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ACQUISITION OF 1064 LOCOMOTIVES FOR TRANSNET'S GENERAL FREIGHT BUSINESS ("TRANSACTION"): INQUIRY

REPORT

VOLUME VI

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Locomotive tender evaluation for the supply of 465 new diesel locomotives for the General Freight Business

Report of the Cross Functional Evaluation Team (Finance)

1 – Agreed to file

10 December 2013

Mr Thamsanqa Jiyane

General Manager (CPO – TFR)

Locomotive tender evaluation for the supply of 465 new diesel locomotives for the General Freight Business

Report of the Cross Functional Evaluation Team (Finance)

Purpose of Report

The purpose of this report is to detail the finance team's objectives, scope, assumptions, risks and findings from the stage 6 evaluation for the 465 Diesel Locomotive tender.

Our understanding is that the contents of this report will be used as a basis for communication to the 1064 locomotive steering committee and the TFR Chief Executive.

Objective

The objective of the stage 6 evaluation was to determine the scoring that each bidder would obtain based upon the approved evaluation criteria for this stage.

Background

Transnet issued an RFP for the acquisitio of 465 diesel locomotives as was outlined in the locomotive deployment plan to ensure hat TFR would be in a position to provide the required capacity in support of the MDS. FR also has a need to modernise and upgrade its current fleet of diesel locomotives as part of the fleet is in need of replacement. As a result of the above, TFR has a requirement to procure new locomotives in the short, medium and long term.

The aim of the RFP was to elicit bids from locomotive suppliers for the proposal to supply diesel locomotives (the Locomotives) in such a way so as to contribute sufficient tractive effort to support TFR's growing General Freight traffic projections in the most cost effective manner.

A Cross Function Evaluation Team (Finance) "(CFET (Finance)" was requested to assist in the evaluation of the financial and related elements of the tender submissions. Predetermined criteria, scoring and associated weightings (which were approved by the relevant authority – Transnet Board) were provided to the members of the finance team as the basis for the stage 6 financial evaluation.

Finance team

The following finance personnel were appointed by the TFR Chief Executive as the CFET (Finance) and were involved in the evaluation:

Yousuf Laher – Executive Manager, TFR Finance

Danie Smit – Deputy Treasurer Middle Office - Transnet Group Treasury

Zunaid Vally – Executive Manager, TFR Finance

Thabo Seapi – Senior Manager, TFR Finance

Mohammed Moola – Senior Manager, TFR Finance

Tsietsi Tlaletsi – Senior Manager Transnet Group Treasury

Briefing session and bidders included in stage 6

The Supply Chain Services (TFR) ("SCS") team in the presence of Transnet Internal Audit ("TIA") briefed certain members of the team on the first day of the evaluation. The following aspects were mentioned to the CFET (Finance) in this briefing:

- The technical team required the base price to be normalised based on various options that were requested to be included as part of the locomotive technical specification;
- All four bidders have made it to stage 6 and as such they all have to be evaluated as part of this stage of the evaluation;

Bidder files, Laptop computers and CD's made available

SCS ensured that all relevant bidder files were made available to the CFET (Finance) each day. Only the relevant files were made available to the CFET (Finance).

These files remained in the control of SCS for the duration of the tender evaluation. At no point during the evaluation period were any files, documents or notes removed from the boardrooms where the evaluations were being performed. All notes, documents or spread sheets generated by the CFET (Finance) during evaluation sessions remained in the boardroom where the evaluation was conducted.

Certain technical files which contained financial information relative to the option pricing were reviewed for further information and clarity on the pricing evaluation. The reason for reviewing the technical files was as a result of bidders providing the detailed explanations and submissions for certain aspects of the price in the technical files. These files were again only reviewed in the presence of the SCS and TIA personnel.

SCS provided laptop computers with which to conduct the evaluation. All workings were conducted on these laptop computers. These laptop computers were never removed by the finance team from the boardrooms where the evaluation took place. These laptop computers remained in the possession of SCS when not in use by the finance team. CD's returned by bidders with the relevant financial information required for the evaluation was loaded onto some of these laptop computers. These laptop computers were used in the presence of the SCS and TIA personnel.

All backups of files on these laptops were kept by SCS on hard disks in a safe location.

Declarations of interest /conflicts

All CFET (Finance) members completed and signed their declarations of interest as required by SCS before the commencement of the evaluations on a regular basis. No CFET (Finance) member declared any interest in the bidders or declared any conflict of interest throughout the evaluation period.

Scope

The scope of our review was limited to evaluating the following in terms of stage 6 of the RFP and the approved evaluation criteria for this stage. As advised by SCS, the percentages and criteria listed below are the predetermined criteria as specified by the Transnet Board.

	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT
		100.00%	60.00%
1	Price	30.00%	18.00%
2	Total Cost Of Ownership (TCO)	20.00%	12.00%
3	Delivery Schedule (DS)	25.00%	15.00%
4	Payment Terms (PT)	10.00%	6.00%
5	RFP & Contractual Compliance (CC)	10.00%	6.00%
6	Financial Stability (FS)	5.00%	3.00%
	TOTAL SCORE	100.00%	60.00%

There were no changes to the predetermined criteria apart from the following which requires approval of the Steering Committee and the Transnet Board:

- The "Price" evaluation criteria required hedging costs and escalations to be included. This was changed to evaluate on the basis of price excluding hedging costs and escalations (refer to the detailed explanations in the report below).

The detailed scoring criteria and scoring results are included as part of Annexure A.

With regard to the pricing of options we were provided a list of options from CFET (Technical) for the purpose of including these items into the base price. Our scope was limited to including the prices as provided by the bidders for these technical options into the base price. We did not have access to technical files to verify that the responded technical scope included these options or not.

Technical team involvement

At certain stages during the evaluation the CFET (Finance) requested, through SCS, assistance from the technical team around aspects of:

1. The request to "normalise" the base price;
2. Conducting an evaluation of the energy models submitted as part of the TCO evaluation;
3. Reviewing the scheduled and unscheduled maintenance elements of the TCO model for reasonability.

Details of this assistance are summarised below:

1. Request to normalise the base price

As part of the request to normalise the base price, a schedule was provided to the CFET (Finance) of items that the CFET (Technical) advised were required. In these instances, the CFET (Finance) were advised:

- that certain bidders had provided these items as "options" in their submissions and;
- Other bidders had indicated availability of these "options", however, the CFET (Technical) were not clear as to whether these items were appropriately costed, quoted and included in the price.

The schedule submitted gave indications of what the CFET (Technical) expected to be done by the CFET (Finance). The detailed schedule is included as "Annexure B" of this report. In summary the following process was followed:

- Adjust the price of the relevant bidders where bidders were not consistent in including the cost of the item in their base price;
- Obtain pricing, for those "items" included in the schedule, from bidders who had not submitted quotes and
- Effectively the CFET (Finance) were required to "normalise" the base price submissions for appropriate comparison between the bidders for those options that the CFET (Technical) believed must be included in the price.

Two members of the technical team (Christo Uys and Elvis Tshivilinge) were made available to discuss and clarify the base price "normalisation" issues. These discussions took place in the presence of SCS and TIA.

Subsequent to the initial phase of the evaluation, clarity questions were submitted to the bidders regarding the requirements of the detailed schedule (Annexure B) from the CFET (Technical).

The CFET (Finance) used the responses received from bidders on clarification questions to conclude on the final 'Normalised Base Price'.

2. Evaluation of energy models

Five members of the technical team (Devendran Govender, Winfried Mors, Trevor Downing, Justice Ngwenyama and Chris Uys) were made available to conduct the energy model evaluation. The energy model was designed by CFET (Technical) and was fully evaluated by CFET (Technical) without the involvement of CFET (Finance). CFET (Finance) incorporated the results of the energy model evaluation into the stage 6 TCO model financial evaluation.

3. Review of the scheduled and unscheduled maintenance regimes within the TCO models as submitted by bidders

The CFET (Finance) found numerous inconsistencies in the manner in which bidders chose to complete the scheduled and unscheduled maintenance portions of the TCO model. The CFET (Finance) recommended that the CFET (Technical) review the models for reasonability with the purpose of allowing the CFET (Technical) to guide the CFET (Finance) in making decisions to score the TCO models submitted as well as to guide the CFET (Finance) in their deliberations as to whether the models submitted would actually meet the requirements to be scored fairly amongst bidders.

Four members of the technical team (Devendran Govender, Frikkie Harris, Eugene Russouw, Chris Uys) were made available to conduct a review of the scheduled and unscheduled maintenance regimes as supplied by bidders for reasonability.

Transnet Internal Audit involvement

TIA was present at evaluations sessions as requested by SCS to ensure good corporate governance. KPMG, Sekela Xabiso and Nkonki Incorporated are the outsourced service provider of the Internal Audit function for Transnet.

We noted during our evaluation that KPMG were the auditors of two of the bidders.

This matter was reported to the SCS representatives present. We were advised that the process of evaluation must continue with TIA continuing to perform the oversight role for good governance.

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Methodology of scoring

Scoring of points was completed using the set predetermined criteria and weightings for each section of the financial evaluation.

The process for scoring, checking and evaluating the short-listed bidders was done jointly by all members of the CFET (Finance) in the presence of SCS and TIA. All results submitted were based on consensus agreement amongst all the CFET (Finance). Yousuf Laher was a key person in the development of the evaluation model and RFP requirements, in conjunction with SCS. He outlined to all members of the CFET (Finance) the processes, procedures and methodology of scoring.

Meetings held

During the course of the evaluation, all meetings were held in the presence of SCS and TIA. These included meetings with the following parties:

- Technical (the purpose of these was to clarify issues that pertained to the technical options that required normalisation of the base price, to brief the technical team in preparation of their review of the TCO model and to receive input from the technical team around the energy model);
- Legal (the purpose of these was to advise and assist the legal representative during the contractual compliance evaluation);
- Meetings with CPO (the purpose of these meetings was mainly to provide the CPO with an update on the progress of the financial evaluation process and to obtain guidance on certain matters that required interpretation or clarification related to the RFP or others sections (Technical/SD of the evaluation).

Results of scoring

1. Price

The result of the "Price" evaluation is reflected below:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Price	0.00%	0.00%	0.00	0.00	0.00	0.00

Price Evaluation Criteria (Escalations and hedging costs)

- The Board approved evaluation criteria supplied to the CFET (Finance) indicated that the price evaluation must be done on the basis of the price including foreign exchange hedging costs and escalations;
- The CFET (Finance) was unable to evaluate on the basis of a fixed price including escalations and hedging costs (refer explanations in the sections below);
- The price evaluation was therefore done based on the price excluding hedging and escalation costs for all bidders. The risk impact of this is outlined in the "Overall Risks" section of this report.

Escalations

- The RFP requested bidders to submit a price in line with the following options:
  - Fixed pricing;
  - Escalation based pricing;
  - Indexation formulas used in pricing calculations;

  Most bidders chose the option of providing prices based on either escalation or indexation based pricing. Most of the bidders did not offer a fixed price as was required by the Board approved evaluation criteria in order to conduct the evaluation;
- It was noted that bidders provided various differing escalation regimes that were not comparable to normalise a 'Base' price over the period of the locomotive supply contract;
- Some bidders were not willing to provide fixed pricing (including escalation) over the delivery period due to the risks involved for them in this type of a pricing mechanism;

Hedging Costs

- The wording of the RFP with regard to foreign exchange hedging costs was subject to interpretation in that bidders were recommended (but not required) to provide a price including hedging costs;

- The RFP stipulated that TFR would prefer a Rand based contract and that the bidders must submit the cost of hedging and a hedging strategy. Although some bidders did provide the cost of hedging, they stated clearly that appropriate hedging strategies will be discussed and agreed upon at the contract award stage. In addition as part of their RFP response some bidders provided the cost of hedging whereas other bidders did not submit the cost of hedging;

- Through a process of clarification and in order to ensure that hedging costs were excluded from their 'Base' price, all bidders were requested to confirm whether their 'Base' prices quoted excluded foreign exchange hedging costs and if these were included to then provide the quantum thereof. Bidders were also requested to provide us with an estimated cost of hedging, whether included in the Base price or not;

- As the cost of hedging will most likely change due to exchange rates fluctuating between evaluation and final contract signature date, and because the cost of hedging will in any case be base-lined, checked for reasonability by Transnet Treasury, and agreed to on the date of contract signature, it would be more appropriate to exclude the cost of hedging from the evaluation at this point;

- Post these clarifications we noted that one bidder (bidder 1) did not want to provide TFR with the estimated cost of hedging;

- An important point to note is that none of the bidders indicated that they were unwilling to enter into a foreign exchange hedging arrangement with TFR at the time of contract signature;

Final agreed evaluation methodology (escalation & hedging costs)

- In order to proceed with the price evaluation on a consistent and fair basis, the CFET (Finance) agreed, after consultation with SCS, that it would be more appropriate to exclude escalations and hedging costs from the price evaluation and thereby attain a more normalised price for evaluation purposes. This was agreed to with SCS on the proviso that this change to the evaluation methodology be brought to the attention of the steering committee and Transnet Board for approval prior to the award of the contract;

Normalising the "Base" Price for evaluation

Technical Options

- The 'Base' price, as submitted by all bidders was normalised for the "technical option" items as requested by the technical evaluation team. Refer "Annexure B" which contains a list of all option items that were normalised;

- The provisioning of ECP/WDP and RDP was a mandatory requirement per the technical specifications. Based on our discussions with CFET (Technical), all bidders have confirmed, in the technical response, that they fully complied with this requirement. It was therefore concluded that all bidders had included the cost of provisioning in their base price and no adjustment to this item was required for evaluation purposes.

- The cost of either ECP/WDP or RDP was included in the base price, as the CFET (Technical) have advised that it is probable that this option would be exercised. We were advised by the GM Logistics Integrator (Pragasen Pillay) as to the number of ECP/WDP, RDP or ECP/WDP/RDP combination that must be applied over the fleet. (refer Annexure B for allocation and associated cost of this split);

- All bidders included the provisioning of ECP/WDP or RDP into in their price; however only bidder 2 included the equipment cost in their base price. Based on the advice from CFET (Technical), we therefore included the equipment cost of ECP/WDP and RDP for all other bidders onto their base price for the purpose of normalising the base price;

Rebasing the price for foreign exchange differences

- The RFP did not indicate the date that bidders should use to convert foreign exchange as part of the imported content of their price. As such bidders made their own assumptions and each used a rate and date of their choice. The result of this is that a comparison of base prices with different dates and rates would be inconsistent. In order to normalise the price for changes due to foreign exchange differences and movements since RFP closing date, the CFET (Finance) normalised their prices based on exchange rates as at 11th November 2013 (USD/ZAR 10.37, EUR/ZAR 13.91). As a consequence bidders were requested in a clarity question to confirm their foreign currency components included in their 'Base' price. These foreign currency components were converted at spot rates on the 11th of November 2013 for the purpose of comparing prices between bidders;.

Using TE as a main subcontractor

- The RFP part 2 dictates as follows "participation of TRE in this locomotive procurement process will be prescribed". In terms of the evaluation governance process CFET (Finance) does not have access to 'Supplier Development' files. As such CFET (Finance) assumed that all bidders have provided pricing based on the utilisation of TE as the main subcontractor;

- SCS however advised CFET (Finance) that the Supplier Development files submitted by bidders indicated that Bidder 1 did not specify the use of TE as the main subcontractor and that this could have a potential price adjustment implication. SCS also mentioned that bidders were likely to make different assumptions in the use of TE as a main subcontractor including the percentage that would be subcontracted. These assumptions which were not specified by TFR in the RFP process could differ significantly between bidders. Accordingly SCS subsequently decided to obtain clarity from bidders on this matter;

- SCS in conjunction with the TFR CE and Transnet GCE and GCFO decided that clarity should only be obtained from those bidders who included TE as a main subcontractor. The clarity request was to establish what proportion of the bidder's price related to the use of TE;

- Accordingly the methodology provided to the CFET (Finance) was that all bidders should be evaluated excluding the use of TE as a main subcontractor in order to normalise the base on which to evaluate price;

- Based on this decision clarity responses were only issued to Bidder 2 and Bidder 4 (those bidders who indicated the use of TE as a subcontractor).

- Bidder 3 had already provided pricing with and without the use of TE as a subcontractor and indicated that the impact of using TE as a subcontractor would be a decrease in price of R 1 640 000 per locomotive;

- Clarity responses were received from these bidders who indicated the impact on price and the new bid price for 465 locomotives if TE was not used as subcontractor. The summary of these responses is as follows:
    - Bidder 4 provided the required information as requested and indicated that the impact of using TE as a subcontractor would be a decrease in price of R 1 046 060;
    - Bidder 2 provided the required information, however we noted that their new submitted bid price excluding TE as a subcontractor did not reconcile to their original bid price. This posed a risk to the evaluation of the price and the CFET (Finance) subsequently consulted with SCS to explain the concern as the impact of this difference was significant in relation to the final scoring on price;

- It was subsequently decided by SCS that further clarity from Bidder 2 was required to understand this difference. SCS together with a representative of the finance team and in the presence of TIA engaged Bidder 2 telephonically on the evening of the 4 December 2013 to discuss this un-reconciled difference;
- Bidder 2 indicated that the difference related to them providing a price based on the quote provided for fixed pricing as per the 1st clarification process instead of the rice per their original tender submission. Subsequent to this telephonic conversation Bidder 2 submitted a new clarity and the subsequent submission from them that the impact of using TE as a subcontractor would be a decrease in price of R 1 530 190;
- The CFET (Finance) subsequently completed the evaluation on this basis;

- In summary the impact of excluding TE from the normalised base price is as follows:

Bidder 1	Bidder 2	Bidder 3	Bidder 4
n/a	-1 530 190	-1 640 000	-1 046 060

- The normalised pricing used for evaluation purposes of all bidders (capital acquisition cost) excluding TE as the main subcontractor i.e. using private sector as the main subcontractor is summarised as per the table below;

Bidder 1	Bidder 2	Bidder 3	Bidder 4
44 232 853	33 254 876	42 761 272	27 493 481

Assumptions used for pricing

Other than as noted above the following additional assumptions were used by the CFET (Finance) in the price evaluation:

- Where the import content percentage was not supplied by bidders as part of their pricing proposal and or clarification then the local content declaration form as supplied by bidders was used to obtain the imported content;

- The RFP requested break point pricing for batches of locomotives. As the TFR requirement is for 465 locomotives, the CFET (Finance) used the pricing provided by bidders for 465 locomotives to conduct the evaluation;

- Bidder 3 quoted for a price including and excluding utilising TE as the main build subcontractor. We used the price quoted where TE was included as the main sub-contractor for evaluation purposes. A reduced price of R 1 640 000 per locomotive was offered with private sector build instead of TE, coupled with limitations to localisation. The reduced price was taken into account for

evaluation purposes as the evaluation was done on the basis of bidders using the private sector as the main sub-contractor for the build;

- The price of a standard list of capital spares and spare parts was requested as part of the RFP, to be included in the acquisition cost of the locomotive. Where bidders added additional items to this list of capital spares and spare parts then these items were excluded for evaluation purposes in order to ensure that the bidders were evaluated on the standard list thereby ensuring the evaluation was performed on an "like for like" basis. In instances where a bidder did not provide a price for a capital spare or spare part as per the standard list, then an average price of the remaining bidders was used to ensure that a realistic comparison was achieved;

- The Bonus points for Value Added services were not assessed. The main factor for this decision is that this item was not clearly defined in the RFP and the technical team had no view of the requirement of "value add" aspects and the technical team was not allowed to have access to the financial files. Therefore the finance team could not assess value added services;

2. Total Cost of Ownership (TCO)

TCO evaluation criteria

The evaluation of TCO is conducted based on the following five elements (a maximum of 20 points in total):

i. scheduled maintenance (8 points);
ii. lost revenue (4 points);
iii. unscheduled maintenance (4 points);
iv. energy utilisation (4 points);
v. overall TCO result bonus points (2 points);

Points are allocated individually for each of the five elements above.

- Whilst reviewing the submissions received from bidders on the TCO model we noticed that the results of the scheduled and unscheduled maintenance varied considerably. The CFET (Finance) was unable to ascertain whether these varied results were as a result of bidders' interpretations of the TCO model or as a result of the different maintenance regimes of their respective locomotives. The result of this is that the evaluation of the scheduled and unscheduled maintenance could be subjective. The items that contribute to the subjectivity are as follows:

  i. bidders used different labour rates;
  ii. bidders used different prices for similar components;
  iii. bidders assumed different types of maintenance regimes and;
  iv. bidders assumed different failure rates for unscheduled maintenance;

- Through discussions with CFET (Technical), we were however advised that the above could be normalised by CFET (Technical), if required;

- The matter was discussed together with SCS and CFET (Technical) and it was decided that due to the subjectivity of this item, and because we did not want to make assumptions to change bidders submissions, different scenarios including and excluding scheduled and unscheduled maintenance should be prepared to provide the Steering Committee with appropriate information to make a final decision;

- As per confirmation from CFET (Technical) all bidders confirmed as part of their technical submission, that they would meet the required reliability regime i.e. that the locomotives offered would achieve less than 15 faults per million kilometres. This contributes to reducing the risk of an unreliable locomotive and as such provide some comfort should the unscheduled maintenance be excluded from the TCO evaluation. The draft supply agreement includes a penalty regime whereby should the stated minimum reliability regime (15 faults per

million kilometres) not be reached then the penalty clauses would come into effect;

The results of the "TCO" evaluation scenarios are reflected below:

Scenario 1 – all elements of TCO included:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Total Cost of Ownership (TCO)	20.00%	12.00%	0.00	0.00	0.00	12.00

Scenario 2 – (TCO) excluding unscheduled maintenance and excluding bonus point allocation

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Total Cost of Ownership (TCO) excluding unscheduled maintenance and excluding bonus point allocation	20.00%	12.00%	0.00	0.00	0.00	12.00

Scenario 3 - (TCO) excluding unscheduled and excluding scheduled maintenance and excluding bonus point allocation

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Total Cost of Ownership (TCO) excluding unscheduled and excluding scheduled maintenance and excluding bonus point allocation	20.00%	12.00%	0.00	0.00	0.00	12.00

Assumptions used for TCO model evaluation

- The TCO model as submitted by all bidders was used as the basis for the evaluation;
- Escalation was normalised for all bidders for purposes of appropriate comparison. CPI + 2 % was used as escalation for all bidders. CPI was obtained from the current year's budget guidelines;
- The WACC rate was obtained from the latest Group Financial Planning Policy issued on the 1st of August 2012, and was used for the present value calculations;
- The submissions by bidders in respect of failure rates, maintenance strategies, optional components requiring unscheduled replacement and the timing of maintenance interventions varied significantly, however, as a finance team we assumed that these submissions are relative to their locomotive product type as well as their maintenance regime and strategies. Accordingly we used the TCO models as submitted by bidders to conduct the evaluation;
- For the purposes of evaluating lost revenue as part of the TCO evaluation we assumed that TFR's expected delivery schedule would be an equal number of locomotives per month, as per the delivery batches stipulated within the relevant years within the RFP (see delivery schedule notes below). The current average TFR leasing rates per day was used to determine the lost revenue value for all bidders. The lease revenue rate per day used for all bidders was R 18 707 per locomotive.
- The energy model was designed by CFET (Technical) and was fully evaluated by CFET (Technical) without the involvement of CFET (Finance). CFET (Finance) incorporated the results of the energy model evaluation into the stage 6 evaluation of TCO.
- Some bidders included extra optional components for unscheduled maintenance which other bidders have not included in their TCO model. We have not removed this from the TCO model as suppliers would know the unscheduled maintenance costs of their loco's best.

3. Delivery schedule

The result of the "Delivery" evaluation is reflected below:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Delivery Schedule (DS)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Assumptions used for delivery schedule evaluation

- The effective date of contract signature was normalised to 1 September 2013 for all bidders in order to ensure consistent scoring;
- The RFP closing date was extended by about 7 months from 16 October 2012 to 30 April 2013. As such, for the purpose of evaluation, the expected start date for delivery (previously March 2014) was aligned accordingly and was moved forward by 7 months for all bidders (October 2014);
- Where bidders provided an accelerated delivery schedule whereby they would deliver earlier than indicated in the RFP, and would complete delivery of all 465 locomotives earlier than expected in the RFP, then these bidders were allocated the full points applicable for delivery for each subsequent year (where points were allocated) after their delivery is fully completed;
- TFR would conduct acceptance tests prior to accepting locomotives. The length of time taken to conduct acceptance testing is completely under the control of TFR. Bidders were not advised how long this acceptance testing would take within the RFP. As such bidders made their own assumptions regarding the time taken to conduct acceptance testing. In order to ensure consistency, the delivery date as stipulated by bidders was used to conduct the evaluation instead of the acceptance date;
- Some bidders provided an alternative delivery schedule based on more "imported content" This option was not considered in any of the team's evaluations as the preferred position is to maximise local content;

- The delivery schedules of all bidders is summarised as per the table below:

	Oct 14	Oct 15	Oct 16	Oct 17	Oct 18	Beyond	Total
TFR Plan	100	100	100	100	65	0	465
Bidder 1	0	26	98	133	146	62	465
Bidder 2	0	44	107	140	141	33	465
Bidder 3	0	6	82	100	100	177	465
Bidder 4	1	57	165	165	77	0	465

The above delivery schedule assumes a contract effectiveness date of 1 September 2013. The delivery schedule above would move out by an equal number of months from 1 September 2013 to the actual date the contract is signed.

4. Payment terms

The result of the "Payment terms" evaluation is reflected below:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Payment terms PD	10.00%	6.90%	8.00	10.00	8.00	9.00

Assumptions used in payment term evaluation

- The approved evaluation criteria required the evaluation of payment terms on a Net Present Value (NPV) basis. Therefore cash flows needed to be constructed for all bidders using their declared payment terms. Cash flows are generally a factor of payment terms, delivery dates, discount rate and a price. As "price" and "delivery" are evaluated separately as part of this stage 6 evaluation, the CFE (Finance) standardised the price per loco (R 30 million) and the delivery schedule (as per the RFP) for all bidders for the "payment terms" portion of the stage 6 evaluation. This would have the effect of isolating the payment terms offered by bidders on the cash flows for evaluation purposes. The primary reason for this is to ensure that bidders who provide higher/lower prices and/or faster/slower delivery schedules are not benefited or penalised twice in the evaluation process;

- The draft supply agreement issued as annexure I of the RFP stipulated a different % preferred payment terms for TFR as compared to the preferred payment terms stipulated in the RFP. After discussion with SCS we were advised that bidders were advised through a clarification that the preferred payment terms of TFR is as stipulated in the RFP. Where payments terms conflicted between the RFP response and the supply agreement response the payment

terms as offered by bidders in response to the RFP was used for the evaluation purposes;

- Where bidders provided a percentage for the deposit payment, we applied that percentage to the standardised price to determine the deposit payment, whereas where bidders provided a fixed Rand amount we utilised that fixed Rand amount as a deposit payment on the standardised price;

- The WACC rate (12.56%) was obtained from the latest Group Financial Planning Policy issued on the 1st of August 2012, and was used for the present value calculations;

- We used a standardised retention period of 6 months from acceptance date for all bidders. The reason for this is that some bidders had indicated retention period to be when availability and reliability targets are achieved which could vary and can depend on various factors;

- We used a standardised retention period of 6 months from acceptance date for all bidders. The reason for this is that some bidders had indicated retention period to be when availability and reliability targets are achieved which could vary and can depend on various factors;

- The payment terms of all bidders is summarised as per the table below:

	Bidder 1	Bidder 2	Bidder 3	Bidder 4
Deposit	1.08%	1.43%	25.00%	10.00%
Acceptance	88.92%	88.57%	75.00%	87.00%
Retention	10.00%	10.00%	0.00%	3.00%
Total	100.00%	100.00%	100.00%	100.00%

5. RFP & Contractual Compliance

The result of the "RFP & Contractual Compliance" evaluation is reflected below:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
RFP & Contractual Compliance (CC)	5.00%	5.00%	3.75	3.75	3.00	3.50

- Evaluation of the contractual compliance matters related to the responses to the draft supply agreement by bidders was completely evaluated by Mr Kenneth Diedricks (TFR General Counsel) from the TFR legal department. CFET (Finance) incorporated the results of the contractual compliance evaluation into the stage 6 evaluation of RFP & Contractual Compliance;

- Evaluation of the RFP compliance matters related to the administrative responsiveness to the RFP by bidders was evaluated by Ms Lindiwe Mdletshe from the TFR SCS department. CFET (Finance) incorporated the results of the RFP compliance evaluation into the stage 6 evaluation of RFP & Contractual Compliance;

- References were provided by all bidders and therefore SCS assumed these to be adequate and scored full marks for all bidders. We were advised by SCS that they would contact references provided once a preferred bidder is chosen.

6. Financial Stability

The result of the "Financial Stability" evaluation is reflected below:

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
			1	2	3	4
Financial Stability (FS)	5.00%	5.00%	2.50	5.00	3.75	2.50

- The financial stability of the bidders was assessed as part of stage 2 of the evaluation process. Please refer to the CFET (Finance) report relating to stage 2 issued on 31st July 2013. The scoring from stage 2 was carried forward to stage 6 of the evaluation.

OVERALL RISKS

The following risks must be communicated to the steering committee and considered prior to final contract award:

Price

Hedging and Escalations

- The evaluation and scoring for pricing has been determined and explained above. The CFET (Finance) would like to bring to the attention of the steering committee that as a result of the evaluation of price on the basis of excluding hedging costs and escalation costs, that the following additional aspects be considered prior to awarding the contract. These factors when considered either individually or in combination could have a significant impact on the final negotiated price:

  i. Hedging;
  ii. Escalation;
  iii. Break pricing;

A summary of the potential impact of the items above on the evaluated price is summarised below in order to provide the steering committee with a better understanding:

Hedging

Note: Bidder 1 did not quote for forex hedging costs

Bidder 1	Bidder 2	Bidder 3	Bidder 4
Per Loco	Per Loco	Per Loco	Per Loco
0	100 000	9 926 569	2 798 120

Escalations

Note: Bidder 3 did not quote for escalations

Bidder 1	Bidder 2	Bidder 3	Bidder 4
Per Loco	Per Loco	Per Loco	Per
7 968 533	5 146 518	0	5.0

Break Point Pricing

- As the TFR requirement is for 465 locomotives, the CFET (finance) used the pricing provided by bidders for 465 locomotives to conduct the evaluation. Break point pricing was provided by all bidders and the price per locomotive varies dependant on the batch size of the order placed. This must be considered should TFR decide to place an order for a smaller batch as the evaluation was not conducted based on smaller batches. A decision regarding whether smaller batches will be purchased has not yet been made and therefore was unknown at the time of the evaluation. The table below indicates the break point pricing offered by bidders (based on their original tender responses where bidders used the main subcontractor of their choice):

Bidders	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5
1	42 872 500	41 361 250	40 857 500	40 605 625	40 500 000
2	40 057 313	34 310 215	32 394 515	31 436 666	30 929 353
3	41 072 258	38 106 409	36 880 878	36 490 000	36 490 000
4	30 773 333	29 884 636	28 289 553	26 690 788	25 624 560
Loco's cumulative	100	200	300	400	465
Loco's per year	100	100	100	100	65

TE as a subcontractor

- With reference to the section of the report above dealing with TE as the main subcontractor and the impact on price, the following matters need to be considered by the steering committee:

    - Although the price has been normalised to exclude TE for evaluation purposes, the use of TE as a main subcontractor is highly probable as this is a requirement as per the PFMA approval letter from the DPE. As such prices will have to be negotiated with the preferred bidder/s including TE and thus needs to be considered by the steering committee prior to the conclusion of the evaluation process as this could have an impact on the final price;

    - The price that bidders provided based on their choice of sub-contractor is significantly different from the price used for evaluation purposes (where the incremental cost of TE was excluded). This could change the evaluation result and the final price contracted;

    - Bidder 1 has not quoted using TE as the main subcontractor. No clarity was obtained from this bidder as mentioned in the report above. If clarity was obtained from this bidder and they indicated that there is no change to their price whether TE will be used or not then the impact on the evaluation scoring result could be significant;

    - In addition it should be noted that should Bidder 1 become the preferred bidder then there is a risk of a potential price adjustment and possible protracted negotiations. The finance team was unable to reasonably quantify the quantum of this potential price adjustment. It should be further noted that the use of TE as the sub-contractor could be an incremental adjustment to Bidder 1"s price based on the differential between using TE as a subcontractor versus the subcontractor costs already included in the price of Bidder 1's submission;

    - The delivery regime that bidders provided was based on their choice of sub-contractor (some with TE and some using private sector subcontractors). This could change should bidders be required to use TE

as a sub-contractor. A different delivery schedule could have an impact on the evaluation result and the final delivery schedule contracted;

Impact of capital and maintenance spares on price

- Standardised quantities of capital spares required were provided to all bidders as part of the RFP. All bidders quoted for these capital spares based on the quantities provided and this has been included in the price of the locomotive used for evaluation purposes. Following discussions with CFET (Technical) we were advised that as failure rates of these capital spares is not yet known, the quantities requested may not be completely accurate at this point and may change once the locomotives are placed into production;

- Quantities of maintenance spares required were provided by bidders as part of the RFP. All bidders quoted for these maintenance spares based on their knowledge of historical failure rates and this has been included in the price of the locomotive used for evaluation purposes. Following discussions with CFET (Technical) we were advised that as failure rates of these spares is not yet known by TFR, the quantities provided may not be completely accurate at this point and may change once the locomotives are placed into production.

TCO Model

The maintenance and intervention regimes of the selected preferred bidder must receive significant scrutiny during the negotiation phase. The CFET (Technical) will be required to have a detailed understanding of the related submissions and should conduct the necessary reviews and assessments of the maintenance and intervention regimes of the selected bidder.

We would recommend that a clause be inserted into the supply contract whereby a penalty is imposed upon the supplier for higher actual TCO costs as compared to their tender submission. This penalty clause can be built in on the basis of a periodic review (possibly every 5 years) of the actual energy usage, scheduled and unscheduled maintenance costs of the locomotives as compared to their tender submissions.

Delivery

The delivery schedule reflected in this report assumes a contract effectiveness date of 1 September 2013. This delivery schedule would move out by an equal number of months from 1 September 2013 to the actual date the contract is signed.

MATTERS FOR APPROVAL OF THE STEERING COMMITTEE

The CFET (Finance) requests as part of this evaluation and based on the contents of the report above the:

1. Approval of the price evaluation criteria on the basis of excluding hedging and escalation costs;
2. Approval of all assumptions used for scoring as outlined in this report;
3. Approval of the TCO scenario to be used for final evaluation;
4. Approval of the price methodology provided to the CFET (Finance) for evaluation purposes to exclude the impact of TE on price.

CONCLUSION

Based on the scoring by the CFET (Finance) using the assumptions mentioned above, the following is a summary of the results of our evaluation:

Scenario 1 – all elements of TCO included

FINANCIAL EVALUATION - FINANCIAL SUMMARY - 465 DIESELS

	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER 1	2	3	4
1	Price	30.00%	18.00%	0.00	0.00	0.00	30.00
2	Total Cost Of Ownership (TCO)	20.00%	12.00%	10.00	0.00	0.00	12.00
3	Delivery Schedule (DS)	25.00%	15.00%	4.00	6.00	4.00	9.00
4	Payment Terms (PT)	10.00%	6.00%	10.00	10.00	8.00	9.00
5	RFP & Contractual Compliance (CC)	10.00%	6.00%	8.75	8.75	7.00	7.50
6	Financial Stability (FS)	5.00%	3.00%	2.38	3.00	3.25	2.38
	TOTAL SCORE	100.00%	60.00%	35.13	27.75	22.25	69.88
	EFFECTIVE SCORE AT 80%			21.08	16.65	13.35	41.93

Scenario 2 – (TCO) excluding unscheduled maintenance and excluding bonus point allocation

FINANCIAL EVALUATION - FINANCIAL SUMMARY - 465 DIESELS

	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER 1	2	3	4
1	Price	30.00%	18.00%	0.00	0.00	0.00	30.00
2	Total Cost Of Ownership (TCO)	20.00%	12.00%	4.00	0.00	0.00	12.00
3	Delivery Schedule (DS)	25.00%	15.00%	4.00	6.00	4.00	9.00
4	Payment Terms (PT)	10.00%	6.00%	10.00	10.00	8.00	9.00
5	RFP & Contractual Compliance (CC)	10.00%	6.00%	8.75	8.75	7.00	7.50
6	Financial Stability (FS)	5.00%	3.00%	2.38	3.00	3.25	2.38
	TOTAL SCORE	100.00%	60.00%	29.13	27.75	22.25	69.88
	EFFECTIVE SCORE AT 80%			17.48	16.65	13.35	41.93

Scenario 3 - (TCO) excluding unscheduled and excluding scheduled maintenance and excluding bonus point allocation

	FINANCIAL EVALUATION - FINANCIAL SUMMARY - 465 DIESELS						
	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER 1	2	3	4
1	Price	30.00%	18.00%	0.00	0.00	0.00	30.00
2	Total Cost Of Ownership (TCO)	20.00%	12.00%	4.00	0.00	0.00	4.00
3	Delivery Schedule (DS)	25.00%	15.00%	4.00	6.00	4.00	9.00
4	Payment Terms (PT)	10.00%	6.00%	10.00	10.00	8.00	9.00
5	RFP & Contractual Compliance (CC)	10.00%	6.00%	8.75	8.75	7.00	7.50
6	Financial Stability (FS)	5.00%	3.00%	2.38	3.00	3.25	2.38
		-	-	-	-	-	-
	TOTAL SCORE	100.00%	60.00%	29.13	27.75	22.25	51.88
	RFP SCORE AT 60%			17.48	16.65	13.35	31.13

Yousuf Lahe
Executive Manager, Finance

Danie Smit
Executive Manager, Transnet Treasury

Zunaid Vall
Executive Manager, Finance

Thabo Seapi
Senior Manager, Finance

Tsietsi Tlali-tsi
Senior Manager, Finance

Mohammed Moola
Senior Manager, Finance

Annexure A

Detailed Scoring Criteria and Allocated Points

Price:

FINANCIAL EVALUATION				FINANCIAL SUMMARY				
	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE	WEIGHT	BIDDER			
					1	2	3	4
1.1	Price	70.00%	70.00	70.00%	70.00	70.00	70.00	70.00
	Lowest Technically Acceptable Capital Acquisition Cost (LTACAC) including duties or customs, escalations, insurances, engineering support, special tooling and test equipment costs, capital spares costs, consumables, Set up costs, Spares costs and spares holding cost, forex hedging costs) per loco				Bidder 1	Bidder 2	Bidder 3	Bidder 4
					44 232 853	33 254 876	42 761 272	27 493 481
	Bidder with lowest price & or any bidder within 0.99% of LTACAC	30						
	any bidder within 1% to 1.99% of LTACAC	25						
	any bidder within 2% to 2.99% of LTACAC	20						
	any bidder within 3% to 4.99% of LTACAC	15						
	any bidder within 5% to 7.99% of LTACAC	10						
	any bidder within 8% to 12.99% of LTACAC	5						
	>13% of LTACAC	0						
	% result				61%	21%	56%	0%
	Final score				43	15	39	0
1.2	Value added - 1 extra Bonus point							
	Value Add Services included in LTACAC to the value of > R 200 k per loco eg: Free Software & upgrades to software free fitting & replacement of parts	1			Note 1	Note 2	Note 3	Note 4
	Total	101						
	Note that the maximum points available is 30 including the bonus point							

Notes:

1 The Bonus points for Value Added services was not assessed. The main factor for this assumption is that these items are not clearly defined in RFP and the technical team had no view of the requirement of "value add" aspects. Therefore the finance team did not have the relevant expertise to assess value added services.

2 Note: escalations and forex hedging costs were excluded from the price evaluation - refer notes in detailed evaluation sheet.

3 The Price evaluation has been done on the basis of excluding the cost of using TE as the main subcontractor. Bidders 2 & 4 were requested to quote as if another private sector subcontractor is used (this was requested via clarification from bidder 2 & 4). SCS only issued the clarifications to those bidders that indicated that they had used TE as the main subcontractor per the SD files. Bidder 3 already quoted a price including and excluding TE per their 1st tender response.

Annexure A

Detailed Scoring Criteria and Allocated Points

Financial Stability:

FINANCIAL EVALUATION: FINANCIAL SUMMARY

	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER 1	2	3	4
5	Financial Stability (F5)	20%	20%	3	5	5	5

7.1 Total Liabilities/(Total Equity+Total Liabilities)
Gearing Ratio

		1	2	3	4
<20%	5				
21% to 30%	4				
31% to 40%	3				
41% to 50%	2				
51% to 70%	1	65.8%	62.4%		
>70%	0			80.3%	81.3%
Score:		1	1	0	0

7.2 Capacity

Current Assets vs Current Liabilities

		1	2	3	4
3:1	5				
2.5:1	4				
2:1	3				
1.5:1 - 1.99:1	2				
1:1	1		1.17	1.43	
< 1:1	0	0.99			0.79
Score:		0	1	1	0

7.3 NPAT/Revenue
Profitability
Net profit to turnover

		1	2	3	4
>10%	5				
7 - 9.99%	4			8.6%	9.3%
5% - 6.99%	3		5.5%		
2% - 4.99%	2	3.8%			
1 - 1.99%	1				
<1%	0				
Score:		2	3	4	5

7.4 Credit ratings of the bidder (Banker issuing guarantee)

		1	2	3	4
A rating	5	5	5	5	5
B rating	4				
C rating	3				
D rating	2				
E rating	1				
F rating	0				
Score:		5	5	5	5

Annexure A

Detailed Scoring Criteria and Allocated Points

Financial Stability:

7.5 NPAT/Total Equity
ROE

Greater than 40%	5				
Between 30% & 39.99%	4			32.3%	
Between 20% & 29.99%	3				
Between 10% & 19.99%	2		12.3%		10.6%
Between 5% & 9.99%	1				
Less than 5%	0				
Score:					

7.6 EBIT/Total Assets
ROA

Greater than 20%	5				
Between 15% & 19.99%	4				
Between 10% & 14.99%	3				
Between 5% & 9.99%	2			8.0%	9.8%
Between 2% & 4.99%	1		4.88%		4.4%
Less than 2%	0				
Score:					

7.7 EBIT/Net Finance Charges
INTEREST COVER

> 5 Times	5			8	18.36
> 4 Times	4				
> 3 Times	3				
> 2 Times	2				2.89
> 1 Times	1				
0	0				
Score:					

7.8 CASH FLOW
Cash generated by operations

Minimum R 800m cash generated from Operations	5	2 591 637 109	3 426 189 194	44 325 757 500	264 991 932 500
Minimum R 400m cash generated from Operations	4				
Minimum R 200m cash generated from Operations	3				
Minimum R 100m cash generated from Operations	2				
Minimum R 50m cash generated from Operations	1				
< R 50 m as compared to the best bidder	0				
Score:					

Total score	19.00	24.00	26.00	9.00
Final Score	2.38	3.00	3.25	2.38

Final score would be determined by following formula: (total score/40)*5

ANNEXURE B

The table below indicates the items that were added or deducted to the base price as submitted by the bidders in order to normalise the price of the locomotive for evaluation purposes.

