

LivingLab Guidebook

Furthering innovation through open infrastructure



City of
Summerside

Prince Edward Island, Canada



CONTENTS

Preface	1
Introduction	5
Why a Living Lab in Summerside	8
Vision	9
Guiding Principles	13
Why Participant	15
The Process For Participation	21

PREFACE

Summerside's Living Lab platform is founded on open and accessible infrastructure capable of accelerating enterprise and innovators commercialization cycle, assist with product/service evaluation and reduce research and development time. Access to key decision makers with quick turnaround times is a key feature of Summerside's lab platform, we understand the speed of business.

Summerside understands the gaps between prototype and table top experiments and full scale commercialization. Summerside has some of the most advanced infrastructure in North America including a multi-faceted Electric Utility, a strong renewable portfolio and extensive municipal assets that rival and large scale global city. Summerside's belief in opening up this expensive infrastructure to assist companies and innovators to leverage its potential as part of the industrial validation process is a key priority to filling a gap between design and full scale adoption for business and community advancement.

Summerside's Living Lab environment in which companies, researchers, and developers can work directly with the community and its unique infrastructure to further product development, program applications and product testing and integration in a real world setting is the key purpose of our living lab program, allow enterprise to test their applications in a real life setting.

We provide both virtual and physical assets that enterprise/innovators to develop and deploy solutions. Our strength is our people, infrastructure and networks to further mutual interest in an open and collaborative way.

Summerside's Living Lab is developed to collaborate and integrate innovative solutions within the community for the global benefit of stakeholders. Summerside understands the unique challenges of the product development cycle, and it is our belief that by leveraging our unique, controlled and advanced infrastructure, Summerside is establishing itself as a global leader in advancing, testing and data analysis of next generation communities.

In order for the lab to function, all projects must demonstrate that all partners involved have something to gain.

Summerside's value proposition: Enabling infrastructure and partners and access to decision makers provide innovation enterprise with a living lab environment where the testing of assumptions and technology can be tested, verified and proven in real world setting, with the goal of:

- Increase in Technology Participation
- Increase adoption of Technologies
- Advancing Next Generation Technologies for full scale deployment
- Increase in standard of living

Summerside has brought together partners and enabling infrastructure with a shared vision that will produce results for firms/innovators wishing to test and innovate products and services, learn and build business models for advanced deployment in the early stages of the product life cycle.

With Summerside's open municipal infrastructure and key stakeholders, the community is positioned to allow firms to engage in user driven innovation and to be able at the early stages to incorporate the knowledge into full scale deployment of product and services. Some examples include vehicle to grid applications, mass energy solutions, and information technologies solutions and eco-park clusters, through the execution of real life rapid experiments driving a profit model for success.

Summerside is seeking partners and firms wishing to exploit the built infrastructure in Summerside to further their business development, establish a presence in North America and grow markets through applied deployment in real world settings.

To Innovative means to create something new or different and Summerside is leveraging public assets and expertise that can be used in the innovation process.

Summerside and Partners are committed to advancing opportunities in collaboration, to assist enterprise in furthering the market potential for their initiatives.

- Summerside is a Small but innovative City
- Summerside has significant enabling infrastructure in which companies seek
- Summerside has a vast network of partners to engage in like-minded initiatives
- Summerside is in for the long term and believes in two way success
- Summerside has been embarking on some significant initiatives centred on the green economy, technology and collaboration of enterprise.
- Summerside's has a strong predisposition for its stewardship in renewal, green and advanced technologies

INTRODUCTION

Summerside is developing a powerful innovation ecosystem based on world best practices leveraging the community's intrinsic infrastructure, key information communication technology assets and bringing together keenly aligned stakeholders committed to embracing a connected, open and innovative community, based on:

1. Municipally Open Information/Communications Technology and Infrastructure
2. Partners Committed to a Sustainable and Positive impact for Summerside
3. Research Foundation
4. Collaboration
5. Pooling of Complementary Resources
6. Sharing of Information and Innovation
7. Making Innovation More Visible
8. Engaged Citizens

What is a living lab?

A Living Lab is a real-life test and experimentation environment where users and producers co-create innovations. Living Labs have been characterised by the European Commission as Public-Private-People Partnerships (PPPP) for user-driven open innovation. A Living Lab employs four main activities:

1. Co-Creation: co-design by users and producers
2. Exploration: discovering emerging usages, behaviours and market opportunities
3. Experimentation: implementing live scenarios within communities of users
4. Evaluation: assessment of concepts, products and services according to socio-ergonomic, socio-cognitive and socio-economic criteria.¹

For Summerside, a Living Lab is an environment (the geographic community) in which people and technology are gathered and in which the everyday context simulates and encourages research, development, innovation and ultimately commercialization.

