

# Developing an Evaluation Framework for Metro Vancouver's Sustainable Region Scholars Program

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Megan Gerryts, MPA candidate

School of Public Administration

University of Victoria

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**Client:** Ann Rowan, Program Manager, Collaboration Strategies  
Metro Vancouver

**Supervisor:** Dr. James McDavid  
School of Public Administration, University of Victoria

**Second Reader:** Dr. Kim Speers  
School of Public Administration, University of Victoria

**Chair:** Dr. James MacGregor  
School of Public Administration, University of Victoria

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# Executive Summary

## Introduction

Based on primary and secondary research, this report proposes an evaluation framework for the Sustainable Region Scholars program. The recommendations of this report outline the indicators, data sources, and timeline needed to evaluate the program through annual monitoring reports and an overall evaluation report, produced every three years. In order to address the emerging issues identified during the focus group, additional recommendations for the program are proposed. As a newly launched program, senior staff at Metro Vancouver wish to develop an evaluation framework that can collect data on each intake of Scholars and be used to determine the extent to which the program was successful in achieving its intended objectives.

## Background

Metro Vancouver is a federation of 21 member municipalities, one Treaty First Nation, and one Electoral Area, that provides regional services to the lower mainland of British Columbia. These services include regional planning; the provision of drinking water; the treatment of wastewater; solid waste services; and affordable housing. Additionally, the various Boards of Metro Vancouver act as a forum to address issues of regional importance (Metro Vancouver, 2016, p. 2).

The Sustainable Region Scholars Program is a collaborative program between Metro Vancouver and the University of British Columbia (UBC) to undertake sustainability projects in support of Metro Vancouver's Board Strategic Plan. Administered by the Collaboration Initiatives group within the External Relations department, the program involves Metro Vancouver departments identifying smaller sustainability related projects that they feel would benefit from a Graduate student's relevant research and analysis that is outside their department's existing skillset.

Projects are posted on the UBC website and Graduate students, of any discipline, apply to work on the projects. Guided by a project lead within Metro Vancouver, successful applicants or 'Scholars' are required to work 250 hours on the project, using an agreed upon project outline. UBC handles the contracting of the Scholars, who work for 250 hours over the summer semester (May-August) and are remunerated \$5,000 for their completed project. The first intake of Scholars occurred May to August of 2016. Seven graduate students were contracted to work on sustainability projects that support the goals of Metro Vancouver's Board Strategic Plan.

The objectives of the Sustainable Region Scholars program are:

- To enable staff to increase the quality of actions that support the sustainability goals of the Board Strategic Plan by adopting a more multidisciplinary approach; and,
- To strengthen the collaborative relationship between Metro Vancouver and UBC.

Primary research question for this report: What framework can Metro Vancouver use to evaluate the extent to which the Sustainable Region Scholars Program is achieving its intended objectives?

Secondary and supplementary questions:

1. How can the evaluation framework be created to reflect the needs of the Corporate Planning Committee?
2. What were the project leads' experiences with the first intake of students?
3. How much time was required of project leads to supervise the first intake of students?
4. How can emerging issues with the program be addressed, going forward?

## **Methodology and Methods**

In undertaking the development of the evaluation framework, this project employed a mixed methods approach. The methods are divided into three phases. Firstly, a literature review examined the development and implementation of evaluation frameworks including common methods used in the collection and analysis of data and specific issues to consider when evaluating programs involving multiple projects that aim to advance high level objectives. Secondly, a survey of Metro Vancouver's Corporate Planning Committee, Metro Vancouver's executive level staff, was used to determine the importance of the program outcomes, areas of concern for the program, and how the Committee will most likely use the results of a program evaluation. Thirdly, a focus group was carried out to determine the project leads' experience with the first intake of students, the amount of time they spent in their role as project leads, and to identify any early issues that need to be addressed.

## **Key Findings**

The findings from the literature review identified the importance of evaluation frameworks in reducing uncertainty for decision makers. The review of the professional literature on the development of evaluation frameworks emphasized the importance of engaging with stakeholders throughout the evaluation process, and the many benefits of logic models, including creating a shared understanding of the program with stakeholders. By engaging with stakeholders, the evaluator can ensure that the right evaluation questions are being asked and that the appropriate indicators and data sources will follow from the questions. A review of evaluation reports of similar initiatives determined common methods for addressing issues such as tracking the tangible results of funded projects, forms of evidence for collaboration, and specific challenges to consider when evaluating programs involving multiple projects that aim to advance high-level objectives. Using the findings of the literature review, a program logic model was developed by the researcher (Figure 4, p. 27), with input from the Client and senior staff. The literature review and logic model were used to provide direction for the focus group and evaluation framework.

The findings from the survey of the Corporate Planning Committee identified that the committee wanted the program to support an increase in the quality of Metro Vancouver actions that support the Board Strategic Plan and an increase in the number of actions using a multidisciplinary approach. The committee also identified that they wanted the program to support Metro Vancouver succession planning goals by increasing the pool of qualified applicants to fill future job vacancies. Additional areas of concern were the quality of work being produced by the Scholars and individual project alignment with Metro Vancouver's mandate.

The findings of the focus group revealed that project leads generally had a positive experience with the program, often citing the value of the work produced given the amount paid to the Scholar. The time requirements were more than some of the project leads expected with some being concerned about the amount of direction that the Scholar required and the time spent correcting or editing the Scholar's work. Overall, the time required to supervise the Scholars was on average 25 hours per project lead over the course of three or four months. Project leads identified that where the Scholar was able to provide an approach that differed from the skillsets required within their department, there would not be an ongoing need for their skillset; therefore, the program design would likely not be able to support the succession planning goals that the Corporate Planning Committee had identified. Another emerging issue identified was the academic approach of the Scholar, which was occasionally incongruous to the approach of government and unaware of the political realities of Metro Vancouver. All project leads would participate again, although there was some variation in the level of enthusiasm shown for future opportunities, mostly due to the time required in some cases to give direction to the Scholar and edit their work.

## **Elements of the Evaluation Framework**

Upon analyzing the findings of the three lines of evidence, a specific evaluation question and sub-questions were developed.

*Evaluation question:* To what extent has the Sustainable Region Scholars Program been successful in achieving its intended objectives?

*Sub-questions:*

1. Do the projects undertaken align with the objectives of Metro Vancouver?
2. Has the program demonstrated progress towards an increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan?
3. Has the program demonstrated an increase in the number of staff learning new approaches to research problems?
4. Has the program resulted in UBC graduate students having a positive opinion of Metro Vancouver as an employer?
5. To what extent has the program facilitated collaboration between UBC and Metro Vancouver?

In order to answer these questions, an evaluation framework has been developed (Table 5, p. 46) which identifies the indicators, data sources and the frequency of data collection for each question. A key data source, the survey to be administered to project leads annually (Appendix D) was developed to support the framework. Additionally, a timeline (Figure 9, p. 50) was developed to integrate the evaluation process with the UBC deadlines for contracting the Scholar. The evaluation report will be composed of an analysis and synthesis of the annual monitoring reports from the past three years and additional case studies (Figure 10, p. 50).

In response to the emerging program issues identified through the focus group, additional recommendations are also made that can be implemented with the next intake of students. Recommendations focus on placing an increased emphasis on a multidisciplinary approach in the development of the project outline; screening applicants for requirements or skills specific to the project; establishing an 'Introduction to Metro Vancouver' event to familiarize Scholars with the Metro Vancouver context; formalizing the sharing of project results; presenting the monitoring report annually to the Corporate Planning Committee; and, developing an evaluation action plan.

This report provides a proposed evaluation framework for Metro Vancouver's newly launched Sustainable Region Scholars program. The findings of this report should provide immediate value for Metro Vancouver and allow the organization to implement the recommendations with the next intake of students. By implementing the proposed evaluation framework the uncertainty will be reduced for senior staff when making decisions around the program; ultimately, contributing to the culture of evidence-based decision making within Metro Vancouver.

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## 1.0 Introduction

Performance management has been a growing movement throughout North America and the rest of the world, expanding beyond the public sector to also include the private and independent sectors (Patton, 2008, p. 31). The success of performance management depends on having relevant and accurate information about how programs and policies have been implemented and how they are performing (McDavid, Huse, Hawthorn, 2013, p. 39).

Metro Vancouver is seeking a defined framework for evaluating a newly launched collaborative program with the University of British Columbia (UBC). With an increased need to take action on the directions in the Board Strategic Plan in more innovative ways and strengthen relationships with academic partners, Metro Vancouver launched the Sustainable Region Scholars Program in 2016.

The issue that this Master's Project addresses is that Metro Vancouver needs a framework for evaluating the Sustainable Region Scholars Program in order to determine to what extent the program is meeting its intended objectives. Metro Vancouver does not know if the program will meet its intended objectives and whether participating in the program will have negative implications for the project leads.

As this is a new program, Metro Vancouver wishes to develop an evaluation framework that can be administered with each intake of students to assess program performance and support program adjustments. The data will be reviewed periodically and will then be used to improve on the impacts and processes of the program.

### 1.1 Project Client

Metro Vancouver is a federation of 21 municipalities, one Electoral Area and one Treaty First Nation committed to the collaborative provision of core services and integrated planning in a manner that promotes livability and sustainability throughout the broader regional community. Operating under provincial legislation, Metro Vancouver is comprised of four separate legal entities:

- Greater Vancouver Regional District (GVRD)
- Greater Vancouver Sewerage and Drainage District (GVS&DD)
- Greater Vancouver Water District (GVWD)
- Metro Vancouver Housing Corporation (MVHC)

The GVRD, GVWD, GVS&DD and MVHC are each governed by a separate Board of Directors that consists of elected representatives from the member jurisdictions. Through the Boards of the separate legal entities, Metro Vancouver takes on three important roles in the region: delivery of core services, regional planning, and being a political forum (Metro Vancouver, 2016, p. 2).

**Deliver Core Services.** Metro Vancouver provides core utility services related to drinking water, sewerage, and solid waste disposal to members. Metro Vancouver also provides Regional Parks and affordable housing directly to residents.

**Regional Planning.** Metro Vancouver carries out planning and regulatory activities related to the three utilities as well as air quality, regional growth and Regional Parks. At the Board level, strategies and management plans are developed and implemented on topics of regional interest.

**Act as Regional Forum.** Metro Vancouver serves as the main political forum for discussion of issues of regional interest.

As an organization, Metro Vancouver is comprised of nine departments and employs around 1500 people to carry out its roles. Figure 1 depicts the organizational structure of Metro Vancouver.



**FIGURE 1. METRO VANCOUVER ORGANIZATIONAL STRUCTURE**

Metro Vancouver’s direction and priorities are outlined in the Board Strategic Plan and seven Regional Management Plans.

While Regional Management Plans identify longer term direction, the Board Strategic Plan sets priorities for the current sitting of the Board, 2015 to 2018 (Metro Vancouver, 2015, p. 13). All priorities are identified as ‘Strategic Directions’ in the following eight areas:

- Regional Federation
- Regional Planning
- Air Quality and Climate Action
- Regional Parks
- Housing
- Liquid Waste
- Water
- Solid Waste

## **1.2 Collaboration with the University of British Columbia**

Metro Vancouver has a long history of partnerships with the University of British Columbia (UBC). Since the university is located on the University Endowment Lands (UEL), which is a part of Electoral Area A, the Greater Vancouver Regional District (GVRD) has been providing local government services to the Electoral Area since the GVRD's incorporation in 1967 (Woodward, 1993, p. 2).

The intention for increased collaboration with external partners was captured in one of the directions of the Board Strategic Plan. Under the Regional Federation area, a strategic direction is to “Develop relationships and engage with the broad range of stakeholders involved in pursuing a livable region, including businesses, academic institutions, non-governmental organizations and community groups” (Metro Vancouver, 2015, p. 17).

In late 2014, senior staff from UBC and Metro Vancouver began discussing ways to increase collaborative opportunities between the two organizations. The result was a *Strategic Collaboration Memorandum of Understanding* (“the MOU”) that was signed in December of 2015. The MOU focuses both organizations’ efforts on potential initiatives in three areas: Research, Learning and Innovation; Operations; and Regional Prosperity (Intergovernment and Finance Committee, 2015, p. 71).

Section 8.2 of the MOU identified that “the Parties will endeavour to identify new opportunities to share knowledge and research findings, jointly undertake research to further the Parties’ individual and shared goals, and collaborate in the development of approaches designed to address important regional and global sustainability challenges” (Intergovernment and Finance Committee, 2015, p. 77). In support of the collaborative relationship identified in the MOU and the sustainability goals of the Board Strategic Plan, Metro Vancouver launched the Sustainable Region Scholars Program.

## **1.3 Sustainability Scholars Program / Sustainable Region Scholars Program**

Metro Vancouver’s Sustainable Region Scholars program is a part of UBC’s broader Sustainability Scholars Program, which was created to allow Scholars to apply their research skills and contribute to advancing organizational sustainability goals (The University of British Columbia, 2016). UBC’s program was originally created in 2010 as a partnership with the City of Vancouver to enable the City to use graduate students to apply their research skills to advancing the Greenest City 2020 Action Plan (The University of British Columbia, 2016). The program has since been expanded to include other partner organizations due to the success of the City of Vancouver’s collaboration with UBC. The success of the City of Vancouver program inspired Metro Vancouver to launch the Sustainable Region Scholars Program. When the program was launched, Metro Vancouver developed their own program objectives as outlined in the following section.

