

Infra Capacity Project (ICP)



Infrastructure Maintenance



Infrastructure Maintenance

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SAICE Symposium

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Infrastructure Maintenance

Infra Capacity Project (ICP)

Spoornet 2001/02

Problems

:

Service

Delays

Capacity

- * **Locos**
- * **Wagons**
- * **Infra (Lesser extent)**
 - **Theft**
 - **Vandalism**
 - **Occupations**
 - **Speed Restrictions**

Tariff Increases

Business Process

:

T1, T2, T3, T4

“Halcrow” Plan and Capacity

Infrastructure Maintenance**Infra Capacity Project (ICP)****Spoornet 2002/03****Planning and Action to address****Loco Plan****Wagons back in fleet****Wagon upgrade plan****Design of new business process****Communication****Maintenance backlog: Specific - Capacity areas****Wagons****Locos****Infra****R250m additional****New Strategic Plan**

Infrastructure Maintenance**Infra Capacity Project (ICP)****Spoornet 2003/04****Implementation and Action**

Strategic Plan	:	Moderate Growth: GFB
		2002/03 - 82mt
		2003/04 - 84mt
		2007/08 - 88mt
		2017/2018 - 110mt (15 year)
		Based on Loco Plan
New CEO	:	Speed up 110mt plan

Infrastructure Maintenance**Infra Capacity Project (ICP)****Spoornet 2003/04****Implementation and Action**

Business Process	:	3 Traffic Category Programme
Category A	:	Mega Rail Large Consistent Traffic Volumes Fixed Slots, Fixed Trip Plan, Ringfenced
Category B	:	Flexi Rail Not Consistent Demand Agreements Weekly Basis Agreement: Capacity and Trip Guaranteed
Category C	:	Access Rail Small, Irregular Consignments First Come First Serve Basis Pre-allocated Wagons, Fixed Schedule Train Plan

Infrastructure Maintenance**Infra Capacity Project (ICP)****Spoornet 2003/04****Implementation and Action**

Opex Budget	:	Additional R250m/y - 4 Year Period (Infrastructure) Address Backlog <ul style="list-style-type: none">Wagon MaintenanceLoco MaintenanceInfra Maintenance
Capital	:	Loco Plan: 15 Year Program, R600m per year <ul style="list-style-type: none">New Locos + UpgradesFirst New Loco : 2004 (R32m)Upgrades :<ul style="list-style-type: none">6E → 18E9E's11E'sWagon Replacement and Upgrades

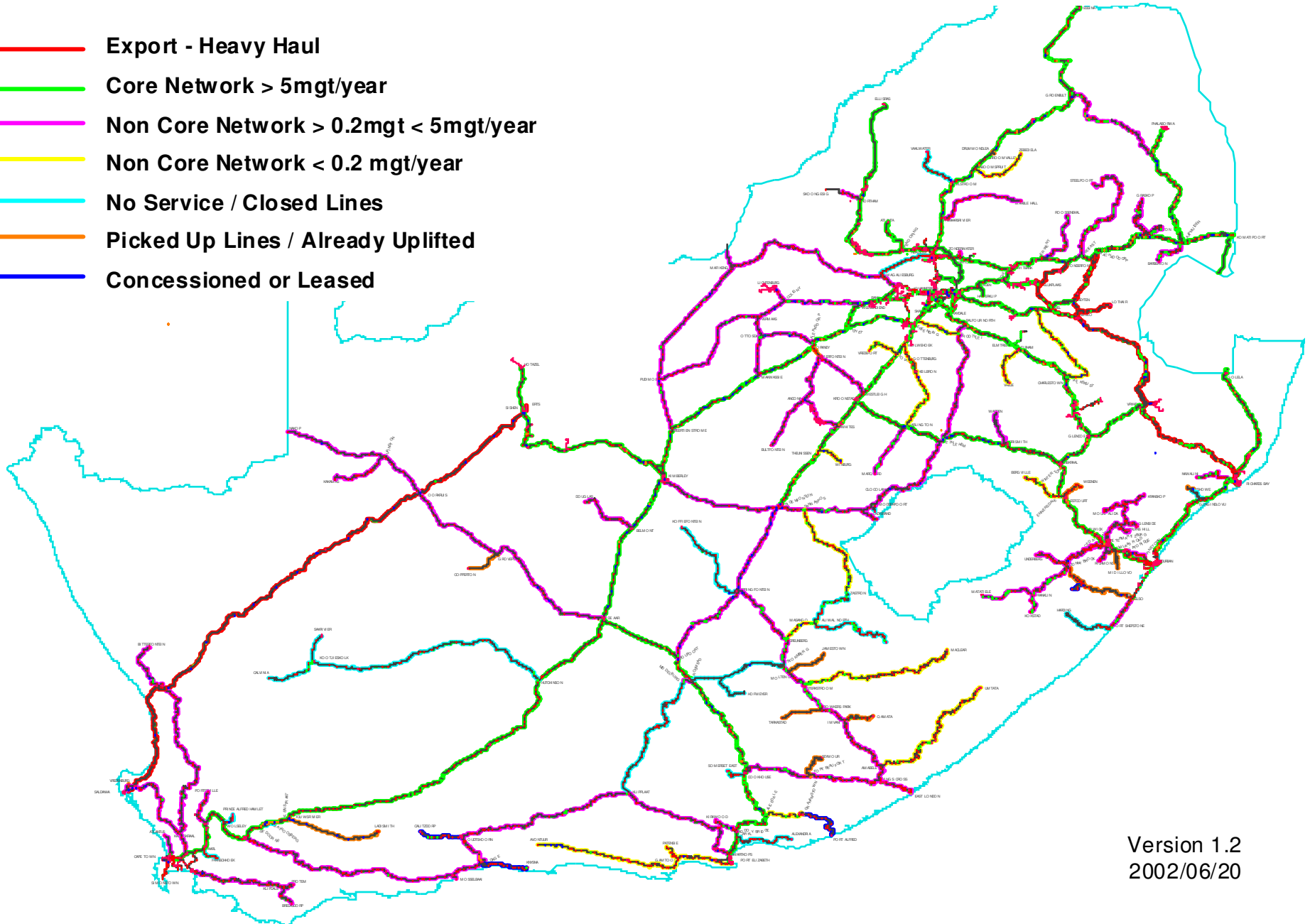
Wagon and Loco Distribution and Management

