

Astronomy Geographic Advantage Bill [B17-2007]

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freight rail

**Transnet Presentation
to the
Parliamentary Portfolio Committee on
Science and Technology
31 July 2007**



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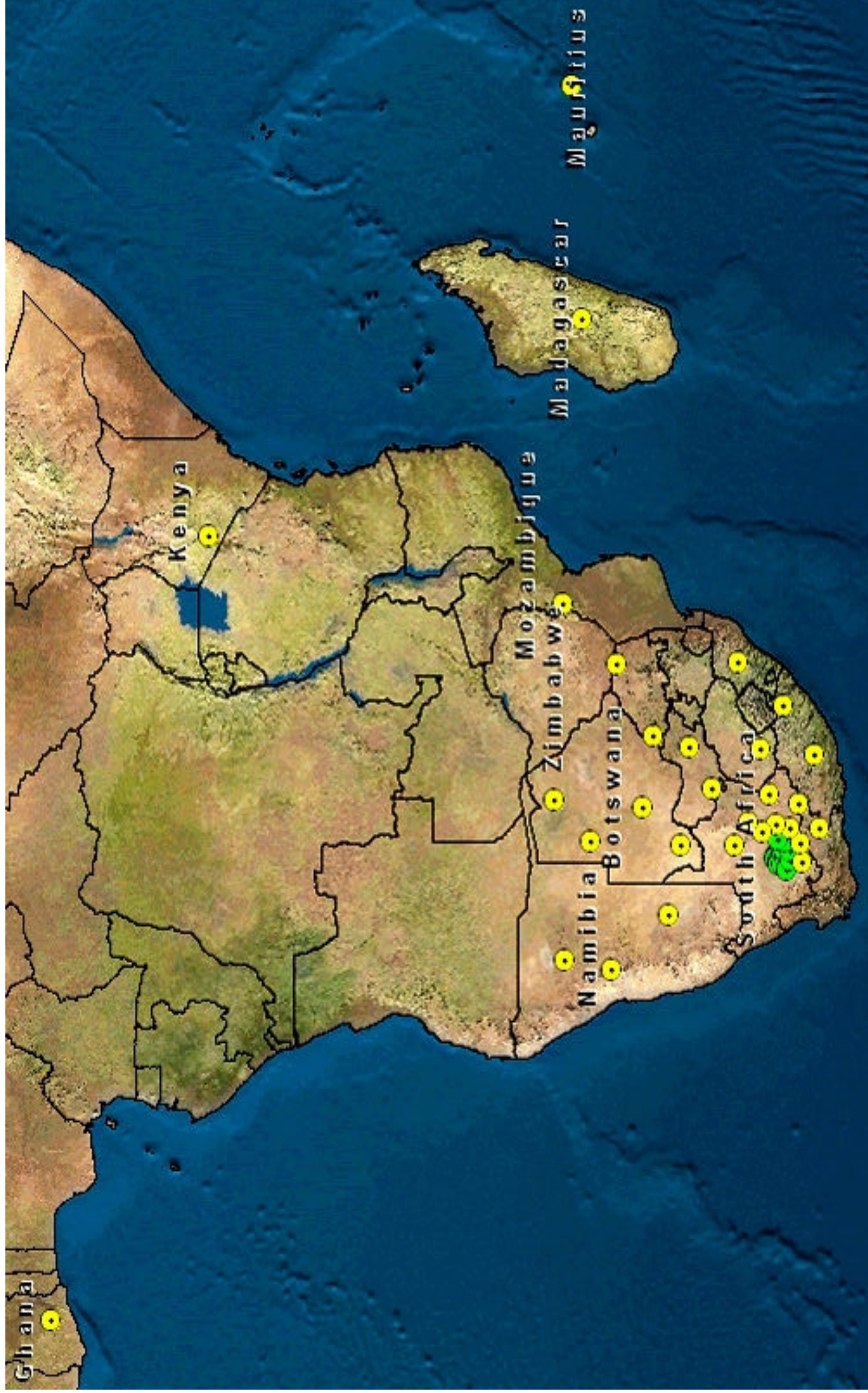
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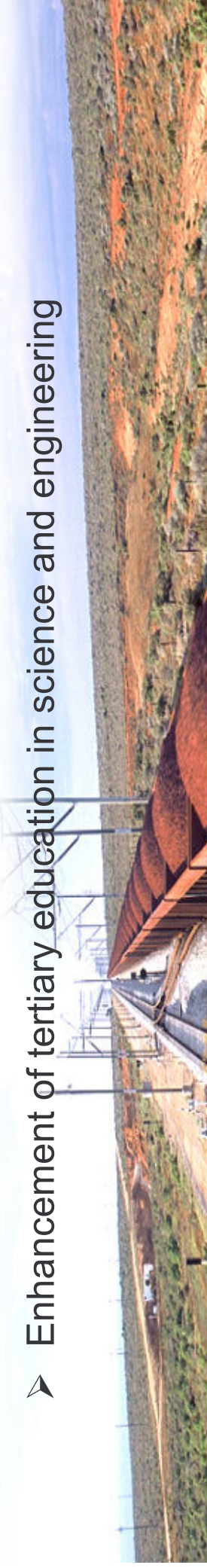
Transnet Supports the SKA Project