## **Program Structure**

The Sustainable Region Scholars Program is managed within Metro Vancouver by the Collaboration Initiatives group within External Relations. The group works closely with staff from the UBC Sustainability Initiative's Teaching, Learning and Research Office to coordinate the logistics of the program.

Specifically, the program involves Metro Vancouver departments identifying sustainability related projects that they feel would benefit from a Graduate student's relevant research and analysis that is not available from within their departments' existing skillsets. The program is open to graduate students from any discipline, so there is potentially a wide range of academic disciplines applying for each project.

Each project specifically lays out how the project relates to the organization's sustainability goals and the directions within the Board Strategic Plan that it supports. In the 2016 intake of students, seven project leads from five of Metro Vancouver's departments put together project proposals, which graduate students, or 'Scholars' applied to work on. UBC provided Metro Vancouver with a shortlist of suitable candidates for each project. Metro Vancouver reviewed the resumes, interviewed appropriate candidates, and advised UBC of their preferred candidates. UBC handled the hiring of the students. The seven successful candidates then worked with the project leads to apply their research skills to complete the projects within an agreed upon timeframe. For the 2016 intake, Scholars were hired to work beginning in late May or early June and aimed to complete their projects by August 2016. Scholars are required to work 250 hours on the project and are compensated \$5,000.

## **Program Objectives**

The Sustainable Region Scholars Program has the following vision:

*To use the skills and expertise of graduate students to enable Metro Vancouver staff to increase the quality of actions that support the sustainability goals of the Board Strategic Plan by adopting a more multidisciplinary approach, while building a strong collaborative relationship with UBC.*

The two over-arching objectives of the program are:

- To enable staff to increase the quality of actions that support the sustainability goals of the Board Strategic Plan by adopting a more multidisciplinary approach; and,
- To strengthen the collaborative relationship between Metro Vancouver and UBC.

The Board Strategic Plan contains 22 priorities for Metro Vancouver with specific actions to accompany each priority (Metro Vancouver, 2015). Each completed project is intended to advance one or more of the goals of the Board Strategic Plan using an approach not usually used within the department. Each project has a focus on some aspect of sustainability and therefore relates to the first strategic direction of the plan:

1. Use livability and sustainability objectives to guide Metro Vancouver services and operations
  - 1.1 Incorporate strategies and actions into all Metro Vancouver functions to mitigate and adapt to climate change

- 1.2 Improve the productivity of significant Metro Vancouver infrastructure by assessing the opportunities to achieving multiple regional objectives including the:
  - Recovery of resources and energy; and,
  - Transition to clean or renewable resources for energy
- 1.3 Ensure a triple bottom line analysis informs decisions on significant policies and projects

Additionally, each project is intended to relate to a more specific sustainability objective contained within the individual functions of the Strategic Plan such as Water Services or Solid Waste Services.

The second over-arching objective is to strengthen the collaborative relationship between Metro Vancouver and UBC. Since Metro Vancouver and UBC both have an interest in sustainability research, it is intended that the connections made with graduate students will lead to an increase in the number of collaborative projects of mutual benefit to both parties, that will advance Metro Vancouver's sustainability objectives. As noted throughout the report, the second objective of the program was revised following the focus group, as the initial intention of having the program support succession planning goals was discovered to be an unlikely outcome of the program.

The program launched with its first intake of students in the summer semester of 2016. The total budget for this intake was \$35,000.

## **1.4 Project Objectives and Research Questions**

This report seeks to answer the following research questions:

Primary research question: What framework can Metro Vancouver use to evaluate the extent to which the Sustainable Region Scholars Program is achieving its intended objectives?

Secondary and supplementary questions:

1. How can the evaluation framework be created to reflect the needs of the Corporate Planning Committee?
2. What was the project leads' experience with the first intake of students?
3. How much time was required of project leads to supervise the first intake of students?
4. How can emerging issues with the program be addressed going forward?

This project sought to answer these questions by reviewing primarily professional literature on the development of outcome oriented program evaluations and examining the evaluation of similar programs, developing a logic model of the program, conducting a survey of the Corporate Planning Committee, and conducting a focus group with the project leads. These lines of evidence have been used to create an evaluation framework that Metro Vancouver can use to determine the extent to which the Sustainable Region Scholars Program is able to achieve its intended objectives. Additional recommendations are offered to address emerging program issues.

## **1.5 Organization of Report**

Following this introduction, this report is organized into seven sections. Section Two gives an overview of the methodology and methods used in this report. This section details the primary

and secondary data collected and concludes with the limitations and delimitations of the project. Section Three presents the findings of the literature review including a brief overview of the stages in designing an evaluation framework and a review of evaluations of similar programs. The literature review ends with a presentation of the program logic model which forms the conceptual framework of this report. Section Four presents the findings of the survey of the Corporate Planning Committee including the main themes that emerged that will be incorporated into the evaluation framework. Section Five presents the findings of the focus group with project leads including the program issues for consideration. Section Six forms the discussion of all of the findings from the primary and secondary data collection. Section Seven presents the proposed evaluation framework and makes additional recommendations for the program going forward. Finally, Section Eight concludes the report.

## **2.0 Methodology and Methods**

In undertaking the development of an evaluation framework, this project employed a mixed methods approach. The methods are divided into three phases. Firstly, the literature review examines key works in the development and implementation of evaluation frameworks including common methods used in the collection and analysis of data and specific issues to consider when evaluating research collaborations that aim to advance high level objectives. Secondly, the survey of Metro Vancouver's Corporate Planning Committee was used to determine the importance of the program outcomes, areas of concern for the program, and how the Corporate Planning Committee would most likely use the results of a program evaluation. Thirdly, the focus group was carried out to determine the project leads' experience with the first intake of students, the amount of time they spent in their role as project leads, and to identify any early issues that need to be addressed. This section provides more detail on these methods including their limitations and delimitations.

### **2.1 Methods – Secondary Data Collection: Literature Review**

The goal of the literature review was to develop an understanding of the development and implementation of outcome oriented evaluation frameworks and to review the methods used for programs similar to the Sustainable Region Scholars program. A majority of sources reviewed for this report are grey literature that are not peer-reviewed, but are instead aimed at practitioners within the public sector who seek to design and implement their own program evaluation. A review of evaluation reports of programs with similar objectives to the Sustainable Region Scholars Program was undertaken to determine specific methods and strategies used to determine progress on objectives.

The search targeted program evaluation methods, guides, handbooks, and evaluation reports, with a focus on the Canadian public and non-profit sector where possible. Internet search databases were used including Google, Google Scholar and the University of Victoria Library database. Both published and unpublished articles, books, reports and guides were included in the search. The reference list of relevant literature was scanned to find further sources for review. Key search terms included variations on program evaluation development, guides, frameworks, methods, logic models and outcome measurement. Searches were conducted for program evaluation reports within the Canadian Federal Government. Key search terms for these reports included variations on research, grant, collaborative, and innovation.

### **2.2 Methods – Primary Data Collection: Survey**

The goal of the survey was to develop an understanding of the most important program outcomes, issues and likely uses of the program evaluation results from the perspective of the upstream stakeholders of the program, the Corporate Planning Committee. The Corporate Planning Committee, which consists of the Chief Administrative Officer and senior level staff, are responsible for providing overall leadership to the organization and strategic and administrative advice to the Boards and Committees (Metro Vancouver Board Workshop, 2016, p. 166). A survey was chosen as the most appropriate method, since the data establishes a comprehensive view

of the areas of importance and the areas of concern and the survey was administered and completed quickly.

Purposive sampling was used, since the Corporate Planning Committee (n=9), as major stakeholders in the program, were determined as having valuable insight that would shape the direction of the evaluation framework (Babbie & Benaquisto, 2014, p. 163). At the time that the survey was administered the position of General Manager of Parks, Planning and Environment was vacant.

The survey (Appendix A) was a mixture of open and closed-ended questions and was designed with input from the client. A majority of the questions in the survey were matrix questions. This allowed the respondents to give input on many different program outcomes and issues in a short amount of time (Babbie & Benaquisto, 2014, p. 240). The survey had a 100% response rate by Corporate Planning Committee members.

The survey primarily used ordinal-type questions; therefore, these types of questions were analyzed by examining the frequency of responses. Averages were not shown, since this does not show a true representation of the data (Allen & Seamen, 2007). The frequency of responses were used to determine where the areas of consensus were for the Corporate Planning Committee, particularly in what they see as the most important program outcomes. The areas of disagreement were also noted. The survey also included two open-ended questions where the respondents had the opportunity to provide further comments and identify any further areas of concern.

### **2.3 Methods – Primary Data Collection: Focus Group**

The goal of the focus group was twofold. Firstly to determine the project leads' experience with the first intake of students, including identifying any initial outcomes of the program. Secondly, to determine how much staff time was required by participating in the program. This estimated the amount of time project leads (n=7) spent mentoring the Scholar from May to August 2016. This information was used to complete the logic model. Information from this focus group was used to inform the evaluation framework going forward and to allow any early issues with the program to be identified.

The focus group of project leads was held in September, 2016 when the first intake of Sustainable Region Scholars was complete. The focus group was held at Metro Vancouver Head Offices during regular office hours. The participants of the program were keen to share their experiences with the program and were also very interested in hearing the experiences of the other project leads, and several themes emerged throughout the course of the discussion. The focus group guiding questions can be found in Appendix B and a list of project titles can be found in Appendix C.

The focus group format was chosen in order to observe how respondents talk and interact about the program (Morgan, 1997, p. 4). Although individual interviews are often favoured for their ability to gain an in-depth understanding of the respondent's opinions and experiences, focus groups can widen the range of responses and help participants share and compare their experiences (Babbie & Benaquisto, 2014, p. 336).

The focus group discussion was audio recorded. The responses were analyzed using an inductive approach in that the researcher allowed themes to emerge from the data (Thomas, 2006, p. 238). The inductive approach is appropriate since it allows the raw data to be condensed into a brief summary format and allows links between the research objectives and the summary findings (Thomas, 2006, p. 238).

## **2.4 Project Strengths, Limitations and Delimitations**

The strengths of this project include the specific knowledge gathered through the literature review relevant to the project, the evaluation framework being designed to suit the needs of the stakeholders that will use the results, and the focus group identifying any early issues with the program. Each of the methods ensures that the evaluation framework is being designed to suit the unique needs of Metro Vancouver rather than adopting a 'one size fits all' approach.

Limitations to this project include the use of the survey for the Corporate Planning Committee. While providing a convenient snapshot of the priorities, using ordinal type questions means that the true intent of responses is not always known, whereas interview responses are better able to convey the person's opinions and priorities (Babbie & Benaquisto, 2014, p. 139). Additionally, the absence of the Parks, Planning and Environment General Manager in the survey may have affected the results, since there were more members representing the Centralized Support Program, an area of the organization that do not directly deal with the provision of services.

The focus group method has some disadvantages including being a less naturalistic environment for observing respondents (Morgan, 1997, p. 8). The group format also gives the researcher less control over the direction of the conversation and the group dynamic may affect the responses given (Babbie & Benaquisto, 2014 p. 336). There could also be a tendency for the project leads to over-state the value of the projects that were received in order to ensure they receive funding for future research even if the quality of the research was not worth the amount paid.

This project may be affected by the status of the researcher as an employee of Metro Vancouver. Particularly, the focus group responses may have been different if they were provided to a neutral third party. The respondents were assured that their responses would be anonymous in the dissemination of results.

An important delimitation of the project is that the evaluation framework does not attempt to address all of the needs and priorities of the Corporate Planning Committee. While opinions and values within the committee were at times varied, it is important to identify the over-arching significant issues and use those as a basis for the evaluation framework.

## 3.0 Findings: Literature Review

### 3.1 Introduction

A literature review was conducted to review the development and implementation of evaluation frameworks. The review focuses on the development of evaluation frameworks, common methods used in the collection and analysis of data, and common methods and specific issues to consider when evaluating programs involving multiple projects that aim to advance high-level objectives. Using the findings of the literature review, a program logic model was developed by the researcher (Figure 4, p. 27), with input from the Client and senior staff. The logic model is presented at the end of this section. The literature review and logic model were used to provide direction for the focus group and evaluation framework.

### 3.2 Program Evaluation Basics

The definition of program evaluation used in this project is “the systematic process for gathering and interpreting information intended to answer questions about a program” (McDavid, Huse, Hawthorn, 2013, p. 491). By answering specific questions and making recommendations, program evaluations reduce the level of uncertainty for decision-makers and other stakeholders (Aucoin, 2005, para. 23). The Treasury Board’s *Policy on Evaluation* (2009), that was rescinded July 1, 2016, asserts that evaluation provides an evidence-based neutral assessment of the value for money of government programs (p. 3). However, evaluations have a wider scope than just value for money and can include such issues as program relevance, efficiency of activities, strengths, weaknesses, and the most common reason for evaluation: program effectiveness (McDavid, Huse, Hawthorn, 2013, p. 17; Owen & Rogers, 1999, p. 14).

