

Asset Optimization Through Utilizing of Vacant Land (Case Study: PT JKL Jakarta)

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ABSTRACT: The study aims to analyzed the optimization of vacant land assets owned by PT JKL, strategically located on Jalan Kayu Putih Raya in East Jakarta. The area is characterized by high mobility, making it essential to assess the land use for optimal efficiency. This assessment will identify the most suitable land use according to the highest and best use principle, which maximizes both building potential and profitability from permissible uses. The analysis resulted in a mixed-use building concept that integrates the functions of a hospital with service apartments. This combination is estimated to generate the highest and best increase in land value, at IDR 74.89 million per square meter, and a 222.79% increase in productivity after development. Over an investment period of more than ten years, the project is expected to generate a net present value of IDR 240.72 billion, an internal rate of return of 17.72%, and a payback period of 9 years and 11 days.

KEYWORDS: Asset Optimization, Highest and Best Use Analysis, Investment, Vacant Land.

INTRODUCTION

The property sector has been significantly affected by the global pandemic caused by the SARS-CoV-2 virus. This industry, which supports many related businesses, faces considerable challenges, particularly for property developers. The impact extends beyond large developers to Regional-Owned Enterprises (BUMDs) that are also involved in the property sector. DKI Jakarta Provincial Government has reported that most BUMDs could not pay dividends in 2022 due to ongoing economic restrictions from the pandemic. However, some BUMDs did manage to distribute profits to the DKI Jakarta provincial government, although these amounts were lower than the targets set for that fiscal year. To evaluate asset optimization effectively, it's important to compare actual revenue from asset management with potential revenue from alternative uses, particularly focusing on unused or idle assets. Generating income can be achieved by optimizing both unused assets and those in use but not fully utilized.

Asset optimization is one of the important strategies in company management to increase asset value and profitability. PT JKL as a BUMD company with three business groups, namely property development, property service, and property partnership, faces asset development opportunities through the utilization of vacant land that was previously part of the service property, which has been reclassified into property development assets. Assets are something or goods owned by a person, business entity, or agency, which have economic value, commercial value and exchange value, where the assets can be in the form of immovable goods (land and buildings) or movable goods (capital, savings, debt) which can be considered as assets (Siregar, 2004: 178). According to Nugent (2010) Optimizing asset utilization is the relationship between service utility and profit returns. From this statement, it can be concluded that asset optimization is the optimization of the utilization of an asset which can produce more benefits or also generate income. In the research of Sudharma, et al. (2021) who studied Asset Optimization on Gili Air Island, Lombok, using the highest and best use (HBU) analysis, which was then also used in the research of Rosyadi, et al. (2023) to study the Optimization of Idle Assets of the Ketapang Regency Government in Increasing Regional Original Income. Pulomas area where the asset is located, is part of East Jakarta, which is a continuously developing urban area, with good accessibility and an environment dominated by housing and commercial. As a dynamic area, Pulomas offers attractive prospects for commercial property development, including service apartments, hotels, offices, malls and hospitals, which can meet the needs of the surrounding community. This study focuses on a 4,657 m² land owned by PT. JKL, located on Jalan Kayu Putih Raya, East Jakarta, to determine the type of property that can provide the highest and best value according to market conditions and regional potential.



LITERATURE REVIEW

The highest and best use analysis involves evaluating the most advantageous use of vacant land or property improvements that are legally permitted, physically feasible, financially viable, and maximizes productivity (Appraisal Institute, 2020). These analyses serve differing functions in the process and valuation. To ascertain the highest and best use of piece of vacant land, four essential testing steps must be conducted, specifically:

1. Legal Permissible

Legally permitted requirements encompass a range of government regulations and decrees that must be adhered to. When analyzing the legal aspects, thorough examination of zoning laws, building regulations, preservation requirements for historic buildings, and environmental regulations was crucial.

2. Physical Possible

When analyzing the physical aspect, it is essential to consider the size and shape of the land, taking into account its dimensions, length, and width. These factors can influence the land's value and its suitability for different land uses.

