



FINAL REPORT

Forest and Wood Products Australia Generic Marketing promotions

Evaluation

*Prepared for
Forest and Wood Products Australia
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Abbreviations

BCA	Benefit Cost Analysis
CIE	Centre for International Economics
FWPA	Forestry and Wood Products Australia

Summary

Forest and Wood Products Australia Limited (FWPA) have been conducting generic marketing activities to promote the use of wood and wood products in Australia since 2007-08. FWPA have commissioned the Centre for International Economics (CIE) to conduct an independent evaluation of these marketing activities over the period to 2014-15.

The current analysis has shown that FWPA's generic marketing activities over the period 2007-08 to 2014-15 have generated an economic return to the market for wood and wood products in Australia. The activities are estimated to have generated a gross return of \$230 million, achieving a BCR of 7.2.

The methodology employed in the evaluation has built on:

- 1 marketing tracking studies conducted by FWPA across consumers and building professionals,
- 2 international studies on the relative scale of advertising effects in different markets and
- 3 a quantification of the value of Australia's market for wood and wood products.

Importantly, the analysis is focussed on quantifying the effect on the market for wood and wood products that has occurred due to the marketing activities over the period 2007-08 to 2014-15. The methodology explicitly excludes analysis of any future marketing activities that may be undertaken by FWPA after this period and includes a decay function in the impact analysis that allows for the impact of advertising activities to continue for a finite period into the future once current marketing activities cease. This methodology does not imply that any future marketing activities will not have any effect on the market, only that the current activities will have a finite influence on the market.

In real terms, FWPA have dedicated \$32 million to generic marketing activities in the either years to 2014-15. The CIE has estimated that the value of apparent consumption of sawn wood and wood panels (target raw products for FWPA marketing activities) in Australia over this time is approximately \$88 billion. Due to the relative scale of any shift in demand required to generate a positive economic return on FWPA's generic marketing activities, it is unlikely to be observed within aggregated national level data.

To overcome this problem, the CIE drew on surveys of consumers and building professionals conducted by FWPA and international studies of empirical advertising elasticities that measured the proportional change in sales expected from a proportional change in advertising expenditure.

The activities undertaken by FWPA were reviewed in light of these international studies with inferences drawn on how FWPA's generic marketing activities may be expected to

have influenced the value of apparent consumption for sawn wood and wood panels in Australia.

The first delineation was to identify FWPA's consumer based marketing activities as promoting a generic material. This category of marketing activities has the hardest marketing task. The objective is to attract entirely new consumption to the market, either through attracting new consumers or increasing purchases from existing consumers by promoting wood in general without reference to a single product type or brand. This introduces an additional hurdle for consumers to translate marketing messages to purchasing decisions.

FWPA's WoodSolutions activities are slightly different as they may be seen as promoting a generic product to the market. The marketing activities are highly specific to building products in defined settings, without reference to branding. To be successful, the marketing still needs to generate new sales in the sector, but there is a closer link between the marketing message and the specification or purchasing decisions by building professionals. All else being equal, generic product advertising is expected to generate a greater response in the market than generic material advertising.

Overall, factors that are considered to influence the scale of advertising elasticities of FWPA activities relative to internationally published elasticities include:

- The commodity nature of wood as the product being advertised towards consumers (downward impact)
- The generic product nature of wood as a building product as advertised to building professionals through WoodSolutions (neutral impact)
- The predominantly mature nature of wood as a product (downward impact)
- The durable characteristics of wood as a product (upward impact)
- The presence of new or novel wood products in the market (upward impact)
- The ability of consumers to retain advertising messaging and to change their consumption patterns (upward impact)

In light of the international literature on advertising elasticities and the characteristics of the market for sawn wood and wood panels, the CIE has utilised a maximum impact advertising elasticity of 0.08 for activities directed at consumers, and 0.13 for activities directed at building professionals.

The CIE has also classified individual segments of the market for sawn wood and wood panels based on the likelihood that they have been influenced by FWPA marketing activities over 2007-08 to 2014-15 as follows:

- Single dwelling residential: project build — negligible impact
- Single dwelling residential: private build — moderate impact
- Multi-dwelling residential— small impact
- Renovations and landscaping — moderate impact
- Commercial and non-residential — moderate impact
- Furniture — moderate impact

For the most influenced consumer market segments an advertising elasticity of 0.08 is applied, which is progressively reduced based on the flexibility of the market segments. An advertising elasticity of 0.13 is considered a longer term upper bound on building professionals responding to the WoodSolutions marketing activities.¹ This elasticity is progressively reduced depending on the responsiveness observed in market segments over the period 2007-08 to 2014-15.

Table 1 presents the advertising elasticities utilised for the respective market segments as well as the utilisation of a 10 per cent, final year change in advertising expenditure. At maximum impact, FWPA's marketing activities could result in a 0.27 per cent shift in the value of apparent consumption.

1 Application of advertising elasticities

Market segment	Current proportion of wood and wood product construction market	Potential scale of marketing influence off current base	Inferred marketing elasticity	Aggregated market impact from 10 per cent advertising change
Single dwelling residential – project build	60 per cent	Small	0.10%	0.060%
Single dwelling residential – private build	5 per cent	Medium	0.80%	0.040%
Multi-dwelling residential	10 per cent	Small	0.30%	0.030%
Renovations and landscaping	10 per cent	Medium	0.50%	0.050%
Commercial and non-residential	5 per cent	Medium	0.80%	0.040%
Furniture	10 per cent	Medium	0.50%	0.050%
Total market impact				0.27%

Note: Current market proportions are based on anecdotal assessments of the current market for wood and wood products and inferences developed through assessment of ABS national Input Output tables. They are provided for indicative purposes only.

Source: CIE.

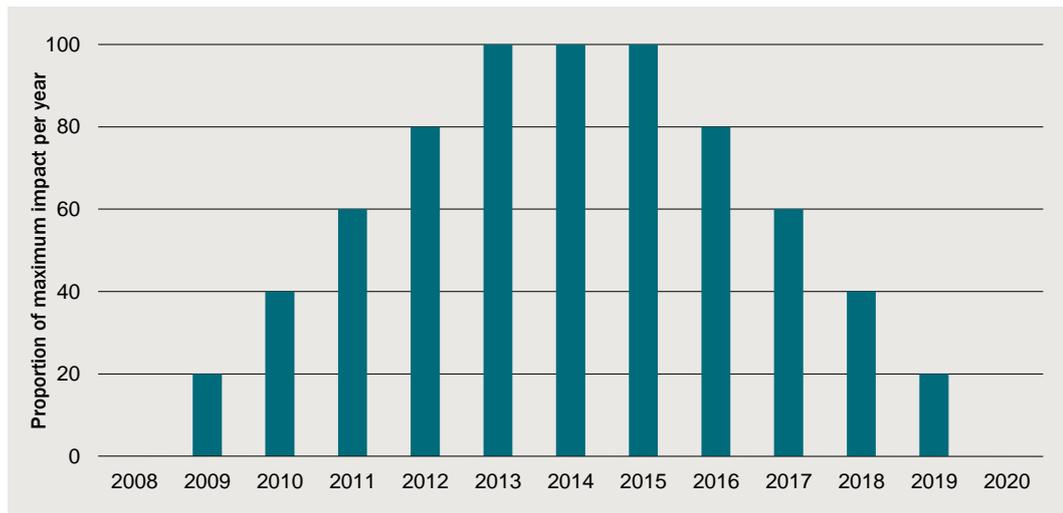
To apply these elasticities, it is important to note that the promotion objective of FWPA is a cumulative task, not well suited to a single year of investment and measurement of return. This is because FWPA's generic marketing activities are aimed at firstly building the social licence of the industry and addressing information gaps on the environmental, structural and durability characteristics of wood before then attempting to change purchasing decisions at both the consumer and designer level.

Chart 2 illustrates the representative time profile of impact for FWPA's generic marketing activities. The analysis is focussed on activities that have been conducted to date and therefore, the growth and decay impact function is based on a total spend to 2014-15 and not any future spending activities. As can be seen, the maximum expected marketing impact is estimated to be reached in the 2012-13 financial year.

¹ Current regulatory restrictions are expected to be dampening the ability of building professionals to respond to the marketing activities. It is expected that should regulatory restrictions on the use of structural timber in higher rise building be lifted, building professionals will have greater capacity to respond to all areas of the WoodSolutions program.

The market impact is likely to extend beyond the finalisation of 2014-15 marketing activities, in line with extended advertising elasticities being observed for durable goods as well as a general declining influence of marketing over time. The representative time profile assumes a decaying impact effect until the 2019-20 financial year.

2 Time profile of cumulative advertising impact



Data source: The CIE

A sensitivity analysis has been undertaken on the model and shows that the finding of a positive economic return is reasonably robust to uncertainty in the variables. The BCR of 7.2 implies that even if the advertising elasticities and market impact evaluations were extremely optimistic, a net return is still likely to have been achieved by the program over the years 2007-08 to 2014-15.

1 *This evaluation*

Forest and Wood Products Australia Limited (FWPA) is the sector's service company and is responsible for range of activities such as generic marketing, R&D investments and building codes and standards. FWPA have commissioned the Centre for International Economics (CIE) to conduct an independent evaluation of the payoffs of its investments in promotion activities over the period 2007-08 to 2014-15. This benefit cost analysis (BCA) forms part of the FWPA's overall assessment of its marketing and R&D investments. The key audiences for such an evaluation are:

- FWPA members and levy payers
- Australian Government.

The BCA approach taken is consistent with the Council of Rural R&D Corporations Methodology² and therefore robust and widely accepted in public policy circles.

Staged methodology

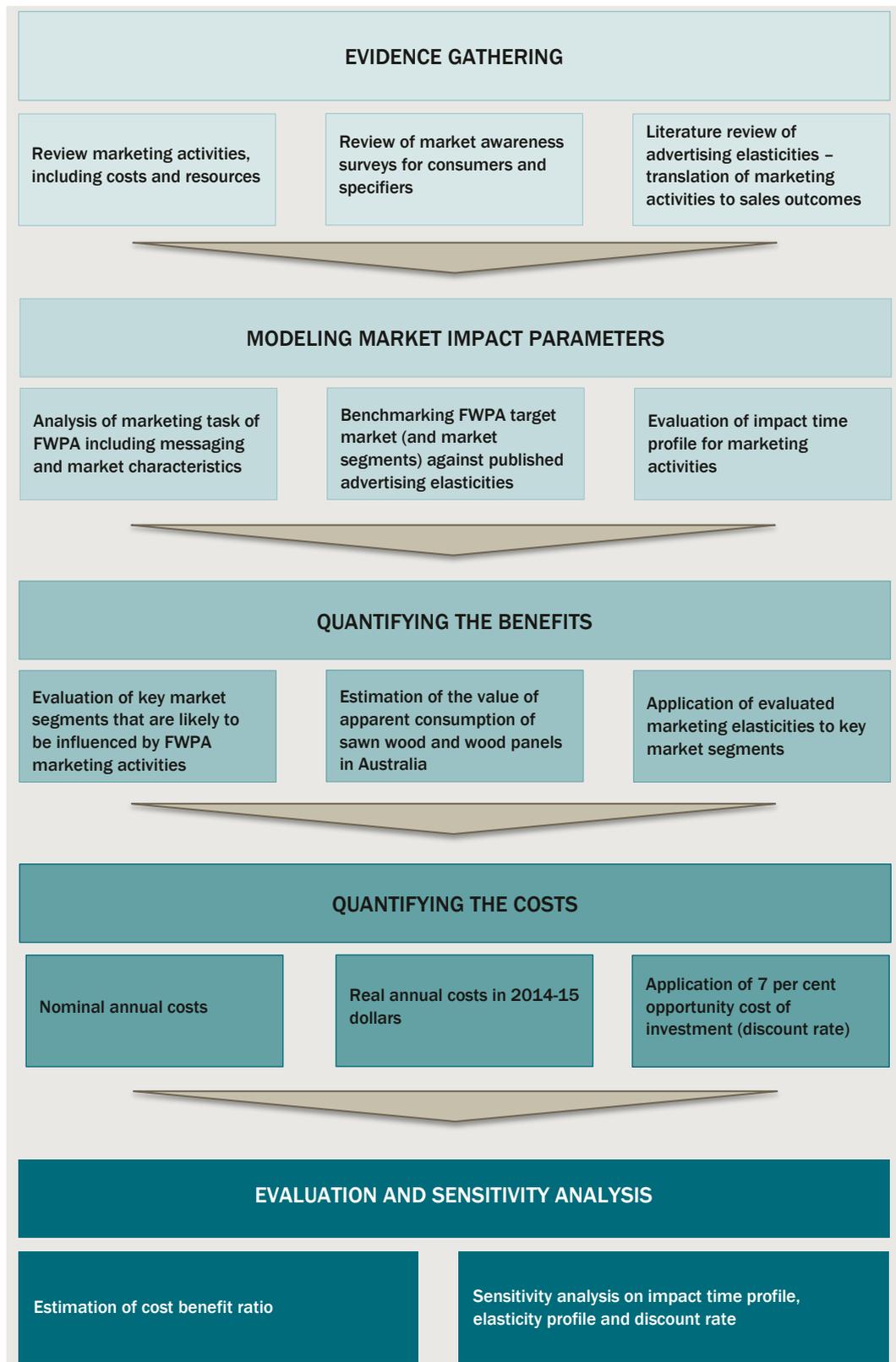
The methodology to approach this BCA is outlined in chart 1.1. This methodology is built around five key processes:

- evidence gathering — including published literature, survey details and results and stakeholder consultations
- modelling market impact parameters – using published empirical studies on advertising elasticities to evaluate the mechanisms through which FWPA's generic marketing activities may impact the market for wood and wood products in Australia
- quantifying the costs — direct costs associated with FWPA marketing activities
- quantifying the benefits — firstly estimating the value of apparent consumption of wood and wood products in Australia then secondly, reviewing the key market segments and the degree to which each segment may be influenced by FWPA's generic marketing activities
- evaluation and sensitivity analysis — calculating a cost benefit ratio and establishing the robustness of the outcome by testing key underlying assumptions.

These steps are made within a narrative of how the program has evolved over time in response to both external and internal industry drivers.

² The Rural R&D corporation website
<http://www.ruralrdc.com.au/Page/Evaluation/Methodology+.aspx> viewed at 1 June 2015.

1.1 The evaluation methodology



Data source: CIE

2 *Evolution of FWPA generic marketing activities*

The FWPA formally began generic promotion activities in 2007-08. The primary objective was to increase the value of wood-based products sold in Australia by increasing demand and reducing constraints on their use and supply'.³ Over the 7 years to 2104-15, the generic promotion activities have been expanded and refined and currently cover three main approaches:

- Wood. Naturally Better — targeted at a retail and consumer audience
- WoodSolutions — targeted at building specifiers and other professionals
- Wood. Naturally Better, partner program — allowing industry stakeholders to leverage marketing, promotional and branding activities of FWPA.

A review of the annual reports published by FWPA over the history of the formal generic marketing campaign show how this three-pronged approach has developed in response to a greater understanding of the information gaps in the market that act as barriers to growth. For example for the first two years, the generic promotion campaign was reported as a single, aggregated task, with a single aggregated budget. By 2009-10, the importance of distinguishing between consumer and professional targeted activities was formally recognised and the reporting of the generic promotion activities and associated budgets was divided into consumer and specifier based activities.

In 2008-09, an additional note was made to the objectives of the program, expanding them to include 'rebuild the industry's confidence in itself and confirm its role as a valuable contributor to sustainable and productive national economy'.

In 2009-10, the objective of the program was adjusted slightly to provide increased emphasis on developing a positive attitude towards wood products, rather than an explicit objective of increasing the value of sales of wood products.

In 2011-12 (and in subsequent annual reports), a range of intended stakeholder benefits of generic promotion were reported, including:

- improving market awareness of, and satisfaction with, forest and wood products
- increasing consumption of forest products and services that can avoid carbon dioxide emissions by replacing more energy intensive alternative materials with wood
- increasing sequestration of carbon dioxide in the built environment through the carbon stored in wood products and avoiding emissions from more energy-intensive alternative materials
- building the social licence that allows the industry to operate with broad community approval

³ FPWA (2008) Forest and Wood Products Australia Annual Report, 2007-08. p14

Box 2.1 charts the evolution of the stated objectives of FWPA's generic promotion campaign as outlined in respective Annual Reports.

Wood. Naturally Better — Consumers

The Wood. Naturally Better campaign was the first formal step taken towards a generic marketing and promotion program by FWPA. Launched in October 2008, the program released a predominantly print media campaign covering newspapers, newspaper insert magazines and magazines. In the first year, it was estimated to have reached an audience of just over 9 million.

The campaign was widened over the period February to June 2009, covering a broader array of print formats, estimated to reach over 10 million readers. In support of the print media campaign, online advertising through a range of websites also ran between February and April 2009, reaching a primary audience of almost 3 million users.

A review of the progress and effectiveness of the print campaign in 2010-11 considered that the campaign had plateaued in terms of its ability to reach the target audience. In response, a television infomercial was developed to reach a wider, new audience. The infomercial was hosted by Peter Maddison and was developed as part of Planet Ark's Environmental Edge campaign, promoting the carbon storage benefits of wood products. The media budget for the infomercial in the first year was in excess of \$1 million and was targeted at audiences of building and renovation programs, complemented by other high rating shows.

The consumer campaign has continued to evolve and now covers a range of activities and promotional materials, undertaken both individually by FWPA and in conjunction with Planet Ark, including:

- Peter Maddison television commercial
- continuation of the print media campaign (in reduced form over time)
- Make it wood, video, noted to be an Australian adaptation of the 'A Convenient Truth' video developed by the UK Forest Commission⁴
- bus advertising, featuring 'woodenised' landmarks, relevant to the market⁵
- Wood. The Untold Story — released as both a short animated video and a Community Service Announcement television and radio commercials⁶
- Charlie the Carbon Catcher — a live show aimed at explaining the carbon cycle and the benefits of trees to children (and parents) at various home shows
- promotion of wood encouragement policies for local councils.

Over eight years to 2014-15, in nominal terms approximately \$13.5 million has been allocated to the consumer program, Wood. Naturally Better.

