



PG BISON

Timber transport for a greenfields operation
- fleet procurement and infrastructure development -



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Introduction

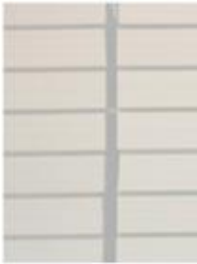
- Ugie is a remote site
- Very poor district – 71% unemployment rate
- No harvesting and transport infrastructure
- Largest in-house operation in SA managed from one office
- Volume to be harvested – 460 000m³





Assumptions

- Trees
 - 0.35m³
 - 800 spha
- Transport
 - 32 tons
 - Weighted average lead = 43km
 - Travel speed empty = 45kph
 - Travel speed loaded = 35kph
 - Vehicle life = 5 years
 - Annual km = 90 000km
 - Gravel to paved roads: 70:30
 - Two shifts of 9 hours each
- Total available working days = 300
- Risk
 - Drivers (Availability, Quality, Housing)
 - Vehicles (Backup)
 - Extreme weather conditions
 - Roads





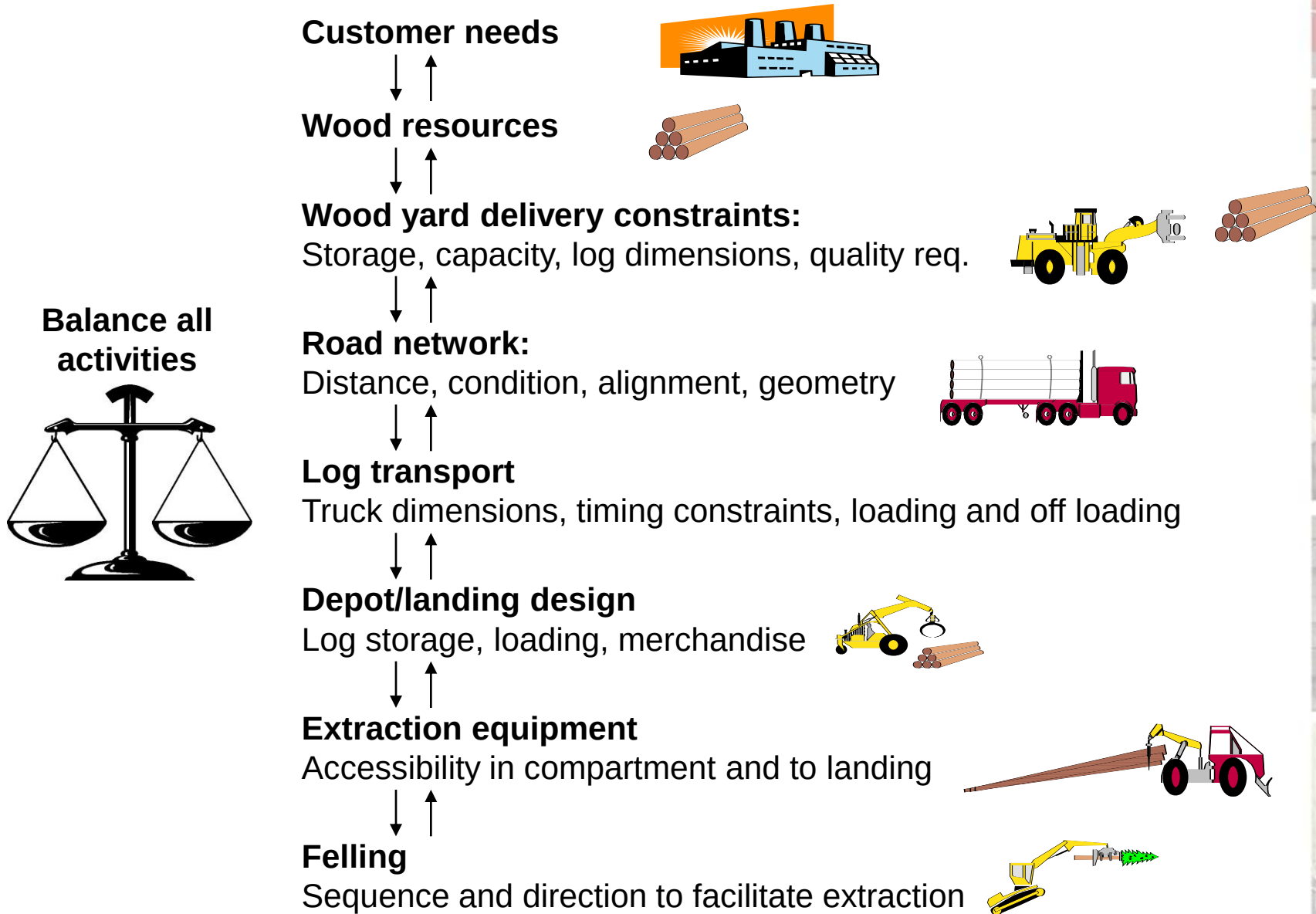
Fleet procurement - General

- Application: NECF timber fleet will not be long haul vehicles running to a depot, but a vehicle that must go to the individual compartments (No shorthaul) .
- Important concept to keep in mind (and one that is frequently ignored): Transport cost is a compound cost that includes transport cost and road cost (construction and maintenance). Taking the above into consideration, the decision was made against using 6 x 6 vehicles.
- Motto: “Horses for courses” and therefore there is definitely no size fits all in the forestry industry.
- Selection for the appropriate vehicle. Not done according to a “secret recipe” known only to a selected few, but is a function of the systematic investigation and evaluation of all the factors (both technical and non-technical)





Fleet procurement - Configuration





Fleet procurement - Process

- Six vehicle suppliers/manufacturers have been invited.
- Manufacturers did a presentation with their solutions.
- Consulted with knowledgeable people in industry.
- Evaluated the technical aspects of each truck
- Evaluated the non-technical aspects of each truck





Fleet procurement – Why selection?

