



ADVANCING ZERO WASTE

A WASTE RECOVERY AND REDUCTION TECHNOLOGY ASSESSMENT UPDATE

Report No. PW 2018-05

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March 14, 2018 | Oxford County Council

PRESENTATION OVERVIEW

1. Waste Recovery and Reduction Drivers

- Alignment with Sustainability and Environmental Plans
- Waste Management Hierarchy

2. Waste Recovery and Reduction Technology (WRRT) Considerations

- Sources of County Waste
- Single Family Residential Garbage Waste Composition
- ICI Waste Composition

3. Selection of Preferred WRRT System

- Refinement of MCA Tool
- Request for Information and Evaluation of Vendor Submissions
- Identification of Preferred WRRT System

4. Next Steps

- Public Engagement Campaign on Preferred WRRT System
- WRRT System Final Report and Recommendation

1. WASTE RECOVERY AND REDUCTION DRIVERS

FUTURE OXFORD

COMMUNITY SUSTAINABILITY PLAN

The Community Sustainability Plan aims to improve quality of life for Oxford's current and future generations and to balance Oxford's collective economic, community, and environmental interests.

- What is sustainability?
- Implementing the plan

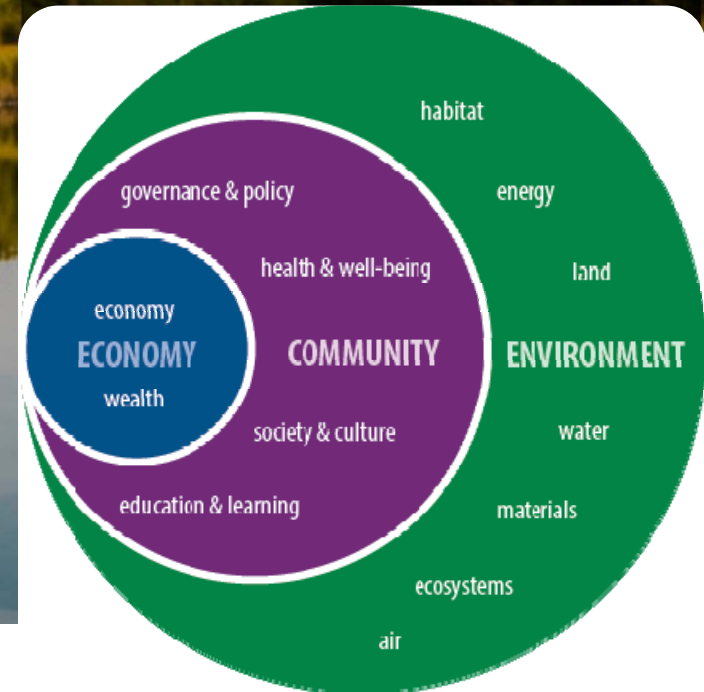
[Print version with further details](#)

Vision

A vibrant, prosperous, and responsible Oxford for all.

Mission

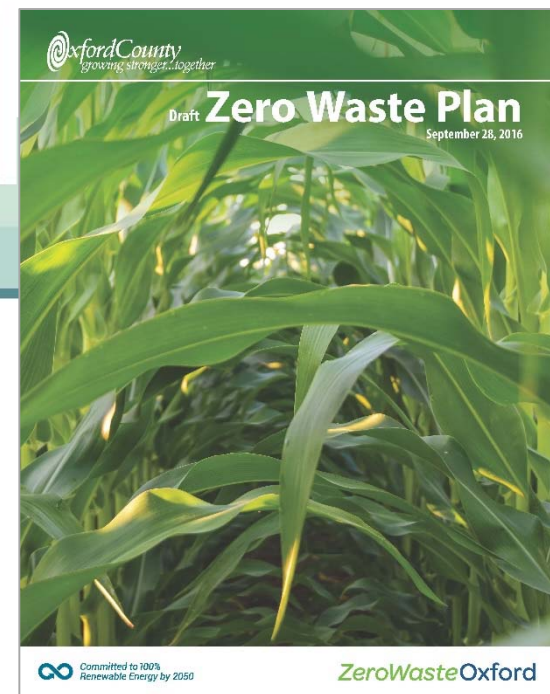
To achieve community sustainability throughout Oxford.