What is a living lab?

The city of Summerside does not develop or create products ... but ... provides a platform for product development. The lab environment encourages the development of business models in real life applications by leveraging the city's municipal infrastructure, processes and citizens, not necessarily created by the city

1. <http://www.openlivinglabs.eu/aboutus>

Why that model?

The development of an experimentation process grounded within the community and in real-life conditions allows a better, deeper understanding of deployment, interaction and embracement of a product, technology or particular service when tested in this context.

The end goal for Summerside is to allow innovators an environment to test and validate the designed product or service and ensure it is generally accepted and provides utility for global users' daily lives.

Summerside will ensure participants in the lab:

- Gain access to knowledge in the community and better understand its needs
- Capture ideas from a larger population and evaluate how technology impacts their every day

Together we will create a Living Lab environment that will test technology and develop solutions that are replicable for other communities.

Establishing this platform will create a situation where participants will:

- Build models for development
- Identify opportunity for collaboration
- Refine business plans
- Examine best practices
- Design, develop and deploy technology
- Demonstrate innovation in a real-world context and environment

Why a Living Lab in Summerside

Summerside provides a very powerful intrinsic value for business, investors, public institutions, innovators and researchers. Given the scale and depth of Summerside's infrastructure and its critical mass of business and residents in a compact geographical setting provide the ideal environment for the industrial validation model, the Living Lab. Coupled with direct access to the key decision makers, removing layers of decision points, Summerside is a perfect setting to advance product validation and service offerings.

From Summerside's perspective a business can take advantage of the environment through the development, validation and integration of new ideas within a confined geographic area and leverage the creative spirit of citizens and business who are potential users of a product or service. The advantages for investors in projects and the link between the innovators, Summerside will be able to showcase to an investor direct market interaction, a reduction in commercialization time leading to lower investment costs and speed to market.

Summerside can reduce costs, risks and time to market.

Summerside and its public sector partners see unique advantages in engaging in two-way communication, advancing our economic development priorities and engaging in and utilizing our infrastructure in unique ways, knowing the value to the users provide for early adoption of products and services and engagement with enterprise from the early stages.

Summerside's living lab is ideal for providing real setting research opportunities, direct access to community and decision makers and an environment that embraces research and business development as its core values.

VISION

The City of Summerside will create the Living Lab that will act as a foundation for enterprise to test technology and develop solutions that are replicable for other communities and work with municipal and enterprise leadership on their testing and commercialization opportunities.

The culture we are establishing will open the door for many different opportunities. Summerside recognizes that there are numerous avenues to explore and many different applications that can be born out of this environment. Assisting the development process by enabling participants with our unique infrastructure is just one way we envision turning concepts into reality.

Potential Applications

The variety of potential applications are endless but a few that resonate in Summerside based on existing priorities are:

Electric Storage and Grid Integration

Electric Vehicles (including Bus and Passenger Vehicle)

Electric Car Charger Solutions with Battery Storage

Security and Surveillance

Appliance Control

Residential Environmental Controls

Smart Home Innovation

Medical Home Care Solutions

Solar Energy Integration

Bio Fuel from Waste

Advanced IT Development

Interoperability for Big Data

EV to Grid

Summerside is seeking innovation automotive and charging solutions enterprise looking for an ideal community for industry-government collaboration enabling joint development of EV/Charging standards, data collection and interoperability

Evs, charging solutions and the utility grid

Summerside is seeking innovative grid tied fast charger systems with built in storage.

Car Sharing

Summerside wishes to collaborate with stakeholders for an all-electric vehicle share program were the vehicle is the vessel that provides both transportation utility but also a repository for energy storage, energy producer and innovative application device for future advancements. The program is also about community positioning as a place to incubate, test and grow business models for profit and we are looking for partners to build our success book!

Solar to Grid

Utilizing Summerside's electrical grid, companies wishing to advance solar to grid applications from home, business to traditional municipal infrastructure use.

Bio Fuels from Waste

Creating a facility transforming wastewater to biofuel for every day application in a sustainable approach. Summerside seeks partners to assist in advancing technologies and applications related to bio fuel development.

Energy Storage to Grid

Firms engaged in storage technology to advance grid capabilities for storage applications of energy

Advanced IT Technology Development

Utilizing the Electrical Infrastructure Network firms looking to incubate, develop, test next generation software and applications direct with consumers and research partners to advance commercialization.