### 3.3 The Development of Evaluation Frameworks

This section explores existing knowledge in the creation of evaluation frameworks to inform the development of the Sustainable Region Scholars Program evaluation framework.

Consulting the professional literature, the process of developing a program evaluation is often broken down into the following phases:

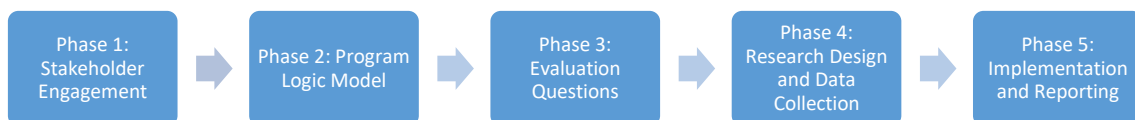


FIGURE 2. THE PHASES OF DEVELOPING AND DOING A PROGRAM EVALUATION

#### Stakeholder Engagement

The professional literature comes to a consensus that program stakeholders need to be involved in the process of developing a program evaluation (Ontario Centre of Excellence for Child and Youth Mental Health, 2013, p. 8; United Way of Greater Toronto, 2004, p. 9). An important planning step is to assess exactly who the main program stakeholders are. These stakeholders

can be identified by determining those who are directly or closely involved in the program, or who have an interest in the program or results of an evaluation (Zarinpoush, 2006, p. 5). The question then becomes to what degree is the stakeholder involved and how much influence should they have over the direction of the evaluation.

A widely agreed upon first step is to identify the stakeholders who are the primary intended users of the evaluation. The evaluator needs to identify the intended users of the evaluation from the many potential stakeholders and use their values to frame the evaluation (Patton, 2008, p. 37). By designing the evaluation according to the needs of these stakeholders, evaluators are increasing the likelihood that the evaluation results will be accepted and used by those in the position to make decisions around the future of the program (Canadian Institutes of Health Research, 2012, p. 14; Fraserhealth, 2009, p. 19; Robson, 2000, p. 16). Much of the professional literature advocates for continued communication with the stakeholder groups throughout the evaluation process to help reduce staff concerns and increase acceptance (Patton, 2012, p. 2; W.K. Kellogg Foundation, 1998, p. 49).

The level of stakeholder participation may depend on a great many factors, including resources, the culture of the organization, and the perceived independence of the evaluator. A review of the professional literature reveals that the primary intended users of the evaluation should be involved in the planning stages to increase the relevance and acceptance of the evaluation results.

### **Program Logic Model**

Aside from stakeholder engagement, an early step in developing a program evaluation is to understand how the program is intended to work and what its intended objectives are (Fraserhealth, 2009, p. 25; McDavid, Huse, & Hawthorn, 2013, p. 47; Zarinpoush, 2006, p. 2). A program logic model is the visual representation of how the program is structured and how the resources and activities are connected to the intended results.

As shown in Figure 3, the structure of a logic model often consists of the following components.



**FIGURE 3. LOGIC MODEL STRUCTURE (TREASURY BOARD OF CANADA SECRETARIAT, 2010)**

The development of the program logic model can serve multiple purposes. Firstly, the process of creating and refining the logic model is valuable for the evaluator and stakeholders as it is an iterative process that clarifies the theory behind the program (McDavid, Huse, & Hawthorn, 2013, p. 79; W.K. Kellogg Foundation, 1998, p. 43). By involving stakeholders in the development of the logic model, they are building a common understanding that will help prevent misunderstandings and confusion later on in the process (Ontario Centre of Excellence for Child and Youth Mental Health, 2013, p. 9; Fraserhealth, 2009, p. 29). Secondly, the logic model ensures that the

evaluation framework is linked to the logic and intended design of the program (McDavid, J., Huse, I., Hawthorn, L., 2013, p. 47; W.K. Kellogg Foundation, 2004, p. 5).

Table 1 shows how the W.K. Kellogg Foundation identifies the ways in which program success and logic models are linked.

TABLE 1: RELATIONSHIP BETWEEN PROGRAM SUCCESS AND LOGIC MODELS

Program Elements	Criteria for Program Success	Benefits of Program Logic Models
Planning and Design	Program goals and objectives, and important side effects are well defined ahead of time	Finds “gaps” in the theory or logic of a program and work to resolve them
	Program goals and objectives are both plausible and possible	Builds a shared understanding of what the program is all about and how the parts work together
Program Implementation and Management	Relevant, credible, and useful performance data can be obtained	Focuses attention of management on the most important connections between action and results
Evaluation, Communication and Marketing	The intended users of the evaluation results have agreed on how they will use the information	Provides a way to involve and engage stakeholders in the design, processes, and use of evaluation

(W.K. Kellogg Foundation, 2004, p. 6)

The logic model for the Sustainable Region Scholars Program will be presented at the end of this section.

### Evaluation Questions

The evaluation questions form the foundation of the evaluation framework. Depending on what question is being asked, the evaluation may focus on the success, need, relevance, appropriateness, technical efficiency, cost-effectiveness and/or adequacy of the program (McDavid, Huse, & Hawthorn, 2013, p. 18). Once again, input from stakeholders is important in this stage, so that areas of concern can be identified and addressed through the evaluation (Blalock, 1999, p. 119; Canadian Institutes of Health Research, 2012, p. 27). The evaluation questions will affect the research design and the appropriate methods of data collection for the evaluation.

There are generally two different purposes for the evaluation that inform what the evaluation question(s) should be: to learn about and improve on the program; or, to judge the overall value and to inform major decision-making (Fraserhealth, 2009, p. 34). Once this decision has been made, the appropriate evaluation question(s) can be determined. The Treasury Board of Canada Secretariat’s *Policy on Evaluation*, focuses specifically on relevance and performance with the following key evaluation questions:

- Is there a continued need for the program?

- Are the program goals aligned with government (organizational) priorities?
- Has the program achieved the expected outcomes?
- Has the program operated in an efficient and cost effective manner?

*(Policy on Evaluation, 2009)*

### **Research Design and Data Collection**

Research design and data collection is the plan and the tools that the evaluator needs to gather the information needed to answer the evaluation questions (Zarinpoush, 2006, p. 12). These tools can be quantitative, qualitative, or both. Different guides will vary on the level of detail provided on the social science side of evaluation. Regardless of the level of detail, many guides stress the importance of using multiple evaluation methods to strengthen the credibility of the results, also known as triangulation (Fraserhealth, 2009, p. 35; Ontario Centre of Excellence for Child and Youth Mental Health, 2013, p. 12; W.K. Kellogg Foundation, 2004, p. 70).

Once the evaluation questions have been determined, the evaluator will need to decide how the questions could be answered and how to gather the information necessary to answer the questions. Evaluation frameworks describe how the questions will be answered through indicators and data sources. Simply put, indicators are what you need to see, hear or read in order to gather tangible, measurable and observable information about the program (Ontario Centre of Excellence for Child and Youth Mental Health, 2013, p. 11). Each indicator and data source should contain a comparison at least implicitly. The typical notation for this comparison consists of 'X' denoting the treatment or program and 'O' denoting the observation (McDavid, Huse, & Hawthorn, 2013, p. 97). Using this notation, two frequently used research designs are the pretest-posttest design: OXO and the after-only design: XO (McDavid, Huse, & Hawthorn, 2013, p. 97). Evaluations can involve different research designs such as experimental or quasi-experimental designs (Babbie & Benaquisto, 2014, p. 352).

The evaluation tools discussed in the literature can be divided into qualitative and quantitative. A review of the literature determined the following six tools to be the most frequently recommended tools in evaluations: surveys, interviews, focus groups, observation notes, document reviews, and administrative data (Fraserhealth, 2009, p. 36; McDavid, Huse, & Hawthorn, 2013, p. 166; Treasury Board Secretariat, n.d., p. 60; W.K. Kellogg Foundation, 2004, p. 73-84; Zarinpoush, 2006, p. 59).

The type of data-collection method used depends on the questions being asked. Some issues to consider during this phase are the resources that will be available for the evaluation including budget and time; the credibility on the instrument being used; and the importance of the information to the evaluation and to the stakeholder (Bergman, 2010, p. 27; W.K. Kellogg Foundation, 2004, p. 72). It is up to the skill of the evaluator to determine when it is appropriate to use a particular tool to answer the question being asked.

The evaluation framework typically gathers the evaluation questions, indicators and data sources into one comprehensive summary table (United Way of Greater Toronto, 2004, p. 8; Zarinpoush, 2006, p. 64). Table 2 shows the typical composition of an Evaluation Framework table:

TABLE 2: TYPICAL COMPOSITION OF AN EVALUATION FRAMEWORK.

Evaluation Question	Indicator	Data Source	Data Collection Method	Frequency of Collection	Research Design or Comparison

(Adapted from United Way of Greater Toronto, 2004, p. 16 and Canadian Institutes of Health Research, 2015, p. 65.)

### Implementation and Reporting

Once the data collection methods have been determined, the evaluator will need to process, analyze and interpret the data. A detailed look at different methods of data analysis is beyond the scope of this literature review. The literature varies significantly in the amount of information that is supplied on data analysis. Basic evaluation guides provide an overview of the difference between quantitative and qualitative data analysis.

When analyzing data, it is important to consider what factors outside the evaluation may be causing outcomes, since programs are embedded in their environment and are subject to its influence (McDavid, Huse, & Hawthorn, 2013, p. 49; W.K. Kellogg Foundation, 2004, p. 95). By developing clear indicators in the evaluation framework (Table 2), the task of interpreting data should be simpler, as the evaluator will know what specifically to look for in the data that is collected and how it is related to the evaluation questions.

Once the data has been interpreted, the findings and recommendations will need to be communicated appropriately to relevant stakeholders. The literature recommends communicating evaluation results in a variety of formats to increase the impact of the evaluation (W.K. Kellogg Foundation, 2004, p. 96; Zarinpoush, 2006, p. 48). The main way to communicate results will be through an evaluation report, but the literature also recommends creating a presentation on the evaluation results, and, if appropriate, using the media to communicate to a wider audience (Fraserhealth, 2009, p. 50; Zarinpoush, 2006, p. 52).

### 3.4 Similar Initiatives

This section reviews program evaluations for initiatives similar to the Sustainable Region Scholars Program in order to determine common methods and strategies used. All evaluations reviewed were carried out in accordance with the Treasury Board Secretariat's *Policy on Evaluation* (2009).

Evaluation reports were reviewed that aimed to advance higher level objectives similar to Metro Vancouver's Board Strategic Plan. Since these evaluations were undertaken according the Treasury Board Secretariat's *Policy on Evaluation* they each evaluated the program's relevance, effectiveness, and efficiency and economy.

Similar to the findings of the previous section, the following data sources were the most common for the initiatives reviewed

- Surveys
- Key Informant Interviews
- Case Examples
- Document/ File Review
- Administrative Data Review
- Partial Benefit-Cost Analysis

In each case where these data sources were used, a specific research design was employed to ensure that data was able to answer the evaluation question.

Since the Sustainable Region Scholars Program includes several different projects, each with their own objectives, that aim to advance higher level objectives, programs such as grants and funding programs were reviewed to determine similar evaluation methods. These programs are not an ideal basis for comparison given the large budgets and program size that exist at the federal government level. In some cases the methods used will not be relevant to the context of a Metro Vancouver program.

Below is a summary of the strategies and tools used by different evaluations to assess success in different areas.

### **Relevance**

A common strategy for program evaluations to demonstrate relevance is through document reviews. Specifically in the case of grant funding programs, individual projects were analyzed to determine their alignment with government priorities. Examples of document reviews included strategic plans, relevant legislation, budget documents, and speeches from the throne (Canadian Institutes of Health Research, 2014, p. 57; Citizenship and Immigration Canada, 2010, p. 15; Goss Gilroy Inc., May 2015, p. 9; Science-Metrix, 2015, p. 36). Interviews and surveys with key informants were also used as a second line of evidence to show the relevance of a program (Canadian Institutes of Health Research, 2014, p. 55).

### **Implementation**

When examining the implementation of a program, evaluations focused on the extent to which the program was administered and delivered in its intended manner (Natural Sciences and Engineering Research Council of Canada, 2016, p. 3). Many evaluations will focus on the administrative efficiency of the program, one strategy used for a funding-type program would be the ratio of administrative costs to total funds awarded (Goss Gilroy Inc., October 2015, p. 21; R.A. Malatest & Associates, 2012, p. 24). Other implementation questions may focus on the timeliness and consistency of administrative duties, measured for example through average application processing times and proportion of applications processed within established service standard times (Citizenship and Immigration Canada, 2010, p. 49).

## Advancing High Level Objectives

A review of the literature revealed how evaluators had attempted to measure the advancement of high level objectives. Many of the reports revealed that the evaluators often translated a high level objective into a more grounded evaluation question, usually attached to a specific action that would ask how, or to what extent, the program had led to this outcome. This evaluation question could then be addressed through an appropriate indicator and data sources. Table 3 provides three examples of how evaluators had attempted to measure high level program objectives.

