

RENOVA

FINANCIAL PLAN

*Based on the iPlan tool developed by
Giorgio Di Maio & Paolo Landoni*

TEAM 01

Angela Corrado, Anika Rieth
Beril Beden, Brenda Villafaña
Luiza Braga, Mariah Giacchetta





FINAL SYNTHESIS STUDIO

PSSD 2020/2021

Politecnico di Milano

Professors: Beatrice Villari, Paolo Landoni,
Marc Garcia Fortuny, Alessandro Cristian Confetti
Tutors: Martina Carraro and Huang Li-Ting

PSSD PRODUCT-SERVICE
SYSTEM DESIGN



POLITECNICO
MILANO 1863

Table of Contents

1.	44
2.	44
3.	1010
4.	1212
5.	1414
6.	14
7.	1615
8.	1716
9.	1816
10.	1917
11.	1917
12.	2219
13.	2220

1. FINANCIAL ASSUMPTIONS - WORKSHEET 1.1

Team 01 has researched and tested the construction retail market in Brazil and now they want to start a for-profit business called Renova, which will buy used construction products from renovators and sell them to architects, designers, and building professionals.

Company	
Name	Renova Ltda
Type	For-profit organization

They are preparing the business plan for Renova, using the software iPlan, with a time horizon of 3 years, starting in January 2021.

Business Plan's Time Horizon			
Start Year	(yyyy)	2021	
Start Month	(mm)	1	
Start Date		01/01/2021	
Start Month	(mm/yyyy)	1/2021	
Time horizon	Years	3	It should not exceed 15 years
Last year in the business plan's time horizon		2023	

Renova is located in Brazil, so the Home Currency is BRL (BRAZILIAN REAL). The Foreign currency is EUR.

Currency						
Home Currency		BRL				
Foreign Currency		EUR				
Exchange Rates			1/2021	2/2021	3/2021	4/2021
	How many BRL for one EUR	BRL/EUR	6,1400	6,1400	6,1400	6,1400
	How many EUR for one BRL	EUR/BRL	0,1629	0,1629	0,1629	0,1629

Renova will have a tax rate equal to 50% of the earnings. Annual taxes will be paid each year on December 31.

Taxation		
Tax Rate	%	50%
Tax Day	(dd/mm)	31/12

2. MARKETS VOLUMES - WORKSHEET 1.2

Renova will operate in the Brazilian market, starting its operations in the biggest city in Brazil: Sao Paulo Metropolitan Area. Sao Paulo has the highest number of projects among state capitals in the country and Renova will start to build up inventory there. Sao Paulo also has surrounding large cities that are easily accessible, such as Campinas and Santos. With data gathered from requests from the first year of operations in Sao Paulo, Renova can better understand the best strategy to start operations in other cities. Analysing the number of architects and

the average of projects per year by each architect, it is estimated that these markets will be the Belo Horizonte Metropolitan Area and Rio de Janeiro Metropolitan Area.

Markets	
	Unit of measure
Market 1	Customers/Architects
Market 2	Customers/Architects
Market 3	Customers/Architects
Market 4	
Market 5	

Market 1 - Sao Paulo Metropolitan Area

Renova estimates a Market 1: Sao Paulo Metropolitan Area **potential market** of 11.800 customers in 2021. The potential market size was calculated according to data provided¹ by CAU (Council of Architecture and Urbanism of Brazil) and the following reasoning: If there are 167.362 architectural projects per year in the state of Sao Paulo, and if 51% of the activities are concentrated in the Sao Paulo Metropolitan Area, then there are around 85.354 projects per year in this region. If the state average is 7,2 projects per year per architect, then there are approx. 11.800² architects in Sao Paulo Metropolitan Area.

Following the growth rate of architects in the state of Sao Paulo in 2018, the estimated growth rate of the potential market is 7% in the second and third years.

Market 1 - Sao Paulo Metropolitan Area				
Market 1 - Potential Market				
Period description	Growth rate	[by month]	(to month)	Annual Volume
1st year		1/2021	1/2022	11.800
2nd year	7,0%	1/2022	1/2023	12.626,00
3rd year	7,0%	1/2023	1/2024	13.509,82
		1/2024		13.509,82

¹ See 13. Appendix for tables and more information on the Council's report.

² The exact number would be 11.854 but for the purposes of this financial plan, it was rounded to 11.800.

The company estimates that its **available market** will be 60% of the potential market in the time horizon considered. This is because Renova will sell through e-commerce, and the data from the CAU (Council of Architecture and Urbanism of Brazil)³ shows that 60% of Brazilian architects are under 40. As a digitally connected generation they provide Renova with a greater chance to reach them through its sales channel.

Market 1 - Available Market			
Period description	[by month]	(to month)	% of the Potential
All time horizon	1/2021	01/2022	60,0%
	01/2022	01/2023	60,0%
	01/2023	01/2024	60,0%
	01/2024		

The **served market** will be 50% in the first year, 55% in 2022 and 60% in 2023. The initial percentage rate comes from interviews with architects, in which 8 out of 10 interviewees were interested in using our products in their projects - but Renova considered an 80% market share aggressive and projects a more conservative 50% in the first year.

Market 1 - Served Market				
Period description		[by month]	(to month)	% of the Available
1st year	1st year	1/2021	1/2022	50,0%
2nd year	2nd year	1/2022	1/2023	55,0%
3rd year	3rd year	1/2023	1/2024	60,0%

Renova estimates a **penetrated market** equal to 30% of the served market from the month of April 2021, after a marketing campaign done in the months from January to March. The penetrated market share continues to grow as a consequence of consistent marketing campaigns throughout the months.

Market 1 - Penetrated Market				
Period description		[by month]	(to month)	% of the Served
After the launching marketing campaign		1/2021	4/2021	0,0%
After the marketing campaign		4/2021	8/2021	30,0%
After the marketing campaign		8/2021	1/2022	60,0%
After the marketing campaign		1/2022	06/2022	80,0%
After the marketing campaign		06/2022	01/2023	90,0%
After the marketing campaign		01/2023	01/2024	100,0%

³ See 13. Appendix for tables and more information on the Council's report.

Market 2 - Belo Horizonte Metropolitan Area

Renova estimates a Market 2: Belo Horizonte Metropolitan Area potential market of 2.500 customers in 2021, which sets the basis for the potential market for 2022, when the operation starts in the region. The potential market size was calculated according to data provided by the CAU⁴ (Council of Architecture and Urbanism of Brazil) and the following reasoning: If there are 49.593 architectural projects per year in the state of Minas Gerais (Belo Horizonte is the state capital), and if 29% of the activities are concentrated in the Belo Horizonte Metropolitan Area, then there are around 14.382 projects per year in this region. If the state average is 5,7 projects per year per architect, then there are approx. 2.500⁵ architects in the Belo Horizonte Metropolitan Area.

Following the growth rate of architects in the state of Minas Gerais in 2018, the estimated growth rate of the potential market is 7% in the 1st and 2nd years of operation.

Market 2 - Belo Horizonte Metropolitan Area				
Market 2 - Potential Market				
Period description	Growth rate	[by month]	(to month)	Annual Volume
Not launched yet		1/2021	1/2022	2.500
1st year	7,0%	1/2022	1/2023	2.675,00
2nd year	7,0%	1/2023	1/2024	2.862,25

The company estimates that its **available market** will be 60% of the potential market in the time horizon considered. This is because Renova will sell through e-commerce, and the data from the CAU⁶ (Council of Architecture and Urbanism of Brazil) shows that 60% of Brazilian architects are under 40. As a digitally connected generation they provide Renova with a greater chance to reach them through its sales channel.

