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# Feasibility Analysis Of Construction Of A Wall Factory Precast Concrete In Samarinda, East Kalimantan At PT. RA Beton

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**Abstract**

The main objective of a business feasibility study is to assess opportunities for a business project and whether the project is worth continuing or not. Results of calculation analysis on PT RA Beton Precast Concrete Wall Product Manufacturing Plant Design with an average production capacity of 128,772 pcs/year with two product designs (Type A-A and Type B-B). Based on the cash flow of the development investment plan, the new factory PT. RA Beton requires capital of Rp. 169.866.126.151.The calculations using the four methods, namely payback period (PP), produce results of 2 years and 4 months less than the economic life or maximum payback period, which is 10 years. Next, using the net present value (NPV) method, the results obtained are the NPV1 value > 0 from 75% interest amounting to Rp. 5,111,998,649, and the NPV2 value < 0 from 80% interest amounting to -Rp. 5,826,301,054. In calculating the Internal Rate of Return (IRR), results were obtained with a value of 94% greater than the applicable interest rate, namely 12%. Each method produces a different value; calculating the payback period concludes that the investment proposal can be accepted and declared feasible because it meets the criteria.

**Keywords: payback period, npv, roi, irr**

## INTRODUCTION

PT. RA Beton is a company operating in the precast concrete industry whose vision is "To become a leading company in the precast concrete wall industry in Southeast Asia." PT RA Beton will be a pioneer precast company in Indonesia, with its first product being precast concrete walls and its first customer being the construction of Indonesia's new capital city in Kalimantan in 2023. PT RA Beton makes a big contribution and plays an important role in developing this country's construction precast concrete industry. Precast concrete products whose flagship product is precast concrete walls. The housing problems faced by large cities in Indonesia are increasingly complex.

The high birth rate and population migration are impacted by the fact that land in urban areas is increasingly limited, land values are increasing, and the majority of the population is from the city, industrial, and university levels. Population settlement problems also occur in the East Kalimantan area, accompanied by planning to develop the IKN project. This issue needs to be looked into further, and it is necessary to think about decent and sustainable housing. From here, alternative solutions emerged by speeding up the construction development process. An alternative to this problem is to create precast concrete wall products, making construction easier and faster. Development is a process of planned growth and change (Ompusunggu, 2018).

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Infrastructure is an important investment factor that indicates whether a country's economy is weak or efficient. Since 2014, the Indonesian government has placed infrastructure as the main focus of attention in national development. As a result, the volume of construction work buildings, such as bridges, housing, transportation facilities and infrastructure, ports, reservoirs, and toll roads, have experienced significant increases (Manus & Lumanauw, 2015).

The main purpose of a business feasibility study is to assess business project opportunities and whether the project is worth continuing or not. If the project is indeed worth continuing, then efforts can be determined that need to be taken to protect against the risk of loss.

## METHOD

In planning a factory, calculations from the initial stages of construction must be carried out in detail so that the results of variable income and expenditure and cash flow are appropriate and ready to be built. The data needed to analyze the feasibility of a project in economic and financial aspects are as follows:

a. amount of investment required
b. Total production costs incurred
c. The amount of non-production costs incurred

Investment is the amount of working capital needed for the company. Depreciation calculates the depreciation of the value of buildings, machinery and other equipment over a certain period. To calculate the depreciation of an investment, there are several methods, namely:

a. Straight Line Method. k determines pdah
b. A sum of Years Digits Method.
c. Double Declining Method.
d. Production Unit Method (Units of Production)

In calculating investment needs and depreciation, the straight line method is used with the formula:

$$\textbf{Depreciation} = \frac{\textbf{Starting Price} - \textbf{Final Price}}{\textbf{Economic Life of asset}}$$

The company must incur labor costs to pay employee salaries in each period, including monthly basic salary, allowances, and overtime. There are several stages, the first is identifying labor costs per jobdesk/position by:

**Labor costs = number of personnel requirements x (basic salary + allowances + overtime) x 12 months in 1 year.**

Meanwhile, the total labor costs are obtained from the total labor costs per jobdesk/position in 1 year. The following is a calculation of labor costs per position.

Cost of goods sold (COGS) can also be used to determine the selling price of a product based on the total costs incurred to produce a good or service. If a company or business does not know about COGS, then the company will have difficulty knowing its performance and have the potential to suffer losses. Therefore, Cost of Goods Sold is an important component that every company owner must know, because it plays a role in determining a company's success.Apart from that, COGS has a role in how to find initial capital. Because by knowing the amount of COGS means the company knows how much initial capital is needed to start producing goods or services.

The annual income plan for each product is obtained by multiplying the selling price of the product by the number of products produced in the same year. The following is an example of calculating the income plan for type A-A products in the 1st year period.

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**Type A-A Revenue 1st year = Number of products x product selling price**

Cash flow has the aim of helping define how much money comes in (cash in) to the company, describes how much money the company has to spend, and describes the types of costs in a certain period. Meanwhile, profit and loss analysis aims to determine the profit or loss the company will obtain later in each period. (Kasmir & Jakfar, 2012).

Calculation of cash inflow according to (Husnan, Suad, & M, 2008) namely using profit **after tax + depreciation + interest (1-tax)**. Due to a mix-up between cash flow due to spending (payment) decisions, interest, and cash flow due to investments (income, cash expenses, taxes). Therefore, to avoid double counting, the first is to subtract the interest first in the flow calculation cash, and then consider the cost of capital in calculating whether an investment proposal is profitable or not and how to compare interest rates with the cost of capital.

The balance sheet projection predicts the amount and details of the company's assets and all its liabilities, both to creditors and shareholders, at a certain time. Must balance the balance sheet.

Making financial projections indicates that the business has thoroughly prepared for future financial management.The liquidity ratio is a measurement of the ability of a company's assets to finance its short-term obligations or debt. The purpose of the liquidity ratio is to measure the company's ability to pay obligations that are due immediately or when they are billed.

The profitability ratio is a comparison to determine the company's ability to obtain profits from income related to sales, assets and equity on the basis of certain measurements. According to (Kasmir & Jakfar, Studi Kelayakan Bisnis., 2014) the definition of profitability ratio is a ratio to assess a company's ability to make a profit. This ratio also provides a measure of the level of effectiveness of a company's management. This is shown by the profits generated from sales and investment income.

BEP or Break Even Point is the point at which the income obtained by the company is equal to the capital that has been issued. In other words, the company does not make a profit but does not experience a loss because the total profit and loss is zero. The following is the calculation formula to get Break even Points:

**BEP (In rupiah) = Fixed Production Costs / (Price Per Unit – Cost Variable Per Unit) x Price Per Unit**

A payback period is a method that calculates how long the period is needed to return the money invested at the beginning of the period through the resulting annual cash inflow (proceeds)—the investment project. Calculating payback periods with unequal cash inflows in each period, then calculate the accumulated proceeds first.

The interest rate used to calculate IRR is when the net present value (NPV) is zero. Therefore, finding a specific interest rate is done by trial and error first to get negative and positive NPV.

