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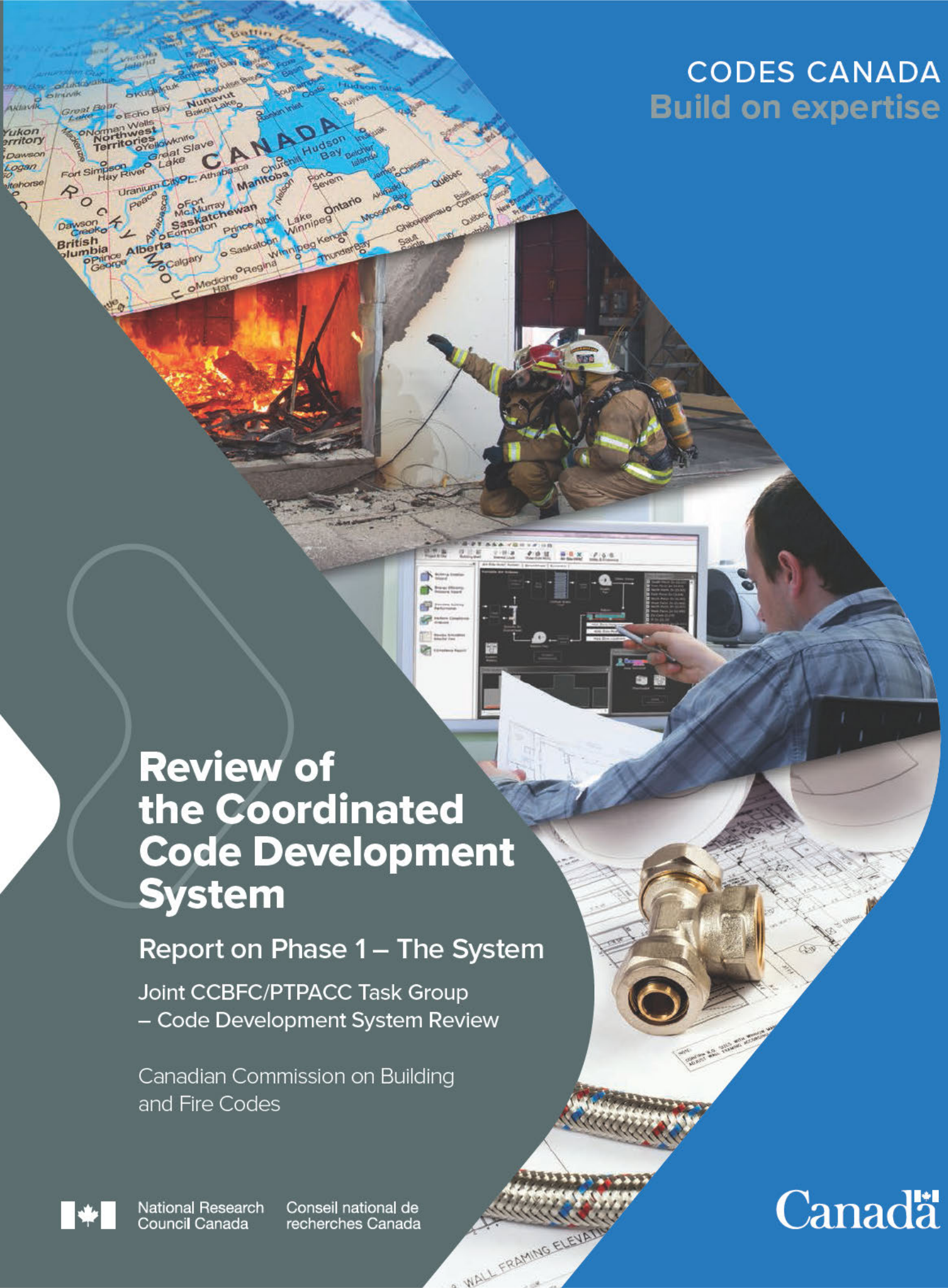

Review of the Coordinated Code Development System

Report on Phase 1 – The System

Joint CCBFC/PTPACC Task Group
– Code Development System Review

Canadian Commission on Building and Fire Codes

National Research Council Canada
Conseil national de recherches Canada

Canada

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Preface

This report describes the current state of Canada's coordinated code development system. It analyzes the roles of the main partners, the Canadian Commission on Building and Fire Codes (CCBFC), the provinces and territories in conjunction with the Provincial/Territorial Policy Advisory Committee on Codes (PTPACC) and the National Research Council (NRC). The report on phase 1 critically reviews the performance of the system and recommends changes and improvements. A phase 2 report will review and analyze the process associated with the system in greater detail.

The CCBFC and PTPACC jointly requested this performance review of the coordinated code development system as ten years had passed since its launch. Besides accommodating the introduction of the objective-based codes in 2005, the main goal at that time of the re-designed system was a higher degree of coordinated code development activities among the provinces and territories and with the CCBFC leading to a timelier adaptation or adoption of the national model codes by the provinces and territories.

For the purpose of this performance review, the CCBFC and PTPACC jointly struck the Joint Task Group on Code Development System Review (JTG) in order to provide for balanced input. The members of the JTG comprise a significant amount of experience in the evolution and challenges of the coordinated code development system over more than three code cycles (see Appendix A).

This report was developed by the JTG using a consensus-based process. Some recommendations may not have the support of all Task Group members and - while the JTG included representatives of provinces and territories appointed through the PTPACC - the report, or individual recommendations therein, are not necessarily endorsed by the jurisdictions that participated on the JTG.

For reasons of brevity, the report refers to the coordinated code development system in many instances simply as "the system."

The information gathered in the report was accurate at the time the report was completed by the JTG (Fall 2015). Where follow-up actions to the report's recommendations require more up-to-date information, NRC staff can provide updates.

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Introduction

This report reviews Canada's coordinated code development system by assessing a number of issues in their current state (including associated strengths and weaknesses) then describing a desirable state to realize the shared goals of the partners. The report concludes with recommendations on each issue to attain these goals.

The report addresses the ultimate goals, the support and participation of the provinces and territories, the engagement of stakeholders in the code development system and associated processes. The report also considers information on international trends and pressures and addresses some of the complexities associated with the coordinated code development process.

The report pays particular attention to the funding mechanism and contributions and the extent to which these can ensure the sustainability of the system. The JTG clearly heard that the current funding situation is not sustainable and must be revised in order for the system to flourish and achieve its goals. Recommended mechanisms and cost sharing scenarios that have the potential to better meet the needs of the future system were explored.

For the context of this exercise the term coordinated code development "system" is primarily characterized by the partners, their goals and values, their roles and responsibilities, and the interaction and relationships among partners and stakeholders. In some cases, comparison is drawn to other national and international codes and standards development enterprises.

Executive Summary

Canada's coordinated code development system provides the p/t authorities with reliable, technical expertise, codes and guides in both official languages and an open process to engage stakeholders in the development of regulatory changes. The system has the potential to create economic benefits for the country and has – over the last 60 years – matured and strengthened to a point where it can respond in a timely fashion to urgent and emerging issues.

The CCBFC and PTPACC struck a joint task group (JTG) with the mandate to review the code development system and process and to make appropriate recommendations for consideration by the parent committees. While this report critically reviews the performance of the system, a second report will further review the process associated with the system and analyze in detail. The JTG also reviewed earlier strategic CCBFC documents as well as past MOUs, assessed the degree of implementation success and analyzed reasons why some planned actions were less successful than others.

While a lot of progress has been made on improving the system, the JTG noted many recent developments that should prompt the partners of the system to take stock. Although the key goals of the system are consistent with those from previous code cycles (increased harmonization, timely adoption, equitable funding, engaged stakeholders and an open and simple process), the JTG concluded that it is important to re-confirm these common goals, potentially correct the course and re-energize the system in critical areas.

In order to implement the recommended changes and course corrections, the JTG concluded that a business-plan approach would be beneficial and that an operational plan was needed. The JTG concluded that a new strategic plan is necessary to achieve the goals. As part of the new strategic plan, the JTG recommended that the limits of the system be clearly identified so that performance expectations from stakeholders are realistic in terms of responsiveness to their needs and in terms of the reliability of the development process.

The JTG concluded that there is an urgent need to review how the system is funded and to improve the viability of such funding. The new funding arrangement would require a course correction in the operations of the system and a renewed partnership that is reaffirmed through new collaborative agreements. The JTG recognizes that NRC along with all provinces and territories must enter into joint discussions to reach a consensus on a sustainable financial model for a coordinated code development system. The JTG also recognizes that the provinces and territories would need to commit to supporting the system, including an equitable contribution in providing the appropriate resources necessary to sustain a viable system. The JTG recommends a number of high-level principles for the new funding solution including a significant base funding component. The JTG also recommends to look at alternative revenue streams and to study the implications of transitioning to free (access to) codes.

The JTG also recommends that the system partners engage in reviewing priorities and resources regularly and making joint decisions on code development priorities and funding.

The review concluded that there is strong sense of a shared national interest in the continuation and success of the system. The provinces and territories are the beneficiaries of a set of model codes for the built environment that, amongst other goals, set minimum standards in the areas of safety, health, accessibility, energy efficiency, fire and structural protection of the building. The setting of minimum standards in these areas is the constitutional responsibility of the provinces and territories. The federal government through their participation in the development of the codes is able to influence the productivity of the construction sector in Canada, enhance interprovincial and international trade and make significant gains in their mandates for the health of Canadians and protection of the environment. The JTG concluded that both, the federal and p/t, levels of

government need to better understand their respective contribution to this 'shared national' interest. The JTG recommends a high-level strategically focused meeting between provincial/territorial and federal governments to garner political support for the shared interest in developing model codes. This meeting should include looking at improving the methods and the timing of provincial/territorial code adoption and increasing harmonization of code requirements across all codes.

While the quality of collaboration between the CCBFC, provinces and territories in conjunction with PTPACC, and NRC can be described as "good", the JTG felt that the partnership could be improved and supported by new collaborative agreements that establish the joint commitment of the partners and reflect the support and involvement of both, the p/t and the federal governments.

The JTG recognized that harmonization remains a key goal of the coordinated code development system. The JTG concluded that efforts to harmonize model codes across the country, including a more timely adoption of new codes and the reducing of technical variations, need to be re-energized, reinforced and sustained by all partners.

The JTG observed an increase towards more p/t initiated code changes and concluded that strong commitments are necessary from all jurisdictions towards favouring the integration of common solutions in the national model codes rather than having jurisdictions develop their own solutions.

The JTG recommends a collaborative approach that expedites p/t issues on the national scale to alleviate the time pressure of the jurisdictions to address an issue. This approach could include higher priority for code change requests submitted by provinces and territories and a fast tracking of larger code development projects.

The JTG found that the performance of the system in terms of p/t adoption of national model codes had deteriorated and concluded that improvements could be achieved by agreeing on common goals for timely adoption in new collaborative agreements and by NRC/CCBFC assisting provinces and territories in considering alternative code adoption mechanisms or processes.

The JTG concluded that best practices of broad stakeholder engagement in public reviews should be discussed in lieu of annual coordinated public consultations, in particular the practice of holding focused stakeholder consultations on significant changes in a jurisdiction and the P/T submitting its stakeholders' comments into the national process after.

The JTG concluded that stakeholders are fairly well engaged with the coordinated code development system but that there are opportunities to engage new or 'missing' stakeholders and develop strategies for stronger links. The JTG also concluded that the quality of communication with stakeholders should to be improved.

The JTG observed perceptions from stakeholders that the system's timeliness and responsiveness need improvement and reviewed other constraints and complexities, such as volume and frequency of change, difficulty to assess the system's performance and the lack of connection between approving priorities and the availability of resources (capability of the system).

The JTG concluded that much improvement on timeliness and responsiveness could be gained from the process review in phase 2 and better communication with stakeholders. The JTG recognized that operating the system as intended takes some time and strongly suggests better managing the coordinated code development system by reviewing priorities and resources regularly and making decisions on priorities and funding together.

The JTG considers phase 1, the review of the "system", to be substantially complete, and hopes that the partners will engage into a focused discussion on the issues raised – some of them urgent. The JTG is offering a number of recommendations in a specific format such that they could easily become part of a strategic plan or an implementation plan, for those actions that have been agreed to jointly by the CCBFC, PTPACC and NRC.

Recommendations (Summary)

ULTIMATE GOALS

1. *Agree to promote and support the ultimate goals of the coordinated code development system.*
2. *Undertake a realistic assessment of resource needs to ensure a responsive, safe and sustainable system and clearly identify the realistic capacity and limits of the system and communicate this capacity in an effective and consistent manner, with all partners and stakeholders.*
3. *Develop a new strategic plan that addresses the steps necessary to achieve the goals of this report and that recognizes the urgent need for action in a number of key areas.*
4. *Enhance and develop the 'learning' environment in order to continuously improve system outcomes.*

EQUITABLE AND SUSTAINABLE FUNDING MODEL

5. *The NRC, with the support of the Minister of State (Science and Technology), enters into discussion with all provinces and territories to reach a consensus on a sustainable financial model for a coordinated code development system that reflects the shared national interests.*
6. *Establish a fair and equitable funding solution consistent with the following principles:*
   a) all provinces and territories need to support the system
   b) the support from the federal government appropriately reflects the federal interest and NRC services comprise part of the federal contribution
   c) the funding system must include a significant base funding component
   d) the solution needs to recognize other p/t code development activities and related research that support the system
   e) the financial support to the system should be regularly reviewed by all contributors
   f) equitable support may be based on metrics such as construction activity or population
   g) responsibility for the management of the fiscal operations and determination of the priorities of the system should be shared by the partners.
7. *Identify and pursue alternative revenue stream opportunities for the future as well as study implications to code use and funding of transitioning to free (access to) codes.*

RECOGNIZING THE "SHARED NATIONAL INTEREST"

8. *Hold strategic level discussions to develop the political commitment to ensure a viable and sustainable code system in Canada for the future and to affirm the shared national interest.*
9. *Encourage a broader discussion on quantifying the economic benefits of the coordinated code development system.*
10. *Look at opportunities to better integrate the partners respective code development processes with the goal of achieving efficiencies for the system.*

PARTNERSHIP AND COLLABORATION

11. *Develop new collaborative agreement(s) that:*
    a) Incorporate the relationships and obligations of the partners within the coordinated code development system
    b) Address the needs and priorities of the partners as outlined in the desirable state discussion
    c) Determine the most effective entity and organizational structure to support the activities of the system and to promote a fair and equitable cost sharing arrangement
    d) Provide for regular meetings of senior government officials to review and re-affirm the commitments
    e) Are broad enough to facilitate p/t commitment, for example tying codes and standards development to disaster mitigation or to increased mobility of trades or development of material for training and certifying trades.
12. *Develop and link new strategic plan goals and effective performance measurements to the new collaborative agreement(s).*
13. *Review and clarify the roles of CCBFC, PTPACC, NRC and the provinces and territories in the coordinated code development system.*

14. *Articulate the benefits of the coordinated code development system by way of developing a value proposition.*

PROVINCIAL/TERRITORIAL COMPONENTS

15. *Reinforce and sustain efforts to harmonize model codes across the country and achieve more timely adoption of new codes and the reducing of technical variations.*
16. *Garner a strong commitment from all jurisdictions towards favouring the integration of common solutions in the national model codes rather than developing independent solutions.*
17. *Investigate opportunities for a national consultation process.*
18. *Develop mechanisms for integration of code development initiatives carried out at the provincial/territorial level into the national process.*

STAKEHOLDERS ENGAGEMENT

19. *Review and clarify the criteria used to establish ex-officio membership.*
20. *Find more effective ways to engage provincial/territorial stakeholders in the national process to highlight the strong partnership.*
21. *Develop new relationships with stakeholders from municipalities, public health advocacy groups, building owners and consumer representatives.*
22. *Improve the quality of communications with existing stakeholders.*

SYSTEM PERFORMANCE AND COMPLEXITIES

23. *Manage the code development system more effectively by reviewing priorities and resources regularly and targeting resources based on system priorities.*
24. *Enhance the standing committee work planning process such that progress on priorities is effectively tracked and resources can be reallocated as appropriate to ensure performance measures are met.*
25. *Continue future sensing activities to create effective link between research activities and CCBFC priorities to provide research on current issues (reactive) and strategic issues/future needs (proactive).*
26. *Ensure that the policies and procedures are revised on a timely basis to promote the transparency of the system including reviewing the principles for an appeals process.*
27. *Review current processes within the coordinated system in order to identify opportunities for efficiency and effectiveness improvements.*

Background

Coordinated Code Development System ("the system")

The coordinated code development system produces model construction and safety codes for Canada through an open and balanced, committee-based process that is operated by the following partners: the CCBFC, the province and territories in conjunction with PTPACC and the NRC.

The foundation for a coordinated system lies in the fact that the authority for regulating building and fire safety rests with the provincial and territorial authorities and that the federal government mandated NRC in 1937 to develop "model" code provisions. The concept of developing "model" codes is still valid and significant today. The intent for model codes is to be easily adopted or adapted by p/t governments into their respective "local" building construction and safety regulations. This federal mandate was also motivated by the desire to assist provinces, territories, and municipalities in creating a more progressive and uniform system that is responsive to new construction, safety products, techniques and to the evolution of knowledge and societal needs throughout the country. The NRC continues to carry out this activity and reports to Parliament through the federal Minister of Innovation, Science and Economic Development.

Following the last deputy ministers meeting in 2000, the term "coordinated" code development system was chosen to capture the intent of coordinating code development activities among the provinces and territories (including agreement on code development priorities) as well as coordinating these activities and those of the CCBFC (i.e. priorities, harmonization, engagement). One of the most important of these activities – at the time – was the coordination of joint public consultations on code change proposals.

