



**prasa**

PASSENGER RAIL AGENCY  
OF SOUTH AFRICA

## **PORTFOLIO COMMITTEE ON TRADE AND INDUSTRY**

### **PRASA's Rolling Stock Fleet Renewal Programme – Economic Development Achievements**



**Date: 05 March 2019**

- **PRASA's Rolling Stock Fleet Renewal Programme**
  - **Overview of the Programme**
  - **Progress to Date**
    - **The Local Factory**
    - **Localisation**
    - **Supplier Development**
    - **Enterprise Development**
    - **Preferential Procurement**
    - **Job Creation**
    - **Skills Development**





## Rolling Stock Fleet Renewal Programme

# Rolling Stock Fleet Renewal Programme

## Modern Fleet

- PRASA wants to migrate from 1950's technology to a **modern** fleet which is up to **world standards**



## Programme Requirements

- New Fleet requirement **~7224** procurement at ~360 coaches per year for two x 10 year contracts
- Total **~R123.5bn** over **20 year** period



## Rolling Stock Fleet Renewal Programme

## Job Creation

- Creating **~65 000** direct and indirect jobs



## Industrialization

- Focus on industrialisation through long term procurement aiming for **above 65%** of the value of a coach to be **produced locally**





# Adopted Strategy for Economic Development



# PRASA's contract with the Gibela Rail Transport Consortium

- On the 14<sup>th</sup> October 2013, PRASA and Gibela signed the following two agreements:
  - Manufacture and Supply Agreement (MSA)
  - Technical Support and Spares Supply Agreement (TSSSA)
- Financial Close reached 26<sup>th</sup> April 2014



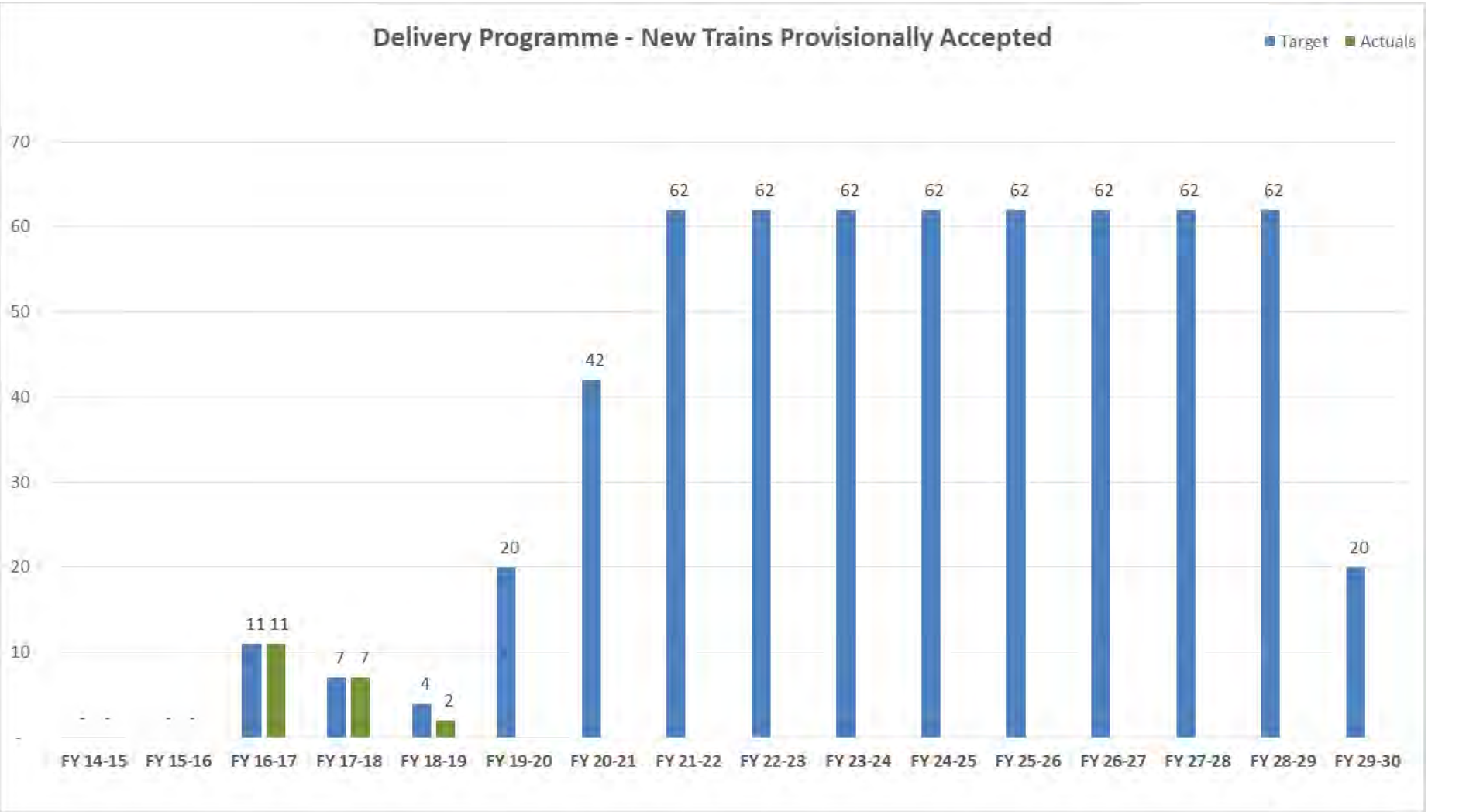
## MSA

- The MSA has been contracted on the following terms:
  - **Contract Value:** R59 billion (including VAT, excluding inflation)
  - **Number of Trainsets:** 600 New Trains (3600 vehicles)
    - **20 trainsets** from Brazil Plant
    - **580 trainsets** from Local Factory
  - **Duration:** 15 year delivery programme

## TSSSA

- The TSSSA is the agreement governing the **maintenance** of the New Trains.
- The **scope** of the TSSSA will ensure that Gibela will perform at least one overhaul on each New Train.
- It is estimated that the TSSSA will have a **duration** of 19 years.





# Localisation Commitments

- Gibela has committed to localisation targets for both the supply and maintenance of the new trains:

## Manufacture and Supply

Delivery Year	May 2020	May 2021	May 2022	May 2023	May 2024	May 2025	May 2026	May 2027	May 2028	May 2029	May 2030 onwards
Local Content %	43.30%	67%	69.00%	69%	69.00%	72%	72.00%	72%	72.00%	75%	72%

## Maintenance

Contract Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Local Content %	50%	85%	92%	89%	87%	84%	81%	78%	77%	76%

