

Report on the CSA Questionnaire on Building Commissioning

Introduction

Since its beginning, the Canadian Standards Association (CSA) has been dedicated to the development of consensus standards, particularly in the fields of health, safety and building construction. CSA's recent interest in the practice of building commissioning arose as a result of the recommendations cited in the "Report on the Advisory Committee on the Commissioning of Buildings" issued by the Ontario Buildings Branch of the Ministry of Housing.

In July 1991, the Ontario Buildings Branch and Canada Mortgage and Housing Corporation (CMHC) offered financial support to fund a survey addressing the need to establish a national program to serve as a model for commissioning practices across the country. This report compiles the results of the survey and conclusions reached.

Research Program

In an effort to assess current building commissioning procedures, CSA conducted a survey in the form of a questionnaire. The purpose of the questionnaire was to evaluate support for the establishment of a series of

Canadian National guidelines upon which to base commissioning. Ultimately, this program could help to create more uniform application of commissioning practices.

In July 1991, CSA distributed the questionnaire to 135 selected representatives of the construction industry in Canada. An additional 66 questionnaires were sent to individuals whose participation was recommended by the original recipients.

Targetted recipients reflected a diverse array of individuals from all provinces and territories and represented four major interest groups:

- (i) owners, developers and contractors;
- (ii) architects and engineers;
- (iii) industry and manufacturing; and
- (iv) regulatory authorities.

Responses were tabulated according to these interest groups (Figure 1).

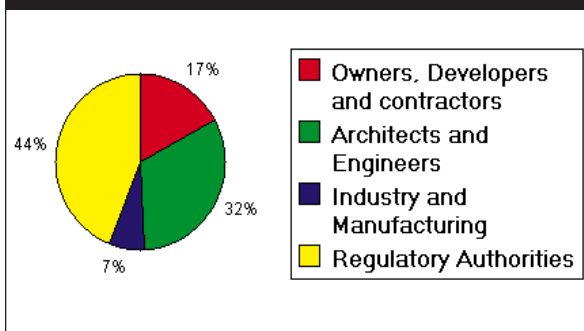
Questions in the survey covered a broad spectrum of issues. These ranged from opinions concerning present commissioning practices to direct inquiries about potential support for initiatives to improve building commissioning.

Results

The response to the survey was quite significant, as 50 per cent (100 out of 201 individuals) of the respondents completed and returned the questionnaire. The results were tabulated for each of the nine questions, and a general overview of comments associated with a specific question was provided.

Most respondents believed that a single verification of the safety and service systems of a building upon its completion is adequate. Others suggested that commissioning practices should be initiated at the concept stage and continued during the design and construction phases. A small minority preferred regular periodic checks as an essential part of the commissioning process.

Figure 1:
Percentage of respondents by interest group



About one half of the respondents indicated that formal commissioning of all new buildings was required within their organization; however, this practice was generally not all-encompassing. With the exception of hospitals, the majority of the responses indicated that only fire safety systems were involved.

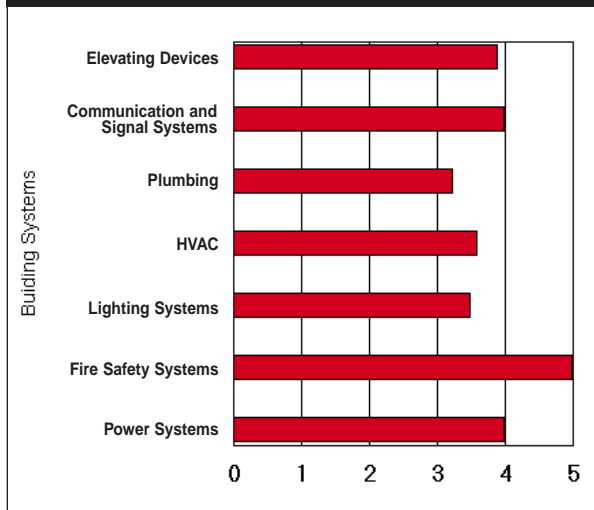
In terms of the specific building systems required to be commissioned, there were some generalizations. Fire safety and power systems (especially those associated with regular and emergency lighting) were among the most

common building systems to be evaluated. Other systems received considerably less attention.

