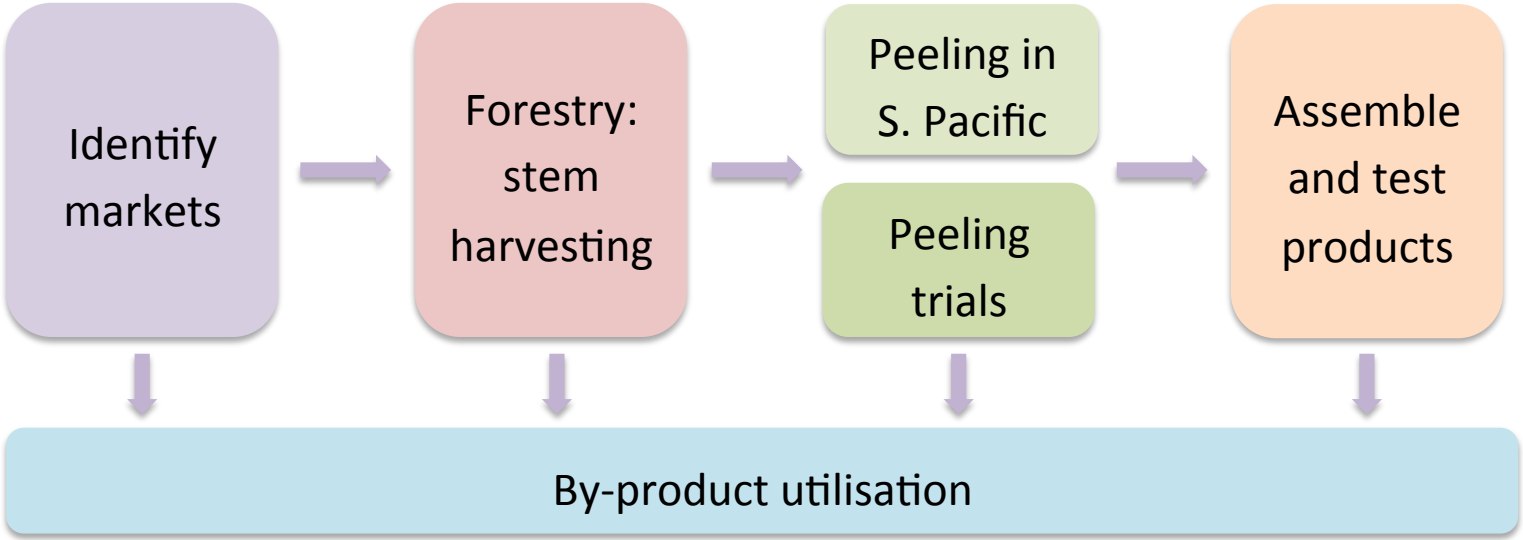
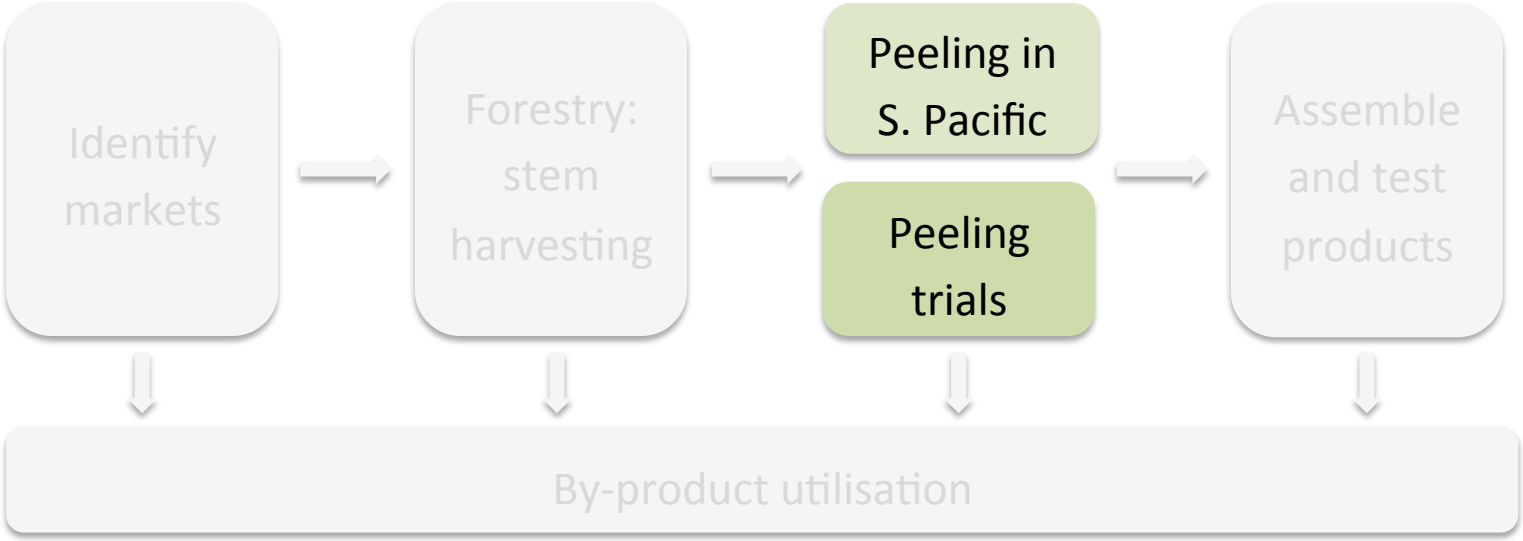
Objective 3