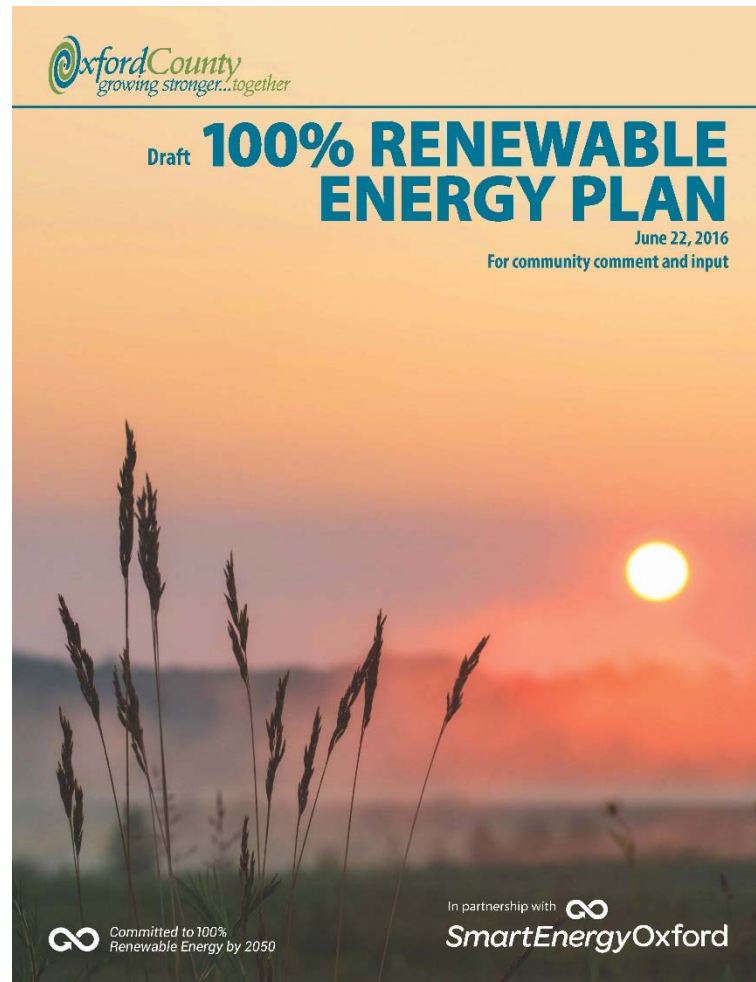
FUTURE OXFORD: PATH TOWARDS ZERO WASTE



The path towards zero waste



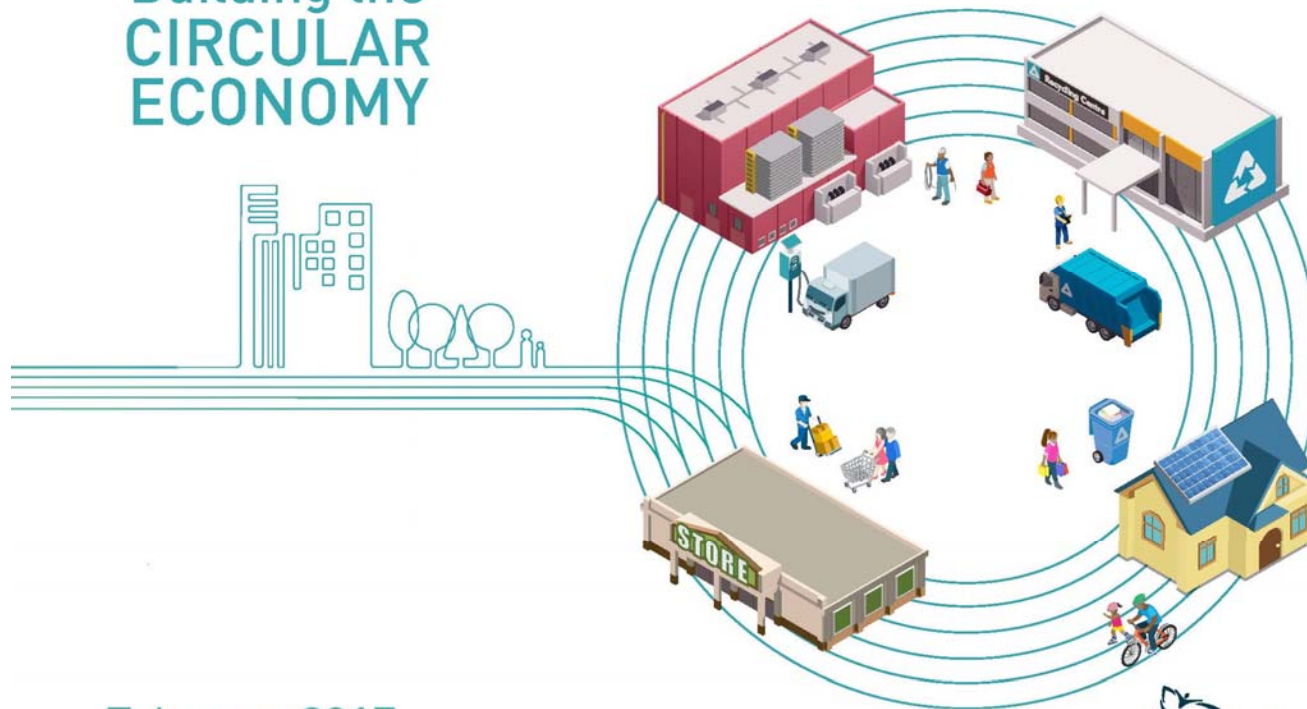
FUTURE OXFORD: 100% RENEWABLE ENERGY



WASTE FREE ONTARIO ACT AND STRATEGY

Strategy for a
**WASTE-FREE
ONTARIO**
Building the
**CIRCULAR
ECONOMY**

Achieve Zero Waste:
"80% diversion by 2050"

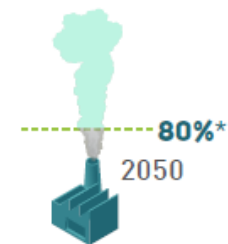
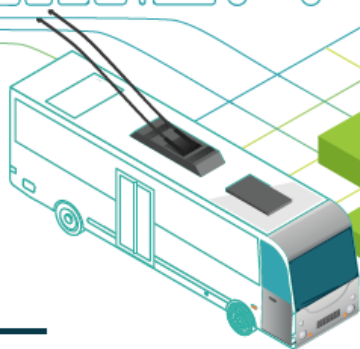