Market 2 - Available Market				
Period description		[by month]	(to month)	% of the Potential
Not launched yet		1/2021	1/2022	0,0%
1st year	1st year	1/2022	1/2023	60,0%
2nd year	2nd year	1/2023	1/2024	60,0%

⁴ See 13. Appendix for tables and more information on the Council's report.

⁵ The exact number would be 2.523 but for the purposes of this financial plan, it was rounded to 2.500.

⁶ See 13. Appendix for tables and more information on the Council's report.

The **served market** will be 50% in 2022 and 55% in 2023.

The initial percentage rate comes from interviews with architects, in which 8 out of 10 interviewees were interested in using our products in their projects - but Renova considered an 80% market share aggressive and projects a more conservative 50% in the first year.

Market 2 - Served Market			
Period description	[by month]	(to month)	% of the Available
Not launched yet	1/2021	1/2022	0,0%
1st year	1/2022	1/2023	50,0%
2nd year	1/2023	1/2024	55,0%

Renova estimates a **penetrated market** equal to 20% of the served market in the first 3 months of operation of the Market 02 thanks to the company's reputation and marketing campaigns for the Market 01. The penetrated market share continues to grow as a consequence of consistent marketing campaigns throughout the upcoming months.

Market 2 - Penetrated Market			
Period description	[by month]	(to month)	% of the Served
Not launched yet	1/2021	1/2022	0,0%
First months of operation	1/2022	04/2022	20,0%
After the marketing campaign	04/2022	08/2022	50,0%
After the marketing campaign	08/2022	04/2023	70,0%
After the marketing campaign	04/2023	01/2024	100,0%

Market 3 - Rio de Janeiro Metropolitan Area

Renova estimates a Market 3: Rio de Janeiro Metropolitan Area **potential market** of 6.700 customers in 2021, which sets the basis for the potential market for 2022, when the operation starts in the region. The potential market size was calculated according to data provided by the CAU⁷ (Council of Architecture and Urbanism of Brazil) with the following reasoning: If per year there are 35.163 architectural projects in Rio de Janeiro state, and if 71% of the activities are concentrated in the Rio de Janeiro Metropolitan Area, then there are around 24.966 projects per year in this region. And if the state average is 3,7 projects per

⁷ See 13. *Appendix* for tables and more information on the Council's report.

year per architect, then there are approx. 6.700⁸ architects in the Rio de Janeiro Metropolitan Area.

Following the growth rate of architects in the state of Rio de Janeiro in the last years, the estimated growth rate of the potential market is 4% in the 1st and 2nd years of operation.

Market 3 - Rio de Janeiro Metropolitan Area				
Market 3 - Potential Market				
Period description	Growth rate	[by month]	(to month)	Annual Volume
Not launched yet		1/2021	1/2022	6.700
1st year	4,0%	1/2022	1/2023	6.968,00
2nd year	4,0%	1/2023	1/2024	7.246,72

The company estimates that its **available market** will be 60% of the potential market in the time horizon considered. The reason behind it is that since Renova will sell through e-commerce, and the data from the CAU⁹ (Council of Architecture and Urbanism of Brazil) shows that 60% of Brazilian architects are under 40. As a digitally connected generation they provide Renova with a greater chance to reach them with its sales channel.

Market 3 - Available Market				
Period description		[by month]	(to month)	% of the Potential
Not launched yet		1/2021	1/2022	0,0%
1st year	1st year	1/2022	1/2023	60,0%
2nd year	2nd year	1/2023	1/2024	60,0%

The **served market** will be 50% in 2022 and 55% in 2023.

The initial percentage comes from interviews with architects, in which 8 out of 10 interviewees were interested in using our products in their projects - but Renova considered an 80% market share aggressive and projects a more conservative 50% in the first year.

⁸ The exact number would be 6.748 but for the purposes of the financial plan, we rounded it to 6.700.

⁹ See *13. Appendix* for tables and more information on the Council's report.

Market 3 - Served Market			
Period description	[by month]	(to month)	% of the Available
Not launched yet	1/2021	1/2022	0,0%
1st year	1/2022	1/2023	50,0%
2nd year	1/2023	1/2024	55,0%

Renova estimates a **penetrated market** equal to 20% of the served market in the first 3 months of operation of the Market 03 thanks to the company's reputation and marketing campaigns for the Market 01. The penetrated market share continues to grow as a consequence of consistent marketing campaigns throughout the upcoming months.

Market 3 - Penetrated Market			
Period description	[by month]	(to month)	% of the Served
Not launched yet	1/2021	1/2022	0,0%
First months of operation	1/2022	4/2022	20,0%
After the marketing campaign	4/2022	8/2022	50,0%
After the marketing campaign	8/2022	4/2023	70,0%
After the marketing campaign	4/2023	1/2024	100,0%

3. REVENUES

3.1 Market Revenues - WORKSHEET 1.3

Renova estimates an average revenue per unit of

- Market 1: \$3.960 BRL per architect, which is the result of the average product price* (\$550 BRL) multiplied by the Sao Paulo Metropolitan Area average of projects/year/architect (7,2)
- Market 2: \$3.135 BRL per architect, which is the result of the average product price* (\$550 BRL) multiplied by the Belo Horizonte Metropolitan Area average of projects/year/architect (5,7)
- Market 3: \$2.035 BRL per architect, which is the result of the average product price* (\$550 BRL) multiplied by the Rio de Janeiro Metropolitan Area average of projects/year/architect (3,7)

*To calculate the average product price, Team 01 made a list of all products (see Appendix) Renova will trade on its platform, searching for the average market price of each item and estimating a selling price of 50% of the MSRP. Based on the estimated demand (price divided by 1=high, 2=medium or 3=low), it was possible

to calculate the average price of a product sold by Renova at \$551,48 BRL - which for the purposes of this plan was rounded to \$550 BRL.

Starting Revenues per Unit			
	Market	Revenues per Unit	Currency
Market 1	Sao Paulo Metropolitan Area	3.960,00	BRL
Market 2	Belo Horizonte Metropolitan Area	3.135,00	BRL
Market 3	Rio de Janeiro Metropolitan Area	2.035,00	BRL

Starting Revenues per Unit in EUR:

Starting Revenues per Unit			
	Market	Revenues per Unit	Currency
Market 1	Sao Paulo Metropolitan Area	645,08	EUR
Market 2	Belo Horizonte Metropolitan Area	510,69	EUR
Market 3	Rio de Janeiro Metropolitan Area	331,50	EUR

The average revenue per unit will increase in subsequent years of 3,2% per year, following the forecast¹⁰ of the IPCA, the benchmark inflation index observed by the Central Bank of Brazil.

