

# Technology Profile



**Value  
to  
Wood**

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## **Large Builders** – An important market segment for the wood products industry



**N**ew residential construction is responsible for the consumption of approximately 40% of the softwood lumber produced in North America. Although residential construction techniques vary considerably and the North American homebuilding industry is generally quite fragmented, an emerging US market segment is growing as a result of consolidation. In 2003, the Top 100 U.S. homebuilders each built between 701 and 37,662 new homes<sup>1</sup>. Figure 1 shows the evolution of the Top 100 homebuilders in the U.S. since 1996. In 2003, the Top 100 builders captured approximately 35% of the residential housing market.

Previous research reveals that when compared to their smaller counterparts, larger builders are significantly more concerned with energy issues, moisture failures, lumber availability, trade availability, material costs, speed of assembly and on-site waste. Additionally, they are more likely to substitute site-built structures with either prefabricated walls or steel studs.

Constructing thousands of homes annually requires a significant supply of wood products. The estimated consumption of the Top 100 U.S. homebuilders is shown in Table 1.

*Table 1. Estimated wood products' consumption for the Top 100 U.S. homebuilders*

Top 100: Estimated Consumption	
Lumber	5.5 Billion fbm
EWP	511 MMfbm
OSB	3 Billion ft <sup>2</sup>
MDF and PB	1 Billion ft <sup>2</sup>

<sup>1</sup> <http://www.builderonline.com/>



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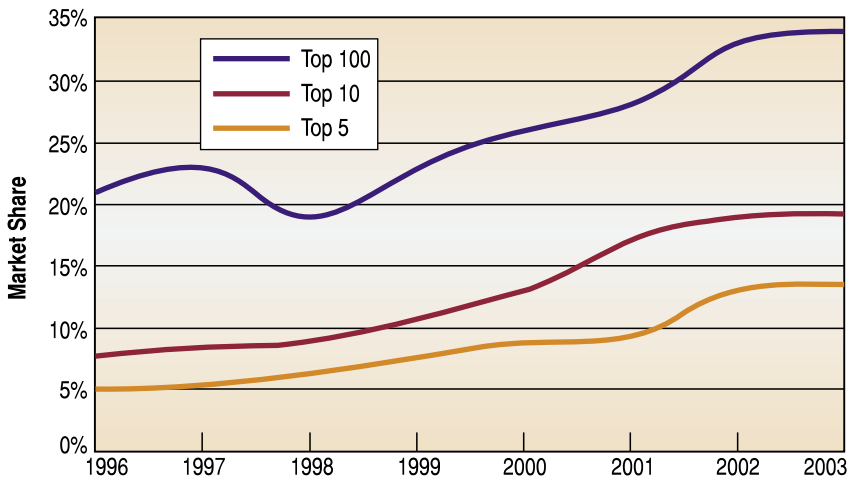


Figure 1. Large builders' market share (source: Builder Magazine)

The significant purchasing power that large builders now have through industry consolidation is leading to the development of new supplier relationships. In 2004, Forintek undertook a survey whose main objectives were to understand:

- current and future construction techniques of the largest U.S. builders;
- product and supplier factors affecting their purchase of wood products;
- partnerships sought by large builders for their material supplies; and
- impact on key suppliers from consolidation of the homebuilding industry .

Overall, 15 builders took part in the survey. Nine of the respondents came from the Top 25 builders while the remaining six represented builders who were ranked between 26 and 100. Survey respondents produced between 1,000 and 40,000 homes per year. In addition, some field visits were conducted to add background information to the study.

### Building materials and techniques

In roof systems, trusses are used 91% of the time, with rafters and engineered wood products used for the remaining 9%. In floor systems, I-joists and open web joists were reported as being heavily used. Pre-assembly was low, but the use of prefabricated floor sections was reported as an emerging practice. With regard to wall systems, 20% of the homes built in 2003 by the survey respondents involved the use of prefabricated wall panels. Larger builders tended to use more prefabricated wall panels, which is in line with observations from previous studies.

### Key specifiers in the selection of building materials

Respondents were asked whether purchasing practices were more central-based or region-based. Although there is no dominant emerging pattern between the two, we believe that specifiers for building materials will become increasingly centralised in the future. Other specifiers and their importance to large builders is demonstrated in Figure 2.