3. Financial Analysis

The financial analysis of the remaining options involves a comprehensive evaluation of the property's physical attributes, legal considerations, and its location. This analysis provides detailed estimates of economic demand and timing, which are essential in determining the highest and best use of the property. Discounted Cashflow (DCF) analysis is a suitable tool when projected market conditions need to be considered in the present value analysis of alternative uses.

4. Maximally Productive

The highest and best use of a property is the one that generates the highest residual land value. Land value is calculated by subtracting the building value from the property value and dividing the result by the land area. The building value is based on the calculation of building investment cost, while the property value is obtained using a future income approach that has been discounted to present value. The use that produces the highest land value during the effective period of the assessment result in maximally productive.

METHODOLOGY

The research was conducted with a descriptive quantitative approach using secondary data. The data for this study were gathered from primary sources through observations and surveys focused on the research subject. Additionally, secondary sources were utilized, including internal company report, information from technical regional apparatus report, relevant regulatory documents related to land use and building purposes, and market research reports that have been executed by third parties (such as analysis companies, journal papers, and other sources). This study uses the HBU (Highest and Best Use) analysis to determine land use that provides the best and highest economic value. The conceptual framework for the research involves conducting a highest and best use analysis to evaluate the competitive position of the subject property. This analysis considers property characteristics, legal and location factors. Additionally, market analysis is conducted to identify different market areas for various alternative uses, enabling measurement of the demand for alternative land uses. Furthermore, financial testing is used to analyze the value of different alternative uses, with income-generating properties requiring support from a market analysis for the financial analysis.

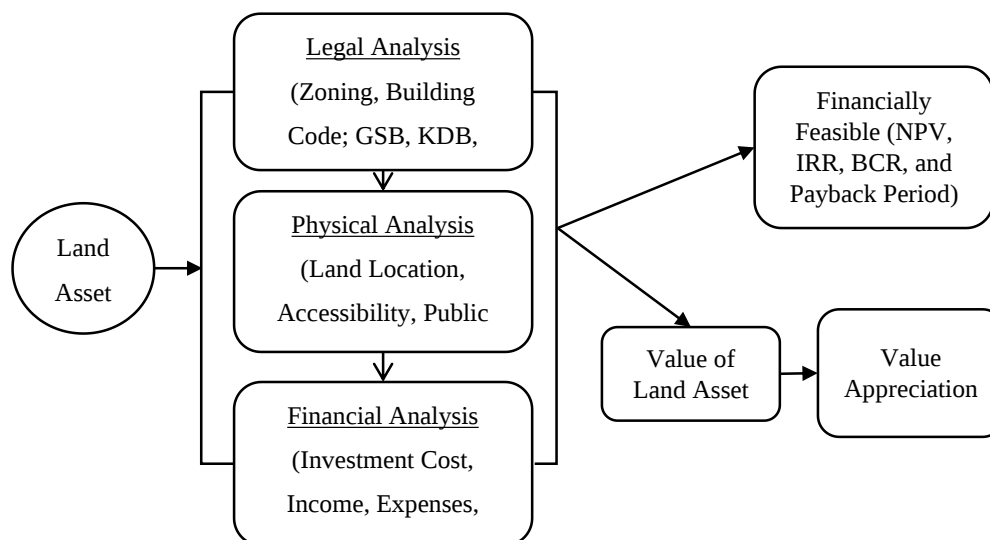


Figure 1 Conceptual Framework

Sources: Author

RESULT

A. Legal Aspect Analysis

Based on the applicable zoning regulations and the Detailed Spatial Plan (RDTR), in DKI Jakarta Governor Regulation No. 31 of 2022, the study object land is located in the trade and service zone, city-scale trade and service subzone, the results are as follows:

