

# Sustainable Tourism Future

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The content of this course was developed by faculty from the following institutions:





## Sustainable Responses to Tourism

Case Study: Canada's First Circular Economy Platform

# Focus

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Signs that our planet is in distress, from global climate change to the COVID-19 pandemic, are overwhelming, and call for transformative action to build back better. In response, a circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems (Macarthur, 2021).

Photo credit: stock image

## Learning Outcomes

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- Apply design thinking to create sustainable, innovative, and resilient tourism and hospitality solutions that will help manage current and future challenges.
- Examine key concepts related to sustainable tourism, circular tourism, sustainability, sustainable tourism, and how they influence the related concept of sustainable livelihoods.
- Identify alternative tourism model that supports regenerative tourism.

Apply design thinking to create sustainable, innovative, and resilient tourism and hospitality solutions that will help manage current and future challenges.

Examine key concepts related to sustainable tourism, regenerative tourism, sustainability, sustainable tourism, and how they influence the related concept of sustainable livelihoods.

Identify alternative tourism models that supports regenerative tourism.

## Module Objective

This module takes a case study approach to illustrate the practise of economic circularity, to understand the barriers, and to identify effective strategies to advance a circular economy.

Moving from the concept of economic circularity to practise is complex. Most initiatives focus on reducing and recycling, not repairing or re-manufacturing (Barreiro-Gen & Lozano, 2020), thus limiting potential contributions to sustainability. This case study tracks a micro-level circular-economy program to understand barriers and to identify effective strategies to advance economic circularity.

## Pre-Module Readings

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In preparation for this module, students should read the following information from the accompanying course notes booklet.

- Barreiro-Gen, M. & Lozano, R. (2020) How circular is the circular economy? Analysing the implementation of circular economy in organisations. *Business Strategy and the Environment*.
- [Raub, Steffen P; Martin-Rios, Carlos](#). (2019) Think sustainable, act local – a stakeholder=filter-model for translating SDGs into sustainability initiatives with local impact. [International Journal of Contemporary Hospitality Management; Vol. 31, Iss. 6.](#)
- Vargas-Sánchez, A. (2021). [The new face of the tourism industry under a circular economy](#). *Journal of Tourism Futures*, 7(2), 203-208.

<https://www.unwto.org/>

In preparation for this module, students should read the following information from the accompanying course notes booklet. Reading this information before they start the module will help set the context for what they are about to cover.

## Supplementary Material

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Beyond the required readings, students may be interested in reading the following information from the accompanying course notes booklet.

- Macarthur, Ellen (2021) [What is the Circular Economy](#)
- Dillon Consulting (2021) [Our Food Future: Food and Food Waste Flow Study; Work Package 1](#)

Beyond the required readings, students may be interested in reading supplementary material listed in the accompanying course notes booklet.



Since the first industrial revolution, economies have followed a linear model, where resources are considered to be abundant, available, easy to source and cheap to dispose of (Barreiro-Gen and Lozano, 2020). But it is not sustainable to continue processing the majority of raw materials as throughput, and to ignore the accumulating waste that results at the end of the process. The system must transform.

A circular economy, and specifically a tourism circular economy (TCE) is an approach to environmental sustainability that is gaining momentum (Vargas-Sanchez, 2021).

This film features Ellen MaCarthur, founder of the Ellen Macarthur Foundation, dedicated to the transition to a circular economy.

## Discussion Question #1

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- Review the following 3 examples of sustainable, circular practises in tourism and hospitality.
- Then discuss how to apply the UN Sustainable Development Goals (SDGs) to local initiatives.
- Which SDGs could a property adopt?



Image source: <https://sdgs.un.org/2030agenda>

The 17 SDGs serve as guidelines for sustainable development, and call on multi-stakeholder partnerships to achieve. The goals differ in the extent to which they may apply at a property level versus a region or country level.

