

**Survey of Quality and Expectations of
Canadian and Japanese Homebuilders
and Product Suppliers**

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FOREWARD

This study was conducted as part of a broader effort by Canada Mortgage and Housing Corporation (CMHC) and Natural Resources Canada (NRCan) to provide housing and building products exporters with intelligence on the Japanese market. Results of this study were incorporated into a separate CMHC Report entitled “**Quality Assurance and After-Sales Issues in the Japanese Housing Market**”.

The findings in this study are by no means statistically valid. Readers are reminded to use the interpretations and conclusion from this study with caution. The results of this study will either validate personal observations regarding the Japanese market or contradict them. In either case readers are encouraged to use this report as a tool to develop a better understanding of how to best meet the needs and expectations of the Japanese imported housing market.

EXECUTIVE SUMMARY

With the current market of approximately 1.4 million houses, half of which are wood frame houses (post and beam and 2x4), it is critical that, in order for Canadians to maintain and expand their market share in Japan, they understand and are capable of meeting and exceeding Japanese expectations for quality while not compromising reasonable profit margins. This will be critical to ensuring a viable and strong housing export industry not only in Japan but other foreign markets.

Given that one of the pillars of Canadian housing aggressively marketed by all exporters is quality, it becomes imperative that the Canadian industry becomes much clearer not only in its definition of quality but also what are the expectations of the client or end user. In addition, it becomes critical that if the housing and building products sector is to survive competitively in foreign markets it is imperative that foreign clients understand the relationship between level of quality and price available from the Canadian industry.

This Phase I work was commissioned to attempt to better understand the expectations of the Japanese homebuilder for housing and building products and compare these with Canadians expectations. The questions were structured such that respondents answered in the context of their own company perspective and are not necessarily a commentary on imported or Canadian products. In the case of either the Japanese or the Canadians it represents their opinion of the domestic market and the quality or issues they face in building and selling houses in the market place.

The results of the survey indicate that most Canadian manufacturers of pre-fabricated components (houses or building products) do not know the market in which their product is being sold. Canadian manufacturers for the most part focussed on quality and best value whereas the Japanese emphasized healthiness and accessibility first followed by quality and value. Both Canadians and Japanese rank durability and energy efficiency as important virtues of their products.

Japanese small and medium sized companies are looking for ways to increase the image of their companies and the houses they build to allow them to compete with the national builders. Creating an image of prestige was expressed as a need by the Japanese. Improved quality, particularly where it enhances priority areas such as an image of prestige, healthiness, accessibility and energy or environmental benefits are areas in which Canadians can and should be able to offer value added elements to their designs or packages.

The issue of quality and after sales service will continue to challenge Canadian exporters in the Japanese market. Japanese expectations of 10 years or more for certain elements of warranties and after sales service are difficult concepts for Canadian home builders or suppliers to grasp. Maintaining and expanding market share in part will demand a stronger commitment to warranties

and after sales service in Japan if the Japanese are to continue to have confidence in the Canadian housing system. The cost of this needs to be articulated to the Japanese client and backed by reliability and commitment. Clearly embodying higher quality throughout the full life cycle of the construction of the house reduces the risk associated with this additional after sales service. There is some indication the Japanese are willing to accept higher quality if it can be demonstrated to provide better value (improved comfort, durability, healthiness, accessibility, etc).

RÉSUMÉ

Avec le marché actuel de près de 1,4 million de maisons, dont la moitié sont munies de charpente en bois (poteaux, poutres et planches 2 par 4), il est de toute première importance que les Canadiens, afin qu'ils puissent maintenir et étendre leur part du marché au Japon, comprennent, en plus de pouvoir répondre et dépasser les attentes des Japonais en matière de qualité, sans pour autant compromettre des marges de profit raisonnables. Tout cela sera également important pour assurer un secteur des exportations viable et vigoureux en matière d'habitation, non seulement au Japon mais sur les autres marchés de l'étranger.

Comme la qualité constitue l'assise même du secteur canadien de l'habitation qui est mise en marché d'une manière dynamique par tous les exportateurs, il devient de plus en plus primordial que l'industrie définisse clairement cette notion, de même que les attentes des clients ou des utilisateurs. En outre, pour que le secteur des produits reliés à l'habitation et aux bâtiments puisse survivre sur les marchés étrangers caractérisés par la concurrence, il faut absolument que les clients des autres pays soient en mesure de saisir les liens qui existent entre le niveau de qualité et les prix en vigueur dans l'industrie canadienne.

La première étape de ce travail a été demandée afin de tenter de mieux comprendre les attentes des constructeurs japonais de maisons en ce qui a trait aux produits destinés aux habitations et aux bâtiments, en plus de comparer celles-ci avec les attentes du côté canadien. On a structuré les questions de façon à ce que les personnes puissent répondre dans une perspective reliée à leurs propres sociétés, et non pas nécessairement les amener à faire des commentaires au sujet des produits importés ou canadiens. Autant dans le cas des Japonais que dans celui des Canadiens, il s'agit de leurs opinions à l'égard de leurs marchés intérieurs respectifs, ainsi qu'à l'égard des questions de qualité et des enjeux auxquels ils sont confrontés lorsque vient le temps de construire et de vendre des maisons.

Les résultats obtenus à la suite du sondage indiquent que la plupart des fabricants canadiens d'éléments préfabriqués (produits de l'habitation ou des bâtiments) ne connaissent pas les marchés où sont vendus leurs produits. Les fabricants canadiens appuient surtout sur la qualité et la meilleure valeur, alors que les fabricants japonais mettent l'accent sur la salubrité et l'accessibilité, suivies de la qualité et de la valeur. Tant les Canadiens que les Japonais placent la durabilité et l'efficacité énergétique au rang d'importantes qualités pour leurs produits.

Les petites et moyennes entreprises japonaises cherchent des moyens d'améliorer leur image de marque et les habitations qu'elles construisent afin d'être en mesure de concurrencer les constructeurs nationaux. Les Japonais ont affirmé que la conception d'une image de prestige était une nécessité. Une qualité accrue, particulièrement lorsqu'elle porte sur l'amélioration de secteurs prioritaires, comme l'image de prestige, la salubrité, l'accessibilité, l'énergie ou les avantages environnementaux, demeure un domaine où les Canadiens peuvent et devraient être en

mesure d'offrir des éléments à valeur ajoutée à l'intérieur de leurs conceptions ou de leurs ensembles.

Les questions de la qualité et du service d'après-vente continueront à constituer des enjeux pour les exportateurs canadiens sur les marchés japonais. Les attentes japonais concernant les garanties et le service d'après-vente d'une durée de 10 ans ou plus continuent à constituer des notions difficiles à accepter pour les constructeurs de maisons ou les fournisseurs. Le maintien et l'expansion en partie des marchés exigeront un engagement plus important au chapitre des garanties et du service d'après-vente. Il faudra engager une telle démarche si l'on désire que les Japonais continuent à avoir confiance dans le système canadien d'habitation. Les coûts reliés à cette nécessité doivent être clarifiés aux clients japonais, en plus de s'appuyer sur la fiabilité et l'engagement. En introduisant des critères plus élevés de qualité tout au long de la durée de vie utile de la construction, on réduit les risques liés à un service additionnel d'après-vente. Il y a des indices que les Japonais sont disposés à accepter une meilleure qualité s'il est prouvé qu'elle signifie une meilleure valeur (confort accru, durabilité, salubrité, accessibilité, etc.).

