# Our Food Future & the Circular Economy

Thrive, PEC, March 2023



# Power of Our Food Systems:

Reshape our Economy
Regenerate the Environment
Resilient Communities

# Circular Food Systems have the power to change the world.

Through the story of *Our Food Future* Guelph- Wellington's Circular Regional Food System Initiative







# Why Food?







### **Food Systems & the Economy**

Agriculture and agri-food system touches all Canadians and communities in Canada.

In 2020, it generated \$139.3 billion, accounting for 7.4% of Canada's gross domestic product (GDP)

It is responsible for 1 in 9 jobs across the country, employing ~ 2.1 million people.







### Food enables life itself

After a good dinner one can forgive anybody, even one's own relatives.

Oscar Wilde

Food is not rational. Food is culture, habit, craving and identity.

Jonathan Safran Foer

Food is everything we are. ..your personal history, your province, your region, your tribe, your grandma.



Canada



# How we grow, produce, distribute, consume food... impacts sustainability of communities & environment



Ok...What does

circularity & the circular economy

have to do with this?

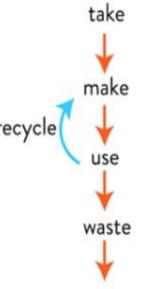
# Linear to Circular Economy

take

make

use







take

make

return

reuse

repair

https://reimaginefood.ca/wpcontent/uploads/2022/12/What-isthe-CFE.mp4



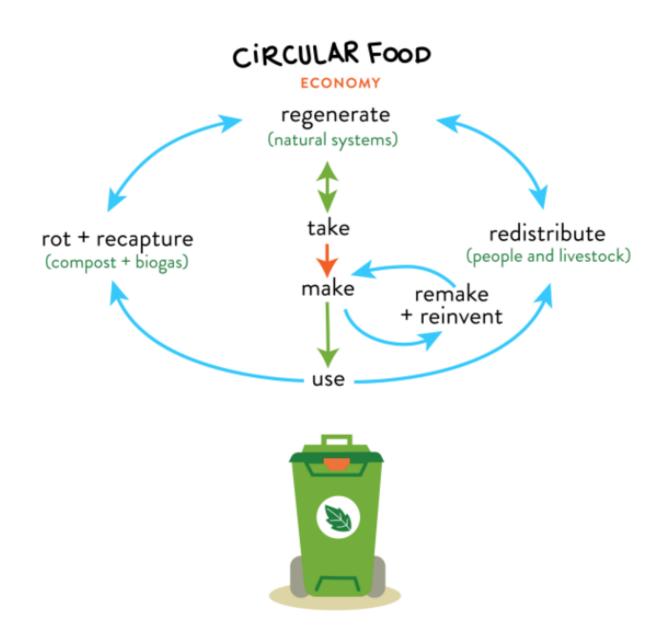
waste





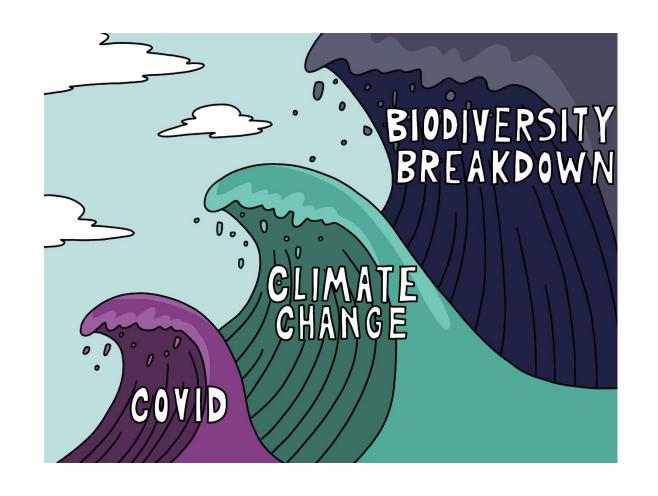
# Linear to Circular Food Systems

- Reimagine
- Regenerate
- Redistribute
- Reinvent
- Refuse



# **Poly-crisis**

The circular economy is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution.



# The food system challenge

## Linear food system



Food systems are the greatest contributor to GHGs on the planet

Food waste costs Canadians +\$17 billion/year

Globally three billion people are food insecure

1 in 8 Guelph-Wellington residents reported living in a food insecure household

Major source of plastics waste



What is your guess on how much food is wasted?