Next, ROI calculations must be carried out. Break-even analysis aims to determine the level of activity at which sales revenue equals the sum of all variable costs and fixed costs. If a company only has variable costs, there will be no break-even problems. The new break-even problem arises if a company, in addition to having variable costs, also has fixed costs. The amount of variable costs in total will change according to changes in production volume, while the amount of fixed costs in total does not change even though there are changes in production volume.

**ROI= (Investment Income-Investment Cost)/Investment Cost X100%**

To understand ROI, it is important to know how to calculate it. ROI calculations can be done with a simple formula. It is enough to know how much investment costs will be incurred and the income received. Even though it is simple, you must be careful when entering numbers into the formula. There may be differences in terms in practice, even though the essence of what is meant is the same. Below is the formula for calculating ROI.

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## RESULT AND DISCUSSION

Table 1 shows the investment costs that a company must incur to run a business and as capital investment in the hope of making a profit in the future through sales of production.

**Table 1. Investment Needs and Depreciation**

| Investment Cost Table Of PT RA BETON | | | | | | | | | Depression |
|---|---|---|---|---|---|---|---|---|---|
| No | Type Of Activas | Amount | Source | Age | Price | N. Remaining = 10% | Total Price | Total N. Remaining | |
| 1 | Licensing And Others | 1 | Package | | Rp150,000,000 | Rp15,000,000 | Rp15,000,000 | Rp1,500,000 | |
| 2 | Land | 45,036 | M2 | | Rp1,500,000 | Rp150,000 | Rp67,553,907,612 | Rp6,755,390,761 | |
| 3 | Closed Building | 4,244 | M2 | 25 | Rp2,000,000 | Rp200,000 | Rp8,487,950,000 | Rp848,795,000 | Rp305,566,200 |
| 4 | Open Building | 39,710 | M2 | 25 | Rp750,000 | Rp75,000 | Rp29,782,847,556 | Rp2,978,284,756 | Rp1,072,182,512 |
| 5 | Road | 39,710 | M2 | 10 | Rp750,000 | Rp75,000 | Rp29,782,847,556 | Rp2,978,284,756 | Rp2,680,456,280 |
| 6 | Concrete Fence | 1 | Is | 25 | 3173349456 | Rp477,461,393 | Rp4,774,613,928 | Rp477,461,393 | Rp171,886,101 |
| 7 | Excavation, Urugan, Compaction | 1 | Is | 25 | Rp4,774,613,928 | Rp477,461,393 | Rp4,774,613,928 | Rp477,461,393 | Rp171,886,101 |
| 9 | Readymix Concrete | 1 | Is | 25 | Rp616,488,800 | Rp61,648,880 | Rp616,488,800 | Rp61,648,880 | Rp22,193,597 |
| 10 | Consultant | 1 | Services | 25 | Rp12,249,656,120 | Rp1,224,965,612 | Rp12,249,656,120 | Rp1,224,965,612 | Rp440,987,620 |
| 11 | Inventory Car (Kijang Inova) | 4 | Unit | 5 | Rp420,000,000 | Rp42,000,000 | Rp1,680,000,000 | Rp168,000,000 | Rp302,400,000 |
| 12 | Truck Trailer | 3 | Unit | 5 | Rp965,000,000 | Rp96,500,000 | Rp2,895,000,000 | Rp289,500,000 | Rp521,100,000 |
| 13 | Gran Max Car | 1 | Unit | 5 | Rp198,400,000 | Rp19,840,000 | Rp198,400,000 | Rp19,840,000 | Rp35,712,000 |
| 14 | Office Desk | 53 | Unit | 5 | Rp300,000 | Rp30,000 | Rp15,900,000 | Rp1,590,000 | Rp2,862,000 |
| 15 | Office Chair | 53 | Unit | 5 | Rp250,000 | Rp25,000 | Rp13,250,000 | Rp1,325,000 | Rp2,385,000 |
| 16 | Computer | 53 | Unit | 5 | Rp3,854,000 | Rp385,400 | Rp204,262,000 | Rp20,426,200 | Rp36,767,160 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17 | Stationery (1 Package) | 12 | Unit | 5 | Rp500,000 | Rp50,000 | Rp6,000,000 | Rp600,000 | Rp1,080,000 |
| 18 | Document Cabinet | 10 | Unit | 10 | Rp1,599,000 | Rp159,900 | Rp15,990,000 | Rp1,599,000 | Rp1,439,100 |
| 19 | Ac | 10 | Unit | 5 | Rp2,000,000 | Rp200,000 | Rp20,000,000 | Rp2,000,000 | Rp3,600,000 |
| 20 | Fire Extinguisher | 28 | Unit | 5 | Rp1,800,000 | Rp180,000 | Rp50,927,700 | Rp5,092,770 | Rp9,166,986 |
| 21 | Printer | 10 | Unit | 5 | Rp2,500,000 | Rp250,000 | Rp25,000,000 | Rp2,500,000 | Rp4,500,000 |
| 22 | Projector | 10 | Unit | 5 | Rp4,100,000 | Rp410,000 | Rp41,000,000 | Rp4,100,000 | Rp7,380,000 |
| 23 | Lights, Cables, Etc. | 32 | Unit | 5 | Rp67,787,571 | Rp6,778,757 | Rp2,169,202,283 | Rp216,920,228 | Rp390,456,411 |
| 24 | U-Ditch Drainage | 1 | Is | 25 | 291025600 | Rp29,102,560 | Rp291,025,600 | Rp29,102,560 | Rp10,476,922 |
| 25 | Shredder | 2 | Unit | 5 | Rp1,715,000 | Rp171,500 | Rp3,430,000 | Rp343,000 | Rp617,400 |
| 26 | Shelving | 10 | Unit | 5 | Rp187,000 | Rp18,700 | Rp1,870,000 | Rp187,000 | Rp336,600 |
| 27 | Hard Disk | 10 | Unit | 5 | Rp1,655,000 | Rp165,500 | Rp16,550,000 | Rp1,655,000 | Rp2,979,000 |
| 28 | Dispenser | 10 | Unit | 5 | Rp1,329,000 | Rp132,900 | Rp13,290,000 | Rp1,329,000 | Rp2,392,200 |
| 29 | Whiteboard | 10 | Unit | 5 | Rp800,000 | Rp80,000 | Rp8,000,000 | Rp800,000 | Rp1,440,000 |
| 30 | Lcd Screen | 10 | Unit | 5 | Rp650,000 | Rp65,000 | Rp6,500,000 | Rp650,000 | Rp1,170,000 |
| 31 | Cleaning Equipment | 10 | Unit | 5 | Rp360,000 | Rp36,000 | Rp3,600,000 | Rp360,000 | Rp648,000 |
| 32 | 250 Kva Generator | 1 | Unit | 5 | Rp500,000,000 | Rp50,000,000 | Rp500,000,000 | Rp50,000,000 | Rp90,000,000 |
| 33 | Silo | 2 | Unit | 5 | Rp132,719,544 | Rp13,271,954 | Rp265,439,088 | Rp26,543,909 | Rp47,779,036 |
| 34 | Handset Panel Formwork (Molding) | 2 | Unit | 5 | Rp6,102,048 | Rp610,205 | Rp12,204,096 | Rp610,205 | Rp2,318,778 |
| 35 | Hopper | 2 | Unit | 5 | Rp53,440,000 | Rp5,344,000 | Rp106,880,000 | Rp10,688,000 | Rp19,238,400 |
| 36 | Boiler Bed | 2 | Unit | 5 | Rp397,030,000 | Rp39,703,000 | Rp794,060,000 | Rp79,406,000 | Rp142,930,800 |
| 37 | Bar Bending, Welding | 2 | Unit | 5 | Rp10,689,294 | Rp1,068,929 | Rp21,378,588 | Rp2,137,859 | Rp3,848,146 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Transformer | | | | | | | | |
| 38 | Eps Cutting | 2 | Unit | 5 | Rp114,528,150 | Rp11,452,815 | Rp229,056,300 | Rp22,905,630 | Rp41,230,134 |
| 39 | Forklift | 2 | Unit | 5 | Rp140,895,660 | Rp14,089,566 | Rp281,791,320 | Rp28,179,132 | Rp50,722,438 |
| 40 | Bridge Crane | 4 | Unit | 5 | Rp374,110,500 | Rp37,411,050 | Rp1,496,442,000 | Rp149,644,200 | Rp269,359,560 |
| 41 | Crane/Hoist | 4 | Unit | 5 | Rp3,441,816 | Rp344,182 | Rp13,767,264 | Rp1,376,726 | Rp2,478,108 |
| 42 | Concreate Pump Hose | 2 | Unit | 5 | Rp26,936,956 | Rp2,693,696 | Rp53,873,912 | Rp5,387,391 | Rp9,697,304 |
| 43 | Handpallet | 2 | Unit | 5 | Rp37,411,050 | Rp3,741,105 | Rp74,822,100 | Rp7,482,210 | Rp13,467,978 |
| 44 | Crawler Mounted Crane | 2 | Unit | 5 | Rp149,644,200 | Rp14,964,420 | Rp299,288,400 | Rp29,928,840 | Rp53,871,912 |
| Total Cost | | | | | | | Rp169,866,126,151 | Rp16,986,002,410 | Rp6,951,009,784 |
| Investor Capital 30% | | | | | | | Rp50,959,837,845 | | |
| Bank Capital 70% | | | | | | | Rp118,906,288,306 | | |

