

ENVIRONMENTAL + SOCIAL IMPACT PARTNERSHIPS

**An Academic and Business
Skills-Matching Framework**

Summary Report

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VANCOUVER
ECONOMIC COMMISSION

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BACKGROUND

Post-secondary institutions anchor the communities in which they are embedded. They can be powerful enablers of economic growth and social change. Post-secondary institutions typically have substantial real estate holdings and are a major community employer. Furthermore, they have access to skilled, knowledgeable researchers and students that can be leveraged for work on civic and community projects. Capitalizing on these resources to benefit the surrounding community should be a priority for all cities.

Experiential learning is gaining recognition as a powerful tool for student learning and academic institutions should ensure it is integrated into curricular and co-curricular activities. Combining experiential learning with community-based initiatives offers a unique opportunity for education while creating mutually beneficial relationships between universities/colleges, government, and industry.

For example, the University of British Columbia (UBC) and the City of Vancouver (CoV) founded the Greenest City Scholars program in 2010. It matches UBC graduate students with city departments to work on projects targeting the Greenest City 2020 Action Plan (GCAP). City departments gain access to additional resources to tackle projects and students have the opportunity to apply their knowledge to a real civic challenge. It has been quite successful with 100 scholars matched to date.

Another Vancouver-based partnership launched in 2011 when the City of Vancouver and the Vancouver Economic Commission (VEC) announced the Campus City Collaborative (C3) initiative. C3 was established to bring together the City of Vancouver, the VEC and six local post-secondary institutions. The founding post-secondary institution members were: the British Columbia Institute of Technology (BCIT), Emily Carr University of Art and Design (ECUAD), Langara College, Simon Fraser University (SFU), UBC and Vancouver Community College (VCC). CityStudio Vancouver, an experiential learning hub that matches student capacity with municipal challenges, was developed through the C3 initiative. The VEC has supported CityStudio programming and helped to link it with Vancouver's business community.

The VEC is committed to helping Vancouver reach its GCAP goals. Specifically, it is responsible for the Green Economy goal and its targets to both double the number of businesses engaged in 'greening' their operations and to double the number of green jobs between 2010 and 2020. To that end, the VEC has been informally matching Vancouver's small and medium sized enterprises (SMEs) with various academic programs over the past several years. This is in addition to their efforts supporting CityStudio programming. These matches provide capacity to enable SMEs to tackle environmental and social challenges.

The matches to date have been mutually beneficial to both SMEs and the academic partners and demand for these partnerships is growing. Students have helped small and mid-size businesses build plans for greening their fleets, develop new sustainability-driven markets, tell their greening stories, and design innovative ways to demonstrate renewable energy technologies. In return, the students have gained valuable experience in project management, client relations, research, design, and business development.

CHALLENGE

The Vancouver Economic Commission (VEC), aims to create a formal program to facilitate partnerships between Vancouver's SMEs and local post-secondary institutions. The objectives of this program include:

- Reducing the administrative burden on VEC staff by streamlining the process of collecting, curating, and matching business challenges with appropriate academic resources
- Improving the quality of matches made and project outcomes by ensuring matches are supported administratively and expectations are clear for all parties involved
- Creating a mechanism for following up with academic and business partners, recording the results of the partnerships, and sharing learnings that are applicable to other businesses

This report summarizes research completed to date and presents three potential skills-matching programs for the VEC to pursue. The trajectory, required resources, business model, and risks are outlined for each option. Recommendations for implementing a more formal VEC Environmental and Social Impact (EASI) Partnerships program are also included.

STAKEHOLDER ENGAGEMENT

The success of the Environmental and Social Impact (EASI) Partnerships program will depend on how well it meets the needs of the various stakeholders. Five key stakeholder groups have been identified and were targeted for engagement during this project. These groups are listed below.

EXISTING PROGRAMS: Organizations that are currently involved in matching students with real-world challenges

ACADEMIC INSTITUTIONS: Local college and university programs that are engaged in (or interested in engaging in) experiential learning

BUSINESSES: Primarily small and mid-size businesses that are looking to build their capacity to tackle social and environmental challenges

STUDENTS: Students that are engaged in or interested in experiential learning as a means of gaining experience in their chosen field of study

FUNDERS: Organizations that provide financial support to community programming in the fields of education and environment

Efforts have been made to engage with each of these stakeholder groups. Engagement insights are summarized below and shared in more depth in Appendices A through E.

EXISTING PROGRAMS

There are already several programs matching students with ‘real-world’ challenges in the Lower Mainland. Interviews were conducted to understand how the programs work, what gaps currently exist and what are the best practices when partnering students with real-world challenges.

These interviews collectively stressed the importance of ensuring there is academic support for the students. Students need access to subject matter experts to provide guidance on project work. This support should be built in at the project outset to ensure resources are available. Matches facilitated through specific courses do have this support built in. The course professor is available to the students and has a vested interest in good project outcomes. Additionally, programs with cohorts of students are preferred as it provides an additional support network and source of motivation for the students.

