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# A semantic inventory of preconceived barriers to quality in Canada's built environment

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ABSTRACT

Traditional definitions of quality in architecture and the built environment have been increasingly challenged over the past decades, particularly through critical perspectives on spatial justice, equity, diversity, inclusion, and postcolonialism. Standardized definitions may reassure decision-makers but ignore evolving values reshaping quality. A Canadian SSHRC-funded research partnership is used as a testbed to examine how diverse stakeholders challenge conventional definitions of quality and propose new dimensions. This partnership functions as a living lab, bringing together representatives of citizens, municipalities, professionals, and academics to examine barriers to quality beyond traditional expertise. Drawing on the partnership's open-access reports, the paper asks: What barriers to built environment quality do participants perceive when they convene around "partnership roundtables"? To address this question, the study develops a semantic inventory of key themes and barriers to quality using two methods: (1) a qualitative content analysis of the 2022 Montreal Convention reports, and (2) analysis of the extracted themes using a researcher-developed framework—disciplinary, managerial, and critical—to examine shifts in definitions of quality. A total of 96 "barriers to quality" were identified and grouped into seven themes. The most discussed included a) Communication and Engagement, b) Sustainability and Inclusivity (EDIA), and c) Programming, Design, Building, and Management. The findings show that the themes align mainly with critical definitions of quality, with little to no disciplinary representation. This suggests that citizens and public-sector stakeholders seek a broader redefinition of quality, and that these expectations are at odds with the traditional disciplinary values of architecture and related disciplines.

## 1. Introduction

### 1.1. Quality in the built environment

Across architecture, urban design, and planning, "quality" in the built environment is widely invoked yet rarely defined with precision (Carmona, 2004; Gehl, 2011; Worpole, 2003). Although frequently associated with claims about social benefit, liveability, and everyday wellbeing (Farrell et al., 2004; Gallacher, 2005; Hill, 2004), the concept itself remains theoretically unstable. In everyday language, "quality" denotes general excellence (Soanes & Stevenson, 2004), making expressions such as "high quality" almost tautological and "low quality" conceptually ambiguous. As a result, quality operates simultaneously as an evaluative judgment and as a descriptor of specific characteristics, creating persistent ambiguity in both policy and practice.

The literature consistently acknowledges that quality lacks a single, shared definition (Dempsey, 2008a,b). Its meaning varies across actors and institutional contexts, shaped by professional norms, lived experience, and socio-cultural positioning (Carmona, 2004; Worpole, 2003). Policy agendas have further mobilized the term to advance particular planning priorities (Lyndhurst, 2004; Odpm, 2002), demonstrating that "quality" is not a neutral descriptor but a value-laden construct. As Rönn (2011) argues, any assessment of quality presupposes explicit value criteria and professional judgment; it is an inherently arguable and historically situated concept rather than a fixed standard. Recognizing this conceptual indeterminacy invites closer examination of how quality has been framed and reframed over time. Rather than treating quality as self-evident, it becomes necessary to unpack the dominant interpretative frameworks through which it has been defined, institutionalized, and contested within the built environment.

### 1.2. Shifting definitions of quality in the built environment

From a disciplinary vantage point, in architecture and related

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disciplines in the built environment (landscape architecture, interior design, urban design), "quality as excellence" has historically proven to be impregnable, leaving the extended field open to speculative, doctrinal and prescriptive manifestoes. Hence today, analyzing definitions of quality through a literature review reveals 3 poles: (1) disciplinary synthesis, (2) managerial and quantitative, and (3) a more socio-anthropological and "critical" analysis.

(1) The more traditional "disciplinary definitions" aim at maintaining quality within a synthetic vision, at the risk of cultivating an elitist horizon. Paradoxically, if quality is considered the reserved domain of designers' expertise it is also considered has hardly quantifiable. Mapping the pitfalls of quality measurement in architecture, the collective book *Quality out of Control*, edited by Dutoit et al. (2010) is exemplary of an exclusively disciplinary viewpoint on quality. It is emblematic of resistance to the deciphering of quality where any attempt at measurement is seen as reductive. This disciplinary approach remains self-referential and reiterates the power of expertise while relegating quantification as a "symptom of a technocratic society" (Odgers & Samuel, 2010). Such a vantage point fails to integrate the user in a complex and meaningful network of actors of quality.
(2) Almost symmetrically opposed to the traditional disciplinary ones, "managerial definitions of quality" oppose the opaque synthesis with more transparent quantitative analyses and quality control indicators typical of industrial production (Nashed, 2005). In Europe, the 1990s witnessed a qualitative managerial turn with the European Council voting a resolution on quality in 2000 (Harker, 2012). Here, quality is at the centre of a triadic system pointing at efficiency: cost, time, and scope. First formulated in 1987, ISO 9001 sets out the criteria for a quality management system focusing on the user as a consumer. This merchandizing principle can however appear poorly adapted to the complexity of public environments. Systems of quality management, as well as "quality rating and improvement systems" nevertheless culminated, in the UK, in the establishment of "Design Quality Indicators" (DQI) supported by the construction industry and controlled by certified facilitators (Prasad, 2004). Recent approaches in "decision-making" reintroduce emotion and intuition but remain limited in a field dominated by standards and norms (Nelson et al., 2007; Volker, 2010).
(3) Between these two irreconcilable poles, resides a spectrum of multidisciplinary approaches focusing on social and human dimensions (Hoddé, 2006; Yaneva, 2016), as well as on cultural determinants for heritage considerations (Choay, 2019). Since the 1980s, policies on architecture in Europe consider quality as a public matter and "public good". Directed by Hoddé in 2006 *Qualités architecturales, (conceptions, significations, positions)*, is a good example of this displacement of values. As the output of a French national research program dedicated to the "problem of quality", it demonstrates how users can never be excluded from the assessment of quality. The sociological vantage point defines quality as a "collective construction" relayed by multiple actors, in which each weakening of the relay, diminishes quality (Hoddé, 2006). The sociological and anthropological frameworks open the debate on a "critical vantage point" were plural voices and intangible impacts are considered as ways to address the disciplinary black box of quality (Samuel & Hatleskog, 2020; Vischer, 2008).

Traditional definitions of quality in the built environment—mostly disciplinary and managerial—are now increasingly scrutinized for their exclusivity and lack of user input (Nashed, 2005; Weston, 2010). These expert definitions based on normative frameworks or efficiency metrics, restricting the voices of those who actually use and interact with these spaces (Chupin, 2022a, 2023). This top-down approach has granted architects and designers the authority to dictate what constitutes quality, sidelining the diverse needs and experiences of users.

In this paper, we look for concrete indicators of this shift of values through intersectoral debates on quality. Rather than being a product of exclusive expert opinions, quality is here defined as an open concept, one that should encompass multidisciplinary insights and community voices to better reflect the social and cultural contexts of public spaces. This shift, that we are careful not to confuse with a paradigm shift at this stage of the research, could represent an essential step if we are to ensure the evolution of democratic definitions of quality.

Scholars such as Till (2009) and Fisher (2018) have already criticized the traditional, expert-driven definitions of quality. In *Architecture Depends*, Till argues that architecture is inherently entangled with complex social realities, making rigid definitions unrealistic and exclusionary. Fisher (2018) has long carried this view, critiquing the elitism in dominant architectural frameworks that often overlook the perspectives of actual users. These critical perspectives support a democratization of quality definitions, challenging the traditional authority of architects and designers as the primary arbiters of quality. While we potentially subscribe to these theoretical approaches, we nevertheless wish to shed light on them through observations and discourse analysis in a specific context, namely the Canadian context, which may of course overlap with observations in other contexts, including those in the Global South.

