

# Social Infrastructure Impact Measurement Environmental Scan

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#### **EXECUTIVE SUMMARY**

The escan revealed that the identification and measurement of the social benefits of social infrastructure is still an emerging field. There are not consistent definitions of the social benefits and social infrastructure itself, especially in terms of definitions that are measureable.

However, seven social benefits of social infrastructure were identified in the references. These included social capital, trust, sense of belonging/community, volunteerism, participation in community activities, safety and wellbeing.



From the information that exists on the social benefits of infrastructure, it appears that measuring baseline and changes across time in social capital is important. Additionally, changes in trust (between residents and with the municipality) and sense of belonging/community should also be captured. The remaining benefits of volunteerism, participation in community activities, wellbeing, and safety show slightly less support.

In terms of measurement, there were five methodologies identified for appraising the social benefits of social infrastructure. They included balanced scorecard, indexes, social impact assessment, social return on investment (SROI), and surveying. There was a similar number of references identified for each of the methodologies discussed. However, given that there has been a previous SROI conducted on the Beltline Aquatic and Fitness Centre, this may be the most promising measurement tool.

# TABLE OF CONTENTS

EXECUTIVE SUMMARY
TABLE OF CONTENTS
INTRODUCTION
DATABASE SEARCHES
SOCIAL IMPACTS
Participation in Community Activities5
Safety5
Sense of Belonging/Community5
Social Capital
Trust
Volunteerism
Wellbeing
MEASUREMENT
Balanced Scorecard7
Indexes7
Social Impact Assessment
Social Return on Investment
Surveying
CONCLUSIONS
REFERENCES

#### **INTRODUCTION**

The Beltline and Inglewood Pools Program includes making immediate operational changes aimed at increasing the sustainability of the Beltline Aquatic and Fitness Centre (BAFC) and Inglewood Aquatic Centre (IAC) while also identifying the long-term, sustainable service alternatives and targeted investments to maximize community and social benefits in the communities around these facilities.

In support of this work, there was interest in conducting an environmental scan of literature on the measurement of the social impact of social infrastructure to inform the Beltline and Inglewood Pools Program. It was hoped that this scan could inform measurement of the existing social impact of the BAFC and IAC, and how to measure changes in these benefits across time should there be changes made in the recreation and community services provided at these facilities.

Rather than confining the scan to the social benefits of recreational and aquatic facilities, it was decided to broaden the search to the measurement of the benefits of social infrastructure. This approach was chosen as the BAFC and IAC currently host a variety of activities beyond recreation, and there are opportunities to expand these offerings. Social infrastructure for the purposes of this escan was defined as long term physical assets that facilitate social services. The term social infrastructure has previously been used to describe health care and education facilities, social and affordable housing, and buildings related to justice, emergency and civic services (Levy, Jacobs, Abello, n.d.). Social infrastructure refers not only the facilities themselves, but also how that infrastructure is activated.

#### DATABASE SEARCHES

Literature on social infrastructure impact measurement was identified through database searches of the following databases:

- EBSCO (Sociology Source Ultimate);
- Muniscope;
- Google Scholar and;
- Google.

Databases were searched using the following keywords:

Social	Infrastructure	Measurement
social	community	impact
	community gathering space	indicator(s)
	facility	measure(s) (ment)
	fitness centre	metrics
	fitness facility	social impact assessment
	municipal	social return on investment
	pool	
	recreation (facility) (site)	
	social infrastructure	

For Google and Google Scholar the first five pages of results were searched for relevance. Additionally, relevant literature was identified from City of Calgary, Calgary Neighbourhoods and Calgary Recreation staff.

The literature identified discussed both the social impacts of social infrastructure and/or the measurement of those impacts. As such these, concepts will be discussed separately in the following sections.

#### SOCIAL IMPACTS

The search revealed that while a number of social impacts of social infrastructure have been identified, more evidence is needed about "why it is important to the health, wellbeing and the liveability of a community" (Davern et al., 2017).

