## **Executive Summary**

#### **Operators Summary**

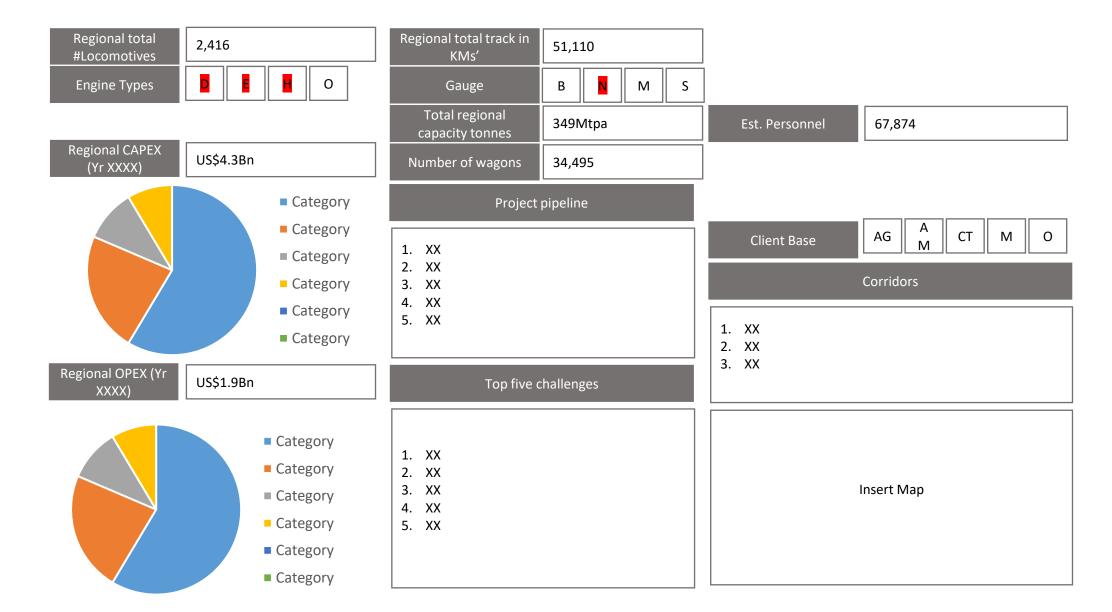
- South Africa is the key rail market in the region, accounting for 60% of track, 73% of locomotives, 36% of wagons, 58% of haulage capacity, and around 80% of Capex and Opex in the region. However, the utilities in South Africa are beset with a range of problems, including lack of finance, corruption, ageing fleets and damage to infrastructure.
  - Operations in countries such as Angola, Tanzania and Namibia, as well as Mozambique are increasingly competing with South Africa's for cargoes to and from the landlocked regions of Southern Africa.
  - However, as individual rail operators, they are still very small by comparison at this stage.
- Most operators in the region are struggling financially from years of underinvestment and
  increased competition from road haulage. There are efforts in several countries to legislate for
  bulk goods to be carried only on rail, but a lack of rolling stock in many cases is preventing this

   Zambia, Zimbabwe and Mozambique are all in this conundrum.
- A new surge in mining and agricultural development in the region, as well as demands for consumer imports is seeing renewed interest in rail. Competition for hinterland cargoes in Southern Africa is also stimulating investment in port and rail infrastructure in several countries:
  - Rail lines in Angola, Tanzania and Mozambique are currently attracting the most investment, as they look to divert traffic away from South Africa's ports, roads and rail networks, which have suffered from neglect and criminality in recent years, increasing costs and risks.
  - The rapid growth of mining activity in the southern provinces of the DR-Congo is driving much of this and will see investment in the DRC's networks as well.
- Countries such as Botswana, Namibia, Eswatini, Zimbabwe and Zambia all rely heavily on transit cargoes, resulting in risks associated with planning and finance for new operations.
   However, as the region integrates and cargo demands rise, this risk should recede somewhat.

#### **Corridor Summary**

- Most corridors in the region are conceptual or operational, rather than being developed.
- The North-South Corridor (NSC) is the prime example of this and revolves more around co-operation between utilities than developing new integrated rail infrastructure.
- Angola and Namibia have some interesting developments, as does Tanzania, although largely linking into Central Africa.
- Rail corridors in the region are developed incrementally, rather than as single projects, with the bulk of activity being extending existing rail infrastructure to meet new demands.
  - As such, whilst it is useful to understand the dimensions of these corridors, suppliers need to drill down into the individual components of corridors, rather than try to approach them as single opportunities.
  - This may require interaction with rail operators and regulators across a number of countries in total, but in many instances, just one rail company for an actual project.

#### **Executive Summary**



### Background

- In addition to an overview of key rail utilities in Southern Africa, a 10-year view of exports of key rail equipment is provided to add granularity to the opportunity and the UK's position as supplier to the region.
- The Trade overview uses UN Comtrade data as a source, as this is standardised and includes data from 95% of reporting countries, including all key manufacturing countries.
- It reveals that exports to the region have declined significantly since the middle of the last decade, largely as a result of scaling back of new projects as mining demand slowed.
- It is expected that this will show signs of recovery as new build and expansion in some markets increases in 2022 and beyond especially in Tanzania, Angola and South Africa, as well as potentially in Mozambique, DR-Congo and Namibia.

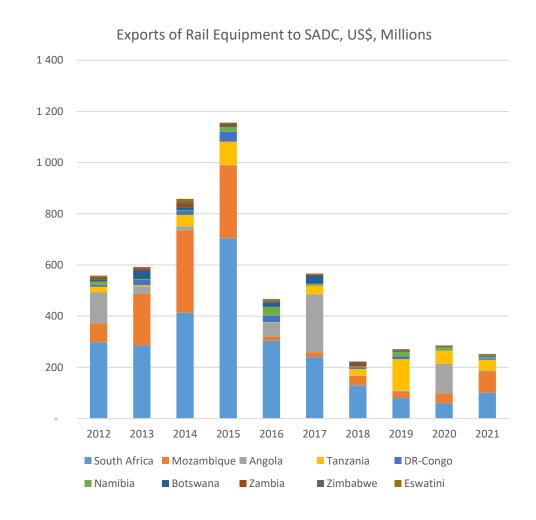
### Background

### The basket of tariff headings includes:

	The backet of tariff floadings from a cor
730210	Iron or steel, railway or tramway track construction material; rails
730230	Iron or steel, railway or tramway track construction material; switch blades, crossing frogs, point rods and other crossing pieces
730240	Iron or steel, railway or tramway track construction material; fish-plates and sole plates
730290	Iron or steel, railway or tramway track construction material; n.e.c. in heading no. 7302
853010	Signalling, safety or traffic control equipment; for railways or tramways (excluding those of heading no. 8608)
860110	Rail locomotives; powered from an external source of electricity
860120	Rail locomotives; powered by electric accumulators
860210	Rail locomotives; diesel-electric powered
860290	Rail locomotives and locomotive tenders; other than diesel-electric powered
860310	Railway or tramway coaches, vans and trucks; self-propelled, powered from an external source of electricity (excluding those of heading no. 8604)
860390	Railway or tramway coaches, vans and trucks; self-propelled, powered other than from an external source of electricity (excluding those of heading no. 8604)
860400	Railway or tramway maintenance or service vehicles; whether or not self-propelled (eg workshops, cranes, ballast tampers, trackliners, testing coaches and track inspection vehicles)
860500	Railway or tramway coaches; passenger coaches, luggage vans, post office coaches and other special purpose coaches, not self-propelled (excluding those of heading no. 8604)
860610	Railway or tramway goods vans and wagons; tank wagons and the like, not self-propelled
860630	Railway or tramway goods vans and wagons; self-discharging, not self-propelled, excluding those of item no. 8606.10
860691	Railway or tramway goods vans and wagons; covered and closed, not self-propelled
860692	Railway or tramway goods vans and wagons; open, with non-removable sides of a height exceeding 60cm, not self-propelled
860699	Railway or tramway goods vans and wagons; n.e.c. in heading no. 8606, not self-propelled
860711	Railway or tramway locomotives or rolling stock; parts, driving bogies and bissel-bogies
860712	Railway or tramway locomotives or rolling stock; parts, bogies and bissel-bogies (excluding driving bogies and bissel-bogies)
860719	Railway or tramway locomotives or rolling stock; parts, axles and wheels, and parts thereof
860721	Railway or tramway locomotives or rolling stock; parts, air brakes and parts thereof
860729	Railway or tramway locomotives or rolling stock; parts, brakes (other than air brakes) and parts thereof
860730	Railway or tramway locomotives or rolling stock; parts, hooks and other coupling devices, buffers and parts thereof
860791	Railway or tramway locomotives; parts n.e.c. in heading no. 8607
860799	Railway or tramway rolling stock; parts n.e.c. in heading no. 8607
860800	Railway or tramway track fixtures and fittings; mechanical (including electro-mechanical) signalling, safety or traffic control equipment for railways, tramways, etc; parts thereof

### Global Exports of Product Basket to Region

- Exports to the region grew sharply from 2012 to 2015, reaching US\$1.16bn in 2015, before declining thereafter – 2018 to 2021 has seen far more modest levels.
- Initial surge was based on South African recapitalisation of rolling stock and investment in Mozambique's mining-led rail developments in the centre and north of the country.
- Angola has also seen sporadic investment in the sector, and can expect higher levels of investment as the country concessions key rail and port infrastructure.
- Tanzania will also see increased activity as the Standard Gauge Railway projects ramp up.
- Other countries have struggled to invest in infrastructure and rolling stock in recent years, largely as bulk export projects slowed in the latter part of the decade, but this could change with a renewed surge in mining activity in Botswana, Namibia, Zambia, Zimbabwe and DR-Congo, especially around copper, cobalt and other battery minerals.
- 2022 figures should be up on 2021 as a result, with the outlook for the next five to ten years improved as well, on the back of commodity trade (minerals and agricultural), upgrades to key ports allowing greater inbound trade, and linking of 'stranded' resources and regions into the regional rail network.
- Data from key exporters including Austria, France, India, Malaysia and a number of smaller exporters is not yet available for 2022, but it would appear that global exports to the region last year would be the highest since 2017.



### Key Suppliers of Rail Equipment to Region

- China is the key supplier, with 32% of the market overall, but only 24% since 2018 – large rolling stock contracts account for bulk of supply;
- USA is also key supplier of rolling stock to SA, with 21% overall, dropping to 14% since 2018;
- SA is largest import market and 3<sup>rd</sup> largest regional supplier – some goods destined for SA are probably re-exported. SA share is steady at ~11%;
- Austria a consistent supplier in 4<sup>th</sup> place with 7% overall, rising to 10% in last four years;
- Brazil's share largely based on rolling stock to projects in Angola and Mozambique in early part of decade, share is 1% in last four years;
- Italy only other consistent supplier to region, with 3% overall, but rising to 10% once early rolling stock figures are removed in last four years;
- UK share is very small at this juncture, at just 1% overall and in the last four years;

	Exports to Southern Africa of Rail Equipment (US\$, Million)											
Rank	ank Supplier 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021								Total			
	Total	558	593	858	1,156	467	567	223	271	285	253	5,232
1	China	187	103	256	670	72	138	37	95	73	43	1,673
2	USA	110	113	212	178	87	271	36	16	84	12	1 117
3	South Africa	72	118	114	93	46	54	24	28	21	41	609
4	Austria	69	59	55	48	23	8	21	39	22	18	360
5	Brazil	12	64	21	18	182	35	3	5	2	3	344
6	Italy	7	13	14	12	5	20	11	28	36	24	169
7	Japan	0	41	47	11	0	1	19	38	1	1	157
8	India	5	8	26	17	3	4	2	3	4	42	113
9	Germany	18	5	9	19	13	3	4	4	6	4	86
10	Spain	9	4	27	38	1	1	2	1	0	0	83
13	υκ	9	10	18	4	2	1	2	3	2	3	55
	Others	61	56	60	49	34	32	63	13	35	63	465

### **Key Products Exported**

- Diesel locomotives are the key export to the region, and together with electric locomotives accounted for 31% of the total over the decade, although only 14% in the last three years.
- Rail supply remains key, as does exports to Southern Africa of coaches, wagons and the like.
- Parts for locomotives, wagons and the like are a consistent source of exports to the region, whilst exports of signalling and control equipment, switch blades, , crossing pieces and the like averaged around US\$32 million a year to the region over the decade.