⁴ FWPA (2012) Forest and Wood Products Australia Annual Report, 2011-12, p28

⁵ FWPA (2013) Forest and Wood Products Australia Annual Report, 2012-13, p22

⁶ FWPA (2013) Forest and Wood Products Australia Annual Report, 2012-13, p22

2.1 Stated objectives of generic promotion in FWPA Annual Reports

- 2007-08 — designed to increase the value of wood-based products sold in Australia by increasing demand and reducing constraints on their use and supply.
- 2008-09 — dual goals, primarily to increase the value of wood-based products sold in Australia by increasing demand and reducing constraints on their use and supply and secondary to rebuild the industry's confidence in itself and confirm its role as a valuable contributor to sustainable and productive national economy.
- 2009-10 — to generate a positive attitude to the use of wood products and to have wood products used more widely in both decorative and structural applications. A secondary objective was to create opportunities for the industry to promote itself and present a confident image to its key audiences.
- 2010-11 — this strategy aimed to increase the use of forest and wood products by promoting the benefits of wood. The means of achieving this was 'by engendering a positive attitude to the use of wood products and an awareness of their advantages, their use will increase in both decorative and structural applications'. A secondary objective was to promote the forest and wood products industry itself (social licence).
- 2011-12 — the stated objective to 'promote the benefits and use of forests and wood products, in accord with changing community attitudes, environmental awareness, and market trends'. The objective was to deliver the following benefits to stakeholders:
 - improving market awareness or and satisfaction with forest and wood products
 - increasing consumption of forest products and services that can avoid carbon dioxide emissions by substituting wood for more energy-intensive alternative materials
 - increasing sequestration of carbon dioxide in the built environment through the carbon stored in wood products avoiding emissions from more energy-intensive alternative materials.⁷
- 2012-13 — the stated objective to 'promote the benefits and use of forests and wood products, in accord with changing community attitudes, environmental awareness, and market trends'. Also includes a statement about the intended stakeholder benefits.
- 2013-14 — to promote the use of wood and wood products, the program seeks to generate a positive attitude towards wood products and to have them used more widely in both decorative and structural applications. The generic promotion program will achieve this by promoting the positive benefits of wood and addressing any real or perceived impediments to its use. Also includes the statement of stakeholder benefits.

⁷ FWPA (2012) Annual report p

WoodSolutions

Beginning as a subset of the Wood. Naturally Better program, specifier targeted activities were first individually branded under the WoodSolutions name in 2009. This distinction was an important one as it is considered that building specifiers are the industry group with 'the potential to have the greatest influence on increasing the market share of wood products used in Australia'.⁸

However, while there is considered to be large potential for growth in the use and specification of wood in the building sector, there are also a large number of constraints that have been identified. Preliminary market research in 2009, surveying the building specifier and construction sector, identified a lack of information on the properties and benefits of wood as a major impediment to its specification in construction.⁹ These findings have been echoed widely across the industry, including in 2011, where constraints were found to exist along the education, training and technical spectrum such as:

- timber technology courses have a reduced level of rigour, leaving a gap in the education of builders and specifiers, leaving few professionals with the knowledge and understanding of how to specify or design with wood;
- educators not being provided with adequate support or course content, particularly at the university course level;
- a limited number and availability of training course in the use of new timber technologies.¹⁰

In response to this finding, the WoodSolutions program was developed with the objective of improving product knowledge and confidence in wood for four primary professional audiences:

- architects (including architects, interior designers and landscape designers)
- engineers (including structural engineers)
- building designers (including building designers and drafting services)
- building professionals (including quantity surveyors, building surveyors and building sustainability assessors).

Under the WoodSolutions branding, there are a range of activities undertaken. The suite of programs have evolved in response to greater understanding over time of the challenges and constraints to the use and specification of wood across the sector.

- **Online industry database** — in 2010-11, the WoodSolutions database was launched, providing a central repository of information about the use of wood and timber products for building specifiers. The objective of the database was to overcome the reported lack of accessible information and wider understanding on the applications of wood.

⁸ FWPA (2009) Forest and Wood Products Australia Annual Report, 2008-09, p15

⁹ FWPA (2009) Forest and Wood Products Australia Annual Report, 2008-09, p16

¹⁰ Mitchell, P. and Tucker, S (2011) Investment plan for increasing the use of wood products in residential construction. Prepared for FWPA, p17-18

- **Technical design guides** — there are 24 technical design guides available for download off the WoodSolutions website, as of August 2015. These technical design guides are ‘part of a suite of technical and training resources produced to support the use of wood and how it can be specified’.¹¹
- **Sponsorship and events** — continuously over the 8 years to 2014-15, the WoodSolutions program has been involved in sponsoring conferences, awards and other events, reaching a wide range of audiences and trading off the reputation of event organisers to promote the messages of the WoodSolutions program.
- **Partnerships** — strategic partnerships, primarily with Planet Ark and allow FWPA to leverage the work of other organisations, and provide additional content to partner activities, providing a benefit to both parties.
- **Seminar Series and Workplace tutorials** — the first round of Seminars and Workplace tutorials were delivered in 2011-12, providing both centralised one-day information events (seminars) and on location technical and training services (tutorials).
- **Tertiary education activities** — recognising the importance of reaching building and design professionals at all stages of their careers, the WoodSolutions program includes activities such as the ‘Structural Timber Kit Survey’, an education micro-site and activities of the WoodSolutions Education Advisory Group.

Timber design awards

FWPA, through the WoodSolutions program, provides Platinum level sponsorship to the Timber Design Awards, a national competition that promotes timber as a “functional, cost-effective and environmentally rewarding building material”¹². The Timber Design Awards are organised by the Timber Development Association and have been running since 1999. FWPA has been involved since 2008-09.

There are nine application categories that cover the range of uses of timber in building, structural and decorative applications:

- 4 Residential Class 1 — New Building
- 5 Residential Class 1 — Alteration or Addition
- 6 Multi-Residential
- 7 Public or Commercial Building
- 8 Interior Fit-out — Residential Class 1
- 9 Interior Fit-out — Commercial
- 10 Landscape
- 11 Stand-Alone Structure
- 12 Furniture or Joinery

Distinction categories have also been developed around key elements of timber use:

¹¹ FWPA (2011) Annual report, 2010-11, p19

¹² FWPA (2010) Annual report, 2009-10, p24

- 1 **The Sustainability Award** — the entry that makes best use of sustainable design principles that includes timber. This includes all items of the sustainable design, not just that timber has been included. Judging for this category is conducted separately by Planet Ark's Make it Wood campaign. They are particularly interested in how timber use has added to sustainable design.
- 2 **The Rising Star Award** — the best entry from an entrant who was (1) aged 35 or under on the date of project's completion or (2) enrolled in fulltime study on the completion date. The designer must be responsible for a substantial portion of the design and not just be a team member.
- 3 **The Small Budget Projects Award** — the best entry based on a project costing less than \$200,000.¹³

There are further timber product classification categories that allow for distinct timber use activities (for example certified timber, engineered timber products, cladding, flooring, panels and veneers) to compete against each other in unique design and structural settings.

At an aggregate level, the Timber Design Awards provide a national platform to promote, recognise and encourage the use of timber in structural and decorative areas, working as both a rewards program for professionals and a marketing and education opportunity for the industry as a whole.

Wood. Naturally Better — Partner program

The Wood. Naturally Better partner program was designed to allow industry partners to leverage the wider promotional activities, with free licencing of logos and access to promotional materials. In 2008, the website, www.naturallybetter.com.au was launched with the objective to:

Provide support to the program partners, validate the propositions made in the advertising and direct knowledge seekers to appropriate industry sites for more detailed information.¹⁴

The partner program has always been the lowest cost component of FWPA's generic marketing promotions. As a low cost initiative, it allows stakeholders free licencing of the Wood. Naturally Better logo and provides access to branded promotional items.

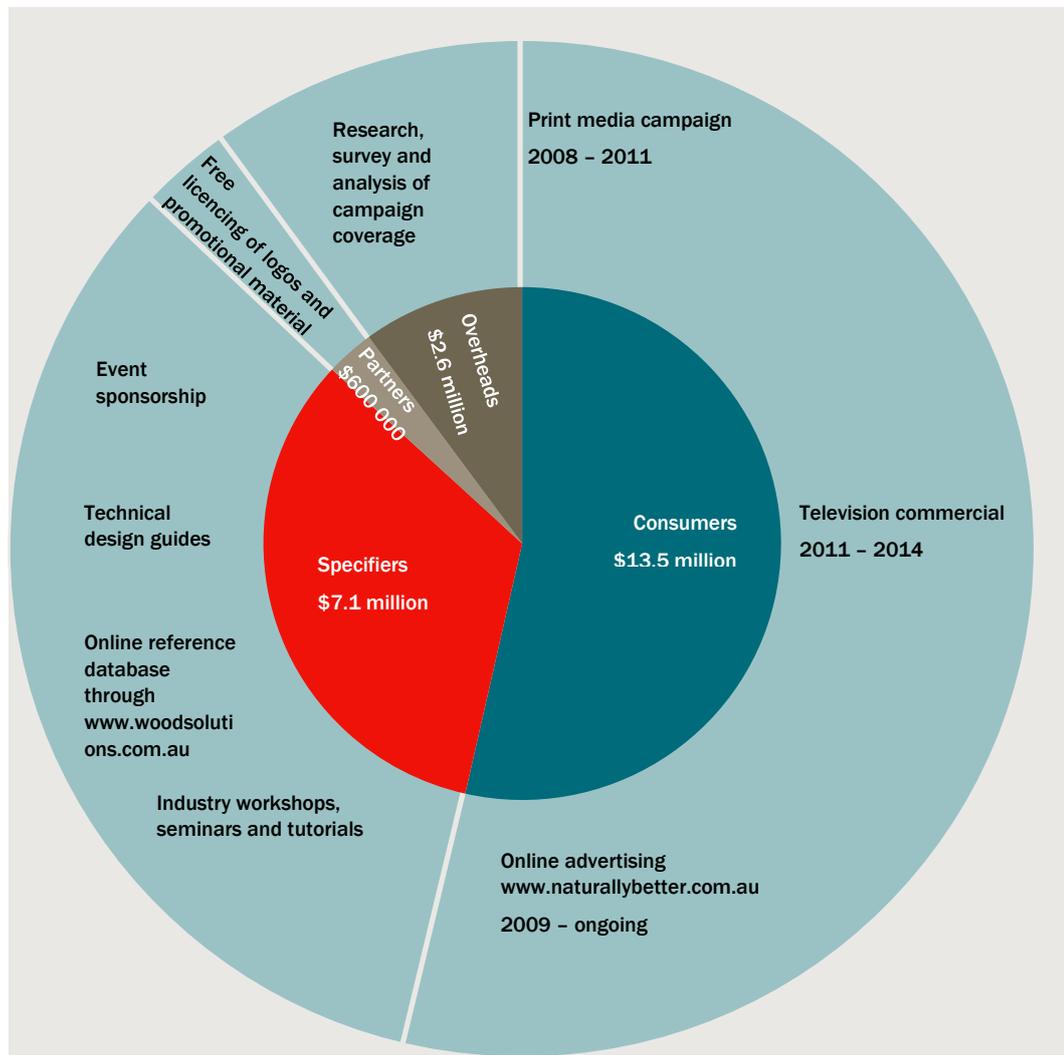
Comparative investment and initiatives

Chart 2.2 provides an overview of the generic promotion activities over the period 2007-08 to 2014-15, including an apportionment of costs across the three streams, the nature of activities that were undertaken and the outputs that have been reported.

¹³ <http://www.timberawards.com.au/entry>

¹⁴ FWPA (2009) Annual Report 2008-09, p17

2.2 FWPA generic marketing activities



Data source: The CIE

Just over half of the total budget for generic promotion has been allocated to the consumer targeted activities, followed by almost 30 per cent being directed to specifier activities under WoodSolutions. Overheads (including research, survey and analysis of campaign coverage) have accounted for just over 10 per cent of the total program spend in eight years.

3 Mechanics of generic marketing activities

FWPA's generic marketing activities are often described along two lines — Wood. Naturally Better that aims to educate consumers on why to use wood, and WoodSolutions that aims to educate building and design professionals on how to use wood. However, there is a third, important element of the generic marketing campaign that has not been articulated explicitly — the promotion of actually using wood.

Chart 3.1 illustrates a closing of the marketing loop to incorporate the act of using wood through the Timber Design awards and similar activities as follows:

- Wood. Naturally Better educates consumers on why to use wood;
- WoodSolutions educates professionals on how to use (design/build with) wood; and
- Timber Design Awards, Planet Ark's Make it Wood promotions and similar activities, encourage, promote and market the final use of wood.

Progressing from why and how to using wood

Why to use wood

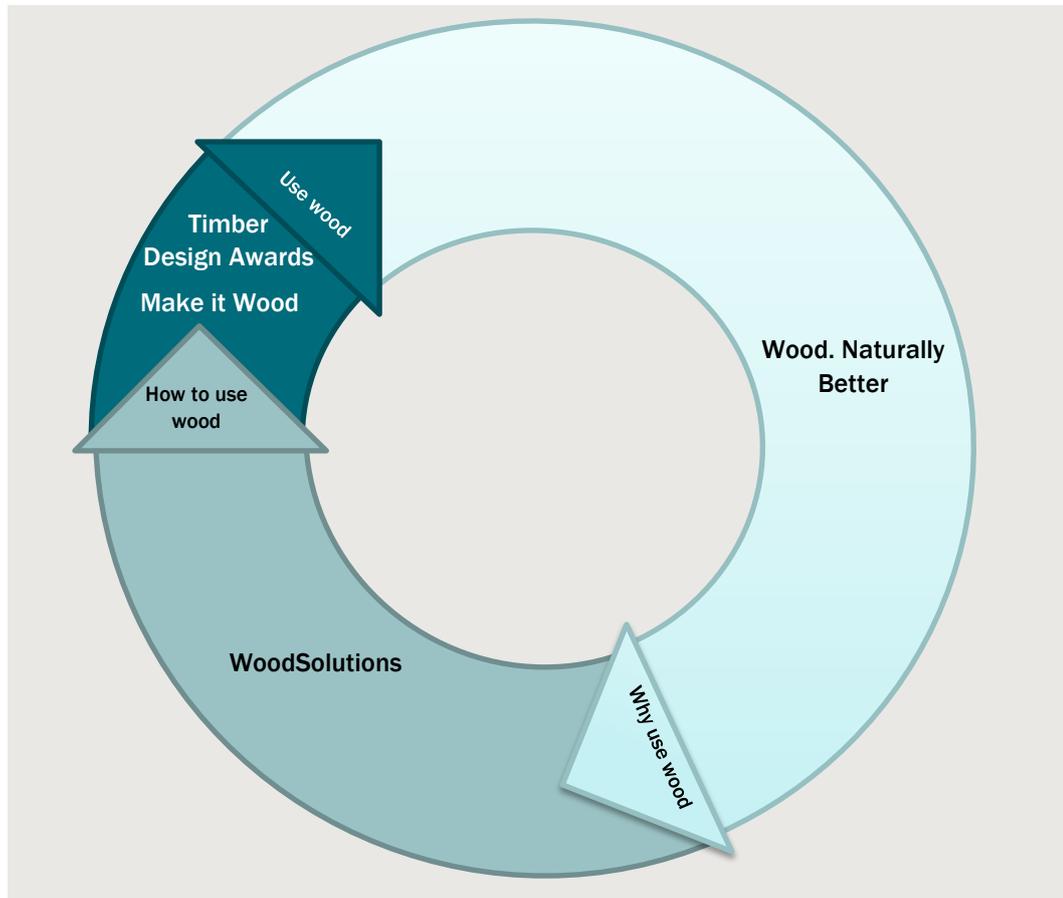
Wood. Naturally Better is a traditional generic consumer marketing campaign, aimed at increasing the awareness of consumers to the product category as a whole. Through concurrent consumer tracking studies, these marketing activities are well attuned to changing consumer attitudes and awareness of products and their applications in different settings. However, there is limited quantitative evidence of the ability of generic commodity promotion to drive strong changes in consumer level sales and longer term consumption habits due to the nature of the market and the advertising task.¹⁵

The consumer campaign has shown positive results in increasing the knowledge consumers have around the carbon properties of wood products (a specific education message that was promoted). However, as wood has been viewed positively throughout the entire media campaign, there have only been marginal changes in collective preferences for wood's aesthetic and more emotional properties.

Ultimately, the consumer generic marketing campaign could be viewed as a successful education campaign that has increased the social licence for the industry and paved the way for consumers to be more willing to accept and welcome wood products in the built environment.

¹⁵ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p17

3.1 Generic marketing loop to promote the use of wood



Note: Pie segments indicate the current relative marketing spend by FWPA on each element

Data source: CIE.

How to use wood

The WoodSolutions program, in contrast, has taken on a distinctly different approach and objective. Developed for building professionals such as architects, engineers, designers and building specifiers this is a highly targeted campaign aimed at increasing the use of wood in the built environment using direct approaches and structuring examples and tutorial based information in a practical manner.

Intuitively these two programs work together hand in hand, with WoodSolutions promoting the diversity of ways wood can be used in the built environment and promoting the advantages of wood over alternate materials. The ultimate goal is to inspire more projects that incorporate an additional volume or value of wood. In support of this 'push' from the professional sector, the Wood. Naturally Better consumer program aims to increase the social licence and acceptance of wood products within the built environment as well as providing an additional layer of demand for wood products in public and commercial buildings.

Do use wood

These two elements of the marketing campaign, when operating successfully are likely to have a positive effect on the use of wood in the marketplace, by promoting consumer demand and providing the resources and knowledge for builders and designers to meet demand. However, the increased use of wood due to these elements alone is likely to be a long term prospect. Additional marketing effort is able to bring forward the market returns from using wood by providing additional encouragement, promotional opportunities or marketing support for final use activities.

Activities such as the Timber Design Awards and Planet Ark's Make it Wood campaign (both supported through the WoodSolutions program) are key examples of such activities focussed on generating a return, or promoting the final end use of wood and wood products. They provide this final step in the wood consumption loop, generating near term recognition, marketing opportunities and economic returns for high quality wood design projects.

Currently, activities focused on this third category of promotion are relatively small. However, this is not a criticism of the allocation of funds within the generic promotion budget. An optimal division of marketing funds across the three categories would require detailed data and information on the direct sales effects of all activities. This level of data detail is not currently available.

Strategy differs by market segments

The Australian market for wood and wood products may, at a high level, be divided into five broad segments:

- direct consumer purchasing of wood based products, such as furniture, optional design features in houses (wood flooring, windows etc) and landscaping choices
- project building company based single dwelling residential sector
- private build residential sector
- multi-dwelling, residential construction sector
- non-residential, commercial and public building construction sector.

For an effective marketing campaign, it is important to understand the current barriers and constraints on consumption, as well as the market segments with the greatest potential for growth. The underlying objective of FWPA's marketing campaigns and promotional activities is to provide information to consumers and building professionals that reduces or removes impediments to their use of wood and wood products.

To be able to achieve this objective effectively, concurrent consumer and specifier market studies have attempted to identify the key information impediments for each target audience. Aligning the marketing messages to these information impediments ensures that the information provided has the greatest potential to reduce market barriers and promote sales of wood products.

In the Australian timber market, the vast majority of timber use is for structural applications in the building industry.¹⁶ At a national industry level, consumers are only able to directly affect a small portion of the market through immediate consumption choices. These immediate consumption choices cover products such as furniture and finishing in houses, as well as landscaping materials.

In contrast, a large portion of Australian timber use is directed into new, residential housing projects. In 2013-14:

- 58 per cent of total dwellings were are single dwelling, detached houses
- 42 per cent were multi-dwelling residential (up from 30 per cent in 2008-09).¹⁷

This segment of the market is now dominated by large construction companies that construct detached and semi-detached houses around variations in a set portfolio of house designs. These construction companies have built a business model around repetition of known designs with known fit outs and have limited flexibility in terms of use of materials. Discussions with industry representatives have indicated that large project builders are often reluctant to make changes to these designs due in part to cost implications but also due in part to known consumer preferences for house styles in Australia. In addition, for multi-dwelling residential, key barriers to increased wood use include perceptions around its strength and fire resistance properties. This would indicate that shifting demand in this segment would be a long term proposition. However, if successful, a relatively small shift in demand would have a substantial impact on total demand for wood due to the size of this market segment.