TABLE 3: INDICATORS FOR HIGH LEVEL OBJECTIVES

High Level Objective	Evaluation Question	Indicator(s)	Data Source	Research Design
Eradication of racism and racial discrimination from society	How has the initiative contributed to federal partners and stakeholders having knowledge, resources and tools to promote inclusion, address racism and discrimination and eliminate barriers to participation?	Evidence that federal partners and stakeholders have knowledge, resources and tools to promote inclusion and address issues of racism and discrimination as a result of the program  Perception and examples provided by key stakeholders	Synthesis of initiative evaluation results  Interviews	Multiple  XO
Increase Canadian capacity for research excellence	To what extent has the program demonstrated research excellence and leadership?	Number and type of research outputs and knowledge dissemination activities undertaken by program participants  Perceived influence of research locally, nationally, and/or internationally	Document review – end of award report  Survey of non-participants  Focus group with participants and non-participants	XO  XO O  XO O
The enhancement of Canada's economy, society, and/or environment within the next ten years	How has the program contributed long-term economic, social, health and environmental benefits to Canada?	Regulatory changes to reduce environmental impacts  Economic benefit	Document review  Cost-benefit analysis	XO  The net-present value of the program's benefit

(Citizenship and Immigration Canada, 2010, p. 39; Canadian Institutes of Health Research, 2015, p. 67; Goss Gilroy Inc., May 2015, p. 28)

### **Attraction and Recruitment of Talent**

Some reports that evaluated the attraction and recruitment of talent focused on higher level objectives such as the perceived prestige associated with an institution or award (Canadian Institutes of Health Research, 2014, p. 15; Science-Metrix, 2014, p. 32). Through document reviews and interviews, specific issues were also explored such as barriers to recruitment and retention with consideration of issues as they were identified, such as barriers to women (Science-Metrix, 2014, p. 32). One evaluation measured program participants' interest in the Science Technology Engineering and Math (STEM) field by asking them to identify increased motivation to pursue informal STEM opportunities or the organization's perception that the program has led to an increase in participants' interest in STEM (Natural Sciences and Engineering Research Council of Canada, 2016, p. 36). Evaluators can then approach this issue at two levels: the reputation of the organization and the barriers to recruitment of talent.

### **Use of Project Results**

Evaluation reports were reviewed that assessed how funded projects had led to tangible results. The review revealed that often case examples, based on multiple sources of information, were used to assess what tangible results had occurred. One evaluation used case examples to demonstrate how projects led to tangible benefits for partners and to determine factors for success, examples were chosen that had demonstrated a tangible impact on partners (R.A. Malatest & Associates, 2012, p. 6). When applicable, some evaluations used site visits to assess the tangible results of a program, such as assessing conservation efforts in Canada's National Parks (Parks Canada, 2014, p. 9).

For projects with less tangible results, evaluations focused on formal methods of knowledge transfer, such as publications, reports, presentations and meetings (R.A. Malatest & Associates, 2012, p. 15). Evaluations that involved project funding used non-funded projects as a control group to compare outcomes (R.A. Malatest & Associates, 2012, p. 15; Science-Metrix, 2014, p. 22).

### **Increased Collaboration**

A review of the literature revealed that many programs that undertook research projects, increased collaboration, particularly in a multidisciplinary and multi-sectoral way, was a stated program outcome. In these cases, the evaluation question would use a variation of "to what extent has the program facilitated multidisciplinary, multisectoral and international collaborations to address research challenges?" (Goss Gilroy Inc., October 2015, p. 3; Performance Management Network Inc., 2012, p. 7). Using this evaluation question, surveys were carried out to establish evidence for whether or not research resulted in multidisciplinary collaborations, tracking the number of collaborations and the variety of organizations involved (Goss Gilroy Inc., October 2015, p. 11; Performance Management Network Inc., 2012, p. 32). Additional evidence was gathered through administrative records, such as tracking funding contributions (Goss Gilroy Inc., October 2015, p. 12).

Case study evidence was used to show evidence of promoting collaborative research such as networking opportunities through conferences and encouraging the creation of joint-projects and cross-project collaboration and network memberships and participation in committees (Goss Gilroy Inc., October 2015, p. 12; Performance Management Network Inc., 2012, p. 32). Further evaluation questions addressed the extent to which the research undertaken met the needs of the partner organization or addressed a significant research challenge (Goss Gilroy Inc., October 2015, p. 14).

### **Challenges Identified**

The review of similar initiatives also identified some key challenges that need to be taken into account when developing and implementing an evaluation framework for the Sustainable Region Scholars Program. A review of the literature found that programs that funded individual projects with a wide scope of program activities found it challenging to assess the overall impact of a program of this nature (Citizenship and Immigration Canada, 2010, p. 10). Also, programs with long-term outcomes such as motivation to apply for a position or motivation to pursue a career in a certain field identified that there was a challenge in measuring these long-term outcomes (Natural Sciences and Engineering Research Council of Canada, 2016, p. 4). Similarly when measuring motivation to apply for a position, a lack of counter-factual analysis is necessary for measuring an outcome in the absence of an intervention, but often it is difficult to attain a comparison group (Natural Sciences and Engineering Research Council of Canada, 2016, p. 4). Another applicable challenge identified was the length of time a program had been in place. Evaluating a program that is in its infancy limits the availability and amount of data (Science-Metrix, 2015, p. 38).

### **3.5 Conceptual Framework: Logic Model**

The conceptual model for this project is illustrated through the program logic model. The Sustainable Region Scholars logic model was developed by the researcher in collaboration with the coordinator of the program with input from senior management.

It was a challenge to create a logic model that focused on the program outcomes that were most important from the stakeholders' perspectives. The logic model was first presented to members of the Corporate Planning Committee prior to them taking the survey. The model was further refined to reflect the Committee's priorities and to reflect the experiences of the project leads. The logic model is presented in Figure 4 below.

## Sustainable Region Scholars Program

*Vision: “to use the skills and expertise of graduate students to enable Metro Vancouver staff to increase the quality of actions that support the sustainability goals of the Board Strategic Plan by adopting a more multidisciplinary approach, while building a strong collaborative relationship with the University of British Columbia.”*

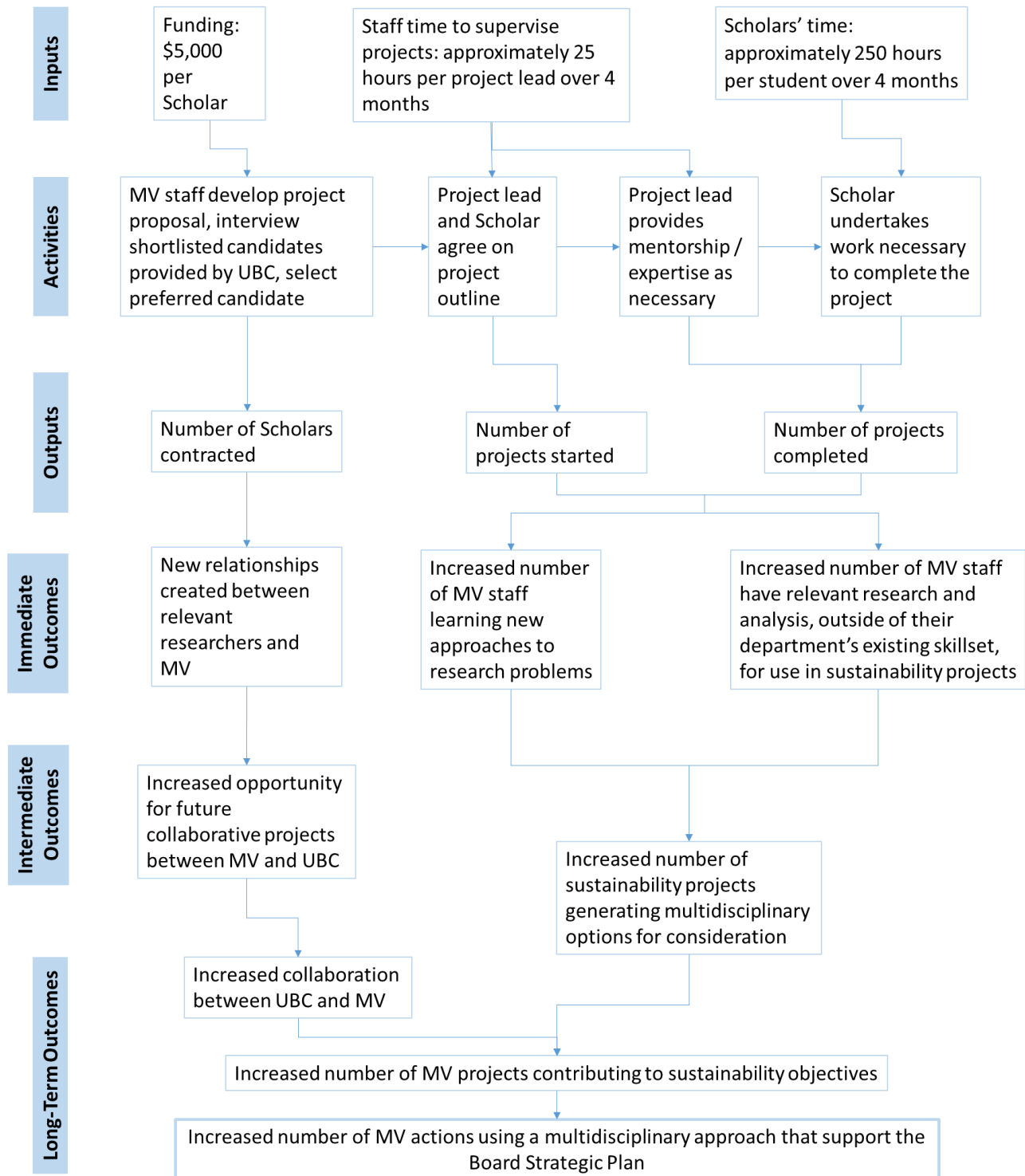


FIGURE 4: SUSTAINABLE REGION SCHOLARS PROGRAM LOGIC MODEL

The logic model is the graphic representation for how the Sustainable Region Scholars Program is intended to operate. The logic model describes how the inputs, activities, and outputs lead to the immediate, intermediate and long-term outcomes. The development of the logic model was an iterative process, taking into account the perspectives of people involved in the program and key stakeholders. The following discussion explains the interconnectedness between the different components of the logic model.

Starting from the top of the page, the text in the blue box outlines the overarching vision for the program. The first line shows the inputs, essentially the time and money required to run the program, that allow the intended activities of the program to be undertaken. Under that, the activities consist of the efforts that are undertaken that lead to the outputs of the program. The outputs can be divided into two categories: the contracting of the Scholar and the completion of a project. These outputs relate directly to the two objectives of the program:

1. to enable staff to increase the quality of actions that support the goals of the Board Strategic Plan by adopting a more multi-disciplinary approach;
2. to strengthen the collaborative relationship between Metro Vancouver and UBC.

The logic model then traces the outcomes of the programs along the two lines of the program objectives. The left hand side stream of the logic model traces how the contracting of the Scholar supports Metro Vancouver's goals of increased collaboration with UBC. The right hand side stream traces how the projects are intended to increase the number of Metro Vancouver actions that are using a multidisciplinary approach that support the Board Strategic Plan.

The logic model that was originally discussed with the Corporate Planning Committee incorporated a different second over-arching objective. The second objective was originally: to support Metro Vancouver's longer term succession planning goals by promoting Metro Vancouver as an employer of choice for graduate students and increasing the pool of qualified applicants to job vacancies. Following the focus group discussion, it was clear that the design of the program was not set-up to enable progress on succession planning goals. The logic model was revised following the focus group in October to make this correction. Further discussion on this change will be undertaken in later sections of this report.

The logic model for the Sustainable Region Scholars Program helps staff to focus on how the logic of the program is intended to work. The outcomes contained in the logic model form the basis of the evaluation framework. Using the findings of the literature review, the survey and focus group, the outcomes contained in the logic model were translated into indicators. These indicators will be used to periodically assess the extent to which the program is able to achieve its intended objectives.

### **3.6 Summary**

The literature reviewed identified key strategies in the development and implementation of evaluations and evaluation frameworks. The review of evaluation reports identified key strategies, data sources, indicators and challenges associated with initiatives similar to the Sustainable Region Scholars Program. The literature review was used by the researcher to

develop a program logic model (Figure 4, p. 27), with input from the Client and senior staff. The literature review and logic model were used to provide direction for the focus group and the development of the evaluation framework.

## **4.0 Findings: Survey**

A survey was administered to assess how the Corporate Planning Committee viewed the program outcomes in terms of importance, their level of concern with various program issues, and how likely they were to use the evaluation results for different purposes.

### **4.1 Sample**

A key objective of this project was to ensure the evaluation framework was created to reflect the needs of the Corporate Planning Committee, major stakeholders in the program. The Corporate Planning Committee is comprised of Metro Vancouver's Chief Administrative Officer and the nine General Managers of the different departments. At the time of the survey in July 2016, the position of General Manager of Parks, Planning and Environment was vacant; therefore, the total number of members was nine. As the executive level staff of a governmental organization, the Committee receives their direction from the Metro Vancouver Board of Directors through the Board Strategic Plan and resolutions made at Board meetings (Intergovernment and Finance, 2016, p. 49).

