

An aerial photograph of a dense forest. The canopy is a mix of dark green and lighter green, indicating different tree species or stages of growth. In the center of the image, there is a distinct, irregularly shaped clearing or gap in the forest, where the ground appears to be a mix of brown and orange, possibly due to fallen leaves or exposed soil. The text "Is larger scale management of secondary native forests a reality?" is overlaid in white, sans-serif font across the upper-middle portion of the image.

Is larger scale management of  
secondary native forests a reality?



# What do we mean?

- Secondary forest?

- Private land.
- Forest previously harvested or extensively modified by man.
- Progressed/(ing) through natural phases of replenishment.
- Progressed such that site and forest species & structural characteristics now amenable to management.



- Upscale – larger scale?

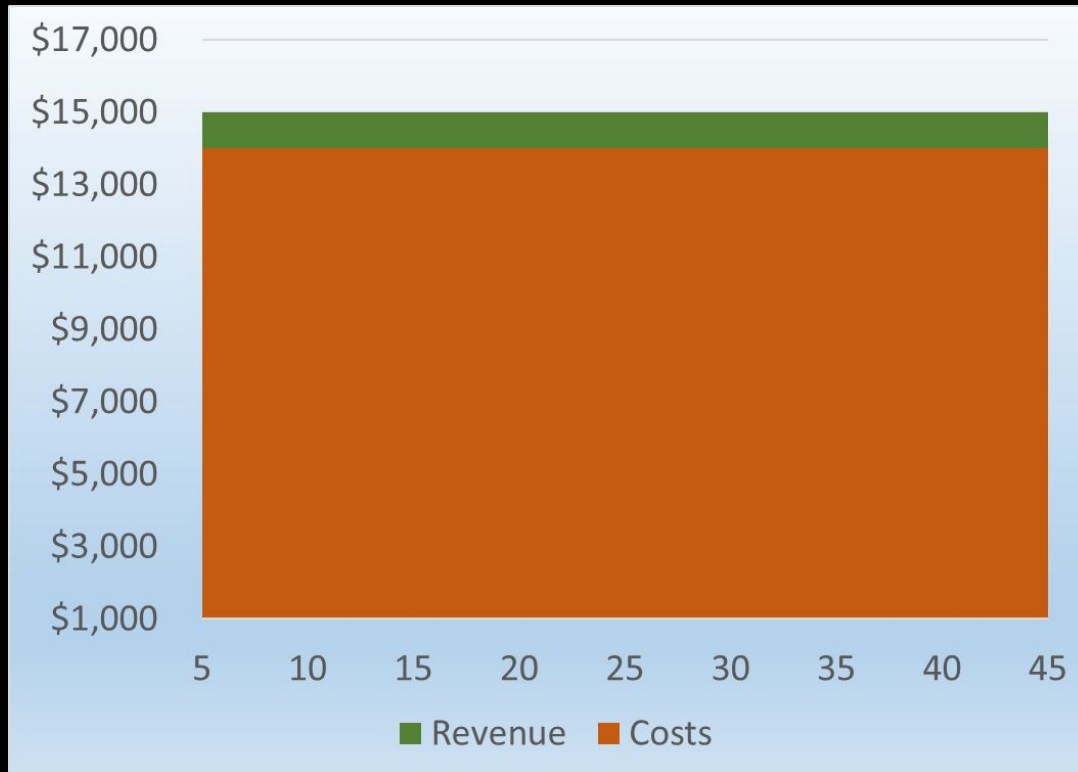
- Eye of the beholder! BUT might exhibit characteristics of –
- Continuous /regular presence in forest (management).
- Continuous / regular harvest and log supply.
- Recognized & consistent grades and quality.
- Established & recognised supply chain and branding.
- Skilled stably employed workforce.