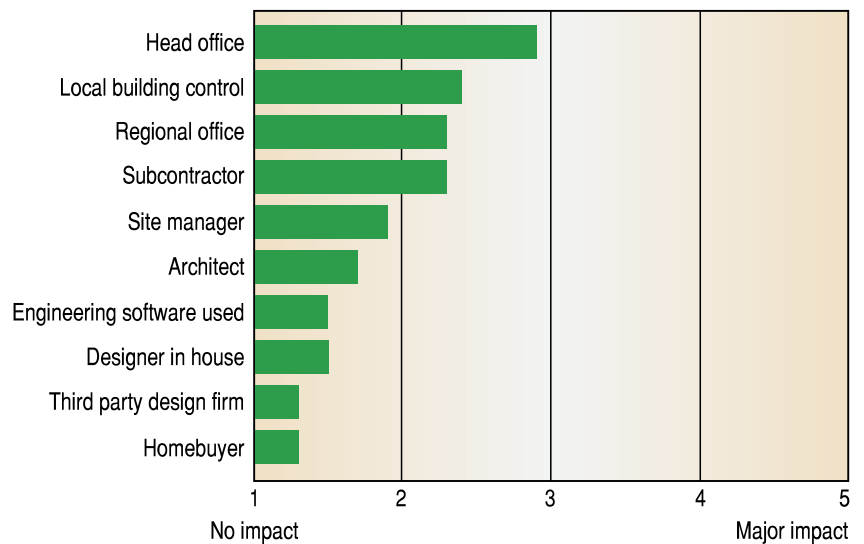


Figure 2. Key specifiers in materials' selection, rated from 1 to 5

### Purchasing and sourcing

On average, 85% of the floor trusses, roof trusses, and wall panels were subcontracted. By far, pro-dealers are the preferred supply source for large homebuilders. However, more than half of the respondents in our survey indicated that they may, or will, go for more direct purchases in the future. Currently, purchasing agreements are negotiated on a short-term basis for lumber, structural panels, engineered wood products, roof trusses and prefabricated walls. However, when questioned about the future of their purchasing agreements, respondents clearly showed a propensity

for developing longer-term agreements. For electrical appliances, electrical fixtures, and other fixtures such as faucets, long-term contracts are now commonplace in the large builder community. Lumber and building materials will be the next products for which these large builders will want to develop such agreements, especially in the face of volatile commodity prices. In general, large builders believe that products with greater added value deserve longer-term agreements.

### Co-operation with suppliers and subcontractors

A fairly low level of inter-firm co-operation was observed between homebuilders and their suppliers. So far, co-operative activities which require a stronger involvement between builders and suppliers (such as developing new products and investing in new ventures) are the exception. However, with the emergence of longer-term and more direct purchasing agreements, collaborative practices are expected to develop further. A majority of the survey participants expected a shorter supply chain, more direct relationships and more co-operation to occur.

### Use of information technologies (IT)

As Figure 3 shows, use of e-mail is widespread, while other types of e-commerce relationships are still in the early stages of development. Most respondents were expecting changes in the use of information technologies and indicated a trend towards more electronic commerce, from electronic ordering and fund transfer to electronic scheduling. They also expected that the use of communication and information technologies with their suppliers will grow.