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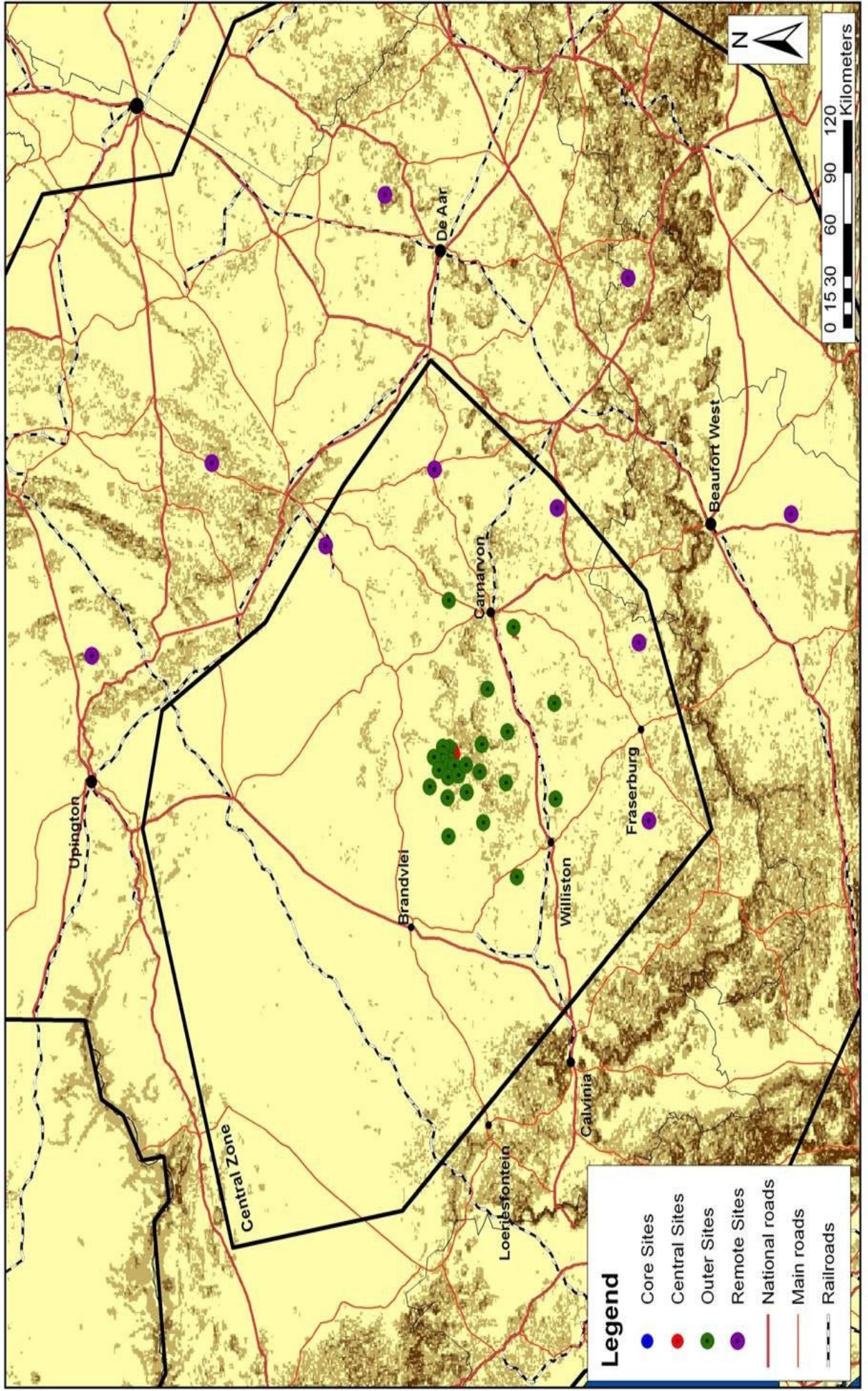