# The Avoidable Crisis of Food Waste

58%

Of all food in Canada annually is lost or wasted

32%

Of this food could be redirected to support Canadians

56.5 MILLION

Tonnes of CO2 equivalent emissions created annually



**Second Harvest** 

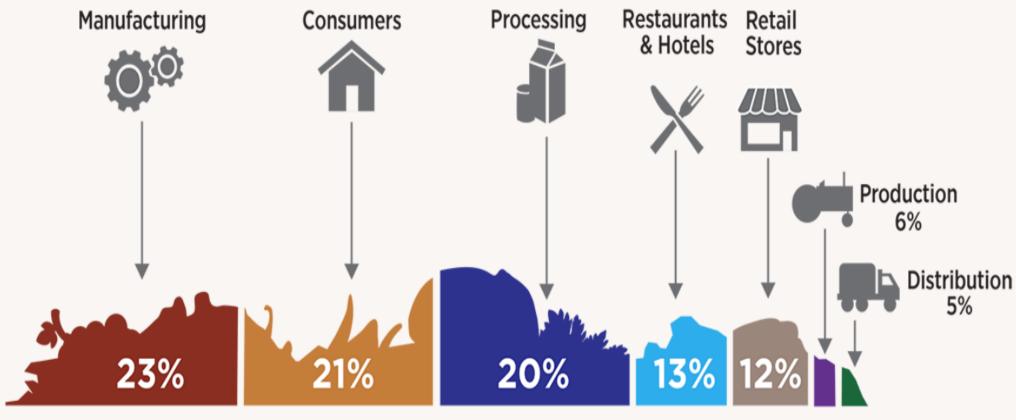


# Where does Food Loss & Waste happen?



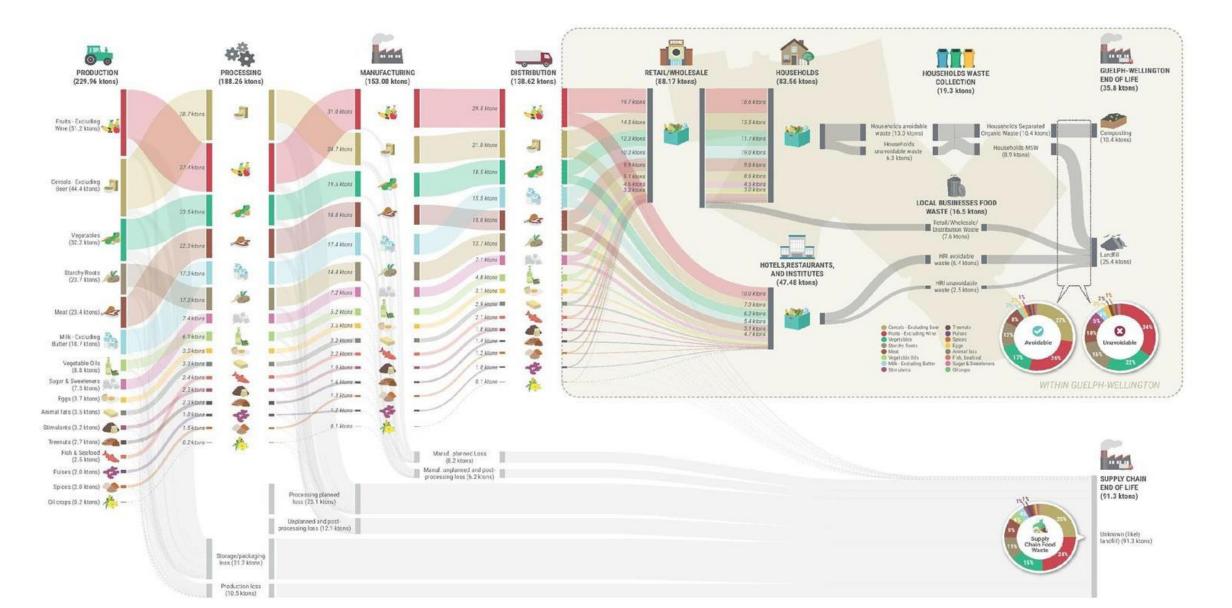
# Food Loss & Waste (FLW) in Supply Chain

Percentage of unplanned (avoidable) and potentially edible food loss & waste (FLW)



Source: The Avoidable Crisis of Food Waste, Value Chain Management International, 2019

## Regional Food Flow Study



Where do we start?

Well it takes a community...