HS Code	Description (Reduced)	Total: 2012-2021	Share	Total: 2018-2021	Share
Total		5,232	100	1,032	100
860210	Diesel Locomotives	1,114	21	138	13
730210	Iron or steel; rails	619	12	202	20
860719	Parts, axles and wheels, and parts thereof	577	11	118	11
860110	Electric (external source) Locomotives	540	10	5	1
860791	Locomotive Parts n.e.c. in HS-8607	355	7	60	6
860500	Coaches, not self-propelled (excl, HS-8604)	231	4	19	2
860692	Goods vans & wagons; open, non-removable sides etc, not self-propelled	206	4	8	1
860799	Rolling stock parts n.e.c. HS-8607	195	4	67	7
730290	Iron or steel, track construction material; n.e.c. in HS-7302	157	3	78	8
860310	Coaches, vans and trucks; self-propelled, external electric (excl. HS-8604)	133	3	0	0
860800	Railway or tramway signalling and control equipment parts	130	2	64	6
860699	Goods vans and wagons; n.e.c. in HS-8606, not self-propelled	129	2	39	4
860390	Coaches, vans & trucks; self-propelled, not external electricity (excl. HS-8604)	122	2	50	5
860400	Maintenance etc vehicles; (eg workshops, cranes, trackliners, testing & inspection etc.)	111	2	32	3
860730	Locomotives or rolling stock; parts, hooks, other coupling devices, buffers, parts	101	2	13	1
853010	Signalling, safety or traffic control equipment; (excl. HS-8608)	90	2	35	3
730230	Iron or steel switch blades, crossing frogs, point rods and other crossing pieces	87	2	25	2
860290	Rail locomotives and locomotive tenders; other than diesel-electric powered	80	2	19	2
860721	Locomotives or rolling stock; parts, air brakes and parts thereof	69	1	23	2
860610	Goods vans and wagons; tank wagons and the like, not self-propelled	52	1	3	0
860729	Locomotives, rolling stock; parts, brakes (other than air brakes) and parts thereof	43	1	16	2
860712	Locomotives, rolling stock parts; bogies & bissel-bogies (excl. driving bogies & bissel-bogies)	24	0	5	0
860711	Locomotives, rolling stock; parts, driving bogies and bissel-bogies	22	0	4	0
730240	Iron or steel, track construction material; fish-plates and sole plates	20	0	3	0
860630	Goods vans & wagons; self-discharging, not self-propelled, excl HS-8606.10	17	0	5	1
860691	Goods vans & wagons; covered and closed, not self-propelled	3	0	0	0
860120	Rail locomotives; powered by electric accumulators	3	0	1	0



within a FY

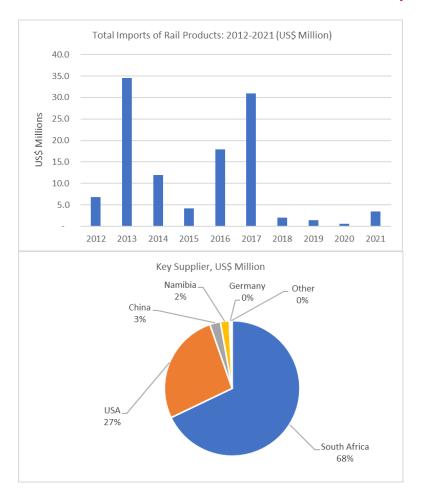
(US\$0.12mn)

## Botswana Railways

PAILWAYS								
Number of Locomotives	34	Track in KMs'	888	Country	Botswana			
Engine Type	D E O	Gauge	B N M S	Established	1987			
Engine supplier	General Electric and General Motors	Capacity tonnes	Unstated – volumes have dropped from 2Mtpa to 1Mtpa over last decade	Est. Personnel	601			
CAPEX (2022/3)	Not Stated	Number of Wagons	1164	Website	https://www.botswanarailway s.co.bw/			
		Project	pipeline	Ownership	PP P C O			
	No Capex expenditure	1. Mmamabula - Leph	nalale	Client Base A M CT M O				
Top five	at present. Lack of finance	<ol> <li>Mosetse- Kazaung</li> <li>Dry Port Facility Go</li> <li>Trans Kalahari</li> </ol>	-	Corridors				
		5. Mahikeng-Swartru	ggens	<ol> <li>Trans Kalahari – no finance at present, coal driven</li> <li>Ponta Techobanine – no finance at present, coal</li> </ol>				
OPEX (2021/2)	US\$0.37 million	Top five	challenges	driven  3. Kazungula – key pr	oject, by environmentally sensitive			
Regular parts and components including technical within a FY	<ol> <li>Rail and parts         (US\$0.24mn)</li> <li>Locomotive Parts         (US\$0.1Mn)</li> <li>Fixtures, fittings &amp; parts</li> </ol>	<ol> <li>Lack of finance for</li> <li>Restrictions and re</li> <li>Ageing rolling stock</li> <li>Maintenance back</li> <li>Theft and Vandalis</li> </ol>	gulatory challenges k log		Francistown Selebi- Prilwe Mahalapye Mahalapye			

5. Theft and Vandalism in South Africa

### Botswana Rail Imports



- Small market, small rail company imports averaged US\$11.4mn a year over last decade
- Locomotives and Rolling Stock are key imports;
- Rail and signalling & safety equipment relatively large;
- Potential for development of links to SA/Zambia?
- Local procurement ensures SA suppliers get orders local partners in Botswana, proximity of supply

#### Key Import Products: 2012-2021 (US\$ Million)

Tariff	Product	US\$, Million
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	48.8
860210	Locomotives; diesel-electric powered	29.1
860500	Passenger coaches, luggage vans, post office coaches etc	8.9
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	8.6
730290	lron/steel, railway track material; n.e.c. in HS7302	3.4
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	2.8
730210	Iron/steel: rails	2.8
860791	Locomotives; parts n.e.c. in HS8607	1.7
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	1.6
860799	Rolling stock; parts n.e.c. in HS8607	1.0
860290	Locomotives & tenders; other than diesel-electric powered	1.0
860721	Locomotives or rolling stock; parts, air brakes & parts	0.8
730240	Iron or steel; fish-plates & sole plates	0.7
860800	Track fixtures & fittings: signalling, safety or traffic equip	0.6
853010	Signalling, safety or traffic control equipment; (excl HS8608)	0.5
730230	Iron/steel, switch blades, crossing frogs, point rods etc	0.4
860110	Locomotives; powered from an external source of electricity	0.4
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	0.3
860390	Coaches, vans & trucks; self-propelled, etc	0.1
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	0.1
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	0.1
860691	Goods vans & wagons; covered & closed, not self-propelled	0.1
860120	Locomotives; powered by electric accumulators	0.1
860400	Railway maintenance vehicles; whether/not self-propelled	0.0
860610	Tank wagons etc, not self-propelled	0.0
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.0
Total		113.9



## Caminho de Ferro Benguela

	Total	Operation	Re	cov	erable			
Number of	Total	Operation	Yes		No			
Locomotives	72	21	40			11		
Engine Type	D	E	H		0			
Engine supplier	CKD	20C – 8; G 8F – 8; Die obra - 6	sel SL/6	TC				
CAPEX (2023- 2026)	Manobra - 6 Concession to spend US\$450 million on rolling stock, line upgrades – 35 locos, 1,555							
Top five	1. 2. 3. 4.	China Rai complete Evenly sp rolling stre equipme maintena Requiren passenge Station re upgrades	ed line uplit betwook, traint and lance. The nent for rail?	ipg ree ctic ine	rade n on			
OPEX (2022)	1	Stated – cession y		eg	in			

Track in KMs'	1,344						
Gauge	В	N	М	S			
Capacity tonnes	24Mtpa, - ave 0.24 Mpta in 2020-2022						
Number of Wagons	567 – 391 are operational, with the balance recoverable						

#### Project pipeline

- 1. Acquisition of:
  - a) Passenger Carriages
  - b) Wheel Maintenance machine
  - c) Workshop Tools and Spare Parts
- 2. Entry into operation of the 3 Multiple Diesel Units
- 3. Launch of the "Camacove" Train in the Lobito Luau section

#### Top five challenges

- 1. Insufficient operational rolling stock
- 2. Rolling stock wheel wear
- 3. Vandalization of Infrastructure (removal of fixtures, crossings, destruction of railway signaling stations, etc.) along the line.
- 4. Capacity of line to carry DRC cargoes
- 5. Lack of reliable connection with SNCC in DRC

Country	Angola							
Established	1899							
Est. Personnel	1325							
Website	https://www.facebook.com/profil e.php?id=100057527767117							
Ownership	PP P C O							
Client Base	AG A M M							

#### Corridors

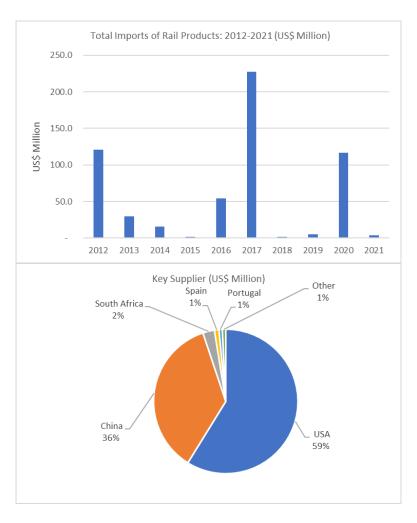
1. Lobito Corridor: Linking Angola to Kolwezi in DR-Congo and potentially Solwezi in Zambia in the future

ANGOLA
Luau
Luena
Kisenge
Huambo
ZAMBIA

#### Top five

- 1. Priorities include:
- 2. Fitting out of workshops, maintenance yards.
- 3. Staff training.
- 4. Rehabilitation of rolling stock that is recoverable.
- 5. Establishing rail track manufacturing facility?