Description	Tenderer 1	Tenderer 2	Tenderer 3	Tenderer 4	Comments
ADU for the driver assistant				37 726	To be included to the base price of tenderer 4 as all other tenders have included the item in their base price
Real time signal analysis	-18 700	-1 950			Deduct from the base price of Tenderer 1 and 2 as tenderer 3 and 4 excluded the item/option from their base price
Access of any information on locomotive should be accessible via any other locomotive in the consist			16 400	115 875	Add to the base price of Tenderer 3 and 4 as tenderer 1 and 2 included the item/option in their base price
Installation of ECP/WDP cabling	-	-348 874			All tenderers have included the provisioning in their price, however Tenderer 2 has also included the equipment cost in their base price and therefore we have excluded the equipment cost from their base price.
Installation of RDP cabling					All tenderers have included the provisioning in their price but have excluded the equipment cost in their base price and therefore no adjustment to the base price is required for evaluation purposes.
Installation of combination of RDP/WDP and cabling					All tenderers have included the provisioning in their price but have excluded the equipment cost in their base price and therefore no adjustment to the base price is required for evaluation purposes.
Supply of dummy train line power supplies and ECP junction boxes			7 191		Add to the base price of Tenderer 3 as tenderer 1, 2 and 4 have included the item in their price.
It is an essential requirement that solid multiwear wheels with the option of tyring the wheel be offered and that the wheels shall conform to AAR-Specification M-107 for class B wheels or an equivalent International standard to be agreed upon by Transnet Freight Rail	29 222				Add to base price of tenderer 1, as all other tenderers have this option included.
Traction inhibit when park brakes are applied	-12 500		-9 988		Deduct from Tenderer 1 and 3 as tenderers 2 and 4 have excluded this item in their base price or not provided a price for this item.
Fire Detection				70 135	Add to the base price of Tenderer 4 as tenderer 1, 2 and 3 have included the item in their price
MU Operation (inter locomotive communication)		32 000			Add to the base price of Tenderer 2 as tenderer 1, 3, and 4 have included the item in their price
Equipment cost of WDP/ECP and RDP combination and RDP in a ratio of 379:89 the fleet of 465 locos	498 086	544 523	1 046 034	657 606	As per the technical team, this option wil probably be exercised,. On the 2nd Dec 2013, JD provided the split which we used to calculate the unit price per loco for this option
Total adjustment to base price	496 108	196 399	1 059 637	881 342	

Workings					
Cost of WDP/ECP equipment	430 000	548 874	1 030 100	767 325	
Cost of RDP equipment	450 000	450 000	957 556	544 841	
Combination Price (WDP/ECP and RDP)	710 000	828 874	1 485 779	1 154 557	
Equipment cost of WDP/ECP and RDP combination and RDP only in a ratio of 379:89 the fleet of 465 locos	498 086	544 523	1 046 034	657 606	As per the technical team, this option wil probably be exercised,. On the 2nd Dec 2013, JD provided the split which we used to calculate the unit price per loco for this option

Annexure C

The table below indicates the standard delivery schedule used for the payment terms evaluation.

Diesels

Standard delivery schedule used for evaluating payment terms of bidders

	Year 1	Year 2	Year 3	Year 4	Year 5	
April	9	9	9	9	6	
May	9	9	9	9	6	
June	9	9	9	9	6	
July	9	9	9	9	6	
August	8	8	8	8	6	
September	8	8	8	8	5	
October	8	8	8	8	5	
November	8	8	8	8	5	
December	8	8	8	8	5	
January	8	8	8	8	5	
February	8	8	8	8	5	
March	8	8	8	8	5	
Total	100	100	100	100	65	465

Annexure A

Detailed Scoring Criteria and Allocated Points

Payment Terms:

FINANCIAL EVALUATION - FINANCIAL SUMMARY							
	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
				1	2	3	4
	Payment Terms						
	Final Score						

Payment terms are usually based on:
- Pre-payment (%)
- Milestones
- Acceptance of Locos
- Retentions

4.1 Cash Flow - Time Value of money
Best payment terms from a time value of money perspective & within 0.99 % of best payment terms
Within 1 to 1.99 % of the best payment terms
Within 2 to 2.99 % of the best payment terms
Within 3 to 3.99 % of the best payment terms
Within 4 %- 4.99 % of the best payment terms
Within 5 %- 5.99 % of the best payment terms
Within 6 %- 7.99 % of the best payment terms
Within 8 %- 9.99 % of the best payment terms
Within 10 %- 11.99 % of the best payment terms
Within 12%- 12.99 % of the best payment terms
> 13 % of best payment terms

10
9
8
7
6
5
4
3
2
1
0

Annexure A – Detailed Scoring Criteria and Allocated Points – Contractual Compliance

	FINANCIAL EVALUATIONS FINANCIAL SUMMARY						
	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
				1	2	3	4
	Risk & Contractual Compliance (QC)	10.00%	2.50%	2.75	3.75	2.00	3.50
5.1	General information duly completed (RFP section 3A)	Y=0.25		0.25	0.25	0.25	0.25
5.2	Provided AUDITED financial statements for the past 3 years	N=0		0	0	0	0
5.3	Provided AUDITED financial statements for quarters thereafter			0	0	0	0
5.4	Provided latest Rating report from current banker (Fitch or equivalent) & adequacy thereof			0.25	0.25	0.25	0.25
5.5	Provided strength of approvals (RFP section 3B - c) & adequacy thereof			0.25	0	0.25	0.25
5.6	Provided a complete breakdown on proposed financing structure on buy option (RFP section 3B - b) & adequacy thereof			0	0	0.25	0.25
5.7	Provided company equity structure (Holding company and subsidiaries)(RFP section 3B - d) & adequacy thereof			0.25	0.25	0.25	0.25
5.8	Provided company debt structure (Holding company and subsidiaries)(RFP section 3B - e) & adequacy thereof			0.25	0.25	0.25	0.25
5.9	Provided hedging strategy (RFP section 3B - f) & adequacy thereof			0.25	0.25	0.25	0
5.10	Provided insurance strategy (RFP section 3B - g) & adequacy thereof			0.25	0.25	0	0
5.11	Provided tax strategy (RFP section 3B - h) & adequacy thereof			0.25	0.25	0	0
5.12	Cash flow model adequately provided (RFP section 3 C)			0.25	0.25	0.25	0.25
5.13	Provided "Sensitivity Analysis" ratios/proposal			n/a	n/a	n/a	n/a
5.14	Provided Manuals			0.25	0.25	0.25	0.25
5.15	Provided Mock Ups			0.25	0.25	0	0.25
5.16	Provided Maintenance Plan			0.25	0.25	0.25	0.25
5.17	Provided Training & Training Manuals			0.25	0.25	0.25	0.25
5.18	Provided SD proposal/obligations			0.25	0.25	0.25	0.25
5.19	Rand based pricing offered			0.25	0.25	0.25	0.25
5.20	Fixed pricing excluding escalations offered			0.25	0.25	0.25	0.25
5.21	Risk provisions adequately completed (section 2B of RFP)			0.25	0.25	0.25	0.25
5.22	References adequate			0.25	0.25	0.25	0.25
5.23	Design life parameters offered adequate (not less than 30 years)			0.25	0.25	0.25	0.25
5.24	Fleet Availability target accepted			0.25	0.25	0.25	0.25
5.25	Mission Reliability target accepted			0.25	0.25	0.25	0.25
5.26	Testing & commissioning terms accepted			0.25	0.25	0.25	0.25
5.27	Handover & testing terms accepted			0.25	0.25	0	0
5.28	Risk, Title & payment process accepted			0.25	0.25	0.25	0.25
5.29	Delay & early delivery regime accepted			0.25	0.25	0	0.25
5.30	Proposed warranty regime accepted			0.25	0.25	0	0.25
5.31	Lawful & safe operation clauses accepted			0.25	0.25	0.25	0.25
5.32	IP clauses accepted			0.25	0.25	0.25	0.25
5.33	Contractor covenant clauses accepted			0.25	0.25	0.25	0.25
5.34	Spares, change out spares & tools clauses accepted			0.25	0.25	0.25	0.25
5.35	Insurance clauses accepted			0.25	0.25	0.25	0.25
5.36	Breach & termination clauses accepted			0.25	0.25	0	0
5.37	Limitation of liability clauses accepted			0	0.25	0	0
5.38	Indemnity clauses accepted			0.25	0.25	0	0
5.39	Force majeur clauses accepted			0.25	0.25	0.25	0.25
5.40	Dispute resolution & confidentiality clauses accepted			0.25	0.25	0.25	0.25
				8.75	8.75	7	7.5

Annexure D

Reconciliation of price

The following table provides a reconciliation between the submitted bid prices to the final evaluated prices, highlighting the impact of each change to the final price used for evaluation:

	Bidder 1	Bidder 2	Bidder 3	Bidder 4
Price per loco submitted	40 500 000	30 929 353	36 490 000	25 624 550
Add adjustments for items to reconcile to price per Annexure F:	493 202	548 193	2 275 033	34 141
Special tooling	27 787	-	33 724	31 075
Engineering support	-	-	-	-
Capital Spares	442 830	532 721	407 915	-
Consumables	-	-	1 756 452	3 066
Spares holding	27 595	15 472	74 399	-
Setup cost	-	-	-	-
Insurance	-	-	2 534	-
Rounding	-10	-	-1	-
Customs	-	-	-	-
Forex Hedging	-	-	-	-
Price per loco submitted as per annex F (capital acquisition cost)	40 993 202	31 477 546	38 765 033	25 658 701
Adjustments to normalise:				
Deduct Schedule B capital spares	-	-126 034	-	-
Add spares not included	41 012	-	26 855	497 257
Deduct Forex hedging	-	-100 000	-	-
Sub Total 1 - Price excluding impact of hedging and escalations	41 034 214	31 251 512	38 791 888	26 155 958
Add Options	496 108	196 399	1 059 637	881 342
Sub Total 2 - Price with options included	41 530 322	31 447 911	39 851 526	27 037 300
Impact of Re-basing for foreign exchange movements	1 702 531	3 337 155	4 549 746	1 502 241
Sub Total 3 - Total price before TE adjustment	43 232 853	34 785 066	44 401 272	28 539 541
Impact of not using TE as the main sub-contrator	-	-1 530 190	-1 640 000	-1 046 060
Price used for evaluation	43 232 853	33 254 876	42 761 272	27 493 481

1020

Annexure A – Detailed scoring criteria and allocated points - TCO

FINANCIAL EVALUATION: FINANCIAL SUMMARY

WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER
Total Cost of Ownership (TCO)	20.00%	20.00%	
Total Cost of Ownership (TCO) excluding unscheduled maintenance and excluding bonus points	80.00%	80.00%	
Total Cost of Ownership (TCO) excluding unscheduled maintenance and excluding bonus points allocation	20.00%	20.00%	

Lowest Total cost of Ownership (LTCO) - NPV - for preventative/scheduled maintenance only (excluding corrective maintenance, lost revenue & energy)

Lowest LTCO & any bidder within 0.99% of LTCO	6	33 490 940	34 379 878	11 554 800	7 481 516
any bidder within 1% to 1.99% of LTCO	5				
any bidder within 2% to 2.99% of LTCO	4				
any bidder within 3% to 7.99% of LTCO	2				
any bidder within 8% to 12.99% of LTCO	1				
>13% of LTCO	0				
% Result		80%	360%	58%	0%
Score		0	0	0	0

1.2 Lost Revenue - Oppurtunity cost

Lowest Lost Revenue (LLR) - NPV

Lowest LLR & any bidder within 0.99% of LLR	4	3 127 352 083	2 099 041 494	1 239 800 951	1 741 511 515
any bidder within 1% to 1.99% of LLR	3				
any bidder within 2% to 3.99% of LLR	2				
any bidder within 4% to 12.99% of LLR	1				
>13% of LLR	0				
% Result		80%	21%	143%	0%
Score		0	0	0	0

1.3 Corrective/unscheduled maintenance plan

Lowest technically acceptable corrective maintenance cost of Ownership (LTACMCO) - NPV - corrective maintenance (excluding energy and

Lowest LTACMCO & within 1.99% of LTACMCO	4	2 624 993	3 097 750	35 515 149	5 422 905
within 2% to 4.99% of LTACMCO	3				
within 5% to 7.99% of LTACMCO	2				
within 8% to 12.99% of LTACMCO	1				
>13% of LTACMCO	0				
% Result		0%	18.0%	1253.0%	106.6%
Score		4	0	0	0

1.4 Energy

Lowest technically acceptable energy cost (LTEC) - NPV - (excluding corrective and preventative maintenance)

Lowest LTEC & within 0.99% of LTCO	4	73 800 167	100 291 258	95 507 882	100 663 249
within 1% to 1.99% of LTEC	3				
within 2% to 3.99% of LTEC	2				
within 4% to 12.99% of LTEC	1				
>13% of LTEC	0				
% Result		0%	36%	29%	36%
Score		4	0	0	0

1.5 Bonus Points - overall lowest NPV for TCO (excluding lost revenue)

Lowest overall NPV & within 0.99% of lowest overall NPV	2	89 918 120	137 768 894	142 877 831	113 557 659
within 1% to 2.99% of lowest overall NPV	1				
>2.99% of lowest overall NPV	0				
% Result		0%	53%	59%	26%
Score		2	0	0	0

Note that the maximum points available is 20 including the bonus point

Notes:

1 We used the TCO calculations as provided by bidders. Bidders could (not that they have) miscalculate and reflect a low lifecycle cost. This could expose TFR to risk of higher life cycle costs than that which was used for evaluation.
We recommend that a penalty clause is built into the contract to mitigate the risk of exposure of changes in the TCO over the life of the asset.

Annexure A

Detailed Scoring Criteria and Allocated Points

Delivery:

FINANCIAL EVALUATION: FINANCIAL SUMMARY							
	WHAT IS BEING MEASURED	WEIGHT	EFFECTIVE WEIGHT	BIDDER			
				1	2	3	4
B	Delivery Schedule (DS)	25.00%	15.00%	0.00	0.00	0.00	0.00

New GFB Diesel Locomotive Plan						
Delivery Periods	2013/14	2014/15	2015/16	2016/17	2017/1	Total
Quantity of Locomotive	100	100	100	100	65	465

	Bidder 1	Bidder 2	Bidder 3	Bidder 4
Final Score				

Cumulative Number of loco's delivered 3.1 on time each year	
100 loco's by March 2014	3
200 loco's by March 2015	3
300 loco's by March 2016	3
400 loco's by March 2017	3
465 loco's by March 2018	3
Total points	15
Number of loco's delivered on time each 3.2 year	
100 loco's during Financial Year March 2014	2
100 loco's during Financial Year March 2015	2
100 loco's during Financial Year March 2016	2
100 loco's during Financial Year March 2017	2
65 loco's during Financial Year March 2018	2
Total points	10
Total scoring is out of 25	

TRANSNET FREIGHT RAIL
ENQUIRY/TENDER NO: TFRAC-HO-8609
TFRAC-HO-8608

CLARIFICATIONS WITH THE STEERING COMMITTEE
STEP 6 (FINANCE)
UMJANTSHI BOARDROOM
GROUND FLOOR
INYANDA HOUSE 2,
15 GIRTON ROAD,PARKTOWN

TRANSNET

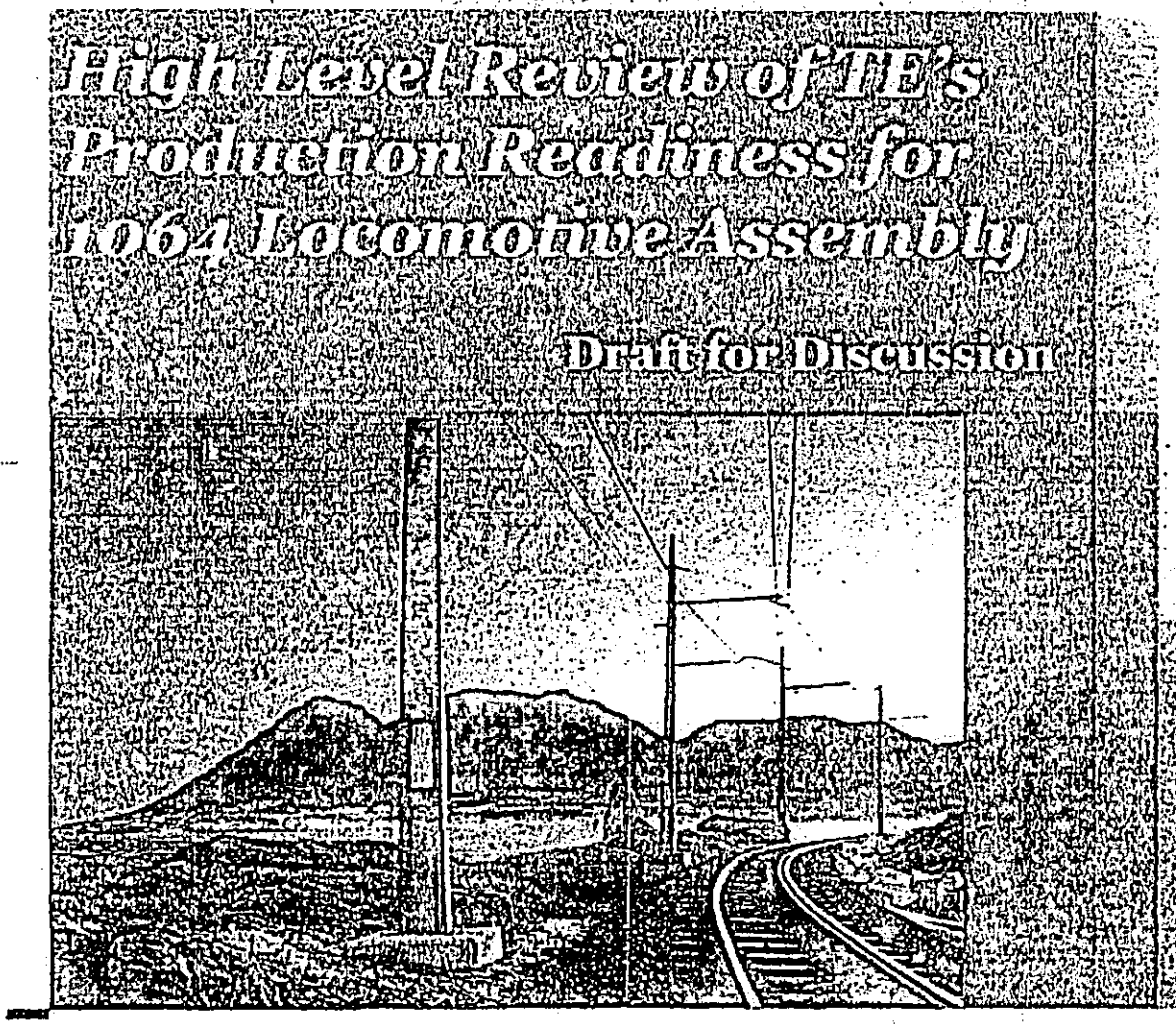
DATE	TIME	TITLE	VENUE
04 December 2013	07H00 to 19H00	SUPPLY OF 465 NEW DIESEL LOCOMOTIVES FOR GENERAL FREIGHT BUSINESS (GFB) AND SUPPLY OF 599 NEW ELECTRIC DUAL VOLTAGE LOCOMOTIVES FOR GENERAL FREIGHT BUSINESS (GFB)	INYANDA HOUSE 2, 15 GIRTON ROAD,PARKOWN

NAME & SURNAME	DEPARTMENT	SIGNATURE	TEL NO:	EMAIL ADDRESS
Mr Gama	TFR CE		011 584 0500	Siyabonga.Gama@transnet.net
Mr Singh	GCFO		011 308 2253	Anoj.Singh@transnet.net
Lindiwe Mdletshe	TFR SCS		011 584 0620	Lindiwe.Mdletshe@transnet.net
Yousuf Laher	TFR FINANCE		011 584 0942	Yousuf.Laher@transnet.net
Mohammed Moola	TFR FINANCE		011 584 0912	Mohammed.Moola@transnet.net
Thabo Seapi	TFR FINANCE		011 584 0920	Thabo.Seapi@transnet.net
Danie Smit	GROUP TREASURY		011 308 2622	Danie.Smit@transnet.net
Tsietsi Tlaletsi	GROUP TREASURY		083 578 9291	Tsietsi.Tlaletsi@transnet.net
Emma Molotsane	TIA		082 522 8721	Emolotsane@sekelaxabiso.co.za
Princess Nsibande	TIA		082 336 6849	Pnsibande@sekelaxabiso.co.za

1022

High Level Review of HE's Production Readiness for 1064 Locomotive Assembly

Draft for Discussion



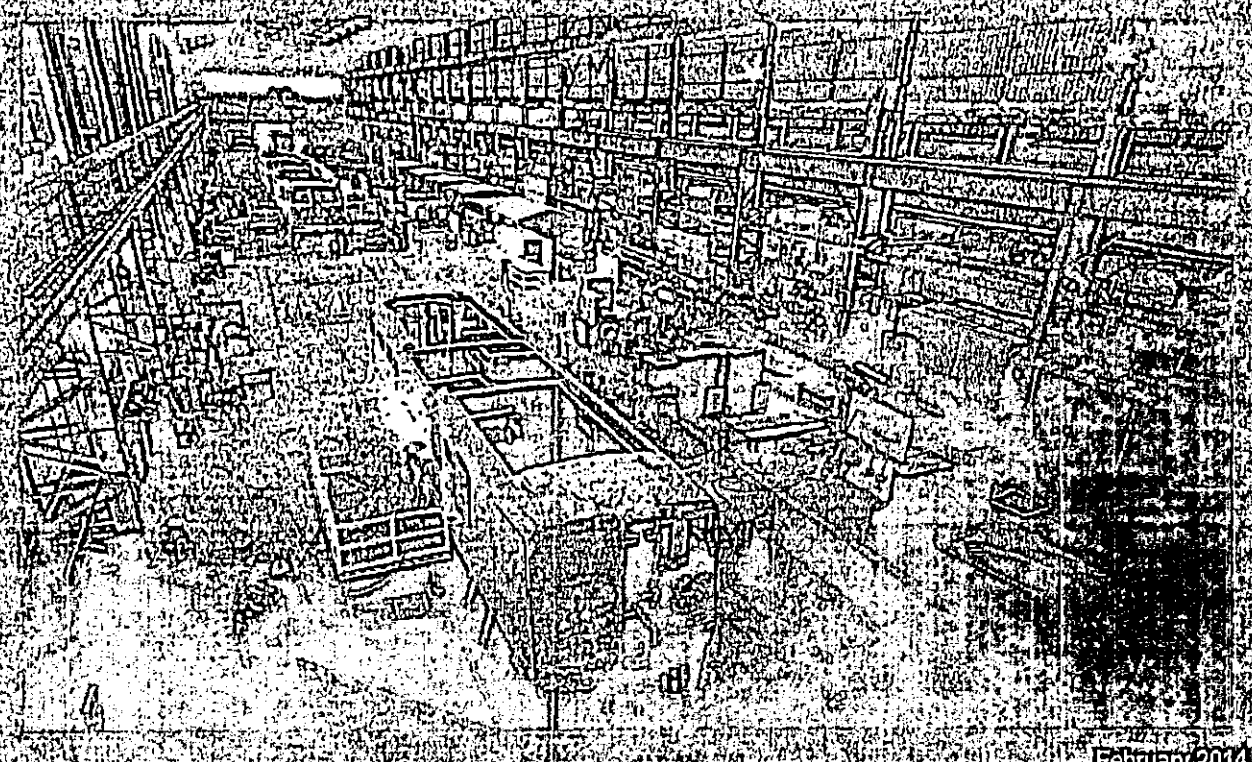
Strictly Private and Confidential

21th February 2014

pwc

Background

1



Scope of work

The scope of the review was to assess the readiness of Transnet Engineering (TE) to start production of the 1064 Electric and Diesel Electric Locomotive order.

In assessing the operational readiness for the manufacture of the locomotives, PwC reviewed the following areas as well as identified the major risks associated with each review objective:

1. Review and approval of the locomotive designs
2. How fast can production be ramped up to full production rates?
3. What is the maximum production rate?
4. Where should the assemble lines be located?

1026

Method applied during the operational readiness assessment

The overall objective of the review was to assess the operational readiness of TE by looking at the following key areas:

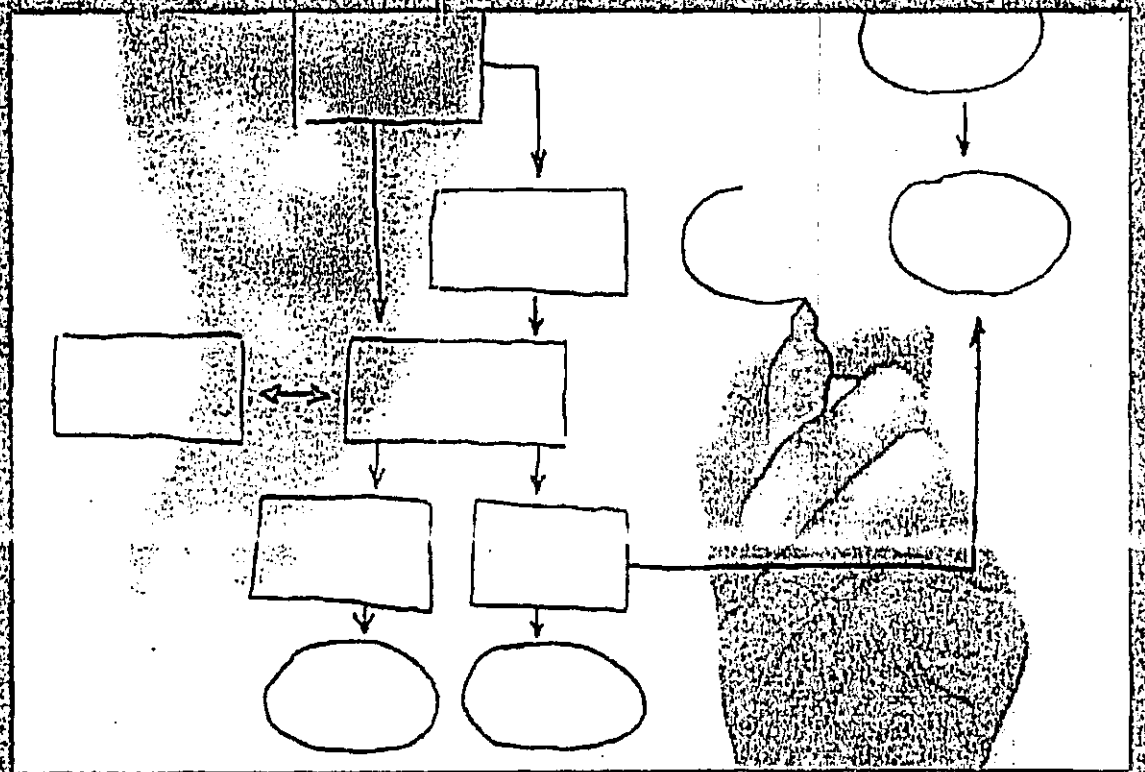
- The future anticipated assembly requirements of locomotives at Koedoespoort and Durban,
- Interviews with key personnel responsible for current and proposed locomotive manufacture,
- Observations from walk-throughs of the main assembly lines at Koedoespoort and the proposed assembly lines at Durban,
- TE's historical performance on recent CSR and GE contracts, and
- Observations based on PwC's experience.

The assessment was conducted primarily by reviewing operational information provided by the Transnet Engineering (TE) Management team, conducting interviews with key operations personnel, engagements with Transnet Freight Rail (TFR) and observations from conducting site inspections.

Reliance was placed on the written and verbal information provided, most of which could not be verified due to time constraints given the need to report in time for the Original Equipment Manufacturer (OEM) negotiations process.

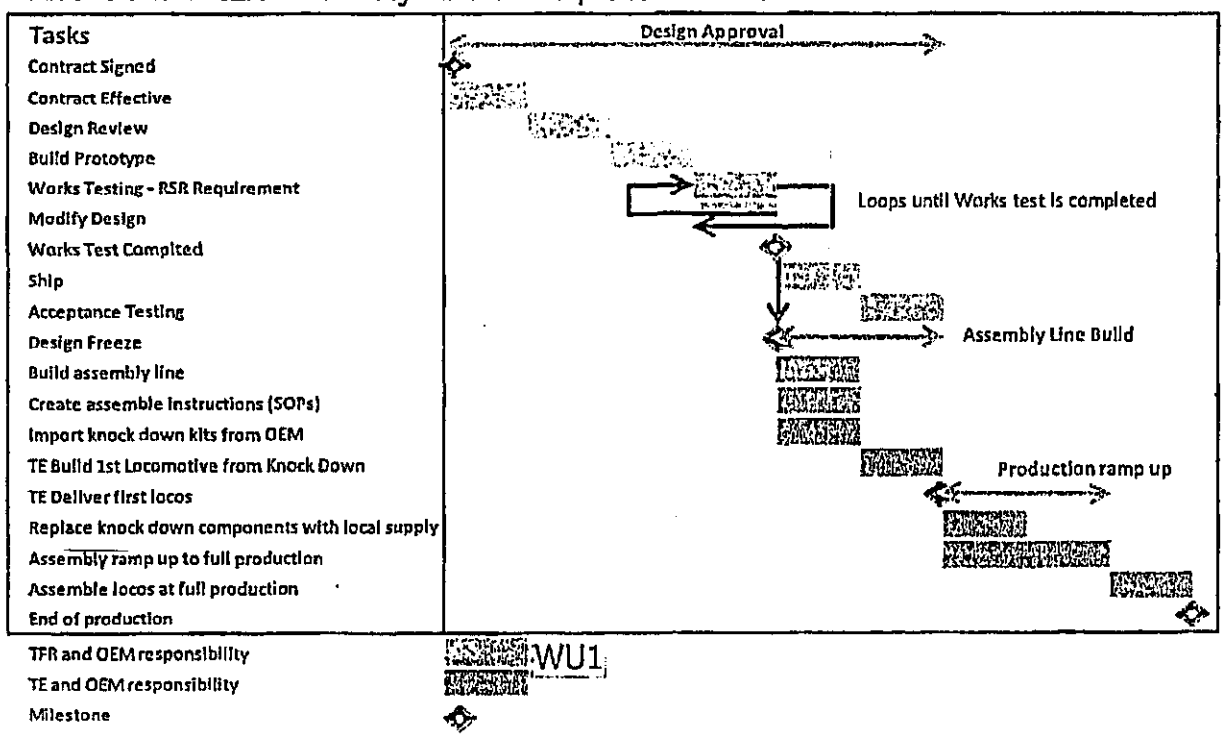
Review and appraisal of locomotive designs

2



High level process from Contract signing to complete delivery

A key dependant for TE to start with the manufacture/assembly of locomotives is the freeze of locomotive designs. The timeline below depicts key activities and milestones that must be managed to achieve the desired delivery of the 1064 locomotives:



What does the activity duration mean? Assumed, nominal, etc.???

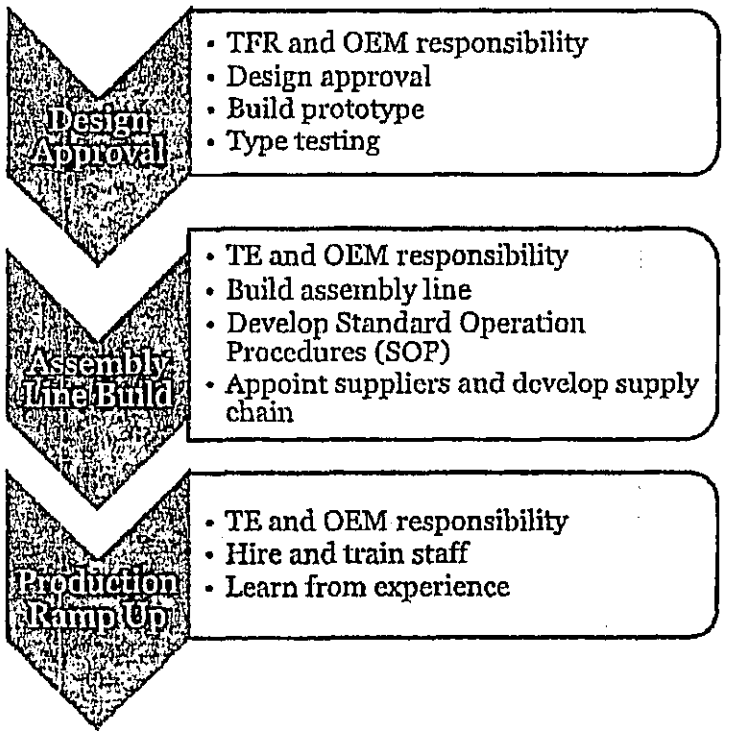
Three separate phases in production ramp up

There are primarily two milestones which must be met prior to TE ramping up production of the locomotives.

The locomotive designs must be finalised and a design freeze be declared by TFR and the OEM. Once the designs are approved then TE is in a position to assess what the requirements for setting up an assembly line are.

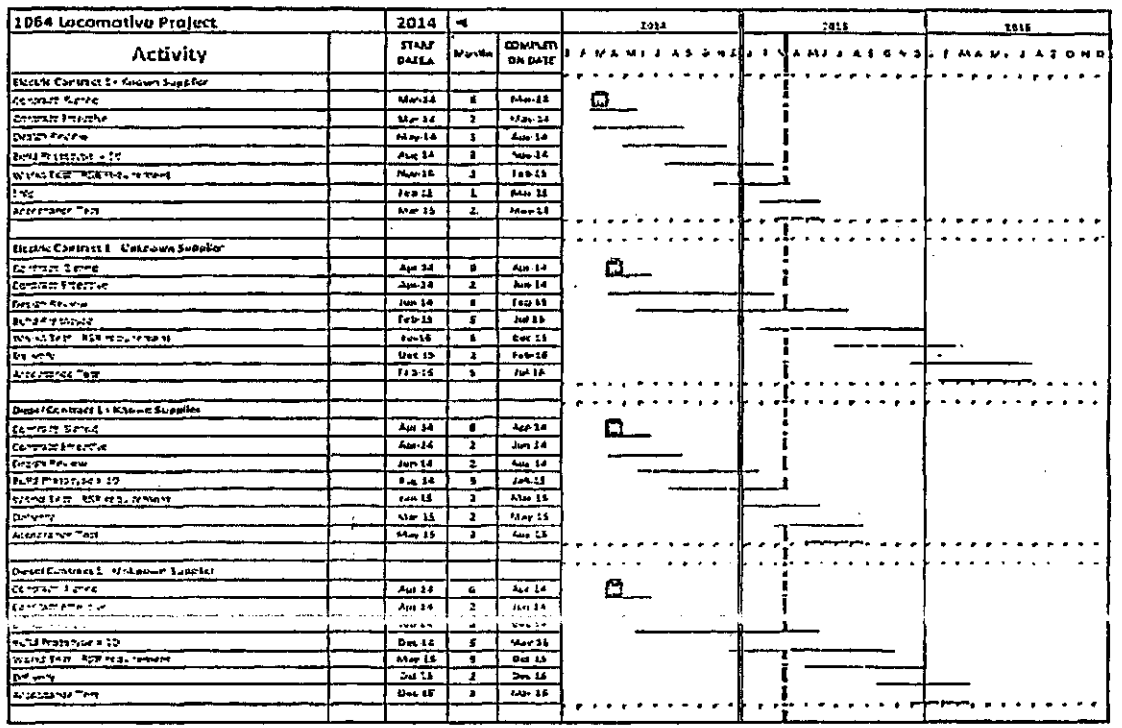
TE and the OEMs are jointly responsible for setting up the assembly line for the locomotives. Once set-up, standard operation procedures (SOP) are finalised in preparation for production by either TE and the OEM together with the accredited third party suppliers.

Once the production line is defined and set-up, TE is deemed ready to initiate the production ramp up process.



TFR's Proposed Design Phase Timeline

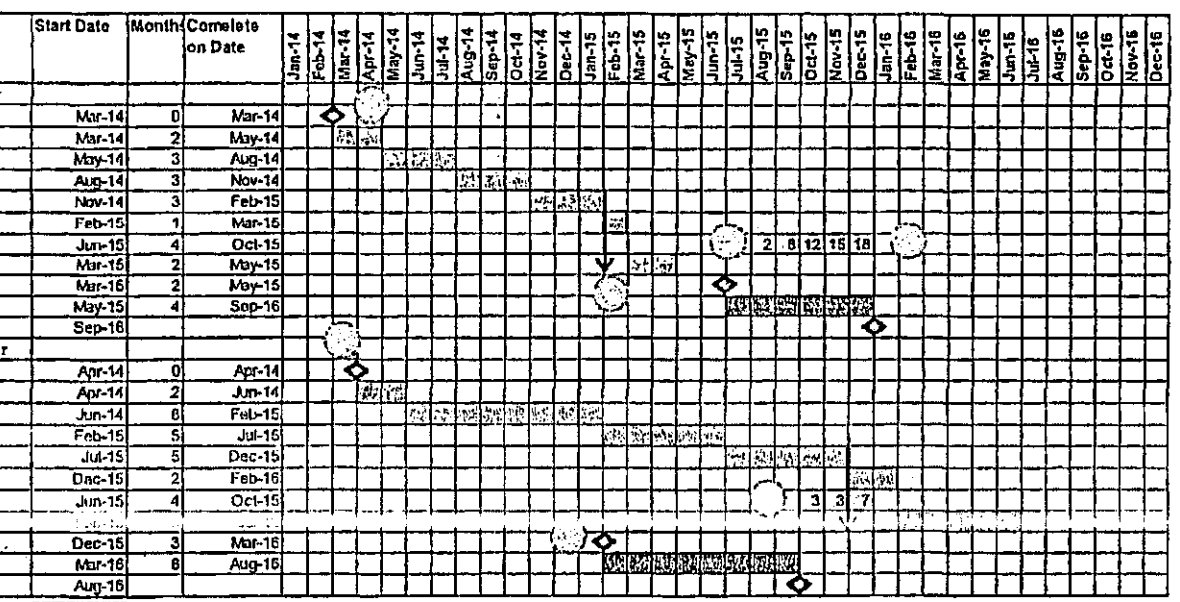
The following chart depicts the planned design timeline for the four OEMs that have been shortlisted. It is observed that the timeline is shorter for the OEMs which TFR and TE have an existing working relationship with. The timeline for the two new OEMs have been estimated based on historical experience.



There is misalignment between OEM design & delivery schedule and TFR design capability

The following is the outcome of our assessment of the design readiness for the electric locomotives. It was observed during the review that there are areas of concern which TE needs to manage in order to meet delivery schedules. These issues are depicted on the time below and the details articulated in the following slides.

Activity	Start Date	Months	Complete on Date
Electric Contract 1 - CSR Known Supplier			
Contract Signed	Mar-14	0	Mar-14
Contract Effective (OEM Design)	Mar-14	2	May-14
Design Review	May-14	3	Aug-14
Build Prototype x 10	Aug-14	3	Nov-14
Works Test - RSR requirement	Nov-14	3	Feb-15
Ship	Feb-15	1	Mar-15
OEM Proposed Delivery of Prototype	Jun-15	4	Oct-15
Acceptance Test	Mar-15	2	May-15
WU2 Design Freeze CSR	Mar-15	2	May-15
Assembly Line Build CSR	May-15	4	Sep-15
First Delivery CSR	Sep-15		
Electric Contract 1 - BT Unknown Supplier			
Contract Signed	Apr-14	0	Apr-14
Contract Effective (OEM Design)	Apr-14	2	Jun-14
Design Review	Jun-14	8	Feb-15
Build Prototype x 10	Feb-15	5	Jul-15
Works Test - RSR requirement	Jul-15	5	Dec-15
Delivery	Dec-15	2	Feb-16
OEM Proposed Delivery of Prototype	Jun-15	4	Oct-15
Design Freeze BT	Dec-15	3	Mar-16
WU3 Assembly Line Build BT	Mar-16	8	Aug-16
First Delivery BT	Aug-16		



TFR and OEM responsibility

TE and OEM responsibility

Milstone

Issue reference number

The date stated in the columns vs. time line do not match for the design freeze rows.

Does set up include assembly of loco? (Delivery milestone at end of set up time, first delivery by OEM)

Misalignment between Electric OEM design & delivery schedule and TFR design schedule

The following are issues that were identified during the review of the realisation of the electric locomotive design requirements in preparation for the finalisation and approval of the locomotive designs, which are plotted on the timeline in the timeline on the previous slide:

1. **Different assumed contract signing dates** - CSR schedule is based on a February 2014 contract signing date. TFR schedule is based on a 1 March 2014 contract signing date.
2. **Different prototype delivery dates** -CSR Prototype delivery is 5 Months after TFR's planned prototype delivery date. TFR believe the design phase will be much quicker as they already have experience with this supplier.
3. **Reduced Local Content** – CSR has proposed to deliver the first 45 locos as factory prototypes fully assembled in China. This large number of locos will reduce total contract local content percentages.
4. **TFR can reduce design approval time** – TFR believe they can approve design and works testing approximately 5 months earlier based on prior experience with CSR. This is provided that there are no issues found during works testing which require design modifications.

Misalignment between Electric OEM design & delivery schedule and TFR design schedule (Cont.)

5. **Different assumed contract signing dates** - BT schedule is based on a February 2014 contract signing date. TFR schedule is based on a 1 April 2014 contract signing date.
6. **BT can deliver prototypes ahead of the TFR schedule** – BT's delivery schedule has the delivery of the prototypes 4 months ahead of TFR schedule. This is provided that there are no issues found during works testing which require design modifications.
7. **Design freeze must occur 8 weeks prior to prototype delivery** – BT prototypes will be built locally in South Africa. To allow for TE's 8 week assembly line set up period the design freeze needs to occur by Feb 2015

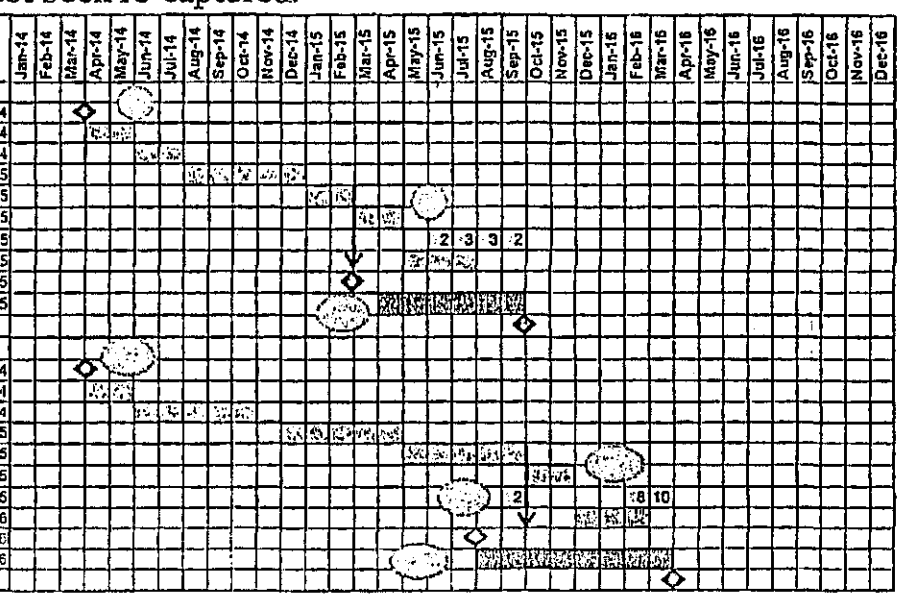
   TE is making the initial prototypes. It is not clear how TE will develop SOPs (Standard Operating Procedures) if they have no assembly line to copy.

   BT's prototype delivery schedule shows first delivery of 3 locos. This will require TE to assemble 3 locos in the first month of setting up the assembly line.

There is misalignment between OEM design & delivery schedule and TFR design capability

The following is the outcome of our assessment of the design readiness for the diesel electric locomotives. It was observed during the review that there are areas of concern which TE needs to manage in order to meet delivery schedules. These issues are depicted on the timeline below and the details articulated in the following slides. Note that some of the issues are similar to the ones identified for the electric locomotive. These have not been re-captured.