The Guelph-Wellington Story

# Cities/towns are the right place to start















## Guelph-Wellington

**Nearly 223,000 residents** 

1,600+ food businesses and entrepreneurs

40+ agri-food research institutes and centres



A vibrant and engaged local food community





### **Federal Smart Cities Challenge**





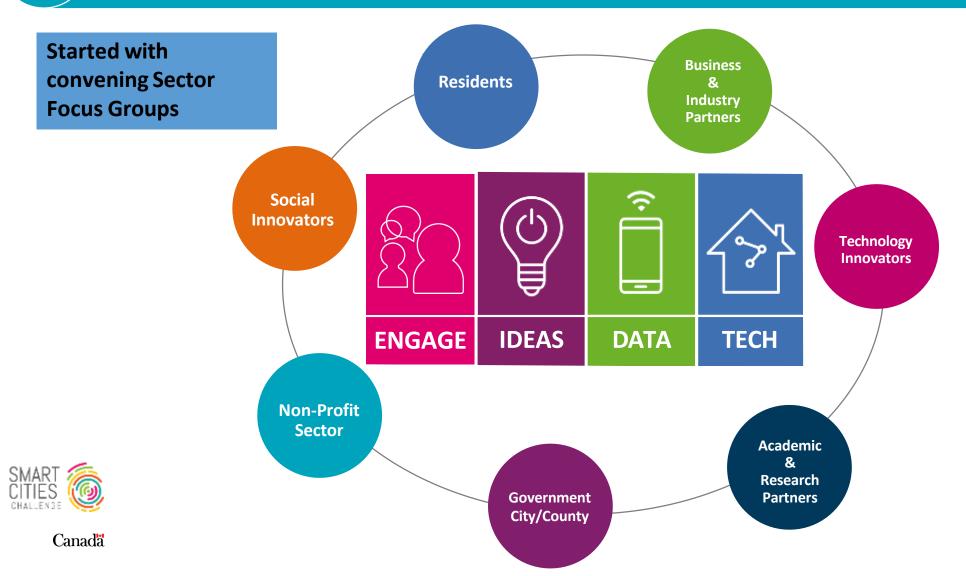








### City as collaborator, convener, catalyst





# Multi-Sector Collaboration: Shared Objectives

- Re-invent how we produce, distribute and consume food
- Shrink our environmental footprint
- Create new revenue streams from waste
- Promote collaboration between food innovators
- Transform the local food ecosystem