### Angola Rail Imports



- Relatively large market by regional standards large recaps;
- Averaged US\$58mn in imports per year, but unevenly spread;
- Locomotives and Rolling Stock are key imports;
- Rail and signalling & safety equipment relatively large;
- Expect large orders as upgrade of Benguela Rail takes place;
- US locos, Chinese track construction dominate;

	Key Import Products: 2012-2021 (US\$ Million)	
Tariff	Product	US\$, Million
860210	Locomotives; diesel-electric powered	362.4
860500	Passenger coaches, luggage vans, post office coaches etc	67.9
860390	Coaches, vans & trucks; self-propelled, etc	46.8
730210	Iron/steel: rails	40.1
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	8.2
853010	Signalling, safety or traffic control equipment; (excl HS8608)	5.9
860800	Track fixtures & fittings: signalling, safety or traffic equip	5.7
730230	Iron/steel, switch blades, crossing frogs, point rods etc	5.2
860400	Railway maintenance vehicles; whether/not self-propelled	5.2
730290	Iron/steel, railway track material; n.e.c. in HS7302	4.6
860610	Tank wagons etc, not self-propelled	4.0
860799	Rolling stock; parts n.e.c. in HS8607	3.8
860692	Goods vans/wagons; open, non-removable sides >60cm, etc	3.8
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	3.4
860791	Locomotives; parts n.e.c. in HS8607	3.1
730240	Iron or steel; fish-plates & sole plates	2.4
860721	Locomotives or rolling stock; parts, air brakes & parts	1.7
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	0.9
860691	Goods vans & wagons; covered & closed, not self-propelled	0.8
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	0.3
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	0.3
860110	Locomotives; powered from an external source of electricity	0.1
860120	Locomotives; powered by electric accumulators	0.0
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	0.0
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.0
860290	Locomotives & tenders; other than diesel-electric powered	0.0
Total		576.8



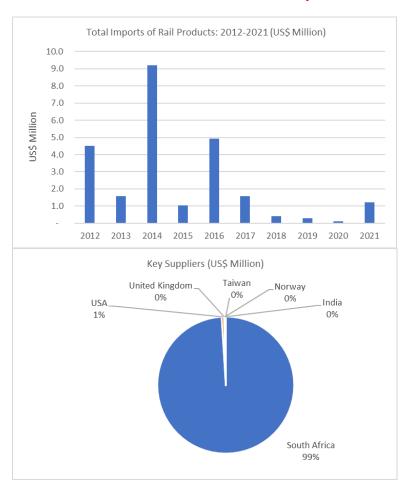
Accident compensation

85,485

## ESWATINI RAILWAYS ESWATINI Railways Efficiency Re-defined

	nber of motives	46	Track in KMs' 301km				Country Eswatini						
Engin	пе Туре	D E H	0	Gauge	В	M S		Established	1879	1879			
Engine	SIIINNIIA	18 General Electric; 28 of Motors (see spreadshee		Capacity tonnes	12 million tonnes moved in 2022 (ir traffic)			Est. Personnel	358	358			
	X (2019- 022)	US\$50.56 million		Number of Wagons	75			Website	https	://esw	atinirai	l.co.sz/	
				Project	pipeline			Ownership	S	PP	Р	С	О
		2. ICD – \$0.6bn (own		Eswatini Rail Link (ESRL) Project     Transit Hub with TFR and CFM				Client Base	AG	A M	СТ	M	O
Тор	p five							Corridors					
		funding of \$42 two years)	z in iast	3. ICD Expansion 4. Sidings				1. ESRL: The joint inter-railway venture with Transnet Freight Rail (TFR), will build a new 150-kilometre-long railway line from					
OPEX (2	2021/22)	US\$17.6 million		Top five	challenges		Lothair (South Africa) to Sidvokodvo (Eswatini) corridor to create a dedicated general freight b						
	Total expend	diture	17,608,948				1 [		(SR / M / 36)	matipoor!			
	Wages, Loar	ns, Insurance, Sundry	13,920,093	1. Heavily reliant on t	ransit traffic (709	6 of		Republic of South Africa Properties					
	Maintenance	e	2,423,126	revenue)				NO.	BANE	Sign Miamula	eni aon		
	Perway mate	erial	447,431	<ul><li>2. Access to capital</li><li>3. Vandalism and cab</li></ul>	la thaft damastis	allyand		Western Manager I Addition					
Top five	Strategic pla	nning	245,144	in SA	ie triert domestic	any and							
	Safety & sec	curity	226 764	4. Obsolete technolog	ξV			Burga Process					
	Training & e	ducation	131,866	5. Retention of Intelle					ESWATINI	Big Bend	C		
	Protective cl	lothing	129,039		3. Reterition of interieural capacity			Managaro Barrio					

### Eswatini Rail Imports



- Tiny market, with bulk of spend on goods wagons and tanks;
- Average imports of only US\$2.5mn per annum;
- Little in the way of rail expansion over the period;
- Some small projects in the pipeline;
- South Africa supplies almost all requirements to Eswatini Rail;

	Key Import Products: 2012-2021 (US\$ Million)							
Tariff	Product	US\$, Million						
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	13.4						
860610	Tank wagons etc, not self-propelled	2.2						
730210	Iron/steel: rails	1.9						
730290	Iron/steel, railway track material; n.e.c. in HS7302	1.3						
860290	Locomotives & tenders; other than diesel-electric powered	1.2						
860210	Locomotives; diesel-electric powered	1.0						
730230	Iron/steel, switch blades, crossing frogs, point rods etc	0.8						
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	0.7						
860799	Rolling stock; parts n.e.c. in HS8607	0.5						
860791	Locomotives; parts n.e.c. in HS8607	0.3						
860400	Railway maintenance vehicles; whether/not self-propelled	0.2						
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	0.2						
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	0.2						
730240	Iron or steel; fish-plates & sole plates	0.2						
853010	Signalling, safety or traffic control equipment; (excl HS8608)	0.2						
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	0.2						
860721	Locomotives or rolling stock; parts, air brakes & parts	0.1						
860800	Track fixtures & fittings: signalling, safety or traffic equip	0.1						
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	0.0						
860120	Locomotives; powered by electric accumulators	0.0						
860110	Locomotives; powered from an external source of electricity	0.0						
860691	Goods vans & wagons; covered & closed, not self-propelled	0.0						
860390	Coaches, vans & trucks; self-propelled, etc	0.0						
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.0						
Total		24.9						



4. Maintenance and repair

5. Exchange of rolling stock

(US\$2.37mn)

materials (US\$4.45mn)

## Mozambique Railway (CFM)

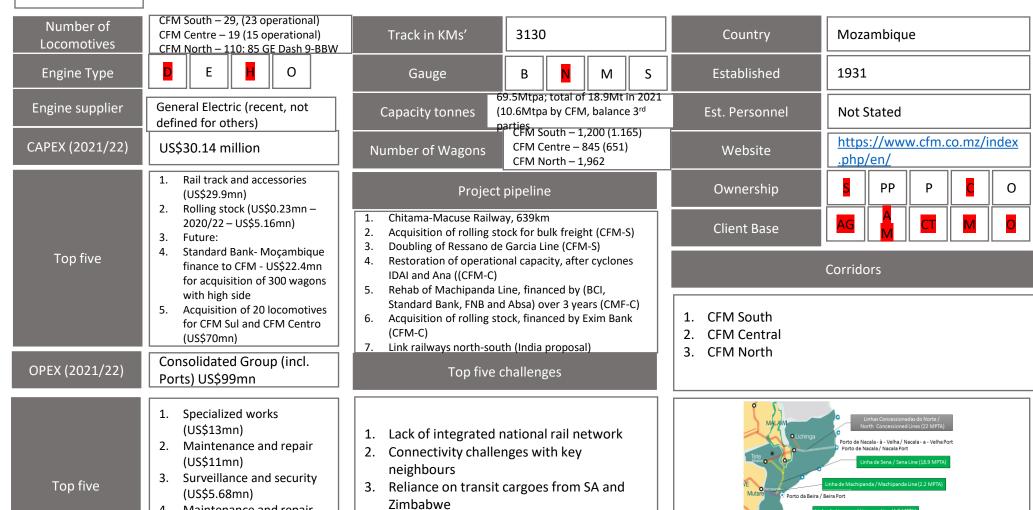
Funding

Maintenance and rolling stock

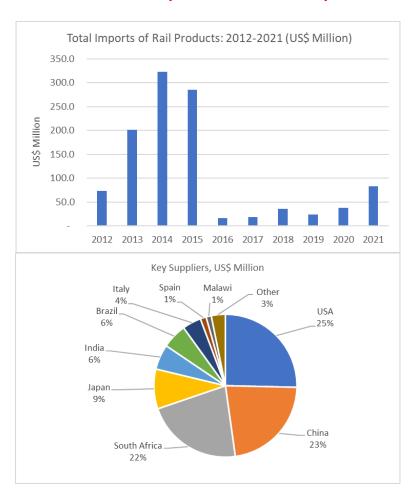
Porto de Maputo / Maputo Port

ha de Goba / Goba Line (4.7 MPT

4.



### Mozambique Rail Imports



- Relatively large market by regional standards, complicated by three rail lines and multiple concessionaires;
- Over US\$100mn a year in imports;
- 'Pit to Port' lines driven by coal mining from 2012 to 2015;
- Spread of suppliers reflects multiplicity of contracts, origin of developers and contractors;
- Strong project pipeline, funding an issue for some projects;
- Prone to flooding emergency repairs a feature in centre and north

	Key Import Products: 2012-2021 (US\$ Million)	
Tariff	Product	US\$, Million
860210	Locomotives; diesel-electric powered	374.5
860692	Goods vans/wagons; open, non-removable sides >60cm, etc	196.4
730210	Iron/steel: rails	145.6
860500	Passenger coaches, luggage vans, post office coaches etc	46.0
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	37.8
730290	Iron/steel, railway track material; n.e.c. in HS7302	34.1
860400	Railway maintenance vehicles; whether/not self-propelled	32.1
860791	Locomotives; parts n.e.c. in HS8607	30.5
860800	Track fixtures & fittings: signalling, safety or traffic equip	28.7
730230	Iron/steel, switch blades, crossing frogs, point rods etc	28.6
860799	Rolling stock; parts n.e.c. in HS8607	28.3
860290	Locomotives & tenders; other than diesel-electric powered	24.3
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	15.8
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	13.1
730240	Iron or steel; fish-plates & sole plates	11.5
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	11.4
860721	Locomotives or rolling stock; parts, air brakes & parts	11.0
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	7.9
860610	Tank wagons etc, not self-propelled	6.6
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	6.4
853010	Signalling, safety or traffic control equipment; (excl HS8608)	4.8
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	1.3
860390	Coaches, vans & trucks; self-propelled, etc	0.8
860120	Locomotives; powered by electric accumulators	0.3
860691	Goods vans & wagons; covered & closed, not self-propelled	0.0
860110	Locomotives; powered from an external source of electricity	0.0
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.0
Total		1,098.2



4. Utilities

5. Statutory obligations

## National Railways of Zimbabwe

ПППП	J					
Number of Locomotives	166	Track in KMs'	2,760km	Country	Zimbabwe	
Engine Type	В Н	Gauge	B N M S	Established	1897	
Engine supplier	General Motors	Capacity tonnes	18Mtpa – currently 2.3Mtpa	Est. Personnel	3587	
CAPEX (2018- 2023)	US\$400mn over five years (not fully secured)	Number of Wagons	7023	Website	www.nrz.co.zw/	
	Refurbishment and procurement over three phases of:	Project	pipeline	Ownership	PP P C O	
	<ol> <li>Refurb 132 locomotives, + 43 new</li> <li>Refurb 2,761 wagons + 1,280 new</li> <li>Refurb 144 coaches, + 56 new</li> </ol>				AG A CT M O	
Top five	<ul> <li>5. 250 track caution removals</li> <li>6. Yard lighting to 100% by Phase 3</li> <li>7. Train control and lighting systems</li> </ul>	<ol> <li>Lions' Den- Kafue R</li> <li>Harare – Moatize</li> </ol>	Railway link	Corridors		
	upgrades: entry-level track warrant system; Integrated & Centralised Train Control System	3. Harare Chitungwiza	a light commuter rail	North-South Corrid	or (Multiple linkages)	
OPEX (2022)	US\$20 million from PSIP Fund	Top five (	challenges			
Top five	Key Spend: 1. Salaries 2. Fuels 3. Maintenance spares	Opex for maintena track	apital for both Capex and nce of existing fleet and and derailment on track ptible	Zimbab	we we	