### *1.3. An experiment in bottom-up research on quality: the SSHRC partnership project (2022–2027)*

To better understand and test a potentially more democratic approach to quality, the canadian SSHRC partnership project, "*Quality in Canada's Built Environment: Roadmaps to Equity, Social Value, and Sustainability*," brings together a wide array of stakeholders—14 universities, 70 researchers, and 68 public and private organizations. Four types of stakeholders of the "built environment" have signed agreements to share they lived experiences, views and framework on quality: 1 – representatives of citizens and communities, 2 – representatives of cities and public procurement, 3 – representatives of professionals and construction industries, 4 – scholars and students in all fields of the built environment and related disciplines. This 5-years research partnership project thus aims to better understand current limitations so as to redefine quality in prioritizing equity, social value, and sustainability (see Living Atlas of Quality in the Built Environment web site). By engaging the main four types of stakeholders, this ambitious research initiative also provides an opportunity for researchers to observe our quality can actually be defined from multiple and at times contradictory perspectives, emphasizing the importance of unprecedented or even marginalized perspectives over mainstream disciplinary and managerial definitions.

This SSHRC initiative is epistemologically unique as it considers quality as a "collective construction" rather than a purely theoretical one. By responding to diverse voices and it is supposed to better reflect the complexities of public buildings and spaces. Furthermore, by serving as a "living lab on quality", the project gathers real-world data through discussions among stakeholders, offering an empirical foundation and a series of testimonies or "positive lived experiences of quality" (see ArchiQualiData digital platform) to understand quality beyond typical and traditional disciplinary frameworks.

### *1.4. Importance of understanding preconceived "barriers to quality"*

Quality in the built environment exists within an "epistemological grey zone," a concept lacking a unified scientific framework (Michalos, 2014) and reliant on commonly perceived values and interpretations (Rathier & De Fornel, 2006). Chupin's (2023) three-partite categorization of definitions of quality—disciplinary, managerial, and critical—reinforces the notion that quality resists stable definitions. Consequently, instead of defining quality directly, the partnership

started with exploring barriers to quality. These barriers are not synonymous with "non-quality"; rather, they represent obstacles that hinder the realization of quality in practice. Understanding these barriers allows researchers to delineate the qualities that stakeholders consider essential.

At the first SSHRC convention held in Montreal in 2022, the focus was on identifying barriers to quality as a way to reveal critical aspects of what quality should entail. This problem-oriented approach acknowledges that some barriers reflect preconceived ideas, shaped by participants' professional backgrounds and initial opinions. As such, these barriers highlight a range of individual experiences and assumptions about quality in the built environment. Recognizing this spectrum of "preconceived" ideas underscores the need for an inclusive, evolving understanding of quality, where diverse voices contribute to a collective knowledge base.

### *1.5. Research hypothesis, objectives, and research questions*

This study hypothesizes that quality in the built environment, particularly in public spaces, is best understood as a "collective construction," one that reflects the multiplicity of voices and resists a single authoritative definition. Acknowledging the democratic nature of public spaces, this hypothesis suggests that no singular definition of quality should dominate. Instead, the study seeks to compile an inventory of barriers to quality, identifying the range of perspectives and challenges that stakeholders perceive.

The primary objective is to make an inventory of these perceived barriers to quality and to examine how they reflect broader critiques of traditional definitions. The research questions guiding this study are:

I. What barriers to quality in the built environment do participants perceive at the outset of their involvement with the SSHRC partnership?
II. What do these barriers reveal about the complexity of defining new dimensions of quality in the built environment?

## 2. Method

### *2.1. Data sources*

This study draws on empirical qualitative data generated through the SSHRC Partnership project Quality in Canada's Built Environment, conducted under approved ethical protocols at Université de Montréal (Project no 2022-2163-CERAH-2022-015-D). Specifically, we analyze materials produced during the project's first-year Montreal Convention (2022), which convened approximately 200 partners and participants. The Convention was intentionally designed as a bottom-up inquiry to surface barriers to "quality" in the built environment. This approach was deemed essential for two reasons: first, understanding barriers was considered a foundational step in defining quality; and second, it was anticipated that participants would find it easier to articulate obstacles impeding quality production.

The data were collected in two complementary formats:

I) Preparatory Documents. Prior to the Convention, participants submitted two-page summaries identifying perceived barriers to quality (Quality in Canada's Built Environment Roadmaps to Equity, Social Value and Sustainability; Preliminary Reports and Summaries Compilation; Montreal Convention, 2022). These summaries were structured around the following questions:

1. Brief biographical sketch and a description of the perspective on quality you represent
2. One example of barrier to quality in the built environment in your context of living, working or expertise
3. One suggestion for a case study that should be conducted by your group's research team in the coming months during local round tables to shed light on the problem or possible solutions for improvement
4. Indications of expectations regarding the content of the roadmaps to be produced as part of the quality partnership (2022–2027)

For this research, responses to the second question were analyzed, as this directly addressed barriers to quality within participants' specific contexts. A secondary analysis was conducted on data related to the convention discussions.

II) Convention Reports: The second source of data included reports of the convention written by graduate students, which comprised transcripts from roundtable discussions, workshops, and plenary sessions held during the convention (Chupin, 2022b, see the open-access report). In total, the dataset includes a 114-page report covering 15 roundtable discussions from the Montreal convention. Each roundtable was co-moderated by research-site partners from two different universities within the partnership. The Montreal convention was organized around four main thematic clusters:

Cluster 1: Spatial Justice and heightened quality of life.
Cluster 2: Integrated resilience, material culture & adaptive reuse
Cluster 3: Inclusive design for health, wellness, aging & special needs
Cluster 4: Processes & policies supporting the re-invention of built environments

Over 200 participants attended the two-day convention, representing diverse backgrounds, expertise, and regions across Canada. The attendees included scholars, professionals, architects, designers, citizen groups, and students. The socio-demographic breakdown of participants was as follows: 32.3% scholars, 23.6% citizen groups, 21.3% professionals, and 22.8% students.

### *2.2. Data analysis*

Data were analyzed using qualitative thematic analysis supported by ATLAS.ti. Both data sources (preparatory documents and convention reports) were imported into the software and analyzed iteratively to identify, categorize, and interpret barriers to quality in the built environment.

***Step 1_Open coding***: All documents were reviewed and coded inductively. Segments explicitly or implicitly referring to "barriers to quality" were identified and indexed. Coding remained grounded in participants' language to preserve conceptual proximity to the empirical material, reflecting our trust in the insights shared by participants as valuable forms of knowledge. Since there was no incentive for participants and the process was conducted transparently, their contributions were regarded as authentic.
***Step 2_Code consolidation and frequency mapping***: Initial codes were reviewed, merged where conceptually overlapping, and organized into a structured coding framework. We examined code frequency and distribution across data sources. While frequency was not treated as a proxy for importance, it was used as an analytical indicator of shared concern. (A full list of identified barriers and their occurrences is included in Annex 1.)
***Step 3_Thematic development***: Codes were grouped into higher-order categories through iterative comparison and abstraction. In the initial round of analysis, 10 themes emerged. After further refinement, these were consolidated into seven overarching themes encompassing 96 distinct barriers to quality. (See Annex 2.)
***Step 4_Analytical refinement***: To simplify the analysis and align with the scope of this research paper, the list of 96 barriers was further refined. Only barriers with a frequency of four or more mentions

were retained. This approach ensures the focus remains on the most critical barriers discussed in relation to quality in the built environment. Findings are presented in aggregated form to ensure participant confidentiality.