Calculating Project Return on Investment is one of the most essential factors to support, both for building a business and for creating a business, and it is often the main obstacle that hinders it, whether you lack capital or do not have any capital. The following are the sources of costs for the PT RA Beton Factory: 30% Sources from yourself, namely 70% source from loans (bank).
Loan = IDR 118,906,288,306
Time (n) = 10 years
Interest = 12%

**Table 2. Loan Return Calculation Pattern**

| Loan Repayment Calculation Pattern | | | | |
|---|---|---|---|---|
| **Year** | **Loan** | **12% Interest** | **Installments** | **Payment** |
| 0 | Rp 118,906,288,206 | | | |
| 1 | Rp 112,128,629,875 | Rp 14,268,754,597 | Rp 6,777,658,433 | Rp 21,064,413,030 |
| 2 | Rp 104,537,652,427 | Rp 13,445,435,585 | Rp 7,590,977,445 | Rp 21,064,413,030 |
| 3 | Rp 96,035,757,688 | Rp 12,544,518,291 | Rp 8,501,894,739 | Rp 21,064,413,030 |
| 4 | Rp 86,513,635,580 | Rp 11,524,290,923 | Rp 9,522,122,108 | Rp 21,064,413,030 |
| 5 | Rp 75,848,858,820 | Rp 10,381,636,270 | Rp 10,664,776,760 | Rp 21,064,413,030 |
| 6 | Rp 63,904,308,848 | Rp 9,101,863,058 | Rp 11,944,549,972 | Rp 21,064,413,030 |
| 7 | Rp 50,526,412,880 | Rp 7,668,517,062 | Rp 13,377,895,968 | Rp 21,064,413,030 |
| 8 | Rp 35,543,169,395 | Rp 6,063,169,546 | Rp 14,983,243,485 | Rp 21,064,413,030 |
| 9 | Rp 18,761,936,693 | Rp 4,265,180,327 | Rp 16,781,232,703 | Rp 21,064,413,030 |
| 10 | Rp 0 | Rp 2,251,432,403 | Rp 18,761,936,693 | Rp 21,013,369,096 |

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The company must incur raw material costs to purchase materials or raw materials later processed into finished products. How to calculate costs There are several stages for raw materials. The first is the identification of material prices for each product. The following are calculations of material prices and total raw material costs for manufacturing precast concrete wall products: price increases for every price change in the form of inflation reaching 5.4%

**Table 3. Direct Labor Costs**

| Direct Labor Costs | | | | | | | |
|---|---|---|---|---|---|---|---|
| **J** | **Operator Position** | **Wages/Month** | **Wages/Year** | **Holiday Allowance** | **End Of Year Allowance** | **Insurance/Year** | **The Amount Of Costs** |
| 4 | Precast Mold Assembler, Working Drawings | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 4 | Mixing Precast Raw Materials | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 4 | Making Precast Concrete Mix | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 4 | Bbs (Bar Appeal Schedule) | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 8 | Cleaning, Casting | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 8 | Drying | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 8 | Mold Release | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 6 | Checking Product Quality | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 6 | Finished Product Storage Warehouse | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 3 | Material Storage | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 8 | Maintenance & Utilities | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |
| 4 | Security | Rp 3,201,396 | Rp 38,416,752 | Rp 3,201,396 | Rp 3,201,396 | Rp 320,140 | Rp 180,558,734 |

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| | |
|---|---|
| Total | Rp 3,024,358,801 |

**Table 4. Indirect Labor Costs**

| Indirect Labor Costs | | | | | | | |
|---|---|---|---|---|---|---|---|
| **J** | **Operator Position** | **Wages/Month** | **Wages/Year** | **Holiday Allowance** | **End Of Year Allowance** | **Insurance/Year** | **The Amount Of Costs** |
| 3 | Commissioner | Rp 42,050,000 | Rp 504,600,000 | Rp 42,050,000 | Rp 42,050,000 | Rp 50,460,000 | Rp 1,917,480,000 |
| 1 | director | Rp 29,000,000 | Rp 348,000,000 | Rp 29,000,000 | Rp 29,000,000 | Rp 34,480,000 | Rp 440,800,000 |
| 7 | manager | Rp 7,000,000 | Rp 84,000,000 | Rp 7,000,000 | Rp 7,000,000 | Rp 8,400,000 | Rp 744,800,000 |
| 26 | staff | Rp 5,628,487 | Rp 68,189,844 | Rp 5,628,487 | Rp 5,628,487 | Rp 6,818,984 | Rp 2,245,718,862 |
| 8 | supervisor | Rp 6,037,276 | Rp 72,447,312 | Rp 6,037,276 | Rp 6,037,276 | Rp 7,244,731 | Rp 734,132,762 |
| 12 | leader | Rp 5,066,108 | Rp 60,793,296 | Rp 5,066,108 | Rp 5,066,108 | Rp 6,079,330 | Rp 924,058,099 |
| Total | | | | | | | Rp 7,006,989,723 |

Calculating the cost of goods sold is done by adding the cost of goods manufactured with the initial goods inventory and subtracting the ending goods inventory. The following is a projection calculation table for the price of goods sold: Table 5 and 6 .

