

AN INTRODUCTION THE BRAZILIAN MINING SECTOR

FACT PACK - BRAZILIAN MINING SECTOR

November 2015
São Paulo, Brazil



BRAZIL IS A LEADING MINERAL PRODUCER

THE INDUSTRY IS A KEY SECTOR FOR THE BRAZILIAN ECONOMY



2,3% of Brazil's GDP

BRL **113bn** in 2013*

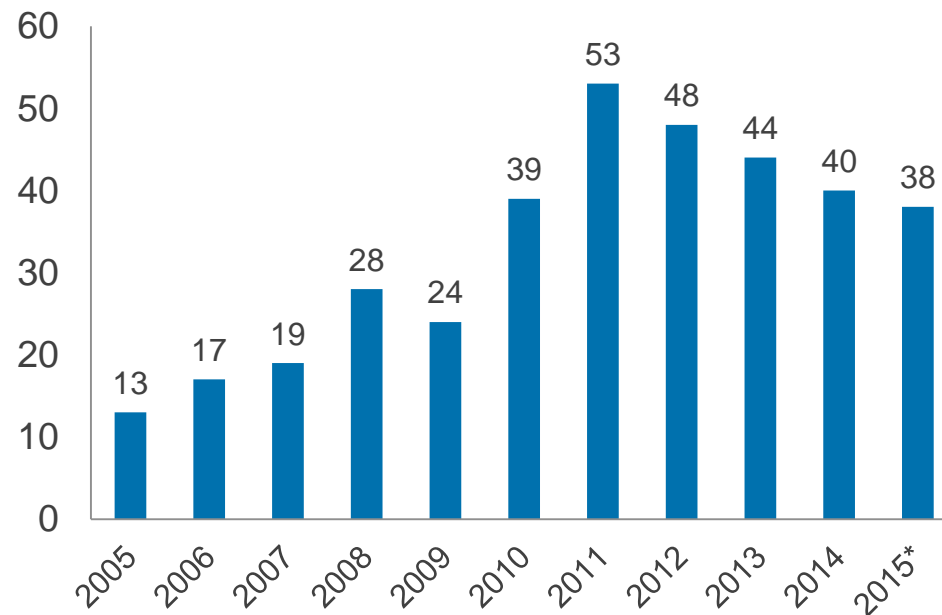
- ▶ The mining sector represents almost 7% of GDP when including the mineral transformation industry
- ▶ Minerals exports accounted for 15% of total exports in 2013. Iron ore alone accounted for 13%, which was more than soy exports



IN 2015, BRAZIL WILL PRODUCE 38 BUSD OF MINERALS

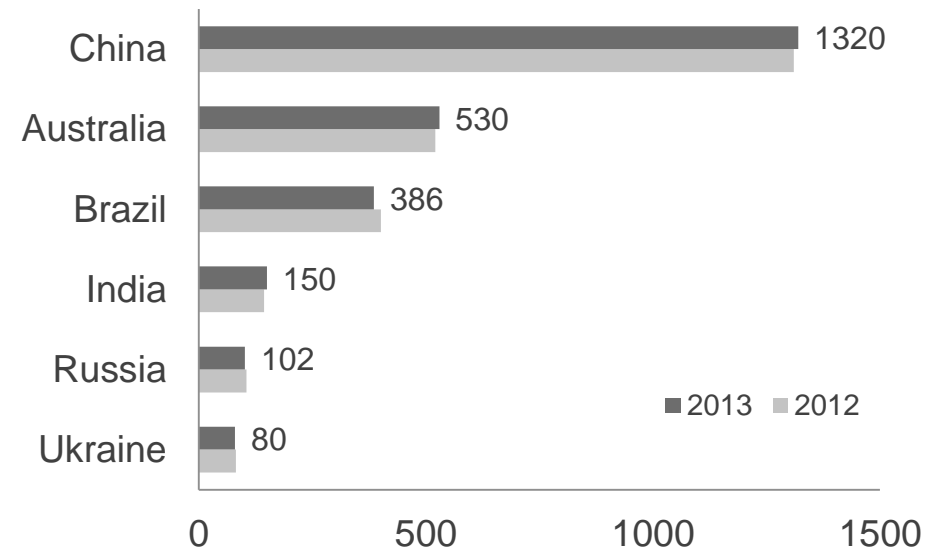
BRAZIL IS THE WORLD'S 3RD LARGEST IRON ORE PRODUCER

BRAZILIAN TOTAL MINERAL PRODUCTION (BUSD)