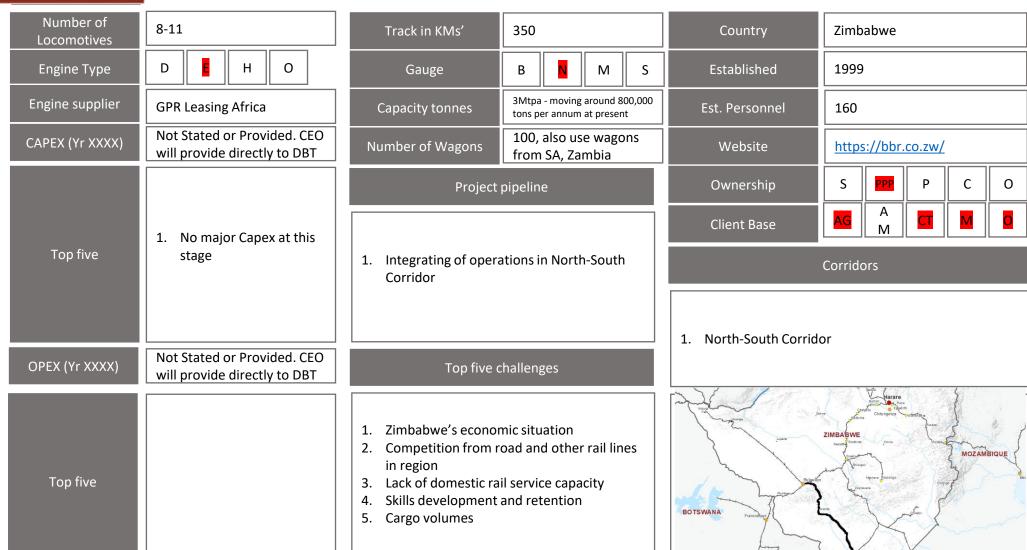
3. Skills development and retention

5. Inflation eroding budgets

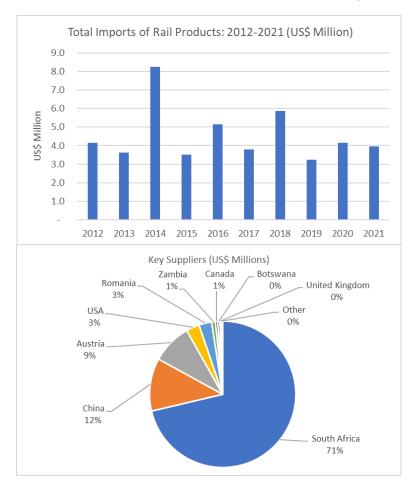
Competition from road transport



## **BBR** Beitbridge Bulawayo Railway



### Zimbabwe Rail Imports



- Small budgets, inadequate rolling stock hamper service;
- Country imports on average US\$4.6 million of rail equipment a year;
- Years of under-investment have crippled much of NRZ capacity –
   BBR still operates relatively well;
- Rail links to SA, Mozambique, Botswana, Zambia make Zimbabwe key link in North-South Corridor;
- RSA is key supplier, but Chinese involvement growing;

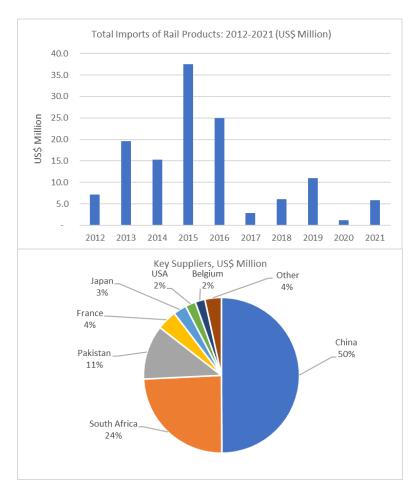
#### **Key Import Products: 2012-2021 (US\$ Million)** US\$, Tariff **Product** Million Iron/steel: rails 730210 7.2 860791 Locomotives; parts n.e.c. in HS8607 6.6 860799 Rolling stock; parts n.e.c. in HS8607 5.0 860400 Railway maintenance vehicles; whether/not self-propelled 4.7 Locomotives or rolling stock; parts, axles & wheels, & parts 860719 4.1 860390 Coaches, vans & trucks; self-propelled, etc 2.9 730290 Iron/steel, railway track material; n.e.c. in HS7302 2.8 860290 Locomotives & tenders; other than diesel-electric powered 1.9 860120 Locomotives; powered by electric accumulators 1.4 860500 Passenger coaches, luggage vans, post office coaches etc 1.3 860210 Locomotives; diesel-electric powered 1.2 860711 Railway locomotives, rolling stock; parts, driving & bissel-bogies 1.0 860110 Locomotives; powered from an external source of electricity 1.0 Locomotives/rolling stock; parts, brakes (not air brakes) & parts 860729 8.0 860699 Goods vans & wagons; n.e.c. in HS8606, not self-propelled 0.7 730240 0.6 Iron or steel; fish-plates & sole plates 860800 Track fixtures & fittings: signalling, safety or traffic equip 0.5 860730 Locos/rolling stock; parts, hooks/other coupling, buffers, parts 0.5 860630 Goods vans/wagons; self-discharge, etc. Excl. HS8606.10 0.4 860721 Locomotives or rolling stock; parts, air brakes & parts 0.4 853010 Signalling, safety or traffic control equipment; (excl HS8608) 0.3 860712 Locomotives or rolling stock; parts, bogies & bissel-bogies etc 0.2 860692 Goods vans/wagons; open, non-removable sides >60cm, etc 0.1 730230 Iron/steel, switch blades, crossing frogs, point rods etc 0.0 860310 Coaches, vans, trucks; self-prop, external elec (excl. HS8604) 0.0 Total 45.7



## Societe Nationale des Chemins de Fer du Congo

		, 001180	•					
Number of Locomotive	36-42	Track in KMs' 3,641km		Country	Democratic Republic of Congo			
Engine Typ	D E O	Gauge	B M S	Established	1902			
Engine suppl	CRN-Dalian supplied locomotives, with US- made engines from 2004 to 2015. They comprise: CK1F2 x 4; CKD8C4 x 10; CKD8C1 x	Capacity tonnes 3Mtpa (largely inoperable)		Est. Personnel	4,000			
CAPEX (Yr 202	23/4) 20; Unstated x 4 US\$60 million	Number of Wagons	Number of Wagons 4-5,000		https://www.snccsa.com/			
		Project	pipeline	Ownership	S PP P C O			
	1. Emergency rehabilitation of rolling		requirement to feed in	Client Base	AG A CT M O			
Top five	stock and track, including signalling equipment	is US\$60m)  2. Potential infusion of consortium	US\$100m by Lobito Rail	Corridors				
			om 16 tons to 22 tons to angolan rail	<ol> <li>North-South Corridor</li> <li>Dar es Salaam Corridor (NSC)</li> </ol>				
OPEX (Yr 2021	1/2) Not Stated	Top five o	Top five challenges		3. Lobito Corridor			
Top five	<ol> <li>Very little actual Opex</li> <li>In 2021/2 key imports were:</li> <li>Passenger carriages         (US\$4.2m)</li> <li>Rolling stock parts (US\$1.2m)</li> <li>Track (US\$1m)</li> <li>Signalling etc equipment         (US\$0.2m)</li> </ol>	2015, most of the i stock is dysfunction 2. Lack of funding nee stock and track 3. Historical mismana 4. Competition from r	eded to upgrade rolling gement of assets	Congulational Conjugate Congulation Conjugate Congulation Conjugate Congulation Conjugate Congulation Conjugate Conj	Sonds  AVET DEATH DEATH  AVET DEATH AND DEATH  AVET DE			

### **DR-Congo Rail Imports**



- World Bank-funded refurb of SNCC from 2008 to 2015 saw (relatively) large outlays;
- Rail system badly neglected since, needs major finance injection;
- Opening of Lobito link will see some emergency funding for track, signalling and loan of rolling stock;
- Last two years has seen almost no maintenance or rehabilitation of infrastructure

#### Key Import Products: 2012-2021 (US\$ Million) US\$, Tariff Product Million 860210 Locomotives; diesel-electric powered 54.1 730290 Iron/steel, railway track material; n.e.c. in HS7302 21.3 730210 Iron/steel: rails 14.7 Passenger coaches, luggage vans, post office coaches etc 860500 14.6 860799 Rolling stock: parts n.e.c. in HS8607 6.3 3.6 860791 Locomotives; parts n.e.c. in HS8607 3.5 860400 Railway maintenance vehicles; whether/not self-propelled 860719 Locomotives or rolling stock; parts, axles & wheels, & parts 2.7 Goods vans & wagons; n.e.c. in HS8606, not self-propelled 860699 2.7 Signalling, safety or traffic control equipment; (excl HS8608) 853010 1.8 860729 Locomotives/rolling stock; parts, brakes (not air brakes) & parts 1.4 860610 Tank wagons etc, not self-propelled 1.0 860290 Locomotives & tenders; other than diesel-electric powered 0.8 860711 Railway locomotives, rolling stock; parts, driving & bissel-bogies 0.8 860800 Track fixtures & fittings: signalling, safety or traffic equip 0.5 0.5 860730 Locos/rolling stock; parts, hooks/other coupling, buffers, parts 860712 Locomotives or rolling stock; parts, bogies & bissel-bogies etc 0.4 730240 Iron or steel; fish-plates & sole plates 0.4 860721 Locomotives or rolling stock; parts, air brakes & parts 0.3 730230 Iron/steel, switch blades, crossing frogs, point rods etc 0.1 0.0 860120 Locomotives; powered by electric accumulators 860310 Coaches, vans, trucks; self-prop, external elec (excl. HS8604) 0.0 860390 0.0 Coaches, vans & trucks; self-propelled, etc 860691 Goods vans & wagons; covered & closed, not self-propelled 0.0 Total 131.7

