



# Irani Papel e Embalagem S.A.

## Investor Presentation

**RANI3**

B3 LISTED NM

Porto Alegre, February 2023





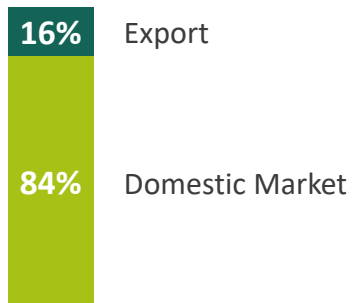
We are the only Brazilian pure player in the packaging segment listed on B3's *Novo Mercado*

**8** decades  
of experience

more than **60** environmental awards at regional and national levels

more than **2,400** employees

**BRL 1.7 billion**  
Net Revenue 2022



**BRL 11.8 mm**  
Average Daily Trading Volume (ADTV 20)  
average of the last 20 days,  
as of Dec 31<sup>th</sup>, 2022

**294**  
thousand tons of paper for  
sustainable packaging  
produced 2022



Sustainable Packaging  
(Corrugated boxes)



Sustainable Packaging Paper  
(Paper)



Sustainable Resins  
(Gum Rosin and Turpentine)

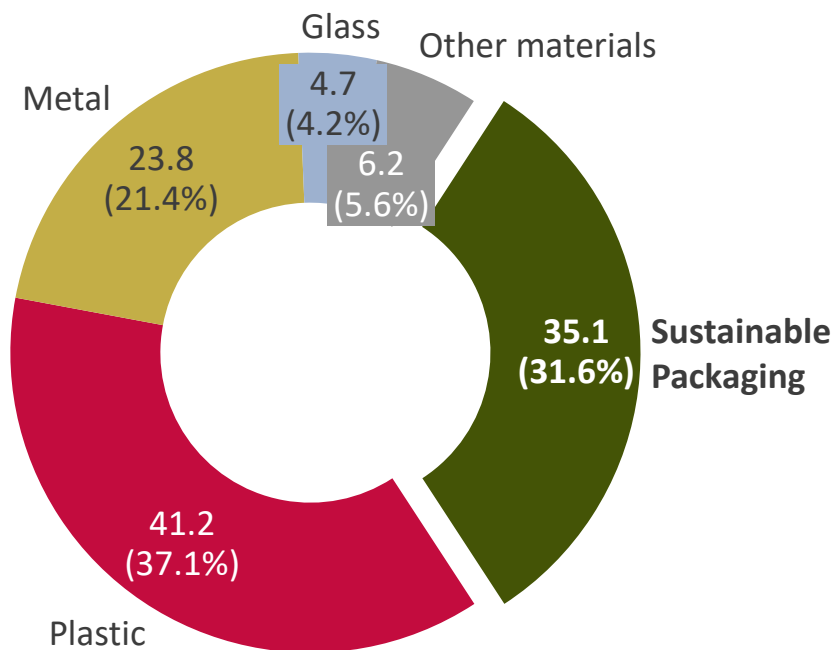


— The packaging market in Brazil totaled BRL 110.6 billion in 2021 and BRL 26.6 billion in the segments where Irani operates