1.0 INTRODUCTION

Canada has established a world-class reputation in the design, supply and construction of wood frame housing, building products and services both in Canada and around the world. This reputation has been based in part on a strong commitment to quality both in the supply of individual building components as well as in the supply of fully integrated housing packages. Together with the support of a number of government agencies, competitive price advantage and a proven tradition of durable construction, Canadian firms have been able to make significant breakthroughs in many foreign markets where wood frame or 2x4 type construction is less well known.

The design and construction of a house in Canada in itself is a sophisticated process involving the coordination of a number of components, sub-trades, and services. The export of the same product where the exporter has limited control over trades who will assemble the house adds an additional level of complication. The interdependency of many components, sub-trades and services towards the successful completion of a house which must meet expectations of a discriminating buyer is a feat in itself. The fact that houses are successfully built standing the test of time, weather and external forces of earthquakes and hurricanes is a testament to the wood frame system and the built-in quality processes that already exist with a number of exporters. Despite these natural checks and balances, there are a number of opportunities where the performance and quality of the house may be severely compromised.

Nonetheless, increasing pressure within Japan to lower the cost of housing, combined with increasing competition from other countries who can also offer the same type of 2x4 wood frame system, requires Canadians to ensure that their product meets the expectations of their client. Lower quality often manifests itself in premature failure or repair of a building product or system. While many non life-safety components can be repaired with minimal cost, failures in critical structural or mechanical systems can have serious cost and reputation repercussions for the exporter.

The Japanese market represents one example where the concerted efforts of both private and public sectors have succeeded in establishing Canada as the principal source of imported manufactured housing to Japan. Other sectors of the housing industry, forest and building products, are also enjoying unprecedented levels of growth.

The reputation in part has been based on aggressive promotion of the quality of Canadian building products and housing systems. Foreign countries such as Japan view the standard of living of Canadians as much higher than in their own country. Floor area, land area, domestic amenities, lifestyle, leisure time together with demonstrated performance of houses in extremely cold and harsh climates has helped create a strong image of Canadian housing and building products as high quality.

Over the course of the last few years there have been concerns expressed by Japanese importers that the quality of Canadian housing is falling short of expectations of Japanese importers. This is due to several reasons. First, increased pressure by Japanese buyers to lower the cost of housing forces some Canadian exporters to look at ways of reducing the cost to their clients without compromising reasonable profit margins for the company. Lower quality building components are sometimes selected, on-site supervision is reduced, alternative after-sales service approaches are used all in an effort to provide the Japanese client with the best value for the budget available while still maintaining some profit for the company.

Second, there are a number of Canadian companies who can offer Japanese clients lower cost housing products or systems. While these products may be acceptable to some Canadians, their durability or tolerances may be of a lower quality. While on the surface these products or systems may seem acceptable, once applied they can lead to disappointment by either the Japanese builder or his client, the Japanese homebuyer, who takes the purchase of a house extremely seriously, comparable to the custom home market in Canada. To some degree the problem lies with both the exporter and the importer who have failed to define the expectations of the end-user.

Finally, Japanese expectations and definition of quality may not necessarily coincide with Canadian definitions or assumptions of high quality. Quality can not only embody characteristics in the manufacture or finish of a product, it can and often does include standards in design, inventory control, shipping, receiving, installation, training and education, marketing and promotions, inspection, after sales service and warranties. The export of a building product or a sophisticated housing system requires addressing all of these issues if the product is to be successfully used by the end-user.

This study is the first step in an effort to quantify the term quality as promoted by Canadian exporters, define expectations of the Japanese client, and attempt to isolate recent concerns expressed by the Japanese regarding the quality of Canadian products and housing systems now being exported to the Japanese market.

2.0 SURVEY METHODOLOGY

The study involved the completion of a survey by industry and government stakeholders active in the export and import of housing building products, systems or services to the Japanese market. The list included individuals representing all regions of each country and included management and building associations.

The survey served as a means of assessing:

- size of company and market segments
- areas of focus for buyers and customer service
- benchmark levels of performance
- critical area of improvement in products and services
- management processes
- ISO and other standards
- competency of trades
- warranty policies and procedures.

The goal of the survey was to try and quantify negative anecdotal comments and complaints from the Japanese regarding the quality of Canadian building products and housing systems. By understanding or anticipating expectations of the Japanese, Canadians will be able to better tailor and respond to the expectations and needs of their Japanese clients and thus hopefully maintain and expand market share.

Surveys were faxed to a total of 52 key contacts. Thirty questionnaires were sent to Japanese companies and 22 questionnaires to Canadian companies. Follow-up telephone calls to the Canadian companies were made in order to prompt respondents. A total of 13 responses were received, representing a response rate of 25 %, which was higher than the typical 10% to 15% rate of response for this type of survey.

Of the 13 responses, 6 were received from Japanese individuals representing a 23 % response rate, and 7 or 32% were received from Canadian contacts. A copy of the survey instrument is in APPENDIX B.

Based on a mailout survey 7 Canadian responses and 6 Japanese responses were received. While the number of respondents is by no means statistically valid, many of the responses re-inforce issues or concerns that have been observed in Japan in the past. The results can be used in two ways. First the results may re-inforce anecdotal concerns regarding quality or priorities that are emerging in the Japanese market today. Alternatively the results may contradict pre-conceived perceptions regarding the Japanese market, and as such one will be required to validate either the survey results or previously pre-conceived perceptions.

3.0 INTERVIEWS

In addition to the surveys, 3 in-person interviews were conducted with leading Canadian industry players. The interviews allowed for a more detailed discussion of the needs of Japanese customers and opportunities for Canadian housing exports.

Pertinent Quotes from the Interviews

Threats

- “Can’t serve customer without covering the cost of customer service.”
- “Individual Canadian companies need to share the facilities to make it cost effective.”
- “Private sector needs to finance warehouse(s).”
- “Government needs to provide seed money and/or personnel.”
- “Compensation levels must be competitive.”
- “Individual companies desire to be different may limit endorsement of generic programs such as R2000 or Super E. Need to promote customization options.”
- “Being too far away from contact with the customer, will hamper the development of loyalty to our product and services. Need to have continuous direct contact with the end users of our superior technologies and processes.”
- “Resistance to costly approaches.”
- “Extra time to ship our superior products.”
- “Relatively short time Canada has been in the export marketplace. It may take 10 or 20 years to develop a superior quality reputation.”

Opportunities

- “Majority of houses are custom, therefore a process to ensure superior quality can be adapted to meet the needs of the individual builder.”
- “Looking for comfort and maintenance free housing.”
- “Need our moisture prevention solutions for rain and interior humidity.”
- “Training/Inspection/Customer Service knowledge can be delivered to Japan companies.”
- “Japanese customers desire for problems to be prevented as is the case in other products purchased.”
- “Canada has made in-roads but constancy needs to be maintained.”
- “Need small warehouses at strategic locations to service market.”
- “Canadians have the know how to provide excellence in customer service.”
- “Japanese buyers like the comfort (insulation and mechanical systems) provided by Canadian housing.”
- “Our construction solutions work.”
- “Our training and customer service knowledge is world class.”
- “Japanese customers have purchasing power to buy our value oriented housing.”
- “ISO recognition in the long term.”