# Whole of community initiative



# Rethink...Reimagine







Purpose

People

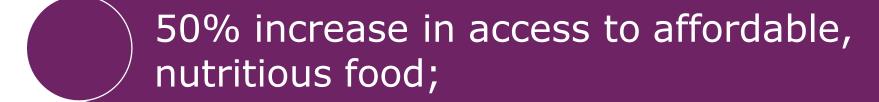
Planet

Prosperity





## Outcomes: 50x50x50 by 2025



50 new circular business and collaboration opportunities; and

50% increase in economic value by reducing or transforming food waste







# What happened next?

# **Guelph-Wellington Rural Urban Living Lab**



# Pathfinder Projects











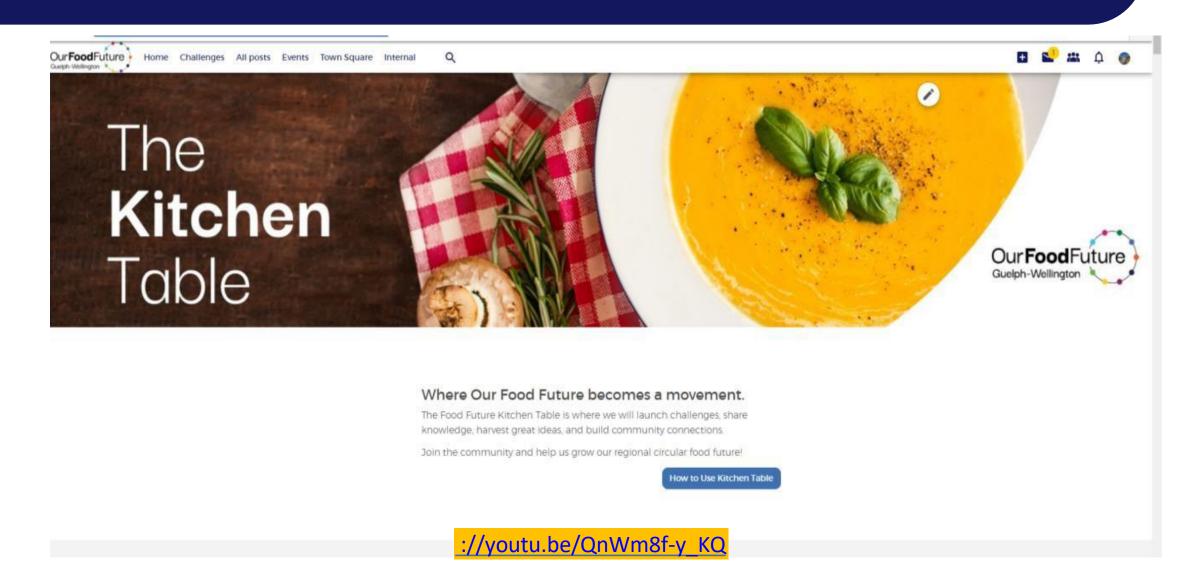








# Kitchen Table Community Platform

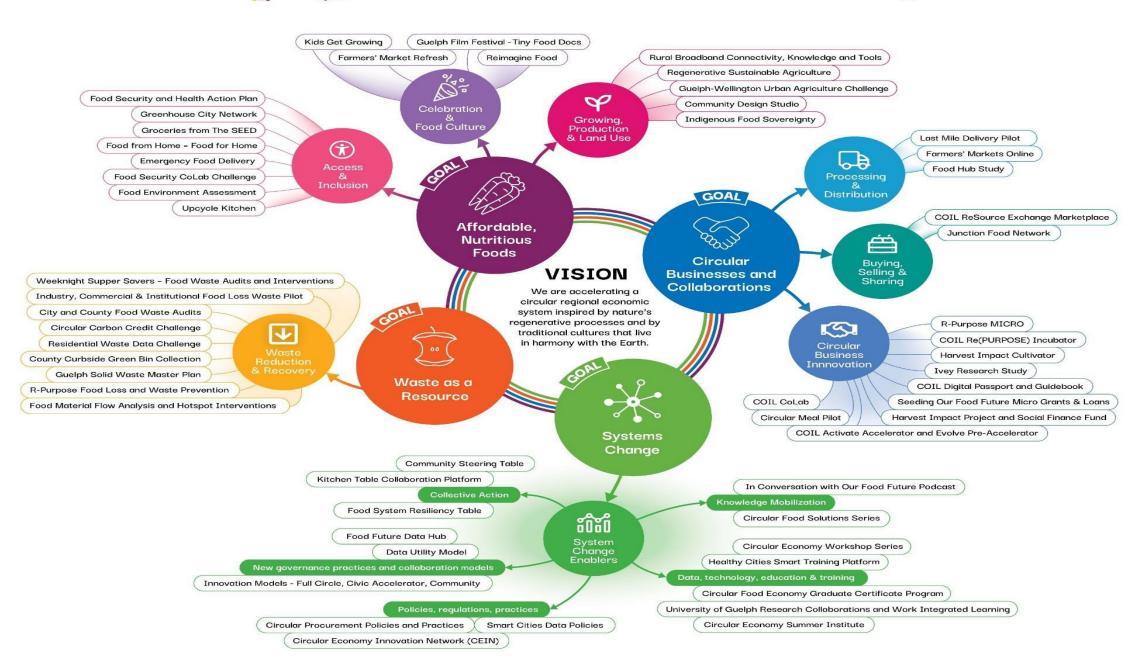








### Our Food Future Programs



# Affordable Nutritious Food



# Food Environment Assessment Final Report

Nutritious Foods Workstream October 2021





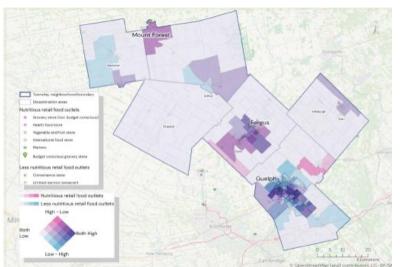


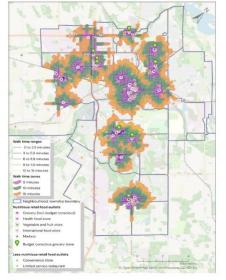


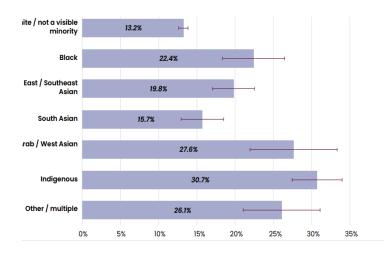
# Establishing a Baseline of the Food Environment











