

The following information is an excerpt from the Letter of Intent submitted to the J.W. McConnell Family Foundation in response to the RECODE Request for Proposals of Spring 2014.

The University of Guelph

The Problem

The world's food system is in crisis. Globally, there are 842 million undernourished people while 1.5 billion are overweight or obese. Approximately one third of the world's food is wasted before it is consumed. Resource-intensive agricultural practices contribute to climate change and deforestation. As a result, serious questions exist about our ability to sustainably feed the world's projected population of nine billion people.

Within Canada, these same issues resonate and take shape as rising food bank usage, food waste, and agricultural pollution. Countless initiatives have tried, and are trying, to address these issues. But all too often they happen in siloed and constrained ways. Debates are polarized, governments are shrinking, and innovations are stifled because of funding restrictions, red-tape, and a lack of strong collaboration.

Canada needs an innovation centre, where cross-disciplinary and cross-sectoral partnerships can be forged around innovative solutions to the global food crisis, thereby developing strategies capable of feeding nine billion.

This proposal outlines how such an exciting initiative can be realized at the University of Guelph, through a collaboration of faculty and administrators from four colleges, a student group, local business incubators, a venture capital fund, and a national NGO. The University of Guelph is perfectly poised to host this centre as it has been at the forefront of food studies since its inception in 1874, has acted as an incubator for food issues for decades, and currently employs some of Canada's greatest thought leaders on food systems issues.

The proposed centre will be led by Dr. Evan Fraser, who is a Professor of Geography, a Canada Research Chair, and a Fellow of the Trudeau Foundation. Dr. Fraser will work in close collaboration with the University of Guelph's Food Institute (led by former Vice President (Innovation) for Loblaw Companies, Paul Uys), and the Institute for Community Engaged Scholarship (which is part of Dr. Fraser's institutional home, the College of Social and Applied Human Sciences).

The Proposal

The proposed Food Solutions Innovation Centre will act as a research and incubation hub for prototypes and cutting edge innovations addressing food systems issues. Borrowing from the technology sector, the early mandate of the Centre will focus on a series of "hack-a-thons"¹, with the aim of engaging student-faculty teams to create and implement solutions to two vital issues facing Canada's food system: food waste and the need for less resource-intensive protein sources. More specifically, the goals of this initiative are four-fold:

¹ "Hack-a-thons" come from computer science and refer to events where programmers collaborate intensively on shared problems. In our case, we are using this phrase to refer to an event where we will bring teams together to work intensively on finding innovative solutions to problems in the food system.

1. To foster student engagement and promote social innovation through identifying, prototyping and incubating solutions to pressing food issues;
2. To help catalyze a culture of social innovation around the food system and infuse this into university-level educational programs;
3. To foster cross-sectoral and cross-departmental partnerships within the University of Guelph and with industry and community partners to expand the scope and reach of innovative research and provide new opportunities for the application of this knowledge; and,
4. To create and operationalize scalable solutions and products that address food systems issues.

The first three years of the Centre's work-plan have been designed with a staged approach, building local engagement and innovation in year one around the issue of campus food waste, and culminating in a national competition to revolutionize protein consumption in year three.

Phase 1 – Student-level hack-a-thon on food waste, 2014-2015

In Phase 1, the University of Guelph will run a 48-hour, student-level hack-a-thon aimed at understanding and addressing food waste on campus. In advance of this event, the Centre's coordinator will work with administrators and staff at the University to collate and organize data on food waste produced through food procurement and retail channels on campus. This will produce the data sets to be used during the initial hack-a-thon, and create informational packets to be used by all hack-a-thon teams that clearly identify and articulate the problem at hand.

During the hack-a-thon, a series of short talks and workshops will take place to increase student learning on food waste issues and social innovation. From the entrepreneurship side, these will include informational sessions from on- and off-campus business incubator programs to raise student awareness of how they can utilize and engage with these resources. From an issues perspective, faculty and community experts such as Ralph Martin, Kate Parizeau, Caitlin Colson (Meal Exchange) and Michael von Massow will give talks about food waste at the campus, municipal, national, and institutional levels.

