

November, the growth of Surabaya residents as many as 30,675 people who moved to Surabaya and 28,289 babies born in Surabaya. This makes people who move and live in Surabaya vary ethnically. Ethnic in Surabaya there are Malays, Chinese, Nusantara, Arab, India, East Asia, Europe, etc. However, racial, ethnic and religious conflicts occur very little. This makes Surabaya a dynamic and plural city.

With the rapid growth of the population and the relatively stable city, many people decided to live in Surabaya. This certainly makes them have to find a place to live. This is evidenced by the rapid property growth in Surabaya which is indicated by the increasing property prices. Recorded, property prices in Surabaya in the early trimester of 2013 increased by 12% compared to 2012. In addition, in 2013, construction sector growth reached 9.11% based on data from the Central Bureau of Statistics. Based on data from urbanindo.com, the most sought property in Surabaya is home. This is because the mindset of the people of Surabaya who prefer a house rather than an apartment. The development of existing property is influenced by the rapid economic growth in Surabaya. In fact, data from Jawa Pos stated that the projected economic growth in East Java reached 5.61% in 2016.

Surabaya as an international trading city of colonial and plural cities, makes Surabaya rich in art and culture, one of which is architecture. The architectural style is very diverse, there are art deco, *indische*, Chinese, eclectic, etc. Growth of art in Surabaya can also be felt up to now. The creative industry is very developed, ranging from culinary, fashion, crafts, furniture, to architecture and interior. Recorded, the creative industry contributes 7% of Surabaya Gross Regional Domestic Product or about Rp. 12.3 trillion. Many new cafes and restaurants whose buildings and interiors are designed with concept. Not only that, many people now do not want their house as boring as before, they have started thinking of comfort and aesthetics.

These things make researcher¹ who now work as freelance architects, should be able to capture the opportunities that exist. Researcher¹ have five years of architectural work and have enough experience, it is time to start the company's own architect. Previously, researcher¹ have done many home projects, housing, hotels, and interiors. This study aims for researcher¹ to have calculated preparation in starting an architect firm, so the risks that will occur can be reduced and controlled.

LITERATURE REVIEW

Previous Research

The first study was Abou-Moghli and Al-Abdallah's "Market Analysis and the Feasibility of Establish Small Business" in 2012. The purpose of this study was to examine the relationship and effects between market analysis and feasibility in the opening of small business in the service sector in Jordan. This research is done by using descriptive method with four reference variables, namely location, demand, price, and competitor. The population study consisted of 163 cases and the researchers used 42 questions with close ended questionnaire, with reliability coefficient of 83.43%. Then, the analysis is done with simple regression analysis and stepwise multiple analysis. The results show statistically closely the relationship between location, demand, price, and competitors with the feasibility of opening a small business.

The second study was "Feasibility Study of E-Insurance in Iranian Insurance Company (Asia Insurance Co.)" conducted by Alipour, Dorodi and Pishgahi in 2011. This study aims to study the feasibility of electronic insurance services in Asian insurance companies. This study uses the methods and theories conducted by other insurance companies. This study uses the TELOS model where there are technical, economic, legal, operational, and seasonal aspects. Data were obtained through 27 questions on a questionnaire survey at Iran Insurance Company (Asia Insurance Company). The conclusion of this research information is done with descriptive and inferential statistics. The results of this study indicate that the economic factor becomes the most important, then operational, legal, and then seasonal factors. The conclusion of this study

recommends Asian insurance companies to work with electronic insurance services within their departments.

The third study is "Carwash Mobile Feasibility Analysis in Bandung" conducted by Blue, Fitria, and Bakar in 2014. The purpose of this research is to evaluate the feasibility of mobile carwash business in Bandung. The research method used is literature study, data collection, and data processing. Analyzes were conducted on market, technical, legal, human resource management, and financial aspects. Data collection was done by interview with the manager of car washer company competitors in the area of Bandung, East Java. The results of this study explain the relation of market, technical, legal, human resource management, and finance aspects to the plan of opening carwash mobile business in Bandung. The conclusion of this research is that this effort is feasible to run.

The fourth research is "Business Development Feasibility Study at PT Dagang Jaya Jakarta" conducted by Nurjanah in 2013. The purpose of this research is to know the feasibility of business development conducted by PT Dagang Jaya. This research method uses analysis based on the aspects of business feasibility study, namely financial, market and marketing aspects, management and human resources, legal, technical and operational, environmental, and economic and social. The results of the analysis of each aspect show a positive result which states that the development of this business is feasible to run with one way is to increase the number and variety of products distributed by the company.