- **General aspects**

- Ground clearance: Ground clearance was the best of all trucks evaluated.
- Position of boosters: Hidden behind back axle and can't be knocked or damaged by branches.
- Construction of chassis frame: Not solid – allow for a flexing chassis. It is also bolted and not riveted.
- Inter-axle and inter-wheel differential locks
- Retarder
- All hoses, wiring and exposed parts lifted high off the ground and “hidden” in chassis.

- **Parts commonality**

- Common and available off-the-shelf parts. Should a catastrophe ever hit NECF, parts would be available which minimizes our risk.
- Interchangeability of parts throughout the range. This holds true for our tippers, rigids, truck tractors and the 4x4 used for infield service units and fire fighting units. This simplifies our stock holding and a level of standardization can be reached. Not one other supplier could offer this.
- Very little advanced electronics and no automatic gearboxes. Advantages are the ease of maintenance and no need for specialized equipment and technicians.

- **Price**

- The gear ratios on the Kerax enabled us to select a 350 hp instead of the 400 to 420 hp quoted by all other suppliers. This had a big price advantage.
- Basket of parts





Fleet procurement – Why selection?

- Training?

Renault: Provided technical training of our technicians on their product
Provided a driver trainer

- Consignment stock?

Renault: Provided us with consignment stock in our workshop

- Assist with specialised tools?

Renault: Assisted with the set-up costs with regards to specialised tools needed.

- Involvement in workshop?

Renault: Assisted in the design and layout of the workshop

- Warranties?

Renault: Assisted with accreditation of our workshop so that we do warranty jobs.





Current fleet composition

- 1 x Renault Kerax 350 rigid and drawbar unit mounted with a crane



- 2 x Renault Kerax 350 rigid and 2-axle drawbar units (pup trailers)
- 10 x Renault Kerax 350 rigid and 4-axle drawbar trailers



- 2 x Renault Kerax 350 trucks mounted with Tigercat 220 loaders.



Current fleet composition



1 x Renault Kerax 400 truck tractor for pulling a lowbed trailer

- 1 x Renault 4 x4 used as a lubrication vehicle
- 2 x Renault Kerax 350 tipper trucks.

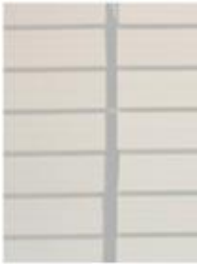


2 x Renault Kerax 350 trucks converted to fire fighting units.



Training

- NECF invests in training
- Technical training for our technicians as well as driver training.
- Some drivers had no drivers license. Basic driver training courses.
- SA Training services. Every year for three months. Assess each driver.
- Gravel (off-road) driving techniques





Infrastructure development - Workshop

- Operations

Accept “Total” ownership and develop expert operators

- Maintenance Function

Set and drive maintenance program with appropriate tools

- ✓ Build a workshop
- ✓ Infield diesel and lube dispenser
- ✓ Mobile workshop (x2)
- ✓ Appointment own personnel



- OEM Suppliers

Involvement in operations

- ✓ Warranties,
- ✓ Service agreements
- ✓ Consignment stock,
- ✓ Technical training & Re-training



Infrastructure development – Roads (1)



“If I had the tongues of angels,
I would not sing hallelujah;

I would sing fewer and better forest roads.

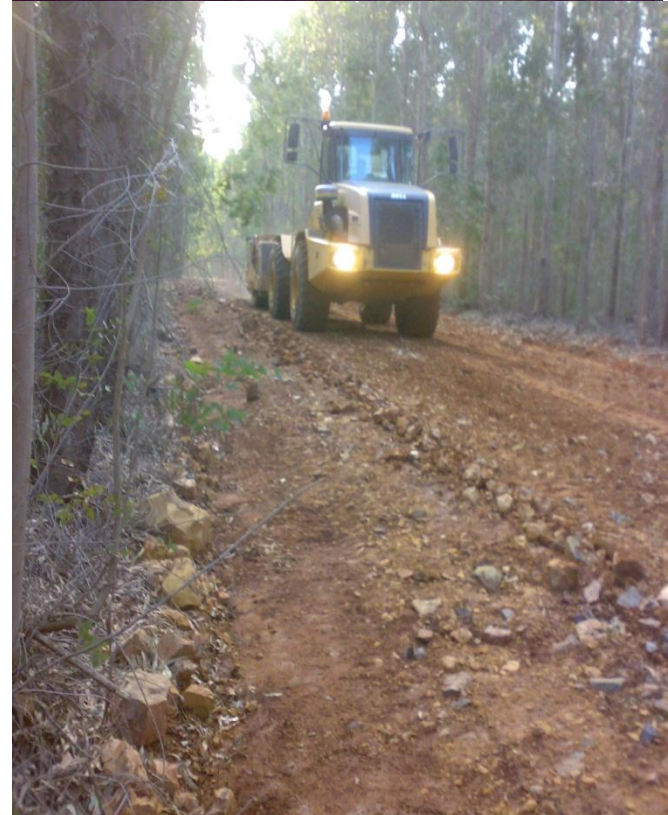
Accessibility is the foremost prerequisite for sustained
forestry.”





Infrastructure development – Roads (2)

- Employed a roads engineer.
- Started with upgrading and maintenance operations a year in advance.
- District and municipal roads
- Time to engage with local and provincial government.



Conclusion

One: Planning.

“Thinking ahead & eliminate those problems that can be eliminated and to deal wisely with the remaining ones.”

Two: It is all about the people!







Scavenger Unit



Building winning partners