For example, the SDG goal #1 to end poverty and #2 peaceful and inclusive societies may be most impacted at the country level, needing legislation and policy to advance. Whereas SDG goal #8 sustainable economic growth and #12 sustainable consumption and production and even #13 climate change provide opportunity for the private sector to advance (Raub and Martin-Rios, 2019).

Review the following examples of sustainable, circular practises in tourism and hospitality. Then discuss how to apply the UN Sustainable Development Goals (SDGs) to local initiatives. Which SDGs could a property adopt?

## Green & Circular Lodging

Sustainable development and economic growth to create local, authentic tourism.

Italian farm vacation follows circular economy principles, adopting measures to respect the environment, such as photovoltaic and solar powered electricity and hot water, and natural depuration to manage wastewater.



*Le Querce di Cota*

The **Le Querce di Cota** farmhouse is located in the territory of Troina, recognized as one of the most beautiful villages in Italy, with an extension of 21 hectares. It is the remainder of a large 19th century fiefdom; part of **the Nebrodi Park** with views of the western part of the Etna Volcano, the highest and most active in Europe, breathtaking both in winter with snow and in summer with its characteristic rock.

Using its natural habitat of **centuries-old oaks and olive trees** to welcome guests, together with large expanses of cultivated crops (i.e., organic durum wheat), they follow traditional practices of alternating crops “to respect the rest period of the land”.

In this manner, the farm vacation property is both authentic and sustainable.

Photo source:

# Circularity in Action

## Urban, Lifestyle Hotel



QO was born of the need to stop hospitality's wasteful, one-use approach. Embracing a sustainable, circular approach creates a genuinely positive impact – for people and planet.

QO's greenhouse is the perfect example of how they envisage a living building. A fully functioning, self-sufficient and self-regulating ecosystem, they have created an active approach to circularity that filters through every floor of the QO. It connects the layers of the hotel by growing specialist and distinctive fruits, vegetables, herbs – even fish – to provide produce that's served in their property restaurants. A circular production.

Whether urban or rural, sustainable practices are possible.

There are four key ways in which QO moved away from one-use and into circularity.

- Firstly, they use natural and existing resources as much as possible.
- They source materials and consumables that are both well-produced and created nearby.
- They use long-lasting instead of throwaway items.
- Finally, they reuse, repurpose or recycle before even consider discarding something.
  
- Circularity has become their Unique Selling Proposition that they are proud to put into practice throughout the QO. It's the force behind their greenhouse – the core of their living building – where guests can see the concept brought to life.
  
- Logo source:



## B-Corp Certified<sup>1</sup>, The Neighbourhood Group follows three core values:

1. Promote locally crafted, natural food & beverage to champion the farmers and producers that made them
2. Create unique venues that preserve the past and showcase regional building materials, décor, artisanal craftspeople
3. Operate sustainably to reduce carbon footprint and overall waste.

Certified B Corporations are businesses that meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. B Corps are accelerating a global culture shift to redefine success in business and build a more inclusive and sustainable economy.

The Neighbourhood Group of Companies (NGC) philosophy is based upon Three Core Values.

Operate restaurants that promote locally crafted, natural foods and beverages while championing the farmers and producers that made them.

Create unique venues that preserve the past while showcasing regional building materials, decor motifs and contemporary artisanal craftspeople.

Operate our restaurants in a sustainable fashion with the goal to reduce our carbon footprint and overall waste annually.

<sup>1</sup><https://bcorporation.net/about-b-corps>



Case Study: Canada's First Circular Economy Platform

# Canada's 1<sup>st</sup> Circular Economy Platform

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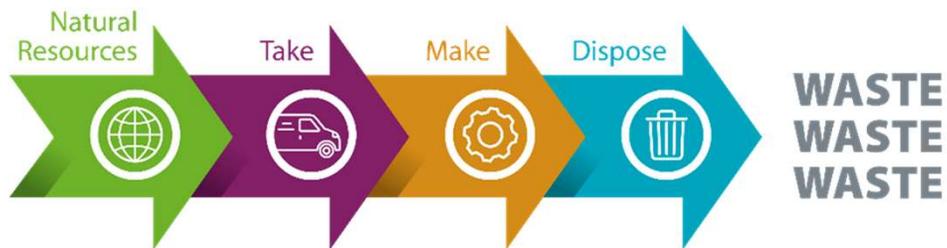
- Guelph to lead sustainable initiative
- Supported by \$5M government investment
- To achieve net zero emissions by 2050
- Local initiative with national aspirations
- Focus on 2 sectors: environment & food

