

**Constructing Equity:  
Advancing Women's Leadership Roles  
in the Construction Sector**

Prepared by:

Luciana Cabral de Souza Faria, Graduate Student

Program:

Strategic Foresight & Innovation

MRP Supervisor:

Cheryl Giraudy, Associate Professor, Faculty of Design

Submitted to OCAD University in partial fulfillment  
of the requirements for the Master of Design in Strategic Foresight and Innovation  
Toronto, Ontario, Canada

**2026**

## **Abstract**

Equitable access must be the premise of any designed space, enabling as many people as possible to use it in the best way possible. In this sense, ensuring access to spaces, not only physical, but also hierarchical, is fundamental to building more inclusive environments. Running counter to this principle, according to the Global Gender Gap Report 2024, published by the World Economic Forum, achieving gender parity at the global scale may take more than a century. Against this backdrop, the study examines how structural and cultural factors shape women's leadership trajectories in the construction sector in Brazil and Canada. Through a mixed-methods approach — combining survey and semi-structured interviews — integrated with a Strategic Foresight perspective, the research proposes the Systemic Leadership Equity Framework as an analytical lens for understanding and transforming the conditions that sustain or limit more equitable leadership trajectories in the sector.

**Keywords:** Leadership; Construction Sector; Gender Equity; Women's Leadership; Executive Roles; Systemic Inequality; Structural Barriers; Occupational Segregation; Glass Ceiling; Gender Parity; Equal Opportunity; Comparative Study

## Resumo

O acesso equitativo deve constituir a premissa de qualquer espaço projetado, de modo a possibilitar seu uso pelo maior número de pessoas, nas melhores condições possíveis. Nesse sentido, garantir o acesso aos espaços — não apenas físicos, mas também hierárquicos — é fundamental para a construção de ambientes mais inclusivos. Em contrapartida a esse princípio, o Relatório Global de Desigualdade de Gênero 2024, do Fórum Econômico Mundial, indica que a paridade de gênero em escala global ainda pode levar mais de um século para ser alcançada. Diante desse cenário, este estudo examina como fatores estruturais e culturais moldam as trajetórias de liderança de mulheres no setor da construção no Brasil e no Canadá. Por meio de uma abordagem de métodos mistos — combinando questionário e entrevistas semiestruturadas — articulada à perspectiva de *Strategic Foresight* (Previsão Estratégica), a pesquisa propõe o *Framework* Sistêmico de Equidade na Liderança como uma lente analítica para compreender e transformar as condições que sustentam ou limitam trajetórias de liderança mais equitativas no setor.

**Palavras-chave:** Liderança; Setor da Construção; Equidade de Gênero; Liderança Feminina; Cargos Executivos; Desigualdade Sistêmica; Barreiras Estruturais; Segregação Ocupacional; Teto de Vidro; Paridade de Gênero; Igualdade de Oportunidades; Estudo Comparativo

## **Dedication**

I dedicate this work to all the women who came before me, and to those who are yet to come — especially my grandmothers, who paved the way and made possible the spaces I am able to occupy today, and my mother, who encourages me to pursue any space I aspire to, inspiring other women to do the same.

To my father, who introduced me to the power of construction from its very foundation.

To my husband, for his presence and unconditional support.

And to all the professionals who accompanied me throughout this research — my advisor and the colleagues who generously shared their time and experiences, contributing to this journey.

Your strength has carried me through this challenge. Thank you for making this journey possible.

## **Dedicatória**

Eu dedico este trabalho às minhas avós, que abriram caminhos e tornaram possíveis os espaços que hoje posso ocupar.

Ao meu pai, que me apresentou a potência da construção desde a sua base.

À minha mãe, que me incentiva a ocupar qualquer espaço que eu almeje, inspirando outras mulheres a fazerem o mesmo.

Ao meu marido, por sua presença e apoio incondicionais.

A todas as mulheres que vieram antes de mim e àquelas que ainda virão.

E a todos os profissionais que me acompanharam ao longo desta pesquisa — minha orientadora e os colegas que generosamente compartilharam seu tempo e suas experiências, contribuindo para esta jornada.

A força de vocês me sustentou ao longo deste desafio. Obrigada por tornarem esta jornada possível.

## Land Acknowledgment

OCAD University acknowledges the ancestral territories of the Mississaugas of the Credit, the Haudenosaunee, the Anishinaabeg, and the Huron-Wendat, who are the original peoples and stewards of the land on which we live, work, and create. The work presented here is situated in Tkaronto, on the land of Treaty 13 with the Mississaugas.

At the same time, it is recognized that part of the reflections that inform the research are also connected to the territory now known as São Paulo, traditionally inhabited by Indigenous peoples, particularly the *Tupi-Guarani* and *Guarani Mbya* peoples.

In both contexts, I recognize that processes of colonization—although distinct in their forms—have resulted in profound territorial, social, and institutional transformations, the impacts of which persist to the present day. These legacies are directly connected to the structures of power that shape contemporary inequalities, including those observed in leadership trajectories and in the dynamics of equity within the construction industry.

As a researcher, I acknowledge my position within these systems and my responsibility to develop work that not only recognizes these histories, but also contributes to building more equitable, inclusive, and sustainable futures.

I express my respect and gratitude to Indigenous peoples who continue to act as stewards of these lands, preserving knowledge, cultures, and fundamental relationships with the land.

I further recognize the importance of advancing ongoing processes of justice, reconciliation, and structural and systemic transformation.

## Reconhecimento Territorial

A OCAD University reconhece os territórios ancestrais dos *Mississaugas of the Credit*, dos *Haudenosaunee*, dos *Anishinaabeg* e dos *Huron-Wendat*, que são os povos originários e guardiões das terras nas quais vivemos, trabalhamos e criamos. O trabalho aqui apresentado está situado em *Tkaronto*, no território do Tratado 13 com os Mississaugas.

Ao mesmo tempo, reconhece-se que parte das reflexões que fundamentam esta pesquisa também se conecta ao território hoje conhecido como São Paulo, tradicionalmente habitado por povos indígenas, especialmente os povos Tupi-Guarani e Guarani Mbya.

Em ambos os contextos, reconheço que os processos de colonização — embora distintos em suas formas — resultaram em profundas transformações territoriais, sociais e institucionais, cujos impactos persistem até os dias atuais. Esses legados estão diretamente relacionados às estruturas de poder que moldam as desigualdades contemporâneas, incluindo aquelas observadas nas trajetórias de liderança e nas dinâmicas de equidade no setor da construção.

Como pesquisadora, reconheço minha posição dentro desses sistemas e minha responsabilidade de desenvolver um trabalho que não apenas reconheça essas histórias, mas que também contribua para a construção de futuros mais equitativos, inclusivos e sustentáveis.

Expresso meu respeito e gratidão aos povos indígenas que continuam atuando como guardiões dessas terras, preservando conhecimentos, culturas e relações fundamentais com o território.

Reconheço, ainda, a importância de avançar em processos contínuos de justiça, reconciliação e transformação estrutural e sistêmica.

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## **List of Acronyms**

**BEAT** – Building Equality in Architecture Toronto

**CAU/BR** – *Conselho de Arquitetura e Urbanismo do Brasil*

**CAWIC** – Canadian Association of Women in Construction

**CBIC** – *Câmara Brasileira da Indústria da Construção*

**DEI** – Diversity, Equity, and Inclusion

**IBGE** – *Instituto Brasileiro de Geografia e Estatística*

**ILO** – International Labour Organization

**IMF** – International Monetary Fund

**KPI / KPIs** – Key Performance Indicator(s)

**MRP** – Major Research Project

**OCAD U** – OCAD University

**OECD** – Organisation for Economic Co-operation and Development

**OHCHR** – Office of the United Nations High Commissioner for Human Rights

**PNAD** – *Pesquisa Nacional por Amostra de Domicílios*

**REB** – Research Ethics Board

**SENAI** – *Serviço Nacional de Aprendizagem Industrial*

**STEM** – Science, Technology, Engineering, and Mathematics

**UNESCO** – United Nations Educational, Scientific and Cultural Organization

**WEF** – World Economic Forum

**WESP** – Women's Economic Security Program

## 1. Introduction

The construction sector remains one of the most male-dominated globally, especially in leadership positions. Despite advances in women's participation in higher education and in areas related to the built environment, this progress does not translate into proportional representation in positions of authority and decision-making. This discrepancy does not stem from a lack of qualification or ambition among women — it is the result of the persistence of structural and cultural barriers that shape professional trajectories over time.

The way in which a system is conceived is determinant in shaping the perceptions, experiences, and possibilities of those who use it. In this sense, ensuring access — not only physical, but also hierarchical — becomes essential for building more inclusive environments. The starting point of design must enable human access; therefore, departing from this principle, inequality in leadership can be understood as the result of systems that, historically, were not designed for everyone.

According to the Global Gender Gap Report 2024, published by the World Economic Forum, at the current pace, global gender parity will only be achieved in approximately 134 years — a setback in relation to the pre-pandemic estimate of 99 years. A single systemic crisis was sufficient to extend this horizon by more than a generation, demonstrating that inequalities do not merely persist, but tend to deepen in contexts of instability. Recent progress has been slow and uneven, and the data indicate that the problem does not lie in women's talent or qualifications, but in the way, systems are organized.

In the global gender equality ranking, Brazil occupies the 72nd position among 148 countries, while Canada occupies the 36th. Countries such as Iceland, Sweden, and Norway remain among the highest-ranked, demonstrating that progress toward equity can be sustained when supported by broader institutional arrangements. These contrasts indicate that equity does not result from isolated initiatives, but from the interaction between public policies, institutional structures, and organizational practices over time.

Despite their distinct contexts, Brazil and Canada present persistent inequalities that manifest in specific ways. In Brazil, factors such as labor market informality, mobility restrictions, socioeconomic inequalities, and challenges related to safety and urban infrastructure

directly influence professional trajectories in the sector. In Canada, more consolidated institutional structures coexist with persistent patterns of occupational segregation and gendered career progression. In both cases, the challenge extends beyond initial access — it encompasses retention, progression, and recognition throughout the entire career.

This research examines how these factors operate in practice, investigating the structural and cultural conditions that shape women's leadership trajectories in the construction sector in both Brazil and Canada. To this end, a mixed-methods approach is adopted — combining survey and semi-structured interviews — integrated with a Strategic Foresight perspective. This combination makes it possible to connect the empirical diagnosis to the exploration of possible futures, questioning not only why inequalities persist, but also what may emerge when the structures that sustain them begin to be reconfigured.

The research is organized around three complementary movements. The first reconstructs the history and persistence of gender inequalities in the sector, drawing on literature and evidence of global reach. The second deepens the focus on Brazil and Canada — two institutionally distinct contexts that nonetheless converge in similar structural patterns — investigating what has been done and where gaps persist. The third proposes futures, that draw on data and participants' experiences, it proposes pathways of systemic transformation spanning from basic education to executive leadership, from organizational redesign to institutional policies.

As a contribution, the research proposes the Systemic Leadership Equity Framework — an analytical model that interprets inequality in leadership as a problem of systemic design. By shifting the focus from merely increasing women's participation to redesigning the conditions that structure who can lead, the study offers a lens for understanding and transforming the institutional foundations of inequality in the construction sector.

