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Research Design:
Development of a Profile of
the Residential Renovation Industry
in Nova Scotia

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1. Introduction

Overview

Changes in the nature and composition of housing demand have placed the entire residential construction industry in a state of transition. As a consequence of these changes, housing renovation will be a key component of the industry in the future. This research design introduces the conceptual and methodological issues related to a study of the residential renovation industry in Nova Scotia. The project is a joint government and industry planning study aimed at preparing for the future of the renovation industry.

In order to plan for change effectively, both public and private sector decision-makers must have access to current information on the activities of the renovation industry, its characteristics and how the industry structures itself to supply the services and skills necessary to meet the demand for renovation work. Unfortunately, the current information base does not meet the needs of either sector.

It is recognized that the renovation industry is as diverse as renovation work itself. In the broadest sense, renovation work is carried out by both large and small firms as well as "do-it-yourself" homeowners. However, the latter group is not to be considered part of the industry for the purposes of this study. The industry does include firms of various sizes that concentrate all or part of their work activities on renovation. Both general contractors and related building trades are to be considered as part of the industry.

Renovation work, as defined for this study, includes both capital improvements to and the rehabilitation of existing housing units. Housing rehabilitation is typically limited to repairs and improvements to existing dwellings required to satisfy minimum municipal property standards.

Study Objectives

The decline in requirements for new housing units in concert with the aging of the existing housing stock has important implications for the residential construction industry and the renovation industry in particular. This study results from the recognition by both the public and private sectors of the need to prepare for increased demand in the housing renovation sector. A full understanding of the characteristics and capabilities of the residential renovation industry is fundamental if the changes in the industry are to receive the attention they require. Consequently, the primary objective of this study is:

to develop a deeper understanding of the residential renovation industry in Nova Scotia so that the appropriate policy, planning, organizational and educational activities necessary to accomodate anticipated changes in the function and composition of the entire residential construction industry may be undertaken by the public and private sectors.

In meeting the primary study objective, the analysis must also satisfy a number of sub-objectives. These include:

- to identify explicitly industry participants for the purpose of follow-up action if required;
- to assess the industry's prospects and expectations for development and growth, including the need for a product warranty;

- to identify both the internal and external constraints and problems faced by industry participants; and,
- to determine areas where government policy initiatives and support may be required.

2. Study Requirements and Research Topics

2.1 Anticipated Outputs

To fulfill the study's objectives, the research must provide a number of explicit outputs. The primary output will be a comprehensive profile of the housing renovation industry in Nova Scotia. This profile must:

- assess the size of the renovation industry, its capacity, skill levels, and scope;
- encompass all geographic areas of the province, both urban and rural;
- estimate the effects of firm size on various work activities and performance;
- determine the degree that contractors are involved in renovation versus new construction or other activities; and,
- estimate the kinds of renovation work undertaken.

The second major output of the research will be a list of renovation industry participants. This list will allow the industry representatives on the study Steering Committee:

- i) to inform and assist renovators in the province,
- ii) to expand its own membership in the province; and,
- iii) to improve the quality and standards of renovation work throughout the province.

Thirdly, from the information gained during the development of the industry profile, the consultant should provide an assessment of the industry's view of its future

including topics such as its growth potential, the role of government, and consumer confidence in the industry. In terms of the latter topic, the possible need for a renovation warranty, similar to that used for new construction, should be examined.

Another output relates to the internal and external problems and constraints faced by industry participants. To satisfy the study requirements, the consultant must determine the extent to which internal problems such as inadequate skill levels and education affect the performance of firms in the industry. Possible financing difficulties, the general business environment and the regulatory environment are areas where external barriers to the industry may exist. These and other topics that may arise during the development of the industry profile should be investigated by the consultant.

As a result of this analysis, the study should provide an indication of areas where government policy initiatives and support may be required.

2.2 Additional Topics

It is anticipated that one or more sample surveys will be the most appropriate means of meeting the objectives of this study. Although specific questionnaires have not been designed, it is possible to indicate potential research questions based on the study objectives. In addition to the descriptive analysis which will constitute the bulk of the profile, the research must be designed to answer questions such as the following:

- 1) Do firms of various size differ in performance characteristics such as output per employee, employee years of work and skill levels as well as quality of work?