Strengths of the System

Currently, the provincial and territorial authorities value the coordinated code development system as an effective way in fulfilling their constitutional responsibility of providing building and safety regulations. They benefit from the sharing of technical expertise brought together within the system to which they contribute themselves. The provinces and territories also benefit from the national system facilitating and coordinating the updating, reviewing and referencing of product, testing and application standards within codes.

For the federal government, the value of a system lies primarily in increasing the economic benefit to industry (economies of scale, cost reduction for regulatory compliance) while harmonized regulation and uniform requirements also facilitate international and interprovincial trade and support innovation and the competitiveness of the Canadian construction industry.

The CCBFC conducts its business and publishes all code documents in both official languages, which is unique to Canada's system and satisfies significant national, federal and provincial interests.

Based on what is often referred to as "smart regulation" principles, the coordinated code development system has – for the last 60 years – produced model codes that address a minimum acceptable level of performance in the areas of safety, health, accessibility and protection of buildings and facilities. Smart Regulation, as defined by the Federal Government's External Advisory Committee on Smart Regulation in 2004, "*… is not deregulation. Smart Regulation does not diminish protection […]; it strengthens the system of regulation so that Canadians can continue to enjoy a high quality of life in the 21st century. […] regulation should support both social and economic achievement — providing citizens with the protection they need to feel safe, supporting the transition to sustainable development, encouraging a*

more dynamic economy and creating opportunities for Canadians and a model of regulatory excellence in the world."

Stakeholders generally trust the system. The construction industry and the regulatory authorities value its openness to all views, its transparency of policies and procedures, its balanced committees and its consensus-based decision-making.

The contribution of technical advisors who are subject matter experts in their respective areas and support the valuable contributions made by the experts who volunteer to participate on CCBFC committees reinforces the system and adds to the value of its outcomes. In addition to providing administrative support to the committees, the technical advisors' role includes analyzing and preparing agenda materials for review by the committees. All recommendations and decisions on which action to take are however made by the standing committees, the Executive Committee or the Canadian Commission of Building and Fire Codes.

The contribution of the over 400 volunteer experts serving on CCBFC committees at any given time can be valued at $4 million per year.

Partners

The CCBFC, the provinces and territories, in conjunction with PTPACC and NRC are typically referred to as the principal partners in the coordinated code development system.

The Canadian Commission on Building and Fire Codes (CCBFC) provides direction and oversight to the development of the National Model Codes in support of effective regulation and innovation in building construction in Canada.

The Provincial and Territorial Policy Advisory Committee on Codes (PTPACC) provides a discussion forum for issues affecting building and fire safety standards in the jurisdictions. PTPACC coordinates input from all provinces and territories and provides official policy advice to the CCBFC on public safety issues.

The National Research Council of Canada (NRC) hosts and manages the funding of the CCBFC activities and provides administrative support to PTPACC. NRC sells and licenses national model code documents and provides an evaluation service for construction and safety products for industry and regulatory authorities (Canadian Construction Material Centre, CCMC). NRC also provides specialized R&D in collaboration with industry.

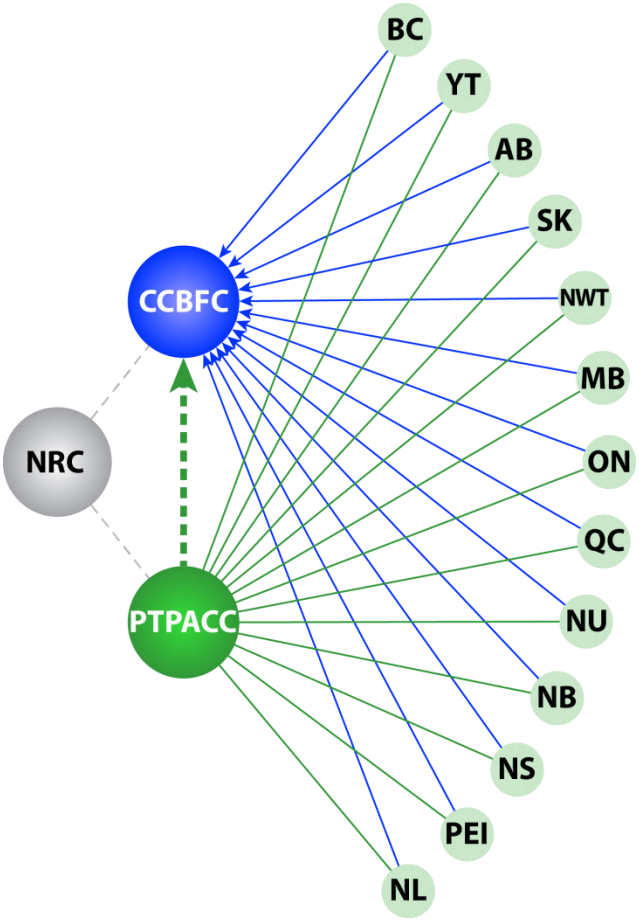

Figure 1: Collaboration and Relationships of Partners

The provinces and territories have the constitutional responsibility for enacting codes and contribute directly or indirectly to codes development funding. Provinces and territories participate in and can coordinate national public reviews with their own consultations. While provinces and territories participate on PTPACC, through which they provide policy guidance, their staff may also participate on the CCBFC and its committees at various levels (SC, TG, WG) as full voting members.

Scope

In Canada, the p/t building authorities have jurisdiction to regulate building construction and fire safety as well as the maintenance of existing buildings to satisfy societal needs for health, safety, accessibility, the protection of buildings from fire and structural damage and the protection of the environment. The p/t authorities as well as the CCBFC are also working on developing code requirements for more specific topics such as ageing population, care facilities, maintenance of existing buildings.

- The National Building Code of Canada (NBC) addresses the design and construction of new buildings and the renovation of existing buildings.
- The National Fire Code of Canada (NFC) provides minimum fire safety requirements for buildings, structures and areas where hazardous materials are used, and addresses fire protection and fire prevention in the ongoing operation of buildings and facilities.
- The National Plumbing Code of Canada (NPC) covers the design and installation of plumbing systems in buildings and facilities.
- The National Energy Code of Canada for Buildings (NECB) provides minimum energy efficiency requirements for the design and construction of new buildings higher than three storeys and larger than 600 m² footprint of all occupancy classifications except for farm buildings and housing and small non-residential buildings falling under the scope of NBC Part 9.
- The National Farm Building Code of Canada (NFBC) provides relaxations of the requirements in the NBC to address the particular needs of farm buildings.

The model codes apply to new buildings and facilities and to some extent to the demolition and alteration of buildings. The National Fire Code also applies to the maintenance of buildings and facilities and may have some implications for retrofit (e.g. smoke alarms). The scope of the documents cover all aspects of building and facility construction and safety (excavation, structural and earthquake design, building envelope, fire protection, ventilation and plumbing services, stairs and safe use of buildings as well as hazardous materials and activities).

The model codes are a mix of performance requirements, intended for projects where designers are involved, and prescriptive requirements allowing builders and contractors to apply the rules without engineering reports. Increasingly, performance-based requirements are provided to accommodate new products and methods, which results in a need for science-based and cost-effective solutions. The 2005 codes introduced the unique concept of objective-based codes to provide even more clarity on the objectives and the scope of codes and more flexibility for the introduction of innovative designs or practices where explicit performance requirements do not currently exist.

Structure and Membership

The CCBFC is an independent committee of volunteers established by the NRC and oversees the work of eleven committees:

- Executive Committee
- Standing Committee on Earthquake Design
- Standing Committee on Energy Efficiency in Buildings
- Standing Committee on Environmental Separation

- Standing Committee on Fire Protection
- Standing Committee on Hazardous Materials and Activities
- Standing Committee on Housing and Small Buildings
- Standing Committee on HVAC and Plumbing
- Standing Committee on Structural Design
- Standing Committee on Use and Egress
- CCBFC Technical Translation Verification Committee.

Each standing committee is responsible for a code or sections of a code and – if applicable the related guide documents. The standing committees advise the CCBFC on technical issues and recommended changes. The Technical Translation Verification Committee is responsible for verifying the technical accuracy of the translations of all codes published in French. As well, the Executive Committee acts as the Standing Committee for each of the Divisions A (Compliance, Objectives and Functional Statements) and Divisions C (Administrative Provisions) of all codes.

Each committee may have several task groups or working groups, which brings the total to over 400 volunteers on over 950 committee seats, as 50% of committee members participate on two or more committees. The content of the model codes is developed and determined by these volunteer committee members based on input from the stakeholders.

Committee members either have expertise in the construction industry (designers, consultants, builders), or they come from the regulatory community (building and fire) or they are part of the general interest groups (warranty providers, academia, education, consumer interests).

The CCBFC makes sure that the input from members on committees is balanced, such that all relevant sectors and geographical areas of the country are represented. NRC's Codes Canada supports all CCBFC committees administratively and technically.

NRC staff support the committees with technical advice and do not have a vote. Staff from associations or other federal government departments as well as representatives of CCBFC's major building material interest partners serves as ex-officio members, which are full members of a committee, but without voting rights. New editions of codes are published on a 5-year cycle, although interim changes can be published as part of revisions and errata between new editions.

All meetings except those of the Executive committee are open to the public, which ensures broad input from stakeholders and the construction community.

Process

The CCBFC develops the model codes through a committee-based process and formally approves all codes, guides and technical revisions prior to publication by NRC. The development of code content is a consensus-based process that relies on the voluntary contributions of standing committee and task group members, and the public.

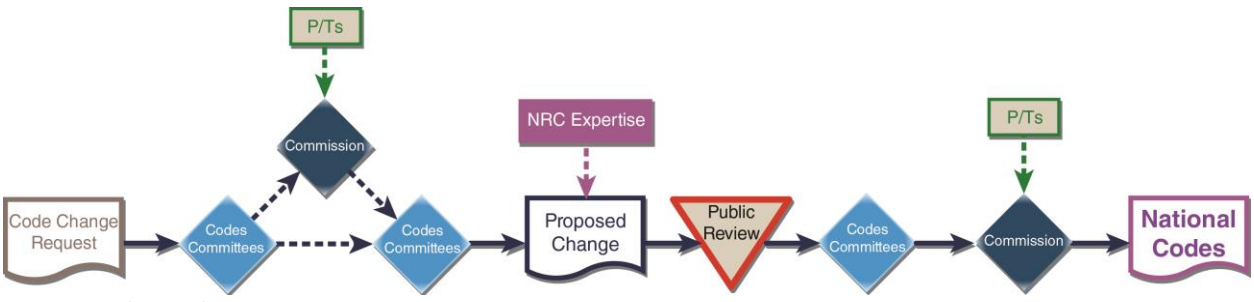

Figure 2: Code Development Process

A common process—from the initial proposing and consideration of code change requests to the publication of approved changes—is followed for all codes. An important feature of the code development and maintenance process is the extent of public involvement.

The development process typically starts with a code change request that can be submitted by anyone. Alternatively, the CCBFC can also assign tasks to committees and assign priorities to committee tasks. Once standing committees (SC) determine that requests have technical merit, the CCBFC approves the work and allows the committees to develop technical changes - often in task or working groups. The final steps include a public review, last revisions by the technical committees and forwarding of a final recommendation of the responsible standing committees to the CCBFC for final approval and inclusion in the next edition of the respective code. The requirements for an open, transparent and consensus-based process are captured in the CCBFC's Policies and Procedures, which are published online.

No stakeholder group, ministry or authority has a veto right on the proposed changes. However, if one of the p/t authorities has major concerns with a proposed change, the CCBFC would be informed and – in that case – it would be unlikely that the change would go forward without further considerations.

Public reviews on the final text of proposed changes are held in the fall each year and generate on average about 800 comments. Each comment is considered and addressed by the technical committees before a final recommendation on the proposal is made to the CCBFC for a decision regarding their incorporation in the next edition of a code.

The PTPACC is a discussion forum for policy issues affecting codes and standards and advises the CCBFC on national priorities from the adopting regulators. PTPACC deliberations are often held in-camera. During the 2005-2010 code cycle, process changes were implemented to formally provide provinces and territories the opportunity to provide comments to the CCBFC before and after the public review.

The justification of proposed changes is supported by a cost-benefit analysis and impact assessment regarding enforcement implications.

Code Adoption

The provincial and territorial authorities are responsible for adopting, interpreting and enforcing laws and regulations. Although the development process is continuous, new editions of national model codes are published on a 5-year cycle. Interim changes can be published as part of revisions and errata between new editions.

Currently, the NBC, the NFC, and the NPC are used extensively as the basis of provincial, territorial and municipal building, plumbing and fire regulations. The scope of these regulations may differ from the National Model Construction Codes Documents.

Some provinces adopt the national model codes automatically (upon publication), some with a lag time (to allow for updating permit protocols etc.), some do not adopt at all and some authorities review the changes in detail and adapt them to publish their own codes with substantial variations.

The largest and most widely adopted document is the National Building Code. In 2014, the 2010 NBC had been adopted or used as a basis for building regulations in seven of the 13 PT jurisdictions. Although three jurisdictions adopted the 2010 NBC in 2015, this adoption rate lags those of both the 2005 and 1995 cycles (by 2 or 3 jurisdictions) when comparing the same point in the code cycle (year 4).

Important Milestones

1987 Deputy Ministers' Meeting

In 1987, the p/t Deputy Ministers (DM) responsible for the building industry recommended that the federal, provincial and territorial governments develop a Memorandum of Understanding (MOU), which would commit the provinces and territories to adopting the National Building Code as a core document with as few amendments as possible. This MOU was signed in 1990 by representatives of seven of the provincial and the two territorial governments.

1995 CCBFC Strategic Plan

Various strategic documents have been written about Canada's code development system analyzing the needs of the provinces and territories and their participation and support. In addition, consideration has been given to the engagement of stakeholders as code users and the ultimate goals of the system.

An Issues Paper on the National Building Code of Canada, prepared for Canada Mortgage and Housing Corporation in 1994, reviewed the strengths and weaknesses of the code development system and presented the most significant issues concerning building regulations in Canada. The CCBFC followed suit by developing a new strategic plan in 1995, with a separate working document containing possible measures to implement the plan.

The goals identified in the 1995 CCBFC strategic plan were to:

- provide national model codes that meet the needs of all code users in Canada
- have future national model codes adopted without modification by all authorities having jurisdiction in Canada
- have uniform interpretation and understanding of code requirements throughout Canada
- have a responsive, objective, efficient and effective code development system
- strengthen the Commission's leadership role, and
- be substantially self-funding.

1998 and 2000 Deputy Ministers' Meetings

Records from two meetings between NRC and the provincial/territorial DMs responsible for building codes (in 1998) and for building, fire and plumbing codes (in 2000) show that the provinces and territories committed to the introduction of objective-based codes, the coordination of national and p/t public reviews, more active participation of provinces and territories through the creation of PTPACC, and the equitable sharing of the cost of developing codes.

In preparation for these groundbreaking DM meetings, the CCBFC and the Provincial/Territorial Committee on Building Standards (PTCBS – the precursor to PTPACC) jointly conducted a detailed study of the code development process and suggested ways to better meet the needs of the provinces and

territories and the above-stated strategic goals. The final report "*Towards an Improved Code Development System for Canada*" was broadly circulated and presented at the 1998 DM meeting. This report presented the supportive arguments and features for a "single, national coordinated code development system" now being reviewed.

2008 CCBFC Strategic Plan Workshop

In 2008, the CCBFC updated its strategic directions for the following five years after having assessed the environment and the organization's current state. The CCBFC created a mission and vision and four near-term priorities with associated action plans:

- communications, marketing, awareness and education
- timeliness and responsiveness to changes
- work towards harmonization of national, provincial and territorial codes
- future sensing - Identifying trends and issues and developing action plans accordingly

The CCBFC also identified potential performance measures for the system:

- degree of model code adoption by jurisdictions
- progress on strategic action plan milestones
- responsiveness to current stresses on the system

2011 CCBFC Communication Plan

Following the 2008 strategic workshop, the CCBFC developed and approved a communication plan in 2011. As a result, future sensing activities have become commonplace on the agendas of the CCBFC, its Executive Committee and standing committees. The CCBFC communication plan identifies a number of goals and sets out the guiding objectives of ensuring stakeholders in the national codes development system have access to information about how it functions as well as how to access it and use it. The plan also sets the goal of ensuring stakeholder needs are sensed, captured and assessed as to how the system responds to address those needs in a timely manner.

Considerations on Canada's Coordinated Code Development System

Ultimate Goals

The coordinated codes development system is a mature, collaborative system. It is of the utmost importance for a complex system with many partners and a multitude of stakeholders to be clear on its goals and directions.

Much progress has been achieved towards important goals. The coordinated system has broad support, from stakeholders and partners, for its model codes on building and plumbing construction, fire safety and – more recently – energy efficiency. The system is also recognized internationally for its groundbreaking work on objective-based codes, which greatly clarified the scope and the intent of the codes. Recent changes to the system have also contributed to its openness and transparency. Lastly, the rigor of the code development process, which relies on study, evaluation and decisions from volunteer experts and input from many significant stakeholders, is considered a key strength of the system.

Much like in a navigation system, however – it is equally important to know how close the system is to achieving all of its goals. It is also important at times to "make a turn" to get back onto course and to have a good understanding of the current capacity of the system and its limits.

In 2015, the system, with its partners and stakeholders, is at such a crossroads, where goals need to be confirmed, potentially significant course corrections considered and the system re-energized in some critical areas.

Current State

The goals identified in the 1995 CCBFC strategic plan were to:

- provide national model codes that meet the needs of all code users in Canada
- have future national model codes adopted without modification by all authorities having jurisdiction in Canada
- have uniform interpretation and understanding of code requirements throughout Canada
- have a responsive, objective, efficient and effective code development system
- strengthen the Commission's leadership role, and
- be substantially self-funding.