## 3. Results and discussion

### 3.1. Overall results

The initial analysis compared the frequency of themes (see Fig. 1). The overall findings indicate that, based on the aggregated results, *communication and engagement* emerged as the most frequently mentioned theme, mentioned over 100 times. This is particularly noteworthy given that the project focuses on inclusivity and amplifying citizen voices. Interestingly, citizens, scholars, and professionals who participated in the discussions identified *communication and engagement* as the most significant barrier to quality. In other words, while the project aims to improve the quality of the built environment by fostering dialogue among various stakeholders, participants consistently emphasized the need for greater involvement in the production of the built environment. This highlights a critical gap and reinforces the importance of engaging citizens more effectively.

The second most frequently mentioned theme was *sustainability, inclusivity, and EDIA (Equity, Diversity, Inclusion, and Accessibility)*. Conversely, *quality measurement and evaluation* was the least mentioned theme. This may be due to its stronger association with architectural practices, and the relatively low participation of architects in the project. Additionally, *cultural and Indigenous perspectives* emerged as the second least discussed topic. During the first year of the project, there was limited representation from Indigenous communities. However, as the project progressed, participants' awareness of Indigenous perspectives significantly improved. If these practices were conducted now—midway through the project—it is likely that Indigenous perspectives would feature more prominently. This shift aligns with the increasing focus on these discussions, as demonstrated during the Halifax Convention 2024.

As described in the Method section, the second phase of the analysis involved assessing the most frequently mentioned barriers within each theme to identify which specific barriers were discussed. Table 1 provides detailed information on the frequency of each barrier and its corresponding theme. As noted earlier, barriers with a frequency of fewer than four occurrences are excluded from the discussion but are included in the annex for future research. Within each theme, the top two or three most frequently mentioned barriers are highlighted for a more in-depth discussion.

### 3.2. In-depth discussion of themes

#### 3.2.1. Theme 1: Communication and Engagement

The main two major barriers to quality of this theme are: "Limited citizen engagement" and "Lack of communication". It has been discussed that engagement in the urban and architectural design is often reduced to "checking the box," with limited opportunities for meaningful dialogue or co-design. This performative approach creates a misalignment between what citizens want to discuss and what they are allowed to influence, ultimately leading to disengagement.

> "*[Engagement] was totally just checking the box of yes, we went there, we presented, but we didn't even have the power to change the program at that time, because it was written in the RFP[…] The expectations for what citizens want to discuss versus what they can actually provide feedback on creates an imbalance which affects attitude, attendance, and motivation for participating in public engagement.*"
>
> (Montreal convention report, p 8)

Citizens often feel their feedback is not integrated into the final design, resulting in frustration and distrust. This disconnect is exacerbated by complex regulations and frameworks at higher levels, such as federal procurement processes, which are far removed from grassroots realities. As a result, those working closer to the public feel powerless to effect systemic changes. This highlights the importance of developing trust, shared language, and mutual understanding to foster more inclusive and collaborative processes:

> "*I propose that ineffective consult process is a barrier to quality in the built environment. How do we learn to how listen to each other, to develop a shared language through which to create the built environment.*"
>
> (Preparatory Documents, p 148)

The second critical barrier identified is the inadequacy of communication tools and practices in the built environment sector. Participants

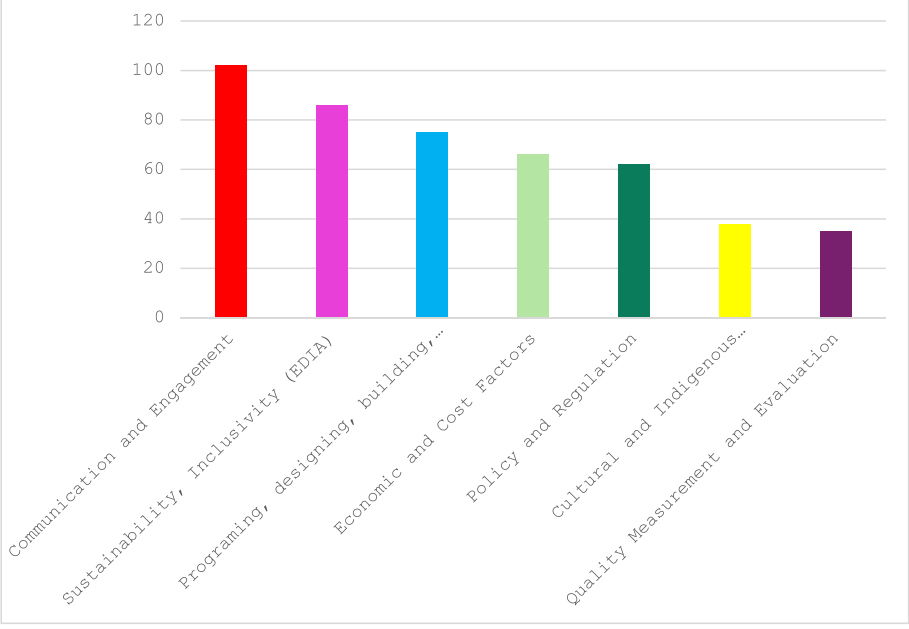


**Fig. 1.** Barriers seven themes and their frequencies.

**Table 1**
Seven themes and their associated barriers: The numbers in parentheses indicate the frequency of discussions. Highlighted barriers within each theme represent the most frequently discussed ones, while the colors correspond to the seven different themes.

| Themes | Observed Barriers |
|---|---|
| ● Communication and Engagement (102) * | ● Limited citizen engagement (40) |
| | ● Lack of communication (18) |
| | ● Lack of collective/ shared understanding (11) |
| | ● Lack of interdisciplinary collaboration knowledge (11) |
| | ● Lack of diverse voices in design (6) |
| ● Sustainability, Inclusivity (EDIA) (86) | ● Lack of Equity, Diversity, and Inclusion in design recognition (27) |
| | ● Insufficient accessibility consideration in design (18) |
| | ● Limited consideration of sustainability principles (17) |
| | ● Inequitable access to green spaces (4) |
| | ● Inequity in land use (4) |
| ● Programing, designing, building, and managing (75) | ● Short term vision-oriented design (12) |
| | ● Lack of coordinated effort (7) |
| | ● Lack of intersectoral collaboration (6) |
| | ● Complexity and ambiguity in built environment projects (5) |
| | ● One-fits-all solution/ standardization (5) |
| | ● Partial incorporation of lived experiences in design (5) |
| | ● Absence of transformative leadership (4) |
| | ● Inadequate maintenance (4) |
| | ● Political constraints in the area of project management (4) |
| ● Economic and Cost Factors (66) | ● Limited resources for implementing good design (10) |
| | ● Affordability (9) |
| | ● Focus on low initial cost (9) |
| | ● Commodification of housing /design (8) |
| | ● Housing is not affordable (7) |
| | ● Cost-driven public procurement (6) |
| | ● Lack of funding (6) |
| | ● Lowest bidder principle undermining quality (5) |
| ● Policy and Regulation (62) | ● Regulatory hinderance to innovation (8) |
| | ● Siloed policy and decision-making (8) |
| | ● Bureaucracy (6) |
| | ● Conflicting policies (6) |
| | ● Regulatory framework for urban planning (5) |
| | ● Lack of law enforcement, promotion and incentive (4) |
| | ● Rigid policies (4) |
| ● Cultural and Indigenous Perspectives (38) | ● Misappropriation of indigenous perspective (10) |
| | ● Neglect of contextual values in design (10) |
| | ● Lack of innovation and culture (6) |
| | ● Lack of sufficient appreciation and understanding of heritage building (5) |
| | ● Systemic racism (4) |
| ● Quality Measurement and Evaluation (value system) (35) | ● Lack of access to knowledge and expertise (6) |
| | ● Awards are merely for completed projects (Post occupancy assessment) (6) |
| | ● Awards exclude citizens and civic organizations involved in participatory or post-occupancy design, focusing only on architects. (5) |
| | ● Different interpretation of quality (5) |

