

The Understanding and Ability of the Apartment's Project Manager Roles in Ensuring Successful of Investment

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Abstract— High-rise apartments are categorized as complex building, which in its development needs a value and customer satisfaction oriented team, while producing a return on investment for investors and owners [6]. Meanwhile, investment succeed is mostly determined by the successful of construction phase, which is the most important stages in real estate development, because the value of a property is "building", where building "unfinished" or semi-finished then there is "no value" [23]. The construction process is risky and the successful is depend on the choice of appropriate Project Manager (PM).

The aim of this study is improving the knowledge of PM roles expected by the apartment developer ensuring the successful of investment; and the ability of PM who has specific roles that becomes a reference for apartment practitioners in Surabaya in developing competency to realize a return on investment. This study is an exploratory research. In the implementation of the survey carried out in two stages. The first stage is a preliminary survey to a few practitioners in the field of real estate development to enhance the main variables. The second stage is a main survey, which is collecting data by using a structured questionnaire, in the form of a likert scale. Data analysis using descriptive analysis and factor analysis that formed the new roles of apartment's PM ensuring the successful of investment in the construction phase.

The result of this research is the knowledge (understanding) of apartment PM roles refers to the expectation of developer, those are maintaining organizational commitment and the achievement of the final result, implementing market-oriented value management (VM), implementing performance and risk management, as well as implementing knowledge management in the production process. Then the ability of specific roles of apartment developer's PM, ensuring the successful of investment which are maintaining the quality of the work to improve the customer's satisfaction; defect list management; scheduling management; knowledge on technological advances and managerial competence in the design phase; responsive to the changing of market conditions and macro economics; integrating value management (VM); team management in the design, construction, marketing, financial, and operational phase.

Keywords— Apartment; Project Manager; Roles; Successful Of Investment

I. INTRODUCTION

High-rise apartment is a complex project. The complexity of apartment marked by numerous stakeholders, size and cost associated with building size, height of the building which led to high costs; complex interaction that characterized the diversity of interaction in the development process; cultural implications which are usually caused by the involvement of external intervention for financing; uncertainty because of multi-years projects, and other factors [15]. In addition, the complexity of the apartment marked also by the technical support or the method implementation; investment analysis that should be up-dated; performance and achievement of sales targets; the completion defect list of diverse customers [12].

As a residence, many factors must be considered by the developers of apartments, from the stage of pre-design, design, construction, management and maintenance. That is because, apartment investment is a long-term residential investment, which is the responsibilities associated ownership of the apartment remain in the developer or the owner, so that the development process needs careful planning to create customer satisfaction. Therefore, by the time we decided to build an apartment, the first thing being essential is creating the satisfaction of apartment dwellers who must be accommodated since the design phase. This is accordance to the reason, either being leased or self-occupied, the final purpose of the apartment building is a dwelling [12].

Therefore, build an apartment is a complex project, which is consist of various stakeholders [15], then in practice it takes people who really understand the process (includes the development of raw land and all effectively merger process creative in it, natural resource management, finance and marketing) [23]. In stakeholder management project, the old view focused on profit, but in new perspective mention that the success of the project is oriented on achieving customer business value [15]. This means that a developer should be thinking one step ahead again in developing the apartment property, as required not only developer profit-oriented, but also need to think about the business value opportunities that would be obtained by the customer later. The success of the project is a project that creates business value, which mandates the PM to learn not only the three conventional

factors (time, cost, quality), but also studied the effects of benefits (benefits realization management) where in practice and implementation requires integration between the project team and oriented towards achieving long-term goals of the company [21].

