

Measuring What Matters

Understanding the Context
for Community Prosperity
Metrics in Calgary



Marshal McCallum
With contributions from Dr. David Finch

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ABOUT THE AUTHOR



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Marshal McCallum is a ‘soon to be’ Honours graduate of Mount Royal University’s Bachelor of Business Administration program. Prior to this, Marshal worked in oil & gas, construction, aviation refinishing, as well as finance and insurance sales. From a young age, Marshal has been obsessed with understanding the how and why of systems. This fascination started with the disassembly of the family ‘tube’ tv and evolved into an early education in electronic systems, robotics, and mechanics. When confronted with concepts in behavioral economics and welfare economics, Marshal began to question the quantifiability of social and societal values, given the astonishingly complex interdependencies of the social systems we inhabit. The unbridled desire to understand more about the innerworkings of this complexity led Marshal to join the *Measuring What Matters* Feasibility study, host a podcast, and write this paper.



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David Finch’s professional background reflects a commitment to the convergence of theory and practice. David possesses a PhD in management and is an active educator, scholar and practitioner. Dr Finch holds several academic appointments including Associate Professor at Mount Royal University’s Bissett School of Business, and is a Visiting Fellow at both Ohio University and the Henley Business School in the United Kingdom. David also teaches Executive Education at the Haskayne School of Business at the University of Calgary. David’s research interests focus on exploring the empirical link between stakeholders and organizational performance. Based on his research and breadth of experience, Dr Finch is the Director of the Business School Research Network (BSRN) - a network of senior researchers from 15 North American business schools focused on examining the empirical performance of business schools. In the past five years, David has authored over 50 scholarly papers and published in journals such as the *Journal of Business Ethics*, *Academy of Management Learning & Education*, *Journal of Marketing Management*, *Canadian Journal of Administrative Sciences*, *Higher Education*, the *Journal of Marketing Education*, the *Corporate Reputation Review*, and the *International Journal of Management Education*.

ABOUT MEASURING WHAT MATTERS

Measuring What Matters, a project of the CityXLab, hosted and powered by the Institute for Community Prosperity at Mount Royal University, is an independent community forum for nurturing dialogue and critical conversations associated with community performance metrics. This community forum is open to all; Commercial, social, civic groups, and citizens are all invited to participate in conversations about measuring community prosperity. This work has been guided by a Steering Committee of passionate, engaged Calgarians. This is the second paper in the *Measuring What Matters* series. The first, authored by Angela Bear Chief, is Indigenous Perspectives from Treaty 7 & Moh’kingsstsis (Calgary).



This report is a compilation of three applied academic papers that tie into the podcast ‘*Measuring What Matters*’. The purpose of this paper is to provide the reader with a better context as to how community prosperity is (or can be) measured, why this is particularly important to Calgary today, and what an optimal model for measurement could look like. This paper has quotes from the various podcast guests dispersed throughout – Kylie Woods, Jacie Alook, Colin Jackson, Cynthia Watson, Sarah Bateman, and James Stauch. For more information on these individuals please see Appendix A.



ABOUT THE INSTITUTE

As part of Mount Royal University’s commitment to providing an extraordinary experience for undergraduate students, the Institute for Community Prosperity connects students with social impact learning through applied, community-partnered research, creative knowledge mobilization and systems focused education. The Institute defines community prosperity as “the cultural, economic, social, and ecological conditions necessary for human potential to flourish”.



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Why Measure Community Prosperity? Why Calgary? Why Now?

ACKNOWLEDGEMENT

In the spirit of respect and truth, we honour and acknowledge the traditional Treaty 7 territory and oral practices of the Blackfoot confederacy: Siksika, Kainai, Piikani, Aamskapi-piikani, as well as Tsuut'ina Nation and the Iyarhe Nakoda Nations which consist of the Bearspaw, Chiniki and Wesley First Nations. We also acknowledge that this territory is also home to the Métis Nation of Alberta, Region 3. We acknowledge all Nations – Indigenous and non-Indigenous - who live, work and play on this land, and who honour and celebrate this territory, known as Moh'kinsstsis (Calgary), where the Elbow River meets Bow River. We acknowledge the importance of relating to this territory as a place to call home for all generations past, present and future.¹

FOCAL QUESTIONS

1. Why do performance indicators matter?
2. What is the history of measuring community prosperity?
3. Why does it matter to Calgary?

"I think probably one of the biggest learnings that we have in our work is that just because it's hard doesn't mean that we shouldn't do it. And measuring people's wellbeing and happiness is hard."

- Cynthia Watson

MEASURING COMMUNITY PERFORMANCE

This paper is an amalgam of a three-part applied academic series of papers exploring the importance of measuring community performance.

This first chapter explores the context and rationale in Calgary for using community performance indicators. It also provides an historical lens to the challenge of measuring community performance.

The second chapter explores the dimensions of performance measurement and leading models for measuring community prosperity.

The third chapter explores a process to develop a potential Calgary model. This model would provide rigorous, comparable, longitudinal, open, and accessible evidence – to better answer the question “How is Calgary really performing?”

A CHANGING COMMUNITY

The past two decades of economic growth has transformed Calgary. Today, the region's population is 1.5 million, with an increase of 250,000 in the past decade alone.² This growth has contributed to making Calgary the third most ethnically diverse community in the country with 33.7 per cent of Calgarians Identifying as a visible minority. Finally, Calgary possesses one of the highest education attainment levels in Canada.³

However, Calgary is facing serious economic and social headwinds.⁴ Fundamental structural changes in the oil and gas sector contributed to Calgary having the highest unemployment rate of Canada's six largest cities over the past half decade.⁵ Prior to the recent turnaround in oil and gas prices, this unemployment was forecast to continue well into the 2020s.⁶ Regardless, Calgary Economic Development forecasts that half of the jobs performed by Calgarians today could be at risk of automation over the next 20 years.⁷

“Calgary’s prosperity, going as far back as the 40’s and 50’s, has been defined by carbon-based fossil fuels [that] the world now is eager to reduce its dependency on and move away from. This has created a kind of existential crisis in Calgary, about how we think of ourselves and how prosperity should be defined.”

– James Stauch

Many of these macro-level socio-economic forces are not unique to Calgary. In fact, over the past three decades, the strategic economic role of all community’s has been redefined. Historically, a community’s relative competitive advantage is anchored to its proximity to scarce natural resources ranging from lumber and iron ore to access to navigable waterways.⁸ However, a community’s relative competitive position has now transitioned from its proximity to these natural resources, to its ability to unlock human potential.⁹ This is an integral feature of *community prosperity*.