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- SKA is a project of Strategic National Interest
- Transnet recognises the significant benefits to RSA:
 - Significant Direct Foreign Investment (estimated project value 1Billion Euro)
 - Enhanced reputation and international standing amongst knowledge intensive countries
 - Attractiveness for high tech investment
 - Science & technology skills transfer
 - Socio – economic benefits for Northern Cape communities
 - Enhancement of tertiary education in science and engineering



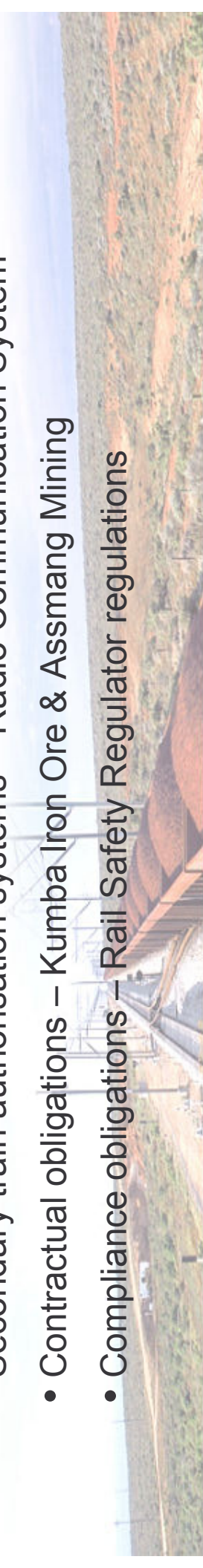
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Transnet Activity in proposed AGA Area

Sishen –Saldanha Railway Line(OreLine)

- Primary activity- rail transportation of iron ore for export
- Annual tonnage transported
 - Current volume > 30M
 - Future Volume prediction 2008 +/- 40M
 - 2012 +/- 90M
- Annual revenue generated
 - Current > R1Bn
- Number of trains per day
 - 10 trains per day
- Primary train authorisation systems – Signalling on a single rail line (Microwave back bone)
- Secondary train authorisation systems – Radio Communication System
- Contractual obligations – Kumba Iron Ore & Assmang Mining
- Compliance obligations – Rail Safety Regulator regulations



Transnet Activity in the proposed AGA Area

De Aar – Nakop General Freight Business Line (commissioned June 2006)

- Primary Activity – Transportation of grain products, cement, container traffic and fuel for export to Namibia;
- Primary train authorisation systems – Single Line Track Warrant UHF Radio System;
- Average Number of trains per day – 4 x Four trains a day
- Other affected line – Cape Town to De Aar (lesser extent)

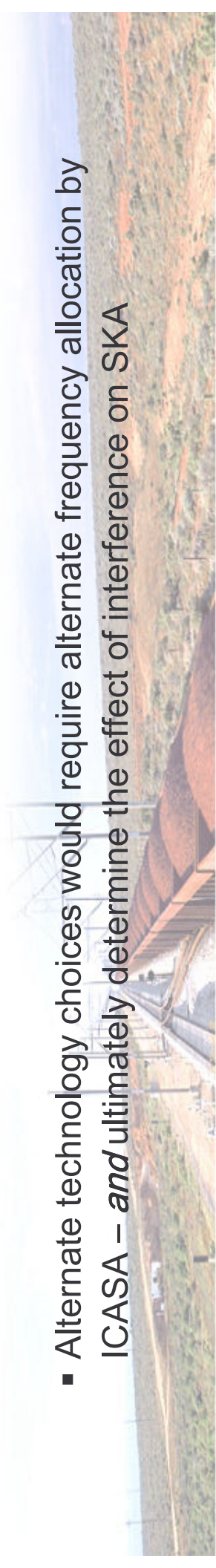


Radio Frequency Impact Minimisation

- Radio Network Re-Engineering
 - Reduction of Effective Isotropic Radiation Power (EIRP)
 - Re-engineer antenna radiation patterns (omni-directional to directional)
 - Re-engineer from high site to low site design to minimise overshoot (impact – additional low sites focused on the railway line)

- Digital Technologies
 - Terrestrial Trunked Radio (TETRA)
 - GSM – Approximated infrastructure cost R200 m over an 8 years period
 - Wi MAX – mobile version availability +/- 5 Years