The fifth study was "Feasibility Study of Cigarette Factory Establishment in Bojonegoro, East Java" conducted by Saputra, Surjani, and Soegiharto in 2013. The purpose of this research is to evaluate the feasibility of establishing a tobacco factory in Bojonegoro. The research method is done by five steps, namely initial observation, problem identification, determining research objectives, conducting library study, data collection, data processing and analysis, and finally draw conclusions and suggestions. The data collected in the form of primary data and secondary data. Primary data was collected from direct observation from the source by interviewing and sharing questionnaires to 150 smoker respondents in Bojonegoro. The results of this study explain the relationship between the plant establishment plan with the aspects of market, technical, management, and finance. The results of the sensitivity analysis, the most sensitive variables are selling price, selling rate, and labor cost. The conclusion of this research is that this business has a very good prospect to run.

Architectural Service

Service is any action or for work offered by one party to another that is intangible in principle and does not cause any transfer of ownership (Philip Kotler, 1997). Its production may be related and may not be related to a physical product (Murti Sumarni, 2002:17).

Architectural service is simply designing a good architecture and in accordance with the needs of clients. While, the purpose of architecture is (1) Controlling the physical from external factors, such as: climate, disaster, crime, noise, etc.; (2) Facilitate and as a forum for the whole set of activities that require space and are expressed in a certain pattern of behavior; (3) *Social milieu*, which is the building duty in relation to social functions; (4) As a cultural symbol, a tool for communicating values (Norberg-Schulz, 1963).

The function of using the services of architects according to the Association of Indonesian Architects are (1) Architects are trained to receive explanations from clients and can see the whole concept. They are aware of the important needs for designing flexible buildings that can adapt to changing needs of the inhabitants; (2) Architects can save clients money by maximizing investment from clients. A well-designed building can reduce current costs and increase its value over the long term. (3) Architects can save time by organizing and coordinating key elements in the project. (4) Architects can help their client's business. They

create an overall built environment, interior and exterior, comfortable and functional for the users and occupants of the environment.

Feasibility Study

A feasibility study is an activity that studies in depth about an activity or business to be run, to determine whether or not a business is viable (Kasmir and Jakfar, 2012). Running a new business as well as developing a business will have the possibility of failure to meet company goals. To avoid the possibility of failure before establishing or developing a business, it is necessary to study the business (Kasmir and Jakfar, 2012:6). The business feasibility study not only analyzes feasible or unfeasible business built, but also when operationalized on a regular basis in order to achieve maximum profit for an unspecified time (Umar, 2005).

Market Aspect

Market aspect analyzed with STP theory and marketing mix. STP contains segmenting, targeting, and positioning. Segmenting is a heterogeneous market-sorting activity into homogeneous market units. Segmenting sees available markets for the company's industry, then divides them based on variables that will be adjusted to the company's target. Targeting is the activity of assessing and selecting one or more market segments to be entered by a company. Positioning is designing supply and corporate image to occupy a position of competition and position in society.

Marketing mix contains 4P, that is product, price, place, and promotion. Products are goods or services to be produced or sold (Philip Kotler, 2010). Price is the quantity of payment or compensation given by one party to another in return for goods or services (Robert M. Schindler, 2012). Place is the location for the company to sell its products. Promotion is the way companies can communicate their products, with the purpose of giving a positive influence on consumer decisions.

Legal Aspect

Legal aspects analyze the legality needed to run a business. Legal provisions may vary according to the area of business or business location is run. The existence of regional autonomy causes the provision of law and licensing between one region with another different region (Suliyanto, 2010:15). For architect firm, which need to be studied are business license (SIUP), Indonesian Architect Association (IAI) regulations, Surabaya city government regulations, building management permits (IMB), and tax obligations. The business license takes care of the need to open a legal entity. Indonesian Architects Association takes care of the need for profession of architect. The Surabaya city government regulation governs urban planning and technical requirements in designing buildings. Building management permit describes the required picture requirements for building a building. Tax obligations regulate individuals or legal entities to pay contributions to government.