Establish experimental veneer-peeling capacity in the South Pacific

Project objectives



Objective 3 – South Pacific veneer peeling capacity



Objective 3 – South Pacific veneer peeling capacity

Peeling in S. Pacific

Peeling trials

Objective 3 – South Pacific veneer peeling capacity

Peeling in S. Pacific

Peeling trials

Objective 3 – Establish experimental veneer-peeling capacity in the South Pacific

3.1 – Commissioning a spindleless lathe equipment

3.2 – Assessing the potential of a regional trial and demonstration program

Objective 3 – South Pacific veneer peeling capacity

Peeling in S. Pacific

Peeling trials

3.1 – Commissioning a spindleless lathe equipment

- Lathe equipment suite procured and commissioned at QDAFF
- Lathe modifications carried out at QDAFF
- Peeling facility then established in Fiji

3.1 Commissioning Spindleless Lathe

- Overall equipment suite required
  - Pre-conditioner
  - In-feed
  - Lathe
  - Out-feed/clipper
  - Veneer handling
  - Drier
  - Blade sharpener

	Adapted/locally assembled	*To be purchased*	*Probably necessary*	*Unnecessary*
Log debarker				x
Log conditioning			x	
Log in-feed deck	x			
The rotary lathe		x		
Veneer out-feed and clippers		x		
Sprayers		x		
Veneer handling equipment and pallets.	x			
Veneer dryer	x			

3.1 Commissioning Spindleless Lathe

Pre-conditioner

Heating the stem to soften fibres to simplify peeling

- Boiler driven steam chamber or fire bath
- Optimum solution depends on technical requirements infrastructure present