- With a goal to lead sustainable development, the city of Guelph established Canada's 1<sup>st</sup> circular economy platform, supported by a \$5 million government investment to advance Canada's commitment to achieve net zero emissions by 2050 (Khan, 2021), a local initiative with national aspirations. Guelph's platform accelerates the transition to sustainability by focusing on two sectors: environment and food. Food is fundamental to life, yet many experience food insecurity even in developed nations, food waste creating greenhouse gases in landfills instead of realizing its potential value.
- Guelph-Wellington, located in the province of Ontario, has a population of 223,000
- Circular Economy initiative supported by a \$5M federal government investment in spring 2021- to 2024
- Goal of achieving Net zero emissions by 2050 by less green house gas emissions, carbon capture and carbon offsetting as part of the larger G7 commitment
- Canada established a \$3 billion net zero accelerator fund
- City of Guelph is surrounded by rural food producers, making it a fitting environment to initiate a circular food economy.

## Traditional linear “take-make-dispose” system

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- Food is fundamental requirement of life however, the “take-make-dispose” system is unsustainable, economically, socially, environmentally



<https://foodfuture.ca/about-our-food-future>

Neo-liberal capitalist focus on growth and profit, and perpetuate the traditional linear “take-make-dispose” system.

Yet in Guelph-Wellington, one in six families experience food insecurity, and the cost of healthy food keeps increasing. Meanwhile, between a third and a half of the food we produce is thrown away. Much of that ends up in landfill, where it creates the greenhouse gases that drive climate change.

## Defining a Circular Food Economy

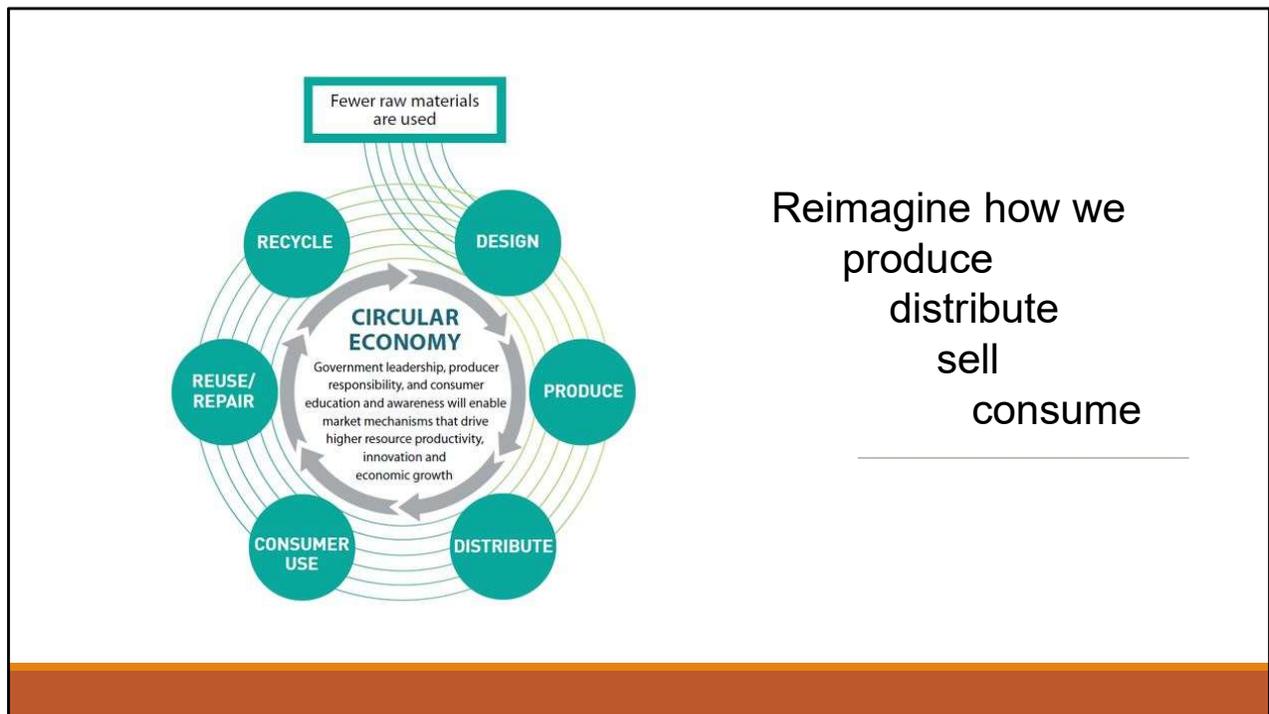
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- Inspired by the planet's natural cycles, a circular food economy reimagines and regenerates the systems that feed us, eliminating waste, sharing economic prosperity, and nourishing our communities.