Ratio of healthy / unhealthy food retail by neighbourhood

Food access by walk time

Demographics of populations experiencing food insecurity

## Why Food Access Matters



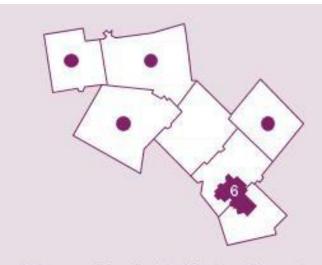




1 in 7 (14%) of Guelph households and 1 in 10 (10%) Wellington County households are food insecure



Fewer than 25% of food insecure households access emergency food services to meet their immediate needs



4 townships in Wellington County and 6 neighbourhoods in Guelph have been identified as geographic priorities for engagement and actions to improve access

# Canada's Invisible Food Network

We need to radically change how we value people and how we understand food charity in this country.

61,000

Non-profits provide food to Canadians

**4X** 

More food charities than grocery stores in Canada

\$33 BILLION

Value of food provided by charities to individuals in Canada in 2020



#### **Spotlight**

#### Growing possibilities for food access

Guelph-Wellington Urban Agriculture Challenge awards strengthen community garden projects

10 projects funded

**\$106,000** distributed

\$1,380,279

total value of projects submitted

1,650 community members engaged

workshops and seminars

2,297+ lbs of food grown

raised garden beds built

2 COMPOST SYSTEM REBUILD: MODELS

1. Harron Street Garden Middl (the "Compart Cathedral")

1. Harron Street





1. Rainwater harvesting bench brings water supply to community gardens – .83 gallons collected for every inch of rain. 2. Piloting garden trellis made with cattle fencing produced better yields that were easier to tend. 3. Newcomer youth community garden programs and workshops.













#### THE SEED IS A DO-IT-TOGETHER FOOD MOVEMENT. WE ARE WORKING TOWARDS A CONNECTED COMMUNITY WHERE EVERYONE HAS ACCESS TO HEALTHY FOOD.



Apple, Local (1ea)

RETAIL PRICE: \$0.80

Choose what you'll pay: (\$)

Minimum price: \$0.60

ADD TO CART



Bananas, (1ea)

RETAIL PRICE: \$0.35

Choose what you'll pay: (\$)

Minimum price: \$0.25

ADD TO CART



#### Beets, Red (1ea)

RETAIL PRICE: \$0.75



Choose what you'll pay: (\$)

Minimum price: \$0.55

ADD TO CART











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# Social Prescribing Fresh Food





# The Circular Economy is Healthy Communities







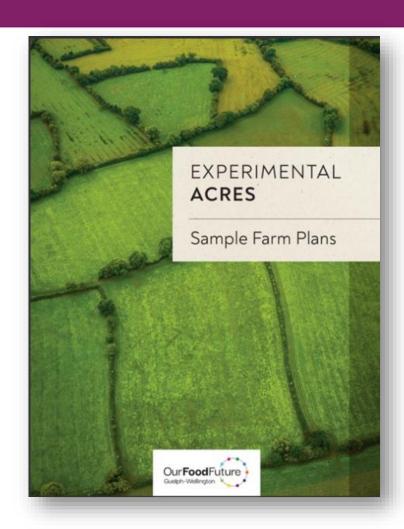






# How we grow food matters







INNOVATION



https://y outu.be/ uCZFwi vd2Vg



livestock

#### **Spotlight**

#### Regenerative farming

Healthier soils reduce reliance on extractive resources

#### neditiller soils reduce reliance on extractive re

#### **Practices Benefits Principles** Avoid soil compaction **Ecological services** Minimize Precision agriculture soil Water management Low-till or No-till disturbance **Erosion prevention** Leave crop residues Keep soil Carbon sequestration Cover crops covered Improved soil biology Crop rotation Maximize Intercropping Lower GHGs crop Silvopasture diversity Reduced fuel costs 90 Maintain → Perennial plant Improved soil structure living roots Reduced inputs Mob grazing Rotational grazing Improved pest management Integrate

Animal integration

Manure management

#### The Experimental Acres Pilot



Coaching and funding for up to 24 farms to explore regenerative farming techniques.