4.0 SURVEY RESULTS

A. Survey Respondents Company Profile

1. Which of the following best describes your company's primary business activity?

	Canadian		Japanese	
	#	%	#	%
Sales Agent	--	--	--	--
Pre-Fab. Hsg. Company	5	71.3	4	67
Supplier (components: Ventilation systems, HRV's, Fenestration products, kitchen / bathroom, wall panels)	1	14.3	2	33
Buyer	--	--	--	--
House Builder	1	14.4	--	--
Trade / Contractor	--	--	--	--
Architect / Engineer	--	--	--	--
Third Party	--	--	--	--
Assoc. Representative	--	--	--	--

2. How many residential units do you anticipate building during the next 12 months?

	Canadian		Japanese	
	#	%	#	%
Over 100	5	71	3	50
50 to 99	1	14.5	1	16.7
10 to 49	--	--	1	16.7
1 to 9	--	--	--	--
Not applicable	1	14.5	1	16.7

3. Please indicate the approximate # of homes or components shipped in each market:

	Canadian # units	Japanese # units
Canada	30 - 1000+	
Rest of North America (Washington, Montana, Alaska, Minnesota)	1 - 20	
Japan	14 - 500	250 - 1300
Germany	10-20	
South America	10-20	

4. What type of housing does your company mostly market or build?

	Canadian		Japanese	
	#	% ¹	#	% ¹
Detached Single Family	7	100	6	100
Semidetached, Row & Town Houses	4	3	2	33
Apartment Buildings	1	14	3	50

If you make components or provide services please indicate type(s)
(Ventilation systems, HRV's, Fenestration products, kitchen / bathroom, wall panels)

¹ Number of respondents active in the sector of the market

6. Over the past 12 months, what proportion of your sales have been in the following market segments?

	Range	
	Canadian	Japanese
Number of Respondents	50 %	67 %
First-Time Buyer	10 to 35 %	30 to 50 %
Move-up Buyer (Tract Housing)	35 to 50 %	10 to 20 %
Move-up Buyer (Custom Homes)	12 to 80 %	20 to 70 %
Move-Down Buyer	8 to 25 %	10 %

Commentary

The majority of respondents were from the pre-fabricated home building sector. On the Canadian side one respondent was from the ventilation/HRV sector who has been exporting HRV's to Japanese and US markets. On the Japanese side two respondents were involved in the supply of individual building components.

All respondents were generally involved in the supply of anywhere from 50 to well over 1000 houses per year, primarily in the single detached market, and to a lesser extent in the semi-detached, row and town house markets. Of note, 3 of the Japanese companies were also active in the apartment building sector.

Primary market segments for Canadian respondents were domestic Canadian markets and Japan with secondary markets in US, Germany and South America. This is not surprising since the mailing list for Canadian respondents was derived from exporters active in the Japanese market.

The custom home and first time buyer represented a good proportion of the market segment for both Japanese and Canadian companies although Canadian companies were also much more active in tract housing than their Japanese counterparts. The move-down buyer also represented a market segment for both Canadian and Japanese companies. It was interesting to note that several companies either could not or were unable to answer this question suggesting information was not readily available or not known. Some Canadian companies indicated that they simply did not know for what segment of the market their buyers were building their houses.

B. Perceived Characteristics of the client

5. What are the three most important reasons for buyers to purchase your homes, components or services?

	Canadian	% ¹	Japanese	% ¹
Product Quality	1st	85 %	1st	83 %
Quality of Construction	2nd	72 %	3rd	67 %
Referral	4th	57 %	No ranking	
Location	5th	14.3 %	No ranking	
Financing	No ranking		No ranking	
Floor Plan	No ranking		4th	33 %
Price	3rd	43 %	2nd	100 %
Size	No ranking		5th	17.3 %
Appearance	No ranking		4th	33 %

¹ Number of respondents who ranked this item. No ranking indicates that no respondent cited this item as a reason for buyers to purchase their homes, products or services.

9. What do owners or buyers like about your homes, product or services?

Canadian Responses

- We stand behind our products.
- Quality workmanship, materials, good value.
- Quality of materials, components, custom design, delivery, reputation and dependability.
- Balanced ventilation, with HRV – Improves indoor air quality.
- Technically advanced homes yielding lower operating costs.
- Healthy environmentally responsible building.
- Reputation for good design and quality service.

Japanese Responses

- Through the brand name of our company we have been working in the housing market more than 30 years. The customers expectation is our trustworthiness and engineering expertise.
- Development of highly insulated and highly airtight homes. Supply of company management know-how and tools.
- Repair Service; we reply to customer requests promptly.
- Owners have confidence that they will receive repair services in the future.
- Airtightness, insulation, soundproofing.

10. What do owners or buyers dislike about your homes, product or services?

Canadian Responses

- They still want it cheaper.
- Paperwork.
- No education material about the product.
- Central systems require ducting.

Japanese Responses

- Time it takes to receive delivery of product (imported houses).
- Social standing of our company is lower than that of the national companies.
- They want more prestige in buying their homes, which we are inferior to the national builders.

Commentary

Virtually all Canadian and Japanese respondents cited product quality, quality of construction and price as the top 3 reasons for buyers purchasing their product. For the Japanese respondents price was almost as important as product quality. Interestingly less than half of the Canadian respondents cited price as an important factor in the buying decision of their buyers. Of the remaining items there is an interesting contrast between Japanese responses and Canadian responses. Most notably half of the Canadian respondents cited referral as an important reason for buyers choosing their home, product or service. None of the Japanese respondents cited this as a reason for Japanese buyers to purchase their products. Other interesting notes: some of the Japanese respondents ranked appearance, floor plans and size as factors in the decision-making process of Japanese buyers. None of the Canadian respondents cited these factors as important in the minds of buyers of their products.

When asked to comment on what customers liked about the companies' products and services Canadian and Japanese responses were similar. Issues of quality, reputation and trustworthiness were reflected in both Japanese and Canadian responses. Features related to airtightness and highly-insulated houses were also expressed on both sides.

With respect to what customers disliked about the companies' products and services, fewer responses were provided. On the Canadian side, price, lack of educational material and the requirement for centralized ducting for ventilation/heating and cooling were viewed by the Canadian responses as what buyers (implying Japanese buyers) disliked about the Canadian product.

Only three Japanese respondents provided comments but interestingly two of the three companies cited the fact that their company was inferior to that of the national builders in terms of prestige/social standing.

C. Customer Education

The following question was designed to determine the degree to which companies have developed or provide customer education.

7. Does your company have a customer education program in place, which is focused on managing your customer expectations?

		Canadian			
		Yes	%	No	%
Have a customer education program	3	43 %		4	57 %
Have a buyer's manual on Home Care & Maintenance	4	57 %		3	43 %
		Japanese			
		Yes	%	No	%
Have a customer education program	4	67 %		2	33 %
Have a buyer's manual on Home Care & Maintenance	5	83 %		1	17 %

Commentary

About half of Canadian and Japanese companies indicated that they did have some form of customer education program in place for their buyer. Of note almost all the Japanese respondents indicated that they had a buyer's manual on home care for their customers, whereas a little more than half of the Canadian respondents indicated they had a home care buyer's manual.

D. General Quality

8. Based on quality of your homes, products or services please rate the following:

	Canadian	Japanese
Building Durability	Much Above/Above Av	Much Above/Above Av
Structural	Much Above/Above Av	Above Avg/Avg
Exterior Appearance	Much Above/Above Av	Above Avg/Avg
Home Comfort	Much Above/Above Av	Much Above/Above Av
Windows / Doors	Above Avg/Avg	Much Above/Above Av
Interior Finish	Above Avg/Avg	Above Avg/Avg
Noise	Above Avg/Avg	Much Above/Above Av
Defects in Mechanical	Above Avg/Avg	Above Avg/Avg
Design / Layout	Above Avg/Avg	Much Above/Above Av
Kitchen Cabinets	Avg	Above Avg/Avg
Foundation	Avg	Much Above/Above Av

Commentary

Both Japanese and Canadian respondents cited Building Durability as being above average to much above average. The Japanese tended to rate this item higher (more indicating much above average) compared to Canadian respondents.

