Update on FWPA activities

Forest & Wood Products Australia Ltd (FWPA) is the industry's service organisation.

- One of 15 rural R&D corporations (the only one that covers the full supply chain, including imports).
- Funded through compulsory levy on growers, processors and importers (except Pulp & Paper).
- Previously a government body now a private company.
- Independent board of senior industry executives.
- Matching Commonwealth funds for R&D.
- Total expenditure around $10-12 mil with 9 staff.
- Investor in R&D along the value chain.
- Directly manage generic industry promotion.
- New role as “coordinator” of timber standards.
What does FWPA do?

Our aim is to be the industry’s leading source of knowledge, and to invest in and facilitate innovation and promotion.

Four Key Strategies
1. Promote the benefits and use of forests and wood products
2. Invest in and coordinate relevant research and development
3. Expand the industry’s capacity and capability
4. Increase FWPA’s capacity and scope to deliver benefits to the industry (Building codes and standards)
What are we trying to achieve?

1. Increase demand for wood products.
   - Generic promotion
   - Standards coordination
2. Ensure that R&D investments are better linked to industry outcomes.
3. Increase industry's capacity to respond to innovation and promotion initiatives.
4. To encourage a pan-industry, pre-competitive approach to opportunities and problems.

Strategy 1
Generic Industry Promotion
Primary Objective
To increase the value of wood-based products sold in Australia by increasing demand and reducing impediments to the use and supply of wood-based products

Secondary Objective
To rebuild industry’s confidence in itself and its role in a sustainable and economically prosperous Australia

Program Components
- Wood. Naturally Better.™ branded communications
  - print advertising
  - online advertising
  - websites
  - sponsorships
  - partnerships
- National PR aimed at consumers and professionals
- Licensing and support program for industry and wholesaler/retailers
- Specifier activities targeted at architects, engineers, carpenters, project builders, homebuilders/renovators, local governments and other buyers/specifiers
- Market research and campaign tracking
**Shaping the climate for change**

- Wood has the potential to be a material solution (not a land-use problem).
- Building a range of messages for different target markets.
- Messages must be factual but engaging and relevant to audiences.
- Develop internal industry support via licensing program.
- Build alliances to amplify our message.
- Drive a link to behaviour and purchase decisions.

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**Strategy evolving to increase breadth and depth of activities**

- **Strategy 1 Generic Promotion**
  - **Consumer Program**
    - Print advertising
    - Internet advertising
    - Website
    - Sponsorships
    - Partnerships
    - Market research
    - 55% of spend
  - **Specifier Program**
    - Print advertising
    - Internet advertising
    - Website
    - Sponsorships
    - Partnerships
    - Market research
    - 35% of spend
  - **Trade Partners Program**
    - Email
    - Merchandise
    - Carpenters Day
    - 10% of spend
  - **Key Purchasers Program**

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*Wood Manufacturing 2010*
Climate Change is occurring

+ Human causes of C02
+ Wood stores carbon
+ Forests are replanted

= Wood is good for climate change
Wood Manufacturing 2010

**It’s more than economical framing. It’s a way you can tackle climate change.**

Because wood stores carbon for life

Wood is a natural, sustainable building material that stores carbon for life. This means it can help combat climate change by sequestering carbon dioxide, the main greenhouse gas responsible for global warming.

Wood is also a renewable resource, which means it can be replenished naturally. This makes it an excellent choice for reducing our carbon footprint and fighting climate change.

Design for a smaller carbon footprint. Touch wood.

Up to 55% of the dry weight of wood is carbon, but that’s only half the story. Trees also store carbon in their biomass. As long as trees are grown and harvested responsibly, wood can help to sequester carbon and reduce our carbon footprint.

Add the existing wood design possibilities of engineered and laminated timbers, and you’ll discover why so many architects and designers are choosing wood as the go-to building material of choice.
Partnerships: Program Partners

More than 500 organisations have licensed the Wood. Naturally Better.™ brand logo

Strategy 2
R&D Investment
R&D program is part of a strategic framework

Inputs:
- Industry Advisory Groups
- National R&D priorities
- Ministerial direction
- Other

Outputs:
- Strategic review
- Operational review

FWPA Investment Priorities

1. Information, analysis and interpretation of domestic and export markets
2. Timber construction in residential buildings
3. Timber construction in commercial and industrial buildings
4. Appearance of timber products and markets
5. Wood products in sustainable buildings
6. Development of secondary products and markets for them
7. Solid wood, engineered wood and panel and paper products: performance and yield
8. Maintaining product yields and values from current resources
9. Improving wood quality and yields, and tools for forest management
10. Genetic improvement and delivery for increased wood yield and quality and for managing risks
11. Water-use efficiency, access to resources and balanced policy outcomes
12. Forest biodiversity and impermanence
13. Mitigation of and adaptation to climate change and the management of the carbon cycle in plantations and native forests
14. Biodiversity conservation in native forests and in vegetation rehabilitation plantations.
15. Use of chemicals in commercial forests
16. Community engagement, perceptions and societal acceptance of the industry
Investment plans are the key to delivering outcomes

- 13 investment priorities for R&D
  - 5 in tree growing
  - 3 in processing
  - 5 in market access
- Two plans signed off by the Board (sustainable buildings, Genetics)
- Four under development
- Limitation is the availability and skills of the people to develop the plans

