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# **Implementation of the SM4RT Living Solid Waste Master Plan**

Committee of the Whole  
Town of Newmarket  
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# Three key aspects of the SM4RT Living Solid Waste Master Plan

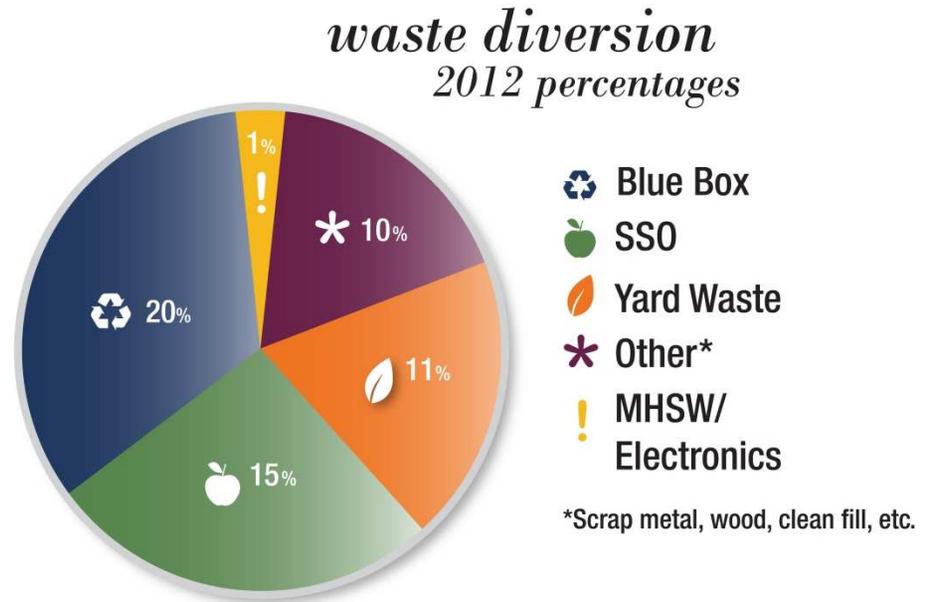
- q **Infra-stretching** through demand management achieved by waste reduction and public education
- q **Investment** in new capital with proposed expansion of Durham-York Energy Centre, SSO facility and CEC network
- q **Innovation** with partnership-based approach to deliver the SM4RT Living Plan



# Where we are

- q Leaders in Ontario (2012)
  - q 57% WDO diversion (unverified)
  - q 82% diversion from landfill

- q Council endorsed 4Rs hierarchy
- q Inclusive blue box and green bin programs with high participation