Activity	Start Date	Months	Complete on Date
Diesel Contract 1 - GE Known Supplier			
Contract Signed	Apr-14	0	Apr-14
Contract Effective (OEM Design)	Apr-14	2	Jun-14
Design Review	Jun-14	2	Aug-14
Build Prototype x 10	Aug-14	5	Jan-15
Works Test - RSR requirement	Jan-15	2	Mar-15
Delivery	Mar-15	2	May-15
OEM Proposed Delivery of Prototype	Jun-15	4	Oct-15
Acceptance Test	May-15	3	Aug-15
Design Freeze GE	Apr-15	2	Jun-15
Assembly Line Build GE	Jun-15	4	Oct-15
First Delivery GE	Oct-15		
Diesel Contract 1 - CNR Unknown Supplier			
Contract Signed	Apr-14	0	Apr-14
Contract Effective (OEM Design)	Apr-14	2	Jun-14
Design Review	Jun-14	6	Dec-14
Build Prototype x 10	Dec-14	5	May-15
Works Test - RSR requirement	May-15	5	Oct-15
Delivery	Oct-15	2	Dec-15
OEM Proposed Delivery of Prototype	Sep-15	7	Apr-16
Acceptance Test	Dec-15	3	Mar-16
Design Freeze CNR	Oct-15	3	Jan-16
Assembly Line Build CNR	Jan-16	3	Jun-16
First Delivery CNR	Jun-16		



TFR and OEM responsibility

TE and OEM responsibility

Milestone

Issue reference number

PwC

February 2014
13

1037

Misalignment between Electric OEM design & delivery schedule and TFR design schedule

The following are additional issues (in addition to those shown on slides 11&12) that were identified during the review of the realisation of the diesel electric locomotive design requirements in preparation for the finalisation and approval of the locomotive designs, which are plotted on the timeline in the previous slide:

8. **Different assumed contract signing dates** - GE schedule is based on a February 2014 contract signing date. TFR's schedule is based on a 1 April 2014 contract signing date.
9. **Different prototype delivery dates** - GE Prototype delivery is 1 month after TFR's planned prototype delivery date. TFR believe the design phase will be quicker as they already have experience dealing with this supplier.
10. **Reduced design cycle** – TFR are proposing a 1 month reduction in the design phase when compared to GE's proposed design time. This is provided that there are no issues found during works testing which required design modifications.
11. **Different assumed contract signing dates** - CNR schedule is based on a February 2014 contract signing date. TFR's schedule is based on a 1 April 2014 contract signing date.
12. **Different prototype delivery dates** – CNR's Prototype delivery is 3 month ahead of TFR's planed prototype delivery date. TFR have reduced the time as they do not have the resources to cope with additional work load.
13. **Delay in Prototype delivery** - CNR has proposed to initially delivery 2 prototypes in September 2016. Then there is a delay of 5 months before the next 18 prototypes are delivered. We are unclear why such a delivery schedule is being proposed.
14. **TE needs an earlier design freeze** - TE will need design freeze to occur two months ahead of TFR delivery schedule if they are to met CNR's delivery schedule and ramp up production after the last prototype has been delivered.

TFR's design phase is not aligned to OEM's design phase timeline

TFR has proposed a more stringent timeline for GE and CSR which might be at risk due to limited availability of capable technical professionals that can test and approve the prototype from OEMs.

- TFR has proposed a reduced time frame for delivery of 1st prototype for GE and CSR. TFR believes this can be achieved because of their recent experience working with these OEMs.
- TFR has limited technical people capable of approving and testing OEM products. To smooth the workload TFR is proposing to pull in the approval processes for the two known OEMs - GE and CSR and push out the approval process for the two unknown OEM's BT and CNR.

Time from contract start to delivery of 1st prototype

OEM	OEM Timing	TFR Timing	Difference
CSR	17 Months	12 Months	-4 Months
BT	18 Months	22 Months	4 Months
GE	15 Months	13 Months	- 2 Months
CNR	18 Months	20 Months	2 Months

TFR ramp up time can be reduced slightly with significant increased risk

The currently proposed TFR ramp up period for GE and CSR is ambitious given the insufficient availability of technically skilled professionals who can complete the design work for all four OEMs.

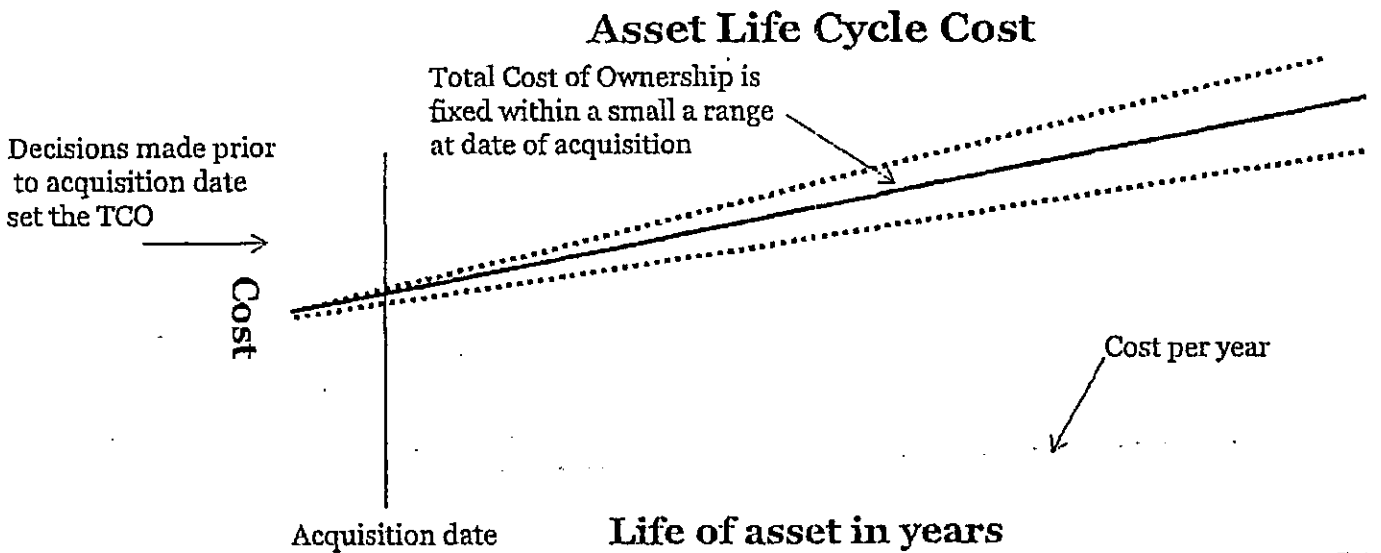
- The current proposed schedule from TFR is already considered quite aggressive for the known OEMs (CSR and GE). The TFR proposed design schedules for both these OEM's have been reduced.
- It is considered high risk to take the shortest design period from either TFR or the OEM's. TFR do not have sufficient skills to complete all four design phases simultaneously and if forced to do so will significantly increase risk. Errors made in the design phase will have long lasting impacts to the loco performance and life time costs.

OEM	OEM Timing	Low Risk	Medium Risk (TFR proposed)	High Risk
CSR	17 Months	17 Months	12 Months	12 Month
BT	18 Months	22 Months	22 Months	18 Months
GE	15 Months	15 Months	13 Months	13 Months
CNR	18 Months	20 Months	20 Months	18 Months

WU4

Key considerations given the aggressive design timelines

- Care should be taken not to reduce the design timelines beyond critical duration. Errors or omissions in design phase can have a significantly effects on the total cost of ownership (TCO) of an asset.
- The following guideline needs to be borne in mind - That although only about 20% of the TCO of an asset is spent at the time of the acquisition of the asset, 80% of an asset's TCO is ***locked*** in at this time.



1041

What is the purpose of this slide?

[redacted] User, 03/03/2014

TE's design phase is aligned to OEM's design phase timeline

The forecast time to the delivery of the first locomotive assembled by TE is in line with the OEMs target:

- Most OEMs have not specifically provided details of the duration from design freeze to the delivery of the first locomotive assembled by TE .
- We have assumed design freeze occurs at the completion of Type testing.

Time from design freeze until first TE delivery

OEM	OEM Timing	TE Timing	Difference
CSR	~6 Months	6 Months	0 Months
BT	~8 Months	8 Months	0 Months
GE	6 Months	6 Months	0 Months
CNR	~8 Months	8 Months	0 Months

TE ramp up time can be reduced slightly with increased risk

TE targets a ramp-up period between six and eight months in preparation for the assembly of the first locomotive:

- TE's proposed duration from design freeze to first TE delivery is already considered aggressive based on previous experience

Time from design freeze until first TE delivery

OEM	OEM Timing	Low Risk	Medium Risk	High Risk
CSR	~6 Months	7 Months	6 Months	5 Month
BT	~8 Months	10 Months	8 Months	7 Months
GE	6 Months	7 Months	6 Months	5 Months
CNR	~8 Months	10 Months	8 Months	7 Months

Locomotive Design - Risk Summary

The following risk assessment was performed for the building of the assembly line. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate.

No.	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	TFR required to make approval short cuts which impact on the long term benefits of new locomotives	2	2	4
2	Errors made in the design phase will have long term effects on locomotive performance and total cost of the locomotive	2	2	4
3	TFR has limited staff qualified to conduct design reviews and performance testing	2	2	4
4	Schedule dates for CSR are ambitious/aggressive with an estimated 3 months assumed for design review and 4 months for assembly line set-up time compared to 6 months of actual set-up time.	2	2	4
5	Misalignment on OEM and TFR design signing dates.	2	2	4
6	TFR has an ambitious/stringent timeline for the delivery of the prototype (CSR and GE).	2	2	4

* 1 = Low, 2 = Medium, 3 = High

Locomotive Design - Risk Assessment and Mitigation Strategies

The following potential risks were identified on the accelerated completion of the design phase for TFR. Mitigation strategies are proposed to reduce the likelihood of their occurrence:

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	TFR required to make approval short cuts which impact on the long term benefits of new locomotives	Medium	Medium	• Identify and complete tasks which can be completed in advance to design freeze. • Include a random and /or spot check quality control step • Seek regular feedback on progress of design freeze status and adjust assembly line build programs as required
2	Errors made in the design phase may have long term effects on locomotive performance and total cost of the locomotive	High	Medium	• Be very considerate when reducing design phase timeline. • Seek other areas to bring locomotive delivery in earlier in preference to pressurising design phase
3	TFR has limited staff qualified to conduct design reviews and performance testing	High	High	• Hirer industry experts to assist in the design review and performance testing • Spread design reviews and performance testing over time so that they do not occur simultaneously • Investigate opportunity to second TE engineers to assist in the design phase of the project

Locomotive Design - Risk Assessment and Mitigation Strategies

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
4	Schedule dates for CSR are ambitious/aggressive with an estimated 3 months assumed for design review and 4 months for assembly line set-up time compared to 6 months of actual set-up time.	High	Medium	• Discuss the re-adjustment of the CSR target dates to realistic timelines with the OEM. • Identify the activities that could be brought forward to improve the likelihood of achieving the timeline. • Identify non value adding activities that could be dropped to reduce the time required to complete the planned activities.
5	Misalignment on OEM and TFR design signing dates.	Medium	Medium	• Identify the activities on the TFR side that could be brought forward to improve the likelihood of achieving the OEM timelines. • Review the TFR design signing process to identify which activities could be shortened to enable meeting the target OEM sign date.
6	TFR has an ambitious/stringent timeline for the delivery of the prototype (CSR and GE).	Medium	Medium	• Identify areas of improvement from the previous work done with CSR and GE to enable the achievement of the target delivery dates. • Identify which activities could be brought forward to improve the likelihood of achieving the tight delivery schedule.

Recommendations – Design review and approval

The following mitigation recommendations are made to address the medium and high risk areas:

Insufficient design approvals due to lack of resources	○ Contract rail industry specialists to assist with the design approval and prototype testing ○ TFR engineers to brainstorm ways of reducing design approval and prototype testing phases
Design flaws due to time constraints adversely affect locomotive performance and total cost of the locomotives	○ Contract rail engineers to assist with the design activities ○ Review the design process to identify activities that could be reduced in scope or sub-contracted to improve design turnaround time ○ Prioritise designs to reduce batches that must receive 100% design review and approval
Insufficient availability of qualified staff to conduct design reviews and performance testing	○ Contract rail engineers to assist with the design activities ○ Second TE Engineers to assist in this phase of the project

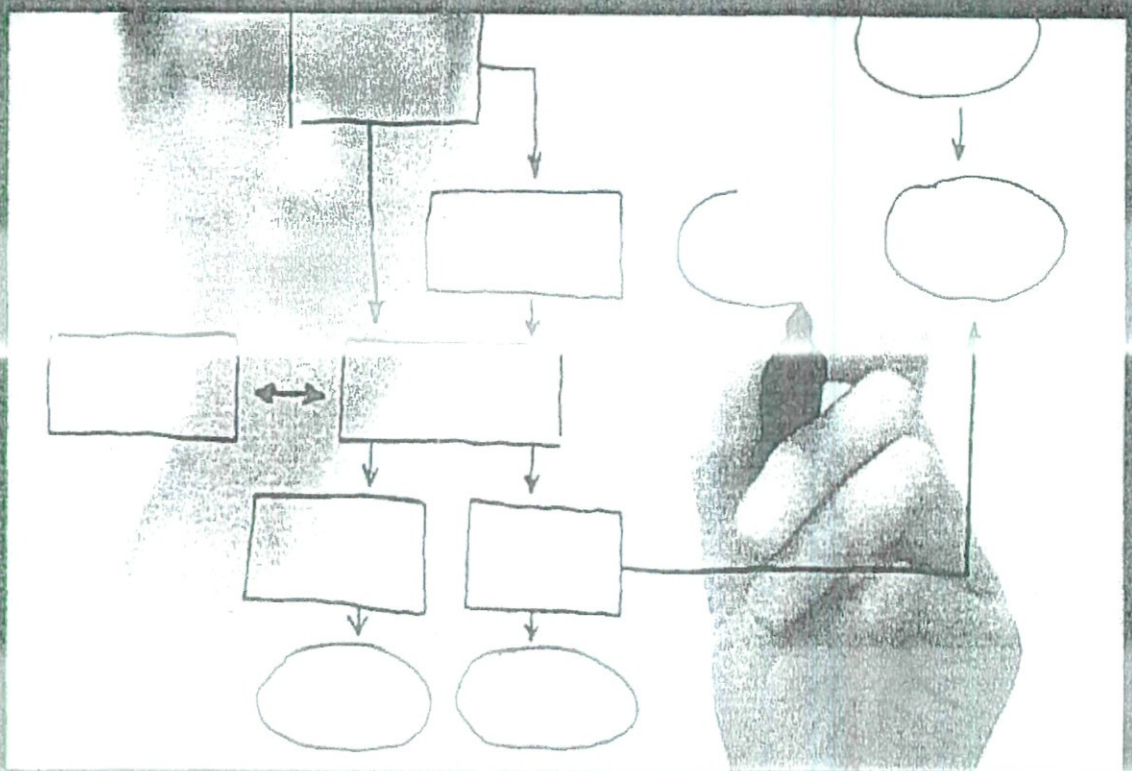
Recommendations – Design review and approval

The following mitigation recommendations are made to address the medium and high risk areas:

CSR's schedule is aggressive / ambitious	○ Discuss the possibility of increasing the timelines for CSR in line with the other OEMs (BT & CNR) ○ Review and prioritise design activities for CSR to focus on critical areas.
Misalignment on OEM and TFR design signing dates	○ Review the design signing dates and impact to identify opportunities to align signing dates. ○ Review to identify design activities that could be brought forward to achieve the design signing dates.
TFR has an ambitious / stringent timeline for the delivery of the prototype (CSR and GE)	○ Review the possibility to align the CSR and GE timelines for the delivery of the prototypes with those for CNR and BT. ○ Prioritise and rationalise the OEMs to balance high and low intensity OEMs in order to reduce workload.

How fast can full production be ramped up?

2



1050

Assessment Areas for Assembly Line Ramp-up

The overall objective in evaluating this assembly line build up was to assess how far TE is in addressing the minimum requirements for preparing to assemble the locomotives. The following were noted during our review:

Assembly line

Currently TE operates an assembly line for Diesel and Electric locomotives which are similar to the locomotives planned for the 1064 transaction. The understanding from the operation of these two production lines will go a long way in helping to set-up assembly lines for General Electric (Diesel loco) and China South Railway (Electric loco). Although TE does not currently have experience with Bombardier Transportation (Electric loco) and China North Railway (Diesel Loco), the approach used to set-up the assembly lines for GE and CSR will be adopted for BT and CNR.

Development of standard operating procedures (SOP)

Standard operating procedures have been developed for the Diesel Loco (Class 43) which is similar to the planned Class 44 as well as for the 20E Electric Loco which is similar to the planned 21E.

However, these will not be fully adaptable and thus will have to be reviewed after design freeze and with learning from the manufacturing of the propotype locomotives.

Supplier development

Supplier development for the OEMs and TE are at different stages with some work still to be finalised. TE has suppliers which they have been working with on the Class 43 and 20E locomotives. These are going to be complemented with the suppliers that have been identified and/or used, to some extent, by the OEMs.

TE has demonstrated an on-time delivery performance

The following table of results provides a summary of the time it took TE to deliver the first locomotives after design freeze. Projected target dates were extrapolated for the 1064 locomotives consignment.

		Previous TE projects			Projection			
Milestone	**Responsible**	**EMD**	**GE**	**CSR**	**GE**	**CSR**	**CNR**	**BT**
Contract sign		01-Mar-07	01-Dec-09	01-Dec-12	01-Apr-14	01-Apr-14	01-Apr-14	01-Apr-14
Design freeze	OEM TFR	01-Jan-09	01-Jan-11	01-Nov-13	01-Apr-15	01-Mar-15	01-Oct-15	01-Dec-15
Proto delivery	OEM	01-Mar-09	01-Feb-11	01-Dec-13	01-Jun-15	01-May-15	01-Jan-16	01-Mar-16
First TE Delivery	TE OEM	01-Aug-09	01-Aug-11	01-May-14	01-Oct-15	01-Sep-15	01-Jun-16	01-Aug-16
Times from Contract sign (Months)								
Design freeze		22	13	11	12	11	18	20
Proto delivery		24	14	12	14	13	21	23
First TE Delivery		29	20	17	18	17	26	28
Design freeze to TE delivery		7	7	6	6	6	8	8

- With the EMD, GE 45 Class and CSR locomotives, TE has ramped up for the delivery of their first locally assembled locomotives to 7 months from Design Freeze
- TE propose that they can ramp up for delivery of the first locally assembled locomotives for CSR and GE within 6 months from design freeze. This is because they already have experience dealing with these OEMs.
- TE propose that they are able to ramp up for delivery of the first locally assembled locomotives for BT and CNR within 8 months of design freeze.

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TE can reduce assembly line ramp up duration through several means

TE ramp ups are already considered aggressive and of medium risk

Further reductions in ramp up could be achieved through:

- Importing knock down kits earlier and over a longer time period to give time for the identification and contracting of local suppliers,
- Identify and complete tasks that can be completed ahead of design freeze,
- Detailed planning and project management of assembly line preparation well in advance and prior to design freeze,
- Ensuring supply chain and planned recruitment are initiated early in the process and well before design freeze, and
- Seeking OEM input in the assembly line preparation and set up well before design freeze.

TE Assembly Line Set-up - Risk Summary

The following risk assessment was performed for setting up of the assembly line. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate.

	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	Long lead times in supplier contracting process delays commencement of locomotives assembly	2	2	4
2	Setting up of 4 OEM assembly lines simultaneously will spread critical resources and delay delivery schedule	[redacted]	[redacted]	[redacted]
3	Transnet Engineering attempts to manufacture as much scope as possible within TE as opposed to looking for opportunities to outsource products to third parties local suppliers	2	2	4
4	Limited number of experienced locomotive assemble managers	[redacted]	[redacted]	[redacted]
5	TE do not have the necessary project management skills and experience to manage complex projects	[redacted]	[redacted]	[redacted]
6	Quality of assembly of product may result in potential bottleneck at testing stations due to quality of assembly	2	[redacted]	[redacted]
7	Allow adequate time for the translation of drawings (especially Chinese)	2	2	4
8	TE cannot develop their Standard Operating Procedures (SOP) for BT through observation as usually the case. (BT plan to assemble prototypes at TE)	2	2	4

* 1 = Low, 2 = Medium, 3 = High

TE Assembly Line Set-up - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	Long lead times in supplier contracting process delays commencement of locomotives assembly	High	Medium	• Included a designated supply chain and procurement personnel in each production line team to ensure open communication and accountability • Share future demand requirements with supply base to allow supplier preparation. • Working with suppliers (e.g. Aberdare Cables) to upgrade product specifications to fit with new design specifications • Stagger the phase out of knock down kits from the OEM to provide increased timeline • Commence contracting process prior to final design freeze on components. • Obtain "shipping list" upon shipping date and feed to MRP system to identify potential gaps to be addressed
2	Setting up of 4 OEM assembly lines simultaneously will spread critical resources and delay delivery schedule	High	High	• Set up 4 separate project teams responsible for readying each production line. • Appoint a strong steering committee with critical skills to review project progress and advise further actions on regular basis • Utilise critical resources in an overseeing and directive role as opposed to hands on role. • Review opportunity to stagger the commencement of each production line to focus of critical resources (with lines in Pretoria commencing first, followed by the Durban lines) • Agree an increased number of OEM direct supply locos to allow a longer time to set up each production line

TE Assembly Line Set-up - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
3	Transnet Engineering attempts to manufacture as much scope as possible within TE as opposed to looking for opportunities to outsource products to third parties local suppliers	Medium	Medium	• Review the performance measures of TE business units to encourage sharing of assets for the benefit of TE as a whole • Critically review each component manufactured internally for opportunities to outsource the work to third party local suppliers • Seek opportunities to centralise the manufacture of components across all four production lines to reduce duplicating complex sub-component processes.
4	Limited number of experienced locomotive assemble managers	High	High	• Advertise in the market well in advance to identify potential candidates • Approach OEMs to seconder senior staff for duration of contract • Identify internal candidates now. Develop an training program which commences now and builds up until project commencement.
5	Poor workmanship when assembling components may result in bottlenecks at testing stations	Medium	High	• Manage the workmanship by continuous training as well as a full time QA representative per line • Ensure correct number and quality of product available in advance through MRP system to reduce number of snags as a result of "missing components"

TE Assembly Line Set-up - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
6	Inadequate time reserved for the translation of design drawings (especially Chinese)	Medium	Medium	• Ensure drawings received is understood by key personnel, to transfer knowledge to team members and suppliers • Understanding of drawings and unusual spec's to be created during training at OEM's and early conversion to TE system • Working with OEM's on understanding the full scope of changes to be incorporated after initial design, before commencement of first built • With supply of knock down kits, actual samples of parts to be delivered locally will be available for improved training and adherence to standards
7	TE do not have sufficient project management skills and experience to manage complex projects	High	High	• Utilise experienced and skilled project managers to manage the process • Identify an employ an experienced project manager if they can't be found internally • Implement a regular balanced project reporting model • Appoint a steering committee comprising of all key stakeholder groups
8	TE cannot develop their Standard Operating Procedures (SOP) for BT through observation as usually the case. (BT plan to assemble prototypes at TE)	Medium	Medium	• Understand how BT have handles this knowledge transfer in the past. • Ensure the issue is understood by the BT/TE project team and a [illegible]

Recommendations – Assembly Line Ramp-Up

The following mitigation recommendations are made to address the medium and high risk areas:

Long lead times in supplier accreditation and contracting process	○ Review the supplier accreditation and contracting process to identify opportunities to shorten/fast-track the process. ○ Prioritise the suppliers into tiers based on the order of critical components for the accreditation process.
Critical resources stretched due to setting up of 4 OEM assembly lines simultaneously	○ Identify the type of critical resources that must be brought in to complete the ramp up process. ○ Identify critical areas that must be resourced with contract specialists and initiate the recruitment process as soon as TFR/OEMs contracts are signed.
TE not passing the non- strategic scope to local suppliers	○ Evaluate which of the non-strategic scope of supply can be outsourced. ○ Evaluate the available scope of supply to identify which areas could be outsourced or co-sourced. ○ TE to develop a roll-out programme based on criticality of components and reliability of suppliers.

Recommendations – Assembly Line Ramp-Up

The following recommendations are made to address the mitigation actions proposed to address the medium and high risk areas:

Limited number of experienced locomotive assemble managers	○ Contract rail engineers to assist with the design activities. ○ Evaluate and stagger the activities for ramp-up process to balance the available personnel. ○ Match experienced engineers with novice engineers to reduce the workload while maintaining quality.
Poor workmanship during assembly of components may result in bottlenecks at the testing stations	○ Increase the number of qualified artisans and match experienced artisans with the novice to increase the pool of effective and productive workforce. ○ Introduce quality circles to identify and share performance improvement techniques. ○ Introduce quality spot checks to drive quality improvement and knowledge transfer.
In adequate time provided for translation of design drawings (Chinese)	○ Procure the skills of Chinese Engineers from CNR/CSR and team with local engineers to assist with translation. ○ Explore the use of language translation tools for technical environments to complete custom work.

Recommendations – Assembly Line Ramp-Up

The following recommendations are made to address the mitigation actions proposed to address the medium and high risk areas:

TE do not have sufficient project management skills and experience to manage complex projects	○ TE to appoint a program manager with experience of similar sized and complexity projects ○ Contract rail engineers to assist with the production set-up and ramp-up activities. ○ Empower experienced technicians to carry out routine project risk and monitoring activities.
TE needs to adopt a different approach to develop SOPs for BT	○ Second experienced engineers to work with BT for the development of SOPs. ○ TE to procure the SOPs from BT including time for the customisation to suite the TE operations. ○ TE to negotiate their requirements to develop SOPs with BT which includes exposure to BT's operations.

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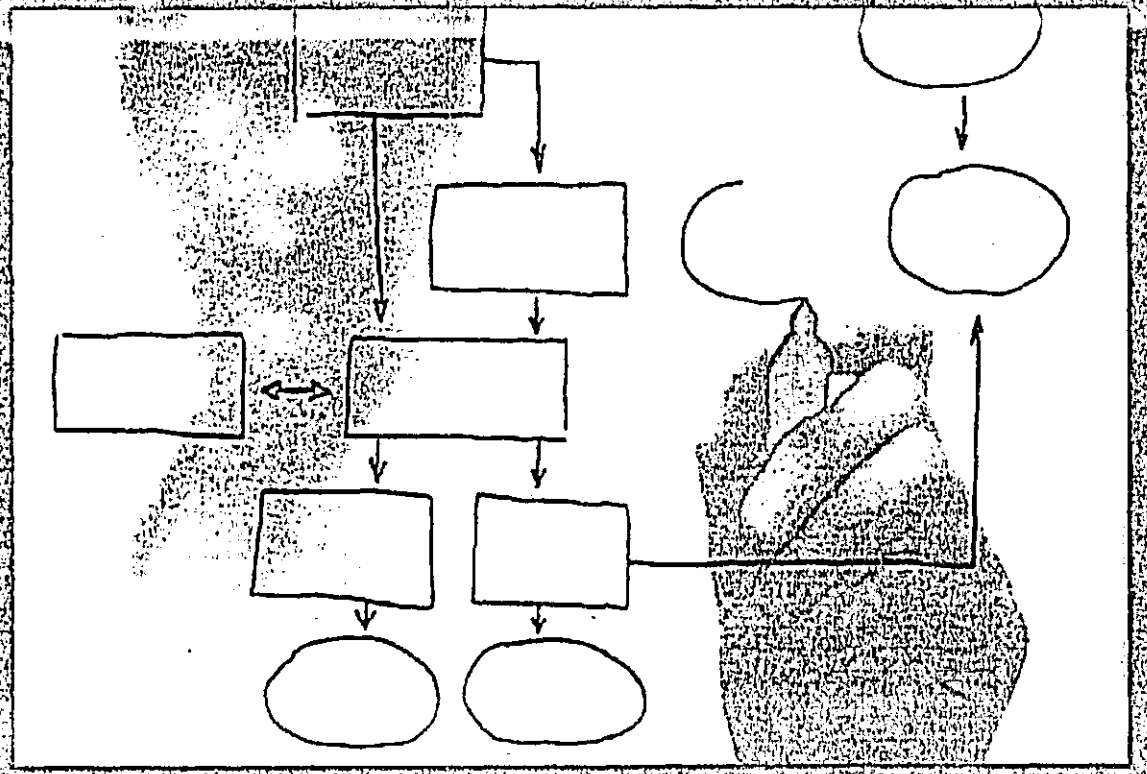
What is the maximum production rate?

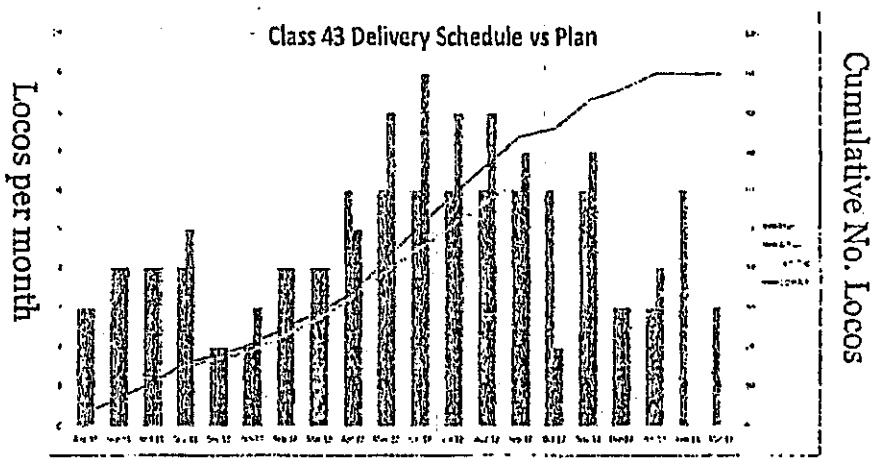
3



TE has a proven consistent production rate of 8 locomotives per month

The following observations were made during the assessment of TE's operational readiness for the 1064. It was noted that:

- TE consistently assembled 8 Diesel locomotive per month for GE which is similar to the class of locomotive that is planned for the diesel portion of the 1064 transaction.
- The production run was on a single shift.
- The consignment was delivered ahead of schedule.



TE can produce 10 locomotive per month per assembly line

- In February this year TE agreed to produce the CSR designed E20 locomotives at a rate of 10 locomotives per month.
- TE has previously produced a up to a maximum of 12 GE43 Class locomotive per month.
- Given time and effort TE may be able to increase production up to 15 locos per month but this may well come at increased cost per loco, and as yet is an untested production rate.

	Low Risk		Medium Risk		High Risk	
Locos per month per line	10	15	12	18	18	24
Locos per month all lines	40	60	50	72	72	92
Work hours per week	40 (1 shift)	80 (2 shift)	60 (1.5 shifts)	80+ (2.5 shifts)	80+ (2.5 shifts)	168 (3 shifts)

Assumptions used in developing delivery schedules

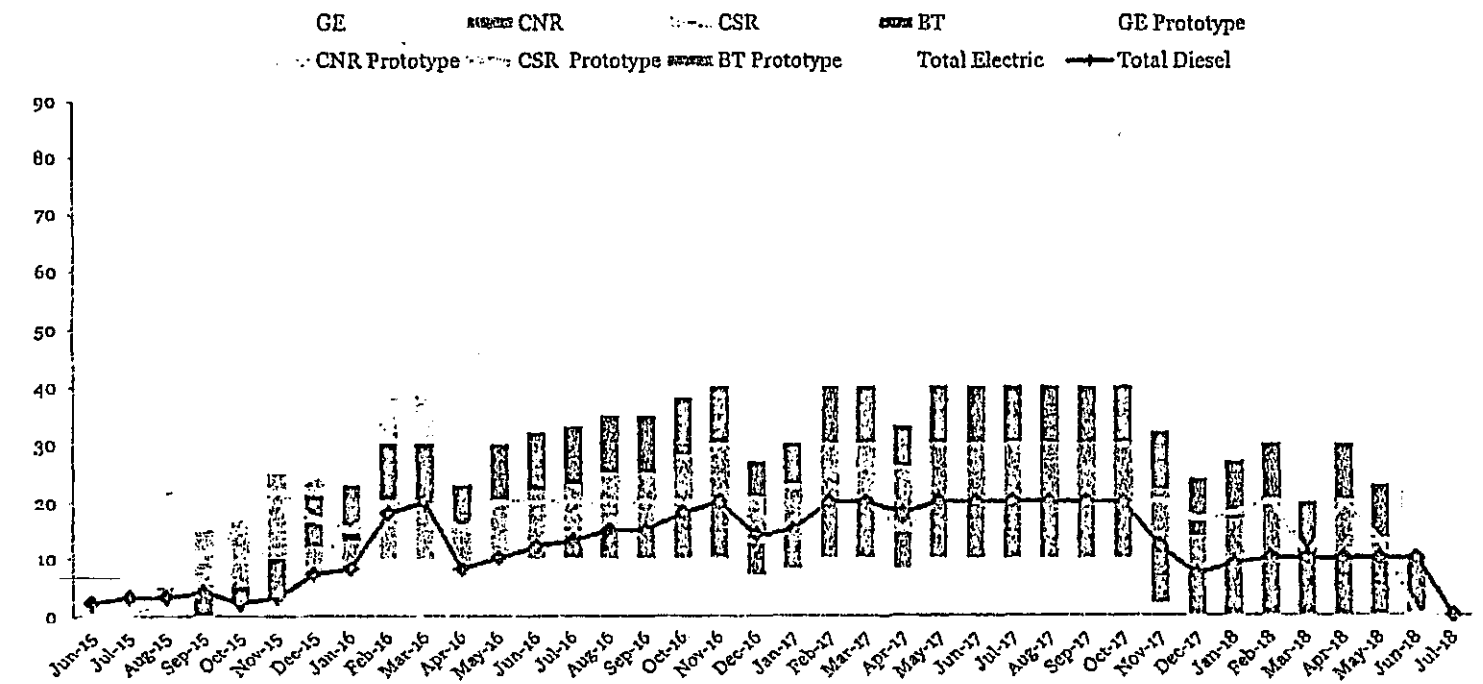
An evaluation of TE's throughput for low, medium and high risk was done using the delivery schedules of the four OEMs given the following assumptions:

- Delivery schedules are based on OEM's proposed delivery schedules and production ramp ups,
- TFR design constraint have not been considered,
- TE will commence delivery of locally assembled locomotives in the month following the delivery of the final prototype for that OEM, and
- December and January production is at 50% capacity due to seasonal shut down.

Low Risk: 40 Locos per month (10 per OEM)

Assumptions

- Ramp up 1, 2, 4 , 8, 10
- Halve production over December and January

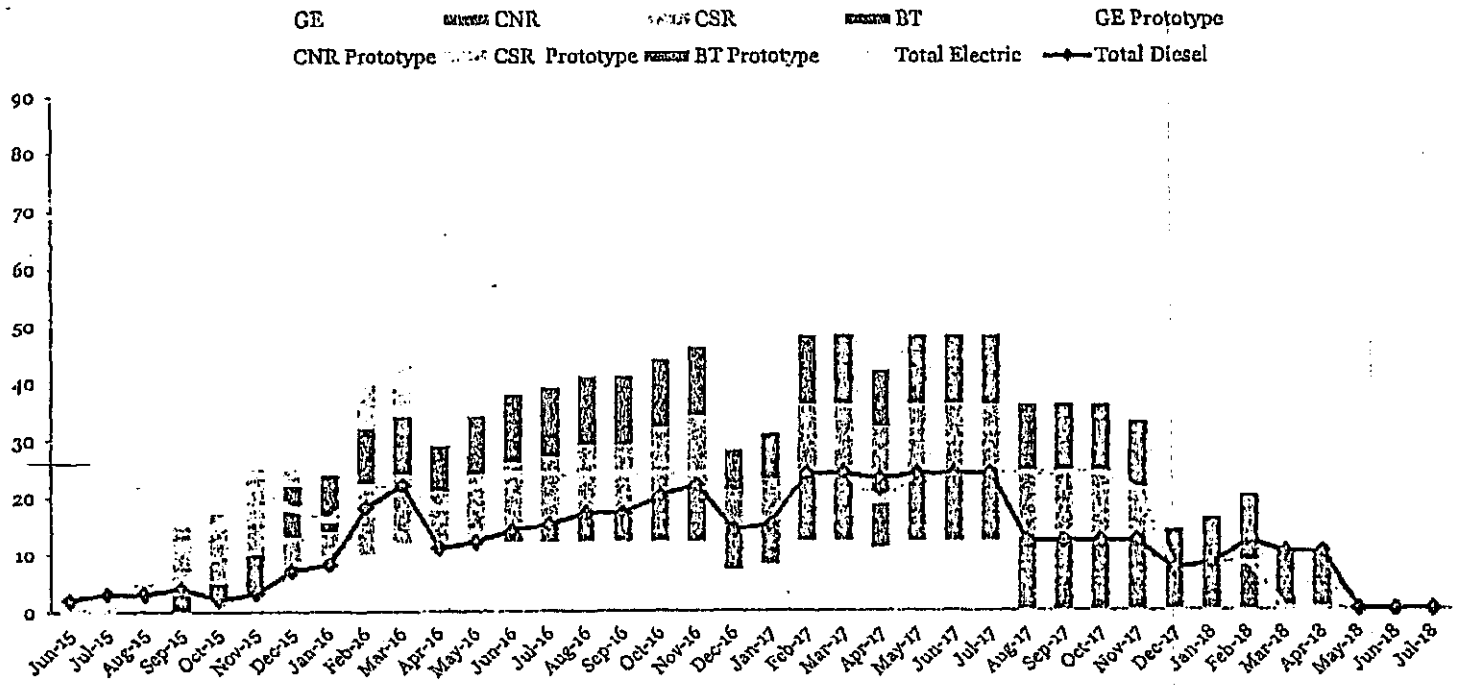


1065

Low - Medium Risk : 48 Locos per month (12 per OEM)

Assumptions

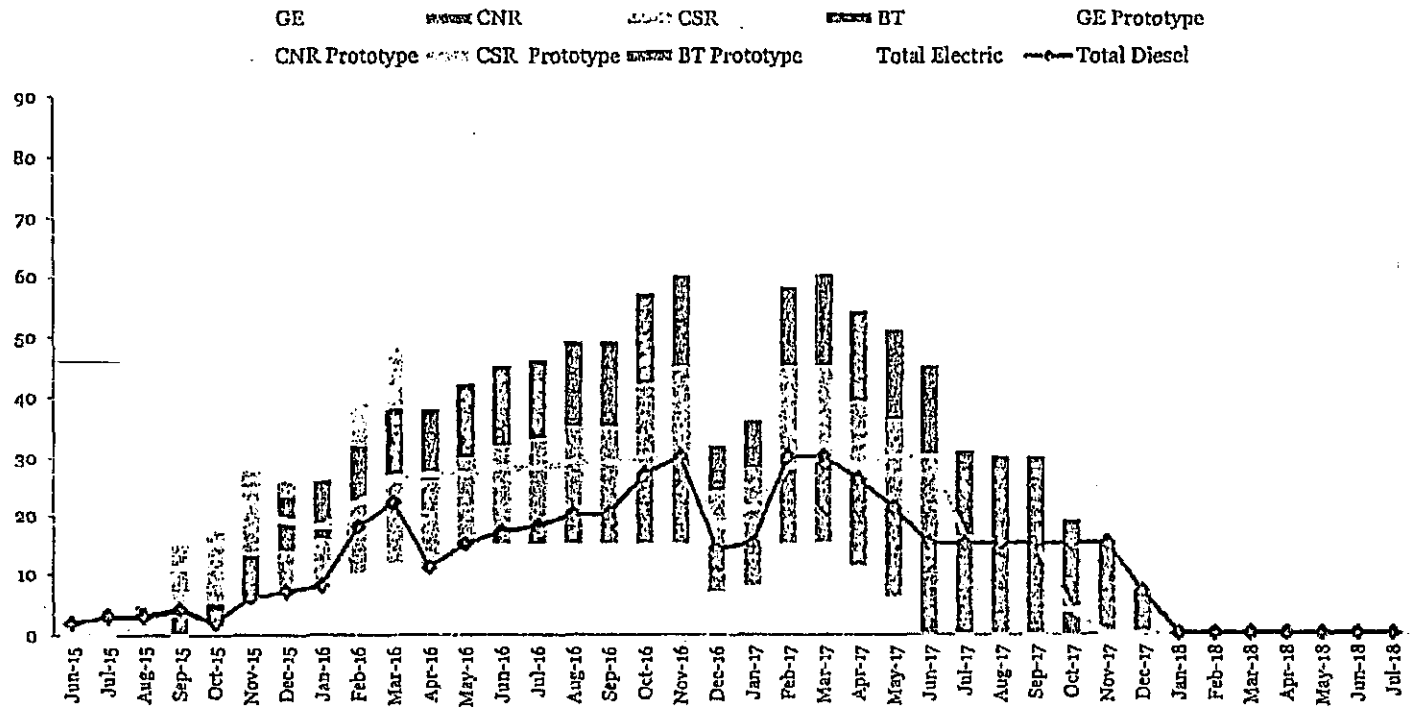
- Ramp up 1, 2, 4, 8, 12
- Halve production over December and January



Medium Risk: 60 Locos per month (15 per OEM)

Assumptions

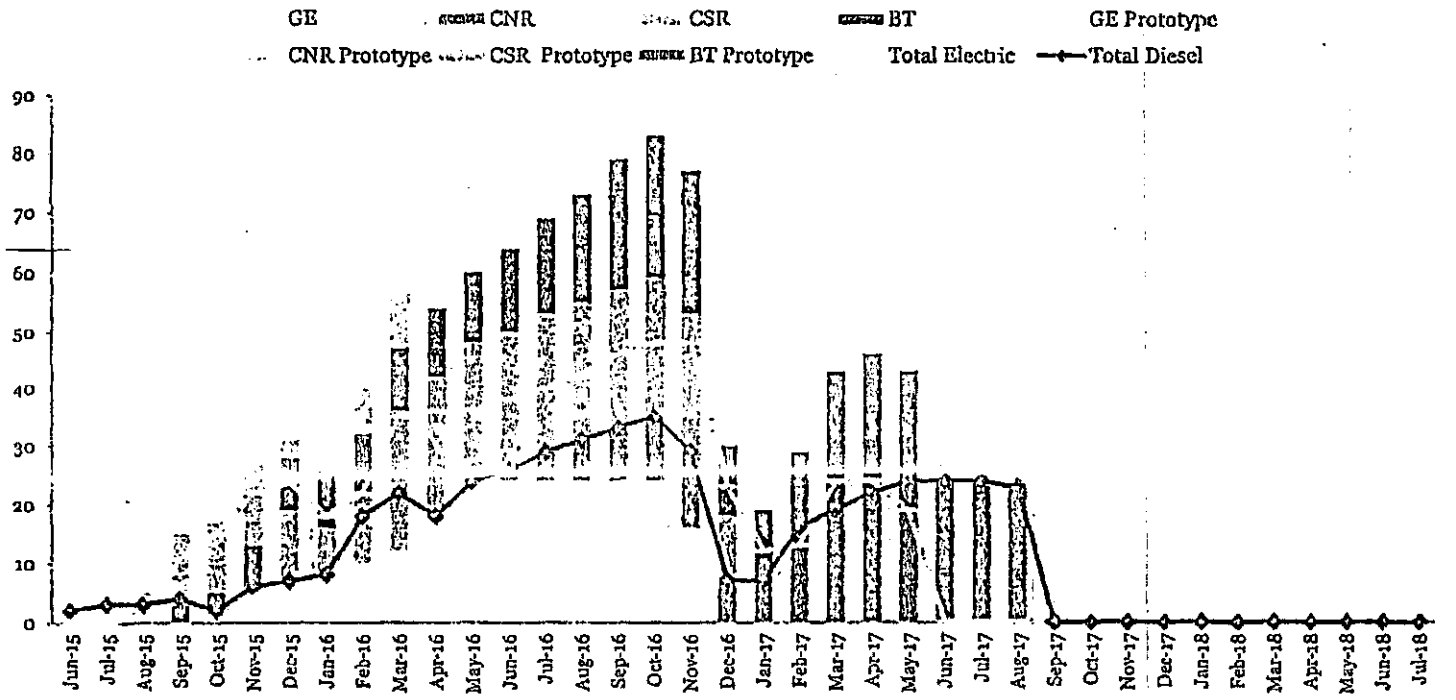
- Ramp up 1, 4, 10, 15
- Halve production over December and January



High Risk: 83 Locos per month (24 per OEM)

Assumptions

- Ramp up 1, 4, 8, 12, 16, 20, 24
- Halve production over December and January



TE Production - Risk Summary

The following risk assessment was performed for the production line. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate.