Research consortia are being used to deliver complex programs

**Solid Wood Initiative**
- Maximising volume and value recovery of sawn timber through exploitation of measured log and board properties.
- In service stability – production of ‘ultra stable’ boards
- Reduction of water and energy consumption
- All FWPA softwood sawlog levy payers have access to consortium developed IP via secure web page

**Structural Timber Innovation Company**
- The development of prefabricated structural timber members, made from LVL and Glulam, and viable pre-stressed timber construction systems for frames, walls and floors
- Promotion and technology transfer of the systems developed to the relevant sectors of the building industry
SE Qld Resource evaluation for slash pine - DEEDI
- Overall tree size confirmed as the key determinant of in-grade recovery.
- Can readily be assessed in the field.
- Existing site index maps of the resource are based on inventory plot measures of predominant height and identified as the most cost-effective way of ranking clearfall stands and compartments for potential in-grade recovery.

Hoop pine work resource evaluation – DEEDI and Forest Research NZ
Tree and Log Value Models were created which permit users to test various scenarios, and examine relative influences on log values, through changes in resource characteristics, lumber prices and processing costs for specific situations.

Resin shakes in slash pine – DEEDI and subcontractors
- Comparison of available commercial technologies including acoustics/ultrasound tools.
- Computer aided Tomography (Hospital CT) scanning was the only reliable method that can "see" resin in logs but is commercially not yet viable.

Non destructive MOE characterisation of log and board properties - DEEDI
- Verification that acoustic grading can be used to segregate logs and boards for improved recovery of structural grade wood
- Green grading (both log and board) can be used to further enhance recovery.

Some key R&D projects currently underway

Development of an embodied carbon calculator to measure embodied carbon values in housing designs.
- Add on module to AccuRate
- Utilise existing building design files and LCI values to report embodied carbon values
- Inform designers of whole of life carbon impacts of design changes and options

Powder coated solid wood materials
- Enhanced external durability and stability properties
- Demonstrated using both ACQ and untreated pine
- Equivalent performance to automobile paint performance in terms of UV degradation
- Only pigmented coatings at present – clear systems to be developed
R&D projects (cont)

Glulam R&D projects undertaken

1. Development of standard GL grades – (Monash University)
2. Risk management protocol to inform selection of new adhesive systems – (GLTAA)
3. Current shook length project – (Monash University)
   - Establish the relationship between the finger joint spacing (shook length) and the tension strength of glulam beams.
   - Develop a methodology to predict the tension strength of glulam beams from the tension strength values of finger joints.

Accelerated evaluation protocols for H3 preservative performance

- Using CSIRO accelerated field simulator to assess candidate formulations
- Results confirmed against Innisfail exposure trials
- Investigation of the use of acoustic analysis to detect onset of timber decay before externally visible.

End of produce life reuse options for treated timbers

- Characterisation of end of life products – expected volumes, concentration of actives etc.
- Determination of suitable recycling pathways e.g. roadside mulch, animal bedding etc based upon concentration of active in final product stream (when blended with untreated materials).
- Treated timber product stewardship group providing assistance

Combined fire retardant and timber preservative formulations

- CSIRO project – Clayton (preservatives) and Highett (fire performance)
- Several promising formulations identified and characterised.
- Fire retardant performance not yet optimal, likely changes to performance requirements in near future.
Strategy 3
Capacity, Adoption
and Promotion

Each year, FWPA invests approximately $800K in activities to improve the capacity, adoption and promotion of R&D findings.

- Approximately $300K was invested in providing scholarships to PhD candidates exploring topics across the value chain.
- Over $100K in mid career skills awards (e.g., Denis Cullity Award) and sponsorship of technical conferences and events.
- Deployment of knowledge brokers for key topic areas.
- Development and distribution of Leading Edge newsletter, websites and trade articles.
- Development of a style guide for technical bulletins and design guides.

R&D doesn’t finish with the production of an R&D report
New education investment plan

New 5-year investment plan to increase the attractiveness of the forest and wood products sector as a career and to expand the capacity of existing employees to undertake innovation and promotion of the sector.

- Improved national coordination
- Updated industry careers website supported by promotional activity
- Liaison with other primary industries for curriculum development
- Targeted program to address specific tertiary skill gaps
- Continuation of education support for building specifiers

Strategy 4
Coordination of standards and building codes
Over $4.5 million spend on standards related R&D since 2004

- Development and support of AS1684 and AS1720
- Full scale demonstration and fire testing of wood framed construction to provide evidence for compliance to fire code.
- Evaluation of fire retardant treated cladding systems for commercial buildings

Review of the standards development process was undertaken in 2008 to determine how the industry should manage its approach to standards.

Australian standards writing has undergone significant change

- Separate of Standards Australia and SAI Global
- Increase drive towards ISO standards
- Funding pressures driving requires a users pay approach
- Development of multiple alternative pathways for recognition in the Australian Building Code.
- Aging capacity to respond to standards issues
- No coordinated response from industry
- Exposure to competitive activity from alternative material groups (and other anti-timber groups)
FWPA has responded to industry’s needs and concerns about standards

- FWPA Board has approved a strategy based on
  - Analysis and prioritisation of standards
  - Multiple development pathways
  - Coordination and communication with industry
  - Encouragement of adoption of standards
  - $500K per annum investment
- Appointment of a full-time standards manager
- Establishment of standards reference group
- Close alignment with Standards Australia and SAI Global
- Renewal of skills base and improved representation

It’s the start of long journey