

The BOABC Quality Framework Project

ENVIRONMENTAL SCAN



PHASE 1.1 **Analysis and Recommendations**



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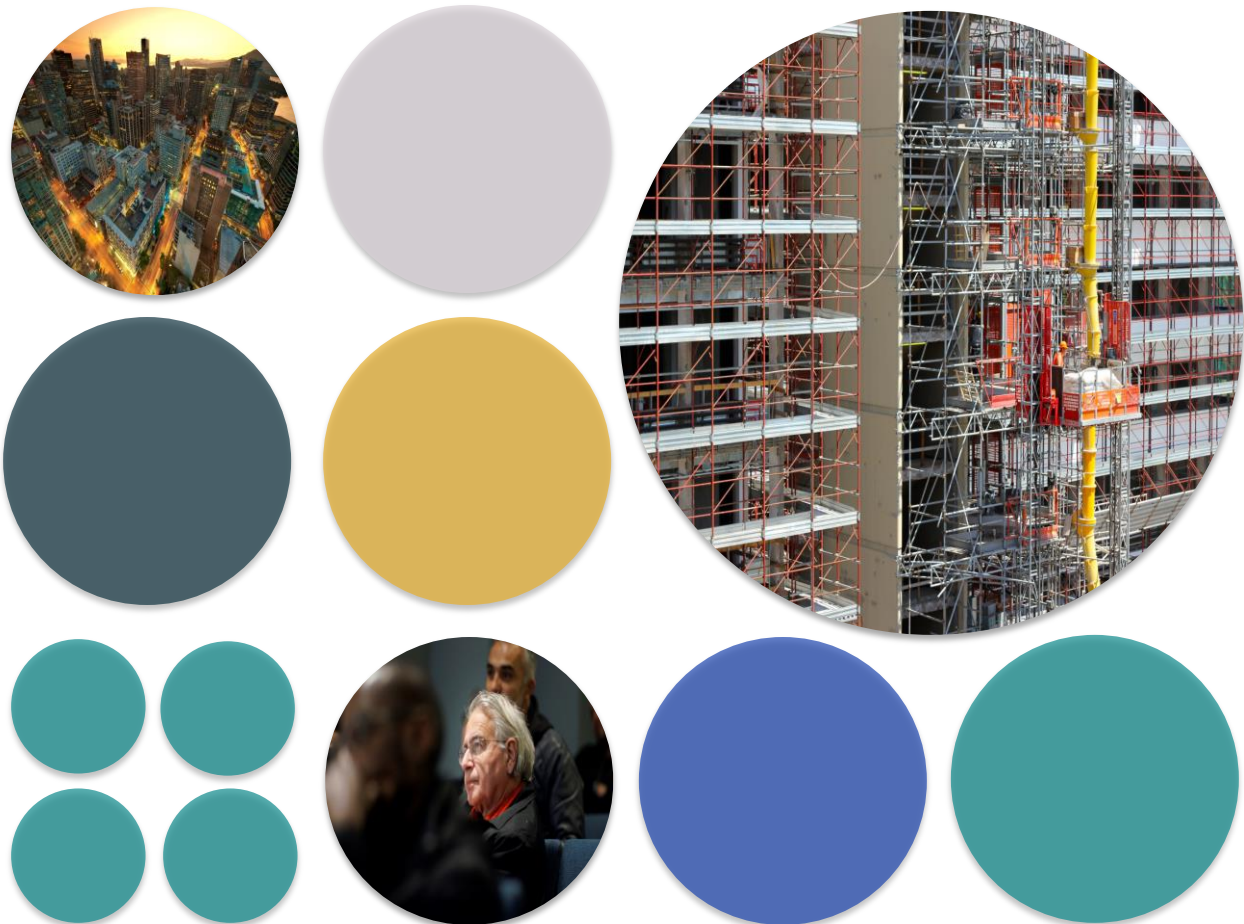
Executive Summary

In March 2016, BCcampus conducted an environmental scan of industry stakeholders on behalf of the Building Officials' Association of British Columbia (BOABC). The purpose of the environmental scan was to gather evidence to identify industry needs and perceptions of:

- Professional development
- Future provincial qualification requirements as outlined in the provincial *Building Act*
- The role of the BOABC

The environmental scan findings are intended to inform the development of a comprehensive education plan based on a competency map within an organizational quality framework. The quality framework will serve as the foundation for the design and deployment of BOABC-sponsored training, exam preparation, and continuous professional development.

This report is the first component of the proposed quality framework. It describes prominent needs identified by industry members in their responses to an online survey distributed to the industry community.



Methodology

Data was collected through two online surveys distributed to 1,095 recipients. The first survey was sent to 848 recipients who were building industry employees. A second survey was sent to 247 recipients, including employers of building officials throughout British Columbia and members of the Regional Planning and Licensing Committee.

Survey 1 garnered 297 responses and 1,167 comments. Of the 297 respondents, 144 identified their professional title. Results are illustrated in Figure 1 below.