- 2) To what degree do firms concentrate on particular segments of the renovation market? Are there firms that specialize in renovation work?
- 3) Is there a general lack of management skills in renovation firms? If so, is this a significant barrier to the successful expansion of the firms?
- 4) How do renovation firms obtain work?
- 5) What is the degree of mobility in firms, particularly smaller operations? Do most firms complete most of their work within a small geographic area such as a neighbourhood?
- 6) Are small firms offshoots of larger construction companies? Even if this is not the case, are larger companies indirectly responsible for levels or standards of skill development in smaller firms?
- 7) Is quality an important consideration to renovation contractors? Is there a measurable difference in the quality of work performed by various sized firms?

3. Methodology Options

3.1 Statement of the Problem

Two areas pose a major challenge to the successful fulfillment of the study's objectives: the lack of pertinent research and the unavailability of data. The problem is compounded by the apparent diversity of the renovation industry, the variety of renovation work and even the size of individual renovation markets in Nova Scotia. As a consequence of these conditions and constraints, this study requires a carefully planned methodological approach.

Research on the characteristics of industry participants is in the formative stage. Most of the work completed to date concentrates on particular segments of the industry which are active in large urban areas. While the research is generally not directly applicable to the Nova Scotia situation, it may be useful for comparison purposes. For example, several studies have been completed on the renovation industry in the Toronto area. Large Scale Renovation by Coombes/ Kirkland/ Berridge (1983) used surveys, interviews and a case study methodology to examine large scale renovation experiences with groups of houses or low-rise apartment buildings. The Toronto Renovators: The Structure of the Industry and the Operation of Its Firms was completed for CMHC by Donald M. Caskie in 1983. The study is rather limited in methodological scope: a small number of renovation firms were contacted, primarily based on their inclusion in the Toronto Yellow Pages. John Clark undertook two studies for CMHC on rehabilitation contractors in the Ottawa area in 1980 and 1981. The objective was to determine the extent to which building permit data could be used as a data source for contacting rehabilitation contractors.

Although the study had similar objectives to this current study, the use of building permit data as a data source and the limited geographic coverage of the study make it difficult to generalize the results to the Nova Scotia renovation market.

Data on the Nova Scotia renovation industry are scarce. The data that are available suffer from a number of inadequacies, the most common difficulty being incomplete coverage. For example, many small firms do not advertise in the Yellow Pages; many appear to obtain work by word of mouth. Industry associations presently include only a small percentage of firms active in the renovation industry; such firms are typically located in the larger urban centres of the province. In addition, most renovation work appears to be completed without a building permit. Consequently, this potential data source may have only limited use.

The following section presents several possible methodological approaches to meeting the study objectives. The primary focus of the approaches is on data collection.

3.2 Research Design

Industry Enumeration

The preparation of a province-wide list of firms in the renovation industry is a key first step in the research design. The information obtained from a carefully designed enumeration of the industry will greatly influence the subsequent choice of a survey methodology. The enumeration should be comprehensive. The consultant may also wish to include information on the size and degree of specialization of renovation firms. In addition to providing input on the

survey methodology, this information will form the basis of a profile of the industry.

Survey Options

The constraints and difficulties noted in section 3.1 suggest the need for several alternative approaches to meet the study objectives. Each alternative presented below has different levels of reliability, accuracy and resource commitments. The choice of the methodology is also influenced by the information obtained during the enumeration of the industry. Depending on which factors are important, one or more of the following alternatives should be considered. The consultant should recommend which option or set of options will best satisfy the study objectives.

- 1) A survey of the industry as viewed by industry clients and other special interest groups;
- 2) A full-scale sample survey of renovation firms operating throughout the province; and,
- 3) A sample survey restricted to certain industry sectors or geographic areas where renovation is an important component of housing activity.

Two general methodological approaches are possible: direct and indirect surveys of industry participants. The first method, which corresponds to Option 1, examines the nature of the industry indirectly through interviews with the industry's clients, government officials and others with direct industry contact. The former approach, which includes Options 2 and 3 above, involves direct questioning of renovation industry participants through one or more surveys.

Option 1: An Indirect Survey of the Renovation Industry

Option 1 approaches the development of the industry profile from the perspective of informed industry observers. This option may be used either as a stand-alone option or as a supplement to Options 2 or 3.