## 2. Literature Review

The research is grounded in data as well as in historical and structural elements that illuminate and connect interdependent axes such as gender, education, organizational design, public policies, and equity practices. This framing makes evident that the sector must be evaluated beyond a productive domain — as a system in which power relations shape decisions about who enters, remains, and progresses along professional trajectories toward leadership.

### 2.1 Gender and Power in the Construction Sector

The work of Joan Acker is fundamental for understanding how gender is embedded at multiple institutional levels. In her concept of inequality regimes, Acker (2006) defines these structures as:

"Loosely interrelated practices, processes, actions, and meanings that result in and maintain class, gender, and racial inequalities within particular organizations." (p. 441)

Applied to the construction sector, this concept reveals that inequalities are not occasional failures of the system — they are clear expressions of how the system was historically configured to operate. The presence of women is frequently accompanied by dynamics of constant competence validation, in which women are required to demonstrate higher levels of performance or assertiveness to achieve the same recognition granted to their male peers. This pattern is a manifestation of a broader system characterized by the unequal distribution of authority, technical credibility, and professional legitimacy — confirming Acker's argument that leadership inequalities are not isolated barriers faced individually.

In many cases, women who manage to access professional trajectories within the sector encounter growing obstacles as they advance toward higher levels of responsibility. This phenomenon is frequently referred to as the broken rung — the first critical point in career progression, where women's advancement tends to slow down or stagnate, compromising their future leadership trajectories. Associated with this, the literature describes the double burden, referring to the simultaneous responsibilities between work, home, and family, which influence career decisions, mobility, and retention in specific organizational contexts.

Over time, the construction sector has consolidated practices, norms, and work rhythms that reflect this institutional legacy. Long working hours, continuous on-site presence, geographic mobility, and cultural expectations related to professional and personal availability create environments that hinder the retention and progression of professionals who do not conform to the historically defined model of the ideal worker. As Acker (1990) argues:

"The abstract worker is actually a man, and it is the man's body, sexuality, and relationships to family and work that are assumed in the organizational theories and research."

(p. 139)

Understanding this structure is therefore the first step toward transforming it.

## **2.2 Inclusive Design and Social Change**

In this context, Inclusive Design proposes the development of systems that consider human diversity from the outset, rather than merely correcting exclusions after they occur. As Manzini (2015) argues, "design for social innovation is not limited to the creation of objects or products, but involves the capacity to reorganize interactions, practices and institutions." In this sense, design can be understood as a tool for rethinking the social and organizational structures that produce inequality.

In the research presented here, Inclusive Design functions as a lens that expands the concept of accessibility, shifting it from the physical domain to the institutional and organizational domains. This implies recognizing that access to leadership positions is also a matter of systemic design — organizational structures, promotion processes, professional networks, and recognition criteria can be understood as designed artifacts and, therefore, subject to revision and transformation.

Margolin and Margolin (2002) reinforce this perspective by proposing a social model of design, in which "collective problems and institutional structures are treated as legitimate objects of design intervention" (p. 26). Applied to the construction sector, this approach makes it possible to interpret organizational norms, institutional policies, and professional cultures as designable elements, opening space for the redesign of practices that expand opportunities for access and progression for historically underrepresented groups.

This perspective also aligns with the notion of post-heroic leadership proposed by Fletcher (2004), who emphasizes "models of leadership based on collaboration, collective learning and interdependence," in contrast to traditional hierarchical models frequently associated with male-dominated organizational cultures. By integrating these approaches, Inclusive Design enables a shift in focus from the individual adaptation of women to an analysis of how organizational systems themselves can be redesigned to become more equitable.

### **2.3 Foresight and Systemic Transformation**

Strategic Foresight offers a complementary lens for the research by emphasizing the importance of imagining and preparing for potential futures. Unlike linear forecasting, foresight seeks to explore multiple possibilities based on emerging trends, social transformations, and desirable values. Rather than predicting outcomes, it connects structural diagnosis to strategic imagination — questioning not only why inequalities persist, but what kinds of futures may emerge when the structures that sustain them begin to be transformed. The study draws particularly on the Three Horizons model proposed by Sharpe et al. (2016), which describes processes of systemic transformation across three temporal layers:

1. Horizon 1 — characterized by the current system and its persistent inequalities.
2. Horizon 2 — a transitional space in which new practices and experiments emerge.
3. Horizon 3 — desirable futures in which new structures become consolidated.

Applied to this context, the model makes it possible to interpret initiatives such as mentorship programs, professional support networks, organizational equity policies, and training programs as emerging signals of institutional transformation — indicators that the system is in motion, albeit slowly.

### **2.4 Education and Technical Training – Trades**

Technical and professional education is a key element for understanding how women's trajectories in the construction sector are shaped from the outset. The comparison between Brazil and Canada reveals that learning models and professional certification systems influence women's access, progression opportunities, and retention in the sector in distinct ways.

In Brazil, recent years have seen an expansion of technical and professional training programs aimed at the construction sector; however, these initiatives still require greater standardization at the national level, as well as greater public availability of career progression data disaggregated by gender. In Canada, patterns of entry, retention, and career progression can be monitored with greater precision through apprenticeship systems and technical certification structures (trades), given the country's higher degree of institutionalization and statistical tracking.

These factors relate not only to initial access to the sector, but also to the possibilities of transitioning into supervisory, management, and leadership roles. Gender inequality does not manifest only at the top of organizations — it takes shape throughout the entire professional trajectory, from education to the critical points of career progression. The difference in data availability between the two countries does not necessarily indicate that inequalities are greater in one context than in the other; rather, it demonstrates how different institutional structures influence the visibility and monitoring of these inequalities.

Studies on women's participation in technical fields suggest that early educational interventions can play a significant role in expanding professional trajectories in traditionally male-dominated sectors. International experiences — particularly in Nordic countries — indicate that initiatives aimed at promoting gender equality in educational environments, including more inclusive curricula and institutional policies for reducing occupational stereotypes, contribute to broadening women's access to technical and engineering fields. Technical education must therefore be understood not merely as a stage of professional qualification, but as part of a broader institutional ecosystem that shapes career trajectories and leadership opportunities.

## **2.5 Political and Economic Structures of the Sector**

The political and economic structures that organize the construction sector — including regulation, public procurement systems, financing, labor regimes, and collective agreements — play a fundamental role in defining the conditions under which professional trajectories develop. These institutional mechanisms influence not only the functioning of organizations, but also the criteria for professional recognition, work rhythms, and cultural expectations associated with the profession.

In many contexts, the organization of work in the sector continues to be based on models of continuous availability, physical on-site presence, and geographic mobility — characteristics that produce unequal effects on professionals who face family responsibilities or mobility restrictions. From this perspective, gender inequalities in the sector are not merely the result of isolated organizational practices but are part of a broader institutional system that defines incentives, opportunities, and conditions for retention.

The literature on social design and institutional innovation suggests that interventions at this level may include the revision of public procurement criteria, the incorporation of diversity targets in publicly funded projects, the creation of institutional equity indicators, and the strengthening of mechanisms for monitoring women's participation in the sector. Although such initiatives do not automatically eliminate structural inequalities, they contribute to making patterns of exclusion visible and opening space for broader institutional change.

## **2.6 Case Studies – Projects and Initiatives with Women’s Leadership**

Examples of projects, institutional initiatives, and professional trajectories help illustrate how women's leadership already manifests in the built environment sector. The objective is not to present these cases as isolated exceptions or mere individual success stories, but as evidence that women's leadership in the construction sector exists in practice and can produce institutional transformations when it receives adequate visibility, recognition, and support. They should be read as signals of possibility — indicators that alternative leadership trajectories are already emerging at different scales of the system.

### **Brazil**

In the Brazilian context, the most robust evidence is concentrated in qualification programs, sectoral articulations, unions, councils, and institutional governance. This is analytically relevant: it does not signify the absence of women's leadership but suggests that in Brazil it appears with greater documented frequency in programs, councils, and training networks than in consolidated case studies on women's leadership in construction companies.

At the federal level, the *Programa Mulheres Construindo Autonomia na Construção Civil*, launched by the Secretariat of Policies for Women, demonstrated that women's integration into construction has been recognized at the national scale as a matter of public policy, linking professional qualification, economic autonomy, and access to historically male-dominated occupations (Presidência da República, 2010). More recent initiatives, such as the *Programa Asas para o Futuro*, reinforce the importance of approaching equity also from the standpoint of structural conditions of access — providing financial support and ongoing accompaniment — recognizing that women's professional trajectories depend on infrastructures of support, not merely on individual merit (Ministério das Mulheres, n.d.).

At the sectoral level, the *Câmara Brasileira da Indústria da Construção* (CBIC) develops the *Elas Constroem* project, in partnership with *SENAI*, aimed at the training, visibility, and leadership of women in the sector. In 2025, CBIC also began highlighting the *Elas no Conselho* program, focused on expanding women's presence in governance spaces within construction companies and entities — shifting the debate from participation to the institutional architecture of authority. The *CAU/BR*, in turn, has been broadening the discussion on gender equity in the built environment, demonstrating that the debate crosses architecture, urban planning, and professional representation bodies (CBIC, 2025; CAU/BR, 2025).

At the state level, *Qualifica Paraná Mais Mulheres* constitutes a particularly relevant case: launched in partnership with *SENAI-PR* and Heineken Brasil, the program offered hundreds of free places in vocational courses with financial subsidies, demonstrating that equity in leadership also depends on policies designed to act at the base of the professional trajectory — access, qualification, and the material conditions of entry into the sector (Government of Paraná, 2024).

At the local level, Maria Inês Menegotto de Campos, at *Sinduscon Caxias do Sul*, represents a relevant example of women's leadership in sectoral governance, linked to regulatory mediation and participation in local decision-making arenas (CBIC, 2023). At the historical level, Lina Bo Bardi remains a reference of female authority in the Brazilian built environment — a historical marker of possibility, demonstrating that the presence of women in positions of authority in the sector is not new, even if it has frequently been treated as an exception.

## Canada

In the Canadian context, cases tend to appear more frequently as public leadership narratives associated with structured governmental initiatives, formalized professional networks, and professionals appointed to positions of high institutional visibility. This does not mean the problem has been resolved — it indicates that the institutional visibility of women's leadership is greater, even in a context where structural barriers, occupational segregation, and male-dominated organizational cultures persist.

At the federal level, the Women in the Skilled Trades Initiative funds projects focused on the recruitment, retention, and success of women apprentices in 39 Red Seal trades, predominant in the construction and manufacturing sectors. Its analytical relevance lies in framing the problem not merely as "attracting women," but as creating conditions for retention and progression in historically male-dominated professional trajectories (Canada, ESDC, 2024). At the provincial level, Ontario offers equally relevant examples: investments through the Skills Development Fund, regulatory measures to make construction sites more accessible to women — such as the requirement for women's restrooms on larger worksites and appropriate protective equipment — and the Women's Economic Security Program (WESP), which offers training for low-income women across different pathways, including skilled trades (Government of Ontario, 2023; 2024).