In response to the 1995 strategic goals,

- the CCBFC has optimized the system to enable regular and frequent interaction with provinces and territories during codes development activities
- the PTPACC was created to enable the CCBFC to receive policy advice on building and fire safety related issues through direct communication and through formal process steps such as pre- and post-public review as well as ad-hoc groups late in the code cycle; all these process enhancements, however, have led to a much more complex system
- the CCBFC also published the model codes in objective-based format, which increased clarity and design flexibility.

In 2008, the CCBFC updated its strategic plan and identified potential performance measures for the code development system, such as the degree of model code adoption by jurisdictions, the progress on strategic action plan milestones and the responsiveness to current stresses on the system.

In response to the 2008 strategic update, Codes Canada has optimized a number of the process steps through the effective use of technology. While progress on some actions in the 2008 plan was achieved and reported to the CCBFC, a final report on the 2008 strategic update has not been provided. The status of some of the actions identified in the 2008 strategic plan update is therefore not clear.

Many of the strategic documents as well as the past MOUs have identified the overarching goals consistently over the years (uniformity of codes and application, timely adoption, stable funding, meeting needs of code users). Consideration of the renewal of the last strategic document (now seven years old) and the creation of new collaborative agreement(s) is needed.

The transition to objective-based codes has been completed but an overall assessment of the effectiveness of its implementation is outstanding. It is however already clear that objective-based codes alone cannot satisfy the desire for uniform interpretation and understanding of code requirements throughout Canada.

Currently, one of the measures of the success of the system is the degree to which provinces and territories have adopted the model codes, but the time lag of model code adoption in provinces and territories is substantial (between 0 and 5 years) (see the Subsection on *Provincial Adoption of Model Codes* for more information)

Lastly, not only has the goal to have sustainable funding not been reached, it appears as if the funding of the system, which is based on the timely adoption by provinces and territories, has reached a near-crisis mode.

Desirable State

The desirable state of the system would have well defined goals along with performance indicators to measure success in reaching these goals (for more information see the Section on *System Performance and Complexities*).

The goal of safe and healthy buildings and facilities for Canadians is the raison d'être for all building and safety regulations. In addition, the partners would agree to a set of ultimate goals for the coordinated codes development system such as recognition of a shared, common national interest, sustainable funding, timely adoption, greater harmony, simplified process, and engaged stakeholders. These ultimate goals require support from stakeholders in addition to the partners.

The achievement of these goals would be monitored and reported on through performance indicators (via future strategic and operational plans) to demonstrate the success of the system. Adequate resources would be in place to provide a responsive, safe and sustainable system. The capacity of the system would be understood and communicated to all parties.

The monitoring of the system's performance and successes should strengthen the continuous improvement and innovation of the system. The following are concrete strategies as to how a 'learning' environment could be created:

- review findings from the JTG's environmental scan for possible improvements to the system in areas currently addressed by international 'competitors'
- monitor 'competing' international code products and seek to harmonize and close gaps
- increase engagement of Innovation, Science and Economic Development Canada and the related p/t ministries on harmonization of construction and safety codes and related standards
- promote code-related research and the integration of other research into the code development process
- continually monitor emerging international and societal trends and research findings

- study the feasibility of assessing the overall effectiveness of building safety regulations (ex-ante, ex-post).

The following goals would characterize the desirable state:

- The CCBFC produces ready-to-adopt regulations to assist industry and regulators in providing occupants with a safe, healthy and cost-effective built environment resulting in fewer variations and adaptations and more timely adoption (see Subsections on *Provincial/Territorial Adoption of Model Codes* and *Provincial/Territorially Initiated Code Changes*).
- NRC and CCBFC work together to maintain an open, participatory development process that enables the creation of effective building and fire regulations in response to emerging societal issues and that enables innovation in the design and construction market. (Some aspects of this goal are further explained under *Stakeholder Engagement* those relating closer to the process will be addressed in phase 2 of the JTG's work).
- NRC and CCBFC effectively engage the expertise of volunteer members to develop – by consensus – consistent and defensible model building and fire regulations (see Section on *Stakeholders Engagement*).
- The shared national interest and benefits of the system are recognized and championed by the federal, provincial and territorial governments (see Section on *Recognizing the Shared National Interest*).
- The p/t and federal governments regularly and formally affirm their common interest in the success of a coordinated codes development system (see Subsection on *New Collaborative Agreement(s)*).
- The Provinces/Territories, CCBFC and NRC agree on a fair and equitable financial support arrangement for the system (see Section on *Equitable and Sustainable Funding Model*)
- The provinces and territories, CCBFC and NRC agree on a long-term sustainable funding mechanism and transitioning plan to a budget-management approach that links available resources to code development priorities. (see Section on *Equitable and Sustainable Funding Model*).
- Provinces and territories adopt model codes more timely and create greater harmony in building and fire regulations as a result (see Subsection on *Provincial/Territorial Adoption of Model Codes*).
- NRC and the CCBFC agree on minimum service standards on key performance indicators or responsiveness (see Section on *System Performance and Complexities*).

Recommendation(s)

1. Agree to promote and support the ultimate goals of the coordinated code development system.
2. Undertake a realistic assessment of resource needs to ensure a responsive, safe and sustainable system and clearly identify the realistic capacity and limits of the system and communicate this capacity in an effective and consistent manner, with all partners and stakeholders.
3. Develop a new strategic plan that addresses the steps necessary to achieve the goals of this report and that recognizes the urgent need for action in a number of key areas.
4. Enhance and develop the 'learning' environment in order to continuously improve system outcomes.

Equitable and Sustainable Funding Model

The current funding model benefits from a number of sources including a constant base funding commitment provided by NRC (capped at $2.4M/y) and the sales of codes and guides. The latter relies in large part on timely p/t adoptions, which spur the commercial market for codes. In addition, the in-kind contributions made by the volunteers on CCBFC committees are estimated at $4M/y.

As noted, the base funding commitment is augmented by funding provided through the user-pay principle. Currently, the coordinated system – in order to be sustainable – needs every user of national codes content to contribute financially to the ongoing development of the codes. This individual contribution is embedded in the pricing of national codes sold by NRC, as well as in the NRC licensing of national codes information to provinces and territories and third parties. However, timely p/t code adoptions have proved difficult to achieve in practice.

There is now an urgent need to review how the coordinated codes development system is funded and to improve the viability of such funding.

International Trends on Funding Code Development Work

In order to inform the JTG of best practices of other Canadian and international organizations involved in developing construction codes and standards, the JTG conducted an environmental scan. The following summary highlights some of the information identified as it relates to funding models of those entities/jurisdictions.

While funding sources vary across the international code and standard development organizations, most standard organizations (ex. NFPA, ICC, CSA) include product sales and some accept contributions from industry (ISO, CSA). Other sources of revenue included paid membership (ASHRAE, ISO), training/conference fees (ASHRAE), advertising (ASHRAE) and investments (CSA).

For organizations that develop federal regulations or model codes (Australia, Germany, NRCan), some or all of the funding is government based. In Australia, model codes development is funded by a 50% contribution from the federal government with the state governments contributing the other 50%. Individual state governments contribute pro-rated amounts based on their respective population and number of construction permits issued. The German model recognizes the federal government's role with a 20% contribution and that of the federal state governments providing an 80% financial contribution, based on a state's population and their construction GDP. The NRCan model of developing the Energy Efficiency Act is funded 100% by the Canadian federal government.

A number of codes and standards developing organizations (ABCB, NFPA, ICC) publish their business plan and goals, which makes them more accountable to their stakeholders and urge their organizations to accomplish their identified future goals.

The product formats and delivery modes are largely the same among all organizations. While all organizations distribute their products electronically, paper products are offered by most except Germany and the NRCan Energy Efficiency Regulation. A number of organizations highlighted a growing trend to provide codes free.

About the Australian Intergovernmental Agreement (IGA)

A joint initiative of all three levels of government in Australia established and signed by the Commonwealth, States and Territories on 1 March 1994 resulted in a new Intergovernmental Agreement (IGA) that took effect on 30 April 2012.

All signatories to the Australian IGA are expected to:

- adopt and adhere to the Australian model codes,
- to prevent local or state/territorial regulatory instruments from overriding model code performance requirements, and
- ascertain a consistent application of the model codes across the different states and territories.

The IGA states that the Australian Building Code Board's (ABCB) funding is provided by annual appropriation by the Commonwealth to an "ABCB Account" and crediting of payments made by the states and territories to the Commonwealth for the purposes of the ABCB Account. The IGA describes in detail which payments the Commonwealth may receive from other sources for the purposes of running the ABCB and which payments can be credited to the ABCB Account. The signatory parties pay predetermined annual contributions of funds as soon as practicable after the commencement of each financial year. The ABCB Account has a central function in this arrangement. All annual contributions of the signatories will be credited to the ABCB Account. Amounts from the ABCB Account including interest may only be used for the purposes of achieving the Board's objectives.

The IGA also sets out the funding contribution of the signatories. Individual state and territory contributions consist of a base component of $75,000 per annum and a pro-rata amount based on the total value of building approvals using Australian Bureau of Statistics data for 2007-08.

Besides the funding contributions of the ABCB's activities, the IGA sets out the details of appointments, functions, powers, meetings, duties and eligible expenses. As well, the Australian State Ministers have agreed to meet periodically to review the outcomes and progress against objectives set out in the Annual Business Plan(s) and to review the annual reports of variations from the model codes.

Current State

As the administrative host, NRC has the main responsibility for managing the fiscal operations of the system. In past code cycles, as part of the discussion and approval of code pricing strategies, NRC has shared the revenue expectations from code sales and projected 5-year expenditures with members of the CCBFC Executive Committee and the PTPACC. Though some limited discussions have taken place on the financial situation during the cycles, the JTG was of the opinion that the information provided lacked the level of transparency and detail needed for the provinces/territories to effectively participate in the system. In addition, the information on expenditures and resource allocation has not been sufficiently detailed to allow the partners to understand how resources are linked to system priorities and provide input on how resources should be used to support system priorities.

A number of factors have contributed to the funding shortfall and although some of these factors have been outside of the control of NRC, NRC has covered this shortfall in funding to date in the interest of supporting the coordinated system.

In terms of financial support, the system's current revenues are insufficient to sustain the system in its current form. Over the last number of code cycles, the gap in revenues is due to a variety of factors including:

- inflation (federal commitment has not been adjusted for inflation)
- increasing expenses due to
    - expanded scope of codes requiring new staff and committee for energy efficiency in buildings (2008) and staff for housing (2013) and earthquake design (2014)
    - increasing demand for more detailed cost and enforcement information in proposed changes
    - development and maintenance of new users guides (1995 guides, 1998 Illustrated Guide,

2010 Illustrated Users Guide Part 9, 2011 NECB users guide) and large Appendix notes (Tables of fire and sound resistance ratings, 1995)
    - development of objective-based codes and the need to maintain and publish objective-based information (intents, application, objectives)
    - development of electronic products
    - installation of a content management system for consistent document production
    - implementation of work plan control (approval process) and introduction of the Executive Committee (1999)
    - creating a specialized production team rather than using NRC shared services (1995)
- reduced revenues in 2000-2005 code cycle because 2000 model were not produced
- the lack of regular and timely adoption of the latest edition of the model codes in some provinces/territories
- failure to reach agreement with Ontario on an equitable funding formula

All these factors combined have created the revenue shortfalls that – so far – NRC has underwritten. See *Figure 3: Historical Comparison of 5-year Figures for Cost vs. Revenue*.

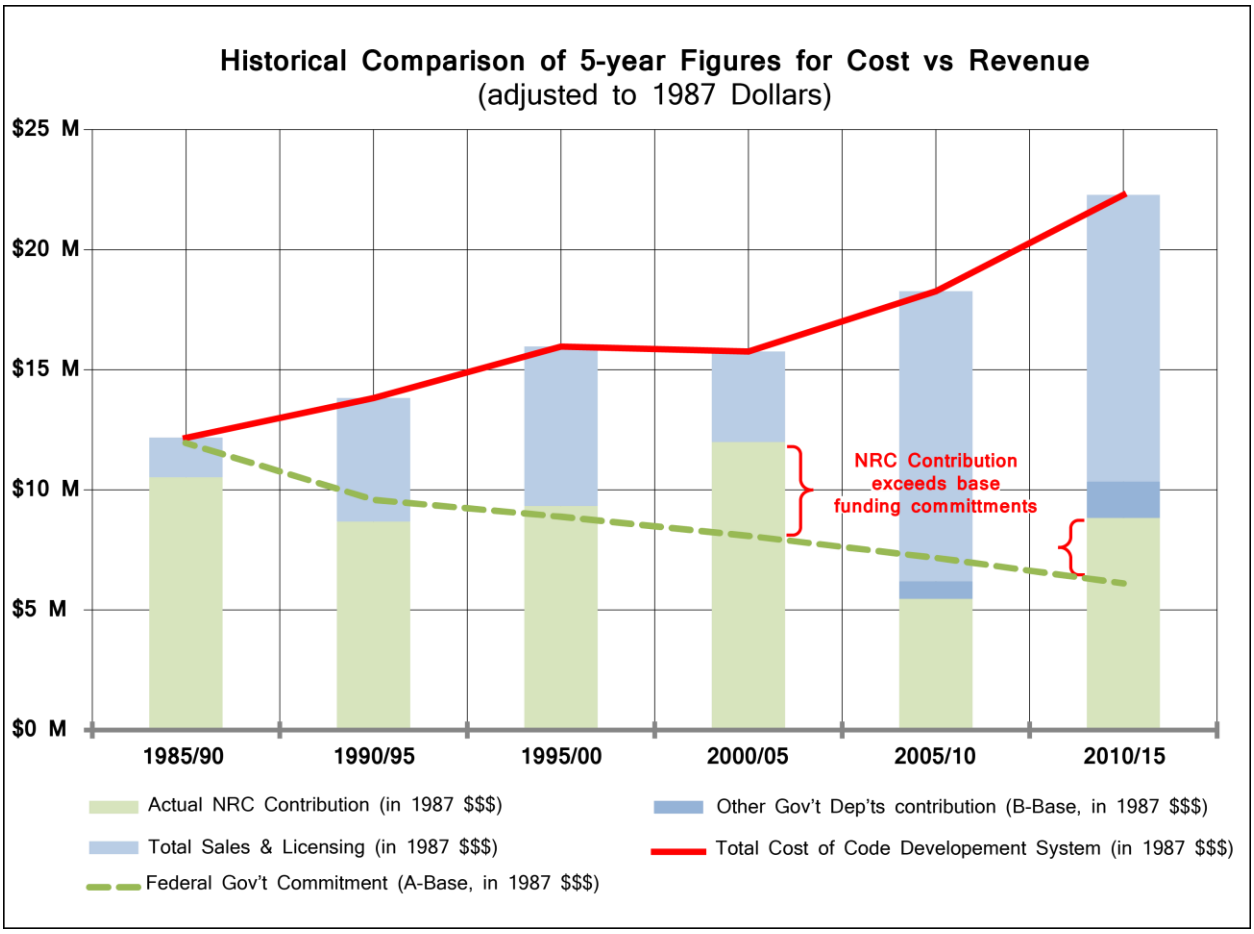

Figure 3: Historical Comparison of 5-year Figures for Cost vs. Revenues (adjusted for inflation)

The lack of regular and timely adoption of new codes has significant financial impact on the coordinated codes development system. Delayed adoption results in delayed revenue to the system.

Equitable funding contributions from all provinces and territories have largely been implemented across jurisdictions based on the user-pay principle; with one notable exception where none of the revenue arising from the sale of p/t building and fire codes is channeled to be used in direct support of the national system (see Table 1).

Table 1: Provinces' and Territories' Contribution to Funding of Coordinated Codes Development System

National System Funding Method	BC	YK	AB	SK	MB	NWT	ON	QC	NU	NB	PEI	NS	NL
National Codes Adopted by Reference		✓	✓**	✓	✓	✓			✓	✓	✓*	✓	✓*
NRC Produces and Sells Provincial Codes based on National Content			✓					✓					
License to Reproduce National Content in Provincial Codes	✓												
None							✓						

* *By municipalities.*
** *As of March 2015.*

Ontario represents the largest Canadian market of code users and develops and publishes its own codes that are – in large part – similar to national codes content though with substantial differences in scope and content. No portion of the revenues from Ontario's code sales flows back to support the national system.

A number of provinces including Ontario, British Columbia and Alberta have also contributed to the development of content in the national codes over the years through special, relatively large initiatives and actions within the provinces.

Provinces and territories also support the system through a number of other in-kind services, which include:

- technical content via code change proposals, and comments on proposed national changes
- membership of p/t staff on national committees
- policy advice through PTPACC
- support for research projects
- publishing of provincial codes by NRC or other agreements including royalties to NRC

A sustainable funding solution needs to recognize p/t contributions to the system.

For the fiscal years of the 2010-2015 code cycle, the estimated revenues from code sales, royalties, licensing and funding from other federal government departments led NRC management to estimate a total budget of $40M for the system for the 2015 code cycle.

Revenue expectations from code sales, royalties, licensing fees and other government department funding should thus total $28M over 5 years. The actual revenues from these sources between 2009 and 2014 totaled only $22M. As this shortfall became evident, NRC management has progressively reduced codes development expenses to control expenditures. The JTG is of the opinion that these expenditure reductions have negatively affected the effectiveness of the coordinated code development system.

Late in the 2010-2015 cycle, NRC has expressed its intention to limit its financial base funding commitment from $2.4M annually ($12M over 5 years) to a maximum of 20% of the system's expenses. During the course of this study, the JTG was informed of this change in NRC's policy. As such, NRC expects – on a going forward basis – to contribute $8M to a total 5-year budget envelope of $40M. This change will further compound the funding shortfall.

Using the figures from the most recent code cycle (2010-2015) with expenditures estimated at $40M, NRC's contribution being capped at $8M and code sales accounting for $22M there could be an estimated shortfall in the order of $12M over 5 years or $2.4M annually.