Sources of income in the business processes of the PT company. RA Concrete obtained from sales of precast concrete wall products. Election These products are selected based on the highest number of consumer requests and have the most significant potential for profit from the company. Demand for precast concrete walls is experiencing an increase from year to year, so in this study, the company assumes that Type A-A will produce 60% of the total and Type B-B will produce 40% of the total.

**Table 5 Total Production Per Year**

| Number Of Products Per Year | | | |
|---|---|---|---|
| **No** | **Year** | **Type A-A** | **Type B-B** |
| 1 | 2022 | 71,134 | 47,423 |
| 2 | 2023 | 74,223 | 49,482 |
| 3 | 2024 | 75,768 | 50,512 |
| 4 | 2025 | 76,541 | 51,027 |
| 5 | 2026 | 76,927 | 51,284 |
| 6 | 2027 | 77,120 | 51,413 |
| 7 | 2028 | 77,216 | 51,478 |
| 8 | 2029 | 77,265 | 51,510 |
| 9 | 2030 | 77,289 | 51,526 |
| 10 | 2031 | 77,301 | 51,534 |

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Below in Table 6 is data regarding the price of each product, namely

**Table 6. Annual Production Price**

| Number Of Products Per Year | | | |
|---|---|---|---|
| **No** | **Year** | **Type A-A** | **Type B-B** |
| 1 | 2022 | Rp 3,681,804 | Rp 3,681,804 |
| 2 | 2023 | Rp 3,674,704 | Rp 3,674,704 |
| 3 | 2024 | Rp 3,673,397 | Rp 3,673,397 |
| 4 | 2025 | Rp 3,674,809 | Rp 3,674,809 |
| 5 | 2026 | Rp 3,677,579 | Rp 3,677,579 |
| 6 | 2027 | Rp 3,681,066 | Rp 3,681,066 |
| 7 | 2028 | Rp 3,684,954 | Rp 3,684,954 |
| 8 | 2029 | Rp 3,689,087 | Rp 3,689,087 |
| 9 | 2030 | Rp 3,693,387 | Rp 3,693,387 |
| 10 | 2031 | Rp 3,697,817 | Rp 3,697,817 |

Below in Table 7 is the income plan from sales of Type A-A and Type B-B precast concrete wall products

**Table 7. Total Annual Income**

| Total Annual Income | | | | |
|---|---|---|---|---|
| **No** | **Year** | **Type A-A** | **Type B-B** | **Total** |
| 1 | 2022 | Rp 261,900,647,577 | Rp 174,600,431,718 | Rp 436,501,079,295 |
| 2 | 2023 | Rp 272,748,933,291 | Rp 181,832,622,194 | Rp 454,581,555,485 |
| 3 | 2024 | Rp 278,326,534,815 | Rp 185,551,023,210 | Rp 463,877,558,025 |
| 4 | 2025 | Rp 281,271,863,417 | Rp 187,514,575,612 | Rp 468,786,439,029 |
| 5 | 2026 | Rp 282,904,186,116 | Rp 188,602,790,744 | Rp 471,506,976,860 |
| 6 | 2027 | Rp 283,883,199,031 | Rp 189,255,466,020 | Rp 473,138,665,051 |
| 7 | 2028 | Rp 284,538,814,084 | Rp 189,692,542,723 | Rp 474,231,356,807 |
| 8 | 2029 | Rp 285,036,052,380 | Rp 190,024,034,920 | Rp 475,060,087,300 |
| 9 | 2030 | Rp 285,457,490,911 | Rp 190,304,993,941 | Rp 475,762,484,852 |
| 10 | 2031 | Rp 285,844,485,949 | Rp 190,562,990,632 | Rp 476,407,476,581 |

The company's profit and loss statement compares cash inflows, namely income company each period, and cash outflows, namely costs charged to the company. Table 8 below shows the profit and loss per year at PT. RA Concrete.

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**Table 8. Profit and Loss Projection of PT RA Beton**

| Profit and Loss Projection of PT RA Beton | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **No** | **Description** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| 1 | Sale | Rp 615,466,521,806 | Rp 640,959,993,233 | Rp 654,067,356,815 | Rp 660,067,356,815 | Rp 664,824,837,373 | Rp 667,125,517,722 | Rp 668,666,213,098 | Rp 669,834,723,093 | Rp 670,825,103,642 | Rp 671,734,541,979 |
| 2 | Minus COGS | Rp 436,501,079,295 | Rp 454,581,555,485 | Rp 463,581,555,485 | Rp 463,877,558,025 | Rp 471,506,976,860 | Rp 473,138,665,051 | Rp 474,231,356,807 | Rp 475,060,087,300 | Rp 475,762,484,852 | Rp 476,407,476,581 |
| Gross Profit | | Rp 178,965,442,511 | Rp 186,378,437,749 | Rp 190,189,798,790 | Rp 192,202,440,002 | Rp 193,317,860,513 | Rp 193,986,852,671 | Rp 194,434,856,291 | Rp 194,774,635,793 | Rp 195,062,618,789 | Rp 195,327,065,398 |
| Minus Commercial Expenses | | | | | | | | | | | |
| 3 | Administrative Burden | Rp 31,340,381,154 | Rp 34,474,419,270 | Rp 37,921,861,197 | Rp 41,714,047,317 | Rp 45,885,452,048 | Rp 50,473,997,253 | Rp 55,521,396,978 | Rp 61,073,536,676 | Rp 67,180,890,344 | Rp 73,898,979,378 |
| | Marketing Expenses | Rp 31,340,381,154 | Rp 34,474,419,270 | Rp 37,921,861,197 | Rp 41,714,047,317 | Rp 45,885,452,048 | Rp 50,473,997,253 | Rp 55,521,396,978 | Rp 61,073,536,676 | Rp 67,180,890,344 | Rp 73,898,979,378 |
| | Delivery | Rp 51,545,249 | Rp 56,699,774 | Rp 62,369,752 | Rp 68,606,727 | Rp 75,467,400 | Rp 83,014,140 | Rp 91,315,554 | Rp 100,447,109 | Rp 110,491,820 | Rp 121,541,002 |
| | Etc | Rp 10,000,000 | Rp 11,000,000 | Rp 12,100,1000 | Rp 13,310,000 | Rp 14,641,000 | Rp 16,105,100 | Rp 17,715,610 | Rp 19,487,171 | Rp 21,435,888 | Rp 23,579,477 |
| | Interest Expense | Rp 14,268,754,597 | Rp 13,455,435,585 | Rp 12,544,518,291 | Rp 11,524,290,923 | Rp 10,381,636,270 | Rp 9,101,863,058 | Rp 7,668,517,062 | Rp 6,063,169,546 | Rp 4,265,180,327 | Rp 2,251,432,403 |
| | Total Commercial | Rp 31,340,381,154 | Rp 34,474,419,270 | Rp 88,462,710,437 | Rp 95,034,302,282 | Rp 102,242,648,766 | Rp 110,148,976,804 | Rp 118,820,342,182 | Rp 128,330,177,178 | Rp 138,758,888,723 | Rp 150,194,511,638 |
| Operating Profit | | Rp 77,011,062,155 | Rp 82,471,973,899 | Rp 101,727,088,353 | Rp 97,168,137,719 | Rp 91,075,211,747 | Rp 83,837,875,867 | Rp 75,614,514,109 | Rp 66,444,458,615 | Rp 56,303,730,067 | Rp 45,132,553,760 |
| Minus 11% Income Tax | | Rp 101,954,380,356 | Rp 103,906,483,850 | Rp 11,189,979,719 | Rp 10,688,495,149 | Rp 10,018,273,292 | Rp 9,222,166,345 | Rp 8,317,596,552 | Rp 7,308,890,448 | Rp 6,193,410,307 | Rp 4,964,580,914 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Minus VAT 11% | Rp 11,214,981,839 | Rp 11,429,711,023 | Rp 11,189,979,719 | Rp 10,688,495,149 | Rp 10,018,273,292 | Rp 9,222,166,345 | Rp 8,317,596,552 | Rp 7,308,890,448 | Rp 6,193,410,307 | Rp 4,964,580,914 |
| Net Profit | Rp 11,214,981,839 | Rp 11,429,711,023 | Rp 79,347,128,916 | Rp 75,791,147,421 | Rp 71,038,665,163 | Rp 65,393,543,176 | Rp 58,979,321,005 | Rp 51,826,677,720 | Rp 43,916,909,452 | Rp 35,203,391,933 |

