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**Case Study: Brazil's first
wood-to-energy project finance –
Recommendations on how to
structure your Project to secure
funding in Brazil**

About CELA



• CELA – Clean Energy Latin America is a São Paulo-based financial advisory firm supporting renewable energy companies and investors in Latin America with:

- Equity fundraising
- Project Finance
- Mergers & Acquisitions
- Financial advisory for power auctions
- Development of Greenfield investment projects

CELA specializes in renewable energy: bioenergy, wind, solar, small hydro, energy efficiency and waste-to-energy

Agenda



- 1) Renewable Energy Market in Brazil
- 2) Case Study: Aratinga Project
- 3) Tips on how to structure your project
- 4) Mitigating the main risks to secure funding
- 5) Conclusions

1) RENEWABLE ENERGY MARKET IN BRAZIL



- Note the relevance of the Industrial and Transportation sectors together in the Energy Matrix
- This case study explores the energy consumption of the Industrial sector

Table: 2013 Energy Final Consumption by Sector

IDENTIFICATION (in 10 ³ toe)	2013	
FINAL CONSUMPTION	260.249	100,0%
FINAL CONSUMPTION NON-ENERGETIC	16.338	6,3%
FINAL CONSUMPTION ENERGETIC	243.911	93,7%
INDUSTRIAL	88.295	33,9%
TRANSPORTATION	83.153	32,0%
ENERGETIC SECTOR	26.139	10,0%
RESIDENTIAL	23.730	9,1%
AGRICULTURE AND LIVESTOCK	10.662	4,1%
COMERCIAL	8.064	3,1%
PUBLIC	3.868	1,5%

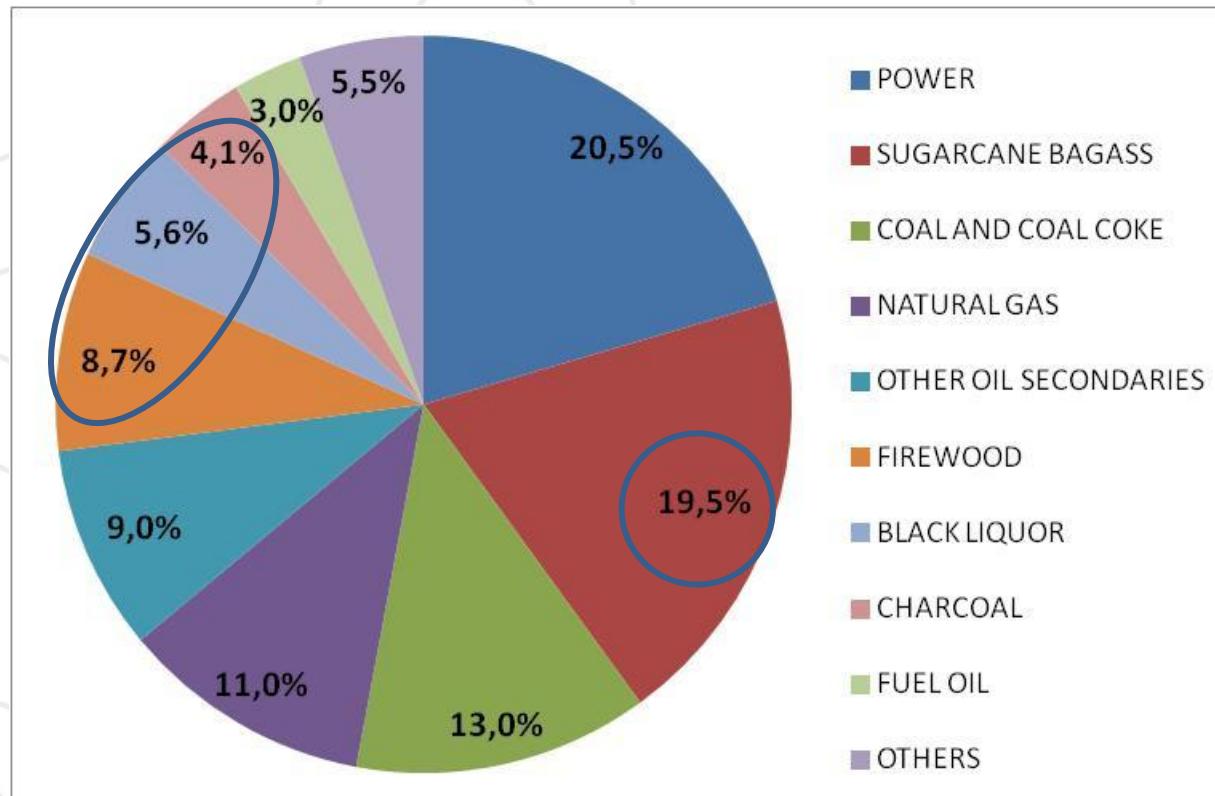
Source: Balanço Energético Nacional 2014, EPE, MME, p.28