Both Japanese and Canadians also rated home comfort as being much above average to above average in quality with the Japanese also rating this item consistently higher than responses of the Canadians.

In comparison to building durability and home comfort, both Canadian and Japanese rated interior finish, noise, kitchen cabinets and defects in mechanical as being average to above average in quality. Again the Japanese on average tended to rate these items slightly higher than the Canadians (more Canadians rated these items in the average category).

Of these four items, a number of Canadian and Japanese respondents rated kitchen cabinets as having only average quality.

Of note are the areas where Canadians or Japanese rated the quality of items differently. In general Canadians cited the quality of structural elements and exterior appearance of the house generally as above average to much above average whereas the Japanese would typically rate these items as average to above average.

In contrast, Japanese tended to rate windows and doors and design layout as above average to much above average whereas the Canadian respondents would rate these items as average to

above average.

Most notably is the wide difference in views of the Japanese and Canadians with respect to foundations. Canadians tended to rate this item as having average quality whereas Japanese considered this item as having above average to much above average quality. This difference needs to be taken in the context of building practices for each country wherein full height basements are typical in Canada compared to Japan where crawlspace or slab on grade are the norm.

In summary both Canadians and Japanese agreed and rated Building Durability and Home Comfort as having very high quality. Canadians identified structural and exterior appearance as the next two areas which deserved to be recognized as having above average to much above quality in contrast to the Japanese who rated windows/doors, noise and design/layout as those elements deserving to be recognized for their higher level of quality.

E. Building it right the first time

11. How would you rank the importance of the following improvement areas?

	Overall Ranking	
	Canadian	Japanese
Durability	3rd	3rd
Environmental	4th	5th
Healthiness	6th	2nd
Accessibility	9th	1st
Fire Safety	8th	9th
Pleasantness	2nd	8th
Doors / Windows	4th	6th
Mechanical	7th	4th
Value	1st	7th
Noise	Not ranked	Not ranked
Home Comfort	Not ranked	Not ranked

Commentary

The results of this question revealed some remarkable contrasts between Canadian and Japanese responses. Most notably the Canadians cited improving value (presumably lower cost) as the number 1 area requiring improvement whereas the Japanese ranked this item relatively low (7th out of 9 items). The area requiring the most improvement for the Japanese was in the area of accessibility. Canadians ranked this item 9th out of 9 items.

Interestingly Japanese ranked healthiness as the 2nd most important area requiring improvement whereas Canadians ranked this 6th.

Canadians felt that the pleasantness of the house was the 2nd most important area requiring improvement. The Japanese ranked this item 8th.

In terms of relative priority for areas of improvement, durability and environmental ranked similarly for both Japanese and Canadians. The higher ranking of durability was surprising given earlier responses (Question 8) by both Japanese and Canadians which indicated the quality of building durability was much above average. This issue in particular deserves further exploration.

Windows and doors ranked in the middle of the pack with the Japanese ranking this item as needing less improvement than that suggested by Canadians. This appears consistent to earlier responses regarding the degree of quality of these items.

Mechanical ranked relatively low (7th) as an area requiring improvement for the Canadians while

the Japanese ranked it 4th. This is not surprising since mechanical systems (other than HRVs) are not generally exported by Canadians.

Finally, fire safety was ranked 8th/9th by the Canadians and Japanese respectively suggesting little improvement in this area was required. This may be in part due to the fact that this area is heavily regulated both in Canada and Japan through Building Code requirements.

In summary, Japanese and Canadians have a number of areas where they significantly differ in their views of areas requiring improvement, the most notable of these being value, healthiness and accessibility.

Home comfort and noise were not ranked by either Canadian or Japanese as areas requiring improvement suggesting these areas are simply not important or are simply not a problem to the Japanese or Canadians.

12. Which target areas is your company committed to delivering a superior product or service? Rank the top three

	Overall Ranking	
	Canadian	Japanese
Better Durability	3rd	1st
Energy Efficiency	1st	1st
Healthy Environment	5th	3rd
Barrier free accessibility	5th	5th
Fire Safety	Not ranked	Not Ranked
Top quality finishes	4th	4th
Doors / Windows	2nd	2nd
Efficient Mechanical Systems	4th	Not Ranked
Best Value	1st	4th

Commentary

Interestingly enough the top target area where both Canadians and Japanese indicated they were committed to delivering a superior product or service was in energy efficiency. Equally important for both Japanese and Canadians was a commitment to doors and windows. Canadian respondents cited providing best value as the top area targeted by the company whereas Japanese did not rank this item in the top 3.

Both Canadian and Japanese respondents ranked top quality finishes and barrier free accessibility 4th and 5th respectively but certainly not one of the top 3 areas where the company was committed to superior quality.

Of significant note was the ranking of healthy environment and better durability, both ranked in the top 3 as areas of commitment by the Japanese, yet Canadians ranked these somewhat lower. The issue of healthy environment in particular reflects similar differences noted between Canadian and Japanese respondents in Question 11.

The issue of efficient mechanical systems was ranked relatively low by Canadians (although higher than barrier free and healthy environment). This element was not even ranked by the Japanese. This may be in part due to the fact that most Japanese homebuyer purchase their heating/cooling equipment separately similar to buying an appliance.

F. Quality Standards and Continuous Management Improvement

13. Are your employees and business associates committed to the principle of quality system standards and guidelines?

	#	%	#	%
Yes	7	100	6	100

14. Does your company have a continuous management process in place, which is focused on the customers in the following areas of activity?

	Canadian		Japanese	
	YES	%	YES	%
Sale of Product / Services	6	86 %	4	67 %
Design of Product / New Services	6	86 %	6	100 %
Contracts	6	86 %	6	100 %
Construction	6	86 %	5	83 %
Defect / Deficiency	6	86 %	5	83 %

15. Are your management procedures and processes in writing?

	Canadian		Japanese	
	#	%	#	%
Yes	4	57 %	4	67 %
No	2	29 %	1	16.7 %
Sometimes	1	14 %	1	16.7 %

16. If YES or sometimes, has the management team committed to making one person responsible for the process?

	Canadian		Japanese	
	#	%	#	%
Yes	5	100 %	2	33 %
No	0	0	3	67 %

17. On the topic of ISO 9000, has your business:

	Canadian	
	Yes	%
Become aware of the management process	7	100%
Attended seminars	3	43%
Taken courses	2	29%
Developed a Quality Management Program	4	57%
Pursued ISO certification	2	29%

	Japanese	
	Yes	%
Become aware of the management process	5	71%
Attended seminars	3	50%
Taken courses	1	17%
Developed a Quality Management Program	1	17%
Pursued ISO certification	1	17%

18. How would you prioritize your pursuit of a quality product, which consistently meets or exceeds a level of performance that has been spelled out by the customer?

	Canadian		Japanese	
	#	%	#	%
Top priority	5	71 %	2	33 %
A priority	2	29 %	3	50 %
Somewhat of a priority	--	--	1	17 %
Not a priority	--	--	--	--
Not needed at all	--	--	--	--

Commentary

With regard to quality systems and guidelines both Japanese and Canadian respondents indicated (not surprisingly) that they were committed to the principles and had in place a process which focussed on the customer. Most companies have procedures in writing but some companies clearly indicated that they did not. For Canadians the management team had made one person responsible for the process. Interestingly enough only 33% of the Japanese companies had made one person responsible for the process. The wording of this question may have been too restrictive since it may be possible that more than one person is responsible (typical of Japanese culture where everybody contributes to the process).