*Consistently ranking in the top of the WDO Large Urban category of diversion*

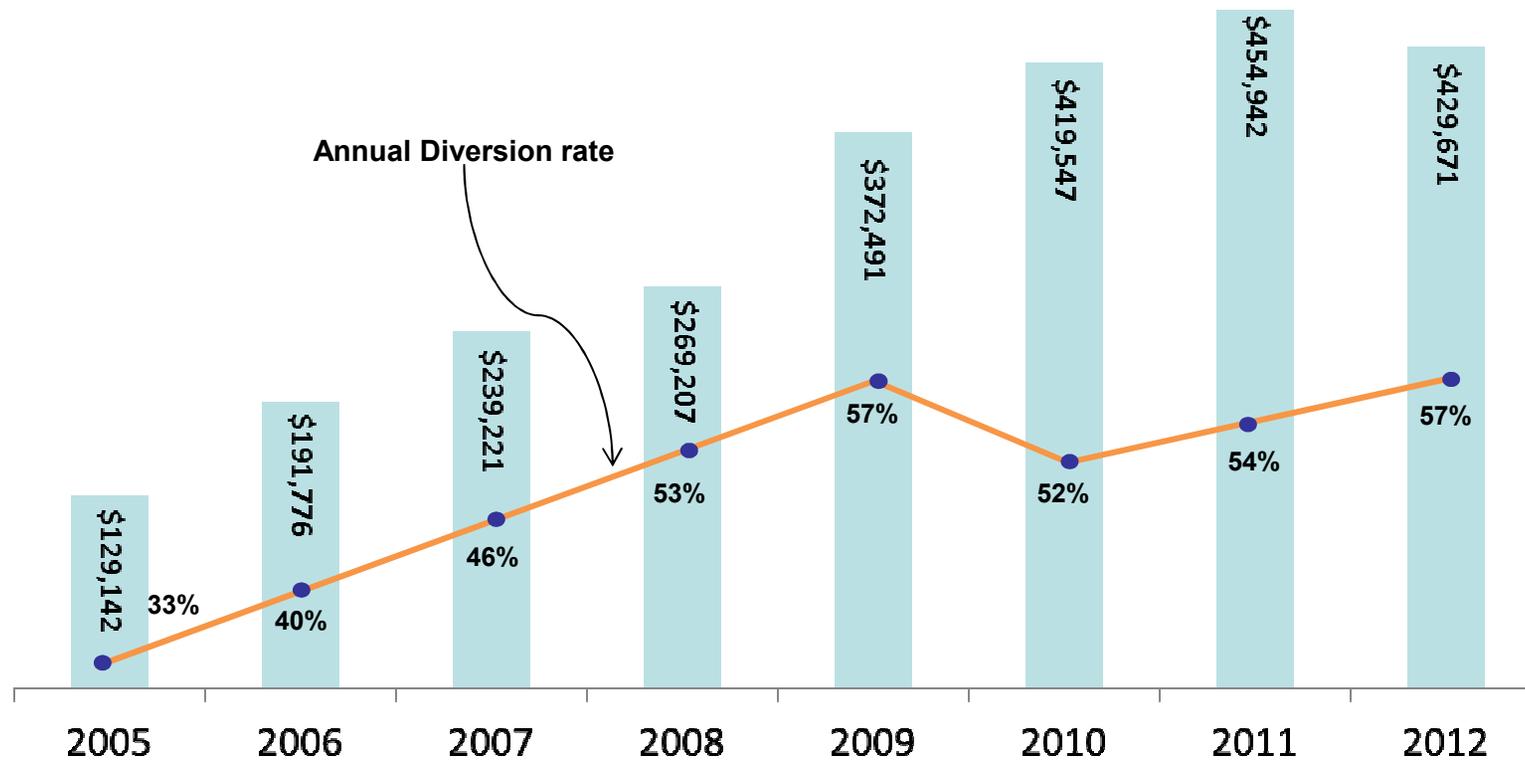
# Where we want to go

- q Diversion has stalled in Ontario
- q Limited return on investment with additional diversion programs
- q Waste reduction focuses on cost avoidance through waste prevention



*Measures of success in waste management at a tipping point - new Waste Reduction Act pending*

# Diminishing return on investment for additional diversion programs



Cost per percent of diversion increased by \$300K over 8 years

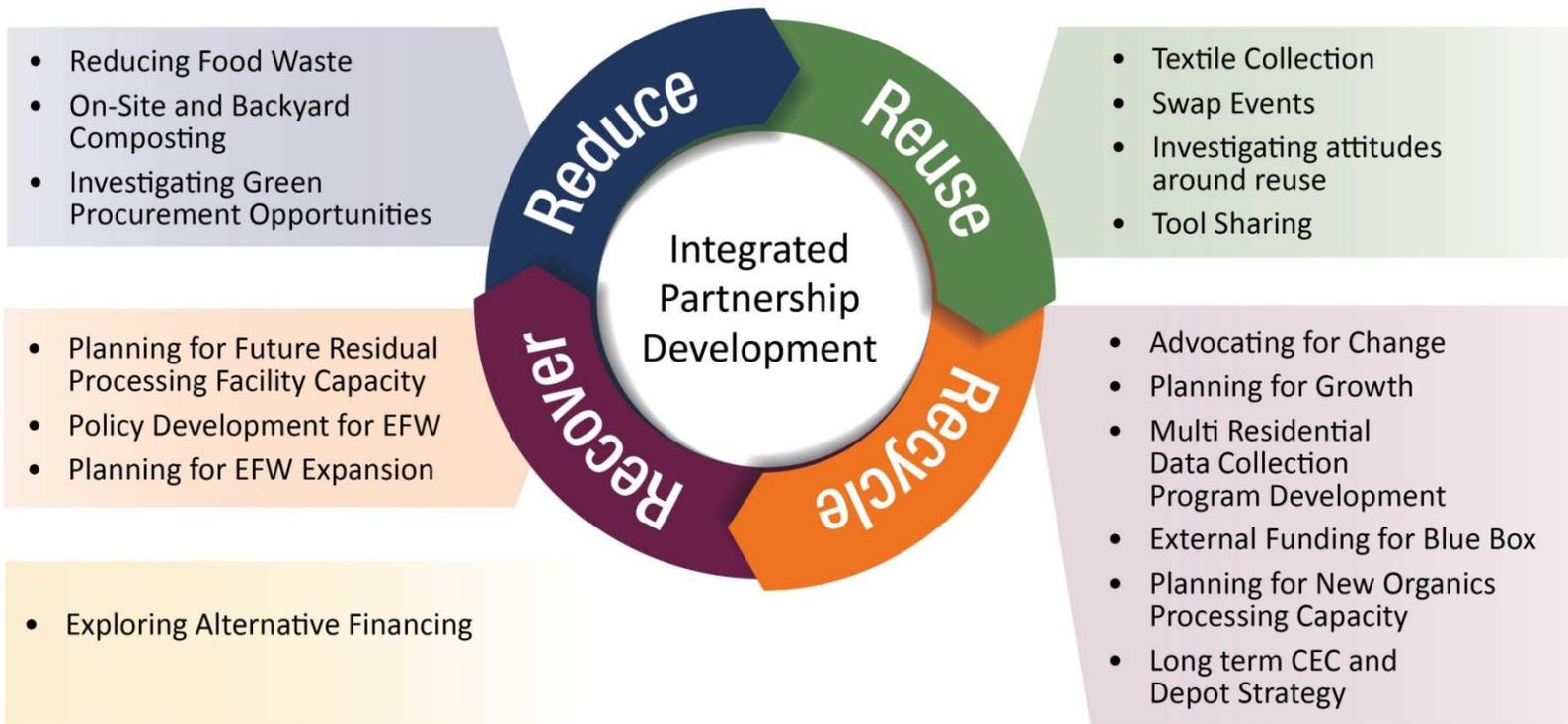
# Bending the curve to reduce waste generation