In Indonesia, especially in Surabaya the residential property building with high-rise type, further grow and develop, leading to apartment developer's PM are given the authority to manage the apartment development project. Therefore, developers need to build new insights in the human resources management, if in the construction process PM is the owner spearhead in the field, the project manager should be involved and businesses oriented, as important as schedule and budget [15]. From the description about the developers opportunity to develop apartment property, as well as see the various activities of property development where construction phase is the most critical phase, see also the long-term goal of developers which is not only profit-oriented, but also oriented on the value of the business customer. From the explanation described in the paragraph above, it can be concluded that the studies with the title of the understanding and ability of Apartment PM Roles in ensuring the success of the investment, is a research to find out about the role of PM apartments from the developer side, in carrying out its role in a development project in the apartment, which is required not only done on time, right cost and right quality, but also required to have the understanding and ability to manage projects and integration of functions in it during the construction period, with a business-oriented, and guided the long-term goal that is successful of investment.

II. LITERATURE REVIEW

A. Developer and The Successful of Investment

Developers are actors who transform raw land for property improvement by using the efforts of labor, capital, and entrepreneur [10]. Developers are also builders (who actually build improvements on real estate) [20]. They also differ in the extent to which involved in the actual process in development. Some are responsible for the total management of each project's stage from start to finish, while others are content to delegate some of the responsibility for the project manager, in order to maintain a more strategic policy role. However, the developer is an entrepreneur - someone who can identify the need for product specific properties and are willing to take the risk to make a profit [25]. Then, apartment is one room or more, usually a part of a residential structure that is designed to be occupied by mor be than one family, which normally functions as rental housing and have never owned by the occupants, but managed by the owner or manager of the property [10].

Developer goal is get high return (rate of return) and low risk. Then, the long-term goal of developer is generally to build prosperity, maintaining the company's financial strength, as well as creating a property asset that has longevity and profitable. The successful investment in property is determined by where the property will be developed. So if developers want to achieved a returns, developers need to consider a long-term planning, policy-strategies and corporate culture that is shown in Fig 1.

In the process of development, the return consists of several components as follows [20]:

- (1) The development fee or cost of development, which is a direct compensation for the development of the project;
- (2) Profit or gain on the sale of long-term investors, in which sales should be able to cover the cost of development to produce projects that are functioning perfectly);
- (3) The possibility of equity positions (financing from its own capital) long-term (both developers who contribute financial capital or not), in terms of objective development which is similar to a passive investor;
- (4) Satisfaction at the level of individuals and professionals, in realizing the concept of a better new urban environment;
- (5) Corporate reputation, which can create development opportunities in the future.

The successful investment is characterized by the achievement of rate of return were planned and expected from three things: (1) income, which returns in the form of cash money or dollar returns; (2) appreciation, is an increasing of the value of investments derived from scarcity and inflation such as gold, art collections, etc; while (3) gain value, obtained from an increase in corporate value such assets or land management [31].

Fig 1. Determinant Factors of Successful Investment

No	Variable	Determinant Factors of Successful Investment	Reference
1	Technical Management	- Project Mission; Top Management Support; Client Consultation; Technology and Skills; Crisis Management; Time Management; Quality Management	[18], [20]
2	Resource Management	- Continuous interaction in coordination and collaboration among main players in construction phase; Commitment; Organizational Structure; Capability	[18], [20]
3	Marketing Management	- Client acceptance	[18], [20]
4	Financial Management	- Budget control; Cashflow Management; Good relationships with lenders of loans; Loan Financial Planning	[20]
5	Property Management	- Involvement and Property Management Responsibility	[20]

Source : Lewis (1993); Miles et al (2007)

The successful of investment is determined by the success of the construction phase, which is the most important stages in real estate development, because the value of a property is "building", where building "unfinished" or semi-finished then it is "no value" [23]. In the conventional system of project management, project success is determined by the perception of a triangular pyramid, known as time, quality, and cost, which means that the construction should be completed in a timely, cost effective, and appropriate quality. But in a present project management system, the success of construction projects assessed also on the satisfaction of stakeholders (customers and end users), teamwork, agreed objectives, competencies of a project manager, client consultation, availability of resources, the support of top management [9] and create business value [21].

