



RAILWAY CORRIDOR AND PORT CHITIMA-MOATIZE-MACUSE

THAI MOÇAMBIQUE LOGÍSTICA S.A. (TML)

building the future



MOZAMBIQUE May 2019

1 | MARKET CONTEXT

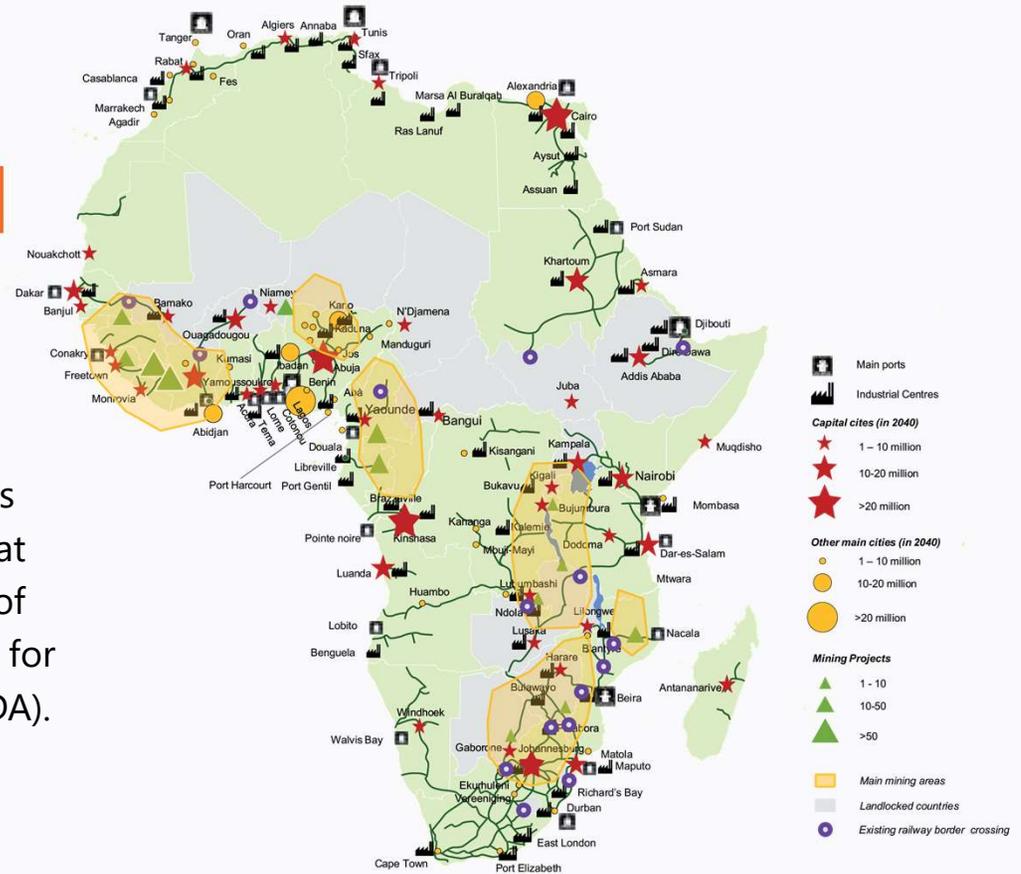
INFRASTRUCTURE IN AFRICA



US\$93 BILLION PER YEAR

INFRASTRUCTURE INVESTMENTS

Africa is the region with the largest needs of infrastructure investments, estimated at **US\$93 billion per year**, with a shortfall of **US\$32 billion** according to the Program for Infrastructure Development in Africa (PIDA).



Areas with potential to host new rail projects

Source: ALG in "Rail Infrastructure in Africa - African Development Bank"

1| MARKET CONTEXT

THE MOZAMBIQUE OPPORTUNITY



Top FDI destination countries 2016	USD billion	Main target sectors
Egypt	10.1	Real estate, oil, gas, renewables
Morocco	4.9	Renewables, real estate, auto
Angola	4.4	Oil, gas, communications, transportation
Ghana	3.6	Oil, financial services, construction
Mozambique	3.4	Transport, coal, gas, real estate
Ethiopia	2.7	Chemicals, real estate, textiles
South Africa	2.8	Coal, oil, gas, transportation, auto

Source: African Economic Outlook 2017, AfDB

US\$3.4 BILLION

FDI MOZAMBIQUE

Since independence in 1975, the country has faced critical developmental challenges including widespread poverty and inequalities, low diversification of the economy, with most of its workforce employed in the agricultural sector, and periods of political unrest.