Similarly, Mawby, Armstrong and Hay (2009) note that there is a paucity of research in the area of social benefits, while there is healthy amount of literature on its economic benefits. This suggests that the literature on this topic is still developing.

The social impacts that have been identified to date include: participation in community activities, safety, sense of belonging/community, social capital, trust, volunteerism and wellbeing. Each are described in more detail below.

# **Participation in Community Activities**

Two references discussed how social infrastructure provides a venue for residents' participation in community activities (Roskruge, Grimes, McCann & Poot, 2011; Klinenberg, 2018). As Klinenberg (2018, p. 32) states:

"most leading thinkers about social and civic life have extolled the value of voluntary associations like bowling leagues and gardening clubs without looking closely at the physical and material conditions that make people more or less likely to associate. But social infrastructure provides the setting and context for social participation".

Details of how this aspect was asked and collected from residents was not provided in the references. Measurement of participation in community activities should be considered for inclusion in measurement plans for social infrastructure.

## Safety

One reference identified that social infrastructure can be associated with feelings of safety within one's community (Williams & Pocock, 2009). Also, Casey (2005) found a relationship between reduced crime and social infrastructure. There was no information provided about how a community's safety or feedback on perceived safety was collected. Aspects of community safety, actual or perceived, may be considered for the measurement of the benefits of social infrastructure.

## Sense of Belonging/Community

Three references discussed how the presence of social infrastructure in the community, and the activation of that infrastructure, can contribute to residents' sense of belong and/or their sense of their being part of a community (Australian Urban Observatory, n.d.; Rac 2014; Williams & Pocock, 2009). The authors did not describe how residents were asked about these concepts. The references suggest that both users and adjacent residents' sense of belonging and community should be measured to collect a baseline and to see if this sentiment changes across time.

# Social Capital

The strongest evidence for the social impact of social infrastructure was related to the concept of social capital. Social capital refers to people's relationships and interpersonal networks (Klinenberg, 2018). There are two types of social capital, bridging, and bonding. Bridging involves the development of horizontal connections between residents who belong to different types of communities and backgrounds (Cowen & Parlette, 2011). Bonding on the other hand, happens within communities and those of similar backgrounds (Cowen & Parlette, 2011). Some have suggested another form of social capital, linking, which is related bridging. It involves vertically linking individuals who may differ in where they sit in a hierarchy, such as socio-economic status (Claridge, 2018).

A total of nine references noted the development of social capital due to social infrastructure (Australian Urban Observatory, n.d.; Broad & Ortiz, 2018; Glaser, Kominers, Luca & Naik, 2015; Grimm, 2018; Klinenberg, 2018; Millar & Rappaport, 2009; Roskruge, Grimes, McCann & Poot, 2011; University of Texas at Dallas, n.d.; Williams & Pocock, 2009). Klinenberg (2018, p. 5) describes how this occurs:

"When social infrastructure is robust, it fosters contact, mutual support, and collaboration among friends and neighbors; when degraded, it inhibits social activity, leaving families and individuals to fend for themselves. Social infrastructure is crucially important, because local, face to face interactions – at the school, the playground, and the corner diner – are the building blocks of all public life. People forge bonds in places that have health social infrastructures – not because they set out to build community, but because when people engage in sustained, recurrent interaction, particularly while doing things they enjoy, relationships inevitably grow." In terms of measurement it is important to note that there is some variability in the definition of social capital and its components, which can make its measurement more challenging (Williams & Pocock, 2009). Additionally Grimm (2018) notes, there is no leading practice for measuring the concept of social capital. Although several indicators have been identified and tested for measuring bridging, bonding and linking capital.