If the current shortfall in funding cannot be resolved with a more sustainable solution, staff resources and operational expenses (such as costs associated with committee meetings) would need to be reduced to stay within the revenue projections on an annual basis. This will have a serious effect on the accomplishments of CCBFC priorities and upgrading of code products and introduction of new technologies.

International Trends on Funding Code Development Work

At this time, little pressure exists of other (international) code development organizations being considered as an alternative to the current coordinated code development model by p/t jurisdictions. Possible exceptions to this are Newfoundland-Labrador and Prince Edward Island, where the NFPA 101 life safety code is referenced rather than the National Fire Code.

As well, the move towards referencing of international standards is considered an opportunity to strengthen the viability of the system.

There is a notable trend among national and international organizations (CSA-CEC, NFPA, ICC) towards providing free viewing of codes or providing completely free access to all products (Germany, Australia).

In reviewing strategic directions being pursued by national and international codes and standards developing organizations, the desire to increase (national and international) harmonization ranked highest followed by wanting to expand into new market areas and changing the funding models (from product sales to diversifying the funding).

Desirable State

In the desirable state, the basic principle for funding the system would remain a fair and equitable financial support by federal and p/t levels of government that recognizes the shared national interest of developing model codes. A sustainable funding solution following this principle would satisfy these criteria:

- all provinces and territories support the system
- the support from the federal government appropriately reflects the federal interest - NRC services are considered part of the federal contribution
- the financial support of the system is regularly reviewed by all contributors
- equitable support may be based on metrics such as construction activity or population
- responsibility for the management of the fiscal operations and determination of the priorities of the system is shared by the partners

A sustainable system must also have a significant component of stable base funding such that the 'business' can be planned and prioritized effectively. There is a need to develop alternative revenue streams both to support the system but also to minimize the risk to funding that a potential move in the future to free code access presents.

It is recognized that reaching an agreement on a sustainable funding mechanism and transitioning to a new management approach that links available resources to code development priorities will take a number of years. Therefore, a transition period is needed before the new arrangements can be fully implemented. In order to inform the discussion that needs to take place to determine an equitable and sustainable funding model a number of scenarios were considered. They are provided here as possible approaches.

It is critical that all provinces and territories commit to supporting the coordinated codes development system including an equitable contribution in providing the appropriate resources necessary to sustain a viable system.

Scenarios

Based on the current funding system and taking into consideration funding models used in other national and international areas of partially government-supported codes or standards development activities, the revenue sources for possible funding model scenarios may include:

- base funding
  - provided by federal government
  - provided by p/t governments - prorated
- sale of products
  - national codes and licensing of national codes content
  - provincial codes printed by and distributed by NRC
  - provincial codes by p/t agents and remittance of royalty to NRC

In addition to the revenue sources listed above, the partners would study the possibility of a new service, in which NRC develops and markets design and compliance (modeling) tools for performance-based requirements to assist designers and builders in the ever-increasing complexity of code requirements.

Table 2 describes the funding scenarios discussed and analyzed by the JTG.

Table 2: Funding Scenarios for the Coordinated Codes Development System

Scenario	Federal/NRC Base Funding	PT Base Funding	Code Sales
1	20%		80%
2	20%	10%	70%
3	20%	20%	60%
4	20%	80%	
5	50%	50%	
6			100%

Scenario 1 essentially represents the status quo based on NRC's revised policy direction, which has been determined through experience not to be viable unless two conditions were met: adoption of latest national codes content (by reference or through incorporation in provincial code) within a fixed period and participation by all provinces and territories.

Scenario 2 represents a minor variation to Scenario 1. The system would still depend largely on the sale and licensing of national codes content (70%) but the provinces and territories would fund annual revenue shortfalls (~ 10%) based on prorated contributions. Continued protection of the commercial value (intellectual property) of national codes content would be required (this is also valid for options 1, 3 and 6). Provincial/territorial contributions would have to be managed annually because of the cyclical nature of sales revenue during a code cycle.

Scenario 3 is based on Scenario 2 but would see the direct p/t base contributions increase to 20% of the total system expenses. Any annual system surplus could be used to fund codes-related research, or to repay provinces and territories, who have invested in research of value to national codes.

Scenario 4 would see the abandonment of the commercial value of codes content (code sales and licensing). The codes could be distributed electronically free of charge, which would greatly aid their

diffusion and use in practice and training. Hardcopy versions could still be sold on a printing and distribution costs recovery basis (i.e. no net revenue available for development funding). The provinces and territories would be expected to directly fund 80% of total system expenses (on a pro-rata basis per P/T), for example, the provinces and territories could assign funds from existing budgets or raise funds through a building permit levy. This system would be similar to that used for construction code development in Germany.

Scenario 5 also follows the 'free codes' idea, but with an equal cost sharing amongst the federal and p/t governments. This system would be similar to the Australian model.

Finally, Scenario 6 is a funding model based on 100% of the revenue being generated from sale and licensing of codes content (similar to a private venture). A careful banking management of revenues and expenses would be required to ensure the system could operate stably through lean and rich years (surplus vs. shortfall in sales). This scenario was not considered as a sustainable option on a go forward basis.

Formula for Equitable Sharing

An equitable funding arrangement between the federal government and the provinces and territories needs to be established. Though the JTG considered a number of potential solutions, the resolution of this sharing arrangement can only be determined by both levels of government working together to ensure the continued sustainability of the coordinated codes development system.

The JTG reviewed a number of statistical metrics to estimate and compare the p/t construction activity (population, building permits, housing starts, construction capital expenditures). Options worthy of future study in determining p/t contribution levels to the system seem best to be derived and prorated according to an average of the construction activity and/or the population proportions of the respective province or territory.

The JTG also noted the merits of the Australian approach of creating a new entity outside of both the federal and p/t governments that could jointly manage a code development system.

Recommendation(s)

5. The federal government (likely with NRC taking the lead) confirms support for the coordinated code development system and enters into discussion with all provinces and territories to reach a consensus on a sustainable financial model for a coordinated code development system that reflects the shared national interests.
6. Establish a fair and equitable funding solution consistent with the following principles:
   a) all provinces and territories need to support the system
   b) the support from the federal government appropriately reflects the federal interest and NRC services comprise part of the federal contribution
   c) the funding system must include a significant base funding component
   d) the solution needs to recognize other p/t code development activities and related research that support the system
   e) the financial support to the system should be regularly reviewed by all contributors
   f) equitable support may be based on metrics such as construction activity or population
   g) responsibility for the management of the fiscal operations and determination of the priorities of the system should be shared by the partners.
7. Identify and pursue alternative revenue stream opportunities for the future as well as study implications to code use and funding of transitioning to free (access to) codes.

Recognizing the "Shared National Interest"

Historically, the effort to collaborate on a model codes system was driven by the federal interest to create uniform requirements for housing construction during World War II. Industry associations supported that initiative and petitioned the federal government to address the issue of disparate building bylaws in the absence of provincial codes. Over time, the need for expanded model codes grew to include fire, plumbing and energy considerations.

There is now a significant interest for a coordinated codes development system from the provincial and territorial jurisdictions, which have the constitutional responsibility for building and fire safety. While some jurisdictions may have the capacity to develop building and/or fire codes independently, most choose to rely on the system. All jurisdictions agree on the benefits of the system and indicate a strong desire to promote harmonization wherever possible. The significance of the p/t and federal interest is underlined by the importance and size of the construction market.

Current State

The 'national' interest is not well defined. The p/t interest clearly revolves around their constitutional responsibilities in the area of building standards and fire safety. However, the coordinated codes development system goes across these jurisdictional boundaries and thus extends into many areas of federal interest. The federal interest in uniform national model codes (industry productivity, global competitiveness, trade) does not appear to be well understood or appreciated. Because of the breadth of subject matter in the model codes, the p/t and the federal interest is diffused through both levels of government.

At the p/t level, the landscape is complicated as there is a large diversity of p/t Ministers responsible for building standards (including energy) and fire safety. In a similar manner, a number of federal departments have an interest in the scope and content of the model codes.

The last provincial Deputy Minister's conference on the coordinated codes development system was held in 2000 and - to the best of the JTG's information - a conference of senior federal officials with an interest in the built environment has never taken place.

Significant federal involvement and support through the NRC has been a mainstay of the model codes system since its inception. Codes Canada administers the business of the CCBFC process, which includes supporting and advising the technical committees of the CCBFC, the CCBFC itself, and providing secretarial support to PTPACC. As well, the production and marketing of national and some provincial codes and guide products are handled at NRC. Codes Canada routinely and closely collaborates with researchers from NRC Construction. Findings from NRC research projects – often obtained in collaboration with industry and p/t partners – constitute a significant proportion of the technical and scientific evidence submitted to inform CCBFC committee decisions.

<u>Federal Interest</u>

The federal interest in uniform regulations lies primarily in increasing the economic benefits to industry (economies of scale, reducing the cost burden of regulatory compliance). Harmonized regulations and uniform requirements also facilitate international and interprovincial trade and support innovation and the competitiveness of the Canadian industry.

The effectiveness of the Canadian model codes in creating economic benefits for Canada has however never been quantified. Recent work undertaken in Australia quantified the value of the economic benefit of a regulatory reform under a similar constitutional environment. In the Australian context, a 2012 report by the Centre for International Economics found that building regulatory reforms

implemented progressively over the last 20 years have been delivering $1.1 billion per annum in benefits. The report predicts an additional $1.1 billion per annum in potential benefits yet to be realized through providing free codes and creating a more consistent application of code requirements across Australia.

Recently a heightened interest in Canada from federal government departments has been noted in participating in the code development process that allows for dialogue and collaboration on areas of p/t and/or joint responsibilities (e.g. Health Canada (radon, hot water) and Natural Resources Canada (energy efficiency).

Provincial/Territorial Interest

Currently, the provincial and territorial authorities recognize the coordinated codes development system as an effective way to fulfill their constitutional responsibility of providing building and safety regulations. They benefit from the sharing of technical expertise brought together within the system to which they contribute themselves, especially those jurisdictions that may not have the capacity to develop a building, plumbing, energy and/or fire code independently. All jurisdictions agree on the benefits of the system and indicate a strong desire to promote harmonization wherever possible. The provinces and territories also benefit from the system facilitating and coordinating the updating, reviewing and referencing of standards.

As noted above, much of the system is funded through the sale of codes by NRC. PTPACC member ministries may not control the entire codes' adoption process within their jurisdiction, because of legislative or regulatory processes and government priorities. In addition, the PTs do not have a direct interest in the economic impact that delays in adoption have on the sustainability of the coordinated code development system. Though there have been signed MOUs in the past between NRC and provinces and territories, a formal contractual agreement among all provinces and territories that commits all signatory parties to a common goal and a sustainable system has not been reached. (This subject is more fully addressed in the Subsection on *New Collaborative Agreement(s)*.)

Recently, there has been some renewed interest among jurisdictions to combine efforts and accomplish the development and implementation of uniform codes. For example, some of the western jurisdictions collaborate on harmonizing training of trades and acceptance of professional, technical and trade qualifications' within the partner provinces.

Construction Industry

The construction Industry is an important contributor to the economy. In 2011, Construction accounted for 6.0% of Canada's gross domestic product (GDP) (at basic prices) amounting to $76.5 billion. The industry grew 4.2% since 2010, a greater gain than Canada's overall GDP growth of 2.6%. The strongest component was engineering, repair and other construction activities, which gained 7.0%. Engineering includes construction for transportation, oil and gas, electric power and communication engineering construction. The other two components were residential building construction, which rose 1.6%, and non- residential building construction, up 0.4%. Roughly, 1.3 million people worked in construction in 2011, making it the fifth-largest employer by industry and accounting for 7.3% of jobs among all industries.

From 2000 to 2010, construction GDP increased 42.7%, whereas GDP for all industries increased 20.2%. (from: Canada Year Book 2012 - Catalogue no. 11-402-X http://www.statcan.gc.ca/pub/11-402-x/11-402-x2012000-eng.htm)

Table 3 provides an overview of the construction GDP by province and territory. It provides a combined residential/non-residential GDP component (column D) that would resemble more closely the work

affected by building, plumbing, fire and energy codes. For ease of comparison, it also provides the percentage of the res./non-res. component for each P/T (column E).

Table 3: Provincial/Territorial Gross Domestic Product (GDP) at Basic Prices, by Sector and Industry (Construction) in annual dollars (2011) x 1,000,000

Province/Territory	A	B	C	D	E
	GDP (2011) Total Construction[1,2]	GDP (2011) Residential Building Construction[1]	GDP (2011) Non-residential Building Construction[1]	B + C	D/A
Newfoundland and Labrador	$ 2,039	$ 668	$ 336	$ 1,004	49.3%
Prince Edward Island	$ 314	$ 102	$ 71	$ 173	55.2%
Nova Scotia	$ 2,125	$ 716	$ 373	$ 1,089	51.3%
New Brunswick	$ 2,098	$ 678	$ 347	$ 1,025	48.9%
Quebec	$ 22,862	$ 7,694	$ 3,752	$ 11,447	50.1%
Ontario	$ 38,814	$ 13,636	$ 8,562	$ 22,199	57.2%
Manitoba	$ 3,342	$ 890	$ 465	$ 1,356	40.6%
Saskatchewan	$ 5,245	$ 1,054	$ 731	$ 1,786	34.1%
Alberta	$ 27,109	$ 4,610	$ 2,814	$ 7,425	27.4%
British Columbia	$ 15,033	$ 5,497	$ 2,104	$ 7,602	50.6%
Yukon	$ 297	$ 77	$ 46	$ 123	41.5%
Northwest Territories	$ 298	$ 23	$ 38	$ 62	20.8%
Nunavut	$ 210	$ 35	$ 52	$ 87	41.6%
Total	**$ 119,791**	**$ 35,686**	**$ 19,698**		

[1] *Source: Statistics Canada CANSIM Table 381-0030*

[2] *The total construction GDP also includes engineering, repair and other construction activities, which are not listed in Table 3.*

Desirable State

The strong "Shared National Interest" is recognized in the coordination of p/t interests with federal interests in providing an effective and efficient regulatory environment for the stakeholders across the country who are interested in design, construction, public health, accessibility, environment and public safety. As this is a very important industry for Canada, the shared national interest should be regularly and formally affirmed by senior elected officials and supported by a financial model that provides sustainable and predictable support from federal and p/t sources.

There should be a strong common interest of federal and p/t governments in harmonized and uniform codes to the greatest extent possible, including both the technical content and the codes adoption schedule. This common interest should be well understood and communicated to all parties having an interest in the system.

The federal government should formally recognize the benefits to industry of a harmonized, coordinated construction and safety codes development system and support its sustainability. Engagement of federal departments should be enhanced to make use of the system to build consensus among authorities and stakeholders on areas of shared national interest.

All provinces and territories would commit to supporting the system including providing their fair share of the appropriate resources necessary to sustain a viable system. Improved integration of the codes development activities at the p/t and federal level need to become a priority including renewing efforts

at achieving greater harmonization. This enhanced integration should result in effectiveness and efficiency improvements.

Joint discussions should highlight how the system attracts industries, creates a wider (national) market for industries, facilitates access to Canadian markets by foreign industries (through easier interprovincial trade and international harmonization), and increases innovation and productivity. Decisions made within the jurisdictions to undertake independent code amendments must be balanced on the impact these decisions have on the broader shared national interest goals. A next step, therefore, would be determining which federal, p/t ministries should be engaged in such discussions.

Additional initiatives to recognize and promote the shared national interest of the system need to be undertaken, including:

- enhancing the participation of the federal government in the system and in particular other federal government departments that have an interest in model codes, and
- developing a commitment from the provinces and territories to support and take more of a leadership role in the system. This should include participation in an equitable funding model which is discussed in the Section on *Equitable and Sustainable Funding Model*.

Recommendations

8. Hold strategic level discussions to develop the political commitment to ensure a viable and sustainable code system in Canada for the future and to affirm the shared national interest.
9. Encourage a broader discussion on quantifying the economic benefits of the coordinated code development system.
10. Look at opportunities to better integrate the partners respective code development processes with the goal of achieving efficiencies for the system.

Partnership and Collaboration

The coordinated code development system is a collaboration of a number of partners and many stakeholders.

As it has been addressed previously, the NRC acting on behalf of the federal government through Innovation, Science and Economic Development Canada provides significant resources and support to the system. Individual provinces and territories are strong participants in the system in a variety of areas. The CCBFC has been established by NRC to direct and manage the system. More recently, in order to provide a forum for collective policy discussion and advice to the CCBFC from the provincial/territorial level, the PTPACC was established. These entities (CCBFC, the PTs, PTPACC and NRC) are considered the principal partners of the system.

While the partners are also stakeholders, the term '*stakeholders'* used in this report refers to the broader group beyond the partners that interact and have an interest with the coordinated system. The engagement of stakeholders and their interaction with the system (and the partners) is discussed in detail in the Section on *Stakeholders Engagement*. One group of stakeholders, who have close relationships with one or more of the partners, are described as 'major building material interests' or 'key stakeholders'.

Current State

Currently, while the quality of collaboration between the CCBFC, provinces and territories in conjunction with PTPACC and NRC can be described as “good”, the JTG felt that the partnership could be improved.

Canadian Commission on Building and Fire Codes (CCBFC)

The CCBFC develops the model codes through a consensus-based process and formally approves all codes, guides and technical revisions prior to publication by NRC. The CCBFC meets annually and conducts its business through the year by letter ballot and conference calls as required.