February 2017



ONTARIO CLIMATE CHANGE ACTION PLAN

ONTARIO'S FIVE YEAR CLIMATE CHANGE ACTION PLAN 2016 - 2020



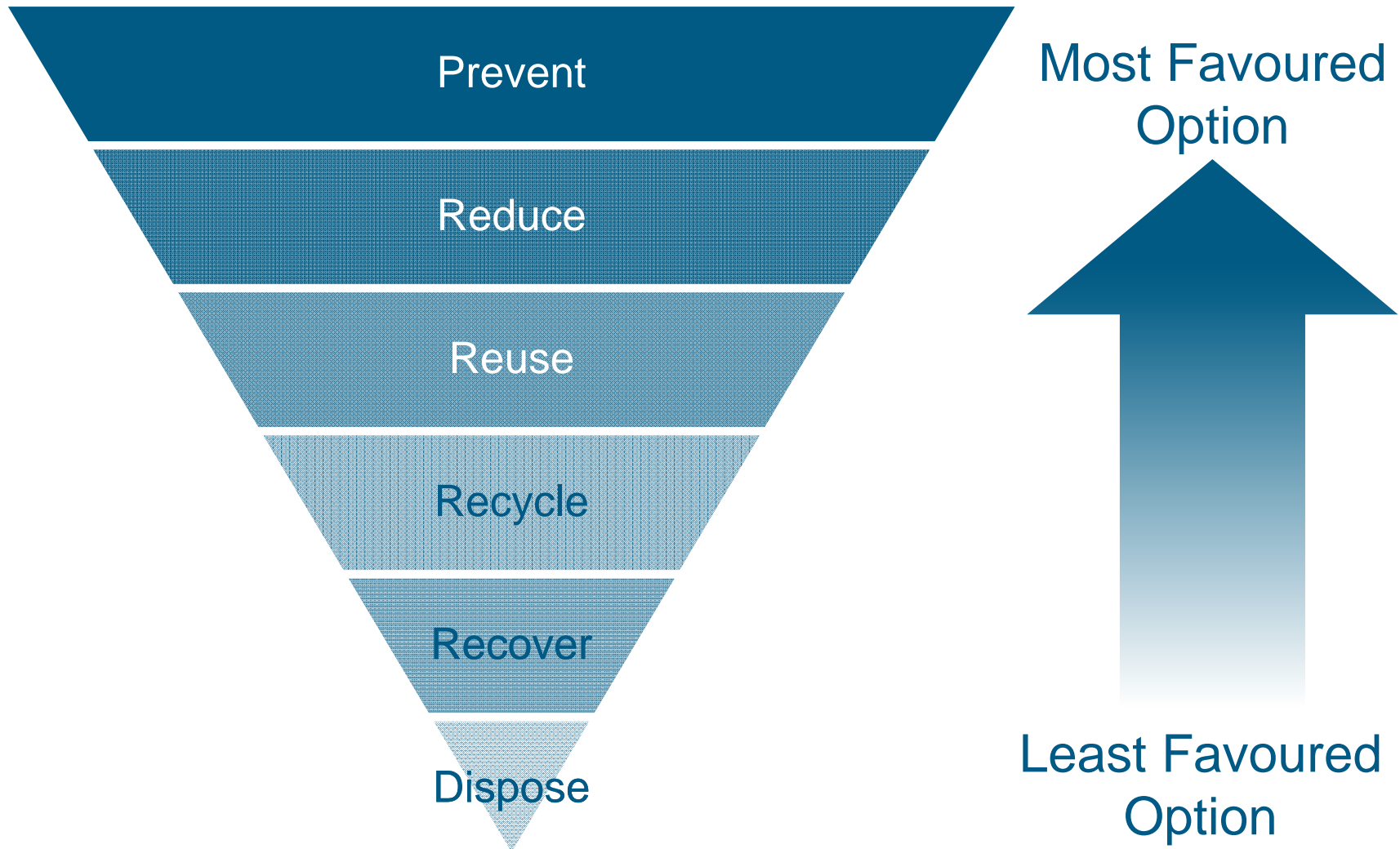
**Achieve Zero
GHG Emissions**

Climate Change
Action Plan



Committed to 
100% RE | Zero Waste | Zero Poverty

WASTE MANAGEMENT HIERARCHY

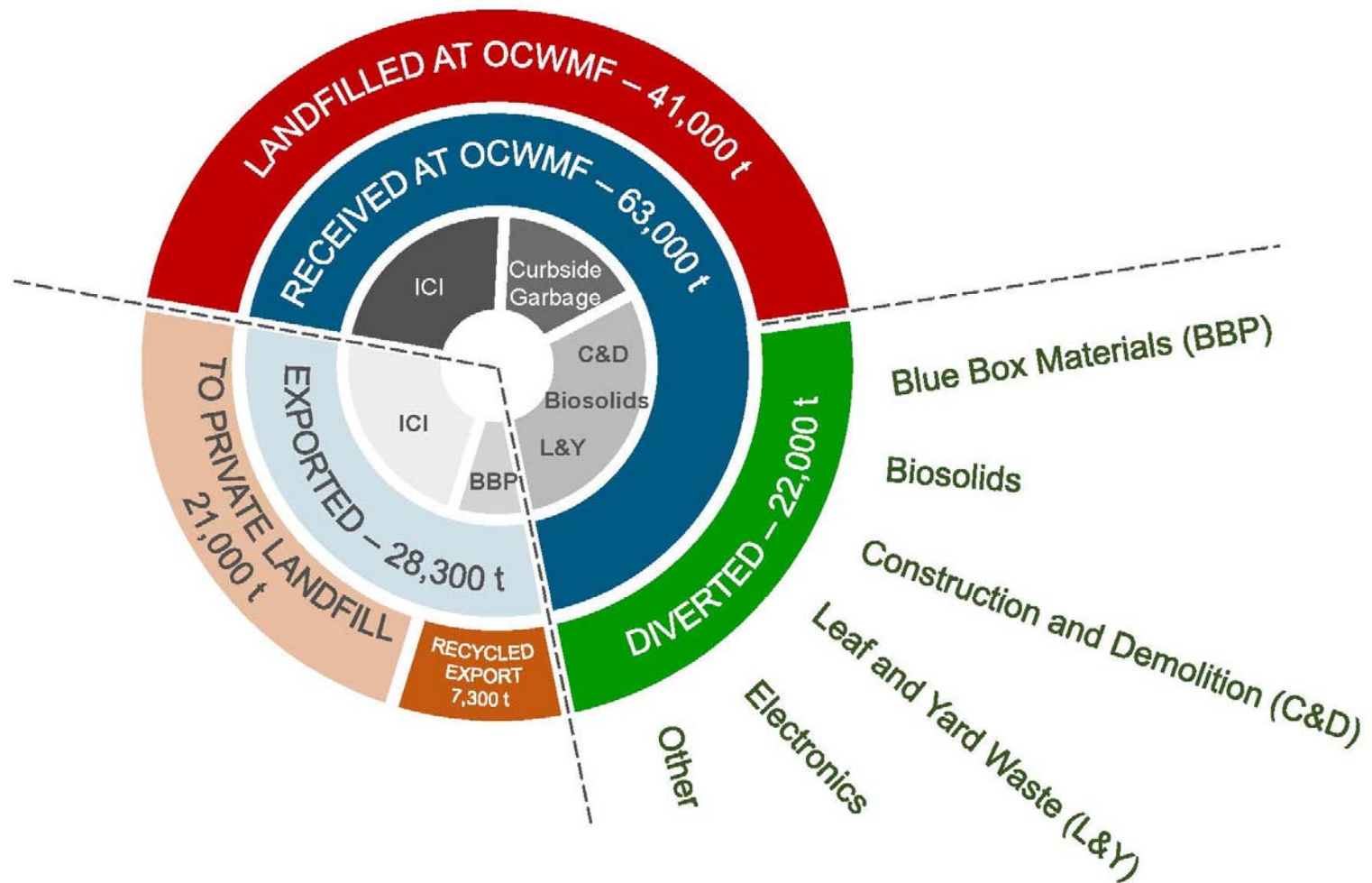


2. WASTE RECOVERY AND REDUCTION TECHNOLOGY CONSIDERATIONS

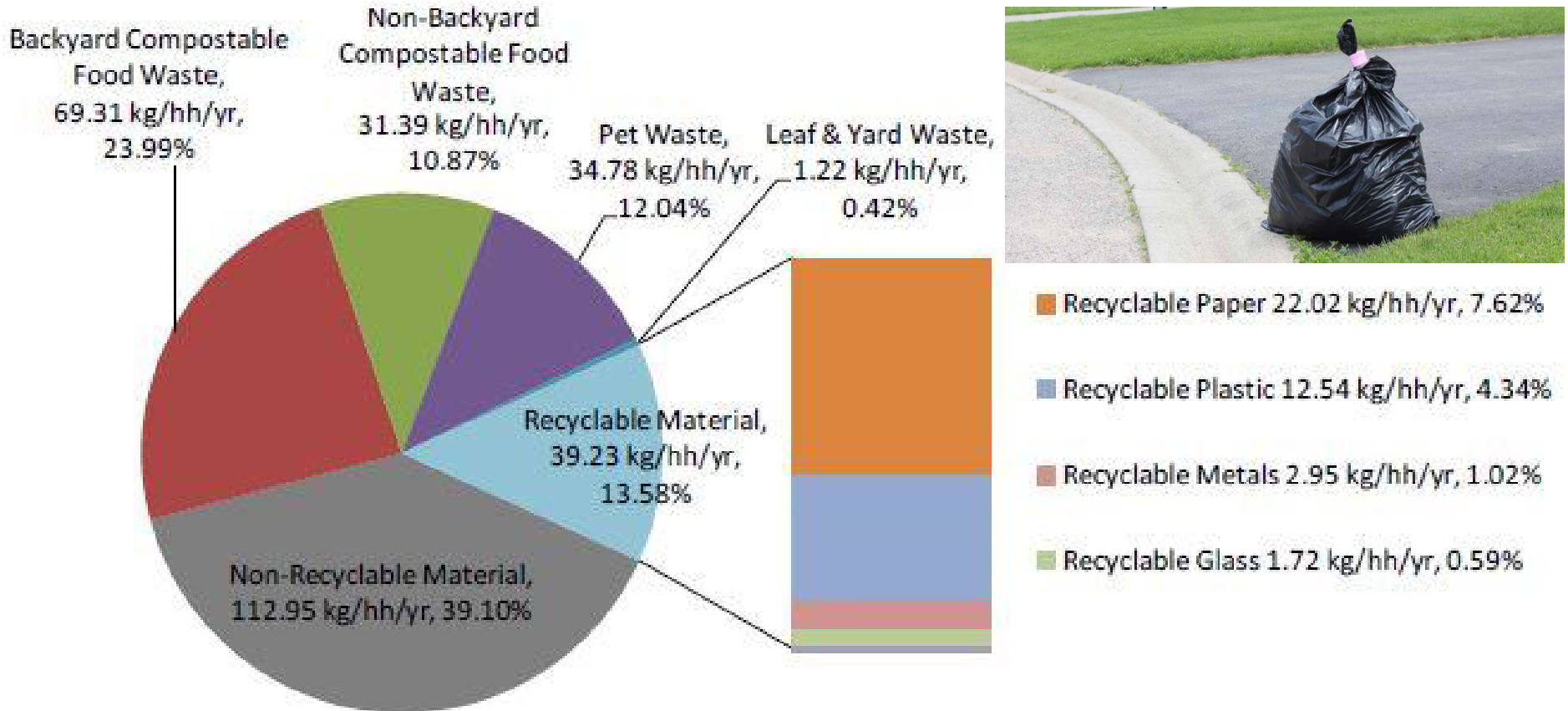
SOURCES OF COUNTY WASTE

Source		Composition
Mixed Solid Waste	Residential	Food wastes, paper, cardboard, plastics, textiles, leather, yard wastes, wood, glass, metals, ashes, special wastes (i.e. bulky items, consumer electronics, white goods, batteries, oil, tires), household hazardous wastes, e-wastes, furniture.
	Industrial	Housekeeping wastes, packaging, food wastes, wood, steel, concrete, bricks, ashes, non-hazardous solid wastes (sludges, slurries).
	Commercial & Institutional	Paper, cardboard, plastics, wood, food wastes, glass, metals, special wastes, e-wastes, furniture.
	Construction & Demolition	Wood, steel, concrete, soil, bricks, tiles, glass, plastics, insulation, designated substances (special waste, asbestos).
	Municipal	Street sweepings, landscape and tree trimmings, sludge, wastes from recreational areas, biosolids.
Process Waste		Scrap materials, off-specification products (i.e. wind turbine blades), process water and chemicals (i.e. industrial sludge).
Agricultural Waste		Spoiled food wastes, plastic (bale wraps), spoiled feedstock.