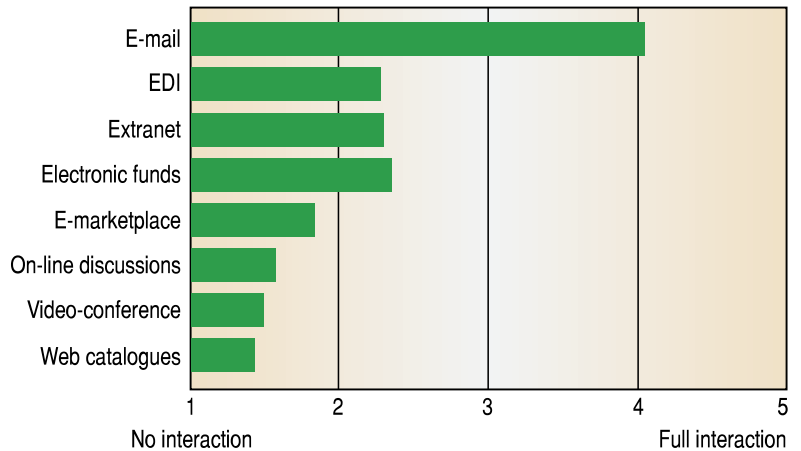


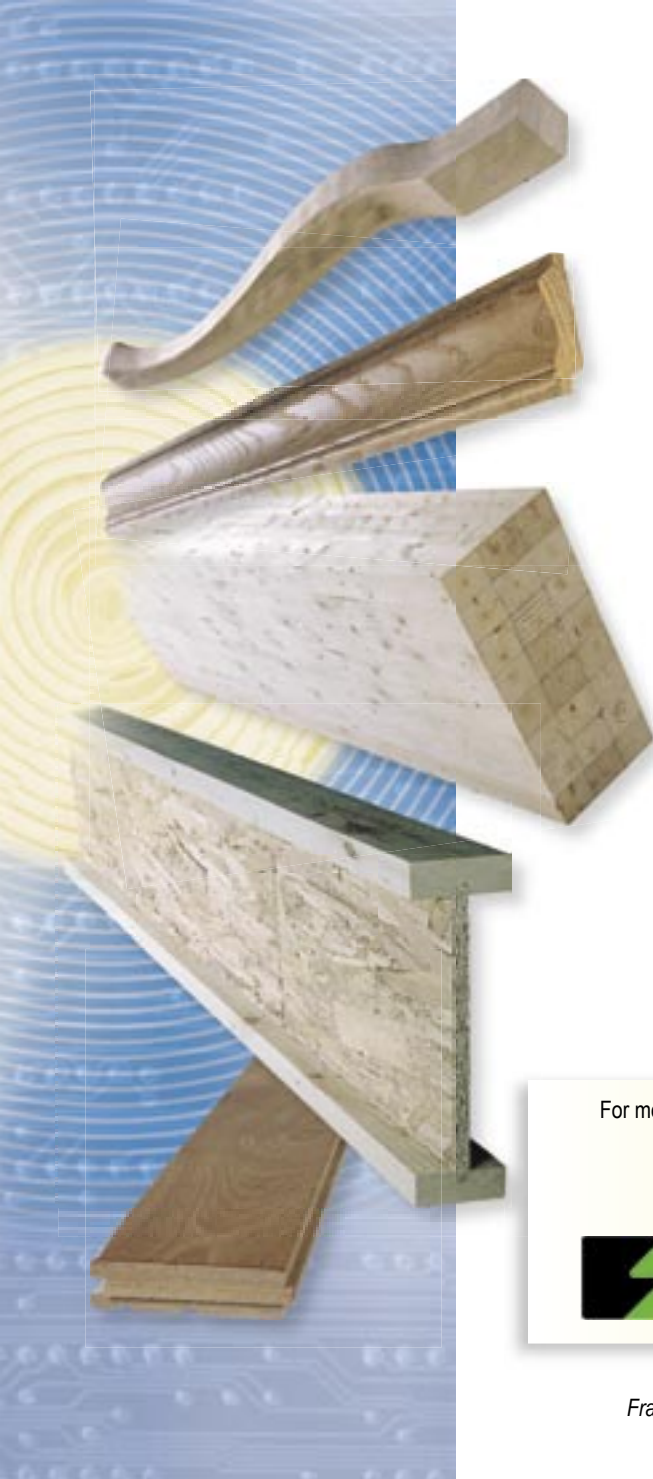
Figure 3. Information technologies used in interactions between builders and suppliers, rated from 1 to 5

**« with the emergence of longer-term and more direct purchasing agreements, collaborative practices are expected to develop further »**



Prefabrication is also making its way through concrete foundations





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For more information on the 2004-2005 *Value to Wood* research program, visit [www.valuetowood.ca](http://www.valuetowood.ca) (Research and Development). The partners involved are:



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*Ce Profil technologique est également disponible en français.*



As part of the *Value to Wood* program, funded by Natural Resources Canada, Forintek's Industry Advisors are providing technical services to value-added wood product manufacturers in all regions of Canada. If you need information on any technical issue related to wood product manufacturing, you can:

- Send a request via [valuetowood.ca](http://valuetowood.ca) (Help Desk).
- Contact a *Value to Wood* co-ordinator at one of the following locations:

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