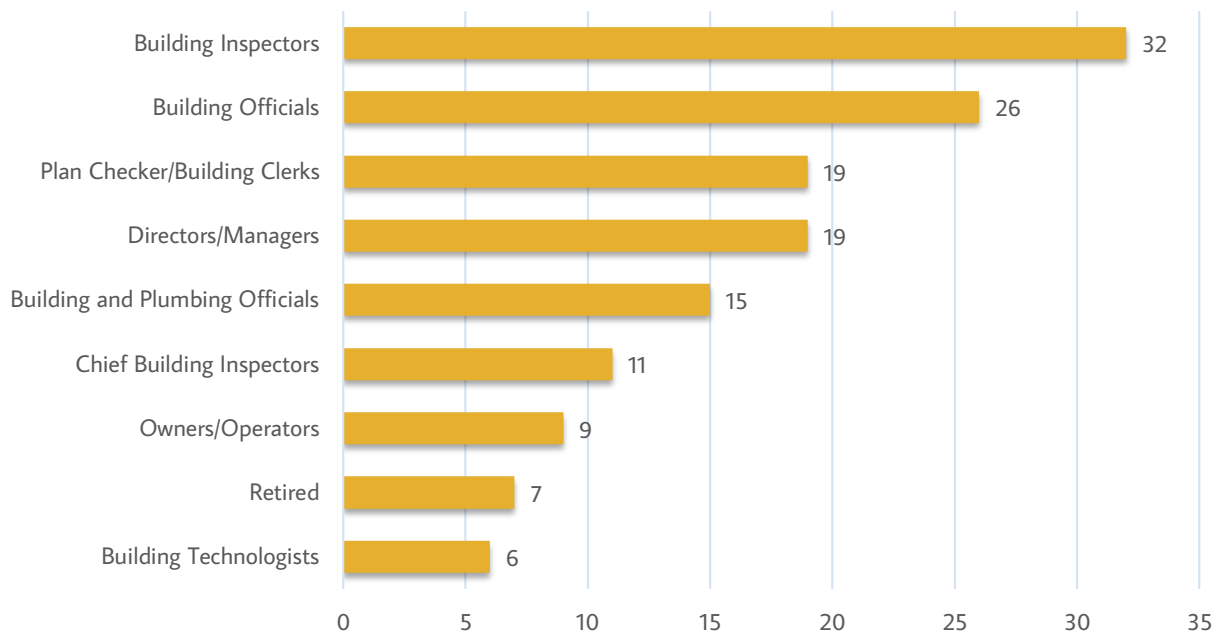


Figure 1 - Professional titles identified in Survey 1

Survey 2 (247 recipients) obtained 18 responses and 54 comments. Seven recipients identified their professional title, listed as follows:

- Chief Administrative Officer (2 respondents)
- Supervisor of Plans Examination
- Building Official
- Division Manager, Electoral Area and Environment
- Director, Building and Development Engineering
- Manager, Planning and Building Services

The survey data was compiled and analyzed using several software tools. Quantitative and qualitative data was collated using the spreadsheet software program Excel. Analysis of respondents' comments and prominent themes was completed using two web-based text reading and analysis environments: Voyant (voyant-tools.org) and Dedoose (dedoose.com).

LIMITATIONS

An online survey was used due to the short timeframe for this phase of the environmental scan. This allowed the data collection process to be designed, deployed and completed in one month.

An online focus group was also created, using the program Nabble (nabble.com), to obtain deeper insights about the challenges and opportunities building officials face and potential support the Building Officials' Association of British Columbia (BOABC) could provide. The focus group did not achieve the expected level of engagement among industry employers and the BOABC's executive members: nine replies were submitted to the three discussion questions.

Despite the lack of participation in the online focus group, the online surveys attained a favourable response rate. These detailed survey responses inform this report's analysis.



Organization of Report

FINDINGS

The findings of this environmental scan have been organized according to a guiding question:

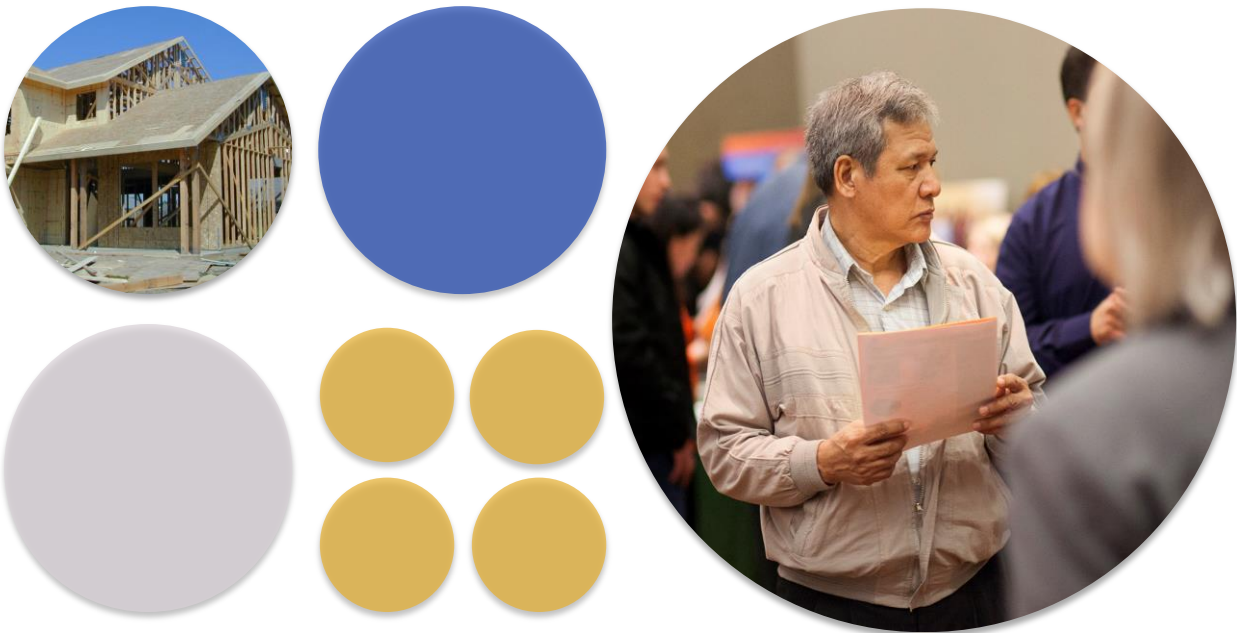
What are the industry needs and perceptions of professional development, the future provincial qualification requirements as outlined in the Provincial Building Act, and the role of the BOABC?

The first section of this report presents findings according to three themes within the guiding question:

- Professional development in the industry
- The *Building Act's* qualification requirements
- The role of the Building Officials' Association of British Columbia (BOABC)

RECOMMENDATIONS

The findings are followed by a recommendations section. This section outlines suggested actions the BOABC could pursue to meet the prominent needs identified by survey respondents and develop a comprehensive education plan that maximizes engagement and success with the qualification requirements as determined by the *Building Act* and the BOABC.



Findings

PROFESSIONAL DEVELOPMENT IN THE INDUSTRY

What are the industry needs and perceptions regarding professional development?

The results of the online survey indicated that 86% of respondents attended a class, seminar, or conference in the last year. Half of respondents also participated in other forms of learning, such as onsite training, online learning, or independent research.



Figure 2 - Preferred professional development methods (multiple selections permitted)

The survey revealed face-to-face environments as the preferred learning format. Respondents placed a high value on “two-way exchanges” but also acknowledged the need for both skilled facilitators and optimal attendance to get the most from these learning occasions. Respondents expressed appreciation for opportunities to discuss trends, issues, and BC Building Code interpretations with their colleagues, as well as to hear “knowledgeable and approachable facilitators/educators” present “interactive material.” Words like “hands-on,” “practical,” and “onsite demonstrations” were prominent descriptors for engaging professional development experiences.

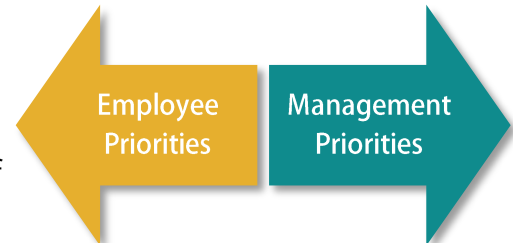
Industry members also emphasized the value of teaching or mentoring others in providing opportunities to reflect on and master information.