Building Intensity

The area of land available for development, after subtracting the building boundary line, is 2,879 m², which reflects an effective land area out of a total of 4,657 m². This area falls within the Flight Operation Safety Area (KKOP), which also regulates the height of buildings. The nearest point to Halim Perdana Kusuma Airport is approximately 10 km away, with a maximum allowable building height of 172 meters. Considering that the average height of office buildings in DKI Jakarta is 4 meters per floor, the maximum number of floors permitted for constructions on the studied land is 43. Additionally, the location of the study site benefits from a bonus zone for urban transit-oriented development (TOD), leading to an increased Building Area Coefficient (KLB): from 6.06 to 8.67 for office properties and from 8.67 to 11 for apartments. However, for hospital development, classified under the limited permitted category, the KLB is set at a reduced rate of five.

The basement footprint coefficient is established at 60% of the total land area, which spans 2,794 square meters. Concurrently, the green area encompasses 2,096 square meters, accounting for 45% of the entire site, thus significantly exceeding the minimum requirement of 20%. It is noteworthy that the calculation of the building floor area allocated for parking does not factor into the KLB calculations, provided it does not surpass 50% of the specified KLB. As a result, the remaining portion dedicated to other uses constitutes 50% of the total KLB, following the regulations set forth by *PERMEN-AGRARIAN/KEPALA BPN Number: 17/2017*.

Building Boundary Line

The building boundary line (GSB) is defined with specific dimensions: the front side measures 8 meters, while the rear and both left and right sides are set at 6 meters each. In accordance with applicable legislation and regulations, this parcel of land can be developed for a variety of purposes, including healthcare facilities such as hospitals, commercial offices, residential apartments, and mixed-use developments that integrate these functions. For comprehensive guidelines and regulations concerning development, please refer to *Pergub 31/2022*, which provides a clear outline of all pertinent requirements.

B. Physical Analysis

The land profile, based on the survey data obtained, indicates that the land under review is generally rectangular in shape. The front width of the land is 67 meters, the length to the back on the left is 73.4 meters, while the right is 57.9 meters, and the width of the

back is 72 meters, resulting in a total land area of 4,657 square meters. The land under review is rectangular in shape, which facilitates the property development planning process. This conclusion is further supported by the physical characteristics of the land contour, which is observed to be flat. The area surrounding the site is undergoing a period of growth in terms of trade and the provision of services. As a developing area, this area has the support and availability of utilities, including the PLN electricity network, PAM water network, communication network, Fiber optic, and other infrastructure networks. The land in question is situated on a collector road within the urban road hierarchy, which connects local roads with main roads. As a result, it is relatively easily accessible. The surrounding area is undergoing a process of development, with mixed-use housing, commercial areas, shopping centres, accommodation, and infrastructure, as well as public transportation such as busways and LRT.

C. Financial Analysis

The financial aspect analysis will conduct a thorough examination of the selected property alternatives, focusing on several critical components. This analysis will encompass a detailed evaluation of investment costs, projected income streams, recurring expenses inherent to property ownership, and an extensive cash flow analysis. By systematically investigating these elements, the study aims to elucidate the financial viability and performance metrics associated with each property option, thereby contributing valuable insights to the decision-making process.

Land Value

It is imperative to recognize land value as a significant variable within the development process. To conduct a land valuation, one may utilize data accessible through the Zone of Land Value (ZNT) on the Bhumi ATR/BPN website or derive information from the public appraisal service office (KJPP) appointed by PT JKL. By applying an average land value of IDR 23.2 million, the acquisition cost of the land subject to this study, which spans 4,657 m², can be determined through the formula: IDR 23.2 million multiplied by 4,657 m². This calculation yields an acquisition value of IDR 108,042,400,000.

Investment Cost

In addition to assessing land value, a comprehensive financial analysis of property project development must include investment costs. In this context, the calculation of construction costs per square meter is based on the Building Technical Cost (BTB) published by Indonesian Society of Professional Appraisers (MAPPI), which differentiates between standard and non-standard costs. Standard costs encompass overhead expenses incurred by construction service providers, occupational safety insurance, and applicable taxes. Non-standard costs refer to atypical physical construction implementation expenses, which may include aspects such as labour, elevators, interior work, deep foundations, basements, electrical systems, and infrastructural facilities. Below are the investment costs associated with the proposed property alternatives.