### Brazilian packaging market - 2021

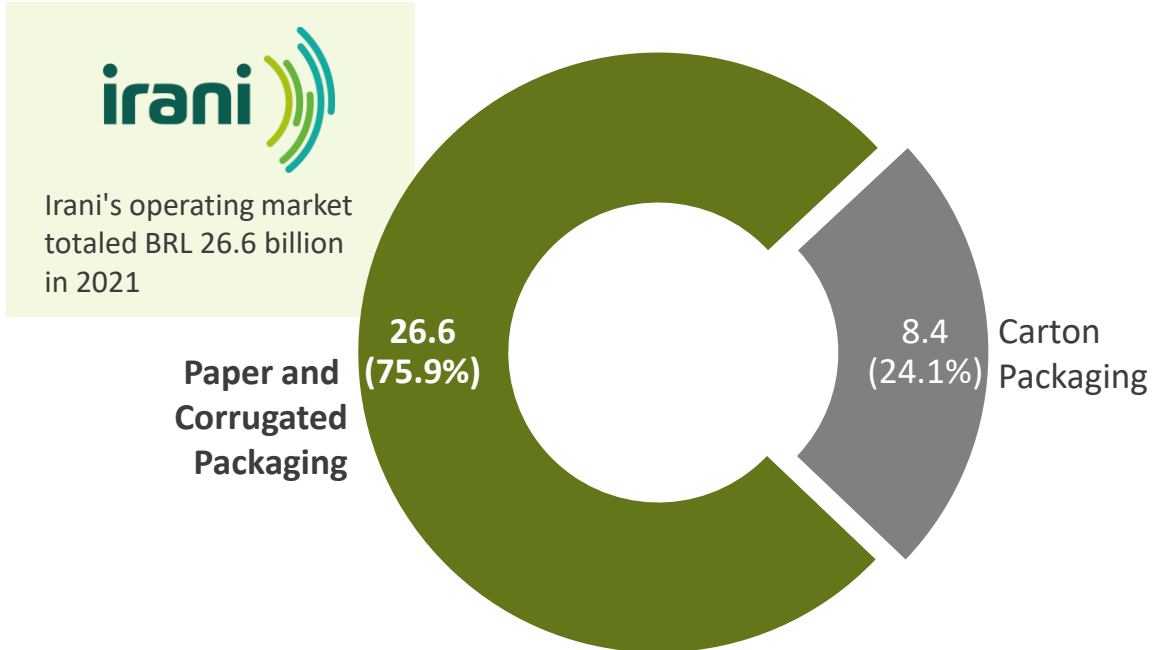
BRL billion

Total: BRL 110.9 billion



### Brazilian sustainable packaging market – 2021

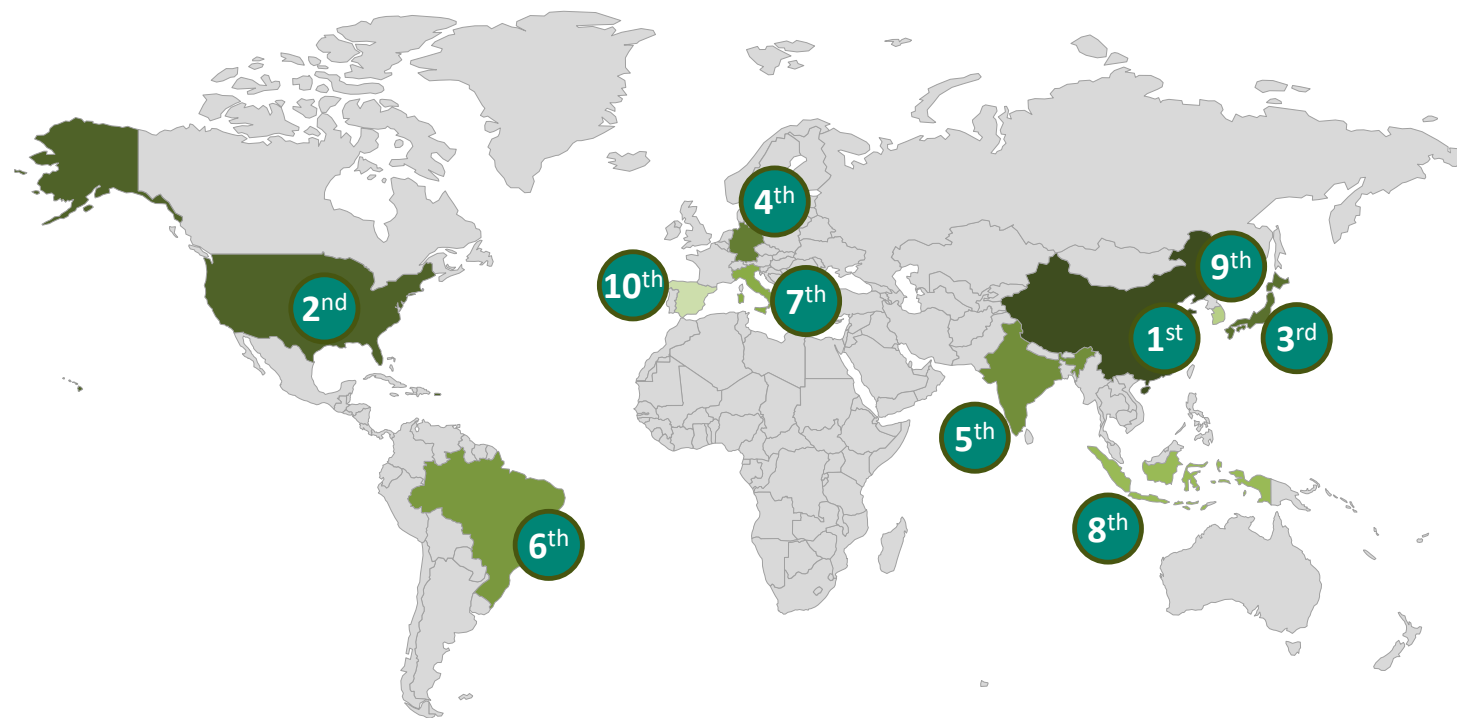
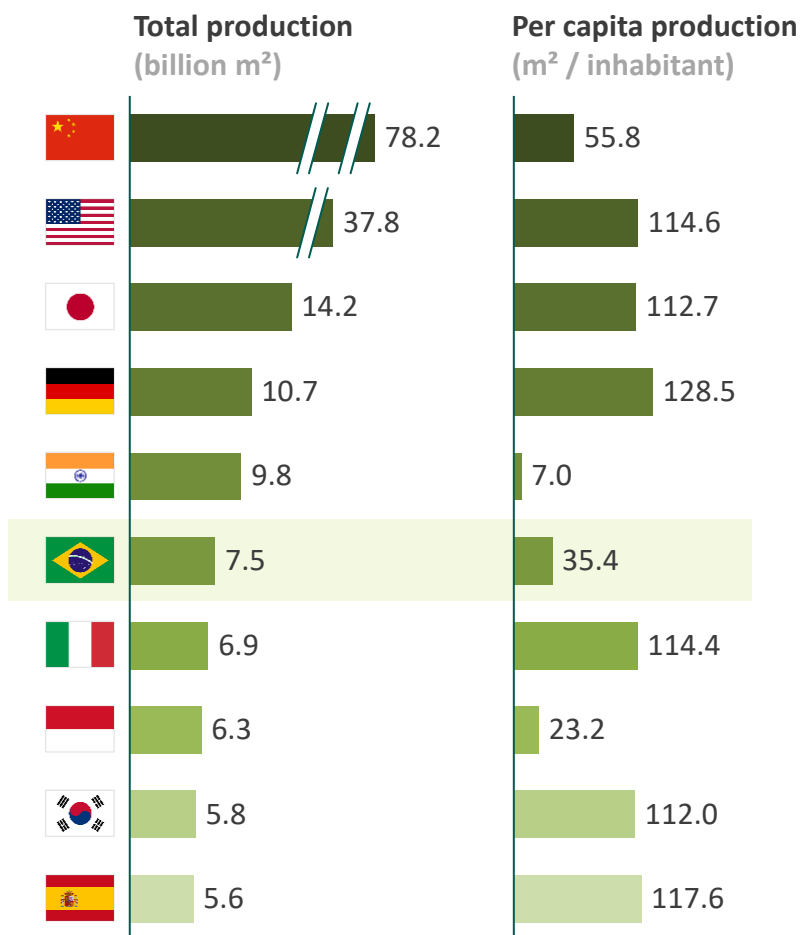
BRL billion





— Brazil is the 6<sup>th</sup> largest producer of corrugated packaging in the world and still has great potential to increase per capita production

### Infographic of the 10 largest countries that produce sustainable corrugated packaging – 2020



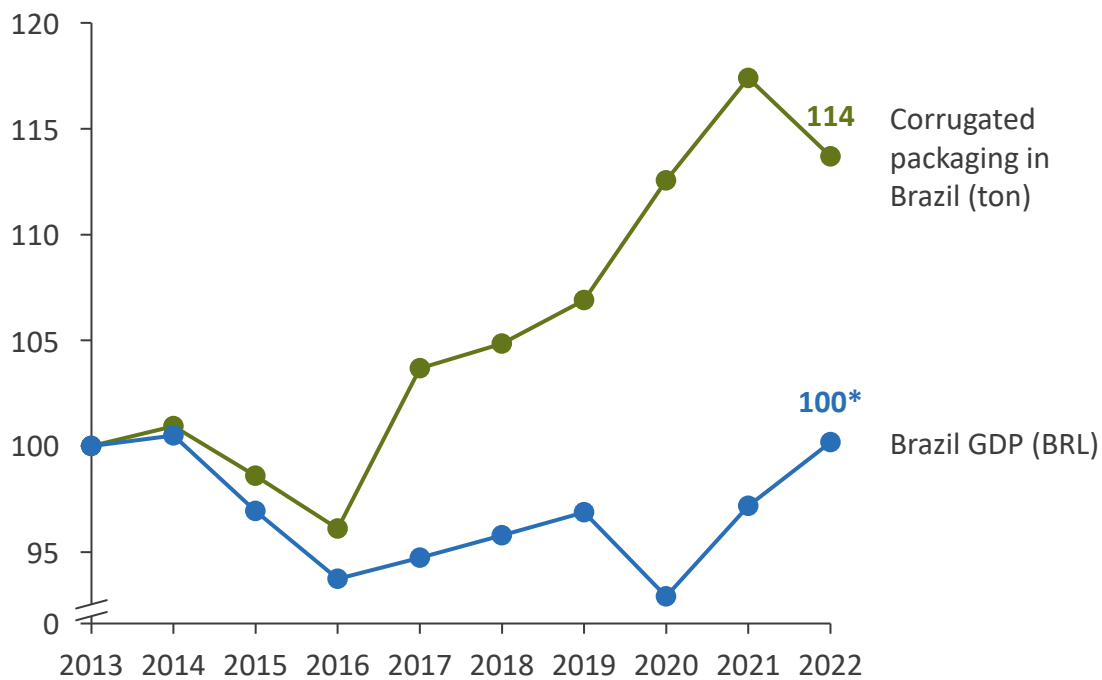
Note: corrugated packaging is a regional consumer product, typically within a radius of 300 km.  
Source: International Corrugated Case Association ICCA.