**Table 9. Projected Cash Flow of PT RA Beton**

| Cash Flow Calculation Table of PT RA CONCRETE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No** | **Description** | **0** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| 1 | Income (Inflow) | | | | | | | | | | | |
| | Loan | Rp 118,906,288,306 | | | | | | | | | | |
| | Capital | Rp 50,959,837,845 | | | | | | | | | | |
| | Net Profit | | Rp 79,524,416,678 | Rp 81,047,041,803 | Rp 79,347,128,916 | Rp 75,791,147,421 | Rp 71,038,665,163 | Rp 65,393,543,176 | Rp 58,979,321,005 | Rp 51,826,677,720 | Rp 43,916,909,452 | Rp 35,203,391,933 |
| | Depreciation | | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 |
| | Total Income | Rp 169,866,126,151 | Rp 86,475,426,461 | Rp 87,998,051,587 | Rp 86,298,138,699 | Rp 82,742,157,205 | Rp 77,989,674,946 | Rp 72,344,552,960 | Rp 65,930,330,789 | Rp 58,777,687,503 | Rp 50,867,919,236 | Rp 42,154,401,717 |
| 2 | Expenditure (Outflow) | | | | | | | | | | | |
| | Investment | Rp 169,866,126,151 | | | | | | | | | | |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Principal | | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 |
| | Total Expenditure | Rp 169,866,126,151 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 | Rp 21,046,413,030 |
| | Income Outcome | Rp - | Rp 65,429,013,431 | Rp 66,951,638,557 | Rp 65,251,725,669 | Rp 61,695,744,175 | Rp 56,943,261,916 | Rp 51,298,139,930 | Rp 44,883,917,759 | Rp 37,731,274,473 | Rp 29,821,506,206 | Rp 21,141,032,621 |
| | Cash At The Beginning Of The Year | Rp - | Rp - | Rp 65,429,013,143 | Rp 132,380,651,988 | Rp 197,632,377,657 | Rp 259,328,121,832 | Rp 316,271,383,748 | Rp 367,569,523,678 | Rp 412,453,441,436 | Rp 450,184,715,910 | Rp 480,006,222,115 |
| | Year-End Cash | Rp - | Rp 65,429,013,431 | Rp 132,380,651,988 | Rp 197,632,377,657 | Rp 259,328,121,832 | Rp 316,271,383,748 | Rp 367,569,523,678 | Rp 412,453,441,436 | Rp 450,184,715,910 | Rp 480,006,222,115 | Rp 501,147,254,736 |

The balance sheet projection predicts the amount and details of the company's assets and all its liabilities, both to creditors and shareholders, at a certain time. Must balance the balance sheet.

**Table 10. Projected Balance Sheet of PT RA Beton**

| **Projected Balance Sheet Table of PT RA Beton** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **No** | **Description** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| 1 | Current Asset | | | | | | | | | | |
| | Cash | Rp 65,429,013,431 | Rp 132,380,651,988 | Rp 197,632,377,657 | Rp 259,328,121,832 | Rp 316,271,383,748 | Rp 367,569,523,678 | Rp 412,453,441,436 | Rp 450,184,715,910 | Rp 480,006,222,115 | Rp 501,147,254,736 |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Receivables | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - |
| | Wip Inventory | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - |
| | Finished Goods Inventory | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - | Rp - |
| | Total Current Activity | Rp 65,429,013,431 | Rp 132,380,651,988 | Rp 197,632,377,657 | Rp 259,328,121,832 | Rp 316,271,383,748 | Rp 367,569,523,678 | Rp 412,453,441,436 | Rp 450,184,715,910 | Rp 480,006,222,115 | Rp 501,147,254,736 |
| 2 | Fixed Assets | | | | | | | | | | |
| | Land | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 | Rp 67,553,907,612 |
| | Building | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 | Rp 68,053,645,112 |
| | Machines And Equipment | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 | Rp 48,527,328,024 |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Investment | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 | Rp 184,134,880,748 |
| | Minus Accumulated Depreciation | Rp 6,951,009,784 | Rp 13,902,019,567 | Rp 20,853,029,351 | Rp 27,804,039,135 | Rp 34,755,048,919 | Rp 41,706,058,702 | Rp 48,657,068,486 | Rp 55,608,078,270 | Rp 62,559,088,054 | Rp 69,510,097,837 |
| | Total Fixed Assets | Rp 177,183,870,964 | Rp 170,232,861,180 | Rp 163,281,851,397 | Rp 156,330,841,613 | Rp 149,379,831,829 | Rp 142,428,822,045 | Rp 135,477,812,262 | Rp 128,526,802,478 | Rp 121,575,792,694 | Rp 114,624,782,910 |
| | Total Assets | Rp 242,612,884,395 | Rp 302,613,513,168 | Rp 360,914,229,054 | Rp 415,658,963,445 | Rp 465,651,215,577 | Rp 509,998,345,723 | Rp 547,931,253,698 | Rp 578,711,518,388 | Rp 601,582,014,810 | Rp 615,722,037,647 |
| 3 | Obligation | | | | | | | | | | |
| | Debt | **Rp 112,128,629,872** | **Rp 104,537,652,427** | **Rp 96,035,757,688** | **Rp 86,513,635,580** | **Rp 75,848,858,820** | **Rp 63,904,308,848** | **Rp 50,526,412,880** | **Rp 35,543,169,395** | **Rp 18,761,936,693** | **Rp 0** |
| 4 | Capital | | | | | | | | | | |
| | Capital Stock | Rp 50,959,837,845 | Rp 117,028,818,938 | Rp 185,531,342,450 | Rp 253,354,180,443 | Rp 318,763,691,595 | Rp 380,700,493,699 | Rp 438,425,519,813 | Rp 491,341,169,395 | Rp 538,903,168,665 | Rp 580,568,645,714 |
| | Retained | Rp 79,524 | Rp 81,047 | Rp 79,347 | Rp 75,791 | Rp 71,038 | Rp 65,393 | Rp 58,979 | Rp 51,826 | Rp 43,916 | Rp 35,203 |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Earning | ,416,678 | ,041,803 | ,128,916 | ,147,421 | ,665,163 | ,543,176 | ,321,005 | ,677,720 | ,909,452 | ,391,993 |
| | Total Liabilities And Capital | Rp 242,612,884,395 | Rp 302,613,513,168 | Rp 360,914,229,054 | Rp 415,658,963,445 | Rp 465,651,215,575 | Rp 509,998,345,723 | Rp 547,931,253,698 | Rp 578,711,519,388 | Rp 601,582,014,810 | Rp 615,772,037,547 |