Stem in-feed

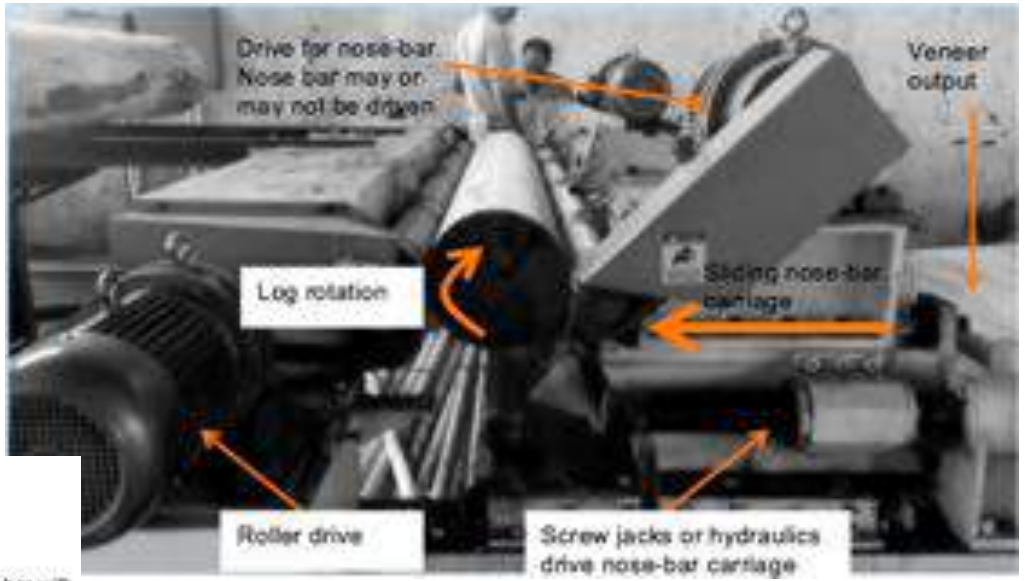
Delivers the conditioned stem to the lathe

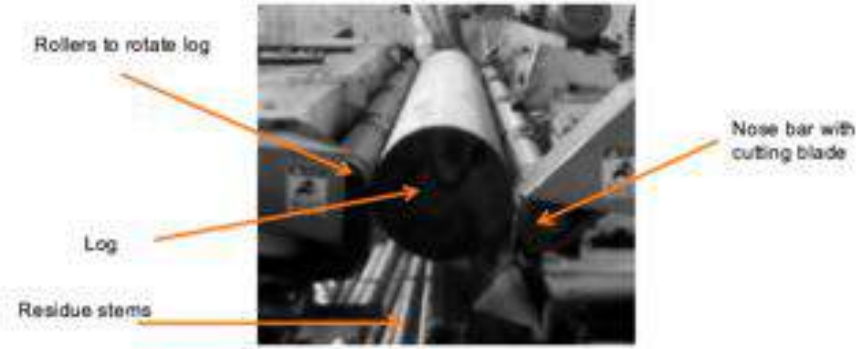
- Manufactured locally

3.1 Commissioning Spindleless Lathe

Lathe

Peels the stem into veneers





3.1 Commissioning Spindleless Lathe

Out-feed/clipper

Receives the veneer from the lathe and clips to desired sheet size

- Rotary clipper
- Clips at set time intervals
- Purchased

3.1 Commissioning Spindleless Lathe

Sprayers

Apply fungicide to the veneers

- Manufactured locally from off the shelf components

Veneer handling

Moving, packing and processing veneer

- Scissor lift procured locally
- Manual handling

3.1 Commissioning Spindleless Lathe

Veneer drier

- Has significant affect on veneer quality
- Large heat source typically required
- Preferred solution depends on infrastructure present and technical requirements - TBC

Blade sharpener

- Commercial operations change blades several times daily
- Blade sharpening by local industry partner under agreement (VTB)

3.1 Commissioning Spindleless Lathe

	Adapted/locally assembled	*Specification TBC*	*Ordered (May '13)*
1. Stem conditioning		X	
2. Stem in-feed	X		
3. Lathe			X
4. Veneer out-feed and clippers			X
5. Sprayers	X		
6. Veneer handling equipment	X		
7. Veneer dryer		X	
8. Blade sharpener	X		

3.1 Commissioning Spindleless Lathe

Lathe procurement

- 11 lathe manufacturers researched
- Potential manufacturers identified in China and Malaysia
- Shanghai WoodExpo 2013 visited
- Manufacturers visited in
  - China (BSY, Jhine, Raute)
  - Malaysia (Tajamas)