# The sustainable packaging market is driven by secular trends of sustainability and e-commerce growth

## Comparison between sustainable packaging vs GDP

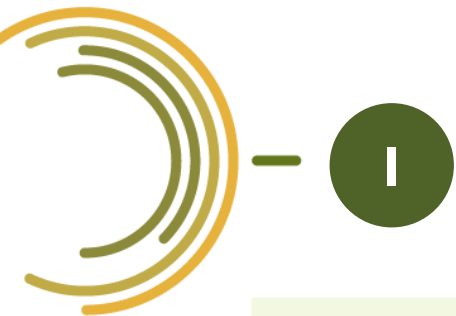
Evolution in base 100



## Sustainable packaging market drivers






- I** Paper-based are the best solutions for packaging 
- II** Demand for sustainability: substitution of plastic for paper 
- III** Growth of e-commerce and delivery 

\*2022 PIB was estimated with 3,1% growth in relation to 2021, official data was not published by IBGE yet.



## Fiber packaging is superior to alternatives

- ✓ Fiber packaging is renewable and easily recyclable, as well as it does not produce harmful gases during the recycling process.
- ✓ It is biodegradable and results in less environmental risk when discarded.
- ✓ It is economical, resistant and hygienic that protects the consumer's health.

	 <b>Paper Fiber</b>	 <b>Plastic</b>	 <b>Styrofoam</b>	 <b>Metal</b>	 <b>Glass</b>
<b>Cost effectiveness</b>					
<b>Protection quality</b>					
<b>Recycling rate</b>	86% <sup>1</sup>	18% <sup>2</sup>			
<b>Biodegradability</b>					
<b>CO2 emission</b>					

(1) Associação Brasileira de Embalagens de Papel – Brazilian Paper Packaging Association (Empapel). (2) OCDE Environment Policy Paper no. 12.

Note: internal assessment.



## Growing demand for sustainability and substitution of plastics

- ✓ Consumers want more than just quality, often looking for products and brands that align with their personal values.
- ✓ People strongly believe that companies should help improve the environment.



Example: Louis Vuitton has committed to replacing 100% of its single-use plastic consumption with sustainable packaging by 2030.



Example: Heinz announced in 2022 that it is developing paper fiber-based packaging for its products.



## The rise of e-commerce and delivery are an important driver of sustainable packaging growth

**7x**

E-commerce consumes up to 7x more corrugated boxes per dollar of sales, compared to traditional retail.

**80%**

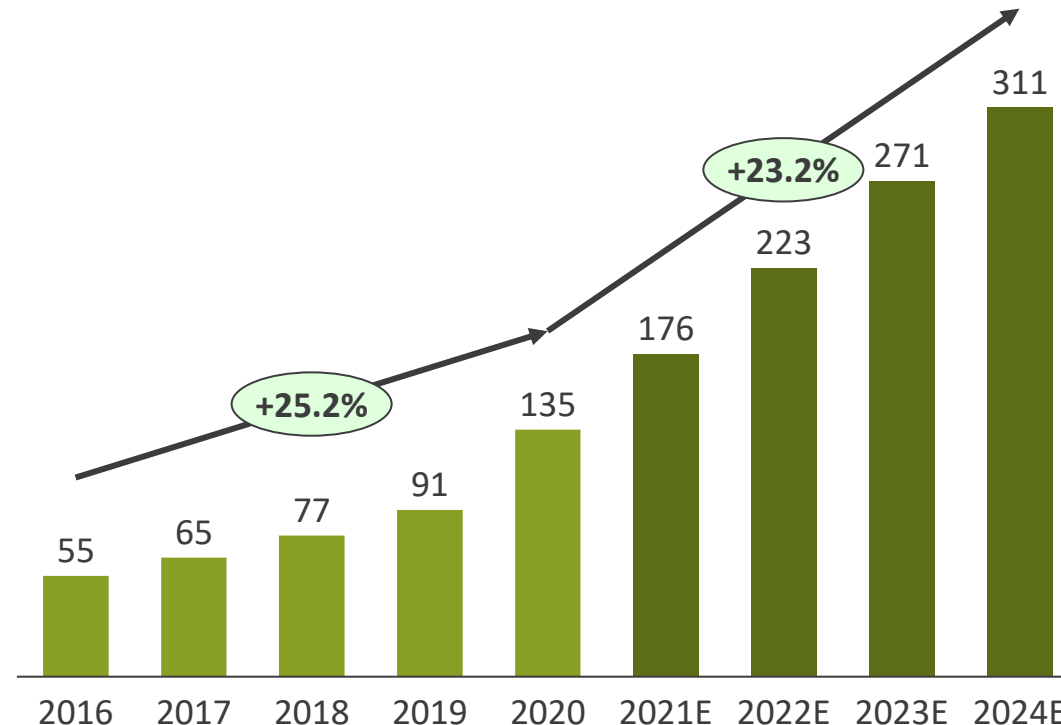
Sustainable corrugated packaging represents 80% of packaging used in e-commerce.

**+23.2% p.y.**

Brazilian e-commerce is forecast to grow at a CAGR of 23.2% in the period from 2020 to 2024.