The Phase 1 hack-a-thon will be focused on three outcomes: new ways of visualizing data regarding food waste on campus; designing apps and other programs to collect better data about food waste on campus; and identifying current gaps in data collection combined with a process for the University to gather this data. This phase is important to both ascertain the limitations of data currently being collected by the University of Guelph, and to engage students in identifying and implementing solutions to data collection around this issue. In addition, (and as well as winning a cash prize) the outcomes of this hack-a-thon will be three-fold:

1. Outcomes will be integrated into the new Undergraduate Trans-disciplinary Innovation Program (UTIP), which, in the winter of 2015, is offering a new project-based seminar class to upper year undergraduate students. The goal of the UTIP course is to bring senior undergraduate students from all seven colleges on campus

together to explore solutions to real-world problems, and to share discipline specific knowledge and expertise regarding these issues. Both Innovation Guelph (IG) and the Catalyst Centre will offer entrepreneurship training to students in this course. These include “Start Your Engines”, an entrepreneurship 101 class offered through IG, and IP 101 (offered by the Catalyst Centre) which will explore the various options available with regards to licensing software and data products. UTIP is being piloted in the 2014-2015 academic year, with financial support from the University Provost, coordinating support from the Institute for Community Engaged Scholarship (ICES), and faculty collaboration from all seven campus colleges. If proven successful, UTIP will integrate with the Food Solutions Innovation Centre to infuse student competitions into university curricula in the long-term.

2. Winning data collection ideas will be implemented by the University of Guelph to inform the following year’s Phase 2 hack-a-thon.
3. Projects that integrate into the UTIP program will have the opportunity to enter the final phase of a social purpose incubation pitch competition, run by the University’s Co-operators Centre for Business and Social Entrepreneurship (CBaSE) in the spring of 2015. If these projects win the pitch competition, they will be part of a 12-week incubation/acceleration program which offers business mentorship and seed funding to student innovations and prototypes.

The Phase 1 hack-a-thon will be organized by the Society of Computing and Information Science (SOCIS), a student organization in the University of Guelph’s School of Computer Science, and adjudicated by a panel of experts including members of the University of Guelph, social entrepreneurs, and Meal Exchange.

Phase 2 – Provincial-level hack-a-thon on food waste, 2015-2016

Using improved data collected through Phase 1, the Innovation Centre will next run a provincial-level hack-a-thon aimed at generating projects, apps, and solutions to reducing campus food waste. This hack-a-thon will be directed at joint student-faculty teams province-wide. It will follow a similar format to the hack-a-thon in Phase 1, with workshops and information sessions on food systems issues and social enterprise opportunities taking place throughout the event.

The adjudication panel will consist of start-up, retail, industry, and procurement experts from the Guelph Food Institute, ICES, Innovation Guelph, the Catalyst Centre, CBaSE, and others. Alongside prize money, this hack-a-thon offers a unique opportunity for innovators to have their projects implemented and utilized by the University of Guelph. Business support and mentorship will again be offered by our incubation partners. In addition, Meal Exchange will be involved in the adjudication panel, with an aim to scale resulting best practices to campuses nationwide. As in Phase 1, innovative outcomes brought forward by University of Guelph teams will be integrated into upper year project courses on food systems, policy, and trans-disciplinary learning.

Phase 3 – National-level competition on protein alternatives, 2016-2017

Phase 3 will continue the tradition of annual entrepreneurial food systems competitions, but

engage with an issue of increased complexity – finding more resource-efficient protein sources for Canadian consumers.

This competition will aim to engage multi-sectoral teams, with potential partners such as universities, government workers, industry and retail officials, farmers, and technologists. Outcomes of the competition will be adjudicated by a national-level expert panel. Early commitment to this national competition has been made by Toronto-based venture capital fund, Freycinet Investments. Freycinet's CEO, James Appleyard, has agreed to be a member of the adjudication panel for this competition and mentor winning teams. In addition, Mr. Appleyard has expressed interest in exploring synergies between this event and Freycinet's own annual start-up competition, which focuses on food, health and clear water innovations. The University of Guelph's Catalyst Centre will also adjudicate, bringing expertise on intellectual property and commercialization, as will an executive from Loblaw Companies Ltd.

The on-going mandate and direction of the Innovation Centre will be determined halfway through this grant, based on continuing discussions of the inter-university steering committee, and according to the lessons learned through the implementation of the first two hack-a-thons. On-going institutional support and leadership has already been pledged by Dr. Evan Fraser (through funds provided by his Trudeau Fellowship) and the University of Guelph's Food Institute and Institute for Community Engaged Scholarship, ensuring a lasting commitment to this vision beyond the duration of this proposal.