There was overall agreement on the need to improve current building commissioning protocol. This was reflected in apparent support for the development of simple and affordable national guidelines by CSA to be available for voluntary use. However, there was some concern that such documents would be integrated into building bylaws.

The respondents expressed a need for documents on fire safety standards. It was also suggested that communication systems, power systems, elevator systems, lighting, plumbing and HVAC should be given priority in the development of CSA documents (Figures 2 and 3).

Figure 2:
Average priority of document development from 1 (low) to 5 (high)



Most responses reflected a genuine interest in participating in committee activities that would oversee the creation of the commissioning documents. Others suggested that regional workshops on building commissioning would be beneficial. However, most of the respondents said that they were not in a position to support the project financially.

In general, respondents emphasized the need for proper commissioning procedures but maintained that these should not be made mandatory by legislation. Better buildings will be achieved only by acceptable industry-driven practices and workmanship.

Implication for the Housing Industry

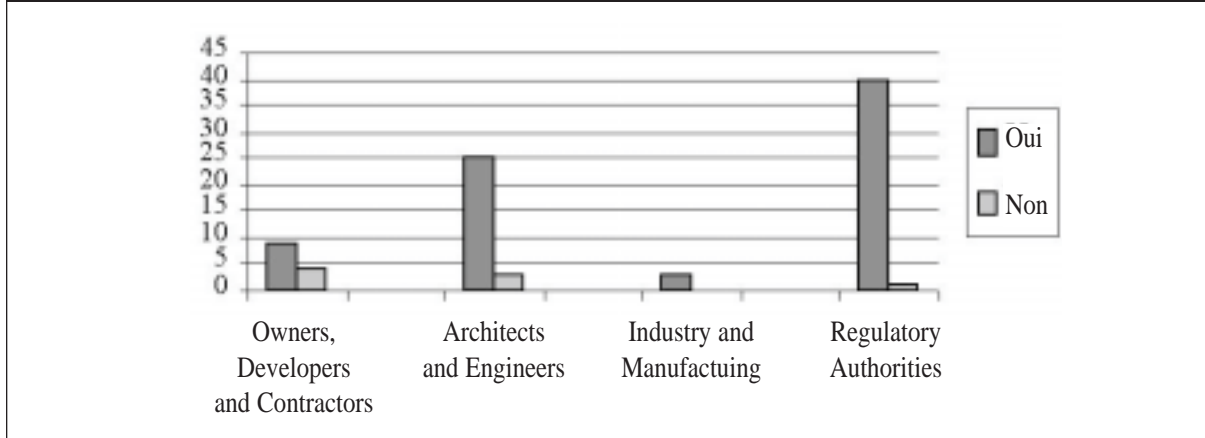
The results of the survey reflected a need to improve current strategies in building commissioning. This view was shared by individuals across Canada and belonging to various interest groups in the construction industry.

The present lack of a standard commissioning process prevents the application of consistent practices. Responses seemed to support the development of a series of Canadian National documents that would strive to create such a process. Such initiatives would contribute to the total quality assurance of all buildings and would serve to standardize industry- and profession-driven practices without imposing further legislation.

The creation of useful and effective documents under the auspices of CSA would have to address several issues:

1. A consensus understanding of the process of building commissioning would have to be defined.
2. The documents would have to encompass several activities, rather than focus on the more active areas for commissioning, such as fire safety and power systems.
3. The process would have to be applied voluntarily, not through bylaws.
4. These documents would have to be supplemented by regional workshops to promote a more commonly accepted approach to building commissioning. Interest in participating in such events was expressed by the respondents to the survey.
5. A committee of volunteers would be required to direct the project. Once again, responses indicated a willingness to participate in any committee activities associated with the development of CSA documents.
6. Financial support for the project would have to be sought from both the public and private sectors.

Figure 3: Distribution of responses on the need for Canadian National documents for commissioning practices



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Report: Report on the CSA Questionnaire on Building Commissioning, 1992.

A full report on this research project is available from the Canadian Housing Information Centre at the address below.

Housing Research at CMHC

Under Part IX of the National Housing Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

This fact sheet is one of a series intended to inform you of the nature and scope of CMHC's technical research report.

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