Market 1 - Sao Paulo Metropolitan Area					Monthly Volumes
Revenues per Unit					
Period description	Growth Rate	[by month]	(to month)	Revenues per Unit	
1st year		1/2021	1/2022	3.960,00	
2nd year	3,2%	1/2022	1/2023	4.086,72	
3rd year	3,2%	1/2023	1/2024	4.217,50	

Market 2 - Belo Horizonte Metropolitan Area					Monthly Volumes
Revenues per Unit					
Period description	Growth Rate	[by month]	(to month)	Revenues per Unit	
Not launched yet		1/2021	1/2022	3.135,00	
1st year	3,2%	1/2022	1/2023	3.235,32	
2nd year	3,2%	1/2023	1/2024	3.338,85	

Market 3 - Rio de Janeiro Metropolitan Area					Monthly Volumes
Revenues per Unit					
Period description	Growth Rate	[by month]	(to month)	Revenues per Unit	
Not launched yet		1/2021	1/2022	2.035,00	
1st year	3,2%	1/2022	1/2023	2.100,12	
2nd year	3,2%	1/2023	1/2024	2.167,32	

¹⁰ Reference: <https://www.ceicdata.com/en/indicator/brazil/forecast-consumer-price-index-growth>

3.2 Other Revenues - WORKSHEET 1.6

N/A

4. COSTS - WORKSHEET 1.4

4.1 Variable Costs - WORKSHEET 1.4

The cost of each unit of measure is specific to each market segment, as follows:

- Market 1: \$1.512 BRL, that is \$210 BRL (which is the average product cost calculated by how much Renova pays the seller for each item (15% of the market price of the new product) plus \$65 BRL (cost of deconstruction and collection¹¹)) multiplied by 7,2 (state average of projects/year/architect)
- Market 2: \$1.197 BRL, that is \$210 BRL (which is the average product cost calculated by how much Renova pays the seller for each item (15% of the market price of the new product) plus \$65 BRL (cost of deconstruction and collection)) multiplied by 5,7 (average of projects/year/architect)
- Market 3: \$777 BRL, that is \$210 BRL (which is the average product cost calculated by how much Renova pays the seller for each item (15% of the market price of the new product) plus \$65 BRL (cost of deconstruction and collection)) multiplied by 3,7 (average of projects/year/architect)

Costs Variable with Markets Volumes						
Description	Market	[by month]	(to month)	Cost per unit	Currency	
All time horizon	1	1/2021	1/2024	1.512,00	BRL	
All time horizon	2	1/2022	1/2024	1.197,00	BRL	
All time horizon	3	1/2022	1/2024	777,00	BRL	

Costs Variable with Markets Volumes in EUR:

¹¹ Cost of deconstruction and collection: if the day of a contractor costs \$180 BRL on average and s/he recovers a minimum of 4 items/day, than \$45/item + \$20 BRL collection costs per item

Costs Variable with Markets Volumes

Description	Market	[by month]	(to month)	Cost per unit	Currency
All time horizon	1	1/2021	1/2024	246,30	EUR
All time horizon	2	1/2022	1/2024	194,99	EUR
All time horizon	3	1/2022	1/2024	126,57	EUR

4.2 Investments - WORKSHEET 1.5

Renova plans to buy equipment for the warehouses, such as forklifts, shelving and pallets. They cost \$25.000 BRL and \$15.000 BRL. In 2021, the company will only acquire the equipment for Market 1: Sao Paulo Metropolitan Area. In 2022, it will invest in the equipment for the warehouses for Market 2 and Market 3. The equipment has a fiscal depreciation coefficient equal to 30%.

Investments

Description	Date	Depreciation coefficient *	Amount	Currency	XRT	Amount (BRL)
Forklift Sao Paulo	01/01/2021	30%	25.000,00	BRL	BRL/BRL	25.000,00
Shelving and Pallets	01/01/2021	30%	15.000,00	BRL	BRL/BRL	15.000,00
Forklift Rio de Janeiro	01/01/2022	30%	25.000,00	BRL	BRL/BRL	25.000,00
Shelving and Pallets	01/01/2022	30%	15.000,00	BRL	BRL/BRL	15.000,00
Forklift Belo Horizonte	01/01/2022	30%	25.000,00	BRL	BRL/BRL	25.000,00
Shelving and Pallets	01/01/2022	30%	15.000,00	BRL	BRL/BRL	15.000,00

4.3 Other Costs - WORKSHEET 1.7

Renova will pay a domain and hosting service for the platform of \$1000 BRL monthly from the start of the operations, and will hire a service designer (\$5.000 BRL, including taxes) and tech lead expert in machine learning (\$9.000, including taxes). The company also plans to rent a warehouse and to hire a client manager and warehouse employee for each market. Each warehouse will have monthly bills to be paid (water, electricity, internet). Each market will also require accounting services and a budget for marketing.

Other Costs

Description	Starting month	Ending month	Amount	Currency	XRT
Platform domain and hosting	1/2021	1/2024	1.000,00	BRL	BRL/BRL
Service Designer	1/2021	1/2024	7.000,00	BRL	BRL/BRL
Tech Lead (Machine Learning Expert)	1/2021	1/2024	9.000,00	BRL	BRL/BRL
Market 01: SP: Client manager 01	1/2021	1/2024	4.000,00	BRL	BRL/BRL
Market 01: SP: Warehouse employee 01	1/2021	1/2024	2.500,00	BRL	BRL/BRL
Market 01: SP: Warehouse rent	1/2021	1/2024	3.500,00	BRL	BRL/BRL
Market 01: SP: Warehouse monthly bills	1/2021	1/2024	500,00	BRL	BRL/BRL
Market 01: SP: Accounting	1/2021	1/2024	1.000,00	BRL	BRL/BRL
Market 01: SP: Marketing budget	1/2021	1/2024	4.000,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Client manager	1/2022	1/2024	5.000,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Warehouse staff	1/2022	1/2024	2.500,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Warehouse rent	1/2022	1/2024	3.500,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Warehouse monthly bills	1/2022	1/2024	500,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Accounting	1/2022	1/2024	1.000,00	BRL	BRL/BRL
Market 02: Belo Horizonte: Marketing budget	1/2022	1/2024	2.000,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Client manager	1/2022	1/2024	5.000,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Warehouse staff	1/2022	1/2024	2.500,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Warehouse rent	1/2022	1/2024	3.500,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Warehouse monthly bills	1/2022	1/2024	500,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Accounting	1/2022	1/2024	1.000,00	BRL	BRL/BRL
Market 03: Rio de Janeiro: Marketing budget	1/2022	1/2024	2.000,00	BRL	BRL/BRL

5. TERMINAL VALUE - WORKSHEET 1.9

At the end of the Business Plan's time horizon, the business operations will continue for two years with the same net earnings of the last year of the business plan's time horizon.

Business operations beyond the Business Plan's time horizon and final selling or liquidation of the business activity

Last year in the business plan's time horizon	2023	
Terminal year (at the end of this year, the business activity is sold or liquidated)	2025	It should be between 2023 and 2035
Number of years between the last year of the business plan's time horizon and the terminal year	2	
Net earnings in the last year of the business plan's time horizon, 2023	8.665.545	BRL
Constant annual growth rate of the net earnings in the period 2024-2025	0%	%
Selling price or liquidation value of the business activity at the end of 2025	0	BRL

Terminal value in EUR:

Business operations beyond the Business Plan's time horizon and final selling or liquidation of the business activity

Last year in the business plan's time horizon	2023	
Terminal year (at the end of this year, the business activity is sold or liquidated)	2025	It should be between 2023 and 2035
Number of years between the last year of the business plan's time horizon and the terminal year	2	
Net earnings in the last year of the business plan's time horizon, 2023	1.411.617	Euro
Constant annual growth rate of the net earnings in the period 2024-2025	0%	%
Selling price or liquidation value of the business activity at the end of 2025	0	Euro

6. FINANCIAL NEED – WORKSHEETS 1.1, 2.1, 3.10

Based on this data, Renova calculated the monthly-accumulated operating net cash flows, which show a financial need equal to 137.500 BRL or 22.398,75 EUR.

