Mixed Waste Pre-Sort

July 8, 2020 Works Committee Meeting

DURHAM REGION

Service Excellence for our Communities

Presentation Outline

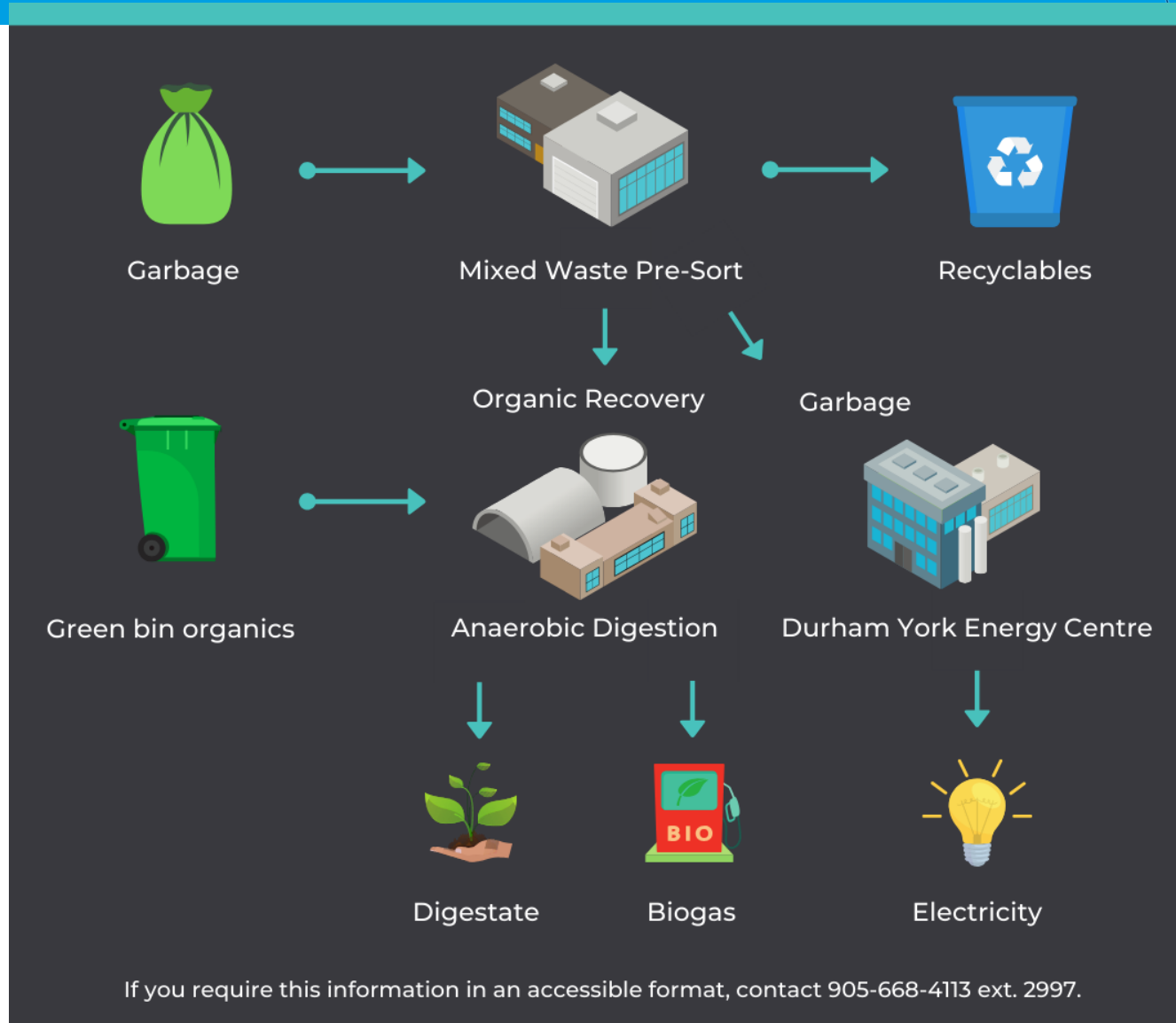Opening Remarks

What is Mixed Waste, Presort

Presort Objectives

Presort Technology

Artificial Intelligence in Presort

Presort Facilities

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What is Mixed Waste, Presort and Anaerobic Digestion?

Garbage → Mixed Waste Pre-Sort → Recyclables

Organic Recovery / Garbage

Green bin organics → Anaerobic Digestion

Durham York Energy Centre

Digestate / Biogas / Electricity

If you require this information in an accessible format, contact 905-668-4113 ext. 2997.