Table I Investment Cost (in million rupiah)

Description	Building			
	Hospital	Office	Service Apartment	Multifunction (Mixed-use)
Land	Rp. 108,048	Rp. 108,048	Rp. 108,048	Rp. 108,048
Building	Rp. 478,897	Rp. 530,729	Rp. 1,150,377	Rp. 709,768
Total	Rp. 586,945	Rp. 638,777	Rp. 1,258,425	Rp. 817,816

Sources: Author's Calculation

Income Planning

Hospital revenue planning encompasses various sources, including outpatient and inpatient services, pharmacy revenue, laboratory tests, surgeries, and radiology. Additionally, alternative property income is derived from rental income, service charges, and parking fees. Service charges typically range from 25% to 30% of the annual property rental income (Juwana, 2005). This fee, paid by either the owner or tenant for building maintenance, is calculated based on the square meterage of the building. The amount of the service charge is further influenced by occupancy rates and annual increases in rental prices. Rental prices are

determined by assessing comparable properties in the area. As for parking fees, they are regulated by the Governor of the Special Capital Region of Jakarta Province's Regulation Number 31 of 2017, which outlines parking service rates, fines for transaction violations, and motor vehicle locking fees. For optimal future cash flow projections, a timeframe of five to ten years is recommended, and thus this calculation anticipates cash flow for the next ten years. Below is the revenue planning table:

Table II Income Planning (in thousand rupiah)

Years	Building			
	Hospital	Office	Service Apartment	Multifunction (Mixed-use)
2025	-	-	-	-
2026	133,085,979	49,450,586	240,717,937	189,352,280
2027	170.231.901	55.235.432	265,777,276	221.208.301
2028	210,038,758	61,403,946	293,513,678	255,621,382
2029	241,970,357	67,977,566	321,736,137	286,645,427
2030	276,835,411	74,978,828	352,899,206	320,631,423
2031	318,611,820	82,431,427	386,374,242	359,501,257
2032	365,049,444	90,360,268	423,424,845	402,578,921
2033	422,150,830	98,791,526	462,093,585	452,447,652
2034	488.908.124	107,706,751	503,570,637	500,537,308
2035	567,464,120	111,969,064	548.040.160	560.403.020

Sources: Author's Calculation

Expenses Planning

The process of expense planning encompasses both operational costs and maintenance costs. The operational costs, in turn, comprise electricity costs, water costs, and labour costs. It is assumed that labour costs represent 42% of service costs, while maintenance costs account for 15% of service costs (Juwana, 2005). Operational outcomes are susceptible to fluctuations resulting from increases in utility rates and labour costs on an annual basis. The following section presents the planning outcome of alternative property development plans:

Table III Expense Planning (in thousand rupiah)

Years	Building			
	Hospital	Office	Service Apartment	Multifunction (Mixed-use)
2025	-	-	-	-
2026	103,701,275	26,976,243	146,982,326	123,576,598
2027	129,701,982	27,917,520	161,932,880	145.191.252
2028	157,052,409	28,910,382	178,493,578	168,317,895
2029	180.348.153	29,957,456	195,309,843	189,736,576
2030	206,089,365	31,061,496	213,892,923	213,426,804
2031	236,720,375	32,225,393	233,851,741	240,612,471
2032	270,525,534	33,452,174	255,962,404	270,690,668
2033	312,427,445	34,745,016	279,013,633	306,018,907

2034	360,617,945	36,094,994	303,735,787	341.131.215
2035	419,958,293	36,996,373	330.238.332	385,037,975