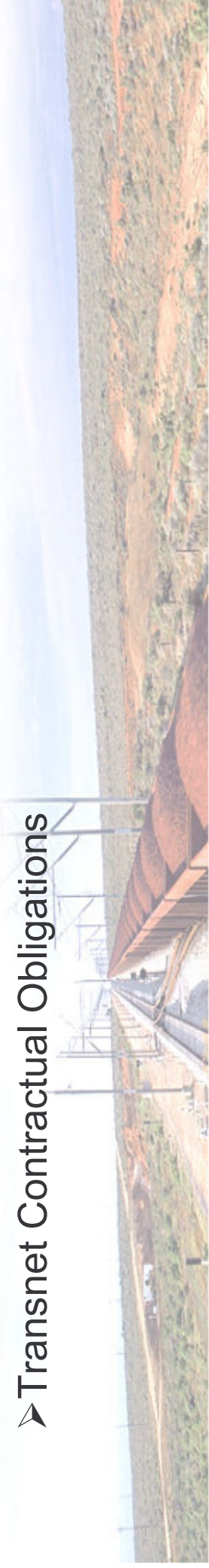
- Alternate technology choices would require alternate frequency allocation by ICASA – *and* ultimately determine the effect of interference on SKA



Transnet Responses re AGA Bill

- General concerns relate to -
 - Current Rail Operation
 - Planned Rail Expansion Activities

- Specific Concerns re the AGA Bill –
 - Consultation Process
 - Cost Implications of sections of Bill
 - Safety Implications of sections of the Bill
 - Transnet Contractual Obligations



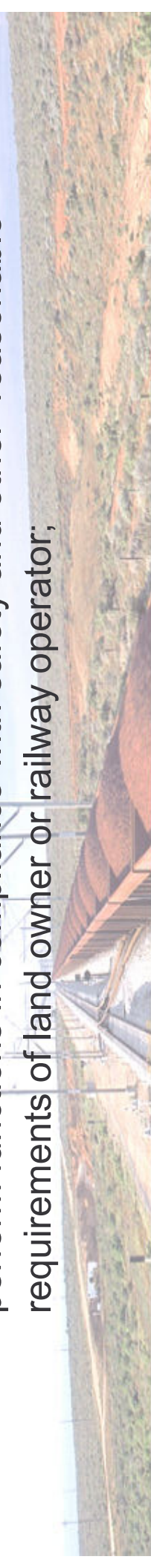
Transnet Response to the AGA Bill

- S2 - The definition of “*minimal* radio frequency interference” – needs clarity
- S4 – the superseding powers in the Bill over all national, provincial legislation and municipal by-laws; particularly over the ECA No. 36 of 2005;
- S22(a,b&c) – prohibits or restricts the use spectrum and may require conversion to alternate technologies – within a “reasonable time”;
- S29 - enter upon any land or construct or maintain any astronomy device on any land, including on any railway in South Africa
- S23(1)(b&e) & S35 – Although provision for consultation, concern that the rights & interests of rail operators are sufficiently protected to comply with S2(d) – “minimal radio frequency interference”
- Restrictions and the impact on commercial activities and obligations to third parties;
- Threat of “captive” locomotives fleet on the De Aar – Nakop and other lines should alternate technology be deployed



Finding the Balance

- Spectrum usage in core and central advantage areas need to be defined and limitations specified in the Bill
 - *minimal* radio frequency interference
- Provide for a stronger right than “consultation” for organs of state
 - S7(3), S9(3), S16(2)(a) & S17(2)(b), S20(2)(d), S22(2) – must be amended to include reference to **organ of state**;
 - S18(4) – amend to provide that termination of a co-management agreement be subject to a dispute resolution mechanism where it involves an organ of state,
 - S29(1)(a)-(c) – amend to impose obligations on management authority to perform functions in compliance with safety and other reasonable requirements of land owner or railway operator;



Finding the Balance

- Where alternative technologies are found suitable, we propose that the cost of compliance be funded by the state
 - Facilitates widespread support for AGA Bill
- Formation of joint SKA / Transnet / Stakeholder (e.g. Telcos / Broadcasters) Forum to investigate less intrusive alternate technologies and associated financial impact;
- ICASA as the custodian of Spectrum planning, allocation and management will play pivotal role in facilitating this balance between the AGA Bill and the interests of affected parties



Summary

- Transnet supports the intent of the SKA project and the AGA Bill
- Transnet proposes that the AGA Bill:
 - Provide for a stronger right than “consultation” for organs of state
 - Consider compensation for related compliance activities to be more strongly stated in the Bill
- Cooperation between affected / stakeholder parties will ultimately determine the success of South Africa’s bid for the SKA;





Questions & Answers