At the institutional and professional level, the organization Building Equality in Architecture Toronto (BEAT) exemplifies how professional networks can operate as infrastructure for legitimacy, visibility, and leadership development — creating opportunities for community-building, advocacy, networking, and mentorship with a focus on equality and diversity in architecture (BEAT Toronto, n.d.). In this context, Maya Mahgoub Desai, Chair of Environmental Design at OCAD University, articulates professional practice, academia, and advocacy, demonstrating how women's leadership can materialize at the intersection of knowledge production and the construction of more inclusive professional communities.

At the local and urban scale, Jennifer Keesmaat, as Chief Planner and Executive Director of City Planning for Toronto, broadens the understanding of leadership beyond the company or the construction site, demonstrating how authority in the built environment is also built through public influence and agenda-setting. The case of Biidaasige Park, in the context of the Port Lands Flood Protection Project, reinforces this reading: with more than 40 hectares and a renaturalized river that also functions as flood protection infrastructure, the project associates Shannon Baker — identified by Waterfront Toronto as Director of Parks and Public Realm — with the delivery of complex public infrastructure, demonstrating women's leadership linked to concrete results rather than symbolic representation (Waterfront Toronto, 2025).

### **Comparative synthesis**

The cases gathered reveal a significant difference in the visibility of leadership trajectories between Brazil and Canada — concentrated in programs and institutional governance in the former, and in public narratives and formalized initiatives in the latter. At the same time, both contexts converge on a crucial point: when women occupy positions of influence — in organizations, professional networks, training systems, councils, or urban planning — they contribute to expanding the conditions under which other women can also enter, remain, and advance. The question, therefore, is not whether women can lead in the construction sector, but how institutions recognize, sustain, and reproduce these trajectories over time.

## **3. Conceptual Framework**

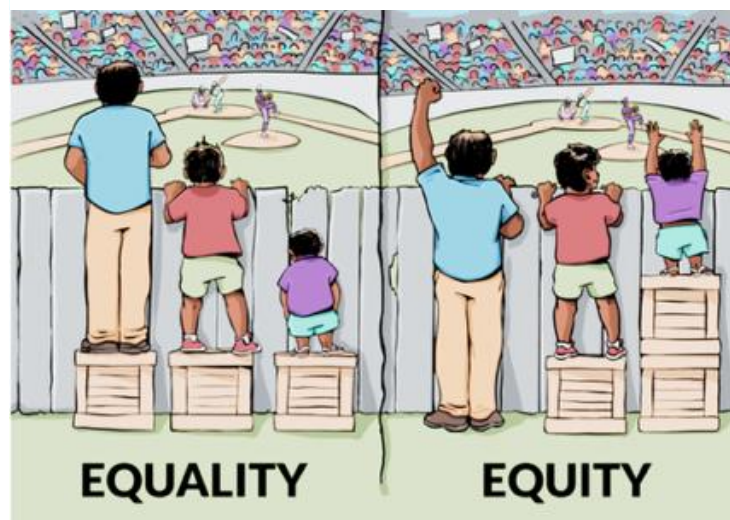
Gender inequality in leadership does not result primarily from individual deficits, lack of ambition, or insufficient qualifications among women. Rather, it emerges from interdependent systemic conditions that shape who is recognized as legitimate, promotable, and authorized within organizations and in the sector more broadly. It is from this premise that the Systemic Leadership Equity Framework is developed — proposed in the research presented here as an analytical tool for understanding and intervening in leadership trajectories in the construction sector.

### 3.1 Equity as a Design Principle

Before presenting the framework itself, it is important to clarify the conceptual distinction between equality and equity, as this distinction underpins the analytical and strategic orientation of the model. Equality refers to a condition in which all individuals receive exactly the same resources or treatment — the principle of formal equality. Equity, on the other hand, refers to a condition in which individuals receive what they need to have fair and equivalent opportunities.

The figure below, proposed by Margolin (2010), illustrates this distinction precisely — demonstrating that equity is not about treating everyone in the same way, but about ensuring that each person has what they need to access the same opportunities.

**Figure 1: Equality X Equity**



Source: Margolin, 2010

Inclusive Design goes beyond formal equality by proposing the redesign of systems so that different individuals can access the same opportunities. As the Inclusive Design Research Centre (OCAD University, n.d.) argues, "inclusive design does not mean designing one thing for all people but designing a diversity of ways to participate so that everyone has a sense of belonging." This distinction is essential to the research: the underrepresentation of women in leadership cannot be resolved solely through formally neutral policies. A system may appear equal in principle and yet continue to privilege those who already conform to the historically

dominant patterns of leadership, technical authority, career continuity, and informal access to networks of influence.

For this reason, the framework adopts equity as its guiding principle — as an ethical objective and as a principle of institutional design. This implies questioning how systems are constructed, who they assume as their normative subject, and how specific institutional arrangements may favor certain groups while restricting others. This point is particularly relevant in the construction sector, where leadership has historically been associated with masculine norms of authority, technical credibility, and occupational presence.

### **3.2 Systemic Perspective**

In the research presented here, gender inequality in the construction sector is examined through a systemic perspective structured across three levels: macrostructures, organizational culture, and interpersonal dynamics. Within the framework, organizational culture is positioned as the primary agent of change, although it remains influenced by broader institutional forces.

The comparison between Brazil and Canada reinforces this perspective. In both countries, women demonstrate equal or higher participation in higher education, yet remain underrepresented in leadership positions in predominantly male organizational environments. At the same time, significant structural differences exist between the two contexts: in Brazil, higher levels of labor market informality, greater restrictions related to on-site mobility and safety, and more pronounced structural inequalities; in Canada, more consolidated institutional and legal structures, more established equity policies, and more robust labor protections.

These systemic differences reveal, paradoxically, a pattern of similarity that points to the root of the problem: regardless of institutional context, the challenge extends beyond entry into the sector and encompasses retention, career progression, and access to decision-making positions. The research also identifies two key mechanisms that operate in both contexts: labor market segregation persists despite educational equality, and informal networks shape who is promoted or recognized in the workplace.

### 3.3 Systemic Leadership Equity Framework

Drawing on Acker's (1990; 2006) theory of gendered organizations, Meadows' (1999) leverage points framework, and the principles of Inclusive Design as proposed by Manzini (2015) and Margolin and Margolin (2002), the research proposes the Systemic Leadership Equity Framework as an integrative analytical model for examining and addressing inequality in leadership in the construction sector.

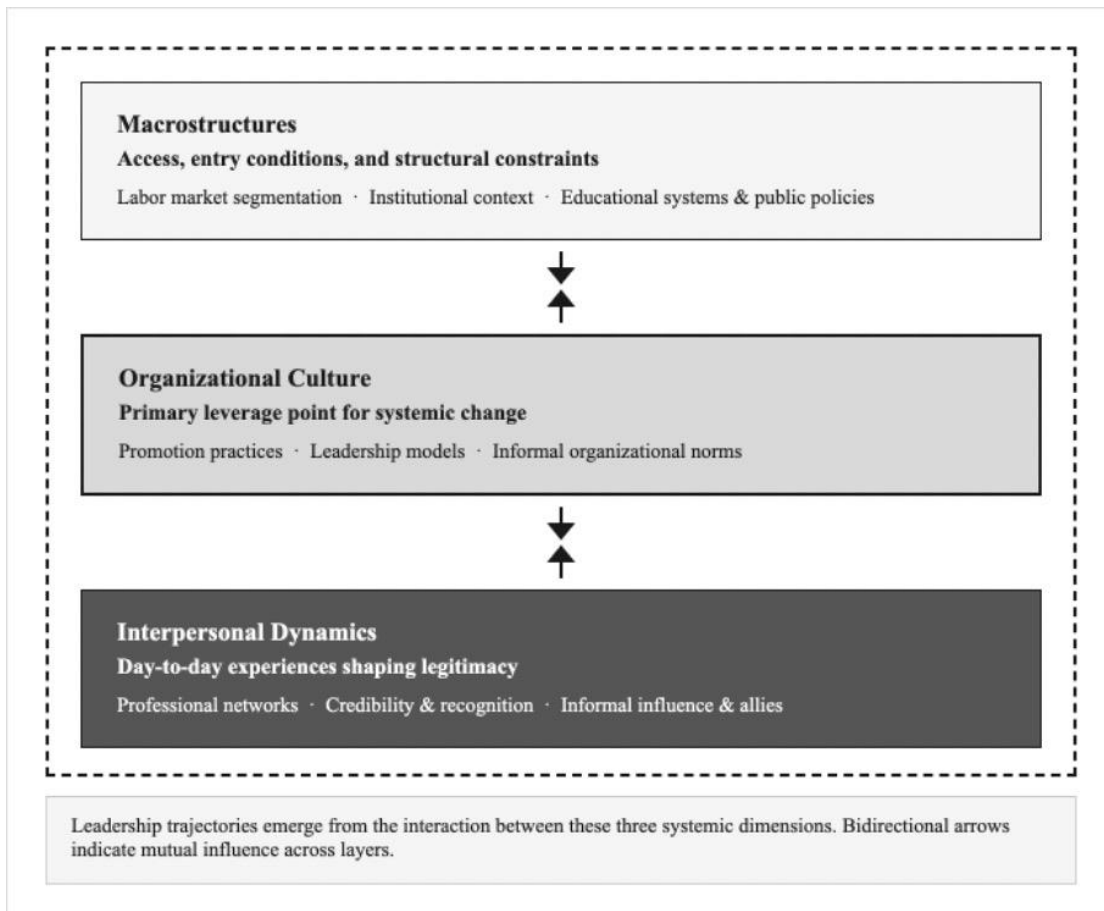
Grounded in a systemic perspective, the model departs from the premise that leadership trajectories are not determined by isolated individual attributes but emerge from the interaction between different layers of the professional and institutional system. In this sense, gender inequality is understood as a relational and multi-scalar phenomenon, produced and reproduced by dynamics that operate simultaneously at structural, organizational, and interpersonal levels.

The framework organizes these dynamics across three interdependent dimensions. At the level of macrostructures, the model highlights the conditions of access, entry mechanisms, and structural constraints that shape the professional field — including labor market segmentation, educational systems, and public policies. At the dimension of organizational culture, the model identifies a central leverage point for systemic change, demonstrating how promotion practices, leadership models, and informal norms contribute to the maintenance or transformation of inequalities. At the level of interpersonal dynamics, the focus turns to the everyday experiences that shape professional legitimacy — professional networks, recognition, credibility, and forms of influence.

These three dimensions do not operate in isolation, but in continuous interaction, configuring leadership trajectories that reflect both constraints and possibilities for agency. By making these interdependencies visible, the framework engages directly with Acker's (1990) argument that "the gendered substructure of organizations is hidden by a supposedly gender-neutral bureaucratic structure," offering an analytical lens capable of making explicit the frequently invisible mechanisms that sustain inequality.

The model organizes this analysis across three interconnected dimensions:

**Figure 2:** Systemic Leadership Equity Framework



*Source: Systemic Leadership Equity Framework developed by the author – Luciana Cabral de Souza Faria, 2026.*

Leadership trajectories emerge from the interaction between these three systemic dimensions. The framework does not treat women's leadership as the result of isolated individual achievements, but as the product of a system in which institutional arrangements, organizational norms, and everyday interactions continuously shape who progresses, who is legitimized, and who receives support.