Finally, participating companies should have some financial stake in the project. Even a nominal amount of money helps to ensure the company and their employees have a vested interest in the project. This guarantees better company participation, including improved response time and access to project data, which improves student experiences and project outcomes.

ACADEMIC INSTITUTIONS

A robust academic network is vital to ensuring the skills-matching program’s viability. This network will provide access to skilled students across disciplines and institutions to create capacity for business challenges. The network should be inter-institutional and multi-disciplinary. A broad and well-developed network increases the chances that there will be suitable courses and students for any business challenge that arises. Relevant and effective matches between students and SMEs will increase the likelihood of successful project outcomes.

Instructors and other academic institution contacts, including program coordinators, faculty deans, and campus-wide student engagement offices are motivated to find meaningful projects to enrich the student experience and are, therefore, all valuable additions to a robust academic network. Projects embedded within courses also have built-in academic support. It is recommended partnerships need to be made with campus-wide contacts, program or department contacts, and course-specific contacts.

Campus wide contacts are needed to provide access to the full breadth of disciplines at each institution. For disciplines where the VEC does not have existing program or course partners, the campus wide contacts can provide access. A campus wide contact can also help make connections with researchers.

Program or department contacts are also important to develop. The environmental and social challenges will require different skill sets depending on the project. The VEC will need to understand what skill sets are developed within various programs. This will enable the VEC to better direct the SME challenges to suitable academic partners. Additionally, at the program level, the VEC can also advise on curriculum development to provide opportunities for more effective matches.

Course specific contacts are necessary to facilitate matches embedded in courses. These professors and instructors will be the primary academic contact during projects with SMEs. The course requirements and expected project outcomes will be defined by these contacts.

Figure 1 below provides an academic contact overview based on the discussions made to date and previous VEC partnerships. Additional information on these connections is provided in Appendix B. Maintaining this network will be an ongoing and fundamental task for the skills-matching program.

Academic Institutions	Campus-Wide Programs	Individual Experiential Learning Programs
SFU	Radius Ventures + Fellowship programs Centre for Dialogue Semester in Dialogue	Beedie School of Business Change Lab SIAT
UBC	Centre for Community Engaged Learning SEEDS Sustainability Office Campus as a Living Lab S3i CIRS	Sauder D. Studio SALA, Environmental Design SCARP, Graduate Capstone Engineering, Undergrad Capstones
ECUAD	Living Labs	Digital Communications
BCIT	MAKE+	Sustainable Business Leadership Interior Design Program Architectural Science Program
KPU	Chip Wilson School of Design	Product Design Fashion Design

FIGURE 1: Campus Connections with VEC to Date

BUSINESSES (Small and Medium Sized)

Vancouver’s SMEs are important stakeholders in developing an impact partnership program. The projects need to be designed around the business community’s needs. An impact partnership program must ensure that the projects provide meaningful outcomes on environmental and social challenges. Project results should be actionable to provide the most benefit for local SMEs. This will not be possible without an engaged business community who are able to communicate their needs to the academic partners. VEC also has a role to play in translating the needs of these stakeholders for one another, ensuring expectations and assumptions are made very clear for all parties from the outset.

A small group of local SMEs with previously identified challenges were interviewed to provide insights into business needs. Additionally, a survey was distributed to engage with a wider group of businesses. The survey questions and results are included in Appendix C. Key insights from the survey and interviews are summarized below.

The businesses surveyed unanimously showed interest in improving their social and environmental performance. On average, the businesses were also highly committed to addressing these challenges. However, 80% of businesses stated that they lacked the internal capacity to address these challenges. This is primarily due to financial and staffing barriers, along with a lack of skills (technical and otherwise). SME employees are typically fully utilized and do not have time to devote to projects outside their mandate.

SMEs are inspired to want to make changes for various reasons. As noted in the City of Vancouver Business Energy and Emissions Profile prepared by Climate Smart in 2014, Vancouver's businesses are motivated by more than just marketing or cost savings. They are also spurred by changing regulations, or anticipated future regulations. For example, a city inspector's visit prompted one innovative business to address their facility's water-run-off by installing a grey water system on site. Other businesses are motivated by demands from their client base, partners and investors. Simply bringing businesses together to share experiences is also a powerful motivator. This is seen with the success of programs like Climate Smart, which SMEs say help them tap into the local business collective. These experiences bring support and inspiration from other local companies and additionally the businesses then hold each other accountable. SMEs are eager to share knowledge and learn from each other.

Figure 2 below highlights the top challenge areas for Vancouver's SMEs. Bubble size corresponds to the percentage of businesses identifying these challenges. This overview provide insights into the challenges businesses are facing, however, it was developed from a limited sample size and should not be considered indicative of all Vancouver SMEs. Continued outreach with Vancouver SMEs is necessary to continue to define business needs.