“Prosperity is an interesting word in and of itself because it is traditionally in the economic world, but I think people are redefining it, especially after the last year and a half with the pandemic.”

– Sara Bateman

Historically, prosperity was viewed through a relatively narrow lens of economic or financial prosperity. It is therefore not surprising that the indicators used to measure this prosperity reflect this narrow view and included measures such as investment, employment, vacancy rates or home sales. The challenge is these performance indicators may or may not have any direct influence on an individual’s prosperity. As former Bank of Canada and Bank of England Governor Mark Carney notes, as a society, we have been conditioned to overvalue measures of economic performance and undervalue dimensions of value, including social, ecological, and human.¹⁰ This is the complexity underlying modern performance management.

“It is really important to measure what matters, but I think it’s also a bit of a trap, because what we fall into is the quick answer that well, what matters is what can we measure? The economy! But that [takes us] into all kinds of strange stories and all kinds of self-deception.”

– Colin Jackson

WHY MEASUREMENT MATTERS

Regardless of whether it is a bank, social agency, or professional sport club, measuring performance is essential. Modern performance measurement recognizes value is created not by any one factor; Rather, it is created through a complex interaction of many factors. This complexity demands that we move beyond simply linear causation and adopt a systems view, recognizing that any outcome could be caused by an exponential number of interconnected variables. The result is decision-making that demands a new approach to problem solving. This new approach is often referred to as “system thinking”. But systems thinking, and the complexity that underpins it, does not mean that measurement is value-less. Measuring in a context of complexity is still essential to gain some degree of shared understanding, and a finer resolution picture of systems and outcomes across many domains. As we will explore in later sections of this paper, measurement is far from sufficient, but it is necessary.

MEASURING PROSPERITY: A LONG HISTORY

The modern demand for measuring community prosperity emerged from World War One and the Great Depression.¹¹ As government’s allocated significant public investment, they needed a better yard stick to calculate the effect of their intervention.

In the early 1930’s, American economist Simon Kuznets along with British economist Richard Stone, developed a method for a nation’s economy to be measured and managed during times of crisis and conflict.¹² This measurement system is the widely recognizable Gross National Product (GNP) model. The GNP is the market value of all the goods and services produced over a defined period. As a measure of overall production, it provides a comprehensive view of economic health. However, systems that depend solely on economic performance indicators have faced criticism for decades. Even Kuznets argued against its misuse: “It could never adequately measure the things we value ... Goals for more growth should [address the question of] more growth of what and for what?” (Wysham, 2011). Similarly, Senator Robert F. Kennedy argued that GNP “measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile”.¹³

Almost sixty years following the introduction of the GNP, the United Nations launched the Human Development Index (HDI). Launched in 1990, the goal was to establish a composite measure of human development to shift policy from being economic-centric, to becoming human-centric. The HDI is composite index incorporating indicators of life expectancy, education, and standard of living. The critique of the HDI is that it does not incorporate indicators related to inequality, poverty, and human security.

The HDI, combined with increasing calls for policymakers to incorporate indicators related to environmental sustainability in the 1990s, contributed to the emergence of new indicators and new data to provide an increasingly multi-dimensional view of community prosperity. For example, the *Social Progress Imperative*, incorporates no economic indicators, and instead focuses on how an individual's prosperity contributes to a community's prosperity.

"Wellbeing and quality of life is [present] where the community works for everybody. Where everybody feels a sense of connection and belonging."

– Sara Bateman

WHAT MAKES MEASUREMENT OF COMMUNITY PERFORMANCE SO DIFFICULT?

System thinking analyzes how the variables in a system interact to influence its overall behavior and outcomes. System thinking is simple in principle, but most people find it difficult to adopt in practice. This is because system thinking reframes the principle of causation. For most decisions we choose simplicity, intuition, and speed over slow deliberation. As a result, we prefer to break big problems into a series of smaller and more manageable problems. This pursuit of simplification and speed contributes to a desire to isolate a specific cause that led to the defined effect.¹⁴ However, what system thinking demands is a greater *focus on identifying problems*, not answers. As Albert Einstein is quoted to have said, "If I were given one hour to save the planet, I would spend 59 minutes defining the problem and one minute solving it."

Therefore, a critical challenge of problem solving is a need to deconstruct the system that underlies the problem. Once we better understand the system, we will be able to identify solutions. For example, a widget company does not simply measure the number of widgets it sold. This is because the managers at the widget company recognize that widget sales are the output of a complex system that directly involves engineering, manufacturing, marketing, and sales; and indirectly involves human resources, accounting, and regulatory compliance. For this reason, to understand the drivers of performance, managers must go deeper into measuring the system. By understanding the system, managers at the widget company will have the evidence essential to allocate its scarce resources (time and money) to enhance system performance.

"I think in our city in Calgary, we have a number of tensions. One of them is we know that what matters is people and relationships. But what we talk about is the economy. So right now, we're struggling with a shift in our economy. Less based on oil and gas, more on other things, and we're engaging in that. But we're not necessarily considering what that looks like, in terms of our relationships to each other. What's the emerging story; The new 'story of us'?"

– Colin Jackson

The challenge of measuring a community's prosperity faces the same systematic facets incorporating not only multiple levels of government, but also tens of thousands of commercial and civil society organizations. These cascading levels of complexity, coupled with sporadic pressures to change and adapt to new criteria, allow us to identify large cities, like Calgary, as complex adaptive systems. Some of the dramatic shocks that have plagued Alberta are the natural disasters like record forest fires and hail damage, or changes in our province's stock and flow of human capital due in part to the changing resource economy. These shocks contribute to aggregate behaviours pushing for adaptation and contributing to innovation. Unlike more simple systems, or the economic models we use to understand some systems, these complex systems have no definitive endpoint¹⁵. Even if we could wholly and completely understand every variable that currently exists and extrapolate from that an optimal point for community prosperity, the passage of time and unpredictability of new variables will move that optimal point in unforeseeable ways.

Fortunately, we are not the first to face this challenge.

WHY CALGARY? WHY NOW?