The construction process is a part of the production process in apartment development, starting from the planning process or design, construction, supervision, and completion. Design stage is a refinement idea stage in the form of an image projected onto the conceptual design and then continue to scalatic real image or commonly known as the Detail Engineering Design (DED). At this stage also conducted feasibility study containing the market, legal, physical, and financial feasibility; also establish communication with the government. After that, there was a contract negotiation, based on the final design according to the market study, which will be the user and the purchaser of the property. At this stage the developer establish commitment with the general contractor, involves local government. Then proceed with a formal commitment with all shareholders and stakeholders involved, in which all of these processes lead to the construction phase [20]. At the stage of construction, the entire energy mobilized to achieve investment success, because failure at this stage is the failure of the entire process of real estate development [23].

B. Apartment and Apartment's Developer

Apartment is one type of multi-family residential, which has a function as a place to stay, settling and perform daily activities. The concept of living in an high-rise apartment is unusual, this is a new experience for many people, because changing the urban structure of sigle family residential into multi-family residential, which is divided into small units with other families. The roles of property owners and designers, one of all is to create a family safety through the design of the interior and exterior of environmental hazards and violence on the streets [22]. Apartments are usually built with the intention to rent per unit. The purchase of the apartment units can be done in three ways: cash installment; hard cash, and Apartment Ownership Loan Program (KPA).

The successful of apartment's investment can be defined from the point of view of developer and the users. By the time developer decided to build an apartment, the important things to be considered at the design phase is the main purpose of developer and the needs of apartment's users. The main purpose of apartment's developer in developing apartment's project is shown in Fig. 2, while the needs and expectation of the apartment's users are shown in Fig. 3.

Fig 2. Successful of Apartment Investment based on Developer's Objectives

No	The Developer's Objectives	Sourch
1	Regular income from service charge	[12],[19]
2	Consistent design, minimize change order	[20]
3	Timely completion of construction	[20]
4	The quality of the work according to the technical spec.	[20]
5	Construction costs not swell	[20]
6	Stable financing of construction lenders	[20]
7	Legally permittable	[23]
8	Physically Possible	[23]
9	Financially Feasible	[23]
10	Creating investment opportunities for customers	[21]
11	Progress significant sales	[20]
12	Satisfaction rate of individuals and professionals	[20]
13	Creating development opportunities in the future	[20]
14	Conflict and social upheaval is resolved	[20]
15	Build prosperity, maintaining the company's financial strength, creating a property asset that has a long life and favorable	[20]

No	The Developer's Objectives	Sourch
16	Get a maximum rate of return and minimum risk	[20],[3]
17	Profit or long term goals	[20]
18	Apartment dwellers satisfaction	[12]

Source : Baum (2009); Halim (2015); Miles et al (2007); Marlina (2008); Peca (2009); Mossalam and Arafa (2015)

Fig 3. Successful of Apartment Investment based on Customer's Needs

No	Customer's Needs	Indikator	Reference
1	Security	Safe from environmental hazards and violence on the streets	[13],[22]
2	Service charge	Fees for the facilities provided by the developer to support the activities inside the apartment	[13]
3	Building Function	Utilities and elements occupied units can function perfectly	[12]
4	Management lease rules	The existence of rules for customers who lease rental unit	[13]
5	Apartment's Design	The size and layout of the apartment, orientation, construction standards, quality, location	[13]
6	Accessibility	Ease of access to the apartment units	[12]
7	The diversity of facilities	Proximity and ease of facilities at workplaces, schools	[13]
8	Management and maintenance	Cooperative services, periodic repair, regulation fair	[22]
9	Architectural features	Spaciousness, comfort, ease of use of space, the relationship with the residential environment	[13]
10	Neighbourhood	Environmental conditions	[13]
11	Neighbours	Positive interaction activities is a natural instinct cultured	[13]
12	Recreational space	recreation room	[13]
13	Parking	The availability of adequate parking space	[12]
14	property values	The stable of rising price apartment units	[12]

Source : Halim (2015); Hanlon (2006); Mridha (2015)