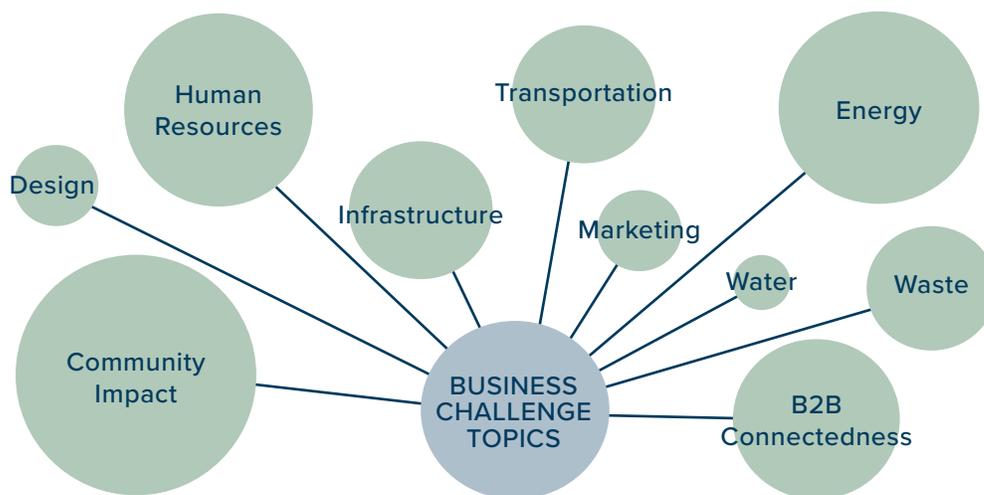


FIGURE 2: Business Challenge Topics Overview

STUDENTS

The VEC has been facilitating matches between students and SMEs for three years. Feedback was solicited from some of these past students to better understand their experience. The survey questions and results are included in Appendix D. Overall, students were overwhelmingly positive about their experience working on a VEC facilitated project. The work provided a very high value to their overall educational experience. The VEC provided significant support and was invaluable in helping students engage with stakeholders. Students would however, like more opportunities for project follow-up after the projects are finished.

Limited responses were received from past students, in part because it was difficult to track down students who have since graduated. Most responses came from students from one of the most recent projects. The responses therefore provide some insights, but should not be considered to provide a complete picture.

The VEC in the past has provided support to students both during and after the projects end. They have provided references for students applying for work or graduate school. Additionally, some of these projects have yielded full-time positions for the student at the partner SME after completing their studies.

FUNDERS

Sourcing adequate and sustainable funding for the skills-matching program is necessary for the program's viability. The funding model will depend on the program selected, but will likely rely on a combination of SME contributions, government funding and other grants. Securing funding will be essential to launching an EASI Partnerships program. Appendix D summarizes some potentially suitable grant opportunities that were researched as part of this report.

FRAMING THE CHALLENGE

A key challenge in developing an impact partnership program is in identifying the types of social and environmental challenges faced by Vancouver’s SMEs. Different problems will require different approaches and require vastly different resources. Our research has indicated problems can be categorized as individual (primarily serving one business) or collective (serving an entire industry), as well as technical (engineering or design challenges) or social (business model, communications, policy). Examples of these various types of challenges are shown in Figure 3 below.

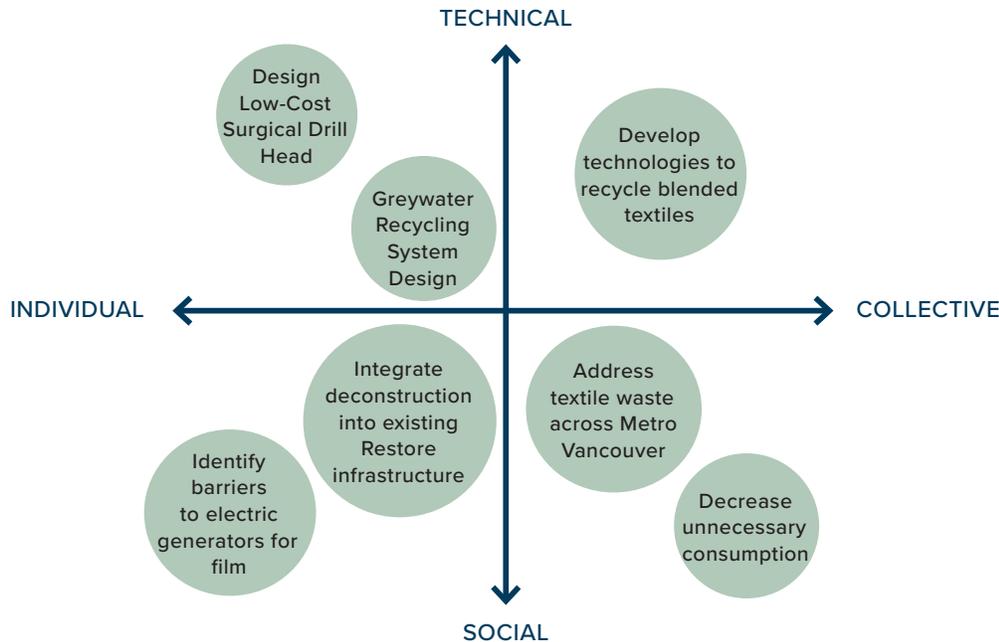


FIGURE 3: Challenge Framing Matrix + Example Challenges

Individual problems are those unique to a business (or small cohort of similar businesses) that can be tackled by a single student or student team. They require straightforward solutions. SMEs primarily need assistance with these problems because they lack the internal skill set. For example, they do not have market researchers (social) or engineers (technical) on staff. Collective problems are more complicated and involve groups of sometimes disparate businesses linked by a common challenge. These problems do not have straightforward solutions. They will likely require multi-disciplinary academic teams to tackle the challenges and create implementable solutions.