Purposive sampling was seen as appropriate since the members of the Corporate Planning Committee have been identified by the researcher as being the key stakeholders and decision makers for the program. Given the small sample size and the status of the respondents as stakeholders there is a risk of response bias. Corporate Planning Committee members that were more likely to have a Sustainable Region Scholar within their department, could be more likely to speak of the program more positively in the hopes of enabling its continuation. However, the survey data is anonymous, with no identifying information being asked for on the form, only aggregate data is shown. The survey findings aim to present a snapshot of Corporate Planning Committee concerns and priorities. The evaluation framework does not attempt to factor in every response received.

After a presentation was given outlining the Sustainable Region Scholars Program, the objectives of this project, and the logic model, the Corporate Planning Committee were asked to participate in the survey. An invitation to participate was emailed to all members. Once consent forms had been received, hard copies of the survey were administered by inter-office mail. Responses were collected from the nine Corporate Planning Committee members from July 12-29, 2016, a response rate of 100%. The respondents have remained anonymous in the dissemination of the survey results.

### **4.2 Survey Design**

The survey (Appendix A) contained three topics: program outcomes, program issues, and use of Program Evaluation results. Likert-scale type questions were used to provide data that can be measured on an ordinal level (Babbie & Benaquisto, 2014, p. 240). The Likert scale items for level of importance, level of concern, and degree of likelihood were all taken from previously established Likert items (Lavrakas, 2008, p. 429). The questions were designed using a matrix format to allow the respondents to answer several questions in the same category. This format was specifically chosen to allow respondents to answer many questions quickly (Babbie &

Benaquisto, 2014, p. 240). Given the restrictive schedules of the respondents, open ended questions were used sparingly.

The program outcomes identified in the survey were all taken from the logic model created by the researcher in consultation with the program manager of the Sustainable Region Scholars program. The program issues were identified early on in the discussion of this research project. The potential uses for program evaluation results was adapted from McDavid and Huse (2012, p. 17).

### 4.3 Program Outcomes

The first survey question focussed on six identified program outcomes. The respondents were asked to identify how important the six program outcomes were for them. An increase in the quality of Metro Vancouver actions that support the Board Strategic Plan was the area of greatest consensus, with 66% of respondents identifying the outcome as ‘Extremely Important’ (44%) or ‘Very Important’ (22%). An increase in the level of innovation / adoption of a multidisciplinary approach in Metro Vancouver projects was also an area of consensus with all respondents identifying the outcome as ‘Very Important’ (56%) or ‘Moderately Important’(44%).

The areas with the least amount of consensus related to the succession planning outcomes of the program. Figure 5 shows the range of responses received to the program outcome of increased recognition of Metro Vancouver as an employer of choice for UBC Graduate students.

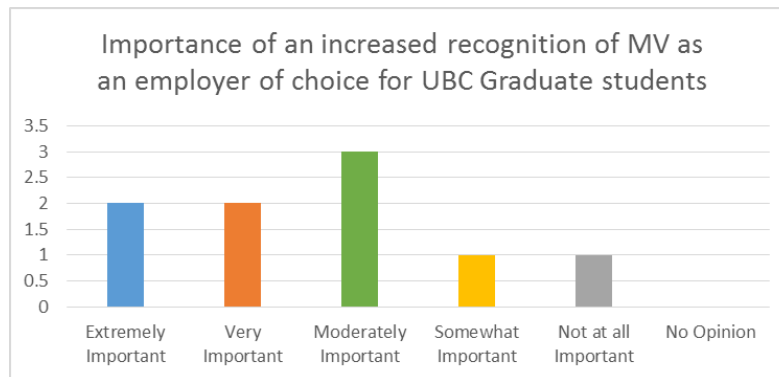


FIGURE 5: QUESTION 1.4 SURVEY RESPONSE

Another surprising result is shown in Figure 6, 55% of respondents identified that increasing the pool of qualified applicants to fill future job vacancies was ‘Extremely Important’, yet the remaining responses were divided between responses ranging from ‘Very Important’ to ‘Not at all Important’. This divide may be due to some Corporate Planning Committee members seeing the potential in the Scholars to fill future vacancies within their departments, while others would not see this value as they would be unlikely to require the skillset of a UBC Graduate student. This divide is further discussed in Section 6 of this report.

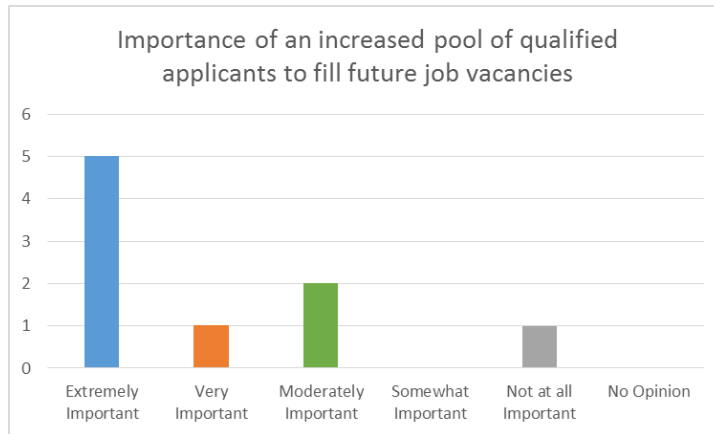


FIGURE 6: QUESTION 1.5 SURVEY RESPONSE

## 4.2 Concern with Program Issues

The second survey question asked the Corporate Planning Committee to identify their level of concern with six different program issues: cost, staff time commitment, potential for union issues, quality of work, correspondence to Metro Vancouver’s mandate, and practical application of research. The survey results clearly show a consensus that there is minimal concern with the program cost (67% identified that they were ‘Not at all concerned’); staff time commitment (44% reported they were ‘Not at all concerned’); and potential for union issues (33% reported being ‘slightly concerned’ and another 33% reported being ‘not at all concerned’).

There was no definitive program issue where the Corporate Planning Committee showed a consensus. Respondents identified the quality of work produced was perhaps one of the areas with the most consensus, with 44% reporting being ‘Moderately Concerned’ and 22% reporting being ‘Very Concerned’. Concern over project results not corresponding to Metro Vancouver’s mandate had the widest variety of responses shown in Figure 7 below.

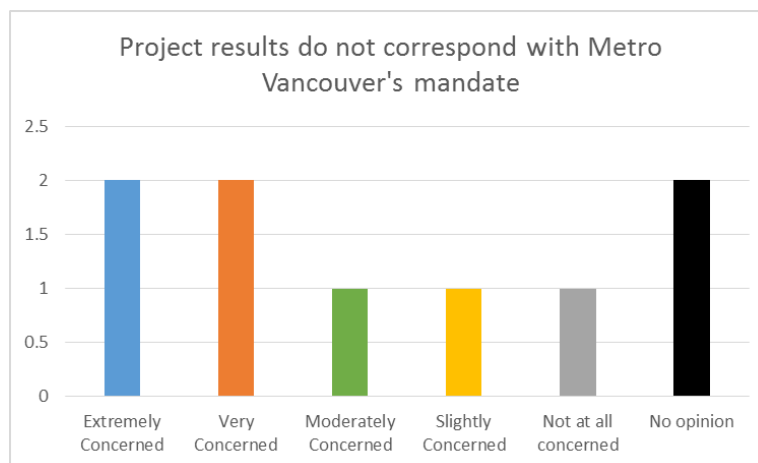


FIGURE 7: QUESTION 2A (5) SURVEY RESPONSE

The respondents were the most divided over the program issue of the practical application of the research projects. 33% identifying as 'Very Concerned' and 33% identifying as 'Not at all concerned'. Results show that there is some disagreement among program stakeholders on whether or not the projects should have a practical application.

Results in the second section of the survey show that the Corporate Planning Committee were not concerned with the time and cost of the program, but rather the relevance and the quality of the work produced. Further program concerns identified through the open-ended question were lack of status reporting, and the limitation of the program only targeting UBC students at the graduate level.

### 4.3 Use of Program Evaluation Results

The third survey question asked the respondents to identify how likely they were to use the results of a program evaluation in six possible ways: accountability, communications, program improvements, making policy decisions, making budget decisions, and making Human Resources decisions. The two ways in which the evaluation results were most likely to be used were improving program efficiency and effectiveness (Figure 8) and making policy decisions.

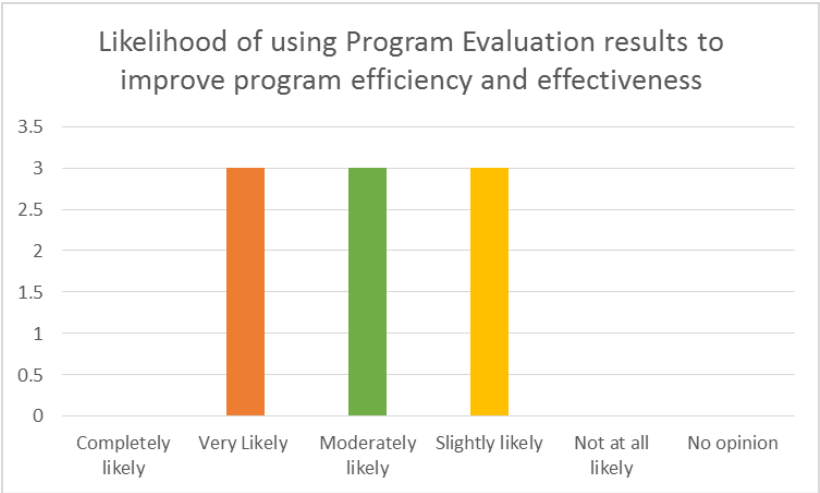


FIGURE 8: QUESTION 3.3 SURVEY RESPONSE

Disagreement was once again seen in the succession planning side with 44% of respondents saying they are 'moderately likely' to use results for making Human Resource decisions. But 33% were 'not at all likely' to use the results for that purpose.

### 4.4 Summary of Findings

The survey was designed to identify the needs and areas of concern for the Corporate Planning Committee, so that the evaluation framework could be designed to suit their needs. An analysis of the responses determined the need to assess the following program outcomes through the evaluation framework:

- An increase in the quality of Metro Vancouver actions that support the Board Strategic Plan
- An increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan
- An increase in the number of qualified applicants to fill future job vacancies

Other areas to assess in order to address the concerns of the Corporate Planning Committee:

- Quality of the work being produced by Scholars
- Individual project alignment with Metro Vancouver's mandate

Finally, the results of the program evaluation should be framed in the form of recommendations that will improve the efficiency and effectiveness of the program and enable policy decisions to be made.

## **5.0 Findings: Focus Group**

### **5.1 Introduction**

This section of the report will provide an overview of the key findings of the focus group conducted with the project leads. The focus group was carried out with the aim of determining how much time was required from project leads supervising their Scholars, generally determining their experience and satisfaction with the program, and identifying any emerging issues with the program.

The focus group of project leads was held September 22, 2016 when the first intake of Sustainable Region Scholars was complete. The focus group was held at Metro Vancouver Head Offices during regular working hours with six out of seven project leads participating. The project lead who was unable to participate gave their feedback to the researcher in a separate interview.

The focus group discussion was audio recorded. The responses were analyzed using an inductive approach in that the researcher allowed themes to emerge from the data (Thomas, 2006, p. 238). The inductive approach is appropriate since it allows the raw data to be condensed into a brief summary format and allows links between the research objectives and the summary findings (Thomas, 2006, p. 238). The focus group guiding questions can be found in Appendix B.

### **5.2 Overall Experience of the Project Leads**

The participants were keen to share their experiences with the program and were also very interested in hearing the experiences of the other project leads. Appendix C presents a list of project titles along with the department and division that the project lead works in.

Of the seven Scholars participating in the program, one did not finish their project. The Scholar who did not complete the project had some barriers to completing their project since the project required field work and they did not have access to a car to travel to the appropriate areas, which were often remote. After two months of working on the project, the Scholar stopped communicating with the project lead. Eventually it was discovered that the Scholar had left the country. In this case, the department determined that the project outline should have specified that access to a car was mandatory. Additionally, they believed that the Scholar being relatively inexperienced in field work may have contributed to the incomplete project. In this case, the Scholar did not receive any remuneration for their work.

The project leads that received work from their Scholars were generally satisfied with the program. Many of them spoke of the value of the projects given that the Scholars were limited to 250 hours and were remunerated \$5,000. Participants believed that the program generally ran smoothly. Project leads also spoke of how valuable the experience was for the Scholar and how it was likely to shape their future academic and career pursuits. Many agreed that given the time constraints and the experience level of the Scholar, the project received was not going to be perfect and that managing expectations was important. All of the project leads would participate in the program again, with several being very enthusiastic about future opportunities. However,

two of the project leads would only be willing to proceed if they felt confident in the ability of the Scholar to complete the work effectively.

Several themes emerged throughout the course of the discussion, including the difference between an academic research project and a government one, the time and amount of direction the Scholar required, the use of project results, and the specialized skillset of the Scholar. These themes led many of the participants to emphasize the need to manage their expectations and adapt the project to suit the best candidate available.