In BRL:

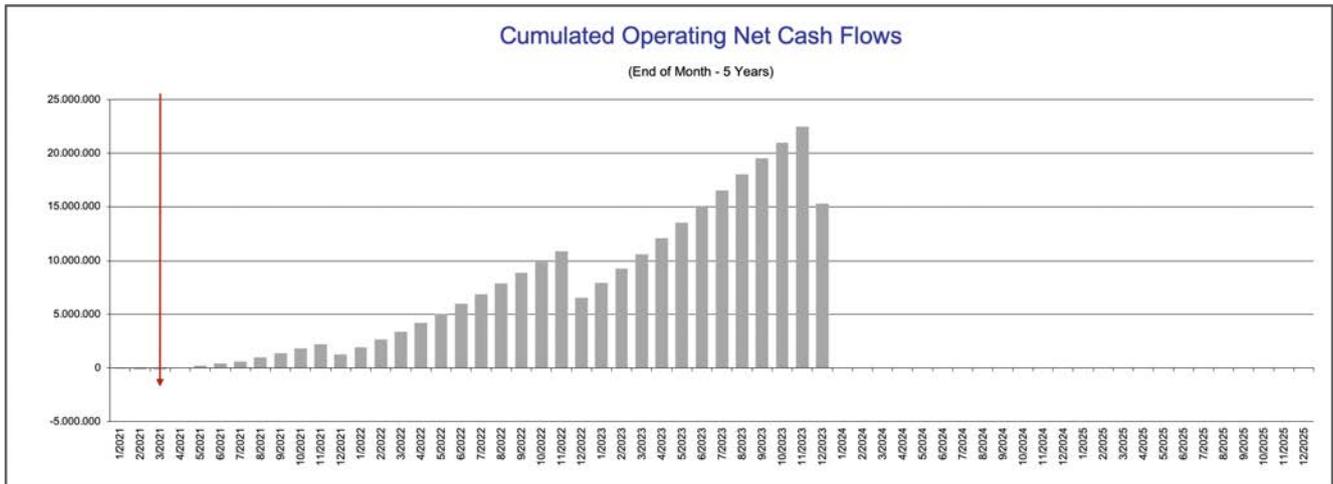
Financial Need		
Financial Need	BRL	-137.500,00

In EUR:

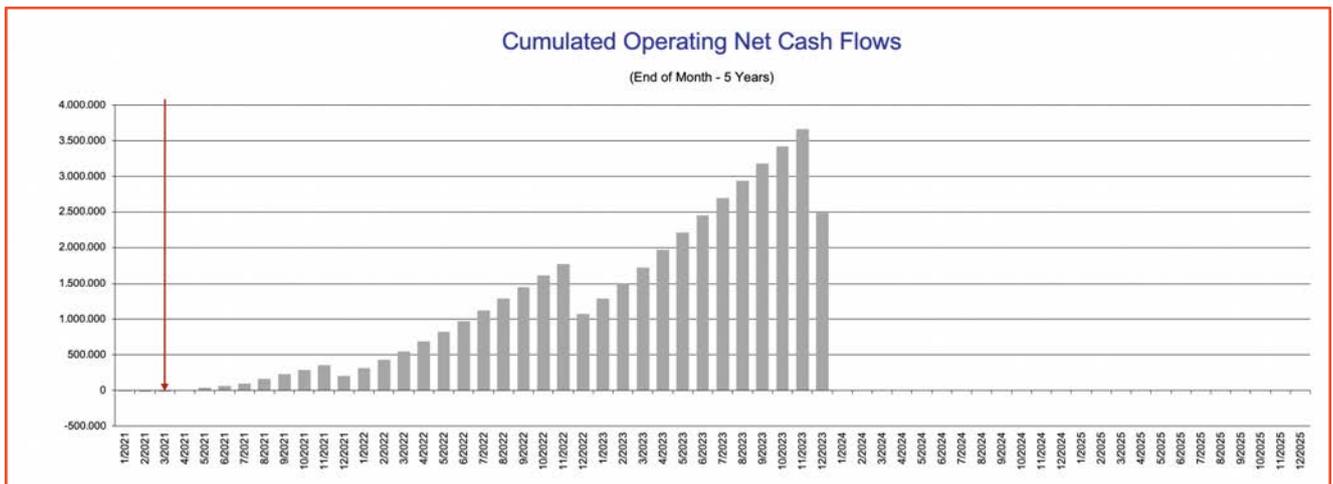
Financial Need		
Financial Need	EUR	-22.398,75

The financial need is also shown by the chart of the monthly-accumulated operating net cash flows (2.1 Cumulated Operating Net Cash Flows).

In BRL:



In EUR:



7. CAPITAL CONTRIBUTIONS - WORKSHEET 1.1

The shareholders (owners) of Renova will cover this financial need by investing an initial capital equal to 150.000 BRL or 24.435 EUR.

Capital contributions		Amount	Period
1 st Round - Initial capital	BRL	150.000,00	1/2021 T=0

In EUR:

Capital contributions		Amount	Period
1 st Round - Initial capital	EUR	24.435,00	1/2021 T=0

Renova will not resort to bank overdraft or purchase any property with a mortgage.

Debt	
Use of the Bank Overdraft?	No
Use of the Mortgage?	No

Thus, Renova will have a buffer of 12.500 BRL or 2.036,25 EUR (the Financial Need with Capital contributions is positive) for its operations.

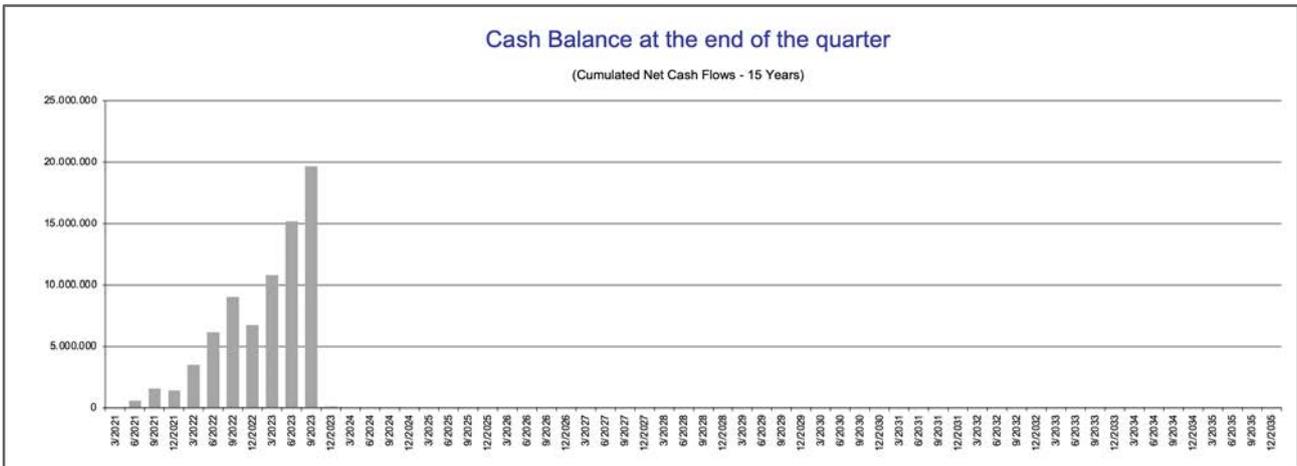
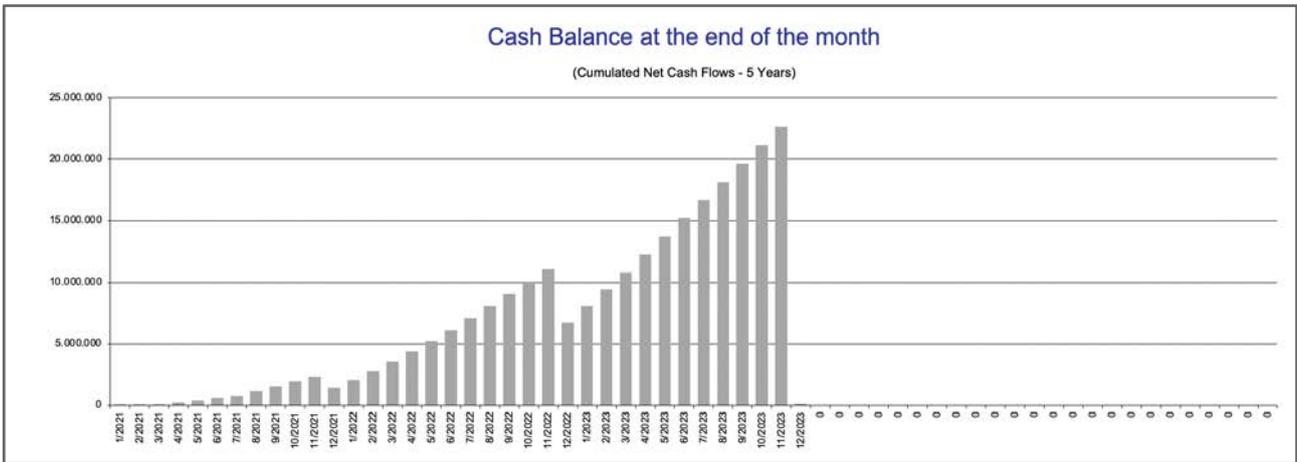
Financial Need		
Financial Need	BRL	-137.500,00
Financial Need with Capital contributions	BRL	12.500,00