	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	TE may not be able to produce locomotives at a rate higher than previously constantly demonstrated (8 per month)	1	1	3
2	Contracted labour on assembly lines will slow down production rates in an effort to extend contract duration			
3	Assembly lines are held up to lack of material/parts			
4	Production losses incurred because of the lack of information exchange between afternoon shift and day shift the following day	1	2	2
5	Increased cost incurred due to requirement to work overtime to catch up production	1	2	2
6	TE fail to constantly deliver locomotives as per required TFR schedule	2	2	4
7	Delays caused by inconsistent/inaccurate packing lists from OEMs	2		

* 1 = Low, 2 = Medium, 3 = High

TE Production - Risk Assessment & Mitigation

The following mitigation strategies were developed, for which the medium to high risk should be considered for implementation:

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	TE may be unable to produce locomotives at a rate higher than 8 per month	High	Low	• TE to work additional hours per week to make up production. (Either more shifts or overtime or both) • Incorporate lean manufacturing techniques in all TE assembly processes • Utilise SAP to support ad monitor production activities • Seek productivity advise form OEMs • Utilise knock down kits to increase productivity on assembly line
2	Contracted labour on assembly lines may slow down production rates in an effort to extend contract duration	High	High	• Provide productivity incentivised pay as opposed to hours incentivised pay where possible. • Utilise visual production status measures • Strong supervision as appropriate
3	Assembly lines are held up to lack of material/parts	High	High	• Appoint individuals responsible for the on-time deliver of goods. • Utilise SAP to monitor and track potential delivery issues • Suppliers contracted to find alternative delivery methods for goods which will not make due delivery dates

TE Production - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
4	Production losses incurred because of the lack of information exchange between afternoon shift and day shift the following day	Low	Medium	• Try to complete all work on a single shift • Assign different work to each shift • Develop handover procedures which include exchange of necessary information • Break work up into small tasks which can be completed in 30 minute blocks to eliminate need for exchange of information at handover.
5	Increased cost incurred due to requirement to work overtime to catch up production	Low	Medium	• Provide productivity incentivised pay as opposed to hours incentivised pay where possible. • Utilise visual production status measures • Strong supervision as appropriate • Utilise lean manufacturing techniques
6	TE fail to constantly deliver locomotives as per required TFR schedule	High	Medium	• Contract assembly of some locomotives to other players in the market • Maintain an option to import further batches of fully completed locomotives from OEM
7	Delays caused by inconsistent/inaccurate packing lists from OEMs	Medium	High	• Contract with OEM's to provide material as required complete with accurate packing lists • Request OEM to maintain stock level locally in their own warehouse facilities

Recommendations – Production Rate Improvement

The following mitigation recommendations are made to address the medium and high risk areas:

TE may be unable to produce locomotives at a rate higher than 10 per month	○ Consider the option of TE taking GE, CSR and one other OEM and providing a production line to an outside South African assembler in order to reduce the risk associated with rapid ramp up risk ○ Increasing productivity through applying Lean Sigma methodologies to the assembly line processes
Delays due to contractor workers working slowly to prolong the contract time	○ Contract labour to be employed under production incentives as opposed to time incentives ○ Introduce a productivity tracking and monitoring programme ○ Use the productivity monitoring programme to improve a productivity focused culture
Assembly lines are held up due to the lack of material/parts	○ Institute a delivery forecast and monitoring system and proactively follow up on expected deliveries ○ Review the minimum order quantity levels given the loco delivery schedule to provide sufficient buffer while maintaining JIT (just in time)

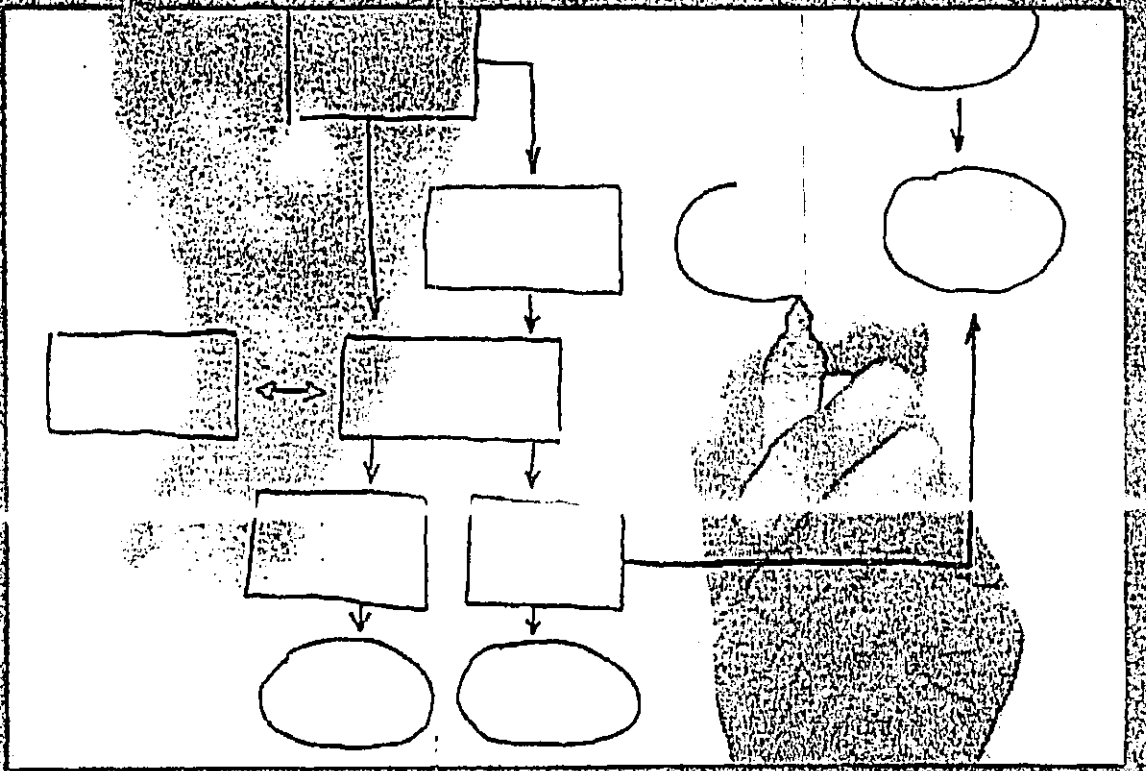
Recommendations – Production Rate Improvement

The following mitigation recommendations are made to address the medium and high risk areas:

Increased cost incurred due to requirement to work overtime to catch up production	○ Institute a delivery forecast and monitoring system and proactively schedule required overtime to minimise financial impact. ○ Develop a low cost operating model that could be adopted when overtime is required.
TE fail to constantly deliver locomotives as per required TFR schedule	○ Review and improve the current production tracking and monitoring system to manage risk areas that could impact the delivery rate. ○ Extend the monitoring period for the forecasted delivery against work in progress.
Delays caused by inconsistent/ inaccurate packing lists from OEMs	○ Track and monitor stock-outs or missing items and implement stock levels to prevent running out. ○ Review minimum stock levels to identify optimum quantities given the type and expected production throughput.

Where should the facilities be located?

4



TE's assessment of the physical facilities

TE conducted an assessment of different sites to identify which ones could be used for the assembly of the 1064 locomotive order. The assessment indicates that either Saltriver, Uitenhage and Durban works could be used for the assembly of locomotives in addition to the current facility at Koedoespoort.

A further high-level assessment of Koesdoespoort and Durban works were conducted by the PwC team through site visits and interviews of key production personnel.

Koedoespoort has been used to assemble the Class 43 Diesel locomotives for GE and the 20E for CSR. Durban is primarily used for repairs, but has available facilities suited to the production line requirements of either of the four OEMs.

Row Labels	SRX Score	Dep Score	Cam Shed	Uth Score	DBN Score
Bogie Assy	0.21	0.14	0.07	0.21	0.21
Bogie Fabrication	0.10	0.05	0.08	0.13	0.13
Cubicle assy	0.02	0.03	0.03	0.02	0.002
General	0.15	0.10	0.08	0.15	0.15
Hoods an componet fabrication	0.20	0.15	0.25	0.30	0.25
Mainline Assembly	0.48	0.30	0.18	0.42	0.41
Offline Assembly	0.40	0.20	0.20	0.30	0.38
Paint	0.39	0.17	0.22	0.33	0.4
Platform (Carbody)Fabrication	0.30	0.10	0.15	0.35	0.32
Test	0.11	0.28	0.11	0.22	0.3
Traction Motor Assy	0.05	0.03	0.03	0.04	0.05
Transformer Assy	0.02	0.02	0.02	0.02	0.02
Warehouse	0.22	0.14	0.35	0.31	0.015
Wheel assy	0.08	0.02	0.02	0.06	0.08
Grand Total	2.728	1.7195	1.783	2.856	2.72

Overview of TE's Koedoespoort Operations

The outcome of the assessment of Koedoespoort indicates that the site meets the majority of the requirements to establish the required lines, with some actions required to prepare for the assembly of the 1064 locomotives.

Diesel & Electric Locomotive

TE Scope		AREAS OF GAPS CONSIDERED					
		Capability/ Complexity	Availability of Floor Space	Equipment Availability	Number of Skilled Staff	Staff Skill Level Required	Down Stream Supplier Readiness
Total Loco	SIZE OF GAP						
	EASE TO CLOSE						
Bogie Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Loco Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Locomotive Control System Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Traction Motor Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Power Conversion System	SIZE OF GAP						
	EASE TO CLOSE						
Propulsion &Electronic Braking	SIZE OF GAP						
	EASE TO CLOSE						

Key	Size of gap	Ease to close
	Critical gap	Extremely difficult
	Significant gap	Difficult
	Gap	Moderate
	Slight gap	Slight
	No gap	No gap to fill

Overview of TE's Durban Operations

The outcome of the assessment of the Durban works indicates that the site requires additional actions to meet the requirements for the assembly of the 1064 locomotives.

Diesel & Electric Locomotive

TE Scope		AREAS OF GAPS CONSIDERED					
		Capability/ Complexity	Availability of Floor Space	Equipment Availability	Number of Skilled Staff	Staff Skill Level Required	Down Stream Supplier Readiness
Total Loco	SIZE OF GAP						
	EASE TO CLOSE						
Bogie Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Loco Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Locomotive Control System Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Traction Motor Assembly	SIZE OF GAP						
	EASE TO CLOSE						
Power Conversion System	SIZE OF GAP						
	EASE TO CLOSE						
Propulsion &Electronic Braking	SIZE OF GAP						
	EASE TO CLOSE						

Key	Size of gap	Ease to close
	Critical gap	Extremely difficult
	Significant gap	Difficult to Close
	Gap	Moderate
	Slight gap	Easily Closed
	No gap	No gap to fill

Pros and Cons of locating 2 of the 4 OEM lines in TE' Durban facility

	Pros	Cons
Socio-Economic	• Geographical distribution of jobs, • Create jobs in Durban, known as a area of major unemployment	
Supply Chain	• Reliance on a broader number of suppliers in Pta and Dbn, • TE can double up locomotive supply chain function, through additional hires at Dbn.	• Greater TE supply chain management requirement by separated between two facilities • Gauteng has deepest local supplier base, e.g. transformers, tractions motors, etc
Industrial Action	• Risk of industrial action at one facility mitigated by separating 2 of the 4 OEMs	
OEM IP Separation	• Current approach creates clear IP separations between OEMs; 1 electric + 1 diesel – Koedoespoort, 1 electric + 1 diesel – Durban.	• Two OEMs with the same platform (either diesel or electric) at the same site will require TE's to create active separation of management, supply chain, logistics and separate store facilities.
Manufacturing Synergies	• Taking 1 electric and 1 diesel to separate manufacturing facilities would separate OEM IP	• Consolidating all OEMs would create some sub-tier synergies, but this would be limited by their requirements for separation
Import and export	• Potential to grow local suppliers ability to export through Port of Durban.	• Creates greater incentive to import components as logistics costs will be lower.

Pros and Cons of GE and CSR lines located in Koedoespoort

Pros	Cons
• GE and CSR production lines already exists in KDS resulting in shorter start-up times • The supply chain for GE and CSR locomotives are already be in place around KDS • Engineering support is conveniently located at KDR • Skilled resources are readily available • Increases ability for local suppliers to gain more economic order quantities • Good competition amongst local suppliers	• Two large assembly line located at the same location will divide focus of local management • May create supply bottlenecks at security and surrounding areas • The more difficult task of setting of an assembly line for a new OEMs will be delivered by a regional site away from TE expertise and experience

Pros and Cons of CNR and BT lines located in DBN

Pros	Cons
• Good heavy manufacturing supplier base in the area • Lower wages in KNZ than in Gauteng which should reflect in lower cost of goods and services • Spread the economic activity away from Gauteng	• BT would not be able to easily leverage supply chain from previous Gauteng production • The more difficult task of setting of an assembly line for a new OEMs will be delivered by in DBN site away from TE expertise and experience • Requires duplication of sub assembly lines in DBN or incur transport costs. • DBN has no experience in assembly of locomotives (only Loco overhauls and upgrades)

Pros and Cons of TE taking on all four locomotive assembly lines from an SA Inc perspective

Pros	Cons
• TE are by far the most experienced assemblers of locomotives in the country resulting in lower risk of poor workmanship. • TE will ensure localisation occurs within their supply chain even if it comes at a small cost • TE will be more likely to maintain locomotive specific knowledge and experience gain through this contract	• Risk of industrial action within TE is not mitigated • No opportunity to test TE's cost of assembly in the market • TE has a higher labour cost base and this may be reflected in an increased cost of a locomotive • TE has a mind set to manufacture as much work internally as they are capable of as opposed to allowing it to flow onto lower level suppliers. Will limit the down stream benefits through the supply base.

TE Assembly - Risk Summary

The following risk assessment was performed for setting up of the assembly line. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate

	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	Locating more than two assembly lines in KDS delay s assembly start-up for additional lines	2	[redacted]	[redacted]
2	Industrial action within TE halts locomotive delivery from all TE lines	2	2	4
3	OEM's to assemble in Durban may indicate an increase price to compensate for relocation	2	[redacted]	[redacted]
4	Transnet Engineering's Durban facility has not previously assembled locomotives	1	[redacted]	3
5	The input of inaccurate and incomplete data in SAP will result in the failure of SAP to be utilised to support the production process	[redacted]	[redacted]	[redacted]

* 1 = Low, 2 = Medium, 3 = High

TE Assembly - Risk Assessment & Mitigation

The following mitigation strategies were developed, for which the medium to high risk should be considered for implementation:

No	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	Locating more than two assembly lines in KDS may cause delay s assembly start-up for additional lines	Medium	High	• Only locate two assembly lines in KDS and the other two lines at other locations • TE to provide a detailed plan s for assembly line fit out and start-up of all lines which should be scrutinised for risk by an independent party
2	Industrial action within TE halts locomotive delivery from all TE lines	Medium	Medium	• Locate assembly at more than one location
3	OEM's require an increase price to compensate for relocation of assembly in Durban	Medium	High	• Request OEM's to justify additional costs structure of Durban relocation • Seek alternative assembly locations where additional costs are not incurred.
4	Transnet Engineering's Durban facility has not previously assembled locomotives	Low	High	• Agree a less aggressive delivery schedule with TFR (and compliment it with a steeper ramp up in Pretoria if required) • Use OEM knock down kits for an increased number locomotives during start up • Relocate critical resources to Durban facility for duration of the contract • Utilise "refurbishment" knowledge and skills currently situated in Durban

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TE Assembly Line Set-up - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
5	The input of inaccurate and incomplete data in SAP will result in the failure of SAP to be utilised to support the production process	High	High	• Develop a clear picture of what support functionality will be required from SAP during the production process. • Include a designated person to be assigned to each production line project team from the beginning who is responsible for SAP's ability to support the production process. • Design a data entry process which ensures only accurate data in entered into SAP • Design a data cleansing process to continually clean any inaccurate data

Recommendations – Assembly Location

The following mitigation recommendations are made to address the medium and high risk areas:

Delays due to more than two assembly lines located in Koedoespoort	○ Spread delivery risk through assembling locomotives across several locations and/or other suppliers who have an assembly facility. ○ Limit assembly lines at KDS to two lines unless TE can provide a detailed plan of where and by when a third or fourth line would be set-up at Koedoespoort.
Production interruption due to industrial action	○ TE to draft employment contracts that encourage an open communication and provide a platform for dialog for resolution of potential conflict/unrest. ○ TE to consider an agreement and/or incentive measures to deter industrial action.
Locomotive price increase due to OEM required to operate from TE Durban site	○ TE to locate the OEM with the least established local operations to minimise the impact of this cost. ○ TE to develop a negotiation strategy comprising of the cost comparison between Gauteng and KwaZulu Natal to use as leverage to minimise costs.

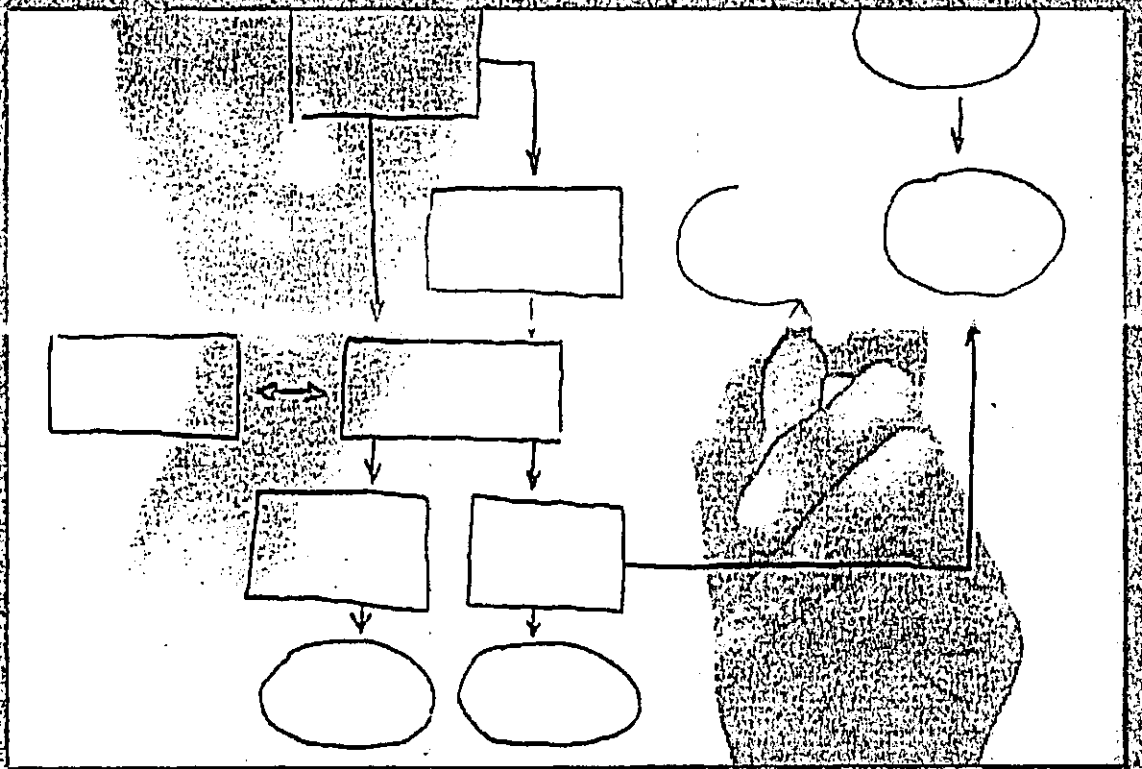
Recommendations – Assembly Location

The following recommendations are made to address the mitigation actions proposed to address the medium and high risk areas:

Durban site has not been used to build locomotives	○ Develop a transition plan to convert part of the Durban facility to assemble locomotives, including the enabling infrastructure i.e. logistics ○ Develop a capacity and capability plan for required skills and competencies
Inaccurate and incomplete data in SAP impacts the ability to make production decision	○ Assess and cleans the SAP master data to improve quality to enable reliance during decision making ○ Develop and roll-out a programme to create awareness on the critical aspects of data quality and how it can be maintained ○ Institute an improvement programme to identify inefficiencies and misuse to educate on data maintenance and management

Staffing Projections

5



PwC

February 2014
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Slide on staffing ramp up required

The following information was obtain from the TE management team on the staffing requirements for the assembly of the 1064 locomotives:

	Required			Existing			New Hires			Additional Shift		
	Electric	Diesel	Total	Electric	Diesel	Total	Electric	Diesel	Total	Electric	Diesel	Total
New Build - Final Assembly, Tes and Commision	349	267	616	140	60	200	209	207	416	336	254	590
RSE Carbody and Bogie Fabrication	170	140	310	125	40	165	45	100	145	163	133	296
Bogie Assembly	26	20	46	12	12	24	14	8	22	25	19	44
Wheel Set Assembly	8	8	16	6	6	12	2	2	4	8	8	16
Traction Motor Assembly	6	6	12	4	4	8	2	2	4	6	6	12
Supply Chain	13	13	26	4	3	7	9	10	19	3	3	6
Total			1026			416			610			964

- TE must hire an additional 610 staff, on either contract or full time basis, to fill the requirements of four assembly lines
- Staff ramp up is planned to occur from Aug 2015 to April 2016.
- TE will need to hire an additional estimated 964 staff to increase production to a full second shift across all assembly lines.

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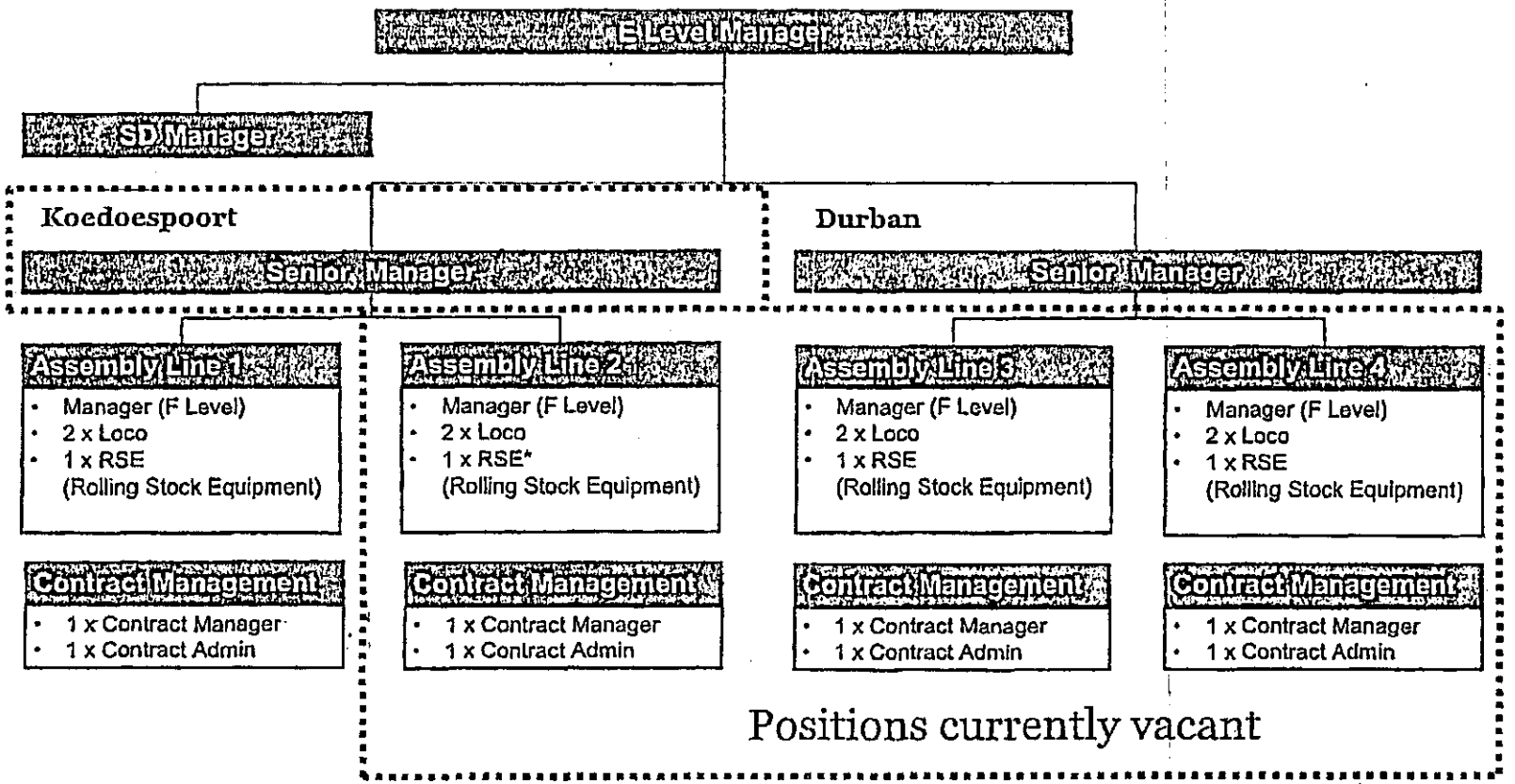
There are some gaps in required skills which will need addressing

Required Skill	Gap	Comments
Project Management		• Historically TE has done what is required to meet delivery schedules • TE do not have proven project management experience relating to projects of this size and complexity • Do not currently follow all the practices we would expect to see of a specialist project management organisation
Diesel Locomotive Assembly		• TE have good experience with a few individuals regarding Diesel locomotive assembly • They will need additional skills to manage four separate lines
Electrical Locomotive Assembly		• Currently TE's Electrical locomotive experience is limited to upgrades and modifications. • TE has commenced the assembly of 95 CSR Electrical locomotives with the first delivery due on 6 May 2014 • This will provide TE with significant experience in assembly electric locomotives.
Procurement		• Gap does not exist in skills but there is a gap in number of skilled staff. (See following page for vacancy details)
Expediting		• In the past expediting has been an issue for TE. Over time they have been improving but it is still presenting problems
SAP utilisation		• Has in the past been an issue for TE. Over time they have been improving but it is still presenting problems

Proposed Supply Chain Management Structure

Supply Chain Management proposed organisation structure to accommodate the additional procurement requirements for the Koedoespoort and Durban plants.



TE Staffing- Risk Summary

The following risk assessment was performed for the building of staffing requirements. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate.

	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	TE will have a short hiring lead time as they will not identify the actual number and skills of staff required until a few months prior to production commencement when Standard Operating Procedures are completed.	1	3	3
2	TE will not know if they need to work additional shifts to meet production requirements until the begin production. If an additional shift is required there will be a very short widow of time to hire a large number of additional staff.	3	1	3
3	Contracted labour on assembly lines will slow down production rates in an effort to extend contract duration	3	3	9
4	Recruitment department at TE cannot handle the processing of 610 new staff in the timeframe required.	2	3	6
5	HR's ability to on-board additional staff in required timeframe may delay production of locomotives	3	2	6

* 1 = Low, 2 = Medium, 3 = High

TE Assembly location - Risk Assessment & Mitigation

The following mitigation strategies were developed, for which the medium to high risk should be considered for implementation:

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	Short hiring lead time due to the need to identify the actual number and skills of staff required.	Low	High	• Identify conservator estimates of numbers early and bring potential staff through hiring process. Make final decisions on hiring numbers once SOP are developed.
2	Lack of foresight on the number of people required to meet production demands.	High	Low	• Develop staffing contingency plan for a partial second shift • Identify a pool of potential staff who have completed most of the screening process. • Identify recruitment consultants who could be utilised to speed up hiring process. • Utilise overtime to achieve increased production levels until additional staff can be hired.
3	Recruitment department at TE unable to handle the processing of 610 new staff in the timeframe required.	Medium	High	• Develop plans to understand workload and timing. Start process early to spread workload out over next 18 month. • Outsource recruitment screening process if required

TE Assembly Line Set-up - Risk Assessment & Mitigation

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
	HR's ability to on-board additional staff in required timeframe may delay production of locomotives	High	Medium	• Draw from pool of previously employed Transnet staff • Reduce required employee skill level through detail SOPs, as well as OEM onsite training and assisting in development of SOP's • Review opportunity to contract out initial employee screening process • Review opportunities to divert resources from other programs of work such as refurbishments, coaches and wagons. • Seek opportunities to outsource the manufacture of components to reduce need to increase staff. (See risk 4 below) as well as pre-assembly of certain components by suppliers • Build capacity during the current GE / CSR contracts (employ more than needed for training purposes, carry over to 1064 contract) • HR to form part of the Project Management team envisaged for Phase 1 of project(s)

Recommendations – Staffing Requirements

The following recommendations are made to address the mitigation actions proposed to address the medium and high risk areas:

Short hiring lead time due to the need to identify the actual number and skills of staff required	○ Develop a skills matrix to inform the development of the recruitment drive based on priority. ○ TE to request divisions within Transnet to second Human Capital (HC) Practitioners to assist with recruitment. ○ Develop a recruitment plan that will focus and inform the recruitment and on-boarding process.
Lack of foresight on the number of people required to meet production demands	○ Conduct a skills assessment to identify the nature, level and number of different skills that are required. ○ Develop a skills map, based on priority, for the building of the 1064 locomotives.
Recruitment department at TE unable to handle the processing of 610 new staff in the timeframe required	○ Secondment of HC Practitioners to assist with the recruitment and on-boarding process. ○ Develop a customised induction and orientation programme for quick integration of new recruits. ○ Establish a buddy system to assist with the speedy integration of new joiners.

Recommendations – Staffing Requirements

The following recommendations are made to address the mitigation actions proposed to address the medium and high risk areas:

Delay in production of locos due to HR's inability to on-board additional staff in required timeframe	• Develop a customised induction and orientation programme for quick integration of new recruits. • Establish a buddy system to assist with the speedy integration of new joiners. • Secondment of HC Practitioners to assist with the recruitment and on-boarding process.

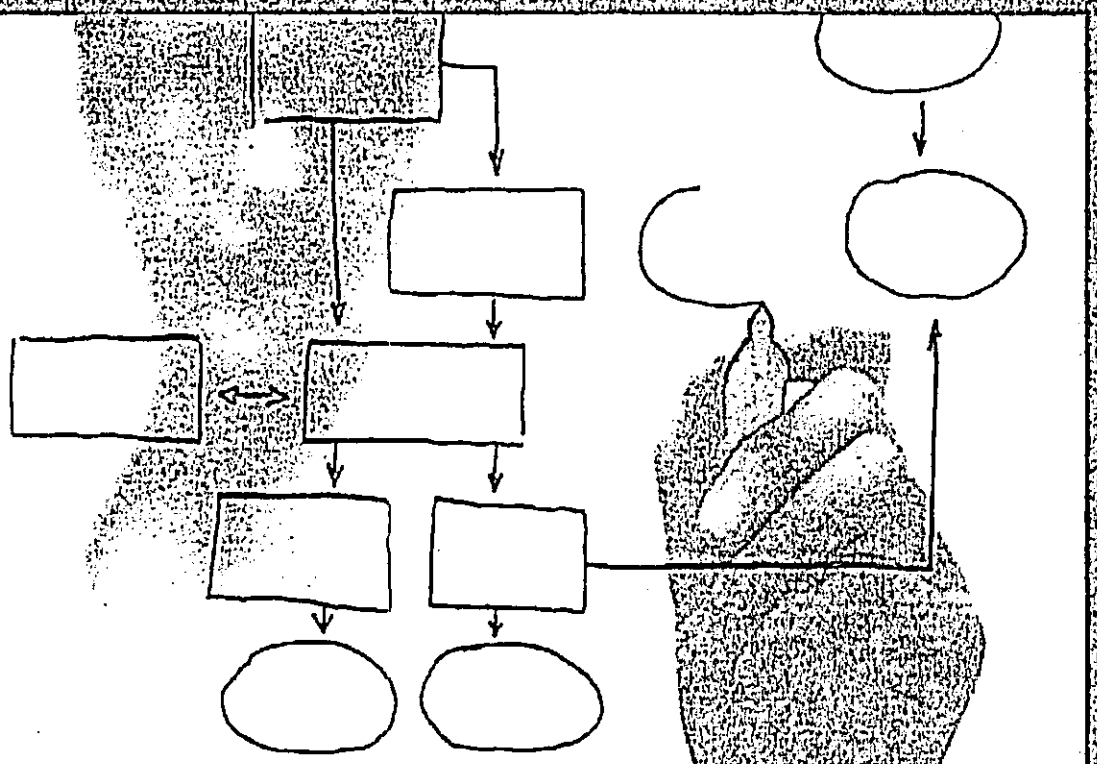
Recommendations for staffing requirements

The following recommendations are made on recruitment and on-boarding of staff depending on the delivery schedule that is adopted for the 1064 locomotives:

- Once TE assembly workload is finalised, TE needs to develop a more detailed staffing plan by assembly line and location. The staffing plan should include details on skills, number and timing. TE needs to make a contingency plans should a partial second shift be required.
- TE Recruitment team should develop a plan on how they can on-board the additional staff in the timeframes required. The plan should include a contingency plans should a partial second shift be required.

TFR Identified Risks

6



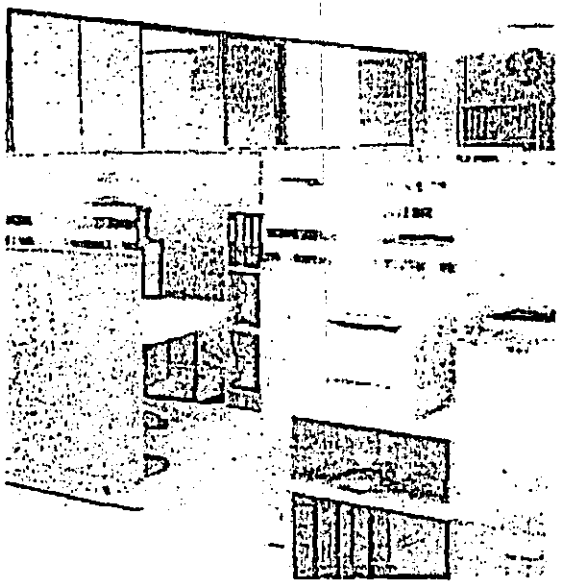
Outcome from Interaction with TFR

Ad hoc and a formal sessions were held with TFR to understand their status given their input into the design and commissioning of the locomotives.

The key areas which were discussed with TFR were:

- Readiness for review and approval of locomotive designs
- Locomotive delivery schedules
- High level operational readiness of TFR for the 1064 locomotives

A number of risks and concerns were raised by TFR and these are documented in this section of the report.



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TFR Issues and concerns regarding TE completing locomotive assembly

The following risk assessment was compiled based on the outcome of the discussions held with TFR. Mitigation actions are proposed which should be considered for the medium to high risk areas. Low risks should be monitored so that they do not escalate.

#	Risk	Impact*	Likelihood of Occurrence*	Risk Score
1	Maintenance and MOPS will suffer as a consequence of TE changing focus		1	3
2	TE do not have a good track record of project management and do not have the project management skills or experience to manage the ramp up of 4 OEM assemble lines			
3	Testing facilities at Durban are not sufficient. They will need to be upgraded or increased testing time allowed for in delivery schedule.	1		3
4	TFR are required to conduct design approvals on two Electrical locomotives simultaneously and/or two Diesel locomotives simultaneously			
5	TFR's infrastructure cannot handle the delivery of greater than 300 locomotives per year (25 per month)			

* 1 = Low, 2 = Medium, 3 = High

Risk Assessment and Mitigation Strategies

The following mitigation strategies were developed, for which the medium to high risk should be considered for implementation. Low risks should be monitored so that they do not escalate.

	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
1	Negative impact on maintenance and MOPS as a consequence of TE changing focus	High	Medium	• Draw from pool of previously employed Transnet staff • Reduce required employee skill level through detail SOPs, as well as OEM onsite training and assisting in development of SOP's • Review opportunity to contract out initial employee screening process
2	TE does not have the required project management skills or experience to manage the ramp up of 4 OEM assemble lines	High	High	• Ensure TE appoint a project manager with demonstrated experience in managing project of this size and complexity • Utilise a detailed project timeline to manage the assembly line start-up and ramp up. • Utilise a proven project management methodology e.g. PMBOK • Ensure OEM maintains responsible for TE assembly line start up and delivery schedule • Implement a project management status reporting process to ensure all stakcholder are kept informed of progress
3	Testing facilities at Durban are not adequate. They will need to be upgraded or in increased testing time allowed for in delivery schedule.	Low	High	• Only assemble Diesel locomotives in Durban as thee requirement for test facilities is less demanding. • Id Electric locomotives are to be tested in Durban then they must allow for the additional testing time in the delivery schedule.

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Risk Assessment and Mitigation Strategies

#	Risk	Impact	Likelihood of Occurrence	Mitigation Strategy
4	TFR required to conduct design approvals on two Electrical locomotives simultaneously and/or two Diesel locomotives simultaneously	High	High	• Stagger design reviews so that only one electrical and one diesel locomotive's design review is conducted at any one time. • Complete the design reviews of the two known OEMs (GE and CSR) first as these will take less time. • Compete the design review of the two unknown OEMs second (BT and CNR) • Investigate contracting in additional skills • Investigate opportunity to seconder TE engineers to assist in design review process.
5	TFR's infrastructure unable to handle the delivery of greater than 300 locomotives per year (25 per month)	High	High	• TFR to understand what items/actions are on the critical path preventing receiving of more locomotives. (If they don't already) • Make informed decisions on TFR's real ability to receive more locomotives onto the rail network and which type of locomotive can be received. (Do not want to pay a penalty to increase loco production when they cannot be utilised by TFR)

Recommendations – TFR Identified Risks

The following mitigation recommendations are made to address the medium and high risk areas:

Negative impact on maintenance and MOPS as a consequence of TE changing focus	○ TE to consider sub-contracting the maintenance function to improve its dedication to focus areas. ○ TE to evaluate the current maintenance regime in line with its envisaged role and develop a relevant approach.
Insufficient project management skills and experience to manage the ramp up of four OEMs	○ TE to appoint a program manager with experience of similar sized and complexity projects. ○ Contract rail engineers to assist with the production set-up and ramp-up activities. ○ Empower experienced technicians to carry out routine project risk and monitoring activities.
Inadequacy of testing facilities at the Durban site	○ Develop a transition plan for upgrading the Durban site operations to the required testing facility. ○ Compile a capex plan for the procurement of the required test and weighing equipment.

Recommendations – TFR Identified Risks

The following mitigation recommendations are made to address the medium and high risk areas:

Inadequate resources to approve the designs for the 2 Diesel and 2 Electric locomotives	○ Contract rail engineers to assist with the design activities ○ Second TE Engineers to assist in this phase of the project
TFR's infrastructure unable to handle the delivery of greater than 300 locomotives per year	○ TFR to evaluate its infrastructure plan to develop a strategy to enable accommodation of the new locos. ○ TFR to consider engineering options to develop infrastructure conducive for the locos. ○ TFR to consider a dedicated network for the locos.

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Appendix 52 1105

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1990/000900/30

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TRANSNET
freight rail

www.transnet.net

MEMORANDUM

To: Mr. Brian Molefe, Group Chief Executive, SOC Ltd

From: Mr. Siyabonga Gama, Chief Executive, Transnet Freight Rail

Date: December 2, 2013

SUBJECT: SEEKING APPROVAL TO ISSUE STEP 6 FINAL CLARIFICATIONS FOR 599 NEW DUAL VOLTAGE ELECTRIC AND 465 DIESEL LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS

PURPOSE:

1) The purpose of this memo is to seek approval from the GCE to issue step 6 (financial) clarifications.

BACKGROUND:

2) The tender for the procurement of the 1064 Electric and Diesel locomotives was issued on the 13 July 2012 and after various extensions it closed on Tuesday, 30 April 2013.

3) The evaluation criteria and methodology was approved by the GCE.

4) The evaluation methodology was to follow a 6 step evaluation process.

5) The evaluation process have been finalised for the following steps;

   4.1 Step One – Test for Administrative Responsiveness
   4.2 Step Two – Test for Substantive Responsiveness
   4.3 Step Three – Local Content
   4.4 Step four – Supplier Development & BBBEE Score Card
   4.5 Step five – Technical valuations

6) On completion of the evaluations Transnet Internal Auditors reviewed the results.

DISCUSSION:

7) Whilst the Cross Functional Evaluating Team (CFET) is busy with the evaluations for step 6 financial, they were number of challenges around Transnet Engineering being a subcontractor as prescribed in the Request for Proposal.

8) Challenges around TE are as follows:
   - certain tenderers did not reflect TE as a major subcontractor,
   - tenderers who used TE as a subcontractor did not indicate a separate price if another facility that is owned by the private sector were to be used,
   - other tenderers that used TE as the prescribed subcontractor they also provided a price if they were to use other subcontractor.

9) Issuing clarifications will assist in making sure that the CFET compare all the tenderers on the same basis and that the pricing information which is being compared is on the similar basis.

10) Following clarifications will be issued on the 02 December 2013 and will close on the 04 December 2013. The clarification will only be sent to the tenderers who have indicated that they will use TE and the clarification will be as stated below.

a) To tenderers that used TE as the prescribed subcontractor:

Kindly confirm

- the percentage that will be subcontracted to TE for 599 COCO Locomotives / 465 Diesel Locomotives and
- what is the value (TE portion) of your bid price per locomotive for 599 COCO Locomotives/ 465 Diesel Locomotives and

11) As we receive the requested documents from tenderers CFET will finalise the evaluations and issue a full report for step 6 and approval for shortlisting/award which will include negotiations

BUDGET IMPLICATIONS:

12) The estimated cost for the acquisition of the 1064 locomotives (including initial component float) comprising 599 new Electric and 465 new Diesel locomotives over the period 2012/13 to 2018/19 is R38,146 m.

RECOMMENDATION:

13) It is recommended that the GC approves the issuing of step 6 final (financial) clarifications.

RECOMMENDED BY:

Mr. Thamsanqa Jiyane
Chief Procurement Officer: Transnet Freight Rail
Date: 02/12/13

Supported
Lucky Masoleta
Director: TFR

SUPPORTED BY:

Mr. Siyabonga Gama
Chief Executive: Transnet Freight Rail
Date: 2013-12-02

SUPPORTED BY:

Mr. Anoj Singh
Group Chief Financial Officer:
Transnet SOC Limited
Date: 02/12/13

APPROVED/ ~~NOT APPROVED~~ :

Mr. Brian Molefe
Group Chief Executive: Transnet SOC Limited
Date: 2.12.13.

Appendix 53

TRANSNET

freight rail

Mr. Santhosh Pillay
GE South Africa Technologies (Pty) Ltd
130 Gazelle Avenue
Corporate Park South
Midrand

Tel: 011 237 0000
Cell: 082 453 1844
Email: santhosh.pillay@ge.com

Mr. Thamsanqa Jiyane
Transnet Freight Rail
15 Girton Road
Parktown
Johannesburg
2193

Tel.: 011 584 0589
Fax: 011 773 0858
Email: Thamsanqa.Jiyane@transnet.net

Date: December 2, 2013

Ref: TFRAC-HO-8609

Dear Tenderer,

TENDER NO.: TFRAC-HO-8609
DESCRIPTION: SUPPLY OF 465 NEW DIESEL LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS (GFB)

Your tender dated 30 April 2013 refers.

Transnet has realised that the statement about TE (TRE) contained in the RFP has led to different interpretations by tenderers regarding the scope of work for TE.

In an effort to fully consider every possible factor, Transnet requires the following clarification:

1.	What would be the Rand Impact on your price per locomotive if you did not use TE as a local subcontractor, but used an alternative local private sector subcontractor?	R
2.	What would your price per locomotive be if you did not use TE as a local subcontractor but used an alternative local private sector subcontractor?	R

Please do not submit or resubmit any information in addition to the information required in the returnable schedule.

Transnet reserve the right to issue further request for clarification.

Failure to comply may prejudice your bid submission.

TRANSNET

freight rail

The envelope is to be deposited in the Transnet Freight Rail tender box which is located at Inyanda No 1, Ground Floor, 21 Wellington Road Parktown, JOHANNESBURG and should be addressed as follows:

THE CHAIRPERSON
TRANSNET FREIGHT RAIL
ACQUISITION COUNCIL
GROUND FLOOR
TENDER BOX
Inyanda House 1
21 Wellington Road
Parktown

OR

Clarifications can be emailed to the Secretariat Ms. Prudence Nkabinde and Ms. Lolo Sokhela: Prudence.Nkabinde@transnet.net and Lolo.Sokhela@transnet.net

Please note that this clarification closes punctually at 12:00 on Wednesday, 04 December 2013.