C. The Specific of Apartment Project

As a commercial property building, apartment has a characteristic, which is shown in the explanation below. The specificity of the apartment project is its function as a place to stay that allows occupants to stay longer, compared to hotels, rental office, as well as shopping centers. In addition, the terms of sale system is sale, the profit is the developer could obtain faster rate of return on capital, but the risk if the sales target is not significant it will affect on funding, because construction lenders may terminate its funding at any time [20]. The support facilities in an apartment should be provided as well as in a landed-house residential, as far as possible to make apartment dwellers comfortable. The facilities include sports facilities, health facilities, facility services, as well as other commercial facilities services such as retail and restaurants [19].

In the construction phase, the main aspects that must be met by the developer as well as a differentiating aspects with other commercial real estate is meeting the needs of the customer in the quality of the product and completion of apartment units defect list [12]. Customer in an apartment development will be different with customer in the development of other commercial properties. If the customer

in the hotel, office, and mall is the stakeholders that will be faced by developers when building start operating, but on the apartment development, the customer is involved from the beginning of the construction phase. Meanwhile, the number of customers who should be involved during the construction process as many as the number of apartment units were built. On this basis, the aspect of quality and completion defect list becomes the most important aspect in the development of apartments.

The distinguishing aspect of the investment with the development of other commercial properties include investment period (payback period), the financing, sources of income, sources of expenditures, salvage value, as well as terminal value. Because of using selling system, the apartments have a faster payback period than other commercial property [20]. As the financing, in addition to a loan obtained from the bank and equity also advances the customer, so the customer is very important presence in the construction process. The main income comes from the sale of apartment units, while the additional revenue obtained during that operation of the service charge. The salvage value of apartments only from the increasing value of land [31], in contrast with other commercial properties in addition to the increase in land value is also derived from the value of the building is reduced by functional depreciation. While the weakness of the apartment is no terminal value which is net operating income (NOI) divided by capitalized rate. This is because ownership of the apartment has been transferred to a number of customers, so that the terminal value at the end of the investment period owned by the customer, unless if the apartment is the mixed-use concept, then the terminal value can be obtained from retail rental income [31]. At the construction phase, the main aspects that must be met by the developer as well as a differentiating aspects with other commercial real estate is meeting the needs of the customer is the quality of the product and completion of apartment units defect list [11].

D. The Roles of Project Manager (PM)

Project Manager (PM) is a person appointed to drive the project organization and lead to achieve project objectives [17]. PM is the top position in a project, in which concentrated great responsibility upon the success of the project. In the large and highly complex projects, the PM even must have perfect competence. PM's responsibility is to meet the needs in the form of task needs, team needs and individual needs, the link between strategy and team, as well as business development and the survival of the company. The skills needed by a PM in charge of a project [17], are: planning, conflict management, negotiation skills, written communication, group dynamics, total quality management, earn-value analysis, decision-making, setting goals, leadership skills, interviewing, team building, scheduling methods, listening skills, problem-solving, analyzing data, oral communication, coaching/counseling, quality function deployment, concurrent engineering, time management.

Zavadskas et al (2008) in his study about multi-criteria selection of project managers delivered PM yield criteria in a development company that is expected to be able to manage the project so as to achieve financial success, among other

things: *Personal Skills, Project Management skills, Business skills, Technical skills, Quality skills, dan Time of decision-making.*

Ahadzie et al (2008) in his research on contextual behavior and task behavior, concluded that the competencies that must be owned by the PM in the future is effective time management, the ability to provide solutions to every conflict while maintaining good relations, as well as dedicated in helping job contractor and his team in achieving the work program and resolve the problem.

Starr (1990) in his study states that the role of PM in realizing Fast Response Organization with tactics (internal) and strategy (external). In the traditional project management, completing the project is the responsibility or target individuals, whereas the new approach, there are two initiatives related to the concept of rapid response, namely: (1) management phases of simultaneous projects, where each project phase conducted simultan (synchronously), and (2) multi-project management sustainable products, to create a market and technology (the new method).

