



LIVING LAB: BUILDING ENERGY AWARENESS

CHALLENGE

Buildings consume about 40% of energy and contribute up to 30% of all greenhouse gas (GHG) emissions globally.

Many building owners, managers and occupants currently lack meaningful information about how energy is delivered, used and produced in the buildings they occupy. They also often lack information about the sustainability measures implemented in these buildings.

This often leads to missed opportunities to make better decisions, reduce overall energy consumption and encourage sustainable decisions and behaviours in buildings.



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OPPORTUNITY

The *Building Energy Awareness Living Lab* focuses on utilizing energy data – for example, through energy monitoring tools, smart meters, visualization tools and more – to encourage more informed decisions and to inspire sustainable behaviour.

This project will assess how an energy monitoring device, which provides building owners, managers and occupants with compelling and meaningful feedback about energy and sustainability, can:

- Improve awareness about energy use and sustainability measures within the building
- Foster better decision making about energy and sustainability projects within buildings
- Encourage sustainable behaviours and an overall reduction in energy use in buildings

INNOVATION

This project will utilize *hello energy* – a system that displays energy and sustainability information in a compelling and meaningful way – including a web-based dashboard, tablet and TV screens.

The *hello energy* system sets out to:

- Provide building owners, sustainability managers and asset managers with insights into energy use, renewable energy production and sustainability initiatives within the buildings being evaluated
- Inform building occupants of relevant energy and sustainability news and energy-saving tips

Read more about *hello energy* at www.hello-energy.com

EXPERIMENT & MEASURED IMPACTS

The environmental, economic and social impacts of *hello energy* will be measured in more than 10 buildings - including hotels, commercial offices, retail and multi-unit residential buildings.

WHAT WE WILL MEASURE	Environmental <ul style="list-style-type: none"> • Energy use • GHG emissions 	Economic <ul style="list-style-type: none"> • Return on investment • Cost savings 	Social <ul style="list-style-type: none"> • Increased awareness and pro-environmental behaviours of building occupants & visitors • Improved capacity to make informed decisions among sustainability and asset managers 
HOW WE WILL MEASURE IT	Energy data - including electricity, gas and thermal energy - will be monitored before and during the installation of the <i>hello energy</i> system Changes in energy use, and associated changes in GHG emissions, will be calculated	Return on investment and cost savings will be measured based on overall reductions in energy use	Surveys and interviews with sustainability and asset managers, and building occupants, including staff, residents and guests

Innovation Lighthouse will build on the findings of this project by evaluating the effectiveness of additional behaviour-based interventions - such as an energy challenge or competition among building occupants and building asset managers - for improving energy efficiency and reducing energy consumption.

LIVING LAB PARTNERS