Sources: Author's Calculation

Cash Flow Analysis

The objective of cash flow analysis is to evaluate the movement of cash within a business over a specific period. Key metrics such as Net Present Value (NPV), Internal Rate of Return (IRR), and the payback period are used to assess the viability of an investment opportunity. In investing, there is an expected return; however, since this return occurs in the future and carries uncertainty, it is crucial to consider the associated risks. Therefore, when making investment decisions, it is necessary to calculate both the expected rate of return and the risk involved. To determine the minimum attractive rate of return (MARR), one typically considers the bank interest rate and adds a company's risk factor, or this can be calculated using the Weighted Average Cost of Capital (WACC) method. Based on the company's internal data, the interest rate derived from the WACC is 13.38%, with an investment period of ten years. Below are the results from the cash flow analysis calculations:

Table IV Capital Budgeting Analysis

Description	Alternative Property			
	Hospital	Office	Service Apartment	Multifunction (Mixed-use)
NPV (in million)	Rp. 220,079	-Rp 155,948	Rp. 218,330	Rp. 240,723
IRR	18.53%	8.88%	16.09%	17.72%
Payback Period	9 years 4 months 6 days	-	9 years 10 months 16 days	9 years 0 months 18 days
Eligibility	FEASIBLE	NOT FEASIBLE	FEASIBLE	FEASIBLE

Sources: Author's Calculation

The results indicate that the office property alternative exhibits a negative net present value (NPV), rendering it unfeasible. Conversely, the remaining three property alternatives meet the financial feasibility criteria, as evidenced by positive NPV, internal rates of return (IRR) exceeding the marginal annual required rate of return (MARR), and payback periods within the investment period. Consequently, these three property alternatives are deemed viable for development and will be subjected to further analysis.

Maximum Value of Land

This analysis represents the final stage of the HBU Analysis process, ensuring optimal utilization of the land. First, the property value must be determined. This is achieved by adding the net present value to the investment value and then subtracting the total land cost from the investment cost. This allows the value per square meter of land to be calculated by subtracting the property value from the building value. To determine the percentage increase, the final land value per square meter is minus the initial land value per square meter and then divided by the initial land value per square meter multiplied by one hundred percent. The resulting figure is shown in the table below.

Table V Maximum Land Value (in million rupiah)

Description	Building		
	Hospital	Service Apartment	Multifunction (Mixed-use)
Investment Value	586.945	1.258.425	840.013
Net Present Value	177.283	191.204	211.606
Land Cost	108.048	108.048	108.048
Property Value	764.228	1.449.629	1.051.618
Building Value	478.897	1.150.377	731.964
Land Value	285.332	299.252	319.654
Initial land value/ (m2)	Rp 23,20	Rp23,20	Rp23,20
Final Land Value/ (m2)	Rp 61,27	Rp64,26	Rp68,64
Percentage Increase (%)	164%	177%	196%

Sources: Author's Calculation

The data presented in the table demonstrates that the construction of mixed-use buildings has led to a notable increase in land value, with an average of Rp 68,64 million per square meter, representing a percentage increase of 196%. This is followed by a second notable increase in land value, which is attributed to the construction of a service apartment, with an average of Rp 64.26 million per square meter. The third increase in land value is a service apartment, which has a value of Rp 61.27 million per square meter, resulting in a percentage of 164%. Therefore, the development of multifunctional building properties (mixed-use) represents a realistic and potentially trend-setting choice for the future development of mixed-use hospitals.

CONCLUSION

The results of the study indicate that the optimization of assets through the utilization of vacant land owned by PT JKL, located on Jalan Kayu Putih Raya, with an area of 4,657 m², can be achieved through the development of mixed-use building properties that combine the functions of a hospital and service apartment. This designation can optimize land use and, consequently, result in the highest increase in land value, reaching Rp 68.64 million/m², with a percentage increase of 196%. Furthermore, the designation is considered feasible for development, as it generates an NPV exceeding zero, amounting to Rp 211.606 billion, an IRR surpassing the MARR, which is 17.56%, and a projected payback period of 9 years, 18 days within a 10-year investment span.

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