[a]This number represents the total frequency of all barriers within this theme. However, to simplify the table, barriers with a frequency of less than four have been excluded.

mentioned that people with disabilities are rarely consulted during public engagement or design processes, which is a significant issue related to communication with built environment users with special needs. This issue highlights a lack of standardized and accessible frameworks for sharing information results in duplicated efforts across provinces and cities, wasting resources and impeding progress. Moreover, complex regulatory language makes policies and guidelines difficult to understand for the general public, NGOs, and even some professionals. These barriers highlight the need for innovative communication strategies and plain-language, accessible frameworks to ensure

that all stakeholders, especially marginalized groups, have a voice in shaping the built environment. The discussion goes further by emphasizing the importance of maintaining meaningful engagement with communities throughout the lifecycle of a project, which remains a significant challenge. Iterative processes that involve stakeholders over the long term are underutilized, undermining trust and collaboration.

> "*Getting all of the stakeholders involved at an earlier stage is essential. But how can the iterative nature of these projects allow for long-term community engagement? In other words, sustaining and fostering long-term participation over the project's lifecycle is a crucial issue.*"
>
> (Montreal convention report, p 68)

#### 3.2.2. Theme 2: Sustainability, Inclusivity (EDIA)

Two main barriers are highlighted within this theme: "Lack of Equity, Diversity, and Inclusion (EDIA) in design recognition" and "Insufficient accessibility consideration in design." Regarding accessibility, while physical access is an essential minimum requirement, it is often overlooked in design. Accessibility is typically framed by existing codes that are inconsistent across Canada, poorly enforced, and primarily focused on physical mobility needs. This oversight extends beyond the physical realm to neglect the needs of neurodiverse individuals and social inclusivity, resulting in designs that fail to support vulnerable groups. As one participant emphasized:

> "*We need to broaden our scope to look at neuroatypical accessibility, especially regarding aging dementia which 'is a huge tsunami that will be facing us.*"
>
> (Montreal convention report, p 68)

Urban planning also often creates conflicts that hinder accessibility, such as tensions between residential and commercial spaces or between the needs of different demographic groups, including the elderly and low-income populations. The importance of considering aging populations is especially critical when discussing the sustainability of cities. It was noted that many cities lack alignment between smart, sustainable strategies and the needs of older adults and marginalized groups. As one participant observed:

> "*A barrier to quality is the lack of consideration of aging populations and marginalized communities in the design and quality of the built environment. Existing standards provide a very bare minimum of acceptability of quality for these populations, and much work is necessary to understand their needs and to better plan the future of cities in this regard.*"
>
> (Preparatory Documents, p 92)

In addition to the voices of older adults, participants also discussed the underrepresentation of women in the field of architecture. Despite higher enrollment rates among female students, only 20% of architects worldwide are women, largely due to imbalanced working conditions. Furthermore, even community organizations often fail to represent the diverse needs of the populations they serve. It was emphasized that the users of the built environment should be prioritized in the design process, and their voices must be heard effectively. As participants pointed out:

> "*The construction industry is not inclusive – it often tells us how to build and what to build with, but does not ask us, the consumer, if it is the right fit.*"
>
> (Montreal convention report, p 30)

> "*The main barrier is that neither the clients nor the designers do not see the project through the lens of the users and the community who will use it. […]; the initial program does not come from the context and is a cookie cutter approach to give everyone the same thing without questioning it. It is the difference between equality and equity!*"
>
> (Preparatory Documents, p 149)

#### 3.2.3. Theme 3: programing, designing, building, and managing

"Short-term vision-oriented design" and "Lack of coordinated effort" emerged as the most frequently discussed issues within this theme. Public projects often prioritize cost savings over quality by awarding contracts to the lowest bidder, undermining long-term outcomes. Politicians, focused on achieving short-term successes during their terms, tend to emphasize quantity over quality. Frequent shifts in council priorities and tight deadlines further hinder comprehensive planning and high-quality execution. Additionally, short-term agreements between developers and occupants fail to consider long-term societal impacts. Developers are not held accountable for contributing to urban challenges such as heat islands, public transportation inefficiencies, and biodiversity loss. A lack of emphasis on the circular economy perpetuates unsustainable practices, with short-term profits and low upfront costs prioritized over long-term benefits. A cultural shift is essential to integrate sustainability and long-term considerations into procurement, policymaking, and design processes.

Regarding the lack of coordinated effort, key issues include insufficient collaboration, collective understanding, and transformative leadership. Despite public demand for higher standards (e.g., accessibility), no national policies ensure consistent implementation. As one participant stated:

> "*It is crucial to step out of our silos, work together, and think more holistically so that one interest doesn't trump all the other interests, especially since they often compete with each other.*"
>
> (Montreal convention report, p 29)

#### 3.2.4. Theme 4: Economic and Cost Factors

"Limited resources for implementing good design," "affordability," and "focus on low initial cost" are the primary barriers discussed under this theme. Funding constraints restrict project adaptability to specific needs, ultimately diminishing the quality and inclusivity of the built environment. For instance, funding programs often impose rigid requirements—such as a specific number of bathrooms or resident groupings—that limit flexibility. In some cases, private and corporate donations have been necessary to create innovative designs tailored to special needs. However, not all organizations can access this level of funding, emphasizing the need for regulatory and funding agencies to revise their principles to foster innovation.

> "*Regulatory and funding agencies must revisit their principles to allow space for innovation.*"
>
> (Preparatory Documents, p 149)

A lack of tools and resources to promote good design as a critical factor in personal and collective wellness further impedes widespread implementation.

Regarding the "affordability" and its effect on quality, it has been discussed that rising housing and land costs often force affordable housing projects into lower-quality locations, limiting residents' access to essential amenities, safe walkable areas, and public services. Treating housing as a speculative commodity exacerbates disparities, pushes families out of the market, and undermines affordability. Cooperative housing—designed and managed by inhabitants—offers a potential solution. Unfortunately, current national strategies emphasize developer-led projects, which worsen affordability challenges.

> "*The greatest barrier to quality in the built environment is the commodification of housing – where homes become speculative commodities to be bargained with and traded for profit.*"
>
> (Preparatory Documents, p 121)

The rising cost of urban land also pushes people to suburban areas, increasing transit demands and creating inequities for non-car owners. Housing policies often fail to address the needs of diverse family structures, particularly immigrant and marginalized communities. Limited

funding and a focus on modest, "bare minimum" solutions restrict innovation and quality, forcing projects to compromise on aesthetics, material quality, and long-term sustainability. Moreover, affordable housing projects often perpetuate segregation and inequities. For low-income families, such complexes are often experienced as disempowering rather than community-oriented solutions.

Regarding "focus on low initial cost", the design and construction industry prioritizes low upfront costs, driven by commoditization and competitive procurement processes. This focus frequently sacrifices quality, sustainability, and long-term value.