# The Opportunity – the key distinction

(Hypothetical Examples)

**Existing forest (Carbon not provided for)**



**Planted Forest - (+ carbon sequestration?)**



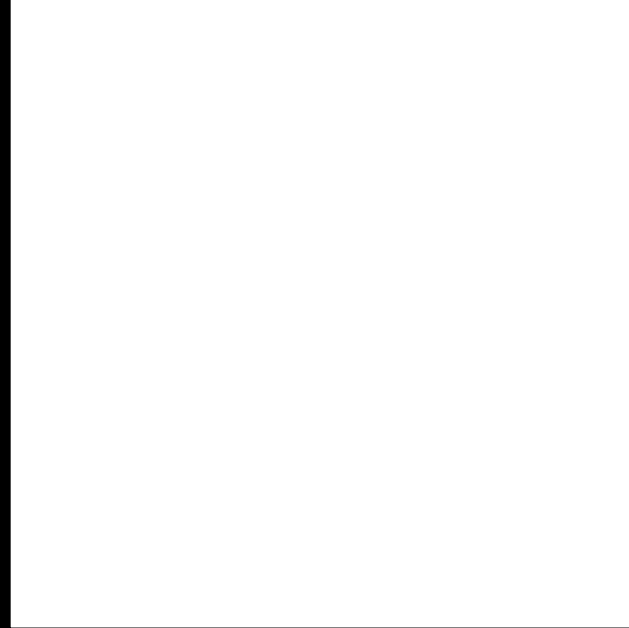
Existing forest (continuous cover) with annual harvest – returns exceeding costs by a small margin may be viable