The following indicators have been used or suggested in the measurement of social capital:

- civic engagement (Williams & Pocock, 2009);
- civic leadership and involvement (Casey, 2005);
- diversity of friendships (Casey, 2005);
- donations (Casey, 2005);
- faith based engagement (Casey, 2005);
- informal socializing (Casey, 2005);
- network density (Williams & Pocock, 2009);
- political participation conventional and protest politics (Casey, 2005);
- reciprocity (Williams & Pocock, 2009);
- social control (Williams & Pocock, 2009);
- social support (Williams & Pocock, 2009);
- trust inter-racial and social (Casey, 2005; Williams & Pocock, 2009) and
- volunteering (Casey, 2005).

Williams & Pocock (2009) also emphasized the importance of measuring the precursors to social capital, such as an individual's opportunities for interactions, and capacity to develop social ties and networks. They also discussed collecting information on residents' life stage as social capital can look different for dual income families, new mothers, the elderly, and teenagers in particular.

#### Trust

Three references identified increased trust, either between residents or with the municipality, as a result of social infrastructure (Grimm, 2018; Rac, 2014; Roskruge, Grimes, McCann & Poot, 2011). Trust is developed as diverse residents have opportunities to interact with one another, and municipal staff, within social infrastructure. As with other concepts, details on how trust has been measured were not provided. Trust has also been identified as an indicator of social capital. As multiple references identified this concept, trust should likely be incorporated into any measurement of social benefits.

#### Volunteerism

Three references identified volunteerism as a social benefit of social infrastructure (Broad & Ortiz, 2018; Cowen & Parlette, 2011; Grimm, 2018). Neither of the references cited questions that were asked to gauge the level of volunteerism within social infrastructure. Similar to trust, volunteerism was identified as one of the social capital indicators. There appears to be some support for incorporating measures of volunteerism into measurement plans assessing social infrastructure.

#### Wellbeing

One reference, Davern et al. (2017), found a relationship between the presence and mix of social infrastructure and residents' subjective wellbeing. Conversely, they note that where there has been poor planning or a lack of investment of social infrastructure, health inequities have emerged as this type of infrastructure helps to address many of the social determinants of health.

In this study wellbeing was measured through respondents' satisfaction in seven areas of their lives: standard of living; health; achievements; personal relationships; community connectedness; safety and future security. Each of these areas were rated on an 11-point scale from 0 (no satisfaction at all) to 10 (extremely satisfied).

As only one reference identified wellbeing as a concept related to the social benefits of social infrastructure, it is questionable as to whether it should be collected to assess the social value of infrastructure.

## MEASUREMENT

The escan has revealed some challenges with respect to the measurement of social benefits of social infrastructure. For example Davern et al. (2017) notes that "social infrastructure requires a consistent and measurable definition". Also, Grimm (2018) states "social infrastructure and services are provided in response to the needs of communities, they generate a variety of explicit and implicit benefits but these are difficult to measure".

Despite these difficulties a few methodologies have been used or proposed to measure the social impact of social infrastructure. They include balance scorecard, indexes, social impact assessment, social return on investment, and surveying. Each of these methodologies are described in more detail below.

#### **Balanced Scorecard**

A balanced scorecard includes five measures beyond the traditionally reported financial impact of a program, intervention, or infrastructure. These include measures of: financials, customers, business processes, learnings and growth, and social impact (Casalini, n.d.; Cusumano, Caslini, D'Arcangelo, 2018). The specifics of measurement of social impact were not described, as they would have to be tailored to the program, intervention, or infrastructure being reported. Two references described the use of a balanced scorecard to measure the social impact of social infrastructure (Casalini, n.d.; Cusumano, 2018).

#### Indexes

There are two existing social infrastructure indexes, one developed in Australia and one from the United States.

The Australian Urban Observatory's (n.d.) Social Infrastructure Index measures distance to six types of social infrastructure (Community Centres, Culture and Leisure, Early Years, Education, Health and Social Services and Sport and Recreation) and 16 types of services that are housed in this infrastructure. Points are assigned if the type of infrastructure is within a certain distance of residents. These included community centres within a 1000 metre distance, public swimming pools within a 1200 metre distance, and sports facilities within a 1000 metre distance. Higher scores indicate greater access to social infrastructure.