In EUR:

Financial Need		
Financial Need	EUR	-22.398,75
Financial Need with Capital contributions	EUR	2.036,25

8. CASH BALANCE - WORKSHEET 2.5

In BRL:



9. NET EARNINGS - WORKSHEET 3.7

Based on this data, Renova expects to be able to achieve the following net earnings in BRL in the time horizon 2021-2023.

	2021	2022	2023
Taxable Revenues	4.906.440,00	18.166.833,69	28.223.348,04
Revenues	4.906.440,00	18.166.833,69	28.223.348,04
Costs and Expenses	-2.263.368,00	-7.459.344,45	-10.856.257,91
EBITDA	2.643.072,00	10.707.489,24	17.367.090,13
Depreciations & Amortizations	-12.000,00	-36.000,00	-36.000,00
EBIT	2.631.072,00	10.671.489,24	17.331.090,13
Interests	0,00	0,00	0,00
Earnings Before Taxes	2.631.072,00	10.671.489,24	17.331.090,13
Taxes	-1.315.536,00	-5.335.744,62	-8.665.545,07
Net Earnings	1.315.536,00	5.335.744,62	8.665.545,07

Based on this data, Renova expects to be able to achieve the following net earnings in EUR in the time horizon 2021-2023.

	2021	2022	2023
Taxable Revenues	799.259,02	2.959.377,08	4.597.583,25
Revenues	799.259,02	2.959.377,08	4.597.583,25
Costs and Expenses	-368.702,65	-1.215.127,21	-1.768.484,41
EBITDA	430.556,37	1.744.249,87	2.829.098,84
Depreciations & Amortizations	-1.954,80	-5.864,40	-5.864,40
EBIT	428.601,57	1.738.385,47	2.823.234,44
Interests	0,00	0,00	0,00
Earnings Before Taxes	428.601,57	1.738.385,47	2.823.234,44
Taxes	-214.300,79	-869.192,73	-1.411.617,22
Net Earnings	214.300,79	869.192,73	1.411.617,22

10. DIVIDENDS - WORKSHEET 1.8

All net earnings are distributed as dividends to the shareholders each year.

In BRL:

Dividend Policy						
Financial Need with Capital contributions and Debt				12.500,00		
Financial Need with Capital contributions, Debt and Dividends				12.500,00		
Year	Retained earnings at the end of the previous year	Net Earnings of the year	Max Dividend of the year	Dividend of the year	Payment Date	Retained earnings at the end of the year
2021		1.315.536,00	1.315.536,00	0,00	31/12/2021	1.315.536,00
2022	1.315.536,00	5.335.744,62	6.651.280,62	0,00	31/12/2022	6.651.280,62
2023	6.651.280,62	8.665.545,07	15.316.825,69	15.316.825,69	31/12/2023	0,00

In EUR:

Dividend Policy						
Financial Need with Capital contributions and Debt				2.036,25		
Financial Need with Capital contributions, Debt and Dividends				2.036,25		
Year	Retained earnings at the end of the previous year	Net Earnings of the year	Max Dividend of the year	Dividend of the year	Payment Date	Retained earnings at the end of the year
2021		214.300,79	214.300,79	0,00	31/12/2021	214.300,79
2022	214.300,79	869.192,73	1.083.493,52	0,00	31/12/2022	1.083.493,52
2023	1.083.493,52	1.411.617,22	2.495.110,74	2.495.110,74	31/12/2023	0,00

11. FINANCIAL STATEMENTS - WORKSHEET 2.2

Renova can thus estimate the financial statements of the business in BRL i.e. the balance sheet, income statement and statement of cash flows for the period 2021-2025.

Balance Sheet

	2021	2022	2023	2024	2025
LIABILITIES					
Capital	150.000	150.000	150.000	150.000	150.000
Retained Earnings	1.315.536	6.651.281	0	0	0
Equity	1.465.536	6.801.281	150.000	150.000	150.000
Bank Overdraft	0	0	0	0	0
Mortgage	0	0	0	0	0
Debt	0	0	0	0	0
TOTAL LIABILITIES	1.465.536	6.801.281	150.000	150.000	150.000
ASSETS					
Gross Fixed Assets (Plant & Equipment)	40.000	120.000	120.000	120.000	120.000
Accumulated Depreciation	-12.000	-48.000	-84.000	-112.000	-120.000
Net Fixed Assets	28.000	72.000	36.000	8.000	0
Bank & Cash	1.437.536	6.729.281	114.000	142.000	150.000
TOTAL ASSETS	1.465.536	6.801.281	150.000	150.000	150.000

Income Statement

	2021	2022	2023	2024	2025
Taxable Revenues	4.906.440	18.166.834	28.223.348		
REVENUES	4.906.440	18.166.834	28.223.348		
Costs and Expenses	-2.263.368	-7.459.344	-10.856.258		
EBITDA	2.643.072	10.707.489	17.367.090		
Depreciations & Amortizations	-12.000	-36.000	-36.000		
EBIT	2.631.072	10.671.489	17.331.090		
Interests	0	0	0		
EARNINGS BEFORE TAXES	2.631.072	10.671.489	17.331.090		
Taxes	-1.315.536	-5.335.745	-8.665.545		
NET EARNINGS	1.315.536	5.335.745	8.665.545	8.665.545	8.665.545

Cash Flow Statement

	2021	2022	2023	2024	2025
CASH FLOWS FROM OPERATING ACTIVITIES					
Net Earnings	1.315.536	5.335.745	8.665.545	8.665.545	8.665.545
Depreciations & Amortizations	12.000	36.000	36.000	28.000	8.000
Net cash provided by operating activities	1.327.536	5.371.745	8.701.545	8.693.545	8.673.545
CASH FLOWS FROM INVESTING ACTIVITIES					
Investments (Plant & Equipment)	-40.000	-80.000	0	0	0
Net cash provided by investing activities	-40.000	-80.000	0	0	0
CASH FLOWS FROM FINANCING ACTIVITIES					
Capital contributions	150.000	0	0	0	0
Dividends	0	0	-15.316.826	-8.665.545	-8.665.545
Bank Overdraft					
Mortgage					
Net cash provided by financing activities	150.000	0	-15.316.826	-8.665.545	-8.665.545
NET INCREASE IN CASH IN THE YEAR	1.437.536	5.291.745	-6.615.281	28.000	8.000
CASH AT THE END OF THE YEAR	1.437.536	6.729.281	114.000	142.000	150.000

Renova can thus estimate the financial statements of the business in EUR :