Listening to all Voices

Today, Calgary has the third most racialized population of all cities in Canada. At the same time, it faces the important challenge of reconciliation between Indigenous and non-Indigenous people, both within a Treaty 7 context, and more broadly. However, evidence shows that many of these voices have been largely excluded from the processes defining our city's future.¹⁶

"We want to put the community at the center of everything we do. That means that we need to be a really good listener, and I think that also creates space for people to kind of raise their hand and say yes, I'm a part of that yes, you know, I have ownership over this kind of organization and community too, and my voice has space to be heard."

– Kylie Woods

Economic Challenges

Since 2014, Calgary and Alberta have faced considerable economic challenges which are in no small part caused by the boom-bust nature of our resource economy. These economic challenges have had a profoundly negative impact on governments' ability to invest in areas such as healthcare, education, and public transportation with anything close to consistency. Together, these decisions are defining our city's future. Yet, these decisions are largely being made independent of one another, based on isolated, fragmented and competing indicators.

Environmental, Social, & Governance

Companies are incorporating community prosperity data into ever-more important environmental, social, and governance (ESG) performance indicators. As part of this, many companies are looking to benchmark their performance against broader shared public or community indices, such as the UN Sustainable Development Goals or Social Progress Index.

Data Fragmentation

This research identified 350 different indicators, ranging across physical, emotional, intellectual, spiritual, economic, and ecological dimensions.¹⁷ Thus, the challenge has shifted from a lack of data and robust indicators to an exponential expansion in the volume and variety of data, leading to increasing fragmentation and confusion. Although it should be noted that an increase in indicators is not in itself a problem. Rather, the increase in similar indicators being measured inconsistently across sectors is leading to a conflicting or fragmented picture of outcomes. Funders make this worse by requiring grantee partners to measure indicators, outputs and outcomes in a bespoke fashion (specific to the project or the grant), while underfunding community-wide data-sharing and shared measurement initiatives. As a result, it is not surprising that decision makers across the commercial, social, and public sectors are asking the simple question – *what measures matter?*

"You would have to go back to the late 1960's or maybe even before that, to find a period in global society where social change is happening as rapidly and profoundly as it is now. This is a once-in-three or four generation opportunity to rethink some of the fundamental assumptions we have about what's important in the world, a world that is facing severe and even existential threats."

– James Stauch

MEASURING WHAT MATTERS

Measuring What Matters is a diverse group of organizations (from around the general Calgary area) across the commercial, community, and public sectors who established a working group through 2021 to explore increased collaboration and alignment on measuring community prosperity.

The goal initially was to establish rigorous, comparable, longitudinal, and open measure of Calgary's community prosperity. Over time, however, it became clear that an even more urgent goal was simply to understand the terrain of existing attempts at measuring community prosperity.

The benefits of collaboration on community performance indicators include:

Shared facts: Ensure that decisions, whether for an individual family, a corporation, a public body, or a social organization are based on shared understandings of trends and community-scale phenomena.

Shared resources: Collaboration provides opportunities to minimize duplication and share resources based on a common purpose. Enables ‘swimming in the same direction, in the same stream.’

Communication: Collaboration provides the potential to amplify key messaging to the community.

Acceleration: Collaboration provides the potential to accelerate access to data and accelerate evidence-based decisions.

Fortunately, there is a strong foundation of information to draw from. Not only is there outstanding work at the international and national level, but there have been excellent local initiatives such as the City of Calgary’s *Equity Index*, Sustainable Calgary’s *State of Our City Report*, and the Calgary Foundation’s *Vital Signs* reports. Table 1 gives seven examples of different models and their associated indicators.

Table 1. Measuring Community Prosperity

Source	Indicators
BC Prosperity Index	Business-Environment; Economic Wellbeing; Societal Wellbeing
Calgary Equity Index	Economic Opportunities; Social & Human Development; Civic Engagement; Physical Infrastructure & Environment; Health
Economist Global Liveability Index	Stability; Healthcare; Culture; Environment; Education; Infrastructure
Government of Canada’s Community Wellbeing	Education; Labourforce Activity; Income; Housing
New Zealand Living Standard Framework	Social Capital; Human Capital; Natural Capital; Physical/ Financial Capital
Organisation for Economic Cooperation and Development Better Life Index	Housing; Income; Jobs; Community; Education; Environment; Civic Engagement; Health; Life Satisfaction; Safety; Work-Life Balance
Social Progress Index	Basic Human Needs; Foundations of Well-Being; Opportunity
United Nations Human Development Index	Life Expectancy at Birth; Expected Years of Schooling; Mean Years of Schooling; Gross National Income Per Capita
University of Waterloo’s Canadian Index of Wellbeing	Community Vitality; Democratic Engagement; Education; Environment; Healthy Populations; Leisure & Culture; Living Standards; Time Use
World Happiness Report	Business & Economic; Citizen Engagement; Communications & Technology; Diversity; Education & Families; Emotions; Environment & Energy; Food & Shelter; Government and Politics; Law & Order; Health; Religion & Ethics; Transportation; Work

"We realized as we dug into this project that there are already really interesting, robust, useful measurement tools and indicator projects. But a lot of these initiatives are really low profile, and may only have a niche (or non-public) audience. So [the question became how] can we amplify awareness of these various attempts? Can we help provide a forum where people can actually discuss, dig into, and debate?"

– James Stauch

We want to build on and help amplify this exceptional work, but in doing so, it is imperative that we collaborate as a broader community to identify the measures that matter. To build the best version of Calgary it is important to work authentically with common understanding, values, and purpose. How we get to a common understanding with open informed discussions?

Up to this point these open discussions have not been possible because often the data from measurement reports is not transparent. There have been problems with the availability of source information, unexplained weighting of indicators, and inadequate representation. Without a means to ask questions about the results of reports, when conflicting data exists the reports become more of a hinderance extending the time it takes for informed decisions to be made.

"I think that there's something really vulnerable and uncomfortable about measuring things."

– Kylie Woods

By empowering the people that call Calgary home with more information, and inviting them into the conversation about how we can get even better at measuring community prosperity, we can help spawn an approach that adapts to, resonates with, and reflects a diverse, every-changing city.

The goal is for citizens to start to see themselves in this city. Not just in their home but in the choices and directions that our community takes. With an open platform and the ability to voice opinion as well as tell their stories we can move to creating common goals that represent what Calgarians want. Not only will the city, industry, and citizens be on the same page, we will finally be reading from the same story.

"If you don't see yourself reflected [in the city], you'll leave. Whether you don't see yourself reflected in the arts, the politics, or the job opportunities. All of those pieces connect. That's the complexity of it. It's not just one thing but the interdependence of all of it."