The non-residential, commercial and public building construction segment centres on singularly designed, special purpose buildings that have a large degree of design flexibility incorporated. This market segment has been identified as currently experiencing strong information and perception barriers to increased specification of wood with key constraints being perceptions around strength and fire resistance. However, it also represents the greatest opportunity for marketing and promotion activities.¹⁸

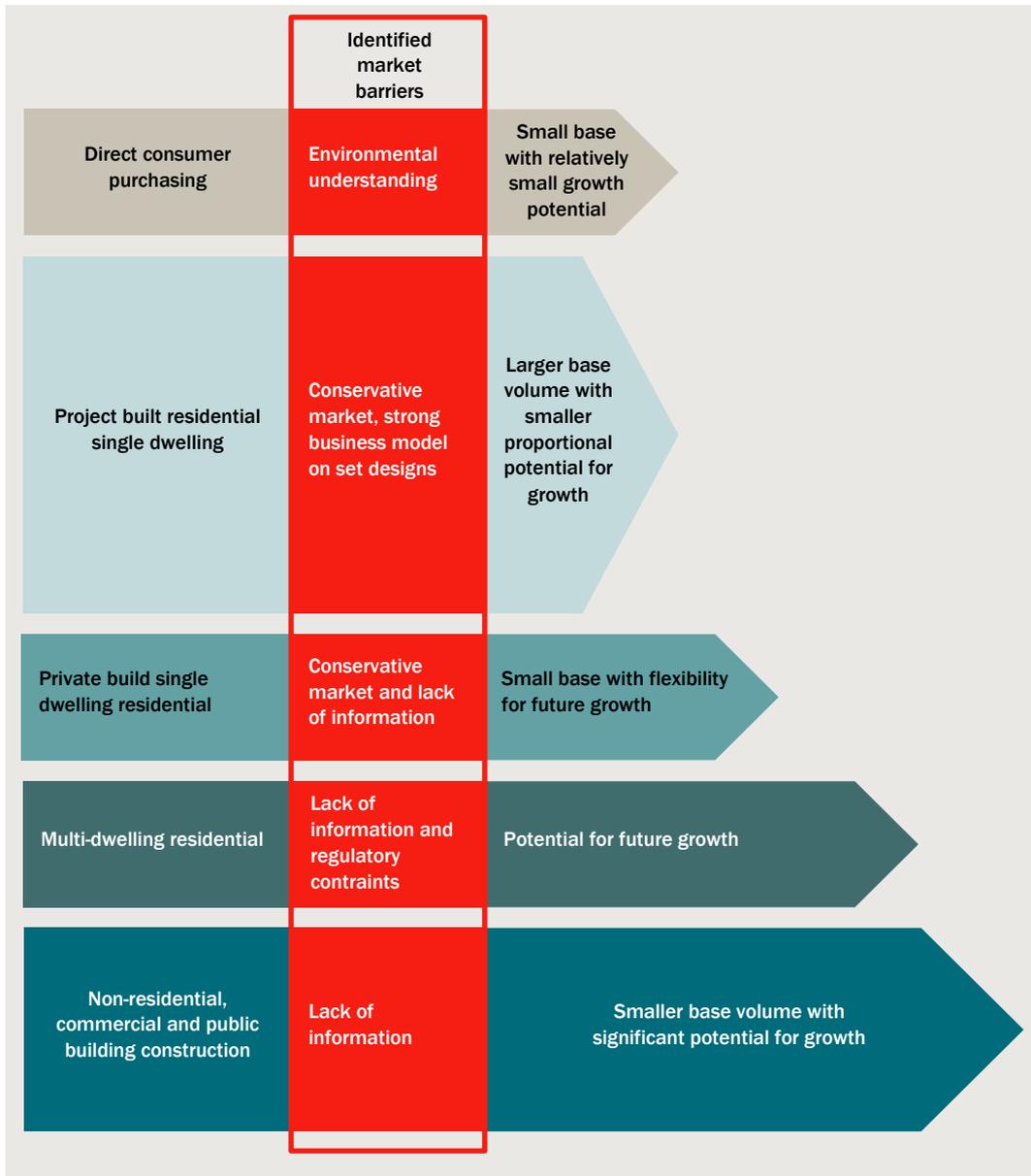
Chart 3.2 provides an illustrative representation of this market segmentation.

¹⁶ Kapambwe, M. et al (2009) Dynamics of carbon stocks in timber in Australian Residential Housing. Prepared for FWPA, p15, quoting BIS-Shrapnel (2008) Sawn timber in Australia 2008-2022.

¹⁷ ABS Catalogue no. 8752.0, table 33.

¹⁸ FWPA (2009) Forest and Wood Products Australia Annual Report, 2008-09, p15

3.2 Market segmentation and identified barriers and constraints

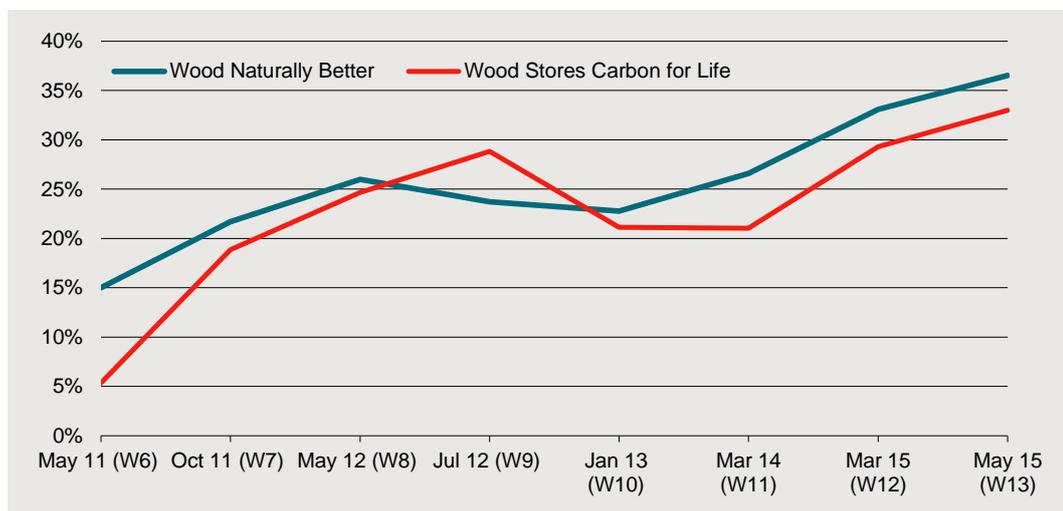


Data source: CIE.

4 Assessment of consumer marketing outputs

Consumer tracking results have shown a trend of increased consumer awareness of FWPA's marketing activities, with year on year growth. Chart 4.1 highlights the growing consumer familiarity with FWPA marketing messages, indicating that more than a third of consumers are aware of both the Wood. Naturally Better message and the Wood Stores Carbon For Life message.

4.1 Consumer familiarity with FWPA marketing messages



Data source: Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA

The CIE considers that the consumer marketing activities have the ability to affect demand for wood and wood products through three possible avenues:

- direct influence on sales decisions — this direct demand effect is unlikely to be high due to the generic nature of the promotion of wood as a material rather than promotion of specific wood products
- indirect influence on design decisions — this is an indirect demand effect where consumers increase their appreciation of wood as a design and construction material and seek more wood in the built environment
- increased social licence — where consumers are more likely to accept wood in the built environment, recognising that there are not necessarily net environmental or social costs from the associated forestry activities.

While these three elements cannot be measured directly, a cross referencing of findings from the consumer tracking studies highlights which particular consumer measures might be able to contribute to select demand shifters. Tracking studies of consumer attitudes and understanding of wood and wood products have been conducted on behalf of FWPA since October 2008. Conducted over the course of the Wood. Naturally Better

campaign, these tracking studies have attempted to provide an insight into issues such as:

- preferences for wood and wood products, including emotional associations
- understanding of the environmental and carbon storage properties of wood products
- attitudes towards forestry activities and the forest and wood products industry.

Table 4.2 illustrates this matrix of influence, indicating the likely strength of different consumer measures to affect the identified demand shifters for wood and wood products.

4.2 Influence matrix – consumer take outs and shifters of demand for wood

	Direct purchase decision	Indirect demand	Increased social licence
General preferences and emotional attachment to wood	Light blue shaded cell		
Understanding of environmental properties of wood	Light blue shaded cell	Dark teal shaded cell	
Attitudes towards forestry activities	Light blue shaded cell		Teal shaded cell

Source: CIE.

Each of these elements will be explored further, however, a high level overview is provided here. Where general preferences and emotional attachment to wood are, and have remained high since 2008, this element of the marketing campaign is considered to have a slight positive impact on each of the three demand elements.

In contrast, where understanding of the environmental properties of wood and wood products were not as universally held in the early years of the marketing campaign, increased awareness is considered to have a distinct effect on indirect demand as well as measures of social licence. Only a small direct demand effect is expected, due to the generic promotion of a material rather than a single product that consumers can identify.

Finally, the consumer tracking studies have reported increased trust attributed to the forest and wood products industry over the period of the consumer awareness campaign, and this is likely to have a strong positive effect on the social licence of the sector.

Preferences for wood and wood products

A review of 15 waves of consumer surveys shows that there is an ongoing appreciation of the aesthetics of wood and wood products that has remained consistently high.¹⁹ In general, consumer tracking surveys have found:

- a high proportion of consumers (79-86 per cent) like or love wood as a material, without reference to a type of product²⁰
- wood has remained a contender in the primary decision set for ‘materials’ for between 63 and 57 per cent of respondents, without reference to a type of product²¹
- FWPA’s advertising activities have the ability to improve attitudes towards wood products, in particular due to environmental messaging and emotional associations.²²

In general, when compared to other materials such as steel, concrete and bricks, wood is found to lead the way in terms of nearly all positive emotional and attitudinal characteristics (for example, warmth, timelessness, uplifting, unique etc).

As these positive attitudes towards wood and wood products have remained high since the beginning of the consumer tracking surveys, it is unlikely that the advertising campaigns have had a significant influence on the perception of wood as a premium and emotionally pleasing material. However, continual reinforcement of the messaging has likely helped to solidify the further messages of environmental credentials and sustainable forestry activities.

Understanding of environmental attributes

Over the course of the consumer tracking studies, there is evidence of an increasing awareness of the carbon storage properties of wood and wood products. Chart 4.3 shows a progressive trend increase in consumer understandings (with a data anomaly in May 2011) for the topics of carbon storage in wood, the permanence of carbon storage in wood and the role of wood products in the home to store carbon.

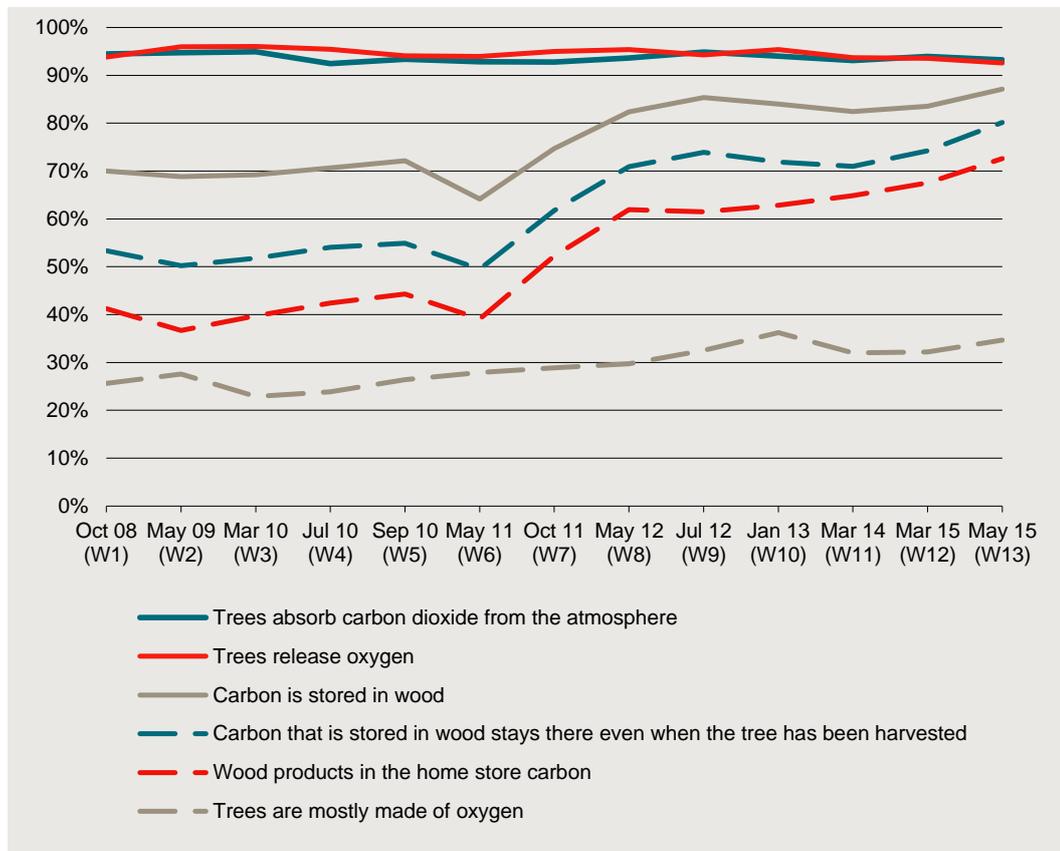
¹⁹ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA

²⁰ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p21

²¹ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p22

²² Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p23 and 24

4.3 Understanding of carbon storage properties of wood



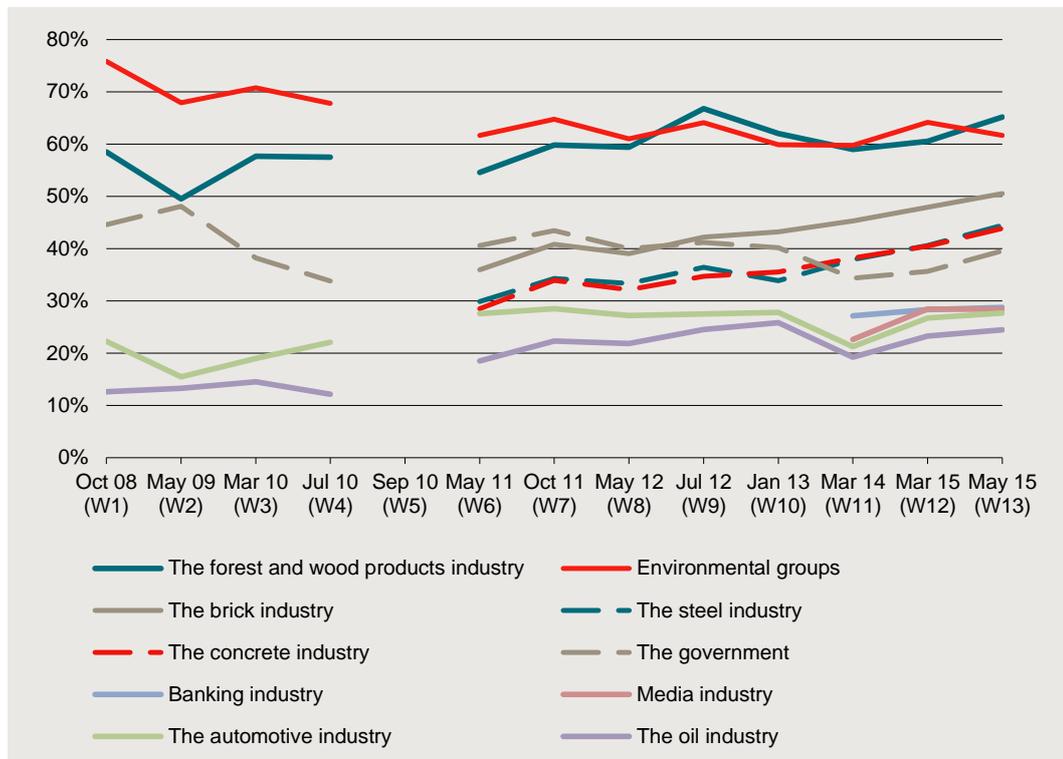
Data source: Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p34

Attitudes towards forestry activities and the forest and wood products industry

Over the period of FWPA’s generic marketing program there has been a notable increase in the level of trust consumers are willing to place in the forest and wood products sector. As shown in chart 4.4, in 2008 just less than 60 per cent of respondents ranked the forest and wood products sector as a reliable source of environmental information. By May 2015, this had increased to 65 per cent. This increase in trust for the forest and wood products industry has occurred at a time when environmental groups have lost the trust of consumers, dropping from 77 per cent in 2008 to 62 per cent in 2015.²³

²³ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p32

4.4 Reliability of organisation to provide environmental information



Data source: Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p32

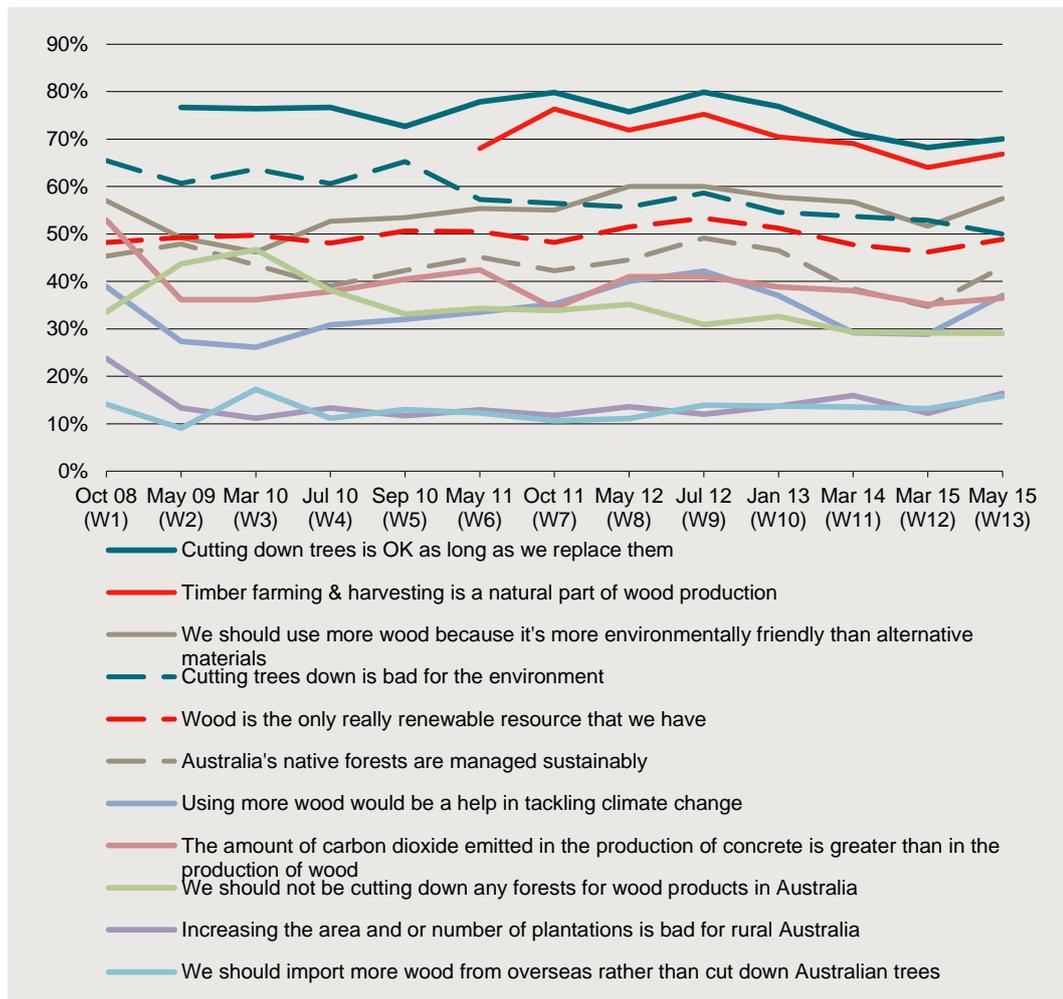
While the link between this data and increased wood use is complex, they provide insight into the attitudes and approaches of consumers when seeking information. Market observers have noted that other industry-wide activities were limited over this time period — as such it would be reasonable to conclude that FWPA’s generic marketing program has been responsible for most if not all of this increase in acceptance of the forest and wood products industry as a reliable information source.²⁴

Longer term attitudes towards forestry activities associated with wood and wood products have not demonstrated significant longer term trends overall, as illustrated in chart 4.5. However, there are some key movements in attitude worthy of highlighting:

- almost 60 per cent of consumers (up from a low of 45 per cent in 2010) agree that more wood products should be used because wood is ‘more environmentally friendly’ than other products
- the number of respondents who consider cutting down trees as unconditionally bad for the environment has reduced from 67 per cent in 2008 to 50 per cent in 2015
- a downward trend since 2010 in the proportion of respondents agreeing that forests should not be cut down for wood products in Australia.