Balance Sheet					
	2021	2022	2023	2024	2025
LIABILITIES					
Capital	24.435	24.435	24.435	24.435	24.435
Retained Earnings	214.301	1.083.494	0	0	0
Equity	238.736	1.107.929	24.435	24.435	24.435
Bank Overdraft	0	0	0	0	0
Mortgage	0	0	0	0	0
Debt	0	0	0	0	0
TOTAL LIABILITIES	238.736	1.107.929	24.435	24.435	24.435
ASSETS					
Gross Fixed Assets (Plant & Equipment)	6.516	19.548	19.548	19.548	19.548
Accumulated Depreciation	-1.955	-7.819	-13.684	-18.245	-19.548
Net Fixed Assets	4.561	11.729	5.864	1.303	0
Bank & Cash	234.175	1.096.200	18.571	23.132	24.435
TOTAL ASSETS	238.736	1.107.929	24.435	24.435	24.435

Income Statement					
	2021	2022	2023	2024	2025
Taxable Revenues	799.259	2.959.377	4.597.583		
REVENUES	799.259	2.959.377	4.597.583		
Costs and Expenses	-368.703	-1.215.127	-1.768.484		
EBITDA	430.556	1.744.250	2.829.099		
Depreciations & Amortizations	-1.955	-5.864	-5.864		
EBIT	428.602	1.738.385	2.823.234		
Interests	0	0	0		
EARNINGS BEFORE TAXES	428.602	1.738.385	2.823.234		
Taxes	-214.301	-869.193	-1.411.617		
NET EARNINGS	214.301	869.193	1.411.617	1.411.617	1.411.617

Cash Flow Statement

	2021	2022	2023	2024	2025
CASH FLOWS FROM OPERATING ACTIVITIES					
Net Earnings	214.301	869.193	1.411.617	1.411.617	1.411.617
Depreciations & Amortizations	1.955	5.864	5.864	4.561	1.303
Net cash provided by operating activities	216.256	875.057	1.417.482	1.416.178	1.412.920
CASH FLOWS FROM INVESTING ACTIVITIES					
Investments (Plant & Equipment)	-6.516	-13.032	0	0	0
Net cash provided by investing activities	-6.516	-13.032	0	0	0
CASH FLOWS FROM FINANCING ACTIVITIES					
Capital contributions	24.435	0	0	0	0
Dividends	0	0	-2.495.111	-1.411.617	-1.411.617
Bank Overdraft					
Mortgage					
Net cash provided by financing activities	24.435	0	-2.495.111	-1.411.617	-1.411.617
NET INCREASE IN CASH IN THE YEAR	234.175	862.025	-1.077.629	4.561	1.303
CASH AT THE END OF THE YEAR	234.175	1.096.200	18.571	23.132	24.435

12. NET PRESENT VALUE AND INTERNAL RATE OF RETURN - WORKSHEET 2.2, 3.11

In BRL:

Financial Indicators

Discount Rate %

Shareholders' perspective

Shareholders' Net Cash Flows: capital contributions, dividends, and terminal value

NET PRESENT VALUE (NPV) 5.738.127 BRL [See details](#)
INTERNAL RATE OF RETURN (IRR) 388%

The NPV and IRR according to the Company's perspective are shown [Here](#)

	2021	2022	2023	2024	2025
RETURN ON EQUITY (ROE)	90%	78%	5777%	5777%	5777%
RETURN ON INVESTMENT (ROI)	90%	78%	5777%	5777%	5777%

In EUR:

Financial Indicators

Discount Rate %

Shareholders' perspective

Shareholders' Net Cash Flows: capital contributions, dividends, and terminal value

NET PRESENT VALUE (NPV) 934.741 EUR [See details](#)
INTERNAL RATE OF RETURN (IRR) 388%

The NPV and IRR according to the Company's perspective are shown [Here](#)

	2021	2022	2023	2024	2025
RETURN ON EQUITY (ROE)	90%	78%	5777%	5777%	5777%
RETURN ON INVESTMENT (ROI)	90%	78%	5777%	5777%	5777%

In BRL:

NPV & IRR

Shareholders' perspective & Company's perspective

Discount Rate	60%
Last year in T	2023
Terminal year	2025

Shareholders' perspective

	T=0	2021	2022	2023	2024	2025
Business Plan's time horizon						
Capital Contributions	-150.000					
Dividends				15.316.826		
Continuation of the business operations beyond the Business Plan's time horizon						
Dividends = Net Earnings					8.665.545	8.665.545
Selling price or liquidation value of the business activity at the end of 2025						
Terminal Value						
Shareholders' net cash flows	-150.000			15.316.826	8.665.545	8.665.545
t	0	1	2	3	4	5
Discount factor	1,00	0,63	0,39	0,24	0,15	0,10
Present Value	-150.000			3.739.459	1.322.257	826.411
NET PRESENT VALUE (NPV)		5.738.127				
INTERNAL RATE OF RETURN (IRR)		388%				

Company's perspective

	2021	2022	2023	2024	2025
Investments (Plant & Equipment)	-40.000,00	-80.000,00			
Net Earnings	1.315.536,00	5.335.744,62	8.665.545,07		
Net Earnings beyond the BP's time horizon				8.665.545,07	8.665.545,07
Depreciations & Amortizations	12.000,00	36.000,00	36.000,00		
Terminal value not considered					
Net Cash Flows	1.287.536	5.291.745	8.701.545	8.665.545	8.665.545
t	0	1	2	3	4
Discount factor	1,00	0,63	0,39	0,24	0,15
Present Value	1.287.536,00	3.307.340,39	3.399.041,04	2.115.611,59	1.322.257,24

In EUR:

NPV & IRR

Shareholders' perspective & Company's perspective

Discount Rate	60%
Last year in T	2023
Terminal year	2025

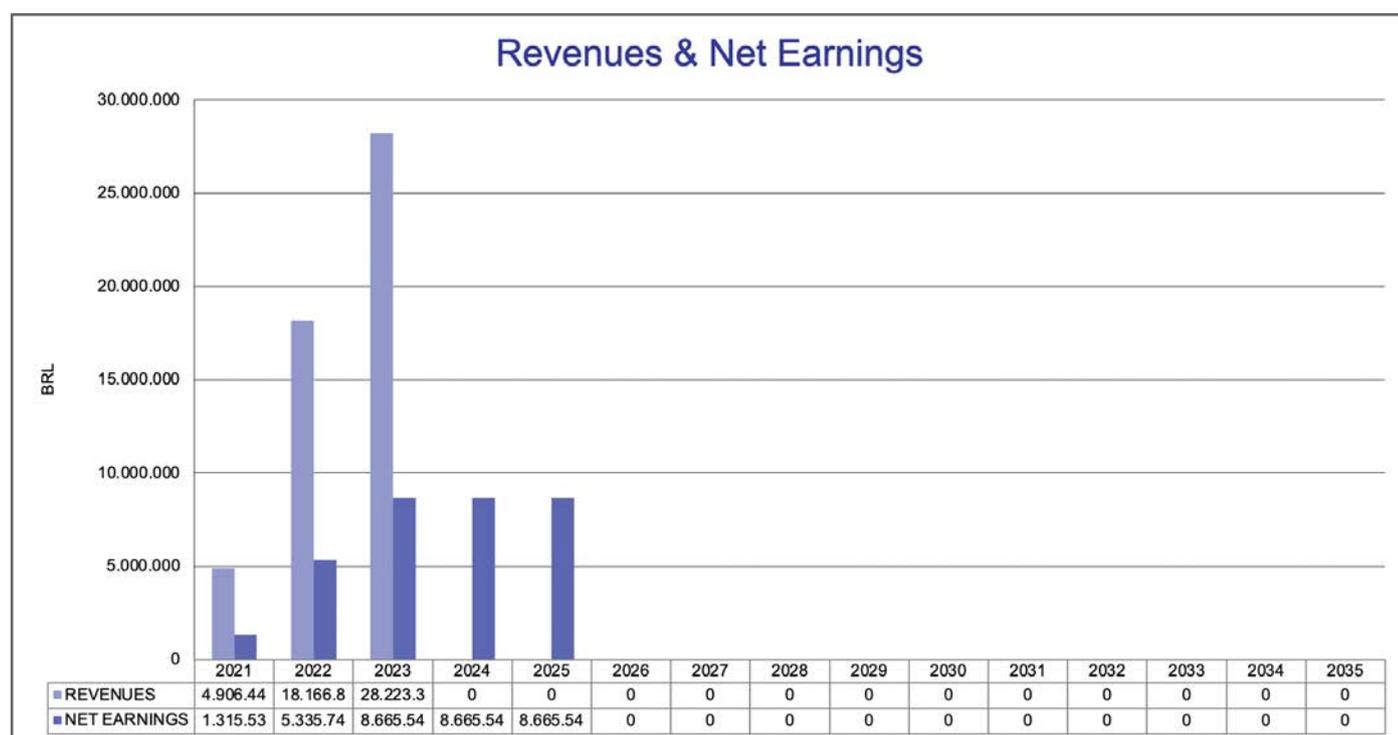
Shareholders' perspective

	T=0	2021	2022	2023	2024	2025
Business Plan's time horizon						
Capital Contributions	-24.435					
Dividends				2.495.111		
Continuation of the business operations beyond the Business Plan's time horizon						
Dividends = Net Earnings					1.411.617	1.411.617
Selling price or liquidation value of the business activity at the end of 2025						
Terminal Value						
Shareholders' net cash flows	-24.435			2.495.111	1.411.617	1.411.617
t	0	1	2	3	4	5
Discount factor	1,00	0,63	0,39	0,24	0,15	0,10
Present Value	-24.435			609.158	215.396	134.622
NET PRESENT VALUE (NPV)		934.741				
INTERNAL RATE OF RETURN (IRR)		388%				

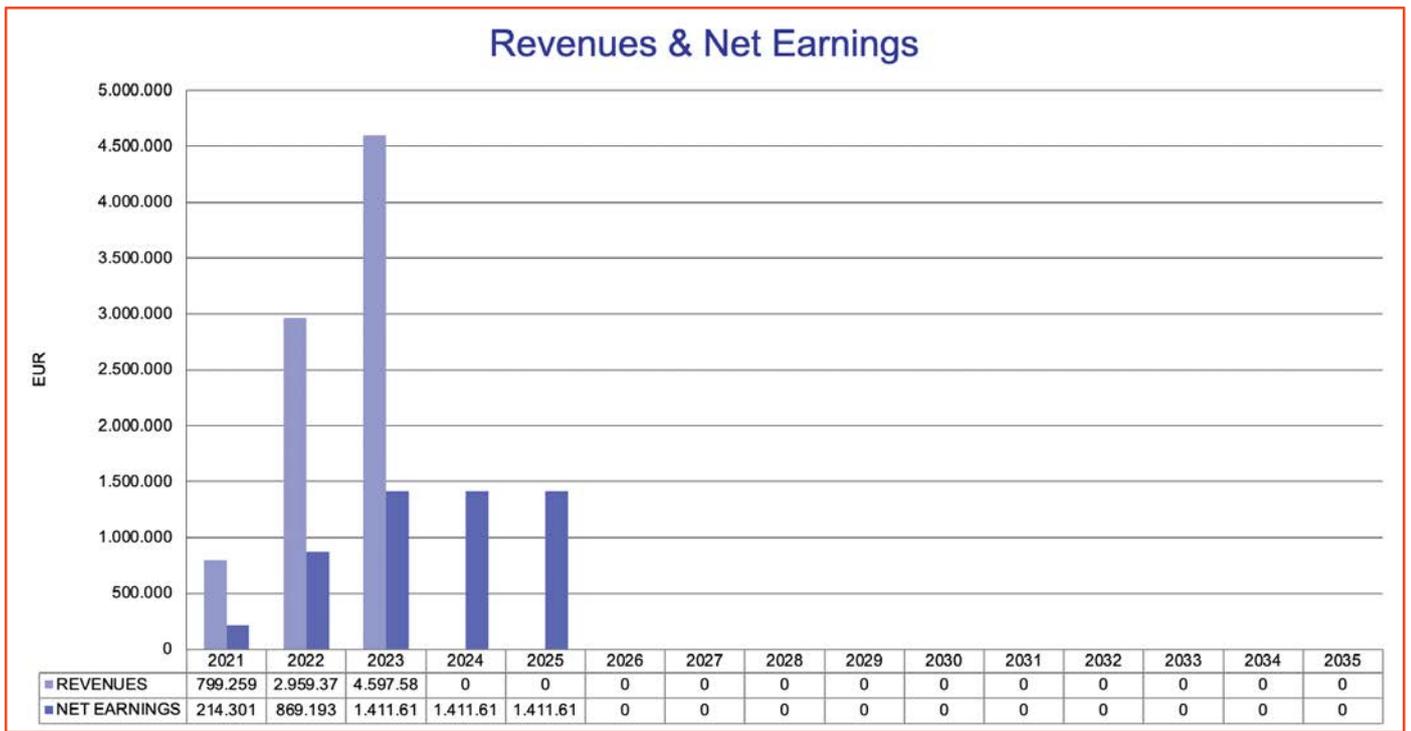
Company's perspective

	2021	2022	2023	2024	2025
Investments (Plant & Equipment)	-6.516,00	-13.032,00			
Net Earnings	214.300,79	869.192,73	1.411.617,22		
Net Earnings beyond the BP's time horizon				1.411.617,22	1.411.617,22
Depreciations & Amortizations	1.954,80	5.864,40	5.864,40		
Terminal value not considered					
Net Cash Flows	209.740	862.025	1.417.482	1.411.617	1.411.617
t	0	1	2	3	4
Discount factor	1,00	0,63	0,39	0,24	0,15
Present Value	209.739,59	538.765,71	553.703,76	344.633,11	215.395,69

In BRL:



In EUR:



13.APPENDIX

Supplementary material that informed the company’s financial and strategic decisions.

13. 1 BRAZIL’S ARCHITECTURE AND URBANISM ANNUAL REPORT 2019

The annual report made by CAU - Council of Architecture and Urbanism of Brazil - was the main data source used to inform Renova’s financial plan. A summary of the relevant information can be found in the following images. For the full report, please access the link:

<https://caubr.gov.br/wp-content/uploads/2019/06/ANUÁRIO-FINAL-WEB.pdf>

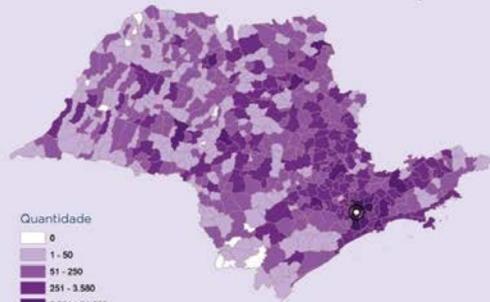
Market 01: Sao Paulo Metropolitan Area

6.4 SÃO PAULO



387.594

ARCHITECTURAL
ACTIVITIES IN THE
STATE OF SAO PAULO



Quantidade

- 0
- 1 - 50
- 51 - 250
- 251 - 3.580
- 3.581 - 21.625
- 21.626 - 130.0

© São Paulo

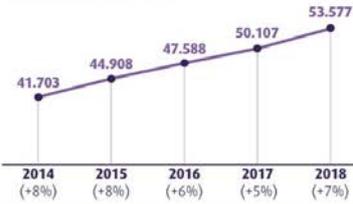
Fonte: IGEO-CAU/BR.