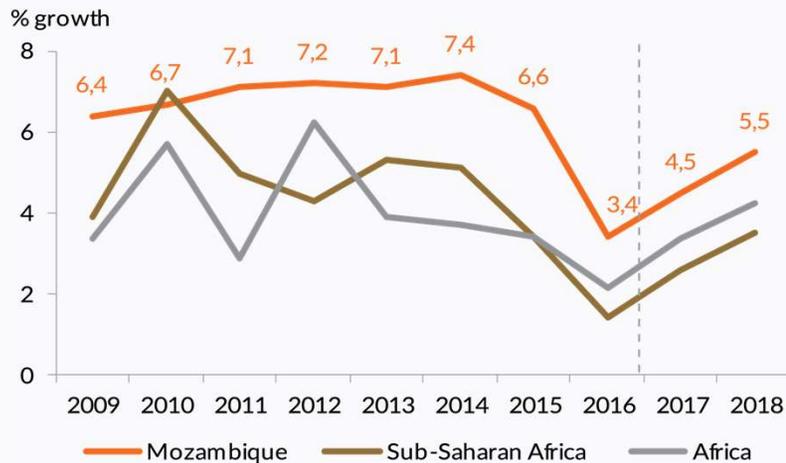
The discovery of huge natural gas and coal reserves in Mozambique, and the ensuing strong increase of foreign direct investments since 2010, represent a unique opportunity to accelerate the country's socioeconomic development.

1| MARKET CONTEXT

THE MOZAMBIQUE OPPORTUNITY



GDP GROWTH



In the wake of the “hidden-debt” crisis in 2016 the economy has experienced a severe downturn, with real GDP growth plunging to an estimated 3.4%, down from an annual average of around c.7% in the previous five years.

The economy showed signs of improvement in 2017, with growth estimates ranging between 4.5% - 5.5% driven by exports and mega-projects in the resources/extractives sector.

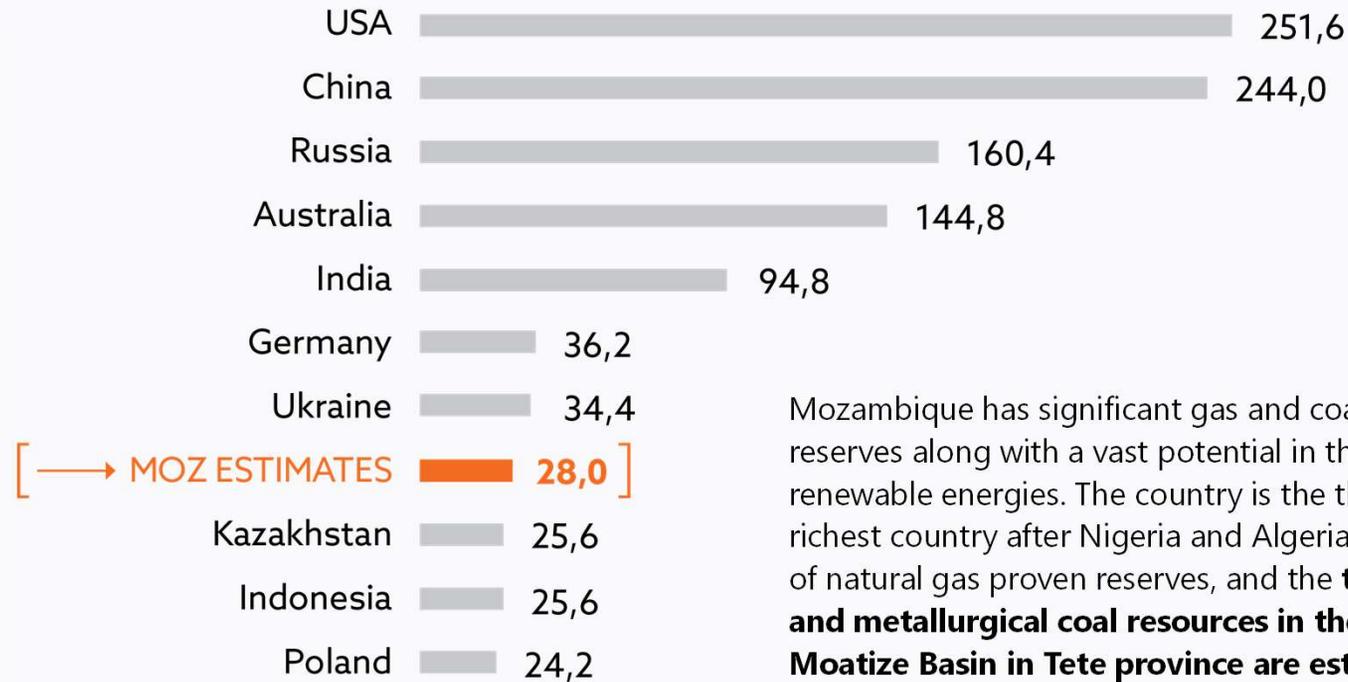
Nevertheless **MOZAMBIQUE** has remained one of the **TOP 5 DESTINATIONS** of foreign direct investment (FDI) in the continent, **LARGELY DUE TO THE RESOURCE-RELATED MEGA-PROJECTS.**