“ The actual giving of the presentation also helps to imprint the subject with you. ”

“ Teaching others requires you to answer questions and sometimes rethink your ideas about things or situations in ways you may not otherwise have done. ”

While building officials expressed appreciation for opportunities to learn, they described significant restrictions that prevent them from participating in professional development. The two predominant themes that characterize these restrictions are:

- Different professional development priorities between building officials and their employers
- Lack of professional development opportunities for those who work in rural and remote regions of B.C.



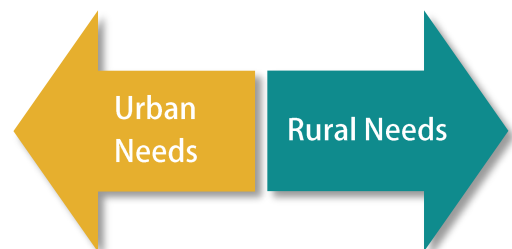
Many survey respondents described circumstances in which they were unable to attend professional development opportunities because their managers would not allow time off or provide funding. Additionally, some respondents reported that their managers do not use an objective process to approve professional development requests.

“ The employer is hesitant to pay for the costs associated with my participation in courses, seminars, meetings, etc. Lack of back-up means that if I’m not at the job doing the work, the job doesn’t get done. Clients get upset, my boss gets static, and we end up in ‘discussions’ of the needs or benefits (to the organization) of these seminars. ”

“ My employer says they support education but often deny permission to attend for the reasons stated above: not relevant to my job, too expensive, not enough money in the budget. ”

“ At times my employer has used the criteria ‘who needs CPD points’ for deciding who attends conferences or seminars. This causes a dilemma for me. I may be denied the opportunity to attend something paid by my employer on work time because I don’t need the points since I obtained them on my own time and my own cost. ”

Respondents portrayed professional development as a privilege limited to those who live in large cities or in southern, more populated areas of B.C. Many in rural and remote regions expressed that their level of access to professional development falls below that of urban areas.



“ Information sessions sponsored by BOABC, HPO, APEGBC, etc. are promoted as province-wide, but are limited to the lower third of the province. ”

“ I am new to the interior of BC and find it woefully lacking in resources for Building Officials. Both the BCBC and the BOABC are ‘coast-centric.’ I can’t imagine what it must be like dealing with all the code changes if you’re in a small Northern

community. The biggest changes have occurred outside the Lower Mainland, but the resources to deal with the changes are not available to us. ”

In addition to minimal access to local professional development, building officials in rural jurisdictions suggested that they also lack support from their employers to bear the additional costs of travel to attend conferences, classes, or seminars in urban areas.

“ Work for a small community and must attend all meetings and training without financial support for my time away from work. ”

“ Because of geographic location, it boils down to money. The cost of ferries, flight, hotels, and meals really bites into budget. ”

Another emerging issue was the perceived lack of relevant information applicable for rural jurisdictions.

“ ...there is a growing urban/rural divide occurring in the applicability of the code and of the building code processes within B.C. I do not think that existing BOABC PD (professional development) processes reflect the tremendous difficulty experienced by building officials in rural areas as they attempt to apply complex code requirements and ‘Big City’ local government policies to constituents who have had to become self-reliant in order to withstand the fluctuating economic diversity of rural B.C. ”

Respondents’ survey reflections also revealed concerns about their ability to obtain the continuous professional development (CPD) points required annually to maintain their qualifications. Many large-scale professional development events that enable participants to collect higher amounts of CPD points, such as conferences, occur more often in urban locations.

“ Members in areas of the province other than the lower mainland are challenged with travel and costs to attend in-person conferences and seminars. While there are opportunities to obtain continuous professional development (CPD) points by other means, they generally provide less points (than a conference, for example). ”

Survey respondents communicated a high level of interest for professional development, particularly interactive, face-to-face learning experiences that provide opportunities to discuss issues and ideas with colleagues. Many respondents suggested, however, that attending professional development events is challenging or impossible due to a lack of support from their employer. This places significant time and financial constraints upon building officials’ capacity to network with colleagues and learn new skills. Respondents living in rural regions of B.C. face the additional challenge of incurring significant financial costs for travel, especially if they wish to attend conferences that offer higher-than-average amounts of CPD points. The perception that there is a lack of employer support and an imbalance in accessing professional development is also a reoccurring theme in the next category, qualification requirements.

THE BUILDING ACT'S QUALIFICATION REQUIREMENTS

What are the industry needs and perceptions regarding qualification requirements as outlined in the Building Act?

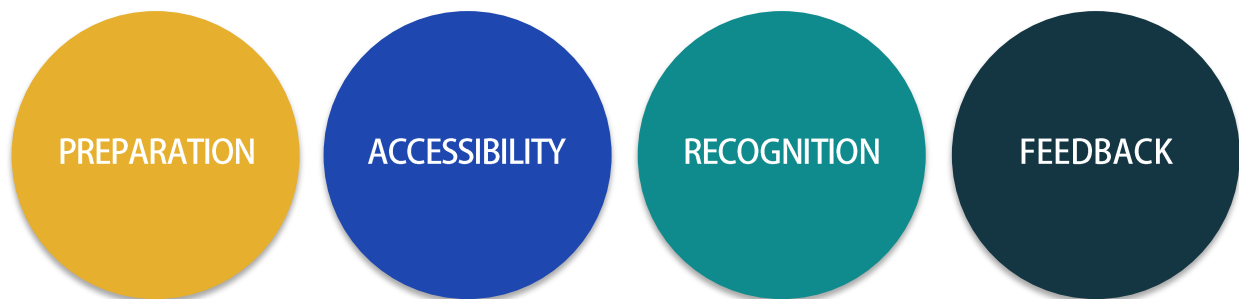
A high percentage of respondents expressed that the qualification requirements are a “positive step” in establishing the standards of the profession.

“ Having a province-wide mandatory association brings strength, fairness, and legitimacy to the industry. ”

A majority of respondents agreed that the timeline for meeting the qualification requirements is reasonable, provided employers help provide the necessary time and financial conditions to study and take the mandatory exams and that the BOABC provide flexible options to take the exams in-person and online multiple times during the year.

Exams

A word analysis of the data revealed that the topic of exams was included 240 times in the respondents' comments. Concerns were frequently expressed, particularly with regard to needed support from the BOABC according to the following four themes:



Preparation

Respondents suggested that more assistance is needed to help building officials learn effective 'test-taking' skills and to study the necessary content for the exams.