### **5.3 Academic versus Government Approach**

Participants shared similar experiences of dealing with the Scholars' approach or writing style that was somewhat incongruous to the Metro Vancouver style or context. This manifested itself in several different ways such as the language used, the report structure, or the recommendations made.

One participant described how their Scholar, who was a Graduate student in Planning, was very keen to be prescriptive and find solutions to the issue, and the project lead needed to direct the Scholar's work so that they were synthesizing information rather than taking a position. Another participant, who's Scholar was a PhD student in Engineering, described how their Scholar needed a fair amount of mentoring in interpreting the results of their findings, rather than simply stating their findings. Another participant commented that in university it is common to write an opinion piece that is backed up by evidence, but as a staff member in government it is not common practice to do that.

The participants agreed that the Scholars generally did not have a clear understanding of the role that Metro Vancouver played as a regional government and the organization's legislated responsibility. This led to some of the projects making recommendations that were outside of the mandate of Metro Vancouver. Other recommendations were described as not being politically sensitive to the realities of the Board structure or even being somewhat naïve. The group agreed that given the time requirements of the project it was a lot to expect the Scholar to be aware of the Metro Vancouver context and some of the political realities of the organization.

### **5.4 Time Requirements**

The time requirements and the amount of guidance the Scholar required was a significant topic of discussion. Some participants described their role as "minimal work" and were impressed by how the Scholar seemed to "hit the ground running". While others described the work as more than they expected it to be, due to the Scholar requiring quite a bit of direction or "hand-holding". Overall the project leads were asked to estimate their total number of hours spent in their role as project leads, responses ranged from 15 hours to 40 hours over the course of 3 to 4 months. The project lead whose Scholar did not complete the program had spent roughly 25 hours with the Scholar in the field training them in the study area as well as driving them around. The project lead expressed that they were hoping for a more proactive student who could take the lead on the study, but none of the applicants applying seemed to meet their requirements.

For two of the participants, the final report required a more significant amount of copyediting than the project lead had anticipated. One participant stated that “I actually had to do quite a bit of wordsmithing and tell [them] to go back to the drawing board in a few areas,” which was identified as being a language barrier issue. Similarly, the other participant described some of the applications he received as “shockingly error filled”. When the final project was received, whole sections of the final report were struck, since the project lead did not believe it was worth their time to re-work the section.

Overall, the group agreed that given that the Scholar was limited to 250 hours, the project they received was quite cost effective. One participant remarked that \$5,000 to a contractor would barely be enough to get them to “crack a book”. Given the time limitations of the project, the group stated that it was important to manage expectations. A project that was required for immediate use would not have relied on a student to do the work.

## **5.5 Adaptation of Project Findings**

Participants shared the initial or expected outcomes of the projects they had received from their Scholar. Three of the six projects received had already shared results in a formal way or had begun implementing the recommendations. One project’s main deliverable was a set of recommendations that served as actions to carry out. By the time of the focus group, six weeks after the project had been received, the project lead estimated that one-third of the recommendations had been carried out, while some of the remaining actions were longer term goals to be carried out over the course of several years.

One participant who had formally shared the project’s findings stated that there had been some concerns with one of the main conclusions of the report from the task force they were reporting to. The concern arose from existing controversies related to the project area. The project lead was still planning to do some re-writes to the project and turn the recommendations into some best practices that could be shared with member municipalities.

The remainder of the received projects were planning to adapt the findings of their Scholar’s project into something more high-level and digestible. One participant described the project as “the hidden technical appendix” behind a green paper. Similarly, two participants described the end product as being something that can be adapted or massaged by staff in future projects. All participants agreed that the project informed their overall knowledge in the project area. Table 4 below summarizes how the Scholars’ projects will be used within Metro Vancouver going forward:

TABLE 4: FUTURE USE OF PROJECTS

Project Area	Future Use of the Project
Air Quality and Climate Change	Research will be used in a Policy Green Paper – potentially changing regulation in the long term
External Relations	Writing will be used in communication materials such as presentations in ongoing work of the National Zero Waste Council
Planning (1)	Research will be used in larger Best Management Practices for Invasive Species
Planning (2)	Research will be used in larger Regional Industrial Lands Initiative
Solid Waste	Department will implement specific actions recommended in the report
Water Services (1)	Project will form basis of larger Wildfire Risk Assessment and Mitigation Strategies
Water Services (2)	Project not completed

Project leads varied significantly on how they had shared the Scholar’s project within the organization. One had formally shared the project results within the department by having the Scholar present their research and answer the questions of staff. Two project leads had shared the work externally. The remaining projects were limited in their dissemination within Metro Vancouver.

## 5.6 Specialized Knowledge of Scholar

Many of the participants were very happy with the specific skillsets and experience of their Scholars. Several of them describing themselves as “lucky” to have found a Scholar who clearly aligned with what they were looking for in a candidate. However, there were a limited number of applicants applying for each project this was due to the projects being posted on the UBC website later than other organization’s projects. Each project received between two and six applications and some project leads identified that they were hoping for more. In two of the cases, the Scholar was working at the PhD level and had very specialized knowledge that the project leads could use to their advantage. Those with Scholars at the PhD level often spoke of the connections that the Scholar had from previous work, such as data sources that could be used in the project. Others developed connections over the course of their work that the project leads planned on maintaining.

Three of the Scholars contracted were part of UBC’s Planning graduate program. One project lead had hoped for Graduate students from the Economics or Commerce programs to apply and even sent the posting out twice to solicit more applicants. However, the only applicants were Planning students. Due to this, the project focus had to be somewhat adapted to focus less on the economics side of the project. Similarly, two other project leads narrowed the focus of their projects due to the specialty of their Scholar. One remarked that having an Engineer PhD student conduct policy analysis was “an unfair ask”. While another remarked that one topic was omitted from the study due to it being outside of their Scholar’s field of study. The limited number and variety of applicants was an issue that the project leads could adapt to by having some flexibility in the research project requirements.

The project lead whose Scholar did not complete the project had been looking for a specific skillset; however, when none of the applicants had experience in Biology they attempted to train the Scholar. The participant expressed that they were overly optimistic in thinking that the Scholar could be trained in the study area in such a short amount of time. In the future, the same project will be posted where the department is hopeful to receive applications from students that have the specific skills they are looking for.

When asked about how the Scholar could possibly fit within the organization, a majority of the participants believed that given the specialized knowledge of the Scholar, they could perhaps have a role as a contractor in the future, but there would not be an ongoing need for their skillset within the organization. For Scholars from the Planning Master's program there would be future availabilities for their skillsets within the Planning division. It was these findings that led to the change in program objectives away from succession planning and towards an increase in the collaborative relationship with UBC.

## **5.7 Summary**

Inductive analysis of the focus group transcriptions revealed four main themes: academic versus government approach, time requirements, adaptation of project findings, and specialized knowledge of Scholar. The responses from participants show a broad range of experiences; however those that received a project were satisfied with the result given the time and funding put in. All project leads would participate again, although there was some variation on the level of enthusiasm shown for future opportunities, mostly due to the time required in some cases to give direction to the Scholar and edit their work. The limited number and variety of applicants was an issue that some project leads needed to overcome by adapting the project to suit the successful candidate.

On average participants spent a total of 25 hours in their role as project lead, away from their regular duties over the course of three months. Initial outcomes of the projects have already begun in many cases with all completed projects expecting a number of long-term outcomes to develop. There was a wide variation in how the project leads were sharing the work of the Scholar both internally and externally. Where the Scholar had provided a fresh approach from what was usually available from within that department, there would not be an ongoing need for the Scholar's skillset; therefore, it is unlikely that the design of the program will be able to support Metro Vancouver's succession planning goals.

## **6.0 Discussion and Analysis**

The purpose of this section is to review the findings of the three lines of evidence: the literature review, the survey, and the focus group in the context of the research objectives. These findings will then be analyzed for their implications for the evaluation framework. The first part of this section examines the priority areas identified by the Corporate Planning Committee, taking into account the findings of the literature review and the focus group. The second part of this section examines the main program issues identified by the focus group and analyzes their implications for the evaluation framework.

### **6.1 Priority Program Areas**

The survey administered to members of the Corporate Planning Committee was designed to identify the needs and areas of concern with respect to the program. The analysis of the responses show the need to measure the following program areas:

- An increase in the quality of Metro Vancouver actions that support the Board Strategic Plan
- An increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan
- An increase in the number of Sustainable Region Scholars applying for job vacancies in Metro Vancouver

Other areas identified as areas of concern were the quality of work being produced by the Scholar and the individual project alignment with Metro Vancouver's mandate.

#### **Measuring High Level Objectives**

The logic model identifies 'Increased number of sustainability projects generating multidisciplinary options for consideration' as a medium-term outcome and 'An increased number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan' as a long-term outcome. The literature review identified that measuring these high level objectives with multiple activities, such as projects, would be challenging, but it can be done through clear evaluation questions and appropriate indicators. Additionally, evidence of these outcomes needs to be supported by multiple lines of evidence, where possible using a control group for comparison.

The focus group participants indicated that the completed projects had been used, or were intended to be used, in some form that would support the goals of the Board Strategic Plan. Tracking the intention of the project leads in using the results of the project will be an important data source, as well as using published documents, such as Board and Committee reports, Green Papers, and Management Plans to track the use of the Scholar's work.

The adoption of a multidisciplinary approach is another outcome that will be challenging to measure. The results of the focus group indicate that currently the program has had varied success in producing projects with an approach different to one available in their department. The Scholar had the most value when they exhibited a specialized skillset, usually working at the PhD level or with relevant connections. However, some projects would not differ substantially from 'business as usual' within that department, since the project description was not designed

to produce anything that differed from the existing approach used within the department. Therefore, any multidisciplinary approach had to have been consciously decided upon prior to submitting the project proposals to UBC. An additional challenge presented itself when a specific approach was decided upon, but Metro Vancouver was not able to solicit applications from that discipline. In addition to measuring the success of a multidisciplinary approach, the project leads, in coordination with their departments will need to consider how future projects can use an approach not usually considered within the department that would produce work of a higher quality that would support the Board Strategic Plan. Using lessons learned from the more successful projects, project leads will need to have a clear idea of the skillset that they require and may need to work with UBC to target a particular type of graduate student.

*Evaluation question that emerges: Has the program demonstrated progress towards an increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan?*

### **Succession Planning**

Analyzed together, the findings revealed a few discrepancies between the expected program outcomes, the Corporate Planning Committee's priorities, and the experience of the project leads with the first intake of students. An originally expected outcome of the program, a priority of the Corporate Planning Committee, was how the program would support Metro Vancouver's succession planning goals. But the focus group revealed that the specialized skillset of the Scholar, while very helpful in meeting the objectives of the project, would not be needed on a permanent basis within the department. Since the succession planning outcome was primarily an objective of the Corporate Planning Committee, the change in objectives is unlikely to affect the program from the perspective of the project leads or Scholars. The change in objectives may affect the way that the Corporate Planning Committee approaches approving project proposals. The connection with UBC graduate students is an important outcome, but hiring from the program is unlikely to be a significant outcome and should not be included as a program objective unless the design of the program is altered to accommodate this objective.

There was some disagreement within the Corporate Planning Committee regarding the succession planning outcomes contained within the program. Fifty-five percent identified that increasing the pool of qualified applicants to fill future job vacancies was 'Extremely Important'. The divide around succession planning can partially be attributed to certain Corporate Planning Committee members not seeing hiring from the program as a likely outcome for their department, because their department is not in need of the skills of a UBC Graduate level student. While others would see the immediate need within their departments to recruit new talent and prepare for impending retirements.

The contracting of the Scholar forms important relationships and connections between Metro Vancouver staff and researchers working in fields that are relevant to Metro Vancouver operations. As identified in the logic model, this connection is intended to enable staff to identify areas of future collaboration with relevant researchers; thereby, increasing capacity for collaborative projects that will contribute to sustainability objectives.

The experience of the project leads indicated that there was unlikely to be a future need for the specialized skillsets of their Scholars. However, since the program is in its infancy, data should be regularly collected on the number of Graduate students applying for Metro Vancouver projects or the number of Scholars that have a favourable opinion of Metro Vancouver as an employer. This data would show how progress had been made on the collaborative objectives of the program and determine if hiring from the program could be achieved.

*Evaluation question that emerges: Has the program resulted in Scholars having a positive opinion of Metro Vancouver as an employer?*

### **Collaboration with UBC**

While not identified as highly as other program outcomes, 'An increase in collaboration between Metro Vancouver and UBC' was identified as 'Quite Important' by 44% of the Corporate Planning Committee and 'Extremely Important' by 22%. Additionally, one Corporate Planning Committee member wrote an additional comment that the program was an excellent way for Metro Vancouver to engage with UBC on a wide range of initiatives. The program offers the chance to strengthen the collaborative relationship between the two organizations.

The literature review identified many ways of building collaboration into program design or measuring collaboration as an outcome. Evidence of a strengthened relationship could manifest itself in many ways including formal meetings between UBC and Metro Vancouver staff, ongoing discussions on areas for future collaborative projects, and an increase in the platforms for collaboration.

*Evaluation question that emerges: To what extent has the program facilitated collaboration between UBC and Metro Vancouver?*

## **6.2 Emerging Program Issues**

This section examines the main program issues identified by the focus group and analyzes the implications for the evaluation framework and the program going forward.