51%

OF ARCHITECTURAL ACTIVITIES
CONCENTRATED IN THE METROPOLITAN
AREA OF SAO PAULO CITY

7%

MORE ARCHITECTS AND URBAN
PLANNERS IN 2018



53.577

ARCHITECTS
AND URBANISTS

ATIVIDADE	2018	CRESCIMENTO
Projeto	167.362	6%
Execução	141.310	13%
Gestão	20.887	1%
Meio Ambiente	3.818	-7%
Atividades Especiais	50.338	10%
Ensino e Pesquisa	91	78%
Eng. Segurança do Trabalho	3.788	28%
TOTAL	387.594	9%

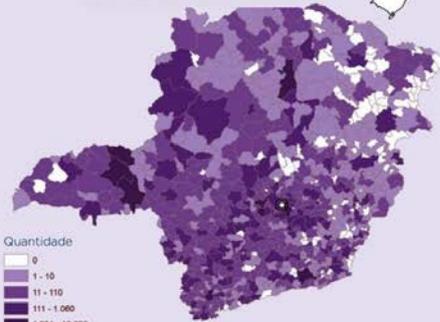
7.2
PROJECTS/YEAR
STATE AVERAGE

Market 02: Belo Horizonte Metropolitan Area

6.2 MINAS GERAIS



73.243
ARCHITECTURAL
ACTIVITIES IN THE
STATE

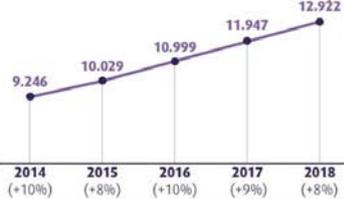


29% OF ARCHITECTURAL ACTIVITIES
CONCENTRATED IN THE METROPOLITAN
AREA OF BELO HORIZONTE

Fonte: IGEO-CAU/BR

8%

MORE ARCHITECTS AND URBAN
PLANNERS IN 2018



12.922
ARCHITECTS
AND URBANISTS

ATIVIDADE	2018	CRESCIMENTO
Projeto	49.593	2%
Execução	14.576	-2%
Gestão	1.026	1%
Meio Ambiente	1.624	29%
Atividades Especiais	6.170	18%
Ensino e Pesquisa	8	-50%
Eng. Segurança do Trabalho	246	37%
TOTAL	73.243	3%

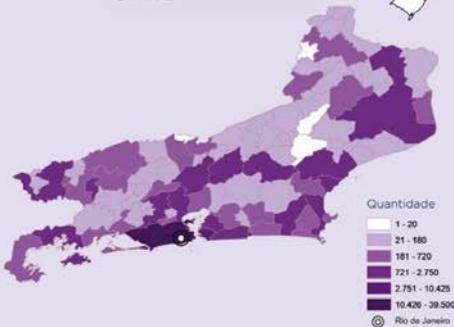
5.7
PROJECTS/YEAR
STATE AVERAGE

Market 03: Rio de Janeiro Metropolitan Area

6.3 RIO DE JANEIRO



72.254
ARCHITECTURAL
ACTIVITIES IN THE
STATE

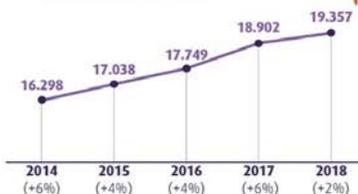


71% OF ARCHITECTURAL ACTIVITIES
CONCENTRATED IN THE METROPOLITAN
AREA OF RIO DE JANEIRO CITY

Fonte: IGEO-CAU/BR

2%

MORE ARCHITECTS AND URBAN
PLANNERS IN 2018



19.357
ARCHITECTS
AND URBANISTS

ATIVIDADE	2018	CRESCIMENTO
Projeto	35.163	9%
Execução	25.433	8%
Gestão	1.572	-4%
Meio Ambiente	480	34%
Atividades Especiais	8.529	21%
Ensino e Pesquisa	23	215%
Eng. Segurança do Trabalho	1054	18%
TOTAL	72.254	10%

3.7
PROJECTS/YEAR
STATE AVERAGE

13. 2 HOW RENOVA ESTIMATED THE AVERAGE PRICE OF ITS PRODUCT

To calculate the average product price, Team 01 made a list of all products Renova will trade on its platform, searching for the average market price of each item and estimating a selling price of 50% of the average market price. Based on the

estimated demand (price divided by 1=high, 2=medium or 3=low), it was possible to calculate the average price of a product sold by Renova at \$551,48 BRL - which for the purposes of this plan was rounded to \$550 BRL.

Category	Product	Type	Average market price	Estimated selling price (shipping excluded)	average of 100m2	Estimated demand	
Flooring	Wooden parquet floor	m2	R\$150.00	R\$75.00	7500	2	\$3,750.00
	Solid wood flooring	m2	R\$250.00	R\$125.00	12500	2	\$6,250.00
	Engineered wood flooring	m2	R\$100.00	R\$50.00	5000	2	\$2,500.00
Light fixtures	Pendant light	unity	R\$350.00	R\$175.00		2	\$87.50
	Chandelier	unity	R\$800.00	R\$400.00		3	\$133.33
	Light switches	unity	R\$20.00	R\$10.00		3	\$3.33
	Sconces	unity	R\$200.00	R\$100.00		1	\$100.00
	Ceiling lamps	unity	R\$150.00	R\$75.00		1	\$75.00
Bath fixtures	Grab bars	unity	R\$50.00	R\$25.00		2	\$12.50
	Toilet paper holder	unity	R\$40.00	R\$20.00		2	\$10.00
	Faucets	unity	R\$400.00	R\$200.00		2	\$100.00
	Sinks	unity	R\$225.00	R\$112.50		2	\$56.25
	Toilets	unity	R\$200.00	R\$100.00		2	\$50.00
	Shower box	kit	R\$1,500.00	R\$750.00		2	\$375.00
	Bathtub	unity	R\$2,500.00	R\$1,250.00		2	\$625.00
Kitchen fixtures	Stone countertops	m2	R\$750.00	R\$375.00		3	\$125.00
	Kitchen faucets	unity	R\$250.00	R\$125.00		2	\$62.50
	Metal sinks	unity	R\$600.00	R\$300.00		2	\$150.00
	Kitchen sinks	unity	R\$350.00	R\$175.00		2	\$87.50
General fixtures	Wood door	unity	R\$400.00	R\$200.00		2	\$100.00
	Metal door	unity	R\$700.00	R\$350.00		2	\$175.00
	Wood window	unity	R\$700.00	R\$350.00		2	\$175.00
	Metal window	unity	R\$500.00	R\$250.00		2	\$125.00
	Wood gates	unity	R\$3,000.00	R\$1,500.00		2	\$750.00
	Metal gates	unity	R\$3,500.00	R\$1,750.00		2	\$875.00
	Metal grids	m2	R\$400.00	R\$200.00		2	\$100.00
	Mirrors	unity	R\$300.00	R\$150.00		1	\$150.00
	Brackets	unity	R\$60.00	R\$30.00		2	\$15.00
	Handrails	m2	R\$80.00	R\$40.00		3	\$13.33
Hardware	Knobs	unity	R\$50.00	R\$25.00		1	\$25.00
	Handles	unity	R\$80.00	R\$40.00		1	\$40.00
Number of items		31		R\$9,327.00			\$17,095.96
Average product price							___ \$551.48