Technical and Technological Aspect

Technical aspect analysis is all matters pertaining to the technical business development process and its operation after the project is completed. In this aspect it examines the company's workflow, the five dimensions of service, and the technology required for the operation of the company. The workflow discusses how firms operate efficiently and systematically. Five dimensions of service is a multidimensional research instrument (i.e. questionnaire or measurement scale) designed to measure service quality by capturing respondents' expectations and perceptions along the five dimensions of service quality (A. Parasuraman, L.L. Berry and V.A. Zeithaml, 1996). Five dimensions of service contain: (1) Reliability, the ability to perform the promised service dependably and accurately; (2) Assurance, the knowledge and courtesy of

employees and their ability to convey trust and confidence; (3) Tangibles, the appearance of physical facilities, equipment, personnel and communication materials; (4) Empathy the provision of caring, individualized attention to customers, (5) Responsiveness, the willingness to help customers and to provide prompt service. Technology discusses hardware and software that will be needed in the company's operations.

Management Aspect

In this aspect there are five forces analysis, PEST, SWOT, and organizational structures. Five forces analysis discusses the five forces that affect industry and business strategy, namely: (1) Threat of New Entrants; (2) Bargaining power of buyers; (3) Bargaining power of suppliers; (4) Threat of substitute products or services; (5) Rivalry among existing competitors (Michael Porter, 2008). PEST describes the macro environment that can affect the company's micro environment, namely: political, economic, social, and technology. SWOT is an effective and efficient way to observe the internal and external environment of the company (Philip Kotler, 2011: 51). Internal environment in question is the strength and weakness of the company, while the external environment is an opportunity and threat from outside that affect the company. The organizational structure addresses the arrangement, hierarchy, and allocation of human resources so that the company can run effectively, efficiently and flexibly.

Financial Aspect

Financial analysis is an activity of assessing and determining the units of rupiah against the aspects deemed worth making in the business analysis phase (Sofyan, 2003). This aspect will calculate NPV (Net Present Value), IRR (internal rate of Return), PP (Payback Period), and PI (Profitability Index). Net present value is a method that calculates the difference between the current investment value and the value of net cash receipts in the future. IRR is the interest rate that keeps the cash outflow the same, or the interest rate that makes or causes the NPV equal to zero. Payback period can be obtained by calculating the number of years required for the amount of cash flow equal to the initial investment value. According to the profitability index method, a business can be calculated by dividing the present value of cash in flow with present value cash out flow from the business.

RESEARCH METHODS

Research approach used is applied research, survey approach, descriptive explanation level, and type of qualitative data. Time of study is conducted within 4 months between January 2017 - April 2017 or during this thesis research. The research was conducted to the property industry practitioners who use the services of architecture and society of Surabaya with the method of interview and direct observation. This research use interview method and sampling method used is purposive sampling. This technique is a non-probability technique in which the units are examined based on the assessment of the researchers. The purpose of using this method is for research to really focus on the company.

The data in this research are qualitative data obtained from several sources. Primary data in the form of interviews, market observation, survey, and projection of internal data of the company. Secondary data is literature study. Market aspect analyzed with STP and marketing mix. The legal aspect analyzed all the permits required for the establishment of architect firm in Surabaya. Technical and technological aspects are analyzed with workflows, five dimensions of service, and required technology. Management aspects are analyzed with five forces analysis, PEST, SWOT, and organizational structure. Financial aspects were analyzed with NPV, IRR, PP, and PI.

RESULTS AND DISCUSSIONS

Market Aspect

The following are STP results from the company RE:DO. Segmenting is divided by: (1) Economy class: low, middle, and high; (2) Project scale: small, medium, and large; (3) Ownership: individuals, corporations, and governments; (3) Architectural style: classical, ethnic, modern tropical, industrial, and contemporary; (4) Project function: residential, office, retail, food and beverage, exhibition, hotel, apartment, shopping center, religion, school, entertainment, industry. From the existing segment, the company sets targets, as follows: residential with modern tropical dan contemporary architectural style; and office, retail, food and beverage, exhibition, religion, school, entertainment projects with contemporary architectural style. The positioning to be achieved by the company is a company that produces a luxury design that shows individuality of design for people who have architectural design needs that are more specific than the average person. The company also has a tagline that represents the company's positioning desire, which is "How much you yearn for your sanctuary?" The tagline describes how the client wants to be the most important place to him, how designing should be for the place that is most important to him.