### **Number and Variety of Applicants**

One of the issues identified by the focus group was the number and variety of students applying. Project leads identified that they were hoping for more applicants or applicants from a different program or faculty. Each project received between two and six applications, which was attributed to the late posting date meaning that many students had already found placements for the semester. A variety of applicants is a critical component of the program because it allows for the project to adopt that multidisciplinary approach previously discussed. In order to ensure that the projects receive a satisfactory amount of applicants, a clear timeline for having projects approved and posted for UBC students will need to be established and adhered to. Additionally, where a specialized skillset is required, a plan will need to be put into place to ensure that UBC is able to target a particular program that Metro Vancouver requires.

### **Academic versus Government Approach**

The Scholars approach to the project and their understanding of the Metro Vancouver context is another emerging program issue that was identified in the focus group. Related to this, the Corporate Planning Committee identified that the quality of work produced was an area of concern for them. The Scholars' understanding of context is crucial since it will affect the quality and the usefulness of the work produced. If Scholars take an approach that is not useful to the project leads, the project leads will need to spend additional time correcting the final product produced by the Scholar. While some of the project leads cautioned that participants need to "manage their expectations" when it comes to the quality of work that they will receive, there are some steps that can be taken to help the Scholars understand the Metro Vancouver context, such as developing a presentation that explains the various roles of Metro Vancouver. Another strategy would be to screen applicants for experience working for government. If projects require a specific approach not available within the graduate programs at UBC, it may be necessary to expand the program to include additional universities with Public Policy or Public Administration programs.

### **Time Requirements**

The results of the focus group showed that the time demands on project leads was deemed to be reasonable; however the time spent by a few of the project leads to extensively edit their Scholars' projects is an emerging issue. In two cases where extensive editing was required, the Scholars lacked proficiency with English or the writing skills that the project lead was expecting. This may once again be a case of managing expectations, such as the case of an engineering PhD student not being required to perform policy analysis. Or if writing skill is an important requirement, ensure that applicants are screened for writing experience or proficiency. The time requirements for being a project lead will need to be tracked and accounted for.

### **Tracking of Project Uses**

From the initial findings of the focus group, the completed projects were expected to be used in future projects that would support the Board Strategic Plan. Although preliminary findings suggest that the projects will be used in some form going forward, there needs to be a formal system in place to ensure that the results of the individual projects are tracked over time. The best way to ensure that this is done is to build the tracking into already established processes. The focus group showed that staff were inconsistent in their approach to sharing project results, especially when the project was not planned to be shared through formal channels. A formalized approach to information sharing will allow for the multidisciplinary approach to permeate throughout the organization and allow staff to identify future areas of study or collaboration with UBC. Processes and data sources will need to be identified that can track the use of the projects once complete.

### **6.3 Summary**

This section has reviewed the findings of the three lines of evidence and analyzed them for their implications on the evaluation framework and actions to take regarding the program going forward. A number of priority program areas were identified and evaluation questions were formulated. Four emerging program issues were also identified that will need to be addressed going forward as they will affect the program's ability to achieve its intended objectives. This report will now turn to the evaluation framework and specific program recommendations made in response to the findings of the three lines of evidence.

## 7.0 Evaluation Framework and Recommendations

### 7.1 Evaluation Framework

This section presents the recommended evaluation framework created to reflect the needs of the Corporate Planning Committee. Also presented are additional recommendations made in response to the emerging program issues identified in the analysis of the focus group data. The evaluation framework presented below includes indicators and data sources that will be used to answer the evaluation questions that have been developed to address the priority areas for the Corporate Planning Committee.

#### **Overall Evaluation Question:**

To what extent has the Sustainable Region Scholars Program been successful in achieving its intended objectives?

#### **Sub-questions:**

1. Do the projects undertaken align with the objectives of Metro Vancouver?
2. Has the program demonstrated progress towards an increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan?
3. Has the program demonstrated an increase in the number of staff learning new approaches to research problems?
4. Has the program resulted in UBC graduate students having a positive opinion of Metro Vancouver as an employer?
5. To what extent has the program facilitated collaboration between UBC and Metro Vancouver?

The framework presented below primarily uses an after-only experimental design (XO), wherein program and control differences are not measured before the treatment begins (McDavid, Huse, & Hawthorn, 2013, p. 99). The framework lays out the indicators, data sources, methodology, and frequency of data collection for each of the sub-questions. The project lead survey is presented in Appendix D. Each row of the framework will be discussed in turn.

TABLE 5: SUSTAINABLE REGION SCHOLARS PROPOSED EVALUATION FRAMEWORK

Evaluation Issue	Questions	Indicators	Data Sources	Methodology	Frequency of Data Collection
<b>Relevance</b>	1. Do the projects undertaken align with the objectives of Metro Vancouver?	<p>Demonstrated alignment with the BSP or other Management Plans, as applicable, in the project outline</p> <p>Projects result in work that is supported at the Board or Committee level</p>	Document review (Project outline and BSP/MV Business Plans/Committee or Board reports as appropriate)	Document analysis to determine the extent to which there is an alignment between objectives of projects and the Board Strategic Plan	Once per year in October
<b>Effectiveness</b>	<p>2. Has the program demonstrated progress towards an increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan?</p> <p>3. Has the program demonstrated an increase in the number of staff learning new approaches to research problems?</p>	<p>Recognition from project leads that their Scholar’s project will be used in work that adopts or considers a multidisciplinary approach</p> <p>Scholars’ project is used in larger project or program that shows evidence of a multidisciplinary approach</p> <p>Scholars’ project is shared amongst staff in a variety of formats</p> <p>Project leads recognize that they have learned a new approach to research problems as a result of their Scholar’s work</p>	<p>Survey of project leads</p> <p>Document Review (Scholar’s research / the final product or result of their work)</p> <p>Document Review (presentations, staff lunch and learns, intranet stories)</p> <p>Survey of project Leads</p>	<p>Survey and document review analysis to determine the extent to which a multidisciplinary approach occurred as a result of the program</p> <p>Survey and document review determine that staff learning occurred or was attempted through the sharing of projects as a result of the program</p>	<p>Once per year September – October</p> <p>Once per year September - October</p>

	<p>4. Has the program resulted in UBC graduate students having a positive opinion of Metro Vancouver as an employer?</p>	<p>Scholars would recommend MV as an employer to other graduate students</p> <p>Increase of UBC graduate students applying for the Sustainable Region Scholars Program</p>	<p>Survey</p> <p>Administrative Data Review (average # of applicants applying for Sustainable Region Scholars projects)</p>	<p>Survey and document analysis to determine the extent to which Metro Vancouver is recognized as an employer of choice as a result of the Program</p>	<p>Once per year: August (administered through UBC)</p> <p>Once per year in October</p>
	<p>5. To what extent has the program facilitated collaboration between UBC and Metro Vancouver?</p>	<p>Increase in the number of collaborative projects undertaken between MV and UBC</p> <p>Evidence of both organizations promoting collaborative research projects</p>	<p>Case studies</p> <p>Document review</p> <p>Document Review / Administrative Data (reports to the UBC MOU Steering Committee, participation in committees, conferences, or other events that promote research; funding contributions of both organizations to research projects)</p>	<p>Administrative data, document review and case studies determine the extent to which collaboration has resulted from the program</p>	<p>Case studies undertaken once every three years</p> <p>Once per year in October</p>

**1. Do the projects undertaken align with the objectives of Metro Vancouver?**

This evaluation question will be answered through a document review of two sets of data sources. Firstly, the project outline will be analyzed for a demonstrated alignment with the goals of the Board Strategic Plan or other associated Management Plans specific to each department. This will show that the project had the intent to be aligned with the objectives of Metro Vancouver. Secondly, the project results will be analyzed for a demonstrated alignment with the objectives of Metro Vancouver. The types of documents that will be analyzed will vary according to the project, but could include: Board or Committee publications, media releases, Green Papers, Advisory Committee minutes, or references in Metro Vancouver work plan documents that are produced as part of the budgetary process. This second analysis will show that the project resulted in work that aligned with Metro Vancouver objectives.

**2. Has the program demonstrated progress towards an increase in the number of Metro Vancouver actions using a multidisciplinary approach that support the Board Strategic Plan?**

This evaluation question will be answered through two data sources: the survey of project leads and a document review. A survey for the project leads that addresses part of the data required to answer the sub-questions has been developed and is presented in Appendix D. The project leads will be surveyed to determine if their Scholar's project will be used in work that adopts or considers a multidisciplinary approach. To corroborate this line of evidence, a document review will be undertaken to analyze the extent to which a multidisciplinary approach occurred as a result of the program.

*Possible external factors: if the project was used in a larger program or project, document analysis should consider if a multidisciplinary approach occurred due to the Scholar's work or if it was the result of other contributing authors.*

**3. Has the program demonstrated an increase in the number of staff learning new approaches to research problems?**

This evaluation question will be answered through two clear indicators. Firstly, evidence that the Scholars' project is shared amongst staff in a variety of formats. This will be confirmed by the project leads and corroborated through a document review, which will include sources such as emails, Lunch and Learn events, and formal presentations. Secondly, the survey identifies that the project leads recognize that they have learned a new approach to research problems as a result of their Scholar's work. The two indicators together will provide evidence that staff learning occurred, or was attempted through the sharing of projects, as a result of the program.

**4. Has the program resulted in UBC graduate students having a positive opinion of Metro Vancouver as an employer?**

This evaluation question will be answered through two indicators. Firstly, the Scholar would recommend Metro Vancouver as an employer to other graduate students. This is a question that UBC will ask the students during their post-program evaluation survey. In order to integrate with

UBC processes and avoid survey fatigue, UBC will administer the survey and share the results with Metro Vancouver. The second indicator is an increase in the number of UBC graduate students that are applying for the Sustainable Region Scholars Program. This would be administrative data that will be gathered with each intake of students.

*Possible external factors: other events that would cause a change in student's willingness to apply for the program (e.g. changing graduate program requirements, suitability of posted projects, change in the reputation of Metro Vancouver).*

## **5. To what extent has the program facilitated collaboration between UBC and Metro Vancouver?**

This evaluation question will be answered through two indicators. Firstly, an increase in the number of collaborative projects undertaken between Metro Vancouver and UBC will be measured primarily through a document review that will analyze new collaborative projects outside of the Sustainable Region Scholars program. Additionally, once every three years it is recommended that case studies be undertaken to highlight the long term outcomes of projects that have been successful in facilitating collaboration. Case studies are a useful way to examine longer term outcomes, but are too time intensive to undertake on an annual basis. The second indicator will be evidence of both organizations promoting collaborative research projects, which will be measured through a combination of document and administrative data review. Possible sources include reports to the UBC Memorandum of Understanding Steering Committee, participation in committees, conferences, or other events that promote research and funding contributions of both organizations to research projects.

*Possible external factors: additional programs and efforts being undertaken to facilitate collaboration.*

### **Timeline**

A timeline for collecting data and adhering to the deadlines set by UBC has been developed and is presented below (Figure 9). The timeline was created to integrate with the UBC posting and hiring schedule. By adhering to the timeline set out by UBC, it is intended that the number and variety of applicants for each job posting will be increased.

The timeline for data collection includes the internal survey, the survey administered by UBC, and the document and administrative data review. The document and administrative data analysis will be undertaken in October in order to align with the budget process, which includes departments creating their annual work plans and considering opportunity projects over the next five years. Data collected annually will be put into a monitoring report that will be presented to the Corporate Planning Committee in November. Every third year case studies will be undertaken to give more insight into the results and outcomes of selected Scholar's work, once complete, the monitoring reports and case studies will be analyzed together in an evaluation report (Figure 10).

