decorator, sit down and discuss together while directly changing materials and 3D models to achieve the higher design standards and rendering quality. In this process, material details, textures, furniture details, and decorations are truly realized to simplify the subsequent design process. Interior designers, decorators and decorators sit together to change designs and render images using the D5 render program. With this program rendering images can adjust the 3D model designed together. As stated by Kalay (2004) computing technology could link information so that when one representation is modified, the other will also be modified.

C. PT. Omah Architecture Strategies in Achieving an Ideal Design Application of Tropical Modern Architecture

Based on the researcher's analysis of the application of tropical modern architecture

to the design process of the SEVVA project case study, the application of tropical modern architecture to the project not only plays a role in anticipating the tropical climate of the location, but also fulfills the client's needs and desires and gives uniqueness to each project. Through the following table of analysis results (Table 1) it can be seen how the application of architectural concepts in each stage of the design process can guide the project to achieve ideal design result.

Table 1. Table of Analysis Results of the Application of Modern Tropical Architecture in the SEVVA Project. (Source: Personal Documentation, 2022)

Case Study SEVVA Project	Design Process				
	Client Meeting	Site analysis	Concept Design	Schematic Design	Design Development
Application of Tropical Modern Architecture		-There is a compromise between the client's needs and climate anticipation, such as the position of the view against the direction of the wind and the sun. --Problems in anticipating climate that have not been resolved must be resolved for further design processing.	-With consideration of site analysis, drafting and placement of building masses made according to requests from clients. -Solving existing problems with solutions that are in harmony with the concept of tropical modern architecture. Determine together the interior design concept based on the wishes of the client.	Develop designs by: -considering the climate, - Tropical modern style -the concept of "wabi sabi" which is appointed based on the wishes of the client.	

Based on the results of the analysis it can be seen that:

1. The application of a modern tropical architectural style is considered and re-checked throughout the design process, reviewing what must be compromised between prioritizing client needs and climate anticipation.
2. The modern tropical architectural style application is flexible when combined with the style desired by the client, taking harmonized values between them to the design and making the different values into accent elements. This

gives its own color to each existing project.

3. Application of modern tropical architectural style in the design of PT. Omah requires that interior development and architecture cannot be separated.

Use of Technology in the SEVVA Project Design Process

Based on the results of the analysis, the researchers found that technology played a major role in helping the design process of PT. Omah Architecture is the use of drones and Virtual Reality.

The researcher concludes that the use of this technology not only plays a role in supporting the communication and coordination of the design process, but also helps clients, design teams, and other stakeholders to be able to see more broadly about opportunities that exist and review designs with more precision so as to maximize design potential. Through the following table of analysis results (Table 2) it can be seen the role of the use of technology for clients, the internal design team, and other stakeholders at each stage of the design process.

Table 2. Table of Analysis Results of Technology Use in the SEVVA Project (Source: Personal Documentation, 2022)

Use of Technology in the SEVVA Project Design Process					
Case Study SEVVA Project	**Design Process**				
	Client Meeting	**Site analysis**	**Concept Design**	**Schematic Design**	**Design Development**
For Clients	Building **client awareness of the potential** offered by PT. Omah, thus increasing the client's confidence and trust in the team.	-drone builds the client's understanding of the potential of the site by looking more realistically and in full on the captured images.	-Clients can get spatial experience as well as understand the design. 3-dimensional space helps clients visualize designs more precisely and clearly, clients can express their wants in the early stages of design.	-Through spatial experience, VR helps clients to be aware of their desires and ensure whether the design fits their wants. -Using VR makes clients understand the real proportions of space, thereby minimizing and correcting misunderstandings that occur when clients only see two-dimensional images.	