![Durham Region logo] Service Excellence for our Communities

Durham's Residential Waste

Tonnes of Residential Waste Managed
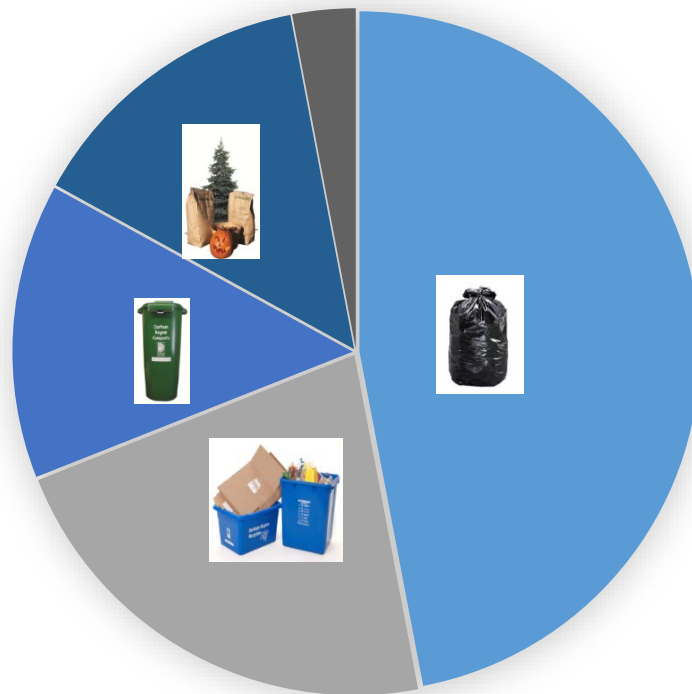
- Garbage - 47%
- Recycling - 22%
- Food Composting - 14%
- Leaf & Yard Waste Composting - 14%
- Other Diversion Programs - 3%

Non-divertible garbage - 15%

Organics suitable for AD - 49%

Non-combustibles - 12%

HHW - 1%

Non-recyclable plastic - 19%

Blue Box Recyclables - 4%
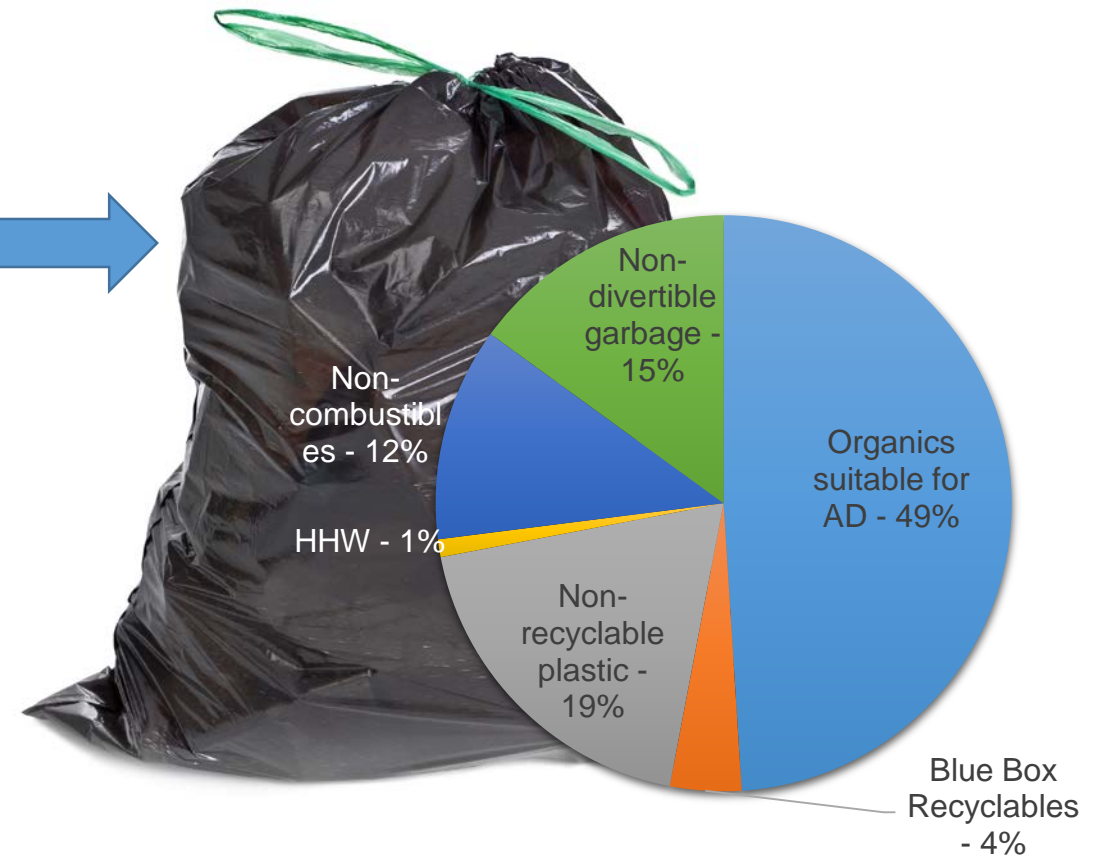
Presort Objectives

- Remove Organics:
  - Quantity: 80 percent
  - Quality: Methane Potential and Digestate

- Remove Non-Combustables
  - Metals: Ferrous and Non-Ferrous
  - Glass
  - Rubble: bricks, stones….

- Recyclables with a positive marketing potential

- Others

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Presort Technology

- Bag Opener

- Manual Sorting
  - Large items: cardboard..

- Mechanical Sorting
  - Size
  - Shape
  - Density
  - Colour

- Artificial Intelligence

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Presort Layout

https://www.bulkhandlingsystems.com/solutions/municipal-solid-waste-msw/

Artificial Intelligence in Presort

https://www.youtube.com/watch?v=tuIyOAq1PGk

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Presort Facilities

- GHD Technical Advisor

- Technology Review completed

- Existing facilities visited

- Performance audit

- Informed the Business Case and RFQ documents
  - Capture rates for quantity
  - Methane potential for RNG
  - Digestate and beneficial uses

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Questions

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