Smith and Lecoeuvre (2014) emphasizes the role of the PM in increasing customer satisfaction; control operating costs; meet the demands of financial markets demanding low risk and high returns; as well as cooperation with other teams (marketing, finance, operations, procurement) during execution.

While Ramadhani and Jergeas (2015) examines the concept of how to develop and prepare for future PM (the journey from good to great), that PM should be able to quickly respond to changing economic, social and technical; demonstrated technical competence of project management, interpersonal, and leadership behaviors are supported by project management education; encourage and nurture interpersonal skills, communication skills, decision making skills; develop critical thinking to deal with the complexity, developing both interpersonal and technical skills for project managers, creating knowledge in the context of its application, pay attention to both academic education and continuous training and development.

While Mossalam and Arafa (2014) put forward the concept of the role of PM in aligning the benefits of the strategy; think "the final result" in mind; utilizing the method of delivery success; integrate the benefits with performance management; manage the benefits from the perspective of the portfolio; implement effective management; and develop a culture of Value Management. These studies about roles of PM emphasize the role of business-oriented PM both for developers and for customers.

E. The Understanding and Ability of PM's Roles

The concept of understanding, and ability is part of the change management (Creasy, 2007), which aims to focus the management team in the company's activities to achieve specific business results oriented. In the change management needed the knowledge (understanding) about how to change, and the ability to implement the change.

There is some meaning of understanding words: (1). cognitive condition of someone who understand; (2). The tendency to favor or loyal or agree with; (3). The capacity to think rationally or make assumptions or conclusions; (4).

having knowledge (online dictionary, <http://kamus.landak.com>). The definition of understanding is something that is characterized by an understanding based on the assertion and empathy; the ability to understand something. Understanding referred to this research is the roles of PM which is expected by apartment's developer, to be known and understood by apartment developers practitioners in ensuring the success of the investment phase of construction, by using factor analysis to determine the group of the role is expected by the developers of apartments in Surabaya in ensuring the success of the investment.

Ability means wisdom, skill, intelligence. Definition of ability itself is: (1) the quality would be the ability to do; (2) quality that enable or facilitate the achievement or accomplishment; (3) possession of qualities (especially mental qualities) required to do something or get something (an online dictionary, <http://kamus.landak.com>). Ability referred to in this research is the specific role of apartment developer's PM so that it becomes a reference for practitioners in developing competence (ability) in their role as prime minister apartment developers in ensuring the success of the investment. The specific roles obtained from the group of the most dominant role of the results of factor analysis, as well as in-depth review of the literature regarding the need for apartment dwellers and apartment development needs.

III. METHODOLOGY

A. Research Concept

Based on the aims of the research, the concept of this research is using descriptive analysis and factor analysis, which is aims to find the understanding and ability of apartment PM's roles ensuring the successful of investment. The factors analysis is used to answer the questions regarding the role of PM apartments expected by the developer, which should be understood by apartment practitioners (understanding) to accommodate the company's goals. While descriptive analysis was conducted to answer questions about the ability of apartment developers PM's roles in ensuring the success of investment, supported by in-depth review of the literature on user needs and final goals of apartment developers. Variables in this research are derived from the literature review and a preliminary survey conducted in experts and practitioners that are experienced in real estate development, especially in apartment development.

Based on literature review and preliminary survey, there are twenty two (22) variables of apartment PM's roles ensuring the successful of investment. Those variable are consist of maintain the stage of schedule acceptance; maintain the short term schedule and long term schedule; adjusting schedule (slow down); hold a design adjustment in certain budget range; controlling cash flow in order to avoid the cost over-run; implementing Value Engineering (VE); maintain performance for controlling the financing (loan); adjust working methods for the budget efficiency; propose costs and sales targets at the start of the project; ability to handle and accelerate the settlement of the conflict; completion of Change Order; completion of defect list; good communication with shareholders and stakeholders; maintain the company reputation (branding); maintain the quality of

work; awareness of the changing market conditions and macro economics; coordinate and integrate the production process; ensure that all drawing are consistent and applicable; ensuring availability and manage the resource; anticipate risks and environmental fields; analyze the risk management of the contract.