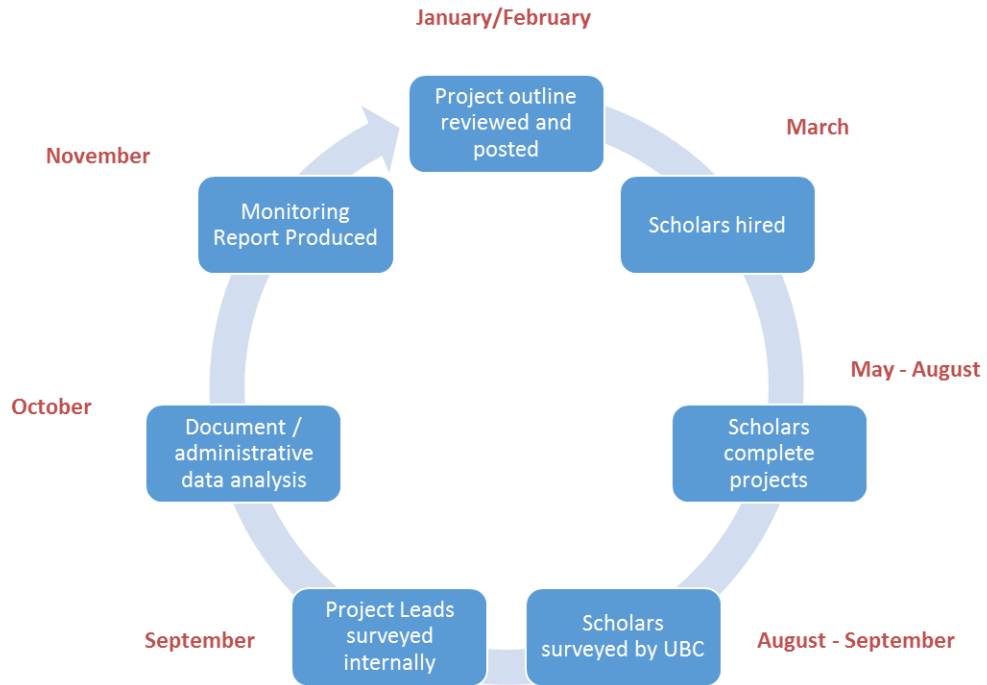


FIGURE 9: TIMELINE FOR EVALUATION (NON CASE STUDY YEAR)

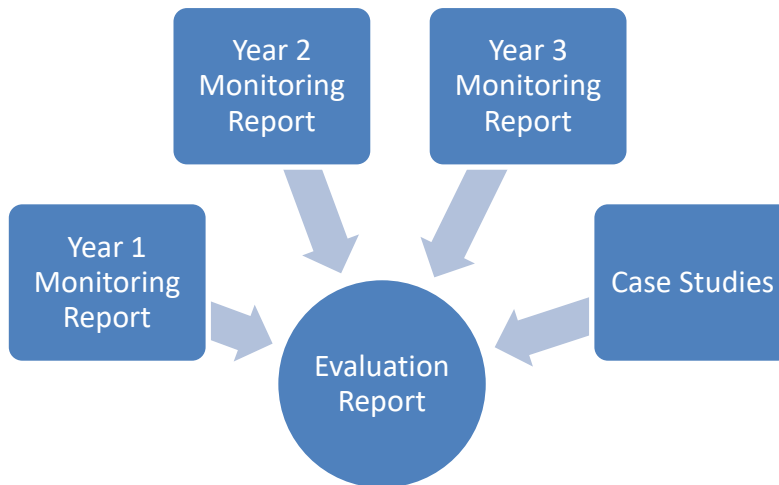


FIGURE 10: COMPOSITION OF EVALUATION REPORT

## 7.2 Additional Recommendations

This section presents additional recommendations made in response to the emerging program issues identified in the analysis of the focus group findings.

**Recommendation 1: Place an Increased Emphasis on a Multidisciplinary Approach in the Development of the Project Outline**

In order to facilitate a multidisciplinary approach, departments should consider how projects can use an approach that specifically lies out of their department's existing skillset. When vetting potential projects, Corporate Planning Committee members should consider what multidisciplinary approach could best be employed to meet the goals of the project. In the case where a very specific skillset is required, staff should work with UBC to target the specific research that is required.

**Recommendation 2: Screen Applicants for Requirements / Skills Specific to the Project**

In the interview process, project leads need to be aware of the specific skills or requirements that their Scholar must possess. Screening for proficiency in writing, for example, may reduce the amount of time the project lead spends editing the final project result. Additionally, requirements such as access to a car will need to be specified in the posting. In the case where there are no applicants that meet the requirements, and the project cannot reasonably be adapted to suit the best candidate, it is recommended that no Scholars be contracted, this may help to prevent incomplete projects.

**Recommendation 3: Establish an 'Introduction to Metro Vancouver' event to Familiarize Scholars with the Metro Vancouver context**

In order to encourage more useful and relevant project recommendations, the Scholars should be given more information on the Metro Vancouver context. By establishing an introductory event, a formal process will be in place to ensure that Scholars are introduced to the unique operations of the Metro Vancouver organization. The introductory event would also allow the Scholars and project leads to mingle and establish connections. It is recommended that the event include a slide deck that could be easily shared with Scholars unable to attend.

**Recommendation 4: Formalize the Sharing of Project Results**

When creating project outlines, departments should consider how to best share the results of the Scholar's work and build the sharing into the agreed upon timeline. For example, the Scholar could present their findings to the department in a presentation and be available to answer questions. Additionally a summary of the Scholar's projects, taken from the evaluation report, should be condensed into an Intranet story that can be shared across the organization. This will allow for a more structured way for staff to share the results of the project and facilitate the learning of new approaches.

**Recommendation 5: Present Monitoring Report Annually to the Corporate Planning Committee**

It is recommended that the annual data be presented in a monitoring report annually to the Corporate Planning Committee. Additionally, the results of the evaluation report should be presented to the Corporate Planning Committee every three years. Having the monitoring reports presented in November will allow for strategic planning of future projects to be undertaken and allow time to create the project outlines so that UBC deadlines are met.

**Recommendation 6: Develop an Evaluation Action Plan**

It is recommended that an evaluation action plan be developed to specify actions leading up to and including the evaluation report being produced. Additionally, the action plan should include a revised look at the program objectives to consider ways to make them more specific, measurable, attainable, relevant, and time-bound. This recommendation is intended to ensure the process leads to concrete actions taken, key-decisions being made, and to ultimately improve the value of the evaluation process to the program stakeholders.

**7.3 Summary**

The purpose of this section was to present the recommended evaluation framework that was created to reflect the needs of the Corporate Planning Committee. Additional recommendations were made in response to the emerging issues identified in the focus group analysis. A proposed timeline synchronizes the collection of evaluation data and the deadlines set by UBC to post project outlines and contract the Scholar.

The evaluation framework presents the means to determine the extent to which the program has been able to achieve its intended objectives.

## 8. Conclusion

The purpose of this report was to develop a framework that Metro Vancouver can use to evaluate the extent to which the Sustainable Region Scholars program is achieving its intended objectives. This included ensuring that the priorities of the Corporate Planning Committee were addressed in the evaluation framework, determining the time required to be a project lead, and identifying any emerging program issues that need to be addressed.

A review of professional literature on the development of program evaluations was conducted to guide the development of the evaluation framework. A logic model was developed to cultivate a shared understanding of program design and how it related to the intended outcomes of the program. A survey of the Corporate Planning Committee identified priority program areas to evaluate and concerns about the program from the perspective of major stakeholders in the program. The focus group determined that project leads were generally satisfied with the program and felt it provided a lot of value; however there were some emerging issues particularly concerning the number and variety of applicants, academic versus government approach, time requirements, and tracking of project uses. All project leads would participate again, although some were very enthusiastic, while others would only be willing to participate again if they were confident in the abilities of the contracted Scholar.

The analysis of the data found that there were a few discrepancies around the Corporate Planning Committee's expectations for the program and the program's ability to deliver on those expectations. Particularly, the succession planning priority for the Corporate Planning Committee would not be able to be achieved under the current program design. Following this discovery, the program logic model was revised to place increased emphasis on the building of a collaborative relationship with UBC.

The literature review and the analysis of the data gathered informed the recommended evaluation framework (Table 5, p. 46), timeline and additional recommendations. A survey to be administered annually to project leads was developed and is presented in Appendix D.

The evaluation framework and additional recommendations of this project should provide immediate value for Metro Vancouver and allow the organization to implement the recommendations with the next intake of students. By implementing the proposed evaluation framework the uncertainty will be reduced for senior staff when making decisions around the program; ultimately, contributing to the culture of evidence-based decision making within Metro Vancouver.

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## Appendix A: Corporate Planning Committee Survey

Please fill out this survey and return via inter-office mail to Megan Gerrys - Head Office, 3<sup>rd</sup> Floor

**Question 1:** Please indicate how important the following Program Outcomes are for you:

	Extremely important	Very important	Moderately important	Somewhat important	Unimportant	No opinion
An increased number of Metro Vancouver actions that support the Board Strategic Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An increase in the quality of Metro Vancouver actions that support the Board Strategic Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An increase in the level of innovation / adoption of a multi-disciplinary approach in Metro Vancouver projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An increased recognition of Metro Vancouver as an employer of choice for UBC graduate students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An increased pool of qualified applicants to fill future job vacancies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An increase in collaboration between Metro Vancouver and UBC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Question 2a:** Please indicate your level of concern with the following issues related to the Program:

	Extremely concerned	Very concerned	Moderately concerned	Slightly concerned	Not at all concerned	No opinion
Program Cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff Time Commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Potential for Union Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of Work Produced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project results do not correspond with Metro Vancouver's mandate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research has little practical application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Sustainable Region Scholars Program: CPC Survey**

**Question 2b:** Please indicate any further concerns you have that haven't been listed above:

**Question 3:** The deliverable of this research initiative is an evaluation framework for the Sustainable Region Scholars Program. Please indicate how likely you are to use the results of a Program Evaluation for the following purposes:

	Completely likely	Very likely	Moderately likely	Slightly likely	Not at all likely	No opinion
Accountability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communications – internally & externally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving Program Efficiency and Effectiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making Policy Decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making Budget Decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making Human Resource Decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Question 4:** Please provide any further comments:

# Appendix B: Focus Group Guiding Questions

## Sustainable Region Scholars Program

### Focus Group Questions

1. Introduce yourself:
  - Professional background
  - Department and position
  
2. Overview of the project you were a lead on – what was the main deliverable of that project?
  
3. Generally describe your experience participating in the Sustainable Region Scholars program  
Was it generally a positive experience?
  
4. Generally describe your role as Project Lead. Did you find it demanding of your time?  
Estimate how much time you spent on average per week in your role as project lead
  
5. Did the Scholar provide a fresh approach/different skillset than what was available in your department?  
(i.e. did the Scholar carry out the project the way that you would have if you were in their position)  
What was your Scholar's academic background?  
Did you learn any new way of approaching projects or problems from your Scholar? How have you shared or intend to share the project results?
  
6. How satisfied were you with the project you received?  
How has the project been used/will be used in the future? If given the opportunity would you hire the Scholar?
  
7. Do you have any concerns with the program overall?  
Describe how you would improve the program?
  
8. Any further comments?

## Appendix C: Sustainable Region Scholars Program – 2016 Intake Project Titles

Project Title	Department	Division
BC Municipal Solid Waste Research Collaborative - Research Process Design and Implementation	Solid Waste Services	Solid Waste Planning
Watershed Songbird Critical Habitat Assessment & Mapping	Water Services	Watershed Environmental Management and Quality Control
Assessing the Importance of Spring Rains to Watershed Forest Conditions	Water Services	Watershed Environmental Management and Quality Control
Reducing Transportation Impacts through Fuel Improvements in Metro Vancouver	Parks, Planning and Environment	Air Quality and Climate Change
Advancing the Concept of a Circular Economy in Canada - Green Paper	External Relations	Collaboration Initiatives
Emerging Practices for Invasive Species Management in the Metro Vancouver Region	Parks, Planning and Environment	Regional Planning and Electoral Area Services
Exogeneous Forces Impacting Long-term Industrial Land Demand and Use in the Metro Vancouver region	Parks, Planning and Environment	Regional Planning and Electoral Area Services

## Appendix D: Project Leads Survey



### Sustainable Region Scholars: Project Leads Survey

#### How has your Scholar's project contributed to Metro Vancouver's sustainability objectives?

Contributes, or will contribute, to the advancement of directions specified in the Board Strategic Plan.

In what areas (Check all that apply)

- Overarching (Incorporating strategies and actions into all Metro Vancouver functions to mitigate and adapt to climate change or improving the productivity of Metro Vancouver infrastructure by recovering resources and/or transitioning to clean or renewable resources for energy)
- Regional Planning (including contributing to the development and implementation of *Metro 2040*, encouraging Complete Communities, and developing solutions for managing competing demands on land in the region)
- Air Quality and Climate Action (including mitigating threats to air quality and public education)
- Regional Parks (including protecting natural areas, educating the public, and stakeholder engagement)
- Housing (including research based advocacy and facilitating members' housing actions)
- Liquid Waste (including contributing to the implementation of the ILWRMP, resilience to vulnerabilities, and public education)
- Water (including contributing to the implementation of the DWMP, resilience to vulnerabilities, and public education)
- Solid Waste (including contributing to the implementation of the ISWRMP, working towards financial sustainability, and public education)

Contributes, or will contribute, to sustainability objectives in another way (please specify)

[Click here to enter text.](#)

Did not contribute to Metro Vancouver's sustainability objectives

#### Describe how the work your Scholar has produced will be used:

[Click here to enter text.](#)

#### Provide an estimate of the amount of time you spent in your role as a Project Lead (total number of hours):

[Click here to enter text.](#)

#### Did the Scholars education or skillset differ from the skillset available in your department?

- Yes
- No
- Unsure



**Did you learn a new approach to research problems as a result of the Scholar's work?**

Yes

No

Unsure

Why is that? [Click here to enter text.](#)

**Will the work produced by the Scholar be used in work that will adopt or consider a multidisciplinary approach?**

Yes

No

Unsure

Why is that? [Click here to enter text.](#)

**How have you shared or intend to share your Scholar's work internally?**

Email to department

Scholar gave a presentation

Lunch and Learn

Intranet Story

Other, please specify: [Click here to enter text.](#)

I will not be sharing my Scholar's work

**How satisfied were you with the work that was produced by your Scholar?**

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

Why is that? [Click here to enter text.](#)

**How satisfied are you with the Sustainable Region Scholars Program overall?**

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

Why is that? [Click here to enter text.](#)