Planted forest – returns must exceed costs + accumulated interest.

# The Challenge

TIME and interest!

- An economic return (NPV) – positive to negative over short period.
- Break-even log value has to rise significantly and increasingly with time.



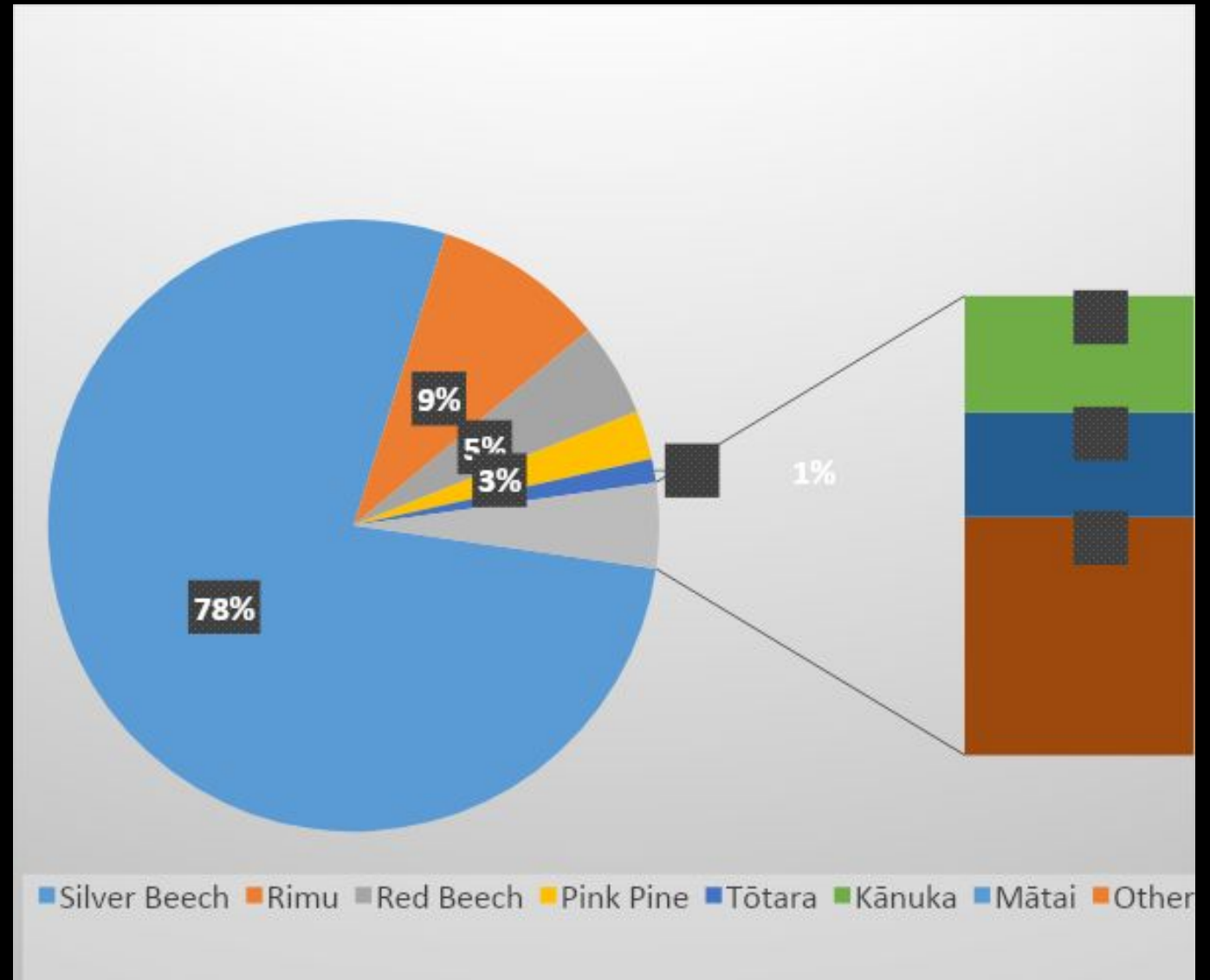
(Hypothetical Example)