1| MARKET CONTEXT

THE MOZAMBIQUE OPPORTUNITY



COAL PROVEN RESERVES AT END 2016 -TOP 10 . BILLION TONNES



Source: BP Statistical Review of World Energy, June 2017

Mozambique has significant gas and coal reserves along with a vast potential in the field of renewable energies. The country is the third richest country after Nigeria and Algeria in terms of natural gas proven reserves, and the **thermal and metallurgical coal resources in the Moatize Basin in Tete province are estimated at c.28 billion tons.**

COAL RESOURCES IN THE MOATIZE BASIN IN TETE PROVINCE ARE ESTIMATED

c.28 BILLION TONS

1| MARKET CONTEXT

THE MOZAMBIQUE OPPORTUNITY

Coal exports from Mozambique started in 2011. Since then, improved rail and port infrastructure has allowed annual exports to increase from 0.6 million tons to 11 million tons in 2017, even in the context of weak coal prices.

Infrastructure remains a key constraint for the development of several coal mine projects in the Tete region. At the moment there are three operating mines and several other mine projects waiting to be developed.

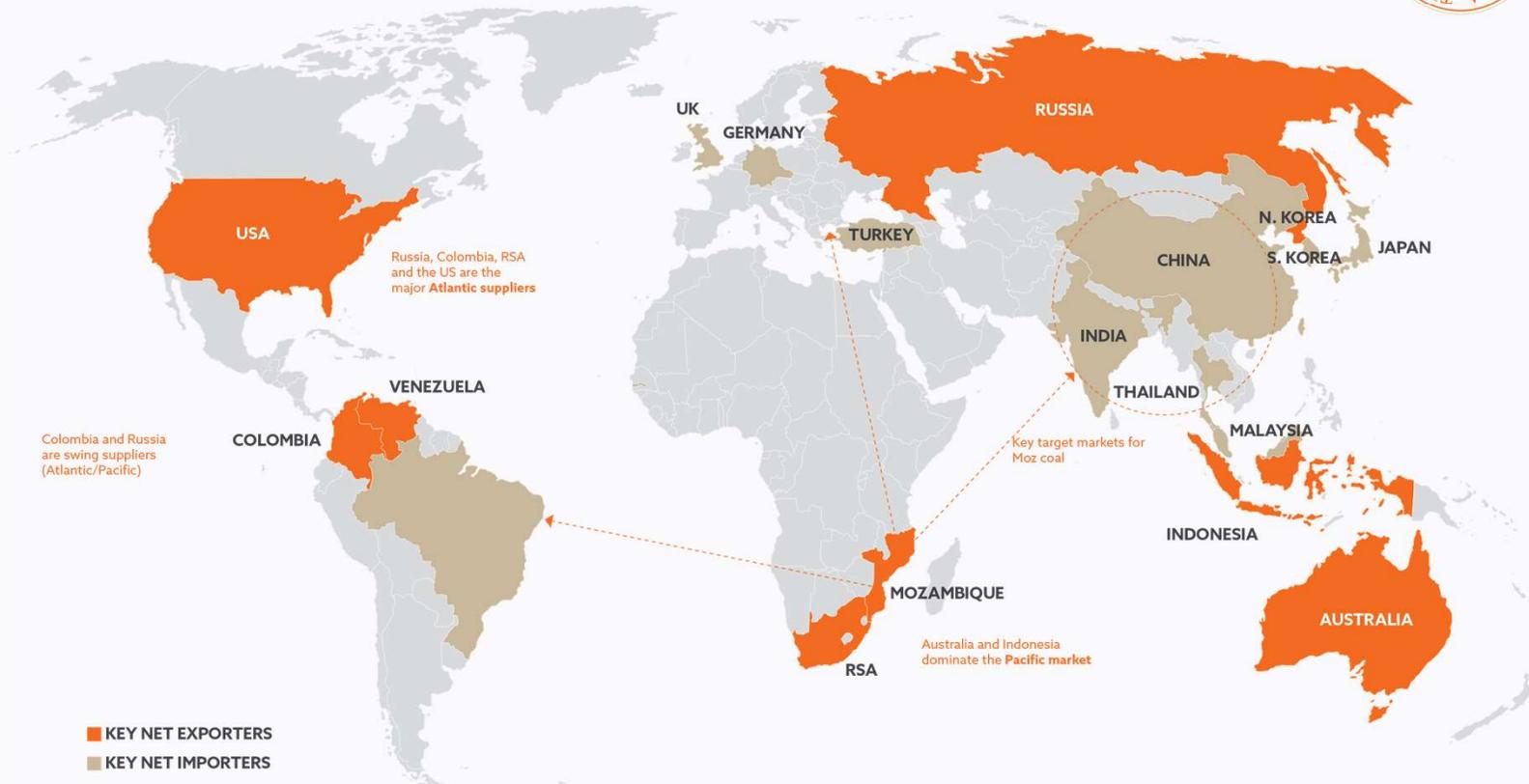
Considering the operating mines, known projects and the existing resources, the country has the potential to become one of the world's top coal exporters.