#### Other supports offered:



Place-based carbon market study



Future funding paths



Best management practices



Community of support



Knowledge transfer

Improved biodiversity



Wellington Soil Symposium

# Circular Businesses & Collaborations

# **Circular Opportunities Innovation Launchpad**

Programs v Business Toolkit v Contact FR







#### **Spotlight**

#### **Building a Circular Business Ecosystem**

Engaging with 1,000+ businesses and collaborations to promote and enable circularity





#### **Coming soon!**





#### **Growth and Success**



✓ Increased revenue projections \$14M+

Expansion into construction, renovation and demolition (CRD) material-stream



**Innovative business models** 



**CE** cluster creation



New circular technologies



Social & environmental impact











## **Harvest Impact Fund**

- Social Finance Fund
  - Launch of \$2M+ fund to intake local investments and invest in local projects





#### **Zero Waste Economic Transformation Lab**

COIL's systems-change accelerator applying circular economy strategies to generate innovation, business development, and in new sectors — starting with **construction**, **renovation and demolition materials**.



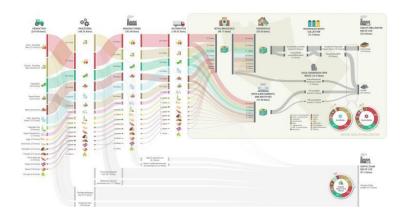


Founding supporter:



### Our replicable process can work for most materials











# Waste as A Resource



#### **Spotlight**

#### Discovering value in waste

Rapid, high-impact training pathways to help businesses create new products and markets by designing out waste.





of Canadians will purchase upcycled products



value of upcycled market



of Canada's food waste is unavoidable



participating businesses across Guelph-Wellington... so far

Heartwood Farms identified waste in processing and transportation and is developing new products from their waste stream.







Friendlier is eliminating single-use take-out containers and has quickly become Canada's fastest-growing reuse company.

Connecting local food businesses to discover and exchange unusable waste resulted in Canada's first fully circular meal, generating international attention.



#### **Food Waste Diversion Pilot**



Institutions, Restaurants, Industry Sector

Waste separation – recyclables, food rescue, organics to compost













# **ReSource Exchange Marketplace**



# Al on Waste Trucks- Organics Diversion





# System change - local knowledge and collective action.



# Food System Resiliency Table

**Your Guelph-Wellington Food Charter Toolkit** 



Have you signed the Guelph-Wellington Food Charter?

**3** 

It's now time to take action!



This toolkit can help you get started.

a nourishment for everyone wellington Food Routh

Toolkit for Eaters • page 3
Toolkit for Growers • page 5
Toolkit for Business
and Institutions • page 7
Toolkit for Policy Makers • page 8
Toolkit for Community
Food Projects • page 9

the Food System
Resiliency Table
Public Meeting:
Thursday, Feb 16, 2023
at 6 pm - 8 pm

Location: Guelph Community Health Centre 176 Wyndham Street North, Guelph

Light refreshments will be served & bus tickets available.





#### **Spotlight**

#### Harnessing data and technology to guide Our Food Future

Enabling, collecting and analysing data and technology to further direct evidence-informed circular solutions

Al on waste collection trucks pinpoints household waste patterns



Food Hub Feasibility Study will identify technologies and community infrastructure to connect supply chains, reduce waste, and support economic growth

iHub Digital Passport helps businesses navigate tools and supports on their road to circularity



System-wide food waste flow analysis of 70 datasets spotlights hotspots for action

Resource Exchange connects businesses to share avoidable food waste





Wellington County Rural Broadband guide fosters on-farm connectivity

Food Access points and organizations database and map



Food Environment Assessment maps 2,004 sites in 19 categories

Carbon credit innovation challenge envisions carbon-backed digital currency



Community gardens and pollinator gardens data map

800+ members of Kitchen Table social network for knowledge sharing and digital collaboration





Piloting cooperative Civic Data Utility to enable trusted data sharing and collaboration across the food sector



88,064

meals prepared and delivered to community members



Individuals with increased access to affordable, nutritious foods

7,836



Acres of land piloting regenerative agriculture practices

150



Data sets centralized in the Food Future Data Hub

60



Stakeholders engaged in Our Food Future

1,079



New funding leveraged

\$18,072,507

#### Our Impact 2020-2022







Value of inkind contributions

\$1,772,598



Value of supports for NGOs

\$3,046,868



Value of supports for businesses and social enterprises

\$2,028,505



Value saved and/or earned by shifting to more circular business practices

\$1,247,409



Dollar value of food distributed to community members at a reduced rate or free of charge

\$636,402



Businesses that established or expanded their circular practice

243



Business collaborations strengthening the circular supply chain

308



New products and services from diverted food waste

23



Tonnes of food waste diverted, upcycled or recycled

86,458



Tonnes of food upcycled to new products

75,567



GHG Emissions prevented

116,419 tonnes



### Join the movement.

Your seat is waiting.

www.foodfuture.ca