> "*In the procurement process… we have been relatively obsessed with initial costs… From a very practical perspective, I think you know on the pure front-end economic side (which is) very short-sighted*."
>
> (Montreal convention report, p 110)

To reduce costs, responsibilities and liabilities are often shifted to trade contractors, which degrades quality further. Higher initial costs for zero-emission buildings and other innovations deter private sector adoption due to demands for quick payback. Initial cost reduction dominates decision-making, overshadowing principles of sustainability and circular economy practices.

> "*It is all too common that quick profits, low-initial costs, and immediate impacts are prioritized, rather than factors governed by more forward-thinking considerations*."
>
> (Montreal convention report, p 110)

Convincing stakeholders to prioritize quality over initial costs requires compelling evidence of the long-term benefits of investing in better design and construction.

#### 3.2.5. Theme 5: Policy and Regulation

This theme emphasizes two primary issues: "Regulatory Hindrance to Innovation" and "Siloed Policy and Decision-Making.". Regarding the first one, it was discussed that zoning and planning requirements across Canada are outdated, failing to adapt to the evolving needs of society. This misalignment between regulations and lived realities perpetuates systemic injustices and stifles innovation. Additionally, building codes often prioritize rigid, prescriptive standards over more flexible, innovative approaches.

> "*If the needs of a changing society are not reflected through adaptable regulations and policies, the regulations and policies become inherently disassociated with the lived conditions of a place and often work to further exclude and perpetuate systemic injustices*."
>
> (Montreal convention report, p 8)

Financial regulations also pose challenges. Issues like supply chain disruptions, inflation, and delayed funding force projects to prioritize cost-cutting over quality and innovation. Procurement processes are plagued by extreme risk aversion, resulting in excessive bureaucracy, delays, wasted resources, and subpar outcomes.

Regarding "Siloed policy and decision-making" it was discussed that the built environment suffers from fragmented collaboration among key sectors (e.g., national associations, educators, regulators). This compartmentalization limits the ability to create holistic solutions, as organizational mandates and scopes often discourage broader engagement. Policy fragmentation across municipal, provincial, and federal levels further restricts innovation and the implementation of cohesive strategies.

> "*It is crucial to step out of our silos, work together, and think more holistically so that one interest doesn't trump all the other interests, especially since they often compete with each other*."
>
> (Montreal convention report, p 29)

Inconsistent energy codes across provinces exemplify this issue, with varying iterations of the National Energy Code for Buildings (NECB) creating inefficiencies. Repeated efforts to redefine criteria, such as sustainability, waste valuable resources and time. To address these challenges, the participants suggested collaboration among academia, professional practices, and citizen groups. Participants highlighted the role of the partnership project in breaking down silos and empowering stakeholders to tackle complex systemic problems and effectively share knowledge, fostering innovation in Canada's built environment.

#### 3.2.6. Theme 6: Cultural and Indigenous Perspectives

The key topics discussed in this theme were the "Misappropriation of Indigenous Perspective" and the "Neglect of Contextual Values in Design".

Regarding the first issue, it was highlighted that rapid urban and architectural changes in Indigenous communities often occur without considering local voices or their specific needs, leading to a disconnection from cultural traditions. Colonial policies, such as the Indian Act, create systemic barriers that hinder community-led initiatives, particularly in sustainable housing and other vital projects. Indigenous housing designs frequently fail to reflect the cultural values of Indigenous peoples, relying heavily on external materials and labor, which further disconnects communities from their heritage. Moreover, many Indigenous communities continue to rely on traditional skills for survival, but face obstacles due to government codes and regulatory frameworks. These are viewed as bureaucratic barriers that undermine Indigenous autonomy. The participants emphasized the importance of including Indigenous voices at all levels of decision-making to ensure that quality in the built environment is redefined through a culturally sensitive lens.

The second key topic discussed was "Neglect of Contextual Values in Design". Many design practices fail to preserve or enhance the unique values of a place, often driven by economic interests rather than contextual and cultural considerations. Urban and infrastructure developments are frequently implemented without sufficient attention to environmental, social, and cultural contexts, leading to unsustainable sprawl and generic, disconnected designs. In Northern regions of Canada, construction heavily relies on imported materials that are unsuitable for extreme climates, resulting in performance failures, high maintenance costs, and economic disadvantages for local communities. On the other hand, heritage and existing buildings are often dismissed as inadequate for modern needs, which leads to unnecessary demolitions and contributes to the loss of knowledge around adaptive reuse.

#### 3.2.7. Theme 7: Quality Measurement and Evaluation (value system)

This theme, though less frequently discussed, highlights significant issues related to the value system within the architectural discipline. Two primary barriers identified are "Lack of access to knowledge and expertise" and "Awards are merely for completed projects (Post occupancy assessment)".

The lack of knowledge, particularly regarding materials like wood in Canada, is a major obstacle in non-residential wood construction. Insufficient understanding of materials, building codes, and proper design practices often leads to poor-quality buildings. Training gaps in wood design and materials exacerbate the problem, resulting in a shortage of skilled professionals. Improving access to education, particularly in urban development, was proposed as a critical step to address these challenges. Early education can empower citizens to make informed decisions and participate effectively in city development processes. For instance, homeowners often struggle with retrofitting older homes due to limited knowledge and inadequate policy support. Stakeholders also face difficulties stemming from mismatches between available information and the timing needed for its application. The absence of a centralized knowledge base or repository for accumulated architectural insights further hinders progress, as one participant highlighted:

"*The loss of knowledge due to the lack of a common compendium or a repository of all the know-how gathered over the centuries.*"

(Montreal convention report, p 90)

The second issue concerns the limitations of current award systems, which primarily recognize new construction projects while neglecting the existing built environment. Few awards recognize the maintenance or long-term performance of buildings, despite their significant importance. Establishing durability awards that honor buildings with proven longevity faces challenges were highlighted. A participant emphasized the need to broaden the scope of awards, suggesting:

"*We should not simply focus on new construction but also pay attention to the post-occupancy period following a construction project. The measurement of a building should take into account its impact on the community, both in terms of intended and unintended effects, both positive and negative.*"

(Montreal convention report, p 39)

Some participants also questioned the purpose and values promoted by awards. They argued that current systems often drive consumption rather than promoting meaningful contributions to communities. A more thoughtful approach could involve scaling awards to model industry best practices and considering a building's lifecycle, including its evolution, use, and community impact over time. Suggestions included introducing awards at various stages of a building's life, including post-occupancy assessments, to better evaluate long-term quality and relevance.

### 3.3. Beyond the seven discussed themes

Although stakeholders' discussions were organized into seven thematic categories, some nuanced overlaps and interconnections emerged across them. For example, the themes of "Communication and Engagement" and "Sustainability and Inclusivity (EDIA)", while framed differently, converge around a shared objective: amplifying the voices of end users and broadening stakeholder participation in the design process. Both emphasize early-stage engagement, cross-sector dialogue, and improved accessibility as conditions for enhancing quality in the built environment. These concerns also intersect with the theme of "Cultural and Indigenous Perspectives", which challenges one-size-fits-all and exclusively disciplinary approaches, advocating instead for more democratic, bottom-up, and plural definitions of quality.

Similarly, the themes "Programming, Designing, Building, and Managing" and "Policy and Regulation", though analytically distinct, are structurally intertwined. Participants identified fragmented collaboration and lack of intersectoral coordination in project delivery, which correspond to siloed policy frameworks and decision-making structures. While these barriers operate at different levels, they are mutually reinforcing. This interdependence highlights the complex and "wicked" nature of barriers to quality and underscores the limitations of single-lens, disciplinary definitions, reinforcing the need for multi-actor and critical perspectives.