The University of Texas at Dallas (n.d.) have developed a Social Infrastructure Index as well, based on evidence that areas with more social infrastructure are more desirable to live and/or work. The index consists of nine variables (average number of people per community center, average number of people per library, education expenditures per child, five year population growth, parks quality, police spending per officer, poverty rate, technology job growth, volunteer rate). Although it does not measure access to recreational facilities, it measures the number of individuals per community centre and the average number of individuals per library. Index values are currently available for 55 locations in the United States and Canada.

Although neither of these indexes would be applicable for the Flatwater Pools project, they provide some direction of how indicators can be combined into an index to possibly inform the work.

#### Social Impact Assessment

Social Impact Assessment is similar to Social Return on Investment described in the following section, although with fewer steps. It involves developing measureable definitions using the program, intervention, or infrastructure's theory of change. A theory of change is a description of expected outcomes and how those occur related to the program, intervention or infrastructure over the short, medium and long term. Next the social value is defined by listing the three most correlated social indicators with the desired outcomes. Next this social value is translated in a monetary value (Casalini, n.d.). Social Impact Assessment was identified by two references for the measurement of the social impact of social infrastructure (Casalini, n.d.; Cusumano, Caslini, D'Arcangelo, 2018)

#### Social Return on Investment

Social Return on Investment (SROI) is a methodology that is assists in measuring the social, economic, and environmental value of a program, intervention, or set of infrastructure. SROI was identified by three references for measuring the impact of social infrastructure (Broad & Ortiz, 2018; Casalini, n.d.; Cusumano, Caslini, D'Arcangelo, 2018). SROI results in a ratio of the value of the program, intervention, or set of infrastructure relative to the resources invested. For example a 1 to 5 ratio, indicates that every dollar invested results in a \$5 return in benefits. A variety of quantitative, qualitative and participatory methods can be used to identify the social value (BC Housing Research Centre, 2018). There are six stages to the methodology: scoping what aspects will be included and excluded in the SROI and recruiting stakeholders, mapping out the outcomes, collecting evidence regarding the outcomes, establishing if there is an impact, calculating the SROI, and reporting the results (Cusumano, Caslini, D'Arcangelo, 2018). Practitioners must be accredited in the methodology through Social Value Canada (Social Value Canada, n.d.). Advantages of the method are that it distills its findings into a clear benefit and cost ratio. Disadvantages include the challenge of translating the value of a program, intervention or set of infrastructure into quantifiable benefits or savings (Casalini, n.d.).

SROI has previously been applied to social infrastructure. For example, Casey (2005) found that for every dollar invested in such infrastructure, there were ten dollars in savings in terms of improved health and employment, and reduced crime. A SROI was conducted on the BAFC in 2012 (Newlove, 2012). The study reported that when comparing operating costs and revenue, the ratio would be 1: 0.27. However, when the facility's value to stakeholders was measured, the ratio rose to 1: 0.99. The author also estimated a social value of future programming at BAFC to be 1: 2.30.

# Surveying

In describing the social benefits of social infrastructure, some authors appeared to be suggesting surveying facility users and the larger community about the presence or absence of these concepts. However, only Davern et al. (2017) provided an explicit description of how they conducted their surveys and the questions that were asked.

## CONCLUSIONS

The escan revealed that the identification and measurement of the social benefits of social infrastructure is still an emerging field. There are not consistent definitions of the social benefits and social infrastructure itself, especially in terms of definitions that are measureable.

From the information that exists on the social benefits of infrastructure, it appears that measuring baseline and changes across time in social capital is important. Additionally, changes in trust (between residents and with the municipality) and sense of belonging/community should also be captured. The remaining benefits of volunteerism, participation in community activities, wellbeing, and safety show slightly less support.

In terms of measurement, there was a similar number of references identified for each of the methodologies discussed. However, given that there has been a previous SROI conducted on the BAFC, this may be the most promising measurement tool. REFERENCES

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