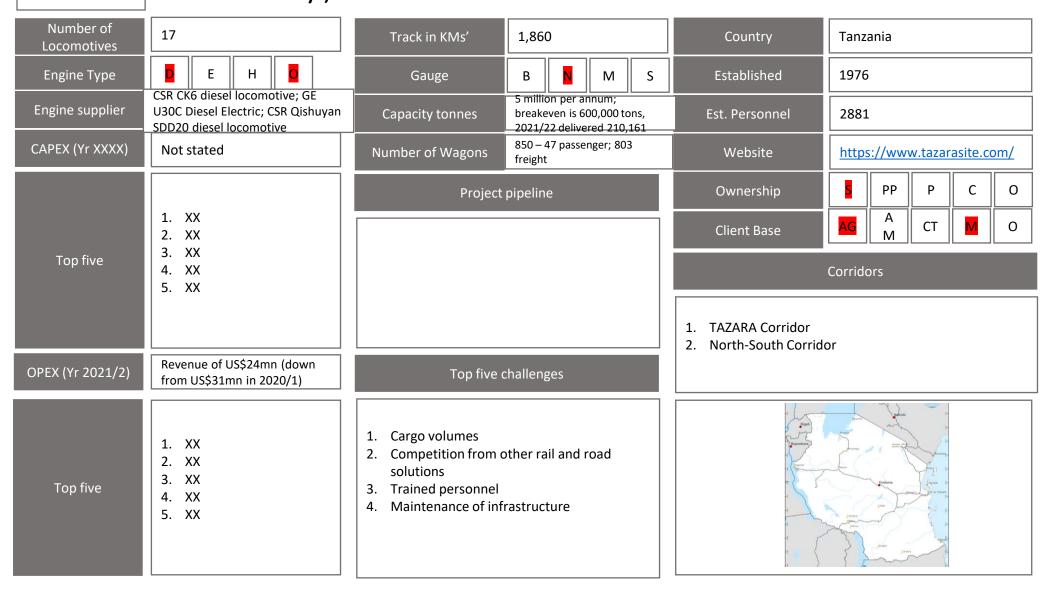


## Tanzania Railway Limited

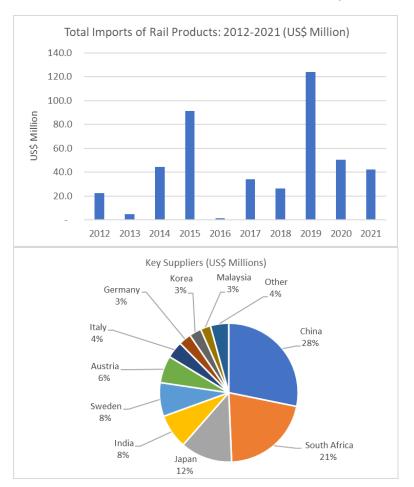
	4					
Number of Locomotives	30 (in 2020), down from 45	Track in KMs'	Track in KMs' 2707		Tanzania	
Engine Type	E H O	Gauge	B M S	Established	1977	
Engine supplier	Not Stated	Capacity tonnes  2.16Mtpa – 340,000 tons in 2020; 3.1m passengers		Est. Personnel	Not stated	
CAPEX (Yr XXXX)	Not stated	Number of Wagons	380 serviceable in 2020, down from 1,200 in 2013	Website	https://www.trc.co.tz/pages	
		Project	pipeline	Ownership	PP P C O	
	1. XX 2. XX	Tanzania Standard Gau     Tanga-Arusha–Musoma	ge Railway Network a Standard Gauge Railways	Client Base	AG A CT M O	
Top five	3. XX 4. XX 5. XX	Line 3. Mtwara – Mbambabay Standard Gauge Railwa		Corridors		
	3. AK	4. Mtwara – Mbambabay Standard Gauge  5. Second Tanzania Interr Project (TIRP-2) (US\$15	modal and Rail Development	1. North-South Corridor		
OPEX (Yr XXXX)	Not stated	Top five o	challenges			
Top five	1. XX 2. XX 3. XX 4. XX 5. XX	<ol> <li>Shortage of rolling</li> <li>Outdated rolling sto</li> <li>Poor infrastructure</li> <li>Shortage of qualifie</li> <li>Lack of adequate for</li> </ol>	ock ed staff	Together the state of the state	And the state of t	

Insert Operator Logo

# TAZARA (Tanzania-Zambia Railway Authority)



### Tanzania Rail Imports



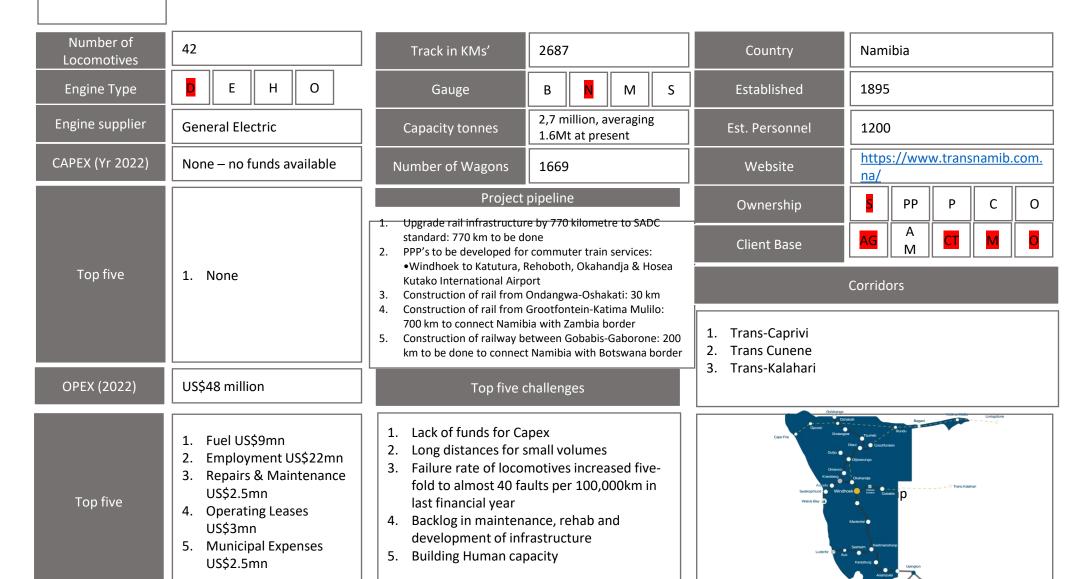
- Two key rail companies, linking Tanzania to hinterland;
- Many years of neglect, but strong push to revitalise, expand rail network – will come through in later trade data;
- Averaging US\$44mn a year in imports;
- Major project basket being delivered;
- China, RSA are key suppliers, but many other countries active in Tanzania as well – Turkey may emerge as well;

#### Key Import Products: 2012-2021 (US\$ Million)

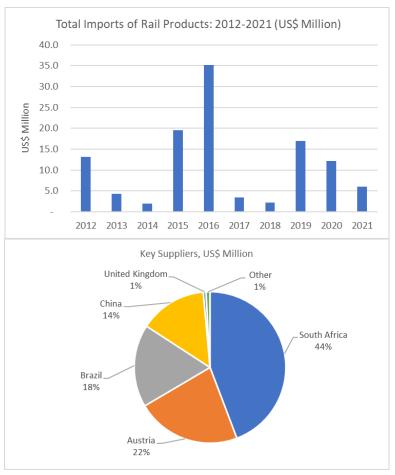
Tariff	Product	US\$, Million
730210	Iron/steel: rails	77.1
860390	Coaches, vans & trucks; self-propelled, etc	71.2
730290	Iron/steel, railway track material; n.e.c. in HS7302	59.0
860800	Track fixtures & fittings: signalling, safety or traffic equip	45.7
860400	Railway maintenance vehicles; whether/not self-propelled	33.0
860610	Tank wagons etc, not self-propelled	27.7
860210	Locomotives; diesel-electric powered	25.9
853010	Signalling, safety or traffic control equipment; (excl HS8608)	22.3
860791	Locomotives; parts n.e.c. in HS8607	18.1
860500	Passenger coaches, luggage vans, post office coaches etc	17.8
860290	Locomotives & tenders; other than diesel-electric powered	17.4
860799	Rolling stock; parts n.e.c. in HS8607	5.6
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	4.4
730230	Iron/steel, switch blades, crossing frogs, point rods etc	3.5
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	2.9
730240	Iron or steel; fish-plates & sole plates	1.9
860691	Goods vans & wagons; covered & closed, not self-propelled	1.8
860721	Locomotives or rolling stock; parts, air brakes & parts	1.8
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	1.5
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	1.0
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	0.6
860692	Goods vans/wagons; open, non-removable sides >60cm, etc	0.2
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	0.1
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	0.1
860120	Locomotives; powered by electric accumulators	0.1
860110	Locomotives; powered from an external source of electricity	0.0
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.0
Total		440.7

**trans**namib

## Transnamib Holding Limited



### Namibia Rail Imports



- Small budgets for large distances and small volumes;
- Transnamib working hard to double volumes, income;
- Linkages to SA, Botswana, Zambia key not all in place yet;
- SA largest supplier, but also involvement of others in sector;

Key Import Products: 2012-2021 (US\$ Million)						
Tariff	Product	US\$, Million				
730210	Iron/steel: rails	31.0				
860210	Locomotives; diesel-electric powered	26.7				
730290	Iron/steel, railway track material; n.e.c. in HS7302	17.6				
860610	Tank wagons etc, not self-propelled	10.1				
860799	Rolling stock; parts n.e.c. in HS8607	6.0				
860692	Goods vans/wagons; open, non-removable sides >60cm, etc	5.7				
730230	Iron/steel, switch blades, crossing frogs, point rods etc	4.4				
860290	Locomotives & tenders; other than diesel-electric powered	3.3				
860791	Locomotives; parts n.e.c. in HS8607	2.2				
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	1.9				
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	1.2				
860800	Track fixtures & fittings: signalling, safety or traffic equip	1.1				
860721	Locomotives or rolling stock; parts, air brakes & parts	0.8				
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.7				
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	0.6				
730240	Iron or steel; fish-plates & sole plates	0.5				
860400	Railway maintenance vehicles; whether/not self-propelled	0.3				
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	0.3				
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	0.2				
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	0.2				
860390	Coaches, vans & trucks; self-propelled, etc	0.1				
860500	Passenger coaches, luggage vans, post office coaches etc	0.1				
853010	Signalling, safety or traffic control equipment; (excl HS8608)	0.1				
860110	Locomotives; powered from an external source of electricity	0.0				
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	0.0				
860691	Goods vans & wagons; covered & closed, not self-propelled	0.0				
Total		114.9				



Other

239.2

## Transnet Freight Rail

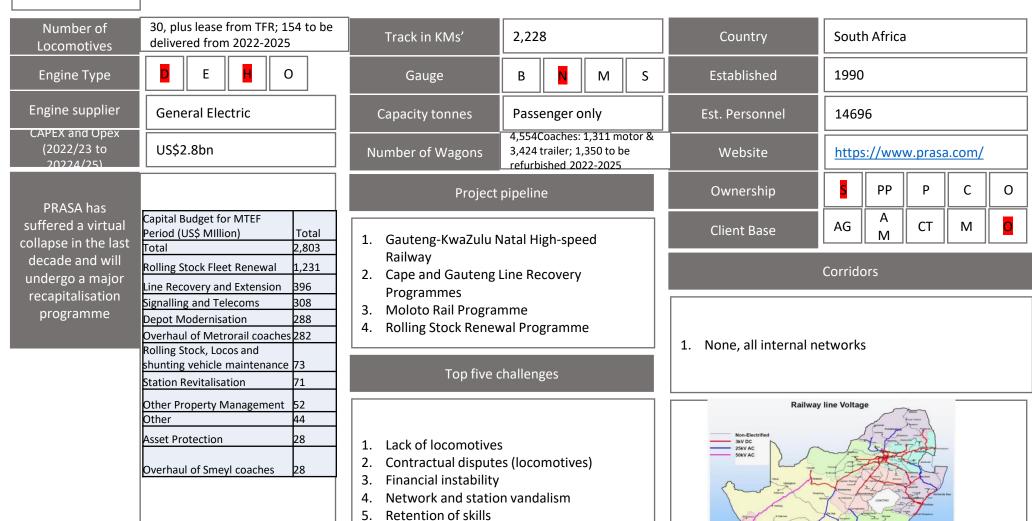
freight rail								
Number of Locomotives	1656 (down from 2,215)	Track in KMs' 31,000 – 5,500km o		Country	South Africa			
Engine Type	D E O	Gauge	B M S	Established	1910			
Engine supplier	General Electric	Capacity tonnes	200Mtpa, operating at ~50% or less at present	Est. Personnel	38,000			
CAPEX (2022/23)	US\$441 million	Number of Wagons	7,900	Website	https://www.transnetfreightra il-tfr.net/Pages/default.aspx			
	hice (a citi;)	Project	pipeline	Ownership	PP P C O			
	US\$ (Million) Infrastructure 172.5	1. Boegoebaai Port, R	ail and Infrastructure	Client Base	AG A CT M O			
Top five	Locomotives 103.5 Wagons 165.6	2. Eswatini Railway Lii	Eswatini Railway Line (SRL) Project		Corridors			
	Total 441.1	Container Line 4. Mmamabula-Lepha		<ol> <li>North-South Corridor (Regional)</li> <li>NorthCor</li> <li>OreCor</li> </ol>				
OPEX (2022/3)	US\$1,559.6bn		challenges	<ol> <li>CapeCor</li> <li>CentralCor</li> <li>ContainerCor</li> </ol>				
Top five	US\$ (Millions) Energy 345.6 Maintenance 158.4 Materials 13.4 Personnel 803.0		tructure risk	CE: Mdx Midds  Bit : Mdx Midds  Common Registration  CE: Mdx Midds  Common Registration  CE: Mdx Midds  Common Registration  CE: Mdx Midds  CE: Josidh Ngxi  CE				

