Web-based System to Measure Social and Environmental Impact of Co-operatives

Deadline: Submit your application to Mr. Keith Bain via email by March 24, 2016 – 10:00 am.

Project Description

While a vast number of measurement tools and methodologies have been developed for investor-owned businesses and non-profit organizations, there is a paucity of standardized and universal measurement of the impact of co-operatives socially and environmentally. The overall goal of this research is to measure the social and environmental impact of co-operatives. The objectives include: 1) to identify social and environmental indicators that the co-op sector will report on for their co-operatives; 2) to develop an online, user-friendly social and environmental impact tool; 3) to promote system-wide adoption of the tool; and 4) to put in place a sustainability plan to ensure that social and environmental impact assessment can continue beyond the life of the funding. As a result of this research, we expect to identify a minimum of 15 social and environmental key performance indicators, the supporting metrics and a process involving the web-based system with representative co-operatives from a variety of sectors across Canada. Through this project, Duguid Consulting will develop a system by which benchmarks will be created by and for the co-operatives to help them evaluate their social and environmental performance. The project will also provide the intern with an experience in creating a web-based interactive service for data acquisition and analysis that will be used by a nation-wide clientele of co-operatives. It will be a significant career development opportunity that includes data analytics, client interaction, system analysis, design, implementation, and testing.

Specific objectives of the internship

Develop a web-based interactive system to accommodate data collection and reporting for 15 key performance indicators (KPIs) that reflect the social and environmental performance of co-operatives in Canada. The system must be designed to include a mechanism for participating co-operatives to submit their data. From the accumulated data submitted, the system will be designed to identify a benchmark for each KPI. A major feature of the system will be an interactive reporting tool whereby users can create their own reports using the following parameters:

- From/to dates
- Industrial sector – financial (insurance and credit unions), agricultural, grocery, housing, energy, etc.
- Social and environmental groupings (select specific KPIs or all)
- Co-operative size as measured by assets or revenue

Responsibilities of the intern

- Work with faculty supervisors, Dr. Pawan Lingras and Dr. Daphne Rixon to document and gain an in-depth understanding of the project goals
- Prepare a ‘mock-up’ of the proposed web-based tool. This mock-up will be provided to participants to solicit their feedback.
- Attend focus group meetings with the academic supervisors and the 15 co-operative participants in the pilot project. The purpose of the focus group meetings with participating co-operatives is to identify the 15 KPIs, definitions and calculation methodologies.
- After the focus group meetings, the intern will prepare a detailed user requirements document that will be approved by the supervisors before work commences on the development of the web-based interactive reporting tool.

Timeline.

The following tasks will be completed by the intern who will be working full-time on the project from May to August, 2016.

Dates	Tasks to be completed by the Intern
May – week 1	Meet with academic supervisors and read background material provided by the academic supervisors
May – week 2	Prepare a high-level user requirements document
May – weeks 3 & 4	Develop high-level system mock up for focus group participants
June – week 1	Attend focus group meetings
June – week 2	Prepare a detailed user requirements document for review by the academic supervisors
June – week 3	Based on the feedback, revise the user requirements document accordingly
June – week 4	Web systems development – data submission tool, definitions and calculation methodologies
July – weeks 1 & 2	Develop systems administrator options to add/delete KPIs, definitions, calculation methodology and other information.
July – week 3	Web systems development – construct benchmarks from accumulated data
July – week 4 August – week 1	Web systems development – interactive reporting tool whereby users can create personalized reports with tables and graphs by selecting specific criteria. Include download to Excel capability.
August – week 2	User testing and system revisions as required
August – week 3	Prepare systems documentation for CEARC system administrator and users
August – week 4	Work with academic supervisors to develop the Mitacs survey and final report

Expected deliverables. Please describe the expected deliverables of the project (including the submission of a completed Mitacs Final Report and Mitacs survey at the end of the project).

1) Web-based system to accommodate data for 15 social and environment indicators reported by co-operatives
2) Each indicator will be accompanied by a definition and a calculation methodology
3) Functionality to enable participating co-operatives to enter their data
4) Interactive reporting tool that will enable users to create their own reports based on criteria for dates, industrial sector, KPIs and co-operative size
5) Functionality that will enable the system administrator to modify the system to add or delete KPIs, definitions and calculation methodologies. This will provide functionality to capture, analyze and report data for a wide array of KPIs in the future. The current project will include just two categories of KPIs – social and environmental indicators. For future projects, the system should provide the the capability to add other KPI categories such as human resources, financial ratios, seven principles of co-operatives.
6) User documentation for co-operatives and systems documentation for use by the CEARC systems administrator
7) Mitacs Final Report
8) Mitacs Survey
9) Two academic papers will result from the project. One paper will focus on the IT aspect and will be targeted towards an information technology journal. The second paper will concentrate on the establishment of benchmarks for the co-operative sector and will be targeted towards an accounting journal.

Benefit to the intern
Financial remuneration: $10,000

1. Opportunity to develop a leading-edge web-based reporting tool to capture the social and environmental performance of co-operatives.
2. Work with user participants on a national project. The project will involve participants from co-operatives in all 10 provinces and the territories.
3. Gain an understanding of how to identify and synthesize system needs from multiple users in small and large co-operatives in rural and urban areas throughout Canada. The intern will learn how to work with users to achieve compromise on conflicting needs and goals.
4. Develop a system whereby the systems administrator is given the functionality to maintain the system and implement modifications as needed.
5. Make a significant contribution to the practitioner and academic literature on social and environment reporting.