### 3.4 Macrostructures

The first dimension refers to macro-institutional structures — the organization of the labor market, educational systems, regulatory regimes, public policies, and broader institutional conditions that shape the functioning of the sector. Even in contexts where educational parity has

been achieved, labor market segmentation remains a persistent characteristic in sectors such as construction.

This segmentation manifests both in the occupational distribution between men and women and in the concentration of women in positions with limited access to authority and career progression. Women tend to be more present in functions related to design, technical documentation, and administrative activities, while men remain predominant in field work, operational leadership, and executive decision-making. Occupational segregation therefore influences professional trajectories well before the formal question of promotion to leadership arises.

Macrostructures also shape which professional trajectories become viable over time. Public policies, technical education models, certification systems, apprenticeship structures, public procurement rules, mobility conditions, and levels of informality can both expand and restrict career progression opportunities for women. The comparison between Brazil and Canada demonstrates how these institutional conditions shape trajectories in distinct ways — and why the pipeline narrows as levels of responsibility increase. The bottleneck lies not only in initial access to the sector, but primarily in retention, progression, and access to leadership.

### **3.5 Organizational Culture**

The second dimension of the framework refers to organizational culture — including informal norms, leadership models, promotion practices, and symbolic expectations that shape the everyday functioning of organizations. Within the systemic perspective adopted in the research, this layer represents the primary leverage point for transformation. In many organizations, professional recognition and progression opportunities depend not only on formal criteria, but also on informal networks, cultural expectations, and implicit patterns of legitimacy.

These factors influence who is perceived as ready to lead, who receives visibility opportunities, who is considered technically reliable, and who is seen as naturally suited to authority. The research also indicates that the recognition of leadership is frequently mediated by gender — women are often required to demonstrate higher levels of performance to achieve equivalent levels of credibility. Informal norms and cultural expectations continue to influence access to promotion and leadership. As Benschop and Doorewaard (1998) observe, "gender

subtext operates through seemingly neutral organizational practices that systematically advantage men over women" — and it is precisely this apparent neutrality that makes organizational culture simultaneously the most persistent obstacle and the greatest leverage point for transformation.

This dimension also encompasses the phenomenon known as the glass ceiling, in which women manage to enter the sector but encounter invisible barriers that limit their progression toward leadership positions. These barriers are rarely explicitly codified — rather, they are reproduced through norms of belonging, expectations regarding leadership styles, and unequal access to networks of influence and sponsorship. For this reason, transformations in organizational culture represent one of the most relevant pathways for advancing equity in leadership.

### **3.6 Interpersonal Dynamics**

The third layer concerns interpersonal interactions — professional networks, technical credibility, informal influence, everyday validation, and the support of allies within organizations. Informal networks are fundamental for the circulation of information, the distribution of opportunities, and professional recognition, frequently functioning as hidden systems of validation and access that influence decisions related to promotion and the allocation of responsibilities.

Representation is an additional highly relevant aspect in this context. As Eagly and Carli (2007) argue, "women who have made it to the top have done so by navigating a labyrinth of challenges — not a single barrier, but a complex set of structural and interpersonal obstacles." When few women occupy leadership positions, it becomes more difficult to imagine the pathways that lead to them — and, consequently, to establish points of reference. When women do occupy these positions, however, they have the capacity to expand what is recognized as possible.

Finally, this dimension addresses the role of institutional allies. Leaders, colleagues, and professional associations can collaborate to create opportunities and promote cultural change. Organizational transformation does not depend solely on the presence of women — it also requires allies to act actively within leadership structures, making concrete possibilities for

change viable. The Systemic Leadership Equity Framework serves as the analytical lens through which the empirical findings are interpreted, allowing the identification of patterns across macrostructures, organizational culture, and interpersonal dynamics.

#### **4. Methodology**

The investigation of how structural and cultural conditions shape women's leadership trajectories in the construction sector in Brazil and Canada is conducted through a comparative mixed-methods strategy. As Gray (2018) argues, "complex social problems frequently require methodological designs that are not only flexible, but also interdisciplinary, allowing the integration of multiple forms of evidence." This perspective makes it possible to evaluate how different contexts influence leadership trajectories related to gender differences in the sector through the combination of quantitative and qualitative methods.

While the survey identifies patterns related to career trajectories — occupying leadership spaces and perceptions of barriers and opportunities — the interviews allow for a deeper exploration of participants' lived experiences, which would not be possible through quantitative analysis alone. The articulation between these two instruments connects structural patterns to lived experiences — and it is precisely this connection that sustains the central objective of the study.

The combined analysis identifies both convergences and divergences between Brazil and Canada, highlighting how patterns of inequality can persist even under different institutional arrangements. The study maps not only the existence of structural and cultural barriers, but also how these barriers are perceived, experienced, and narrated in each specific context.

The purposive sampling strategy aims to select participants with relevant experience in the sector, including professionals from engineering, architecture, and construction management. As Creswell and Creswell (2018) observe, "purposive sampling allows the researcher to select participants who can best illuminate the phenomenon under study, rather than seeking statistical representativeness." The survey included 51 respondents in Brazil and 21 in Canada, while the interviews were conducted with three expert participants in Brazil and four in Canada — as detailed in the table below.

**Table 1: Distribution and Profile of Participants**

<b>Category</b>	<b>Brazil</b>	<b>Canada</b>
Survey respondents	51	21
Interviews conducted	3	4
Total participants	54	25
Gender — Women	69%	57%
Gender — Men	31%	38%
Gender — Non-binary	0%	5%
Largest age group	35–44 years (35%)	35–44 years (33%)
With leadership experience	76%	48%
Professional areas	Engineering, Architecture, Construction Management	Engineering, Architecture, Construction Management

*Source: Distribution and Profile of Participants. Data managed by the author, 2026*

This composition allows for a balance between comparative breadth and qualitative depth, prioritizing the identification of underlying patterns and mechanisms rather than broad statistical generalization. The Brazilian sample includes a significantly higher proportion of professionals with leadership experience — 76% compared to 48% of Canadian participants — which may influence perceptions related to organizational culture and institutional policies in the sector.

Data analysis followed complementary pathways. Survey data, as the quantitative component, were examined through descriptive statistics, yielding distributions, frequencies, and general trends. In the qualitative component, the interviews were analyzed through thematic analysis, with the objective of identifying recurrent patterns related to structural and cultural barriers — including organizational culture, professional recognition, informal networks, legitimacy, and career progression. This approach draws on the principles of Grounded Theory, which, as Strauss and Corbin (1998) describe, allows "analytical categories to emerge from participants' reported experiences rather than being imposed by pre-existing theoretical frameworks." The integration of these approaches brings to the study an understanding of inequality in leadership as a systemic phenomenon.

The methodological design also reflects the interdisciplinary nature of the study, situated at the intersection of gender studies, organizational analysis, inclusive design, and strategic foresight. In this sense, the methodology goes beyond a set of techniques and represents an epistemological position: inequality in leadership is understood as the result of interactions between institutional structures, organizational practices, and lived experiences — and not as an

individual attribute or an isolated failure of the system. This approach makes it possible to examine structural patterns, professional experiences, and contextual variations, providing the empirical foundation upon which the systemic interpretations and strategic recommendations presented in the following sections are constructed.

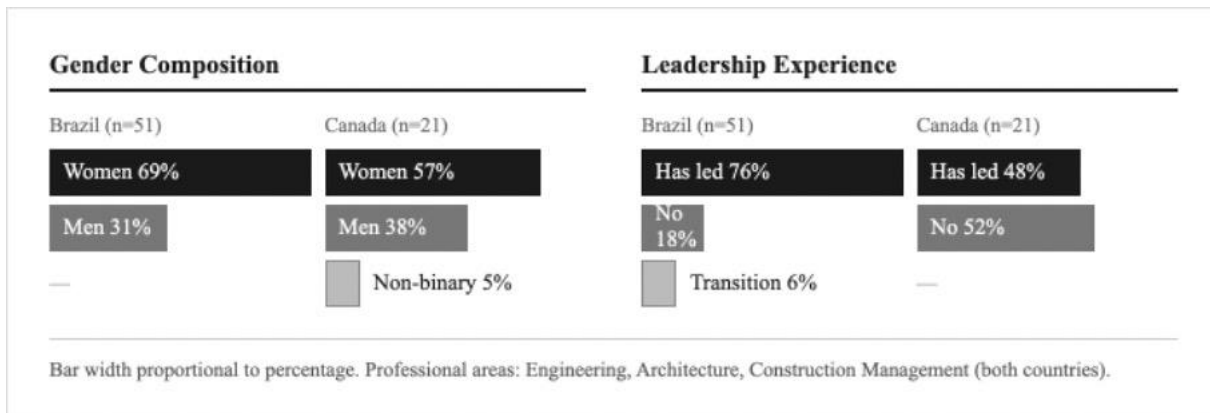
## **5. Data Analysis and Findings**

The main findings of the research emerge from the integration of documentary analysis, survey results, and narratives obtained through semi-structured interviews with expert participants. The objective is to identify structural patterns that shape women's leadership trajectories in the construction sector and to interpret these patterns through the lens of the Systemic Leadership Equity Framework. The analysis combines quantitative evidence with qualitative interpretations, making it possible to understand not only the structural patterns, but also how they are experienced in everyday professional contexts.

### **5.1 Participant Profile**

A total of 72 respondents participated in the survey — 51 from Brazil and 21 from Canada — complemented by seven semi-structured interviews with expert participants (three in Brazil and four in Canada). The majority of participants identified as women in both countries, with similar age distribution: the 35 to 44 age group represented the largest cohort in both contexts (35% in Brazil and 33% in Canada). The data below illustrate the composition of the sample in terms of gender and leadership experience, revealing a significant difference between the two contexts that warrants interpretative attention throughout the findings.

**Graph 1: Participant Profile — Gender Composition and Leadership Experience**



Source: *Participant Profile — Gender Composition and Leadership Experience*. Data managed by the author, 2026.

An important difference emerges in relation to leadership experience: 76% of Brazilian participants reported having held or currently holding leadership positions in the sector, while in Canada that proportion was 48%. This figure is analytically relevant and warrants careful reading. The significant difference between the two contexts may reflect, in part, the nature of the sampling strategy: in Brazil, access to participants occurred predominantly through sectoral networks and professional associations consolidated throughout the researcher's own professional trajectory — which may have concentrated respondents with more senior profiles and direct leadership experience.

In Canada, where the researcher's integration into the sector's networks is more recent, the sample presented greater diversity in career stages, including a higher proportion of professionals in earlier phases of their trajectories. This asymmetry does not invalidate the comparison, but indicates that the perceptions reported throughout the findings — particularly in relation to organizational culture and institutional policies — may be influenced by the level of accumulated experience of each group. In other words, this is not a perfectly symmetrical comparison, but rather two distinct cross-sections that, taken together, offer a richer reading of the sector's reality in both countries.

## 5.2 The Pipeline Exists, but Narrows Toward Leadership

Drawing from both survey data and narratives obtained through interviews with expert participants, one of the most recurrent patterns identified in the analysis concerns the narrowing of the pipeline along professional trajectories. Survey data indicate clearly that women's

participation in areas related to the built environment does not translate proportionally into representation in leadership positions. Although women are increasingly present in higher education and in professional trajectories associated with engineering, architecture, and project management, progression toward positions of authority remains unequal.

