Wellington County, City of Guelph and Next Generation Manufacturing Canada

Request for Proposal

Food Hub Feasibility and Circular Food Manufacturing Capability Model

15 March 2021

Introduction & Background

The County of Wellington has strong roots in farming and food. Home to over 2500 farms and food businesses, strong agri-tourism programmes, and University of Guelph agriculture research facilities, the County makes food both a business and a lifestyle. The region enjoys high-grade growing soils, a strong manufacturing sector, and an innovative and entrepreneurial agricultural heritage.

The City of Guelph is the location of the largest concentration of expertise and infrastructure dedicated in agrifood and agritech research and development in Canada, including the University of Guelph, federal and provincial ministries of agriculture and a concentration of major food companies and industry organizations.

Guelph and Wellington are jointly leading ***Our Food Future***, an Infrastructure Canada funded smart cities project to create Canada's first technology-enabled circular food economy. The initiative includes over 150 collaborator organizations across an integrated rural-urban living lab, with aims of increasing access to healthy nutritious food, incubating new circular food businesses and collaborations and unlocking the economic value of food waste.

Next Generation Manufacturing Canada (NGen) is the industry-led not-for-profit corporation leading Canada's Advanced Manufacturing Supercluster. NGen is dedicated to building world leading advanced manufacturing capabilities in Canada, for the benefit of Canadians.

NGen aims to strengthen Canada's economic performance, boosting GDP by $13.5 billion and creating 13,500 well-paying jobs over the next ten years, while contributing solutions that address some of the world's most pressing challenges in areas like health care, energy and environmental sustainability.

NGen works to achieve these objectives by leveraging Canada's technology and industrial strengths to accelerate the development, scale-up, and productive deployment of advanced technologies in Canadian manufacturing and their commercialization in global markets.

Canada's advanced manufacturing assets are currently well hidden to industry making it difficult for even large companies to connect with local manufacturers, technology providers, or research capabilities. With low levels of awareness, there is not enough interaction between manufacturers looking for technology solutions and technology start-ups with applications of potential value.

The Challenge

The food and beverage processing industry is the largest manufacturing industry in Canada, accounting for over 16% of the total manufacturing sector's GDP and 17% of jobs. The food processing industry continued to grow, until the COVID-19 outbreak highlighted the volatility in the food supply chain.

From our primary and secondary research, several common considerations continually emerge:

- **Food waste:** Over 50%, 35.5 million tonnes[1], of food produced in Canada is lost, or wasted, per annum, costing the economy almost $50 billion per year[2]. Recognizing there is no one solution to

answer this, AAFC is proactively looking at challenges that impact the whole food system. NGen is keen to support them with supporting processors adopt digital technologies or systems that can prevent waste and/ or divert it from landfill. Guelph and Wellington are working to support innovative business models that reduce and revalorize food waste.

- **Food sector innovation and opportunity:** Many smaller food sector organizations lack access to facilities and equipment to experiment and innovate food products or circular business models. Awareness and coordination of current food support structures is also important to achieve maximum utilization and benefit for this sector.
- **Food security**: In a recent survey, 12% of Guelph-Wellington residents reported being food insecure. Nutritious and locally produced foods can be less accessible for residents, especially those with lower incomes.

To ensure we build on such a system, food processing innovation should consider:

- *Quality of Food* – At the manufacturer/ processor level, food quality is centered on conformance to specifications/ protocols. The more meticulously advanced manufacturing can help processors conform to these requirements, the better for the whole food system.

  From conversations with stakeholders, alignment with regulatory and quality standards is critical for this industry, as many SME food processors have subjective quality control checks. Quality controls and standards may also unnecessarily impede the revalorization of waste / co-products from other economic activities. This revalorization is necessary to realize maximum value from resources.

- *Food recalls* – Food safety is of critical concern to all stakeholders in the food supply system, and food recalls can occur due to several triggers along this chain. Whether a public health concern, food test results, or food tampering. Therefore, it is becoming increasingly important for transparency and traceability to be built into the full supply system.

  Technology providers have core technologies that can enhance transparency throughout the food chain, and organizations such as AAFC, CAS and CFIN all have a mandate to move this forward. Working with NGen, this could become a reality through technological investments and partnerships to build advanced production systems that can track a product from farm to table.

- *Supply Chain sustainability* – It is estimated that the food system is responsible for approximately one-quarter of global greenhouse gas emissions. Fostering innovation in food production and processing is not only overdue, but also being demanded by consumers who are calling for greater transparency of food system practices to drive their purchasing decisions. Several major agri-food corporations are implementing supplier requirements for suppliers around regenerative and low-climate impact food production.