### E-commerce sales in Brazil

BRL Billion



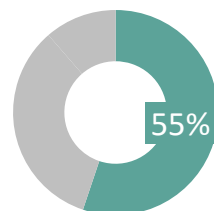
90% of Irani's revenue comes from the sustainable packaging market



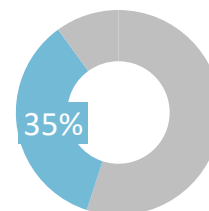
Sustainable Packaging  
(Corrugated boxes)

Breakdown of Net Revenue 2022

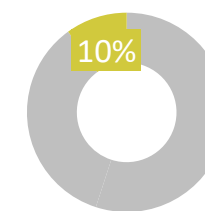
DOMESTIC MARKET  
EXPORT



Sustainable Packaging Paper  
(Paper)










Sustainable Resins

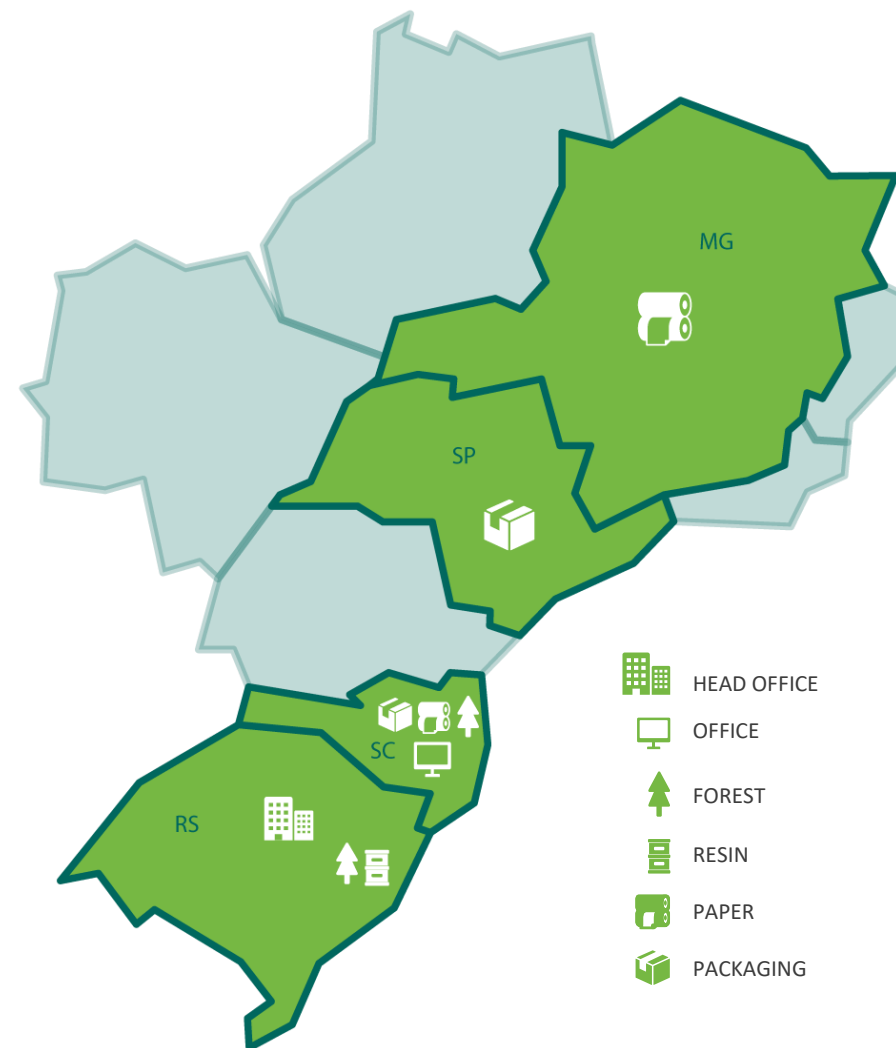




## Mills and facilities are strategically located in the main regions of Brazil, in terms of GDP and forest base

 Forests	Land Area	Focus
SC   Santa Catarina	27,947 ha	Pulp, market timber and energy generated from biomass
RS   Rio Grande do Sul	5,952 ha	Resin and market timber
<b>Total</b>	<b>33,899 ha</b>	

	Total Production LTM 3Q22	Softwood Pulp	Sustainable Packaging Paper (Paper)	Sustainable Packaging (Corrugated Containerboard)	Sustainable Resin
 MG   Santa Luzia	-	-	55k tons	-	-
 SP   Indaiatuba	-	-	-	86k tons	-
 SC   Vargem Bonita	89k tons	-	-	-	-
 SC   Vargem Bonita	-	-	238k tons	-	-
 SC   Vargem Bonita	-	-	-	73k tons	-
 RS   Balneário Pinhal	-	-	-	-	13.7k tons
<b>Total</b>	<b>88k tons</b>	<b>88k tons</b>	<b>293k tons</b>	<b>159k tons</b>	<b>13.7k tons</b>





## — Main competitive advantages

1

**The only pure player in the packaging segment in the Brazilian stock market**

The only Brazilian publicly held company focused on sustainable packaging, in addition to being listed on B3's *Novo Mercado*

2

**Circular economy business model**

Complete insertion in a circular economy.

3

**Own production of electricity and own forestry base**

Guarantee of supply and stability in costs, resulting from our own production of electricity and our own forestry base.

4

**Innovation at the heart of strategy**

Pioneering in several innovation initiatives, reflecting in competitive differentials.

5

**Excellence in the environmental, social and governance dimensions**

Pursuit of excellence in all ESG spheres.



1a

## Irani is the only Brazilian publicly held company focused on the sustainable packaging market

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The company does not sell pulp and is not subject to commodity pricing cycles.

The company has all its operations integrated with the production of sustainable packaging.

It is positioned in the value chain of the Brazilian market, meeting the growth of e-commerce, delivery services and retail activities, consumer goods and food.

### Markets that drive the company





1b

The sustainable packaging pricing is not cyclical, and it is very resilient to turbulent economic times.

**FRED** — Producer Price Index by Industry: Folding Paperboard Box Manufacturing: Folding Paperboard Boxes, Packaging, and Packaging Components



Shaded areas indicate U.S. recessions.