Many aspects of the ongoing operation of the CCBFC are conducted on their behalf by an Executive Committee (EC) of the Commission. The Chair of the CCBFC also chairs the EC. This group meets two to three times annually in face-to-face meetings supplemented with a number of conference calls. The EC also functions as a standing committee for all the Divisions A and C in each model code as well as for all of the Parts 1 and 2 of the Divisions B in each of the model codes. Outside of deliberation, while operating in its role as a standing committee for scope and objectives, the EC meets in-camera. Visitors may attend in-camera sessions of the EC by prior request and on agreement of the Chair for an agenda item. CCBFC members are welcome as observers for all portions of the meeting.

Once a year, the Executive Committee has a joint meeting with the PTPACC that serves to share, coordinate, address and explore issues of common interest and to facilitate moving forward on urgent and important issues.

The primary code development activities are carried out by nine technical standing committees (SC) of subject experts who are selected to balance the three primary groups; regulators, industry and general interest. SC members are expected to consider a proposal based on its merits and not to represent a particular interest or group. A number of Task Groups may be struck from time to time in order to work on particular areas of interest. The CCBFC approves tasks or assigns tasks to its committees annually.

The CCBFC’s role also includes the setting of priorities for the codes development work while considering policy advice from PTPACC. Clear criteria or principles for the assignment of priorities of code development tasks were not identified during the review by the JTG.

CCBFC policies seek to apply smart regulation principles such as a solid justification and impact analysis to all its proposed changes (which are highly valued by stakeholders), but the application of these policies may still be inconsistent across all committees and proposed changes.

The CCBFC often waits for policy advice from PTPACC before directing its committees to work on subjects, which may lead to delays in developing code changes.

Provincial/Territorial Policy Advisory Committee on Codes (PTPACC)

Since its inception, as an action arising from the Deputy Ministers meeting in 2000, the PTPACC has provided policy advice to the coordinated code development system. While some jurisdictions are more active than others, all thirteen provinces and territories are members of PTPACC. The participation of a few jurisdictions has however been very limited.

The PTPACC is a discussion forum for policy issues affecting codes and standards. Besides the CCBFC, the PTPACC also advises the Standards Council of Canada on public safety issues and on national priorities from the adopting regulators. PTPACC deliberations are generally held in-camera. During the 2005-2010 code cycle, process changes were implemented to formally provide provinces and territories the opportunity to provide comments to the CCBFC on proposed code changes before and after each public review.

At times, there has been a significant time lag between the CCBFC asking for advice from PTPACC and a response being received on items. This can lead to the system being slow to respond to emerging issues.

During an environmental scan of national and international code and standards development bodies, it was noted that stakeholders may perceive PTPACC to maintain powerful rights within the Canadian context and that its in-camera discussions of policy might hinder transparency. On the other hand, the role of PTPACC to advise the CCBFC on priorities has been recognized as critical to maintaining the relevance of the coordinated codes development system. To this effect, the environmental scan describes similar international code development systems (Australia, Germany) where the authorities are actively involved and have considerable influence over the system.

National Research Council of Canada (NRC)

The NRC hosts and manages the funding of the CCBFC activities and provides administrative support to PTPACC. NRC sells and licenses national model code documents and provides an evaluation service for construction products and technologies through the Canadian Construction Material Centre (CCMC) for industry and regulatory authorities. NRC staff (Codes Canada) support the CCBFC committees with technical advice, but do not have a vote on committees.

NRC also provides specialized research in collaboration with industry. Codes Canada staff routinely and closely collaborates with researchers from NRC Construction. CCBFC committees often receive research findings from NRC research projects that inform their decisions.

Individual provinces and territories

Individual provinces and territories are engaged in the system in a variety of ways.

Many provinces and territories already support and contribute to the system and its goals in a number of ways, including:

- direct financial support through provincial codes sales by NRC or license fees remitted to NRC for the reproduction of national codes content
- making efforts to harmonize the technical content of the model codes via code change requests and through comments on proposed national changes
- supporting participation of p/t staff as members on national committees
- advising the CCBFC on policy matters through PTPACC
- financial support of NRC research projects
- development of code change initiatives independently and outside of the coordinated codes development system
- consulting on codes changes within their jurisdictions

As part of their constitutional responsibility to enact into regulation either building, plumbing, energy and fire safety codes, some jurisdictions adopt model codes as written (SK, NB, NU, YT, NWT), some modify model codes in particular areas (QC, MB, BC, AB, NS) and one province develops their own building and fire codes (ON). Two provinces adopt other international standards (NL, PEI) in addition to some national model codes.

Some representatives of the provinces and territories participate as regulators on CCBFC committees. In this capacity, they are considered subject matter experts and not representatives of a particular jurisdiction. Official policy advice is communicated to the CCBFC through PTPACC rather than directly into the technical committees. Individual provinces and territories may be involved in discussions on code change proposals where there is a significant impact on their jurisdiction.

Provinces and territories also contribute by submitting comments during national public reviews and by submitting Code Change Requests (CCRs) into the national system. Individual provinces and territories may also choose between bringing issues to the national level themselves (through PTPACC) and supporting their stakeholders in bringing an issue forward.

A number of provinces also develop new areas for inclusion in their provincial building and fire codes. Some of these provinces have significant code development and administration resources that are engaged in these activities at the jurisdictional level. (This development work is discussed in more detail under both the Subsection on *Harmonization* and the Section on *Equitable and Sustainable Funding Model*).

Memoranda of Understanding (MOUs)

In the past, a formal arrangement, called a Memorandum of Understanding (MOU), between provinces and territories and the NRC captured the commitments to common goals and principles of the partnership in the coordinated code development system.

Apart from Nunavut[1] and Newfoundland-Labrador, who have never signed an MOU with NRC, all other jurisdictions have formally signed on to the coordinated code development system through an MOU on at least one occasion. Many have provided significant support and have demonstrated significant commitment to the system and its principles set out in the respective MOUs.

In 1990, nine jurisdictions signed the same MOU document, which created accountability among the provinces and territories towards each other's commitment. The 1990 document applied however only to the National Building Code. Of the three provinces, which did not sign, Quebec adopted the National Building Code as the minimum set of building regulations to be administered by its municipalities; Newfoundland and Prince Edward Island did not have provincial building codes – their major cities, however, adopted the National Building Code.

Starting in 2005, seven jurisdictions signed individual MOUs related to the National Building, Fire and Plumbing Codes. The latter approach was intended to achieve stronger p/t commitments. The result in terms of the number of signatory provinces and territories, however, does not reflect this (see Table 4). The 2005 MOUs also added obligations on the provinces and territories, which may have reduced the number of provinces and territories signing on. It should be noted however, that signing a MOU does not determine whether a P/T can participate in the system.

Table 4: Signed MOUs by Province and Territory

P/T	1990 MOU	2005 MOUs
Nunavut	N/A	
Yukon Territory	Signed	Signed 2008
Northwest Territory	Signed	
British Columbia	Signed	Signed 2009
Alberta	Signed	
Saskatchewan	Signed	Signed 2008
Manitoba	Signed	Signed 2008
Ontario	Signed	
Québec		Signed 2009
New Brunswick	Signed	

[1] The geographic area of Nunavut was part of the Northwest Territories, which signed an MOU with NRC in 1990.

P/T	1990 MOU	2005 MOUs
Prince Edward Island		Signed 2008
Newfoundland-Labrador		
Nova Scotia	Signed	Signed 2008

Desirable State

In the desirable state, the partners would continually foster and strengthen their relationships among themselves and with all stakeholders and continue to interact within a collaborative model.

A collaborative model would be characterized by:

- formalized roles and expectations of the parties in the form of a new collaborative agreement
- a mechanism of providing support to the system that recognizes the collaborative nature of the partnership and shares the need for sustainable funding
- PTPACC (or some other P/T entity) taking more of a leadership role in the coordinated code development system
- the CCBFC (or some other entity) taking more of a management role in the operations of the system
- codes development work done at the p/t level being integrated at the CCBFC
- continuing to strive for harmonization of codes across jurisdictions to the greatest extent possible, and
- transparency and communications with stakeholders to develop a better understanding of the coordinated code development system.

<u>CCBFC</u>

Consideration should be given to the role of the Commission and what can be realistically accomplished in one annual, two-day, face-to-face meeting. Currently, much of the annual meeting is devoted to the details of each standing committee's work plan.

The CCBFC (through the Executive Committee) should play a stronger role in tying CCBFC priorities to available resources and reviewing the budget and other performance measures of the system. Other stakeholders who play a significant role in the system may also require the opportunity to provide their input on the plans and priorities.

The role of the Executive Committee should also be reviewed in the context of the review of the Commission's role. One item to consider includes whether the Executive Committee (EC) is the appropriate body to serve as a Standing Committee for Divisions A and C of all the model codes (scope, policy). Another item to consider is the level of transparency for the EC's decision-making and whether the appropriate level of management oversight on the system is exercised, in particular on the priority-setting component.

<u>PTPACC</u>

Consideration should be given to the role of PTPACC and how much its members can realistically accomplish. The JTG regularly heard input into the competing time demands faced by PTPACC members given the substantial responsibilities they have within their jurisdictions.

The JTG was also made aware of lag times in the CCBFC receiving policy advice from PTPACC. In order for the system to work as currently structured, PTPACC must be able to respond to requests in a timely manner. In the context of new collaborative agreement(s) being prepared, there is an expectation that

PTPACC may need to take on more of a leadership role within the coordinated code development system. The JTG considered a review of PTPACC to be beyond the terms of its mandate.

The real or perceived lag of timely communication between the PTPACC and CCBFC may be partially accommodated in the future if the CCBFC directs its committees to begin work on subjects notwithstanding that policy advice from the PTPACC had not been received. The risk of proceeding in this manner is, however, to develop code content that is inconsistent with p/t priorities, which contradicts the CCBFC's overall goal of harmonization.

NRC

In the desirable state, the NRC would continue to play the role of a valued partner in the future coordinated system. NRC would continue supporting the CCBFC and its committees as well as providing administrative support to PTPACC. NRC would install a business plan framework that allows a more effectively control of the code development budget. NRC would report on the performance of its code development business with more transparency. The progress and completion of priority tasks would become part of annual reporting.

Currently one of the strengths of the system is its access to the expertise of Codes Canada's technical advisors and their involvement with the standing committees, which is a unique aspect of the Canadian system that should be promoted in the future. The link between the research community and Codes Canada staff has been extremely beneficial in the past. This linkage could be further developed.

The NRC needs to play a significant role in the future in engaging other federal departments and communicating the value of the coordinated code development system to them. This aspect is more fully addressed in the Section on *Recognizing the Shared National Interest*.

Provincial/Territorial Contributions

In addition to the support that provinces and territories already provide, the desirable state would increase their participation in the coordinated code development system. This could be done through PTPACC with a broadened mandate or through other mechanisms. If the provinces and territories are going to contribute more in the future than is currently anticipated, they should also be more engaged in the system's strategic planning, priority setting and operations. Code development activities at the p/t level would also be more integrated within the system. Their strong support for coordinated consultations wherever possible, the overall goal of harmonization and increased uniformity of national codes is essential in the future.

As well, the provinces and territories can financially support the system by using NRC services to publish provincial codes or by entering into IP agreements with NRC including shared royalties.

New Collaborative Agreement(s)

A new, clear and updated collaborative agreement is required that sets out the relationship between the partners in the system. It should reflect support and political commitment from both, the p/t and the federal governments.

In developing the new collaborative agreement(s), the following items require consideration:

- engaging and creating awareness of the system among senior government level staff from federal and p/t governments in preparation for signing
- developing briefing documents to inform respective governments on the need for the collaborative agreement(s) and the national interest that the system fulfills
- developing an implementation plan to fulfill the commitments
- investigating incentives or value added opportunities for those partners that sign on

- reviewing the role of PTPACC and its effectiveness as an integral part of the system
- reviewing the roles of CCBFC and PTPACC in monitoring the performance of the coordinated code development in view of the commitments
- considering mechanisms for the CCBFC to become more engaged in priority setting and allocation of resources to these priorities
- developing consistent messaging among partners– within each p/t jurisdiction – the values and benefits of partnership in the system, the importance of active participation in and support of the system and the role of the partners, and
- developing better mechanisms to support p/t changes in the national system.

This renewed political involvement could use the development of new collaborative agreement(s) to re-negotiate the relationship between the p/t and the federal governments. The involvement of the most senior level government officials possible would ensure that the importance of the renewal is understood and supported accordingly.

In the desirable state, provinces or territories recognize an economic benefit in not having to develop separate codes for their jurisdiction as well as improving their collective competitive advantage and confirm their interest in these benefits by signing a new collaborative agreement(s).

The following issues should be addressed in a collaborative agreement between the provinces and territories and NRC:

- harmonizing national/p/t building (incl. plumbing), fire and energy codes to the greatest extent – wherever possible
- equitable, transparent cost sharing
- facilitation of the implementation of p/t policies
- timely adoption of p/t codes (as a shared multi-lateral commitment among provinces and territories and with the NRC)
- agreement to continuously monitor the effectiveness of the system, and
- maintaining a system that is responsive to technological changes, research and knowledge of risk, and the needs of the p/t regulatory process, such as consultation of stakeholders, impact analysis, training of trades as well as practice guides and design tools.

The new collaborative agreement(s) should be supported by a strategic plan, which would be operationalized (on a shared basis) and the successful achievement of its goals would be monitored.

The Australian Building Code Board (ABCB) also generated an agreement similar to an MOU because – like the CCBFC – its primary responsibility is to prepare and publish Australian model codes on behalf of the two levels of government, the Commonwealth (federal) and the states and territories, the latter of which are responsible under their various Acts and Regulations for administering the National Construction Codes.

In Australia's intergovernmental agreement (IGA), the federal government (Commonwealth) asks all signatories to adopt the Australian model construction codes, to adhere to those codes and to prevent local or state/territorial regulatory instruments from overriding model code performance requirements, and to ascertain a consistent application of the model code across the different states. The Australian State Ministers have agreed to meet periodically to review the outcomes and progress against the objectives set out in the Annual Business Plan(s) of the Board and review the annual reports of variations to the model codes. The IGA sets out the details of appointments, functions, powers, meetings, duties, eligible expenses and the funding contributions of the Board's activities.

In Germany, the federal and state governments have a similar arrangement and the state and Federal ministers meet annually to renew the agreement and their commitment.

In the work leading up to the signing of new a new collaborative agreement(s), the partners would

- consider the most effective entity and organizational structure to support the activities of the system and to promote a fair and equitable cost sharing arrangement
- develop an implementation plan to fulfill the commitments in the collaborative agreement(s)
- provide for regular meetings of senior government officials to review and re-affirm the commitments in the collaborative agreement(s), and
- investigate the broadening of the collaborative agreement(s) to issues that might facilitate p/t commitment, for example tying codes and standards development to disaster mitigation or to increase mobility of trades or development of material for training and certifying trades.

Strong Partners

In the desirable state, the partners would promote the values and benefits of strong Canadian codes with more consistent messaging and communication. This consistent communication becomes critical when stakeholders are not equally engaged at the p/t level or are differently engaged at p/t and national levels.

While the quality of collaboration between the CCBFC, PTPACC, NRC, and the provinces and territories can be described as “good”, the JTG felt that the partnership could be improved by clarifying, aligning and better communicating their common goals. While the current roles of the principal partners and their relationships are clear among themselves (as described above under *Background*), it appears that stakeholders are not always aware of the principals’ roles and their relationship with each other.

A solution needs to be found for shared national/p/t consultations. A national “online” home for a single consultation process should be created that would be supported by and work across all jurisdictions with shared results after consultations. The partners need to discuss timelines and frequency of consultation and need to brainstorm effective implementation strategies with PTPACC.

Major public reviews held once in a code cycle seem to show the most promise for wide ranging coordination and participation. There is a need to share the comments from national public reviews with provinces and territories as well as the provinces and territories sharing of comments from their specific p/t public reviews or consultations. The Québec model of holding stakeholder consultations to formulate and submit the p/t comments on significant changes into the national process could be examined as a best practice.

Existing tools should be expanded to share comments from specific p/t public reviews within the national system. If information that was available nationally was shared with p/t advisory committees this could elevate p/t code issues to the national level. A closer relationship should be developed between p/t advisory bodies and the national system committees and nationally available information should be shared more effectively. As well, the creation of p/t advisory committees where they do not exist yet, would provide a consistent opportunity for interaction of stakeholders within provinces and territories and between the national system and the provinces and territories.

Harmonization and the evolution of importance of provincial variances

In the desirable state, the importance of addressing provincial variations is recognized by all partners. As well, provinces and territories recognize that they are involved in national and international trade agreements, in which uniform building, plumbing, fire and energy efficiency requirements represent an important aspect of harmonization.

Recommendation(s)

11. Develop new collaborative agreement(s) that:
    a) Incorporate the relationships and obligations of the partners within the coordinated code development system
    b) Address the needs and priorities of the partners as outlined in the desirable state discussion
    c) Determine the most effective entity and organizational structure to support the activities of the system and to promote a fair and equitable cost sharing arrangement
    d) Provide for regular meetings of senior government officials to review and re-affirm the commitments
    e) Are broad enough to facilitate p/t commitment, for example tying codes and standards development to disaster mitigation or to increased mobility of trades or development of material for training and certifying trades.
12. Develop and link new strategic plan goals and effective performance measurements to the new collaborative agreement(s).
13. Review and clarify the roles of CCBFC, PTPACC, NRC and the provinces and territories in the coordinated code development system.
14. Articulate the benefits of the coordinated code development system by way of developing a value proposition.

Provincial/Territorial Components

The future success of the coordinated code development system relies on the system meeting the needs of the jurisdictions as well as the jurisdictions (specifically the provinces and territories) becoming more engaged in a number of significant areas with the system. During the course of the JTG's review, a number of issues were identified that are critical for this future success, many of which are inter-related:

- harmonization of the provincial/territorial codes with the Model National Codes
- provincial/territorial initiated code changes
- provincial/territorial adoption of Model Codes, and
- coordination of public consultations

Current State

Harmonization of the Provincial/Territorial Codes with the Model National Codes

One of the most critical common interests is to achieve harmonization of the national codes and PT's regulation on building standards and safety to the greatest extent possible. Harmonization has two aspects, the timely adoption of uniform requirements by all jurisdictions as well as creating greater uniformity of the technical content of codes.