For the hospitality sector, think of this as “regenerative hospitality”, like Regenerative Tourism – humans and nature having a reciprocal relationship, with the local community as stewards.

Our Food Future is bringing together people, ideas and technology to build Canada’s first circular food economy in Guelph-Wellington.



- Guelph-Wellington aims to address these issues by creating Canada's first circular food economy, reimagining how we produce, distribute, sell and consume food. We imagine a food system where everyone can access nutritious food, nothing is wasted, and the impact on our environment is minimal. We imagine a system where food experts and entrepreneurs come together to tackle our most complex food challenges.

- Site image source:



## FOOD WASTE FLOW STUDY

This video presents a summary of a detailed food waste flow study by Dillon Consulting, June 2021 as a key first step of the Guelph-Wellington Food Future initiative in response to Canada's Smart Cities Challenge. Watch and consider the complexity of circularity.

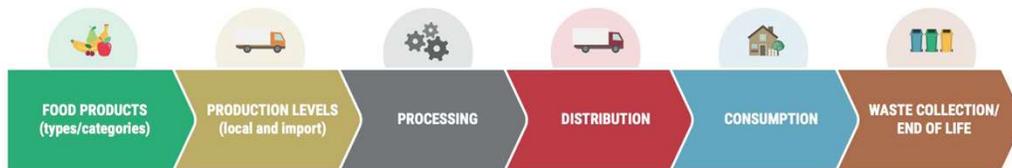
### Report synopsis:

As part of Our Food Future's Waste as a Resource workstream, researchers have identified several food waste "hotspots" across the region's food system. The Mapping Food and Food Waste Flows in Guelph-Wellington for Waste Redirection and Reduction study offers valuable insights that will guide future circular food system strategies and support businesses and organizations to reduce food waste. In the first phase of the three-stage Food and Food Waste Flow Study, researchers from Dillon Consulting, Metabolic and University of Guelph analysed more than 70 sets of data. The analysis shows that specific food categories, such as fruit losses before manufacturing and losses of cereals at the processing stage, warrant deeper investigation. Storage and packaging also represent an important area of loss for fruits and vegetables, likely due to their vulnerability to damage and shorter shelf life. Focusing on these hotspots will provide more significant overall impact than other points of intervention in the supply chain.

## Step by Step process

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- Stage 1: Material Flow Analysis
- Stage 2: Interventions to analyze hotspots
- Stage 3: Roadmap to minimize waste
- Stage 4: Dissemination



- Stage 1: Material Flow Analysis method using public and private data guided by experts (stage completed as seen in video)
- Stage 2: Interventions to analyze hotspots, engage key stakeholders, monitor KPIs (ongoing)
- Stage 3: Roadmap to minimize waste
- Stage 4: Dissemination

## Setting Targets

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### Nutritious Foods

Increase access to affordable, nutritious, local food by 50% by 2025



### Circular businesses

Create 50 new circular businesses and collaborations by 2025



### Waste as a Resource

Increase circular economic benefit by 50% by 2025 by unlocking the value of waste

Source: [https://guelph.ca/wp-content/uploads/SmartCities\\_Booklet.pdf](https://guelph.ca/wp-content/uploads/SmartCities_Booklet.pdf)

The initiative first set targets.