Source: U.S. Bureau of Labor Statistics

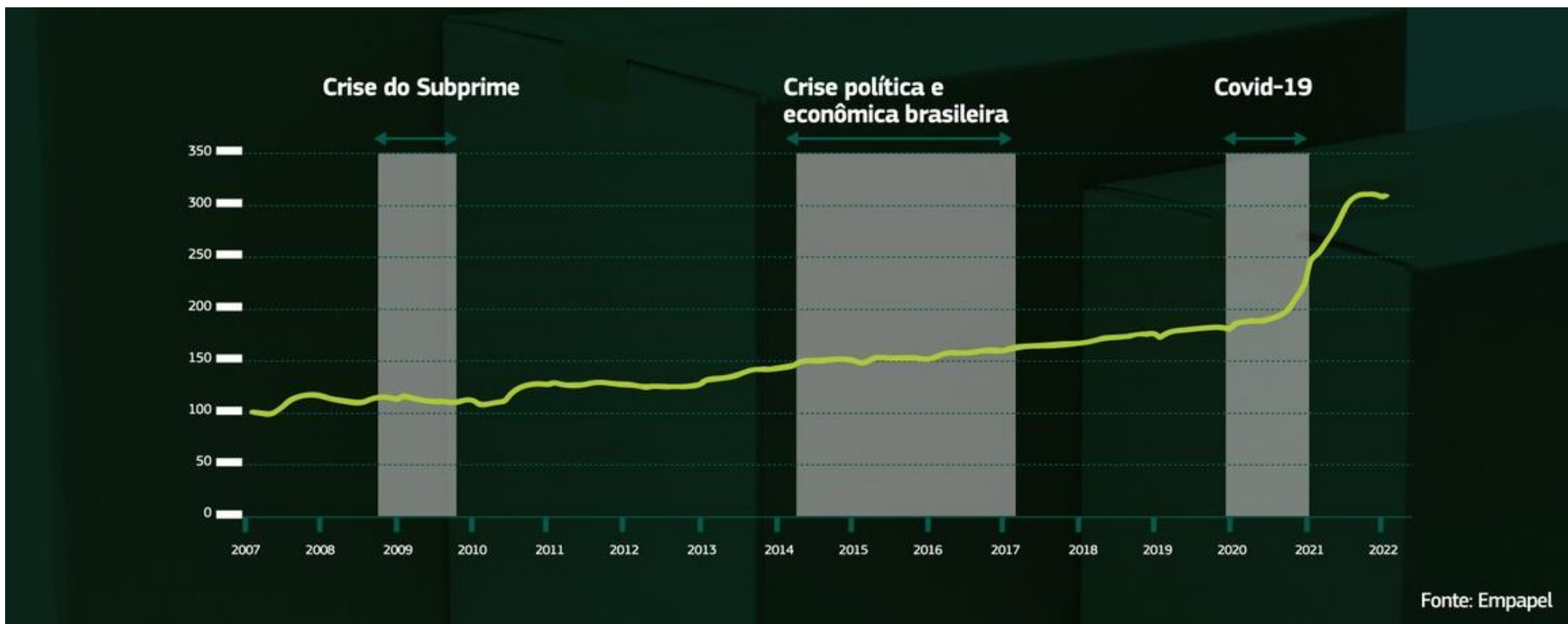
fred.stlouisfed.org



1c

The sustainable packaging pricing is not cyclical, and it is very resilient to turbulent economic times.

Corrugated paper boxes average prices in Brazil (BRL/ton) – jan/2007 base 100



Note: In Brazil, average prices only started to be measured and published from Jan/2007, by the sector association (Empapel)

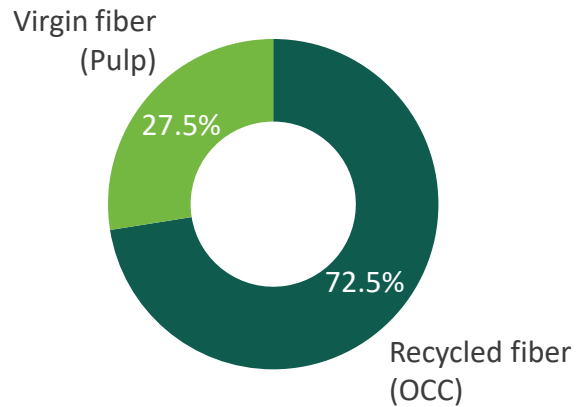
2

## The company's business is fully immersed in the secular trend of circular economy

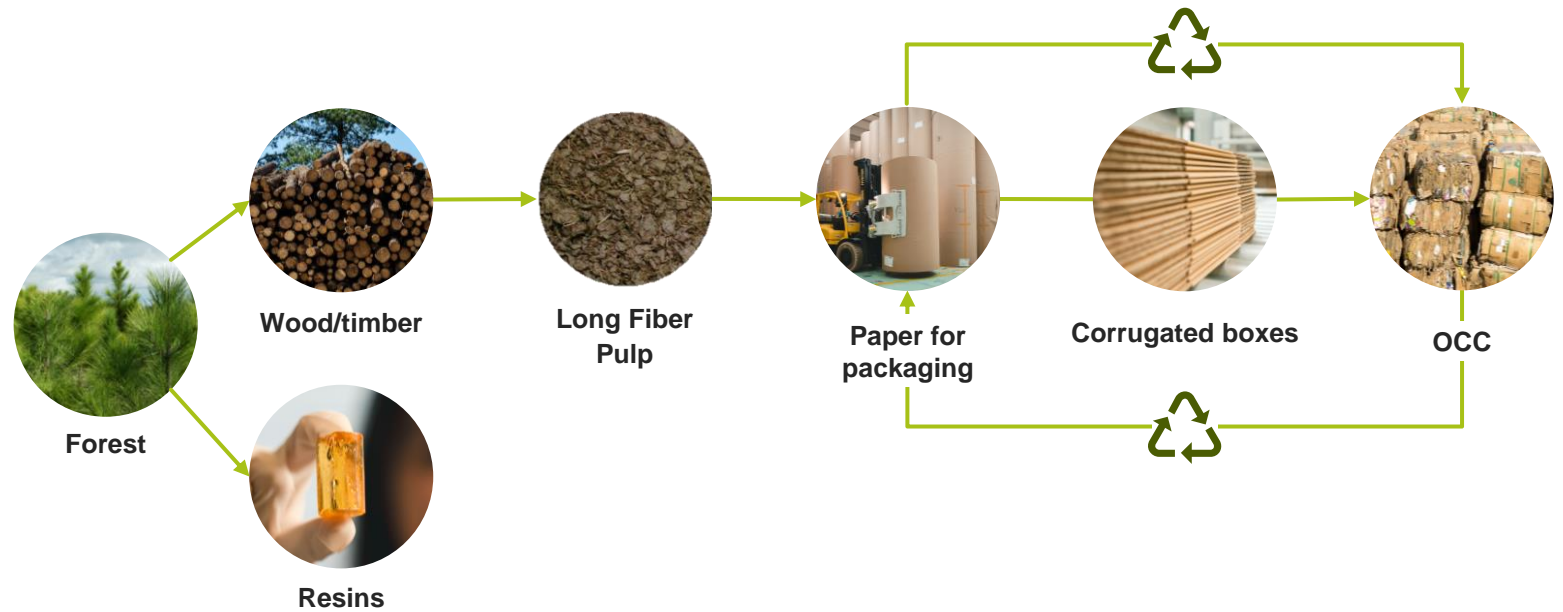
### Raw material composition (LTM 3Q22)

% of volume consumed (Ton)

**72.5%** of the raw material is recycled fibers



### Productive cycle of the company's operations





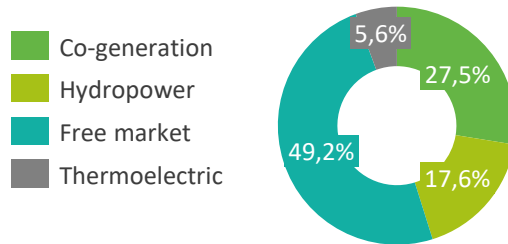
3

# The company has its own production of renewable energy and its own land base

**We will have 100% of our own production of renewable electricity after the Gaias.**

In addition to not being exposed to the risks of energy supply in the country, we have become more cost efficient, with clean and renewable energy.