A demand for both individual and collective scale projects exists. SME stakeholder interviews to date have primarily identified individual-scale problems. Additionally, the skills-matching that the VEC has facilitated to date has focussed on the individual scale. Through the Thriving Vancouver Industry Innovation Labs however, the VEC has done significant work surrounding some collective challenges. Focusing on individual problems would likely engage a larger number of Vancouver SMEs, but significantly more administrative and logistical management is required. Addressing collective challenges however, presents a significant opportunity to tackle some of the large, intractable problems plaguing not just local SMEs, but society at large.

EASI PARTNERSHIPS PROGRAM FRAMEWORK

Three options were explored for developing a formal Environmental and Social Impact Partnerships Program through the VEC. Each option follows the stages shown in Figure 4 and assumes the program should aim to use knowledge from one project cycle to feed into subsequent challenges. The application of this framework to various program options is outlined in the following sections of this report.



FIGURE 4: EASI Partnerships Program Stages

OPTION 1: CAMPUS COURSE MODEL

OVERVIEW

This option is based on CityStudio’s Campus Courses program. Social and environmental challenges from SMEs will be matched with a course from one of Vancouver’s post-secondary institutions. Students will complete a project, individually or in teams, designed to provide a solution to the assigned challenge. This will primarily target the individual social and technical challenges.

TRAJECTORY

Challenge Sourcing

Work begins by sourcing challenges from local SMEs. The VEC will distribute a call for challenges to the local business community. This will culminate with a ‘Pitch Your Problem’ event to give academic partners insight into the types of challenges faced by SMEs. The event should be held at a minimum annually to provide current challenges. Additional benefits to hosting an annual event include creating opportunities for SMEs to learn from each other as they share ideas and common

challenges, building community ties among businesses that are tackling similar types of issues, and allowing the VEC to target new businesses every year to expand the program reach.

Challenge Selection / Classification

After the challenges have been collected, they need to be reviewed and classified. Those suitable for matching with academic courses should be identified and a preliminary assessment should be done to determine the type of course suitable to work on the project.

Academic Partner Selection + Project Scoping

Once the challenges have been classified, academic partners need to be approached to find suitable courses. Challenges may be introduced to several potential academic partners to determine the best fit. The academic partners will work with the VEC team and the relevant SMEs to define the project scope based on what is achievable within the course. It is important to clearly define the project to manage expectations for all stakeholders. The project should comprise the bulk of the course work to ensure that the project is the students' focus. Course matches should primarily focus on upper-level undergraduate or graduate level students. This will lead to more robust and implementable project outcomes.

Execution

During project execution, the a project coordinator needs to help facilitate interactions between students and the SMEs and outside mentors to ensure students can gain access to information needed to successfully complete the projects. Course faculty will support the students' work academically.

Storytelling

At the end of each semester, the completed projects from all the various courses will be presented at an event. Here, information will be disseminated between students and the SME partners. This will give the entire student and SME cohorts an opportunity to connect and learn from each other. Additionally, this will act as a showcase for the program.

Archiving

Aligning with Thriving Vancouver's mission to engage businesses with inspiration and resources, completed projects will be maintained in a database at the VEC. The database will provide resources to other SMEs and students interested in the work. This knowledge will also feed into the next round of challenge sourcing as the process begins again.

RESOURCES

Staffing is the primary resource required to start this program. At a minimum, one full-time position (project coordinator) is required to run the program and build the academic relationships. In addition to miscellaneous projects costs, funds are also required for event planning and execution. There will also be some IT infrastructure and maintenance costs associated with maintaining the project database.

Approximately \$100,000 per annum is estimated to run a program equivalent to CityStudio's Campus Courses program (15-20 courses + per semester), including associated events and communications.

BUSINESS MODEL

This program will need to be funded through partnerships with various stakeholders and through grants. Academic institutions have historically paid for access to programs to bring experiential learning to their curriculum. It is anticipated that a partnership agreement between the VEC and various post-secondary institutions would yield a substantial portion of the required program costs.

Additionally, there may be funding available from the municipal, provincial and/or federal governments. This program is well aligned with the City of Vancouver's GCAP Green Economy goal and they might be willing to contribute funds accordingly, at least until the program's conclusion in 2020. Grants may also be available for the trial period of this program through local foundations. Appendix E lists some of the promising funding options that should be targeted by this program.

Lastly, businesses that participate in matches should be required to contribute funds to participate. Even a nominal amount of money ensures their investment in the project and improves the likelihood of success. It should be noted that the business model cannot be confirmed until the partnership agreements and successful grant applications are known.