- ▶ The decrease in the price of iron ore, mainly explored minerals, has affected the Brazilian production dramatically
- ▶ Brazil also struggles with high production cost, affecting competitiveness. Poor logistics and low automation are the main challenges for the industry

IRON ORE PRODUCTION RANK (MILLION TONS)



- ▶ Brazilian iron ore is competitive in the international market due to its high percentage of iron oxide, approximately 64%, which is considered higher quality. Australian ore has ~59%

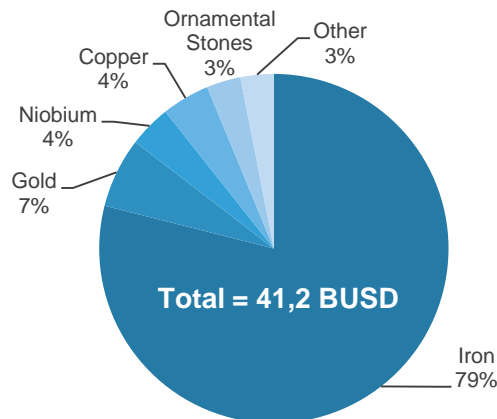
BRAZIL HAS A HIGH MINERAL PRODUCTION, WITH QUALITY IRON ORE AS THE MAIN PRODUCT

BRAZIL PRODUCES 72 DIFFERENT MINERAL SUBSTANCES DUE TO ITS DIVERSIFIED GEOLOGICAL FORMATIONS

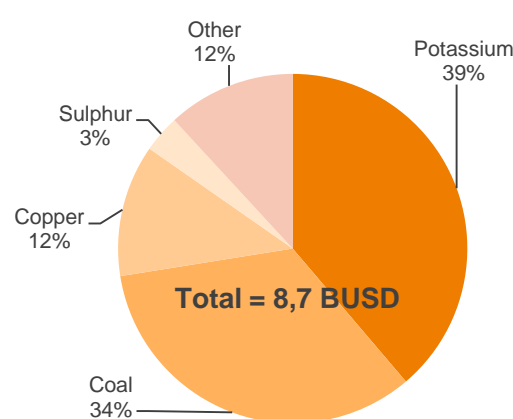
BRAZILIAN PRODUCTION OF SELECTED MINERALS

Mineral	Production (tons)	% World (2013)	World Rank
Iron	386 270 053	13,1%	3 rd
Bauxite	32 867 000	12,7%	3 rd
Manganese	2 883 000	7,2%	5 th
Niobium	73 668	92,8%	1 st