Currently, the level of harmonization on technical requirements can be qualified as moderate. Most jurisdictions adopt the national codes, with or without adaptations, as the basis of their regulation on building standards and safety, but late or non-adoption by some jurisdictions remains an issue. The coordinated code development system offers opportunities to share information on technical variances and promote harmonization of those variances.

Canada has a few chartered cities that already have the authority to adopt and adapt building, fire, plumbing or energy codes and more cities are exploring the creation of new charters to allow them some control over the adoption and/or amendment of construction codes. The creation or expansion of yet another layer of differences and non-uniform code adoptions, however, may unnecessarily complicate the design and construction process.

In the context of the coordinated code development system, the desire to harmonize code requirements extends only to those technical provisions in building, energy, plumbing and fire codes that are within the current scope of the model codes. The common goal of harmonization therefore does not apply to administrative requirements (because legislative and the regulatory frameworks vary from one jurisdiction to another). Nor does the common goal apply to technical requirements in the p/t codes that fall outside of the scope of the model codes (as they may be related to specific, regional goals or specific buildings and installations, that – as determined by the respective p/t authority – have to be considered by building designers, builders and owners.)

The provinces and territories' involvement in the public review process varies and is still evolving, but continues to generate effective input and p/t influence on model code changes, which should lead to fewer variances.

Recently, NRC has started to offer video presentations to the jurisdictions on proposed changes in order to facilitate internal consultations and p/t staff analysis about policy, impact and enforcement issues.

Provincial/Territorially Initiated Code Changes

As p/t governments rely more frequently on the construction and safety regulation as a means of supporting government policies, such policy-driven code changes have – in the recent past – resulted in

un-harmonized requirements, at least temporarily, when the p/t expectations about the timeline to incorporate code changes are not met by the national code development process.

The building safety ministries of the larger provinces and territories have on occasion experienced societal pressures to develop regulation for emerging or sensitive issues. Recent examples of this are British Columbia's Green Building Code or the moving forward of many provinces (BC, AB, ON, NS) on accessibility related requirements or mid-rise wood requirements.

Some subjects seem to prompt a competitive aspect among the p/t jurisdiction as could be observed during the development of energy efficiency requirements.

In some cases, it is perceived that CCBFC committees insist on starting from square one when a solution has already been developed and implemented by a jurisdiction. A difficulty appears when the national process reviews all existing regulations to ensure that the model code solution works for all jurisdictions. Even though the solution previously developed by a jurisdiction might have been the best at that time - the 'national' solution may have evolved. The result is that the jurisdiction that originally developed the solution must update their solution or choose not to harmonize with the national model codes. Updating solutions already legislated and implemented within a jurisdiction can be difficult.

There is currently very limited assistance from the CCBFC or NRC for development of requirements by one or more jurisdictions that may be adopted by more jurisdictions later on, which leads provinces and territories to undertake these – sometimes-large – projects by themselves. There is also limited recognition (both from a services in-kind perspective and from an acceptance of the policy/technical work perspective) at the national level for much of the development work that was undertaken at the individual p/t level.

There appears to be an increase in new, broad areas of codes introduced by jurisdictions rather than having them addressed in the national model codes first. There are a number of factors leading to this including conflicting priorities between provinces and territories and the ability of the national process to meet the individual jurisdiction's timeliness pressures to address a specific issue. On the other hand, no additional jurisdiction has indicated that it is considering putting in place its own code development system with all the associated resources.

Provincial/Territorial Adoption of Model Codes

The adoption of model codes into p/t law makes them an enforceable regulation. The coordinated code development system counts on provinces and territories to adopt the model codes in the timeliest fashion in order to maximize the uniformity of construction codes across Canada. The system also relies on the CCBFC committees to develop requirements that are consistent and uniformly applicable across the country. Ultimately, the system also depends on the timely adoption of model codes to supplement its budget with code sales.

The legislative and regulatory frameworks vary from one jurisdiction to another. No quantitative targets have been set in the MOUs as to the acceptable lag time from model code publication to p/t adoption. It is also clear that the timing of the adoption of updated codes is outside of the direct control of those managing the system at the p/t level.

The pre-and post-public review steps were added in the 2005 code cycle to make sure the p/t jurisdictions have an opportunity to review code changes for potential administrative and policy-related issues. In addition, one of the reasons for moving towards individual MOUs was to attempt to accommodate the jurisdictions' unique needs and circumstances.

Despite these efforts, the level of adoption of the 2010 national model codes across Canada trailed that of the 2005 national codes. The following figures compare the adoption times of model code editions (regardless as to whether they were adopted as is or with modifications) for the 2010 and two previous code cycles.

Table 5: Adoption Time Delays of Model Codes (by code and by province or territory)

Province/ Territory	Years to adoption										
	NBC 1995	NBC 2005	NBC 2010	NFC 1995	NFC 2005	NFC 2010	NPC 1995	NPC 2005	NPC 2010	MNECB 1997	NECB 2011
YT	0	0	1	0	0	1	0	0	1	N	4
NWT	2	3	1	1	3	1	N	N	N	N	N
NU[1]	N/A	N	N	N/A	N	N	N/A	N	N	N/A	N
BC	3	1	2	3	1	2	3	1	2	N	2
AB	2	2	5	2	2	5	2	2	2	N	4
SK	2	4	3	2	3	3	N	6	N	N	N
MB	3	1	1	3	1	1	3	1	1	N	3
ON	3	1	2	2	2	4	3	1	2	9	2
QC	5	3	5	N	N	2	3	3	4	N	N
NB	3	4	5	2	3	1	2	4	4	N	N
PEI[2]	N	N	N	N	N	N	N	N	4	N	N
NS	3	2	3	N	2	1	2	1	3	N	3
NL[2]	2	3	N	2	N	N	N	N	N	N	N
AVG time to adopt	**2.5**	**2.2**	**2.7**	**1.9**	**1.9**	**2.1**	**2.3**	**2.1**	**2.6**	**9.0**	**3.0**
Non Adoption (N)	**1**	**2**	**3**	**3**	**4**	**3**	**4**	**4**	**4**	**11**	**7**

[1] *Nunavut has used both the 1995 NBC and NFC since its creation in 1999.*

[2] *Prince Edward Island: Province-wide adoption of the National Plumbing Code through the Environmental Protection Act. Province-wide fire code not based on but referencing portions of the National Fire Code. Major municipalities adopted the 2010 National Building Code in 2011.*

[3] *Newfoundland and Labrador: Province-wide adoption of the National Fire Code and the National Building Code (through major municipalities) with exceptions.*

Year 0 represents the year of release for the respective code editions. For example, 2014 would represent Year 4 of the 2010 adoption cycle while 1999 was year 4 for the 1995 NBC. In other words, the publication year is not counted since the codes are typically published at the end of the year. The table values therefore represent the time elapsed since the publication of the model code.

As of February 2015, it can be observed that

- the 2010 NBC has so far been adopted or used as a basis for building regulations in 10 of the 13 PT jurisdictions,
- the 2010 NFC has so far been adopted or used as a basis for fire regulations in 10 of the 13 PT jurisdictions, and
- the 2010 NPC has so far been adopted or used as a basis for plumbing regulations in 9 of the 13 PT jurisdictions.

It should be noted, however, that the number of late adoptions (indicated by values of 4 or 5) has increased with the adoption of the 2010 codes.

The 1997 MNECB was adopted by reference in the 2006 Ontario Building Code, 9 years after publication. No other jurisdiction adopted the MNECB. In 2007, the Council of the Federation committed to develop and implement programs, standards or incentives aimed at improving energy efficiency in buildings. In support of the jurisdictions, the CCBFC updated the 1997 MNECB and published the 2011 NECB. The 2011 NECB has so far been adopted or used as a basis for energy efficiency regulation in four of the 13

PT jurisdictions. Although this is already a stronger adoption than the 1997 MNECB, it was expected that substantially more jurisdictions would adopt the NECB and at a faster adoption rate than the MNECB.

NRC spends considerable resources helping those provinces and territories whose codes are produced at NRC in editing or clarifying code wording and in publishing their provincial codes, but there is currently no formal support step offered from CCBFC or NRC to assist other jurisdictions in converting the model codes into p/t regulations.

Coordinated Public Consultations

The consultation of stakeholders is a key element of any code or standard development system. Better coordination of national and p/t public reviews was one of the key issues agreed to by the Deputy Ministers responsible for building codes, fire codes and the plumbing codes.

The viability and success of Canada's code development system depend on the extent to which stakeholder views in a given province or territory are expressed and integrated into the broader national system through public consultations.

Other aspects affecting the effectiveness of public consultations are discussed under *Partnership and Collaboration* and *Stakeholders Engagement*.

Public reviews at the national level are hosted by NRC and are held in 4 of 5 years. Each public review since 2003 has generated on average about 800 comments. Table 6 shows the respective province, territory or country of origin for all comments from the public reviews held nationally since 2003 and compares it to commonly used statistics for the same P/T.

Table 6: Public Review Comments by Provinces and Territories

PROVINCE TERRITORY COUNTRY	Public Review Statistics			Comparison Metrics		
	NUMBER OF COMMENTS	PERCENTAGE		HOUSING STARTS (2013)	CONSTRUCTION ASSETs (2010)	POPULATION (2013)
YT	0	0.0%		0.10%	0.20%	0.10%
BC	1525	22.0%		15%	15%	13%
AB	1069	15.0%		18%	16%	11%
MB	463	7.0%		3%	3%	4%
NWT	5	0.1%		0.10%	0.20%	0.10%
SK	69	1.0%		4.00%	2.80%	3.10%
ON*	3011	44.0%		34%	37%	39%
QC**	623	9.0%		21%	21%	23%
NB	18	0.3%		1.40%	1.80%	2.10%
NS	8	0.1%		2.60%	2.30%	2.70%
PEI	0	0.0%		0.30%	0.30%	0.40%
NU	0	0.0%		0.00%	0.10%	0.10%
NL	2	0.0%		1.40%	1.40%	1.50%
USA	123	2.0%		N/A	N/A	N/A
TOTAL	6916	100%		100%	100%	100%

* *ON comments contain a large number of national commenters such as national trade associations*

** *QC does provide comments into the national public review that have been discussed and vetted by large focused stakeholder groups*

The distribution of public review comments by their province/territory of origin shows that BC and MB are more engaged relative to their respective share of population and that for example NS and SK are less engaged. These variations may be a result of how the review of national code changes is managed in each jurisdiction. The higher proportion of public review comments received from Ontario reflects the high number of nationally based organizations located in Ontario. NRC has indicated that future counting will separate truly national stakeholders from the Ontario comments. The lower than expected

number of comments in QC may be explained with QC's practice of providing comments into the national public review after having discussed and vetted them by large focused stakeholder groups.

Interestingly, where some jurisdictions make minimal changes to national codes and are relying largely on the national process (NS, SK) there is lower than expected participation in the national commenting process.

While most provinces and territories have a policy requirement to hold public reviews before changing regulations, it is not clear whether the nationally held consultations comply with the respective p/t legislations. Despite this, very few provinces and territories run their own public review in parallel each time a national public review is held. In some PTs, the CCBFC public review can only complement the public review required by the p/t regulations but does not replace it.

A survey was conducted on the engagement of stakeholders at the p/t level, which also highlighted a few trends regarding the coordination of public consultations. About half the provinces and territories say they submit comments from their own public reviews into the national code development process, but figures suggest that not all p/t concerns are shared with the national system. Most of the smaller jurisdictions are not conducting their own public reviews and only one province reported submitting comments after consulting with their stakeholders and on their behalf for consideration in the national system.

It was also noted that a single, coordinated public consultation process may not meet the needs of all provinces and territories and that it is a political reality that timing the coordination of joint public consultations are beyond the control of those managing the individual p/t departments. As well, the current frequency of annual consultations may be too high for some provinces and territories and annual public reviews might even be counterproductive when the goal is to achieve a coordinated public review.

It should also be noted that staging public reviews on an annual basis has an effect on the overall time required to develop changes, as staff resources need to be allocated to this task on an annual basis. The resources needed to manage public reviews in 4 years out of 5 are not separately accounted for.

Desirable State

Harmonization of the Provincial/Territorial Codes with Model National Codes

In the desirable state, all partners recognize the importance of addressing provincial variations. As well, provinces and territories recognize that harmonized building, plumbing, fire and energy efficiency requirements represent an important aspect of national and international trade agreements. All parties would be committed to harmonize p/t codes and adoption timelines with those of the model codes to the greatest extent possible.

Provincial/Territorial Initiated Code Changes

In the desirable state, provinces and territories act as effective partners in the system and commit individually and as a group to submit and present code change requests on significant variances that they have adopted and that relate to the national codes objectives.

Complementing this effort, partners would agree to create a specific sub-process to deal appropriately with significant code changes from provinces and territories. The process would give due consideration to proposals that are already enforced in at least one jurisdiction. The same process would allow the sharing of information and active collaboration among provinces and territories to allow a jurisdiction developing an important code change to obtain feedback from others, which would in some cases,

support and inform a code change request to a model code. The process would also evaluate input from other PTs on priorities or specific construction activities or the relevance of an issue in a given jurisdiction.

The best-case scenario is of course for the province or territory to work within the national system during the initial development of a code change. However, in the desirable state, the partners and stakeholders recognize that variations and individual p/t policy needs are a reality that requires accommodation. This desirable state of the system would deal with the reduction of variation in the following ways:

- Codes Canada and research staff actively follows, informs, assists and supports those jurisdictions having to rapidly develop significant code changes, which would facilitate where appropriate their eventual incorporation in the national codes
- Although p/t needs and local pressures to develop new requirements often arrive with short notice, the partners agree that their development should be – as much as possible – planned and supported nationally
- The allocation of necessary (limited) resources, reallocation from other tasks, or if possible investment sharing with major partners should be discussed and agreed to by the CCBFC, NRC and the PTPACC; as well, the cost of specific p/t driven activities should be equitably shared (if other provinces and territories are interested). Under this agreement, a concept of a "code development credit" could be explored for jurisdictions that spearheaded the development of major changes (recent examples include mid-rise wood or energy efficiency)
- The policy considerations and the scope of specific p/t driven activities would be well defined and confirmed to be of shared national interest

Stronger ties and more consistent communication between partners may also create a forum for open discussion on "national" code development priorities. CCBFC and NRC should consider assisting the provinces and territories in communicating these priorities in a form that allows the responsible p/t ministries to brief their ministers to support the coordinated code development process prior to pursuing the initiative unilaterally.

Developing a more integrated approach to code development between the P/T's and the national system would be beneficial to minimize these occurrences. Having the national process engaged to some extent while the individual jurisdictions develop the changes could reduce the 'disconnect' between how an individual jurisdiction addresses the issue and how it is addressed in the national model codes.

A component should be implemented into the national process that expedites issues brought forward by individual jurisdictions to alleviate the time pressure of the jurisdictions to address an issue. This could include code change requests submitted by provinces and territories and the fast tracking of larger code development projects while considering the resources necessary and the necessary due diligence.

Provincial/Territorial Adoption of Model Codes

Open discussions between NRC/CCBFC and the PTs will be necessary to have a good understanding of the p/t code adoption processes and hurdles, and to devise appropriate ways to limit their impacts on timely adoption.

In the desirable state – the record on p/t code adoptions would be substantially improved concerning the timeliness (minimal lag) of adoption after model code publication. The measurement of successful adoption could be extended to include consistent application of model code requirements across the country, such as is done in Australia, which would benefit regulators and industry alike through wider

distribution of code-related guides and tools, as well as the possibility of national assistance in implementing industry and regulator training.

Offering pre-adoption support from CCBFC or NRC to assist jurisdictions in converting the model codes into p/t regulations should be discussed, such that common legislative practices are developed and best practices for regulatory drafting are shared. In addition, final revisions of proposed changes should be shared earlier, the NRC would assist jurisdictions with early stakeholder engagement on controversial issues and support jurisdictions during the implementation of new requirements.

The need and effectiveness of pre-and post-public review should be reviewed. Suggestions have been made to expand the scope of the pre- and post-public review to include technical review of code changes in addition to policy and administrative issues. This would create a “one-stop shopping” for provinces and territories and provide one more opportunity for NRC to brief the jurisdictions. However, the pre- and post-public review steps add substantial time to the process. Reducing the number of consultations as discussed in the previous Section would lessen the burden in this regard. The effectiveness of pre- and post-public reviews in facilitating adoption should be reviewed and mechanism for the timely sharing of public review comments between the NRC and the respective p/t jurisdictions need to be identified.

The new or renewed collaborative agreement(s) should include commitments of provinces and territories to CCBFC and NRC as well as among provinces and territories to each other to adopt the latest national model codes as the basis for their regulations. Best efforts on behalf of the provinces/territories should be made to adopt updated codes within two years of the publication of model national codes. Regular confirmation of the collaborative agreement(s) as suggested above will also ensure that ministers are aware of the commitment for timely adoption.

Enhancing the Partnership

There are significant benefits – as identified throughout this paper – in a coordinated code development system. In order to achieve these benefits, those engaged in the system and, in particular, the partners need to address a number of items that are identified throughout the report and are covered in detail in other Sections. One of the areas identified deals with the concept of conducting coordinated public consultations. Responses from a survey of p/t jurisdictions support the observation that a coordinated public review as well as annual public reviews are not working well in many jurisdictions.

Coordinated Public Consultation

In the desirable state, provinces and territories are broadly supporting nationally held public consultations and coordinate their own public reviews effectively. As well, the partners are aware of the resources spent on conducting public reviews.