Most were aware of ISO, about 50% had taken courses or seminars on the subject. About half

the Canadian respondents had developed a quality assurance management process compared to only 1 out of 6 Japanese respondents. Few of the respondents were actually pursuing ISO certification, however the fact that some are seeking this certification is of interest.

Not surprisingly Canadian and Japanese respondents agreed that pursuing a quality product was either a top priority or a priority.

G. Shipping and Handling

19. Are you having shipping or handling problems in exporting your prefabricated components?

	Canadian		Japanese	
	#	%	#	%
Yes	0	--	1	17%
No	6	86%	2	33%
No Comment	1	14%	3	50%

20. Based on your experiences please rate the following:

Responses	Canadian (5 out of 7)	Japanese (1 out of 6)
Reliability of shipping	Much Above Avg/Above Avg	Much Above Avg
Shipping on time	Much Above Avg/Above Avg	Above Average
Suitable containers	Above Average	Much Above Avg
Handling problems	Above Average	Average
Contract administration	Above Average	Average
Site security	Above Avg/Avg	Average

Commentary

Generally no problems were expressed by Canadian respondents regarding shipping and handling although in relative terms containers and handling problems were rated slightly lower compared to reliability and shipping on time.

Contract administration and site security appeared to be areas of more concern to Canadians.

Only one Japanese responded to question 20. Interestingly enough this respondent ranked experiences in this area similar to those of Canadian respondents citing handling, contract administration and security lower in relative terms to suitability of containers, shipping on time and reliability of shipping.

H. Regulatory Barriers

21. Are regulatory barriers and / or lack of standards hampering the timeliness of getting your product to market?

	Canadian		Japanese	
	#	%	#	%
Yes	2	29%	1	17%
No	4	57%	1	17%
N/A	1	14%	4	66%

Commentary

Some of the Canadian respondents indicated regulatory barriers as hampering timeliness of getting the product to market. Most Japanese did not respond to this question. Of the two that did respond one indicated problems and one did not.

I. On the Site

22. Based on your experiences please rate the following:

	Canadian		Japanese	
Windows / Doors	2.75	1	3.33	1
Component suppliers	2.75	1	2.67	2
Site assemblers	2.67	2	2.6	3
Finishing trades	2.33	3	2.4	4
Mechanical / Electrical trades	2.33	3	2	6
Exterior contractors	2.33	3	1.8	7
Kitchen cabinets	2.25	4	2.67	2
Foundation contractors	2	5	2.2	5

23. Is the availability of trained trades for your business

	Canadian		Japanese	
	#	%	#	%
An important problem	3	43%	0	0%
A problem	2	29%	2	33%
Somewhat of a problem	1	14%	1	17%
Not a problem	1	14%	3	50%

24. Do you have your own construction crews?

	Canadian		Japanese	
	#	%	#	%
Yes	0	0%	4	67%
No	6	86%	2	33%
Sometimes	1	14%	0	0%

25. Please rate the quality of:

	Canadian	Japanese
Your own crews	Much Above Avg /Above Avg	Much Above Avg /Above Avg
Contractors	Average	Above Avg/Avg

26. Would you encourage having a program that allows trades / professionals from other countries to practice in your domestic market?

	Canadian		Japanese	
	#	%	#	%
Yes	5	72%	2	33%
No	1	14%	3	50%
No Comment	1	14%	1	17%

Commentary

With regard to experiences with sub-trades, only half of the Canadian companies surveyed responded to this questions probably in part because many do not know or have control over trades in Japan. Of those who responded, both Canadian and Japanese respondents rated trades associated with windows and doors and general component suppliers as above average. Both Canadians and Japanese ranked site assemblers and finishing trades as average to above average although not as high as windows and door trades.

The Japanese were very critical of exterior contractors. At least 2 Japanese respondents ranked exterior contractors as below average.

They were also critical of the mechanical/electrical trades. Since earlier questions suggested that the Japanese have little involvement with the mechanical trades it is implied that the Japanese were expressing criticism of the electrical trades in this question.

In the case of exterior contractors and mechanical/electrical trades, Canadian ranked these trades higher in relative terms compared to the Japanese.

Both Canadian and Japanese respondents ranked foundation contractors as average.

Canadian respondents appeared to be a bit more critical of the kitchen cabinet trades compared to the Japanese ranking for this trade.

Generally half the Japanese do not view availability of trained crews as a problem. At least half the Canadians ranked it as an important problem.

For the most part Canadians do not have their own crews in Japan. Both Canadian and Japanese ranked quality of contractors lower than their own crews.

Almost all Canadian companies encouraged a program that allowed trades / professionals from other countries to practice in their domestic market. For Canadian responses this implies support to train Japanese trades/professionals in Canada.

Interestingly, about half the Japanese respondents would not encourage a program to allow trades/professionals from Canada to practice in Japan. It is not clear why many of the Japanese respondents were concerned about this question and deserves further exploration.

J. Warranties/After Sales Service

30. As a supplier, prefab housing company or builder, do you provide service to your customers after the warranty periods expire?

	Canadian		Japanese	
	#	%	#	%
Yes	7	100 %	6	100 %

If yes, please explain

Canadian Responses

- Where it is a clear example of poor workmanship or material breakdown
- One year warranty / service
- If required the customer is always right
- Provide service beyond manufacture warranty

Japanese responses

- Exchange functional parts or components (chargeable in some cases)
- 3 times in ten years
- A full time staff will reply to customer request by telephone
- We guarantee our building for ten years after which our subsidiary company will reply by an onerous contract.

27. Are you experiencing problems with building materials and/or equipment?

	Canadian		Japanese	
	#	%	#	%
Yes	2	29%	2	33%
No	3	42%	3	50%
No Response	2	29%	1	17%

28. Did your supplier make good on all warranty items?

	Canadian		Japanese	
	#	%	#	%
Yes	4	57%	0	0%
No	1	14%	6	100%
No Comments	2	29%	0	0%

Commentary

All respondents indicated that they provided service to their customers after the warranty periods expired. The extent (up to ten years and even beyond) to which the Japanese commit to their client is probably the most significant observation and difference between Canadian builders (even domestically) and Japanese builders.

About half the Canadian and Japanese respondents indicated that they were experiencing problems with building materials and equipment in the context of warranties and after sales service. Individual comments cited by respondents included a perception of lack of commitment by suppliers, difficulty in obtaining quality parts and the responsibility for after sales service is not made clear.

Probably the most disturbing difference in responses between Canadian and Japanese respondents was on the issue of whether the supplier made good on warranty claims. Most Canadian respondents felt that suppliers made good on warranties. All Japanese respondents felt suppliers did not make good on warranty claims. For the Canadian respondents the question was answered in the context of the Japanese client. Whether the Japanese responses were referring to Canadian suppliers, Japanese suppliers or both is not clear but in all likelihood there is probably some inference to Canadian suppliers. Nonetheless it represents an extremely important discrepancy that should be pursued further.

5.0 SUMMARY OF RESULTS

Based on a mailout survey 7 Canadian responses and 6 Japanese responses were received. While the number of respondents is by no means statistically valid, many of the responses re-inforce issues or concerns that have been observed in Japan in the past. The results can be used in two ways. First, the results may re-inforce anecdotal concerns regarding quality or priorities that are emerging in the Japanese market today. Alternatively the results may contradict pre-conceived perceptions regarding the Japanese market, and as such one will be required to validate either the survey results or previously pre-conceived perceptions.