²⁴ Howrad Parry-Husbands, pers comm 28/08/2015

4.5 Consumer attitudes around wood use and sustainably managed forests



Data source: Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p36

Direct attribution of advertising to purchasing activities

Assessment of the television commercials have noted that they have been very successful in laying the groundwork for future purchases of wood and wood products rather than directly driving increased consumption. A review of the FWPA consumer campaigns in 2015 noted that the television commercials have ‘shifted attitudes towards wood, however this has not translated into increased consideration or purchase of wood’.²⁵

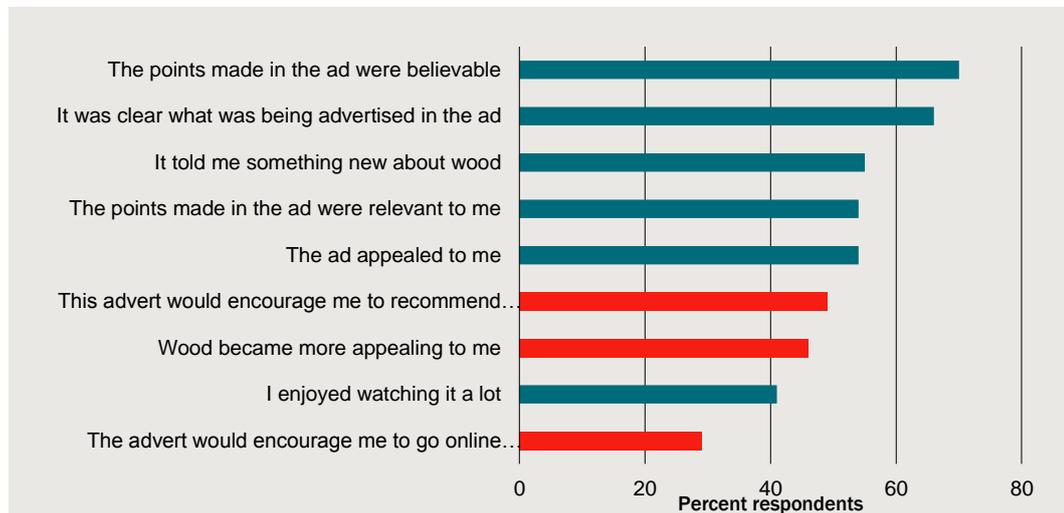
It is likely that this assessment is justified in terms of not being able to pinpoint a particular wood product that has experienced increased sales from the marketing activities. However, some elements of the marketing campaign and subsequent consumer surveys have been able to indicate an increased preference for wood purchases and increased discussion of wood as a product between consumers.

²⁵ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p17

An ongoing set of questions within the consumer tracking survey asks respondents to agree with a range of statements following a screening of FWPA's advertising campaigns. Chart 4.6 shows the level of agreement that survey participants had with various statements following viewing the April 2014 Environmental Edge advertising campaign. The key responses of interest to assessing a change in purchasing habits are highlighted in red. That is:

- The points made in the ad were relevant to me — 54 per cent
- This advert would encourage me to recommend to others to use wood products — 49 per cent
- Wood became more appealing to me — 41 per cent
- The advert would encourage me to go online and find out more — 29 per cent.

4.6 Level of agreement with statements following viewing the advertisement



Data source: Pollinate (2014) Project Buzz: Carbon TVC evaluation. Presentation made to FWPA

Similar levels of responses were also observed in 2015 consumer tracking surveys, indicating that consumers are showing an interest in discussing wood products and in further educating themselves around the properties of wood. In terms of a longer term marketing strategy to drive acceptance as well as consumption of wood products, these are encouraging results.

Further questioning within the survey asked respondents to rate their likelihood of using wood following viewing of the television commercials with 50 per cent of respondents indicating that they were more likely to use wood after having seen the advertisement. While this survey response cannot be relied upon quantitatively, it does provide positive indications towards the potential for increased sales of wood and wood products due to FWPA advertising activities.

Targeting a demographic likely to actually use wood

Where consumer advertising campaigns are targeted at reaching a wide audience, they operate on the principle that the advertising will resonate with a portion of the audience, and that a further portion will act based on their exposure. Reviewing the activities being undertaken by survey respondents indicates that up to 56 per cent of respondents (and in turn, the Australian population) at any one time are likely to be undertaking activities that could be associated with traditional wood purchases:

- Buying or have bought new outdoor furniture and Buying or have bought new furniture for the home — 35 per cent
- Renovating or have renovated your home and Redecorating or have redecorated — 34 per cent
- Landscaping a garden — 26 per cent
- Building or buying a new home — 12 per cent.²⁶

These consumer activities were cross referenced against the respondents' recognition of Planet Ark Carbon television commercial. Where approximately 34 per cent of respondents across the survey reported being aware of the television commercial, those participating in 'wood purchasing' activities indicated distinctly higher awareness of the campaign compared to consumers not undertaking 'wood purchasing' activities, as follows:

- Purchasing furniture (35 per cent) and
- Renovating or redecorating (37 per cent)
- Not undertaking these activities (33 per cent).

Of particular interest is the notably lower advertising awareness figure for respondents who were in the process of building or buying a new home, with only 28 per cent reported awareness.²⁷ This result needs to be considered in the context of whether or how consumer advertising might be able to affect the large traditional market for wood products — residential construction.

Willingness to pay for environmental properties

The Wood. Naturally Better consumer advertising campaigns have been targeted at increasing the understanding consumers have of the environmental performance of wood and wood products. The predominant message outlined has been the contribution to carbon abatement efforts that well managed forestry resources and resulting wood products may have. This message was developed in direct response to consumer research that found that many consumers were uncomfortable with the harvesting of trees to supply wood products, while still ranking wood highly for environmental 'friendliness' and sustainability/renewability.²⁸

²⁶ Pollinate (2014) Project Buzz Carbon TVC evaluation. Presentation to FWPA, p21

²⁷ Pollinate (2014) Project Buzz Carbon TVC evaluation. Presentation to FWPA, p21

²⁸ FWPA (2009) Annual Report, p15

When cast in terms of consumption decisions, increased information on environmental properties is analogous to increasing the environmental performance of wood products. That is, where consumers have a positive willingness to pay for increased environmental performance of products, there is likely to be an increase in the willingness to pay for wood products once consumers are educated and fully account for these environmental characteristics.

The stated preference for consumers to pay a premium for products and services that are made in an environmentally friendly manner has been cursorily considered within the consumer tracking studies. Over the period May 2011 to May 2015, a steady proportion of respondents (between 35 and 41 per cent) have stated that they would be willing to pay a 25 per cent premium for environmentally friendly products and services.²⁹ While this question is not quantitatively reliable and the scale of the premium is likely over estimated once purchasing actions are actually taken, the results do give an indication that increased awareness of environmental properties is likely to drive either a switch in demand, or allow for a price premium to be charged.

Investigating a link between stated preferences for environmentally friendly products and purchasing choices is complex and generally requires significant data resources. Indeed, research conducted for FWPA reported that while 90-95 per cent of consumers consistently say that they have concerns for the environment, only approximately 10 per cent are 'actively modifying their purchase behaviour to reflect this concern'.³⁰

A 2014 international survey of 30 000 people in 60 countries found that 55 per cent of respondents indicated that they were 'willing to pay extra for products and service from companies committed to positive social and environmental impact'. This response rate was up from 45 per cent in the same survey conducted in 2011, indicating a general increase in acceptance, internationally, of price premiums for environmentally friendly products and services.

To support the stated preference survey, a review was conducted of sales data across 20 brands in nine countries to test whether stated preferences for environmental and sustainability qualities were adhered to in purchasing decisions. In March 2014, on a year-on-year analysis showed:

- 2 per cent average annual sales increases for products with sustainability claims on packaging
- 5 per cent average annual sales increases for products with sustainability actions through marketing programs
- 1 per cent average annual sales increase for products without sustainability claims or marketing.³¹ (p5)

These findings have been echoed to a certain degree in other studies, including stated preference for energy efficient products. While not exactly aligned to the case of wood given the reduction in running costs often associated with energy efficiency, these

²⁹ Pollinate (2015) Project Toy Story Key Findings. Presentation to FWPA, p38

³⁰ FWPA (2009) Annual Report, p15

³¹ Nielsen (2014) Doing well by doing good, p5

studies have provided some limited insight into how willingness to pay may change in relation to the total cost of the products purchased. For example, a 2014 London Economics based study found that while more than half of survey respondents stated they were willing to pay a premium for more energy efficient products, the number of respondents agreeing to a premium declined when more expensive products were considered (for example, light bulbs compared to televisions compared to washing machines). That is, for more expensive products, the premium willing to be paid declines.

Evaluating trends in consumer willingness to pay for environmental characteristics provides some important insight for assessing the direction, if not the scale, of performance of FWPA's generic marketing campaign for consumers:

- There is an increasing international trend in consumer willingness to pay for environmental performance of products. Where FWPA's advertising campaign can improve the environmental perception of wood and wood products, this increased information is likely to translate into increased willingness to pay.
- The scale of the price premium attributable to increased awareness of the environmental performance of wood and wood products is difficult to measure given the distinction between stated preference and purchasing decisions.
- There is a likelihood that the proportional price premium declines relative to the total purchase price of the goods.

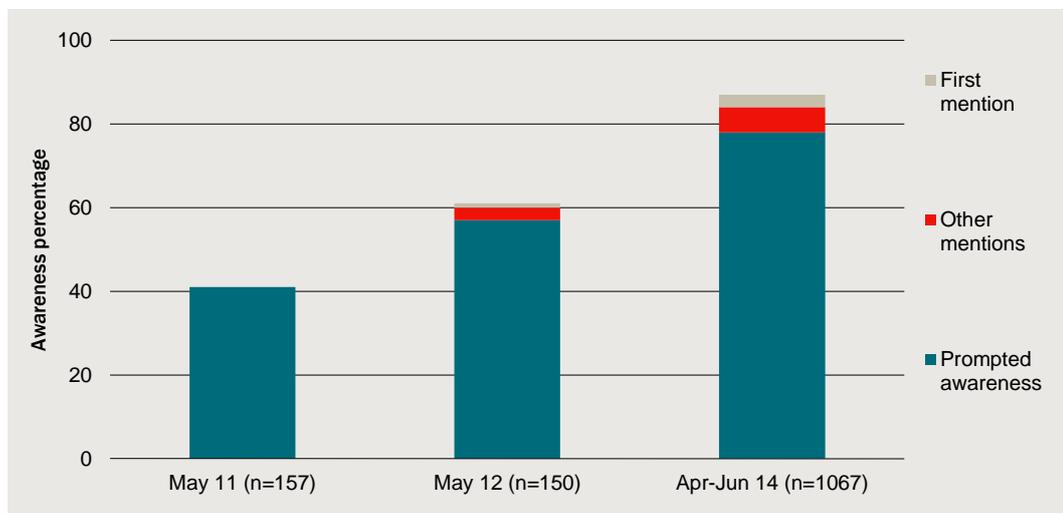
5 Assessment of specifier marketing outcomes

Three waves of tracking studies of building professionals have been undertaken since May 2011 to measure the impact and progress of WoodSolutions. The tracking studies have covered three main elements:

- importance of material characteristics and how wood ranks relative to other materials
- level of engagement, understanding and opinions on WoodSolutions resources (technical design guides, tutorials, workshops)
- level of engagement, understanding and opinions on Timber Design awards.

As shown in chart 5.1 there are indications that specifier awareness of the WoodSolutions program has increased over the waves, however changes in the survey methodology mean it is difficult to quantify this increased base awareness level.³²

5.1 WoodSolutions brand awareness



Data source: Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p42

The ability of FWPA's WoodSolutions program to drive the use of wood products in the built environment is of particular importance to the success of the program. As has been highlighted by FWPA, the market segment of building specifiers has the greatest potential to increase the demand and use of wood and wood products.³³ It is therefore

³² The third wave of specifier surveys increased the sample size to over 1 000 compared to approximately 150 in previous years. The majority of the increased sample was sourced from FWPA's direct mailing contact list, that would be expected to have a higher base awareness of FWPA's activities than the Australian population of specifiers.

³³ FWPA (2009) Forest and Wood Products Australia Annual Report, 2008-09, p15

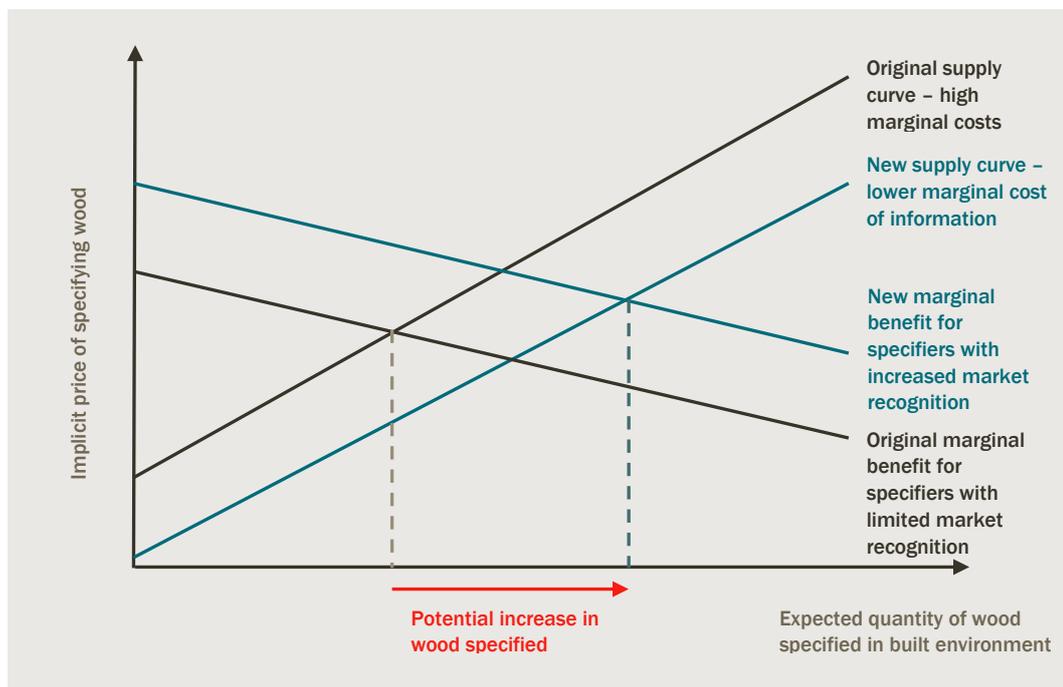
reasonable to expect that this segment of the market would react first and most strongly to any FWPA marketing activities.

WoodSolutions activities focus on the specifier market segment to promote the use of wood in the built environment through two main avenues:

- 1 Lowering the information costs of specifying wood in the built environment by providing information on ways, means and applications of wood: activities such as the Technical Design guides, seminars and tutorials attempt to alleviate some of these information costs for specifiers
- 2 Increasing the returns to specifying wood in the built environment by providing a central and promotable recognition instrument for the industry: activities such as the Timber Design awards bring forward and attempt to consolidate the more disparate market preferences of consumers for wood and wood design.

Chart 5.2 illustrates the combined effect that such information and recognition activities may be able to have on the market for wood in the build environment. The lighter shaded curves represent the original market outcome, with higher marginal costs of information and lower, more dispersed levels of market recognition that cannot be harnessed by specifiers.

5.2 Representative effect of WoodSolutions on wood specification



Data source: CIE.

Following the introduction of information distribution activities such as the Technical Design guides, specifiers have a reduced marginal cost of specifying wood, which is likely to have a flow on effect of increased wood specification.

The Timber Design awards may be represented as a channelling of consumer preferences for wood in the built environment that cannot be harnessed directly by

specifiers. The result is an appreciable increase in the marginal benefit, or marginal return, for wood product in the built environment (indirectly facilitated through FWPA and the Timber Development Corporation). Together, these effects increase the likely quantity of wood specified in Australia.

Perceptions of wood relative to other building materials

The specifier tracking studies have been designed to report on the key characteristics of different building materials that drive specification choices, and where wood fits into these rankings. Identifying perceptions and understandings of specifiers has allowed the WoodSolutions education campaign to be refined overtime.