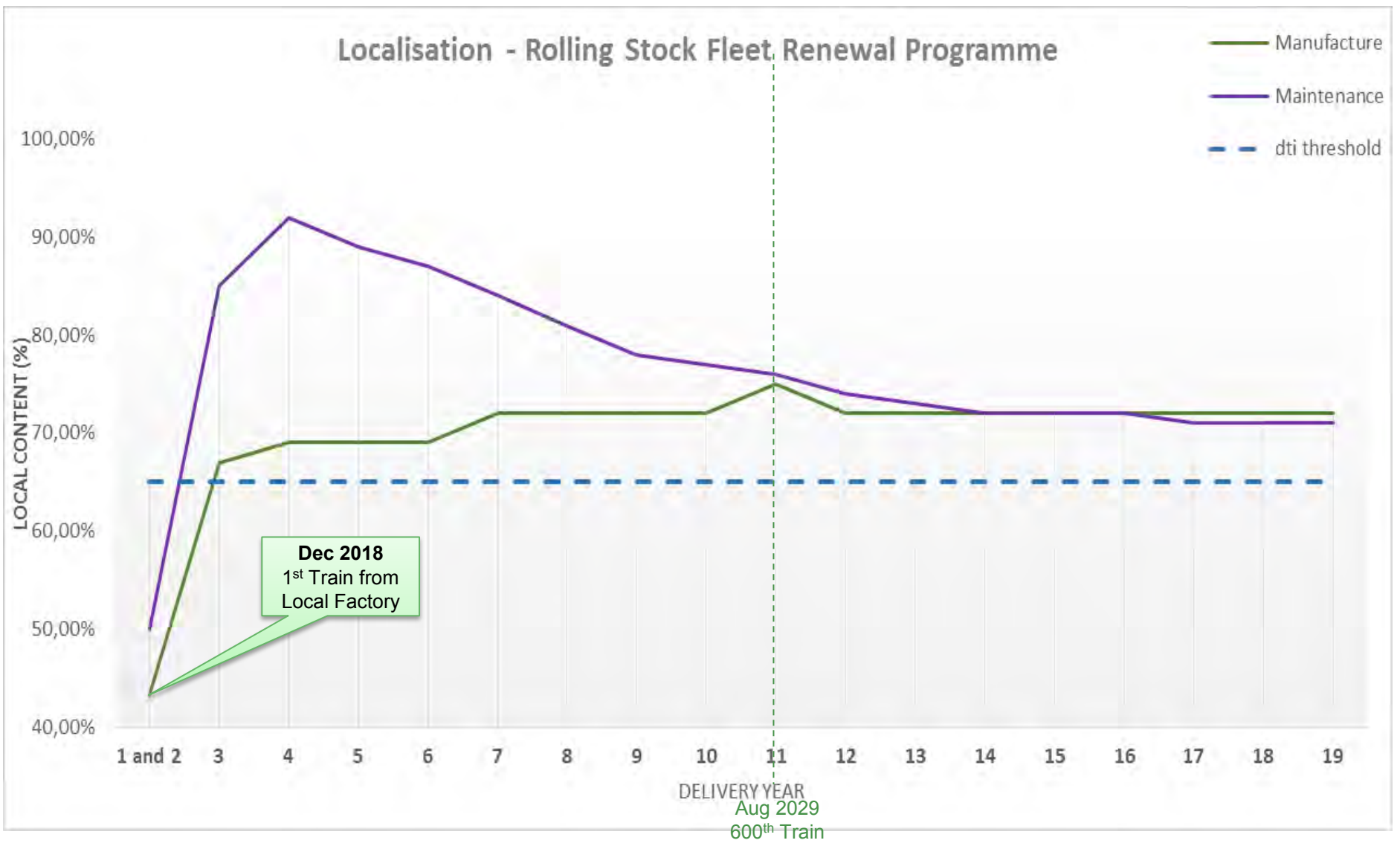
  

Contract Year	2027	2028	2029	2030	2031	2032	2033	2034	2035
Local Content %	76%	74%	73%	72%	72%	72%	71%	71%	71%

- Local Content:**
  - is measured throughout the supply chain, i.e., up to the raw materials used within a component
  - measures South African value add on components, i.e., if the raw material is foreign, but has local manufacturing, then the local manufacturing portion will only count as Local Content.
- Gibela will thus require companies **within its supply chain** to have **Local Content commitments** on their products



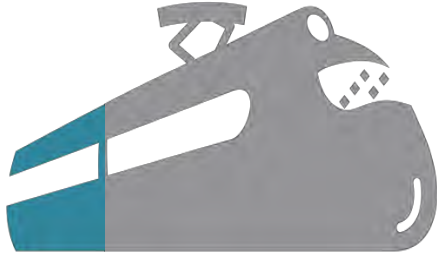
# Localization Commitments



# Phasing of Localization aligned to Manufacturing Activity

## Train components focus

### Trainsets 1-20 (Manufacturing completed) (Imported)



21% South African sourcing value

- First 20 trains manufactured at Alstom's manufacturing plant in Lapa, Brazil
- Trainsets from Brazil use local material and components such as stainless steel, Glass, doors, panels etc.

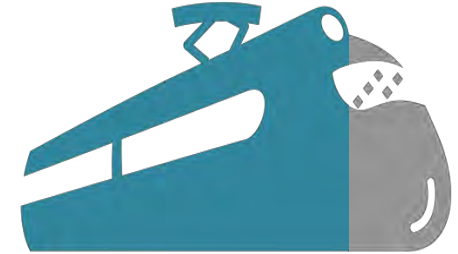
### Trainsets 21- 33 (Local Manufacture from Q4 2017)



67% South African sourcing value

- First trains to be produced in South Africa at Dunnottar
- **Large increase in South African content due to global companies localizing**

### Trainset 34+ (Local Manufacture from Q4 2019)



74% South African sourcing value

- By trainset 34, **base localization will be established**
- This level of localization sustained during manufacturing
- Local content optimization will continue to increase localisation where possible



Progress to date



## Local Factory



# Local Factory and Supplier Park: Manufacturing of Trains in SA

## Local Factory

- Construction of the factory at Dunnottar Park, Ekurhuleni has advanced:
  - Construction of Training Centre and main Car-Body Shell Building is complete
  - Main Fittings and Tooling have been installed for start of operations
  - Start of basic operations, including testing of manufacture processes begun in January 2018
- Gibela on-boarding suppliers for South African manufacture
- Manufacture has progressed well, with 1<sup>st</sup> local train delivered in December 2018



## Supplier Park

- Is a critical enabler for the development of a central industrial rail hub which will support localisation
- Mobilization to develop the Supplier Park that supports the Local Factory is currently underway
- Construction of the Supplier Park cannot begin until:
  - Exemption from MFMA regulations for subleasing
  - Sublease finalised with Ubumbano
- **Council approval of sale of site to PRASA obtained from EMM**
- 7 Companies already have in principle agreement to have facilities in the Supplier Park



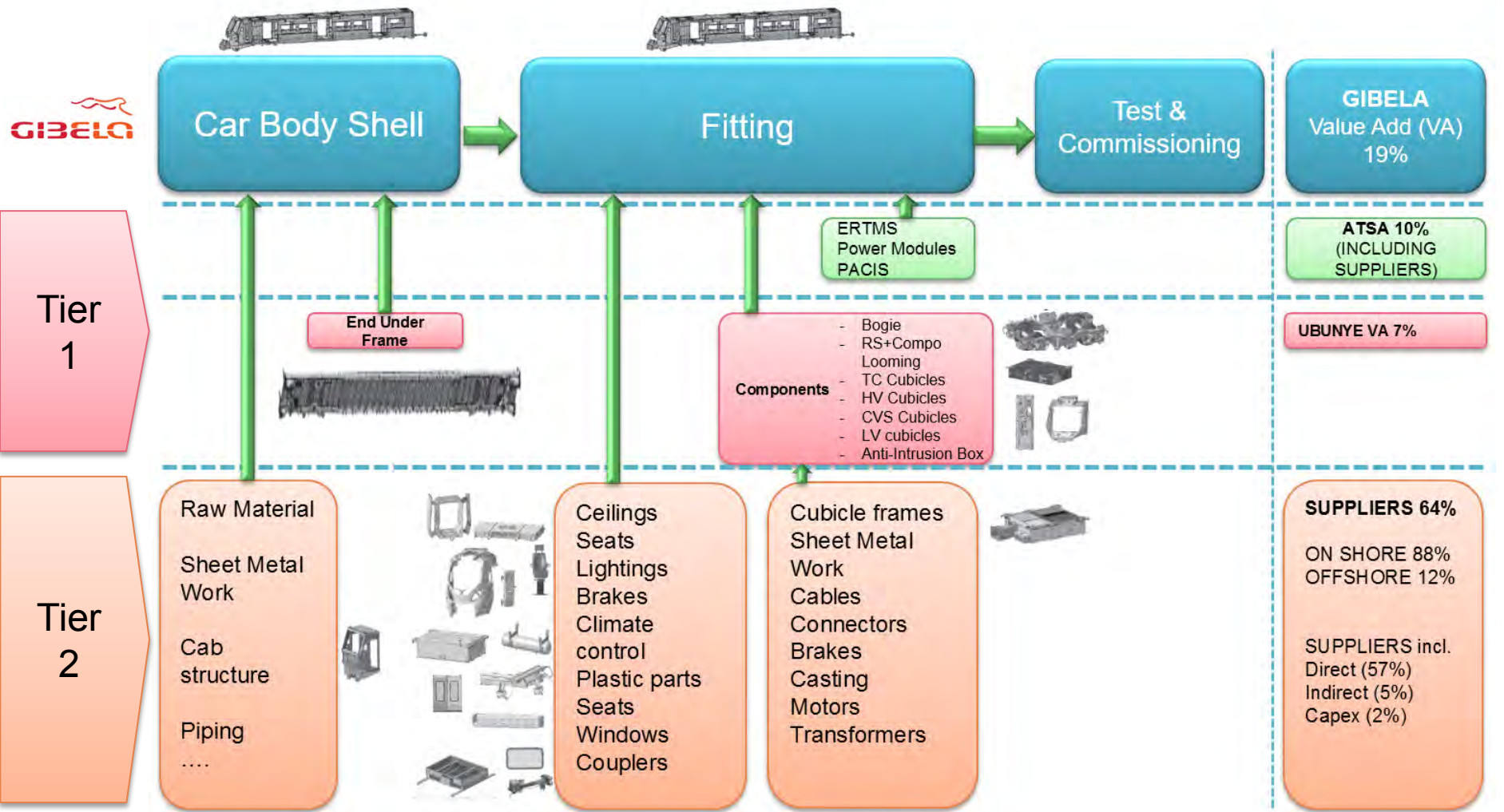
# Gibela's Local Factory launched on 25 October 2018



