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**Flavia Dias da
Silva de Souza**

Supply chain
management

GERDAU
Stakeholder
Day 2023

Chain Management

In numbers



+ US\$ 5 billion
annual expenditure
between OPEX and CAPEX



+ 35 sites
served



+ 12,600
active suppliers



Operations in
9 countries





Risk Management

Map the risks associated with the supply chain, implementing actions to prevent, mitigate and eliminate risks



Competitiveness

Seek competitiveness at every link of the supply chain, reducing inefficiencies and capturing the best TCO for the organization



ESG

Engage with our partners and suppliers to move forward on the ESG agenda



Digital Innovation

Provoke innovative supply models, using technology to optimize time, cost and performance

Chain Management

Risks

Map the risks associated with the supply chain, implementing actions to prevent, mitigate and eliminate risks



Risk matrix

to identify the probability of a mapped event happening



Monitoring market trends and movements

to identify possible actions to mitigate risks

		Probability of Risk Occurrence							
		(1) Very low	(2) Low	(3) Average	(4) High	(5) Very high	I	P	A
Risk Impact	(5) Catastrophic	15	19	22	24	25	4	5	23
	(4) Critical	10	14	18	21	23	3	2	9
	(3) Serious	6	9	13	17	20	1	4	7
	(2) Moderate	3	5	8	12	16	1	4	7
	(1) Light	1	2	4	7	11	2	2	5

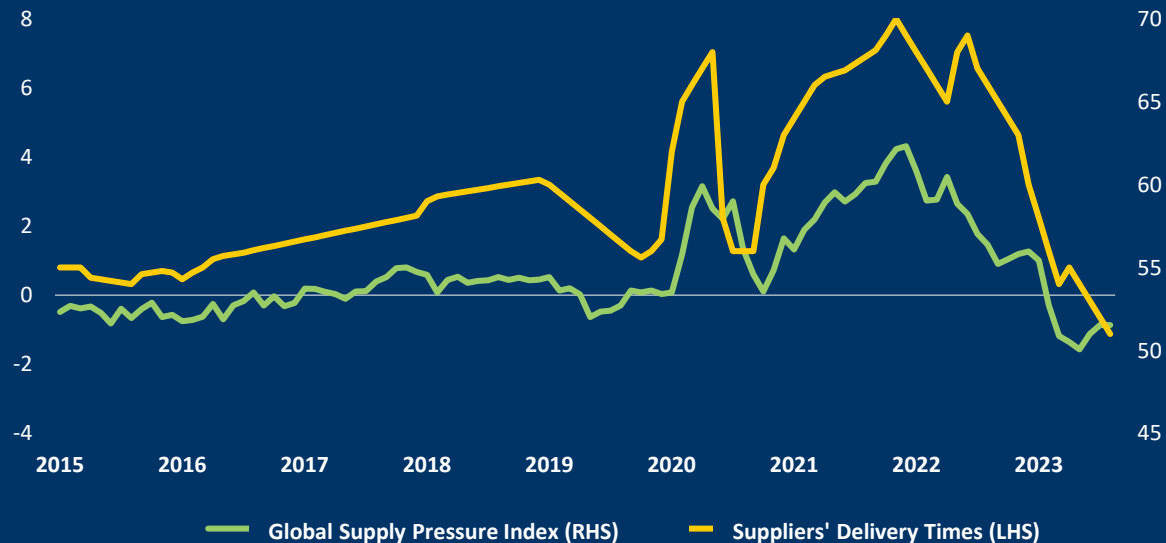
Chain Rupture

Risks



Supply Chain

Gerdaud is present in the Americas with 32 production units in 9 countries, resulting in a complex supply chain



Example of the main supply chain risks



Sea freight

Increase in logistics costs/time between 21/22, impacting material imports



Production

Our suppliers are required to follow ESG best practices



Material availability

Related to the RUS vs. UKR conflict, where sanctions were imposed on Russian materials



Protectionist barriers

Geopolitical tensions between the US and China, increasing protectionism on imports