– Sara Bateman

How Do We Measure?

FOCAL QUESTIONS

1. What is measurement?
2. What are the leading community prosperity measurement models today?
3. How can these models guide Calgary?

"I think probably one of the biggest learnings that we have in our work is that just because it's hard doesn't mean that we shouldn't do it. And measuring people's wellbeing and happiness is hard."

- Cynthia Watson

This second chapter explores different approaches that our city could adopt to emerge as a leader in measuring community performance.

MEASURING COMMUNITY PERFORMANCE

As outlined in the first chapter, over the past three decades there has been an exponential expansion of indices and scorecards who share the goal of measuring dimensions of community prosperity (whether the focus is on health and wellbeing, sustainability, economic inclusion, or some other framing). As a result, decision makers across the commercial, social, and public sectors are confronted with making critical decisions about the future of our city, based on competing data and indicators. Collectively they ask, *what measures matter?*

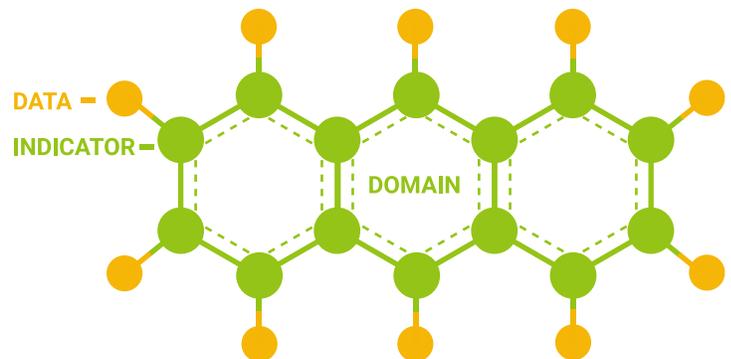
What matters? Well, I think what matters is seeing each other, I think what matters is listening to each other. What matters is calming myself down. So I'm not as afraid of you as I might otherwise be and more open to who you are. What matters is kindness and empathy."

- Colin Jackson

That is not to say progress has not been made in understanding how to value meaningful dimensions. However, the contextual nature of community prosperity makes it impossible for a 'one-sized fits all' model. Therefore, open and transparent dialogue is critical to defining a unique approach to measuring community prosperity for Calgary.

UNDERSTANDING MEASUREMENT

Valid and reliable measurement is complex. To explore this, it is helpful to think of three dimensions: indicators (data points or benchmarks); domains, and how this rolls up into an index.



Indicators

The first component of any measurement system is defined as the *indicator*. Indicators are the smallest and most precise element of a measurement system. Indicators are like the atom in physics. Atoms are the world's building blocks and without atoms the world does not exist. Similarly, without indicators, measurement systems will not exist.

However, indicators require source data. This kind of data may come from surveys, observations, or any form of data collection that is both consistent and accurate. Indicators, and by extension their input data, are the absolute foundation of measurement systems as they define the conditions and set ranges on what the 'health' of individuals and communities ought to be¹⁸. While the data itself may be valueless, the indicator choice, definition and positioning is a normative decision, that ideally reflects and serves as a proxy for the community's values.

Domain

The second component of the measurement system is the *domain*. The domain is like molecules, in that they are composed of a set of thematically-linked indicators. In the same way that molecules are a collection of atoms that together create something new, a domain is collection of different indicators that paint picture that is different from each indicator in isolation. In some cases, domains may be a composite of dozens of indicators and therefore, it is optimal to understand both indicators and how they roll up to a domain-level picture.

Some measurement systems create sub-domains to distribute the indicators under smaller more focused lenses. The sub-domains would then make up the larger domain in the way that many H₂O molecules make up a glass of water. In this sense when we see that the glass is half full, a scan of sub-domains would tell us why much faster than a scan of all individual indicators.

Index

The combination of the domains together form an index (also referred to as scorecards or dashboards). Therefore, the selection of the domains defines the index and priorities of a given community. As we have covered, it is the indicators that form the domain; and the data in turn form the indicators. If any one of these elements are flawed, or do not reflect the real values and priorities of a community, it will contribute to decisions that are also flawed and do not reflect the values and priorities of the community. The final consideration when designing an index is the respective weighting of indicators and domains in a model¹⁹²⁰. Over-weighting or under-weighting an indicator or domain can have dramatic outcomes on a model. For example, an index will fundamentally refine the priorities of a community depending on whether the domain of ‘education’ is weighed as 50% or 5% of an index.

LEADING BENCHMARKS

This exponential expansion of indexes measuring domains and/or indicators associated with community prosperity provides a foundation for developing a ‘made in Calgary’ solution. But it is important first to consider some of the leading frameworks and the lessons these might offer for the city.

“[We need to go beyond] those vanity metrics of what’s easy and what’s going to make us look like we’re successful.”

- Kylie Woods

Better Life Index (OECD)

The foundational framework used by many of the current wellbeing measurement systems comes out of the Organisation for Economic Development’s (OECD) *Better Life* initiative, which in turn is built on the findings of the 2009 report by the commission on the measurement of economic performance and social progress²¹. The OECD’s framework incorporates eleven domains that touch on both current material conditions as well as the requirements for future sustainability. The domains were constructed to enable global comparability and include two distinct levels of indicators in each domain. The two levels of indicators are distinguished by their ability to monitor community prosperity comparatively to other countries over set time frames, and the ability to provide complementary evidence towards the first level of indicators. With the former labeled as a *Headline Indicator* and the latter as a *Secondary Indicator*²².

The eleven domains recommended by the OECD are separated by two larger domain categories: material living conditions and quality of life. Moreover, to position the indicators for sustainability, they established four forms of capital: natural, economic, human, and social²³.

Table 2: Better Life Index

Material Living Conditions	Quality of Life
<ul style="list-style-type: none">• Income & wealth• Jobs & earnings• Housing conditions	<ul style="list-style-type: none">• Health status• Work–life balance• Education & skills• Social connections• Civic engagement & governance• Environmental quality• Personal security• Life satisfaction
Sustainability Indicator	
<ul style="list-style-type: none">• Natural capital• Economic capital	<ul style="list-style-type: none">• Human capital• Social capital

This framework recommended by the OECD also provides an excellent platform for analysis of the UN Sustainable Development Goals (SDGs). There is also some compatibility between this model and what is referred to as the “donut model” developed by Oxford Economist Kate Raworth²⁴. This model is framed to build on a strong social foundation while managing both growth and consumption levels to live comfortably while not overutilizing our planet’s resources and causing catastrophic failure of the environment.