Training Centre



# Gibela's overall Value Chain



# Launch of Local Factory – 25 October 2018



**OCTOBER  
TRANSPORT MONTH**

**#OTM\_SA2018**

## **MINISTER OF TRANSPORT LAUNCHES THE NEW GOVERNMENT TRAIN MANUFACTURING PLANT**

*Government aims to position rail transport as a mass mover and a backbone of the public transport system in South Africa.*

As a result, **The Minister of Transport DR. B.E. Nzimande (MP)** will officially launch the New Train Manufacturing Plant in Dunnottar, Nigel.

*It is therefore with great pleasure to extend this invitation to:*

to join the Minister of Transport, Dr. B.E. Nzimande at the launch of the New Plant.

Details of the launch are as follows:

**Venue:** Train Manufacturing Facility  
Dunnottar in Nigel.

**Date:** 25<sup>th</sup> October 2018

**Time:** 09h00-14h00

Please R.S.V.P Bronwyn Scharneck on [BScharneck@prasa.com](mailto:BScharneck@prasa.com) / 012 748-7101.

By Monday, 22<sup>nd</sup> October 2018 before 16h00.



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REPUBLIC OF SOUTH AFRICA





# Launch of Local Factory – 25 October 2018



# Launch of Local Factory – 25 October 2018







## Economic Development Progress

# Progress on Localisation

## Gibela Localisation

Gibela has contracted with **60 South African suppliers** for **71 components** for the trains being manufactured at Dunnottar Park, including:

Scope of Supply	South African Suppliers
Couplers	VOITH South Africa
Passenger Doors	KB South Africa
Driver Seat	ISRINGHAUSEN
Braking Resistor + Motor Fan	PENBRO KELNICK
Input Filter + Line Inductor	
Cables	ABERDARE
Bogie Fitting	STAINLESS PRECISION ENGINEERING
Bogie Machining	WEKABA
Master Controller	RADEL
Emergency Alarm	
Rear View Mirror	
Voltmeter + Door Indicator	PROFIBER
Seats	
Lateral Windows + Windshield	
Lighting Saloon	PG GROUP
Side Walls (Upper and Lower)	RADEL
Equipped Ceiling	TRECKLINER
Air Ducts	GLOBAL COMPOSITES
Carbon Steel + Stainless Steel	
External Lighting	MACSTEEL SERVICE CENTRES
Saloon Heaters + Foot Rest	LED LIGHTING
Battery + Battery Box	BOOYCO
Sheet Metal Work	FNB
Luggage Racks + Ducts	DC TECHNICAL SERVICES
Horn	DENEL
Fairing + Ducts	KAMA
Interiors	CREST
Air Tanks	GLOBAL COMPOSITES
Cabin Door	ILVA ENGINEERING
Insulation	SIYAMHAMBAMBA
	GIS





# Gibela's Localisation Strategy



**Peak Manufacture**

**Localisation**

**Manufacture in Brazil**

**April '14- Dec '16**

- 1<sup>st</sup> 20 trains manufactured in Brazil
- 20% of material scope locally
- 30 local suppliers participated

**Local Train Readiness**

**Jan '17 –Sep '19**

- TS21 Start of production in Dunnottar.
- Global suppliers started localizing
- +/-100 local suppliers (direct and downstream) delivering to the project.

**Local Supply Chain Established**










**Oct '19– Dec '22**

- +/-150 local suppliers (direct and downstream) delivering to the project.
- Increase participation of BWOs/QSEs
- Funding available to support suppliers



**Start Delivery**

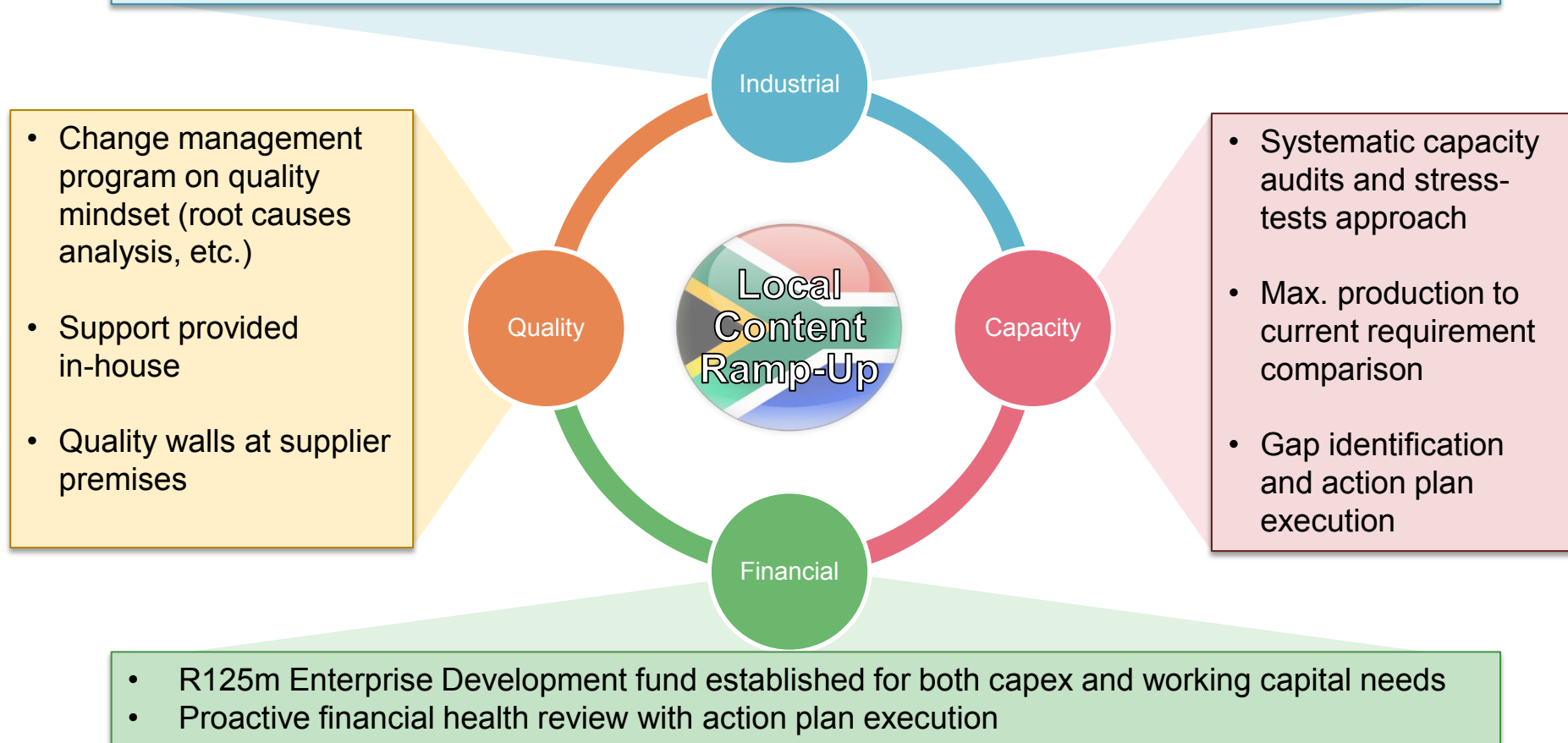
# Gibela's Supplier Development supporting Localisation