For Internal Design Team		-drones play a role in showing more complete and relevant data, for the purposes of site analysis. This helps the design team to better realize the potential of the site and maximize design outcomes. - By having better awareness of existing site conditions, the use of technology also conveys the team's concern for the environment by helping the team to design spaces that respond to natural environmental conditions and reduce negative impacts to the environment (by making use of existing trees/green land). -It is also beneficial to maintain soil stability on site.	-Technology helps the design team to unify views and ways of thinking, so the design team can review designs together more precisely and quickly. -Technology also helps the design team design a good design to anticipate the movement of the sun, by simulating the movement of sunlight.	-Technology assists the design team in reviewing designs before being delivered to clients so that the results of designs submitted to clients are maximized, by previewing the experience of space and space for movement. - Helping the internal design team with decorators to collaborate to ensure the design is according to common desire.	-Technology assists the design team in reviewing designs before being delivered to clients so that the results of designs submitted to clients are maximized, by previewing dimensions of the space and spatial experience.
For Other Stakeholders			-Technology helps other stakeholders to unify views and ways of thinking, understand the outline of the design in the early stages, so that they can continue their work according to the main concept	- Helping the internal design team with decorators to collaborate to ensure the design is according to the common desire.	

Based on the results of the analysis it can be seen that:

1. Technology (not limited but at least drones and VR) builds client awareness

of the design potential offered by PT. Omah, so as to generate client confidence and trust.
2. Technology (not limited but at least drones) builds awareness and understanding of everyone involved (clients, internal design team, and other stakeholders) about the existing project site conditions.
3. Technology (not limited but minimally drones) helps the internal design team to reduce the negative impact on the environment during the design development process.
4. Technology (not limited but minimally VR) builds awareness of client's wants through preview of spatial experience.
5. Technology (not limited but at least drones and VR) assists the internal design team in optimally reviewing the design, especially the space dimensions and overall spatial experience, so that the results obtained are neater and more accurate.
6. Technology (not limited but minimal VR and live software updates) helps the internal design team and other stakeholders (interior team and decorators) to find a midpoint between what is ideal in design terms and what the client wants.

CONCLUSION

These strategies should work together in the design process so that the ideal design will be achieved. In the end, it is not only that the ideal design is achieved, but also that the design process runs more effectively and efficiently by using technologies as a tool. Furthermore, the use of technology makes the process design run by PT. Omah Architecture become unique and different from other design firms.

The application of Modern Tropical Architecture, which is applied flexibly together with the application of what client wants, forms a distinctive style and design process that is unique to PT. Omah Architecture. This is a guarantee for the client that the designs produced by PT. Omah Architecture will be ideal for the tropics as well as realizing what each client wants. In addition, as discussed above, the use of technology in the design process of PT. Omah Architecture has a positive impact on clients, internal design teams and other stakeholders. The use of technology is something new that makes the design process carried out at PT. Omah Architecture is different from the design process carried out by other design consultants. The use of technology makes the design process carried out by PT. Omah Architecture is more effective and efficient by:

1. Streamlining the flow of communication and coordination in the design process.
2. Speeding up the work on any design developments and changes (3D models, construction drawings, estimated cost estimates, and others).
3. Provide more precise design considerations to the design team.
4. Enables more effective collaboration among design team members.

In addition, the use of technology increases the client's opportunity to take an active part in the design process. These things are an added value for PT. Omah

Architecture and appeal to potential clients. Overall, the use of technology plays an important role as a very important supporting tool in carrying out a good and smooth design process to achieve an ideal design.

Furthermore, from this conclusion, we can see that technology has become a really good partner for a designer to run the design process. There is much more potential for the use of technology in the field of interior architecture. However, keep in mind that technology is a tool and facility for designers. The main idea and results of a design can only be created by humans' (designers) ability to create a design from human minds that can connect daily life experiences with the needs or personal character of the client, producing designs with various stories and backgrounds. Technological capabilities that continue to develop from time to time provide alternatives and new potentials in the field of interior architecture. However, it takes the ability and skill of the designer to operate it. Hence, it would be nice if today's designers continue to learn and are open to new things, especially in the use of technology.

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