The following are the marketing mix results from the company RE:DO. Products and services are architectural design ideas and interior design through architectural shopdrawings and 3D images, and coordination services between architects, clients, and all parties in the project (contractor, mechanical, electrical, plumbing, structural expert, interior). The price for the design is a relative thing because the judged is the idea. The offered price is Rp. 500.000,-/m² for building area. Price is calculated based on operational cost and profit to be taken. From the interviews and observations, the location is not the main thing for the architect firm, but only for the company's bonafide. Office design should be able to reflect the architect firm. Then, in the IAI code of ethics, architects can not be promoted with advertising, then the effective way of promotion is with digital media (website and instagram), business cards, and words of mouth.

Legal Aspect

To start a company, need a Business License (SIUP). To make SIUP need to follow some requirements and collect some documents. And, for the architect firm required IAI certification and become its members. Certificate of expertise from IAI has three stages, namely: (1) *Arsitek Pratama*, first level; (2) *Arsitek Madya*, second level; (3) *Arsitek Utama*, the highest level. The *Arsitek Pratama* has the most restrictions on handling projects to the *Arsitek Utama* who can handle any type of project.

In operation, it is necessary to follow the applicable local rules. Architects must follow the Urban Spatial Detail Plan (RDTRK), where they are set zoning zones according to urban development plans. Then, there are some border lines that governs the planning of a project. Border lines are set: (1) Fence Border Line (GSP), set the distance between road and fence; (2) Building Border Line (GSB), set the distance between buildings with limits of lots or streets. Then, there are rules governing the appropriation of a project. Zoning regulations consist of: (1) Building Ground Floor Coefficient (KDB), is the ratio of the entire ground floor area of the building to the land area; (2) Building Floor Area Coefficient (KLB), is the ratio of the entire floor area of the building to the land area; (3) Green Coefficient (KDH), the ratio of the entire open space area outside the building, intended for plantation, to the land area; (4) Basement Site Coefficient (KTB), is the ratio of the basement site to the land area; (5) The maximum height of high rise buildings; (6) Number of floors of basement; (7) Specific provisions applicable to the location concerned, eg. distance to the electric tower; (8) Amount of vehicle parking.

Then, there are building technical requirements that govern the safety and sustainability of the building. It is regulate the strength of building structures and building utility systems from mechanical, electrical and plumbing, fire and evacuation systems. In addition, amenities and circulation are also governed by heating, ventilation, and air conditioning (HVAC), human

horizontal circulation, vertical circulation (ladder, elevator, elevator), and vehicle circulation. Then, the architect must create a drawing for the IMB where there are drawing requirements to be collected.

In addition, there is a taxpayer regulation for the company. The tax liability to be borne by the company is personal income tax (PPH 21), income tax on delivery of services (PPH 23), and corporate income tax (PPB).

Technical and Technological Aspects

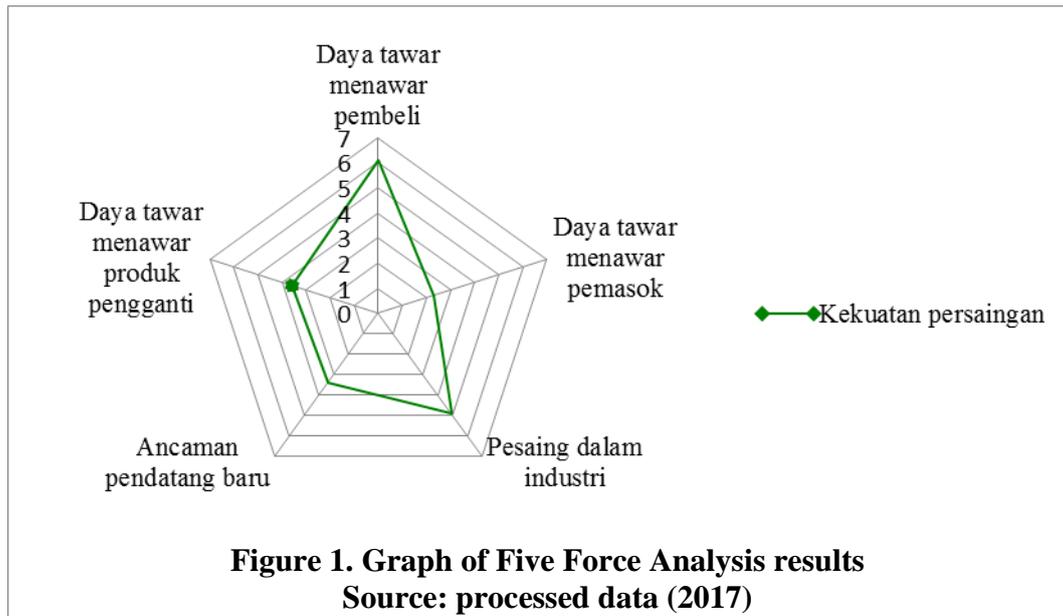
The first thing that needs to be analyzed is the workflow of the company. Company operations start from consultation / tender and site survey to get data from client and site. After that, the brainstorming company goes into the design process until it prints the image for presentation to the client. After that, the client provides feedback for the revised design. Once approved by the client, then start shopdrawing for construction and coordination of the team on site until the project is completed.