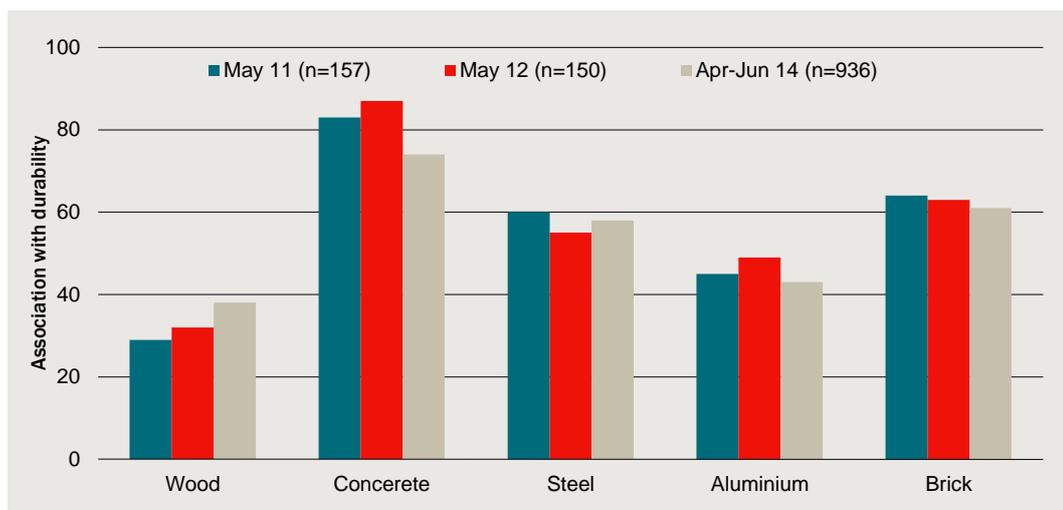
In the 2014 survey of specifiers, durability, availability and value for money (materials and installation) were the top four most important characteristics of chosen construction and design materials.³⁴ These three characteristics have remained the top considerations through the surveys.

While wood remains at a disadvantage in terms of its perceived durability compared to other materials, there are indications that this perception is correcting over time. Further, over the tracking studies, wood has performed strongly in terms of perceived value for money in both material and installation costs. These findings suggest that the WoodSolutions program, and wider industry and community activities, may be having an impact on the perception of wood as a favourable building and design material.

Durability

Specifier perceptions of the durability of wood have increased over the survey period but remains behind all other materials identified in the survey (chart 5.3).

5.3 Association of materials with durability



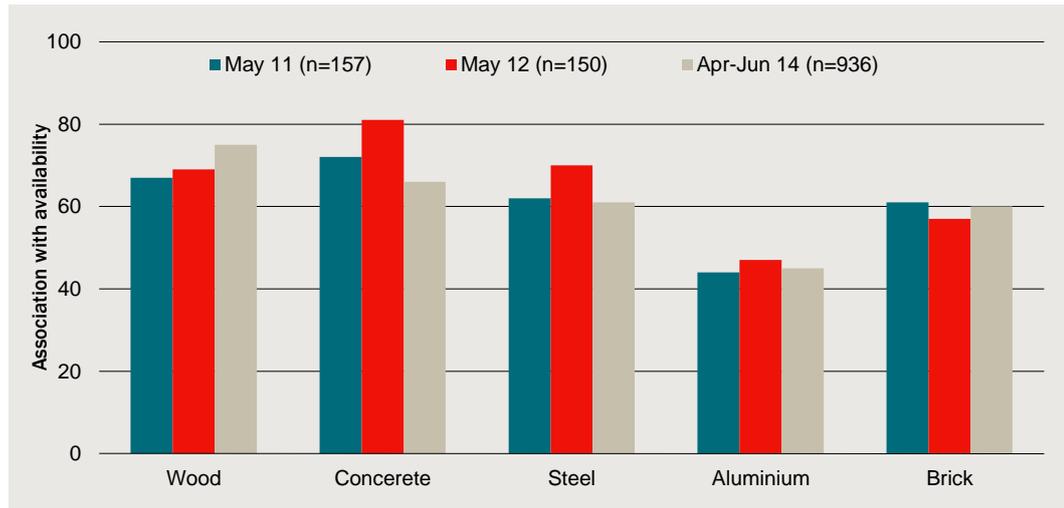
Data source: Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p27

³⁴ Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p21

Availability

Specifier perceptions of wood's availability have increased marginally over the survey period and wood continues to perform favourably against other materials in this category (chart 5.4).

5.4 Association of materials with availability



Data source: Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p31

Value for money

Specifier perceptions of wood as a value for money product have increased notably over the survey period. In the latest survey wood was the material most likely to be associated with a value for money proposition of any of the materials considered (chart 5.5).

Engagement with WoodSolutions

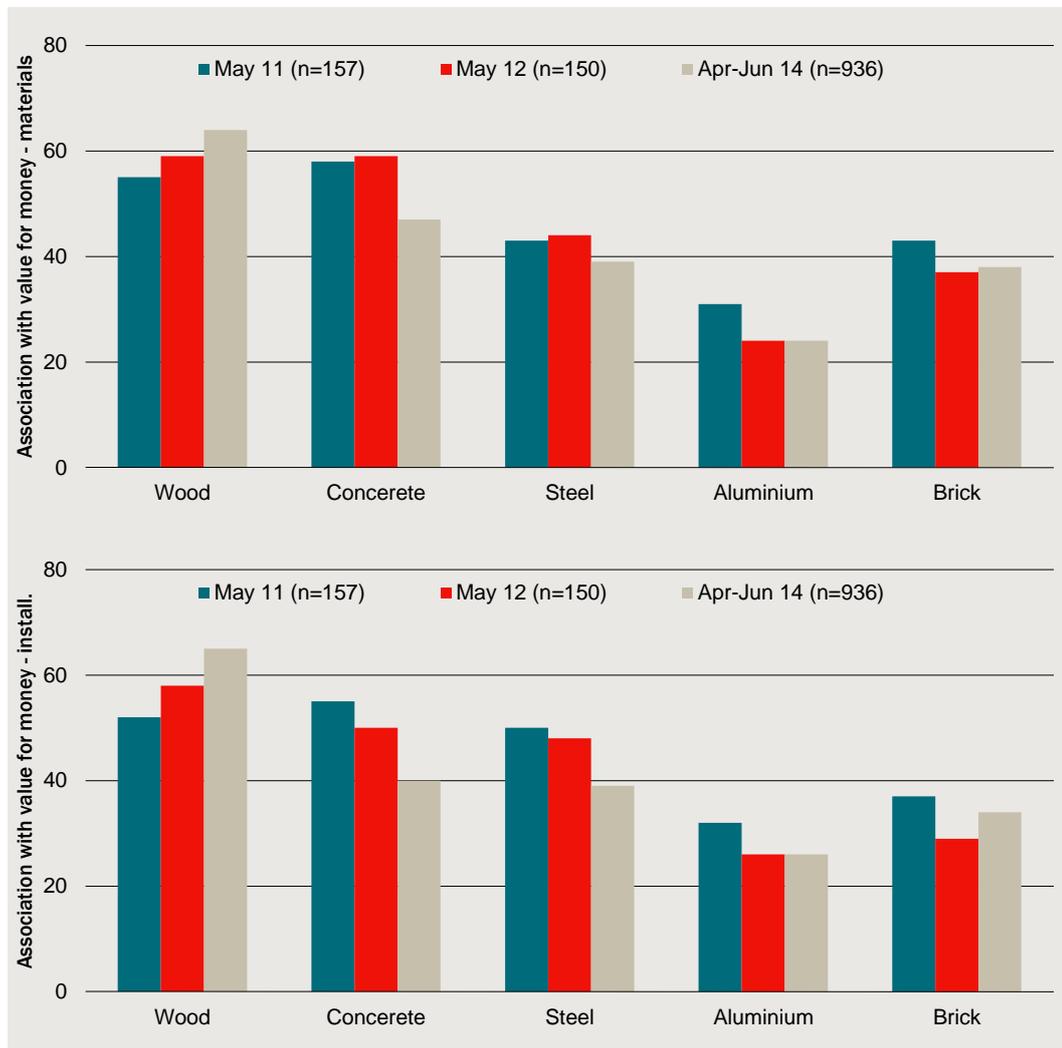
Preliminary market investigations found that a lack of information on wood was a key impediment to it being specified in building and design projects.³⁵

Increased understanding of wood and wood products is known to be a driver of increased specification, with a survey of American architects noting that increased knowledge of, in particular, cross-laminated timber, leads to a higher potential for specification in building projects.³⁶

³⁵ FWPA (2009) Annual Report 2008-09, p16

³⁶ Mallo, M. and Espinoza, O. (2014) Awareness, perception and willingness to adopt crosslaminated timber in the United States, presentation made to University of Minnesota

5.5 Association of materials with value for money



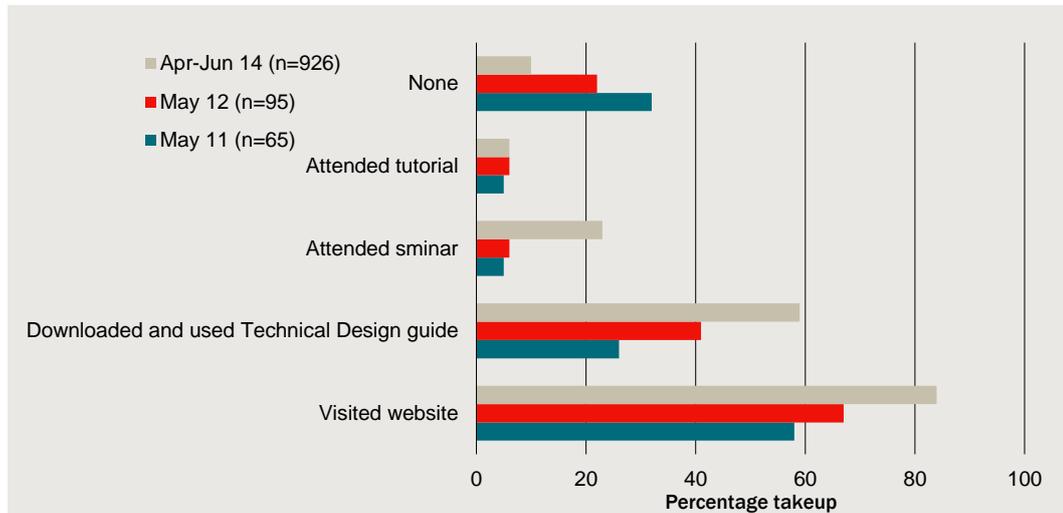
Data source: Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p28

WoodSolutions works to increase the available information and knowledge on wood and its uses through multiple means — predominantly Technical Design guides and workshops and tutorials.

Chart 5.6 show the change in engagement with WoodSolutions activities over the three survey waves. While the change in survey methodology makes the change in take-up reported in 2014 difficult to quantify, the figures show an increasing level of engagement and identify the strength of the Technical Design guides in providing information.

Accessing Technical Design guides is the most common and rapidly growing form of interaction with WoodSolutions. In 2014, 59 per cent of respondents aware of WoodSolutions had downloaded a Technical Design Guide indicating that the program is being utilised as intended as a source of information for professionals.

5.6 Take up of WoodSolutions initiatives



Data source: Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p53

Attendance at tutorials also an important indicator of program reach with 23 per cent of respondents in 2014 indicating attendance. Again, a change in survey design makes it difficult to compare with previous year findings.

Timber Design Awards

The Timber Design Awards are a direct form of engagement with promoting the use of wood in the built environment. While the awards only form a small portion of the FWPA generic promotion program, they provide an important link between generic promotional activities and market recognition activities.

FWPA engagement with Timber Design Awards began in 2008-09, almost ten years after the awards were developed. In this time, FWPA has provided strong financial support for the awards as a Platinum sponsor.

Both awareness and engagement with the Timber Design Awards is at reasonable, although declining, levels. In 2014, 71 per cent of respondents reported being aware of the Timber Design Awards, with 6 per cent reported having entered a project in the awards in the past.³⁷ FWPA's direct mailing list was a key source of awareness of the Timber Design awards, for those on the list.

Architects were the main professional group engaged with the Timber Design Awards, accounting for just over half of the reported entered projects — 24 of 45 reported projects. Engineers accounted for over a quarter of reported projects — 12 of 45 reported.³⁸

³⁷ Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p58 and 60

³⁸ Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p60

Ability to drive use of wood products — future expectations

The tracking surveys as published provide limited insights into how interaction with WoodSolutions may drive an increased use of wood products however there are indications of growing interest in particular market segments such as engineered wood products. When asked the likely change in volume of engineered wood products they would use in the following 12 months, 13 per cent of respondents indicated a 'significant increase' (up from 8 per cent in 2012), and 44 per cent indicated a 'slight increase' (up from 34 per cent in 2012).

The survey results indicate that the categories of engineered wood products and recycled wood products are likely to receive increased attention in future years, with more than half of respondents indicating an increase in their likelihood of using engineered wood products, and just over 40 per cent indicating a likely increase in their use of recycled wood products. Overall, the expected use of non-engineered wood products is anticipated to remain largely stable.³⁹

These results indicate increased interest in non-traditional, novel and innovative areas of the wood and wood products market, however, it is unclear what effect this would have on the national value of volume of wood and wood products being consumed in Australia.

³⁹ Research Ink (2014) WoodSolutions Brand Research Wave 3 April-June 2014, p36

6 *Translating marketing awareness into sales*

There are a range of studies that have considered the ability of consumer advertising to translate into sales. These studies, and their findings are often as diverse as the types of advertising being used and the products being promoted.

There is limited consistent quantification of the effectiveness of advertising activities and estimation of so-called advertising elasticities (the proportional increase in product sales attributable to a proportional increase in advertising expenditure). Such a gap in the literature is understandable when the diverse range of advertising activities is considered (print, online, direct, regional, national, international for example) as well as the diversity in the products being sold (food, short term consumables, durables, luxury for example).

However, the literature provides insight into and discussion around factors that affect the success of marketing and advertising activities, and the relative scale of elasticities of a range of advertising strategies and product types.

Comparing the nature of FWPA's generic marketing promotion campaign, in particular Wood. Naturally Better, to a range of other marketing activities that have been studied provides a foundation for reviewing, critiquing and applying the published literature in the context of FWPA's marketing activities.

Distinction between generic marketing and brand marketing

There are three general categories of marketing campaigns of interest for this study:

- generic marketing of a commodity or material — such marketing campaigns attempt to increase awareness and sales of a particular commodity, irrespective of the final use of the commodity
- generic marketing of a product — such marketing campaigns attempt to increase awareness and sales of a particular product without specific reference to a brand
- specific marketing of a branded product — such marketing campaigns closely link the advertising message with a product to be purchased and only requires increased product sales, not market category sales, to generate a return.

Chart 6.1 provides an illustrative representation of how these differing approaches to marketing may affect the expected marketing elasticity.

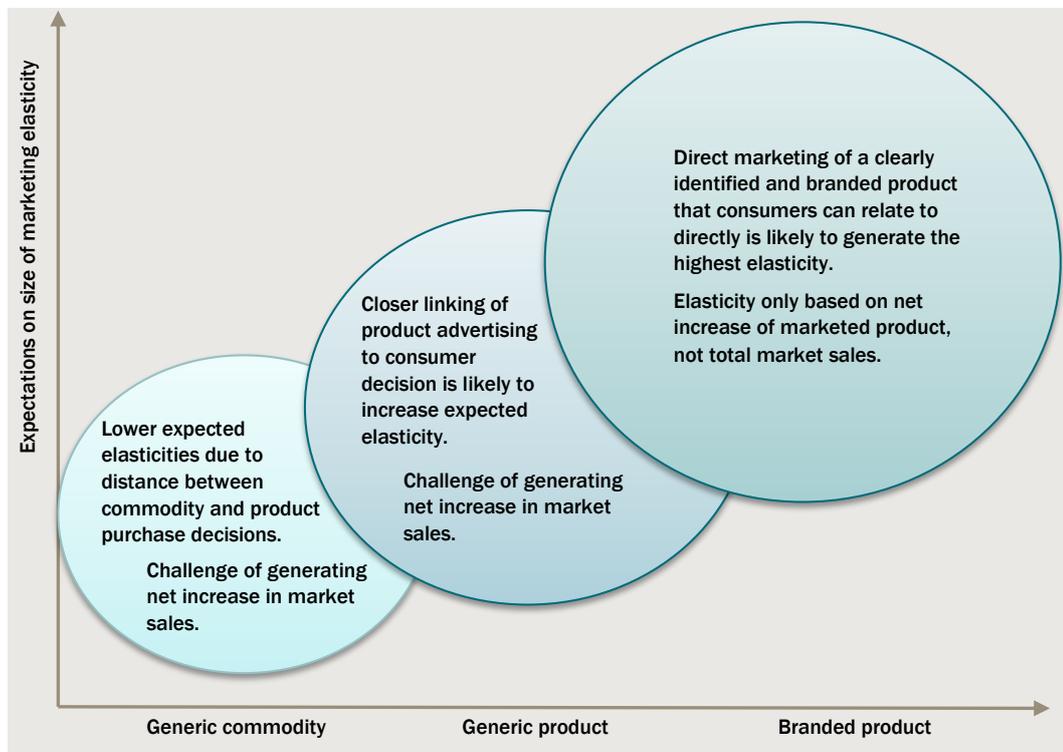
The largest, and hardest marketing task is associated with increasing sales of a generic commodity. These marketing activities are targeted at generating new customers to use a material such as wood, in a wide range of applications, attempting to cover many different target markets. Activities are likely to be diversified depending on different target audiences and target uses for the commodity.

In contrast, generic product advertising campaigns have a more targeted approach, being able to directly link the advertising with a product purchasing choice for consumers. Where such marketing activities are undertaken by an individual producer of a product, the expectation is that their capture of resulting sales increases will not only be sufficient to cover the advertising expenditure, but also be greater than if they had they run a more specific, branded marketing campaign.

As with generic commodity campaigns, a generic product advertising campaign needs to be able to attract genuinely new consumption to the market to be able to earn a return to the marketing activities.

Both of these scenarios are distinctly different, and in some cases more difficult tasks, than traditional branded, product based marketing campaigns. Specifically targeted branded campaigns are only required to increase sales of a particular business or product to earn a return. In this case, the marketing strategy can be a success if the overall market size remains the same, but there is a redistribution of sales towards the marketed product.

6.1 Expected relative scale – marketing elasticities advertised commodities/products



Data source: CIE.

Wood as a generic material for consumers

FWPA's Wood.Naturally Better generic marketing program for consumers falls into the first category, generic promotion of a commodity, irrespective of the final use of the commodity. The diversity of the activities being undertaken by FWPA in its generic marketing promotions highlights the complex task involved with promoting a commodity that can at times be quite removed from the final product that consumers view and choose to purchase.

To generate an economic return to the sector, FWPA's generic marketing campaign needs to be able to increase the total value of consumption of wood and wood products in Australia. That is, to increase the size of the overall market and attract genuinely new consumption to the market through new consumers, or increased consumption from existing consumers.

Due to the complex links between marketing a generic commodity such as wood, and the choice of consumers to purchase specific wood products, it is likely that any marketing elasticity estimated for FWPA's consumer program would be lower than that estimated for a similar campaign aimed at either a generic product or a branded product.

Wood as a generic building product for professionals

The WoodSolutions program, targeted at building professionals could be assessed in terms of a generic product campaign due to the highly specific nature of many of the marketing, education and promotional activities undertaken (workshops, tutorials, trade shows, for example). All else being equal, drawing on international studies, this distinction would imply that the WoodSolutions activities have a greater ability to influence building professionals than consumers.

However, in considering the WoodSolutions target market as separate from consumer markets, it is important to consider separately the restrictions on building professionals choosing to specify wood compared to consumers choosing to purchase wood products. Most notably, there are currently restrictions on specifying wood as a structural material in buildings over 3 storeys high. This restriction has remained in place over the entire evaluation period (2007-08 to 2014-15) and is an important influence on the degree to which marketing and education can influence timber use in commercial and non-residential and multi-dwelling residential buildings.