SD Programme	Actions	Suppliers benefiting
<div data-bbox="148 307 511 342">Technical Development</div> <div data-bbox="148 392 318 564">  </div>	<ul style="list-style-type: none"> <li>• Special processes audits to close suppliers gaps</li> <li>• Hiring of Gibela special process engineers.</li> <li>• International engagements to drive localisation and technology transfer</li> <li>• Full program management of technology transfer and localisation, including sub-suppliers</li> </ul>	<div data-bbox="1503 278 1883 392">            Siyahamba, Profibre, SPE Kare, Global Composites, Remkor Mfg, Delberg         </div> <div data-bbox="1503 435 1845 549">            Penbro, Wabtec SA Bellow &amp; Bus, BFG SA, Remkor Mfg         </div>
<div data-bbox="148 649 511 685">Industrial Development</div> <div data-bbox="148 749 367 963">  </div>	<ul style="list-style-type: none"> <li>• Assist suppliers to develop improvement plans to manage their sub-suppliers - through product and process approvals</li> <li>• Dedicated resources to evaluate and put in place development plans to optimise and sustain long term operations</li> </ul>	<div data-bbox="1503 635 1864 749">            Delberg, Radel, Wekaba, Kare, LED Lighting, Trek, Booyco         </div> <div data-bbox="1503 821 1864 935">            Delberg, Trek, Zanergy, Masobe, Penbro, DCTS, Crest         </div>
<div data-bbox="148 1049 589 1085">Risk &amp; Finance Management</div> <div data-bbox="148 1142 376 1292">  </div>	<ul style="list-style-type: none"> <li>• Implement systematic risk management process</li> <li>• Hiring of dedicated Risk Manager for suppliers</li> <li>• Facilitate engagements with Gibela/IDF fund</li> </ul>	<div data-bbox="1503 1071 1864 1113">            &gt; 50% of tier 1 suppliers         </div> <div data-bbox="1503 1206 1671 1285">            DCTS, VSL Remkor Mfg         </div>

Supplier Development Pillars

## Next Steps

- Additional on-boarding of residents located at supplier premises to increase suppliers industrial maturity (lean, 5S)
- Residents supported by dedicated Engineering, Industrialization and Supply-Chain experts
- Overall program supported by Technology Localisation Implementation Unit (under the Department of Science and Technology)





# Gibela's Supplier Development - Success Stories

## Siyahamba Engineering



SD Interns leading a LEAN class that will **reduce waste and improve supplier profitability**

**Note:** Intern featured has been permanently employed by Gibela



5S process implementation (everything has a place and in its place) used to **drive efficiency**



Visual management in place to **measure efficiencies and production performance** – Feedback control to drive goal attainment



**Siyahamba Engineering**

**Driving efficiencies and building up to world class standards**

**90% Black Owned  
10% Black-Woman owned**





100% Black Owned



New jig implementation  
**increasing capacity by 67%**

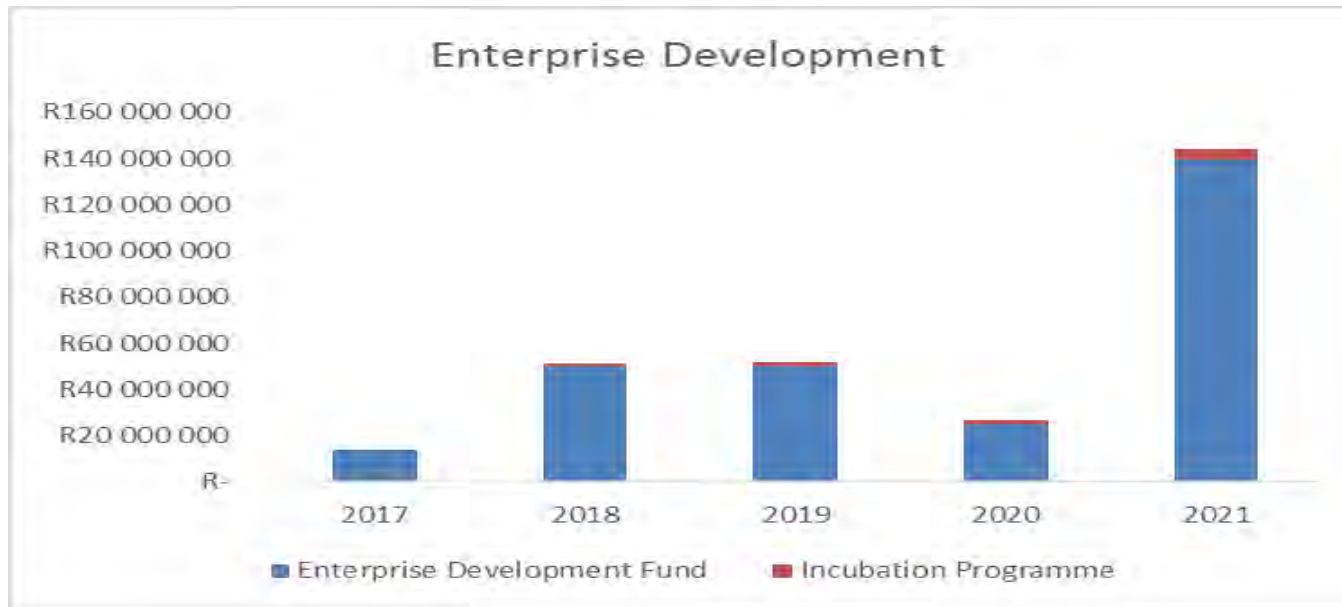


8D QRQC - Suppliers learning root cause analysis methodology which allows them to apply appropriate containment and corrective actions  
**saving time and money**

**Improving ways of working to drive long term sustainability**



# Enterprise Development - Commitment



**Substantial *current and immediate* investment in Enterprise Development,**

**Total Enterprise Development investment expected at ~R 900M over project lifetime**

## Gibela supplier commitments

- Gibela has engaged suppliers to support enterprise development objectives
- Support include grants, loans, equity investments and human resources

## Enterprise development fund

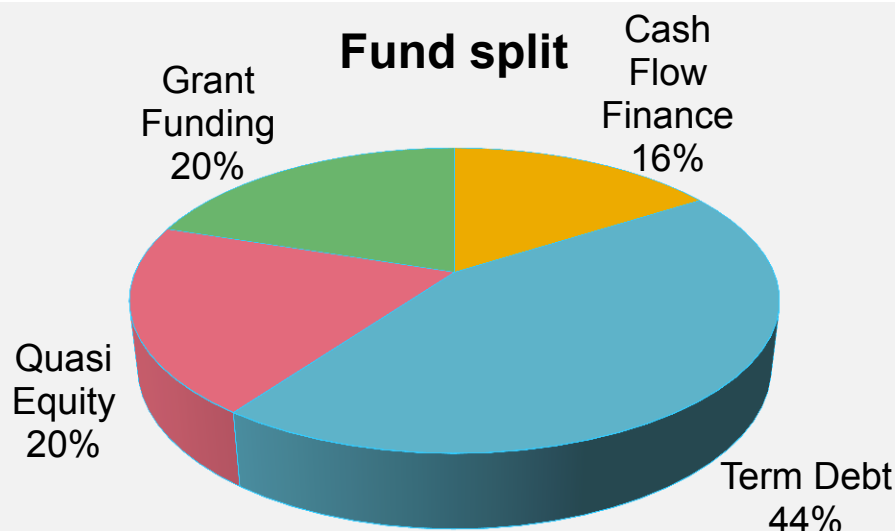
- Established a R125 million financing fund
- Financing will be allocated to qualifying black business with growth potential