A survey of p/t stakeholder engagement supports the view that the current frequency of annual consultations may be too high and suggests that one or two consultations in a five-year cycle might allow more jurisdictions to plan to participate in coordinated reviews more effectively.

Stakeholders and the provinces and territories should be consulted on the specific question of the optimal number of public reviews and the interval between them. Survey results suggest two reviews during a 5-year period may be optimal.

In the desirable state, any public review would be seen by the provinces and territories as an appropriate time to review and comment on proposed changes, and stakeholder comments from p/t consultations and subsequent revisions would make their way back into the national system. This would happen regardless of whether a P/T participated in a coordinated consultation or not.

Although the desirable state may not always be feasible given p/t approval processes and priorities, the new collaborative agreement(s) should include a commitment to consider changes to the way PTs participate and support the national process of public consultation. Opportunities short of a full coordinated public consultation may exist that manage the needs of participants. A common national (web) platform could facilitate this process whether it is a stand-alone web page or a system that allows p/t sites to "plug-in"

In the desirable state, the strength of a national system would grow because all comments from p/t public reviews are shared into and through the national system. In addition, the sharing of nationally available information with more formal p/t advisory committees would elevate p/t code issues to the national level.

The Québec model of holding stakeholder consultations to formulate and submit the provincial/territorial comments on significant changes into the national process should be reviewed as a best practice.

Recommendation(s)

15. Reinforce and sustain efforts to harmonize model codes across the country and achieve more timely adoption of new codes and the reducing of technical variations.
16. Garner a strong commitment from all jurisdictions towards favouring the integration of common solutions in the national model codes rather than developing independent solutions.
17. Investigate opportunities for a national consultation process.
18. Develop mechanisms for integration of code development initiatives carried out at the provincial/territorial level into the national process.

Stakeholders Engagement

"Stakeholders" are typically defined as individuals or groups who can affect the outcome of projects or who are affected by the organization's objectives and who have therefore an interest in the outcomes produced by the organization. Applying this definition to coordinated code development system would then include everyone from the principal partners, key partners such as the major building material interests, code users as well as the public. For the purpose of this discussion, the JTG interpreted the term stakeholder as excluding the partners.

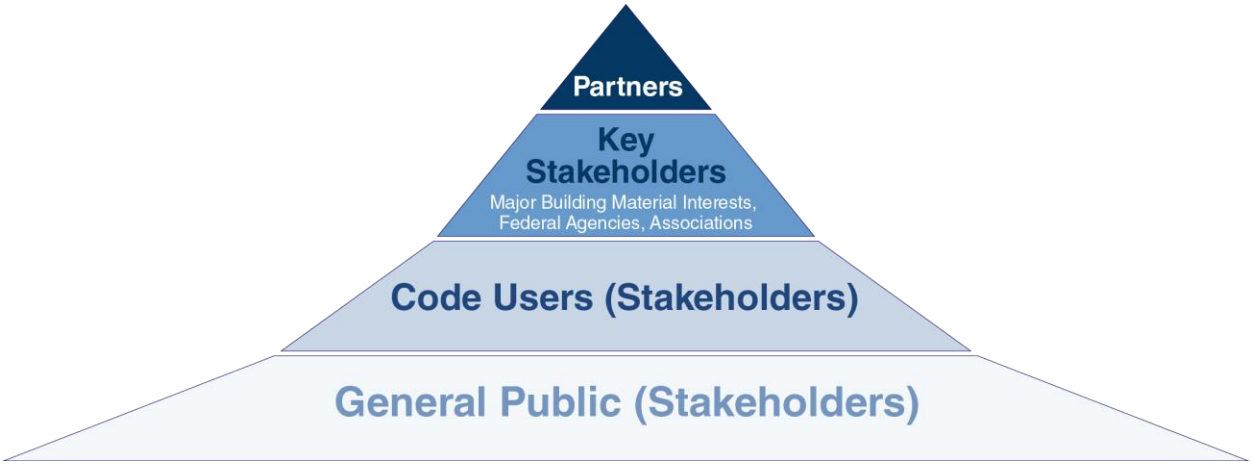

Figure 4: Partners and Stakeholders

The JTG focused on the engagement of stakeholders in the system and investigated their presence or absence, their interaction (communication) with the system and their relationships with the partners as well as their specific interest.

Interaction in the system is not limited to committee participation and meeting observers. Public review commenters and code change proponents are also seen as stakeholders.

Current State

Stakeholders in the coordinated code development system are engaged with the CCBFC and its committees as well as with each of the provinces and territories. Some are also engaged directly with the NRC.

CCBFC stakeholders are separated into three categories: regulatory, general interest and industry. Figure 5 shows the regulatory category on the lower right, the general interest on the left and the industry category on the upper right.

It should be noted that the size of the three categories shown in Figure 5 is merely a reflection of the diversity of the categories rather than their actual proportion in membership. The CCBFC Policies and Procedures require balanced membership of all three categories represented on the CCBFC and its standing committees. CCBFC committees are limited in size and participation from all stakeholders is therefore not possible. The public review however can compensate for this and obtain input from stakeholders on a much broader basis. Occasionally, NRC staff prompts key stakeholders to engage with committees or through public reviews, to make sure their input is captured. At times, this creates a view that the codes are developed by a closed circle that is inaccessible to outsiders.

Stakeholders shown in the inner ring adjacent to the CCBFC are formally recognized in the committee matrices, at both the CCBFC and the standing committee level. Some broader participation in the

national system by various associations and institutions outlined in the outer ring does take place through correspondence, submission of code change proposals, and occasionally participation as observers or through ex-officio participation usually at the standing committee level.

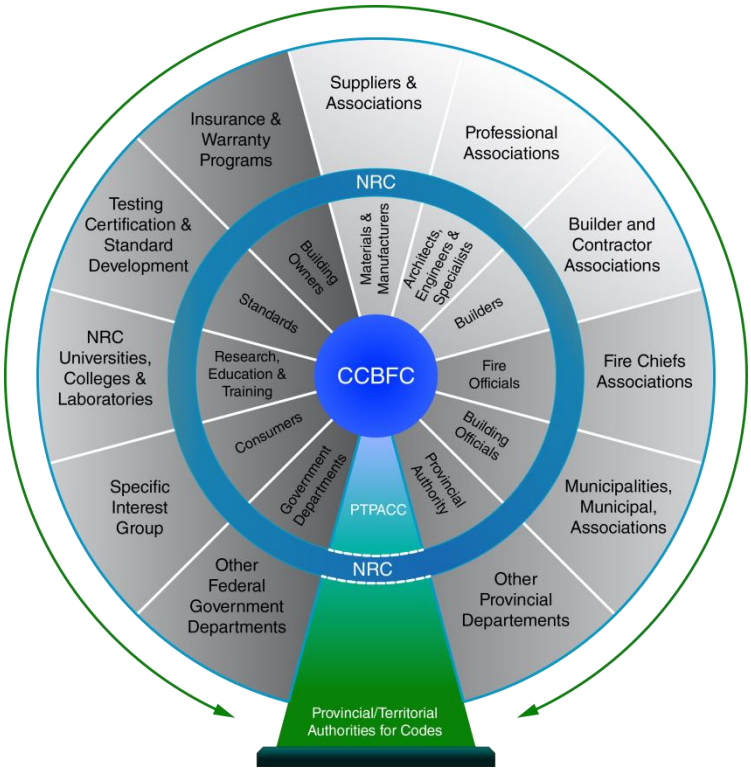

Figure 5: Stakeholders Engaged with the Coordinated Code Development System

The CCBFC selects members for its committees based on individual experience and knowledge, which puts more emphasis on the role of "individuals" at the national level, while the engagement of stakeholders on the p/t level works mainly through associations and organizations.

A survey of p/t jurisdictions regarding their engagement with stakeholders confirmed that these organizations and associations (as opposed to individuals with expertise) are also frequently and formally recognized in consultation and participation in code development at the p/t level, which reflects the fact that the political decisions regarding code development are made at the p/t level. There is a risk, however, that these stakeholders do not also sufficiently engage with the system. It remains therefore a challenge for the partners to effectively include the feedback received at the p/t level in order to inform decisions made by the CCBFC.

Current Internal Stakeholders – CCBFC Committees

The regulatory category in the CCBFC committees consists of members from p/t authorities, as well as municipal building, fire and plumbing officials and members of p/t appeal and compliance boards and conformity assessment agencies.

Many of the regulators are well engaged at the technical committee level, as well as through submitting code change requests and commenting on proposed changes during public review.

The industry category consists of builders, designers, architects, engineers, consultants, specialists, contractors, manufacturers, suppliers and their respective professional associations. They are users of the codes who are responsible for complying with the code requirements. Industry practitioners have traditionally been the group most engaged in the system at the technical committee level. This stakeholder group is generally well engaged.

The general interest category includes a broad range of interests, including consumers, building owners and occupants, property managers, warranty providers and insurances, research and testing organizations, education and training organizations, standards development organizations, public health organizations and other government departments at all levels with an interest in codes. These stakeholders are impacted by codes and have various interests in codes. This stakeholder group tends to

be the weakest of the three categories in terms of number of committee members. It is often difficult to have all interests represented because of the diversity of technical issues that a committee deals with.

One of the most important stakeholders in the general interest category are the standards development organizations (SDO) as standards are an extremely effective tool to regulate complex details of technology and to ensure an even playing field. The SDOs understand the mandate of the CCBFC well and information between the codes system and standards system flows well. The SDOs are very well engaged. NRC staff regularly engages with SDOs for information sharing and harmonization of document publications and content. The role of other Government Departments (OGD) such as Environment and Climate Change Canada, Natural Resources Canada and Health Canada, and to some extent their provincial/territorial counterparts, is less clear. They are critical to providing for example climatic data or current energy performance data and sometimes funding to perform research in support of code changes. This stakeholder group is variably engaged depending on the level of government interest in code decisions affecting their sector. Committee members representing OGDs typically occupy ex-officio seats on committees or the Commission, which allows them to inform committee decisions without voting privileges. NRC researchers also fall into this category.

Other stakeholders within the general interest category are Canada's home warranty providers (builders) real estate/property insurance providers (owners). These stakeholders hold valuable information on the performance of current construction practice and often highlight areas not well addressed by market forces or regulation. This stakeholder group is currently not very well engaged.

Ex-officio status for Major Building Material Interests

Canada's major building material interest representatives (wood, steel, concrete, plastics) have been invited to participate at the CCBFC in an ex-officio function, which means that delegates of a representative organization sit at the committee table, but do not have voting rights. In this function, they can inform the discussion at the CCBFC without having a conflict of interest in voting on decisions that may directly impact their industry. Recently the CCBFC Nominating Committee recommended that this principle should also be extended to its standing committees. NRC management has supported this recommendation and the change has been implemented.

Although the CCBFC registered initial resistance to this change from its major industry partners, it is not anticipated that this will jeopardize the good relationship between CCBFC and the major building material interests, because ex-officio members:

- are appointed by virtue of their office and are recognized as full members on the committees (e.g. they can initiate and second motions, participate in discussion, sit at the table during face-to-face meeting, receive agendas and minutes documents and are permitted to participate on working groups, which are reserved for committee members only)
- benefit by being allowed to substitute their representative on the committee, which is not permitted for voting members, and
- can still effectively inform standing committees and task groups who benefit from the assistance of the major building material interests.

However, some building material interests were not included in this recent change such as insulation, plastics, building envelope materials, which may be perceived as unfair and biased by observers. The difficulty in the technical area of building envelope materials is that there is not a single large industry association that represents most industry players.

Gaps and Perceptions

Many stakeholders seem not to be aware of proposed changes or committee discussion although public reviews are advertised and committee meetings are public. This lack of engagement leads to resistance to code changes and – by extension – risks unintended consequences after adoption because some implications were not brought to the attention of the committees by these stakeholders. There is a notion held by stakeholders that committee members are selected from within closed circles and that it is hard to get on a committee, although the CCBFC and its standing committees are 'refreshed' with new members to between 30% and 50% every 5 years.

Important stakeholder groups in key areas such as professional associations (engineers, architects) and key interests or advocacy groups in the public health field are not represented, while manufacturers and industry associations are well represented on technical committees.

There is a negative perception by stakeholders of the concept of "minimum" codes and a lack of awareness that decisions are made by volunteer experts across the country and not by bureaucrats from a federal government department.

There are very few stakeholders from international code development agencies involved, which may risk re-inventing the wheel if committees and NRC staff are not diligent in their regulatory scan for existing (international) solutions.

All partners need to communicate messages about the national code development and their commitment consistently.

Survey of Jurisdictions for Stakeholders Engagement

Overall, results from a survey of p/t jurisdictions on how they are engaging their stakeholders confirm that the majority of provinces engage stakeholders in the code process separately from the national process. As a result, the benefit of stakeholder input at the p/t level is not fully captured in the national system.

It appears that provinces and territories are quite engaged with their local stakeholder communities but that the connection and sharing of input at the p/t level with the national system is weak. In extreme cases, stakeholders may be confused when different messages are received from the national and p/t sides, respectively.

There is a slightly different mix of stakeholders that engage at the provincial-territorial level and very likely by different individuals or associations even though the category of stakeholder is the same as the one engaged at the national level (for example, builders).

Desirable State

In its desirable state, the coordinated code development system would see all stakeholders broadly engaged (submitting CCRs, public comments, as committee members, through direct interaction with the partners). The system would have stakeholders who are well informed about the system, who support the system and know its benefits for Canada and who feel that they can effectively participate and influence the decisions being made and partners who continually foster and strengthen relationships with all stakeholders and among the partners themselves.

There are three main areas that could be improved upon to arrive at a desirable state, which are opportunities to engage, developing relationships and building strong partners.

Expanding Opportunities to Engage

The rate of appointing new members and opening up committees is an important indicator for stakeholders as to how open the system is for their input. It is however also important to design the membership replacement rate for sufficient committee productivity and continuity for committee decisions. The JTG recognizes that the current replacement rate addresses both criteria but recommends soliciting feedback on how to balance these two issues from stakeholders and to confirm that current practices are sufficient.

Strategies for identifying, attracting and engaging new (relevant) participants need to be developed and stronger links with important stakeholders such as professional associations, municipalities, and advocacy groups need to be created. The coordinated code development system needs to continue its reliance on the broad participation across the three balanced categories of regulators, industry and general interest.

There is a need to proactively engage stakeholders in new areas of code development - long before feedback is needed for public review comments. Recent examples where this would have been beneficial were the areas of energy efficiency or water use efficiency. These new subject areas brought new stakeholder groups into the system, but their earlier engagement could have improved the quality of their engagement and the relationship with the system and the provinces and territories. This could be done through workshops, seminars speaking engagements and face-to-face meetings with stakeholders.

An opportunity that could be further explored is to engage with stakeholders to discuss their perceptions of the system such as:

- committee members may not represent them and committee membership may not be refreshed often enough with new stakeholders
- impact assessments may not address stakeholder views and do not involve stakeholders during the process of developing impact assessments
- “minimum” codes have a negative connotation and could be better described with terms like “fair”, “reasonable”, “justifiable”, “sustainable”, or “defensible” or “widely agreeable”.

More effort is needed to reflect code issues in the national system, in which the main p/t system influencers are interested. A gap seems to exists mainly with municipalities and regulatory/enforcement associations, who engage well with provinces and territories but who are not as well engaged in the national system entry points (public review, committees, CCRs). As well, a broad increase of participation is needed for all groups under the general interest categories, such as public health advocacy groups, building owners and consumer representatives.

Regular ‘national road shows’ for public review and code change presentations could complement the CCBFC’s efforts of incorporating more support for p/t changes in national public reviews and would offer opportunities to highlight the strong partnership of provinces and territories with the national code system.

The partners need to educate federal agencies and departments on how they can best support / influence / engage in the system without tipping its sensitive balance between provinces and territories and the federal government.

Developing Relationships

The number and quality of relationships with peers and/or competitors needs to be increased among international code development bodies to minimize re-inventing the wheel for code solutions as well as creating an early start for international harmonization.

Even in existing subject areas of code development, it is important to build new relationships and foster existing ones with groups for specific interests (e.g., accessibility/visitability, or protection from radon). These issues are often discussed in public forums and a solid understanding of the system and a positive relationship with other stakeholders in the system is important for the success of code development.

The quality of the current communication channels with all stakeholders could be improved. Examples include speaking opportunities (both invited and with the media) and strengthened or expanding website features (online meeting calendar, online CCR tracking).

A few new communication channels need to be added. The CCBFC communication plan includes opportunities that have not been realized or even been started. For example, a newsletter with informative and educating articles on the system. Other channels could be explored such as a single innovative portal/web site of CCBFC, with a portal for code (and standards) related information jointly handled among NRC and the provinces and territories.

More proactive communication is needed with stakeholders to broaden the discussion, provide consistent information on the benefits of the system and to generate support.

Ex-officio status for Major Building Material Interests

Recent changes to the ex-officio category in standing committees and the CCBFC have highlighted the need to review the criteria based on which an organization can apply for this status and a review as to whether the conversion of voting standing committee members from the building material interests into ex-officio status has had an impact on their relationship with CCBFC.

Recommendation(s)

19. Review and clarify the criteria used to establish ex-officio membership.
20. Find more effective ways to engage provincial/territorial stakeholders in the national process to highlight the strong partnership.
21. Develop new relationships with stakeholders from municipalities, public health advocacy groups, building owners and consumer representatives.
22. Improve the quality of communications with existing stakeholders.

System Performance and Complexities

Numerous successes over the last decade have demonstrated that the coordinated code development system has become more responsive. This includes not only a shorter processing time for CCRs, the timely development of urgent issues like energy efficiency, radon or mid-rise wood construction, but also increased focus and coordination through the CCBFC's controlled work plan approvals. Despite these successes, the perceived lack of timeliness and responsiveness remains the most common criticism of the system.