Yours Faithfully

02/12/13

Mr. Thamsanqa Jiyane
General Manager: Supply Chain Services

Appendix 54 1110

TRANSNET

SIEMENS

TENDER NO: TFRAC-HO-8608
THE SUPPLY OF 599 NEW DUEL ELECTRIC LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS (GFB)
Siemens Pty Ltd.: malcolm.longley@siemens.com, Private Bag X71, Halfway House, 1685

CLARIFICATION

2 DECEMBER 2013

This document provides the answers to the clarification questions received in your letter dated 02 December 2013. For ease of use we have referenced the questions as provided in your letter. Clarity on the method applied in selecting our preferred mechanical supplier is attached in addition.

OFFICIAL TENDER DOCUMENT
03 DEC 2013
SIEMENS (Pty) Ltd
co.reg.no 1923/007514/07
Infrastructure & Cities

Date & Company Stamp _____

TRANSNET
05 - 04 DEC 2013
CHAIRMAN

TRANSNET

SIEMENS

TENDER NO: TFRAC-HO-8608
THE SUPPLY OF 599 NEW DUEL ELECTRIC LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS (GFB)
Siemens Pty Ltd: malcolm.londey@siemens.com, Private Bag X71, Halfway House, 1685

TABLE OF CONTENT

OFFICIAL TENDER DOCUMENT
03 DEC 2013
SIEMENS (Pty) Ltd
co.reg.no 1923/007514/07
Infrastructure & Cities
Date & Company Stamp

TRANSNET
04 DEC 2013
CHAIRMAN ACQUISITION COUNCIL

TRANSNET

SIEMENS

TENDER NO: TFAC-HO-8606
THE SUPPLY OF 599 NEW DUEL EL CTRIC LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS (3FB)
Siemens Pty Ltd.: malcolin longley@siemens.com, Private Bag X71, Halfway House, 1685

1 QUESTION 1 AND 2

1. What would be the Rand impact on your price per locomotive if you did not use TE as a local subcontracter for 599 Co-Co, but used an alternative local pri ate sector subcontractor?	R 0.00
2. What would your p ice per locomotive be for 599 Co-Co if you d l not use TE as a local subcontractor but used an alternative local private sector subcontract r?	R 31, 356, 000.00

Notes:

- Our original offer alre dy included the most commercially competitive supplier offer in respect of the mechan cal portion, and was already declared in our local and im orted declaration – Annexure s C, D and E.
- We have specified tha we would work with either TE or UCW on an equally s ped, contractual and comme cial basis.

The above pricing is in accordan e with the terms and conditions specified in our origin offer submitted on the 30th April 2013.

OFFICIAL TENDER D)CUMENT
03 DEC 20 3
SIEMENS (Pty Ltd
co.reg.no 1923/00 514/07
Infrastructure & ilities
Date & Company Stamp

TRANSNET
Division Transnet SOC Limited Reg No. 1990/000900/30
05 - 04 DEC 2013
SUPPLY CHAIN COUNCIL

BOMBARDIER

Bateleur Place
1st Floor
Hertford Office Park
90 Bekker Road
Vorna Valley
1686
South Africa

25°00'45.24"S
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P O Box 10042
Edenglen
1613
South Africa

04 December 2013

The Chairperson
Transnet Freight Rail
Acquisition Council
Ground Floor
21 Wellington Road
Parktown

TENDER NO: TFRAC-HO-86 8
DESCRIPTION: SUPPLY OF 599 DUAL VOLTAGE ELECTRIC LOCOMOTIVES FOR THE GENERAL FREIGHT BUSINESS (GFB)

Dear Chairperson,

Your letter of 02 December 2013 refers, and this response also refers to and clarifies our submitted proposal of 30 April 2013.

Bombardier Transportation South Africa (Pty) submitted our proposal on 30 April 2013, based on our understanding that use of Transnet Engineering (TE) was compulsory. In response to TFR's questions of 02 December, we have assessed our expected costs and we estimate significant price impact if we were to not use TE as a local subcontractor for 599 Co-Co, but instead were to use alternative local private sector subcontractors.

Private sector alternatives to TE not only have significantly lower labour and overhead rates but they are also able to absorb setup costs as part of longer-term development plans that are in some cases already in implementation. Bombardier Transportation has experience with suitable local suppliers and has in the past discussed this possibility; however in the time available we have not been able to secure any firm quotes from potential private sector subcontractors.

Based on these factors, BT estimates that the price reduction to substitute a local private sector subcontractor for TE scope could be R1 905 514 (R863 644 from reduced rates and R1 041 870 from lowered setup costs), which would result in a per-locomotive price of R29 049 486. This change of subcontractors is not expected to negatively affect Supplier Development or delivery schedule.

Therefore, Bombardier Transportation's indicative response to TFR's clarification request of 02 December 2013 is, according to the same inclusions and assumptions from our offer of 30 April 2013, Price Sheet, Section 2 Base Prices:

1	What would be the Rand impact on your price per locomotive if you did not use TE as a local subcontractor for 599 Co-Co, but used an alternative local private sector subcontractor?	(- R 1 905 514)
2	What would your price per locomotive be for 599 Co-Co if you did not use TE as a local subcontractor, but used and alternative local private sector subcontractor?	R29 049 486

Sincere Regards,

David Anglin
Director, Business Development
LOCOMOTIVES
Bombardier Transportation

TRANSNET
A Division of Transnet SOC Limited Reg No. 1990/000900/30
01 - 04 DEC 2013
CHAIRMAN
ACQUISITION COUNCIL

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bidder 2

CSR 中国南车

To:
Prudence.Nkabinde
Acquisition Council Secretariat

TRANSNET FREIGHT RAIL

Inyanda House 1, 21 Wellington Road,
Parktown, Johhanesburg, South Africa

E-mail: Prudence.Nkabinde@transnet.net
Lolo.Sokhela@transnet.net
Lindiwe.Mdletshe@transnet.net

From:
Wang Pan
General Manager

CSR E-Loco Supply (Pty) Ltd.

1st Floor, China Construction Bank Building,
95 Grayston Drive, Sandton, 2196,
Johannesburg

Tel.: +27-10 007 1127
Cell: +27-72 562 5154
Fax: +27-86 599 7734
E-mail: alton@csrzelc.com

Date: 04th December, 2013
Our Ref.: TFRAC-HO-8608/CSRE-004

Description: Response to the Third TFR's Clarification Request regarding the Tender for Supply of 599 New Dual Voltage Electric Locomotives for the General Freight Business (GFB)

Dear Madam or Sir,

CSR E-Loco Supply (Pty) Ltd. (hereafter as CSR E-Loco) received TFR's Clarification Request sent by Ms. Lindiwe Madletshe on 02nd December, 2013.

After carefully calculation, CSR would like to provide TFR with the following response based on the offer in our Bid Response Documents submitted on 30th April 2013.

1. What would be the Rand impact on your price per locomotive if you did not use TE as a local subcontractor for 599 Co-Co, but used an alternative local private sector subcontractor?	R3,480,000.00
2. What would your price per locomotive be for 599 Co-Co if you did not use TE as a local subcontractor but used an alternative local private sector subcontractor?	R28,890,000.00

Note:

1. The price doesn't include any Hedging cost again foreign exchange fluctuation. The above-mentioned price is based on the exchange rate we sated in our Bid Response Documents submitted on 30th April 2013.
2. The above-mentioned price doesn't include any price escalation. Please refer to the Index Formula in our Bid Response Documents submitted on 30th April 2013.

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06 - 04 DEC 2013
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ACQUISITION COUNCIL

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南车电力机车项目公司
CSR E-LOCO SUPPLY (PTY) LTD.

CSR 中国南车

3. The above-mentioned price doesn't include the Spare Parts and Special Tools. The price of the Spare Parts and Special Tools refers to our Bid Response Documents submitted on 30th April 2013.

Best regards,

Wang Pan

General Manager
CSR E-Loco Supply (Pty) Ltd

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南车电力机车项目公司
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ELECTRO-MOTIVE.

Electro-Motive Diesel Africa (Pty) Ltd.
14, 12th Street, Menlo Park 0081
PO Box 35280 Menlo Park 0102
Tel +27 12 346-4036
Fax+27 12 346 6379
Reg 2011/006352/07

COPY

9 January 2014

THE CHAIRPERSON
TRANSNET FREIGHT RAIL ACQUISITION COUNSEL
GROUND FLOOR
TENDER BOX
Inyanda House 1
21 Wellington Road
Parktown, South Africa
C/O Ms. Prudence Nkabinde (prudence.nkabinde@ransnet.net) and
Lolo Sokhela (Lolo.Sokhela@transnet.net)

Subject: Request for "Best and Final Offer"
Reference: Transnet letter dated January 4, 2014 regarding Tender No: TFRAC-HO-8609

Dear Sir/Madam:

Electro-Motive Diesel Africa (PTY) Ltd. is in receipt of you letter dated January 4, 2014 regarding Tender No: TFRAC-HO-8609 for the supply of 465 Diesel locomotives, and we are in the process of preparing the responses requested.

Please note that with respect to TFR's request that bidders provide a quotation "using sub-contractors of [their] choice not Transnet Engineering"; we trust that this does not allow a bidder who did not previously offer a non-Transnet Engineering option to now amend their bid to include a new "private sector" offer. If this is the case we are concerned that this could jeopardize the integrity of the tender process.

We request that Transnet please confirm that the process of submitting a best and final offer will not allow a bidder who did not include a private sector offer in their original bid submission to now introduce a private sector offer.

Best Regards,

Sibani Mngomezulu
Chief Executive Officer

TRANSNET
A Division of Transnet SOC Limited Reg No. 1990/000900/30
03 - 07 JAN 2014
CHAIRMAN
ACQUISITION COUNCIL

Directors: B Graney (Chairman) +, S Mngomezulu* (CEO), TN Sek[illegible] (CFO), Executive; +British***

Company Secretary: Barloworld Trust Co Ltd

EMD Africa is a Barloworld, EMD Joint Venture Company. EMD is owned by Progress Rail Services, a Caterpillar Company

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Brian Molefe, Group Chief Executive

Mr. Sibani Mngomezulu
Chief Executive Officer
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Menlo Park, Pretoria, South Africa
0081

Tel: 012 365 4036
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Brian Molefe
Transnet SOC Ltd
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150 Commissioner Street
Johannesburg
2001

Tel.: 011 308 2313
Fax: 011 308 2315
Email: Brian.Molefe@transnet.net

Date: January 21, 2014

Dear Sir,

REQUEST FOR BEST AND FINAL OFFER: TENDER No: TFRAC-HO-8609

1. The above matter, our letter dated 4 January 2014 and your letter in response dated 9 January 2014 refer.

2. We wish to point out that the Request for Proposals in respect of the 465 Diesel Locomotives made it very clear that it is compulsory to use Transnet Engineering (TE) as a subcontractor.

3. Based on the above requirement, bidders were not expected to submit a proposal using any private sector company as a subcontractor and it would be very unfair to even consider any offer which included such an option since TE was a compulsory option.

4. Should Transnet now consider a private sector option/offer, it will only be fair to give all bidders an opportunity to provide such an offer which our request of 4 January 2014 has done.

5. We therefore wish to advise that all bidders have been asked to submit an alternative private sector in their best and final offer in order to ensure that the process is fair to all bidders.

6. Based on what is set out above, Transnet is of the view that the integrity of the procurement process has not been jeopardised.

Yours Faithfully

Brian Molefe
Group Chief Executive
Date: 21.1.14.

Control Effectiveness	Requires Improvement
Control Processes Status	

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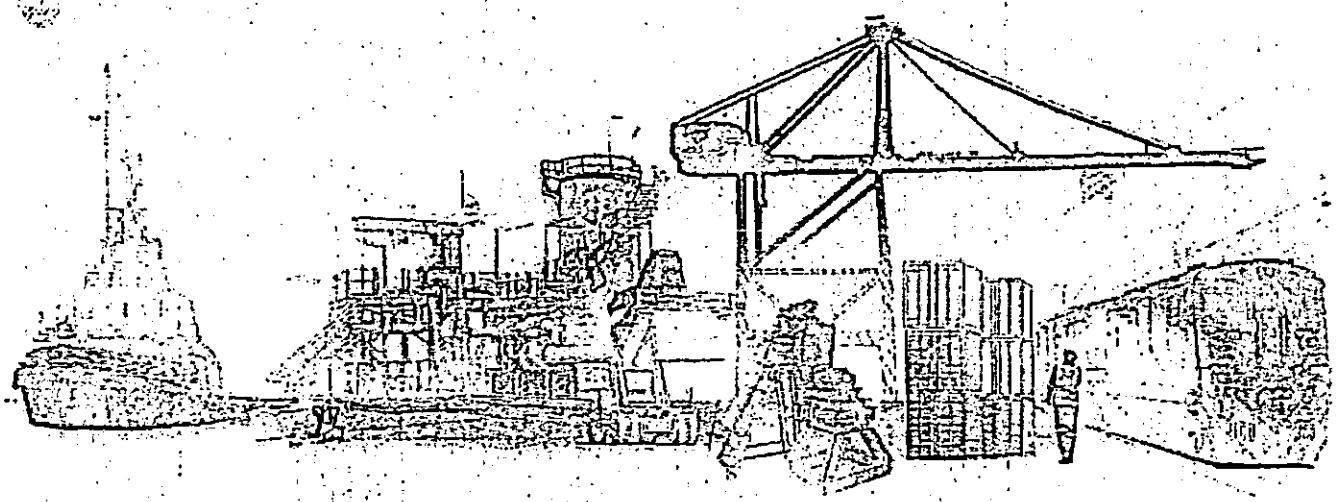

Operating Division	: Transnet Freight Rail
Engagement Name	: 1064 Locomotives Acquisition Control Effectiveness Review
Engagement number	: TFR 4009
Period of review	: 01 April 2016 to 31 December 2016
Issue date	: 8 August 2017
Report Status	: Final Report

MDS

www.transnet.net

8 August 2017

Ms Rita Roper
General Manager: Capital Programme
Transnet Freight Rail
Inyanda House
15 Girton Road
Parktown
2193

Dear Rita

We have completed our risk based audit of the control effectiveness of the 1064 Locomotives Acquisition project in accordance with the Audit Planning Memorandum signed and dated 05 October 2016. The results of the review are presented in this report.

We value the opportunity to work with you and sincerely appreciate the cooperation and assistance provided to us during the course of this engagement. We will be pleased to further discuss any aspect of our procedures or this report with you or other members of management at your convenience. If you have any questions please contact me on 083 419 7404 or Jaco Hoon on 082 717 1831.

Please note that this report is intended solely for the information and use of the Transnet Audit Committee, Transnet Management, and any other similar governance structures.

Yours faithfully

Johan de la Rey
Capital Competency Leader
TIA Account Lead: KPMG
Transnet Internal Audit

Xoliswa Ntshingila
GM: Operations Audits

Mmathabo Sukati
Chief Audit Executive

Cc: As per the distribution list

MANAGEMENT'S REPORT ACCEPTANCE AND ACTION PLAN COMMITMENT

We as management of Transnet Freight Rail have agreed to the scope of the audit as included in the Engagement Scope Letter dated 11 January 2017.

We have provided all the information requested and attended to the queries raised by internal audit.

We are committed to an improved system of risk, governance and internal controls.

We agree with the findings raised and have developed appropriate sustainable action plans to mitigate the weaknesses identified. The action plans include containment of the findings (if required), in addition root causes for the findings and the related risk impacts have been considered during the development of the mitigating action plans.

We accept the report rating and will monitor progress on the implementation of the actions plans.

On behalf of management

Rita Roper
General Manager: Capital Programme
Transnet Freight Rail

Date

Contents

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Distribution List

Business Category	Name	Position
Transnet Freight Rail	Ravi Naik	Chief Executive
	Lloyd Pravesh	Chief Operating Officer
	Nomfuyo Gelani	Chief Financial Officer
	Rita Roper	General Manager: Capital Programme
	Gene Bellings	Executive Manager: Planning and Governance
	Lindiwe Melatshe	General Manager: SCS Sourcing
	Brian Monakali	Executive Manager: Capital Planning
	Frikkie Harris	Project Director
Transnet Group	Garry Pita	Group Chief Financial Officer
	M'ambuli Buthelezi	Group Chief Operating Officer
	Eddie Lindeque	General Manager: Group Risk and Compliance
	Deon Struwig	Acting General Manager: Reporting and Taxation
	Diteba Moephuli	Chief Corporate and Regulatory Officer
Transnet External Audit	SizweNtsalubaGobodo	External Auditors
Transnet Internal Audit	Mmathabo Sukati	Chief Audit Executive
	Xolisiwe Ntshingila	General Manager: Operations Audit
	Versha Chetty	TIA Governance Reporting
	Rafiq Hamid	TIA Project Management Office

Section 1: Executive Summary

Individual Finding Classification	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
	0	1	1	1	0

Ref	Observation	Main Root Cause	Priority
Control Effectiveness Findings			
4.2.1	No Local Content verification has been conducted to date on OEMs – potential reputational risk to Transnet	Methods and Practices	
4.2.2	Further project delays may result in critical skills shortages	People	4
4.2.3	Potential claims and escalations may result in the remaining contingency not being sufficient to complete the project within the current approved ETC	Methods and Practices	

1.1 Basis of Overall Report Classification

The overall results of the engagement indicate that limited reliance can be placed on the operating effectiveness of controls relating to 1064 Locomotives Acquisition project, since a number of findings rated as "Priority 2", "Priority 3" and "Priority 4" has identified instances indicative of "limited assurance". This report (control effectiveness) is therefore rated as "Requires Improvement".

1.2 Basis of Overall Residual Risk Classification

Despite management and executive management's best efforts, there are a number of project success factors that remain at risk and could possibly affect the cost and on-time completion of the project. The residual risk pertaining to the project is therefore considered to be high:

- At the time of the review, agreement was not yet reached with BT on the conditions attached to the revised delivery schedule. TFR is comfortable with the revised delivery schedule but did not accept the conditions (possible increase in costs) attached to the revised schedule. Negotiations are still in progress. To date, R4.9bn has been paid to BT (as per LSA) with no locomotives accepted into service. BT continues to experience financial difficulty.
- GE and CSR continue tracking behind schedule. Penalties have already been issued to GE in 2016. TFR is awaiting formal feedback from CSR on reasons for delays after which penalties will be issued, if required.
- CNR's revised delivery schedule (with no increase in costs) was only recently agreed (May 2017), with the first six locomotives expected to be accepted in September 2017.

TIA takes cognisance of the fact that the agreed changes to the originally contracted delivery schedules has thus far not resulted in an increase in ETC and that the extended delivery schedules has cash flow benefits for Transnet.

1.3 Introduction

The implementation of Transnet's Market Demand Strategy (MDS) continues to bring about fundamental changes to Transnet's current business processes and its internal control environment. The MDS initiatives have introduced significant emerging risks to the business environment specifically due to material commitments on the locomotive replacement programme combined with a worsening economy and pressure on volumes and consequently capital affordability. As a result, it is imperative that TIA provides management with a view of the level of the adequacy and effectiveness of existing controls within Transnet's key business processes (KBP) in response to the significant changes in Transnet's risk profile.

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1.4 Background to the Engagement

TFR is in the process of procuring 1064 new locomotives (465 diesel and 599 electric) from four Original Equipment Manufacturers (OEMs).

Transnet's procurement strategy for the acquisition of 1064 new locomotives, includes the following key aspects:

- Alignment with the Government of South Africa's socio-economic policy framework; and
- Increasing local content through developing skills, creating jobs, and transferring technology.

TFR entered into fixed price contracts in 2014 with each of the OEMs to supply and deliver the 1064 locomotives. In turn, the OEMs entered into contractual arrangements with TE to co manufacture the majority of the locomotives in South Africa.

Under the agreement TFR contracted with the four OEMs (and TE), to deliver the four classes of locomotive as indicated below:

OEM	Class of Locomotive	Quantity	Costs (Budget) 2017
China South Rail (CSR)	22E	359	R18.0bn
China North Rail (CNR)	45D	232	R10.0bn
General Electric (GE)	44D	233	R8.4bn
Bombardier Transportation (BT)	23E	240	R13.1bn
Contingency			R4.9bn
Total		1064	R54.4bn

This review focused on the TFR / OEM relationship to ensure that 1064 locomotives are delivered within the approved budget, at the correct quality and on schedule.

As at the 2016/17 financial year end, 44% of the R54.4bn has been incurred with 19% of locomotives delivered and accepted. It should be noted that there is no direct correlation between cash flow incurred versus locomotives delivered, due to various contractual prepayments to OEMs relating to factory set-up, relocation etc.

It should also be noted that a 1064 Health Check review was performed in Q4 of the 2016/17 financial year. The focus of the Health Check Review was on the control design adequacy, hence the review only focused on the control effectiveness testing that is based on the Health Check's control design adequacy assessment (rating: requires improvement).

1.5 Objectives of the Key Business Process (KBP)

The objective of the Key Business Process is to effectively plan, organise and coordinate resources and project activities to bring about the successful completion of the specific project goals and objectives to support operations and strategy of the Operating Division. These include:

- To ensure that the project budget and schedule are managed in a controlled manner in line with approved procedures
- Delivery of goods and services on time, within budget, scope and quality required and in accordance with contractual obligations

1.6 Significant risks for the Project

In terms of the Engagement Notification Letter, the following significant risks were indicated:

- Deficiencies in project management practices may have a negative impact on the timely delivery of the project as well as potential budget overruns;
- Continuous changes in the market conditions that could have negative impact on the programme and project business case; and
- Funding availability that could necessitate the delayed completion of the assets, with resultant cost escalation.

1.7 Engagement Objective(s)

The main objective of the 1064 Locomotives Acquisition project review was to assess the operational effectiveness of controls in terms of the expenditure and timelines committed in the Locomotive Supply Agreements (LSAs). Other objectives of this review included:

- Assess the reliability of project progress reporting, in terms of schedule (milestones), costing and supplier development;
- Assess the project schedule integrity (validity, completeness and accuracy); and
- Determine that project scope management and validation is governed and executed in line with the set policies and procedures and LSA.

1.8 Engagement Scope and Approach

As documented in the approved Scope Letter and in line with the approved Annual Internal Audit Plan for 2016/17 FY, this engagement was executed in line with the scope and approach agreed to with management. The following are the key highlights of the agreed engagement scope and approach:

1.8.1 Engagement Scope

The scope of the review included control effectiveness testing of the following areas:

- Cost Management and FFC
- Contracting and Contract Management
- Legal Status of Contracts
- Operational Readiness
- Regular Reporting and Warrant Management
- Risk Management
- Skills and Resource Management
- Supplier Development and Local Content

1.8.2 Engagement Approach

TIA followed a risk-based approach to ensure focus on significant risks that could prevent management from achieving their operational objectives. TIA evaluated the adequacy and effectiveness of controls in managing these significant risks down to an acceptable level and developed recommendations for enhancements or improvements where relevant.

TIA's audit approach was mainly a top-down risk-based approach, which entailed the following:

- The identification of significant risks and related controls. This was performed as part of the 1064 Health Check review in September 2016
- Evaluation of the adequacy of controls to manage related risks. This was performed as part of the 1064 Health Check review in September 2016
- Evaluation of the effectiveness of controls that are deemed to be adequate
- This Internal Audit Report, highlighting audit deficiencies and recommendations is presented to Management for their comments and actions plans
- Follow-up up adequacy (Health Check) review.

1.8.3 Scope Exclusions

Whilst we audited controls around the key processes and high risk areas agreed between TIA and Management, below are the areas that did not form part of the scope of this engagement:

- Control Adequacy assessment as this was already completed in the 1064 Health Check review performed in September 2016
- An evaluation of the likelihood of project success
- A review of the full suite of controls as prescribed per the Integrated Capital Project Assurance Framework (ICPAF), and the Project Lifecycle Process (PLP)
- Rendering a legal opinion over adequacy of contracts and contract clauses
- Specific assurance regarding engineering, design adequacy and technical specifications
- Testing of operating systems, ITGCs, networks as well as any database
- Fitness for purpose of the capital project and contracts
- OEM / TE manufacturing and related processes, or cost benchmarking.
- Detailed Supplier Development and Local Content verifications.
- Detecting inaccuracies in the documentation presented by Transnet; and
- Conducting a review of any underlying processes/controls not included in the abovementioned scope.

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1.8.4 Scope Limitations

During our review of SD and LC, the TFR Supply Chain Services (SCS) team indicated that due to confidentiality reasons TIA was not (allowed to make copies of any information pertaining to financial or other SD and LC related information. TIA were only allowed access to view the information in the presence of the TFR SCS team. TFR did however answer all TIA's questions and displayed material / supporting documentation on the screen or in hard copy where required.

1.9 Performance Improvement Observation

The 1064 Locomotive Acquisition project commenced prior to the implementation of the Transnet Programme Management Framework and Capital Operating Model.

The investment of R54bn constitutes a material part of the MDS, it also impacts on various ODs (TFR and TE (as a subcontractor)) and is based on a complex contractual structure with four OEMs with various complex objectives relating to Supplier Development and Local Content. It is therefore crucial that governance best practice principles are applied as far as practical to ensure that overall outcomes and benefits of the investment are tracked and realised during the course of execution.

TIA takes cognisance of the fact that various governance structures (e.g. TFR Loco Steerco, TE Loco Steerco and Group Loco Steerco) already exist and that these structures all contribute to overall project governance. However, Transnet should consider implementing the latest governance best practices where practically and commercially viable as per prevailing frameworks and models to further enhance overall project governance, specifically in the following key areas:

- Integrated Schedule Management: Managing an integrated schedule taking into account OEM delivery schedules as well as TE production schedules and TE / OEM sub-contractor schedules
- Integrated Cost Management
- Scope Management: Overseeing scope changes and approval across the programme and OD boundaries.
- Stakeholder Management with specific focus on a consolidated view / tracking of Supplier Development and Local Content requirements to ensure Transnet Group and MDS requirements and objectives are achieved.

1.10 Report Close-out with Management

The overall rating of this process is "Requires Improvement" which dictates that we close-out the report with Rita Roper, General Manager: Capital Programme.
Consequently, the report was discussed and closed-out with the following TFR officials:

- Frikkie Harris: TFR Project Director
- Rita Roper: TFR General Manager – Capital Programme
- Gene Beilings: TFR Executive Manager – Planning and Governance
- Lindiwe Mdletshe: Executive Manager – Sourcing
- Ravi Nair: TFR Chief Executive

We wish to inform management that a proper close-out process has been followed and that all the relevant officials have been involved in this process.

1.11 Overall Management Comments

We have held relevant discussions with TIA and we are of the view that the findings raised from this engagement are relevant and will receive appropriate attention from management. We further confirm that taking into account the recommendations raised by TIA we have co-developed improvement plans that will be instrumental in resolving the shortcomings raised by TIA.
It remains management's responsibility to implement the agreed action plans. These are detailed in the "Management Responses" column in Section 4 of this report.

1.12 Management Responsibility

Management is responsible for the establishment and maintenance of an effective system of governance to:

- Establish and communicate organisational goals and values;
- Monitor the accomplishment of goals;
- Ensure accountability and values are preserved; and
- Detection and prevention of fraud.

Management is further responsible for the establishment and maintenance of an effective system of internal control. The objectives of the system of internal control are, inter alia, to provide management with reasonable, but not absolute, assurance that:

- Risks are properly managed;
- Assets are safeguarded;
- Financial and operational information are reliable;
- Operations are effective and efficient; and
- Laws, regulations and contracts are complied with.

1.13 Agreed Next Steps

- All improvement plans will now be uploaded onto SAP GRC for resolution by management
- Management to address all the shortcomings identified and strive to implement the improvement plans within the agreed timelines
- TIA will conduct follow-up audits with the objective of providing management with assurance that the identified shortcomings have been resolved effectively
- It is management's responsibility to update the relevant Process Controls Manuals, Control Frameworks and Control Self Assessments.

1.14 Appreciation

Some initial delays were experienced with the commencement of the control effectiveness testing due to some operational challenges rendering the TFR project team unavailable to start the control effectiveness testing towards the end of 2016. Effectiveness testing commenced on 19 January 2017, with certain TFR project team members being out of the country for a two week period in March 2017 attending to urgent project related matters in China.

We wish to take this opportunity to express our gratitude to management for the support and co-operation that we received during the execution of this engagement.

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Section 2: Summary of Results

The following table illustrates the summary of the control effectiveness of the controls that were evaluated as part of this engagement:

2.1 Control Adequacy Assessment

Control adequacy assessment was performed as part of the 1064 Health Check review in September 2016 (refer to Health Check report issued 12 September 2016). During this review we only performed control effectiveness testing.

2.2 Control Effectiveness Assessment

Key Business Process	Significant Risk(s)	No. of controls evaluated	Control Effectiveness Assessment			Overall Assessment per sub-process (1)	Finding Ref. (Section 4) (1)
Cost Management, FFC, ETC and Contingency	• Financial loss due to potential payment of the incorrect Variation Orders, and payment approval exceeding authorised level of DOA. • No time or insufficient time allocated in the delivery and acceptance schedule which may result in the acceptance of defective Locomotives. • Inaccurate forecasting and non-completion of milestones (i.e. measurement thereof) which may result in incorrect accounting for work-in-progress, accruals and forecasting. • Project may not be delivered within approved ETC due to insufficient Contingency	9	8	1	0	Requires improvement	4.2.3
Contracting and Contractor Management	• There is a risk of poor performance on the project if execution roles and responsibilities are not clearly defined. • Without punitive measures for poor performance, the project runs a risk of having cost overruns and schedule delays.	3	3	0	0	Effective	
Legal Status	• Failure to manage the contracts properly may lead to contractual disputes. • The project may face delays if disputes are not resolved timeously and per contract conditions.	3	3	0	0	Effective	
Operational Readiness	• Operating divisions may not be ready for the project in terms of people, processes and systems.	3	3	0	0	Effective	
Regular Reporting and Warrant Management	• Potential non-compliance with contract clauses which may result in financial fines and penalties per the contractual agreement. • Inability to allocate clear accountability, authority and responsibility for decisions made. • Failure to meet project milestone date deadlines as per the agreed delivery and acceptance schedules which may result in potential financial fines and penalties.	7	7	0	0	Effective	

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Key Business Process	Significant Risk(s)	No. of Controls Validated	Control Effectiveness	Effectiveness Assessment: Results Improvement	Effectiveness Assessment: Design Effectiveness	Overall Assessment per sub-process	Finding Ref. (Section 4)
	• Significant project delays and potential project budget overruns due to a lack of appropriate oversight over project variations by the owner. • Failure to meet design specification requirements by the owner which may result in the need for rework, significant project delays and failure by the project to deliver project benefits. • Project delays due to inaccurate, incomplete and non-timeous reporting on key project risks, critical issues and matrices. • Non-compliance to preliminary contractual requirements may lead to delayed project execution. • Inadequate representation of all stakeholders on governance forums e.g. Steerco, etc						
Risk Management	• Failure to deliver on project deliverables due to significant project risks not being identified and/or effectively mitigated.	3		0	0		
Schedule Management and Integrity	• Failure to deliver project deliverables in accordance with the agreed delivery and acceptance schedule, contract terms, budgeted costs and agreed quality which may result in significant financial loss. • Inaccurate forecasting resulting in financial loss due to ineffective cash management.	3		0	0		
Skills and Resources	• A poorly developed and executed project resource plan may lead to additional cost and schedule overruns.	3		1	0		4.2.2
Supplier Development	• OEMs are not delivering on SD requirements. • OEM progress on Supplier Development are inaccurately reported to stakeholders.	2		0	0		
Local Content	• OEMs are not delivering on Local Content requirements. • OEM progress on Local Content reported to stakeholders may be inaccurate or unreliable.	2		0	1		4.2.1
TOTAL		13		1	1		
OVERALL EFFECTIVENESS ASSESSMENT				Requires Improvement			

2.3 Overall Control Environment Assessment

Based on our assessment of the adequacy and effectiveness of controls, our assessment of the overall control environment, limited to the scope of this engagement, is as follows:

OVERALL CONTROL ENVIRONMENT	Requires Improvement

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Section 3: Cost and Schedule Analysis

3.1 Cost Analysis

The approved budget for the 1064 Locomotives Acquisition project is R54.4bn. As at 24 March 2017, the project had approved commitments of R51.5bn, actual expenditure of R23.9bn. A detailed breakdown per OEM is provided below (all figures supplied by TFR management):

As at 31 December 2016	Current Budget (R)	Commitment to date (R)	% Commitment of approved budget	Actual Expenditure (R)	% Actual expenditure of current approved budget	Assigned	Uncommitted budget (R) (Budget less Assigned)	% Uncommitted budget
Class 22E – CSR	18 035 801 000*	18 035 801 000	100%	9 424 175 291	52%	18 035 801 000	0	0%
Class 23E – GT	13 049 210 000	13 049 210 000	100%	4 935 132 764	38%	13 049 210 000	0	0%
Class 44D – GE	8 428 690 000	8 428 690 000	100%	5 971 575 221	71%	8 428 690 000	0	0%
Class 45D – CNR	9 947 000 000	9 947 000 000	100%	1 406 374 578	24%	9 947 000 000	0	0%
Contingencies	4 954 722 000	2 129 335 548	43%	1 075 717 745	22%	2 129 335 548	2 825 386 452	57%
Total	R4 415 423 000 (N1)	R1 530 036 548	95%	23 872 973 599	44% (N2)	R1 530 036 548	R 823 386 452 (N3)	5%

N1: Overall ETC of R54.5bn was reduced due to credit note received from CSR.
N2: 19% of locomotives delivered and accepted at the time of the audit, versus 44% of costs committed.
N3: Contingency – please refer to comments in findings 4.2.3.

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3.2 Schedule Analysis

Below is a summary of progress against schedule as at 24 March 2017 (as supplied by TFR management):

Project status as at 24 March 2017	Locomotives to be supplied as per contract (A)	Planned locomotives to be delivered and accepted per schedule (B)	Actual number of locomotives delivered and accepted (C)	Variance (B-C)	% of locomotives delivered and accepted (C/A)	Additional information	Risk Status & Risk Trend
General Electric (GE) - 44D -	233	160	117	43	50%	On 24 November 2016 TFR rejected the revised schedule and additional costs proposed by GE. The original schedule as per LSA (Locomotive Supply Agreement) Schedule 2 is therefore still the agreed delivery schedule. As a result, penalties for delivery slippage have been issued to GE in 2016.	
Bombardier Transportation (BT) - 23E	240	143	0	143	0%	Due to the relocation of the production facility to Durban, a revised delivery schedule was required. At the time of the review, agreement was not yet reached with BT on the conditions attached to the revised delivery schedule. TFR is comfortable with the revised delivery schedule but did not accept the conditions (possible increase in costs) attached to the revised schedule. Negotiations are still in progress.	
China Southern Rail (CSR)-22E	359	100	80	20	22%	In June 2016 a revised delivery schedule with no increase in costs was agreed with CSR. However, due to an unfortunate safety incident the production line was closed for a period of time resulting in delivery delays. TFR had discussions with CSR and if the appropriate documentation is not received from CSR in the given time, penalties will be levied according to the contract.	

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Project status as at 24 March 2017	Locomotives to be supplied as per Contract (A)	Planned locomotives to be delivered and accepted per schedule (B)	Actual number of locomotives delivered and accepted (C)	Variance (B-C)	% of locomotives delivered and accepted (C/A)	Additional information	Risk Status & Risk Trend
China Northern Rail (CNR)- 450	337	107	0	107	0%	Due to the relocation of the production facility to Durban, a revised delivery schedule was required. In April 2017, after TFR's technical team's visit to China, CNR provided an updated delivery schedule (with no additional costs). TFR accepted the revised schedule with the first six locomotives expected to be accepted in September 2017. Final approval for the revised scheduled was submitted to the GCE in May 2017.	
Total	1 064	510	197	313	19%	▪ The revised delivery schedules agreed with the applicable OEMs (as outlined above) have thus far not resulted an increase in ETC (R54.4bn). Overall project completion is currently planned for October 2020 (excluding BT). ▪ Progress against delivery schedules are monitored on a continuous basis and remedial action implemented where applicable and reported to the relevant governance forums. However, the following potential impacts/risks remain: ▪ Investment risk on BT, given the amount spent vs. delivery to date, given their financial position. ▪ Possible additional operating cost as Transnet has to refurbish old equipment to maintain operations in the interim while the new locomotives are delivered and accepted in to operations.	

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Project status as at 24 March 2017	Locomotives to be supplied as per contract (A)	Planned locomotives to be delivered and accepted per schedule (B)	Actual number of locomotives delivered and accepted (C)	Variance (B-C)	% of locomotives delivered and accepted (C/A)	Actions	Information	Risk Status & Risk Trend
						• Further delay slippage and/or any potential claim/ard/or escalations may result in the remaining contingency (R2.8bn) not being sufficient to complete the project within the current approved ETC (Estimate Total Cost The residual risk remaining to the project is therefore considered to be high. Also refer to section 1.2 and 4.2 for further details.		

Legends:

High Risk
Medium Risk
Low Risk

↑: Risk trending up
↓: Risk trending down
↔: Risk stable

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Section 4: Detailed Findings

4.1 Control Adequacy Findings

Control adequacy assessment was performed as part of the 1064 Health Check review in September 2016 (refer to Health Check report issued 12 September 2016). During this review we only performed control effectiveness testing. Hence we don't have specific Control Adequacy findings in this report.

4.2 Control Effectiveness Findings

Based on the evaluation of the effectiveness of controls relating to significant risks, the following effectiveness findings were identified during the engagement:

No.	Key Process Risk exposure (observation)	Priority rating	IA Recommendation	Management Response
4.2.1	**No Local Content verification has been conducted to date on OEMs – potential reputational risk to Transnet** **Risk** The Local Content requirements imposed by the Department of Trade and Industry and contractually agreed with OEMs may be behind schedule or not achieved on an overall basis by OEMs, resulting in reputational damage for Transnet and the OEMs. **Control (Criteria)** • Local content of 55% on Diesel Locomotives and 60% on Electric Locomotives by value of the contracts have been agreed with all OEMs • The DTI issued notice *"invitation and evaluation of bids based on a stipulated minimum threshold for local production and content for the rail rolling stock sector"* signed by the Minister of Finance on 17/07/2012 which states: 7. POST AWARD AND REPORTING REQUIREMENTS 7.1. Once bids are awarded, the dti must be: (i) notified of all the successful bidders and the value of the contracts; and (ii) provided with copies of the contracts, the SBD/MBD 6.2 Certificates together with the Declaration D submitted by the successful bidders. 7.2 The purpose of the requirements of paragraph 7.1 above is for the dti to among others conduct compliance audits with a view to monitor the implementation of the industrial development strategies. 7.3 Contractors must not be allowed to sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold. 7.4. Where, after the award of a bid, contractors experience challenges in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AOMA provide directives in this regard.		TIA recommends that: • Management engage with the various stakeholders (DPE, DTI, SABS etc) to ensure that OEM progress against LC requirements are monitored and verified to ensure LC objectives are achieved and potential reputational risk to Transnet is managed appropriately.	Management Comments ▪ Transnet complied with the requirements of clause 7.1 of the instruction note. However, as the process owner we have developed an internal reporting tool which comes with a risk of the information not being aligned with what will be reported by SABS. Therefore, the information received from the monitoring tool will be for internal Transnet use only. The outcome of the verification is to provide assurance on the current status of the OEMs/Suppliers LC commitments. Agreed Management Action • A decision has been made by the Transnet Group Locomotives Steering Committee for TFR to commence with LC verification (OEMs/Suppliers local content performance) whilst Transnet wait

No.	Key Process Risk Exposure (observation)	Priority rating	Recommendation	Management Response
	Observation (Condition) The Local Content requirements imposed by the Department of Trade and Industry and contractually agreed with OEMs have not been verified externally or by Transnet: • Clause 7, 7.1 – 7.4 clearly stipulates the LC reporting requirements and role of the DTI and the Accounting Officers (AO)/Accounting Authorities (AA) (i.e. Transnet). • Contractually, the SABS was appointed by the DTI to verify local content at a 3 Tier level, but enquiries at OEMs and Transnet by TIA indicate that no such verification has been conducted to date by the SABS, to verify whether or not contractors are experiencing problems as per the DTI notice. **Root Cause** • Lack of an integrated assurance plan for Local Content • SABS LC verification processes yet to commence **Potential Impact (Effect)** • The agreed Local Content commitments imposed by the DTI may not materialise, leading to lost development opportunities for the country, and reputational damage for Transnet.			for the SABS audit processes to commence. • A working group has been formed which consists of DTI (SABS), DPE and Transnet to align on the monitoring, reporting and auditing of local content going forward. **Responsible Person** Lindiwe Mdletshe – GM: SCS Sourcing **Implementation Date** June 2017 DTI (SABS), DPE and Transnet working group engagement - ongoing
4.2.2	**Further project delays may result in critical skills shortages** **Risk** • Skills shortages impacting project delivery within budget and schedule. **Control (Criteria)** • The potential impact that project delays may have on critical skills availability is assessed continuously throughout the project's lifecycle	Priority 4	I recommends that: • Management continue to assess the impact of critical skills availability in the event of project delays and implement remedial action where required. This should include formal succession planning	**Management Comments** Sufficient plans are in place to take over from specific personnel when they retire. Succession planning has been in place for a period of time to mitigate the risk. **Agreed Management Action** The project phase where these critical skills were required is already either completed or is at such a stage where

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No.	Key Process Risk Exposure (Observation)		TIA Recommendation	Management Response
	Observation (Condition) TIA noted several of the current project team members will be close to retirement at planned project completion (Oct 2020), which may leave the project team vulnerable to a lack of skills. The table below is examples of individuals that will have less than 3 years of service left after 2018:		and skills transfer programmes where required.	handover can be done without unnecessary additional risk. Design The design phase for all four locomotive classes where some of these key critical skills were required have already been completed. Therefore no further risk exists. Test Tests for the Class 22E and Class 44D have been completed and the tests for Class 23E and Class 45D is already at an advanced stage such that it can be completed without contributions from the relevant individuals. For this phase of the programme, which is extremely important for the successful implementation of the programme, tasks will be handed over to other team members who have performed an integral role alongside the retiring employees throughout the project. **Responsible Person** Mr Frikkie Harris Mr John Kannemeyer **Implementation Date** March 2018

Surname	First Name	Current Age (2017)	Years to Retirement (63 yrs)	Years of Service Remaining after 2018	Position
Downward	Trevor	62	1	0	Snr Locomotive Specialist
Uys	Christo	61	2	1	Manager
Pretorius	Wessel	60	3	2	Snr Engineer
Breytenbach	Nicolaas	60	3	2	Snr Technologist
Upfold	Jeffrey	60	3	2	Snr Engineer
Pansegrouw	Ebert	60	3	2	Technician

Root Cause
- Continued project delays coupled with aging senior workforce
- Informal succession planning coupled with sufficient staff availability within TFR

Potential Impact (Effect)
- Possible shortage of critical skills in the event of project delays that may result in an increase in costs to retain/ obtain the skills required (having to appoint consultants at a premium).

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No.	Key Process/Risk Exposure (observation)	Priority Rating	TIA Recommendation	Management Response
4.2.3	**Potential claims and escalations may result in the remaining contingency not being sufficient to complete the project within the current approved ETC (Estimated Total Cost)** **Risk** • Project may not be delivered within approved ETC **Control (Criteria)** • FFC (including contingency) is assessed regularly during the project for any potential risks that will require an increase in ETC **Observation (Condition)** • On 25 May 2014 the ETC for the acquisition of the 1064 Locomotives for the General Freight Business was increased from R38.6bn to R54.4bn, which includes a contingency amount of R4.9bn. To date R2.1bn of the contingency has been committed, leaving headroom of only R2.8bn (amounting to 5% of ETC) for contingency on the project, before taking the items below into account. • Through discussion with management, the following items may require allocation from the remaining contingency: o Provision for spares for locomotives and potential damages to rail infrastructure during prototype and acceptance testing: initial estimates are approximately R1.2bn for all four suppliers (not yet committed) o Costs relating to a simulators for the purpose of training locomotive crews. Initial estimates are between R150m to R200m (not committed, but likely) o Although an amount of R1.2Bn is included in the committed contingency amount for additional costs relating to the CNR and BT production facility move to Durban, the risk relating to BT for additional funding may increase further if BT's current financial situation does not improve, and TFR and BT cannot reach agreement on the conditions attached to the revised schedule. This is mooted to be a significant amount (R2.3bn).	Priority 2	TIA recommends that: • Management should continue to assess the likelihood of potential costs relating to claims, possible escalations due to further schedule delays and any other costs not originally included in the contracted pricing, to determine the adequacy of the remaining contingency. • Any possible increase in the Contingency (resulting in an increase in ETC) should be reported to the relevant stakeholders and approving authorities immediately for notification and approval if required.	**Management Comments** The most significant risk is the mooted R 2.3bn potential increase in cost from BT. This can only materialise if substantiated by fact based credible evidence. **Agreed Management Action** TFR will continue to manage by close engagement, as per the practice followed to date, and as prescribed in the Locomotive Supply Agreement with BT. **Responsible Person** TFR Steerco Mandated TFR negotiating team Transnet Group Steerco **Implementation Date** Ongoing.