Lessons for Calgary

The OECD framework allows for comparability to other areas around the world. That comparability is important when taking the growing focus on SDGs into account. There is an opportunity to adapt and augment, much like New Zealand has done, in the example following. The Better Life Index has a weighted system in place that focuses on what they call ‘Headline Indicators’ that are needed for comparability, and supplementary Indicators that can be more region-specific and track different trends. This work also provides advice for adopting jurisdictions via extensive supplementary guidelines. These guidelines touch on key points like how to collect data to ensure accurate representation of subjective wellbeing metrics.

Living Standard Framework (New Zealand)

The New Zealand Living Standards Framework, or LSF, has officially been in development since 2011. In truth, it is actually an extension of ongoing work on living standards done by the treasury department going back much further in time, inspired in part by the ground-breaking work of New Zealand feminist economist Marilyn Waring, who was writing about replacing the GDP with wellbeing measures as early as the mid-1980s. The new LSF framework provides a better forum for the Treasury department to display information and have it become more useful in guiding policy²⁵. Importantly, a major part of the development process of the framework was workshopping it with the public whose feedback was then reflected in later iterations²⁶.

A keystone feature of the Living Standards Framework is the commitment to adaptation, always striving to best represent the population. The commitment the framework makes to the people of New Zealand is that “it must reflect who [they] are, what [they] value and how [they] can grow a shared sense of prosperity”²⁷.

Table 3: Living Standards Framework

Disruption		
Our Country	Our Future	Our People
12 Domains	Four Capitals	Relationship
<ol style="list-style-type: none"> 1. Civic engagement & governance 2. Cultural identity 3. Environment 4. Health 5. Housing 6. Income & consumption 7. Jobs & earnings 8. Knowledge & skills 9. Safety & security 10. Social connections 11. Subjective Well Being 12. Time use 	<ol style="list-style-type: none"> 1. Natural Capital 2. Human Capital 3. Social Capital 4. Financial & Physical Capital 	<ul style="list-style-type: none"> • Section is designed to connect the domains.

Lessons for Calgary

New Zealand is similar to Canada in many respects, one of which is the challenge we both face in moving past traditional western reductionist notions of wellbeing. Particularly interesting for Calgary is the work that has been done with ‘Te Puni Kōkiri’- The ministry of Maori Development in developing indicators to be inclusive of the Indigenous population. Recognizing that Indigenous cultures are all unique even within the same land mass, Calgary (or Canada as a whole) could adapt the path laid out by the LSF. Structurally, the dashboard is split into three categories depending on the user’s area of interest: Our Country, Our Future & Our People. This distinction in the way data is collected and displayed assists in finding the information that would ultimately help decision making.

Canadian Index of Wellbeing (University of Waterloo)

The CIW (Canadian Index of Well Being) composite index, designed by researchers at the University of Waterloo, is designed to provide a single moving number that is trackable much like the history of a stock on the Toronto Stock Exchange (TSX). The idea is to capture the overall quality of life that Canadians are experiencing and if it is getting better or worse²⁸.

By using well thought-out visuals along with simple terminology, the averaged number released by CIW is easier for the general public to understand. This in turn helps inform the public on concepts of wellbeing measurement and trends²⁹.

Table 4: Canadian Index of Wellbeing

Canadian Index of Wellbeing Average Eight Domains (8 indicators per domain)

- Healthy Populations
- Democratic Engagement
- Community Vitality
- Environment
- Leisure & Culture
- Time Use
- Education
- Living Standards

Lessons for Calgary

The goal of the CIW is to provide an easily digestible metric for communication as well as to increase the broader public interest in wellbeing. Building public interest in a measurement system in Calgary would have the benefit of increased engagement which could be used to further refine the system.

Although it is recognized that the CIW is an oversimplification for decision-making, the breakdown of each domain and subsequent indicators into their percentage change charts is available, and the data from those charts is far more actionable. If a Calgary model followed the open access approach used by the CIW, making raw data freely and easily available, then compilations of indicators into new domains could theoretically be made by anyone. Beyond finding new trends and better utilizing the data, having a high level of transparency is important when constructing a resilient model.

Social Progress Index (SPI)

Published since 2013, the SPI is a purpose-built Index meant to look strictly at noneconomic indicators³⁰. With that in mind it is not intended to be a complete replacement for economic systems of measurement but instead as a compliment to GDP and the like³¹. The Index uses societal and environmental outcome indicators instead of inputs to prioritize the progress a community has made towards their goals³². This is in contrast to systems that use many inputs as indicators often represented as monetary values.

The Index is organized across the three dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity³³. Under each of those dimensions are four equally weighted components relevant to the associated dimension. Inside of the individual components are 3-5 indicators grouped to define the same aspect of social progress³⁴. Interestingly, the SPI is not held year-over-year to the same specific indicators. The SPI recognizes that research advances may change what indicators need to be focused on and that data availability is a struggle to obtain in many places. With this model they are given the flexibility to look comparatively across many different countries, states & provinces that their data captures³⁵ (totalling 2.4 billion people).

Table 5: Social Progress Index

Basic Human Needs	Foundations of Wellbeing	Opportunity
<ul style="list-style-type: none"> • Nutrition & Basic Medical Care • Water & Sanitation • Shelter • Personal Safety 	<ul style="list-style-type: none"> • Access to Basic Knowledge • Access to Information and Communications • Health & Wellness • Environmental Quality 	<ul style="list-style-type: none"> • Personal Rights • Personal Freedom & Choice • Inclusiveness • Access to Advanced Education

“Having a common understanding of cultural competencies is an important starting point before you delve into how we should go about measuring prosperity. Seek opportunities to learn in ceremony or go out on the land and learn how to pick medicine in a good way.”

- Jacie Alook

Lessons for Calgary

The SPI has already been adopted by ATB Financial inform its data-driven approach to the most pressing socio-economic opportunities in Alberta.

Calgary can also be guided by the design of the SPI. From the ground up, the three domains came to light by asking simple questions about human progress³⁶:

1. Does a country provide for its people's most essential needs?
2. Are the building blocks in place for individuals and communities to enhance and sustain wellbeing?
3. Is there an opportunity for all individuals to reach their full potential?

This approach frames the basic goals of any index as it derives purpose from the data gathered. The subsequent components of a domain can provide the specifics, but the domain should link to the root of wellbeing.