# Current scale – NZ Indigenous Log Removals

Roundwood removals M<sup>3</sup> r  
Y.E 2017:

Southland Silver:	16,216
Rimu:	1,898
Red Beech	1,033
Pink Pine	540
Other	1,201
Total	20,888

Approx 8-9000m<sup>3</sup> sawn



# Current scale – imports M<sup>3</sup> Y.E 2017

- 89% of total sawn timber imports from countries listed.
- 41% of the main sources from Canada. (Cedar / Redwood).
- 20% (14,000m<sup>3</sup>) highly likely tropical H.W.

Country of Origin	Volume (sawn)
Australia	5,298
Canada	28,371
Chile	4,347
China	12,091
Fiji	1,466
Guyana	1,708
Indonesia	4,030
Malaysia	1,434
Peru	641
P&G	590
Solomans	4,543
USA	5,177
<b>Total</b>	<b>69,696</b>
<b>% of total sawn imports</b>	<b>89%</b>

Likely specialist hardwood dominant

Likely specialist softwood dominant

Uncertain

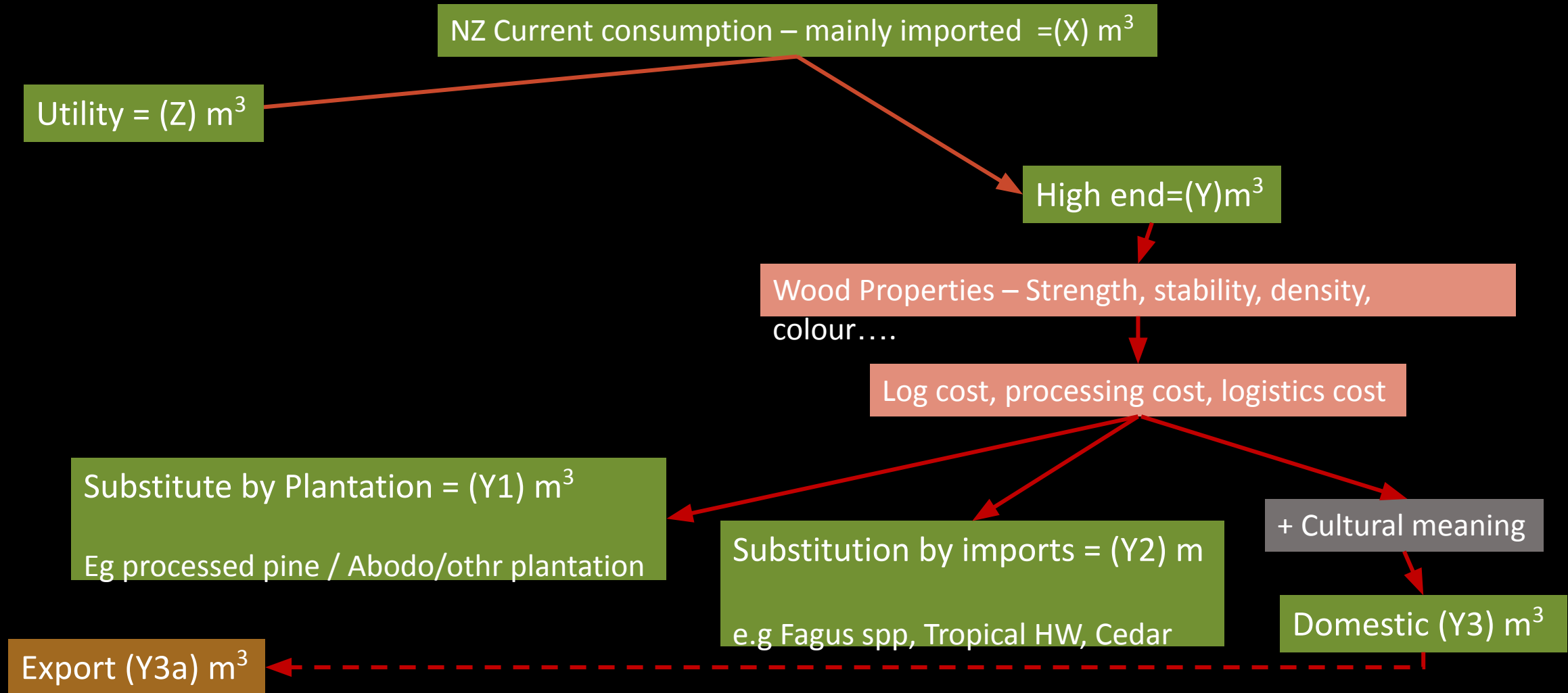
# Up-scaling for what?





# Fitting in a market ecosystem -

Identify markets OR “provide and they will come”





# Confronting the Issues



# Fragmentation

## Forests – complexities in....

- Site, species and form distribution.
- Yield regulation and allocation.
- SMPs ... per block / per group

## Ownership –

- Owner expectations
- Legal contracts/or Forestry rights
- Landowner participation.
- Harvest cycles





# Quality and continuity

Getting beyond a 'sole trader' selling into a few contacts on an 'as and when' basis.....

- Trees are not consistent in characteristics internally or between locations.
- Trees from sites regenerated after past significant disturbance may be more variable.
- Successful up-scaling needs consistent quality defined by well described grades and process.