B. Population, Sample, and Sampling

Population is the generalization region consisting of the object/ subjects that have certain qualities and characteristics defined by the researchers to be studied and then drawn the conclusion [26]. The population in this study is the developer of an apartment in the city of Surabaya. In the event that want to know about the roles of apartment developer PM's roles in ensuring the successful of investment.

Samples are part of the number and characteristics of the population. It is learned from the conclusion of samples will be applied to the population. So, samples are taken by population which could represent the topic [26]. Sampling techniques were in this research is using nonprobability sampling: purposive sampling. Purposive sampling conducted to obtain initial respondents that if in accordance with the limits and scope of the research.

C. Factor Analysis

Stages of factor analysis in this study is used to find the group of new PM roles expected to indicate a group of PM roles in the development of apartments, which is ensuring the successful of investment. Analysis of these factors aim to identify the relationship roles with the role of PM one another by examining the correlation between these factors, then grouping data into a form that makes the new groups to replace a number of specific roles [15]. The final result of the factor analysis shaped four group of factors, that means four group of PM roles, that is shown in Fig. 5.

Fig 5. Factor distribution against Factors Shaped

Group of Factor	Code	Factor	Loading Factor on the group of new factor*			
			NF 1	NF 2	NF 3	NF 4
1	X15	Maintain the quality of work	.898	.138	.149	.061
	X12	Defect list management	.749	.112	.462	-.038
	X2	Maintain the short term schedule and long term schedule	.748	.163	.180	.263
	X14	Maintain the company reputation (branding)	.732	.272	.166	.342
	X1	Maintain the stage of schedule acceptance	.690	.060	.016	.215
	X10	Conflict management	.658	.257	.384	-.035
2	X16	Continuing quality management	.201	.830	.190	.220
	X6	Implementing value engineering (VE)	.210	.798	-.086	.111
	X17	Awareness of the changing market	.117	.773	.305	.180

Group of Factor	Code	Factor	Loading Factor on the group of new factor*			
			NF 1	NF 2	NF 3	NF 4
		conditions and macro economics				
	X11	Completion of change order	.252	.735	.175	.206
	X9	Propose costs and sales targets at the start of the project	-.012	.692	.118	-.119
3	X20	Ensuring availability and manage the resource	.003	.220	.847	.221
	X7	Maintain performance for controlling the financing (loan)	.391	.199	.702	-.007
	X22	Analyze the risk management of the contract	.295	.109	.663	.213
	X21	Anticipate risks and environmental fields	.549	.048	.653	.214
4	X18	Coordinate and integrate the production process	.098	.025	.263	.839
	X5	Controlling investment cost	.274	.196	-.049	.808
	X19	Ensure that all drawing are consistent and applicable	.091	.215	.516	.681
	X8	Adjust working methods for the budget efficiency	.368	.136	.444	.459

Source : Analysis process, 2016

IV. THE UNDERSTANDING OF APARTMENT PM ROLES EXPECTED BY DEVELOPER

The knowledge (understanding) of apartment PM roles refers to the expectation of developer those are maintaining organizational commitment and the achievement of the final result, implementing value management (VM) market-oriented, implementing performance and risk management, as well as implementing knowledge management in the production process.