Developing efficient infrastructure is seen as critical to unlock the value of these natural reserves. Once vital infrastructures are in place, the country will be positioned as a potential key supplier to the Asian economies.



1| MARKET CONTEXT

THE MOZAMBIQUE OPPORTUNITY



Due to transportation costs and consumer patterns (coking coal/thermal coal), the trade of coal is divided into two large regional markets: i) the Atlantic market, and (ii) the Pacific market.

The coking coal trade has a small number of key suppliers (Australia, USA, Canada, Russia) strong potential in Mozambique.

As coal is mostly used in the countries where it is mined, the international coal trade accounts for a relatively small percentage of total coal production (c.19% in 2015), the majority of which via seaborne trade. Only mines with low production costs and good transport links to sea ports can competitively deliver coal overseas.

2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

This project is of vital importance for the logistics of the mining sector, since it assures the opening of the Moatize basin to the international market, ensuring a more competitive logistics cost compared to the more direct competitors, namely Australia and Indonesia.

THIS PROJECT IS OF VITAL
IMPORTANCE

**TO UNLOCK
THE MOZAMBIQUE
COAL BASIN**



2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

This project is of vital importance for the logistics of the mining sector, since it assures the opening of the Moatize basin to the international market, ensuring a more competitive logistics cost compared to the more direct competitors, namely Australia and Indonesia.

THIS PROJECT IS OF VITAL IMPORTANCE

**DEEP SEA PORT
MULTI USERS AND
MULTI PRODUCT
AND INDUSTRIAL
FACILITIES**



2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

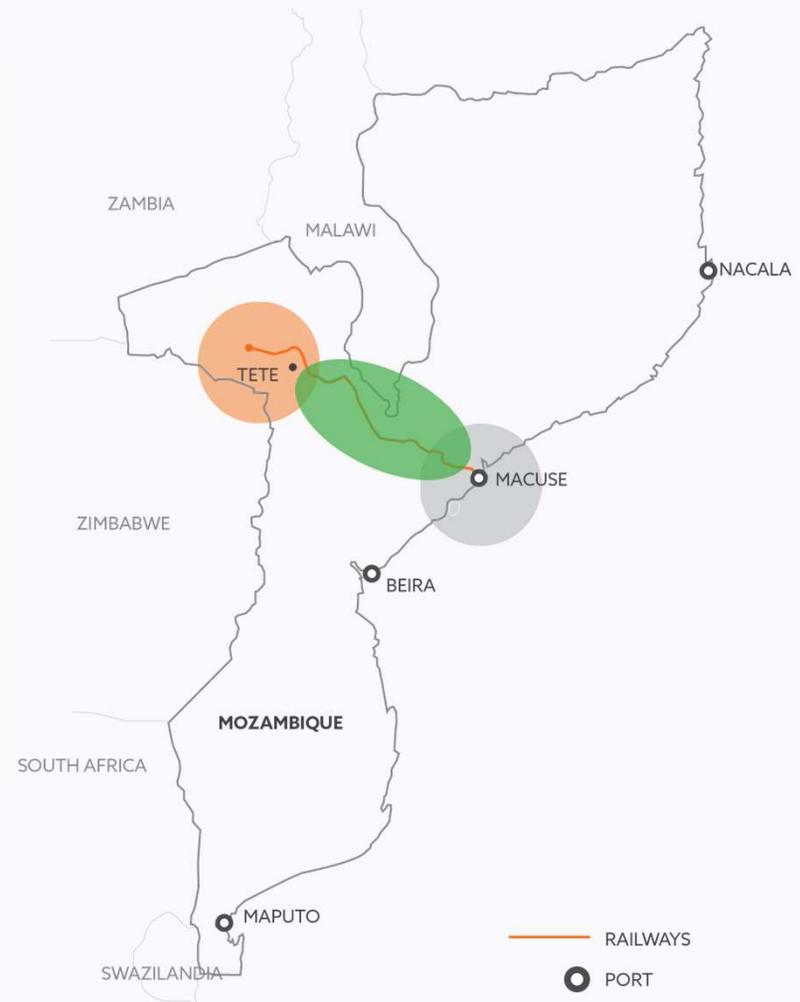
This project is of vital importance for the logistics of the mining sector, since it assures the opening of the Moatize basin to the international market, ensuring a more competitive logistics cost compared to the more direct competitors, namely Australia and Indonesia.