ANTICIPATED OUTCOMES

The campus courses model offers the opportunity to engage broadly with partners to strengthen ties between Vancouver's academic institutions and SMEs. Targeting 20 matches per year (10 in fall term, 10 in winter) the potential impacts are significant. Figure 5 estimates these impacts based on what CityStudio currently achieves with their programming . The CityStudio program has all students in a partner course working on the identified challenge (~25 students per class). This yields a much higher student engagement than if only one or two groups within a class (~5 – 10 students) work on the matched problem.



FIGURE 5: Campus Course Model Anticipated Outcomes

OUTSTANDING CONCERNS

While valuable to the academic partners, there may be mixed benefit for the SMEs who participate. The project results will not always be implementable depending on the student skill level. This risk will be minimized through limiting course matches to upper-level undergraduate and graduate students. Additionally, it is critical to properly scope the project with the participating SMEs to

manage their expectations. The challenge projects must be achievable by students in the time allotted and commensurate with their skill level. If these concerns are not adequately addressed, obtaining financial buy-in from the SMEs might be a challenge if they are unsure if the project results will be implementable.

Another key concern for this option is finding program funding that will be sustainable in the long term. This may make it difficult to hire and retain a qualified program coordinator. Additionally, if the program coordinator must dedicate significant time to fundraising (such as preparing grant applications) this may limit their ability to form relationships with academic partners and support ongoing student projects.

POTENTIAL PARTNERSHIPS

A potential solution to the financing concerns may be to form official partnerships with existing organizations and leverage their resources to tackle this work. This could include partnerships with CityStudio, UBC's Centre for Community Engaged Learning (CCEL), and Riipen, among others. Additional information on these potential partner organizations is found in the corresponding meeting notes in Appendix A.

CityStudio

An official partnership with CityStudio would be very beneficial. It would grant access to their well-established academic network and considerable knowledge. The VEC has been an integral partner to CityStudio since its inception. There is a pre-existing working relationship and both sides already understand each other's goals. CityStudio are open to embedding this program within their organization, but separate funding and staff must be secured. Additionally, CityStudio's goals are somewhat different than the VEC's. CityStudio is interested in deep systems change and is looking at how to build better relationships between cities and universities. The projects, and outcomes, are secondary to this mission. Project outcomes however, would be a primary focus for an impact partnership program run by the VEC for local SMEs. These core differences would need to be further discussed and negotiated before any partnership would be possible.

UBC's Centre for Community Engaged Learning (CCEL)

UBC's CCEL is a campus wide organization with contacts in all departments . CCEL provides opportunities for collaboration between academic resources and community partners aiming to address ill-defined and complex problems at a societal level. They create community-based experiential learning programs to help students grow into resilient and engaged citizens. An official partnership with CCEL, where they manage all the course matches based on challenges curated by VEC would substantially reduce the VEC staffing requirements. This would however limit the program reach to UBC.

Riipen

Riipen is a web platform designed to enable experiential learning within the curriculum. Riipen's academic partners post courses with a project that is searching for partnerships with businesses. Businesses then apply to partner with the course. This system could potentially be configured to work with a VEC campus courses program and Riipen's growing team could help relieve the VEC resource requirements.

OPTION 2: RESEARCH CLUSTER

OVERVIEW

This option is aimed at addressing the collective challenges facing Vancouver businesses. The challenges impact a range of businesses and are large in scope. Skilled researchers, often in multi-disciplinary fields, are necessary to thoroughly approach these challenges and devise implementable solutions. This program option will leverage National Science and Engineering Research Council of Canada (NSERC) Engage and Mitacs Accelerate research grants to bring together academics and industry to solve collective challenges with paid student researchers. Detailed information on the NSERC Engage and Mitacs Accelerate programs is given in Appendix F.

TRAJECTORY

Challenge Sourcing

Thriving Vancouver's industry network will be leveraged to identify collective challenges facing Vancouver's local industries. One program that may be used to generate collective business challenges is Thriving Vancouver's Industrial Innovation Labs . The lab's collaborative efforts can be used to determine areas where research is needed to create implementable solutions. For these large scale, collective challenge, topics or areas of focus could rotate annually.

Academic Partner Selection + Project Scoping

Once a topic is selected, industry partners will be recruited. A collaborative group of industry partners, who can provide broad context for the research, is recommended. The project can however also operate with a single industry partner. The industry partners would be managed by the VEC-based project coordinator.

Efforts will then focus on finding the academic research partners for the project. The VEC project coordinator will use the academic network to try and source appropriate researchers. Additionally, Mitacs will be approached with the proposed research project and the assigned Mitacs representative will also work to find the necessary researchers. Potential academic partners will meet with the industry partners to determine if the project is a good fit.

Once the industry and academic partners are secured, work will commence on the NSERC and Mitacs grant applications. For smaller projects, Mitacs prefers that the intern researcher prepare the application. For larger cluster applications, the specific intern researchers may not have been identified yet and other team members can prepare the application. Mitacs provides support and guidance throughout this process. The NSERC and Mitacs grant applications can be submitted as a package to NSERC. After submission, a response should be received from NSERC and Mitacs in 1.5 – 2 months depending on the project size. There may be some outstanding items to resolve before approvals are given, but most projects are approved outright .