8. ICT Risk

7. Contract Management risk

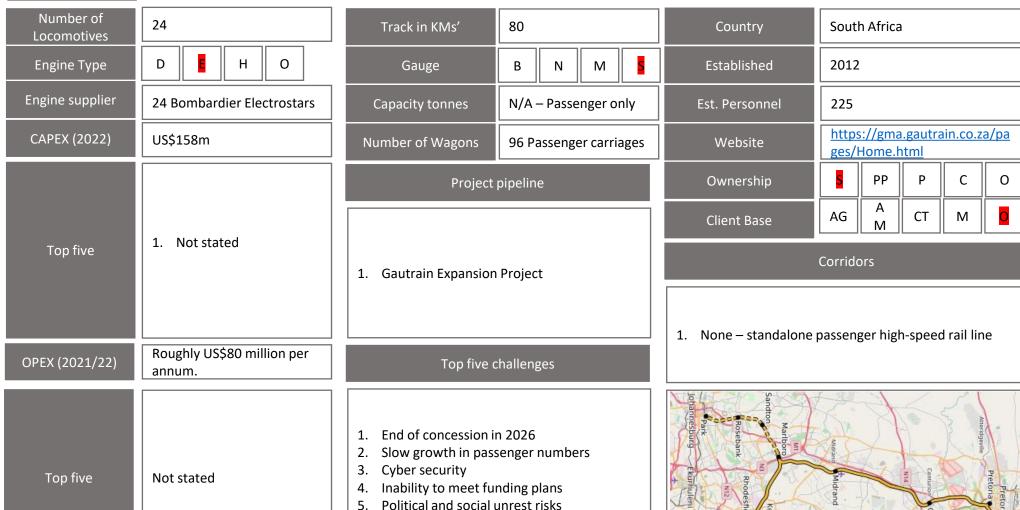


## Passenger Rail Agency of South Africa

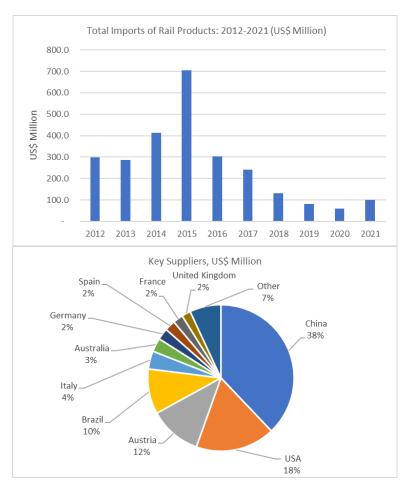




### Gautrain Management Agency



### South Africa Rail Imports



- Largest rail network in Africa, top 10 in world;
- Traditionally a strong domestic supply side but weakened in recent years by imports of rolling stock;
- Imports of roughly US\$260m a year, but dramatic drop in 2<sup>nd</sup> half of decade;
- Exports of US\$57m a year SA is key regional rail supply hub;
- Many global rail suppliers based in SA, some import, some manufacture locally;
- Urgent need for recap of some track, rolling stock;
- Theft, vandalism a recent major problem, lack of money for Capex, Opex also an issue

Key Import Products: 2012-2021 (US\$ Million)						
Tariff	Product	US\$, Million				
860110	Locomotives; powered from an external source of electricity	537.6				
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	529.1				
730210	Iron/steel: rails	290.9				
860791	Locomotives; parts n.e.c. in HS8607	284.1				
860210	Locomotives; diesel-electric powered	235.4				
860799	Rolling stock; parts n.e.c. in HS8607	134.9				
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	132.4				
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	94.3				
860500	Passenger coaches, luggage vans, post office coaches etc	70.1				
853010	Signalling, safety or traffic control equipment; (excl HS8608)	53.9				
860721	Locomotives or rolling stock; parts, air brakes & parts	51.4				
860800	Track fixtures & fittings: signalling, safety or traffic equip	43.5				
730230	Iron/steel, switch blades, crossing frogs, point rods etc	43.4				
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	28.7				
860400	Railway maintenance vehicles; whether/not self-propelled	27.6				
860290	Locomotives & tenders; other than diesel-electric powered	27.3				
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	10.3				
730290	Iron/steel, railway track material; n.e.c. in HS7302	9.0				
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	6.6				
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	4.7				
730240	Iron or steel; fish-plates & sole plates	0.9				
860120	Locomotives; powered by electric accumulators	0.4				
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	0.2				
860692	Goods vans/wagons; open, non-removable sides >60cm, etc	0.2				
860390	Coaches, vans & trucks; self-propelled, etc	0.2				
860610	Tank wagons etc, not self-propelled	0.1				
Total		2,617.2				



### Zambia Railways Limited

Number of	25 owned; 10 leased (14			
Locomotives	operational)			
Engine Type	D E O			
Engine supplier	General Electric and General Motors			
CAPEX (2021/22)	None – negotiating with IDC of Zambia and Team Sweden Rail			
Top five	<ol> <li>New Wagons – US\$33m; 300 new wagons by 2024;</li> <li>Purchase 4 &amp; hire 6 locomotives by 2024 (US\$16m);</li> <li>Revamp of "whole stretch and of signalling and train telecoms – US\$25 million;</li> <li>Reduce derailments from 107 in 2020 to 50 by 2025</li> </ol>			
OPEX (2021/22)	US\$30 million			

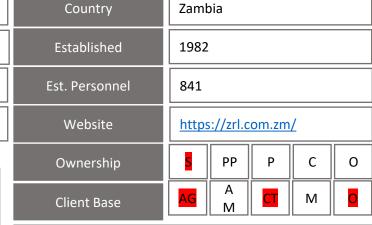
Track in KMs' 1,248							
Gauge	B M S						
Capacity tonnes	5Mtpa: averaging less than 1Mtpa						
Number of Wagons	1,745 (942 operational)						
Duniant visulian							

#### Project pipeline

- Rehab of main line between Livingstone and Copperbelt, approximately 945 km.
- New locomotives and wagons; signalling upgrades and training / capacity building.
- 3. Rehab works (<u>+</u>4 years) to minimise track disruption: track & sleeper replacement, ballast laying, improvement of bridges, culverts, crossings etc
- 4. Construction of sleeper factory, worker camps and material stocking yards
- 5. State of art ERTMS Level 2 system

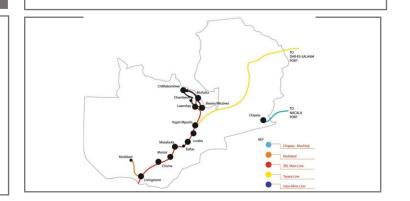
#### Top five challenges

- Lack of CAPEX to roll out programs and plans
- 2. Loss of cargoes to road competition
- 3. Diversion of freight to other routes and ports (regional challenges)
- 4. Infrastructure degradation freight trains moving at only 25km/h compared to 80km/h capacity



#### Corridors

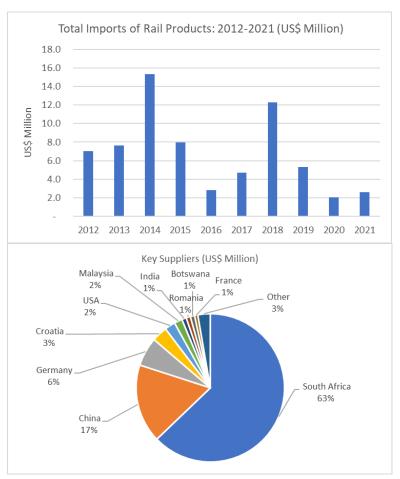
- 1. Victoria Falls Bridge to Kitwe (848 km
- 2. The Mulobezi Line (162 km)
- 3. The Chipata- Mchinji Line (24 km)



#### Top five



### Zambia Rail Imports



- Finance and location have long been constraints to rail
- Imports of only US\$6.8m a year huge need for recapitalisation
- Linkages with neighbours urgently required key to success
  of North-South Corridor, but funding for many rail companies is inadequate
- 'Land linked' to DRC, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola – thus key to regional rail linkages
- South Africa dominant supplier rolling stock, rail and parts

Key Import Products: 2012-2021 (US\$ Million)						
Tariff	Product	US\$, Million				
860699	Goods vans & wagons; n.e.c. in HS8606, not self-propelled	8.7				
860719	Locomotives or rolling stock; parts, axles & wheels, & parts	7.8				
730210	Iron/steel: rails	7.7				
860791	Locomotives; parts n.e.c. in HS8607	4.8				
860400	Railway maintenance vehicles; whether/not self-propelled	4.5				
860500	Passenger coaches, luggage vans, post office coaches etc	4.4				
860800	Track fixtures & fittings: signalling, safety or traffic equip	4.0				
730290	Iron/steel, railway track material; n.e.c. in HS7302	3.8				
860799	Rolling stock; parts n.e.c. in HS8607	3.8				
860210	Locomotives; diesel-electric powered	3.7				
860712	Locomotives or rolling stock; parts, bogies & bissel-bogies etc	3.5				
860290	Locomotives & tenders; other than diesel-electric powered	3.0				
860730	Locos/rolling stock; parts, hooks/other coupling, buffers, parts	2.0				
860729	Locomotives/rolling stock; parts, brakes (not air brakes) & parts	1.3				
860110	Locomotives; powered from an external source of electricity	1.2				
730240	Iron or steel; fish-plates & sole plates	0.7				
860711	Railway locomotives, rolling stock; parts, driving & bissel-bogies	0.7				
860630	Goods vans/wagons; self-discharge, etc. Excl. HS8606.10	0.5				
860721	Locomotives or rolling stock; parts, air brakes & parts	0.4				
860390	Coaches, vans & trucks; self-propelled, etc	0.3				
860120	Locomotives; powered by electric accumulators	0.3				
730230	Iron/steel, switch blades, crossing frogs, point rods etc	0.3				
860310	Coaches, vans, trucks; self-prop, external elec (excl. HS8604)	0.2				
860610	Tank wagons etc, not self-propelled	0.1				
853010	Signalling, safety or traffic control equipment; (excl HS8608)	0.0				
860691	Goods vans & wagons; covered & closed, not self-propelled	0.0				
Total		67.8				

# DRC to South Africa: North-South Corridor

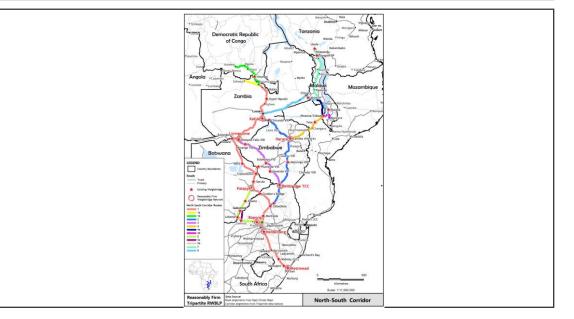


		Basic information
Project Name		North-South Corridor
Project value	[0]	None – it is a conceptual project aimed at creating a seamless rail corridor from Kolwezi in DR-Congo to Durban, South Africa
Project Owner	Ť	Regional Rail Companies
Country/Region	平	SADC – South Africa, Eswatini, Botswana, Zambia, Zimbabwe, DR-Congo (with interest from others)
Buyer Type	血阻	None
Level of engagement	4	Stalled.
Competition	A	None
Partner		NBF, DBSA
Linked to		Tazara, CFM, CFB, Transnamib
Date of next milestone	$\overline{\checkmark}$	Undetermined
Company Name		Afri-ID, NBF

**Background**: The North-South Rail Corridor (NSC) includes a rail network of over 4,000km, from Durban in South Africa through Botswana, Zimbabwe and Zambia, to the DR-Congo. It is the region's key international rail gateway for transporting inbound and outbound cargo. It is the spine of the rail network in the region, and includes ancillary lines linking both the Indian and Atlantic Oceans through Angola, Namibia, Mozambique and Tanzania. A memorandum of understating was signed between the rail operators on the North-South Rail Corridor which includes Zambia Railways Limited (ZRL); Grindrod/Beitbridge-Bulawayo Railways (BBR); Société Nationale des Chemins de fer du Congo (SNCC); National Railways of Zimbabwe (NRZ); Eswatini Railway (SR); Transnet SOC and Botswana Railways (BR) in 2017 to develop a common rail platform.