Drawing on the three definitions of quality discussed in the Introduction —disciplinary, managerial, and critical—an interesting observation emerges: most identified barriers align with managerial and critical definitions, while the disciplinary definition is almost entirely absent in the identified barriers (see Table 2). This imbalance is not due to a lack of architects in the partnership; as outlined in the methodology, 21.3% of participants were professionals in the field. Instead, it reflects a broader trend where architects and other stakeholders within the partnership seem less inclined to prioritize the disciplinary perspective of quality in the built environment.

The language used to discuss and define quality in this project diverges from the terminology typically employed by designers in their daily practices. This finding underscores a shift in how quality is conceptualized, moving away from traditional architectural frameworks toward a critical focus on issues such as spatial justice, equity, diversity, inclusion, and postcolonial perspectives. This shift aligns with the initial hypothesis that the definition and perceived barriers to quality in the built environment are evolving, increasingly emphasizing critical perspectives over disciplinary ones.

**Table 2**
Mapping the seven observed themes using Chupin's definitions of quality.

| Disciplinary definitions | Managerial definitions | Critical definitions |
|---|---|---|
| None | Programing, designing, building, and managing | Communication and Engagement |
| | Economic and Cost Factors | Sustainability, Inclusivity (EDIA) |
| | Policy and Regulation | Cultural and Indigenous Perspectives |
| | Quality Measurement and Evaluation | |

Taken together, these findings point to what may cautiously be described as an epistemological reorientation in how quality is understood in the built environment. Quality no longer appears confined to the synthetic authority of disciplinary expertise nor reducible to managerial metrics of efficiency and control. Instead, it emerges as a negotiated construct situated within networks of actors, institutions, and lived experiences. The near absence of purely disciplinary barriers, combined with the prominence of managerial and critical concerns, suggests that stakeholders increasingly frame quality in relational and systemic terms. Issues such as equity, accessibility, intersectoral coordination, cultural recognition, and regulatory fragmentation are not peripheral; they are treated as constitutive of quality itself. In this sense, quality is shifting from an internal professional attribute to a socially distributed and context-dependent condition.

While we refrain from declaring a full paradigm shift, the implications of this reorientation are significant. If quality is understood as co-produced rather than prescribed, then professional practice can no longer rely solely on expert judgment or standardized indicators. Policy frameworks, procurement systems, and evaluation tools must likewise adapt to recognize plural values and diverse forms of knowledge. This shift strengthens the argument for participatory, iterative, and context-sensitive approaches that engage users and marginalized voices early and meaningfully in the design process. Ultimately, the democratization of quality challenges entrenched hierarchies of expertise and calls for new forms of accountability, collaboration, and reflexivity across the built environment sector.

### 3.4. Implications and recommendations

The predominance of managerial and critical barriers identified in this study suggests that institutional frameworks must adapt to an emerging understanding of quality as collectively constructed rather than discipline-bound. This has implications not only for governance but also for professional education. Schools of architecture and related disciplines have historically privileged formal, technical, and craft-based competencies. While these remain essential, curricula should more explicitly integrate participatory methods, intersectoral collaboration, equity literacy, and reflexive evaluation practices. Aligning education with this epistemological reorientation would better prepare future professionals to operate within plural and negotiated conceptions of quality.

At the level of practice and policy, procurement and project-delivery systems require recalibration. Early-stage and continuous citizen involvement should move beyond consultation toward structured mechanisms of co-design and shared decision-making. This shift necessitates intersectoral coordination platforms capable of bridging silos across policy, planning, and project management. Evaluation

frameworks also warrant reconsideration: award systems and quality indicators should expand beyond completed form and aesthetic resolution to assess participatory processes, lifecycle performance, maintenance, and social impact.

### 3.5. Limitations

- There may be some interpretations by the students who authored these reports, and their accounts may not capture the exact words used by the participants. Additionally, some relevant information may have been omitted from the reports.
- The reports were anonymous, and the names of the participants were not included. Furthermore, some individuals may have wanted to express their views but felt that trust had not been sufficiently established during the first convention to discuss all aspects of barriers to quality openly.
- Additionally, the challenge of discussing barriers to quality without first defining what quality entails was encountered. Defining quality at the outset could have led to a complex and potentially contentious discussion. Instead, the focus was placed on identifying the negative aspects of quality. While a precise and shared definition of quality may be elusive, there is often consensus around what constitutes its absence. This problem-driven approach acknowledges that quality is ultimately the desired outcome.
- While these sources (transcripts and preparatory documents) offer valuable insights, they may not fully capture all aspects of the barrier to the quality, requiring future research to adopt alternative methods to gather more accurate data collection from people regarding the barrier to quality in the built environment. The study assesses convention discussions involving multiple built-environment stakeholders, including citizens. While this approach results in a broad conception of "quality" defined across diverse perspectives, and may be seen as a limitation because it does not focus on a single discipline within the built environment, it is central to the study's epistemological premise: identifying common ground across plural viewpoints.

## 4. Conclusion

This research partnership project served as an X-ray tool, offering a detailed and revealing examination of how diverse participants perceive barriers to quality in the built environment. As hypothesized, the findings affirm that the definition of quality has evolved, with participants in this project highlighting a significant shift toward inclusivity and a shared understanding of quality. The data gathered from the convention reveal a strong focus on critical and managerial aspects of quality, while traditional disciplinary approaches received limited attention.

The hypothesis underlying this research proposed that achieving inclusivity in the built environment requires amplifying a multitude of voices. The content analysis of discussions confirmed that citizens, scholars, and other stakeholders are increasingly eager to contribute to shaping the built environment. This marks a departure from the traditional "top-down" approach, where architects and urban professionals dominated the definition of quality. Instead, quality is now seen as a collaborative concept, shaped by the intersection of diverse perspectives, particularly those of residents and end-users. In this context, quality is understood as a form of "shared knowledge" or "common ground," reflecting a more participatory and inclusive approach to designing and creating public spaces.

Seven priority themes emerged from the analysis of partnership reports and pre-convention submissions: 1) Communication and Engagement, 2) Sustainability and Inclusivity (EDIA), 3) Programming, Design, Building, and Management, 4) Economic and Cost Factors, 5) Policy and Regulation, 6) Cultural and Indigenous Perspectives, and 7) Quality Measurement and Evaluation (Value System). These themes highlight both the dominant barriers and some underexplored challenges in defining quality in the built environment.

Future research could further explore the less frequently mentioned barriers (detailed in Appendices 1 and 2), which may uncover emerging issues that require attention. By expanding the analysis to include these overlooked barriers, the practice of mapping and addressing quality in the built environment can evolve into a more comprehensive, equitable, and community-driven framework—one that fosters sustainability and inclusivity in future urban planning and design.

## CRediT authorship contribution statement

**Morteza Hazbei:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jean-Pierre Chupin:** Writing – review & editing, Supervision, Resources, Project administration, Funding acquisition.