“ The education available often does not correlate with the exams required. ”

“ Officials from the industry path generally have less experience with this type of testing and more difficulty adapting to testing. Educationals for this path also need to include training in 'how to learn and test' as well as simply technical information. ”

“ Online practice exams would be useful to help prepare people for examination. This would help prepare testers on the format and timing required for an exam. ”

Respondents' comments also suggested that building officials in smaller communities may not have suitable information or experience to study for advanced levels of exams.

“ Level III qualification: For the smaller communities within the province, it is important to get good case studies related to the Level III topics since on the ground those cases do not happen very often. ”

Accessibility

The survey comments revealed challenges about the time and cost of attending scheduled “in-person exam sittings.” Those living in rural B.C. suggested it would be very difficult to study and pass exams while maintaining services in offices staffed by fewer personnel. Exam schedules that optimize staff availability are recommended.

“ Being from a small community, we usually have to write proctored examinations. More opportunity should be made available to write examinations throughout the year. With the short building year, having exams in winter months makes sense for Northern communities. ”

Recognition

There were many comments that questioned the lack of recognition for work experience in deeming a building official to be qualified. Some respondents were critical of the strong emphasis on “code knowledge” demonstrated through the exam process. Some also predicted adverse implications stemming from the perceived lack of value placed on practical experience.

“ ...The missing puzzle piece in the qualification requirements is the need for experience. I have had the immense pleasure and good fortune to work in this industry for 34 years now, and if I have learned anything at all, it is that I really know very little about such an immensely complicated industry. And most of what I know, I learned while doing. I would encourage our profession to institute an experience requirement into the qualifications, so that individuals charged with assuring the public interest in relation to building construction and code application are sufficiently experienced to be making such determinations. ”

“ Simply passing exams should not be the only criteria. There should be years of experience in each of the levels of qualification. ”

“ Formal education is valuable, but represents only 50% of the building official's function--practicality, decision-making, and relationship-building make the balance. ”

Lack of recognition was also mentioned by those who have had long, successful tenures as building officials and now need to prove they are qualified to do their job.

“ How about some recognition for 46 years of construction experience? ”

“ There should be an alternate mechanism in unique cases for long-term Building Officials to demonstrate their competency. ”

“ I am concerned about long-time Building Officials who never bothered to certify but who are knowledgeable and competent. I would hope provision is made for experience. ”

Feedback

Some respondents indicated that there is no instructive feedback for incorrect answers on the BOABC exams. They claimed that this not only affects their ability to pass exams on future attempts but also impairs their professional proficiency over the course of their career.

“ To this point there was no indications as to where you went wrong, just a general topic. Many of us were simply told study your code. The code is a book that is very open to interpretation. ”

“ If I am interpreting something wrong, it would be more beneficial to show me where. From that I would learn and never get the intent wrong again. ”

“ Exams are open book but members are not allowed to review the exam they have passed or failed... Unless the pass is 100%, the member may be telling the customer the wrong code information every day of their career but knows nothing else. ”

Continuous Professional Development

Although the BOABC exams were a significant focus of respondents' opinions throughout the survey, many comments also expressed concern about barriers that deter engagement in continuous professional development and hinder one's ability to accumulate the required CPD points each year. A lack of employer support and shortage of professional development opportunities in rural areas were dominant themes.

“ Workplace does not promote professional development. ”

“ My main concern is that my employer may be reluctant to support my continuous professional development. ”

“ ...it is difficult for members, particularly in remote locations, to attain the required CPD points due to the cost of attending conferences, seminars, and workshops. ”

The survey data suggests that qualification requirements outlined in the *Building Act* are a positive and necessary step towards consolidating a standard of professional practice for building officials. More support may be needed, however, to maximize exam success, to provide incentives that recognize experience, and to create more continuous professional development opportunities within close proximity to the workplace.

What are the industry needs and perceptions regarding the BOABC?

The survey data provides feedback regarding the quality of both direct and online interactions between the BOABC and the building industry, as well as potential ways the BOABC could support professional development among its members.

The results of the online survey indicated that respondents interact with BOABC most often online, either through emails or website visits.

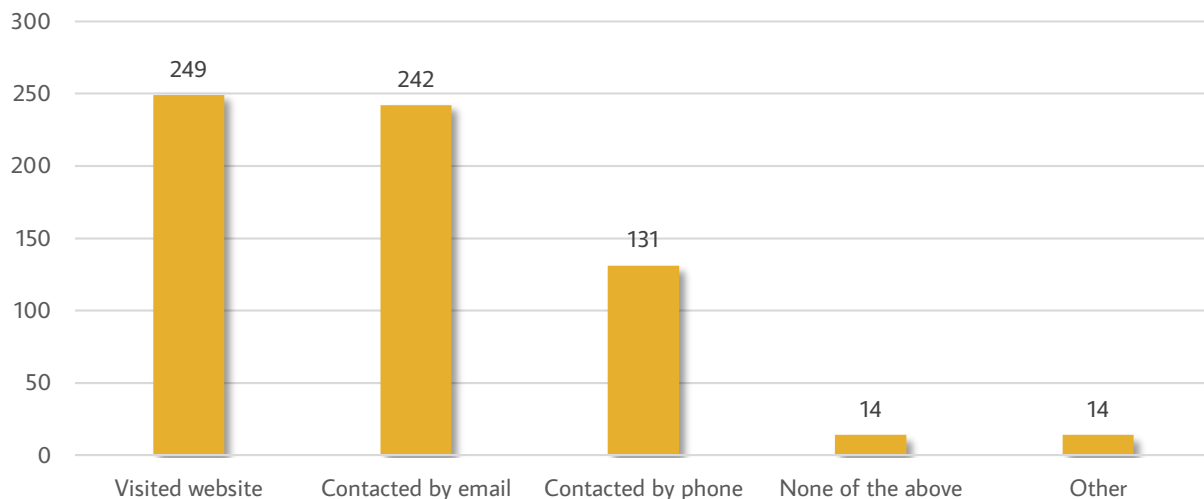


Figure 3 – Methods respondents used to contact the BOABC in the last 12 months (multiple selections permitted)

Direct and indirect interactions with the BOABC through website visits, phone calls or emails were described in very positive terms. Members expressed appreciation for prompt, informative efficiencies in their interactions with the BOABC.

“ I found the new website user-friendly, and I have always found the BOABC staff to be helpful beyond measure. ”

“ BOABC office is always very responsive to inquiries. Email correspondence is excellent. Website is well-maintained. ”

“ Staff is always helpful and knowledgeable. ”

“ ...very ,very professional and informative with outstanding response times ”

“ GREAT service ”

“ Contact directly with the office is always a positive experience. ”

While respondents described numerous ways of interacting with the BOABC, they indicated email was the most effective channel to receive regular updates.