Because the company is engaged in services, it is necessary to analyze five dimensions of service. (1) Reliability: the ability to perform tasks as promised by making SOPs and attending all required meetings of the project. (2) Responsiveness: speed of service by making the time table given to the client. (3) Assurance: invites teams to participate in site surveys, attending meetings, and undertaking studies on the updated and realistic-learning architecture. (4) Empathy: rules to always speak good, proper, and polite Indonesian. The company will also provide rendering of framed rendering images and routinely inquire about the convenience and state of the building to the client as a form of concern. (5) Tangible: office building will be designed with creative. Everyday attire is semi casual sleeves, trousers, and shoes; While attire for meetings are office clothes, trousers, and shoes.

The technology used is divided into hardware and software. Hardware required is three computers, an A3 printer, a fingerprint device, CCTV, an HDTV, and offline network system. Software needed is AutoCAD, SketchUp, 3D Max (or equivalent rendering program), photoshop, MS Word, MS Excel, MS Power Point.

Aspek Manajemen

To find the right management system, it is necessary to analyze internal and external factors of the company. The first is the five forces analysis. Data obtained from a questionnaire filled by two resource persons who work as an architect, then the number of values averaged. Indicators of the threat of new entrants are services, products / services, service prices, capital requirements, and government policies. An indicator of the bargaining power of a buyer is the purchasing power of the buyer, other product information, the cost of switching to another service, the buyer's choice. Indicators of the bargaining power of suppliers are the number of suppliers, the interests of the supplier's products, the differentiation of the supplier's products, the supplier's information. Indicator of replacement product's bargaining power is a replacement product, replacement product quality, replacement product price, replacement product market share. Indicators of the competitor's product bargaining power are the number of competing products differentiated, industry growth, fixed costs, resignation inhibits. Here's a graph of five forces analysis:



Next is PEST analysis. (1) Politics in Indonesia is relatively stable and the government led by Joko Widodo gives positive potential for business. (2) The economy is certainly influential. Increased economic growth will make purchasing power increase as well. (3) Social. With the growing population, the demand for shelter will also increase. (4) Technology will certainly facilitate the operational and educational public about architecture.

Next is SWOT analysis. (1) Strength: The company has a good portfolio, has a strong network, has a strong differentiation. (2) Weakness: still do not have a clear system, still tend to one man show, still not formed organizational structure, capital is still weak. (3) Opportunity: more and more cafes and new restaurants are located, property in Surabaya that tend to stable and still able to rise again, awareness of the design community will increase along with the progress of technology and information, Surabaya society pattern mostly still to reside at home Rather than apartments, the central government's program in infrastructure mega-projects will provoke economic and property growth. (4) Threat: Asian Economic Community (MEA) makes architects in Indonesia have to compete with the market with architects from abroad, many upper-class people in Surabaya are more confident to choose the architect from Jakarta, the price of expensive architectural books and lack of interest in reading Surabaya society slow down the progress of architecture in Surabaya, there are still many people in Surabaya who have not dared to take home design differentiation from home mostly. Of the SWOT indicators, then the sources fill out the questionnaire and then the sum of the values averaged to produce Graph 1.2 which is recommend to use aggressive strategy.