Nonetheless, based on the responses from the 7 Canadian companies and 6 Japanese companies the following observations are evident:

A. Company Profile

The majority of the respondents were prefabricated companies that build 100 or more houses per year serving primarily the single detached custom or first time home-buyer segment of the market. The move-down market emerged as a growing segment for both Canadian and Japanese respondents. Of note several Canadian respondents indicated they simply did not know what segment of the market their houses were being purchased for, particularly in the context of their Japanese buyer.

B. Client Expectations/Perceptions

Virtually all Canadian and Japanese respondents cited product quality, quality of construction and price as the top 3 reasons for buyers purchasing their product.

Appearance, floor plans and size were cited as factors in the decision making process for Japanese buyers. None of the Canadian respondents cited these factors as important in the minds of buyers of their products.

Issues of quality, reputation and trustworthiness were reflected as important characteristics within a company for both Japanese and Canadians. Airtightness and highly insulated houses were also expressed on both sides as important features in the minds of the client.

Price, lack of educational material and the requirement for centralized ducting for ventilation/heating and cooling were viewed by the Canadian responses as what buyers (implying Japanese buyers) disliked about the Canadian product.

Japanese respondents cited the fact that their companies were viewed by some potential buyers as inferior and lower in social standing to that of the national builders and as such their houses lacked prestige.

C. Customer education

Customer education programs are not universal in either Canadian or Japanese companies but several companies did indicate that they have or offer such a program. More importantly is the provision of a home care buyer's manual which all Japanese companies provide to their buyers. Not all Canadian companies provide such a manual.

D. General Quality

Both Canadians and Japanese shared similar views on the quality of various products and services. Both Canadians and Japanese agreed that building durability and home comfort as having very high quality. Canadians identified structural and exterior appearance as the next two areas which deserved to be recognized as having above average to much above quality in contrast to the Japanese who rated windows/doors, noise and design/layout as those elements deserving of being recognized for their higher level of quality.

Areas of Agreement

	Canadian	Japanese
Building Durability	Much Above/Above Av	Much Above/Above Av
Home Comfort	Much Above/Above Av	Much Above/Above Av
Interior Finish	Above Avg/Avg	Above Avg/Avg
Defects in Mechanical	Above Avg/Avg	Above Avg/Avg

Areas of Lesser Agreement

	Canadian	Japanese
Structural	Much Above/Above Av	Above Avg/Avg
Exterior Appearance	Much Above/Above Av	Above Avg/Avg
Windows / Doors	Above Avg/Avg	Much Above/Above Av
Noise	Above Avg/Avg	Much Above/Above Av
Design / Layout	Above Avg/Avg	Much Above/Above Av
Kitchen Cabinets	Avg	Above Avg/Avg
Foundation	Avg	Much Above/Above Av

E. Building it right the first time

Japanese and Canadian respondents have a number of areas where they significantly differ in their views of areas requiring improvement. Of the top two areas considered important to Canadians, value and pleasantness, the Japanese regard these as very low priorities for improvement.

The areas of healthiness and accessibility are ranked as the two top areas for improvement by Japanese, both of which rank very low to Canadians.

Both Canadians and Japanese ranked durability and environmental as relatively high areas for improvement. The higher ranking of durability was surprising given earlier responses (Question 8) by both Japanese and Canadians which indicated the quality of building durability was much above average. This issue in particular deserves further exploration.

Areas Requiring Improvement

	Canadian	Japanese
Value	1st	7th
Pleasantness	2nd	8th
Durability	3rd	3rd
Doors / Windows	4th	6th
Environmental	5th	5th
Healthiness	6th	2nd
Mechanical	7th	4th
Fire Safety	8th	9th
Accessibility	9th	1st
Noise	Not ranked	Not ranked
Home Comfort	Not ranked	Not ranked

Taking the top 4 areas where companies are committed to delivering a superior product or service, Canadians and Japanese both agree on energy efficiency, windows and doors and durability. As reflected earlier the Japanese are placing greater emphasis on healthy environment or healthiness which still does not rank high in the minds of Canadians.

Top 4 areas where companies are committed to delivering a superior product

Canadian	Japanese
Energy Efficiency	Energy Efficiency
Doors/Windows	Doors/Windows
Better Durability	Better Durability
Best Value	Healthy Environment

F. Quality Standards and Continuous Management Improvement

There is general awareness of quality management and many have taken seminars. However, only a few have taken courses or are in pursuit of ISO certification. With regards to quality systems and guidelines most companies have procedures in writing but some companies clearly indicated that they did not. Most were aware of ISO but few of the respondents were actually pursuing ISO certification. About half the Canadian respondents had developed a quality assurance management process as opposed to only 1 out of 6 Japanese respondents.

G. Shipping and Handling

Generally no problems were expressed by either Canadian respondents regarding shipping and handling. Contract administration and site security appeared to be areas of more concern for both.

H. Regulatory Barriers

Some of the Canadian respondents indicated regulatory barriers as hampering timeliness of getting products to the market although these were more related to countries other than Japan.

I. On the Site

Both Canadian and Japanese respondents rated trades associated with windows and doors and general component suppliers as above average. Both Canadian and Japanese ranked site assemblers and finishing trades as average to above average although not as high as windows and door trades.

Japanese were very critical of exterior contractors and mechanical/electrical trades whereas Canadian respondents were more critical of the kitchen cabinet trades compared to the Japanese ranking for this trade.

Almost all Canadian companies encouraged a program that allowed trades / professionals from other countries to practice in their domestic market whereas about half the Japanese respondents indicated that they would **not** encourage a program to allow trades/professional from Canada to practice in Japan.

J. Warranties/After Sales Service

All respondents indicated that they provided service to their customers after the warranty periods expired although the long term commitment by the Japanese to their client is probably the most significant observation and difference between Canadian builders.

Canadian and Japanese respondents indicated that they were experiencing problems with building materials and equipment in the context of warranties and after sales service. There are complaints of a lack of commitment by suppliers, difficulty in obtaining quality parts and the responsibility for after sales service is not made clear.

Probably the most disturbing difference in responses between Canadian and Japanese was on the issue of whether the supplier made good on warranty claims. Most Canadian respondents felt that suppliers made good on warranties. **All** Japanese respondents felt suppliers did not make good on warranty claims.

Whether the Japanese responses were referring to Canadian suppliers, Japanese suppliers or both is not clear but in all likelihood there is probably some inference to Canadian suppliers.

Notwithstanding that warranties always have some limitations, this situation is not acceptable. Rampant unresolved warranty items matter, especially to owners. It represents an extremely important discrepancy that should be investigated further if Canada is to continue to advance housing exports that meet the needs of Japanese customers.

6.0 RECOMMENDATIONS / CONCLUSIONS

Market Intelligence/Client Needs

In the context of exporting, most Canadian firms did not know what segment of the market their clients were buying their houses for. This suggests for the most part that Canadian exporters continue to be reacting to orders from their clients. While this is reasonable and expected in the short term, Canadian exporters may be missing value-added opportunities to introduce alternate or improved product lines to the Japanese clients.

Recommendation

Independent market intelligence by Canadian firms or the Canadian government is strongly encouraged to anticipate consumer preferences and future demographics in Japan to the same level as is understood in Canada. This will provide the requisite information to the private sector to ensure products and services meet client expectations as they evolve rather than reacting to these needs.