Looking at the type of indicators used in the SPI is a reminder to be very careful about the data we select. Today, access to data is not usually the most difficult issue. When selecting the data to build into our indicators we must be cognisant of whether we are analyzing for the outcome or for the process. To use homelessness as an example, is the goal to analyze the increase/decrease of the homeless population (outcome) or rather the number of individuals or organizations engaged in working towards a solution (process)?

Finally, the data visualization of the SPI provides important guidance to Calgary. This Index is created in partnership with governments, businesses, as well as civil society and is intended to be used by as many people as possible. As such, the data needs to be accessible in a way that enables individuals from different backgrounds, education levels, and sectors to benefit. Active visualizations, colour coordinated scorecards, and detailed reports provide value and depth appropriate with the interest of the recipient.

A PATH FORWARD

A goal of *Measuring What Matters* is to build on and help amplify this exceptional work, but in doing so, it is imperative that we collaborate as a broader community to identify the measures that matter. To build the best version of Calgary it is important to work authentically with common understanding, values, and purpose. How we get to a common understanding is with open informed discussions.

Up into this point these open discussions have not been possible because often the data from measurement reports are rarely open. Moreover, there are challenges with the availability of source information, unexplained weighting of indicators, and inadequate representation. Without a means to ask questions about the results of reports, when conflicting data exists the reports become more of a hinderance extending the time it takes for informed decisions to be made.

More than just data availability, *Measuring What Matters* presupposes accessibility and empowerment. It's about encouraging and facilitating a plurality of tools and perspectives. There is no 'god's eye' single perspective, or super-observer that will tell us exactly what is going on in this city. By empowering the people that call Calgary home and inviting them into the conversation we can collectively create a system that more honestly reflects those same Calgarians.

As many of the other reports produced through the CityXLab have shown, it is important for diverse citizens to start to see themselves in this city. Not just in their home but in the choices and directions that our community takes. With an open platform and the ability to voice opinion as well as tell their stories we can move to creating common goals that represent what Calgarians want. If this can happen in a good way, not only will the city, industry, and citizens be on the same page, we will finally be reading from the same story.

"In Calgary, we speak about diversity a lot. And there's a truth to that. Pretty well all the world's peoples and First Nations are here, with all kinds of origin stories. But there's not a lot of exchange between those diverse citizens. So, we're diverse, but we're not necessarily exchanging and building connectivity. As much as we might, you know, pretend that we're a coherent community, we are geographically separated. People in the northeast are not often seen at dinner parties with people in the southwest."

- Colin Jackson

Building the Model

This third and final chapter explores a process to develop an archetypal model which can provide rigorous, comparable, longitudinal, open, and accessible evidence – to better answer the question “How is Calgary really performing?”

“What we’ve learned in the last little bit, is the complexity of how much data we have - we’re almost drowning in it - as well as this desire to have it really simplified.”

- Sara Bateman

When starting on this journey researching multiple indexes and combing through hundreds of indicators, I viewed the building of the perfect community indicators model as the end goal. I had anticipated that through the distilling and refinement of other projects an obvious solution would surface, pointing to a model that would be rigorous, comparable, longitudinal, and accessible.

My first failing was approaching this with a mechanical mindset and believing that an absolute formula would appear that could be applied to any situation and result in the ideal model. But that’s a trap. This extrapolation, based on economic modeling, where oversimplification can be used to gain insights, is essentially the backbone of GDP-based wellbeing models. Throughout my research, in conversations with academic and industry experts, and participating in focused community stakeholder discussions, the complexity of community wellbeing became clear.

“The nature of those complex questions that demand a social innovation approach actually defy easy measurement. They are nonlinear, they have multiple causations or interdependencies”

- Katharine McGowan

While I would caution against building a model strictly from academic advice, this paper will lay out some of the foundational principles that should be followed in crafting a method for community wellbeing measurement and wellbeing information disbursement. The critical path forward is outlined by:

- Meaningful and timely consultation
- Collaborative goalsetting that is adaptable
- Making choices about what the model should look like

CONSULTATION

The term ‘*Nosce te ipsum*’, or “Know Thyself”, has appeared throughout history reminding us to be cognizant of our own bias, our own limitations, and even our very anatomy³⁷³⁸. Keeping this maxim in mind and expanding the boundaries beyond the singular into a community context frames the foundational knowledge that our straw model will be built on. Rather than assume the needs and desires of a community based on a small sample or based on outdated information, comprehensive consultation is required to inform the subsequent building blocks of the model.

By virtue of focusing on consultation as an early step the builders of the model should be able to garner trust, which is key to building a more accurate picture and is also an important element in building social capital³⁹. It is widely documented that past measuring systems focusing heavily on GDP and ignoring the social elements led to policies that harmed “the quality of social relationships and individuals’ sense of community belonging⁴⁰.”

“[How do we measure] small gestures of kindness, like smiles that greet you when you are walking down the street? Or the ability to reach out to another individual and feel safe and comfortable doing so?”

- Jacie Alook

Through consultation we are able to discern the values placed on different attributes of community life and paint a picture of a community's ideal existence. Tandem to understanding the collective values of a community is defining the current barriers preventing advancement towards shared goals. Barriers should not be defined by the outside observer but clearly expounded upon by the individuals who face these very issues. This bottom-up approach ensures the resulting product will better reflect the community it is meant to serve.

The process of consultation will be different for each community with the common element being the need to empower the people served with the information they value and want. This means, as one interviewee framed it, “acknowledge[ing] what matters to specific groups based in respect of differences and working to uphold the strengths those diverse understandings provide”¹.

“There are often different levels of metrics that appeal to different kinds of people. So, for example, our big goal about getting more women and gender diversity in technology work is a metric that appeals to government funders. But then when we look at what metrics matter for actual women who are working in technology, [we find that] they want to have more fulfilling careers where they have more confidence, and where they've got flexibility to choose and build their work in a way that also accommodates their lives.”

– Kylie Woods

GOAL SETTING

Agreeing on “what matters” always takes precedence over the conversation about “measuring”. Although goal setting may seem obvious as a critical early component of building a model, it has a tendency of being overlooked until much later in the process. This tendency to want to measure without goals in mind is due in part to the large amount of data and collection methods we have available. When constructing a model, we need to take into consideration that just collecting large swaths of readily available data is not a substitute for good design. A focus on quantity of data can also lead to the introduction of bias as the data may not be representative of all groups.