Lower pressure on supply chains

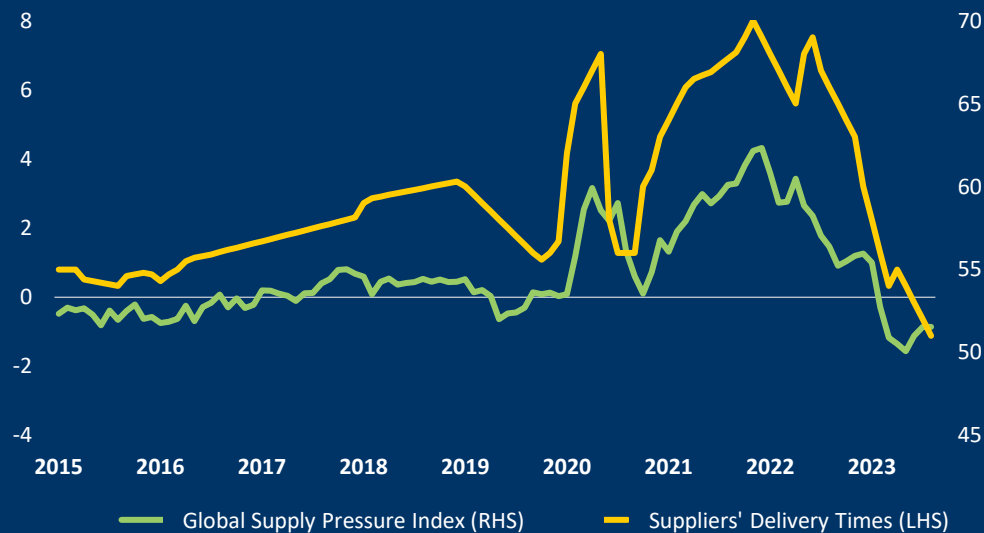
- ↓ Normalization due to falling demand;
- ⊖ Exception: Equipment. Lead times remain under pressure. Suppliers maintain very long deadlines and some sub-suppliers are at risk.



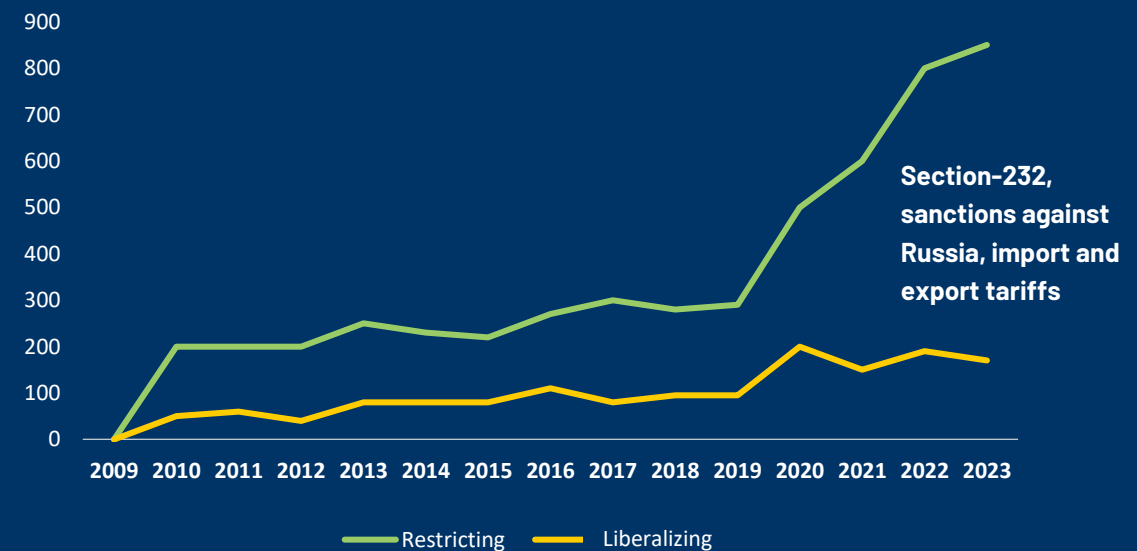
Growing number of protectionist trade measures

- ⊖ It reflects a growing degree of geopolitical tensions.
- Risk:** it will probably reshape global supply chains and increase commercial costs.