With almost 10,000 companies across Canada, many of them SME's, in this sector, this segment of manufacturing has not embraced digitalization, mainly due to the lack of understanding and high levels of regulation; the integration and deployment of advanced manufacturing capabilities and technologies is seen as too high-risk.

For a sustainable Canadian food system, stakeholders need to urge the food system community to assess and integrate advanced technologies to ensure continued food security and regional resiliency for all Canadians.

The purpose of this feasibility study is to examine the local food system within Wellington County and the City of Guelph and undertake research, stakeholder consultation and gap analysis to determine the feasibility of a **local food hub and its potential to support innovation and the growth of the circular food economy**.

NGen and partners are seeking a delivery partner (Bidder) to convene key leaders, influences, and stakeholders from Guelph-Wellington as well as across Canada to assess the feasibility and business model for scaling food innovation hubs. The successful Bidder will lead all research, workshops, collaboration agreements, concept prototyping and reporting activities required to the aforenoted feasibility study.

Scope of Work

The Phase 1 study will identify opportunities and ecosystem gaps that need to be filled to:

- Understand the local need for additional shared, on demand processing assets to support food startups and innovation for established businesses - cold or dry storage, advanced food processing equipment, co-packing and distribution facilities, supply chain support, and so on.
- Understand and model the requirements and infrastructure needed by farms and food producers to fully participate in an integrated food data layer from field (connectivity, sensors, etc) to factory (traceability and quality controls) to fork (consumer transparency supports).
- Understand regulatory challenges that potentially impede or could accelerate technology adoption and/or circularity as applied to each step of the field to fork path).
- Support food collaborations in a circular way– where the food waste/co-products from one activity are revalorized as input for another and increasing the use of local foods and inputs in value-added food processing.
- Develop or utilize innovations that increase the sustainability of the food sector (e.g. use of zero waste packaging, reduced energy/water use, data to support regenerative agriculture).
- Offer benefits to various sectors of the food system; these may include food and beverage manufacturers, farmers' market and CSA vendors, farm businesses, not-for-profit food organizations, emergency food access agencies, and value-added producers.
- Reflect the goals of the *Our Food Future* project by increasing access to healthy, affordable food; creating new circular food businesses; reducing waste and environmental impact.

The Phase 2 study will explore possible models for an innovative food hub which can:

- Support a technology-enabled circular food economy.
- Showcase leading-edge food chain technology and utilize advanced manufacturing.
- Identify possible business or ownership models for future sustainability.

Through a review of local food production, distribution and demand, integrated data gathered through Our Food Future, and global food processing trends and best practices, this feasibility study should determine any un-met or under-serviced needs of small or medium scale regional food producers and determine the value and feasibility of a coordinated food hub facility to support innovation and enhance commercial opportunities of local food producers.

Requirements

Bidders shall meet the following mandatory requirements:

1. At least 5 years of experience in advising, designing, or implementing innovation hubs.
2. Demonstrated experience and expertise in the food sector, as well as at least two of the following areas: supply chain analysis / systems mapping, advanced manufacturing, business model innovation, circular food business models, food waste reduction/revalorization.

Successful completion of the project should result in the following outcomes:

1. The study would also offer a roadmap for establishing similar national food hubs based on the Wellington/Guelph model.
2. This project is expected split in 2 phases, which are:
   a. Phase 1: Assessment of current regional food system as well as the wider food technology and circular food innovation landscape: trends, gap analysis, potential intervention channels.
   b. Phase 2: Modeling for a food hub – including business and ownership models, infrastructure, and demographic recommendations.

Project Deliverables

To achieve these outcomes, the Bidder is required to produce at a minimum the following deliverables:

- Whether the current regional food system infrastructure is operating at capacity, presents opportunities for partnerships, or requires specific enhancements. This should be grounded in an asset map built from local data and encompass the farm-to-factory-to-fork pathway with the goal of regional resilience.
- If gap analysis indicates a need to attract a missing sector within the regional food manufacturing ecosystem.
- If a new facility and other infrastructure requirements are required, or if existing infrastructure can be enhanced, to support innovation within the regional food manufacturing ecosystem.
- What partnerships, operating models would ensure sustainable operations.
- What collaborations with or connections to other processing hubs or distribution groups are recommended.
- What immediate sectors, opportunities or approaches would advance circularity, advanced manufacturing, and local food sector growth.
- What leading-edge infrastructure models could support food system enhancements and future growth within the circular economy framework.
- What farm connectivity readiness is required to support full transparency and traceability in the regional food chain.
- What regulatory requirements are currently required and are there any potential opportunities for regulatory modernization that could accelerate technology adoption and circular practices.
- How the gap analysis, leading practices research and design of the integrated food hub model could act as a launchpad for ongoing innovation, utilizing advanced manufacturing, data and technology to solve food system challenges.
- How this demonstration project can serve as a roadmap for others to move towards a circular food economy.