BRAZILIAN MINERAL EXPORTS



BRAZILIAN MINERAL IMPORTS



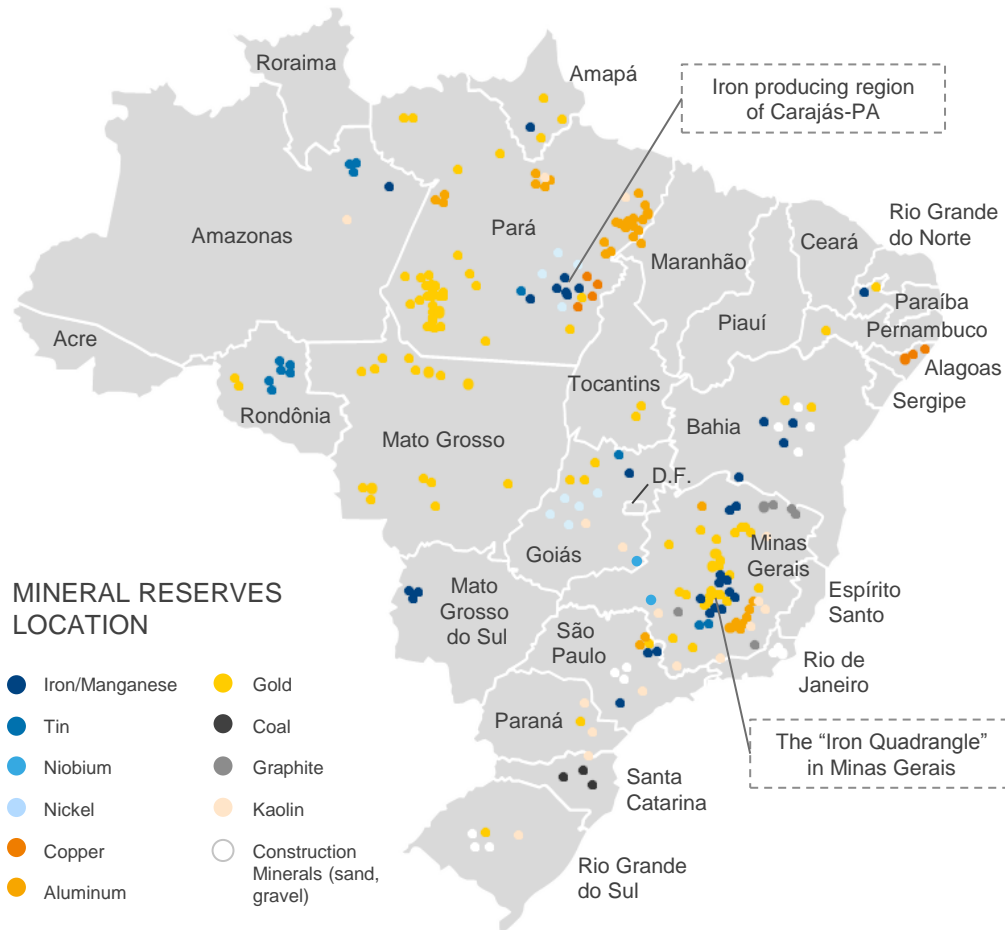
STRATEGIC MINERALS FOR BRAZILIAN INDUSTRY



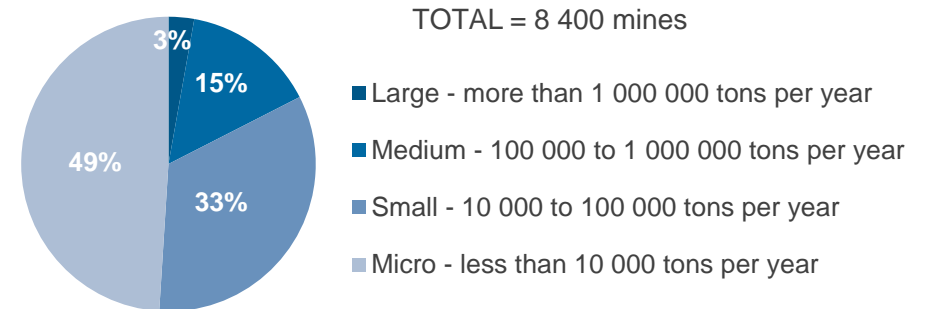
BRAZIL IS A MAJOR GLOBAL EXPORTER OF MINERALS SUCH AS IRON, BAUXITE AND NIOBIUM

SOURCE: IBRAM, DNPM, MINISTRY OF FOREIGN RELATIONS, U.S. GEOLOGICAL SURVEY

CARAJÁS AND THE IRON QUADRANGLE ARE THE MAIN MINING REGIONS



NUMBER MINES IN BRAZIL BY PRODUCTION SIZE, 2014



- ▶ However, the seven largest iron ore mining companies produced 89,9% of total iron in 2014, for example
- ▶ The majority of micro/small mines produce non-metallic minerals, such as sand, clay and limestone, supplying local construction industry
- ▶ Larger mines produce metals such as iron, gold* and bauxite