This pattern is confirmed by the interviews with expert participants conducted in both Brazil and Canada. A Canadian participant in a vice-presidential position observed that, even in organizational environments considered inclusive, the presence of women in certain roles remains limited: "We don't see a lot of women applying for site roles."

This observation suggests that the challenge lies not only in progression within organizations, but in the structural conditions that shape initial access to certain functions. The narrowing of the pipeline is also symbolic and aspirational — when a professional looks around and sees only men in leadership positions, it becomes more difficult to imagine oneself in those spaces. Among Brazilian participants in management positions, the perception emerges that "engineering is still seen as a male profession" and that the work environment can be intimidating, particularly on construction sites.

Associated with the narrowing of the pipeline, the interviews with expert participants reveal persistent patterns of occupational segregation that structure trajectories from the outset. Qualitative data indicate that women remain more concentrated in functions related to planning, design, administration, and documentation, while men are predominantly associated with field operations, technical supervision, and executive leadership. A Brazilian interviewee observed that the traditional image of the construction professional — "frequently associated with an experienced man, wearing a white hard hat and occupying a position of command" — remains a strong symbolic reference in the sector, influencing professional expectations and limiting the recognition of women's authority on site. In Canada, participants reported that women are frequently allocated to "design silos" and rarely receive opportunities to transition into management functions — indicating that segregation also operates as a limiter of career mobility.

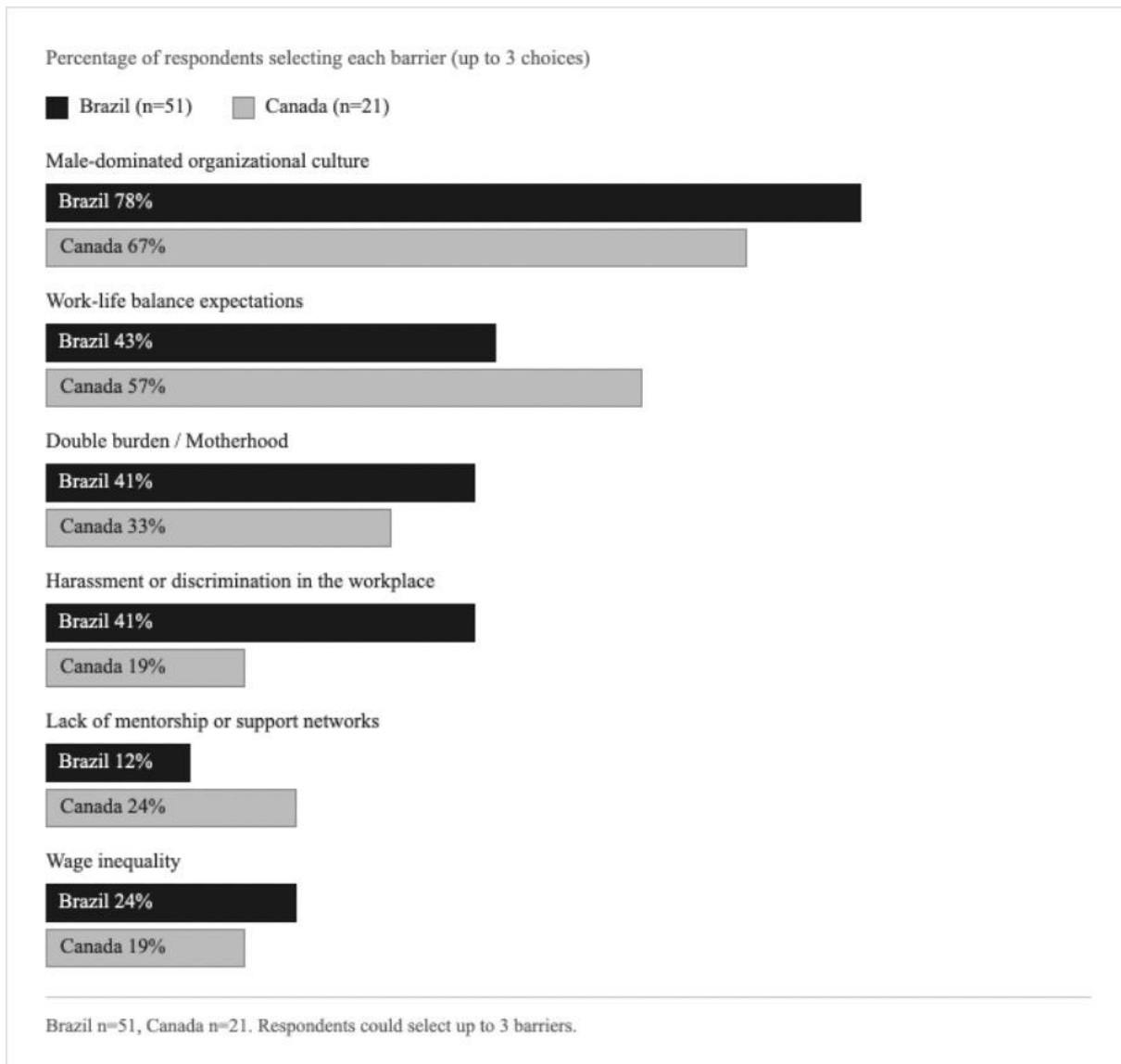
Drawing from the integration of survey data and interviews with expert participants, occupational segregation emerges not merely as a distribution of functions, but as a mechanism that structures differential access to spaces of authority and professional visibility — shaping trajectories well before the formal question of promotion to leadership arises. This narrowing of

the pipeline does not occur randomly: it is fed and reproduced by the organizational culture that implicitly defines who belongs in each space.

### **5.3 Organizational Culture**

Organizational culture emerged as the most influential factor in defining women's leadership trajectories — and as the primary barrier identified by participants in both countries, both in the survey and in the interviews with expert participants. The graph below synthesizes the barriers most frequently selected by respondents, demonstrating both the shared patterns and the differences in emphasis between the two contexts.

**Graph 2: Key Barriers to Women's Leadership Advancement**



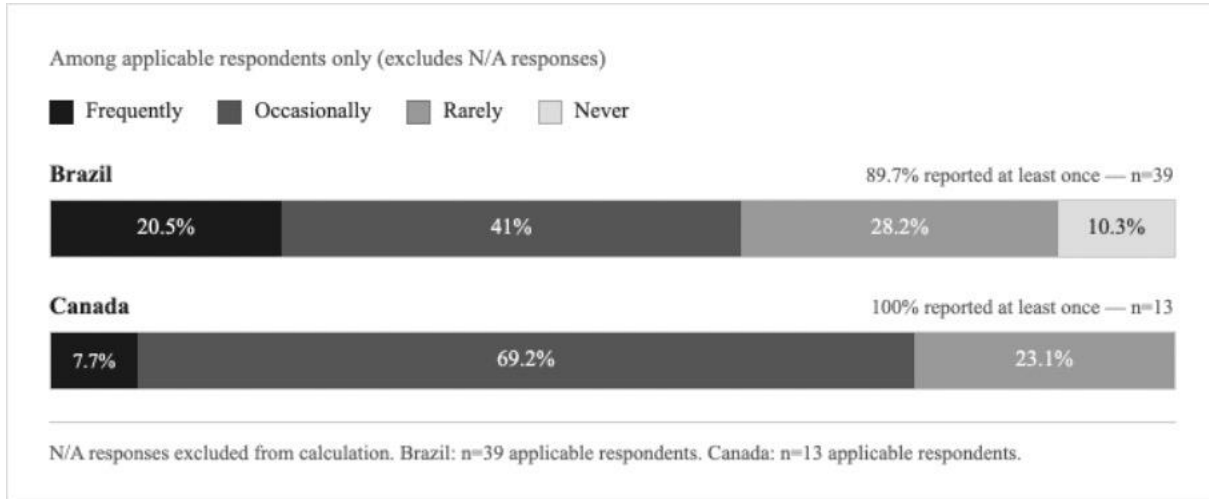
*Source: Key Barriers to Women's Leadership Advancement. Data managed by the author, 2026.*

Survey data demonstrate that male-dominated organizational culture was the most frequently identified barrier in both countries — selected by 78% of respondents in Brazil and 67% in Canada. This figure is revealing in itself: regardless of institutional context, the experience of operating in culturally male-dominated environments is the most widely recognized obstacle among sector professionals.

An equally significant finding concerns the questioning of competence. Among respondents for whom the question was applicable, 89.7% in Brazil and 100% in Canada

reported having experienced some level of questioning of their professional competence based on gender. The data below detail the frequency with which this questioning was reported.

**Graph 3: Competence Questioned Due to Gender**



*Source: Competence Questioned Due to Gender. Data managed by the author, 2026.*

The interviews with expert participants deepen this understanding. Participants described situations in which ideas presented by women were initially ignored or dismissed, but subsequently accepted when reiterated by male colleagues. A Canadian participant described their work environment as exceptionally favorable — "We've got all the right ingredients" — but acknowledged that this experience does not reflect the reality of the sector as a whole: "I feel like I won the lottery." This account demonstrates that leadership trajectories can be profoundly influenced by specific organizational contexts, and that the absence of perceived barriers may reflect an exceptionally favorable organizational configuration — not the non-existence of structural inequalities. As a Brazilian participant in a senior leadership position reported, professional recognition frequently depends on demonstrating performance well above expectations: "you need to prove yourself twice as much to be taken seriously."

Organizational culture thus emerges as the primary leverage point of the system: it is where inequalities become most visible in everyday experience, and where intentional interventions can produce the most significant transformations. It shapes directly what professionals perceive as possible for themselves.

## 5.4 Representation and Aspirations

The presence of women in leadership positions was identified as a key factor in shaping professional aspirations, both in the survey data and in the narratives of the interviews with expert participants. Participants emphasized that the absence of female role models in leadership positions can limit the perception that such positions are attainable. A Canadian participant reported that, in their current organization, there are no women in executive or C-level positions — which reduces the visibility of women's professional trajectories and narrows the horizon of what can be imagined as a viable career path. "When you don't see anyone who looks like you at the top, it's hard to believe you belong there," observed one of the Brazilian interviewees when reflecting on her early years in the sector.

Representation, therefore, is not merely symbolic: it concretely shapes what is perceived as possible. Seeing women in leadership positions expands the field of possibilities — and their absence contracts it. If representation expands the horizon of the possible, allies are those who help make that horizon concrete, opening opportunities that formal structures, on their own, do not guarantee.

## 5.5 The Role of Allies

The interviews with expert participants indicate that allies can play a crucial role in transforming organizational culture and opening professional opportunities for women. A male participant reported that his team is composed exclusively of men and that hiring decisions at the leadership level did not prioritize gender diversity — and, upon reflecting on this dynamic, expressed the intention to seek organizations more aligned with equity values. This account illustrates how leadership decisions can both reinforce and challenge existing institutional norms.

Other female participants emphasized that the presence of allies can broaden access to mentorship, strengthen professional networks, and facilitate cultural change within organizations. "The biggest difference in my career came from having a sponsor who believed in me before I fully believed in myself," reported a Canadian participant when describing the role of a senior leader in her trajectory. Equity in leadership requires the active engagement of people of all genders — including men as allies — as transformation does not depend solely on the female presence, but on leaders who act intentionally to reconfigure existing structures. Beyond

organizational structures and support networks, there is a layer of inequality that cuts across all trajectories in a transversal manner — invisible in formal policies, yet present in the daily experience of nearly all participants.