Small to medium size Japanese companies are constantly competing against the large national home builders. These companies rely heavily on their reputation in the community and focus on designs that create a strong, prestigious image for their client. This is similar to the custom home market in Canada. While Canadians appear to be focussing on quality products (something that should be assumed) Japanese clients' priorities are focussed more on the house design and appearance as well as technical features related to airtightness and insulation.

Recommendation

Canadian companies are encouraged to work with, offer and continue to promote the virtues of their western style designs as part of a marketing effort that helps the Japanese client create this unique, prestigious Canadian house image as a tool in helping these small and medium companies differentiate themselves from the nationals.

General Quality

The context of this question was presented such that companies would rank the quality of various elements relative to each other. For the Japanese, the question does not necessarily rank or rate Canadian products; however, since some of the companies do import Canadian products, there is probably some indirect reference to Canadian products. Canadian companies should use this information to better understand the important issues and priorities related to their Japanese clients.

Both Japanese and Canadian companies believe that the products and services they offer are durable and enhance home comfort. Japanese companies also believe that windows and doors, noise quality (implies quietness) and design/layout are of high quality. Since many Japanese

import windows and doors there is probably a strong endorsement of Canadian windows and doors in this question.

Both Canadians and Japanese believe that interior finish, while acceptable, could probably be improved in quality. The Japanese believe that the quality of structural elements, exterior appearance and kitchen cabinets are acceptable but compared to durability, home comfort and windows and doors there is an implicit suggestion that there is room for improvement. Several of these elements may in fact relate to the desire by the Japanese to create a stronger and more prestigious image for their product since these items are the most visible to the homeowner.

Areas where the Japanese are focussing their attention on greater improvement include healthiness (implies healthy indoor environment) and accessibility. Both imply a strong emphasis on the growing aging population. Durability and mechanical systems (implying ventilation related systems) are also high on the Japanese list of areas requiring improvement. Environmental issues related to housing (recycling, energy efficiency) also are ranked relatively high.

Recommendation

Canadian companies are encouraged to continue to offer and promote high quality products that contribute to durability and to home comfort. Special attention needs to be paid to components that contribute to healthy indoor environment, accessibility, energy efficiency and environmentally sound products such as recycled materials. More attention is also recommended in improving or offering higher quality components relating to exterior appearance (where Canadians can exact control), interior finish, and kitchen cabinets, again in the context of promoting a more prestigious product. It was observed that many of the items of importance to the Japanese are not areas that Canadians consider important.

Quality Standards and Continuous Management Improvement

Most companies are developing quality management processes and systems in the recognition that this can contribute to improved competitiveness and profitability. Such systems and guidelines can take a significant amount of time to develop requiring a commitment from all levels of the company. The building sector in particular, with its strong reliance on sub-trades and suppliers, factory and on-site work adds a significant level of complexity to developing such systems. The very complexity of the building process in itself demands a more rigorous management system to ensure that all elements when assembled meet client expectations. A weakness or lower quality in any one element can significantly contribute to the overall lower quality of the overall housing system. By developing and documenting the process of quality assurance combined with independent third party certification, this certification can be used as a potent marketing tool to create a more prestigious image for the house, a need expressed by many small and medium size companies.

Recommendation

Canadian companies are encouraged to continue to develop strong quality management processes. Courses on continuous improvement specifically designed for the housing and import/export business need to be developed to further enhance industry knowledge of the benefits. The early Canadian adopters of ISO type certification should be supported and case studies of typical guidelines and systems documented to give companies a good starting point to begin embodying quality standards within their companies.

Warranties/After Sales Service

The Japanese homebuilders or suppliers are committed to the clients virtually for life. Long term warranty and after sales service lasting 10 or more years are not uncommon. Homeowner manuals explaining the house and various products are always supplied by Japanese homebuilders to their homeowners. This in part is probably reflected in their culture which embodies implicit trust between people. Another factor may be the fact that houses typically last for 20 years before they are replaced. Maintaining a relationship with the homeowner increases the likelihood of repeat business. The ability of Canadian companies to support the Japanese client so he can meet his long term commitment to the homeowner is challenging but necessary requirement for Canadian companies supplying products and services to Japanese clients.

Problems are being experienced with building materials in Japan in the context of warranties and after sales service. Again, the context of the question could apply to domestic or imported products and in all likelihood there is probably an indirect reference to Canadian imported products. **All** Japanese respondents felt suppliers did not make good on warranty claims while Canadians felt that they did honour (in the context of exported products) their warranty commitments. Whether the Japanese responses were referring to Canadian suppliers, Japanese suppliers or both is not clear but in all likelihood there is probably some inference to Canadian suppliers.

Notwithstanding that warranties always have some limitations, this situation is not acceptable. Rampant unresolved warranty items matter, especially to owners. It represents an extremely important discrepancy that should be investigated further if Canada is to continue to advance housing exports that meet the needs of Japanese customers.

Recommendation

More effort needs to be made by companies to clarify roles and responsibilities between Canadian and Japanese for after sales service and warranties. Canadian commitments also need to reflect the real costs of providing this level of service.

Canadian companies are encouraged to develop appropriate homeowner manuals (in Japanese) related to the products and services provided by the Canadian companies. This concept is growing in Canada but is universal in Japan as part of the long term commitment Japanese builders make to the homeowners. The costs for the Japanese commitments are probably built in

to the costs of the house and Canadian companies should build in and clearly explain such value added services. The additional costs however need to be backed by a reliable level of support.

In this context, a feasibility study investigating the establishment of nonprofit Canadian Housing Service Excellence Centres (CHSEC) in Japan needs to be undertaken as a priority. CHSEC would provide local customer service and product support far beyond the sale and could include some level of warehousing for critical components susceptible to damage or failure. Such a Centre would help to provide continuous feedback on areas requiring improvement, as well as changing consumer preferences and trends. Through such a Centre, Canada's customer service reputation will be improved if Canadians continue to show commitment to service, especially at the local level.

APPENDIX A
LETTER OF INTRODUCTION

October 1997

Dear Japanese / Canadian Associate:

Re: Superior Quality Assurance Program

We are pleased to announce the commissioning of an important strategic research project being undertaken by National Resources Canada (NRCan). The research will identify key elements of the Japanese Super E - Superior Quality Assurance Program for houses and apartments. Canada's excellence in home building will then be tailored to meet the needs of customers in Japan, Canada and other countries.

NRCan has secured the assistance of the Cedaridge Research Centre (CRC) to identify the essential elements of superior quality housing and to recommend appropriate protocols. We have extensive knowledge of the principals of quality assurance and have successfully developed the New Home Warranty Program's revised high-rise certification requirements. A continuous improvement approach has been successfully applied on a voluntary basis to over 10,000 homes, by leading edge builders in Canada and it is essential this approach be utilized in housing exports.

Our approach will be to go beyond the current Housing and Loan Corporation Standards and Loan Specifications for 2x4 Housing. We request your assistance in identifying potential improvement ideas in the following areas:

- * building durability
- * energy efficiency
- * healthiness
- * accessibility
- * fire safety
- * pleasantness
- * doors/windows
- * mechanical
- * customer value

Attached you will find a Questionnaire. Please complete as many questions as possible and, fax or e-mail your responses by November 30, 1997 if possible. This information will provide you with valuable building insights which can give you a strategic advantage, whether you are building in Canada or Japan.

Thank you for your assistance.