First, the organization's commitment in achieving the final result. When a developer decides to start construction stage, they already have to consider the benefits, return and risk, as well as the involvement of all elements associated and involved in the project (shareholders and stakeholders) so that the project is not may stop, except in case of special conditions [15]. To be able to complete a complex project, it takes PM competencies to perform effective time management, the ability to provide solutions to every conflict (conflict management) [18], while maintaining good relations, as well as dedicated in helping the work of the contractor and his team in reaching program of work and solve the problem [1][9]. The project manager must also be able to develop critical thinking to face the complexity [26]. In addition, the project could be said to be successful if it is able to maintain customer satisfaction with the quality of work [14]. The completion of the defect list is an effort to

maintain product quality during the handover unit to the customer to maintain customer trust. The role of PM one of which is to increase knowledge about technological progress, economic pressures and professional at the design stage [2]; and thinking for the achievement of the final outcome orientation [21]. So that the first group of indicators that is the role of PM in maintaining organizational commitment and the achievement of the final result.

Second, market-oriented value management. By the time the construction phase starts, the focus of developers is in construction management, where it is important to note at this stage is the time, cost, and quality of work [20]. All three are related to each other. Quality management performed continuously will create customer satisfaction [14], one of which is to conduct value engineering (VE) to increase the product value of the apartment. Align and integrate the cultural value of this is an effort to achieve the objectives of the company [21]. But in the process of raising the value of products, will lead to added costs associated with change orders, but on the other hand will add to the quality of the cash flow. In addition to values, PM must also be oriented to business, as important as the PM oriented to time, cost, and quality [15]. The implementation of the business is one of them is through the speed of responding to changes in the economic situation, social and technical [26]. In addition, the proposal expenses and sales targets with market-oriented, becoming one of the roles of PM undertaken early in the project, to predict the cost of the entry and exit fees on cash flow. In this case, the PM be a liaison between the company's strategy and team in development, so the business development and the survival of the company is becoming increasingly more strategic [18]. From the explanation above, the second group of the PM role is the role of PM in implementing value management (value management) market-oriented.

Third, performance and risk management. A PM should have the leadership competencies and management capabilities, demonstrated technical competence, interpersonal, leadership behaviors that supported project management education [26]. Implementation of this role one of which is to as certain and manage resources. Natural resource management focuses on anticipation of land and environmental risks, management of financial resources focused on the management costs which are looked stable, while the management of human resources to focus on collaboration and teamwork. The positive effect is the performance appraisal or performance during the construction period, which will affect the decision of the funder (construction lenders), if the performance is stable then the financing will be stable, and if the performance on the field is not significant then the contracting authority may terminate the loan at any time [20]. This is the need for the role of PM starting from planning, bidding, contract negotiation, implementation and supervision, so as to understand the chronological course of the project, to conduct risk management through the identification, analysis, development, and estimating the risk response through strategic contract [24], in addition to the order always thought

thus, the PM roles that such groups include the role of PM in implementing performance and risk management.

Fourth, knowledge management in the production process. The production process starts from the planning process, contract negotiation, continue the process of construction and completion of the project [20]. On large and complex projects such as apartments, the PM must have the perfection of competence. PM responsibility is to fulfill the task needs, team needs and individual needs, which is the link between strategy and team [18]. In the implementation in the field, a PM should improve the knowledge of technological advances, economic pressures and professional at the design stage; but think to the orientation of achievement of the final result [21]. A PM must also have the ability to develop technology and work methods are appropriate to expedite the work. Regarding the working methods of this, it would be better if it was planned at the design stage [2]. Working methods for selection of equipment and materials are appropriate, will assist the developer in control of operating costs to improve the performance of short-term returns [27]. Cashflow in a property project become a very important item, because of collateral cashflow is what will create value or the value of the property later [23]. Selection of appropriate methods, knowledge management at the design stage, will reduce the risk of drawing changes and additional work, so that the swelling of the investment costs can be minimized. Thus, the PM role that such groups include the role of PM in implementing knowledge management in the production process.

V. THE ABILITY OF SPECIFIC APARTMENT PM'S ROLES ENSURING THE SUCCESSFUL OF INVESTMENT

A PM in apartment development, is owner representative who knows the ins and outs of the project from start to finish. In managing apartment projects, the PM must have the managerial capacity and good communication, because in addition to interact and collaborate with various stakeholders, PM apartment also need to be able to interact and collaborate with customers or potential user, so it should be able to accommodate the needs of developers and the needs of the user of apartment.