### **5.6 Cross-Cutting Theme — The Invisible Double Burden**

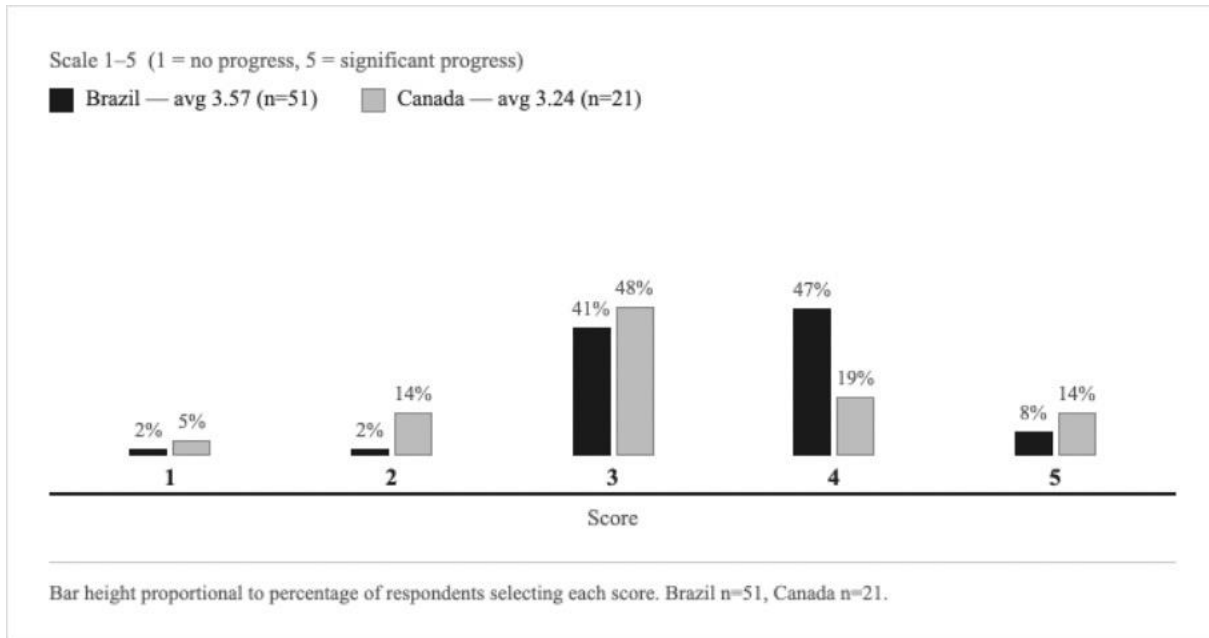
A transversal element that cuts across all the findings — present both in the survey responses and in the narratives of the interviews with expert participants — is the concept of the invisible double burden: the persistent expectation that women must simultaneously excel in professional work and fulfill domestic and caregiving responsibilities. The pattern was selected as a barrier by 41% of respondents in Brazil and 33% in Canada, and appears recurrently in qualitative narratives as a factor that influences career decisions, mobility, and retention in the sector. "I had to choose between being at a project meeting or picking up my child from school — and I knew that choice would be judged differently than if I were a man," reported a Brazilian participant when describing the everyday tensions that shape her professional trajectory.

This finding connects career progression challenges to the tensions between productive work and domestic expectations, revealing a layer of inequality that is not visible in the formal structures of organizations — but that profoundly shapes women's professional trajectories over time. With these patterns mapped, it is possible to turn comparatively to the two contexts — identifying where Brazil and Canada converge and where their institutional differences produce distinct experiences.

### **5.7 Comparative Analysis: Brazil and Canada**

Despite sharing structural similarities, Brazil and Canada present important differences both in the survey data and in the emphases of the open-ended responses. The distribution below reveals how respondents perceive the sector's progress toward gender equity, on a scale from 1 to 5 — and where Brazil and Canada diverge in this assessment.

**Graph 4: Perceived Progress Toward Gender Equity**



*Source: Perceived Progress Toward Gender Equity. Data managed by the author, 2026.*

Survey data indicate that the perception of progress toward gender equity differs between the two contexts: the Brazilian average was 3.57, compared to 3.24 in Canada. While 54.9% of Brazilian respondents rated progress at 4 or 5, only 33.3% of Canadian respondents did the same — with Canadian responses concentrated predominantly around score 3, indicating a more moderate and cautious perception of sectoral progress.

This difference in perception is analytically important and must be read with caution. It does not necessarily indicate that Brazil is advancing more rapidly toward equity — it may reflect, among other factors, the higher proportion of professionals with leadership experience in the Brazilian sample, who tend to perceive the environment more optimistically based on their specific trajectories.

The open-ended responses reinforce this comparative reading. Brazilian respondents emphasized organizational culture change, equal pay policies, parental leave, and recognition of women's competence. Canadian respondents focused more on mentorship programs, professional networks, and recruitment initiatives. Despite these differences in emphasis, both contexts converge on three key dimensions — male-dominated organizational culture, recurrent

questioning of women's professional competence, and challenges in reconciling work and family responsibilities.

The table below synthesizes the structural differences between the two contexts in terms of education, entry, and career progression:

**Table 2:** Education, Entry, and Career Progression of Women in Construction — Comparative Dimensions

<b>Dimension</b>	<b>Brazil</b>	<b>Canada</b>
<b>Women's participation in the workforce</b>	~11.5% (2024)	~14% (2023)
<b>Public data by hierarchical level</b>	More fragmented and less standardized	More robust, with national and sectoral statistical production
<b>Technical education / trades</b>	Growing attention, but lower national standardization	More consolidated apprenticeship and trades system
<b>Progression to supervisory/managerial roles</b>	Lower public visibility of career trajectories by level	More accessible data on mid-level and senior management
<b>Support initiatives</b>	Sectoral programs, training, and women-focused governance initiatives	Professional networks, advocacy, data infrastructure, and more consolidated sectoral initiatives

*Source: Education, Entry, and Career Progression of Women in Construction — Comparative Dimensions. Data managed by the author, 2026.*

The findings presented indicate that inequality in leadership in the construction sector emerges from the interaction between structural, organizational, and relational factors — influencing access to positions of authority, professional recognition, and career progression opportunities. Two central propositions emerge directly from this analysis: the challenge is structural, not individual — and understanding it as such is a condition for any effective intervention.

The inclusion of individual narratives reinforces that positive experiences coexist with persistent structural patterns. As reported by two expert participants — one from Brazil and one from Canada — the fact that they do not feel the barriers, due to certain privileges, does not mean that the barriers do not exist. They recognize that their trajectories were shaped by particular conditions: support, opportunity, and professional networks. This tension suggests that individual experiences of success can coexist with broader systemic inequalities — reinforcing the need for an analysis that goes beyond individual perception.

## 6. Discussion

The integrated interpretation of the theoretical and empirical findings of the research confirms what the Systemic Leadership Equity Framework proposes: inequalities in leadership in the construction sector do not constitute isolated deviations nor questions of individual adaptation, but the cumulative effect of institutional, organizational, and relational systems historically structured around masculinized norms of authority. Women are present in educational programs, professional registries, and diverse areas associated with the built environment — however, their visibility diminishes progressively as levels of authority, seniority, and decision-making responsibility increase. The challenge, therefore, is not limited to participation: it encompasses career progression, institutional recognition, and organizational legitimacy.

This dynamic is sustained by the data with notable consistency. The pipeline exists, but narrows — and the narrowing is not accidental. Occupational segregation structures trajectories from the outset, concentrating women in design, documentation, and administrative functions while men dominate construction sites, operational leadership, and executive decision-making. As McKinsey and LeanIn.Org (2023) demonstrate, "the broken rung remains the greatest obstacle women face on the path to senior leadership — for every 100 men promoted to manager, only 87 women are promoted." This distribution is not neutral — it structures differential access to spaces of visibility, authority, and progression well before any formal promotion decision is made. The recurrent questioning of competence — reported by 89.7% of applicable respondents in Brazil and 100% in Canada — reinforces that barriers are not located only in formal structures, but in the everyday interactions that shape who is perceived as legitimate and promotable.

As Acker (1990) argues, "the abstract worker is actually a man, and it is the man's body, sexuality, and relationships to family and work that are assumed" — and it is precisely this invisible assumption that operates in promotion criteria, informal networks, and cultural expectations that define leadership in the sector. This invisibility is what makes organizational culture simultaneously the most persistent obstacle and the greatest leverage point for transformation. Survey data confirm: 78% of respondents in Brazil and 67% in Canada identified male-dominated organizational culture as the primary barrier to women's progression. As

Benschop and Doorewaard (1998) observe, "gender subtext operates through seemingly neutral organizational practices that systematically advantage men over women" — and it is precisely this apparent neutrality that perpetuates the system without it needing to be explicitly exclusionary.

This pattern also reveals a recurrent tension in participants' narratives — the ambiguity between equity and meritocracy. Questioning whether it would be fair to promote someone for being a woman does not necessarily reflect rejection of equity — it reflects limitations in understanding the very concept of merit. Merit, as historically constructed in the construction sector, is aligned with criteria of continuity, physical presence, mobility, and unrestricted availability — conditions that silently reproduce the advantages of those who have never needed to negotiate career and domestic responsibilities simultaneously. Redesigning these criteria is a systemic correction, not a concession. The case of a Canadian expert participant in an executive position who described her environment as "we've got all the right ingredients" — and immediately acknowledged that "I feel like I won the lottery" — illustrates this tension with precision, demonstrating that individual positive experiences can coexist with persistent structural inequalities, and that the absence of perceived barriers may reflect an exceptionally favorable organizational configuration — not the non-existence of the problem.

Against this backdrop, Inclusive Design emerges as the central analytical and strategic lens. As Margolin and Margolin (2002) propose, "collective problems and institutional structures are treated as legitimate objects of design intervention" — and it is precisely this that the research presented here proposes in relation to the construction sector. Equity ceases to be an abstract ideal and becomes a principle of institutional design, implying the revision of the processes, norms, and criteria that structure access, recognition, and progression. Grounded Theory anchors this analysis in lived experiences, revealing that leadership is not only the result of technical competence, but of social capital, networks of trust, and institutional validation — elements that the system distributes in a profoundly unequal manner.

Strategic Foresight completes the reading by introducing a temporal dimension. Applying the Three Horizons model (Sharpe et al., 2016), the findings of the research can be read as signals of transition: the sector simultaneously presents characteristics of a system still marked by structural inequalities — Horizon 1 — and emerging indications of change, visible in the

strengthening of professional networks, mentorship initiatives, greater visibility of women's leadership, and expanding institutional policies — Horizon 2. Horizon 3, however, is not guaranteed. It depends on the capacity to translate these signals into deliberate structural transformation. As Meadows (1999) argues, "the most powerful leverage points in a system are the goals of the system, the mindset or paradigm out of which the system arises." Shifting the objective — from "increasing participation" to "redesigning the conditions that determine who can lead" — is the central repositioning that the research proposes.