While building professionals may be heavily influenced by FWPA marketing activities, there remain some regulatory constraints on the market. As work is currently being undertaken to review these regulatory constraints, continued education and marketing campaigns could anticipate increased success if these restrictions are relaxed in the future.

Factors that affect the size of a consumer advertising elasticity

Market characteristics are likely to play a strong role in the ability for marketing to drive sales. In reviewing sales data on consumable products in France, Hassens et al (2013) propose four market criteria considered to have a strong influence on ultimate marketing elasticities.⁴⁰

- Potential — that there is the potential to grow understanding of the product over time, consumers are not already fully aware of the product
- Responsiveness — the ability of the marketing campaign to affect awareness in the first instance, through observance and recall
- Stickiness — the staying power of the change in attitudes, do consumers maintain a changed view of the product in the longer term, in particular in response to competitive advertising
- Sales conversion — general increases in advertising awareness are likely to have less of an impact on sales than are more specific advertising induced improvements in product/brand attitude.

These four criteria are able to provide some indication of the overall market response of Australia's wood and wood products market due to FWPA's generic marketing campaign, as follows.

- Potential — while wood is a well-known and well recognised commodity, there are ample opportunities to increase consumer awareness of its applications and multitudes of associated products. Innovations in wood engineering and design also ensure that there is an ongoing introduction of new wood products to the market. While wood as a commodity may be considered to be a 'mature' product, there are many examples and instances of new and innovative growth opportunities for specific products and technology.
- Responsiveness — a review of consumer tracking reports on FWPA's Wood. Naturally Better activities has shown an increase in awareness of the promotions over time, indicating that consumers are becoming increasingly aware of the promotions and can recall the messages being put forward.
- Stickiness — while consumer preferences towards wood have remained at high level since consumer tracking studies were established, there are indications that changing attitudes to and understanding of the positive environmental attributes of wood products are growing and being maintained in the market. This indicates some degree of stickiness in the promotional activities.
- Sales conversion — as previously outlined, the Wood. Naturally Better campaign is a generic commodity based promotion and is therefore likely to have greater challenges translating marketing activities into sales of final products.

Investigating the characteristics of advertised products more closely, Sethuraman et al (2011) noted two market factors that are likely to have a strong bearing on FWPA's

⁴⁰ Hanssens, D., Pauwels, K., Srinivasn, S., Vanhuele, M. and Yildiri, G. (2013) Consumer attitude metrics for guiding marketing mix decisions.

generic marketing campaign. In particular, the study found that advertising elasticities are higher in the following cases:⁴¹

- 1 Durable goods rather than consumable goods.
- 2 Early stages of product release rather than in a mature market

The rationale behind a durable good attracting a higher marketing elasticity is the increased volume of research consumers are likely to undertake prior to purchasing a durable compared to a consumable product. The increased research activity means that as long as the advertising material is available in the future — for example online or in print media — the material has a greater flexibility to reach consumers when there are at the consumption decision. In contrast, advertising for consumable products needs to be available specifically at the point in time and at the right location to influence a consumer's purchasing decision.

The finding of a larger marketing elasticity in the early stages of product release is closely linked with the concept of Potential as outlined by Hanssens et al. (2013). Variations on this finding have been reported through the literature, including by Vakratsas and Ambler (1999) who noted that marketing elasticities were found to decrease during a product's life cycle.⁴² In general, newly developed and introduced products have a large information gap for consumers that can be filled through marketing activities. As the new information provided to consumers decreases, so does the ability of the marketing to activities to promote purchasing.

Considering the findings of these studies in the context of FWPA's generic marketing activities, a schematic of the potential and constraints can be outlined as in chart 6.2.

Chart **Error! Reference source not found.** has been designed to be interpreted in the context of published marketing elasticities of a range of products. That is, based on the differences between FWPA's generic marketing of wood as a commodity and the products studied, inferences can be made on the relative scale of FWPA's expected elasticity compared to published findings.

Estimating the scale of consumer advertising effect

The literature estimating returns to advertising for various marketing campaigns are divided along two methodological lines.

- The first group of studies report findings in terms of a benefit cost ratio that reports the total increase in sales (benefit) estimated to be due to a given marketing activity and expense (cost).

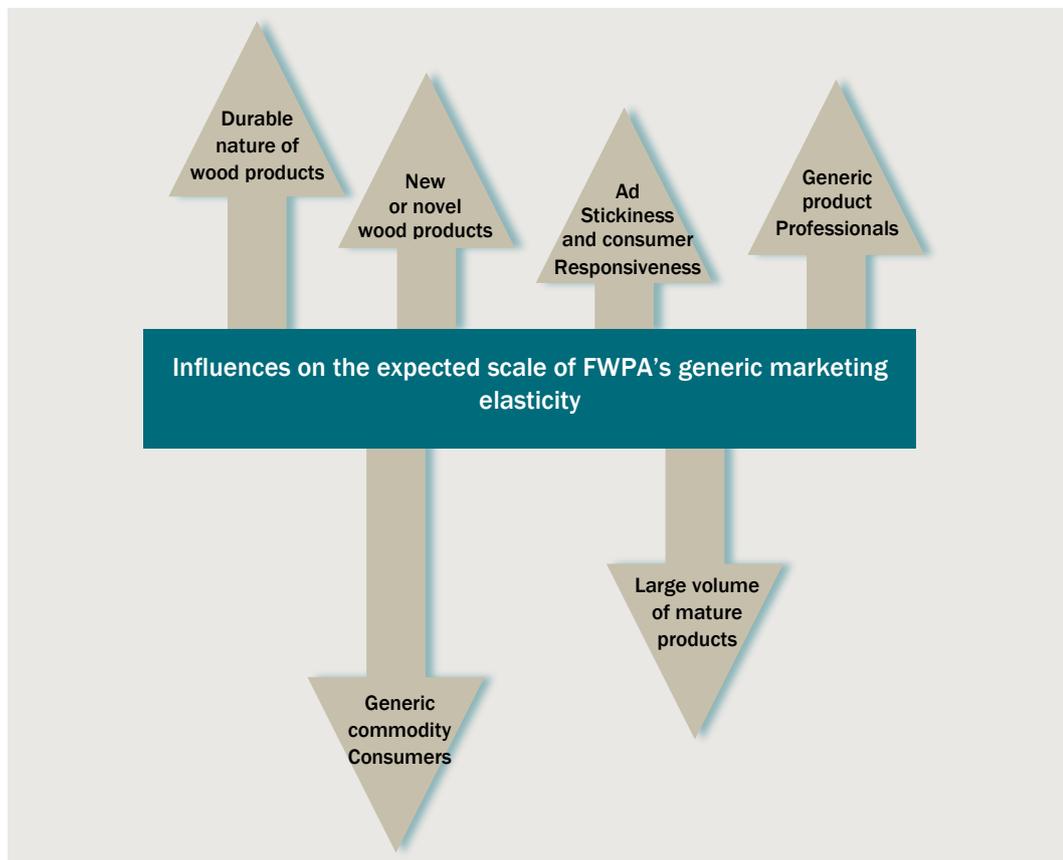
⁴¹ Sethuraman, R., Tellis, G. and Briesch, R. (2011) How well does advertising work? Generalisations from meta-analysis of brand advertising elasticities. *American Marketing Journal*. Vol XLVIII, p457-471

⁴² Vakratsas, D. and Ambler, T. (1999) How advertising works: What do we really know? *Journal of Marketing* 63(1)

- The second group of studies report findings in terms of advertising elasticities, that estimate a proportional increase in sales that is attributed to a proportional increase in advertising expenditure.

While not explicitly outlined in the literature, the choice of reporting metric depends heavily on the type of product being evaluated, the type of marketing activities being undertaken both currently and over time, and most importantly, the amount and quality of data available for the analysis. For example, to be able to report an advertising elasticity, sufficient time series of advertising expenditure figures is required to be analysed and cross referenced with sufficiently detailed market sales figures to be able to identify both percentage changes in advertising expenditure and percentage changes in sales figures over time.

6.2 Influences on FWPA marketing elasticity



Data source: CIE.

In contrast, a benefit cost ratio has slightly less intensive data requirements and can be calculated based on a short period of advertising expenditure. However, data requirements on market movements and longer term sales figures are important to be able to develop a longer term status quo market position against which changes may be evaluated and attributed to a marketing campaign.

A related point to consider in terms of FWPA's generic marketing activities is ongoing contention in the United States around whether or not generic advertising has redistribution effects across brands in addition to promoting market wide sales

increases. That is, there are quantitative studies that have been put forward to argue the case that where generic promotion campaigns work to reduce brand differentiation across final products this activity can impose a net cost on brands that have previously worked hard to establish themselves as premium offering in the market.⁴³

Such effects cannot be estimated through aggregate analysis of market movements and must be undertaken at the product, manufacturer or company level.

Benefit cost ratios

Table 6.3 summarises a range of international studies estimating benefit cost ratios of different marketing activities. All of the products and markets evaluated are food based products, ranging from fresh produce to red meat to dairy items and all of the evaluations have been undertaken at the market level (not by individual producers or distributors). While there are some outlier results, the majority of evaluations report benefits cost ratios in the range of 5 to 7.

6.3 Estimated benefit cost ratios for generic and branded product promotions

Commodity	Study period	Country	BCR	Source
Horticulture				
Strawberries		Canada	4.7	Association de producteurs de fraises et framboises du Quebec, 2013
Highbush Blueberries		US	9.12	Kaiser (2010)
Potatoes	2007-2011	US	5.17 Short run 6.51 long run	Richards and Kaiser (2012)
Washington apples		US	7.0	Ward and Forker (1991)
Avocados	1986-1995	US	5.25	Carman, H.F. and Craft, R.K. (1998)
Red meat				
Beef, lamb and pork	1977-1988	Australia	7	Ball, K. and Dewbre, J (1989)
Beef	1978-1988	Australia	24	Piggot, N.E. et al (1996)
Beef		Australia	5.5	Warrick Yates and Associates (2009)
Beef		US	5.5	Ward (2001 to 2007)
Beef		US	6.4	Kaiser (2014)
Beef	2008-2013	US	9.4	Cranfield (2010)
Dairy				
Fluid milk	1990-2004	Canada	2.2 Maritime 7.4 Quebec 3.4 Ontario	Kaiser et al (2006)
Eggs	1985-1995	US, California	6.9	Schmit et al (1996)
Butter		Canada	1.8	Kaiser et al (2007)
Cheese		Canada	8.3	Kaiser et al (2007)

⁴³ Chakravarti, A. and Janiszewski, C. (2004) The influence of generic advertising on brand preferences. *Journal of Consumer Research* 30.

Source: Adapted and added to from Le Valle, J. (2013) A review of fresh produce benefit-cost studies and potential ratios from Canadian fresh produce checkoff. Presented to Canadian Produce Marketing Association.

Advertising elasticities

Table 6.4 summarises a range of international studies estimating advertising elasticities for a range of marketing activities. The analyses are predominantly for branded products and are based on very large sales datasets and detailed advertising costings. The results tend to agree with the generalisations around advertising elasticities that were proposed by both Sethuraman et al (2011) and Hassens et al (2013), in particular estimated elasticities:

- tend to be higher for durable products than consumable products
- tend to be higher for newly released products rather than mature products
- decline over time.

6.4 Estimated advertising elasticities for generic and branded product promotions

Product	Promotion type	Study period	Country	Elasticity	Source
Durable product in growth phase	Branded product	1960-2008	France	0.51	Sethuraman et al (2011)
Durable product in mature phase	Branded product	1960-2008	France	0.19	Sethuraman et al (2011)
Meta-analysis	Branded product		International	0.09	Henningsen et al (2011)
Branded products	Branded product	1999-2004	France	0.13	Ataman et al (2009)
Ethical drugs	Branded product	1959		0.4 at inception 0 after 2 years	Arora, R. (1979)
Fluid milk	Generic product		US, NYC	0.05 at inception 0 after 2 years	Reberte, C. et al (1996)
Eggs	Generic product	1985-1995	US, California	0.13	Schmit et al (1996)

Source: CIE.

7 Impact analysis of generic marketing activities

The CIE has taken a four-step approach to estimating the potential impact of FWPA's generic marketing activities on the market for wood and wood products in Australia:

- 1 evaluation of program costs in real dollars, accounting for a 7 per cent opportunity cost of investment (discount rate)
- 2 development of an impact profile over time, accounting for the cumulative effect of the marketing activities on social licence and understanding of wood's environmental and structural properties leading to changes in purchasing decisions
- 3 estimation of the value of Australia's wood and wood products market affected by FWPA's marketing activities to provide insight into the relative scale of impact required to deem the generic program successful
- 4 evaluation of advertising elasticity of FWPA's generic marketing promotions and applying them to the apparent consumption value

Chart 7.1 outlines the quantifications and estimations required within each of these steps to finally estimate a benefit cost ratio for FWPA's generic marketing activities.

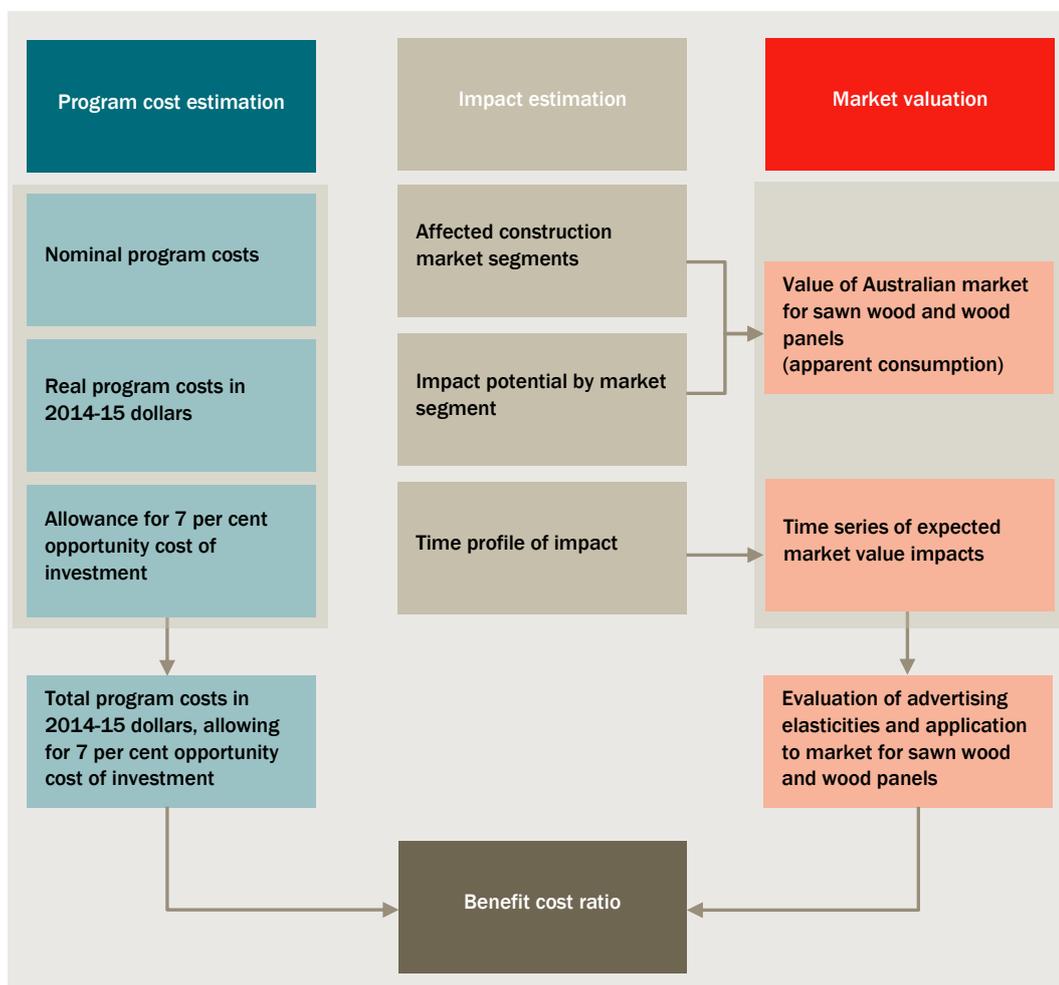
Determining the costs of the campaign

Over the eight years to 2014-15, FWPA has spent a total of \$23.8 million on generic marketing activities, in nominal terms. For the purposes of this evaluation, the nominal expenditures are converted to real dollars (2014-15 terms) and are evaluated using a 7 per cent discount rate (as required by the Office of Best Practice Regulation).

Table 7.2 presents the conversion of program costs from nominal to real 2014-15 dollar terms and inflates previous year expenditures to account for a 7 per cent real discount rate. The 7 per cent real discount rate represents the rate of return that could be expected to be achieved through a more passive investment of funds. It is the opportunity cost of investing in the generic marketing activities.

The figures in table 7.2 show that to cover costs in real terms (including inflation costs and the required opportunity cost of investment of 7 per cent), FWPA generic marketing activities need to have generated additional sales of wood and wood products worth \$32 million over eight years.

7.1 Impact analysis methodology



Data source: CIE.

7.2 Evaluation of FWPA generic marketing cost component

Financial year	Nominal value	Real 2014-15 dollars	7 per cent discount rate
	\$m	\$m	\$m
2007-08	0.3	0.35	0.56
2008-09	3.1	3.60	5.40
2009-10	3.2	3.60	5.04
2010-11	4.4	4.82	6.32
2011-12	3.9	4.19	5.13
2012-13	2.4	2.53	2.89
2013-14	3.1	3.13	3.34
2014-15	3.4	3.36	3.36
Total	23.8	25.60	32.04

Source: FWPA and CIE calculations.

Evaluating the potential impact of advertising activities

To guide the impact analysis, the CIE has developed an influence matrix (chart 7.3) that identifies the key market segments being affected, the key decision makers, and the potential scale of market influence that may be expected from movement in these segments.

As a general rule, those construction activities that are not undertaken on a large scale, or reliant on a replicated construction model are more likely to present opportunities for influence for FWPA generic marketing activities. These include privately commissioned single dwelling residential construction, renovations and landscaping work as well as large-scale commercial and non-residential construction.

7.3 Influence matrix for FWPA generic marketing activities in construction/furniture

Market segment	Current area of predominant wood product use	Dominant and secondary decision makers in segment	Current proportion of wood and wood product construction market	Likely scale of marketing influence over 2007-08 to 2014-15
Single dwelling residential – project build	Structural	Project builders, larger architectural firms	60 per cent	Negligible
Single dwelling residential – private build	Structural and decorative	Smaller project builders, smaller design firms and direct consumers	5 per cent	Medium
Multi-dwelling residential	Structural in low rise and decorative in higher density	Large project builders and larger architectural firms	10 per cent	Small
Commercial and non-residential	Decorative with some examples of structural	Large building and architectural firms	5 per cent	Medium
Renovations and landscaping	Decorative	Direct consumers, smaller builders and architectural firms	10 per cent	Medium
Furniture	Decorative	Direct consumers	10 per cent	Medium

Note: Current market proportions are based on anecdotal assessments of the current market for wood and wood products and inferences developed through assessment of ABS national Input Output tables. They are provided for indicative purposes only.