The major reasons for considering Option 1 include:

- i) the cost of the survey;
- ii) a potentially different perspective on the industry; and,
- iii) the potential for obtaining information on small, low-visibility firms and the extent to which they operate in the renovation market.

Furthermore, by considering the informal opinions of those who deal with the industry such as clients, government officials and material suppliers, potential biases may be minimized. However, care should be taken so that the biases of those interviewed do not influence the study.

Interviews with this group may provide valuable insight into the operations of renovation firms who either may not have been identified during the list preparation stage or who may not wish to be identified on such a list.

The methodological basis for Option 1 is a sample survey approach. With this method, a random sample of municipal building officials, building supply dealers, RRAP Delivery Agents and persons who have hired renovation contractors would be selected and interviewed. One or more methodological techniques would be used in selecting the sample and conducting the interviews.

Option 2: A Survey of Renovation Industry Participants

This option assumes that the renovation industry profile must be based on complete geographic coverage of the province. Implicitly, this approach assumes that the structure of the industry differs in a statistically significant fashion by location, although the extent of these differences is not readily apparent.

The survey methodology for dealing with a province-wide study of renovators may be relatively straightforward, once the difficult step of identifying industry participants is complete. The problems and challenges of enumerating renovation contractors are briefly examined in Section 3.3.

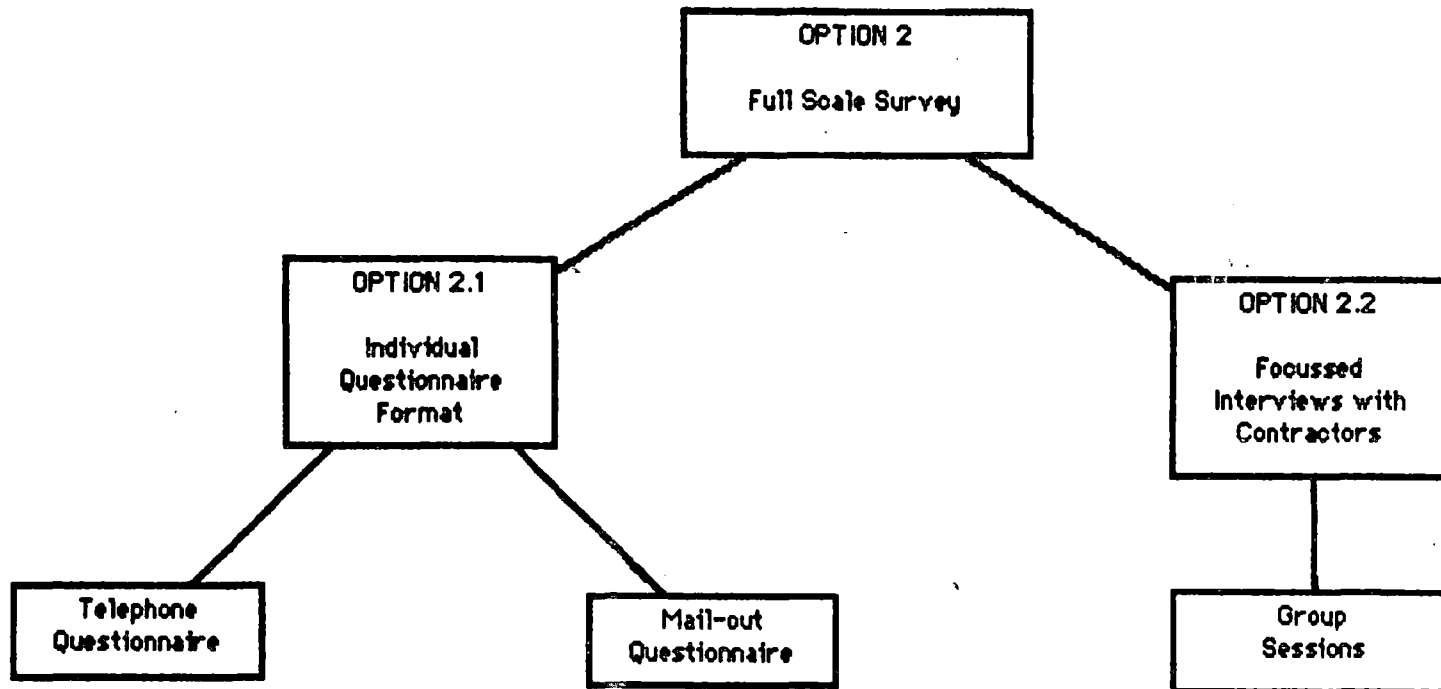
Option 2 consists of three methodological approaches, graphically presented in Exhibit 1. The first approach is based on a comprehensive set of interviews with a representative random sample of individual renovation contractors throughout Nova Scotia. The second relies on a series of focussed group interviews with renovation contractors representing various regional housing renovation markets. The third approach combines elements of the first two sub-options.