MINERAL RESERVES IN BRAZIL

Mineral	Reserves	% of World Reserves
Iron	23 126,0 million tons	13,6%
Aluminum	714,0 million tons	2,8%
Manganese	50,0 million tons	8,8%
Niobium	10,7 million tons	98,2%

THE LARGEST IRON ORE PRODUCERS ARE THE STATES OF MINAS GERAIS (69%) AND PARÁ (27,3%)

SOURCE: IBRAM, DNPM

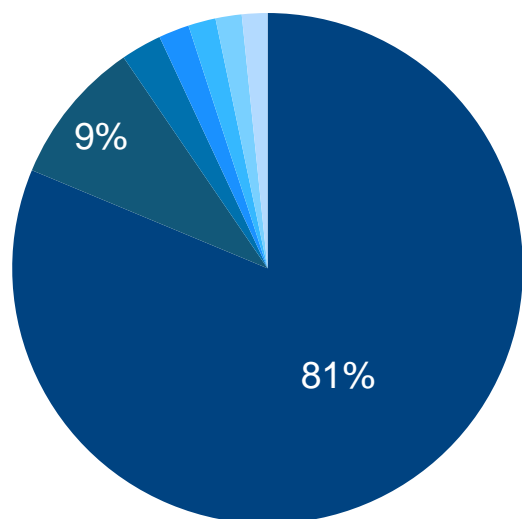
* THERE ARE SMALL GOLD-DIGGING SITES SPREAD THROUGHOUT THE COUNTRY, EXPLORED BY INDIVIDUALS



VALE REPRESENTS MORE THAN 80% OF MINING SALES

SAMARCO IS THE SECOND LARGEST MINING COMPANY, OWNED BY VALE AND BHP

MAIN MINING PLAYERS BY SALES, 2013



CONTROL	COMPANY	SALES (MUSD)	MAIN MINERAL
	Vale	27 986	Iron ore/pellets, nickel, manganese, copper, coal, cobalt, fertilizers
	Samarco	3 164	Iron pellets
	Namisa	889	Iron ore
	Kinross Gold	667	Gold
	Votorantim Metais Zinco	600	Zink
	Magnesita	571	Magnesite, talc
	Votorantim Metais	557	Aluminum, nickel

- ▶ Samarco is owned by Vale (50%) and BHP Billiton (50%)
- ▶ Namisa is owned 60% by CSN (Companhia Siderurgia Nacional – National Metallurgy Company) and 40% by a Japanese consortium
- ▶ There are 8 870 mining companies in Brazil, 40% in the Southeast region. However, market is dominated by large players such as Vale

THE MINING MARKET IS DOMINATED BY THE LARGE COMPANIES; VALE DETAINS APPROX. 85%* OF TOTAL SALES



VALE IS BRAZIL'S 3RD LARGEST COMPANY AND THE 4TH LARGEST MINING COMPANY IN THE WORLD



Vale S.A. is a Brazilian open capital private company working in the metallurgy and mining sector, which also operates in the energy and logistics businesses. Vale is the fourth largest mining company in the world, traded at BMF&Bovespa, NYSE, Euronext, and HKEx

1ST Largest company in iron ore and pellets production

2ND Largest company in nickel production

Net revenue 2014	88 275 MBRL
Net profit 2014	219 MBRL
Ebitda 2014	30 464 MBRL
Number of employees	85 300
Capital structure*	Valepar** (33,7%), Brazilian Federal Government (5,3%), Brazilian investors (14,8%), foreign investors (46,2%)
Mining operations	Brazil, Peru, Canada, Zambia, Mozambique, China, Indonesia and Australia

- ▶ Vale produced a record amount of 319,2 million tons of iron ore in 2014, exceeding the expectations. Devaluated currency (BRL) has helped the company face the international iron ore price slump
- ▶ Vale registered a loss of 44,2 Billion BRL in 2015, although sales volume was higher than in the previous year. The main reasons for the loss were the lower iron ore prices and the devaluation of BRL, which affected the company's debt
 - ▶ The company is also trying to reduce costs and investing in projects that generate higher efficiency
- ▶ Vale claims that 88% of purchases are made with local suppliers
- ▶ In November 2015, an accident involving the breakage of a Samarco's dam in Mariana (MG) resulted in major physical and environmental damages for the region, besides casualties.
 - ▶ Samarco and owners Vale and BHP Billiton are in negotiation with the Brazilian government for the payment of 19 BBRL for 15 years in order to support Mariana's social, economic and environmental recovery