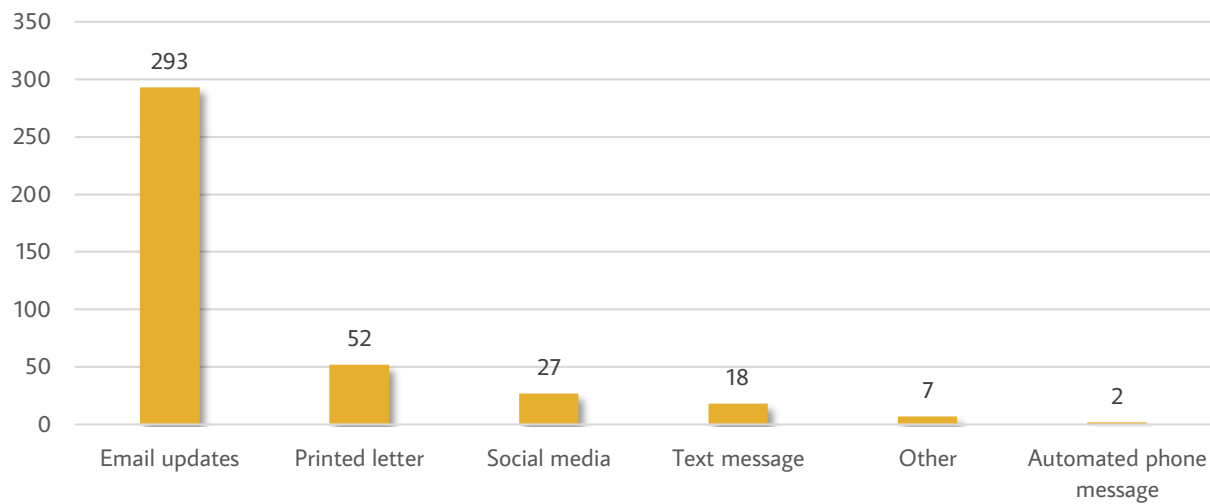


Figure 4 - Preferred communication channels to stay informed about BOABC activities and initiatives (multiple selections permitted)

Responses to survey questions about BOABC-sponsored professional development events indicated that industry members are actively involved in learning and networking.

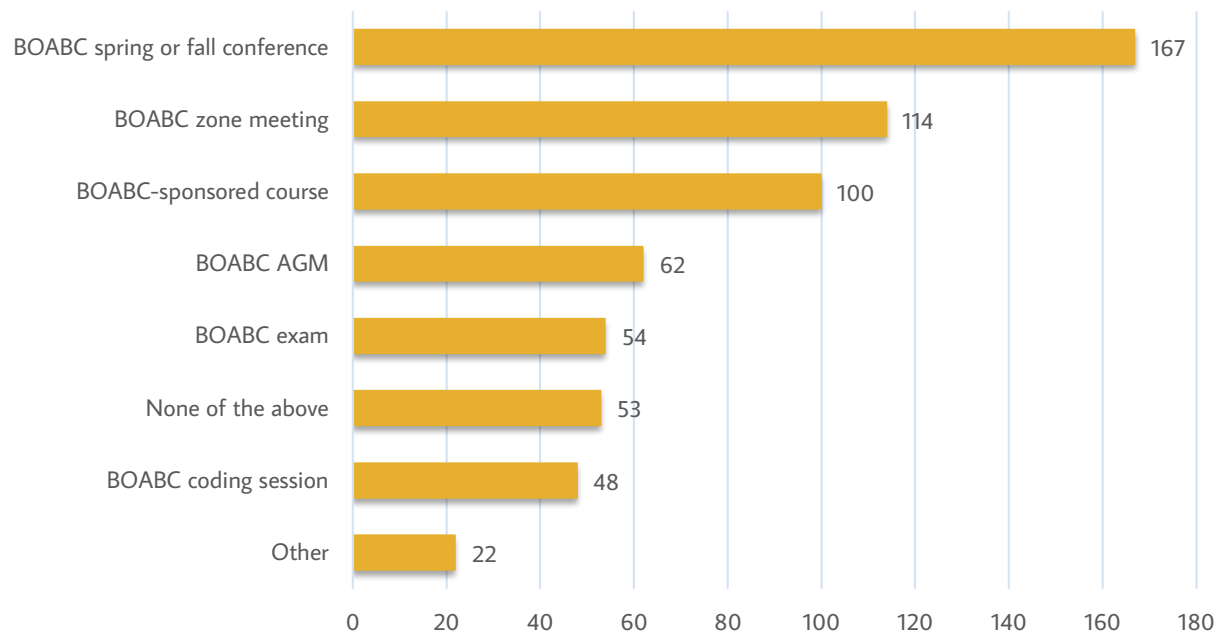


Figure 5 - BOABC professional development activities participated in during the last 12 months (multiple selections permitted)

The 53 respondents who did not participate in BOABC professional development during the last 12 months revealed the following demographic information:

Jurisdictions

- 29 respondents worked in municipalities or cities of less than 100,000 people
- 15 respondents worked in jurisdictions of more than 100,000 people
- 9 respondents said they did not know the population statistics or left the question blank