The JTG noted that it was difficult to gauge how the system was in fact performing and whether it had improved relative to strategic documents written about it in the past. For example, in its 2008 strategic update, the CCBFC established performance measures to assess the status and progress of the coordinated code development system. Though the intent was to track the status of its action plan more effectively, specific progress on these measures has not been reported to date.

Besides effective monitoring of the system's performance against specific criteria, the JTG wanted to explore the perceptions of stakeholders that the system is an overly complex system that is difficult to understand and penetrate. At the same time, the JTG recognized that some level of complexity is necessary to sustain the technical expertise on the broad range of subjects that the national model codes demand and that come with the broad range of stakeholders and issues the system needs to address in a fair, transparent and balanced way. This report therefore reviews the system complexities such as conflicting priorities and limits introduced by current governing principles as well as operational constraints.

Current State

Performance Review

Relative to the CCBFC strategic directions in 2008 (see above under *Important Milestones*), the CCBFC has completed a communications plan (1) and has implemented practices to collect and disseminate 'future sensing' (4), which consists of identifying trends and issues of interest to the CCBFC and developing action plans accordingly. It is not clear, however, how much progress was made in terms of timeliness and responsiveness to changes (2). It is clear that little or no progress has been made on the work towards harmonization of national and p/t codes (3).

While NRC has optimized a number of the process steps through the effective use of technology, the progress on the actions identified in the 2008 strategic plan update is not clear; and neither is whether any of the actions have led to an improvement of the performance of the system. In addition, while the progress on the actions in the 2008 plan was tracked and reported to the CCBFC, a final report on the 2008 strategic update has not been provided.

One performance indicator of a system could be the effectiveness of regulations produced. They could be assessed by determining the impact they have had and by assessing whether the expected benefits have been achieved. The current process emphasizes the pre-regulation impact assessment (ex-ante), but does not perform a post-regulation verification of the achieved impact (ex-post).

Timeliness and Responsiveness

A key goal of the coordinated codes development system is to respond to updating of the codes in a timely manner, such as emerging safety issues, technology changes, innovation improvements as well as new research findings and environmental changes.

The issues of timeliness and responsiveness have dominated performance discussions in the past. However before considering streamlining and simplifying the system and process to reduce (perceived) complexity or lack of timeliness, this report considers the expectations of stakeholders, partners and the larger community (society) on the performance of the system and suggests performance targets for the path forward.

Note that the need and frequency for the public review including pre- and post-public reviews is discussed under *Coordinated Public Consultations*. Likewise, the timeliness of the process from CCBFC approval to adoption of new code provisions by jurisdictions is discussed under *Provincial/Territorial Adoption of Model Codes*.

The most noted issue with the timeliness of the system is the one experienced by stakeholders and refers to the time required from receipt of a code change request to a code solution approved by the CCBFC. Current timeframes for completing simple, small changes can be up to 18 months (for example for new referenced standards), two to three years for medium-effort but significant changes (for example, exterior insulating finish system (EIFS) cladding systems or the introduction of apparent sound transmission class rating (ASTC)) and between three and eight years for complex changes that are controversial or broad in scope (for example, energy efficiency and water use efficiency, mid-rise wood).

The process of developing a proposed code change is fairly time consuming. Not including the process to review, discuss and approve work on a code change request, the development process includes the time needed for the standing committee to discuss and develop the proposed change, possibly including an inter-committee review of the change between task groups or peer standing committees, the provinces and territories to review the change before and after the public review as well as the time to prepare an impact analysis.

The burden of developing impact assessment for code changes falls on the CCBFC committees and NRC staff, which - especially for large and controversial changes - has implications on timeliness and resources. Some of the burden has been reduced by the guidance developed for SC by the Joint CCBFC/PTPACC Task Group on Impact Analysis.

There is often a perception that every code change request becomes a proposed change or that proposed changes can still be incorporated into the next code edition in a very short time frame.

The coordinated code development process is considered a continuous process with annual CCBFC review and approval process, which should provide an opportunity to create timelier updating of codes. It may however not be utilized effectively now.

Complexities

Currently the most notable limit of the coordinated code development system is introduced by the resources attached to it, which are not sustainably funded (see more detail under *Equitable and Sustainable Funding Model*). NRC has had to manage the increasing cost of the system. The result has been identified as reduced service to committees. While NRC controls the cost, the CCBFC controls the SC work plans and considers PTPACC advice on code development priorities. The resulting technical priorities and the resulting expectations of the jurisdiction, however, are currently not discussed in conjunction with budgetary considerations.

The duration of the code cycles and the resulting frequency of changes need to be balanced against the responsiveness of the enforcement community (jurisdictions) to learn about and implement the changes and the capacity of industry to comply with the updated regulations. The JTG has learned that industry is struggling with the high volume of significant code changes in recent code cycles that require new knowledge and skills.

While each standing committee proposes its priorities for the coming cycle/year to be approved by the CCBFC (bottom-up), there is limited or no consideration of top-down priority setting across all SCs that would determine if all proposed SC's activities are indeed of equally high priority.

Another constraint on the system may be the relatively constant number and frequency of committee meetings (CCBFC, PTPACC, SCs) and the reduced number of committee members in fulfilling an ever-broadening mandate, the growing list of tasks and the increasing detail of meeting contents.

While members of standing committees seem largely engaged, even between face-to-face SC meetings via brief, focused teleconferences, the CCBFC/PTPACC members may not be sufficiently engaged except for those members on task groups.

Another limit is that code development is predominantly reactive and not proactive. However, future sensing currently occurs on a number of levels: NRC staff monitoring industry trends and informing CCBFC and the Executive Committee actively tracks issues it wishes to monitor. As well, some proactive work is currently done on the research side in preparation for code development work (for example, on aging in population or indoor air quality).

A potential conflict exists between the desire for reliable, defensible code solutions that have followed a thorough development process and wanting to be as responsive to stakeholders' needs as possible. The p/t jurisdictions and CCBFC experience stakeholders pulling in two directions. On one hand, is the desire for regulators to address new solutions immediately to allow innovative materials and construction methods, while on the other hand some stakeholders, especially from the construction industry, are very sensitive to over-regulating an issue. Despite a desire for timely solutions, the industry stakeholders demand that a reliable and thorough process was followed that identified the minimum necessary regulation. The JTG recognized that this dichotomy may not be resolved but may just create the right tension for a successful process.

The ever-increasing technical complexity of many code solutions presents another potential conflict, especially in predominantly prescriptive areas of the code (Part 9 of the NBC). This complexity is introduced by the desire to move to performance-based codes to accommodate and enable emerging, innovative technologies. However, performance-based solutions are costly (testing reports, evaluations) and compliance can often not be assessed by officials without engineering reports.

Appeals process

When discussing constraints, conflicts and limits, the JTG noted that it was very important to have a documented appeals process that is clear and simple to use. Currently appeals of technical changes are made by submitting a code change request. A formalized process for appealing the code development process also exists, its simplicity has however been questioned. To date, the appeals process has been approved by the CCBFC to be included in the Policies and Procedures.

Desirable State

System Performance

In the desirable state, the progress on key performance indicators should be tracked and reported to allow an assessment of the "stress" the system is under and to allow course corrections.

Going beyond the national system, an assessment of the effectiveness of the end outcome – the enacted regulations – should be considered. The regulatory effectiveness could be determined by the impact that new requirements have had in all jurisdictions and by analyzing whether the expected

benefits have been achieved. Such a review would allow some conclusions on the effectiveness of the overall regulatory management of which the system is only one part.

Timeliness and Responsiveness

The current timelines for routine and medium complexity changes are considered appropriate while it would be desirable to completing complex changes in less than five years and ideally within one code cycle, which would be closer to a three-year development time from request to approved change.

In order to address complex changes in less than five years, the current approach regarding allocation of work to a standing committee would need to be reviewed such that some SC tasks would need to be re-prioritized. Complex changes that enjoy higher priority among the partners should also have the resources allocated to them to complete the work in less than five years (see also the recommendations in the Section on *Partnership and Collaboration*). NRC already involves consultants for complex changes but this practice could be expanded, providing the resources are provided. One example of a successful development of large and significant changes was the development of the NECB where external funding agreements, extensive policy guidance from the CCBFC and PTPACC as well as extensive involvement of consultants were utilized.

The timeliness of the coordinated code development process would be addressed by an in-depth review and potential optimization of the process to reach the performance expectations of partners and stakeholders. Each process step would be investigated with its purpose and value measured against the time it takes. (Much of this work will take place in phase 2 of this task.) The process review would also consider streamlining some of the interactions between standing committee, CCBFC Executive Committee, PTPACC and the provinces and territories with the aim to allow faster development of code changes.

To alleviate the burden of developing impact analysis (especially for medium and high complexity changes) code change proponents – wherever possible – could be responsible for initial steps in the cost-benefit analysis to demonstrate that there is a net benefit for society.

Responsiveness would be assessed by investigating whether the current frequency, content and format of meetings (CCBFC, PTPACC, SC) are adequate. In the desirable state, the partners would identify the limits of the system and translate them into performance expectations in terms of responsiveness to industry needs and reliability of the development process. Partners would also consult stakeholders where they see the balance between responsiveness and thoroughness. This will enable the partners to communicate the message that “it takes time” including some realistic timeframes based on addressing the complexity of code changes.

Complexities

In terms of overall performance, the desirable state would allow for a “less stressed system” where – each code cycle – the code development priorities are discussed together with resource implications. Assuming an equitable funding agreement for the coordinated code development system is reached, it would be considered appropriate that the partners have a stronger role in deciding on which priorities the funds are spent on rather than simply providing “advice” to the CCBFC. This annual discussion would include an overall assessment of all SC tasks and overall strategic directions. For each code cycle, this discussion could also include the organization of the committees, meeting frequency and mandates.

In the desirable state

- Effective future sensing would continue such as that identified issues and trends are managed, presented and transformed effectively into research where necessary. This ensures that uniform model codes can be developed for future needs fairly rapidly if research has prepared

supporting science (for example, on fuel cells, solar cells, climate change adaptability). As a result, more proactive model codes may create buy-in from jurisdictions.

- CCBFC and PTPACC members are better engaged outside the Executive and in-between meetings. As well, the CCBFC and PTPACC members are adequately informed in order to fulfill their mandate.
- The system strikes the right balance between the need for innovation, the frequency of changes and the reliability and thoroughness of the change process.
- The partners recognize that there may be conflicting priorities amongst stakeholders, the jurisdictions and the CCBFC. As well, the partners manage expectations by clearly identifying the limits of the system's responsiveness and by communicating them consistently to stakeholders. The partners would also investigate what the performance expectations of stakeholders really are if faced with the choice between thoroughness (reliability) and responsiveness. In all cases, enhanced transparency and communications would be beneficial.
- The system would study the needs of its code user community, and consider addressing the increased complexity in codes by developing new technology to assess compliance with performance requirements (for example, NRCan's CanQUEST or NRC's SoundPATHS).

Appeal process

The desirable state would include – in the next edition of the CCBFC's Policies and Procedures – an appeal process that addresses concerns surrounding the coordinated code development system and process and that would be regularly reviewed.

Recommendation(s)

23. Manage the code development system more effectively by reviewing priorities and resources regularly and targeting resources based on system priorities.
24. Enhance the standing committee work planning process such that progress on priorities is effectively tracked and resources can be reallocated as appropriate to ensure performance measures are met.
25. Continue future sensing activities to create effective link between research activities and CCBFC priorities to provide research on current issues (reactive) and strategic issues/future needs (proactive).
26. Ensure that the policies and procedures are revised on a timely basis to promote the transparency of the system including reviewing the principles for an appeals process.
27. Review current processes within the coordinated system in order to identify opportunities for efficiency and effectiveness improvements.

Conclusion

Besides exercising due diligence on reviewing progress towards its strategic priorities, the CCBFC recognized the need to review the effectiveness of the coordinated code development system.

For a period of two years, the joint PTPACC/CCBFC Task Group on the Code Development System Review has therefore studied the current state of the coordinated code development system and deliberated on its desirable state.

The review showed that there has been good progress towards some important goals of the coordinated code development system and there appears to be broad support, from stakeholders and partners, for the model codes. The coordinated code development system, however, is at a crossroads, where goals need to be confirmed, potentially significant course corrections considered and the system re-energized. Some specific areas include funding, timely adoption of codes and recognizing the shared national interest in developing model codes.

The most urgent need for a course correction exists for the funding model, to which all provinces and territories and the federal government should be committed. The future funding model should be fair and equitable, and be regularly reviewed as well as jointly managed by the principal partners of the system. A funding model that is not relying on p/t adoptions appears essential for a sustainable system. The JTG also determined that other important course corrections would be the development of common adoption timelines paired with specific adoption support to provinces and territories.

The most critical step to be taken is therefore to hold strategic level discussions to develop the political commitment for a viable and sustainable code system in Canada. These strategic level discussions should also help to define and confirm the ‘shared national interest’ in providing an effective and efficient regulatory environment for stakeholders across the country who are interested in design, construction, public health, accessibility, environment and public safety.

The shared national interest and the commitment to a sustainable funding model should be the basis of a new collaborative agreement between the system partners, which should be formally and regularly affirmed by senior elected officials of federal and provincial/territorial governments.

With the acceptance of this report by the CCBFC and the PTPACC, the JTG considers the review of the “system” to be substantially complete. It is the hope of the JTG that the partners will engage into a focused discussion on the issues raised. This report contains a number of specific recommendations that could easily become part of a strategic plan or an implementation plan, once the actions have been identified and agreed to by the CCBFC and PTPACC.

Appendices

Appendix A – Joint CCBFC/PTPACC Task Group on Code Development System Review

Membership

Many of the members of the Joint CCBFC/PTPACC Task Group on Code Development System Review are former committee chairs and have participated for many years on important task groups related to the new code development system, the introduction of objective-based codes and other policy-related issues.

Table 7 below lists the JTG members, their committee and the year of their first appointment as a member on a committee within the coordinated code development system.

Table 7: JTG Membership

Name	Appointed by Parent Committee	CCBFC Committee[1] member since …
Doug Crawford (Chair)	CCBFC	1997
Chris Tye	CCBFC	1992
Ann Borooah	CCBFC	1993
Russ Riffell	CCBFC	1982
Ralph Bartlett	CCBFC	1989
Bruce Clemmensen	CCBFC	1989
Bob Thompson	PTPACC	1996
Bill Hawkins	PTPACC	2011
Al Suleman	PTPACC	2002
James Douglas	PTPACC	2004
Georges Tessier	PTPACC	2005

[1] This includes all CCBFC Standing Committees and Task Groups

Mandate

The mandate of the Joint Task Group jointly approved by PTPACC and the CCBFC is to:

- Review the various processes involved in the development of the national model codes, including coordination and consideration of code change requests, codes development priority establishment and monitoring, public consultation processes, consideration of p/t policy advice, approval of changes, and release of published documents.
- Review the various committee processes (preparation and timing of agendas, minutes, ballots, engagement of stakeholders, etc.)
- Review the need, objectives and mechanisms for pre- and post-public reviews by PTPACC members.
- Consider modifications to existing processes/tools or entirely new mechanisms/processes/ response standards that may help the CCBFC achieve its mandate in a more effective manner (i.e. ensure that its deliverables are on target in terms of meeting the needs of adopting authorities and industry).
- Review the other needs of the code development system that could support earlier codes

adoption by provinces and territories.
- Review the code development resources and funding needs, and current funding mechanisms.
- Make appropriate recommendations for consideration of the CCBFC, PTPACC, P/T regulatory authorities or other stakeholders.

Modus Operandi

The JTG started to work in the fall 2012 and has had 16 meetings since, four of them were two-day, face-to-face meetings and the rest were teleconferences. In addition, the chair of the JTG has had one meeting with the PTPACC and the JTG had a joint meeting with the PTPACC and the CCBFC Executive Committee.

The JTG agreed to approach the work in two stages, the first phase addressing system considerations, the second phase focusing on the code development process.

Early on, the JTG conducted a SWOT analysis (Strengths, Weakness, Opportunities, Threats) to identify the key areas that it should focus on. As a result, the JTG struck five working groups, for the work related to the coordinated code development system:
- ultimate Goal and viability of the system
- participation and support by provinces and territories
- stakeholder Engagement
- international Trends and Pressures
- system Complexities

The SWOT analysis brought up a number of issues identified in previous strategic documents and highlighted a few new issues. The issues were analyzed by the respective WGs. In order to gain further insight into the subject of stakeholder engagement through the provinces and territories, the JTG conducted a survey of the jurisdictions.

Similarly, in order to understand international trends and best practices in code and standards development, the JTG conducted an environmental scan of Canadian and international organizations involved in the development of construction codes and standards.

The work on the coordinated code development process (phase 2) is ongoing and includes a plan to hold stakeholder consultations on the recommendations.

Appendix B – Acronyms

Acronym	Full Name
ABCB	Australian Building Code Board
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
CCBFC	Canadian Commission on Building and Fire Codes
CCR	Code Change Request
CSA	Canadian Standards Association
DM	Deputy Minister
EC	Executive Committee of the CCBFC
ICC	International Code Council
IGA	Australian Intergovernmental Agreement
ISO	International Organization for Standardization
JTG	Joint CCBFC/PTPACC Task Group on Code Development System Review
MOU	Memorandum of Understanding
MNECB	Model National Energy Code for Buildings (1997)
NBC	National Building Code
NECB	National Energy Code for Buildings (2011)
NFBC	National Farm Building Code
NFC	National Fire Code
NFPA	National Fire Protection Association
NPC	National Plumbing Code
NRC	National Research Council Canada
NRCan	Natural Resources Canada
OGD	Other Government Department (Federal)
PTPACC	Provincial/Territorial Policy Advisory Committee on Codes
SC	Standing Committee
SDO	Standards Developing Organization
TG	Task Group
WG	Working Group

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