## Gibela incubation programme

- Incubation programme aimed at boosting the capacity of 15 suppliers over 3 years (R5m from the Fund)
- Supplier development programme for skills transfer utilising Gibela employees and consultants

# Enterprise Development – Progress to Date

## 1. Financial support



- ED Fund established to support the ramp-up. R125 million fund, first tranche
- 5 Black Owned suppliers identified to date:
  - Masobe Energy
  - Chikare Group
  - Zanergy
  - Tunnel Engineering
  - Lwendo Consortium
- Funding available from Q3 2018

## 2. Business support



- 5 Black Owned companies supported to date:
  - Masobe Energy
  - Chikare Group
  - Zanergy
  - Tunnel Engineering
  - Lwendo Consortium



# Enterprise Development – Targeted areas of development

## Components (QSEs)

1	Baseboard Duct	17	Stickers and Windows Film
2	Cab Air Duct & Underdesk	18	Wheel
3	Doppler Radar and Eurobalise Frame	19	Auxiliary air production bracket (tool box frame)
4	Emergency Handle	20	Bogie fitting – Sheet Metal Work
5	Extract Tube (Extract Air Duct)	21	Cab Foot Step
6	High-Speed Circuit Breaker Machining	22	Fasteners
7	Insulation Kitting	23	Carbon Steel Parts
8	Lateral fitting (top and bottom panels)	24	Machined parts
9	Accessibility Backrest and Tripod Handbar	25	Stainless Steel – Car-Body Shell Cut & Bend, and Fitting
10	Rear View Mirror	26	Cab Foot Step
11	Saloon Lighting	27	Cable Tray Cabin, Roof, Room and underframe
12	Anti-Intrusion Box	28	Door External Fairing
13	Bended pipes	29	Obstacle deflectors
14	Cabin Brackets	30	Passenger Doors
15	Static Converter Frame	31	Low Voltage Boxes Frame
16	Obstacle deflectors		



## Component ( BWOs)

1	Static Converter Frame	5	Baseboard Duct
2	Cab Foot Step	6	Insulation Kitting
3	Cable Tray Cabin	7	Wheel Machining
4	Anti-Intrusion Box	8	Stickers and Windows Film

## Services

1	Site maintenance	5	Special Tools
2	Catering	6	Personal Protection Equipment
3	Pest Control		
4	Waste Management		



# Preferential procurement

## Supplier Category

### B-BBEE Compliant suppliers

## List of suppliers

Supplier Names (Top 5)	Amount in ZAR	Level	BO
ALSTOM Ubunye (Pty) Ltd	168,016,515.90	4	49.00%
TRENCON CONSTRUCTION (PTY) LTD	46,730,887.60	2	100.00%
BARLOWORLD LOGISTICS AFRICA (PTY) L	29,020,955.53	2	72.69%
RMB ASSET FINANCE	12,448,401.60	4	21.66%
Aecom SA (Pty) Ltd	10,960,729.82	3	30.00%
<b>TOTAL</b>	<b>267,177,490.45</b>		

## Interventions

- ED weight allocation when comparing bids
- Access to the ED Fund
- Access to Industrial Development Programme

### BWOs

Supplier Names (Top 3)	Amount in ZAR	Level	BWO
REMKOR MANUFACTURING	1,120,498.01	3	51.00%
Sekela Xabiso CA INC.	560,855.00	3	56.35%
Mgwezi Consultants PTY LTD	176,913.47	4	51.00%
<b>TOTAL</b>	<b>1,858,266.48</b>		

- ED weight allocation when comparing bids
- Access to the ED Fund
- Access to Industrial Development Programme
- Access to the Incubation Programme

### EME/QSEs

Supplier Names (Top 8)	Amount in ZAR	Level	BO
SAFlog Consulting Services PTY LTD	8,792,624.27	1	100.00%
GIS South Africa Pty	3,305,795.06	4	0.00%
DIRECTECH (PTY) LTD	2,884,252.17	2	0.00%
Hamisa Engineering & Mining	1,862,948.40	1	100.00%
Lwendo Consortium (Pty) Ltd	1,824,248.13	1	100.00%
EUR - GIS SOUTH AFRIC (PTY) LTD	1,733,825.94	4	0.00%
LETS SHARE TRADING 67	1,637,227.27	1	100.00%
Alactic Technical Services(Pty) Ltd	1,507,906.45	1	100.00%
<b>TOTAL</b>	<b>23,548,827.69</b>		

- ED weight allocation when comparing bids
- Access to the ED Fund
- Access to Industrial Development Programme
- Access to the Incubation Programme