Spoornet Capacity Problem

- **Locos**
- **Wagons**
- **Growth and Slots**
 - **Specific Lines**
 - **High Capacity Single Lines**
 - **Ferro Chrome: 4,5% p/a to 2010**
New Mine Brits: 250 000 t per year
- **Light Density Lines: Using Capacity**
- **Infrastructure Maintenance**
 - **Cancelled Occupations**
 - **Speed Restrictions**
 - **Even Less Capacity**

Service Level Agreement - Network Classification

- Export - Heavy Haul
- Core Network > 5mgt/year
- Non Core Network > 0.2mgt < 5mgt/year
- Non Core Network < 0.2 mgt/year
- No Service / Closed Lines
- Picked Up Lines / Already Uplifted
- Concessioned or Leased



Version 1.2
2002/06/20


Infrastructure Maintenance**Infra Capacity Project (ICP)****Capacity Lost and Money**

Income per wagon	:	R3250 / day potential
Cancelled or Lost Trains	:	High Capacity Lines Average R200 000 / train
		Ferro Chrome R250 000 - R350 000 / train
		Ironore Sishen – Vanderbijlpark R400 000 / train
		Sishen – Newcastle R700 000 / train

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Infrastructure Capacity Plan

- **Engineers** : **Build new Line (Double)**
High Capacity Signaling
New Line R4 – R7 million per km
- **Other Means** : **Less Maintenance Slots**
Less Theft & Vandalism
Speed Restrictions
RAAS  **Reliability**
Availability
Affordability
Safety
Less Income generating Wagons

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Infrastructure Capacity Plan

- **Wagons** : **Dedicated Wagon Fleet**
 - AY's**
 - Sleeper Wagons (P811)**
 - Rail Train**
 - Wagon Management/Operational Centre**
 - JIT Material**
- **Operational Center** : **Wagon Management**
 - IOMS and Occupation Management**
 - Planners/Logistics/Executions**
 - Customer Services and Production Link**
 - Monitor System**
 - Plan B**
 - JIT Material**
 - Machine Plans**
 - Communication**

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Infrastructure Capacity Plan

Theft and Vandalism

- **New Material, Systems**
- **Warning Systems (Alarms)**
- **Safeguarding (Sub stations, Relay Rooms)**
- **Cables, Fibre Optic**
- **Eye in the Sky and Reaction Units**

Speed Restrictions and Faults

RAAS Program

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Infrastructure Capacity Plan

Less Occupations

High Capacity Machines

Quick in and Out → Capacity

**Example : Tampers, Speed, Hours, Stabilized, Cycle
 Screeners, Capacity, Less Occupations**

Productivity, Availability, Reliability of Machines

Aged Fleet (Screeners, Tampers, P811 etc)

Unit Costs

Spoornet On Track Machine Expenditure per year : R150m

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Infrastructure and Suppliers, Contractors

Infrastructure **:** **Reason for Existence**
R - **Reliability**
A - **Availability**
A - **Affordability**
S - **Safety**

Suppliers, Contractors: **Reason for Existence**
Profit
Value Adding
Expertise to Users
Focus

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Infra Capacity Project (ICP)

Infrastructure and Suppliers, Contractors

Combined Reason for Existence

Profit each

Grow The Mode of Transport (Rail)

Win - Win

RAAS

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Infra Machine Plan :

Tampers (GFB)

Existing

**7 x DP Tampers
4 x Open line tampers
(04/2007 + 05/2005)**

Future (5 year Contracts)

**High Capacity to Start April 2005
High Capacity to Start April 2004
(Note 1 year)**

**2 x High Capacity DP to start April 2005
4 x High Capacity DP to start April 2007
Low Capacity: Low Density Lines**

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Infra Machine Plan

- **Additional Sleeper Replacement Machine**

Total capacity needed per year		320 000	
Existing P811	:	Actual	150 000
		Other Methods	170 000
- **Rail Handling Train**
 - Coalink Program**
 - Orex Program**
 - GFB Program**
 - One Stop Service**

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Open Tenders

- **Coalink High Capacity Tamper**
- **GFB High Capacity Tamper**
- **High Production Screener package**
- **Sleeper Replacement Train**
- **Rail Handling Train**

Note:

- **Spoil Wagon System if not supplied as part of C318**
- **Stabilizer if not supplied as part of C311**

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Future Tenders

- **High Production Dual Purpose Tamper**
- **Future Tenders Based on Tenders now open**

Infrastructure Maintenance***Infra Capacity Project (ICP)*****Electrical Maintenance Machines****Existing Contracts: (End dates)****May 2005****July 2007****March 2004 (5 Machines)****Note: In future only 3 Machines will be needed**