1. **Kickoff:** Align with all project leads on project roadmap and deliverables.
2. **Discover:** Select and convene a cohort of between 15 and 20 regional project participants.
3. **Map:** Assess the current and desired future food supply chain as a system.

4. **Innovate:** Identify the innovations in food manufacturing, new collaborations, and broader innovation models required to transition from the current to the desired system.
5. **Scale:** Develop a plan to scale promising solutions to a national scope, identifying target geographic areas.
6. **Document:** Document the process and learnings as a guide for future collaborations.

RFP Preparation Instructions

Questions and correspondence can be submitted to RFP@ngen.ca

Bids must be submitted electronically RFP@ngen.ca before 5:00pm EDT on 22 March 2021.

Bids will only be accepted from companies that are incorporated and carrying out the work within Canada.

NGen requests the bid organized as follows:

- Section I: Technical Bid
- Section II: Financial Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.
The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, NGen requests that Bidders address and present topics in the order of the evaluation criteria under the same headings.
In Section I of their bid, Bidders should also provide:

1. their legal name;
2. their Procurement Business Number (PBN);
3. the name of the contact person (provide also this person's mailing address, phone and email address) authorized by the Bidder to enter into communications with NGen and partners with regards to their bid, and any contract that may result from their bid.
4. High level resumes of all team members summarizing their relevant experience and detailing their role on the project.

Bidders must submit their financial bid in Canadian dollars and in accordance with the pricing schedule broken down by deliverable. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

Evaluation Criteria

To qualify, Bidders must meet all mandatory requirements. The contract will be awarded based on a determination of best value considering both the technical merit of the proposal and the price evaluations.

The technical merit of a proposal will be evaluated against the following mandatory requirements and rated requirements:

Mandatory Requirement 1: The Bidder must demonstrate that it has completed a minimum of two (2) projects within the last five (5) years in which they designed and facilitated formal collaborations between diverse groups of stakeholders to tackle a complex issue over a sustained period of time in order to create systems change. This experience must be clearly identified by providing a summary description of the project along with the roles and responsibilities, associated project timeline, and name of the client organization(s).

Mandatory Requirement 2: The Bidder must demonstrate that it has experience and expertise in at least three of the following areas: supply chain analysis / systems mapping, advanced manufacturing, clean tech / advanced technologies, business model innovation. This experience must be clearly identified by providing a summary description of relevant projects along with the roles and responsibilities, associated project timeline, and name of the client organization(s).

Rated Requirement 1: Based on the bidder's experience describe in a clear and concise manner what are the core challenges facing the transition to a circular plastic economy in Canada and describe their proposed process for orchestrating the collaboration and how it will yield useful outcomes for NGen and participating NGen members. This criterion should not reference individuals, organizations, or previous experience of either the project team or the bidder.

Conflict of Interest

Each respondent will disclose any potential, perceived or actual business or legal conflict of interest of the respondent ("Conflict of Interest") to the RFP Contact Person through email by the Submission Deadline. NGen may, in its sole discretion, waive a Conflict of Interest, or impose conditions on the respondent which requires the management, mitigation and/or minimization of the Conflict of Interest. If the respondent is determined to have a Conflict of Interest which, in the sole discretion of NGen cannot be managed, mitigated or minimized, NGen may disqualify the Proposal.

RFP not a "Bidding Contract" or Tender

Notwithstanding any other provisions of this RFP, this RFP is not a tender and is not an offer to enter into a contract. Neither this RFP nor the submission of a Proposal by the respondent will create any contractual/legal obligations/rights whatsoever on the respondents or NGen.

No legal relationship or obligation of any kind shall be created between the respondents and NGen until the successful negotiation and execution of a written agreement to provide the Services.

No Liability

The respondent and all other entities participating in this RFP Process agree that NGen shall not be liable, in any way whatsoever, for any act of omission or negligence with respect to this RFP Process.