### Electrical Energy Sources 2021

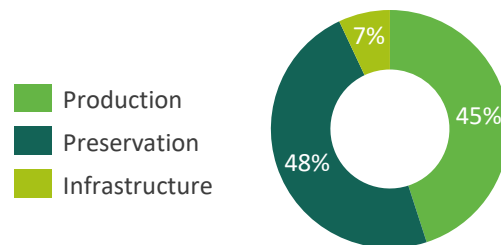


### Electrical Energy Sources After the Gaias

**With Gaia, we will have 100% of our own generation of renewable energy**

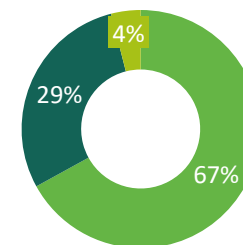
**Our own forestry base gives us stability in the price of this raw material and guarantee of supply.**

### Own Land Base Santa Catarina



**27,947 ha**

### Own Land Base Rio Grande do Sul



**5,952 ha**



4

## Innovation is at the heart of Irani's strategy

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### In-house Innovation

#### INOVA IDEIAS PROGRAM

**6,464** Ideas generated since the beginning of the program

**BRL 8.87 million**

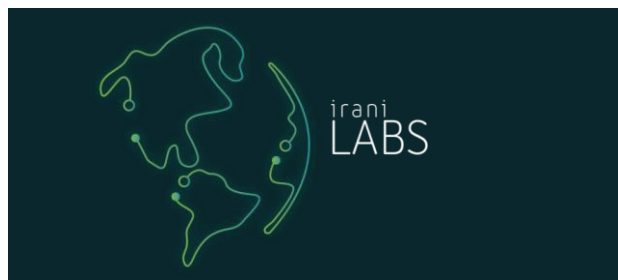
of operating return potential

#### TECHNOLOGICAL PLATFORMS

**17** Main RD&I themes

**48** Projects in progress

### Connection with startups



**227** Enrolled Startups

**9** POCs held in two editions of the Program

**2** Other POCs  
Machine Learning Platform and Predictive sensing of equipment

Focus themes of the first edition:

**Forest technologies;**  
**Waste Management;**  
**OCC collection and management;**  
**New Business Models.**

Focus themes of the second edition:

**New materials and barriers;**  
**Packaging design;**  
**Customer Experience;**  
**Industry 4.0.**

### Disruptive investments



**BRL 10 million**

approved for investments in disruptive startups with high growth potential



5

## Irani is an ESG excellence Company by nature

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### Environmental

Negotiation	Volume (CERs)	Generated Revenue (BRL)	Negotiation month
Customer 1	17,951	BRL 276 ths	Mar and Oct/21
Customer 2	71,134	BRL 295 ths	Mar/21
Customer 3	66,860	BRL 1,133 ths	Dec/21
<b>155,945</b>		<b>BRL 1,704 ths</b>	



**231,837 tons** of recycled paper (OCC)

### Social



We are  
**Great Place To Work**  
For the forth time in a row!



**Top Ser Humano**  
2016 to 2022 by ABRH/RS



More than  
**R\$ 1.9 million** invested in education and training annually

### Governance



IGCX B3  
IGC-NM B3  
ITAG B3  
IBrA B3  
IAT B3  
IDIV B3

SMLL B3  
IGCT B3  
IGPTW B3  
IAGRO B3  
ISEB3

**Distribution of Dividends Policy:** Up to 50% of the adjusted net profit.

**Board of Directors:** Five members, of which 2 are independent.

**Executive Board:** There are no overlapping responsibilities between the Executive Board and the Board of Directors.

**Financial Policy:** indebtedness, average debt term, cash balance and credit rating policies.

**Board Committees**

- Audit Committee
- People Committee
- Strategy Committee

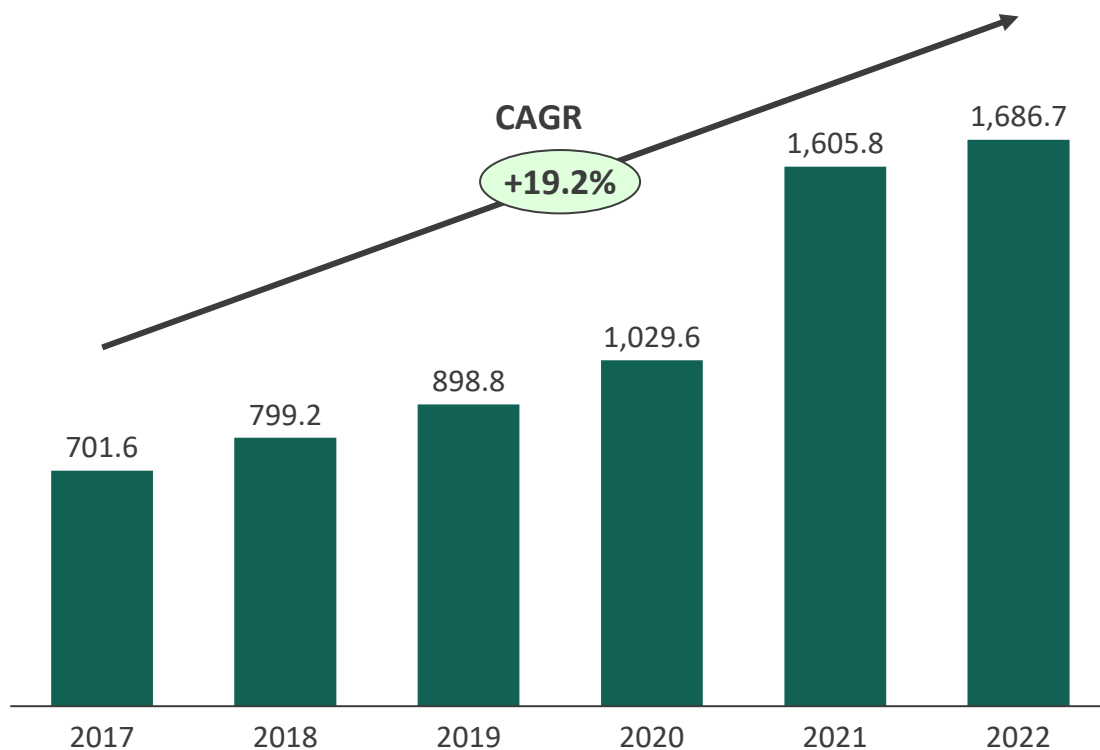
**Financial statements audited by KPMG**