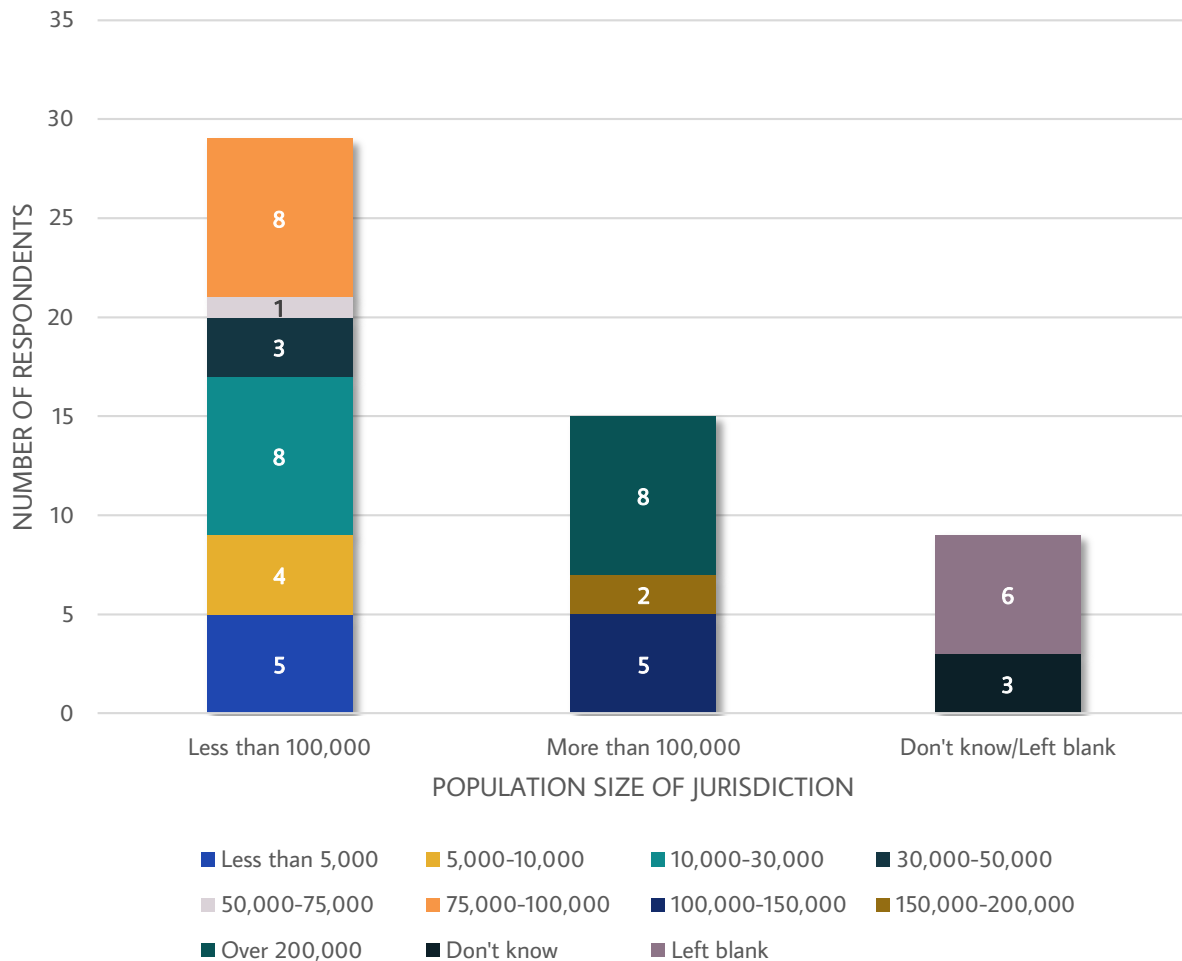


Figure 6 - Jurisdictions of those who did not participate in BOABC professional development during the last 12 months

Work Experience and Locations

- Of the 29 respondents with 20 or more years of experience, 14 worked in communities with populations of 75,000 people or more
- All three respondents with 15-20 years of experience worked in municipalities of less than 150,000 people
- The nine respondents with 10-15 years of experience worked in variety of both small and large communities
- Of the seven people with 5-10 years of experience, six worked in jurisdictions larger than 75,000 people

- Of the three people with less than five years of experience, two were working in jurisdictions smaller than 30,000 people.

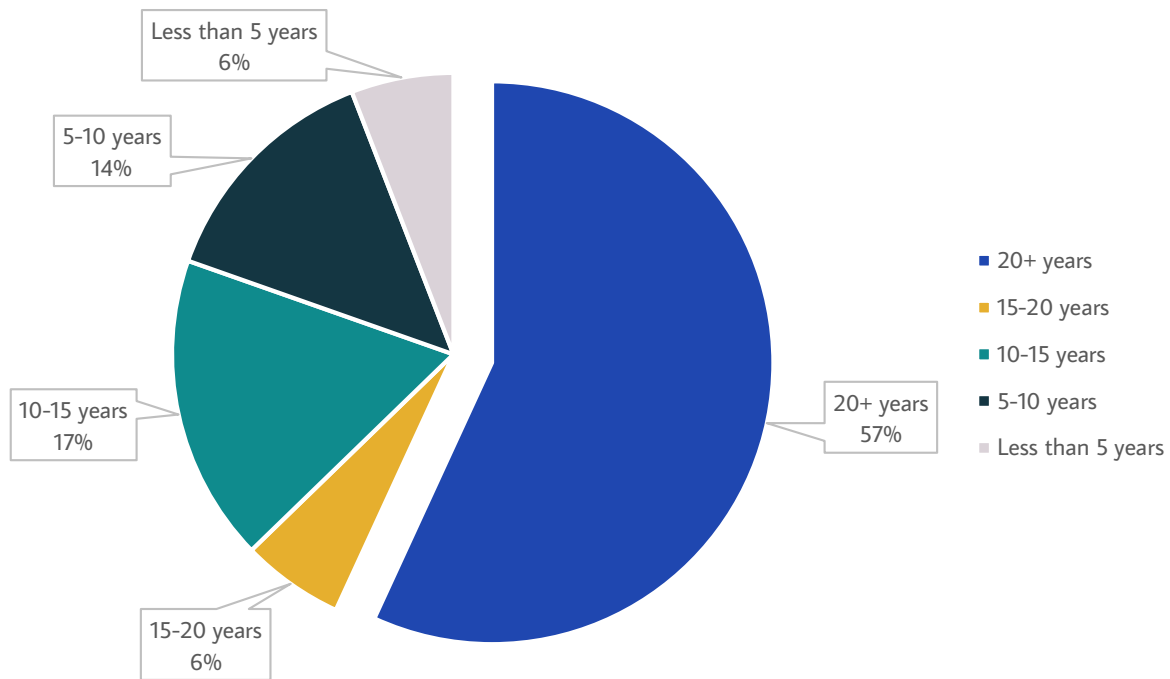


Figure 7 - Years of work experience of those who did not participate in BOABC professional development during the last 12 months

Although respondents' comments implied that those living in smaller communities do not have the same level of access to professional development opportunities as those in larger communities, the demographic data for this question showed that over half of the 53 respondents who did not participate in BOABC professional development opportunities work in mid- to large-size jurisdictions.

The survey data also indicated that those most experienced in the industry are least likely to attend BOABC professional development opportunities. Over half of the 53 respondents who did not participate are employees with more than 20 years' experience.

Respondents' comments suggested that a primary objective for being involved with the BOABC is to obtain understanding and clarification about the BC Building Code. Respondents reported interacting with the BOABC in several ways to stay current with their understanding of the Code: they attend zone meetings, visit the BOABC website, read the member bulletins, and contact the BOABC directly to seek answers to specific inquiries. These interactions suggest positive results, as well as opportunities for further development.

Respondent data indicated that BOABC-sponsored conferences, seminars, study sessions, and zone meetings are "good"—a word used to describe these contexts 35 times. Zone meetings are highly valued as a way to hear guest speakers and discuss interpretations of the BC Building

Code. While respondents expressed that they attend zone meetings to obtain clarification about the Code, such clarity is not always realized.