This redesign does not occur at a single level nor through isolated initiatives — it requires an ecosystem of equity constructed through the interaction between education, labor market, organizational culture, professional networks, and institutional structures. The ecosystem begins before entry into the labor market — with educational interventions from childhood, encouragement of girls' participation in STEM areas, and early exposure to the sector, as indicated by experiences that have already demonstrated effective results in Nordic contexts. Throughout professional trajectories, structured mentorship, sponsorship, leadership development, and organizational environments that favor belonging and psychological safety become conditions — not benefits — for equitable progression to be possible.

At the institutional and regulatory level, monitoring mechanisms, representation indicators, and accountability policies make patterns of exclusion visible and guide more strategic interventions. And across all these layers, the active engagement of allies — leaders, colleagues, professional associations — is indispensable. Transformation does not depend solely on the presence of women, but on a system that intentionally redesigns the conditions under which more people can enter, remain, and lead — and it is precisely this intention that guides the recommendations proposed in the following section.

The findings of the research demonstrate, in synthesis, that inequality in leadership in the construction sector is structural, systemic, and reproduced across multiple layers simultaneously. Understanding it as a design problem — rather than as individual deficit — is the first step toward transforming it. The conditions for this transformation are already emerging. What is lacking is the institutional decision to sustain them.

## **7. Recommendations – Call to Action**

The findings of the research point to recommendations that do not operate in isolation, but as part of the ecosystem of equity outlined throughout the study — making evident that treating equity is not an adjustment, but a strategic starting point. The recommendations are organized around two complementary dimensions: the first brings together broad guidelines addressed to distinct actors who share responsibility for the transformation of the system; the second proposes a proprietary organizational assessment tool, developed from the data and findings of the research, for concrete use by organizations in the construction sector.

### **Dimension 1 — Broad Guidelines for Systemic Change**

#### **Building equity into business practices**

At the organizational level, transformation requires more than formal diversity policies — it requires the redesign of the everyday practices that structure recognition, promotion, and legitimacy. Organizations in the construction sector should revise merit criteria and promotion processes to identify and correct implicit biases; implement structured mentorship and sponsorship programs directed at women at different stages of their careers; create working conditions that recognize the double burden — through flexibility policies, equitable parental leave, and arrangements that do not penalize professionals with caregiving responsibilities — and actively monitor representation, retention, and gender progression indicators, making data visible and linking them to concrete institutional targets. The engagement of allies and leaders who act intentionally to reconfigure norms and open opportunities is a condition for these changes to be sustained.

#### **Governance, policies, and professional associations**

At the institutional and regulatory level, public policies and professional associations play a significant role in creating systemic conditions for equity. This includes the incorporation of diversity and equity clauses in public procurement processes and government contracts — making equity an institutional requirement rather than a voluntary choice; the strengthening of monitoring and transparency mechanisms regarding women's participation in leadership positions in the sector; the development of regulatory incentives for organizations that

demonstrate measurable progress in gender equity; and the formal recognition, by professional associations and sectoral councils, of women's leadership trajectories — broadening their visibility and institutional legitimacy. Just as equity with Indigenous peoples has come to be treated as a non-negotiable requirement in certain regulatory contexts, gender equity can — and should — be incorporated as a structural and strategic condition, not an optional aspiration.

### **Education and training — from K-12 to executive development**

The transformation of the pipeline requires interventions across the full extent of the professional trajectory. In basic education, more inclusive curricula, the reduction of occupational stereotypes, and programs for early exposure to the construction sector — particularly for girls — are strategies with international evidence of impact, particularly in Nordic contexts. In technical and professional training, apprenticeship and certification systems should incorporate inclusion targets and offer support infrastructure that recognizes the unequal material conditions of access. In executive development, leadership programs should be designed to broaden women's access to networks of influence, visibility, and sponsorship that have historically functioned as informal systems of progression. Education, at all these levels, must be understood not merely as qualification, but as part of an institutional ecosystem that shapes who imagines — and who accesses — leadership positions.

### **Global discourse and collaboration**

Advancing equity in leadership in the construction sector requires collaboration that transcends national borders. The comparison between Brazil and Canada demonstrated that similar structural challenges persist in distinct institutional contexts — indicating that solutions developed in one context can inform, with appropriate adaptations, strategies in others, as observed in Nordic contexts. International organizations, global professional networks, and academic institutions have a relevant role in the systematization and dissemination of evidence, models, and practices that broaden the repertoire available for transformation. At a moment when equity and diversity agendas face political resistance in various parts of the world, international collaboration also becomes a form of sustenance — of narratives, data, and shared commitments to more just and inclusive futures.

## **Dimension 2 — An Organizational Assessment Tool**

The guidelines above point to possible pathways — but recommendations, on their own, do not transform organizations, unless they become concrete, measurable practices appropriated by those with decision-making power. It is for this reason that the research proposes, as a second product of its contributions, the development of a proprietary organizational assessment tool: a three-dimensional diagnostic instrument for organizations in the construction sector that wish to evaluate, strengthen, and expand the presence of women in leadership positions.

Just as the Systemic Leadership Equity Framework articulates macrostructures, organizational culture, and interpersonal dynamics as interdependent dimensions of the same system, the tool organizes organizational action across three dimensions that engage with one another — from the diagnosis of the present to the construction of the future. The structure also finds correspondence with the Three Horizons model (Sharpe et al., 2016): dimension A corresponds to Horizon 1 — the mapping of the current system; dimension B to Horizon 2 — the transitional space where retention practices create conditions for change; and dimension C to Horizon 3 — the vision of the future oriented by succession and the deliberate construction of new leadership trajectories.

The tool, grounded in the data and findings of the research, is organized around three interdependent dimensions:

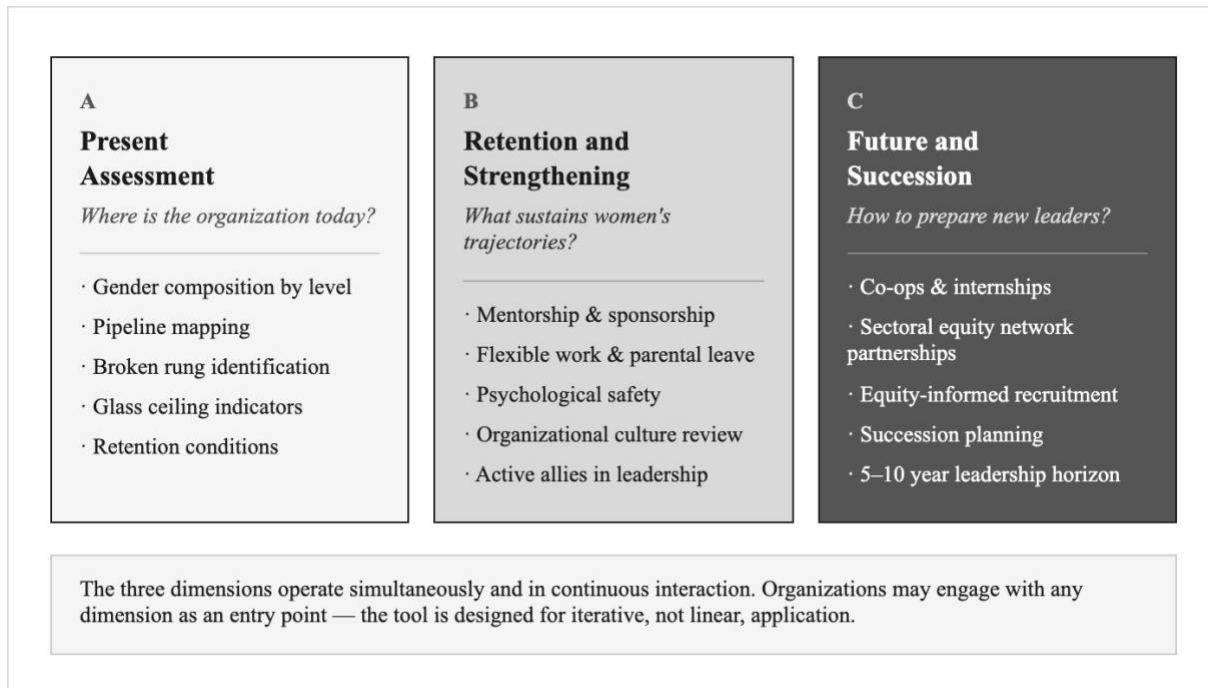
**A — Present Assessment:** where the organization stands today. This dimension maps the current gender composition across different hierarchical levels, identifies bottlenecks in the internal pipeline — including the broken rung and the glass ceiling — and evaluates retention conditions: what makes women stay, and what leads them to leave.

**B — Retention and Strengthening:** what the organization does to sustain the trajectories of women already within it. This dimension examines mentorship and sponsorship programs, flexibility and parental leave policies, organizational culture and psychological safety, and the engagement of allies in leadership positions.

**C — Future and Succession:** how the organization attracts, develops, and prepares new leaders. This dimension includes partnerships with educational and co-op programs, engagement with sectoral equity initiatives and networks in the construction sector, recruitment policies with

an equity lens, and succession thinking — who is being prepared to lead in the next five to ten years.

**Figure 3: Organizational Assessment Tool**



*Source: Organizational Assessment Tool developed by the author - Luciana Cabral de Souza Faria, 2026.*

The tool is not a list of best practices. It is a diagnostic and planning instrument, developed from empirical evidence gathered from 72 sector professionals across two countries, and grounded in the Systemic Leadership Equity Framework proposed in the research. The three dimensions operate simultaneously and in continuous interaction — organizations may engage with any dimension as an entry point, according to their own reality and priorities. The next step is its formal development — transforming the findings of the research into an applicable, proprietary, and replicable product, capable of generating concrete impact in organizations that choose to move beyond diversity discourse and bring these questions into equity in practice.

## 8. Conclusion

The research departed from a simple observation — but one whose implications are profound: women qualify, enter the sector, and build careers, yet continue to encounter barriers to progression, recognition, and legitimacy in leadership positions, still occupying limited space at tables where decisions are made. Throughout the study, it became evident that this reality does not stem from individual deficits, but from the interaction between macro-institutional structures, organizational cultures, and interpersonal dynamics that systematically shape who can access, remain, and lead in the construction sector.

The comparison between Brazil and Canada — two institutionally distinct contexts — revealed a significant structural convergence. Despite differences in terms of labor market informality, data availability, technical certification systems, and the maturity of equity policies, both countries present similar patterns: the underrepresentation of women in leadership positions, the centrality of informal networks, male-dominated organizational cultures, and persistent challenges related to career progression and the invisible double burden. This convergence reinforces the structural nature of the problem and indicates that isolated solutions, circumscribed to a single context or level of intervention, are insufficient to produce lasting transformation.

The primary contribution of the research lies in the shift of analytical focus — from "increasing participation" to "redesigning leadership systems." Equity cannot be understood merely as numerical representation — it demands the transformation of the institutional conditions that sustain legitimacy, recognition, and real opportunities for advancement. The Systemic Leadership Equity Framework, proposed in the study, offers a lens for this reading, articulating macrostructures, organizational culture, and interpersonal dynamics as interdependent dimensions of the same system. By making visible the mechanisms through which inequality is produced and reproduced, the framework opens space for interventions that operate simultaneously across multiple levels — and that recognize that, if the barriers are systemic, the solutions must also be systemic.