a. Global Supply Chain Pressures



b. New trade measures



Chain Rupture

Risks



North America

19%

Electrodes: USA and Mexico

Refractories: USA and Mexico

Metal alloys: USA, Mexico and Canada



South America

42%

Refractory: Brazil

Metal alloys: Brazil and Chile



Europe

12%

Electrodes : Spain, France and Italy

Refractories: Italy, France, Germany, Turkey and Slovakia

Metal alloys: Norway, Germany, Spain and Georgia

Africa



10%

Metal alloys: South Africa

Asia



16%

Electrodes: China and India

Refractories: China

Metal alloys: China, India, Russia and Kazakhstan

Oceania



1%

Refractory: Australia

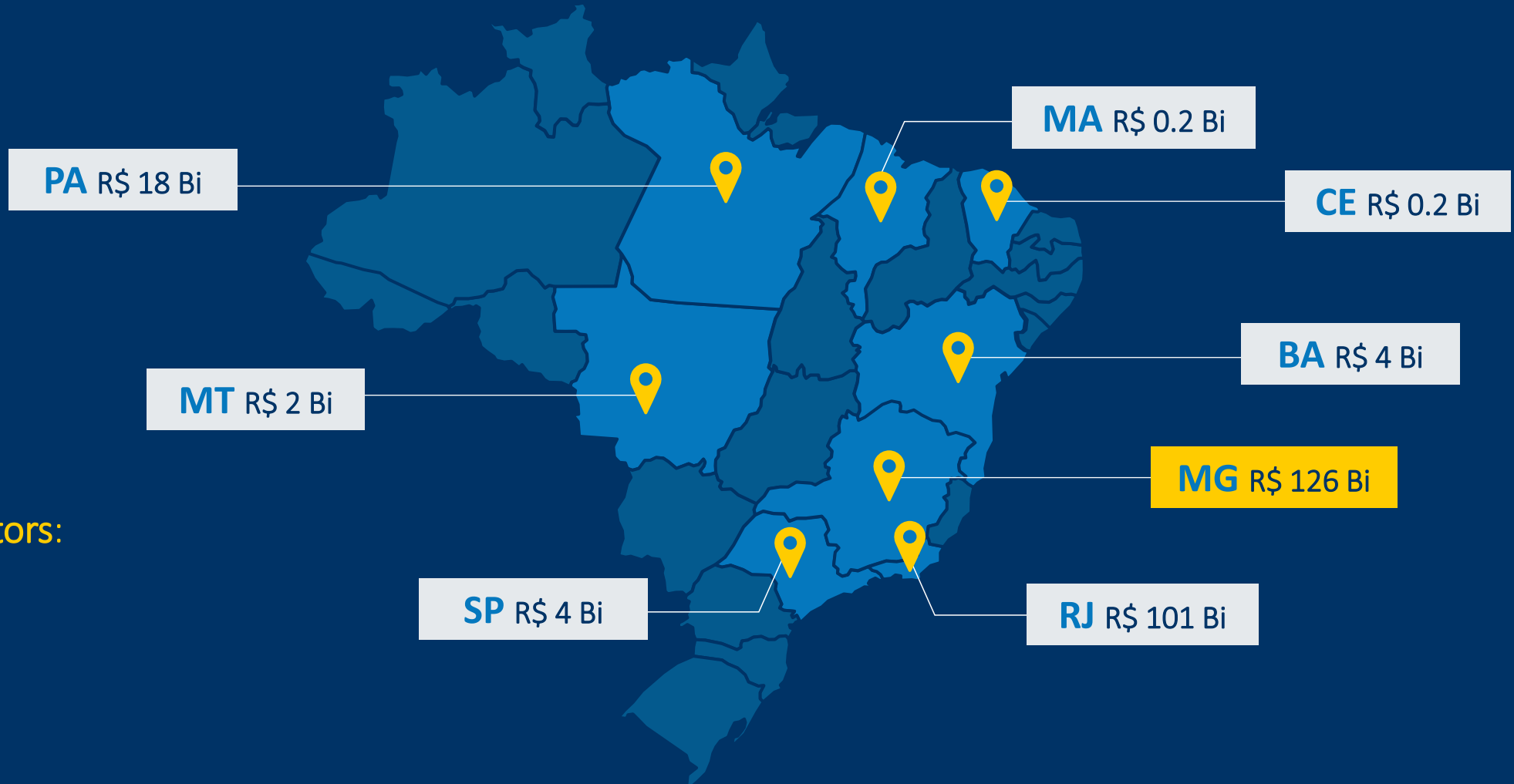
Investments – Labor

Risks



Mapped Sectors:

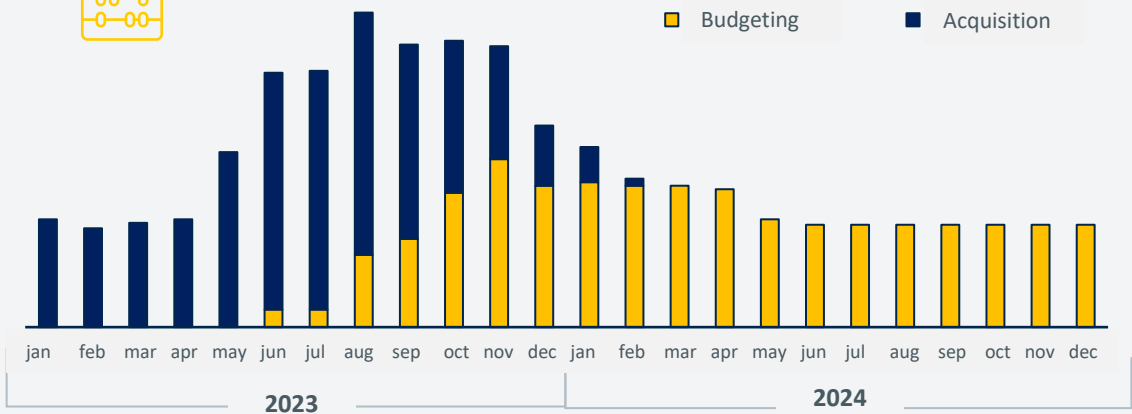
- Steel
- Mining
- Oil & Gas



Commercial pre-qualification

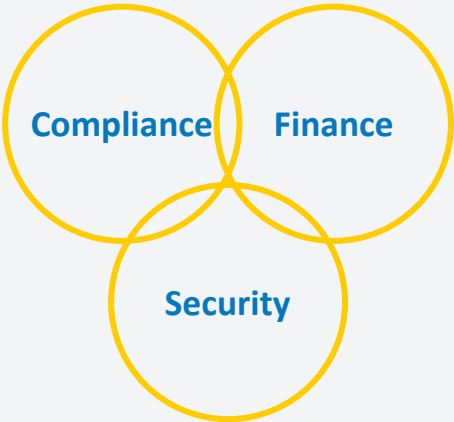
- **Risk** assessment of companies in the 3 main pillars
- Adequacy of supplier **size**
- Categorized vendor list

Histogram Monitoring



Developing new partnerships

- Greater **availability of manpower**
- Labor from other regions
- **Diversification** and not overload
- Expertise in managing **large** projects
- **Quality of** execution
- **Adding value to the process**





Risks

Supplier overload



Opportunities

Continuity of workforce



Benefits

Visibility of the workforce • Long-term **partnerships**
Safety Culture • Qualified **workforce** • Increased **productivity**

Building solutions



Chain Management

Engage with our supplier partners to move ahead on the ESG agenda

ESG



Collective
responsibility for
TRANSFORMATION



Approximately
12,500
suppliers



Impact
+1 million
people





Involve the supply chain in building and sustaining **diversity and inclusion** as part of the work environment



+200

companies signed the D&I pact



+70%

made progress on D&I after Inspire Gerda



+10,000

people impacted



It's coming...

Next class with **small suppliers in the localities where we operate.**

Social - Social Investments

ACTIONS IN PARTNERSHIP

Formal commitment

Social Investment Clause: 0.09% of the contracted amount invested in projects in the locations where we operate



50+ suppliers

investing in social action projects across Brazil



+R\$1.7MM

captured in 7 months



Investment in local **workforce training**



+450
trained people



3 benefited cities

Ouro Branco, Conselheiro Lafaiete and Congonhas



Programa Aprimorar

Uma iniciativa Gerdau de formação técnica para quem deseja trabalhar na indústria.

Em parceria com o Sesi/SENAI, a Gerdau está com inscrições abertas para o Projeto Aprimorar, em Ouro Branco.

São diversos cursos na área para ampliar o desenvolvimento e a qualificação profissional.

CURSOS PRESENCIAIS E GRATUITOS:

Iniciação Profissional em Fundamentos de Eletricidade Industrial

Iniciação Profissional em Fundamentos de Soldagem

Iniciação profissional em Fundamentos de Manutenção Mecânica Industrial

Aperfeiçoamento Profissional em Construção e Instalação de Alvenarias

Aperfeiçoamento Profissional em Preparação de Madeiras para Construção Civil

Se interessou? É muito importante ficar por dentro da duração do curso para garantir a continuidade dos seus estudos.

Para inscrições e mais informações:

SENAI - Av. Macapá, 177, bairro Luzia Augusta, Ouro Branco/MG

(31) 3741-4114



CO2 emissions



SCOPE 1

Steel industry 7- 9%
Carbon emissions

New technologies in
partnership with
suppliers

Market **opportunities**
and new supplier
solutions



SCOPE 2

Indirect emissions:
Energy

Renewable sources
through long-term
contracts and
self-production

I-rec

Energy Efficiency



SCOPE 3

Indirect emissions:
Chain

Supply chain mapping: where
companies are and what are
the existing actions

Opportunities and Strategies

Consider supplier actions linked to
decarbonization when making
decisions



The **Ecoar Program**,
launched in July 2023, is
a **partnership with CDP**,
the world's largest
platform for monitoring
climate data, that places
us as the **first company**
in the steel sector in
Latin America to
encourage the value
chain to **assess its**
impact on climate
changes