THIS PROJECT IS OF VITAL
IMPORTANCE

**GROWTH IN AGRICULTURE
AND AGROINDUSTRY**

FORESTRY DEVELOPMENT

GROWTH IN MOBILITY



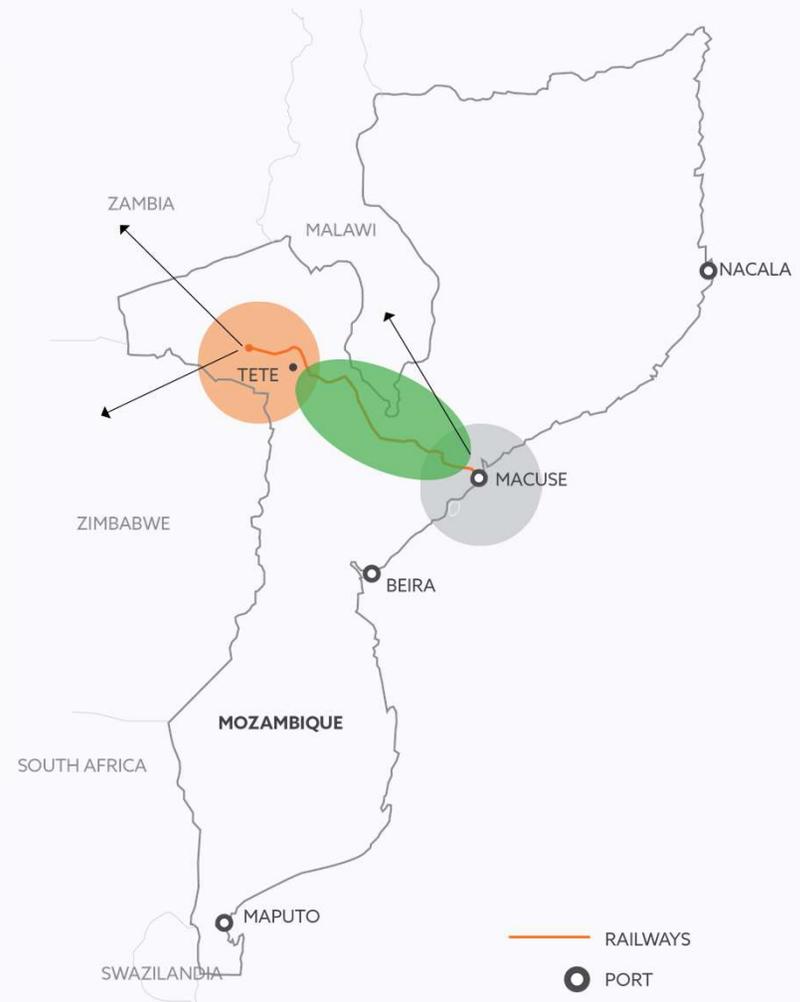
2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

This project is of vital importance for the logistics of the mining sector, since it assures the opening of the Moatize basin to the international market, ensuring a more competitive logistics cost compared to the more direct competitors, namely Australia and Indonesia.

THIS PROJECT IS OF VITAL
IMPORTANCE

**SUPPORT
STRUCTURE FOR
HINTERLAND
LOGISTICS
ACTIVITIES**



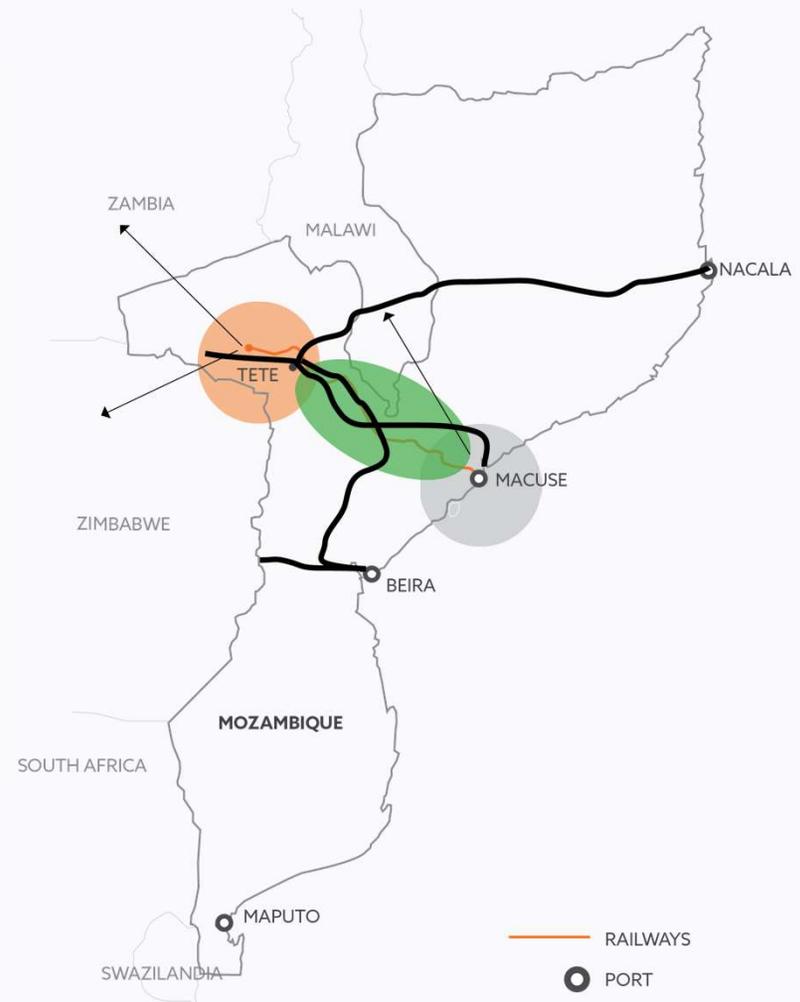
2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

This project is of vital importance for the logistics of the mining sector, since it assures the opening of the Moatize basin to the international market, ensuring a more competitive logistics cost compared to the more direct competitors, namely Australia and Indonesia.