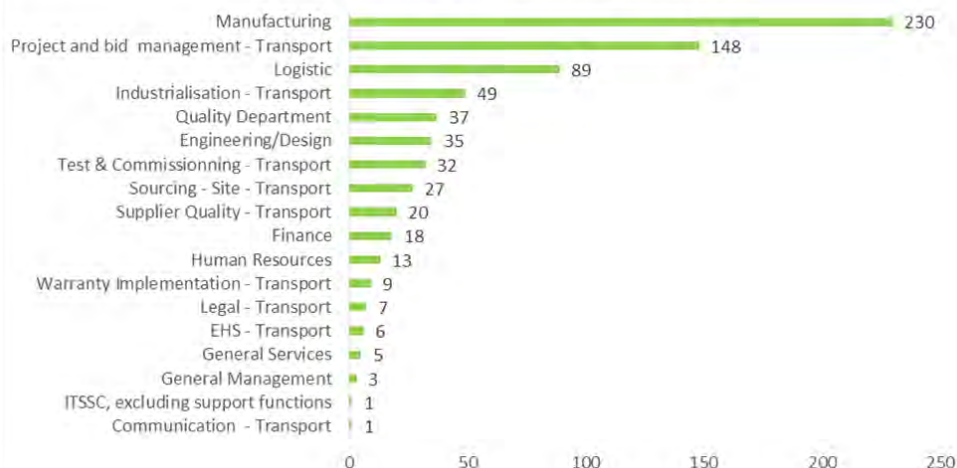


# Jobs Created in Gibela

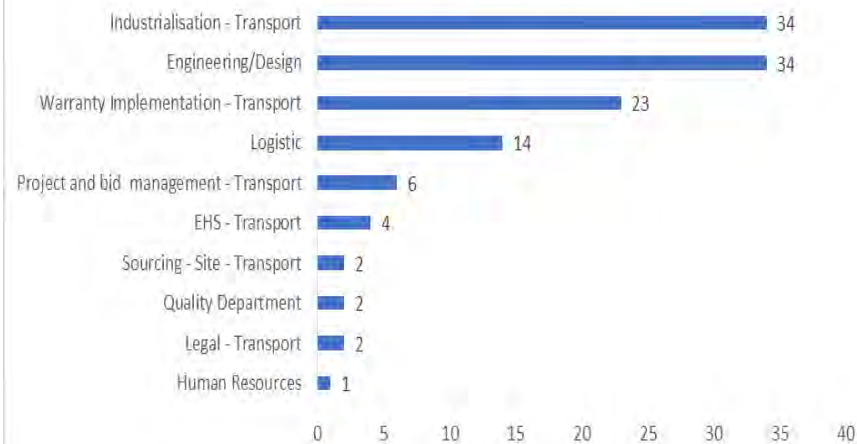
## Gibela Jobs Created - Headcount



## Manufacturing Jobs Actuals (730 total headcount)

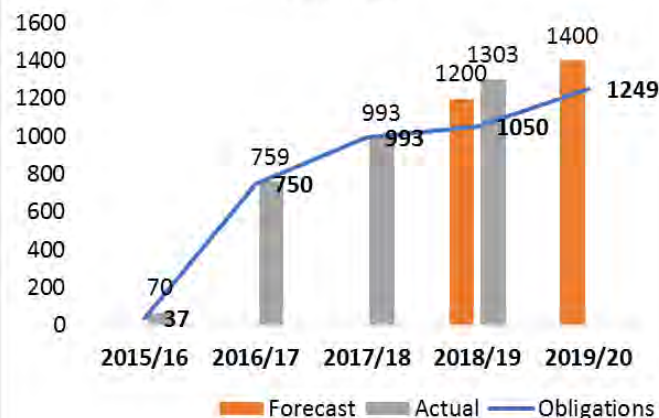


## Maintenance Jobs Actual (122 total headcount)

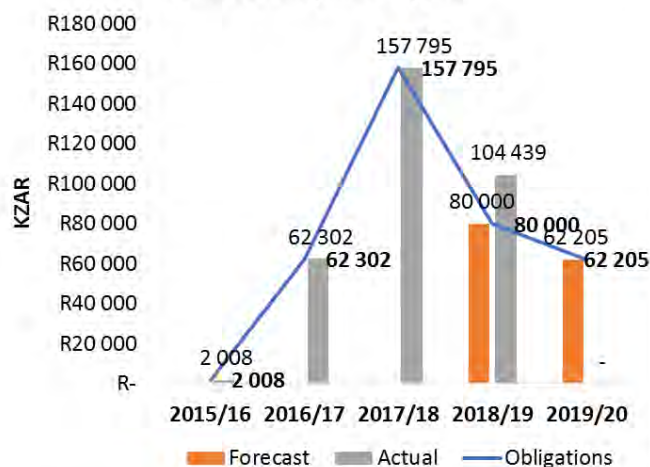


# Skills Development – Progress to date

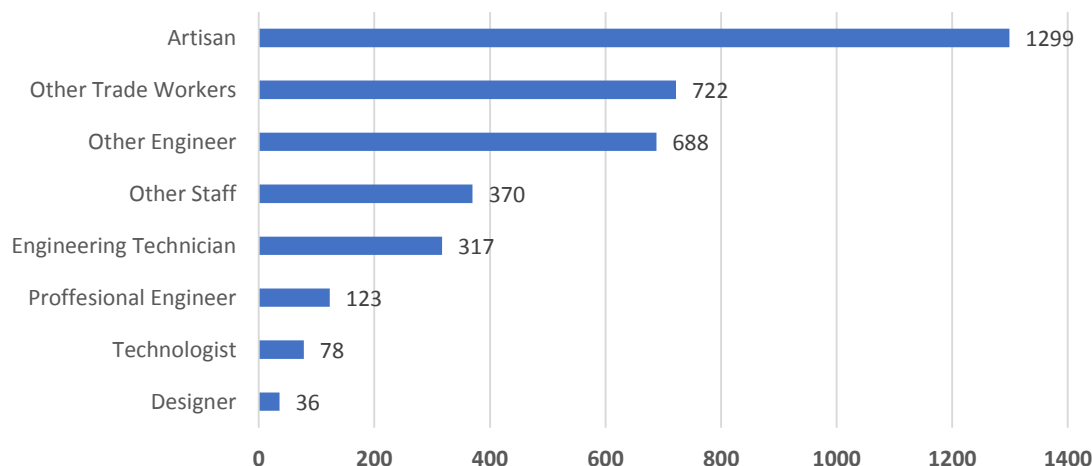
## Skills Development No. of people trained



## Skills Development Spend



## Skills Development across Categories (to date, cumulative)





# Progress on Skills Development

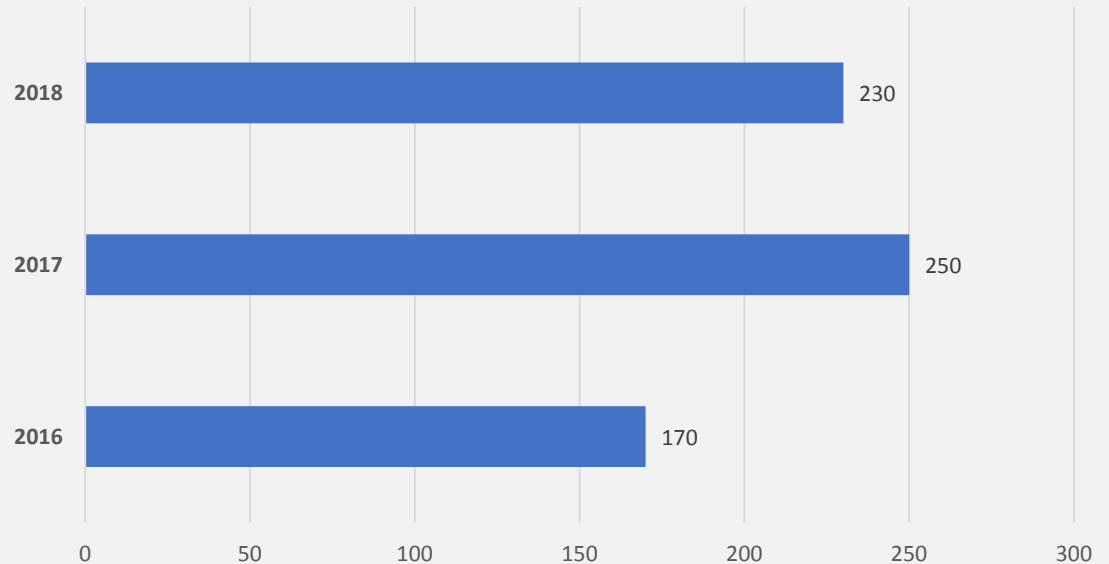
SD Programme		Description	Number of people trained
Rail-related skills development	1 Bursaries	<ul style="list-style-type: none"> <li>Bursaries to up-skill students from marginalised communities on engineering studies through various higher learning institutions.</li> </ul>	650 Students
	2 Transfer of Technology (ToT)	<ul style="list-style-type: none"> <li>Work-based training focusing on employees</li> </ul>	633 Employees
	3 Artisanal Training Learnership & Apprenticeship	<ul style="list-style-type: none"> <li>Focused on youth from marginalised communities; capacitating them with artisan skills</li> </ul>	225 Learners
	4 Internships	<ul style="list-style-type: none"> <li>Provides experiential training to unemployed graduates</li> <li>19 already employed permanently</li> </ul>	89 Learners
	5 Railway Introduction Course (RIC)	<ul style="list-style-type: none"> <li>Programme aimed at exposing attendees to the railway industry and careers on offer</li> </ul>	300 Learners
	6 Research Chair	<ul style="list-style-type: none"> <li>Focused on research and innovation; supplier development</li> </ul>	50 Learners
	6 Community Development and Skills Programme	<ul style="list-style-type: none"> <li>Focused on Skills Programme to address scarce skills gap</li> </ul>	630 Learners





# Bursaries

Annual Bursary Intake



- Since the inception of the programme Gibela has contracted **650** bursars and spent R51m towards their studies.
- Gender distribution for bursary candidates is 46% Female and 54% Male
- Total bursaries granted to university students 43% and TVET students 57%

# Maths and Science Programme – An example of a successful initiative kicked off in 2016

## Programme overview

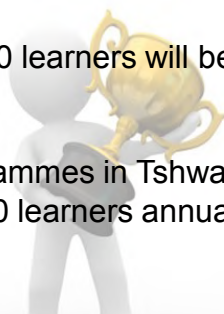
- Initiative to help improve Maths and Science in Ekurhuleni, Soweto and Tshwane
- Currently programme targets learners from 17 schools in the Ekurhuleni region (see right) and two schools in Soweto and Tshwane
- Programme run in conjunction with Math Centre