**Table 11. Profitability Ratio**

| **Profit margin** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **27%** | **27%** | **27%** | **27%** | **27%** | **28%** | **28%** | **28%** | **28%** | **29%** |
| **Gross profit margin** | | | | | | | | | |
| **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **29%** | **29%** | **29%** | **29%** | **29%** | **29%** | **29%** | **29%** | **29%** | **29%** |
| **Return on investment** | | | | | | | | | |
| **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **59%** | **43%** | **34%** | **27%** | **23%** | **20%** | **18%** | **16%** | **14%** | **13%** |
| **Return on equity** | | | | | | | | | |
| **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **75%** | **79%** | **81%** | **81%** | **82%** | **83%** | **84%** | **84%** | **85%** | **86%** |
| **Earning power** | | | | | | | | | |
| **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **59%** | **43%** | **34%** | **27%** | **23%** | **20%** | **18%** | **16%** | **14%** | **13%** |

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**Table 12.BEP**

| Table of Break-even Point Projections of PT RA Beton | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **No** | **Uraian** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| 1 | Sale | Rp 615,466,521,806 | Rp 640,959,993,233 | Rp 654,067,356,815 | Rp 660,988,879,031 | Rp 664,824,837,373 | Rp 667,125,517,722 | Rp 668,666,213,098 | Rp 669,834,723,093 | Rp 670,825,103,642 | Rp 671,734,541,979 |
| 2 | Fixed Cost | | | | | | | | | | |
| | Indirect Labor | Rp 7,006,989,723 | Rp 7,147,129,518 | Rp 7,290,072,108 | Rp 7,435,873,550 | Rp 7,584,591,021 | Rp 7,736,282,842 | Rp 7,891,008,498 | Rp 8,048,828,668 | Rp 8,209,805,242 | Rp 8,374,001,347 |
| | Office Electricity And Lighting | Rp 3,497,861,284 | Rp 3,567,818,510 | Rp 3,639,174,880 | Rp 3,711,958,377 | Rp 3,786,197,545 | Rp 3,861,921,496 | Rp 3,939,159,926 | Rp 4,017,943,124 | Rp 4,098,301,987 | Rp 4,180,268,026 |
| | Pam | Rp 205,632,000 | Rp 209,744,640 | Rp 213,939,533 | Rp 218,218,323 | Rp 222,582,690 | Rp 227,034,344 | Rp 231,575,031 | Rp 236,206,531 | Rp 240,930,662 | Rp 245,749,275 |
| | Fuel | Rp 66,000,000 | Rp 67,320,000 | Rp 68,666,400 | Rp 70,039,728 | Rp 71,440,523 | Rp 72,869,333 | Rp 74,326,720 | Rp 75,813,254 | Rp 77,329,519 | Rp 78,876,110 |
| | Insurance | Rp 72,000,000 | Rp 73,440,000 | Rp 74,908,800 | Rp 76,406,976 | Rp 77,935,116 | Rp 79,493,818 | Rp 81,083,694 | Rp 82,705,368 | Rp 84,359,475 | Rp 86,046,665 |
| | Tax | Rp 4,758,000 | Rp 4,853,160 | Rp 4,950,223 | Rp 5,049,228 | Rp 5,150,212 | Rp 5,253,216 | Rp 5,358,281 | Rp 5,465,446 | Rp 5,574,755 | Rp 5,686,250 |
| | Maintenance | Rp 229,024,800 | Rp 233,605,296 | Rp 238,277,402 | Rp 243,042,950 | Rp 247,903,809 | Rp 252,861,885 | Rp 257,919,123 | Rp 263,077,505 | Rp 268,339,055 | Rp 273,705,837 |
| | Etc | Rp 2,394,064,471 | Rp 2,441,945,761 | Rp 2,490,784,676 | Rp 2,540,600,369 | Rp 2,591,412,377 | Rp 2,643,240,624 | Rp 2,696,105,437 | Rp 2,750,027,545 | Rp 2,805,028,096 | Rp 2,861,128,658 |
| | Telephone | Rp 4,200,000 | Rp 4,284,000 | Rp 4,369,680 | Rp 4,457,074 | Rp 4,546,215 | Rp 4,637,139 | Rp 4,729,882 | Rp 4,824,480 | Rp 4,920,969 | Rp 5,019,389 |
| | Depreciation | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 | Rp 6,951,009,784 |
| | Administrative Expenses | Rp 31,340,381,154 | Rp 34,474,419,270 | Rp 37,921,861,197 | Rp 41,714,047,317 | Rp 45,885,452,048 | Rp 50,473,997,253 | Rp 55,521,396,978 | Rp 61,073,536,676 | Rp 67,180,890,344 | Rp 73,898,979,378 |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Marketing Expenses | Rp 31,340,381,154 | Rp 34,474,419,270 | Rp 37,921,861,197 | Rp 41,714,047,317 | Rp 45,885,452,048 | Rp 50,473,997,253 | Rp 55,521,396,978 | Rp 61,073,536,676 | Rp 67,180,890,344 | Rp 73,898,979,378 |
| | Delivery | Rp 51,545,249 | Rp 56,699,774 | Rp 62,369,752 | Rp 68,606,727 | Rp 75,467,400 | Rp 83,014,140 | Rp 91,315,554 | Rp 100,447,109 | Rp 110,491,820 | Rp 121,541,002 |
| | Etc | Rp 10,000,000 | Rp 11,000,000 | Rp 12,100,000 | Rp 13,310,000 | Rp 14,641,000 | Rp 16,105,100 | Rp 17,715,610 | Rp 19,487,171 | Rp 21,435,888 | Rp 23,579,477 |