The targets set for Guelph's circular food economy are big and bold, calling for 50x50x50 by 2025 results:

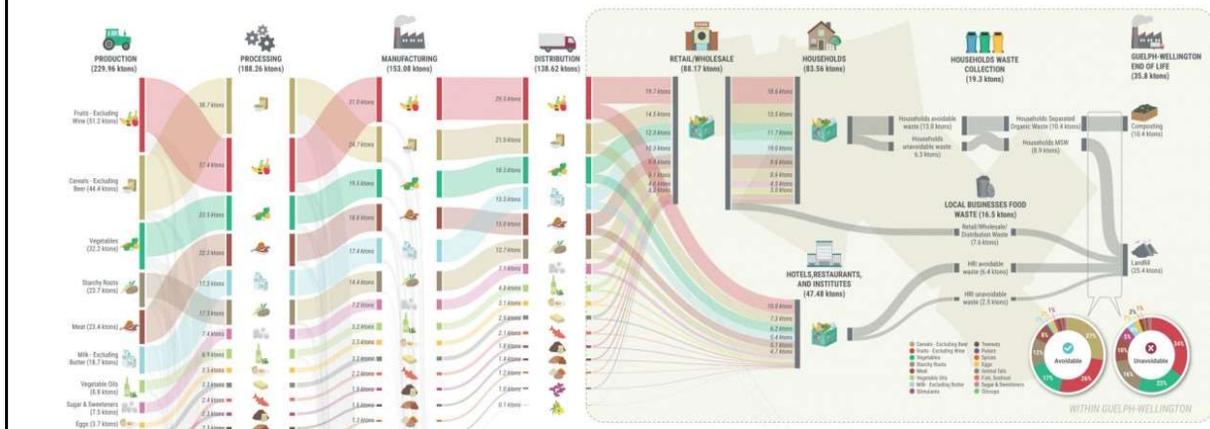
To increase access to affordable, nutritious food by 50%,

To create 50 new circular businesses and collaborations and

To increase circular economic revenues by 50% by recognizing the value of "waste" — all by 2025.