Here is the ideal organizational structure for the company RE:DO:

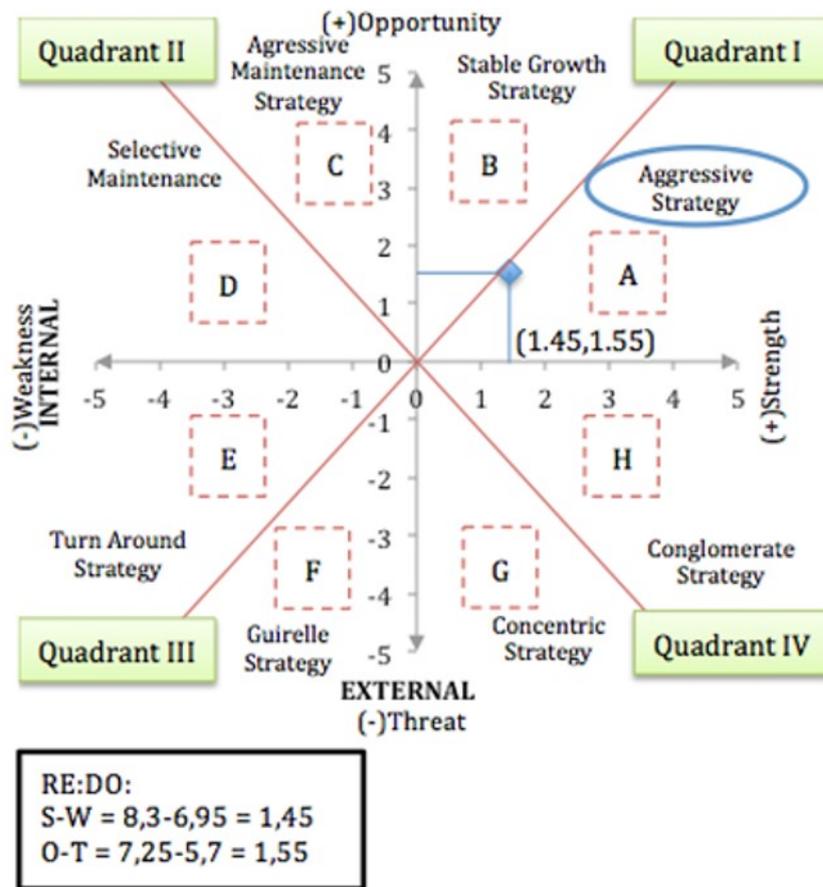


Figure 2. Graph of Five Force Analysis results
 Source: Processed data (2017)

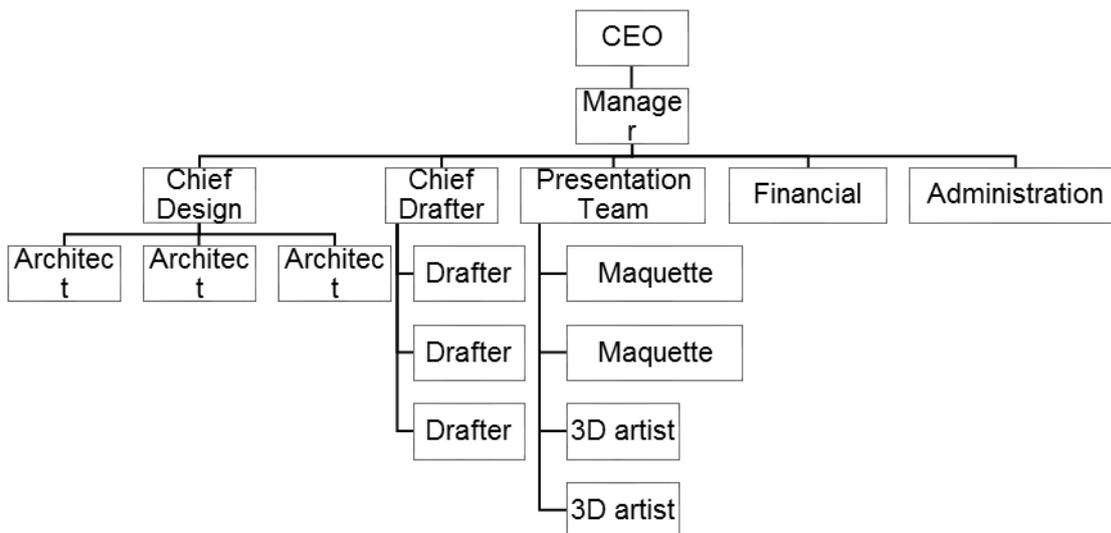


Figure 3. Organizational Structure RE: DO Architect Consultant Studio at the developing stage

Source: Observation

Financial Aspect

In financial terms, records are made. To be analyzed with NPV, IRR, PP, and PI. NPV optimistically generates Rp 672,272,242, - where the value is greater than 1.