# Our competitive advantages support an accelerated pace of growth

## Net Revenue

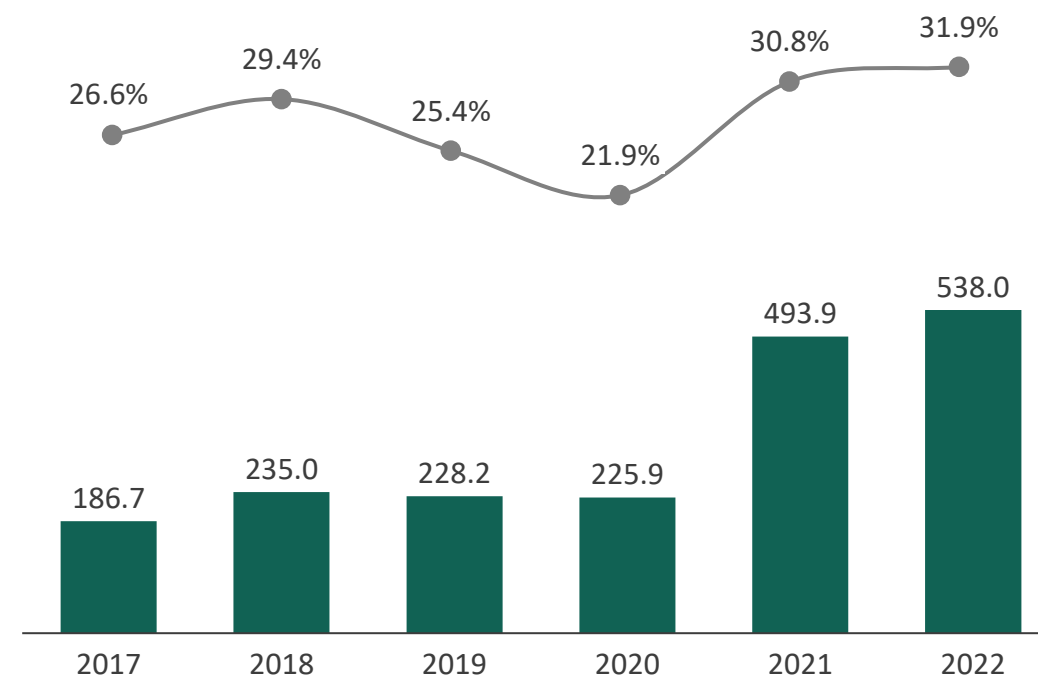
BRL million



## EBITDA

BRL million

● % EBITDA Margin





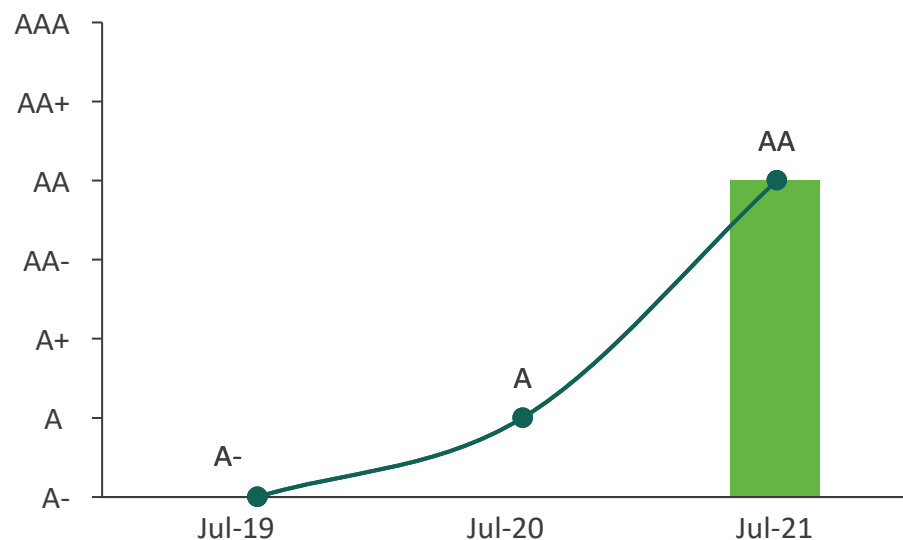
## Generating value for shareholders

### Green CRAs (Agribusiness Receivables Certificates)

- 5<sup>th</sup> Issuance of Green Debentures concluded in October/22, in the total amount of R\$ 720 million.
  - 1<sup>st</sup> series – R\$ 486 mm, 5 years, CDI rate + 1,40% p.y.
  - 2<sup>nd</sup> series – R\$ 234 mm, 7 years, CDI rate + 1,75% p.y.