EXTERNAL FACTORS SUCH AS INTERNATIONAL PRICES AND THE BRAZILIAN RECESSION ARE AFFECTING VALE'S PERFORMANCE

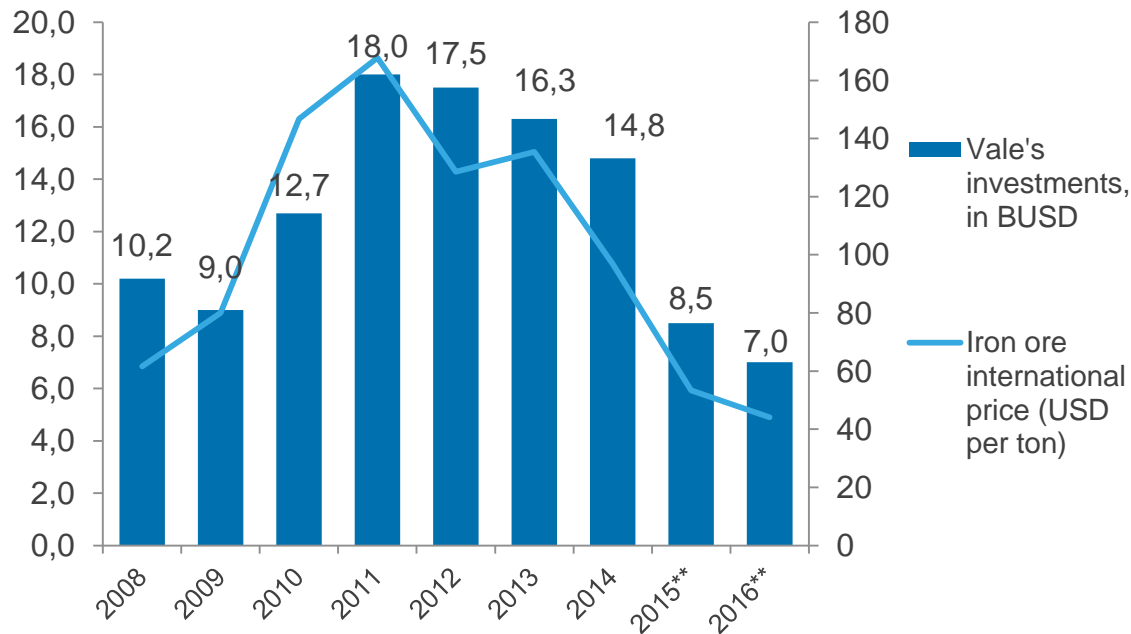
SOURCE: VALOR, VALE'S WEBSITE, MINING GLOBAL, DESKRESEARCH AND INTERVIEWS

* THE BRAZILIAN GOVERNMENT HAS GOLDEN SHARES, WHICH GIVES POWER OF VETO OVER ISSUES SUCH AS COMPANY'S CONTROL AND END OF ACTIVITIES (MINES, PORTS RAILWAYS)
**CONGLOMERATE OF SHAREHOLDERS INCLUDING PUBLIC AND PRIVATE BANKS