| | Interest Expense | Rp 14,268,754,597 | Rp 13,455,435,585 | Rp 12,544,518,291 | Rp 11,524,290,923 | Rp 10,381,636,270 | Rp 9,101,863,058 | Rp 7,668,517,062 | Rp 6,063,169,546 | Rp 4,265,180,327 | Rp 2,251,432,403 |
| | Total Fixed Cost | Rp 712,909,124,023 | Rp 744,133,117,800 | Rp 763,506,220,737 | Rp 777,279,837,673 | Rp 788,610,255,429 | Rp 799,109,099,007 | Rp 809,618,831,655 | Rp 820,600,801,977 | Rp 832,329,591,910 | Rp 844,990,544,958 |
| 3 | Variabel Cost | | | | | | | | | | |
| | Direct Material | Rp 403,842,058,147 | Rp 421,382,239,539 | Rp 430,152,330,235 | Rp 434,537,375,583 | Rp 436,729,898,257 | Rp 437,826,159,594 | Rp 438,374,290,263 | Rp 438,648,355,597 | Rp 438,785,388,264 | Rp 438,853,904,598 |
| | Indirect Materials | 1115276244 | 1163716338 | 1187936386 | 1200046410 | 1206101421 | 1209128927 | 1210642680 | 1211399557 | 1211777995 | 1211967214 |
| | Direct Labor | 3024358801 | 3084845977 | 3146542897 | 3209473755 | 3273663230 | 3339136494 | 3405919224 | 3474037609 | 3543518361 | 3614388728 |
| | Machine Electricity | 5867861046 | 5985218267 | 6104922632 | 6227021085 | 6351561506 | 6478592736 | 6608164591 | 6740327883 | 6875134441 | 7012637129 |
| | Material Handling Costs | 2219984996 | 2264384696 | 2309672390 | 2355865838 | 2402983154 | 2451042817 | 2500063674 | 2550064947 | 2601066246 | 2653087571 |
| | Delivery | 51545249.42 | 56699774.36 | 62369751.79 | 68606726.97 | 75467399.67 | 83014139.64 | 91315553.6 | 10044 7109 | 11049 1819.9 | 12154 1001.8 |
| | Income Tax | Rp 11,214,981,839 | Rp 11,429,711,023 | Rp 11,189,979,719 | Rp 10,688,495,149 | Rp 10,018,273,292 | Rp 9,222,166,345 | Rp 8,317,596,552 | Rp 7,308,890,448 | Rp 6,193,410,307 | Rp 4,964,580,914 |
| | Value-Added Tax | Rp 11,214,981,839 | Rp 11,429,711,023 | Rp 11,189,979,719 | Rp 10,688,495,149 | Rp 10,018,273,292 | Rp 9,222,166,345 | Rp 8,317,596,552 | Rp 7,308,890,448 | Rp 6,193,410,307 | Rp 4,964,580,914 |
| | Total Variable Cost | Rp 438,551,048,161 | Rp 456,796,526,639 | Rp 465,343,733,729 | Rp 468,975,379,695 | Rp 470,076,221,553 | Rp 469,831,407,401 | Rp 468,825,589,090 | Rp 467,342,413,597 | Rp 465,514,197,742 | Rp 463,396,688,070 |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Break Even Point (Rp.) | Rp 712,909,124,022 | Rp 744,133,117,799 | Rp 763,506,220,736 | Rp 777,279,837,672 | Rp 788,610,255,428 | Rp 799,109,099,006 | Rp 809,618,831,654 | Rp 820,600,801,976 | Rp 832,329,591,909 | Rp 844,990,544,957 |
| 5 | Break Even Point (Unit) | 6,013,253 | 6,015,355 | 6,046,125 | 6,093,083 | 6,150,867 | 6,217,148 | 6,291,039 | 6,372,389 | 6,461,450 | 6,558,714 |

Below is the table for estimated net cash flow and its accumulation.

**Table 13 Projected Pay Back Period**

| Table Of Projected Payback Period Of PT RA BETON | | | | | |
|---|---|---|---|---|---|
| **Year** | **Expenditure** | **Cash In** | | **Net Cash Flow** | **Cumulative Net Cash Flow** |
| | | **Net Profit** | **Depresiasi** | | |
| 0 | Rp 184,134,880,748 | | | -Rp 184,134,880,748 | - Rp 184,134,880,748 |
| 1 | Rp 6,777,658,433 | Rp 79,524,416,678 | Rp 6,951,009,784 | Rp 79,697,768,028 | -Rp 104,437,112,720 |
| 2 | Rp 7,590,977,445 | Rp 81,047,041,803 | Rp 6,951,009,784 | Rp 80,407,074,141 | -Rp 24,030,038,579 |
| 3 | Rp 8,501,894,739 | Rp 79,347,128,916 | Rp 6,951,009,784 | Rp 77,796,243,961 | Rp 53,766,205,382 |
| 4 | Rp 9,522,122,108 | Rp 75,791,147,421 | Rp 6,951,009,784 | Rp 73,220,035,097 | Rp 126,986,240,479 |
| 5 | Rp 10,664,776,760 | Rp 71,038,665,163 | Rp 6,951,009,784 | Rp 67,324,898,186 | Rp 194,311,138,665 |
| 6 | Rp 11,944,549,972 | Rp 65,393,543,176 | Rp 6,951,009,784 | Rp 60,400,002,988 | Rp 254,711,141,653 |
| 7 | Rp 13,377,895,968 | Rp 58,979,321,005 | Rp 6,951,009,784 | Rp 52,552,434,820 | Rp 307,263,576,474 |
| 8 | Rp 14,983,243,485 | Rp 51,826,677,720 | Rp 6,951,009,784 | Rp 43,794,444,019 | Rp 351,058,020,493 |
| 9 | Rp 16,781,232,703 | Rp 43,916,909,452 | Rp 6,951,009,784 | Rp 34,086,686,533 | Rp 385,144,707,026 |
| 10 | Rp 18,761,936,693 | Rp 35,203,391,933 | Rp 6,951,009,784 | Rp 23,392,465,024 | Rp 408,537,172,049 |
| Total | | | | | Rp 1,769,176,170,174 |
| Payback Periode | | | -2,310414524 | 2 Years 4 Months | |

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The following Table.14 shows the net present value calculation with an interest rate of 12%.