THIS PROJECT IS OF VITAL
IMPORTANCE

**NETWORK EFFECT
TO COMMUNITIES
AND THE ECONOMY**



2| RAILWAY CORRIDOR AND PORT

INTRODUCTION

The concession was granted to build and operate the railway corridor between **Chitima - Moatize - Macuse** (639km) and the port of Macuse with an initial capacity of 33 mtpa, **extendable to 100 mtpa for the transportation of coal, containers, silos/grain, oil&gas, general cargo and passengers.**

The total infrastructure investment is valued at \$2,700 millions USD

- > Railway infrastructure **Chitima - Macuse** is valued at \$1,890 millions USD
- > Port infrastructure is valued at \$810 millions USD
- > Rolling stock & port equipment is valued at \$500 millions USD

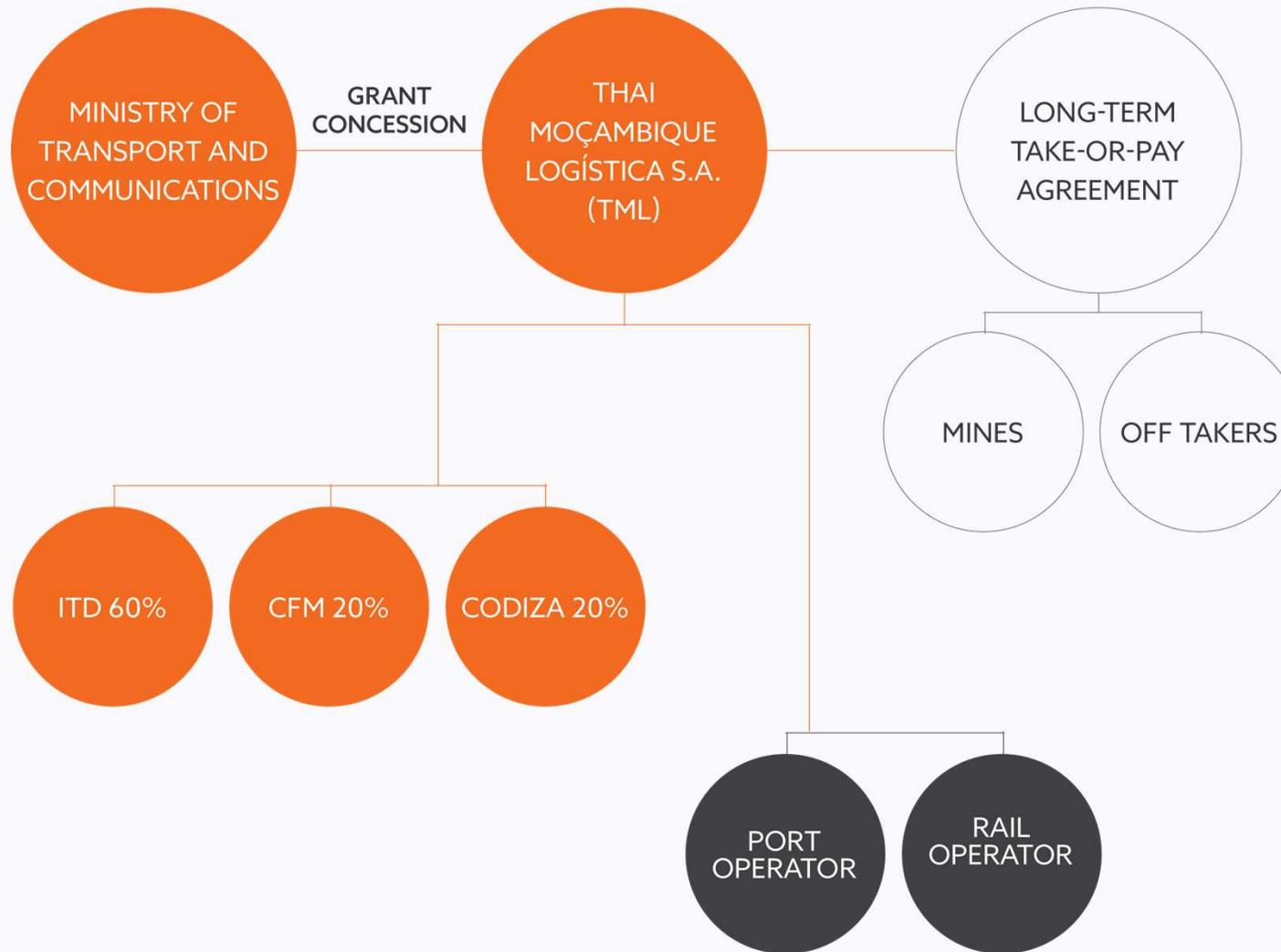


THE TOTAL INFRASTRUCTURE INVESTMENT

\$2,700 MILLIONS USD

2| RAILWAY CORRIDOR AND PORT

SHAREHOLDER STRUCTURE



3| BRIEF DESCRIPTION OF THE PROJECT



RAILWAY



A high-performance railway will be built to transport coal, general cargo and passengers between Moatize/Chitima region and the new port to be built on the Macuse River.

THE TOTAL LENGTH OF THE RAILWAY LINE IS

639 KM

3| BRIEF DESCRIPTION OF THE PROJECT

RAILWAY



CHIRE RIVER



RAILWAY CORRIDOR AND PORT - CHITIMA-MOATIZE-MACUSE

3| BRIEF DESCRIPTION OF THE PROJECT