**Project objective:** The NSC project is focused on the optimisation, rehabilitation and upgrade of the NSC railway network. The objectives are to provide support for the assessment of private sector participation options to introduce a block train service on the North-South Corridor. Significant milestones include:

- Successfully managed execution of NSC pre-feasibility study funded by the World Bank.
- Completed the NSC Feasibility study in Q4 2021.
- · Commenced process of implementing transactions recommended by the NSC feasibility study.
- Successfully collected and disseminated transit time operational performance reports for the NSC.
- Completed stakeholder workshops around operational, pricing, & governance issues



	Documents available								
	Expression of Interest		Request for proposals		Request for Tender		Event details/Links		
	Request for Information		Request for Quote		Company profile/presentation		Project Description		
	Stage of Development								
X	Concept	X	Feasibility		Procurement		Start-up and implementation		
X	Pre-feasibility		Engineering & Design		Construction		Operation and maintenance		
			Project timeline in months:	Not Applicak	ole – see comments below				
			Next decision						
Start			Undet	ermined			Completion		
	Ton five procurement ite	ms hasad ar	nroject phase				V		

#### Top five procurement items based on project phase

- 1. The North-South Corridor project appears to have stalled, with little evidence of a co-ordinated approach to the regional rail project. It is a highly ambitious project, aiming to provide seamless links from the Congolese Copperbelt to ports in the southern and eastern regions of Southern Africa, including Durban, Richards Bay, Beira, Dar es Salaam and Walvis Bay. The impetus for much of the original rationale has been overtaken by events, including the recently signed agreement for the Lobito Corridor Concession, the awarding of the container terminal concession to DP World in Dar es Salaam and improvements to handling capacity at Beira, as well as the diversion of trade away from South Africa's networks due to rail, port and vandalism issues.
- 2. Conceptual, no procurement at this stage

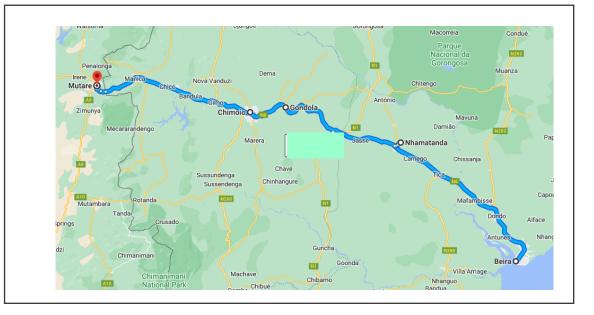
## Machipanda Railway Corridor



		Basic information
Project Name		Machipanda Corridor
Project value	[ 0 ]	US\$400 million
Project Owner	¥	CFM
Country/Region	<b>*</b>	Mozambique/Zimbabwe
Buyer Type	血阻	State Utility
Level of engagement	4	Operational
Competition	A	
Partner	<b>S</b>	Beria Railroad Corporation/ Mozambique Ports and Railways (CFM) / NRZ / African Development Bank/ NEPA
Linked to		North South Corridor
Date of next milestone	$\overline{\checkmark}$	April 2023
Company Name		CFM

**Background**: The Beira-Bulawayo railway, also called Machipanda railway, Beira-Harare-Bulawayo railway and Beira railway, is a railway that connects the city of Beira, Mozambique, to the city of Bulawayo, in Zimbabwe. It is 850 km long, in a 1067 mm gauge.

The Mozambique's Ports and Railways (CFM), began rehabilitation works on the Machipanda railway line in 2019. The 318 km rehabilitation project is valued at US\$400 million and is set to be completed by Q1 2023.



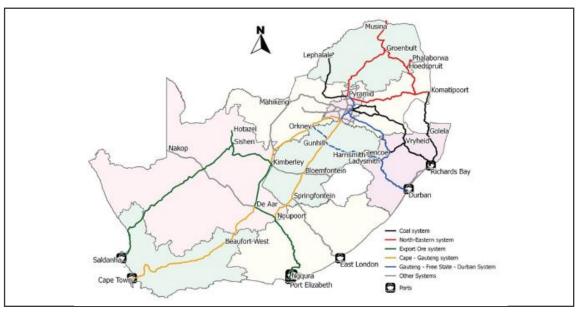
					Docum	ents available					
Χ	Expression of Inte	erest		Request for proposals		Request for Tender		Event details/Links			
	Request for Infor	mation		Request for Quote		X	Company profile/presentation		X	Project Description	
Stage of Development											
	Concept			Feasibility			Procurement			Start-up and implementation	
	Pre-feasibility			Engineering & Design		X	Construction			Operation and maintenance	
Project timeline in months: 60 months, due for completion in Q3 2023											
				Next decis	ion						
Start	3	6	12	18	24	36	48	54	<mark>60</mark>		Completion
Top five procurement items based on project phase								V			
2. Con 3. Con 4. Con 5. Con 6. Con 7. Layi 8. Layi	US\$400 million pastruction of railwastruction of locor struction of bridg struction of signal struction of operang of transmission of railway tracallation of signaling	ay stations motive sheds les and culverts I control rooms ating cabins n lines ks	he following	3:							

### Komatipoort - Richards Bay



		Basic information
Project Name		North-East Rail Corridor
Project value	[0]	Not Stated
Project Owner	¥	Transnet Freight Rail
Country/Region	平	South Africa
Buyer Type	血阻	State Utility
Level of engagement	4	Operational
Competition	A	
Partner	(3)	Transnet Freight Rail
Linked to		Regional Rail networks in Mozambique, Eswatini, Zimbabwe
Date of next milestone	$\overline{\checkmark}$	Unclear, project is being considered in smaller component parts.
Company Name		

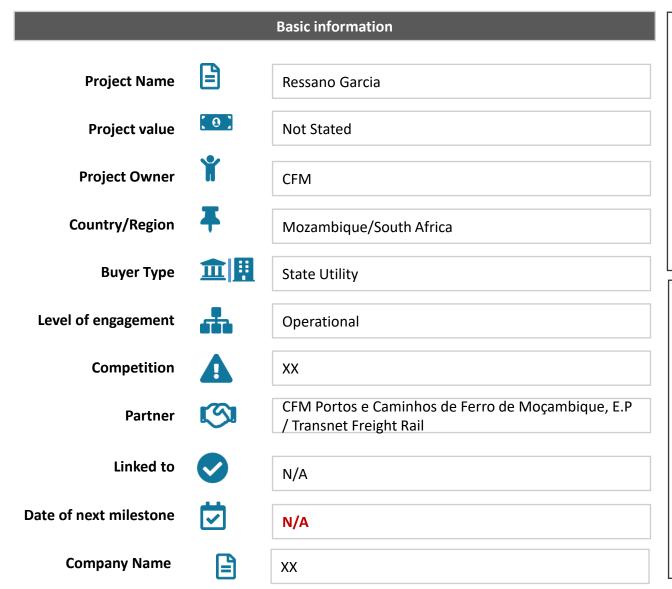
Background: The North-East Rail Corridor is a completed railway line that spans from the Limpopo river at Beitbridge, in the Limpopo, through Komatipoort to Richards Bay on the East Coast and from Pyramid/Witbank (Reyton) to Komatipoort. The North-East Corridor links South Africa's rail freight business with the Southern African Development Community countries mainly through eSwatini, Zimbabwe, Mozambique, Zambia and the Democratic Republic of Congo. Commodities are transported through various border posts, or gates of entry, such as Komatipoort, Golela, Beitbridge, Livingstone and Sakania. The corridor has three main commodity transport links which include: Phalaborwa to Maputo and Richards Bay, predominantly transporting magnetite and rock phosphate; Witbank to Maputo, mainly transporting chrome and coal; and Intermodal (reefer containers) originating from Tzaneen, Musina and Bela-Bela destined for Durban. The total track is estimated to span over 1500km. It is also prone to flooding and was recently closed due to safety concerns.



	Documents available								
	Expression of Interest		Request for proposals		Request for Tender		Event details/Links		
	Request for Information		Request for Quote	X	Company profile/presentation	X	Project Description		
			Stage o	of Developmo	ent				
	Concept		Feasibility		Procurement		Start-up and implementation		
	Pre-feasibility		Engineering & Design		Construction	X	Operation and maintenance		
	Project timeline in months								
		Next decision							
Start		Com	plete			Completion			
Top five procurement items based on project phase							V		
Operational: there are smaller extensions and upgrades being considered, but the project as a corridor is operational.									

# Ressano Garcia Railway (RGR)





**Background**: The Ressano Garcia Railway (RGR) runs for 89 km between Maputo and the South African border, where it interconnects to the South African system linking to Gauteng and beyond. The network is interconnected with that of South Africa, Zimbabwe and Eswatini, and represents a key component of the Maputo corridor transport system. In 2006, an agreement led to the rehabilitation of the 89km railway line in 2008 at a cost of \$20 million in infrastructure and \$50 million in rolling stock.

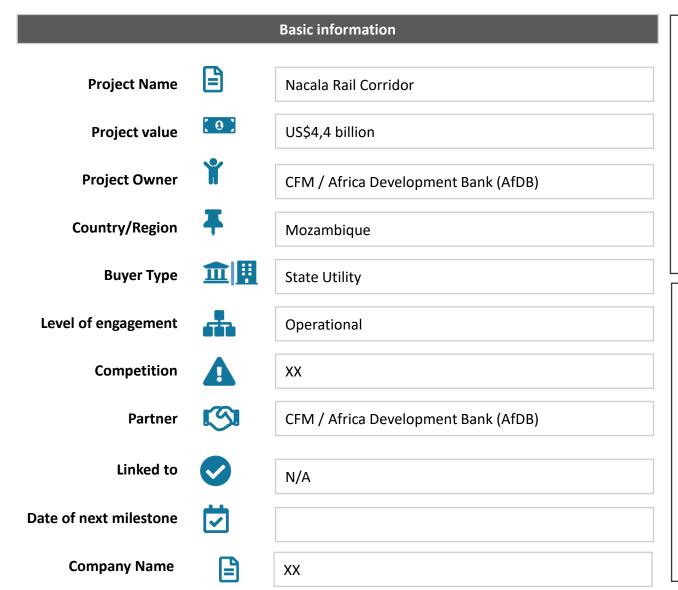
In July 2022, CFM and TFR signed and agreement to eliminate the rail border. This sees exports of chrome and ferrochrome from South Africa direct to Maputo Port. The agreement sees consignments of 50 chrome and ferrochrome wagon loads hauled by two 43D diesel locomotives straight through to the Port of Maputo. The agreement allows CMF and TFR trains to travel across the border unhindered.