\$100's-\$1000's



\$1000's-\$10,000s



\$100,000's

# Equipment

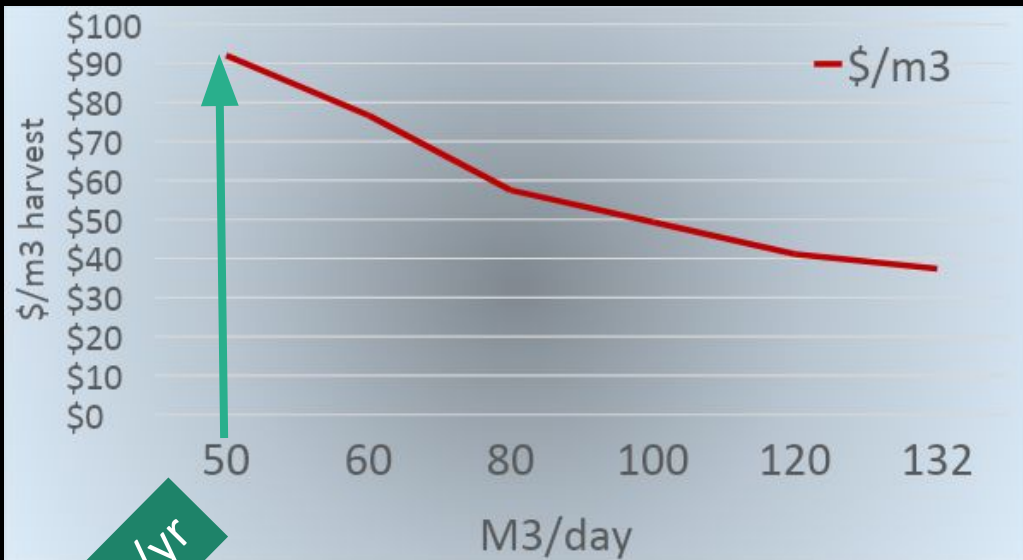
- As harvest scale increases, equipment specialisation develops to meet production requirements.
- As specialisation increases equipment costs rise steeply.
- As equipment costs rise steeply productivity rises steeply to hold or reduce costs.
- There is always a sweet spot!!
- Production costs are very sensitive to any mis-match between resource and equipment.



# More sophistication – Matching equipment to production is critical

E.G smaller high tech European hauler –multi-span = \$500-\$650k

- Continuity of work essential.
- A light touch lowers productivity.
- Cost response is sensitive.







$<1\text{-}5,000\text{m}^3 \text{ log/yr}$



$\longleftrightarrow \text{m}^3\text{log/yr} \longrightarrow$



$20,000+\text{m}^3 \text{ log/yr}$

# Processing

- The rules are similar as for harvesting - there is always a sweet spot between scale, productivity, cost and continuity.
- The small end scale can and does work – flexibility, higher unit labour, less likely integrated into drymill supply chain.
- Larger scale – higher upfront costs, centralised location, less unit labour, better recovery and quality, more integrated.



# Supply chain – Characteristics change with scale

## Small scale

- Relatively self-contained supply chain.
- Casual or personal supply chain.
- Intermittent supply.
- Partial processing.
- Less control on price points.
- Low capital entry point.
- Limited full-time employment.
- High dependency on individual's skills.

## Larger scale

- Coordinated or integrated S.C.
- Commercial dependencies.
- Continuous supply.
- Processing to higher end point.
- Marketing to “push” price.
- Much higher capital.
- Fulltime employment.
- Multiple skills /multiple parties.
- Expanded value chain (furniture).
- Demanding quality parameters.



Certification

# Human resources

We are very trainable!!.....But currently.....

Formal qualifications and standards are sparse or poorly adapted .

- 
- Tree selection and continuous cover systems.
  - Felling experience – wide canopy species.
  - Regeneration ecology / seedling propagation.
  - Specialised machine operations.
  - Small scale milling qualifications.
  - Grading standards (species specific).
  - Cohesive collective knowledge, market intelligence and sector advocacy.





# Can it be done

Possibly – at some (undefined) scale

With....

- A lot of upfront work and cost & coordination
- Luck and amenable landforms (gentle topography) and resource characteristics.
- A coalescence of willing and motivated landowners.
- A story that is culturally significant to its consumer base.

BUT...



# The RMA

## National Policy Statement-IB

Appendix 1: Criteria for identifying areas that qualify as **significant natural areas**

### Representativeness criterion

Representativeness may include commonplace indigenous vegetation and the habitats of indigenous fauna, which is where most indigenous biodiversity is present. It may also include degraded indigenous vegetation, ecosystems and habitats that are typical of what remains in depleted ecological districts. It is not restricted to the best or most representative examples, and it is not a measure of how well that indigenous vegetation or habitat is protected elsewhere in the ecological district.

Under the NPS-IB you must **Avoid** certain effects.

In RMA case law, “Avoid” means no change.