Sub-Option 2.1: Individual Contractor Interviews

The design of the first survey depends a great deal on the information obtained during the enumeration of renovation firms. A grouping or stratification of the firms by geographic location, firm size and/or type of renovation work appears to offer the greatest potential for obtaining the most accurate results at minimum cost.

Exhibit 1

Various Options for a Province-Wide Survey



The survey methodology should focus on either a telephone interview, administered by the consultant, or a self-administered questionnaire, mailed out to potential respondents.

Sub-Option 2.2: Focussed Group Interviews

Focussed group interviews rely on a specific set of interview questions which form the basis for a series of group discussions. Contractors from several different locations around the province would be asked to participate in the discussion groups. Care should be taken to ensure that the contractors who agree to participate are truly representative of the industry. This sub-option may either serve as the primary research vehicle for the survey or complement individual contractor surveys.

Sub-Option 2.3: The Combination Approach

This option combines key aspects of the two previous sub-options. With sub-option 2.3, focussed group interviews would take place at an early stage of the study. Information gained during these interviews would be used to plan for the detailed contractor interviews. One practical advantage of this approach is that the survey methodology and other questions related to the research design may be refined before proceeding with individual contractor surveys.

Option 3: A Sub-Sample of Renovation Industry Participants

Option 3 is based on the assumption that province-wide conclusions may be made from a smaller sample than that required in Option 2. Implicit in this assumption is the view that the renovation industry is sufficiently homogenous to allow some form of sub-sampling to be used.

The basis for choosing between Option 2 and 3 is the information obtained during the enumeration of the industry. The unit cost of each survey would also influence the decision.

The sample in Option 3 might be stratified by geographic region and/or industry sectors. For example, if the list of renovation contractors indicates minimal activity in small urban or rural areas, it may only be necessary to consider firms in certain sizes of urban areas. Information on building trades such as electricians and plumbers who are primarily involved in sub-contracting may be costly and difficult to obtain. The project sponsors may wish to either develop a profile of these sectors separately or consider them within the context of general contractors. In either case, a full scale Option 2 survey might not be required.

3.3 Sources of Information

The reliability and accuracy of this study are largely dependent on the information base from which the sample surveys are developed. Consequently, as noted in section 3.2, this study should begin with the preparation of a list of industry participants. Although this activity is primarily a data gathering exercise, its difficulty should not be underestimated. Factors such as the small scale of renovation work combined with the apparently large numbers of small sized firms contribute to the problem of obtaining data. In addition, many renovators may not wish to be identified, possibly for taxation reasons, potential job conflicts or a general dislike of what may be perceived as government or institutional interference.

The consultant should consider ways of minimizing data availability problems when attempting to enumerate the

industry. The following list indicates potential sources of information on the industry. The list indicates sources for both high profile firms which are easy to contact and low profile firms, for which some effort may be required to obtain adequate information. The latter category may include small firms which obtain business through word-of-mouth contact and individuals who undertake renovation work on a part-time basis.

Information Sources:

- Yellow Pages in telephone directories;
- CMHC RRAP Delivery Agents;
- Nova Scotia Department of Housing Regional Offices;
- CMHC loans/branch offices in Nova Scotia;
- Better Business Bureau;
- Nova Scotia Home Builders Association;
- Nova Scotia Home Certification Program;
- Nova Scotia Mortgage Lenders Association;
- Nova Scotia Department of Consumer Affairs: Consumer Services Bureau;
- Nova Scotia Construction Association;
- Nova Scotia Department of Health
- weekly and community newspapers throughout the province;
- Municipal Building Inspectors;
- Real estate agents;
- Lumber mills;
- Building supply dealers; and,
- Labour Unions.