Execution

After approvals, funding will be sent from Mitacs and the industry partners to the academic partners to administer. Work will then commence on the project. The project size, scope and length are completely customizable to suit the specific project needs, but will be based on up to six-month

NSERC Engage grants and subsequently four month blocks of work per the Mitacs model. For multi-block projects, it is preferable if each intern researcher is assigned two consecutive four-month blocks of work. The VEC project coordinator will manage the project throughout and ensure that the research is progressing sufficiently and that the industry partners are kept informed and are satisfied with the research direction and findings.

Storytelling

Upon project completion, an event will be held to present the results and actionable items back to the initial industry participants and any other interested stakeholders. The focus will be on identifying steps for action.

Archiving

Aligning with Thriving Vancouver's mission to engage businesses with inspiration and resources, a database of completed projects will be maintained at the VEC. The database will provide resources to other stakeholders interested in the selected topic. Additionally, the database will include a project debrief outlining best practices and lessons learned on the program format. This knowledge will inform subsequent research clusters as the process begins again.

RESOURCES

A dedicated full-time VEC staff member (project coordinator) is necessary for the program. They will coordinate the industry partner group and help facilitate interactions with the academic partners. The project coordinator will also be responsible, through Thriving Vancouver, to establish the research topic and team for the subsequent research cluster.

Mitacs requires working space for the intern researchers, as they must split their time between campus and the industry partner. Additionally, there needs to be space at the VEC offices to house researchers as required.

In addition to miscellaneous projects costs, funds are also required for event planning and execution. There will also be some IT infrastructure and maintenance costs associated with maintaining the project database.

BUSINESS MODEL

For the Mitacs Accelerate grant, costs are shared between Mitacs and the industrial partner(s). For smaller projects, costs are shared 1:1 for a \$15,000 grant per block (\$7,500 from industrial partner). For clusters (greater than 6 blocks), Mitacs matches at a ratio of 1.22:1 yielding minimum \$80,000 grants for six blocks (\$36,000 from industrial partner).

In addition to the Mitacs grant, potential NSERC grants will also be explored and leveraged wherever possible to provide additional funding. NSERC Engage grants for example do not require matching industry funds.

Creating an industry partner cohort will lower the participation barrier as the industry contributions will be shared between multiple-businesses. Multiple business partners do not have to split the costs

evenly. Ideally, there would be one or two ‘anchor’ companies who are able to provide the bulk of the industry contributions.

Mitacs Accelerate funding provides salary for the intern researcher (\$10000 per 4-month block), with the remaining grant directed to project costs (\$5000 per block for smaller projects, \$3333 per block for clusters). The partner academic institution manages and distributes the funding. The project costs can be allocated towards a project manager’s salary, but only if the project manager is a university employee or student. These funds cannot be directed back towards the industry partner organizations.

Funding to cover staffing costs for the VEC-based project coordinator needs to be confirmed. Mitacs and other government research grants cannot be used for this purpose. Other grants will need to be secured to cover these costs. Appendix E lists some potential grants that may be suitable.

ANTICIPATED OUTCOMES

This program will promote connection and collaboration between Vancouver businesses. The businesses will work together to address shared challenges. Businesses have identified a desire for opportunities to help build connections and community with each other. The project results should be robust and create actionable work to address the collective challenge. This will enable action on some of the most challenging environmental and social issues facing businesses today. The work will likely also be applicable to a wider range of businesses both within Vancouver and beyond.

There are numerous benefits to these government research grant programs for the academic partners. Research interns will have the opportunity to apply their skills in a professional environment and expand their network. The program will also help professors fund their graduate students and postdocs, and expand their research network. The work itself will also connect researchers to their local community and help build relationships. This program will provide resources to address environmental challenges in Vancouver businesses, directly impacting Vancouver’s GCAP Green Economy Goal target to double the number of businesses actively engaged in greening their operations over 2010 levels. The research cluster model offers the opportunity to engage academia and local SMEs to find meaningful solutions to complex environmental and social challenges. This is vital work that will not be accomplished without leadership and facilitation. Figure 6 below highlights the key impacts from this program.



FIGURE 6: Research Cluster Model Anticipated Outcomes

OPTION 3: JOB PLACEMENT MODEL

OVERVIEW

This option will target individual challenges. The VEC will work with local SMEs to identify opportunities to build their capacity to target addressing environmental and social challenges. Students on break or recent graduates will be matched as interns with these businesses to work on the challenges. Government employment grants will be leveraged to provide financial assistance to SMEs hiring the interns.

TRAJECTORY

Challenge Sourcing

Work will begin with sourcing challenges from local SMEs. The VEC will distribute a call for challenges to the local business community. This will culminate with an event to source challenges. The event will facilitate information sharing and help identify key challenges faced by SMEs. The event should be held at a minimum annually to provide current challenges and should target a winter date to align matches with school year end in April.