VALE EXPECTS TO INVEST 7 BUSD IN 2016

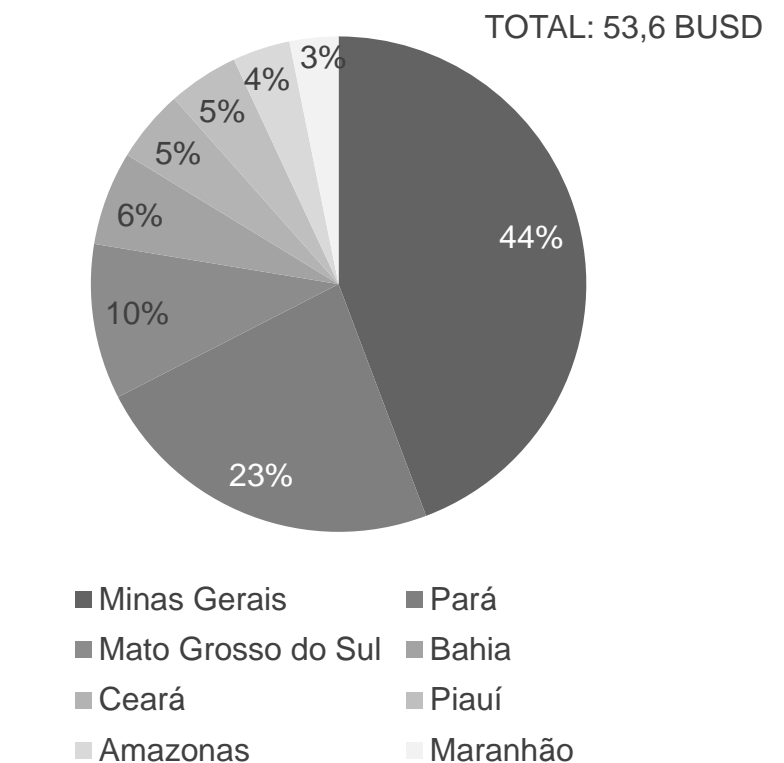
THE WHOLE MINING SECTOR WILL INVEST AROUND 53,6 BUSD FROM 2014 TO 2018

VALE'S INVESTMENTS (BUSD)



- ▶ Part of Vale's investments in 2015 lies on the expansion of iron ore operations in Carajás/PA, totaling 3,7 BUSD
- ▶ The 3,8 BUSD was directed to the replacement of equipment, construction and expansion of tailing dams

EXPECTED MINING INVESTMENTS 2014-2018, BY STATE



MINAS GERAIS AND PARÁ WILL RECEIVE AROUND 36 BUSD IN MINING INVESTMENTS IN THE NEAR FUTURE

SOURCE: VALE, VALOR, IMF, IBRAM

* CALCULATION BASED ON A 5-YEAR PERIOD
** FORECAST



NEW MARKET CONDITIONS FOR THE MINING SECTOR ARE PUTTING PRESSURE ON BRAZILIAN PLAYERS

MARKET CONTEXT

IMPACT EVALUATION

Uncertain definition of the regulatory mark

The Brazilian government has proposed a new regulatory mark that will transfer to a Council the responsibility of field research and the distribution of legal rights to companies to explore for a limited period of 40 years*. The Code also sets an increased ceiling for royalty tax rates (4%) and changes calculation basis

The approval of the regulatory mark itself and the Congress' delay to decide upon this matter create uncertainty within the sector, affecting the scenario of new investments

Fluctuating mineral prices

Lower mineral prices in 2014 (lowest level in six years), especially for iron ore, have affected the mining companies that are working to maintain positive numbers. However, China imported record volume 86.9 million tons in December 2014, which did not contribute to a price recovery due to high global supply levels

Companies are reducing costs, but are also looking for alternatives in order to become more competitive. **Industry experts expect iron prices to recover in 2-3 years time**

Lack of competitiveness

Although Brazil offers iron ore rich on iron oxide (64% compared to Australia's 59%), Brazilian mining companies struggle with low efficiency, which generates high production costs

Mining companies need to adapt to market conditions. **Brazilian players are looking for solutions that can improve efficiency and reduce OPEX**

BRAZILIAN COMPANIES ARE INTERESTED IN SOLUTIONS THAT CAN REDUCE OPEX



GOVERNMENT HAS PROPOSED A NEW MINING CODE FOR INCREASED CONTROL IN THE MINING SECTOR

- ▶ Introduced in 2013, the New Mining Code, as well as its voting delay by the Congress, is creating uncertainty for the mining companies, which is also affecting investments