1) RENEWABLE ENERGY MARKET IN BRAZIL



- Note how predominant Thermal Energy is over Power
- Also note the high participation of bioenergy, including in the production of Power

Chart: 2013 Energy Final Consumption of the Industrial Sector by Source

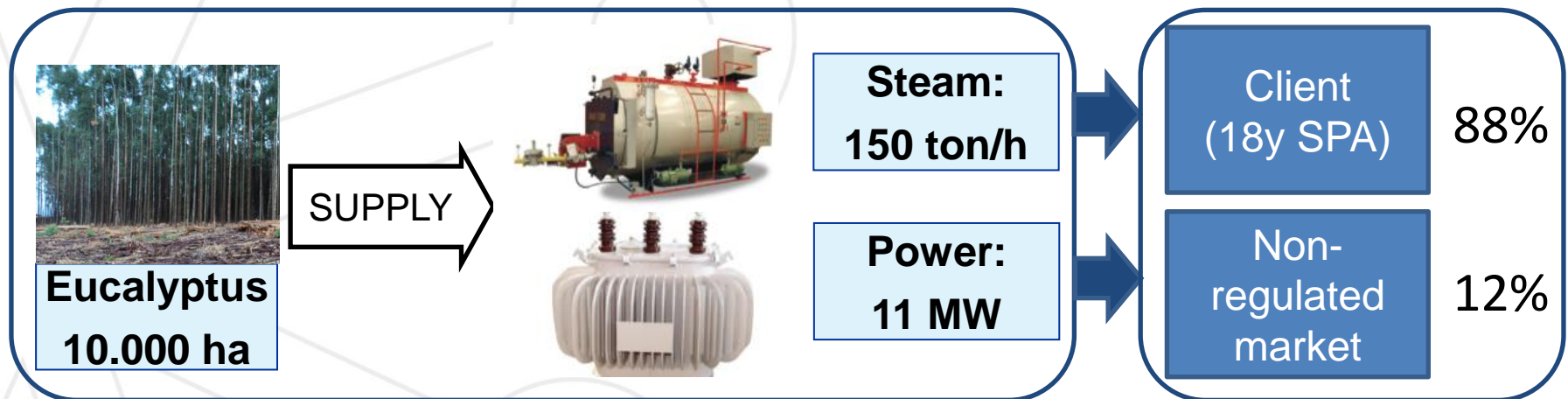


2) CASE STUDY – ARATINGA PROJECT



- The partial replacement of the natural gas-fired steam supply of 2 petrochemical plants in the state of Bahia by wood-fired steam