3.1 Commissioning Spindleless Lathe

- Tajamas preferred manufacturer:
  - Robust lathe construction
  - Hydraulic peeling progression allows robust modification for senile coconut
  - Manufacturer has experience with coconut
  - English-speaking merchant in Australia

6-7 year old lathe peeling coconut

3.1 Commissioning Spindleless Lathe

- Lathe ordered to be delivered to QDAFF August 2013
- Lathe modifications to commence immediately once delivered
- Peeling trial 2 to be completed on newly modified lathe by February 2014
- Lathe decommissioned in QDAFF and moved to Fiji Forestry Research Centre (commissioned by July ‘14)

Objective 3 – Experimental regional peeling

Peeling in S. Pacific

Peeling trials

3.2 – Assessing the potential of a regional trial and demonstration program

- Feasibility of transporting the lathe suite between regional centres will be assessed
  - Technical
  - Economic
  - Physical

3.2 Regional trial program assessment

- Contact has been made with potential regional collaborators in Taveuni, Samoa, and the Solomon Islands
- Some potential sites visited
- Precedents for remote lathe operations gathered
- Assessment for infrastructure requirement commenced

3.2 Regional trial program assessment

Key infrastructure requirements

- Organisational
- Transport (road and sea)
- Stem resource
- Electrical power
- Heating/drying

3.2 Regional trial program assessment

Overall peeling line requirements

- Peeling line requires various individual pieces of equipment
- Specification for each piece of equipment noted
- Either purchase/modify/source locally

	Adapted/locally assembled	*Specification TBC*	*Ordered (May '13)*
1. Stem conditioning		X	
2. Stem in-feed	X		
3. Lathe			X
4. Veneer out-feed and clippers			X
5. Sprayers	X		
6. Veneer handling equipment	X		
7. Veneer dryer		X	
8. Blade sharpener	X		

Equipment	Spindleless lathe
Name/spec	(example) BSY SL1350/4
Weight	7000kg
Shelter	Rain protection but not necessarily enclosure
Space in transit	3300x1900x1600 (LWH)
Space in use	3500x2000x1600 (LWH)
Heat	N/A
Power	35kW

3.2 Regional trial program assessment

Remote lathe operation

- Precedents of remote, regional peeling operations
- ‘Low-tech’ spindleless lathes in rural locations
- Pre-conditioning and drying requirements for cocoveneer in regional locations will be more onerous than for logs peeled typically

3.2 Regional trial program assessment

Spindleless lathe peeling on temporary set-up at Shanghai wood Expo

Summary

- Lathe suppliers researched and visited
- Lathe ordered for delivery to QDAFF in August 2013
- Veneer clipper ordered
- Veneer production support equipment researched and specification being developed as technical requirements established
- Precedents exist for lathes operating in regional locations
- Specification for overall equipment suite and likely options for regional trials being developed
- Possible regional trial partners identified and key infrastructure requirements for possible site being developed

Summary

- Precedents exist for lathes operating in regional locations
- Specification for overall equipment suite and likely options for regional trials being developed
- Possible regional trial partners identified and key infrastructure requirements for possible site being developed

Objective 3 – South Pacific veneer peeling capacity

Peeling in S. Pacific

Peeling trials

Key completion dates –

Activity	Planned	Actual
Lathe procured and commissioned at QDAFF	August 2013	Nov 2013*
Lathe suite relocated to Fiji	January 2014	June 2014*
Assessment of potential regional peeling program	July 2014	

* Revised proposal

Objective 3 – South Pacific veneer peeling capacity

Peeling in S. Pacific

Peeling trials

Key activities next 12 months –

Activity	Anticipated completion
Installation and modification of new lathe at QDAFF	November 2013
Complete specification for ancillary peeling equipment	January 2014
Report on assessment of regional peeling trial program	July 2014

Questions