“ Some zone meetings members come away with less clarity about Code. Provide guidance/resources for Zone meetings. ”

“ After each zone meeting I always feel that we are back to ‘square one.’ ”

Respondents’ comments showed that members would like to attend regularly scheduled zone meetings with strong facilitators to obtain clarification about BC Building Code interpretations.

“ The quality of the discussion groups can be good or not so good, depending on the size of the turn-out. It can be difficult for the Rep. to manage the larger turn-outs, as many different Inspectors can have many different views of Code Interpretations. Can make for a lively discussion group! ”

Respondents indicated that the BOABC website provides useful information about BC Building Code interpretations.

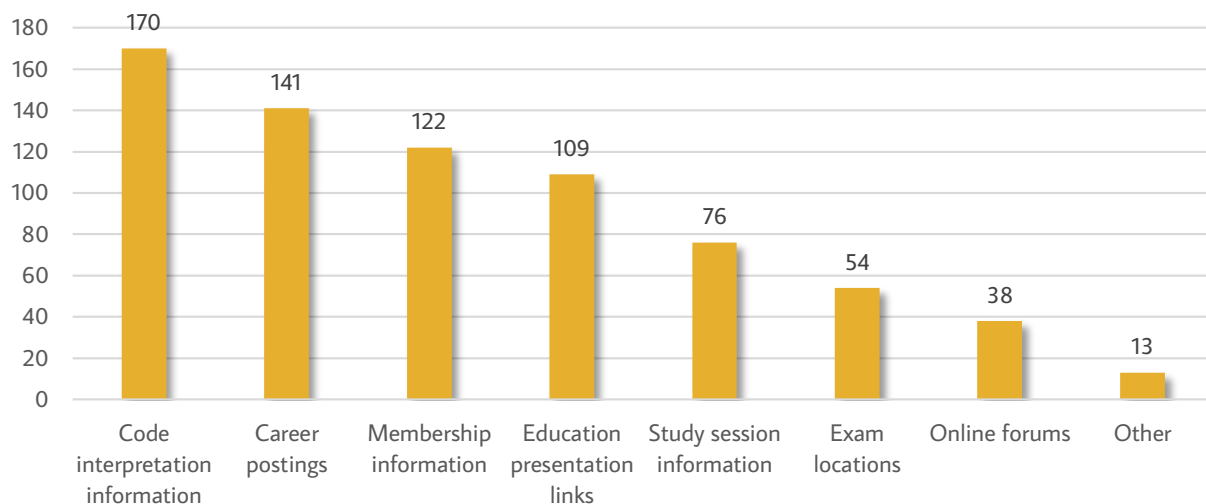


Figure 8 – Most useful BOABC website resources (multiple selections permitted)

Respondents recommended features related to the BC Building Code that could be added to the BOABC website, including open access to the Code, more online Code discussions, an online Code database searchable by keyword, and posted reviews of Code interpretations.

“ I would like to see an area where code questions that have been submitted to the province for review are shared with all the members in the members’ only location instead of each individual re-asking the same questions over and over. This would allow for an increase in uniform enforcement of the code to know how others, including the province, interpret certain sections of the code. ”

Respondents' Final Comments

Ninety-four additional comments were provided as a final reflection about professional development, the *Building Act*, and the role of the Building Officials' Association of British Columbia (BOABC). There were two dominant themes in these final comments:

- Expansion of mandatory qualifications
- General support for mandatory qualifications

Several respondents suggested that future regulatory initiatives should include membership access and a mandatory qualification process for others, such as builders, contractors, and designers, in order to apply the BC Building Code with consistent levels of understanding and practice.

“ Builders/contractors and designers need to have mandatory certification as well with examinations being essential. The lack of understanding of code concepts is reaching a critical level and requires so much more time in conducting inspections and plan review. ”

“ It is a very nice idea to bring some consistency amongst the building inspector community, but we shall not forget the building contractor side of it. Building contractors should get a minimum of training/formation on the current code requirements prior to start constructing any buildings defined by the BC Building Code! It is frustrating to have to spend so much time explaining to contractors the same things over and over... ”

“ Once Building Officials are qualified, we desperately need to ensure that all builders and developers are properly qualified and educated to fulfil their role in the industry. ”

Despite the wide spectrum of perceptions about what it means in practice to be a qualified building inspector, there was general consensus among survey respondents that the mandatory qualification and BOABC membership requirements are a favourable initiative towards strengthening the professional standards among building officials.

“ I support the thrust of the initiatives throughout the industry, including those aimed at making building officials more clearly qualified for their roles. ”

“ The new *Building Act* requirements will improve the industry's perception of building officials, as well as require local governments to hire and train building officials to appropriate levels. ”

Recommendations

In September 2015, BCcampus recommended the development of a quality framework to identify and communicate assessment, training, professional development, and examination processes to building officials in British Columbia. The first component, the identification of industry needs, was explored through the distribution of online surveys in March 2016. Based on the resulting survey data, it is recommended that the Building Officials' Association of British Columbia (BOABC) proceed with fulfilling the remaining requirements of the quality framework by expanding their education department to include experts with skills in communication, curriculum development, instructional design, and organizational development.