Yours very truly,
CEDARIDGE RESEARCH CENTRE



Robert Marshall, P. Eng. - Vice President

15010 Yonge Street, Aurora, Ontario, Canada, L4G 1M6 Fax: 905-841-6744 Phone: 800-215-2218 ext. 3 E-MAIL: marshallr@inforamp.net

Beeton

Aurora

Vancouver

**APPENDIX B
CUSTOMER QUESTIONNAIRE**

QUESTIONNAIRE - NATURAL RESOURCES CANADA

Superior Quality Assurance Program

Your feedback helps improve the quality of homes for buyers in Canada and Japan. Please take a few minutes to complete this questionnaire and return by fax @ (905) 841-6744 or EMAIL: marshlr@inforamp.net by **October 30**. We appreciate your suggestions and will be pleased to provide you a complimentary copy of the final Quality Assurance Report.

Thank you for your assistance!

GENERAL:

1. Which of the following best describes your company's primary business activity?

Sales Agent (Consolidator) Pre-Fab. Hsg. Company Supplier (component: _____)
Buyer House Builder Trade/ Contractor Architect/Engineer Third Party
Assoc. Representative

2. How many homes do you anticipate selling or building during the next 12 months?

Over 100 50 to 99 10 to 49 1 to 9 Not Applicable

3. Please indicate the approximate # of homes or components shipped in each market:

Canada _____ Rest of North America _____ (Which areas _____)
Japan _____ Rest of Asia _____ (Which areas _____)
Germany _____ Rest of Europe _____ (Which areas _____)
South America _____ (Which areas _____)

4. What type of housing does your company mostly market or build?

Detached Single Family Semi-Detached, Row & Townhouses Apartment Buildings

If you make components or provide services, please indicate type(s)

5. What are the three most important reasons for buyers to purchase your homes, components or services?
(please indicate 1st, 2nd and 3rd choices)

Product Quality Quality of Construction Referral Location
Financing Floor Plan Price Size Appearance

6. Over the past 12 months, what proportion of your sales have been in the following market segments?
(THE APPROXIMATE PERCENTAGE OF YOUR SALES SHOULD ADD TO 100%)

First-Time Buyer _____ %
Move-up Buyer (Tract Housing) _____ %
Move-up Buyer (Custom Homes) _____ %
Move-Down Buyer _____ %

COUNTRIES

7. Does your company have a customer education program in place which is focused on managing your customer expectations? (CIRCLE YES OR NO FOR EACH AREA)

Have customer education Program.	YES	NO
Have a buyer's Manual on Home Care & Maintenance	YES	NO

8. Based on the quality of your homes, product or services please rate the following: (PLEASE CIRCLE ANY APPLICABLE COMPONENT)

	Much better than average	Above average	Average	Much worse than average
Interior Finish (Paint, Trim etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitchen Cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windows/Doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior Appearance (Cladding, Roofing Components etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design/Layout (Functionality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defects in Mechanical Equipment (Heating, Cooling, Hot Water, Ventilation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building Durability (Leaks, Condensation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home Comfort (No Drafts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. What do owners or buyers like about your homes, product or services? (Use reverse side if needed)

10. What do owners or buyers dislike about your homes, product or services?

BUILDING IT RIGHT THE FIRST TIME INSIGHTS

11. How would you rank the importance of the following improvement areas? (please indicate choices 1, 2,3 etc.)

Durability [] (moisture)	Environmental [] (energy efficiency)	Healthiness [] (sound, material emissions)
Accessibility [] (barrier free access)	Fire Safety [] (warning/barriers/sprinklers)	Pleasantness [] (finishes)
Doors/windows [] (performance)	Mechanical [] (heating, ventilation and cooling)	Value [] (service, warranty and certification)

12. Which target area(s) is your company committed to delivering a superior product or service ?
(please provide top 3 choices)

- | | | |
|---|---|--|
| Better Durability []
(no mould) | Energy Efficiency []
(insulation) | Healthy Environment []
(low emissions) |
| Barrier free accessibility [] | Fire Safety []
(early warning/sprinklers) | Top Quality Finishes [] |
| Doors/windows []
(high performance) | Efficient Mechanical Systems []
(enhanced indoor air quality) | Best Value [] |

13. Are your employees and business associates committed to the principals of quality system standards and guidelines? YES NO

14. Does your company have a continuous management process in place which is focused on the customer in the following areas of activity? (CIRCLE YES OR NO FOR EACH AREA)

- | | | |
|--------------------------------|-----|----|
| Sale of Product/Services | YES | NO |
| Design of Product/New Services | YES | NO |
| Contracts | YES | NO |
| Construction Supervision | YES | NO |
| Defect/Deficiency Prevention | YES | NO |

15. Are your management procedures and processes in writing?

- YES NO

16. If YES, has the management team committed to making one person responsible for the process?

- YES NO

17. On the topic of ISO 9000 (International Organization for Standards, based in Geneva, Switzerland), has your business; (CIRCLE YES OR NO FOR EACH AREA)

- | | | |
|---|-----|----|
| Become aware of this management process | YES | NO |
| Attended seminars | YES | NO |
| Taken courses | YES | NO |
| Developed a Quality Management Program | YES | NO |
| In Pursuit of ISO Certification | YES | NO |

18. How would you prioritize your pursuit of a quality product which consistently meets or exceeds a level of performance that has been spelled out by the customer?

- | | | | | | |
|--------------|------------|---------------------|----------------|-------------------|----------------------------|
| Top Priority | A Priority | Somewhat a Priority | Not a Priority | Not needed at all | Don=t Know/ Not Applicable |
| [] | [] | [] | [] | [] | [] |

19. Are you having shipping or handling problems in exporting your prefabricated components?

YES NO

If Yes, please explain: _____

20. Based on your experiences please rate the following:

	Much better than average	Above average	Average	Much worse than average
Reliability of Shipping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping on Time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suitable Containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handling Problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contract Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Are regulatory barriers and/or lack of standards hampering the timeliness of getting your product to market?

YES NO

If Yes, please explain: _____

22. Based on your experiences, please rate the following:

	Much better than average	Above average	Average	Much worse than average
Foundation Contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site Assemblers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior Contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical/ Elec. Trades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finishing Trades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Component Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windows/Doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitchen Cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. Is the availability of trained trades for your business?

An Important Problem	A Problem	Somewhat a Problem	Not a Problem	Not needed	Don't Know/ Not Applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Do you use your own construction crews? YES NO

25. Please rate the quality of:

	Much better than average	Above average	Average	Much worse than average
Your own Crews	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Would you encourage having a program that allows trades/professionals from other countries to practise in your domestic market?
YES NO

27. Are you experiencing problems with building materials and/or equipment?
YES NO

If Yes, please explain: _____

28. Did your supplier make good on all warranty items?
YES NO

If Yes, please explain: _____

29. Based on your customer service experiences, please rate the frequency of defects for the following areas :

	Much better than average	Above average	Average	Much worse than average
Foundations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Framing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windows/Doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roofing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitchen Cabinets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finishing Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. As a supplier, prefab housing company or builder, do you provide service to your customers after the warranty periods expire?
YES NO

If Yes, please explain: _____

31. We will be surveying some associates in person. If you are interested in a personal interview please indicate.

I am willing to share my thoughts and opinions in a telephone interview. YES NO

32. Please add any other comments or suggestions for improving the quality of housing. (Use reverse side)

Yes, I am interested in obtaining a complimentary copy of the final Superior Quality Assurance Survey Report.

Name of QA contact: _____

Position: _____

Address: _____

City: _____

Country: _____

Postal Code/Zip: _____

Phone: _____

Fax: _____

E-Mail: _____

Fax Questionnaire to: (905) 841-6744 or EMAIL: marshlr@inforamp.net