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## Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Jean-Pierre Chupin reports financial support was provided by Social Sciences and Humanities Research Council - sshrc-crsh. Morteza Hazbei reports financial support was provided by Canada Research Chair (CRC) in Architecture, Competitions, and Mediations of Excellence. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Annex 1.

| Frequency | Barriers | |
|---|---|---|
| Mentioned 9 or more times | Limited citizen engagement | Lack of Equity, Diversity, and Inclusion in design recognition |
| | Lack of communication | Insufficient accessibility consideration in design |
| | Limited consideration of sustainability principles | Short term vision-oriented design |
| | Lack of collective/shared understanding | Lack of interdisciplinary collaboration knowledge |

(*continued on next page*)

(*continued*)

| Frequency | Barriers | |
|---|---|---|
| | Limited resources for implementing good design | Misappropriation of indigenous perspective |
| | Neglect of contextual values in design | Affordability |
| | Focus on low initial cost | |
| Mentioned 4 to 8 times | Commodification of housing/design | Regulatory hindrance to innovation |
| | Siloed policy and decision-making | Lack of coordinated effort |
| | Housing is not affordable | Lack of diverse voices in design |
| | Lack of intersectoral collaboration | Cost-driven public procurement |
| | Lack of funding | Bureaucracy |
| | Conflicting policies | Lack of innovation and culture |
| | Lack of access to knowledge and expertise | Complexity and ambiguity in built environment projects |
| | One-fits-all solution/standardization | Partial incorporation of lived experiences in design |
| | Lowest bidder principle undermining quality | Regulatory framework for urban planning |
| | Lack of sufficient appreciation and understanding of heritage building | Awards are merely for completed projects (Post occupancy assessment) |
| | Different interpretation of quality | Inequitable access to green spaces |
| | Inequity in land use | Absence of transformative leadership |
| | Inadequate maintenance | Political constraints in the area of project management |
| | Lack of law enforcement, promotion and incentive | Rigid policies |
| | Systemic racism | |
| Mentioned Less than 4[a] | Creating unrealistic expectations within communities | Monopoly and homogenizing architecture |
| | Divergency of stakeholder perceptions and priorities | Absence of climate action in award criteria |
| | Professional practice is disconnected from user needs and expectations | Cultural bias in award programs |
| | Insufficient focus on resilience in the built environment | Homogenous juries in award program |
| | Lack of climate considerations | Lack of a nationally accepted definition of quality and sustainability across Canada |
| | Lack of ecological integration in infrastructure design | Communities rarely see results after sharing their lived experiences |
| | Late accessibility implementation | Inaccurate reflection of community voices |
| | Disrupted projects due to political transitions | Public engagements are often very opaque |
| | Premature project definition leading to compromised quality | Hostile design in public space |
| | Traditional design practices prioritize new construction over material reuse and retrofitting | Lack of defined inclusivity threshold |
| | Inconsistency in the perception of policy definition and expectations | Aesthetic-focused urban design |
| | Regulatory inflexibility in design | Aging Workforce |
| | Regulatory oversight gap | Insufficient adaptability in built environment design to accommodate evolving needs and future conditions |
| | Difficulty in measuring quality | Lack of professional development in architecture (education) |
| | Architects, planners, and experts lack the skills, tools, and authority to effectively engage with communities | Lack of synergy in asset management |
| | Inaccessible communication | Rapid housing development |
| | Accessibility is treated as an add-on rather than an integrated design quality like beauty | Developers expect rapid payback on initial investments |
| | Inflexibility in technological advancement in design | Lack of transparency in funding |
| | Narrow scope of view | Lack of accountability for developers contributing to harmful urban dynamics |
| | Seasonal inadaptability | Lack of early architectural and urban design input in decision-making |
| | Top-down design and municipal governance | Outdated zoning laws |
| | Cutting necessary costs | Restrictive nature of codes |
| | Overemphasis on economic interests | Lack of inadequate built environment codes originated from indigenous communities |
| | Lack of global vision | Challenges in logistics for assessing post-occupancy |
| | Limited access for emerging design practitioners in public tendering | Insufficient evidence for quality |
| | Private and public sector misalignment | Prescriptive nature of architectural awards |
| | Product oriented design | |

[a] These barriers were only mentioned in the first year of the convention. They contain valuable insights that could provide a basis for future research. In this study, we will not analyze these barriers, but we suggest them as a topic for further investigation.

## Annex 2.

| Themes | Observed barriers | |
|---|---|---|
| Communication and Engagement | Lack of communication | Inaccessible communication |
| | Limited citizen engagement | Lack of interdisciplinary collaboration knowledge |
| | Lack of collective/shared understanding | Divergency of stakeholder perceptions and priorities |
| | Professional practice is disconnected from user needs and expectations | Lack of diverse voices in design |
| | Public engagements are often very opaque | Architects, planners, and experts lack the skills, tools, and authority to effectively engage with communities |
| | Creating unrealistic expectations within communities | Communities rarely see results after sharing their lived experiences |
| | Inaccurate reflection of community voices | |
| Policy and Regulation | Siloed policy and decision-making | Bureaucracy |
| | Regulatory oversight gap | Regulatory inflexibility in design |
| | Outdated zoning laws | Regulatory framework for urban planning |
| | Private and public sector misalignment | Rigid policies |
| | Conflicting policies | Inconsistency in the perception of policy definition and expectations |

(*continued on next page*)

(*continued*)

| Themes | Observed barriers | |
|---|---|---|
| | Lack of early architectural and urban design input in decision-making | Lack of global vision |
| | Limited access for emerging design practitioners in public tendering | Top-down design and municipal governance |
| | Lack of law enforcement, promotion and incentive | Restrictive nature of codes |
| | Lack of accountability for developers contributing to harmful urban dynamics | Regulatory hindrance to innovation |
| Cultural and Indigenous Perspectives | Misappropriation of indigenous perspective | Monopoly and homogenizing architecture |
| | Lack of inadequate built environment codes originated from indigenous communities | Systemic racism |
| | Lack of innovation and culture | Lack of sufficient appreciation and understanding of heritage building |
| | Neglect of contextual values in design | |
| Economic and Cost Factors | Lack of funding | Lack of transparency in funding |
| | Cutting necessary costs | Commodification of housing/design |
| | Affordability | Housing is not affordable |
| | Cost-driven public procurement | Limited resources for implementing good design |
| | Lowest bidder principle undermining quality | Focus on low initial cost |
| | Overemphasis on economic interests | Developers expect rapid payback on initial investments |
| Quality Measurement and Evaluation (value system) | Difficulty in measuring quality | Different interpretation of quality |
| | Prescriptive nature of architectural awards | Awards are merely for completed projects (Post occupancy assessment) |
| | Cultural bias in award programs | Absence of climate action in award criteria |
| | Insufficient evidence for quality | Lack of access to knowledge and expertise |
| | Lack of a nationally accepted definition of quality and sustainability across Canada | Awards exclude citizens and civic organizations involved in participatory or post-occupancy design, focusing only on architects. |
| | Challenges in logistics for assessing post-occupancy | Homogenous juries in award program |
| Programing, designing, building, and managing | Disrupted projects due to political transitions | Political constraints in the area of project management |
| | Short term vision-oriented design | Product oriented design |
| | Lack of synergy in asset management | Lack of intersectoral collaboration |
| | Lack of coordinated effort | Partial incorporation of lived experiences in design |
| | Absence of transformative leadership | Narrow scope of view |
| | Premature project definition leading to compromised quality | Inadequate maintenance |
| | Seasonal inadaptability | Complexity and ambiguity in built environment projects |
| | One-fits-all solution/standardization | Aesthetic-focused urban design |
| | Inflexibility in technological advancement in design | Traditional design practices prioritize new construction over material reuse and retrofitting |
| | Aging workforce | Rapid housing development |
| | Insufficient adaptability in built environment design to accommodate evolving needs and future conditions | Lack of professional development in architecture (education) |
| Sustainability, Inclusivity (EDIA) | Lack of defined inclusivity threshold | Insufficient accessibility consideration in design |
| | Late accessibility implementation | Lack of Equity, Diversity, and Inclusion in design recognition |
| | Inequity in land use | Inequitable access to green spaces |
| | Limited consideration of sustainability principles | Lack of ecological integration in infrastructure design |
| | Hostile design in public space | Insufficient focus on resilience in the built environment |
| | Lack of climate considerations | Accessibility is treated as an add-on rather than an integrated design quality like beauty |

## Data availability

Data will be made available on request.