The findings of the research point to necessarily multilevel implications, organized around two complementary dimensions. The first brings together broad guidelines for the transformation of the system. At the organizational level, merit criteria, promotion processes, and

recognition structures need to be revised — not as concessions, but as corrections of historically biased systems. At the institutional level, monitoring mechanisms, equity policies, and structural incentives are conditions for transformation not to depend solely on the goodwill of individual leaders. At the educational and professional level, broadening access and training from the earliest stages — from basic education to technical training and executive development — is an essential part of an ecosystem of equity that sustains trajectories over time. And across all these layers, support networks, structured mentorship, and active allies are central components of a system that intentionally expands the conditions under which more women — and greater diversity — can enter, remain, and lead.

The second dimension translates these findings into concrete action. The proprietary organizational assessment tool proposed in the research — structured around three interdependent dimensions (present assessment, retention and strengthening, and future and succession) — offers organizations in the construction sector a diagnostic and planning instrument grounded in empirical evidence. Anchored in the Systemic Leadership Equity Framework and in dialogue with the Three Horizons model, the tool represents the next concrete step: transforming the findings of the research into an applicable, proprietary, and replicable product, capable of generating real impact in organizations that choose to move beyond diversity discourse.

The research presents limitations that merit recognition. The sample size — 51 respondents in Brazil and 21 in Canada, complemented by seven interviews with expert participants — offers analytical depth, but does not allow for broad statistical generalizations. Purposive sampling, by its nature, concentrates participants with relevant sector experience, which may influence the perceptions reported — particularly in the Brazilian case, where the proportion of professionals with leadership experience is significantly higher. Future research could broaden the sample, include other national contexts, and deepen dimensions that remain underexplored in the present study — such as the specific role of the client side in the reproduction or transformation of leadership structures, the impact of the current political context of resistance to equity and diversity agendas, and the comparative effectiveness of different intervention models along professional trajectories.

In ultimate terms, the research proposes that equity must be treated as a problem of institutional design — if systems produce inequalities, they can also be redesigned to promote inclusion. In a field responsible for designing and building the spaces in which society develops, diversity in leadership ceases to be merely a question of representation — and becomes a central element of institutional quality, innovation, and social justice. The conditions for this transformation are already emerging — what the research offers is a lens for recognizing them, and a framework for sustaining them, ensuring that there must be no fewer rights, no conditions of impediment, but rather the equalization of opportunity.

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## Appendices

### Appendix A — BEAT: Building Equality in Architecture Toronto

The Building Equality in Architecture Toronto (BEAT) is a volunteer network of architects, designers, leaders, and entrepreneurs founded in Toronto, Canada. The organization operates as infrastructure for legitimacy, visibility, and women's leadership development in the built environment sector, creating opportunities for community-building, advocacy, networking, and mentorship with a focus on equality and diversity in architecture.

BEAT's mission is to promote gender equality in architecture and in professions related to the built environment, recognizing that the underrepresentation of women in leadership positions is not an individual problem, but a structural one. The organization offers events, professional development programs, and spaces for exchange that broaden women's access to networks of influence historically dominated by men.

In the context of the research, BEAT is presented as an example of how professional networks can function as mechanisms of institutional transformation — not only representing women, but creating the conditions under which more women can enter, remain, and advance in the sector.

*Source: BEAT: Building Equality in Architecture Toronto (n.d.-a; n.d.-b). [BEAT: Building Equality in Architecture Toronto](#)*

## **Appendix B — Canada's Call to Action on Anti-Racism, Equity, and Inclusion**

The *Call to Action on Anti-Racism, Equity, and Inclusion in the Federal Public Service*, launched by the Canadian federal government, represents an institutional milestone in the country's equity agenda. The initiative establishes concrete commitments for the elimination of systemic barriers related to race, gender, and other forms of exclusion in the federal public service, recognizing that structural inequalities are not resolved through good intentions, but through deliberate changes in organizational practices, policies, and cultures.

Its relevance lies in illustrating how the Canadian institutional environment has advanced toward treating equity as a structural requirement — not as an optional aspiration — and serves as a reference for the analogy proposed in the recommendations: just as racial equity and equity with Indigenous peoples have been incorporated as non-negotiable conditions in certain regulatory contexts, gender equity can — and should — follow the same path in the construction sector.

*Source: Government of Canada (n.d.-a; n.d.-b). [Government of Canada \(n.d.-a; n.d.-b\)](https://www.canada.ca/en/privy-council/corporate/clerk/call-to-action-anti-racism-equity-inclusion-federal-public-service.html). <https://www.canada.ca/en/privy-council/corporate/clerk/call-to-action-anti-racism-equity-inclusion-federal-public-service.html>*

## **Appendix C — Global Gender Gap Report 2024: Key Data**

The Global Gender Gap Report 2024, published by the World Economic Forum, evaluates 146 countries across four dimensions: economic participation and opportunity, educational attainment, health and survival, and political empowerment. The data reveal that, at the current pace, global gender parity will take approximately 134 years to be achieved — a setback in relation to the pre-pandemic estimate of 99 years.

In the global ranking, Brazil occupies the 72nd position among 146 countries, while Canada occupies the 36th. The Nordic countries remain consistently at the top, demonstrating that sustained progress toward equity is possible when supported by robust institutional arrangements and long-term commitments. In the dimension of economic participation and opportunity — the most directly related to the findings of the research — the global gap remains significant, particularly in sectors such as construction.

*Source: World Economic Forum (2024a). [https://www3.weforum.org/docs/WEF\\_GGGR\\_2024.pdf](https://www3.weforum.org/docs/WEF_GGGR_2024.pdf)*

## **Appendix D — Interview Protocol**

The semi-structured interviews were conducted with seven expert participants — three in Brazil and four in Canada — individually, in virtual format, with an average duration of 45 to 60 minutes, in the language of preference of each participant.

**Opening:** brief presentation of the participant's professional background and clarification about the freedom to skip questions or end the interview at any moment.

### **Central questions:**

1. What are the most deeply rooted barriers to the advancement of women into leadership positions in the sector? Do you perceive changes with generational shifts or new policies?
2. Are there significant differences between the Brazilian reality and that of other countries regarding gender equity in construction?
3. Which strategies or policies have proven most effective in promoting more equitable environments?
4. Could you share a concrete example of positive transformation — institutional or cultural — in the sector?
5. Have you ever experienced or witnessed situations of being overlooked in promotion or leadership processes?
6. Which leadership skills are most valued today — and how have women contributed to redefining these standards?
7. What concrete action would you recommend to sector leaders to strengthen the presence of women in leadership?

**Closing:** expression of gratitude for the participation and contributions to the research.

*Source: Interview Protocol. Developed by the author — Luciana Cabral de Souza Faria, 2026.*

## **Appendix E — McKinsey Women in the Workplace: The Broken Rung**

The Women in the Workplace report, published annually by McKinsey & Company in partnership with LeanIn.Org, maps patterns of progression, structural barriers, and organizational conditions that shape women's leadership trajectories. One of its most consistent findings is the concept of the broken rung — the first broken step on the corporate ladder. The 2023 data demonstrate that for every 100 men promoted to the first managerial level, only 87 women receive the same promotion — an asymmetry with cumulative effects throughout the entire professional trajectory.

The report also documents the phenomenon of being an only — the experience of being the only woman in meetings and decision-making spaces — and its effects on psychological safety and professional aspirations. These findings engage directly with the data of the research: 89.7% of Brazilian respondents and 100% of Canadian respondents reported having experienced questioning of competence based on gender.

*Source: McKinsey & Company and LeanIn.Org (2023; 2025). <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/women-in-the-workplace>*

## **Appendix F — Nordic Models: Education and Gender Equity**

The Nordic countries — particularly Iceland, Finland, Norway, and Sweden — are frequently cited as references for systems that sustain consistent advances in gender equity over time, through the interaction between structural public policies, inclusive educational curricula, and long-term institutional commitments.

In the case of Iceland — the country that has led the Global Gender Gap Report for the sixteenth consecutive year (WEF, 2025) — the national educational model establishes gender equality as a transversal principle of the compulsory curriculum from basic education. The Icelandic National Curriculum Guide for Compulsory Schools (Government of Iceland, 2012) establishes that all subjects must be taught from a perspective of equality, with explicit attention to the deconstruction of occupational stereotypes. Combined with policies of shared parental leave and universal access to childcare, this approach creates an institutional ecosystem that sustains more equitable trajectories from childhood through executive levels.

*Sources: Government of Iceland (2012); Government of Iceland (n.d.); World Economic Forum (2025).*

<https://www.government.is>

## **Appendix G — Survey Instrument**

The survey was administered online — in Portuguese for Brazilian participants and in English and French for Canadian participants — and organized across eight thematic questions: gender profile and age group; leadership experience in the sector; key barriers to the advancement of women in leadership (multiple choice, up to 3 options); questioning of competence based on gender; organizational policies for gender equity; perception of progress toward equity (scale 1–5); and an open-ended question about actions and strategies to expand the presence of women in leadership. Participation was voluntary, with explicit consent requested at the beginning of the instrument.

*Source: Survey Instrument. Developed by the author — Luciana Cabral de Souza Faria, 2026.*

## **Appendix H — The Economic Case for Gender Equity in Leadership**

The underrepresentation of women in leadership positions is not only a matter of social justice — it is also an economic problem with measurable impacts. The International Monetary Fund (IMF, 2013) estimates that eliminating barriers to women's participation in the labor market could increase GDP by up to 35% in advanced and emerging economies. The OECD (2024) demonstrates that countries with greater gender equality present higher rates of sustained economic growth. At the organizational level, the Women in Business 2025 report by Grant Thornton International demonstrates that companies with greater gender diversity in leadership positions present better financial performance, greater capacity for innovation, and lower talent turnover — a pattern consistent with the findings of the research.

*Sources: International Monetary Fund (2013); OECD (2024); Grant Thornton International Ltd. (2025a; 2025b).*

## Appendix I — Women's Leadership Initiatives in the Brazilian Construction Sector

In the Brazilian context, the initiatives *Elas Constroem* and *Elas no Conselho*, developed by the *Câmara Brasileira da Indústria da Construção* (CBIC) in partnership with the *Serviço Nacional de Aprendizagem Industrial* (SENAI), represent two of the most relevant national programs supporting women's leadership in the construction sector.

The *Elas Constroem* program aims to promote the technical training, visibility, and leadership of women in the sector, offering vocational courses, spaces for articulation, and initiatives for the recognition of women's leadership. The initiative acts at the base of the professional trajectory — access, qualification, and the material conditions of entry into the sector — recognizing that the transformation of the pipeline requires interventions from the beginning of the career.

The *Elas no Conselho* program, launched in 2025, complements this work by focusing specifically on expanding the presence of women in governance spaces within construction companies and entities. The shift in the debate from "participation" to the "institutional architecture of authority" marks a significant evolution in the sector's agenda.

Together, these initiatives demonstrate that the Brazilian sector recognizes the need for interventions at multiple levels — training, visibility, and governance — and that women's leadership in construction has already reached national sectoral representation bodies.

*Sources: Câmara Brasileira da Indústria da Construção (2025b; 2025d); Serviço Nacional de Aprendizagem Industrial (2022). <https://cbic.org.br>; <https://www.portaldaindustria.com.br/senai>*