## reductions by tonne:

-  Organics
-  Other
-  Waste Reuse
-  Total Waste Managed

# *Priority initiatives to drive long-term performance*



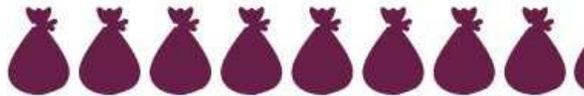
*Implementation of priority initiatives in first five years projected to avoid up to \$62M in Regional and local net costs and reduce 166,000 tonnes of waste by 2031*

# Best practices for waste reduction

## *Best practices for waste reduction*

UK WRAP REDUCTION PROGRAM  
2008 to 2011

**8.3** million tonnes



**vs 7.2** million tonnes



*UK household food waste has fallen  
by 1.1 million tonnes over three years*

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY



Around 31.75 million tonnes  
of food waste was generated  
in the U.S. in 2010 and  
30.80 tonnes of that  
was **thrown away**

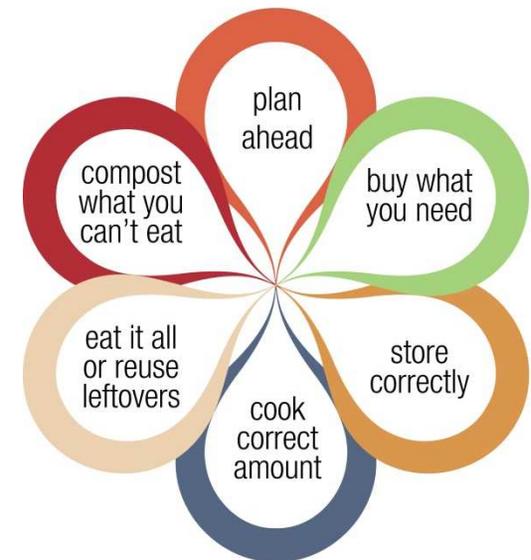
*Wasted food means wasted money  
for businesses and residences.*

*Food waste reduction strategy based on best practices with conservative targets and  
practical approach*

# How We Are Going to Get There

- q Comprehensive evaluation identified impacts of each initiative from Phase 1 and Phase 2 research
- q Practical application of initiatives
  - q Understanding barriers to participation
  - q Working with community and industry partners
- q Conservative projections set based on program success in other jurisdictions
  - q Use of pilots and opportunities to recalibrate

## *How to reduce food waste*



*On-going monitoring of results with first Plan update in 2019 and every four years following to align with term of Council*

# Extended Producer Responsibility

- q Strong desire for reduced packaging and products that can be easily recycled expressed by residents during SM4RT Living Solid Waste Master Plan public consultation
- q Proposed Waste Reduction Act (Bill 91) places emphasis on extended producer responsibility for the blue box and other designated wastes
- q Municipalities currently engaged with Producers and waste industry on changing roles and responsibilities under proposed Waste Reduction Act

*“Ontario producers and product stewards know that if they fail to address the environmental impacts of their products, they risk eroding consumer confidence and market share.”*

*Stewardship Ontario letter to Minister Bradley September 2013*



*Shifts costs for end-of-life management from tax base to producers encourages design for environment*