➤ Total investment: R\$265.4 MM



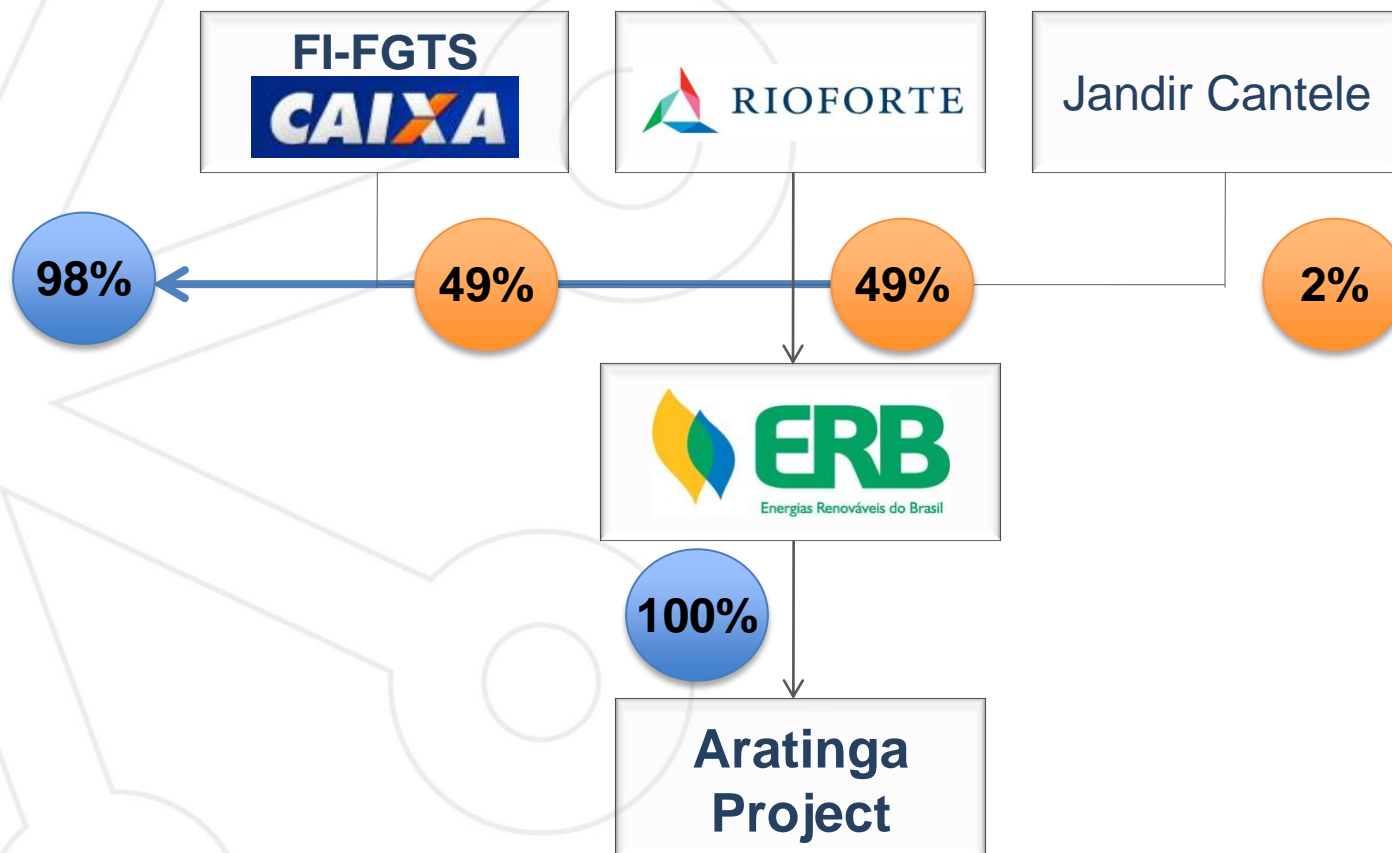
- Aratinga is responsible by planting its own biomass supply
- Started operations in the beginning of 2014