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No.	Key Project Risk exposure (description)		Priority rating	IA Recommendation	Management Response
	• Consultants have been appointed at additional cost by Transnet Group to calculate the net Transnet Group position if penalties were be enforced by TFR on OEMs where applicable due to schedule and other delays. onsidering the potential knock-on effect on the contractual relationship between C vis and TE. Root Cause • . • The PROM methodology was not yet rolled out at th outset of this project, hence the standard 10% contingency was used. Potential Impact (Effect) • Given that: o Overall project delivery is at very early stages of xecution (19% delivered at the time of the audit) o There is delivery slippage by GE and CSR; and o Inability to reach agreement on conditions attach d to the BT revised schedule, there is a risk that the remaining contingency may be nder pressure for the remainder of the project. • Reputational risk. • Inflated asset base / possible impairment.				

Refer to Section 5 for the rating criteria applied to rate individual f lings.

Section 5: Definitions

The tables below give the definitions for the Overall Report Classifications and Control Classifications. The classifications are based on TIA's view of the area under review and by definition involves the application of judgement which takes into account both subjective and objective issues.

5.1 Overall Report Classifications

TIA OVERALL REPORT RATING FRAMEWORK		
Satisfactory	Requires Improvement	Unsatisfactory
Basis of classification • Overall the controls are adequately designed and/or functioning as intended to support the achievement of the KBP's objectives. • Certain control concerns exist but these can be corrected by management in the normal course of business and do not present an immediate threat to the control environment of the KBP. • The residual risk exposure of the controls where findings have been identified fall within Transnet's risk appetite.	**Basis of classification** • The majority of the controls are adequately designed and/or operating effectively, however there are instances where the control design and/or control effectiveness needs to be improved to support the achievement of the KBP's objectives. • A number of significant control concerns exist in certain critical areas, that should be corrected by management in the short to medium term as it could present a threat to the control environment of the KBP if not addressed in a timely manner. • The residual risk exposure for controls where findings have been identified, when considered together, exceeds Transnet's risk appetite and requires improvement.	**Basis of classification** • The majority of the controls are either inadequately designed and/or are not operating effectively. • The significance of the control concerns relating to the adequacy and/or effectiveness of controls presents an immediate threat to the control environment of the KBP and should immediately be addressed by management. • The residual risk exposure of the controls where findings have been identified, when considered together, far exceeds Transnet's risk appetite and should be corrected as a matter of urgency.

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5.2 Individual Finding Classifications

Classification of Individual Findings		
Low Priority (LP)	**Medium Priority (MP) – High Priority (HP)**	
Control Adequacy Findings		
▪ The control exists, but requires minor improvements. ▪ Certain minor aspects of the control is not adequately designed. ▪ Accountability for the control execution is defined to some extent but can be improved.	▪ The control exists, but requires significant improvement. ▪ Certain significant aspects of the control is not adequately designed, e.g. while there is segregation of duties, authorisation limits are not considered. ▪ The control is detective without a compensating preventative control. ▪ Accountability for the control execution is inadequately defined.	▪ No control exists to manage / mitigate a risk or treat the root cause of the risk (control gap). ▪ The existing control is not adequately designed in relation to the associated risk. ▪ Accountability for the control execution is not defined. ▪ The control design does not reflect adequate segregation of duties, completeness, accuracy and validity.
Control Effectiveness Findings		
▪ The exception rate based on the sample of instances evaluated is between 0.1% – 40%. ▪ Findings identified are of a housekeeping nature and shall not be reportable to Audit Committee & the Board but will be reported to the relevant process owner and line management.	▪ The exception rate based on the sample of instances evaluated is between 40.1% – 70%. ▪ Isolated significant weaknesses in the control and/or instances of non-compliance with internal controls were identified which could, if not addressed timely, have a significant and pervasive financial and/or operational (strategic, reputational and compliance) impact on the achievement of the KBP's objectives.	▪ The exception rate based on the sample of instances evaluated is between 70.1% – 100%. ▪ Significant weaknesses in the control and/or instances of non-compliance with internal controls identified which could, if not addressed immediately, have a significant and pervasive financial and/or operational (strategic, reputational and compliance) impact on the achievement of the KBP's objectives.
▪ "Priority 4" - These are low priority issues that are heavily supported by informal and unsustainable ad hoc compensating controls or their recurrence pose an indication of emerging risk. These findings should be resolved within the medium to long-term being 90 days. ▪ "Priority 5" - Low priority issues are matters of a "house-keeping" nature noted during the course of the	▪ "Priority 3" - Instances of weaknesses in the design and/or effectiveness of process controls and/or instances of non-compliance with internal controls. The finding indicates a shortcoming that requires improvement from either a design adequacy or operational effectiveness point of view. These findings should be resolved within the short to medium-term being 60 days.	▪ "Priority 1" - Significant weaknesses in the design and/or effectiveness of process controls and/or instances of non-compliance with internal controls. The finding indicates an inadequate or ineffective shortcoming that requires management's immediate attention and allocation of resources within reasonable constraints. These findings should be resolved within the short-term being 30 days.

Classification of Individual Findings		
Low Priority (LP)	Medium Priority (MP) – High Priority (HP)	
engagement. These findings should be resolved within the medium to long-term being 120 days.		▪ "Priority 2" - Significant weaknesses in the design and/or effectiveness of process controls and/or instances of non-compliance with internal controls. The finding indicates an inadequate or ineffective shortcoming that requires management's immediate attention and allocation of resources within reasonable constraints. These findings should be resolved within the short-term being 30 days.

5.3 Control Adequacy Evaluation

Classification of Control Design (Adequacy Assessment)		
Adequate	Requires Improvement	Inadequate
▪ A control exists and is properly documented with reasonable efforts to ensure continuous improvement. ▪ The control is adequately designed to mitigate the related risk (where applicable, the control is automated and preventative). ▪ Accountability for the control execution is adequately defined. ▪ The control design reflects adequate segregation of duties, completeness, accuracy and validity.	▪ The control exists, but requires improvement. Examples could include the following: ▪ The control is not documented; ▪ The control is not automated. ▪ Certain aspects of the control is not adequately designed, e.g. while there is segregation of duties, authorisation limits are not considered. ▪ The control is detective without a compensating preventative control. ▪ Accountability for the control execution is inadequately defined.	▪ No control exists to manage / mitigate a risk or treat the root cause of the risk (control gap). ▪ The existing control is not adequately designed in relation to the associated risk. ▪ Accountability for the control execution is not defined. ▪ The control design does not reflect adequate segregation of duties, completeness, accuracy and validity.

5.4 Control Effectiveness Evaluation

Classification of Control Effectiveness		
Effective	Requires Improvement	
▪ The control is functioning as intended to mitigate the related risk(s), e.g. timely, in terms of the correct Delegation of Authority (DoA), independently monitored, etc. ▪ Evidence to support the functioning of the control is demonstrated.	▪ Certain elements of the control are not functioning as intended to mitigate the related risk(s), e.g. non-timely, not in terms of the correct DoA, not independently monitored, etc. ▪ Evidence to support the functioning of the control is not always demonstrated. ▪ The control is not always operating consistently.	▪ The control is not functioning as intended to mitigate the related risk(s), e.g. not timely, not in terms of the correct DoA, not independently monitored, etc. ▪ Evidence to support the functioning of the control is not demonstrated.
The above control effectiveness assessment is equivalent to "Satisfactory" in terms of Transnet's Enterprise Risk Management Standards.	The above control effectiveness assessment is equivalent to "Requires Improvement" in terms of Transnet's Enterprise Risk Management Standards.	The above control effectiveness assessment is equivalent to "Unsatisfactory" / "None" in terms of Transnet's Enterprise Risk Management Standards.

Appendix 57

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TRANSNET

MEMORANDUM

To: Siyabonga Gama, Acting Group Chief Executive

From: Ravi Nair Acting Chief Executive: Transnet Freight Rail

SUBJECT: REQUEST FOR ACTING GCE TO APPROVE THE RELOCATION OF BOMBARDIER TRANSPORTATION SA TO TE'S FACILITIES IN DURBAN FOR THE MANUFACTURE OF 240 23E ELECTRIC LOCOMOTIVES

PURPOSE:

1. Request the Acting Group Chief Executive (GCE) to:
   a) Note the final outcome of the negotiation for the relocation to Durban with Bombardier Transportation SA (BT);
   b) Approve variation order for the relocation to Durban to a maximum value of R 618 457 125.00 with BT and
   c) Sign-off a letter to be issued to BT to accept their final proposal.

BACKGROUND:

2. On the 17 March 2014, Transnet SOC limited, acting through its Transnet Freight Rail Division (Transnet Freight Rail), entered into various locomotive supply agreements with CSR, CNR, GE and BT after negotiations which started in February 2014.

3. During negotiations BT and CNR were informed that they will use the Durban Transnet Engineering (TE) facility for the construction of the locomotives which were allocated to them. The Durban facility and the move were introduced to both CNR and BT after the tender had closed and evaluations were done.

4. On the 10 June 2015, AGCE approved the team to negotiate the relocation to DBN with Bombardier Transportation SA (BT).

5. TIA was present during the negotiation and are in the process of finalizing their report.

MOTIVATION:

6. Bombardier's final offer to Transnet is an additional discount of 2,5% and the following cost which has been absorbed:

   a) Further price escalation
   b) Financing cost of own additional efforts, suppliers and already accumulated stock and,
   c) Claims from the suppliers that BT has already rescheduled and delayed.

A) Further price escalation

- The cost of the further price escalation of material/ labour and other expenses were evaluated at 4% due to the additional time for deliver
- 2,5% was due to the increase of the Euro/ Rand ratio over the last year since the instruction to change TE facility was received from TFR and since BT submitted the first Notice of Company Proposed Variation on the subject.
- The additional financing cost due to our ongoing expenses on internal efforts and cost from our suppliers in addition to the logistics and warehousing cost (negative Cash Flow) create an additional 2,5% (two and half) of the costs.
- In addition to the escalation mentioned above, claims from the suppliers were costed at 1% (one percent).

If the Variation Order is not issued by 24 July 2015, the value of BT's Notice of Company Proposed Variation Order will increase by 20%.

BT's current offer represents a total discount of 32,5% (thirty two and half percent) when taking into consideration the indicated potential price increase of approximately 20% (twenty percent) in instances where by the Notice of Company Proposed Variation or the VO is not approved by TFR by 24 July 2015 (validity of BT's offer). The 32,5% (thirty two and half percent) is the sum of the 10% absorbed cost of further price escalation, the abovementioned 20% increased price after the 24 July 2015 and a further 2,5% discount given by BT.

7. The following payment terms have been proposed by BT in accordance with Section 1.2 of Schedule 1 (Pricing and Payment Terms) of the Locomotive Supply Agreement:

   - The first two Milestones (The Effective Date and 6 months after Effective Date) amounting to a combined total of 18% of the Total Contract Price of all Locomotives have already been achieved, due and will be invoiced by BT once the VO is issued. The third Milestone Payment to the value of 9% of the Total Contract Price of all Locomotives will be due 17 Months after Effective Date and will be invoiced accordingly.

8. Caveats:

1. Definition – TE Facility

As it reads currently

"Koedoespoort, Gauteng;"

Amendment to Definition – TE Facility

"Durban, Kwa-Zulu Natal"

2. **Clause 9.1.1**

As it reads currently clause 9.1.1

*"If the Acceptance of a Locomotive occurs after its Scheduled Acceptance Date (a **Delay**), the Contractor shall (subject to Clause 9.2 (Delay Penalty Cap), pay a Delay Penalty to the Company in respect of that Delayed Locomotive at the Applicable Rate. A Delay Penalty grace period of 3 months shall apply to the initial 6 (six) Locomotives Scheduled Acceptance Date".*

Amendment to clause 9.1.1

"If the Acceptance of a Locomotive occurs after its Scheduled Acceptance Date (a Delay), the Contractor shall (subject to Clause 9.2 (Delay Penalty Cap), pay a Delay Penalty to the Company in respect of that Delayed Locomotive at the Applicable Rate. A Delay Penalty grace period of 3 (three) months shall apply to the initial 35 (thirty-five) Locomotives Scheduled Acceptance Date. An additional grace period of 2 (two) months shall apply to the remainder of the Fleet"

BUDGET IMPLICATIONS:

9. The Board at its meeting of 28 May 2014 approved an amount of R4,9 billion in contingencies as part of the revised ETC.

10. The contingencies budget were to cover the following items:
    a) Capital spares beyond the warranty period,
    b) Variation orders and options (such as electronically controlled pneumatic braking and wire distributed power etc.),
    c) Relocation of the programme to TEs Durban facilities.

11. The current status of the utilisation of the contingencies budget is as follows:

Description	R'billion
Contingencies approved	4,954
Variation orders approved to date	1,200
Relocation of BT	618
Relocation of CNR	647
Unutilised portion of contingencies	**2,519**

12. Consequently an amount of R 618 457 125.00 is part of the contingencies budget; included in the final approved ETC the project.

RECOMMENDATION:

13. Request the Acting Group Chief Executive (AGCE) to:
    a) Note the final outcome of the negotiation for the relocation to Durban with Bombardier Transportation SA (BT);
    b) Approve variation order for the relocation to Durban to a maximum value of R 618 457 125.00 with BT and
    c) Sign-off a letter to be issued to BT to accept their final proposal.

Compiled by:

Lindiwe Mdletshe
Senior Manager: Strategic Sourcing Locomotives
Transnet Freight Rail
Date:

Recommended/~~Not recommended~~

Ravi Nair
Acting Chief Executive
Transnet Freight Rail
Date: 22/07/2015

Recommended/ ~~Not recommended~~

Ndiphiwe Silinga
Group Executive: Legal & Compliance
Date: 22/07/2015

Recommended/ ~~Not recommended~~

Anoj Singh
Group Chief Financial Officer
Date: 22/07/15

Recommended/ ~~Not recommended~~

Thamsanqa Jiyane
Chief Executive: TE
Date: 22/07/15

Recommended/ ~~Not recommended~~

Garry Pita
Group Chief Procurement Officer
Date: 22/7/15

Approved/ ~~Not approved~~

Siyabonga Gama
Acting Group Chief Executive
Date: 2015.07.23

Appendix 58 1147

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TRANSNET

MEMORANDUM

To: Siyabonga Gama, Acting Group Chief Executive

From: Ravi Nair, Acting Chief Executive: Transnet Freight Rail

SUBJECT: REQUEST FOR ACTING GCE TO APPROVE THE RELOCATION OF CNR ROLLING STOCK SOUTH AFRICA (CNR) TO TE'S FACILITIES IN DURBAN FOR THE MANUFACTURE OF 233 CLASS 45D ELECTRIC LOCOMOTIVES

PURPOSE:

1. Request the Acting Group Chief Executive (GCE) to approve the following:
   a) The team to negotiate the relocation to Durban with CNR.
   b) Variation order in order to finalise the relocation of the programme for the construction of 233 Class 45D locomotives to Durban to a maximum value of R669 784 286. Separate submission has been prepared for BT.
   c) Letter to be issued to CNR to commence negotiation for the relocation of the programme.

BACKGROUND:

2. On the 17 March 2014, Transnet SOC limited, acting through its Transnet Freight Rail Division (Transnet Freight Rail), entered into various locomotive supply agreements with CSR, CNR, GE and BT after negotiations which started in February 2014.

3. During negotiations BT and CNR were informed that they will use the Durban Transnet Engineering (TE) facility for the construction of the locomotives which were allocated to them. The Durban facility and the move were introduced to both CNR and BT after the tender had closed and evaluations were done.

4. CNR and TE have completed the detailed assessments in terms of the move to Durban and have submitted a joint quotation for the move to Durban.

5. Refer to Annexure AA for the detailed report of the assessment and Annexure A for updated costing.

6. A team will be constituted to negotiate the commercial terms and conditions of the relocation programme.

7. The team will comprise:
   a) Group Chief Financial Officer
   b) Chief Executive: TE
   c) Group Head: iSCM
   d) Group Executive: Legal & Compliance

8. The team will determine an approach that will yield benefits for both Transnet and the OEMs by:
   a) Quantifying different negotiations levers and the reasons for a revised pricing and associated impacts.
   b) Review the accuracy and assumptions in the models to inform the negotiation.

9. Final outcomes will be approved by the GCE in terms of the Board approved delegation of authority for the 1064 transaction.

10. The final outcomes will result in an amendment to the original contracts which will require GCE sign off.

11. The negotiation and final outcome will be subject to the TIA High value tender process as it was an original requirement of the Board of Directors.

MOTIVATION:

12. CNR's original offer to Transnet and the signed contract was based on use of Koedoespoort for final assembly and testing of the locomotives.

13. In order to be able to move operations from Koedoespoort to Durban, there are a following considerations that will drive cost:
    - Labour costs
    - Material costs
    - Operational and logistical effects
    - Technical support
    - Physical transportation of materials and resources
    - Incremental warehousing costs
    - Financing and risk costs due to time constraints and delays.

14. Each of these areas carry a substantial weight on the total cost of relocation, considering the move from a skilled factory with high-end technology in a nationally-central location to an environment where locomotive manufacturing skills are limited and supply of manufacturing engineers is limited. Added to that, being the largest industrial port in South Africa, industrial property is highly sought after, especially in and around railway areas due to the high traffic on the railway lines between Durban and Johannesburg.

15. The largest non-operational and logistical cost faced is also the 4-month delay in production, which is placing substantial currency-hedging risk, import and inflationary risk, insurance, and training costs.

16. Over and above the costs associated with the move to Durban, there will also be ancillary benefits in using the same team to relocate as it will be running the day-to-day operations in Durban. This will minimise team friction, hand-over wastage and delays, lack of accountability and a host of expertise-related risks

BUDGET IMPLICATIONS:

17. The Board at its meeting of 28 May 2014 approved an amount of R4,9 billion in contingencies as part of the revised ETC.

18. The contingencies budget were to cover the following items:
    a) Capital spares beyond the warranty period,
    b) Variation orders and options (such as electronically controlled pneumatic braking and wire distributed power etc.),
    c) Relocation of the programme to TEs Durban facilities.

19. The current status of the utilisation of the contingencies budget is as follows:

Description	R billion
Contingencies approved	4,954
Variation orders approved to date	(1,200)
Relocation of BT	(634)
Relocation of CNR	(670)
Unutilised portion of contingencies	**2,450**

20. Consequently an amount of R69 784 286 is part of the contingencies budget, included in the final approved ETC the project.

DELEGATION OF AUTHORITY:

21. On 24 January 2014, at a Special meeting of the Board of Directors, it was resolved that the DOA be given to the GCE to sign, approve and conclude all necessary documents to give effect to the resolution approving the acquisition of the 1064 locomotives (Annexure B).

22. As a result of the Board of Directors approving the 1064 locomotive transaction and subsequent increase in ETC, together with the delegation of authority granted to the GCE, the GCE has the authority to approve variation orders which will include the move to Durban.

23. Annexure B contains a memo from the Group Executive: Legal & Compliance that confirms that the GCE has the delegation to exercise this option.

RECOMMENDATION:

24. Request the Group Chief Executive (GCE) to approve the following:
    a) The team to negotiate the relocation to Durban with CNR.
    b) Variation order in order to finalise the relocation of the programme for the construction of 233 Class 45D locomotives to Durban to a maximum value of R669 784 286. Separate submission has been prepared for BT.
    c) Letter to be issued to CNR to commence negotiation for the relocation of the programme.

Compiled by:

DOC ATTACHED

Lindiwe Mdletshe
Senior Manager: Strategic Sourcing Locomotives
Transnet Freight Rail
Date:

Recommended/Not recommended

DOC ATTACHED

Ravir Nair
Acting Chief Executive
Transnet Freight Rail
Date:

Recommended/ Not recommend d

DOC ATTACHED

Ndiphiwe Silinga
Group Executive: Legal & Compliance
Date:

Recommended/ ~~Not recommended~~

Anoj Singh
Group Chief Financial Officer
Date: 26/05/15

Approved/ Not approved

Siyabonga Gama
Acting Group Chief Executive
Date: 2015.06.09

RECOMMENDATION:

21. Request the Group Chief Executive (GCE) to approve the following:
    a) The team to negotiate the relocation to Durban with CNR.
    b) Variation order in order to finalise the relocation of the programme for the construction of 233 Class 45D locomotives to Durban to a maximum value of R 635 851 786.
    c) Letter to be issued to CNR to commence negotiation for the relocation of the programme.

Compiled by:

Lindiwe Maleshe
Senior Manager: Strategic Sourcing Locomotives
Transnet Freight Rail
Date: 19/05/2015

Recommended/Not recommended

Ravi Nair
Acting Chief Executive
Transnet Freight Rail
Date:

Recommended/~~Not recommended~~

Ndiphiwe Sibinga
Group Executive: Legal & Compliance
Date: 19/05/2015

Recommended/~~Not recommended~~

Anoj Singh
Group Chief Financial Officer
Date: 19/5/15

Approved/Not approved

Siyabonga Gama
Acting Group Chief Executive
Date:

I need clarity on

(1) Does this apply to both CNR & BT?

(2) The Amount referred to of R635M is still under negotiation

(3) How does this relate to the delegation by the ADC/Board for me to deal with this matter as there is no reference to it in this memo?

(4) Approved on the basis that the limit is 3 is not exceeded & I am informed of final negotiation outcomes.

CNR CONSORTIUM

11 March 2014

Attention: Undiwe Nidi[illegible]
Transnet Freight Rail
Acquisition Council

465 New Diesel Locomotives for General Freight – Impact of Locating in Durban

Dear Undiwe and Garry

Further to our previous email in this regard. Following the request from TFR for CNR Consortium to consider the Durban facilities for manufacture of locomotives, the following calculations were made:

IMPACT OF MANUFACTURING IN DURBAN VS JOHANNESBURG

TRANSPORT COSTS

	Saving	Extra Cost	Comment
Engine		R 8 000.00	Engine imported but testing done in JHB
Propulsion System		R 16 000.00	ABB is located in JHB. 40% is imported portion, assembly in JHB
Brakes		R 8 000.00	Knorr Bremse located in JHB.
Chinese components supplier	R 8 000.00		Imported components from Dalian
Locomotive Gears		R 4 000.00	Based in JHB
Air Conditioner		R 4 000.00	Based in JHB
Wheels + Axles	R 8 000.00		Imported components
Refrigerator		R 500.00	Based in JHB
U-tubes and gear case	R 4 000.00		Rotacon based in Durban
Communications equipment		R 200.00	Located in JHB
Total	R 20 000.00	R 40 700.00	
Difference per locomotive		R 20 700.00	
Extra Cost on Locomotives		R 4 077 900.00	

Care of: Global House, 50 Tulbagh Road, Rompton Park 1619
P.O. Box 10285, Aston Manor, Kempton Park, 1619

Tel: +27 11 230 19[illegible]
Fax: +27 11 936 1[illegible]
Email: Rowlan@globalgro[illegible].org

Appendix 60 1153

TRANSNET

To:
Mr Siyabonga Gama
Group Chief Executive
Transnet SOC Ltd

SUBJECT:

HVT- NEGOTIATIONS FOR DURBAN RELOCATION (CNR: CNR CONSORTIUM AND BT: BOMBARDIER)

For your approval/signature

COMMENTS / NOTES:

Eddie Thomas / Clarry Pita,
Kindly ensure that all information that was required for the HVT report is provided & made available to the CAE in order for the HVT to finalize its report.
SG
2017.06.08

From: Ms Mmathabo Sukati
Chief Audit Executive
Date: 7 June 2017

For collection, please contact Thobeka- 4217

TRANSNET
2017 -06- 07
Office of the Group Chief Executive
RECEIVED 31667wh

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1990/000900/30

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2001

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TRANSNET

www.transnet.net

MEMORANDUM

To: Siyabonga Gama, Group Chief Executive

From: Transnet Internal Audit

Subject: HVT – Negotiations for Durban Relocation (CNR: CNR Consortium and BT: Bombardier)

BACKGROUND:

1. Transnet Internal Audit (TIA) received a series of invitations from Transnet Freight Rail (TFR) to attend the Durban Relocations Negotiations as part of the extended HVT process.

PURPOSE:

2. The purposes of the meetings was for TIA to observe the processes followed during the meetings of the relocations negotiations and provide assurance that the process followed was compliant with the PPM requirements.

   The meeting invites were received post the Negotiations and Evaluations gateways for the 1064 project, which TIA was involved in as part of the HVTP gateway review process. The final reports for both the Evaluations and Negotiations gateways were issued as required per the HVT methodology.

DISCUSSION:

3. **Observations**

The following sequence of events are TIA's observations in relation to the Durban Relocation Negotiations. These are limited to the extent of the information shared with TIA during the respective meetings.

- **<u>19 June 2015</u>**

The meeting was held at OR Tambo International Airport. In attendance were the following bidders:

- BT: Bombardier
- CNR: CNR Consortium

At the meeting, the Transnet Group Chief Financial Officer (GCFO) requested both bidders to submit their proposals for the cost implications of manufacturing out of Durban. A follow up meeting was then scheduled for 23 June 2015 for further negotiations.

- **Event Conclusion:**

  TIA noted no deviations to the PPM requirements.

- **23 June 2015**

TIA was copied in an email sent by the TFR SCM Senior Manager to Transnet Management with the CNR proposal attached for Transnet Management to review and comment. The email further mentioned the postponement of the meeting scheduled for the day as well as that BTs proposal was still outstanding. At this stage, TIA did not review the proposal, as this is not required per the TIA HVT methodology.

- **Event Conclusion:**

  No work was performed by TIA at this stage, thus we cannot conclude on the adequacy of the proposal document.

- **25 June 2015**

TIA was copied in an email from the TFR Finance Executive, addressed to the TFR SCM Senior Manager with comments from his review.

- **Event Conclusion:**

  No work was performed by TIA at this stage, as TIA is required to be present at an evaluation sitting where the proposal is evaluated by Management. TIA would then conclude on whether the process followed is in line with the PPM.

- **8 July 2015**

TIA received an invite for a follow up meeting with TFR Management and Bidders. This meeting was scheduled for 10 July 2015.

- **Event Conclusion:**

  No work was performed by TIA at this stage, as TIA is required to be present at an evaluation sitting where the proposal is evaluated by Management. TIA would then conclude on whether the process followed is in line with the PPM.

- **10 July 2015**

A meeting was scheduled for 10 July 2015 with BT.
An email was forwarded to TIA by the GCSCO with the BT proposal attached. On the same day TIA was copied in an email from GCSCO addressed to the TFR Senior Manager. In the email, the GCSCO requests the following from the TFR Senior Manager:

- to update the memo which should be sent to the Acting Group Chief Executive (AGCE) for approval of the CNR and BT proposals
- to update letters from AGCE to CNR and BT for approval accepting their proposals in order to save time.

He further requested the following:

- that should the management team copied in the email be satisfied with the proposals, management can then effect urgent sign off; and
- the TFR Senior Manager to ensure that TIA's sign off is included in the memo.

TIA was however, not provided any documentation i.e. memo, letters etc for review, even after subsequent informal follow up with the TFR Senior Manager.

- **Event Conclusion:**

  No work was performed by TIA at this stage, as TIA was not invited to a negotiation sitting to provide assurance on the negotiation process.

- **14 July 2015**

TIA was copied an email on 14 July 2015, from the GCSCO, to Group Legal, requesting their review of the legal clauses and caveats in both proposals.

- **Event Conclusion:**

  No work was performed by TIA at this stage. TIA is not expected to provide assurance on requests for Legal reviews.

- **15 July 2015**

On the 15 July 2015, TIA was copied in an email from the TFR SCM Senior Manager informing CNR that their request for an extension was denied and that their responses were required by the 16 July 2015 at 12h00.

- **Event Conclusion:**

  No work was performed by TIA at this stage. TIA was not informed when the bidder was requesting an extension.

- **16 July 2015**

On the 16 July 2015 CNR copied TIA in an email addressed to the TFR Senior Manager, requesting an extension.

No other communication or documentation was received from Management regarding the Durban Relocation Negotiations.

- **Event Conclusion:**

  No work was performed by TIA at this stage. TIA did not receive a request to review the reasons for extension.

FINANCIAL IMP ICATIONS:

4. N/A

BUDGET:

5. N/A

CONCLUSION:

6. TIA was not nvited for subsequent negotiation meetings where negotiations on relocat on costs were discus ed with the bidders in attendance, as required per the HVT methodology.

7. Despite the ICSCO's request for TIA to sign off on the memo that was to be sent to the GCE for approval, TI was not provided with the memo or the outcome of the negotiations or t letters of acceptance f the proposals by the AGCE.

8. Based on TI 's limited involvement in the process indicated above, a formal report to in icate adequacy ar 1/ or effectiveness of the processes undertaken in the Durban Relocation n gotiations could not be produced.

Compiled by:

Emma Molotsane
TIA HVT Manager
Date: 7/Oct/2017

Supported by:

Thato Mahlamvu
TIA SICX Account Lead
Date: 07/Oct/2017

Noted by:

Mmathabo Sukati
Chief Audit Executive
Date:

Noted by:

Siyabonga Gama
Group Chief Executive
Date: 2017-10-08

In a letter to ALCE, on 23 July, reference is made to the effect that the HVT report is being finalized. I would like that the HVT report is produced. Further all information required for same must be made available to the CAE.

HVT VERIFICATIONS FOR KUMBA RELOCATION

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Fred von Eckardstein
KPMG Inc

Per email: fred.voneckardstein@kpmg.co.za

rachel.kelly@hoganlovells.com;
vaughn.harrison@hoganlovells.com;
charles.you@hoganlovells.com; and
nikhil.bhogal@hoganlovells.com
D +27 11 775 6332

Our ref 4433868
Matter ref JOBURG

04 September 2017

Dear Fred

REPORTABLE IRREGULARITY: CRRC ROLLING STOCK SA (PTY) LTD ("OUR CLIENT")

1. INTRODUCTION

1.1 We refer to your letter of 12 June 2017 addressed to our client, your letters dated 12 June 2017 and 11 July 2017 addressed to the Independent Regulatory Board of Auditors and the meeting held on Monday 14 August 2017, and attended by me by way of a conference call link (**"the meeting"**).

1.2 In the meeting, we discussed the alleged "reportable irregularity" arising from a proposal which our client prepared for Transnet SOC Limited (**"Transnet"**) and a business development services agreement entered into between our client and Business Expansion Structured Products Proprietary Limited (**"BEX"**).

1.3 We understand that, at this time and on the basis of information provided to you, you are of the view that the proposal and the agreement contain alleged irregularities for the following reasons:

(a) the proposal significantly misrepresented to Transnet the cost of the relocation of a manufacturing facility from Pretoria to Durban; and

(b) a payment made by our client to BEX appears to "lack sound commercial substance and purpose".

1.4 Following the discussions at the meeting, it appears to us that you have not been given all the information and context surrounding the proposal and the agreement, that you need to properly assess these documents, and we undertook to liaise with our client, and

gather information and documentation with a view to addressing the allegations you have raised, and which allegations are disputed by our client.

1.5 We will set out the further information that we have received from our client, below.

2. **BACKGROUND AND RELATIONSHIP BETWEEN TRANSNET, OUR CLIENT AND BEX**

Our client has instructed us as follows:

2.1 As you know, during March 2014, Transnet awarded contracts to four equipment manufacturers, including Bombardier Transportation South Africa ("**Bombardier**"), to provide locomotives, the majority of which are to be manufactured in Pretoria or Durban, and our client was awarded a contract to manufacture and supply 232 diesel locomotives.

2.2 Following the award of this contract to our client, Transnet approached both our client and Bombardier to request a variation to the original contract. The variation concerned the relocation of the Transnet locomotive manufacturing facility from Pretoria to Durban, and our client prepared a proposal and costing for this variation ("**The Project**").

2.3 We understand that our client and Bombardier were approached by Transnet as they are the primary users of the manufacturing facility, although a part of the space is also used by Transnet. Our client has no knowledge of whether or not Bombardier submitted a proposal to Transnet.

2.4 Our client, having been asked to provide a proposal to Transnet, felt obliged to respond. Accordingly, our client put together a brief proposal to Transnet dated 28 January 2015, and a copy is attached as **Annexure A**.

2.5 As you will see from Annexure A, our client at this stage had only managed to put together a high-level proposal, which did not contain any breakdown of the costs of the Project. This proposal was discussed with a multidisciplinary team appointed by Transnet ("the **Transnet Team**") who advised that this proposal was not detailed enough as Transnet required more information and costing.

2.6 Our client then submitted a revised proposal to Transnet, which is dated 1 February 2015 and is attached as **Annexure B**. This proposal provided that "*the cost will be more than R100,000,000*" but did not provide any detailed break-down of the costs, At this stage, our client was not in a position to provide a detailed cost break-down, as a relocation of the type contemplated, was beyond its day to day expertise.

2.7 This revised proposal (Annexure B) was also discussed at a meeting between representatives of our client and the Transnet Team. Again, Transnet advised our client that the proposal was not comprehensive enough for them to properly consider.

2.8 It should also be noted that our client is a Chinese Headquartered Manufacturing Group and it is accordingly not familiar with local costing and conditions.

2.9 At this meeting, Transnet's Team advised our client to prepare a more professional proposal setting out *inter alia*:

(a) what would be required to complete the relocation of the manufacturing facility and the implementation of the Project;

(b) all of the ancillary issues which would need to be considered as part of the relocation (for example, insurance, warehousing costs, financing etc); and

(c) a detailed breakdown of the various project components with a more detailed analysis of the costs comprising each component of the Project.

2.10 In a further effort to meet Transnet's requirements, our client then compiled a more detailed cost estimate, which was finalised in March 2015, and a copy of this is attached as **Annexure C**. You will see from Annexure C that our client attempted to make a further and more detailed proposal. However, this cost estimate, while more detailed than what had previously been submitted to Transnet, remained nothing more than an estimate, on an uninformed basis, of the costs, estimated by our client's factory engineers, based on what they believed a similar project would cost in China. In preparing this submission, our client's factory engineers failed to factor in the significantly higher costs applicable in South Africa (such as increased labour costs).

2.11 Once again, this more detailed cost estimate set out in Annexure C, was not satisfactory to Transnet.

2.12 Our client and BEX had originally met in 2014, shortly after our client was awarded the original contract by Transnet, at a railway exhibition. At that time, our client exchanged business cards with BEX.

2.13 Subsequently, BEX visited our client at their offices to see whether BEX could assist our client with its business and this meeting was initiated by BEX, not by our client.

2.14 At this meeting our client mentioned to BEX that our client had been asked to provide Transnet with a proposal for the relocation of Transnet's manufacturing facility and that our client had been experiencing difficulty in putting together a proposal which met Transnet's requirements.

2.15 BEX offered to assist our client in putting together the required proposal and a cost breakdown which would meet Transnet's requirements. Our client was of the view that if BEX could provide the skill and expertise required to put a satisfactory proposal together for Transnet, our client was prepared to engage with them.

2.16 BEX provided our client with a copy of its company profile, a copy of which is attached as **Annexure D**, which our client was comfortable with. As our client was under substantial time pressure to submit a detailed proposal to Transnet as Transnet's financial year end was approaching, and as our client was unable to provide a proposal in the form required by Transnet, it required BEX's services in order to be able to do so.

2.17 In accordance with our client's request, BEX then analysed the project, and carefully considered the costing and applicable models and methodologies, and confirmed with our client that the estimated breakeven cost of the Project would be R580 million. This is, of course, higher than the R318 million which our client had calculated but, as mentioned above, this figure was an approximation of what the project would cost if it were undertaken in China, without looking at what the costs in South Africa would be. The main drivers to which the increased costs can be attributed are:

(a) labour costs;

(b) the impact of timing;

(c) hedging and risk management costs; and

(d) additional and material costs to be allocated to upgrading and renovating the Durban facility to ensure parity between it and the high quality of Transnet's Pretoria manufacturing facility.

2.18 Our client and BEX thereafter entered into a business development services agreement, pursuant to which BEX agreed to provide certain services in terms of the agreement attached as **Annexure E**.

2.19 With respect to the fee that BEX would receive for providing these services, our client did not want to take any risk itself in terms of having to absorb additional fees from BEX. Our client was in no way assured of being the successful project bidder and, had it agreed to pay BEX's fees upfront, it would have been out of pocket had it not been successful in its bid.

2.20 As our client needed BEX's services in order to properly respond to Transnet's request for proposal, our client agreed a risk-sharing arrangement with BEX. As you know, it was ultimately agreed (as recorded in the Business Services agreement) that inter alia:

(a) BEX would assist our client in negotiating the "best possible price" with Transnet, based on the Project benchmark cost of R580 million (this being the minimum amount which our client would need to receive in order not to make a loss from the Project);

(b) BEX would be entitled to an "agency commission" equal to the difference between the price awarded by Transnet and the project benchmark cost;

(c) Our client would be guaranteed its R580 million – i.e. if the total price agreed to by Transnet was R580 million or less, our client would have been entitled to the full price to be paid by Transnet and BEX would not have received any fee for their services.

2.21 Our client was of the view at the time that Transnet would not agree to a project cost of R580 million and that the final project cost might be lower than this. Based on our clients prior business experience, that our client believed that Transnet would require a discount on this amount. Thus our client believed that the final project cost would be closer to, R580 million. Hence they believed there was very little risk for them in agreeing an "upside" fee arrangement with BEX.

2.22 As to why our client was prepared to undertake this project on a break-even basis, our client has advised that they were prepared to do so, for strategic reasons. Our client had already been awarded a contract to provide 232 locomotives to Transnet and hoped to secure future work in South Africa. Being prepared to undertake the relocation project on a cost-neutral basis could further assist our client in securing any such future work. In addition, our client is ultimately a State-owned company in China and its mandate and strategy is to encourage investment outside of China. Hence the focus was on trying to ensure that our client did not make a loss as a result of the implementation of the Project, rather than trying to make a profit, and our client approached the matter on a strategic long term basis. It is clear from the above that there are cultural differences in how Chinese companies and South African companies do business and which has not been factored in by you.

2.23 After consulting with BEX, our client then issued a further project proposal and costing to Transnet, attached as **Annexure F**. While our client, based on advice received from BEX, believed that its break-even cost for the project was R580 million, the proposal submitted to Transnet contained a project cost of R635 851 786 to provide for cost increases due to labour costs, hedging and etc. and caused by the lengthy period required to execute the Project, and further to enable our client to accommodate any reductions in our clients proposed Project cost, that might be required by Transnet, and without necessarily putting our client into a position where our client would make a loss on the Project.

2.24 Unavoidably, and due to a time extension by Transnet, a further proposal, marked **Annexure G**, was required to be submitted to Transnet in an amount of R719 090 548, but building in a discount that would reduce the project cost to R647 181 494, and

Transnet accepted that the additional costs had arisen as a result of the extension by Transnet, and Transnet accepted the price and discount that our client had proposed.

2.25 Our client's proposal (Annexure G) was accepted by Transnet, and we attach Transnet's written acceptance as **Annexure H**. While our client is not privy to the facts on which Transnet based its decision to accept our client's proposal, it is likely that the time pressure that Transnet was under to initiate the relocation of the manufacturing facility and thereafter to start the Project as soon as possible may have played a part. Transnet itself refers to an *"extremely tight delivery schedule"* associated with this project (see **Annexure I**). Also, our client further assumed that Transnet would have considered bids from other parties for this project – particularly as our client was aware that Bombardier was approached to submit a proposal. Our client assumes that, in light of this, its proposal must have been favourable as compared to any other proposals that Transnet might have received, bearing in mind that our client's benchmark cost of R580 million was calculated on a breakeven basis, and that other bidders would not have submitted bids on this basis and would accordingly have built a profit margin into their bids. While our client anticipated that Transnet would push back on its proposal and try to reduce this, Transnet accepted that our client had already built in a 10% discount, and appeared comfortable with this.

2.26 Following Transnet's acceptance of our client's proposal, in an amount which was higher than what our client believed Transnet would agree to, our client issued an invoice to Transnet (see **Annexure J**) and BEX issued an invoice for its "fee" to our client – please see **Annexure K**.

2.27 We have asked our client as to whether, when the project price of R647 181 494 had been agreed to by Transnet, there had been any discussions with BEX about reducing the commission payable to BEX under the business development services agreement.

2.28 Our client has advised us that they did consider this and even, had a discussion with Mr Mark Shaw of BEX in which they raised their concerns that with hindsight the commission payable to BEX might be high. However, Mr Mark Shaw dismissed this, and on the basis that the fee or commission payable to BEX had already been contractually agreed. Our client then raised the issue with its parent company in China. The parent company asked what the likelihood of litigation would be if they tried to reduce the commission payable to BEX and our client advised that this was likely. On this basis, wishing to avoid protracted litigation and possible damage to its reputation, our client's parent company instructed our client not to pursue a claim or request for a reduction of the commission payable to BEX.

2.29 Ultimately, our client is of the view that, had they known at the outset that Transnet would have agreed to a project fee exceeding R580 million, they would not have been happy with, nor agreed to, the fee arrangements agreed with BEX as set out in the business development services agreement. At the time, our client was of the bona fide belief that the final project fee would be closer to R580 million, and did not contemplate that it could be significantly higher than this.

3. In conclusion, we trust that the above information provides you with a better context and understanding of the transactions which have been reported as alleged "material irregularities", and we reiterate that our client disputes that there were grounds to do so. Ultimately, BEX did receive a substantial commission for the services it provided to the company but, and as indicated above, there are commercial and bona fide reasons for this.

4. We further remind you of the so-called "business judgment rule" in terms of which it is presumed that in making a business decision, the directors of a company acted on an informed basis, in good faith and in the honest belief that the action taken was in the best

interests of the company. It is evident from the information provided to you that, at all relevant times, Our client's management acted in the best interests of the company, and with the requisite degree of care, skill and diligence in respect of its dealings with Transnet and BEX, and any allegation to suggest that our client and/or its directors acted irregularly or in breach of their fiduciary duties are unmeritorious and specifically denied. Our client expressly denies that they were party to improper dealings, and have advised us that the transactions referred to herein are *bona fide* arms-length transactions between willing contractors.

5. In light of what is detailed herein, our client is of the view that it would not be proper or correct for KPMG to qualify its current draft financial statements, nor revise our clients financial statements for the prior financial year.

Yours sincerely

Vaughn Harrison

Partner

CNR Rolling Stock
South Africa

Durban Locomotive Factory Relocation Proposal

CNR Rolling Stock South Africa

2015-1-28

CNR Rolling Stock South Africa
China Construction Bank Building
95 Grayston Drive
Sandton
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2196
cnrrssapm@163.com

CONTENT

CNR Rolling Stock South Africa
China Construction Bank Building
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cnrrssapm@163.com

TIMU DRAFT

Since Spet.15th of 2014, CNR RS SA has provided the technical supports to TE in positive according to the requirements. The following items have been made big progress.

1.Manufacture Process Chart

In 2014, the draft version of "Information of Process Chart, Working Procedure and Machinery, Jigs & Fixtures for each Station" was provided to TE.

Latterly, when TE visit in Dalian, CNR production line of diesel locomotive was shown and introduced in details to TE, including Carbody fabrication line and assembly line, bogie frame fabrication line and assembly line, Combo fabrication and assembly line, wheelset assembly line, engine test bench, locomotive final assembly line, load test bench and running test bench and etc.