HOW IT IS NOW

- ▶ Mining companies currently have the right to freely research the ground, and automatically explore a field in which they had found mineral deposits
- ▶ Also, government tax rate over exploration *net revenue* can reach up to 3% depending on the mineral (2% for iron ore). Taxes collected are then distributed among federal, state and municipal level

HOW WOULD IT BE

- ▶ “First come, first served” logic for rights to research a field was kept
- ▶ According to the New Code, once mineral assets are discovered, a 40-years right of exploration will be granted to companies *exclusively through* public tenders, meaning that one company may research an area, discover mineral assets and in the end be excluded from the right to explore the field
- ▶ The Code also sets an increased ceiling of 4% for tax rate and changes its calculation basis from *net* revenue to *gross* revenue

IF APPROVED, THE NEW LEGISLATION WILL GIVE EXPLORATION RIGHTS FOR PUBLIC TENDER WINNERS, AND NOT FIELD DISCOVERERS



IRON PRODUCTION IS EXPECTED TO PICK UP SPEED ONCE THE INTERNATIONAL PRICES RECOVER

Market

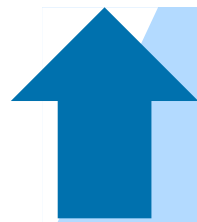
- ▶ Increasing mineral **production and exports**
- ▶ Abundance of mineral **reserves**
- ▶ **Quality** of Brazilian iron ore

Market

- ▶ Fluctuating international **iron prices**
- ▶ Lack of **competitiveness**
- ▶ Preference for **local suppliers**

Players

- ▶ **Cost-efficiency** driver
- ▶ **Large investments**, including Vale
- ▶ Opportunities for **suppliers producing in Brazil**



Which **opportunities** make Brazil interesting?

What **challenges** should companies be ready to face?



New Legislation

- ▶ Exploration through **public tender**
- ▶ Higher **taxes**
- ▶ **Uncertainty**

Projections

- ▶ Mining companies will be **seeking efficient** machinery and equipment, environmental technology and logistics solutions
- ▶ **Iron ore prices** are expected to recover in 2-3 years

Business in Brazil

- ▶ High production **costs and poor logistics**
- ▶ Excessive **bureaucracy** and complex **tax system**
- ▶ Current **economic recession**

THE LARGE BRAZILIAN MINING SECTOR IS OFFERING SIGNIFICANT OPPORTUNITIES FOR SWEDISH EQUIPMENT SUPPLIERS

BUSINESS SWEDEN OFFERS A FULL SERVICE PORTFOLIO FOR EFFICIENT MARKET ENTRY

OUR INDUSTRY FOCUS



ICT



HEALTH CARE & LIFE SCIENCE



MATERIALS & MANUFACTURING



SECURITY



CREATIVE INDUSTRIES



ENERGY & ENVIRONMENT



TRANSPORT SYSTEMS

OUR CUSTOMERS

SWEDISH COMPANIES EXPANDING INTO BRAZIL

LOCAL SUBSIDIARIES OF SWEDISH COMPANIES

SWEDISH GOVERNMENT

OUR MARKET OFFERING

MARKET ENTRY STRATEGY

PARTNER SEARCH

MARKET ANALYSIS

IMPORT ANALYSIS

ACQUISITION SUPPORT

STAKEHOLDER MANAGEMENT

SOURCING ANALYSIS

BUSINESS SUPPORT OFFICE *

RECRUITING

OUR STRENGTH

EXPERIENCED TEAM WITH INDUSTRY FOCUS

UNIQUE OWNERSHIP PROVIDE ACCESS TO THE SWEDISH GOVERNMENT & FUNDING STRUCTURE

GLOBAL PRESENCE

LOCAL & SWEDISH PERSPECTIVE TO BUSINESS OPPORTUNITIES

ACCESS TO HIGH LEVEL AUTHORITIES & BUSINESS NETWORKS IN BRAZIL

* BSO SERVICES INCLUDE: OFFICE PLACE & SERVICE, ADMINISTRATION, COMPANY ESTABLISHMENT (INCL LEGAL ADDRESS), DELEGATE MANAGER AND FINANCIAL ANALYSIS



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