This is a particular problem with groups that are historically underrepresented. Sacrificing the quality of data sources in exchange for a high quantity of data can muddle the application of the model, making it a poor representation of the community.

“To paint an accurate picture of the world we need both storytelling and measurement.”

– James Stauch, Institute for Community Prosperity

Think of this in terms of a multitool or Swiss army knife. The average multitool will have 4-6 components, each suited for a specific task. Following a linear line of rational thought, the more components this device has the more useful it would be. In practice, with each new component added onto the multitool each individual piece becomes more difficult to use. Imagine searching through ten or twenty different variations of a knife to find a can opener. This effect cascades until eventually the overall device is obsolete and all the effort that went into making it is wasted.

Setting clear goals of what a community wants in a measuring model – i.e. “what matters” - creates a jumping off point to start looking at what indicators are applicable to those goals. The discussion of what a better tomorrow looks like for each community should be an extension of the consultation mentioned above. Building a resilient model that is able to adapt goals and adopt new goals as communities evolve can also be achieved by taking a long-term view.

As mentioned in existing wellbeing models⁴¹⁴² indicators often fall into more than one domain whether wholly or partly and can be weighted accordingly as new domains and goals emerge. As an example, some data on public transportation could originally have been collected to inform a mobility or social wellbeing metric and then later used (at least in part) towards measuring carbon footprint. This kind of adaptability is necessary to be able to look at newer goals in a longitudinal manner and create a precedent to work forward from.

¹Jacie Alook - Community Engagement & Partnership Coordinator, leading the Calgary Indigenous Sharing Network, with the non-profit, non-political Indigenous service organization, Native Counselling Services of Alberta

WHAT SHOULD THE MODEL LOOK LIKE?

In construction, it is difficult to complete a job without the correct tools. But it is impossible to complete a job without *understanding* how to use the tools. Building the model and collecting the data is of little practical value if it cannot be displayed and understood by the parties interested in it or presented in a usable format.

Dashboards v. Indices

There are generally two methods for displaying the gathered information: 1. Dashboards and 2. An aggregate Index.

“Figure out what tools are best suited for what the community is looking for. You have to ask ‘how is this going to be used by the community and how is it going to make meaningful change?’”

– Katharine McGowan

Consumer models tend to lean towards the simplicity of the aggregate index approach. While the index model does help purvey general information alongside a sliding scale, the lack of depth means it should not be used for critical decisions (such as public policy) and also makes it hard to extrapolate the collected data to use on new measurement systems.

There are a growing number of dashboard models being created that can make it easier to navigate the complexity of data by providing layers of domains to probe. Recent examples of dashboards in Canada include the MyPeg dashboard in Winnipeg, the Alberta Health Services Cancer dashboard, which does a great job at providing interactable visualizations of data, and the government of Saskatchewan dashboard which allows for the easy exportation of data for further analysis. Some scholars believe the Dashboard model is not only sufficient but the only feasible option⁴³.

The recommendation made in this paper falls in line with Christopher Barrington-Leigh & Alice Escande’s ‘Comparative Review of Indicators’ paper in suggesting a hybrid approach⁴⁴. By including both an aggregate index and dashboard in unison we are able to study the trajectory over time as well as identify the innerworkings of what is actually happening in the system. Costanza et al, describes this collaborative system through the analogy; “having a well-instrumented dashboard in your car is essential, but so is knowing where you are going and whether you are making progress toward your destination”⁴⁵.

The Role of Economic Metrics

One of the trends in newer models of measuring wellbeing is to dissociate economic measurements like GDP in part or entirely⁴⁶. This is partly due to the increasing understanding that growth in social progress and wellbeing do not necessarily follow growth in the economy⁴⁷. A simple, and very local, example of this would be to look at environmental externalities of business operations. Recently in Calgary a call has been made to relocate the Lilydale poultry plant away from its current residential area⁴⁸ because of the increasing volume of trucks and odor impacted quality of life in the community.

Contrary to the growing trend discussed above, it is the opinion of the author of this paper that including economic measures is still critical to creating a representative and comprehensive model. Although not necessarily economic measures in the traditional sense of just GDP growth, but rather business performance metrics that show the contribution of economic activity to societal value. Economic indicators are still vital, but we should critically examine which economic indicators are important (e.g., unemployment), vs. which are essentially decoupled from a community’s lived experience of prosperity (e.g., stock market performance). This is similar to the intention of policies put in place by the government of New Zealand to meet their 2050 emissions goals⁴⁹. The proposal of Robert Costanza and his colleagues is that these metrics must consider the “current knowledge of how ecology, economics, psychology and sociology collectively contribute to establishing and measuring sustainable well-being”⁵⁰.

“A little philosophical piece about this. We have a society that desires perfection and a final product, right? So it’s like, ‘hey, our employer says, provide a dashboard, provide this final product.’ So we work on this, try to be perfect and be like ‘we thought of everything!’. But that’s nearly impossible. When you’re working with complexity, things are constantly changing. And the moment you think you have understood community, or the systems, or the connections, it changes in a blink of an eye. So the other piece that’s a challenge in this is to say, ‘we’re not going to have this perfect, we’re going to have it good enough, because we’ve done some really good thinking and engagement. But it could change next year.’”

– Sara Bateman

Connecting to the SDGs

In the interests of following global standards there should be a level of incorporation, or at the very least consideration, of the SDG's. The 17 goals have imbedded in them 169 targets and over 300 indicators⁵¹ with recognized crossover between domains/categories. The 169 targets of the SDG's provide a good starting point to develop goals that will inform the indicators chosen when designing a model.

Inflows and Outflows

With regard to indicators, it is important to recognize that indication of inflow and outflows serve different purposes in measurement. If the target or goal of measurement is to measure the reduction of chronic homelessness in a population, for example, funding sent to shelters is not an adequate indicator as it focuses on the flow of resources into the system and not on the result of how effective that system might be. There is a place in policy-making where these kinds of indicators are useful, and this example is not intended to dissuade this type of indicator from being used. But there needs to be a well-thought-out connection between indicators and the goal they are meant to inform.

"What are the things that we measure? So what if 3000 kids have swimming lessons? What impact is that actually making in your life? [What we have found is that] people are asking for more opportunities for spontaneous play or social gathering, and for more ability to have relaxation, meditation and rejuvenation."