As per the request made by TE during their visit in Dalian, CNR Dalian updated the draft data sheet by adding the procurement information of Machinery and Jigs & Fixtures, and labor hours at each station etc. In this document, it indicated the product and procedure for the items like material preparation, carbody, underframe, cab, sidewall, partition wall, side door wall, cover, bogie frame, fuel tank, coolant structure, water tank, cowcatcher, driver console, wheelset assembly, bogie assembly, locomotive assembly and test etc. Meanwhile, process flow chart, procedure, machinery, jigs &fixtures, labor time, as well as procurement

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information of those jigs and fixtures like dimension, function, purchasing cycle etc. were indicated.

2.Technical support for Durban

In May of 2014, due to the new facilitate in Durban, we provided some suggestion on jigs and fixtures need to be equipped with in Durban to TE.

3.3P Technical Support

Currently, we are preparing the documents needed during 3P as per the request by TE. The experts from CNR will come once all the document are ready.

4.Potential Cost Increased

Therefore, start from less experience to mature manufacture, it needs a complicated procedure. Due to the tight schedule, the facility and staff in Durban could be challenge on the project execution.
It is estimated that it will get the cost increased, this letter list some of the fields, it is draft but can be finalized during the execution in future.

CNR RS SA
January 28, 2015

CNR Rolling Stock South Africa

Durban Locomotive Factory Relocation Proposal V2

CNR Rolling Stock South Africa

2015-2-1

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CONTENT

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DRAFT V2

Since Sept.15th of 2014, CNR RS SA has provided the technical supports to TE in positive according to the requirements. The following items have been made big progress.

1. Manufacture Process Chart

In 2014, the draft version of "Information of Process Chart, Working Procedure and Machinery, Jigs & Fixtures for each Station" was provided to TE.

Latterly, when TE visit in Dalian, CNR production line of diesel locomotive was shown and introduced in details to TE, including Carbody fabrication line and assembly line, bogie frame fabrication line and assembly line, Combo fabrication and assembly line wheelset assembly line, engine test bench, locomotive final assembly line, load test bench and running test bench and etc.

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4.Potential Cost Increased

Therefore, start from less experience to mature manufacture, it needs a complicated procedure. Due to the tight schedule, the facility and staff in Durban could be challenge on the project execution.

It is estimated that it will get the cost increased, the cost will be more than R100,000,000, such as the following field:

- Transportation cost increased
- Human staff cost increased
- Technical support cost increased

this letter list some of the fields and estimated the additional cost, due to the manufacturing is not started, and the Durban situation and information of the site is not enough, the cost is draft but can be finalized during the execution in

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future.

CNR RS SA
Febrary, 2015

南非项目德班搬迁地
Proposal Estimated Cost Increa

序号 No.	名称 Description	增加金额（总计） Increased amount(total)
1	增加运输费用 Increased logistics cost	65, 430, 000
2	增加德班建立办事处和旅行费用 Increased cost for setupfacilities in Durban & travelling	29, 400, 000
3	全新、新设厂区的工艺布局技术指导，技术支持费用（比指导已有厂区需要等多的技术支持和指导）Increased Cost on technical support & guide on brandnew process layout(compared with the KDS)	48, 600, 000
4	培训全新生产厂员工的难度和费用增加（新生培训的深度和广度与既有熟练员工不同） Difficulty and cost increased on traning the new emplyees	31, 800, 000
5	供应商的机车生产现场服务成本增加 Increased cost for site service on site by supplier	47, 470, 000
6	我方延迟收到货款，货款的时间价值 Increased Financial cost for postpone the delivery due to the relocation	96, 000, 000

曾加费用预算
ısed on Durban Relocation

备注 Remark
table1
办事处房租：60万每年*7=420万；住宿房租（30人）：30万每月*12个月*7年=2520万兰特 Office rental:600,000 Rand/year*7=4,200,000Rand;rental(30 persons): 300,000/month*12*7=25.2million Rand
800R（小时费率）*7.5小时*30人*270个工作日 800R(hour rate)*7.5hours*30persons*270 working day
每台多10万兰特；212台合计=2100万兰特；（可以从培训TE人总数上验证一下）；培训总人数： 100,000Rand per loco increased;21million rand total in 212 locomotives; (to be verified on TE traning)
现场服务按照采购总额（除TE)的10%计算，搬迁导致增长10%计算。 On site service will be calculated according to 10%of procurment amount(excludes TE), and the relocation will increase 10%.

7	保险	2, 726, 851
	总计	318, 700, 000

BEX Structured Products (Pty) Ltd

ABOUT BEX:

BEX Structured Products ("BEX") is a profes onal service advisory business that specialises in business enterprise optimisation using fina cial modelling, derivatives and engineering techniques.

BEX works with the executives of leading So uth African and multinational corporations to solve their most important, complex and recurring cha enges; and to exploit their opportunities. In so doing we are able to add sustainable, verifiable a d significant value to clients.

Where appropriate BEX will advise on capit l raising utilizing either debt or equity funding. In this regard BEX, has significant experience in fu ding all aspects of industrial, financial, insurance, telecoms and marketing businesses as well s having participated or advised in transactions in the mining and property sectors.

OUR EDGE:

We differentiate ourselves by always empl ing rigorous financial techniques and technologies, fused with an intimate understanding of th practical business context and detail. It is through this fusion that we are able to advise our client on a course of action that is value enhancing and cost effective and at the same time feasible to i plement. This enables them to practically attain their objectives in the most efficient and effecti manner.

Merely being 'strategically' or 'directionally correct is insufficient for us. We operate in a world of deliberate precision, and absolute accuracy Our task is to embrace complexity and then refine it into objective clarity.

BEX operates through an established netw k of professional partners to deliver client focused solutions thus providing access to some of outh Africa's leading corporate financiers, engineers, mathematicians, actuarial scientists and so ware programmers, working seamlessly across their respective disciplines in order to deliver ad ce to clients that will result in significant and tangible value.

We define optimisation as:

A rigorous scientific process designed to dis over the configuration of components of a business system (enterprise and/or industry) that wi result in greatest achievement of the desired outcome or objective function.

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OUR CLIENTS:

Some of the Optimisation projects that BEX and our partners have been involved in historically:

Within the Long Term Asset Optimisation Realm:

Client	Engagement Summary
Major Mining Multi-Commodity Conglomerate	Development of probabilistic capacity models for the validation of production plans and business cases for new investments
Major Mining Multi-Commodity Conglomerate	New Mining Technologies in Rock Cutting – Scenarios were designed to formulate business cases for different rock cutting technologies relative to other conventional mining methods
Major Platinum Producer	Modeling, optimisation and the implementation of new mining technologies and methods in the mining industry, Financial Analysis, Strategy, Stochastic scheduling & analysis (Risk Management), Extensive layout design & analysis of New Mining Technologies, Implementation of New Mining Technologies & Mining Methods within the Mining Industry, development of Management Operating Systems for Underground Mines, Operational Time Studies, Analysis & Mining Method Optimisation, Mining Method Visualisations.
Major Platinum Producer	Probabilistic analysis of underground operations' production schedules using Monte Carlo techniques to validate their long term plans.
Major Global Gold Producer	Production scenario planning for several key mines.
Major Platinum Producer	Half level optimisation and costing.
Major South African Gold Producer	Life of Mine scenarios - the development and implementation of detailed NPV and cash flow models focused on evaluating multiple what-if scenarios for their competent persons report at all their Underground Gold operations.
World Leader In Alloying Metals	Opex modelling of a new investment in South Africa of the French based company.
Major Open Pit Platinum Mine	Expansion Validation - Using stochastic discrete event simulation, Cyest tested the feasibility of a 25 - year life of mine plan. The purpose was to determine whether the mine could deliver sufficient material to support the planned plant expansion. Our team determined the confidence level associated with the target, and recommended specific interventions to raise the confidence to an acceptable 80% level. As a result, the mine now plans to use stochastic discrete event simulation to validate their short - term plan as well.

OUR WORK:

Examples of different optimisation scopes:

Capital Optimisation

The objective functions here could be Maximise Value (NPV); or Maximise Returns (ROCE, ROI, etc.) or Maximise Capital Efficiency (economic profit); or minimise Risk.
And the constraints would typically include – capital (funding), availability of investment pipeline, etc.

Asset Optimisation

Asset Optimisation occurs after the investment decision has been taken (during the capital optimisation stage) and the problems tackled here refer to how the assets (plant and equipment) can be configured to achieve the desired objective function.

Examples of sometimes-conflicting objective functions here include goals such as – maximising asset life, ensuring the lowest unit cost, or yielding the greatest return, highest short-term profitability etc. Examples in this realm would include – the design and layout (of a plant, a mine, a logistics network); the allocation and scheduling of assets, etc.

Resource Optimisation

This realm of optimisation is the most operational / granular and occurs once the assets have been decided upon and configured during the asset optimisation exercise.

Resource optimisation refers to how resources are organised around the assets in order to for example – minimise unit cost, or minimise total cost; or increase margin, or maximise profits, etc.

In other words the asset configuration and physical capacity becomes the constraint around which resources must be organised. Examples of decisions in this realm include – resource type, quantum and allocation; production schedule, etc.

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Within the Operational Resource Optimisation Realm:

Client	Engagement Summary
A Leading Global Export Coal Group	Capacity analysis for load and Haul operations using Discrete Event Simulation to establish unit cost reductions of 20%.
A Leading Global Export Coal Group	Development of fleet management diagnostics using Android devices to assist in parking haul trucks.
Major Platinum Producer	Design of an underground mechanised mining management operating system for piloting new mining methods and technologies.
Major Diamond Producer	Value Driver Tree implementation and support for operational diagnostics purposes of an open pit mine.
Major Mining Multi-Commodity Conglomerate	Development of a virtual reality centre to deliver enterprise wide experiential learning to 1,500 people per year.
South African Ferro Chrome Producer	Production and Budgeting model - development and implementation of budgeting model for a Ferro Chrome processing plant.
Major Diamond Producer	Implementation of a plant model to track operational progress, activity based costing, scenario analysis and blend optimisation.
Large Copper Operation	Developed a model allowing the planners at a large open cast copper mine to schedule trucks and shovels that would allow for maximum production efficiency and allow the planners to quickly optimise the value chain on a shift level basis across the value chain.
Leading Iron Ore Producer	Built a capacity analysis model for an iron ore mine that allowed them to identify constraints and opportunities to increase production by 15%.
Major Platinum Producer	Development and implementation of detailed OPEX cash flow model focused on evaluating multiple what-if scenario for new projects.
Major New South American Iron Ore Operation	Mining simulation – The operation had developed a production ramp-up plan for their new processing facility. The question was, what would be the equipment requirements to meet this plan with adequate confidence. Using stochastic discrete event simulation techniques, Cyest Analytics determined the correct fleet sizing to deliver ore with 80% confidence. Additionally, we showed the incremental benefits of additional equipment. The mine continues to use the model to validate its short - term planning.
Major New South American Iron Ore Operation	Plant simulation - In conjunction with the mining simulation, the operation required a plant simulation model that would validate the production ramp - up plan, and also quantify the likely impact on production of various risks that the operation had identified. Using equation - based modelling and Monte Carlo techniques, Cyest Analytics delivered a system that would fulfil this role. The operation continues to use this model to test their ramp - up strategies and steady - state delivery expectations.

Within the Capital Raising Realm:

BEX has successfully been involved in capital raising for privately owned and Public Companies across a number of sectors and industries. Our success in this area of business is a result of our long-standing and trusted relationships with financial institutions and "High Net Worth" family offices both in South Africa and Europe.

CONTACT US:

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Telefax: + 27 086 586 0643

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BUSINESS DEVELOPMENT SERVICES AGREEMENT

CNR ROLLING STOCK SOUTH AFRICA PTY LTD.
(Registration No. 2014/016892/07)

with

BUSINESS EXPANSION STRUCTURED PRODUCTS PTY LTD.
(Registration No. 2009/020420/07)

AGREEMENT DATE: APRIL 25, 2015

This Agreement is entered into by and between the following parties:

BUSINESS EXPANSION STRUCTURED PRODUCTS PTY LTD (hereinafter, referred to as "BEX") (which expression includes its associates, subsidiaries, affiliates, successors and permitted assigns), a company duly incorporated and existing under the Companies Act in South Africa, and having its registered offices at 1st Floor, 24 Crescent Drive, Melrose Arch 2076, Johannesburg, duly authorised and represented by Mr. Mark Shaw

and

CNR ROLLING STOCK SOUTH AFRICA PTY LIMITED (hereinafter referred to as the "Company") (which expression includes its successors and permitted assignees), a company duly incorporated and existing under the Companies Act in South Africa, and having its office address at 3rd floor, 95 Grayston Drive, Sandton 2196, Johannesburg, South Africa, duly authorised and represented by the person signing this Agreement., duly authorised and represented by Mr. Gang Wang, signing this Agreement.

(Hereinafter, BEX and the Company may be individually referred to as a "Party", and collectively as "the Parties".)

WHEREAS:

A. BEX, a professional service advisory business that specialises in business enterprise optimisation using financial modelling, derivatives and engineering techniques, with its long subsisting relationships in the territory of South Africa (hereinafter "The Territory") has acquired a familiarity with regulatory, social, cultural and political framework whereby it is capable to closely co-ordinate with the designated authorities to comprehend the applicable Government policies, identify the opportunities of participation in various Government and Private projects, lend consultancy on participating in various tenders and bidding processes and thus facilitating trade of goods and services concerning such projects.

The COMPANY is a global company specializing in the manufacture of Locomotives and Spare Parts for the same, with a focus on emerging markets. The COMPANY has approached BEX to provide advisory services in respect of the Project and for expanding their business in the Territory and help it in achieving their BEE (Black Economic Empowerment) objectives in the Territory on a long-term basis.

B. The Parties have, after mutual discussions, acknowledged and agreed that they have suitable and complementary resources to jointly harness the opportunities in the Territory through this Business Development Services Agreement, whereby BEX will play an active role in providing advisory services in respect of the Project, Business development and BEE structuring and management in the Territory.

C. In view of the above-set background, the Parties have agreed to reduce in writing their mutual understanding and their respective fundamental interests, rights, duties, obligations and liabilities in relation to the agency, their respective roles in this regard, the terms and conditions on which the Parties would implement the agency relationship and certain other matters thereto.

1. Definitions and Interpretation

1.1. Definitions

Certain terms are defined within the recitals and within the body text of this Agreement. In addition, the following terms shall have the following meaning:

"Affiliate"	means, with respect to any Person, any other Person that, directly or indirectly, through one or more intermediaries, controls or is controlled by or is under common control with such person.
"Agency Commission"	the difference between the price excluding VAT awarded to the Company by TFR and the Project Benchmark Costs of R580 million excluding VAT
"Agreement"	means this Agreement, including the recitals and schedules hereto, as the same may be varied or amended from time to time in writing by agreement of the Parties;
"Agreement Date"	shall mean and refer to APRIL 25, 2015; being the date of execution of this Agreement;
"BEE"	means Black Economic Empowerment as set out in the BEE Charter of the Republic of South Africa.
"Business Day"	means any day on which banking institutions in South Africa are open for business.
"Force Majeure"	means any of the following events or occurrences: (i) Acts of God, such as fires, floods, thunderstorms, earthquakes, unusually severe weather and natural catastrophes; (ii) civil disturbances, such as strikes, lock outs and riots; (iii) acts of aggression, such as explosions, wars, and terrorism which are not foreseen; or (iv) acts of government or actions of regulatory bodies which significantly inhibit or prohibit either Party from performing their obligations under this Agreement.
"Nominee"	means any juristic person or company that may be nominated by BEX with the prior written consent of CNR from time to time to continue with and fulfil the obligations of this Agreement and/or to provide the necessary services and any expertise required for executing the commercial aspects of this Agreement.
"Person"	includes any individual, company, corporation, firm, partnership, consortium, joint venture or association, whether a body corporate or an unincorporated association of persons.
"Price"	shall mean the amount paid by TFR for the implementation

	of the project
"Product"	means the Company's related products and Services.
"Project"	shall mean the change in scope whereby Transnet Engineering (TE) a division of Transnet SOC Limited requires the Company to change the location of the local manufacture programme from the TE Koedoespoort Gauteng facility to their Bay-Head Durban facility.
"Project Benchmark Costs"	shall mean R580m (Five hundred and eighty million Rand) excluding VAT
"Scope Deviation"	shall mean costs associated with the implementation of the Project
"Territory"	means Republic of South Africa.
"Third Party"	means a person who is not a Party to this Agreement and does not include Affiliates of any of the Parties.
"TFR"	means Transnet Freight Rail, a division of Transnet SOC Limited

1.2. Interpretation

1.2.1. References to this Agreement or to any other instrument shall be a reference to this Agreement or that other instrument as amended, varied, novated, or substituted from time to time.

1.2.2. The headings in this Agreement are for ease of reference only and shall not affect the interpretation or construction of this Agreement.

1.2.3. References to Recitals, Clauses and Schedules are references to recitals, clauses and sub clauses and schedules to this Agreement.

1.2.4. Words importing the singular number shall include the plural and vice versa and words importing the masculine gender shall include the feminine and the neuter gender and vice versa.

1.2.5. Each of the representations and warranties provided in this Agreement are independent of other representations and warranties and unless the contrary is expressly stated, no Clause in this Agreement limits the extent or application of another Clause.

1.2.6. "In writing" includes any communication made by letter or fax or e-mail.

1.2.7. The words "include", "including" and "in particular" shall be construed as being by way of illustration or emphasis only and shall not be construed as, nor shall they take effect as limiting the generality of any preceding words.

1.2.8. References to a person shall be construed so as to include:

1.2.8.1. individual, firm, partnership, trust, joint venture, company, corporation, body corporate, unincorporated body, association, organization, any government, or state or any agency of a government or state, or any local or municipal authority or other governmental body (whether or not in each case having separate legal personality);

1.2.8.2. that person's successors in title and assigns or transferees permitted in accordance with the terms of this Agreement; and

1.2.9. References to a person's representatives shall be to its officers, employees, legal or other professional advisers, sub-contractors, agents, attorneys and other duly authorized representatives.

1.2.10. References to statutory provisions shall be construed as references to those provisions as are respectively amended or re-enacted or as their application is modified by other provisions (whether before or after the date of this Agreement) from time to time and shall include any provisions of which they are re-enactments (whether with or without modification).

1.2.11. All warranties, representations, indemnities, covenants, guarantees, stipulations, undertakings, agreements and obligations given or entered into by more than one person are given or entered into severally unless otherwise specified.

1.2.12. In the event that the date on which any act or obligation specified in this Agreement to be performed falls on a day which is not a Business Day, then the date on which the act or obligation is to be effected or performed shall take place on the next Business Day.

1.2.13. This Agreement is the result of negotiations between, and has been reviewed by, the Parties and their respective counsel. Accordingly, this Agreement shall be deemed to be the product of the Parties, and there shall be no presumption that an ambiguity should be construed in favour of or against any Party solely as a result of such Party's actual or alleged role in the drafting of this Agreement.

2. Preamble

2.1. Whereas TE requires the Company to change the location of the local manufacture programme from the TE Koedoespoort Gauteng facility to their Bay-Head Durban facility.

2.2. And whereas the Company has approached BEX to assess and formulate the entire strategy and planning to quantify and benchmark the costs associated with the re-location as per Clause 2.1.

2.3. And whereas BEX has agreed to undertake the work at their sole risk and at no cost to the Company if the agreed Project Benchmark Costs are not recovered from Transnet Freight Rail (TFR);
2.4. After extensive research and negotiations with both the Company & TFR, BEX and the Company have agreed that the Project Benchmark Costs will be fixed at R580 million (Rands Five hundred and eighty million only) excluding VAT.
2.5. Since BEX has undertaken to negotiate and finalize the deal with TFR on a risk basis, it is agreed between both parties that BEX be entitled to an Agency Commission as detailed in Clause 6.

3. Scope and Purpose of the Agreement and key principles

3.1. The Parties have entered into this Agreement to record their mutual understanding as regards their relationship and the manner in which the Project shall be implemented through this Agreement.
3.2. The scope of this Agreement is the regulation of the rights and relationships of the Parties, both among themselves and with respect to Third Parties, with the aim of executing the Project and other services in the Territory.
3.3. In order to achieve their joint commercial objectives, the Parties shall operate this Agreement as per the terms and conditions set out herein.
3.4. Each Party agrees to co-operate with the other Party on a best effort basis.
3.5. Each Party hereby agrees and undertakes towards the other Party to perform and observe all of the provisions of this Agreement.
3.6. The Parties acknowledge that the broad parameters for the conduct of this Agreement (subject always to the terms and conditions of this Agreement) is to implement the Project in the Territory and to enhance the economic value of the Parties.

4. General Conditions of appointment

4.1. The Company hereby appoints BEX to provide advisory and consulting services in respect of the Project and to aid Business Development and to assist in achieving the Company's BEE objectives in the Territory.
4.2. The Parties hereby agree and acknowledge that they are independent contractors. No partnership, joint venture or employment is created or implied by this Agreement.

5. Duties and Responsibilities of BEX

5.1. BEX shall provide advisory services in respect of the Project and will assist in the implementation of the processes related to the Project on a risk basis.
5.2. BEX shall assist the Company to achieve its objectives in the Territory.
5.3. BEX shall not make any representation on behalf of the Company except in conformity with express written permission from the Company.
5.4. BEX will have two years from the Agreement Date to implement the Project
5.5. BEX will inform the Company timeously in writing if it wishes to appoint a nominee or assign the provisions of this Agreement. The appointment of such nominee or assignee shall be effected after the written consent of the Company.

6. Remuneration, payment terms etc.

6.1. For the Project Scope deviation (referred hereinabove), BEX sha assist the Company to negotiate the best possible price with TFR based on the Project Benchmark Cost of R580 million (Rands Five Hundred and Eighty million only) excluding VAT.

6.2. The Company agrees that BEX will be entitled to an agency commissio equivalent to the difference between the price excluding VAT awarded to the Com any by TFR and the Project Benchmark Cost of R580 million excluding VAT. For ex mple if the price awarded is R680 million, then BEX will be entitled to an agency co nmission of R100 million(excluding VAT) i.e. R680m less R580m.

6.3. The Company will be entitled to the Project Benchmark Cost of R580 Million irrespective of whether the total Project value is negotiated lower th n the R680 million by TFR.

6.4. BEX shall be entitled to the agency commission irrespective of whethe the Project Benchmark Cost arise from the supply of services, main product or any spare part or ancillary item thereto.

6.5. The agency commission as stated above will be due and payable in full s and when i) the Company and TFR has entered into an agreement that the Com any will be awarded the Price more than the Project Benchmark Costs by TFR, an ii) the first payment of the Price is received by the Company.

6.6. The company shall pay BEX within 10 business days after from receipt c the invoice from BEX.

7. Term and Termination

7.1. This Agreement shall be effective from the Agreement Date and will emain valid for a period of two years and for such time that the Company remain e gible for the award of the Scope Deviation.

7.2. Once the agreement for the Scope Deviation has been signed by the C mpany, this Agreement shall remain in force until full payment due to BEX under this Agreement is made by the Company.

7.3. If either Party hereto commits a breach of this Agreement or de aults in the performance of its obligations, and if such default or breach is not re tified within 14 (fourteen) business days after the same has been called to the att ntion of the defaulting Party by a written notice from the other Party; then the n n-defaulting Party, at its option, may declare a dispute and hereby consent to th arbitration being dealt with in terms of the expedited Rules of arbitration of AF A within 30 days. The arbitration shall be determined in accordance with the rovisions of South African law and the Parties submit to South African Jurisdi ion for the purpose of this arbitration

7.4. Any expiration or termination of this Agreement pursuant to Clause 7.2 shall be without prejudice to any other rights or remedies to which a Party ma / be entitled hereunder or at law and shall not affect any accrued rights or liabil es of either Party.

8. Liability provisions

8.1. Each Party undertakes to cause its employees, agents, and Affiliates, as long as they are associated with terms of this Agreement, to respect and comply with this Agreement.

In any case, each Party undertakes to collaborate in good faith with each other to avoid or minimize any disadvantage or harm affecting the other Party.

8.2. The provisions of Clause 8 shall continue to apply following the expiration or termination of this Agreement and for a period of Five (5) years thereafter.

9. Confidentiality

9.1. During the course of this Agreement, one Party (the "Discloser") may, on a case-by-case basis, disclose to the other Party (the "Recipient") certain Confidential Information all of which shall be regarded as confidential. "Confidential Information" means any information as the Discloser may from time to time provide (or have supplied or disclosed on its behalf) to the Recipient, including all financial or other information relating to its business affairs or the business affairs of the Affiliates, whether orally or in a written, physical or visual form, regarding the products, activities, including (without limitation) data, software systems, information technology, products, applications together with analyses, compilations, forecasts, studies or other documents prepared by the Discloser (including, but not limited to, lawyers, accountants, consultants and financial advisers) and/or its Representatives which contain or otherwise reflect information about the Discloser and/or its Affiliates.

9.2. The Recipient shall at all times during the term of this Agreement and for a period of five (5) years following its termination, hold all Confidential Information which it acquires from Discloser under the terms of this Agreement, or otherwise, in strict confidence and shall not disclose such information to any third party or duplicate, transfer, or use directly or indirectly, the Confidential Information other than in Recipient's performance of its obligations under this Agreement.

The foregoing restrictions shall not apply to any information which: (i) is or becomes generally available to the public other than as a result of a breach of obligation by Recipient; or (ii) is lawfully acquired from a third party who owes no obligation of confidence in respect of the information; or (iii) Recipient is required to disclose by law (provided that Recipient shall assert the confidential nature of the information and give immediate written notice to Discloser and assist Discloser in obtaining a protective order against such disclosure).

9.3. Upon request of Discloser, or upon the expiration or any earlier termination of this Agreement, Recipient shall promptly return all copies of the Confidential Information in whatever form or media, to Discloser or, at the direction of Discloser, destroy the same. Recipient shall certify in writing to Discloser such return or destruction within ten (10) days of the date of Discloser's request.

9.4. Subject to all other terms of this agreement, this Agreement and its Annexes are also Confidential Information and either party shall not disclose, advertise or publish the terms or conditions of this Agreement or the Annexes without the prior written consent of the other party.

10. Miscellaneous

10.1. All notices required or permitted to be given under this Agreement shall be in writing, shall be given to the other Party and shall be deemed given to a Party when:

10.1.1. delivered to the appropriate address by hand and by email or by overnight courier service (costs prepaid);

in each case to the following addresses and marked to the attention of the person (by name or title) designated below (or to such other email address, facsimile number or person as a Party may designate by notice to the other Party):

BEX:
BEX Structured Products Pty Ltd
For the attention of: Mr. Mark Shaw
Address: 24 Crescent Drive, Melrose Arch 2076, Johannesburg and by email at enquiries@bexstructuredproducts.co.za

The Company:
CNR ROLLING STOCK PTY LTD.
For the attention of: Mr. Gang Wang
Address: 3rd Floor, 95 Grayston Drive, Sandton, 2196, Johannesburg

All correspondence, exchange of information, documents between the Parties, with Customers / third parties shall take place in English language.

10.2. No Party may assign any interest, benefit, right or obligation under this Agreement to any Person without having obtained the prior written consent of the other Party which consent shall not be unreasonably withheld. In the event of assignment as specified above, the assigning Party shall continue to guarantee the performance of the new participant under this Agreement and in any event of assignment, it shall also continue to be bound by the exclusivity and confidentiality provisions set forth herein.

10.3. If any provision of this Agreement is or becomes illegal, unenforceable or invalid under the law of any jurisdiction applicable to the Parties, neither the legality, validity or enforceability of the remaining provisions of this Agreement nor the legality, validity or enforceability of such provision under the law of any other jurisdiction shall be in any way affected or impaired thereby; provided, however, that if such severability materially changes the economic benefits of this Agreement to a Party, the Parties shall negotiate an equitable adjustment in the provisions of this Agreement in good faith.

10.4. This Agreement (including any annexes thereof) sets forth the full and complete understanding of the Parties as of the date of execution of this Agreement and supersedes all other prior negotiations, agreements, and understandings of the Parties with respect thereto. No Party shall be bound by any other obligations, conditions or representations with respect to the subject matter of this Agreement.

10.5. No waiver of any of the provisions of this Agreement shall be deemed to be or constitute a waiver of any other provision whether similar or not. No single waiver shall constitute a continuing waiver.

10.6. Neither this Agreement nor any of the terms hereof may be amended, supplemented, waived or discharged unless the Parties so agree in writing.

10.7. This Agreement may be executed in one or more duplicate counterparts and when executed by all of the Parties shall constitute a single binding agreement.

10.8. Neither Party hereto shall be liable for any failure to perform its obligations under this Agreement due to a Force Majeure event. In the event of Force Majeure the Parties shall evaluate the obligations affected by the Force Majeure event, and shall mutually agree in writing on the measures to be taken or on the effect of such Force Majeure event on the Parties' obligations hereunder. The Parties may agree that performance of a Party's obligations shall be suspended during the period of existence of such Force Majeure event as well as the period reasonably required thereafter to resume the performance of the obligation. The Parties shall use their best reasonable efforts to minimize the consequences of this Force Majeure. In the event of Force Majeure the Parties, shall discuss and mutually agree on the continued co-operation between the parties, including the necessity of termination of this Agreement.

10.9. Except to the extent of indemnification obligations related to Third Party claims, neither Party hereunder shall be liable for special, incidental, exemplary, indirect, punitive or consequential damages arising out of a Party's performance or non-performance under this Agreement, whether based on or claimed under contract, tort (including such Party's own negligence) or any other theory at law or in equity.

11. <u>BEX Banking details</u>

The Banking details will be mentioned in each invoice provided by BEX to the Company.

Any changes to the above banking details of BEX will be advised by BEX to the Company in writing. In the event of the Company receiving what appears to be an instruction from BEX, amending the BEX banking details, the Company shall only be entitled to act upon such instruction if it was received in writing from, or confirmed in writing with the signatory to this Agreement.

12. <u>Binding Effect</u>

With effect from the Agreement Date, this Agreement shall become unconditional and a legal, valid and binding obligation of each of the Parties.

13. Signature in counterparts

This Agreement may be executed in counterparts, each of which shall be deemed to be an original and which together shall constitute one and the same Agreement.

IN WITNESS WHEREOF the Parties have executed this Agreement on the date and at the place mentioned below.

SIGNED AT PARKTOWN ON THIS THE 25th DAY OF APRIL 2015

For and on behalf of BEX STRUCTURED PRODUCTS PTY LTD:

Name: MR. MARK SHAW Designation: Authorized Signatory

Signature: _____

AS WITNESS:

1. _____

SIGNED AT Sandton ON THIS THE 25th DAY OF APRIL 2015

For and on behalf of CNR ROLLING STOCK SOUTH AFRICA PTY LTD.

Name: MR. GANG WANG Designation: Authorized Signatory

Signature: _____

AS WITNESS:

_____

Annexure – A

Details of Services to be provided by BEX to THE COMPANY in respect of the Project

BEX, and its associates have significant relationships in the Territory BEX has agreed to provide the Company with the following services as part of its Advisory and Consulting Services on the Project:

1. Conduct detailed research on the costs associated with the Project on a risk basis
2. Negotiate and assist the Company to conclude the project at the minimum benchmark cost of R580 million excluding VAT.
3. Advise the Company on the regulatory, social, cultural and political framework in South Africa with respect to the Project.
4. In addition to the Project, identify various opportunities to participate in similar projects.
5. Closely co-ordinate with appropriate counterparties to advise on applicable Government policies and advise the Company on successful execution and implementation of the Project.
6. In addition to the Project, assist the Company in increasing their access to in Government and Private Projects in the Territory
7. Assist the Company in relation to the Project to achieve the Price. If requested by the Company, BEX will attend the meeting with the Company in regard to giving report, analysis, explanation and presentation to TFR.
8. Provide project plan, information, data, or documents relating to the accounting records or other necessary data, documents or analysis on the Project.

Structured Projects

Analysis of Cost Increase

for

Locomotive Delivery

and

Locomotive Factory Relocation

from

Pretoria, Gauteng to Durban, Kwa-Zulu Natal

in terms of

Manufacturing Facility Relocation for Class 45D Locomotives Supply Project

Executive Summary

We have been requested to analyse the Cost Increase for the Locomotive Delivery and Locomotive Factory relocation in terms of Manufacturing Facility Relocation for Class 45D Locomotives Supply Project. The decision to relocate from Pretoria, Gauteng to Durban, Kwa-Zulu Natal will cost an estimated R636m.

Description	Cost (R)	% of total
Labour costs	54 367 333	9%
Material costs	178 822 793	28%
Logistical costs	6 420 941	1%
Technical support	70 000 000	11%
Transportation	79 794 785	13%
Delta to Warehouse costs	74 888 245	12%
Other costs	171 557 688	27%
Total	635 851 786	100%

Introduction

In order to be able to relocate the entire operation of manufacturing, production, assembly and servicing from Pretoria to Durban, there are several incremental costs, risks and material changes that will need to be considered.

These considerations can be broken down into:

- Labour costs
- Material costs
- Operational and logistical effects
- Technical support
- Physical transportation of materials and resources
- Incremental warehousing costs
- Financing and risk costs due to time constraints and delays

Each of these areas carry a substantial weight on the total cost of relocation, considering the move from a skilled factory with high-end technology in a nationally central location to an environment where locomotive manufacturing skills are limited and supply of manufacturing engineers is limited. Added to that, being the largest industrial port in South Africa, industrial property is highly sought after, especially in and around railway areas due to the high traffic on the railway lines between Durban and Johannesburg.

The largest non-operational and logistical cost faced is also the 4-month delay in production, which is placing substantial currency hedging risk, import and inflationary risk, insurance, and training costs.

All-in-all, there will also be ancillary benefits in using the same team to relocate as will be running the day-to-day operations in Durban. This will minimise team friction, hand-over wastage and delays, lack of accountability and a host of expertise related risks.

Below is a breakdown of each of the above-mentioned sections, justifying the detailed cost analysis of the relocation project.

Cost Breakdown

The total cost implications of the relocation and the inherent costs of relocating manufacture to Durban from Pretoria amount to an estimated R536m. Importantly, this amounts to less than 10% of the total Class 45D locomotive manufacturing project. The attached outline details and explains the R536m.

Labour Costs

Total cost R54.4m: 9% of relocation costs

The amount is broken down below. This is ~9% of total relocation cost.

Manufacturing costs, amounting to R38.3m, relate to the added size of each team that will be required in order to complete each locomotive build. Due to the lack of skills and experience in Durban, the average team size per locomotive (of 25) will need to be increased to 31 in order to maintain production levels of 12 locomotives per month, which is imperative for the success of the project. The increase in team size accounting for the R38.3m over the period of production is available on request.

Quality assurance relates to the increase in supervision labour required to inspect and monitor production of locomotives due to the lack of experience in the new Durban factory. An additional 6 specialists will be required to mentor and supervise the production of 12 locomotives per month, with each supervisor monitoring the production of up to 2 locomotives at a time. This additional cost amounts to R1.6m over the period.

Customer Service Team ("CST") will need to increase marginally to account for the increase in pressure derived from dealing with more supplier and client issues from a remote location. This will require an additional 8 agents and the setting up of a CST infrastructure sufficient to manage the CST requirements. This will total R8.1m over the period.

Program management for the relocation and new operation will require an additional 3 senior managers due the substantial increase in team size, logistical complexity and supervision. This will amount to an additional R3.4m over move and the initial production phase.

Labour Costs	Manufacturing related costs	(Avg Cost per Emp * Num Durban Emp Required) - (Avg Cost per Emp * Num Pretoria Emp Required)	38 280 000
	QA	Num Supervisors * Cost per Supervisor	1 640 000
	Customer service	Additional Emp * Cost	8 064 000
	Program mgt	Senior Managers Req * Cost Per Manager	3 383 333
	Total		54 367 333

Material Cost

Total cost R178.8m: 28% of relocation costs

Additional material costs amount to R178.8m as a result of the relocation. This has the largest impact on relocation, amounting to 28% of relocation cost.

Inflationary costs equating to R162.1m will be incurred, based on a 4-month delay. This is calculated using the South African inflation rate of 5.5% pa, decomposed to 1.8% over the 4 months.

Incremental estimated procurement costs of R16.8m. Considering than certain raw materials will not be available in South African warehouses at the outset of the project, and considering the target of 12 locomotives per month, we estimate 3 months' storage to various warehouses. The supplier will cost approximately 9% per annum over the 4 month delay.

Material Cost	Inflation due to schedule shift	4-month Inflation * Total Project Cost	162 064 173
	Additional procurement costs	Raw Materials * 4 months Financing Cost * % of Stock on Hand for 3 Months	16 758 621
Total			178 822 793

Operational Logistics Costs

Total cost R6.4m: 1% of relocation costs

Impact of changes to logistics and operations will amount to R6.4m. This is ~1% of total relocation costs.

Administrative costs to re-work logistics will be required, as the roll-out and execution of the relocation and final manufacturing project will need to be altered. This amounts to R1.7m.

A new environment will require to be thoroughly tested, in order to maintain the required level of quality and delivery. This will amount to R475k.

Additional staff travel costs due to the move will amount to an estimated R2m.

Higher inventory requirements will be required due to the distance from Gauteng. This will result in a cost of R2.2m.

Logistics Costs	Admin costs to re-work logistics		1 731 158
	Dry run in new environment	As per Fixed Quotation	474 576
	Additional travel costs		2 024 410
	Higher inventory cost of capital		2 190 797
Total			6 420 941

Technical support

Total cost R70m; 11% of relocation costs

Additional technical support will be required, amounting to R70m. This is 11% of total relocation cost.

The additional technical support comprises the additional technical and engineering teams that will need to be available on the ground, beyond the initial 19month production phase. These specialised teams will be in addition to the requirement from the Pretoria plant due to the lack of expertise in maintenance and post-production servicing currently available in Durban. This will amount to R24.5m.

There will also be an increased cost of on-site service by suppliers due to the increase in travel and relocation of Gauteng-based suppliers. This is estimated at R45.5m over the pre- and post-production periods.

Technical Support	Increased cost of tech support	As per Fixed Quotation	17 500 000
	Engineering		7 000 000
	Increased cost of on-site service by suppliers		45 500 000
Total			70 000 000

Transportation

Total cost R79.8m; 13% of relocation costs

Physical transportation from Pretoria to Durban will amount to R79.8m. This is 13% of total relocation cost.

There will be a R567K cost saving to being based in Durban due to proximity to an industrial port.

Physical transportation of assembly parts of locomotives is estimated at R50.4m, explained as follows: the cost of road logistics in South Africa is estimated at (average) 5% of pre-transport costs. Assuming the project is transporting ~R1b worth of raw materials. The total is thus estimated at R50.4m.

- Short-term insurance on the value of transported goods will amount to R22.5m, based on Industry-level Goods In Transit insurance premiums of between 0.2% and 0.8% of value.
- Transport protection, express shipments (for time-sensitive delivery), Trucks for handover and Testing goods when received are directly inherited costs of the relocation, amounting to incremental costs of R7.6m.

Transportation	International shipments	As per Fixed Quotation	567 104
	Car body - Durban		
	Bogie - Durban		
	Traction Chain - Durban	% Cost of Road Logistics * Cost of Raw Local Materials	50 400 000
	Delta supply chain - Durban		
	Insurance	Insurance Premium % * Total Insurable Value	22 500 000
	Transport protection		3 283 791
	Express shipments		895 427
	Truck for handover	As per Fixed Quotation	1 492 378
	Locos testing		1 790 853
Total			79 794 785

Incremental Warehousing Costs

Total cost R74.9m: 12% of relocation costs

Additional warehousing costs will amount to R74.9m, which is 12% of total relocation cost.

- As a result of the scarcity of prime industrial factories in Durban, the cost per square metre is substantially higher than Pretoria by between R35/sqm-R55/sqm. This will result in an increase in lease cost of R16.8m over the long-term period.
- Fencing, security and office furniture of R300k.
- Office construction and civil work upgrades will amount to R3.9m, based on estimated office space of ~850sqm.
- The project necessitates that ~6-15% of total factory space is used for shelving and storage. This will result in an additional cost of R11.2m. This is based on a calculated build cost of R11 200/sqm.
- Additional forklifts and stacking trucks will be required that would not have been as necessary or as costly in Pretoria. This will amount to 20 forklifts and trucks in total, at a cost of R5.3m.
- Additional delivery vehicles and (new) systems to be implemented in the new factory will amount to R7m.

Additional staff & personnel will be required, incurring a substantial relocation cost to bring in skilled labour from Gauteng (~90 personnel). With incentive salaries and a relocation incentive, this amounts to R24.5m.

Due to the lack of experience of the new teams, external labour and professional consulting/supervisory teams will need to be brought in. Four of these engineering consultants will be needed during the primary production phase, costing R5.8m.

Delta to warehouse costs	Additional Lease costs	Incremental Cost Per Sqm * Total Sqm	16 800 000
	Fencing/Security	As per Fixed Quotation	110 395
	Civil works upgrades/office construction	Office Sqm * Rate per Sqm	3 927 000
	Office & Warehouse furniture	As per Fixed Quotation	188 899
	Racks & Shelving	% of Sqm * Cost per Sqm	11 200 000
	Local forklifts/stacker trucks	(Cost per Truck * Num Trucks) + (Cost per Forklift * Num Forklifts)	5 300 000
	Additional delivery vehicles	As per Fixed Quotation	3 923 552
	Technology & Inventory systems	As per Fixed Quotation	3 133 999
	Additional staff & personnel	(Team To Be Relocated * Salary Increase) + Once-off Relocation Incentive	24 503 400
	Extra outside labour & services	Engineer Consulting Fees * Num Engineers	5 800 000
Total			74 888 245

Financing & Risk Costs

Total cost R171.6m: 27% of relocation costs

Financing costs are the second biggest cost to the relocation, amounting to R171.6m, or 27% of total relocation cost.

- Labour inflation due to the 4-month delay and the additional required resources will amount to R3.7m, based on 5.5%pa CPI.
- Finance cost as a result of rolling over forward currency (USD) contracts are estimated at R63m. The buy and sell spread on forward contracts equals 2 x ZAR 0.12.
- Bond /debt instrument costs increase will amount to R18m based on cash flow risk and upfront payments.
- Contingency risk of 4% on assumptions, amounting to R25.9m.

- There will be increased insurance costs amounting to R2.8m due to the relocation and new teams involved.
- Training costs of additional teams and new staff will be required, amounting to R3.6m based on industry standard of 6% training costs.
- There is a risk provision of 9%, amounting to R55m. This risk is primarily focused around the pressure the relocation will put on the final locomotive production project. The overall effect on a large scale relocation, with new teams, staff, specialists, expertise and a less-known environment will create substantial risk in meeting deliverables and timelines.

Finance Costs	Labour inflation original contract	Additional Staff Costs * CPI	3 648 790
	Finance costs on forward contracts	% Premium * 2 *ZAR 0.12 Spread on USD	63 000 000
	Bond costs increase	Duties * Total Value Added	18 000 000
	Contingency	4% on Cost	25 867 599
	Increased insurance costs	As per fixed Quotation	2 760 000
	Increased training costs	Std % Training Cost * Value of Additional Staff	3 587 623
	Risk provision increase project	9% on Cost	54 708 576
Total			171 557 588

Costing Summary

The above-mentioned breakdown, detailed in the attached cost spreadsheet, outlines the need for the further investment of R636m for the relocation of operations and manufacture to Durban. Although this is a marginal cost in terms of the total project, it should be treated as material to the final project production. In order to not impact on the quality of service, manufacture and delivery of this crucial element of the total locomotive project, it makes sound business sense to maintain the same teams throughout the relocation and manufacture, allowing the seamless handover between the two phases and maintaining the level of skill and experience throughout.

The above breakdown should address any issues pertaining to the costs of the relocation. If not, please do not hesitate to contact us for further details relating to any or all of the summarised figures.

References & Sources

Labour Costs

Based on manufacturing and engineering market standard rates, and applied to skill requirements of different roles relocation and final project.

Material Cost

Based on actu projected manufacturing project costings.

Transportatio Costs

Industry quota ns applied to actual project expectations.

Financing Co s

Inflation as pe SABB CPI projections.

Forward Cont cts as per standard quoted forward contract spreads and rates.