COUNTY-WIDE WASTE GENERATION

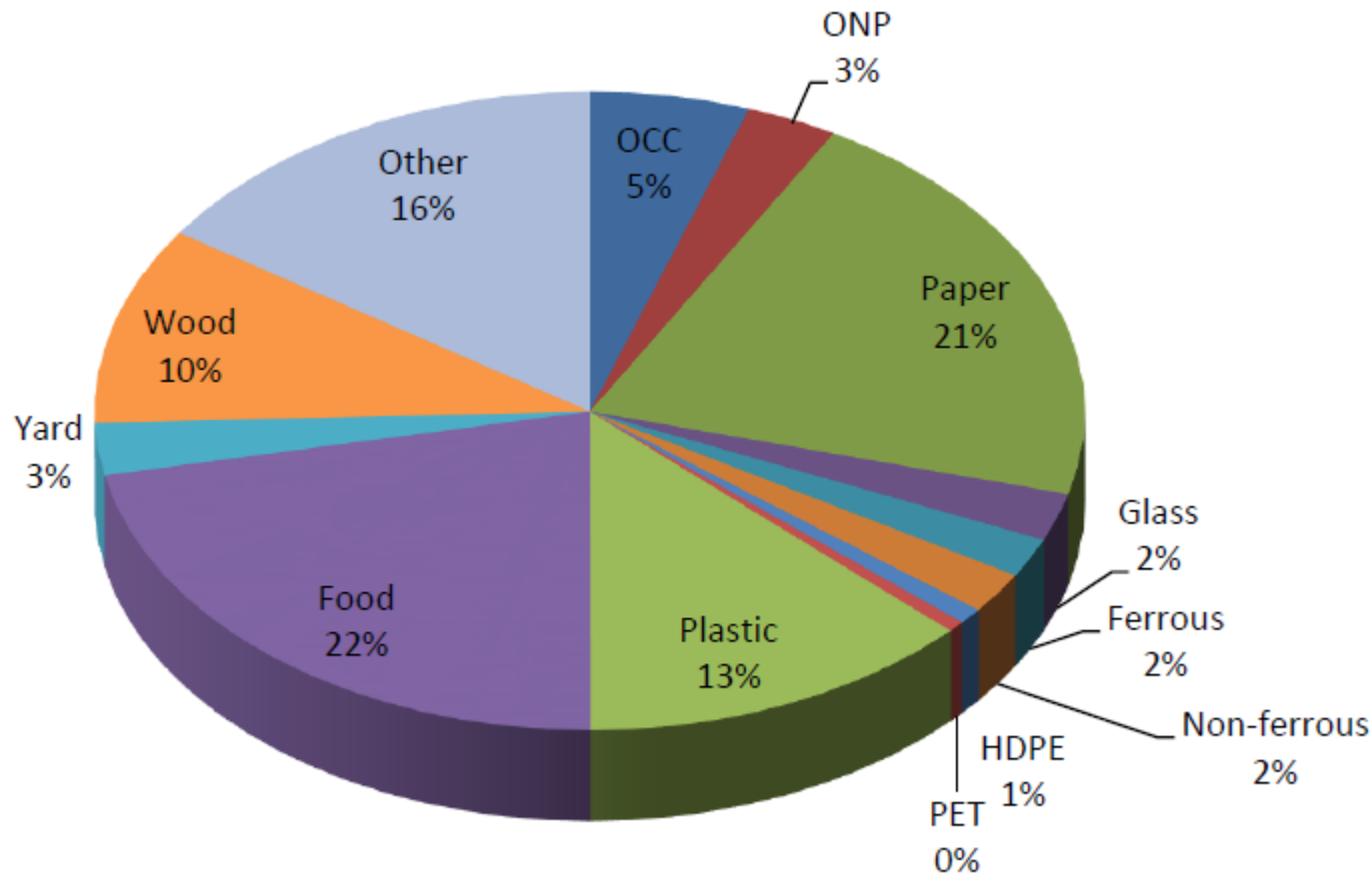


CURBSIDE GARBAGE COMPOSITION & OPPORTUNITIES



2017 = 15,000 tonnes to OCWMF Landfill

ICI WASTE COMPOSITION & OPPORTUNITIES



2016 = 21,000 tonnes to OCWMF Landfill

3. SELECTION OF PREFERRED WRRT SYSTEM

WRRT ASSESSMENT – PHASE 1

- Audit of County’s current mixed waste stream including characterization of waste disposed
- Identified seven waste treatment “systems” feasible for Oxford County to manage Oxford waste
- Systems were evaluated and ranked using the Future Oxford Multi-Criteria Assessment (MCA) tool
- Preferred WRRT systems reflected primary processing within Oxford (*enhanced materials recovery*), with secondary processing of organics (*wet or dry AD*) within or outside the County