2) CASE STUDY – ARATINGA PROJECT



- Project Sponsors

- Shareholding structure in 2010

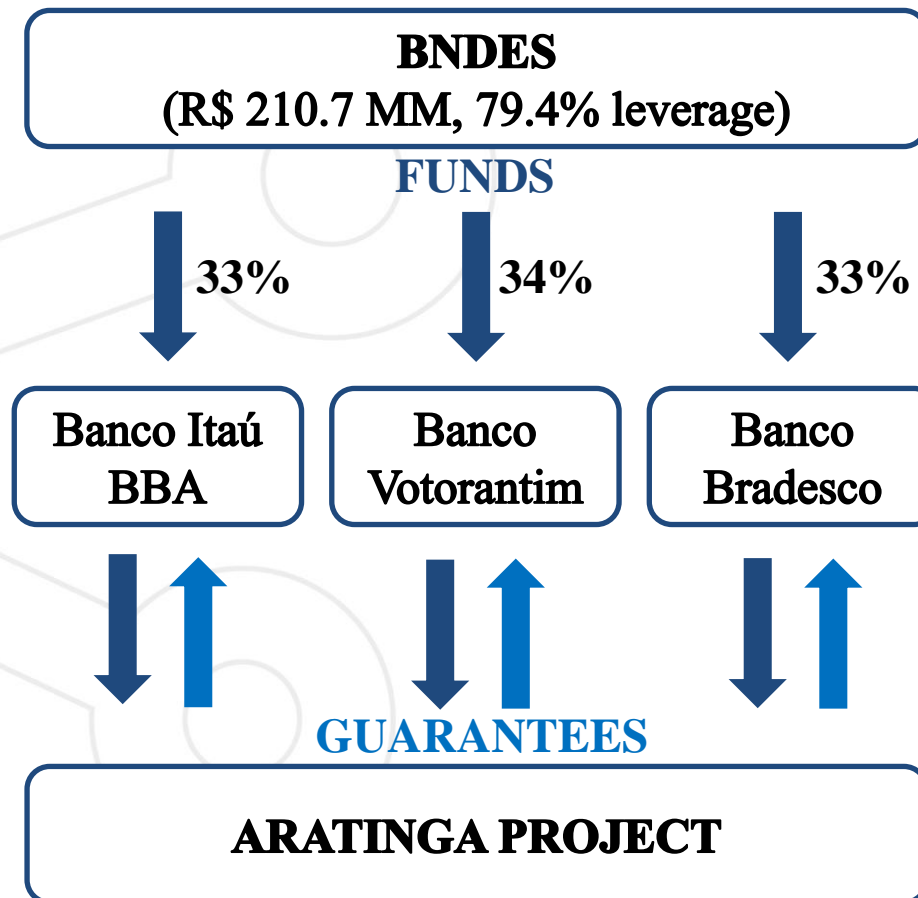