### National scale credit rating

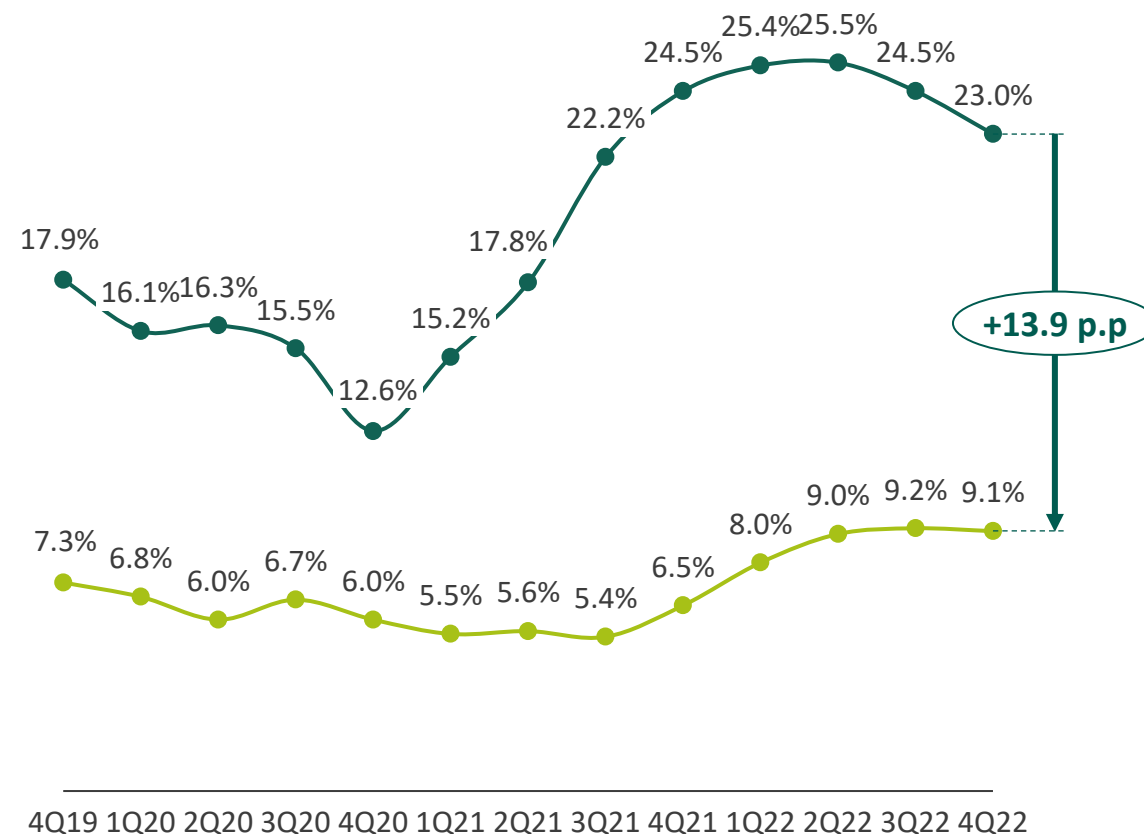
S&P Global Rating



### ROIC and Kd after taxes

BRL million

ROIC Kd after tax shield





— **Very strong returns to our shareholders since our Re-IPO, even during turbulent times for the Brazilian stock market**

**Total Shareholder Return (stock price + dividends) since the Re-IPO**





## The Gaia Platform will lead to a significant improvement in the production mix, in addition to several operational efficiency gains

### BRL 1.04 billion of investments

- Own production of renewable electricity
- Reduction of maintenance costs
- Reduction of chemical consumption
- Greater stability and performance of factories
- Downtime reduction
- Gains in forest management
- Increased printer productivity
- Scrap reduction

### Energy self-sufficiency

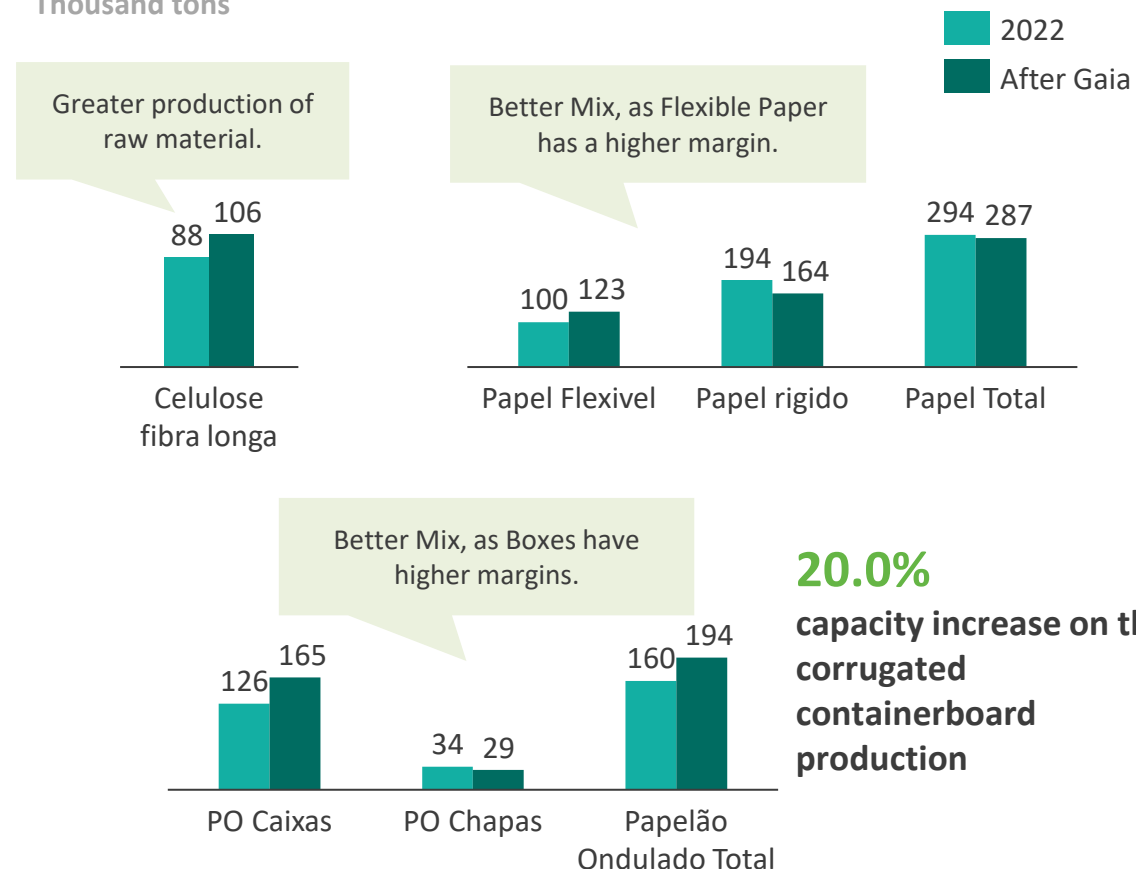
(in the total balance of energy production versus consumption)



[Click here to see more details](#)







### Annual production

Thousand tons





## — Irani has aggressive ESG targets for 2030, in line with its strategy



<b>1</b>	<b>OCCUPATIONAL SAFETY</b>	Zero work accidents with leave	<b>3</b> SAÚDE E BEM-ESTAR 
<b>2</b>	<b>DIVERSITY</b>	Having 40% of women in the company Having 50% of women in leadership positions	<b>5</b> IGUALDADE DE GÊNERO 
<b>3</b>	<b>WATER</b>	Reduce water consumption by 30% per ton produced	<b>6</b> ÁGUA POTÁVEL E SANEAMENTO 
<b>4</b>	<b>ENERGY</b>	Being self-sufficient in renewable energy generation	<b>7</b> ENERGIA LIMPA E ACESSÍVEL 
<b>5</b>	<b>WASTE</b>	Stop waste shipment to landfill	<b>12</b> CONSUMO E PRODUÇÃO RESPONSÁVEIS 
<b>6</b>	<b>CLIMATE CHANGES</b>	Increase the positive balance between emissions and removals of Greenhouse Gases (GHG) by 20%	<b>13</b> AÇÃO CONTRA A MUDANÇA GLOBAL DO CLIMA 







## Links to more information

### Websites:

-  Investors Relations Website
-  Gaia Platform

### Other documents:

-  Integrated Report
-  Financial Statements
-  Reference Form
-  Historical operating data

### Presentations:

-  Institutional Presentation
-  Results Presentation
-  Earnings Release



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