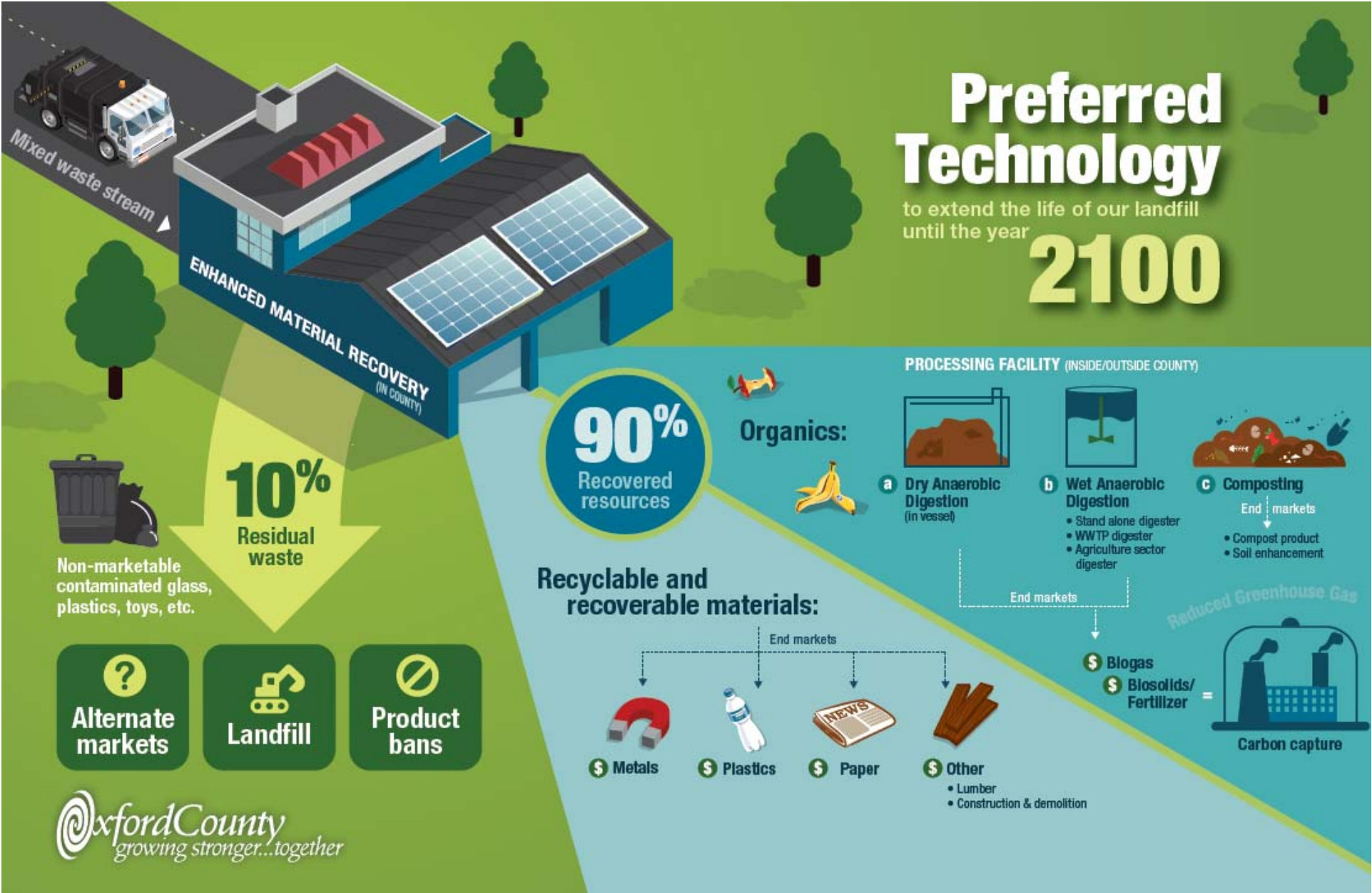
WRRT ASSESSMENT – PHASE 2

- Refined MCA tool criteria with ZWO input to facilitate specific waste technology evaluation
- Prepared and issued *Request for Information* to market
- Analysis of twenty (20) vendor submissions
- MCA tool evaluation and ranking of RFI WRRT systems

WRRT ASSESSMENT – PHASE 2

Detailed Review of WRRT Classes and Systems:

- Enhanced Materials Recovery (EMR) Only
- Biological Treatment Only (Dry Anaerobic Digestion (AD), Aerobic Composting, **Wet Anaerobic Digestion (AD)**)
- Mechanical and Biological Treatment (EMR and Biological Treatment - on Same Site (MBT)) or Different Sites
- Conventional Thermal Treatment (Combustion of Refuse-Derived Fuel (RDF), Including Organics)
- Advanced Thermal Treatment (Gasification of Refuse-Derived Fuel (RDF), including organics)



Preferred Technology

to extend the life of our landfill until the year

2100

OxfordCounty
growing stronger...together

OxfordCounty
growing stronger...together

Committed to 
 100% RE | Zero Waste | Zero Poverty

4. NEXT STEPS

NEXT STEPS

1. Public Consultation on Preferred WRRT System: (March 15 to April 30, 2018)

- Town Hall, Municipal Drop-ins (Open Houses), Speak Up Oxford, Advertising, etc
- Review public responses

2. Confirm Recommended WRRT System Approach

3. Council Reporting: June, 2018

- Present recommended WRRT system approach
- Seek approval to commence formal RFP process for recommended WRRT system

QUESTIONS?