## Programme in pictures



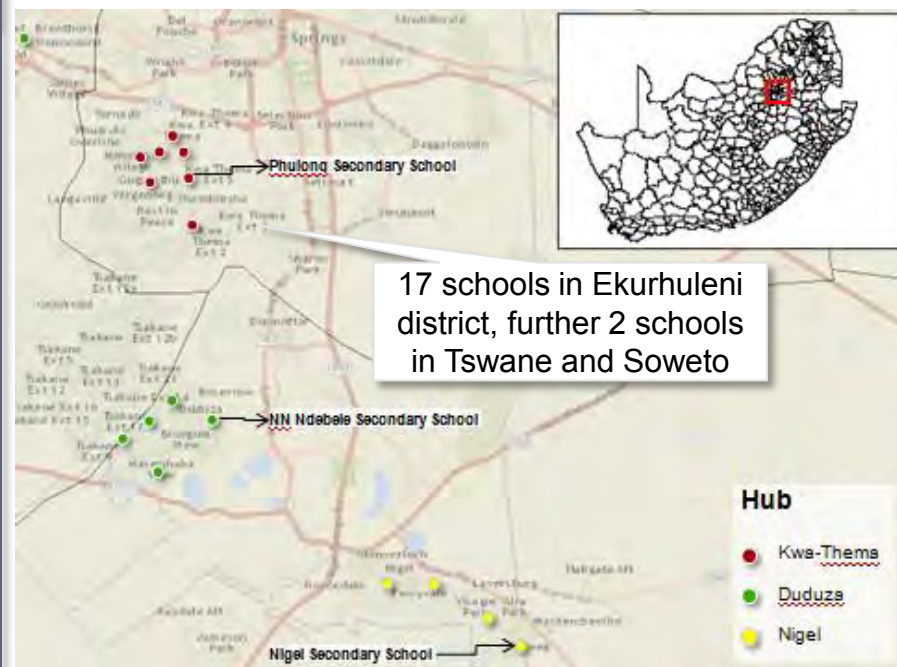
## Programme successes

- First batch of students with strong matric pass rates compared to local / national average (see deep dive)
- 450 learners engaged in the programme in 2016
- An additional 150 learners will benefit each year post 2016
- Additional programmes in Tshwane and Soweto to benefit an additional 150 learners annually



*"This is a great initiative and we appeal to more companies to follow suit."*  
- Ekurhuleni Mayor Councillor

## Region impacted



**THE FUTURE OF SOUTH AFRICAN PASSENGER RAIL IS HERE!**







## Appendix

# Localization on the 1<sup>st</sup> 20 Trains (1/2)

Scope of supply	RSA supplier delivered for Lapa	Volumes of the items that are locally produced	Price of the items as a % of the train price
COUPLERS	VOITH South Africa		
PASSENGER DOOR	KB South Africa	36 door leaves per TS	2.7%
DRIVER SEAT	ISRINGHAUSEN	2 driver seats + 2 co-driver seats per TS	0.1%
BRAKING RESISTOR + MOTOR FAN	PENBRO KELNICK	8 bracking resistors per TS	0.7%
INPUT FILTER / LINE INDUCTOR	PENBRO KELNICK	Not yet available	
CABLES	ABERDARE	Around 8 km of cables per TS	1.1%
CABLING - CIRCUIT BREAKER	CBI	Around 350 circuit breakers per TS	0.2%
MASTER CONTROLLER + EMERGENCY ALARM + REAR VIEW MIRROR + VOLTMETER + DOOR INDICATOR	RADEL	Not yet available	
SEATS	PROFIBER		1.1%
LATERAL WINDOWS + WINDSHIELD	PG Group	2 windshields & 68 lateral windows per TS	0.3%
LIGHTING SALOON	RADEL	Around 100 meters of LED strips per TS x 2 (left and right)	0.2%
SIDE WALLS (UPPER & LOWER)	TRECKLINER	133 panels per TS	0.3%

# Localization on the 1<sup>st</sup> 20 Trains (2/2)

Scope of supply	RSA supplier delivered for Lapa	Volumes of the items that are locally produced	Price of the Items as a % of the train price
SIDE WALLS (UPPER & LOWER)	TRECKLINER	133 panels per TS	0.3%
EQUIPED CEILING AIR DUCTS	GLOBAL COMPOSITES	Around 100 meters of central ceiling per TS	2.2%
CARBON STEEL + STAINLESS STEEL	MACSTEEL SERVICE CENTRES	Around 80 tons per TS	5.9%
EXTERNAL LIGHTING	LED LIGHTING	6 lights per TS	0.2%
SALOON HEATER + FOOT REST	BOOYCO	32 saloon heaters + 2 footrests per TS	0.6%
BATTERY BOX + BATTERY	TTS (inc. FNB & Kare)	2 boxes per TS	1.4%
FIRE DETECTION	CONCILIUM	Not yet available	
LUGGAGE RACKS + DUCTS	GLOBAL COMPOSITES	66 luggage racks per TS	0.7%
HORN	KAMA	6 horns per TS	0.0%
FAIRING & DUCTS	CREST	80 fairing per TS + 26 airducts per TS	1.0%
MISCELL. SHEET METAL WORK	LASER JUNCTION	Various small sheet metal parts	0.1%
AIR TANKS	ILVA ENGINEERING	Around 30 tanks per TS	0.3%
CABIN DOOR + CAB INTERIORS	SIYAHAMBA	4 cabin doors per TS + garnishing of 2 cabins per TS	0.8%
TOOL BOX	SPE	1 tool box per TS	0.1%
INSULATION	GIS	620 sqm per TS	0.4%
HANDRAILS	DELBERG	18 tripods, 106 seat handbars, 8 cab access handles and 1 PMR backrest per TS	0.3%
BASEBOARD DUCT	DENEL	42 baseboard ducts per TS	0.5%
<b>TOTAL LOCALISATION IMPACT first 20 trains (percentage of train price)</b>			<b>20.9%</b>



# Suppliers for Local Manufacture – 71 components currently on-boarded (1/6)

Scope of supply	RSA supplier	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
<b>Cables</b>	Aberdare Cables (Pty) Ltd	Around 8 km of cables per TS	0.47%	1	55.10%	30.28%
<b>Electronic components</b>	ACTUM ELECTRONICS	2 parts per train	0.01%			
<b>Sheet Metal Work</b>	Crest Information Systems	8234 parts per train	1.38%	4	25.97%	25.97%
<b>Casting</b>	Global Manufacturing Solution	24 parts per train	0.03%	4	10.20%	10.20%
<b>Paint</b>	Beckers Industrial Coatings (Pty)	3.4 Lts per train	0.00%	8	0%	0%
<b>Forging</b>	Bensch Forge (Pty)Ltd	36 parts per train	0.10%	N/C		
<b>Composite</b>	BFG INTERNATIONAL	227 panels per train	1.93%	Not yet available		
<b>Heaters, Footrest</b>	Booyco Engineering SA	36 saloon heaters + 2 footrests per TS	0.26%	4	25.98%	25.98%
<b>Pipe bending</b>	CERTUS ENGINEERING (PTY) LTD	23 kits per train	0.08%	N/C	0%	0%
<b>Electronic components</b>	Circuit Breaker Industries (PTY) Lt	Around 350 circuit breakers per TS	0.11%	4	34.10%	23.01%
<b>Sheet Metal Work</b>	Crest Information Systems	264 fairing per TS + 201 airducts per TS + Various small sheet metal parts	2.14%	4	25.97%	25.97%
<b>Machining</b>	DALIFF PRECISION ENGINEERING (PTY)	450 small parts per train	0.03%	2	51.46%	10.87%