– Cynthia Watson

Adaptation and Evolution

The final piece that all measurement projects require is a commitment to adaptation and evolution as their populations grow and change. The first iteration of a model will undoubtedly require further enhancement and, as better indicators are discovered, or new goals developed, the model will grow to better represent its community. That growth is only possible if all stakeholders are involved in the process, meaning community members, business leaders, Indigenous populations, and governing bodies need to foster an open dialog about the measurement model.

Interpretation of Data

There also needs to be an understanding of the terms used in the model and an explanation as to why data is structured the way it is. As soon as someone is being left out of that conversation, the model is no longer representative of the entire community. It takes a village to raise a child and in the same vein – when thinking about Calgary - it takes a city to measure what matters.

There also needs to be an understanding of the terms used in the model and an explanation as to why data is structured the way it is. As soon as someone is being left out of that conversation, the model is no longer representative of the entire community. It takes a village to raise a child and in the same vein – when thinking about Calgary - it takes a city to measure what matters.

"What do I think is important to measure? What do we want to encourage? What we want to encourage a sense of purpose, a sense of belonging, a sense of being part of a river of life, that [will] continue after I'm gone so that I've made a contribution to that future that's going to come whether I'm part of it or not."

– Colin Jackson



Appendix A

Participants in the *Measuring What Matters* Podcast who have contributed quotes to this paper are listed below by alphabetical order along with their associated organization. Full versions of the podcasts can be found on all major streaming services (Spotify, Google & Apple podcasts) under the name ‘The *Measuring What Matters* Podcast’

Jacie Alook - Native Counselling Services of Alberta

Jacie is a nehiyaw iskwew (Cree woman) from Treaty 8 territory, member of the Bigstone Cree Nation. Her family originates from Wabasca, Alberta. Currently Jacie works to support collaboration at the local, municipal, and national level, as the Community Engagement & Partnership Coordinator, leading the Calgary Indigenous Sharing Network, with the non-profit, non-political Indigenous service organization, Native Counselling Services of Alberta. Her involvement with community is rooted in desire to create and deepen relationships for unity, wellness, and sense of belonging. Her two greatest teachers are her daughters, instilling curiosity for life.

Sara Bateman- Blue Castle Consulting

With 15 years in public and corporate community investment and the non-profit sector, Sara Bateman brings a broad perspective of the philanthropic and non-profit organization challenges and opportunities. As a graduate of the Social Innovation Graduate program at the University of Waterloo, Sara brings an adaptive strategy and system-thinking lens to her work.

In June 2021, Sara stepped away from her role as the Director, Community Investment and Impact with Calgary Arts Development. In that role, she became involved in the Measure What Matters Governance and Steering Committee. She now runs a consultancy working with clients to develop emergent strategies for system change initiatives, developmental evaluation and learning experiences. A self-professed nerd about impact and evaluation, Sara helps clients identify the data and key patterns that are important to demonstrate impact and change in community and in their organizations.

Colin Jackson – Calgary on Purpose

Colin Jackson currently serves as Co-Chair of Calgary on Purpose, Senior Scholar at the University of Calgary Graduate College, Board Secretary of the National Theatre School of Canada and is a member of the Arizona State University New American Council for Art and Design. He is the recipient of the Queen’s Golden and Diamond Jubilee medals and a Canada Council Senior Arts Award. He is a Fellow of the Royal Society of Arts, holds a BA from the University of Manitoba and a MPA from Harvard Kennedy School. The Colin Jackson Theatre in Winnipeg is named for him.

Katherine McGowan - Assistant Professor at Mount Royal University

Katharine McGowan is an Associate Professor of Social Innovation at Mount Royal University’s Bissett School of Business. She is a research fellow at the Institute for Community Prosperity and an Affiliated Researcher at the Waterloo Institute for Social Innovation and Resilience. Her research and teaching focus on resilience and systems thinking in addressing complexity, with a particular interest in historical crises, disruptive innovations and systems transformation over time. She is also an educator/faculty champion for MRU’s Map the System Competition. She holds a PhD in Canadian History from the University of Waterloo.

James Stauch – Institute for Community Prosperity

James has developed or co-created social innovation, leadership, and systems-focused learning programs for both undergraduates and the broader community. A former foundation executive and philanthropy and social change consultant, James currently serves as a Director on the Board of Alberta Ecotrust, as an Advisor to the Nonprofit Resilience Lab, and on the Editorial Advisory Board of *The Philanthropist*. He is the lead author of an annual scan of trends and emerging issues, produced in partnership with Calgary Foundation. His recent contributions to community-partnered knowledge production include *Aging and Thriving in the 21st Century*, *The Right to Eat Right: Connecting Upstream and Downstream Food Security*, *Merging for Good: A Case-Based Framework for Nonprofit Amalgamations*, *The Problem Solver's Companion: A Practitioners' Guide to Starting a Social Enterprise*; *In Search of the Altruism: AI and the Future of Social Good*, and *A Student Guide to Mapping a System*. James is a member of Catalyst 2030, and a Fellow of the Royal Society of Arts.

Cynthia Watson – Vivo

Cynthia Watson is Chief Evolution Officer of Vivo for Healthier Generations Society, a charity on a mission to inspire a wholistic mindset for healthy living. She loves to tinker in the realms of social innovation, service design and social economics to co-create solutions with communities at a systems level. She is happiest leading with heart in a lifelong quest to embolden others to make a bigger difference in the world. In her parallel universe, she Co-chair of the ActiveCITY Collective, passionate organizations leading a sustained, collaborative commitment to citizen well-being through Calgary's emerging active economy sector. She is a graduate of the Royal Roads University Master of Arts in Leadership.

Kylie Woods – Chic Geek

Kylie is a passionate social entrepreneur who believes in leading through listening and vulnerability. She's the founder of Chic Geek, a non-profit committed to building gender diversity in technology. Through its Career Pathing initiative, Chic Geek helps intermediate women in technology achieve greater career visibility and invest in their strategic professional networks. Kylie was named Top 40 Under 40 by Avenue Magazine and has been profiled in Metro News as one of "Calgary Heroes." She has also been recognized as a "Need to Know" in Alberta Venture and profiled by the Mount Royal University Summit Magazine in their feature on Women in STEM. Kylie represented Alberta in the prestigious International Visitors Leadership Program hosted by the US Department of State and was a voice for women in STEM on an international stage. Proud mom of identical twins, Lily and Mae, Kylie brings the lessons learned through her journey as a social entrepreneur into her role as a parent.

Endnotes

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