RAILWAY - PERFORMANCE PARAMETERS



ITEM	DESCRIPTION
Gauge	1,067 mm
Axle Load	26 tonnes
Number of principle lines	Single way with 22 crossings
Signaling	Automatic with centralized control
Top pending	0.5% for loaded trains, 1.0% for empty trains
Composition of the train	2 locomotives with 140 wagons of 104 gross tonnes
Trains in operation	14 trains per day
Cycle duration	30 hours
Capacity of the train	11,200 tonnes net
Fleet	30 locomotives and 2,100 wagons
Passenger train	2 per day

3| BRIEF DESCRIPTION OF THE PROJECT

PORT



The new deep-water sea port will be built in accordance with the International Maritime Standards with an initial capacity for coal of 33mtpa, extendable up to 100mtpa.

IT WILL ALSO
ACCOMMODATE OTHER
TERMINALS FOR GENERAL
AND SPECIALIZED CARGO.

3| BRIEF DESCRIPTION OF THE PROJECT

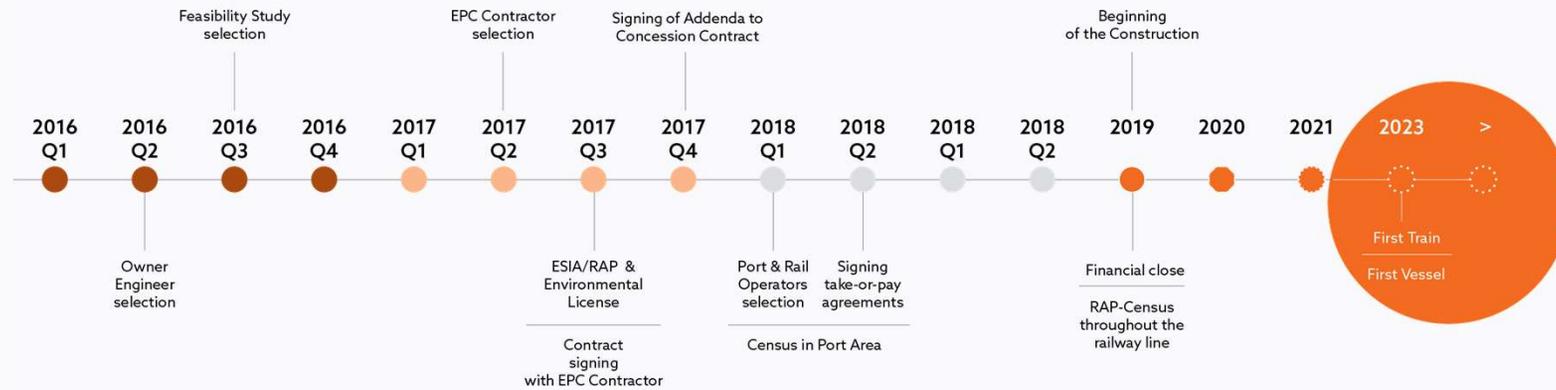
PORT - MAXIMUM CAPACITY OF 100 MTPA



ITEM	DESCRIPTION
Loading Docks for Coal	2 vessels of panamax type 80,000 DWT Loading speed 10,000 tonnes / hour
Tugboat wharf	2 tugs of 80 tonnes with 90m length
Pier Roll-on-roll-off	Leveling Low (L = 40m), Medium (L = 24m), high (8m)
Liquid Terminal	1 Pier of 120 m
Breakwater	North - length 4,000m South - length 3,000m
Access channel	14 Km
Coal stock area	1,200,000 Tonnes