# Measure what Matters

## Mapping food waste flows across Guelph-Wellington

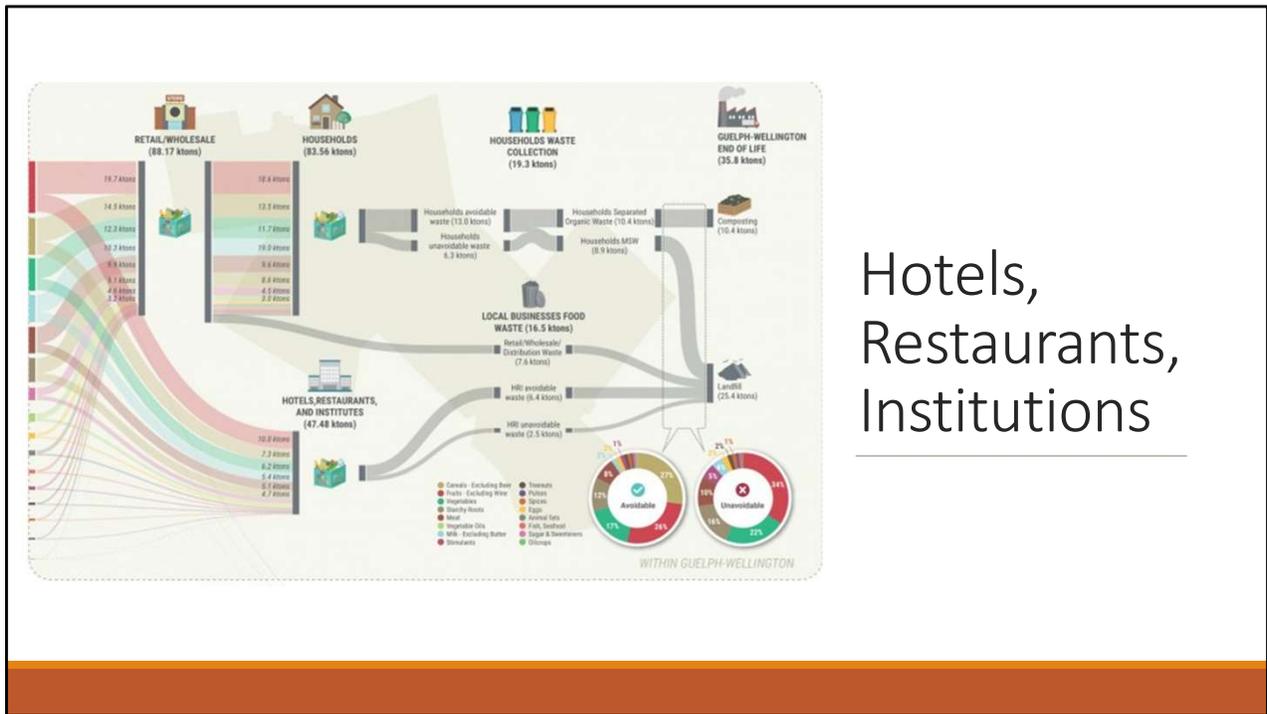


If something matters then it must be measured. Much work was involved to map the current food waste flows across Guelph-Wellington. 16 aggregate food categories represent 366 commodities

As you can see in this diagram, Volumes of food loss and waste vary by product, with fruits and vegetables contributing the highest tons lost

Area of the supply chain experiencing the most loss is storage/packaging (31.5%)

Animal products (meat, dairy) have the largest environmental impact in terms of CO2 equivalents, water usage, emissions, and land use.



# Hotels, Restaurants, Institutions

Hotels, Restaurants, Institutions (HRI) sector generally do NOT separate their food waste, so it ends up in landfill, contributing significantly to methane emission.

Of 47.48 ktons, almost 20% goes to landfill, yet 6.4 kilotonnes (ktons) is considered avoidable waste

## B-Corp restaurant created circular food experience



Photo credit: @bruce.digital

Key to successful activation are restaurants, as supply chain partners, change agents and educators. Canada's largest B-corporation restaurant chain, The Neighbourhood Group, created a circular food experience beginning with waste grain from a brewery upcycled as feedstock for a fish farm; waste became natural fertilizer for potatoes and yeast; all coming together as a circular meal of smoked trout, sourdough and a pint of local beer.

That's 1 example; 49 more to go!

## Discussion Question #2

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- The circular plate was one project from Guelph's circular economy initiative. The goal is 50 new businesses and collaborations by 2025.
- Let's get creative!
- Generate an idea for a tourism circular initiative.



Image source: <https://sdgs.un.org/2030agenda>

This discussion is intended to stretch the student's imagination to think of what might be possible.

The circular plate was one project that resulted from Guelph's circular economy initiative. The goal is 50 new businesses and collaborations by 2025. Let's get creative!  
Generate an idea for a tourism circular initiative.

## Key Takeaways

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- Complex supply chain
- Resource intense to have significant impact
- Long-term commitment of multiple stakeholders
- Value change and change will happen

Lessons learnt include the importance of collaborative efforts of innovators, entrepreneurs and researchers, technological support through a smart city initiative, and leadership commitment. However, scaling-up micro initiatives remains a significant barrier to expanding circularity. Significant public sector investment is required to advance transportation, technology, infrastructure, traceability, and bio-friendly packaging for circular economies to flourish. The hospitality sector can play a lead role by facilitating hub-spoke connectivity for local circular economies to succeed.