**Table 14. Projected IRR of PT RA Beton**

| IRR Of PT RA Beton | | | | | | |
|---|---|---|---|---|---|---|
| Year | Cash Flow | Cash In | | Net Cash Flow | Discount Cash Flow | |
| | | Net Profit | Depresiasi | | 75% | 80% |
| 0 | Rp 169,851,126,151 | | | -Rp 169,851,126,151 | -Rp 169,851,126,151 | -Rp 169,851,126,151 |
| 1 | Rp 6,777,658,433 | Rp 195,408,567,468 | Rp 6,951,009,784 | Rp 127,853,736,506 | Rp 73,059,278,003 | Rp 71,029,853,614 |
| 2 | Rp 7,590,977,445 | Rp 204,408,346,401 | Rp 6,951,009,784 | Rp 133,296,371,475 | Rp 43,525,345,788 | Rp 41,140,855,393 |
| 3 | Rp 8,501,894,739 | Rp 209,299,591,342 | Rp 6,951,009,784 | Rp 135,904,786,646 | Rp 25,358,327,537 | Rp 23,303,289,891 |
| 4 | Rp 9,522,122,108 | Rp 209,408,261,590 | Rp 6,951,009,784 | Rp 135,217,210,883 | Rp 14,417,162,010 | Rp 12,880,773,785 |
| 5 | Rp 10,664,776,760 | Rp 211,341,255,126 | Rp 6,951,009,784 | Rp 135,664,571,647 | Rp 8,265,634,638 | Rp 7,179,660,729 |
| 6 | Rp 11,944,549,972 | Rp 212,857,723,471 | Rp 6,951,009,784 | Rp 135,729,777,721 | Rp 4,725,489,971 | Rp 3,990,617,542 |
| 7 | Rp 13,377,895,968 | Rp 214,231,978,133 | Rp 6,951,009,784 | Rp 135,584,941,857 | Rp 2,697,398,542 | Rp 2,214,643,997 |
| 8 | Rp 14,983,243,485 | Rp 215,609,105,970 | Rp 6,951,009,784 | Rp 135,313,849,913 | Rp 1,538,288,740 | Rp 1,227,897,768 |
| 9 | Rp 16,781,232,703 | Rp 217,070,533,767 | Rp 6,951,009,784 | Rp 134,955,852,359 | Rp 876,696,523 | Rp 680,360,633 |
| 10 | Rp 18,761,936,693 | Rp 218,666,924,853 | Rp 6,951,009,784 | Rp 134,560,821,389 | Rp 499,503,048 | Rp 376,871,745 |
| Total | | | | | Rp 5,111,998,649 | -Rp 5,826,301,054 |
| IPR | | 94% | | | | |
| NPV | | Rp 5,111,998,649 | | | | |

Based on the calculation table 14, The results obtained using the net present value (NPV) method were NPV1 >0 of 75% interest of Rp. 5,111,998,649 and NPV2 < 0 from 80% interest worth -Rp 5,826,301,054. In Internal calculations, the Rate of Return (IRR) produces results with a value of 94% greater than the applicable interest rate of 12%

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**Table 15. ROI calculation**

| ROI Calculation Table Of PT RA BETON | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No** | **Year To** | **0** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| 1 | Investment | Rp 169,851,126,151 | | | | | | | | | | |
| 2 | Sale | | Rp 615,466,521,806 | Rp 640,959,993,233 | Rp 654,067,356,815 | Rp 660,988,879,031 | Rp 664,824,937,373 | Rp 667,125,517,722 | Rp 668,662,213,098 | Rp 669,834,723,093 | Rp 670,821,103,642 | Rp 671,734,541,979 |
| 3 | Cost of Business (COGS) | | Rp 436,501,079,295 | Rp 454,581,555,485 | Rp 463,877,558,025 | Rp 468,786,439,029 | Rp 471,506,976,860 | Rp 473,138,665,051 | Rp 474,231,356,807 | Rp 475,060,087,300 | Rp 475,762,484,852 | Rp 476,407,476,581 |
| 4 | Net Profit | | Rp 178,965,442,511 | Rp 186,378,437,749 | Rp 190,189,798,790 | Rp 192,202,440,002 | Rp 193,317,860,513 | Rp 193,986,852,671 | Rp 194,434,856,291 | Rp 194,774,635,793 | Rp 195,062,618,789 | Rp 195,327,065,398 |
| ROI | | | 74% | 62% | 53% | 46% | 42% | 38% | 35% | 34% | 32% | 32% |

After carrying out calculations using the four methods, namely Payback Period (PP), Net Present Value (NPV), Internal Rate of Return (IRR), and ROI, each of these methods produces different values. The payback period calculation concluded that the investment proposal is acceptable, but also on the calculation of net present value, profitability index and internal rate of return declared eligible because it meets the respective eligibility criteria. This is due to the calculation of the payback period. Compared with NPV, PI, and IRR, it pays attention to the time value of money (time value of money), which is very important for the project and provides long-term benefits. So, it can be concluded that the feasibility of the proposed financial analysis is acceptable.

## CONCLUSION

Results of calculation analysis on product manufacturing plant design PT RA Beton Precast Concrete Walls with an average production capacity of 128,772 pcs/year with two types of product designs (Type A-A and Type B-B) so Several conclusions were obtained, and the factory is establishing on JL P.M. Noor, CA Block No.15, Perum Pondok Surya Indah, Sempaja Sel., Kec. North Samarinda, CitySamarinda, East Kalimantan 75253. The form of a planned business entity is a Limited Liability Company (PT), and a planned form of organizational structure is lines and staff.

PT RA BETON is based on the cash flow investment plan for constructing a new factory. RA Concrete required capital of Rp. 169,866,126,151 consists of purchase costs of land, study and licensing costs, building construction costs, maturation costs of land, and the cost of purchasing equipment and machines for the production process. Capital This is obtained by 30% from investors worth IDR. 50,959,837,845 and 70% of the loan to BANK worth Rp. 118.906.288.306. The total cash inflow is obtained from the amount of income each year; namely, the results of product sales and total cash outgoings each year are obtained from operational costs, which consist of material costs, raw

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materials, labor costs, electricity usage costs, and purchasing costs machine components and depreciation costs using the method straight line of Rp. 6,951,009,784 with a product price of IDR 3,681,804 in the first year and IDR 3,697,817 in the 10th year.

The results of the calculations use the four methods, namely payback period (PP), to get results of 2 years or 4 months less than the economic age. The maximum payback period is 10 years. Next, the net present method value (NPV) is used, and the results obtained are NPV1 > 0 from 75% interest of IDR.5,111,998,649 and NPV2 < 0 from 80% interest worth -Rp 5,826,301,054. On Internal Rate Of Return (IRR) calculations, results with a value of 94% are more significant than the applicable interest rate of 12%. Each of these methods produces different values for payback period calculations. It is concluded that the investment proposal is acceptable; on the calculation, net present value, profitability index, and internal rate of return were declared feasible because they fit the respective eligibility criteria. This is because in the payback period calculation with NPV, ROI, and IRR, taking into account The time value of money is very important for projects to provide long-term benefits, and it can be concluded that the proposal feasibility analysis on financial aspects can be accepted or declared feasible.

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