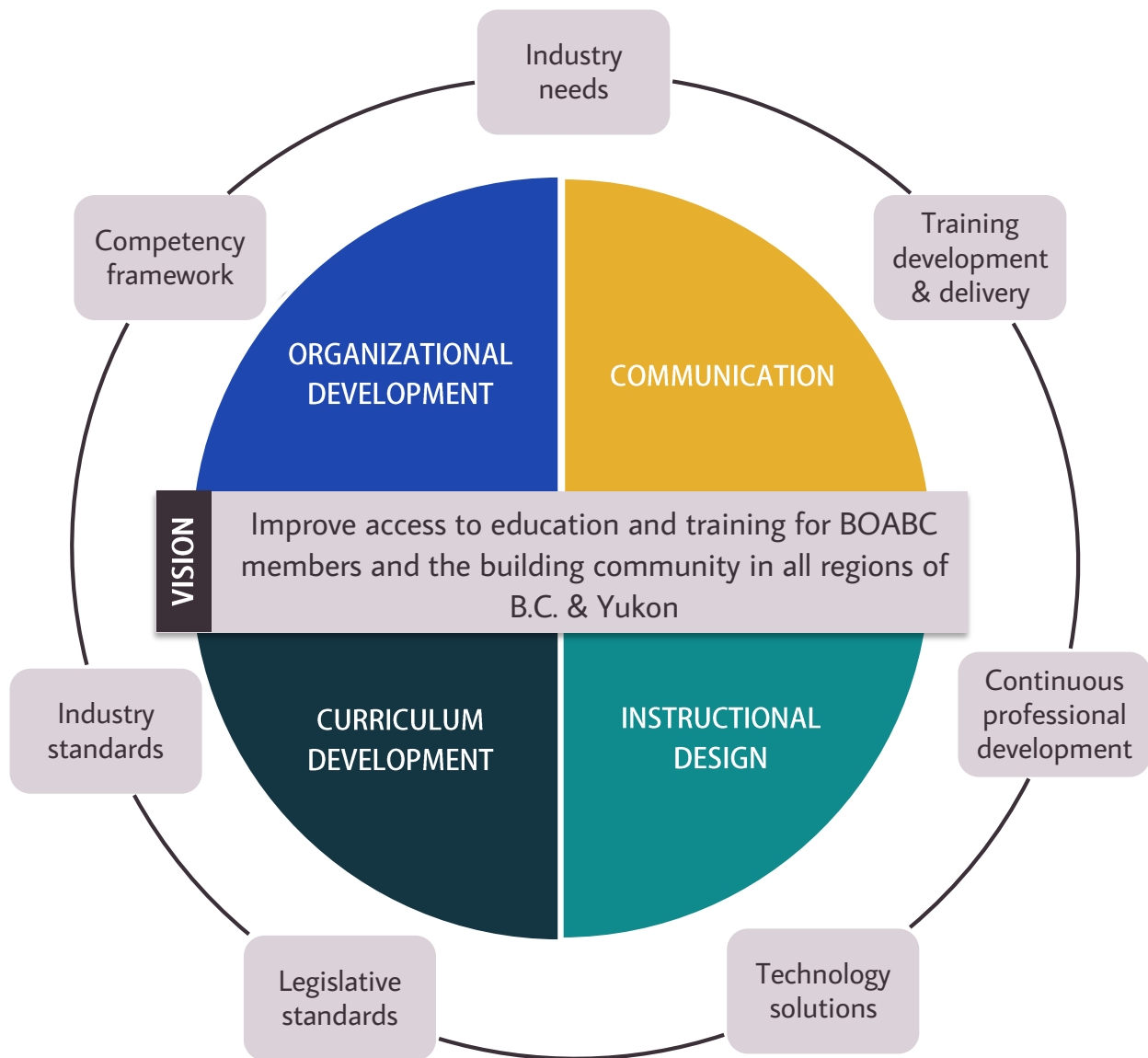


Figure 9 - The quality framework

COMMUNICATION

It is recommended that the BOABC employ a communications specialist to create and deploy an education communication plan that meets the industry needs as identified in the survey data. Priorities to consider include:

1. The development of communiqués to industry members, their employers, and the general public that summarize the results of the March 2016 BOABC online surveys. These communiqués should share the survey results detailed in this report and describe the actions the BOABC will take immediately and in the future to respond to the findings.
2. Frequent distribution of research that highlights the importance of workplace learning and professional development among building officials. This information should be targeted to employers in order to increase support for building officials seeking to prepare for qualification exams and participate in continuous professional development.
3. Frequent and concise email updates to members and continuous content development for the BOABC website. Email and website content should include professional development opportunities and resources related to exam preparation and BC Building Code interpretations.
4. The development and distribution of public service announcements (via public notices, media releases, media lines, social media, etc.) that reinforce the mission of the BOABC and its members in serving the public through building safety.

ORGANIZATIONAL DEVELOPMENT

A consultant with experience in organizational development may lead the BOABC in creating an education plan that outlines the path to acquiring the qualifications required by the BOABC. Respondent data suggests the building community lacks clarity regarding the requirements for qualification, certification, and practical experience.

An articulated path should clearly illustrate or ‘map out’ entry-to-practice competencies, as well as standard evidence for each level of qualification that demonstrates the required knowledge, skills, behaviours, and experience. This path, known as a competency map or competency profile, is a key component of the BOABC’s quality framework and will provide the foundation for developing and deploying curriculum to support BOABC members in understanding, obtaining, and maintaining necessary qualifications. The consultant may wish to adapt the competency map drafted by BCcampus in the report *Recommendations for a Quality Competency-Based Framework for Training, Assessment, Examinations and Professional Development of Building Officials in British Columbia*. Well-defined inputs, outputs, and quality control factors documented in a competency map will enable building officials to pursue professional learning opportunities that are compatible with the quality framework and support BOABC’s vision for education and training.

CURRICULUM DEVELOPMENT

While construction of the competency map is underway, the current education coordinator and a curriculum development specialist may work together to identify new and existing curriculum content that satisfies the competency map objectives. The communications specialist may also publicize these identified education resources as professional development opportunities to industry members.

INSTRUCTIONAL DESIGN

The identified new and existing curriculum content may be distributed in multiple formats (e.g., online, multimedia, print) to maximize BOABC member engagement to achieve and maintain desired levels of qualification. An instructional designer will provide the technical and pedagogical expertise required to construct, record, deploy, and manage multiple content delivery formats for conferences, seminars, and zone meetings in order to support exam preparation, continuous professional development, and clarify BC Building Code interpretations.

An instructional designer's immediate priorities would include outreach to rural and remote regions of B.C. Working with the communications specialist, the designer would format educational resources and experiences to be delivered through dynamic online content, such as live or streaming video or audio.

Given the significant level of concern survey respondents expressed about exam support, it is recommended that the instructional designer also work with the curriculum developer to produce and distribute online content that prepares building officials to take exams. Content to consider includes:

- An online, unscheduled (continuously offered), study skills course
- An online, unscheduled, independent course about test-taking skills
- Online, unscheduled courses of practice questions for all three exam levels that replicate how the questions are formatted and timed in the official exam

Finally, in response to survey comments requesting website content related to the BC Building Code, it is recommended that the instructional designer develop an interactive online environment that assists building officials with finding, discussing, and interpreting the Code. Case studies, particularly in relation to Level 3 exams, are difficult to obtain especially for those in rural regions. The instructional designer and curriculum developer could collect and distribute an online bank of case studies that would allow building officials more opportunities to learn unfamiliar Code information within corresponding contexts.

Conclusion

This environmental scan was completed in order to identify current or anticipated challenges perceived by building officials with regards to professional development, the *Building Act's* qualification requirements, and the role of the Building Officials' Association of British Columbia (BOABC). This report describes the most prominent challenges and opportunities identified by industry members who responded to surveys distributed in March 2016. This information is intended to guide the BOABC in its efforts to design and implement a comprehensive education plan that guides members through the qualification process and supports ongoing industry engagement in education throughout all regions of B.C. and Yukon.



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