Source: CIE.

Single dwelling residential construction accounts for the largest proportion of wood and wood products. While most of the activity in this segment is accounted for by large project building companies that are only minimally influenced, if at all, by FWPA generic marketing activities, there is a small proportion of this market that is made up of private building contracts and smaller design firms, that have a larger influence from final consumers. It is this smaller portion of the single dwelling market that has a greater potential for influence from FWPA activities.

In terms of the commercial and non-residential construction segments, preliminary influences are likely to remain in decorative applications until building regulations allow for increased structural uses under deemed to satisfy approval.

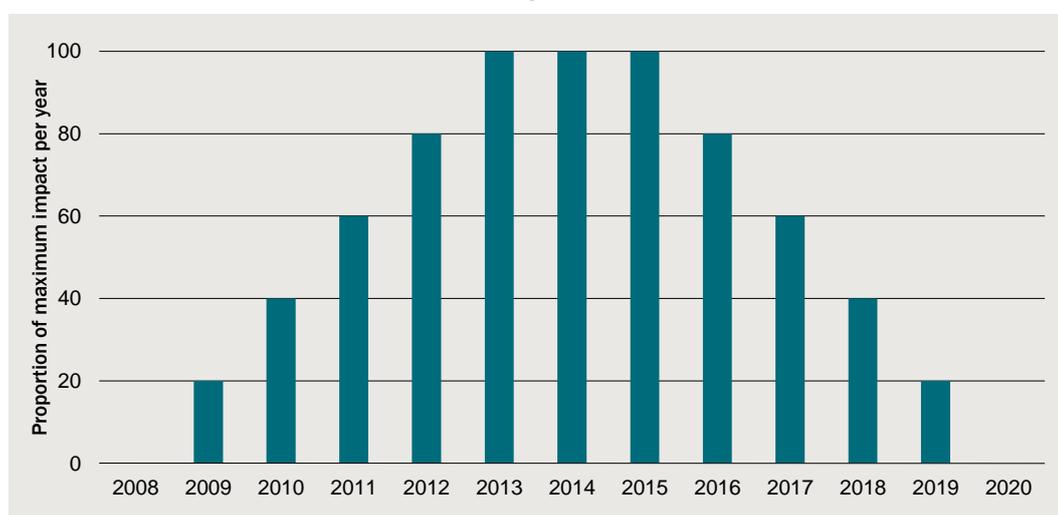
Where furniture manufacturing accounts for a notable proportion of the target market, this is a key area that consumers are likely to have a direct impact, albeit in the higher value, lower volume portion of the market.

The promotion objective of FWPA is a cumulative task, not well suited to a single year of investment and measurement of return. This is because FWPA's generic marketing activities are aimed at firstly building the social licence of the industry and addressing information gaps on the environmental, structural and durability characteristics of wood before then attempting to change purchasing decisions at both the consumer and designer level. Given the longer term nature of these activities it is not unreasonable to expect that any generic marketing activities undertaken by FWPA may take up to five years before having a peak impact on the market.

Chart 7.4 illustrates the representative time profile of impact for FWPA's generic marketing activities. The analysis is focussed on activities that have been conducted to date and therefore, the growth and decay impact function is based on a total spend to 2014-15 and not any future spending activities. As can be seen, the maximum expected marketing impact is estimated to be reached in the 2012-13 financial year.

The market impact is likely to extend beyond the finalisation of 2014-15 marketing activities, in line with extended advertising elasticities being observed for durable goods⁴⁴ as well as a general declining influence of marketing over time.⁴⁵ The representative time profile assumes a decaying impact effect until the 2019-20 financial year.

7.4 Time profile of cumulative advertising impact



Data source: The CIE

⁴⁴ Sethuraman, R., Tellis, G. and Briesch, R. (2011) How well does advertising work? Generalisations from meta-analysis of brand advertising elasticities. *American Marketing Journal*. Vol XLVIII, p457-471

⁴⁵ Reberte, C. et al (1996) Generic advertising wear out: The case of the New York City fluid milk campaign. *Journal of agricultural and resource economics* 21(2) and Arora, R. (1979) How promotion elasticities change. *Journal of Advertising Research* 19(3)

Estimated market value of sawn wood and wood panels

Evaluating the impact that FWPA's generic marketing activities may have had (and may have in the future) on the wood and wood products sector requires separate analysis of the Australian wood and wood products market. Estimates of market value are utilised to provide context on the relative impact that a well performing FWPA generic marketing campaign may have at a national level.

The CIE has developed a high level aggregated model of the Australian market for wood and wood products for this task. Drawing on data sets and analysis published by the Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES), the model is limited to those market sectors likely to be influenced by FWPA's marketing activities — namely sawn wood and wood panels.

As there are currently no published estimates of the value of apparent consumption (consumption) of sawn wood and wood panels in Australia, the CIE has estimated this figure using the following identity.

Apparent consumption of wood and wood products in Australia is equal to:

- 1 the gross value of logs harvested in Australia (ABARES, 2015, Table 7) plus
- 2 industry value added in sawn wood and wood panel activities (ABARES, 2015, table14) plus
- 3 the value of sawn wood and wood panels imported (ABARES, 2015, table 23) minus
- 4 the value of sawn wood and wood panels exported (ABARES, 2015, table 24).

The CIE has aggregated ABS data into the major categories of sawn wood and wood panels. The ABS categories included in these aggregations are outlined in table 7.5.

7.5 ABS aggregations to sawn wood and wood panels

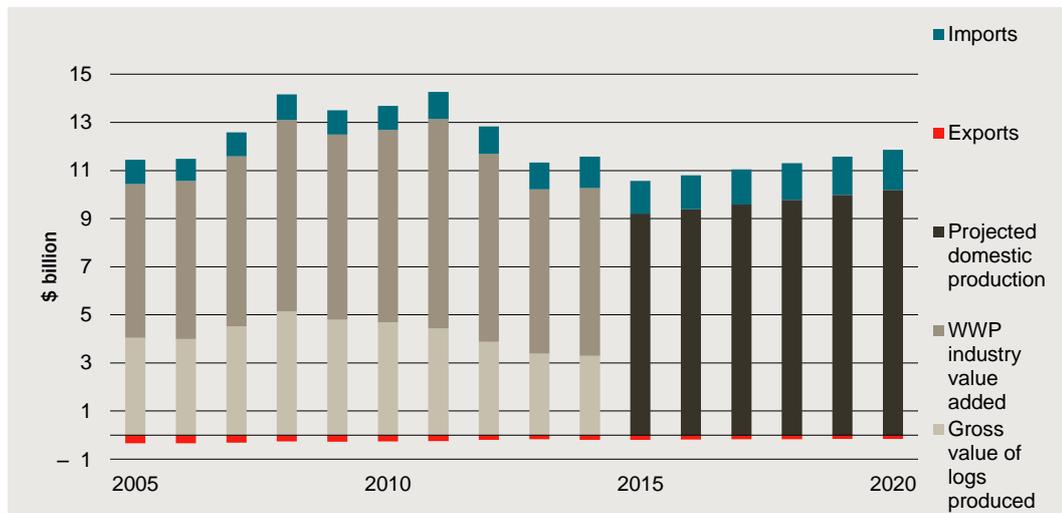
Sawn wood		Wood Panels	
ANZSIC code	Name	ANZSIC code	Name
1411	Log sawmilling	1493	Veneer and plywood
1413	Timber re-sawing and dressing	1949	Reconstituted wood product
1492	Wooden structural fitting and component		

Source: The CIE

As the influence of FWPA's marketing activities is expected to have a lingering effect through time, the CIE has also made projections around the expected future value of the market to 2020. Projections were made drawing on industry projections in Gupta, et al (2013), and selected price indices as published by ABARES (2015).

Chart 7.6 presents the estimated value of Australian apparent consumption of wood and wood products from June 2004 to June 2020 in nominal terms, broken down by domestic production, imports and exports. Chart 7.7 in contrast presents the estimated value of apparent consumption by sawn timber and wood panels.

7.6 Estimated value of apparent consumption of sawn wood and wood panels

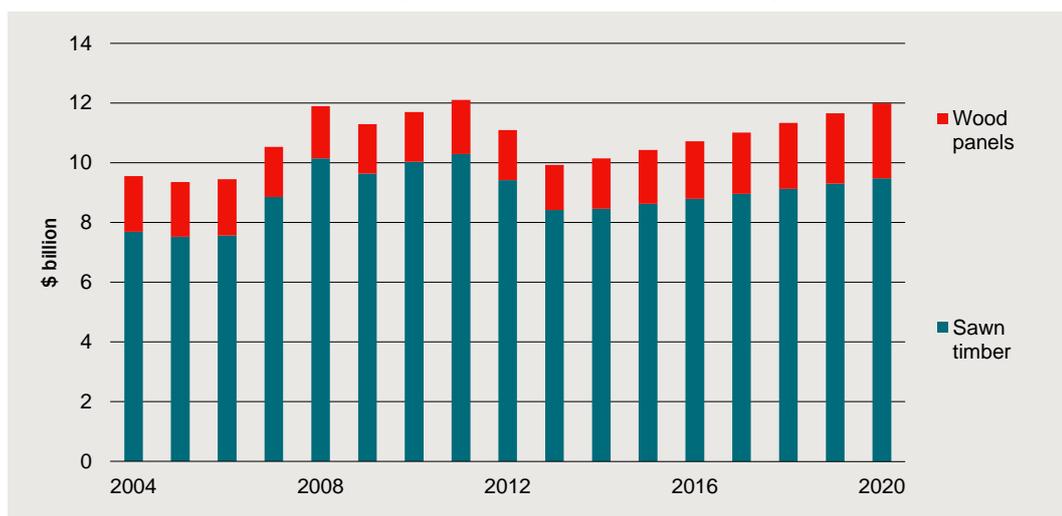


Note: Figures from 2004 to 2014 are based on observed production, import and export volumes, figures from 2015 to 2020 are based on ABARES projected volumes and price indices. A breakdown of gross value of logs produced and WWP industry value added is not available after 2014.

Data source: CIE based on ABARES (2015).

Over the period of interest, from 2008, the value of apparent consumption of wood and wood products has experience some degree of volatility. As assessed in ABARES (2013), ‘the total volume and value of Australia’s log harvest fell by 11 per cent in 2011-12 (compared to 2010-11) driven by difficult economic conditions in downstream markets’.⁴⁶ In 2014-15 the value of Australian apparent consumption of wood and wood products is estimated to be approximately \$10.4 billion.

7.7 Value of apparent consumption by sawn wood and wood panels



Note: Veneer timber and plywood are included in wood panels, noting that approximately 95 per cent of veneer production is estimated to be exported, ABARES (2015) table 20.

Data source: The CIE based on ABARES (2015).

⁴⁶ ABARES (2015) Forest and wood product statistics: September and December quarters 2012, p2

These market value estimates should be considered in the context of their use. They have been developed as a highly aggregated estimate to provide an indication of the relative scale of impact a successful FWPA generic marketing promotion would have.

Estimating the market based benefit cost ratio

To estimate the benefit cost ratio of FWPA's generic marketing activities the CIE has drawn on:

- published advertising elasticities reviewed in light of FWPA's target market
- reviewed the expenditure pattern of FWPA on marketing activities
- estimations of the total value of Australian consumption of sawn wood and wood panels
- real expenditure of FWPA, in 2014-15 dollars and allowing for a 7 per cent discount rate.

Consumer advertising elasticities

The advertising elasticities outlined in table 6.4 provide guidance on a starting point for estimating an impact effect for FWPA's generic marketing activities.

As with all empirical studies, the results can only be used quantitatively in the situation in which they were estimated, but may be used qualitatively to guide wider evaluations. For this reason, the CIE has considered more carefully the findings around durable product elasticities in the mature marketing phase, by Sethuraman et al (2011). This study utilised a large dataset of sales data covering almost 50 years of activity. The study found that durable products (with specific branded product advertising) experienced on average a 0.19 per cent increase in sales in response to a 1 per cent increase in advertising expenditure. Given the generic commodity nature of FWPA's promotion activities, scaling this finding by one half could provide a reasonable indication of the likely impact that generic promotion activities may have on a durable commodity market with predominantly mature products.

The reasonableness of an 0.08 advertising elasticity is supported when considering the other quantitative estimates of 0.13 found for generic and branded products by Schmit et al (1996) and Ataman et al (2009) respectively.

In contrast, findings by Henningsen et al (2011), conducting a meta-analysis of branded product advertising – an average 0.09 elasticity — indicate that there is the potential for this figure to be too high as an across the board elasticity for the entire generic commodity market of sawn wood and wood panels. For this reason, the CIE has estimated the market wide impact of FWPA's generic marketing activities based on those market segments that have the greatest potential for impact over time, and those with limited impact for potential.

Those market segments with the greatest potential for impact are considered to experience a 0.08 advertising elasticity, which is reduced for more fixed market segments.

Building professional advertising elasticities

When FWPA's WoodSolutions generic promotion activities are assessed as a generic product promotional campaign, there is an argument for a higher advertising elasticity to be applied. This is due to the highly specific nature of the workshops, tutorial and study tours that are conducted that match building professionals with specific wood and wood product building supplies.

Results from the literature infer that promotion of generic products can attain an advertising elasticity greater than generic materials, but not as high as branded product advertising. Reviewing the findings of the literature suggests that an advertising elasticity of 0.13 would not be an unreasonable expectation for a fully effective marketing campaign around wood as a generic building product.

The complication for the use of wood and wood products in building applications is current regulatory restriction on the use of structural timber in building above 3 storeys. For this reason, no commercial and non-residential and multi-dwelling residential properties in particular are considered to have a constraint on the advertising elasticity currently. Future relaxation of these height restrictions would likely increase the advertising elasticity for these building classes.

Market impact from advertising expenditure

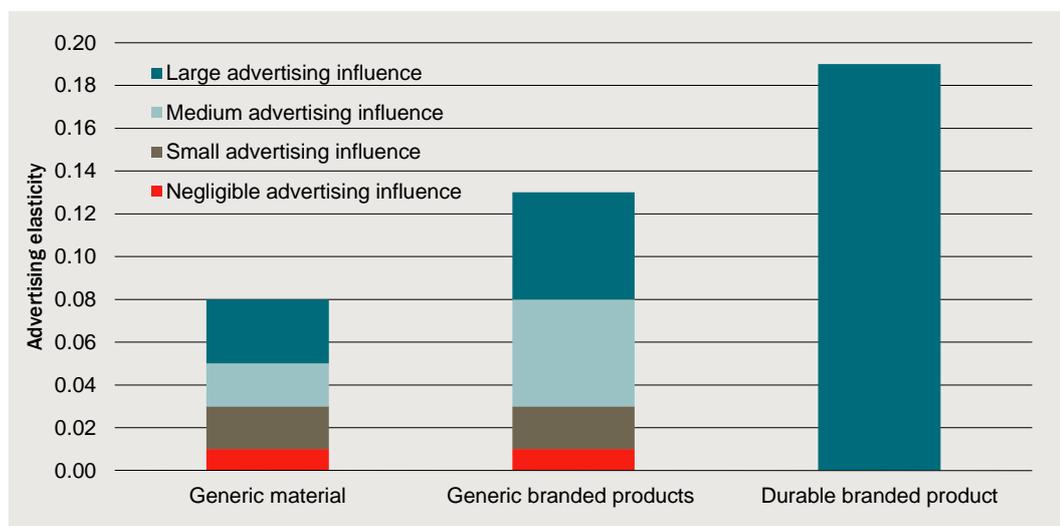
The application of advertising elasticities to the market for sawn wood and wood panels also requires the assessment of a change in advertising spend to drive a change in product sales. There are two difficulties with this application to FWPA's activities:

- 1 The advertising activities began from a minimal base level in 2007-08, increasing rapidly, and then declining. The highly fluctuating annual expenditure as well as the highly aggregated nature of the estimate of apparent consumption means that year on year estimation of advertising impact is not possible
- 2 The cumulative nature of the advertising message is not suited to single year on year quantitative analysis.

In response to these issues, the CIE has taken the total FWPA generic marketing spend over the eight years of the program, and measured the final year (2014-15) incremental advertising spend as a proportion of this total. This represents the final marginal contribution to the cumulative advertising effort of FWPA over the eight years. As outlined in chart 7.4 the full impact of FWPA's advertising impact is also expected to be felt in this year.

Chart 7.8 provides a visual representation of the advertising elasticities used in the analysis, by product categories and market segments.

7.8 Advertising elasticities by product and market segment



Data source: The CIE

The elements of the CIE's quantification of FWPA's generic consumer marketing program are as follows:

- Maximum advertising elasticity of 0.08 for highly influenced consumer market segments
 - 0.05 advertising elasticity for market segments that are moderately influenced
 - 0.02 advertising elasticity for market segments that are minimally influenced
 - 0.01 advertising elasticity for market segment that are negligibly influenced
- Maximum advertising elasticity of 0.13 for highly influenced consumer market segments
 - 0.08 advertising elasticity for market segments that are moderately influenced
 - 0.03 advertising elasticity for market segments that are minimally influenced
 - 0.01 advertising elasticity for market segments that are negligibly influenced
- A 10 per cent change in cumulative advertising effort analysed for the final year of the evaluation period, 2014-15

Table 7.9 presents the estimate of the overall proportional impact that FWPA's generic marketing activities based on these parameters.

The model estimates that the maximum cumulative effect on the market for sawn wood and wood panels is approximately 0.27 per cent.

7.9 Application of advertising elasticities

Market segment	Current proportion of wood and wood product market	Potential scale of marketing influence to 14-15	Inferred marketing elasticity	Aggregated market impact from 10% advertising change
Single dwelling residential - project	60 per cent	Small	0.010	0.06%
Single dwelling residential - private	5 per cent	Medium	0.08	0.04%
Multi-dwelling residential	10 per cent	Small	0.030	0.03%
Commercial and non-residential	5 per cent	Medium	0.050	0.05%
Renovations and landscaping	10 per cent	Medium	0.08	0.04%
Furniture	10 per cent	Medium	0.050	0.05%
Total market impact				0.27%

Note: Current market proportions are based on anecdotal assessments of the current market for wood and wood products and inferences developed through assessment of ABS national Input Output tables. They are provided for indicative purposes only.

Source: CIE.

Time profile of quantitative impact

Allowing for the cumulative effect of FWPA's marketing message, the maximum annual market impact has been deflated based on the defined time profile. The results of the annual impact estimation are presented in table 7.10.

Over the eight years to 2014-15, the aggregated return of FWPA's generic marketing activities are estimated to be approximately \$230 million.