2) CASE STUDY – ARATINGA PROJECT



- Loan structure

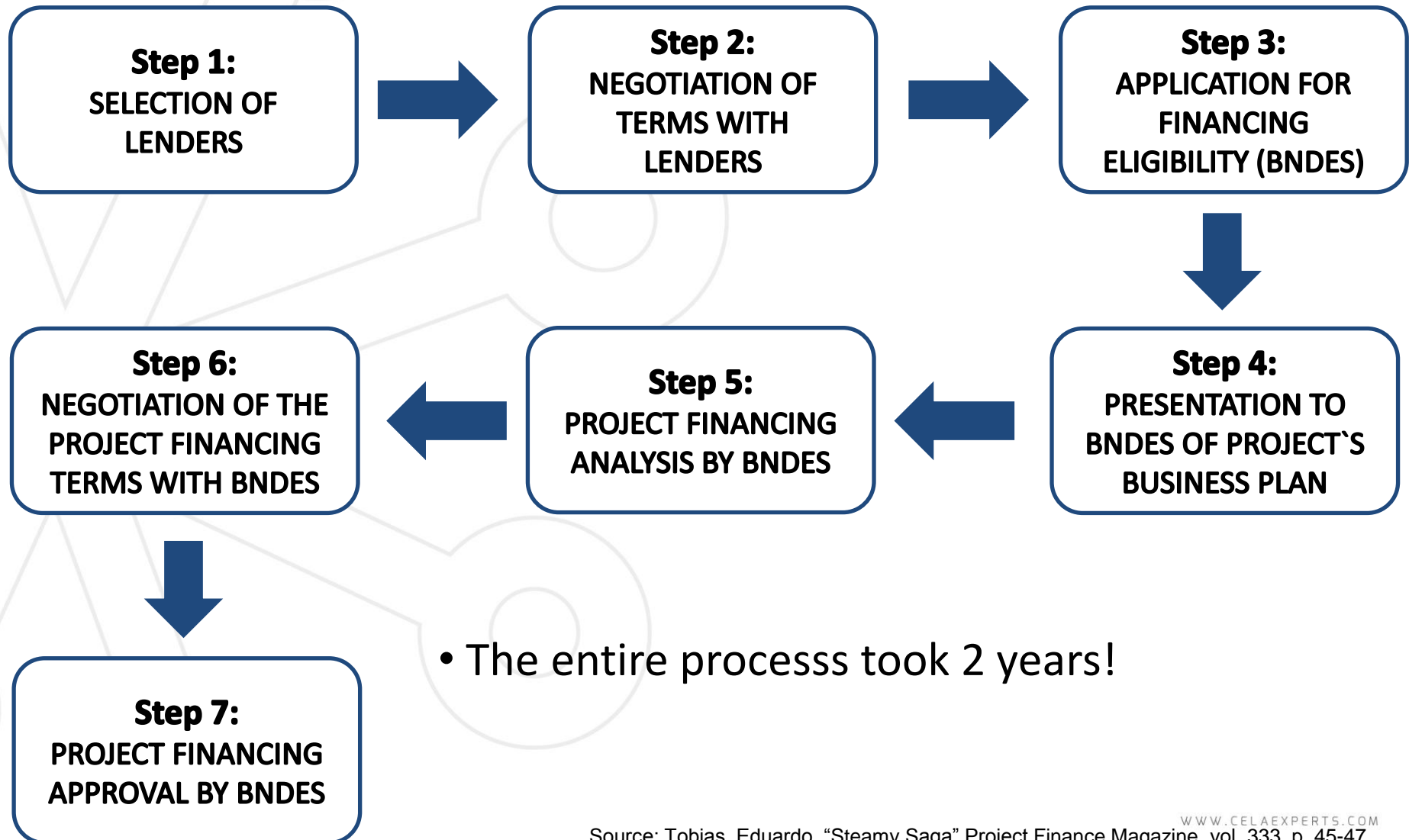
- Indirect loan by BNDES (*Repasse*) in a Project Finance structure