# Suppliers for Local Manufacture – 71 components currently on-boarded (2/6)

Scope of supply	RSA supplier	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
<b>Sheet Metal Work</b>	DC TECHNICAL SERVICES CC	536 parts per train	1.34%	2	51%	19.86%
<b>Handbars</b>	DELBERG ENGINEERING PTY LTD	18 tripods, 106 seat handbars, 8 cab access handles and 1 PMR backrest per TS	0.21%	2	100.00%	0.00%
<b>Baseboard duct</b>	Denel Aerostructures SOC Ltd	42 baseboard ducts per TS	0.22%	2	0.00%	0.00%
<b>Electronic components</b>	ELECTROCOMP (PTY) LTD	18 capacitors per train	0.01%	7	0%	0%
<b>Radio</b>	Emcom Afrika (Pty) Ltd	2 radios per train	0.04%	4	24.96%	11.06%
<b>Battery box equipped</b>	ENZANI TECHNOLOGIES (PTY) LTD	2 boxes per TS	0.31%	2	85.09%	54.32%
<b>Batteries</b>	First National Battery SA	18 battery cells per train	0.19%	5	36.73%	18.03%
<b>Interiors</b>	Global Composites (Pty) Ltd	Around 100 meters of central ceiling per TS + 66 luggage racks per TS	1.43%	4	10.20%	10.20%
<b>Insulation</b>	Masobe	620 sqm per TS	0.05%	1	100%	95%
<b>Stickers</b>	GSDI SOUTH AFRICA (PTY) LTD	1068 stickers per train	0.42%	4	30%	0.00%
<b>Electronic components</b>	HARTING SOUTH AFRICA	around 8000 connectors per train	0.07%	4	0.00%	0.00%
<b>Aluminium extrusions</b>	Hulamin Extrusions	36 threshold per train	0.06%	5	22.51%	4.62%

# Suppliers for Local Manufacture – 71 components currently on-boarded (3/6)

Scope of supply	RSA supplier	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
<b>Tanks</b>	ILVA GENERAL ENGINEERING (Pty) Ltd	Around 30 tanks per TS	0.16%	5	0.00%	0.00%
<b>HVAC</b>	Ingersoll Rand South Africa	2 cabin hvac and 6 hvac per train	2.68%	8	0.00%	0.00%
<b>Plastics</b>	INSULETRIC (PTY) LTD	74 plastic parts per train	0.01%	4	0.00%	0.00%
<b>Driver Seat</b>	Isringhausen SA	2 driver seats + 2 co-driver seats per TS	0.08%	8	0.00%	0.00%
<b>Horn</b>	Kama Industries SA	6 horns per TS	0.02%	3	0.00%	0.00%
<b>Sheet Metal Work</b>	Kare Sheet Metal SA	2 CVS Cubicles and 300 small metal parts per train	1.73%	6	51.00%	0.00%
<b>Passenger Doors</b>	KNORR-BREMSE (SOUTH AFRIC	72 doors per TS	2.80%	3	25.10%	16.32%
<b>Sheet Metal Work</b>	LASER JUNCTION (Pty) LTD	Various small sheet metal parts	0.01%	1	100.00%	0.00%
<b>Lighting</b>	LED Lighting SA	6 lights per TS	0.12%	4	10.05%	4.00%
<b>Electronic Components</b>	Connector & Wire Services	5064 connectors per TS	0.09%	3	00.00%	00.00%
<b>Electronic components</b>	Microelettrica Power (Pty) Ltd	24 contactors per train	0.30%	3	26.00%	15.00%
<b>Floor panels</b>	PAV Shopfitters	100 m of floor per train	0.14%	8	28.27%	5.79%



# Suppliers for Local Manufacture – 71 components currently on-boarded (4/6)

Scope of supply	RSA supplier	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
Brake resistor, line inductor, Electronic components	Penbro Kelnick (Pty) Ltd	8 bracking resistors per TS + 2 line inductors	1.13%	4	26.00%	8.20%
Electronic components	PHENDULA SYNERGY PTY LTD	120 switches and buttons per train	0.02%	1	0.26%	13.26%
Electronic components	PHOENIX CONTACT (PTY) LTD	594 pluggable connectors per train	0.07%	N/C	0.00%	0.00%
Interiors	Pinion and Adams SA	34 interior panels per train	0.21%	4	100.00%	0.00%
Bench	PROFIBRE SIYAPHAMBILE (PTY) LTD	24 benches and 24 3+1 seats per train	0.65%	4	10.00%	10.00%
Lighting, emergency alarm, master controller, rearview mirrors	Radel SA	Around 100 meters of LED strips per TS x 2 (left and right), 72 emergency alarms, 2 master controllers, 4 rearview mirrors	0.78%	4	26.00%	13.26%
Casting	RELYINTRACAST	216 parts per train	0.24%	8	8.00%	8.00%
Sheet Metal Work, copper bars	REMKOR MANUFACTURING	2 CVS Cubicles, 20 LV Cubicles, 126 copper bars per train, Various small sheet metal parts	1.45%	2	51%	51%
Electronic components	RJ Connect (MOXA) SA	2 cabin camera and 12 saloon camera per train	0.03%	2	80%	0%
Windows	Shatterprufe SA	2 windshields & 68 lateral windows per TS	0.17%	4	13.24%	10.05%
Interiors	Siyahamba Engineering SA	garnishing of 2 cabins per TS	0.16%	2	90.00%	10.41%

# Suppliers for Local Manufacture – 71 components currently on-boarded (5/6)

Scope of supply	RSA supplier delivered for Lapa	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
<b>Sheet Metal Work</b>	STAINLESS PRECISION ENGINEERING Pty	4 Traction Converter, 30 absorbers, various sheet metal parts	0.98%	2	26.00%	0.00%
<b>Stamping</b>	STATELINE PRESSED METAL	1175 stamped parts per train	0.44%	3	49.3%	8.4%
<b>Interior Panel</b>	TREK Liners SA	133 panels per TS	0.08%	4	0.00%	0.00%
<b>Couplers</b>	Voith Couplers South Africa	2 couplers and 5 semi-permanent couplers per train	1.52%	4	10.37%	0.00%
<b>Electronic components</b>	VOLTEX T/A PHAMBILI INTERFACE	16800 connectors per train	0.05%	2	35.6%	17.8%
<b>Brakes, pantographs Key Lock</b>	WABTEC SOUTH AFRICA (PTY) LTD	2 pantographs, 12 bogie brakes, 6 carbody brake modules, 21 Key lock system per train	2.96%	8	00.00%	0.00%
<b>Antennas</b>	Webb Industries	6 antennas per train	0.01%	4	58%	30%
<b>Machining</b>	WEKABA ENGINEERING	702 parts per train	0.26%	4	80%	20%
<b>Insulation</b>	ZANERGY ENGINEERING	620 sqm per TS	0.07%	1	100%	100%
<b>Fasteners</b>	BOSSARD	Many parts and references	0.53%	4	0%	0%
<b>Other components</b>	GIS	Many parts and references	2.17%	4	0%	0%
<b>Stainless Steel Coils</b>	MACSTEEL	12 tons of stainless steel per train	3.71%	5	40.66%	10.47%

# Suppliers for Local Manufacture – 71 components currently on-boarded (6/6)

Scope of supply	RSA supplier	Volumes of the items that are locally produced	Price of the Items as a % of the train price	B-BBEE Level	Black Owned	Black Woman Owned
Gangways	Below & Bus	225 parts per TS	1.86%	8	0.00%	0.00%
Wiping System	KNORR-BREMSE (SOUTH AFRIC	6 Kits per TS	0.1.%	3	25.10%	16.32%
Cabin Structure	Nguni Rail	2 Cabins per TS	0.36%	2	55.10%	24.00%
Inductor, Motor Fan	Penbro Kelnick (Pty) Ltd	6 Inductors + 4 Motor Fan per TS	0.4%	4	26.00%	8.2%
