

Questions and Answers from the Briefing Session

1. How many supersites are there and where will they be located?

We are looking at deploying the Supersites at our Major Corridors, i.e. 2 on Ore line (Sishen and Saldanha), 2 on Coal line (Ermelo and Richards Bay) and 1 in Swartkops. At a minimum we are looking at 5.

2. Regarding integration of wayside condition assessment equipment, will the system need to integrate with existing equipment?

The bidders can provide that as an option; however this is meant to be independent system from the existing.

3. If so, is this 3rd party equipment or TFR designed equipment and would there be interface documents available?

Mostly, 3rd Party. Integration not mandatory and not essential, suppliers may propose third-party or in-house designs.

4. Mention is made of system ownership and data purchase options. For the data purchase option, please confirm if the supplier will own the equipment and Transnet will pay for the data/information supplied? For this option, please confirm that the supplier will be responsible for the maintenance of the equipment.

Bidder to provide options. If TFR Pays for Data, therefore supplier will be responsible for maintenance.

Other option

Transnet-owned: Transnet procures the assets and can separately contract maintenance/SLA. Both options should include on-site preventative maintenance, calibration (per manufacturer manuals).

5. Please can you elaborate on the brochure requirement i.e. A4, one or two pages, specifications etc. And what is meant by "of the supersite that is available" under section 4 Technical Specification?

Brochure format and information content is for the bidder to decide. The requirements are provided as examples. "Of the supersite that is available" - The supersite that the bidders are able to provide.

6. Table 2 indicates the requirements for condition assessment. Would this have to be completely automated or would some level of user intervention be acceptable?

Bidders provide information and proposal; however, the preference is to get most of data/measurement that are automated.

7. Regarding the integrated train condition monitoring system (ITCMS) that these systems could interface with:

- Is this a third party or TFR system? ITCMS is Transnet-hosted (not a public cloud).
- Is this a cloud system to which systems must communicate with or a locally hosted system at each site? The bidders should provide options available.

8. What connectivity is available per site?

Primary communication: Fiber-backed Transnet WAN via a site multiplexer.

Recommendations:

Fallback: GSM (APN-locked SIM).

On-site LAN: CAT6E to network switch + Wi-Fi router for local access

The bidders should evaluate suitable connectivity in areas where currently there is no connectivity.

9. Does Transnet insist on measuring trains while stationary, or can we build a fixed supersite through which trains need to proceed slowly?

Both are acceptable. Supersites can be designed for zero-speed (stationary, pre-departure) and/or low-speed in-motion (e.g. < 10 km/h) operation. Proposals will advise a way forward.

10. May we provide both low- / 0-speed supersites (for pre-departure visual inspections, WPMS, bad load detection, etc.) and high-speed supersites (bearing acoustic measurements, etc.)?

Proposals are required. If need be, we will put low-speed supersites and high-speed supersites.

11. Should we primarily focus on pre-departure checking, or is there a requirement for post-arrival checking as well?

We would like to do arrival inspection to inform maintenance.

Pre-departure and post-arrival.

12. Will it be acceptable to provide both 0 speed systems, where an operator walks / rides / drives past the train with mobile instruments, as well as low speed automatic systems, where the train proceeds slowly over / past the instruments?

We are looking at low Speed Automatic System or high Speed.

13. Will it be acceptable to build a shed over the existing tracks, in order to protect the instruments and to provide consistent lighting for cameras?

This is what we are thinking off. A Shed over the Mainline getting into the Yard(s)

14. To which extent should a solution integrate with ITCMS? Specifically, should alarms be handled in a similar fashion?

The Alarms will go to the Rolling Stock Maintenance Team and Operators.

15. Should the offered solution include a maintenance contract / SLA?

If the offer is outright purchase, maintenance and calibration contract will be ideal.

16. Are three super sites needed: 1- Predeparture (train is stationary), 2 – Slow speed site (train is moving) for ms like Wheel Profile Monitoring, assize weigh bridges etc. and 3 – High speed site (train is moving) for ms like Hot bearing detectors, acoustic bearing evaluators, faulty break detectors etc.?

Proposals will be appreciated.

17. If three supersites are considered, shall one contractor be responsible for all three, or could it be broken up into three different "contracts"?

We reserve the right to split the award when contracting. However single contractor will have the entire supersite.

18. Is a turnkey solution wanted?

Correct

19. Could a "main contractor" with partners be considered?
It will be. However, Transnet will contract with an entity (that might be a JV as well).
20. Shall newly developed systems be considered or shall it be only of-the-shelf systems?
It up to the Contractor, we will consider any solution.
21. Who shall be responsible for earth works?
Turnkey Solution is required.
22. Should this develop into an RFP, will it be a closed tender which is only applicable to respondents of the RFI? Or will it be an open tender for any/all companies to bid.
Correct, only those participated in RFI will be considered for RFP.
23. Will Transnet provide detailed 3D models of locomotive types, wagons and bogies or dimensioned general arrangement drawings at the time of RFP to help us optimise the inspection.
General dimensions can be provided at the time of RFP but more detailed information will only be provided at the stage of calibration of detection algorithms (training models), equipment placement, dimensional clearances and threshold-setting.
24. For the purpose of context on the RFI, can Transnet supply understanding on how many vehicle variations are to be considered per consist (Typically locomotives, electric or diesel and wagons).
Train configuration differs per sites as this site will also be in different heavy haul lines.?
25. Can Transnet confirm that all wagons and locomotives will have RFID tags for identification purposes?
All revenue-earning locomotives and wagons are RFID-tagged.
26. What are the specific requirements for inspecting roof equipment, and what level of detail is expected from Transnet?
The bidders to advise on what is currently available.
27. Can Transnet provide statistics on the most common issues causing delays due to conditions that need to be detected, such as broken springs, missing brakes, or cracked wheels? Top ten list should suffice unless there are others which need specific mention?
Use the items listed in the pre-departure and condition assessment requirements tables provided.
28. Is there an opportunity to discuss the hierarchy or cost-benefit analysis for various inspection approaches with Transnet before moving to an RFP or tender stage?
The bidders can provide hierarchy and cost benefits to Transnet if available.
29. Can Transnet confirm if the inspection will be focused only on departing trains, and if there will be a siding or area to pull aside rolling stock for further inspection?
Pre-departure and post-arrival. The bidder will advise if their system requires rolling stock to be pulled out for further inspection.
30. Considering the consist will be inspected while moving, is there any specific requirements from Transnet for measuring rail spreading or lateral loads on-site, or should these be ignored in the initial proposal?

Gauge spreading and gauge narrowing as per condition assessment requirements table provided.

31. Can Transnet provide any additional information or documents that might be necessary for the inspection process, such as maintenance records or historical data?

Maintenance records and historical data can be provided at the stage of calibration of detection algorithms (training models), equipment placement, dimensional clearances and threshold-setting.

32. Do any wagons, particularly bottom-dump type, exhibit incomplete discharge (load hang up)?

The primary requirements for the system will be for normal wagons not bottom discharge.

33. Is there a requirement to detect failed draft-gear operation?

Include this capability if available.

34. Should Rand Value be part of RFI?

The bidders can provide rand value to Transnet if available.