2) CASE STUDY – ARATINGA PROJECT



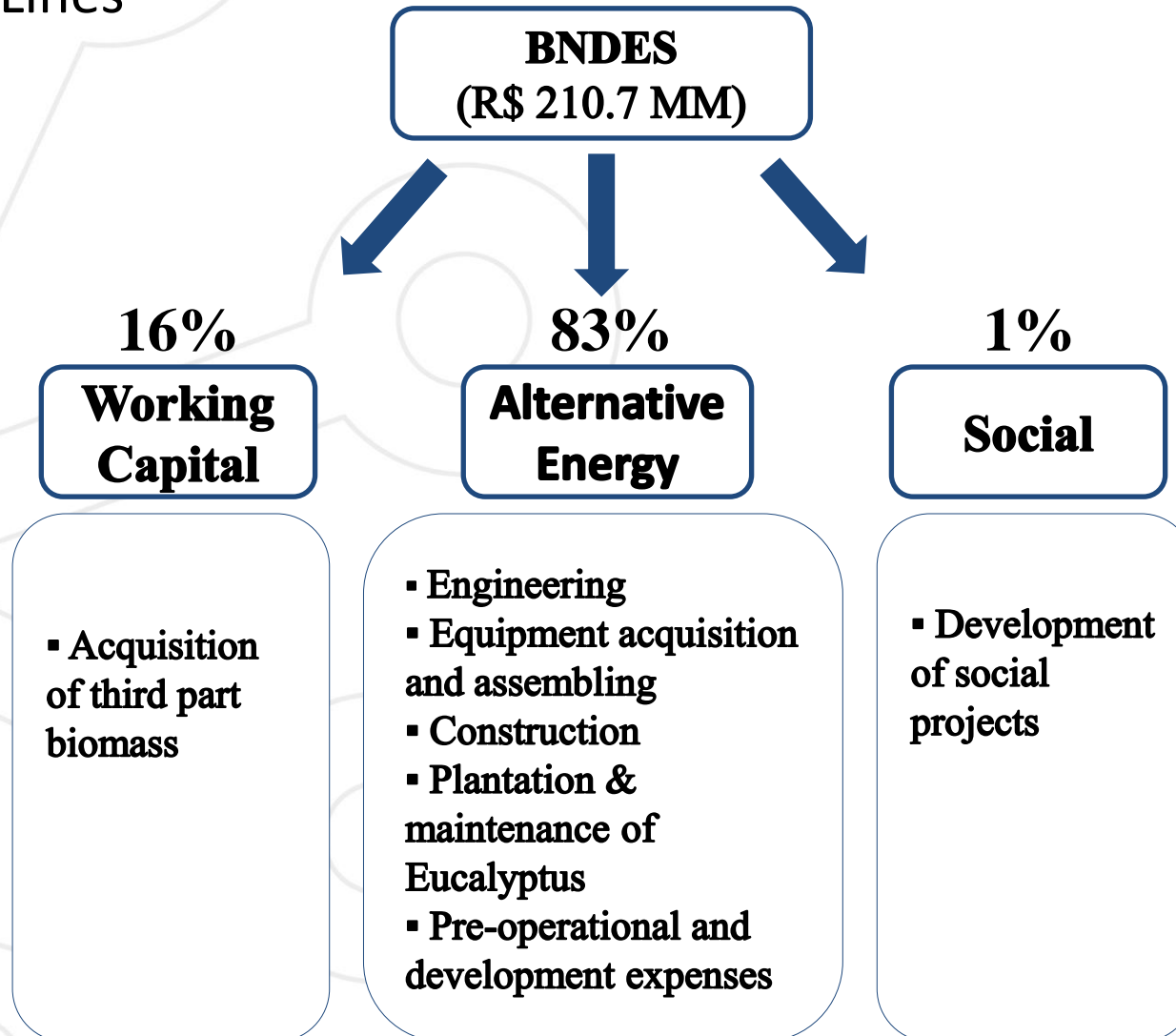
- Main steps to structure the loan as a *Repassé*