4. Estimated Resources

This section provides estimates of the resources necessary to develop a comprehensive profile of the residential renovation industry in Nova Scotia. Estimates are provided for each study option identified in Chapter 3, as well as for a combination several options. The estimates are tentative, due to the degree of uncertainty concerning the level of effort required to enumerate the renovation firms. The estimated fees are based on a per diem cost of \$400 for professional staff, \$250 for research staff and \$125 for clerical staff. The information gathered during the enumeration stage will determine which survey option should be chosen and provide a better base for estimating the costs involved for each survey option.

MAJOR ACTIVITY 1: ENUMERATE THE RENOVATION INDUSTRY

The enumeration of the renovation industry would be primarily clerical in nature, if undertaken strictly as a compilation of firms active in the industry. Although some work may be done in the Halifax area, the task would require travel throughout the province by clerical field workers.

Resources:

DAYS

Professional:	5-10
Research/clerical	20-50
Total Days:	25-60

EXPENSES	\$4,500
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COST	\$20,000-\$25,000
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MAJOR ACTIVITY 2: SURVEY THE INDUSTRY

Each of the surveys will require professional staff for the planning and design and administration of the surveys. Other major tasks include the sampling design, and the design and testing of questionnaires. Research and clerical staff will conduct the actual surveys for the most part. However, in certain circumstances, such as in-person interviews, our preference is to have professional staff conduct the interviews. Consequently, interviews such as the focussed group interviews require a more extensive involvement of professional staff.

Option 1: Indirect Survey of the IndustryRenovation Client Survey:Resources:

DAYS

Professional:	10-15
Research/clerical	30-45

Total Days:	40-60
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EXPENSES	\$3,000
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COST	\$10,000-\$15,000
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Other Parties: Government, Building Inspectors, Suppliers, etc.

Resources:

DAYS

Professional:	15-20
Research/clerical	20-25

Total Days:	35-45
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EXPENSES	\$3,500
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COST	\$15,000-\$20,000
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If Major Activity I is combined with Option 1, costs may be reduced somewhat. The estimated total days to complete the survey should diminish. However, the number of professional days may not decrease significantly, since some of the clerical days in Major Activity 1 would be replaced by the increased involvement of professional staff, as in Option 1.

Our preliminary estimate is that Major Activity 1 and Option 1 could be completed for approximately \$35,000 to \$45,000. The total number of days required would be somewhere in the range of 100-140 days.

Option 2:- Province-Wide Survey:

Sub-Option 2.1:- Individual Questionnaires

Resources:

DAYS

Professional	10-15
Research/clerical	30-50
Total Days:	40-65

EXPENSES	\$4,000
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COST	\$25,000-\$30,000
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Sub-option 2.2: Focussed Group InterviewsResources:

DAYS

Professional	15-20
Research/clerical	10-15

Total Days:	25-35
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EXPENSES	\$2,500
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COST	\$10,000-\$15,000
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Sub-option 2.3: A Combined ApproachResources:

DAYS

Professional	20-30
Research/clerical	35-55

Total Days:	55-80
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EXPENSES	\$5,000
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COST	\$30,000-\$35,000
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Option 3: Geographical or Industry Sector Sub-Sample

At this stage, cost estimates for Option 3 are subject to a number of uncertainties, including the degree of coverage, the possibilities of stratification and the amount of data collection. We anticipate that cost savings in Option 3 would occur because of a less restrictive geographic coverage than Option 2. Consequently, expenses and fees would diminish overall, perhaps in the range of 10-15 percent.

MAJOR ACTIVITY 3: ANALYZE RESULTS AND PRODUCE REPORT

Once the industry has been enumerated and the surveys completed, the results must be analyzed and a report prepared. This activity requires coding and computer analysis of the questionnaires, the preparation of both draft and final reports. The task is heavily weighted towards professional and research staff.

Resources:

DAYS

Professional	10-15
Research/clerical	10-15

Total Days	20-30
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EXPENSES	\$1,500
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COST	\$8,000-\$10,000
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We believe that Major Activity 1 in combination with Option 1 of Major Activity 2 is the most feasible first step in the study. The next step would likely be Option 3, sub-option 3.1, although this ultimately depends on the results from the previous stages of the research. Major Activity 3 would be required regardless of which methodology is chosen. Based on these options, we believe that the budget for the overall study should be in the range of \$70,000 - \$85,000.