Interoperability Lab

The desire to develop and collaborate on the establishment of a high security, interoperability lab to provide testing, validation, training, certification and interoperability services to vendors, organizations and sectors.

GUIDING PRINCIPLES

The guiding principles that will influence our success are:

- Value
- Sustainability
- Impact
- Inclusiveness

VALUE

Creating and expanding value for participants that will ultimately serve a greater good in the community is our priority. Establishing value is critical for the success of our Living Lab initiatives. Value creation for participants and partners will strengthen the platform and encourage further development of opportunity. We also recognize that commercial applications could result in monetary success increasing value for organizations expanding their offering to a larger market.

IMPACT

Delivering value will have a positive impact on our community and the partners involved in Living Lab projects. The success of participants will be measured in part by the impact their initiative will have in the local, regional, national and global markets. A positive impact will embrace the guiding principles but also deliver a sustainable model for future innovation.

SUSTAINABILITY

Economic and environmental sustainability is a top priority for Summerside Living Lab initiatives. Satisfying a need with opportunity for sustainability as we look to create value that delivers an impact over a long term.

INCLUSIVENESS

It's important that we maintain openness and provide opportunity for any and every individual or organization to participate. Our Living Lab needs to demonstrate a willingness to consider a diverse set of concepts and not be closed to a predefined partner profile.

WHY PARTICIPATE?

The City of Summerside is committed to exploring innovative ways to grow our economy. Our living lab provides the right ingredients for projects to grow, nurture and develop in an open and inclusive environment. Strategic programs like the Living Lab are just one way for us to pursue opportunity that will enhance our community.

There are a number of priorities we consider:

- Job Creation
- Economic Diversity
- Community Empowerment and Choice
- Create industry partnerships that enhance our effort in attracting new business and investment
- Develop innovative models for local research and training centres
- Reduce operating costs and capital expenditures by utilizing effective technology solutions
- Influence procurement decisions across the organization to embrace innovation and change
- Implement and communicate our commitment to create lasting participation from all members of the community

INFRASTRUCTURE

Electric Utility

Summerside owns and operates a multi-faceted electric utility serving approximately 7,000 customers in the city. Owning this utility and our open mindset allows us to source solutions for providing a reliable electrical infrastructure and innovative energy sources for our existing residential and business. Owning and controlling this key piece of infrastructure affords us the opportunity to open our grid and seek partnerships on energy applications looking to establish market presence to test, validate and develop market credibility for future growth potential. As part of this Utility we bring peer –to-peer opportunity for our lab participants and open doors in other jurisdictions based on the Summerside lab validation process.

Wind Farm

Recognizing that the demand for electricity would escalate as the municipality grew, and that dependence on imported oil was subject to escalating world prices and environmentally unsustainable, in a forward-thinking move the City of Summerside committed to supplementing their oil powered electrical generation with a city owned wind farm which opened in 2009. At present, Summerside Electric's wind-powered generation supplies 12 megawatts of power, providing 100% of the city's nightly needs and approximately 50% its daytime needs. With that the City is seeking innovative solutions on how to maximize the renewable wind generation through various means, including software optimization software, storage as two key approaches.

Fiber to the Curb/Home

The City of Summerside is deploying full fiber to the Curb/Premise solution to leverage the power of technology and provide, through our Electrical Infrastructure Network a pipeline to each premise in Summerside. This bi-directional communications network between the customer-end's smart devices and the electricity provider will be an open network allowing for multiple solution providers to leverage this infrastructure. We realize the power of this network can be leveraged by many other application providers in the technology sector and the City is seeking partners wanting to use this fiber network to test in a closed environment.

Power Storage Solutions

Through our Powernet program Summerside Electric has begun addressing the problem of energy storage solutions by encouraging residential use of electric thermal storage (ETS) units. ETS units use high-density ceramic bricks to store heat given off by elements inside the units. The elements come on during the off-peak nighttime to heat up the bricks, and then the stored heat is released throughout the peak day time periods as needed. Summerside is seeking additional distributed storage solutions for both the commercial and residential customer.

Pollution Control Centre

Summerside's Tertiary Treatment Facility is one of the most advanced plants in Atlantic Canada. Through the advanced technology and research capabilities, Summerside is the only plant in Atlantic Canada that removes 95 per cent of solids from the water to produce grade-A fertilizer. Summerside believes our pollution control centre has the ability to grow in its product offering and is seeking companies interested in utilizing the nutrient and power systems to seek alternative by-products from this centre, including such things as bio-fuels.