	Documents available								
	Expression of Interest		Request for proposals		Request for Tender		Event details/Links		
	Request for Information		Request for Quote	X	Company profile/presentation	n	Project Description		
Stage of Development									
	Concept		Feasibility		Procurement		Start-up and implementation		
	Pre-feasibility	Engineering & Design			Construction	X	Operation and maintenance		
	Project timeline in months: Operational, upgrades only								
Next decision									
Start Complete						Completion			
Top five procurement items based on project phase							V		
Operations and Maintenance items only									

### Nacala Rail Corridor





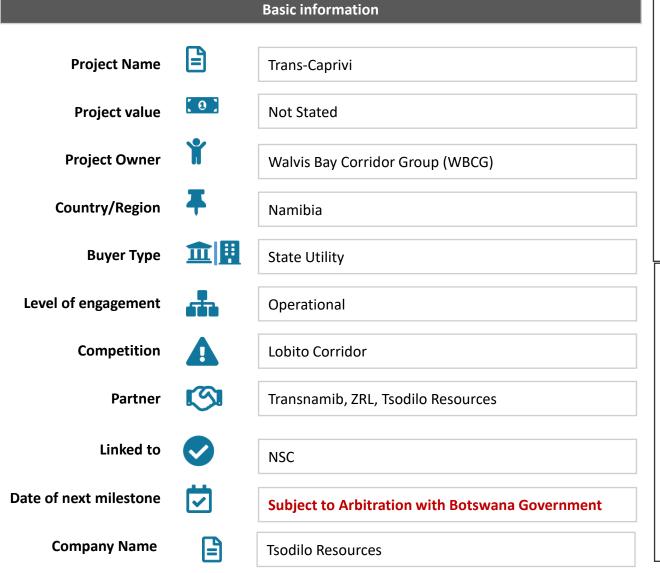
Background: The construction of the Nacala Railway started in 1915, and the first 90 km to Monapo was opened for operation in 1924, but the project declined for lack of resources. In 2010, Brazilian mining company Vale managed established a new joint venture "Integrated Northern Logistical Corridor Society", for the administration of the railway, extending the Nacala Railway to its coal concessions at Benga-Moatize. The extension departed from the Nkaya interconnection station and continued to Moatize, being completed in 2017. The project includes an export terminal and a coal storage yard at the port of Nacala-a-Velha. The railway corridor spans a total of 912 kms.

In April 2022 Vale concluded the sale of its coal assets in Tete and the rail concession to Indian company, Vulcan for US\$270 million as it exited the Mozambican coal sector.



Documents available								
Expression of Interest	Request for proposals		Request for Tender		Event details/Links			
Request for Information	Request for Quote	X	Company profile/presentation		Project Description			
Stage of Development								
Concept	Feasibility		Procurement		Start-up and implementation			
Pre-feasibility	Engineering & Design		Construction	X	Operation and maintenance			
Project timeline in months: Operational								
	Next decision							
Start	Comp	olete			Completion			
Top five procurement items based on	project phase				V			
1. Operational considerations.								

# Trans-Caprivi





**Background**: The Trans Caprivi Corridor, operated by the Walvis Bay Corridor Group (WBCG), provides the shortest route between the Namibian west coast ports of Lüderitz and Walvis Bay and the vital transport hubs of Livingstone, Lusaka and Ndola in Zambia and Lubumbashi (in the southern DRC), as well as Zimbabwe. The Trans Caprivi Corridor is positioned to service the two-way trade between the SADC region and Europe, North and South America and the emerging Far East markets. The infrastructure supporting the Trans Caprivi Corridor has been steadily developed and boasts the most efficient intermodal blueprint for the region, incorporating the ports, air, tarred roads and rail networks, as well as automated border post customs procedures .The TCC allows 5-7 days in transit to and from Lusaka, Harare and Lubumbashi. The railway corridor spans a total of 2,687km.

Transnamib and Tsodilo Resources have completed a final feasibility study for the construction of the Trans-Zambezi Railway extension from Grootfontein to Katima Mulilo via Rundu in Namibia and is part of a multinational railway line between Namibia and Zambia via the Zambezi region. The Study was conducted by M R Technofin Consultants Ltd (Canada) in conjunction with Namibian based Burmeister & Partners, Enviro Dynamics, Koep & Partners, University of Cape Town and 3TI Progetti. The Feasibility Study was co-funded by the Government of the Republic of Namibia and the African Development Bank. The key conclusion of the assignment is that the proposed 772km Greenfield line is viable from a technical, environmental, legal, financial, and economic standpoint and should move forward.



					<mark>Docu</mark>	ments availab	<mark>e</mark>					
	Expression of In	nterest		Request for pro	posals		Request for Ten	der		Event details	s/Links	
	Request for Info	ormation		Request for Quo	ote	Х	Company profile	e/presentation		Project Desc	ription	
					Stage o	of Developme	nt					
	Concept X Feasibility				Procurement			Start-up and implementation				
	Pre-feasibility	,		Engineering &	Design	Construction			X	Operation and maintenance		ntenance
	Project timeline in months: To be determined by Tsodilo Resources Mine Plan development											
Next decision												
Start	3	6	12	18	24	36	48	54	60	72		Completion
	Top five procurement items based on project phase										V	
conf in Bo deve prop	figuration of the otswana will de elopment of tha posed that shou	e rail line from th pend on the outout at mine and the v	e Tsodilo Recome of the olumes anti	t this stage. The f sources iron ore final feasibility st cipated. It has als eet with approval	development audy for the so been							

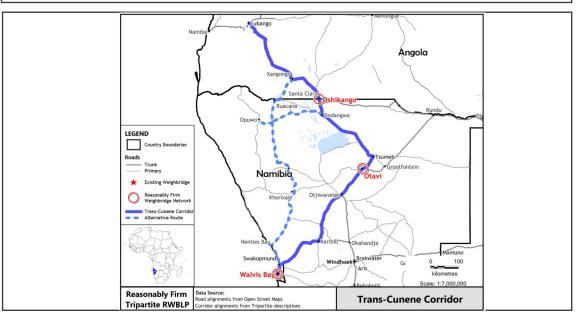
### Trans-Cunene



		Basic information
Project Name		Trans-Cunene
Project value	[0]	Not Stated
Project Owner	Ť	Namrail /Caminho de Ferro de Benguela (CFB)
Country/Region	<b>Ŧ</b>	Angola, Namibia
Buyer Type	血阻	State utility
Level of engagement	*	Operational
Competition	A	XX
Partner	<b>(3)</b>	Namrail /Caminho de Ferro de Benguela (CFB) / European Union
Linked to		N/A
Date of next milestone		
Company Name		XX

**Background**: In May 1997, the Republic of Namibia and the Republic of Angola formally agreed to create the Trans-Cunene corridor as a means of opening up northern Namibia and southern Angola to economic development opportunities. The Trans-Cunene Corridor's road infrastructure is complimented by the northern railway line, which comprises a long-established section, a recently completed section and a soon-to-be-completed section. The railway line doesn't deviate from the road route except to bypass Karibib. The Tran-Cunene railway corridor currently spans a total of 1551 km.

The rail link is complete on the Namibian side of the border, but the Angolan side is yet to be built. It would require an additional 40km of rail to be built in Angola.



Documents available									
	Expression of Interest		Request for proposals		Request for Tender		Event details/Links		
	Request for Information		Request for Quote		Company profile/presentation		Project Description		
	Stage of Development								
	Concept	X	Feasibility		Procurement	X	Start-up and implementation		
	Pre-feasibility		Engineering & Design		Construction	X	Operation and maintenance		
	Project timeline in months: Undetermined, Angolan government yet to commit to project funding.								
	Next decision								
Start	Start Undetermined Complete								
	Top five procurement items	project phase				V			
1. XX 2. XX 3. XX 4. XX 5. XX									
J. XX									

## Trans-Kalahari

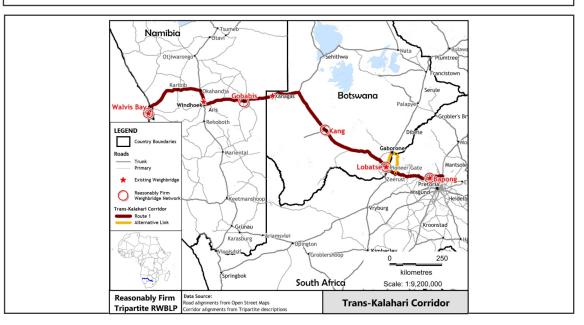


		Basic information
Project Name		Trans-Kalahari
Project value	[0]	US\$9,2 billion
Project Owner	Ť	TransNamib/Botswana Railways
Country/Region	<b></b>	Namibia, Botswana
Buyer Type	血阻	State Utility
Level of engagement	4	Operational
Competition	A	XX
Partner	(3)	TransNamib/Botswana Railways
Linked to		N/A
Date of next milestone	$\overline{\mathbf{v}}$	
Company Name		XX

**Background**: The Trans-Kalahari railway corridor was first announced in 2010 when the Governments of Namibia and Botswana into a Memorandum of Understanding to facilitate its development. A project development plan study was undertaken in February 2015 by the consortium of Australian firms led by Aurecon, which identified all the risks and challenges associated with the project. The railway is expected to run from Mmamabula, Rasesa, towards Phuduhudu, following the Trans-Kalahari Highway through Mamuno border into Namibia, then Gobabis, Windhoek, Okahandja, to Walvis Bay as the final destination. Once completed railway will havecapcity of 200 train wagons carrying 8 400 tons of cargo.

In November 2022 the Task Team, consisting of representatives from Botswana Railways, TransNamib Holdings, and the two member states, were tasked with finding ways to expedite the Trans Kalahari Railway Line. From January 30 to February 3, 2023, the Botswana Railways Task Team visited Windhoek to develop a blueprint document with their Namibian counterparts that will guide the states in expediting the delivery of the project.

The total cost of the project is estimated at around US\$9bn and is heavily reliant on coal exports from Botswana, which may make securing funding for the project difficult.



	Documents available									
	Expression of Interest		Request for proposals		Request for Tender		Event details/Links			
	Request for Information		Request for Quote		Company profile/presentation		Project Description			
	Stage of Development									
	Concept	x	Feasibility		Procurement		Start-up and implementation			
	Pre-feasibility		Engineering & Design		Construction		Operation and maintenance			
	Project timeline in months: Undetermined – project has stalled for the time being									
			Next decision							
Start	Undetermined									
	Top five procurement items	n project phase				$\nu$				
1. Nor	ie as yet.									

# To be added and adjusted by researcher

		Legend	
B Broad gauge M Metre Gauge	D Diesel E Electric	S State Owned PP Public Private Partnership	A Agriculture A Automotive
N Narrow gauge	H Hybrid	P Private	P Container Freight
S Standard gauge	O Other	C Concession O Other	C Mining O Other