The developers' goal is to obtain returns, welfare, as well as the long-term development opportunities [20]. In developing commercial property projects should think achieving the end result [18][23]. In buying the apartment units, most customers or users want to invest so as to increase their property values from year to year [16]. This requires developers to business oriented, to maintain the company's reputation [20], thinks the achievement of the final result [15], to integrate and align the values culture [21].

The apartment user's need is being more complex than the needs of other commercial property such as office, hotel, or the mall, because the function of the apartment at the end is a residence, where the needs of the user should be long term, such as: security, service charge, the function of the building, the management rules of the lease, apartment design, accessibility, diversity of facilities, management and maintenance, architectural features, neighborhood, neighbors, recreational space, parking, property values

[13][22]. These things need to be met in order to create an apartment occupant satisfaction is the key to the success of apartments in the long term.

The design, safety, functionality, diversity of facilities, and accessibility are important aspects for apartment dwellers satisfaction [13]. While management and maintenance, service charge, as well as the neighbor and the neighborhood is also important to consider since the design phase because a user needs a long-term apartments [22]. For apartments in Surabaya, parking availability is critical, so it is also need to be accommodated while the design phase [12]. It is also the desire of the developer, that the developer wanted a consistent design, not much change, so that a PM needs to coordinate and collaborate among teams in the process of design, construction, marketing, financial, operational [20], and increase knowledge about technological advances and managerial competence in the design phase [2].

Each apartment dwellers want the buildings, utilities and elements in the building can perfectly function [13]. While developers also want the results of good quality work in accordance with the technical specifications [20]. So the role of the next PM is maintaining quality of work [20][27], written by [14] it is to achieve customer satisfaction.

The management and maintenance is a major factor in assessing the satisfaction of residents of the apartment [22], in addition to the service charge. the management of the apartment, regular income is expected from the service charge [19]. It is about services cooperative that is the responsibility of the property management [20]. But [27] suggested that in order to achieve an optimal level apartment management requires collaboration between marketing, finance, operations, procurement, and project management during execution, for the best decision making.

The condition of the environment is one of the factors that encourage the user to stay in the apartment [22]. It is synonymous with safety factor, where the user must feel safe from environmental hazards and violence on the streets [13]. So the role of PM that contribute to the needs of the user is in addition to the anticipation of security through the design, it also takes the role of PM in communicating with stakeholders [18], by listening actively and quickly make decisions on the risk of land and the environment [1][26]. From the descriptive about the needs of apartment's dwellers, and follow up the results of the factors analysis that resulted in dominant roles for PM developers of apartments, it can be synthesized that the specificity of apartment PM roles are as follows:

1. Maintain the quality of work to add value products;
2. Complete the defect list;
3. Complete the field work stage according to schedule to maintain the short-term schedule and long-term schedule;
4. Maintain the corporate reputation (branding);
5. Handle and accelerate the settlement of conflicts related to land, environmental and contractual;
6. Coordinate and collaborate among the teams in the process of design, construction, marketing, financial, operational;
7. Increase knowledge about the progress of technology and managerial competence in the design phase;

8. Implement value management at every stage of the apartment development.

VI. CONCLUSION

The roles of PM are expected to be obtained (understanding) by apartment developers are must be concern on the organizational commitment and the achievement of the final result; market-oriented value management; performance and risk management; and knowledge management in the production process. While the specific roles of the PM in apartment developer, which are being the ability for PM, are oriented to: the quality of work to add value products; the defect list completion; schedule to maintain the short-term schedule and long-term schedule; the corporate reputation (branding); the acceleration of conflicts related to land, environmental and contractual; coordination and collaboration among the teams in the process of design, construction, marketing, financial, operational; and knowledge about the progress of technology and managerial competence in the design phase; value management implementation at every stage of the development of apartment.

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