3| BRIEF DESCRIPTION OF THE PROJECT

TIMELINE OF THE PROJECT



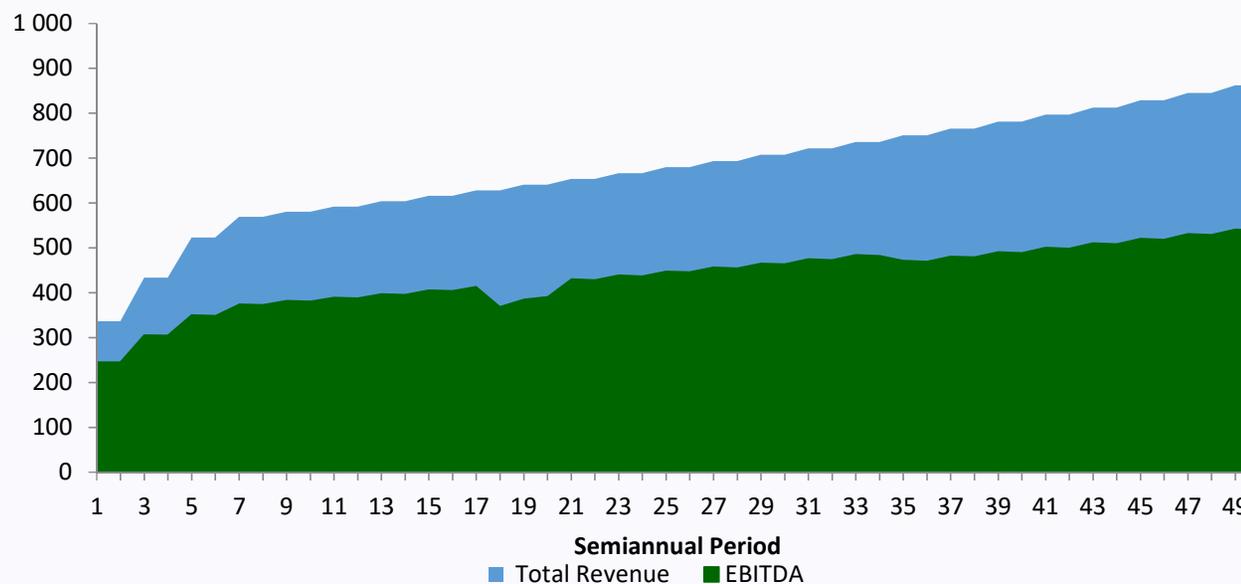


4| PREVISIONAL CARGO

VOLUME

1. Coal 25Mtpa
 - a) Jindal 10Mtpa – Lol in process
 - b) ICVL 10Mtpa – Lol in process
 - c) Others Mines 5Mtpa – Lol in process
2. Containers
 - a) 150.000 TEU per annum – Several Lol - Done
3. General Cargo
 - a) 4Mtpa – MoU already sign
4. Liquid Bulk
 - a) 1,2Mtpa

EBITDA and Revenue (USDmil)



5| BRIEF DESCRIPTION OF THE REASSEMENTLEMN PROJECT AT SUPINHO

THE COMMUNITY



First phase of a Resettlement Project, promoted by THAI MOÇAMBIQUE LOGÍSTICA, S.A. (TML). It is developed within the scope of the Project Construction of the Chitima-Moatize-Macuse Rail-Port Corridor. The first phase, which refers to resettlement housing area, will be deployed on a land of 11 hectares located next to the village of Supinho near Quelimane, in the Zambézia province, according to the attached location plan.



RAILWAY CORRIDOR AND PORT - CHITIMA-MOATIZE-MACUSE

5| BRIEF DESCRIPTION OF THE REASSEMENTLEMN PROJECT AT SUPINHO

THE COMMUNITY



The housing complex is expected to be built in the mentioned area appropriately integrated into the natural conditions of the site, respecting the shrub vegetation, local tree and the relief conditions that directly affect the drainage systems to be merged into the proposed solution. This housing complex will be equipped with 7 housing blocks, each with 10 lots with an area of 800m² (each lot will have 20 meters of width and 40 meters of depth) and 4 lots of different dimensions for the construction of a Primary School, a Healthcare Center, a Multi-sport Pavilion and a Market. These collective facilities are intended to serve the entire village community of Supinho and not simply the future occupants of the resettlement area. The primary school will replace the existing one in the northeast of the village, as in the future the land where this school is located will be separated from the village by the railway line that will be built.



5| BRIEF DESCRIPTION OF THE REASSEMENTLEMN PROJECT AT SUPINHO

THE COMMUNITY



The intervention area, marked in red in the location plan shown in Figure 1, is located on the outskirts of Quelimane, approximately 11.60 km from Zalala Beach and 10.65 km from EN470. The goal is that the construction of this new housing area forms an important factor of local planning, organization and stabilization of urban space, particularly in its impact area. Taken as intervention premises, the development of spatial quality by the integration of the native plant to the solution, with the preservation of the existing tree complex, and the appreciation of the architectural image with the controlled dynamics in the range of the housing types and the harmonization of the color composition.