Challenge Selection + Classification

After the challenges have been collected, the businesses will have the option of either creating the position and applying for wage subsidies on their own, or engaging the VEC to facilitate the process for them. For the challenges delegated to the VEC, they first need to be reviewed and classified. Those suitable for matching with interns should be identified and a preliminary assessment should be done to determine the required project length and desired student background. Summer or co-op positions for students will typically be four months in length, whereas recent graduates will be assigned six to twelve month internships. The VEC project coordinator will then work closely with the SME to prepare a job posting and to apply for wage subsidy funding.

The VEC project coordinator will assist in advertising the job posting in relevant places, such as campus career offices, co-op offices and other online job boards targeting youth or green jobs. The VEC project coordinator will also support the SME during the hiring process to provide guidance and ensure matches are high quality. Facilitating matches would occur year-round as needs arose at SMEs, however there would likely be an increase in matches approaching the normal end of school in April.

Execution

During the internship, the VEC coordinator will maintain a supportive role for both the SME and the intern. Ensuring that both sides have the necessary resources to successfully address the challenge.

Storytelling

A sampling of successful internships will be showcased at the challenge sourcing event in the following year. This will create a platform for information sharing between SMEs and demonstrate the program benefits. In addition to this work, the VEC will also maintain information on existing grants and will advertise this information to the VEC network as required.

Archiving

An internship database will be maintained at the VEC. The database will provide resources to other SMEs interested in hiring ‘green’ interns. This knowledge will also feed into the next round of challenge sourcing as the process begins again.

RESOURCES

Staffing is the primary resource required to start this program. One full-time position (project coordinator) is required to run the program and facilitate intern job postings and wage subsidy applications.

In addition to miscellaneous projects costs, funds are also required for event planning and execution. There will also be some IT infrastructure and maintenance costs associated with maintaining the project database.

BUSINESS MODEL

The VEC will charge businesses a fee to prepare job postings and wage subsidy applications. These funds will be applied to the program costs, including the project coordinator’s salary, event planning and IT costs.

The student salaries will be paid directly by the SME, with wage subsidy funding provided by the federal government. Some of the key government wage subsidy programs that can be leveraged are summarized in Appendix G.

ANTICIPATED OUTCOMES

The program will provide students and recent graduates with valuable work experience related to their field of study, which will help launch their careers. Vancouver’s SMEs will gain access to skilled, subsidized labour that will help them improve their operations and address environmental and social challenges. This program will provide a clear and measurable increase in Vancouver’s green jobs. This directly impacts Vancouver’s GCAP Green Economy Goal target to double the number of green jobs over 2010 levels. Figure 7 below highlights the expected annual impacts from a job placement program run by the VEC.



FIGURE 7: Job Placement Model Anticipated Outcomes

OUTSTANDING CONCERNS

A key concern for this program is how to ensure the interns are supported during the placements. This program will target placements in companies that typically do not have internal capacity for environmental and social challenges. Therefore, there might not be internal subject matter experts to support the intern. One possible solution is to explore developing a network of 'green' mentor companies that could be used to provide support and guidance to the student/recent graduate. This program also has significant staffing requirements, but does not offer the same opportunities for impact as the other two options do. There will be significantly less people interacting with the work than in Option One and there will not be a real opportunity to address some of the more complex collective challenges targeted with Option Two.

The VEC coordinator, as well as other program costs are to be paid from the fee charged for assisting with these applications. It is unlikely this fee would be sufficient to cover all these costs. This program also offers less opportunity for other funding partners, such as academic partners, government funding, or other grants. Therefore, securing sufficient funding to operate this program is a significant outstanding risk for this option.

CONCLUSION

Partnerships between local businesses and academic institutions provide significant opportunities for all stakeholders. They can also be an effective tool for stimulating environmental and social change in places that would otherwise not. A mediating partner, such as the VEC, is a necessary component to engaging SMEs and to providing access to Vancouver's academic institutions.

This report has presented various programming options that the VEC can implement to formalize their existing effort to create business and academic partnerships. The different options are customized to best suit the challenge type to be addressed (individual versus collective). Based on these findings, the VEC should, indeed, move forward with the implementation of an Environmental and Social Impact Partnership program to match students and academic resources with local SMEs.