COMMUNITY PARTNERS

Summerside has a unique ability to bring partners to the table not found elsewhere in North America, including an electric utility with a strong wind component, a national research centre for wind and storage technologies, all levels of government, private sector partners and fundamental an embracing community open for business to incubate and embrace advancement. Our Partners Include:

Wind Energy Institute of Canada

WEICan advances the development of wind energy across Canada through research, testing, training, and collaboration

Eureka Ranch PEI

Eureka! Ranch helps corporations and SME's make better business decisions in managing innovation. By focusing on accelerating profitable growth through more profitable products, services, customers and markets.

Holland College

Holland College has more than 65 full-time career training programs. The college's diploma and certificate programs provide for a combination of theory, competency based learning and direct hands-on training.

University of Prince Edward Island

UPEI's four faculties (arts, education, science, and veterinary medicine) and two schools (business and nursing) offer a wide range of programs and degrees to over 4,400 undergraduate, graduate and doctoral students.

Atlantic Canada Opportunities Agency

The Atlantic Canada Opportunities Agency works to create opportunities for economic growth in Atlantic Canada by helping businesses become more competitive, innovative and productive, by working with diverse communities to develop and diversify local economies, and by championing the strengths of Atlantic Canada.

Innovation PEI

Innovation PEI is focused on accelerating economic development in Prince Edward Island by investing in people, innovation, and infrastructure. We are targeting key sectors that have displayed a high potential for economic growth within the Province. These sectors include aerospace, bioscience (including agriculture and fisheries), information technology, financial services and renewable energy.

Private Sector Partners

Summerside has a cluster of advanced enterprise in multi sectors including agriculture, marine, aerospace, information technology and renewable technologies working collaboratively to advance economic opportunities for export.

PROCESS FOR PARTICIPATION

A potential participant must present a detailed project brief to the City's Economic Development Office, outlining at a minimum:

1. That the project will provide essential services or a clear benefit to the wider community.
2. That the resultant Project has Export Potential
3. The Project Team and their expertise
4. A reasonable business plan that demonstrates real potential for commercial viability and impacts for the community
5. Applicants must provide reasonable evidence of capabilities and experience in undertaking such work including any project history or background work completed to date and needed gaps to be filled by participating in this program
6. How do you envision the City assisting you in realizing your vision and bringing your concept to market?
7. How other partners and their role will be engaged in moving the project forward

You will be expected to provide an overview of the project and its intended uses and why and what role the City will need to play as part of moving this initiative/project forward in detail. As well the proponent is expected to prepare a preliminary budget outlining sources and uses of funds.

In preparing the information about, you will be asked to provide specific information on how your initiative meets the goals and strategy of the City of Summerside and further how the resultant tests will be able to be replicated in other export markets.

A letter of understanding will be presented to ventures that pass the application process outlining the intentions of the city and a suggested course of action to further develop projects.

Once a clear understanding of roles is established final agreements will be structured.



1. Agreements

Summerside recognizes it will be receiving applications that range from concepts to fully developed business models and will customize agreements based on the maturity of the opportunity.



2. Planning

Successful applicants will further develop business models and engage the city in a planning process formalizing concepts, defining needs, establishing roles and determining resources required to bring opportunities to market.



3. Development

A process for developing opportunity will be determined and plans will be presented to ensure consistency with the LivingLab mandate and that priorities are being met.



4. Market Testing

Once opportunities are ready for real-world testing the environment needed will be established. A level of community involvement will be determined on a per project basis.



5. Implementation

Projects that are determined to be market ready will be launched.

GETTING INVOLVED

Summerside's ambition is to integrate innovative solutions within the community for the global benefit of stakeholders. Together we will work to ensure we are ahead and shaping the curve when it comes to technology, research and community advancement. It is our belief that by leveraging our unique, controlled and clustered infrastructure, Summerside is establishing itself as a global leader.

The equation for success requires partners and Summerside has a unique ability to bring partners to the table. Together we can further extend our existing infrastructure and mutually benefit from shared investments that delivers value for the community.

We're keeping the process simple. If you have an interest in participating in the living lab here's how to get started:

Provide a brief on who you are and what your project is. Include what you are looking for from the City and provide us with as much detail on the project, why and how you see the fit with the City and when you want to get started.

Send your brief to:

Mike Thususka, Director of Economic Development
mike@summerside.ca

Don't forget to include:

Company/Person name
Project title
A description of your product or service

and answer the following:

How do you envision the City assisting you in realizing your vision and bringing your concept to market.



Prince Edward Island, Canada



For more information on
the City of Summerside and our Living Lab initiative contact:

Mike Thususka
Director of Economic Development
mike@summerside.ca

www.bigpossibilities.ca