$$NPV = \frac{R1}{(1+i)^t} + \frac{R2}{(1+i)^t} + \frac{R3}{(1+i)^t} + \frac{R4}{(1+i)^t} + \frac{R5}{(1+i)^t} - \text{Initial Investment}$$

$$NPV = \frac{Rp359.680.000}{(1+0.10)^1} + \frac{Rp442.208.000}{(1+0.10)^2} + \frac{Rp561.872.800}{(1+0.10)^3} + \frac{Rp730.327.280}{(1+0.10)^4} + \frac{Rp905.207.368}{(1+0.10)^5} - 1.503.200.000$$

$$NPV = Rp 672.272.242$$

Then, IRR optimally produces IRR of 24,10% which results is bigger than corporate credit rate.

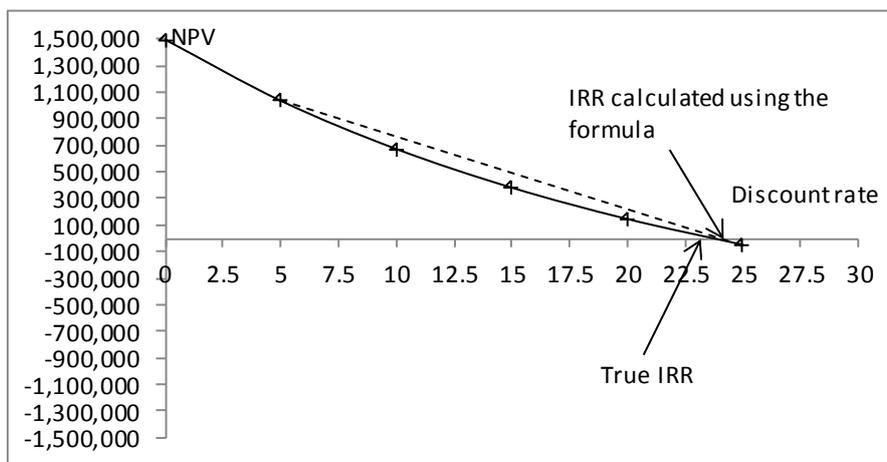


Figure 1.4 Graph of Five Force Analysis results

Source: Processed data (2017)

Then, the PP on the optimistic calculation projected the investment will return within 3 years 10 months 18 days.

$$PP = t + \frac{a+b}{c+b} \times 1 \text{ year} = 3 + \frac{(Rp 1.503.200.000 + Rp 1.198.260.800)}{(Rp 1.862.038.080 + Rp 1.198.260.800)} \times 1 \text{ year}$$

PI for optimism, in the fifth year the number is 1.79 where this number is greater than 1.

Table 1. Profitability Index (optimism)

	Treasury	Investation	PI
Year 0	0	1.503.200.000	0,00
Year I	309.680.000		0,21
Year II	696.888.000		0,46
Year III	1.198.260.800		0,80
Year IV	1.862.038.080		1,24
Year V	2.694.040.448		1,79

Source: Processed data (2017)

From the results of the calculations it shows the RE:DO business is feasible to start and run.

CONCLUSION

After analyzing these five aspects, it can be concluded that the business plan of RE:DO is feasible to be opened and run.

REFERENCES

- Badan Pusat Statistik (2014). *Pertumbuhan Jumlah Penduduk Indonesia*. Accessed 1 April 2017, dari www.bps.go.id
- UrbanIndo (2013). *Analisa Properti di daerah Surabaya, Jawa Timur*. Accessed 1 April 2017, dari www.urbanindo.com
- Norberg-Schulz, Christian (1963). *Intentions in Architecture*. Oslo: Universitetsforlaget.
- Kotler, P., G. Armstrong. (2012) *Principles of Marketing*, 13th edn, Pearson International Education. New Jersey, USA: Pearson Prentice Hall
- Porter, Michael. (2012). *The Esessential Guide to Competition and Strategy*. USA: Harvard Business Review.
- Sofyan, I. (2003). *Studi Kelayakan Bisnis*. First Edition. Yogyakarta: Graha Ilmu.
- Parasuraman, A.; Zeithaml V.A.; and Berry, L.L. (1996). *The Journal of Marketing*, 31-46. American Marketing Association
- Sumarni, Murti (2002). *Manajemen Pemasaran Bank*. Yogyakarta: Liberti