7.10 Time profile of marketing impact

Year	Nominal apparent consumption	Time profile (% of maximum impact)	Expected annual market effect	Nominal expected effect	Effect in 2014-15 dollars, 7 per cent investment cost
	\$m	%	%	\$m	\$m
2007-08	11 900	0	0.00	0.0	0
2008-09	11 300	20	0.05	6.1	11
2009-10	11 700	40	0.11	12.6	20
2010-11	12 100	60	0.16	19.6	28
2011-12	11 100	80	0.22	24.0	31
2012-13	9 900	100	0.27	26.8	32
2013-14	10 100	100	0.27	27.4	30
2014-15	10 400	100	0.27	28.1	28
2015-16	10 700	80	0.22	23.1	21
2016-17	11 000	60	0.16	17.8	15
2017-18	11 300	40	0.11	12.2	9
2018-19	11 700	20	0.05	6.3	4
2019-20	12 000	0	0.00	0.0	0
Total					230

Source: The CIE

Benefit cost ratio

The total returns to FWPA's generic marketing promotions are estimated to be approximately \$230 million. Resulting from a real investment of \$32 million over eight years, this result indicates that the generic promotion campaign may have achieved a benefit cost ratio in the order of 7.2 to 1.

8 *Sensitivity analysis*

To cover the costs of the program, FWPA's generic marketing activities would need to generate a demand shift in the market for sawn wood and wood panels of \$32 million in 2014-15 dollars, over eight years. Total apparent consumption in this market over the eight years to 2014-15 has been estimated by the CIE at approximately \$88 billion.

Given the base case time profile of impact, a maximum demand shift in the market of 0.04 per cent, to be reached in 2012-13 could generate this cost covering return.

Given the relative scale of the movements in the market required to generate a return to FWPA's generic marketing activities, it is unlikely that aggregated national data will be able to identify distinct movements in demand driven by FWPA's activities. The quantification methodology adopted by the CIE in this report presents the likely scale of impact FWPA's generic marketing activities are likely to have had, based on the experience of national and international promotional campaigns and an assessment of the characteristics of the susceptibility of the Australian market for sawn wood and wood panels to marketing activities.

Noting the uncertainty around the parameters outlined in the base case, this section provides a sensitivity analysis of the result. The sensitivity analysis has been designed to understand the level of downside risk that could be absorbed within the base case parameters for the generic marketing program to continue to generate a positive return for the wood and wood products sector.

Three streams of sensitivity analysis have been conducted:

- Delayed time profile of impact with sharp decay function
- Reduced advertising elasticity across all market segments
- Higher and lower discount rates

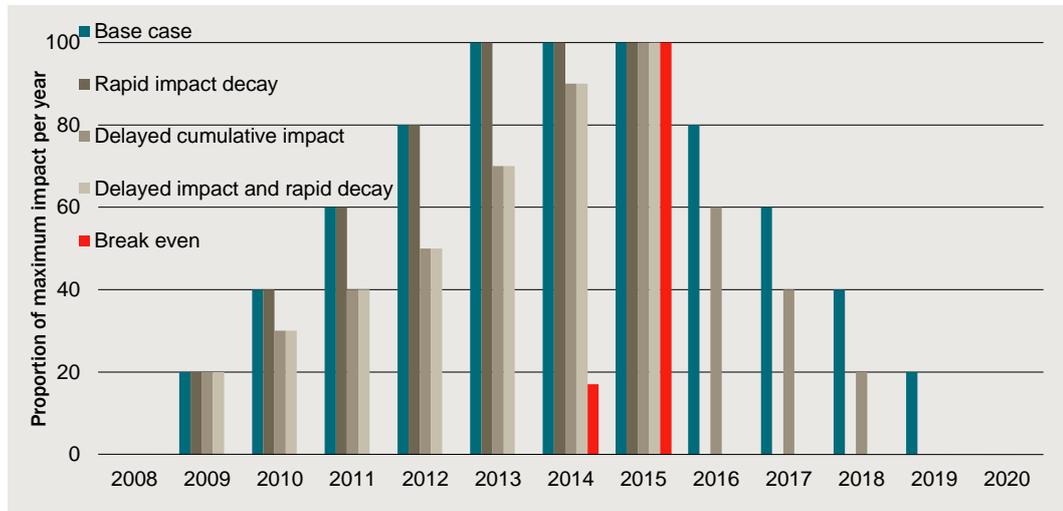
The sensitivity analyses indicate that the model can absorb a high level of downside risk and continue to generate a positive rate of return for the sector.

Time profile

The impact time profile within the model represents how long it takes the market to absorb the marketing messages produced by FWPA and to translate this into changes in behaviour.

The sensitivity analysis here assumes that the maximum impact of FWPA's activities to date are experienced by 2014-15, with varying degrees of cumulative and decay effects. Chart 8.1 presents the three alternate impact time profiles analysed as part of the sensitivity analysis as well as the breakeven impact profile.

8.1 Alternative impact time profiles for sensitivity analysis



Data source: The CIE

Table 8.2 summarises the results of the sensitivity analysis on the impact time profile. All three down size risk scenarios continue to return a positive benefit cost ratio for the generic marketing activities. An extreme reduction in the impact profile is required before the benefit cost ratio is reduced to one. FWPA's generic marketing activities could withstand a long delay and short lasting market impact – 17 per cent impact observed in 2013-14 and 100 per cent impact only in 2014-15 – before the benefit cost ratio would be reduced below one.

8.2 Effect of alternate impact time profiles on estimated BCR

Impact profile	Estimated demand effect in market	Estimated benefit cost ratio
Base case	\$230m	7.2
Rapid impact decay	\$180m	5.6
Delayed cumulative effect	\$172m	5.3
Delayed cumulative effect and rapid impact decay	\$141m	4.4
Break even time profile – 17 per cent impact in 2013-14 100 per cent impact in 2014-15	\$32m	1

Source: The CIE

Rapid impact decay

The rapid impact decay time profile tests the effect on the results from a rapid decline in market effect once the current generic activities cease. That is, from 2014-15, there is no impact on the market for sawn wood and wood panels from FWPA's previous consumer and specifier promotions. Given the nature of FWPA's marketing activities, this is a very extreme assumption, however, even with an immediate decay in impact, the model estimates an overall BCR of 5.6. Total program benefits are estimated to be approximately \$180 million over eight years, covering the estimated \$32 million of program costs.

Delayed cumulative impact

The base case model assumes that the cumulative effect of FWPA's generic marketing activities grow until the maximum market impact is felt (and continues) in 2012-13. The delayed cumulative impact profile reviewed within the sensitivity analysis tests the effect if the market takes an additional two years to reach full impact. That is, 100 per cent impact is not reached until 2014-15, after which the effects begin to decay immediately.

Under the delayed cumulative effect time profile, FWPA's generic marketing activities to date are estimated to generate a \$172 million demand shift within the market, or a 5.3 BCR.

Delayed cumulative impact and rapid impact decay

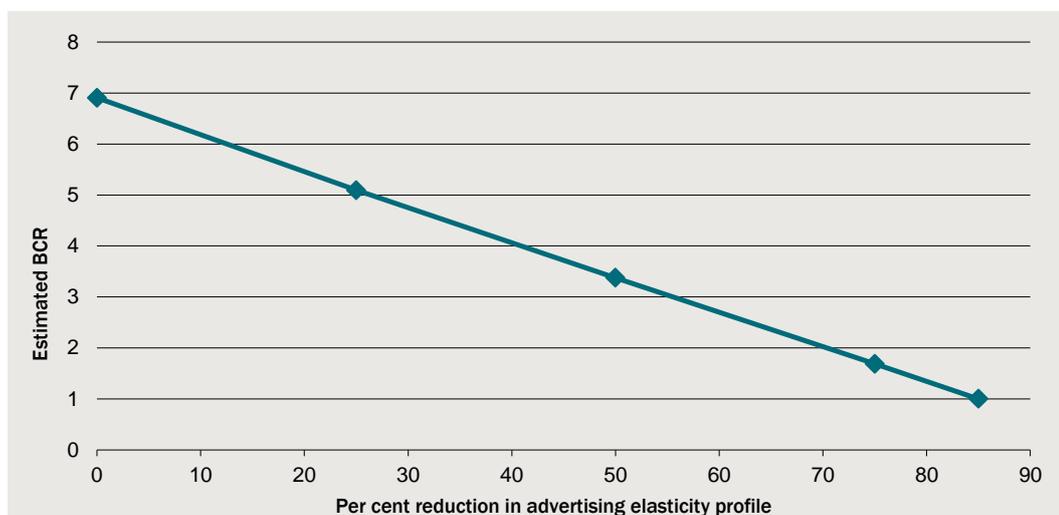
Combining these two effects presents a stronger downside risk to the generic marketing activities of FWPA. A delayed cumulative impact, indicating a sluggish market response, combined with a rapid decay function, indicating no ongoing future impact of FWPA's current and past activities, reduces the estimated demand impact to \$141 million over eight years. The associated BCR is 4.4.

Advertising elasticity

The advertising elasticity in the base case analysis has been derived based on international studies of the effects of advertising on sales in a range of product markets. As there were no international studies that estimated advertising elasticities for generic promotion activities in any wood or wood product markets, the base case maximum impact elasticities of 0.08 and 0.13 were derived based on the relative characteristics of the Australian wood and wood products market compared to those markets explicitly modelled in international studies.

A sensitivity analysis focussing on the downside risk to the advertising elasticity (the risk that the elasticity is less than that used in the quantification) shows that an 85 per cent reduction in the value of the elasticity profile may be absorbed before the generic marketing activities of FWPA generate a benefit cost ratio of 1. Chart 8.3 presents the effect of a progressively reduced elasticity profile (proportionally reducing the advertising elasticity across all influenced market segments) on the estimated benefit cost ratio. The most influenced market segment of commercial and non-residential buildings may experience an advertising elasticity as low as 0.12 for the generic marketing activities to return a benefit cost ratio of 1.

8.3 Sensitivity analysis of advertising elasticity impact profile



Data source: The CIE

To provide insight into the relative importance of the individual market segments to the final estimated benefit cost ratio, table 8.4 isolates the contribution to the overall benefit calculation of each segment. As can be seen, all of the market segments can generate a benefit cost ratio above one in isolation except for multi-dwelling residential. Further, a benefit cost ratio of 5.6 could still be achieved if there was no (instead of negligible) impact in the project built single dwelling residential segment.

8.4 Breakdown of market segment contribution to benefit cost ratio

Market segment	Maximum market impact effect	Segment marketing returns	Segment benefit cost ratio
Single dwelling residential – project build	0.1%	\$51m	1.6
Single dwelling residential – private build	0.8%	\$34m	1.1
Multi-dwelling residential	0.3%	\$26m	0.8
Commercial and non-residential	0.8%	\$34m	1.1
Renovations and landscaping	0.5%	\$43m	1.3
Furniture	0.5%	\$43m	1.3

Source: The CIE

Discount rate

As the economic returns anticipated from FWAP's generic marketing activities are likely to span a number of years, it is important to consider the discount rate utilised in the analysis.

The base case evaluation utilises a discount rate of 7 per cent, as required by the Office of Best Practice Regulation in the preparation of Regulation Impact Statements, and is a generally accepted base discount rate. In the case of FWPA's marketing activities, this figure represents the opportunity cost of the funds invested in the generic marketing program.

The chosen discount rate provides an indication of the relative eagerness of stakeholders to observe an economic return. A high discount rate implies a greater level of impatience with economic return generated in the future having a much lower value than near term returns. In contrast, a low discount rate implies a greater level of patience with economic returns generated in the future being valued at a level closer to those received sooner.

The choice of discount rate does not have a significant effect on the estimation of the returns to FWPA's generic marketing activities, as the impact profile assumes the majority of the benefits are generated in the three years to 2014-15.

A reduction in the discount rate to 5 per cent increases the estimated benefit cost ratio to 7.4 (estimated benefits reduce to \$223 million, with a reduction in evaluated program costs to \$30 million).

An increase in the discount rate to 10 per cent reduces the estimated benefit cost ratio to 6.8 (estimated benefits increase to \$241 million, with an increase in evaluated program costs to \$35 million).

9 *Conclusions and future work*

The current analysis has shown that FWPA's generic marketing activities over the period 2007-08 to 2014-15 have generated an economic return to the market for wood and wood products in Australia. The activities are estimated to have generated a gross return of \$230 million, achieving a BCR of 7.2.

The methodology of quantifying the impact

The methodology employed in the evaluation has built on:

- 1 marketing tracking studies conducted by FWPA across consumers and building professionals,
- 2 international studies on the relative scale of advertising effects in different markets and
- 3 a quantification of the value of Australia's market for wood and wood products.

The task of linking marketing tracking studies conducted by FWPA/Pollinate and direct market changes was not possible due to the nature of the survey questions asked in these studies. The marketing surveys were designed as tools to measure the reach and retention of marketing messages presented through both the Wood. Naturally Better and the WoodSolutions program. There were no questions seeking information on wood purchasing decisions, in scale, value or changes over time.

Given this gap in the available information, the methodology utilised the findings that both consumers and building professionals were increasing their awareness of FWPA's marketing activities and messages over time (an output of the marketing surveys) and linking this with key findings in studies of consumer purchasing and building specification markets.

There is evidence that consumers are willing to pay a premium (of varying scale) for products and services that are produced sustainably or in an environmentally friendly manner.⁴⁷ Where FWPA's generic marketing program has been able to increase the understanding consumers have of the environmental properties of wood, this is analogous to actually increasing the environmental properties of wood and wood products.

Results from consumer tracking studies were used to conclude that there has been an increased awareness of the environmental properties of wood over the course of the evaluation period. This finding when linked with consumer preferences for

⁴⁷ Nielsen (2014) Doing well by doing good

environmental properties implies that there is likely to be a commensurate increase in the value of wood and wood products being purchased by consumers.

International studies on the scale of advertising elasticities were then used to finalise the quantification in the absence of market data.

For building professionals, increased understanding of wood and wood products is known to be a driver of increased specification. A survey of American architects noted that increased knowledge of, in particular, cross-laminated timber, leads to a higher potential for specification in building projects.⁴⁸ This finding was combined with the specifier tracking studies that showed an increased awareness and understanding of wood and wood products amongst building professionals to draw the conclusion that there was likely to have been a market effect due to the WoodSolutions campaign.

Again, international studies on the scale of advertising elasticities were then used to finalise the quantification in the absence of market data.

Conceptualising FWPA's generic marketing activities

FWPA's presentation of generic marketing activities through publications such as the Annual Report have often divided the activities into two streams:

- 1 Educating consumers on *why* to use wood through the Wood. Naturally Better campaign
- 2 Educating building professionals on *how* to use wood through the WoodSolutions campaign.

After reviewing the activities undertaken by FWPA, the CIE made the assessment that there is a third element to the generic marketing campaign that has not been explicitly articulated. Within the WoodSolutions program there are activities directed at encouraging and promoting building professionals to actually use wood. Two prominent examples are the Timber Design Awards and the Planet Ark Make it Wood campaign.

Both of these activities provide additional marketing and promotional support for the use of wood in the built environment, offering a platform to bring together disparate market recognition for these building projects that may otherwise take years to achieve.

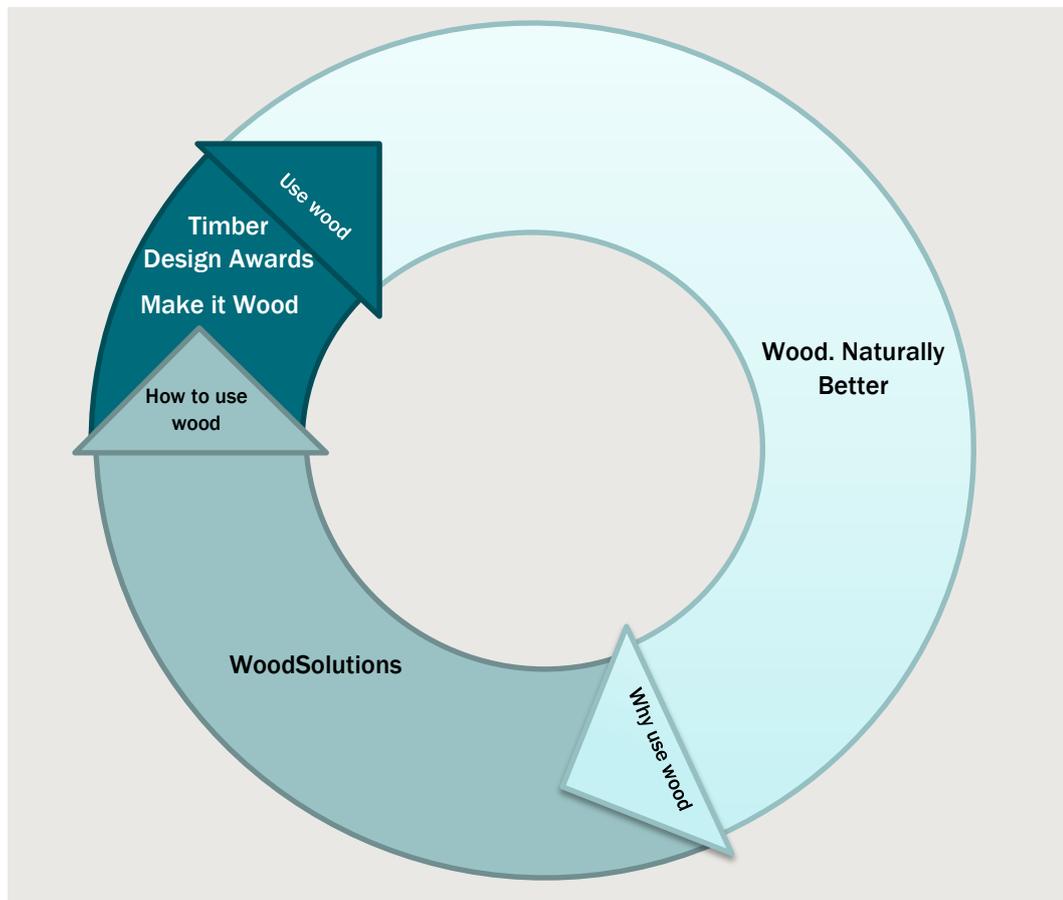
Working together, the WoodSolutions activities target one of two tasks in increasing the specification of wood in the built environment:

- 1 Reducing the information costs associated with specifying wood – this is answering the *how* to use wood question, answered through the range of workshops, tutorials and site visits offered
- 2 Increasing the returns to using wood – this is the promotion of key examples of the specification of wood through the offering of awards or advertising opportunities.

The marketing loop created by these three elements is presented in chart 9.1.

⁴⁸ Mallo, M. and Espinoza, O. (2014) Awareness, perception and willingness to adopt crosslaminated timber in the United States, presentation made to University of Minnesota

9.1 Generic marketing loop to promote the use of wood



Note: Pie segments indicate the current relative marketing spend by FWPA on each element

Data source: CIE.

A review of the funding allocation across these three activities shows that the majority of funding is directed towards the *why* and the *how* of using wood. This should not be seen as a criticism of the current funding allocation.

The decision of how much to invest in which particular activity is based on answering two key questions:

- 1 What is FWPA's main role in driving increased use of wood and wood products (encouraging consumers, educating professionals, or providing marketing platforms for industry)
- 2 Which activities generate the greatest return in dollar sales from a dollar of marketing investment.

The first question is an ideological (and economic) one for FWPA, the second is an empirical one that requires significant amounts of detailed data to answer.

In the short to medium term, adjustments to consumer and professional survey tools may be able to provide assistance. For example, additional questions directed to TDA entrants on their motivation for entry and impact of the awards on their choice of building material, or to consumers that ask directly about wood purchasing habits, in frequency, scale, value and any changes over time.

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