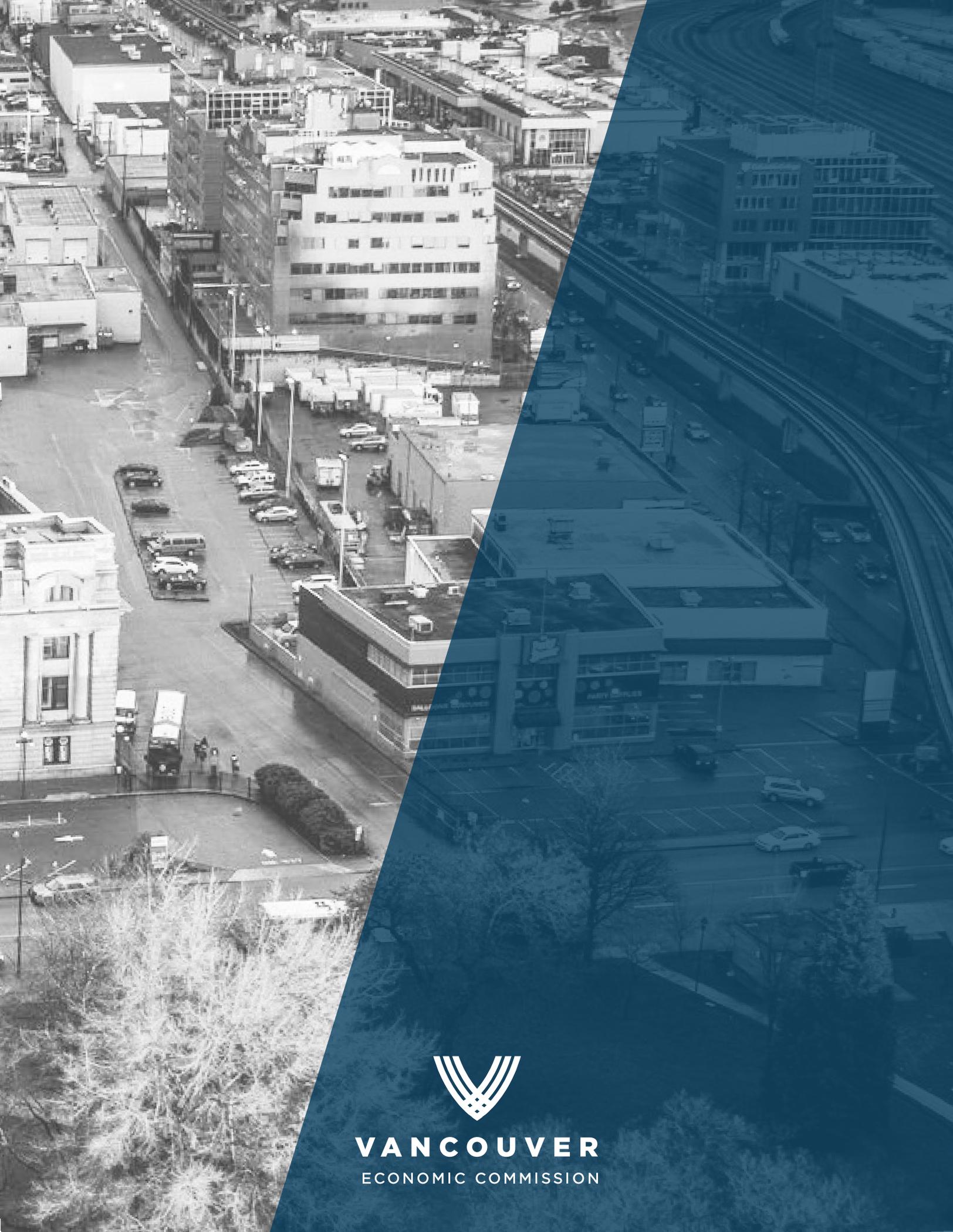
Since the business community requires increased capacity to address both individual and collective challenges, both channels should be explored through partnerships with existing programs that should be leveraged wherever possible. Specific recommendations can be found on the following page.

An environmental and social impact partnership program offers the potential to build a community hub for local businesses. Businesses will build relationships and support each other as they make environmental and social improvements. A program will also provide academic institutions the opportunity to strengthen their community connections while providing meaningful learning experiences for their students and enabling impactful change. Finally, through implementing a more formal EASI Partnerships program, the VEC can increase the impact of its relationships with Academic Institutions.

SUMMARY OF RECOMMENDATIONS

This report has presented various programming options that the VEC can implement to formalize their existing efforts to create partnerships between businesses and academic institutions to further environmental and social impact projects. Given that there is proven demand from the business community to increase their capacity to address both individual and collective EASI challenges, it is recommended that the VEC takes the following actions. Further detail for each quick start action is provided in Appendix H.

	OPTION 1 CAMPUS COURSE MODEL	OPTION 2 RESEARCH CLUSTER MODEL	OPTION 3 JOB PLACEMENT MODEL
TYPES OF CHALLENGES ADDRESSED	Individual business challenges, both technical and social	Collective business challenges, both technical and social	Individual business challenges, both technical and social
RECOMMENDATION	Pursue this option in partnership with CityStudio for two year trial period	Test this option by developing a research cluster linked to ongoing textile waste initiative	Do not pursue this option beyond lending minimal communications support to existing programs
QUICK START ACTIONS	Formalize partnership with CityStudio; Secure funding for trial period; Host 1st annual challenge collection event in fall 2017	Formalize partnership with Mitacs and NSERC; Host session with textiles industry innovation lab participants to secure business and researcher commitments	Use research to generate blog post on existing green job funding programs; Support wage subsidy programs through social media sharing
ANTICIPATED OUTCOMES	Capacity added to 20+ SMEs annually Annual engagement of 100+ stakeholders in EASI partnerships	Collaborative and vital community between academia and local SMEs; Implementable actions for complex challenges	Impacts do not justify program efforts; Significant risk of interns not being supported
RESOURCES REQUIRED	Full-time project coordinator; Estimated \$12k operating budget for events, communications, etc.	Part-time project coordination; Small seed financial commitment (estimated \$2500)	Less than 4 hours effort for VEC marketing team to support existing programs



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