## References


Carmona, M. (Ed.). (2004). *Public places - Urban spaces: The dimensions of urban design*. Architectural Press (repr).

Choay, F. (2019). *L'allégorie du patrimoine*. Média Diffusion.

Chupin, J.-P. (2022a). *Can awards and prizes define quality in architecture?* Wilmington, Delaware: Vernon Press. https://books.google.com/books?hl=en&lr=&id=Sy9yEAAAQBAJ&oi=fnd&pg=PA51&dq=Can+Awards+and+Prizes+Define+Quality+in+Architecture%3F&ots=zZ0oTz8eBr&sig=zumVG7ndLBXBe8eI4toTqkSRnbE.

Chupin, J.-P. (2022b). *Quality in Canada's built environment roadmaps to equity, social value and sustainability final student reports on roundtables; Montreal Convention* (p. 114).

Chupin, J.-P. (2023). *Analogical thinking in architecture: Connecting design and theory in the built environment*. Bloomsbury Publishing. https://books.google.com/books?hl=en&lr=&id=srnMEAAAQBAJ&oi=fnd&pg=PP1&dq=Analogical+Thinking+in+Architecture:+Connecting+Design+and+Theory+in+the+Built+Environment&ots=1L9yjFgdQm&sig=nf3yROwqnxVTVm70iJx6j9gNQcg.

Dempsey, N. (2008a). Does quality of the built environment affect social cohesion? *Proceedings of the Institution of Civil Engineers - Urban Design and Planning, 161*(3), 105–114. https://www.emerald.com/jurdp/article/161/3/105/429824.

Dempsey, N. (2008b). Quality of the built environment in urban neighbourhoods. *Planning Practice and Research, 23*(2), 249–264. https://doi.org/10.1080/02697450802327198

Dutoit, A., Odgers, J., & Sharr, A. (2010). *Quality out of control: Standards for measuring architecture*. Routledge. https://orca.cardiff.ac.uk/id/eprint/13725.

Farrell, S. J., Aubry, T., & Coulombe, D. (2004). Neighborhoods and neighbors: Do they contribute to personal well-being? *Journal of Community Psychology, 32*(1), 9–25. https://doi.org/10.1002/jcop.10082

Fisher, T. (2018). *The architecture of ethics*. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9781351065740/architecture-ethics-thomas-fisher.

Gallacher, P. (2005). Everyday spaces-the potential of neighbourhood space. https://trid.trb.org/View/775062.

Gehl, J. (2011). Life between buildings. https://playspaces.ru/wp-content/uploads/2016/08/Geyl_zhizn_sredi_zdaniy.pdf.

Harker, P. T. (2012). *The service productivity and quality challenge* (vol. 5). Springer Science & Business Media. https://books.google.ca/books?hl=en&lr=&id=FkjzCAAAQBAJ&oi=fnd&pg=PA11&dq=the+service+productivity+and+quality+challenge+&ots=oPtDXi9dXT&sig=AVDtSpw0qsDG1vM2A2i4e80Dw5g.

Hill, K. (2004). Mainstreaming community cohesion in housing. In *Speech given on 14th October*.

Hoddé, R. (2006). *Qualités architecturales: Conceptions, significations, positions*. PUCA Paris.

Lyndhurst, B. (2004). Liveability & sustainable development: Bad habits & hard choices. In *Final report for the UK Office of the Deputy Prime Minister, London*.

Michalos, A. C. (2014). *Encyclopedia of quality of life and well-being research* (Vol. 171). Springer Netherlands Dordrecht. https://www.researchgate.net/profile/Karen-Hamrick/publication/273447872_Time_Poverty_Thresholds_in_the_USA/links/5509eb0f0cf26198a639d508/Time-Poverty-Thresholds-in-the-USA.pdf.

Nashed, F. (2005). *Architectural quality control*. McGraw-Hill.

Nelson, C., Lindell, M., Hopkins, E., Abramowitz, A., Hinkley, P., de Kerchove, G., King-Rowley, D., Kiyono, H., Mehlhoff, S., & Reigle, J. (2007). *Managing quality in architecture*. Routledge.

Odgers, J., & Samuel, F. (2010). Designing in quality. https://orca.cardiff.ac.uk/id/eprint/13084.

Odpm. (2002). *Living places: Cleaner, safer, greener*. London: Office of the Deputy Prime Minister.

Prasad, S. (2004). Clarifying intentions: The design quality indicator. *Building Research and Information, 32*(6), 548–551. https://doi.org/10.1080/0961321042000312376

*Quality in Canada's built environment roadmaps to equity, social value and sustainability; Preliminary reports and summaries compilation; Montreal Convention* (p. 161). (2022). Univeristy of Montreal.

Rathier, F., & De Fornel, M. (2006). *La fabrication du jugement architectural (Les moments d'une pratique de sélection à l'occasion du Palmarès de la réhabilitation)*.

Rönn, M. (2011). Quality in architecture-A disputed concept. In *2011 ARCC spring research conference: Architectural research considering research reflecting upon current themes in architectural research* (pp. 235–244). https://books.google.ca/books?hl=en&lr=&id=79M5AwAAQBAJ&oi=fnd&pg=PA235&dq=R%C3%B6nn,+M.+(2011).+Quality+in+Architecture+%E2%80%93+A+Disputed+Concept.+ARCC+Journal&ots=D46cdz1cT4&sig=-6x3lrcWY1qxOws3o5KKC73Rk18.

Samuel, F., & Hatleskog, E. (2020). Social value in architecture. *90*(4). https://research-information.bris.ac.uk/en/publications/social-value-in-architecture/.

Soanes, C., & Stevenson, A. (2004). *Concise oxford English dictionary* (Vol. 11). Oxford: Oxford University Press.

Till, J. (2009). *Architecture depends* (Vol. 55). MIT Press. https://books.google.ca/books?hl=en&lr=&id=0rC6ezoGHcMC&oi=fnd&pg=PR7&dq=Architecture+Depends+&ots=g6MvRknfk2&sig=62wQhVikBYxhT-Hm-i2al5zDA1Q.

Vischer, J. C. (2008). Towards a user-centred theory of the built environment. *Building Research and Information, 36*(3), 231–240. https://doi.org/10.1080/09613210801936472

Volker, L. (2010). *Deciding about design quality: Value judgements and decision making in the selection of architects by public clients under European tendering regulations*. Sidestone Press. https://library.oapen.org/handle/20.500.12657/47172.

Weston, L. M. (2010). Building cities for young people: Why we should design cities with preteens and young teens in mind. *Journal of Urban Design, 15*(3), 325–334. https://doi.org/10.1080/13574809.2010.487809

Worpole, K. (2003). The social dynamic. In *Urban villages and the making of communities* (pp. 192–210). Taylor & Francis. https://www.taylorfrancis.com/chapters/edit/10.4324/9780203402771-15/social-dynamic-ken-worpole.

Yaneva, A. (2016). *Mapping controversies in architecture*. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9781315593807/mapping-controversies-architecture-albena-yaneva.