Risk & Conti ency premiums derived from financial expert analyses detailing risk profiles in manufacturin in South Africa.

Industrial Pro erty Costs

Based on lea ing property market experts, with primary and secondary research conducted to compare anal s.

1. Increasing the team size does not make sense considering the learning curve will mitigate this requirement within a short time. RE: The team size was increased to compensate for the increased number of inexperienced personnel in Durban.

2. Negotiating with suppliers will eliminate the inflationary cost related to the 4 additional months. In any case material costs generally don't increase on a monthly basis, thus the impact should not be as large as 1.8 %. Also 1.8 % for 4 months does not equal 5.5 % but rather 7.2 % which is excessive.
RE: The SAFEX annual inflation rate is 5.5% this has been calculated based on 4 mths / 12 mths to account for the 4 month delay, which is in fact 5 months now.

3. From the explanation provided, the incremental cost of procurement does not relate to the move to Durban. This should not be charged. In any case 9 % interest is excessive RE:

4. The additional technical support requirement in Durban does not make sense. The cost of this technical support should have been included in the original price.
RE: Due to relocation to Durban, new facilities are to set-up and staff trained. CNR has to contribute more technical support as a greater percentage of the project will be based on foreign vs local manufacture.

5. On site service by technicians should have been included in the original price. R 31.5 m for travel and relocation seems excessive.
RE: Most of suppliers of CNR are located in JHB. Now the manufacture site is relocated to Durban, the suppliers in JHB have to travel to Durban for on-site service as well as to train up the unskilled staff in Durban. All these costs were not planned as part of the original price and therefore are additional.

6. Can the transport not be done by TFR via rail containers? If so then insurance costs would also be minimal as would be internally insured.
RE:

7. R 11200 psm for shelving seems excessive?
RE: This was based on quotations received for the required shelving and related warehouse components.

8. Has consideration been given to TE or TFR property for the warehousing?
RE: The warehouse of TE was not considered. As per the agreement, the warehousing is planned to be rented by CNR and the warehousing of TE should be managed by TE itself at the cost of TE itself. This is not included in this proposal.

9. Why the additional forklifts?
RE: The workshops and facility areas are increased owing to increase in import component.

10. How much is the incentive and relocation cost per staff member?

11. Labour inflation does not increase on a monthly basis. The impact could possibly only be at the end of the project.
RE: Annual inflation rate has been applied for the relevant period as per standard calculations of this nature.

12. Labour inflation rate applied at 6.5 % for the full year, whereas it should only be for 4 months (Cell E23 in 'Staff' sheet).
RE: fair point (mistake in formula) the impact of changing for this is about R3m

13. Contingency risk of 4 % and risk provision of 9 % is unexplained and seems to be additional profit. This seems excessive.
RE: fixed percentages used based on market standards for projects of this nature.

14. Obtain a detailed list of suppliers being used in Durban versus those in JHB.

15. The cost of the long term maintenance consulting does not relate to the move to Durban (Cell E29 'staff'). This should not be charged as it should have been included in the original contract.
RE: Based on the cost of the additional 20 staff members needed over the 4 year project period owing to the relocation to DBN.

16. Labour inflation is double counted (ref cell D7 & cell E23 'staff')
RE: cell D7 is part of the workings only to demonstrate the assumptions used wrt labour and material related costs. ONLY the calculation in cell E23 from the staff schedule relating to labour inflation has been used in calculating the cost increase based on the original contract.

Key References		
South African Reserve Bz	www.reshank.co.za	Macro-economic analysis on
Stats SA	www.statsa.gov.za	trends, growth in
Fin24	www.fin24.com	manufacture, currency risk,
JSE News	www.jse.co.za	inflation and interest

Transportation References	
Department of Transport	www.transport.gov.za
Durban Clearing	www.durbanclearing.co.za
Road Freight Logistics	www.rflogistics.co.za
South African Railways	southafricanrailways.co.za

Finance Costs		
South African Reserve Be	www.reshank.co.za	
Consulting with various finance experts		consulting
Standard Bank		
SASFin		
Bidvest Bank		

Labour Related Research		
SA Board for People Practices		
EVA Solutions	www.evasolutions.co.za	
Exceed HR Consulting	www.exceed.co.za	

Property Research		
Seeff Property Agency	www.seeff.co.za	agency
Property24	www.property24.com	non-agency
Standard Bank Property		banking portfolio assistance
Nedbank Preferred Property Guide		banking portfolio assistance
FNB Property		banking portfolio assistance
Industrial Listings	w.industriallistings.co.za	
SA Commercial Property	w.sacommercialproppies.co.za	

Factory & Materials Costs		
Industry experts in manufacture		consulting
Industry experts in mining & efficiencies		consulting
Industry experts in cost optimisation		consulting
Trading Economics	ww.tradingeconomics.co.za	
Manufacturing Circle	w.manufacturingcircle.co.za	

ANALYSIS OF COST INCREASE

	Costs	% of Total Relocation	Notes
Labour Costs	R 54 867 833	9%	
Manufacturing related costs	R 38 80 000	6%	
Increase quality assurance	R 4 40 000	1%	
Customer service	R 64 000	0%	
Program management	R 3 883 333	1%	
Material Cost	R 178 822 799	28%	
Inflation due to schedule shift	R 167 564 178	26%	
Additional procurement costs	R 15 258 621	2%	
Logistics Costs	R 6 420 841	1%	
Admin costs re-work logistics	R 1 731 158	0%	Fixed Quotation
Dry run in new environment	R 174 576	0%	Fixed Quotation
Additional travel costs	R 2 324 410	0%	Fixed Quotation
Tying of inventory - cost of capital	R 2 190 792	0%	Fixed Quotation
Technical Support	R 70 000 000	11%	
Increased cost of tech support	R 17 500 000	8%	
Engineering	R 7 000 000	1%	
Increased cost of on site service by suppliers	R 45 500 000	7%	
Transportation	R 79 794 785	13%	
International shipments	567 104	0%	Fixed Quotation
Cartridge Eagle, Traction Chain, Delta Supply Chain	R 5 400 000	1%	
Insurance	R 2 500 000	0%	
Transport protection	R 3 289 234	1%	Fixed Quotation
Express shipments	895 427	0%	Fixed Quotation
Truck for handover	R 1 497 378	0%	Fixed Quotation
Load testing	R 1 795 853	0%	Fixed Quotation
Delta warehouse costs	R 74 888 245	12%	
Additional lease costs	R 1 800 000	0%	
Fencing/Security	110 395	0%	Fixed Quotation
Civil works upgrades/office construction	R 927 000	1%	
Office & warehouse furniture	188 898	0%	Fixed Quotation
Racking & Shelving	R 1 200 000	0%	
Lockable forklifts/stacker trucks	R 900 000	1%	
Additional delivery vehicles	R 924 552	1%	Fixed Quotation
Technology & inventory systems	R 139 999	0%	Fixed Quotation
Additional staff & personnel	R 2 503 400	4%	
Extra outside labour & services	R 800 000	1%	
Other Costs	R 171 557 688	27%	
Labour inflation original contract	R 643 790	1%	
Finance costs on forward contracts	R 6 000 000	10%	
Road costs increase	R 1 000 000	0%	
Contingency	R 2 861 599	4%	Contingency Risk- Fixed %
Increased insurance costs	R 750 000	1%	Fixed Quotation
Increased training costs	R 1 587 625	3%	
Risk provision increase project	R 5 708 678	9%	Standard Risk- Fixed %
Total	R 635 852 788		

Global Variables		
Diesel Locomotives	232 locomotives	
Locomotive Weight	200 tons	
Project Value	9 000 000 000	
SA Value	5 850 000 000	65%
Delay	4 mths	

Inflation	
Annual Inflation	5.5% SARB CPI
4months Inflation	1.8%
Total Cost	9 000 000 000
Inflation	162 064 173

Additional Cost	
raw materials	3 600 000 000
Interest	5% pa
Cost	108 000 000
% on hand	16%
	16 758 621

Assumptions & Variables	
Team per Loco	25
Locos per Month	12
Working on Locos pm	300
Number of Months	19

Per Loco	
Unskilled	8
Skilled	17
Managers	3

Avg Cost per Employee	17 500
Unskilled	10 000
Skilled	20 000
Manager	45 000
Calculated Avg	19 000
Total Cost per Team	495 000
Total Cost pm	5 940 000

Increased Training Costs	
Additional Staff	24 503 400
Manufacturing Related costs	38 280 000
	62 783 400
Additional Training	6%
Training Total	3 587 623
Annual Employee Cost	700 000
1 Year MBA	40 000
%	6%

QA due to inexperience	
Number of Locos pm	12
Locos per Supervisor	2
Number of Supervisors	6
Cost per Supervisor pm	40 000
	4 640 000

35% Portion of Total costs for Labour	
30% Margin	
6 300 000 000	Costs
2 205 000 000	Labour
39 705 722	Labour Inflation
5 051 503	Calculated Inflation
280 527 931	Total Original Labour Cost
24 168	Total FTE (over period)

Extra outside labour & services	
Engineering Cost	900 000
pm	75 000
Period	1 450 000
Number of Experi	4
Total	5 800 000

Labour inflation original contract	
Additional Payme	66 250 731
Inflation	5.5%
Total Cost	3 643 790

Long Term Maintenance Consulting	
Years	7
Avg Salary	1 000 000
Number of Engine	10
	70 000 000 pa
Weighting	3
Tech Support	1
Engineers	7
Suppliers	

Customer Service (increase in fl	
Additional team	6
Cost	12 000
	8 064 000

Mix Change Due To Inexperience	Old	New
Unskilled	5	5
Skilled	17	20
Managers	3	6
Per Loco	25	31
Direct Labour per Loco	495 000	660 000
Total Cost	114 840 000	353 320 000
Diff		58 480 000

Additional staff & personnel	
Relocation %	30%
Total Team	300
Relocated Team	90
Salary Growth	25%
Relocation Cost	100 000
Total Cost	17 513 000
Additional Staff	72
Incremental Salary	25%
Total Cost	6 890 400
Grand Total	24 503 400

Program management	
Senior Manager for Relocation	700 000 pa
	58 333 pm
Total	1 127 778
Number	3
Total Cost	3 383 333

Bond cost Increase	
Total Value	3 000 000 000
Value Added (margin)	20%
Total Value Added	1 800 000 000
Duty	1%
Duty Amount	18 000 000

Forward Contract Cost:	
Imported Value	3 150 000 000
12c Spread on Fwd	0.12
Paying Double for Buy/Sell	0.24 Rand to the USD
R/US	12 ZAR/USD
Additional Cost %	2%
Total Cost	63 000 000

Insurance on Transportation	
Standard Insurance	200 000
Insurance	500
	0.25%
Value	9 000 000 000
Insurance	22 500 000

Additional Lease costs			
	680 000 Rpa		
Industrial Rent Pta	350 000	10 000 sqm	35
Industrial Rent Durban	550 000	10 000 sqm	55
Diff	200 000		
	16 800 000		

Racks & Shelving	
	10% of sqm
	10 000 sqm
	11 200 cost per sqm
	11 200 000

Small Office	
	850 sqm
	55 R/sqm
	3 927 000

Local forklifts/stacker trucks		
#	R	
15	120000	lifts
5	700000	trucks
	5 300 000	

Car body, Bogie, Traction Chain, Delta Supply Chain		
Cost of Road Logistics		5% of Total Costs
Total Raw Materials		40% of Costs
Total Imported Value	3 150 000 000	*original cost*
Margin		20%
Total Costs	2 520 000 000	
Raw Materials from Costs	1 008 000 000	
Logistics on Materials	50 400 000	

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Analysis of Cost Increase

for

Locomotive Delivery

and

Locomotive Factory Relocation

from

Pretoria, Gauteng to Durban, Kwa-Zulu Natal

in terms of

Manufacturing Facility Relocation for Class 45D Locomotives Supply Project

July 2015

CNR Rolling Stock South Africa (Pty) Ltd (reg 2014/031693/07) t/a

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Executive Summary

We have been requested to analyse the Cost Increase for the Locomotive Delivery and Locomotive Factory relocation in terms of Manufacturing Facility Relocation for Class 45D Locomotives Supply Project. The decision to relocate from Pretoria, Gauteng to Durban, Kwa-Zulu Natal will cost an estimated R719 090 548.

On this amount we happy to offer a settlement discount of 10% amounting to R71 909 054 Therefore the reduced amount due to CNR after deducting the settlement discount amounts to R647 181 494.

In order to align the balance of the payment with the project execution, the settlement discount assumes the following settlement terms.

- 50% payable within 14 days of signature and the balance R323 590 747
- 50% payable in 24 equal instalments of R13 482 948 ("the relocation payment") commencing the end of the first month that the project commences
- Therefore CNR RS SA will invoice for 24 monthly instalments of R13 482 948
- Please note that the relocation payment will be invoiced separately from the milestone payment invoice as per the Locomotive Supply Agreement for the manufacture of the 212 locomotives ("the LSA"), which will be paid as per the document approved by Transnet. In addition, the relocation payment should not reduce nor increase or affect the milestone payment stipulated in the LSA.

Description	Cost (R)	% of total
Labour costs	54 367 333	8%
Material costs	223 982 441	31%
Logistical costs	6 420 941	1%
Technical support	70 000 000	10%
Transportation	94 194 785	13%
Delta to Warehouse costs	75 650 745	10%
Other costs	194 474 302	27%
Total	719 090 548	100%

Due to the tight time for preparation, there are some elements which affect this Durban relocation project, we reserve the opportunity to give the clarification.

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Introduction

In order to be able to relocate the entire operation of manufacturing, production, assembly and servicing from Pretoria to Durban, there are several incremental costs, risks and material changes that will need to be considered.

During the execution of this project, in order to complete the technology transferring, manufacturing, training, testing and maintenance tasks for this locomotive project successfully, as well as the empowerment of the black economy, the manufacturing facilities are relocated from Pretoria to Durban. Thus this proposal is submitted. This proposal is seen as the project document as per the contract.

These considerations can be broken down into:

- Labour costs
- Material costs
- Operational and logistical effects
- Technical support
- Physical transportation of materials and resources
- Incremental warehousing costs
- Financing and risk costs due to time constraints and delays.

Each of these areas carry a substantial weight on the total cost of relocation, considering the move from a skilled factory with high-end technology in a nationally-central location to an environment where locomotive manufacturing skills are limited and supply of manufacturing engineers is limited. Added to that, being the largest industrial port in South Africa, industrial property is highly sought after, especially in and around railway areas due to the high traffic on the railway lines between Durban and Johannesburg.

The largest non-operational and logistical cost faced is also the 5-month delay in production of entire 232 locomotive, which is placing substantial currency-hedging risk, import and inflationary risk, insurance, and training costs.

All-in-all, there will also be ancillary benefits in using the same team to relocate as will be running the day-to-day operations in Durban. This will minimise team friction, hand-over wastage and delays, lack of accountability and a host of expertise-related risks.

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Below is a breakdown of each of the above-mentioned sections, justifying the detailed cost analysis of the relocation project

Cost Breakdown

The total cost implications of the relocation and the inherent costs of relocating manufacture to Durban from Pretoria amount to an estimated R719m. Importantly, this amounts to less than 10% of the total Class 45D locomotive manufacturing project. The attached outline details and explains the R719m.

Labour Costs

Total cost R54.4m: 8% of relocation costs

The amount is broken down below. This is ~8% of total relocation cost.

- Manufacturing costs, amounting to R38.3m, relate to the added size of each team that will be required in order to complete each locomotive build. Due to the lack of skills and experience in Durban, the average team size per locomotive (of 25) will need to be increased to 31 (i.e. 6 additional mentorships from CNR) in order to maintain production levels of 12 locomotives per month, which is imperative for the success of the project. The increase in team size accounting for the R38.3m over the period of production is available on request.
- Quality assurance relates to the increase in supervision labour required to inspect and monitor production of locomotives due to the lack of experience in the new Durban factory. An additional 6 specialists from CNR will be required to mentor and supervise the production of 12 locomotives per month, with each supervisor monitoring the production of up to 2 locomotives at a time. This additional cost amounts to R4.6m over the period.
- Customer Service Team ("CST") will need to increase marginally to account for the increase in pressure derived from dealing with more supplier and client issues from a remote location. This will require an additional 8 agents and the setting up of a CST infrastructure sufficient to manage the CST requirements. This will total R8.1m over the period.
- Program management for the relocation and new operation will require an additional 3 senior managers due the substantial increase in team size, logistical complexity and supervision. This will amount to an additional R3.4m over move and the initial production phase.

Labour Costs	Manufacturing related costs	(Avg Cost per Emp * Num Durban Emp Required) - (Avg Cost per Emp * Num Pretoria Emp Required)	38 280 000

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	QA	Num Supervisors * Cost per Supervisor	4 640 000
	Customer service	Additional Emp * Cost	8 064 000
	Program mgt	Senior Managers Req * Cost Per Manager	3 383 333
Total			54 367 333

Material Costs

Total cost R224m: 31% of relocation costs

Additional material costs amount to R203m as a result of the relocation. This has the largest impact on relocation, amounting to ~30% of relocation cost.

- Inflationary costs equating to R203m will be incurred, based on a 5-month delay. This is calculated using the South African inflation rate of 5.5%pa, decomposed to 2.3% over the 5 months.
- Incremental estimated procurement costs of R21m. Considering than certain raw materials will not be available in South African warehouses at the outset of the project, and considering the target of 12 locomotives per month, we estimate 3 months' storage to various warehouse suppliers will cost approximately 9% per annum over the 5-month delay.

Material Cost	Inflation due to schedule shift	5-month Inflation * Total Project Cost	203 034 155
	Additional procurement costs	Raw Materials * 5 months Financing Cost * % of Stock on Hand for 3 Months	20 948 276
Total		-	223 982 441

Operational & Logistics Costs

Total cost R6.4m: <1% of relocation costs

Impact of changes to logistics and operations will amount to R6.4m. This is ~<1% of total relocation cost.

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- Administrative costs to re-work logistics will be required, as the roll-out and execution of the relocation and final manufacturing project will need to be altered. This amounts to R1.7m.

- A new environment will require to be thoroughly tested in order to maintain the required level of quality and delivery. This will amount to R475k.
- Additional staff travel costs due to the move will amount to an estimated R2m.
- Higher inventory requirements will be required due to the distance from Gauteng. This will result in a cost of R2.2m.

Logistics Costs	Admin costs to re-work logistics	As per Fixed Quotation	1 731 158
	Dry run in new environment		474 576
	Additional travel costs		2 024 410
	Higher inventory - cost of capital		2 190 797
Total			6 420 941

Technical Support

Total cost R70m: 10% of relocation costs

Additional technical support will be required, amounting to R70m. This is 10% of total relocation cost.

- The additional technical support comprises the additional technical and engineering teams that will need to be available on the ground beyond the initial ~19month production phase. These specialised teams will be in addition to the requirement from the Pretoria plant due to the lack of expertise in maintenance and post-production servicing currently available in Durban. This will amount to R38.5m.
- There will also be an increased cost of on-site service by suppliers due to the increase in travel and relocation of Gauteng-based suppliers. This is estimated at R31.5m over the pre- and post-production periods.

Technical Support	Increased cost of tech support	As per Fixed Quotation	28 000 000
	Engineering		10 500 000
	Increased cost of on-site service by local small business supplier		31 500 000

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Total			70 000 000

Transportation

Total cost R94.2m: 13% of relocation costs

Physical transportation from Pretoria to Durban will amount to R94.2m. This is ~10% of total relocation cost.

- There will be a R567k cost saving to being based in Durban due to proximity to an industrial port.
- Physical transportation of assembly parts of locomotives is estimated at R64.8m, explained as follows: the cost of road logistics in South Africa is estimated at (average) 5% of pre-transport costs. Assuming the project is transporting ~R1.3b worth of raw materials. The total is thus estimated at R64.8m.
- Short-term insurance on the value of transported goods will amount to R22.5m, based on industry-level Goods In Transit insurance premiums of between 0.2% and 0.8% of value.
- Transport protection, express shipments (for time-sensitive delivery), Trucks for handover and Testing goods when received are directly inherited costs of the relocation, amounting to incremental costs of R7.5m.

Transportation	International shipments	As per Fixed Quotation	-567 104
	Engine - Durban	% Cost of Road Logistics * Cost of Raw Local Materials	64 800 000
	Brake System - Durban		
	Traction Chain - Durban		
	Delta supply chain - Durban		
	Insurance	Insurance Premium % * Total Insurable Value	22 500 000
	Transport protection	As per Fixed Quotation	3 283 231
	Express shipments		895 427
	Truck for handover		1 492 378
	Locos testing		1 790 853
Total			94 194 785

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Incremental

Warehousing Costs

Total cost R75.7m: 10% of relocation costs

Additional warehousing costs will amount to R75.7m, which is ~10% of total relocation cost.

- As a result of the scarcity of prime industrial factories in Durban, the cost per square metre is substantially higher than Pretoria by between R35/sqm-R55/sqm. This will result in an increase in lease cost of R16.8m over the long-term period.
- Fencing, security and office furniture of R300k.
- Office construction and civil works upgrades will amount to R3.9m, based on estimated office space of ~850sqm.
- The project necessitates that ~5-15% of total factory space is used for shelving and storage. This will result in an additional cost of R12m. This is based on a calculated build cost of R11,200/sqm.
- Additional forklifts and stacking trucks will be required that would not have been as necessary or as costly in Pretoria. This will amount to 20 forklifts and trucks in total, at a cost of R5.3m.
- Additional delivery vehicles and (new) systems to be implemented in the new factory will amount to R7m.
- Additional staff & personnel will be required, incurring a substantial relocation cost to bring in skilled labour from Gauteng (~90 personnel). With incentive salaries and a relocation incentive, this amounts to R24.5m.
- Due to the lack of experience of the new teams, external labour and professional consulting/supervisory teams will need to be brought it. Four of these engineering consultants will be needed during the primary production phase, costing R5.8m.

Delta to warehouse costs	Additional Lease costs	Incremental Cost Per Sqm * Total Sqm	16 800 000
	Fencing/Security	As per Fixed Quotation	110 395
	Civil works upgrades/office construction	Office Sqm * Rate per Sqm	3 927 000
	Office & warehouse furniture	As per Fixed Quotation	188 899
	Racks & Shelving	% of Sqm * Cost per Sqm	11 962 500
	Local forklifts/stacker	(Cost per Truck * Num Trucks) + (Cost	5 300 000

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	trucks	per Forklift * Num Forklifts)	
	Additional delivery vehicles	As per Fixed Quotation	3 924 552
	Technology & inventory systems	As per Fixed Quotation	3 133 999
	Additional staff & personnel	Team To Be Relocated * Salary ncrease) + Once-off Relocation Incentive	24 503 400
	Extra outside labour & services	ngineer Consulting Fees * Num Engineers	5 800 000
Total			75 650 745

Financing & Risk Costs

Total cost R194m: 27% of relocation costs

Financing costs are the second biggest cost to the relocation, amounting to R194m, or ~27% of total relocation cost.

- Labour inflation due to the 5-month delay and the additional required resources amounts to R1.8m, based on 5.5%pa CPI.
- Finance cost as a result of rolling over forward currency (USD) contracts are estimated at R87m. The buy and sell spread on forward contracts equals 2 x ZAR 0.12.
- Bond /debt instrument costs increase will amount to R18m based on cash flow risk and upfront payments.
- Contingency risk of 4% on assumptions, amounting to R25.9m.
- There will be increased insurance costs amounting to R2.8m due to the relocation and new teams involved.
- Training costs of additional teams and new staff will be required, amounting to R3.6m, based on industry standard of 6% training costs.
- There is a risk provision of 9%, amounting to R54.7m. This risk is primarily focused around the pressure the relocation will put on the final locomotive production project. The overall effect on a large-scale relocation, with new teams, staff, specialists, expertise and a less-known environment will create substantial risk in meeting deliverables and timelines.

Finance Costs	Labour inflation original contract	Additional Staff Costs * CPI	1 810 405
	Finance costs on forward contracts	% Premium * 2 *ZAR 0.12 Spread on USD	87 750 000
	Bond costs increase	Duties * Total Value Added	18 000 000

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	Contingency	4% on Cost	25 867 599
	Increased insurance costs	As per Fixed Quotation	2 750 000
	Increased training costs	Std % Training Cost * Value of Additional Staff	3 587 623
	Risk provision increase project	9% on Cost	54 708 676
Total			194 474 302

Costing Summary

The above-mentioned breakdown, detailed in the attached cost spread-sheet, outlines the need for the further investment of R719m for the relocation of operations and manufacture to Durban. Any costs attributable to TE with regards to the Durban relocation have not been taken into account in the cost of R 719m.

Although this is a marginal cost in terms of the total project, it should be treated as material to the final project production. In order to not impact on the quality of service, manufacture and delivery of this crucial element of the total locomotive project, it makes sound business sense to maintain the same teams throughout the relocation and manufacture, allowing the seamless handover between the two phases, and maintaining the level of skill and experience throughout.

The above breakdown should address any issues pertaining to the costs of the relocation taking into account a 5month delay. If not, please do not hesitate to contact us for further details, relating to any or all of the summarised figures.

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Definition

1. TRANSNET SOC LTD(acting through its Transnet Freight Rail division), a public company incorporated in South Africa (registration number 1990/000900/30) and referred to in Section 2 of the Legal Succession to the South African Transport Services Act, No 9 of 1989 (the Company);
2. CNR RS SA , a company registered under the laws of South Africa(registration number 2014/016892/07) and, subject to a name change, to be known and registered as CNR ROLLING STOCK SOUTH AFRICA PROPRIETARY LIMITED (the Contractor);
3. TE, means Transnet SOC Limited acting through its TRANSNET ENGINEERING Division (registration number 1990/000900/30) (the "Subcontractor");
4. Local Supplier, means the suppliers in South Africa other than TE;
5. Locomotive, means collectively or individually, the locomotives to be manufactured and supplied to the Company by the Contractor in accordance with this Agreement, with each individual locomotive being identified by its vehicle number;
6. Training, means the training to be provided by the Contractor to the Company personnel in accordance with Part 12 (Training) of Schedule 3 (Agreement Management ;

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Mr. Jeff Wang

Chief Executive Officer

CNR Rolling Stock (Pty) South Africa

Mr. Anoj Singh

Chief Financial Officer

Transnet SOC Limited

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		Costs	% of Tot	l Relocation	Notes
Labour Costs		R 54, 367, 333		8%	19
	Manufactur g cost increase	R 38, 280, 000			3
	Increase q lity assurance	R 4, 640, 000			3
	Customer s vice	R 8, 064, 000			3
	Program ma gement	R 3, 383, 333			3
Material Cost		R 223, 982, 441			
	Inflation e to schedule shift	R 203, 034, 165			2
	Additional rocurement costs	R 20, 948, 276			2
Logistics Cos		R 6, 120, 941		1%	
	Admin cost to re-work logistics	R 1, 731, 153			Fixed Quotation
	Dry run in ew environment	R 474, 576			Fixed Quotation
	Additional ravel costs	R 2, 024, 410			Fixed Quotation
	Higher inv tory - cost of capital	R 2, 190, 797			Fixed Quotation
Technical Supp rt		R 70, 000, 000		0%	
	Increased c st of tech support	R 28, 000, 000			3
	Engineering	R 10, 500, 000			3
	Increased c st of on-site service by supplie	R 31, 500, 000			3
Transportation		R 94, 194, 785			
	Internatio l shipments	R 567, 104			Fixed Quotation
	Parts Trans ortation to Durban	R 64, 800, 000			6
	Insurance	R 22, 500, 000			4
	Transport p otection	R 3, 283, 231			Fixed Quotation
	Express shi ments	R 895, 127			Fixed Quotation
	Truck for h ndover	R 1, 492, 378			Fixed Quotation
	Locos testi g	R 1, 790, 853			Fixed Quotation
Delta to wareh use costs		R 76, 650, 745		10%	
	Additional ease costs	R 16, 800, 000			5
	Fencing/Sec rity	R 110, 396			Fixed Quotation
	Civil works upgrades/office const	R 3, 927, 000			5
	Office & wa shouse furniture	R 188, 899			Fixed Quotation
	Racks & She ving	R 11, 952, 500			5
	Local forkl fts/stacker trucks	R 5, 300, 000			5
	Additional elivery vehicles	R 3, 924, 652			Fixed Quotation
	Technology inventory systems	R 3, 193, 999			Fixed Quotation
	Additional taff & personnel	R 24, 503, 100			3
	Extra outsi e labour & services	R 5, 800, 000			3
Other Costs		R 194, 474, 302			
	Labour infl tion original contract	R 1, 810, 105			3
	Finance cos s on forward contracts	R 87, 750, 000			4
	Bond costs ncrease	R 18, 000, 000			4
	Contingency	R 25, 867, 599			Contingency Risk - Fixed %
	Increased i surance costs	R 2, 750, 000			Fixed Quotation
	Increased t ining costs	R 3, 587, 623			3
	Risk provis on increase project	R 54, 708, 676			Standard Risk - Fixed %
Total		R 719, 090, 548			

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Global Variables	
Diesel Locomotive	232 locomotives
Locomotive Weight	200 tons
Project Value	9,000,000,000
SA Value	4,950,000,000
Delay	5 mths

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Inflation		
Annual Inflation		5.5% SARB CPI
5 Months Inflation		2.3%
		(CNR imported cost &Local
Total Cost	9,000,000,000	supplier cost)
Inflation	203,034,165	

Additional Cost		
Materials	3,600,000,000	
interest		9% pa
Cost	135,000,000	
% on hand		16%
	20,948,276	

ons & Variables	
Loco	25
os	232
Month	12
m Locos pa	300
Months	19

	Per Loco
l	6
	17
	3
per Employee	17,500
l	10,000
	20,000
	35,000
d Avg	*19,800*
t per Team	495,000
t pa	5,940,000

Training Costs	
l Staff	24,503,400
ring Related cost	38,280,000
	62,783,400
l Training	6%
Total	3,587,623
ployee Cost	700,000
A	40,000
	6%

inexperience	
Locos pa	12
Supervisor	
rom CNR	2
Supervisors	6
Supervisor pa	40,000
	4,640,000

35% Portion of Total costs for Labour	
9,000,000,000	Total Value
30%	Margin
6,300,000,000	Costs
2,205,000,000	Labour
49,743,370	Labour Inflation

5,051,603	Calculated Inflation
223,920,575	Total Original Labour Cost
11.309	Total FTE (over period)

Extra outside labour & services	
Engineering Consulting	
Fees pa	900,000
pm	75,000
Period	1,450,000
Number of Experts	4
Total	5,800,000

Labour inflation original contract	
Additional Payments	
for Staff	80,250,733
Inflation	2.3%
Total Cost	1,810,405

Long Term Maintenance Consulting		
Years	4	
Avg Salary	1,000,000	
Number of Engineers, T	20	
	70,000,000	pa
Weighting		
CNR Tech Support	8	
CNR Engineers	3	
Local Small Business Supplier	9	

Customer Service (increase in #)	
Additional team	8
Cost	12,000
	8,064,000

Mix Change Due To Inexperience & CNR Additional skill training/mentorship Support	Old	New
Unskilled	5	5
Skilled	17	20
Managers	3	6
Per Loco	25	31
Direct Labour per Loco	*495,000*	*660,000*
Total Cost	114,840,000	153,120,000
Diff	38,280,000	

Additional staff & personnel	
Relocation %	30%
Total CNR Team	300
Relocated Team	90
Salary Growth	25%
Relocation Cost	100,000
Total Cost	17,613,000
Additional CNR Staff	72
Incremental Salary	25%
Total Cost	6,890,400
Grand Total	24,503,400

Program management		
Senior Manager for Relocation	700,000	pa
	58,333	pm
Total	1,127,778	
Number	3	
Total Cost	3,383,333	

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Bond cost increase	
Total Value	9,000,000,000
Value Added (margin)	20%
Total Value Added	1,800,000,000
Duty	1%
Duty Amount	18,000,000

Forward Contract Cost		
Imported Value	4,050,000,000	
12c Spread on Fwd	0.13	
Paying Double for Buy-	0.26	Rand to the USD
R/USD	12	ZAR/USD
Additional Cost %	2.2%	
Total Cost	87,750,000	

Insurance on Transportation	
Standard Insurance	20,000,000
Insurance	50,000
	0.25%
Value	9,000,000,000
Insurance	22,500,000

CNR Rolling Stock South Africa

CNR Rolling Stock South Africa
China Construction Bank Building
95 Grayston Drive
2196 Sandton Johannesburg
cnrssapm@163.com

Additional Lease costs				
	600,000	R pa		
Industrial Rent Pta	150,000	5,000	sqm	30
Industrial Rent Dur	350,000	5,000	sqm	70
Diff	200,000			
	16,800,000			

Racks & Shelving	
17%	of sqm
5,000	sqm
14,500	cost per sqm
11,962,500	

Small Office	
	850 sqm
	55 R/sqm
3,927,000	

Local forklifts/stacker trucks		
#	R	
15	120,000	lifts
5	700,000	trucks
	5,300,000	

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Parts Transportation to Durban		
Cost of Road Logistics		5% of Total Costs
Total Imported Materia		40% of Costs
Total Imported Value	4, 050, 000, 000	*original cost*
Margin		20%
Total Costs	3, 240, 000, 000	
Materials from Costs	1, 296, 000, 000	
Logistics on Materials	64, 800, 000	

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2196 Sandton Johannesburg

Key References			
	South African Reserve Bank	www.resbank.co.za	Macro-economic analysis on trends, growth in manufacture, currency risk, inflation and interest movements and general market speculation on risk.
	Stats SA	www.statssa.gov.za	
	Fin24	www.fin24.com	
	JSE News	www.jse.co.za	
Transportation References			
	Department of Transport	www.transport.gov.za	
	Durban Clearing	www.durbanclearing.co.za	
	Road Freight Logistics	www.rflogistics.co.za	
	South African Railways	www.southafricanrailways.co.za	
Finance Costs			
	South African Reserve Bank	www.resbank.co.za	
	Consulting with various finance experts		*consulting*
	Standard Bank		
	SASFin		
	Bidvest Bank		
Labour Related Research			
	SA Board for People Practices		
	EVA Solutions	www.evasolutions.co.za	
	Exceed HR Consulting	www.exceed.co.za	
Property Research			
	Seeff Property Agency	www.seeff.co.za	*agency*
	Property24	www.property24.com	*non-agency*
	Standard Bank Property		*banking portfolio assistance*
	Nedbank Preferred Property Guide		*banking portfolio assistance*
	FNB Property		*banking portfolio assistance*
	Industrial Listings	www.industriallistings.co.za	
	SA Commercial Property News	www.sacommercialpropnews.co.za	
Factory & Materials Costs			
	Industry experts in manufacture		*consulting*
	Industry experts in mining & efficiencies		*consulting*
	Industry experts in cost-optimisation		*consulting*
	Trading Economics	www.tradingeconomics.co.za	
	Manufacturing Circle	www.manufacturingcircle.co.za	

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H

Siyabonga Gama, Acting Group Chief Executive

TRANSNET

Mr Jeff Wang
CNR Rolling Stock South Africa
95 Grayston Drive
Sandton
Johannesburg
2196

Dear Sir,

Variation order to finalise the relocation of the construction of 233 Class 45D locomotives by CNR Rolling Stock South Africa (CNR) to TEs facilities in Durban

Your proposal dated July 2015 regarding the above refers.

This letter serves to confirm the acceptance of the Variation Order issued by Transnet in accordance Paragraph 2, Schedule 3, Part 7 clause no.2 (Company Proposed Variations) of the Locomotive Supply Agreement between Transnet SCO Limited and CNR Rolling Stock South Africa dated 17 March 2014.

Accepted Variation Order is as follows:

1. TFR Class 45D: Locomotive Supply Agreement - Durban Variation Order for an amount of R647 181 494.00.

2. Proposed payment terms as follows:

   - 50% payable within 14 days of signature amounting to R323 590 747.00. The remainder, being 50% payable in 24 equal instalments of R13 482 948.00 ("the relocation payment") commencing the end of the first month that the project commences provided that the project is on track.

   - Therefore CNR RS SA will invoice for 24 monthly instalments of R13 482 948.00.

Kindly submit detailed invoicing based on the variation order and payment terms stipulated.

Yours Sincerely,

Siyabonga Gama
Acting Group Chief Executive
Date: 2015·07·23

Transnet SOC Ltd
Registration Number
1990/000900/30

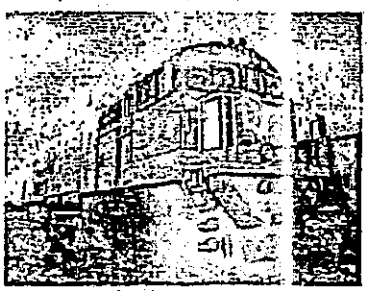
Carlton Centre
150 Commissioner Street
Johannesburg
2001

P.O. Box 72501
Parkview, Johannesburg
South Africa, 2122
T +27 11 308 3001
F +27 11 308 2638

Monday, March 17, 2014

Transnet: 1,064 locomotives, $5 billion

Written by William C. Vantuono, Editor-in-Chief



GE ES40AC diesel-electric locomotive

Transnet, South Africa's state-owned freight transport and logistics company, on March 17, 2014 awarded US$4.7 billion in contracts for 1,064 locomotives to four global original equipment manufacturers—General Electric South Africa Technologies (a unit of U.S.-based GE Transportation), CNR Rolling Stock South Africa (Pty.) Ltd., CSR Zhuzhou Electric Locomotive, and Bombardier Transportation South Africa. The acquisition is the largest-ever locomotive supply contract in South Africa's history and the single-biggest investment initiative by a South African corporation.

The majority of the locomotives will be deployed in Transnet's Freight Rail GFB (General Freight Business) division, which does not include the company's dedicated heavy-haul lines for iron ore and coal. Transnet said it expects Freight Rail, which accounts for roughly 50% of the company's revenue and capital expenditure requirements, to grow its volumes to 350 million tonnes from the current 207 million tonnes. Just over 60% of the growth is expected to come from GFB.

The locomotive acquisition is divided among the four builders as follows: GE will produce 233 Evolution Series GE ES40AC diesel-electric locomotives for the Transnet Freight Rail network. This is in addition to the 143 locomotives that Transnet has ordered from GE since 2010. CNR Rolling Stock South Africa will supply 232 diesel-electric locomotives. CSR Zhuzhou Electric Locomotive and Bombardier Transportation South Africa will supply 599 electric locomotives.

In line with South Africa's commitment to boost its manufacturing capacity, all the locomotives except 70 will be built at plants in Koedoespoort, Pretoria, and Durban operated by Transnet Engineering, Transnet's engineering, manufacturing, and rolling stock maintenance division. Transnet Engineering's role in the agreement has been defined "to ensure that it transforms into an OEM over time," the company said. "Transnet Engineering will share approximately 15% of the total build program, about one-third of which will be outsourced to local emerging engineering and manufacturing firms. This will enable it to create export capability for locomotives and related products, as well as drive South Africa's regional integration objectives. In total, the localization elements are expected to contribute over US$8.4 billion to the South African economy."

The contracts have stringent local content, skills development, and training commitments as dictated by the Supplier Development Programme, a government initiative led by the Ministry of Public Enterprises, whose main goal is to localize the production of imported machinery and equipment.

Transnet said the four suppliers have complied with and exceeded the minimum local content criteria for rolling stock of 60% for electric locomotives and 55% for diesel locomotives. "Once all these locomotives are delivered, Transnet would have met all the rolling stock requirements needed to successfully execute our Market Demand Strategy, our record-breaking US$28.7 billion infrastructure investment program," said Transnet Group Chief Executive Brian Molefe. He added that the contracts "mark a significant milestone in our company's history together with substantial socio-economic benefits for South Africa. The drive to modernize our fleet is intended to improve locomotive reliability and availability. This will improve customer satisfaction, ultimately leading to our crucial goal of road-to-rail migration of cargo in line with government's objectives, and transform the South African rail industry by growing existing small businesses and creating new ones. We are going to create and preserve approximately 30 000 jobs."

The core components of GE's 233 ES40AC locomotives, including the engines, will be made in the U.S., with final assembly occurring at a facility in South Africa. "This technology will help Transnet lower fuel and maintenance costs over the long run," said General Electric South Africa President and CEO Tim Schweikert. "GE South Africa Technologies is honored to be awarded the opportunity to partner with Transnet in revitalizing South Africa's rail sector. Over the past five years, GE South Africa Technologies has delivered more than 115,000 hours of training, more than 35% manufacturing of local content, social upliftment in communities, and technology transfer."

Transnet's contract awards followed a public tender process overseen by its Board of Directors through a subcommittee of independent directors. In addition, Transnet Internal Audit monitored the bid evaluation to ensure that the process complied with South Africa's Public Finance Management Act.

The bid evaluation process had six stages involving Broad Based Black Economic Empowerment and Supplier Development; technical ability (including details of technical offers from the potential suppliers' and commercial. The latter included pricing, total cost of ownership and contractual terms, and compliance to the supply agreement.

The final locomotive is expected to roll off the production line within three and a half years. "In other words, at the program's peak, we will be producing 480 locomotives per year at 40 per month," said Molefe. Commenting on the rationale for splitting the work among four suppliers, Molefe said, "Ability to stick to an extremely tight delivery schedule was one of the key considerations in assessment of the bids. It is our view that no single supplier would have the capacity or resources to deliver within the timelines we had envisaged."

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CNR Rolling Stock South Africa

Tax Invoice

DATE : 03/08/2015

C/N NR CNR00015080301

FOR : SAP Contract :4600016730
R301-232 Class 45D Locos

BILL TO : Transnet SOC Limited
Transnet Freight Rail
Carlton Centre
150 Commissioner Street
Johannesburg
VAT No : 4720103177

3rd Floor
China Construction Bank Building

95 Grayston Drive
Sandton

2196

VAT No : 4660265242

Description	Amount
Durban Relocation 50% payment	R 323,590,747.00
In accordance Paragraph 2 , Schedule 3 ,Part 7 Clause No.2 of the	
Locomotive Supply Agreement	
SUB TOTAL	R 323,590,747.00
VAT [14 %]	R 45,302,704.58
TOTAL	R 368,893,451.58

Bank Details:
Bank name: First national Bank
Branch No: 250655
Account No: 62253129566
Reference: CNR Rolling Stock South Africa (Pty) Ltd 676031170001

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Business Expansion Structured Products (Pty) Ltd
1st Floor
24 Crescent Drive
Melrose Arch
2076
VAT 4740259264

Date 07/09/15
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CNR Rolling Stock South Africa (Pty) Ltd
3rd Floor
95 Grayston Drive
Sandton
2196
VAT 4660285242

Att : Allen Lee -CNR Rolling Stock South Africa (Pty) Ltd
3rd Floor, 95 Grayston Drive
Sandton
Email: lyongzhicuai@163.com

Account	Your Reference	Tax Exempt	
CNR001		N	Exclusive

Code	Description	EX VAT Price
1000000	Re: Agency commission with respect to the project scope deviation associated with changing the location of Transport engineering's local manufacture programme from the TE Koedoespoort Gauteng facility to their Bay Head Durban facility	
	Total agency commission:	
	The price awarded to CNR by TFR for the Project Scope deviation ZAR	647,181,494.00
	Less: the project benchmark cost per the Business Services Agreement between CNR and BEX dated 23 April 2015 ZAR	580,000,000.00
	Total agency commission due to BEX (ex VAT) ZAR	67,181,494.00
	Work performed in terms of Scope Deviation in terms of Business Services Agreement- Business enterprise optimization and advisory services including: a) Conduct detailed market research and produce a comprehensive cost analysis with detailed explanations with regard to changing the location of Transport engineering's local manufacture programme from the TE Koedoespoort Gauteng facility to their Bay Head Durban facility on a risk basis ("the Project") b) Advise on the social, cultural and political framework in South Africa and to identify various opportunities to participate in similar projects c) To co-ordinate with appropriate counterparties to advise on applicable Government policies with regard to the successful execution and implementation of the Project	

Banking Details
Standard Bank
Rosebank Branch Code
004305
Account Number 002 054 833

Payable upon presentation

SubTotal		67,181,494.00
Discount @	0.00%	0.00
Amount Excl Tax		67,181,494.00
Tax		9,405,409.16
Total		76,586,903.16