2) CASE STUDY – ARATINGA PROJECT



- Credit Lines



2) CASE STUDY – ARATINGA PROJECT



- Main challenges:

- This was the first time BNDES and the banks financed a wood-to-energy project
- This was a greenfield project that involves agricultural investments as well as industrial
- The main revenue comes from steam rather than from power
- The project is supplied by wood rather than by sugarcane bagass, unlike most Brazilian projects
- This was the first project of a pre-operational sponsor recently founded, and
- The sponsor's shareholders could not put a corporate guarantee in place, so an Equity Support Agreement was negotiated instead

3) TIPS ON HOW TO STRUCTURE YOUR PROJECT

- We believe the way to secure funding for your Project is by the development and implementation of an effective risk management strategy
- How?



- The goal is to (i) allocate risks to those participants that are more capable to manage them; and (ii) to define mitigation measures in order to balance each participant's risk-return equation to the risks they are taking
- Contracts are the main instruments to allocate and mitigate risks

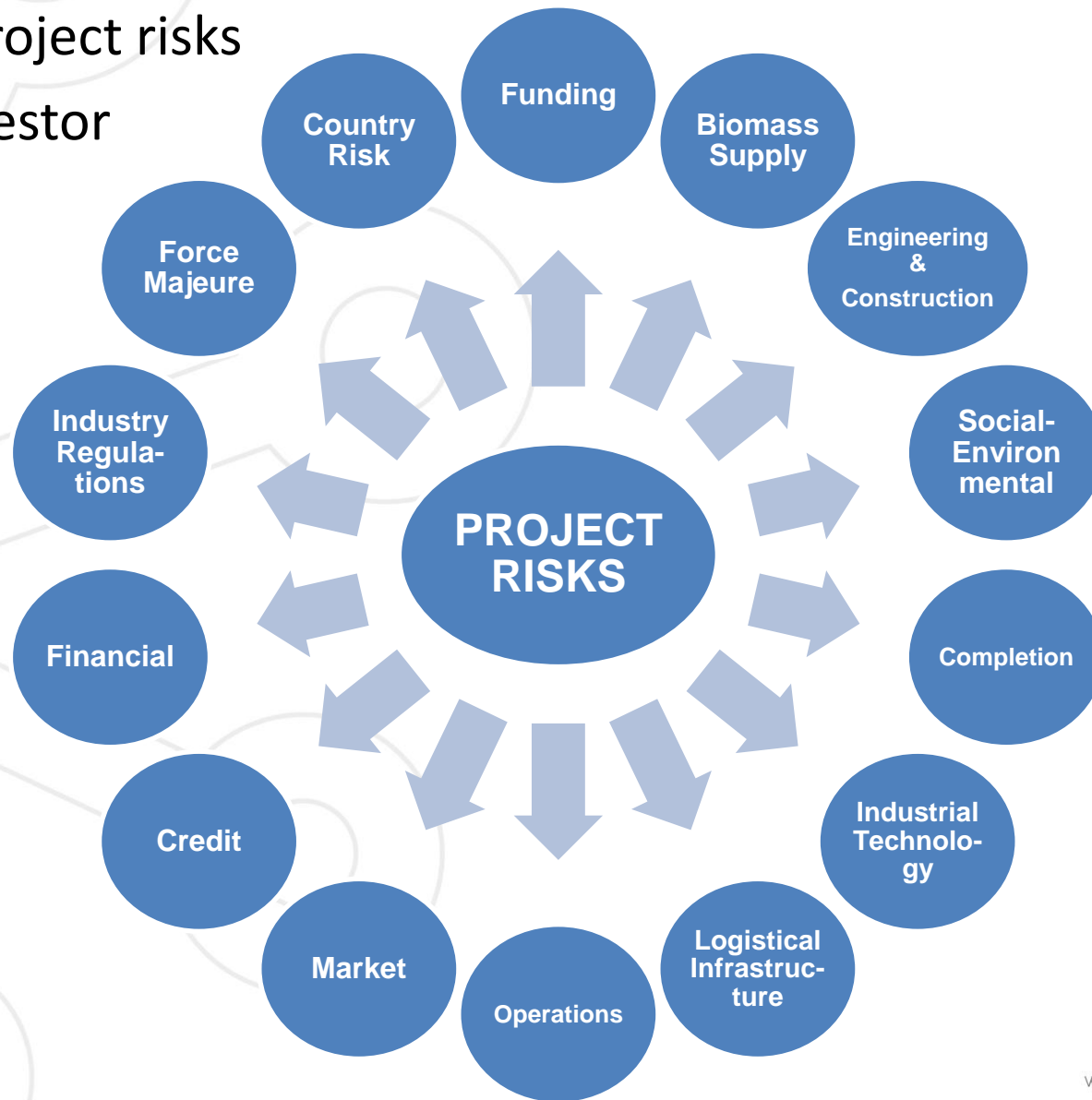
3) TIPS ON HOW TO STRUCTURE YOUR PROJECT

- Lender's risk concerns are very similar to the investor's. The difference is the level of tolerance to each risk
- Therefore, the company's focus should be to manage project risks to protect their investment first, and to secure financing second
- For that matter it is imperative a pragmatic and non-biased investment analysis by the entrepreneur/investor
- At the end of the day, there will have to be a balanced risk-return equation for the investor as well as for the lenders
- In its investment analysis the entrepreneur/investor should identify and consider the following project risks:

3) TIPS ON HOW TO STRUCTURE YOUR PROJECT



- The 14 project risks for the investor



4) MITIGATING MAIN RISKS TO SECURE FUNDING

• Based on our previous structuring experience in the Aratinga Project as well as a few other bioenergy project financing transactions, the most relevant risks to work on are:

- I) Market and Credit
- II) Biomass Supply
- III) Engineering & Construction and Completion
- IV) Funding (credit approval)

5) CONCLUSIONS



- In a well structured project lender's concerns should not be a surprise!
- For that matter it is imperative a pragmatic and non-biased investment analysis by the entrepreneur/investor
- **3 Key Takeaways:**
 - The company's focus should be to manage project risks to protect their investment first, and to secure financing second;
 - Choose a financial advisor with relevant background in bioenergy to guide you through this process from an early stage
 - Remember that contracts are the main instruments to allocate and mitigate risks

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ANY QUESTIONS?
PERGUNTAS?