# Local Municipal partners integral in development and delivery



- Mandatory Material Separation By-law
- Unlimited Clear Bags for Residue
- Expanded Textile/Carpet Diversion Program
- Zero Waste for Schools Program
- Establish Retail Bag Policy for Markham
- Enhanced Promotion & Education
- Reuse Depot for Renovation Materials
- Curbside Electronics and Battery Collection Ban
- Establish Spring & Fall clean-up days
- Expanded Fall Leaf/Yard Waste Collection



- Food waste campaign ads on collection vehicles
- Investigating adoption of waste management development standards
- Curbside 'swap' events and data collection
- Increase use and production of community gardens
- Zero waste in school programs
- Textile/electronics collection in apartment buildings



- Development standards for waste management
- Three-stream collection at parks and public events
- Electronics collection in apartment buildings
- Recycling bins at community mailboxes
- Tracking and audits in apartment buildings



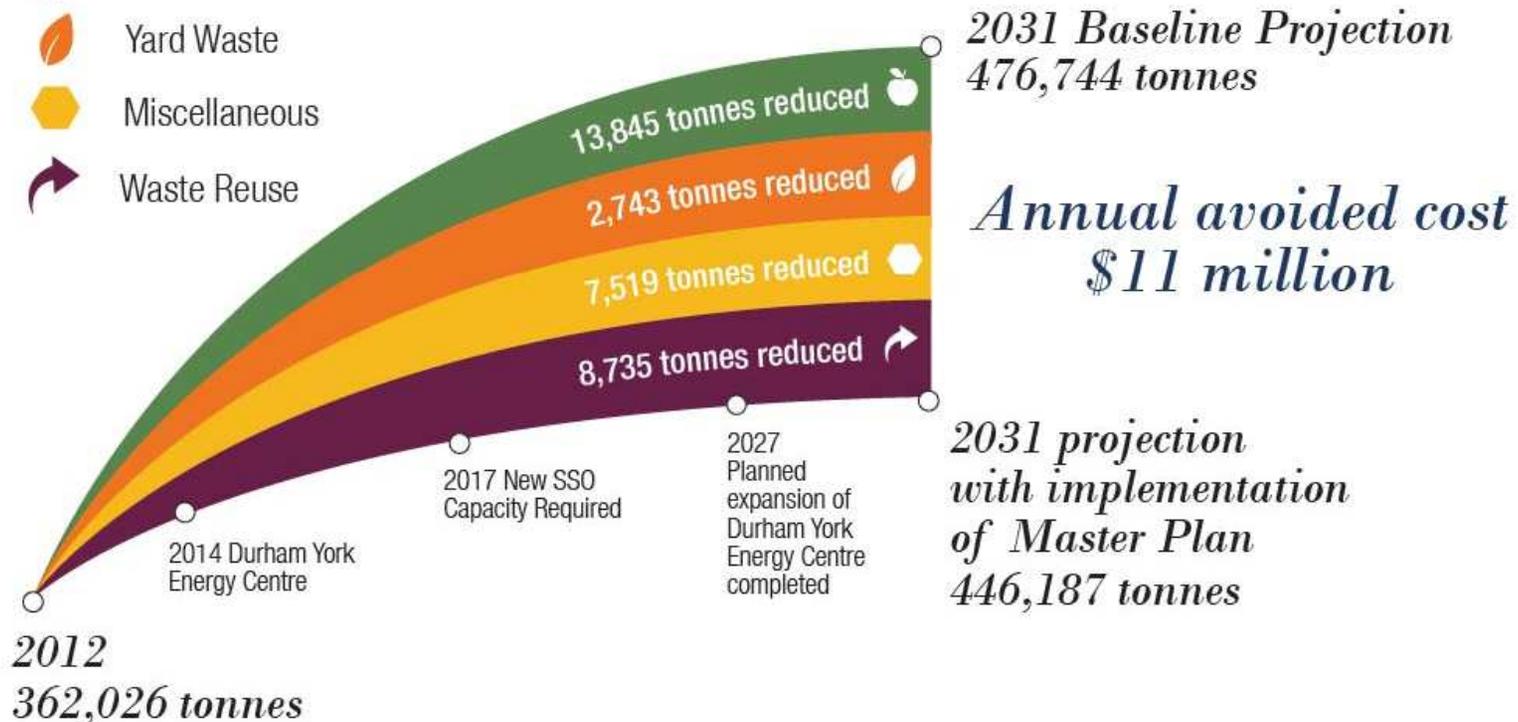
- Supporting composting pilots at community gardens
- Waste electronics collection in apartment buildings
- Textile collection in apartment buildings with charitable partners

*Projected overall impact of first five years of implementation*

# *Annual reduction achieved by 2031*

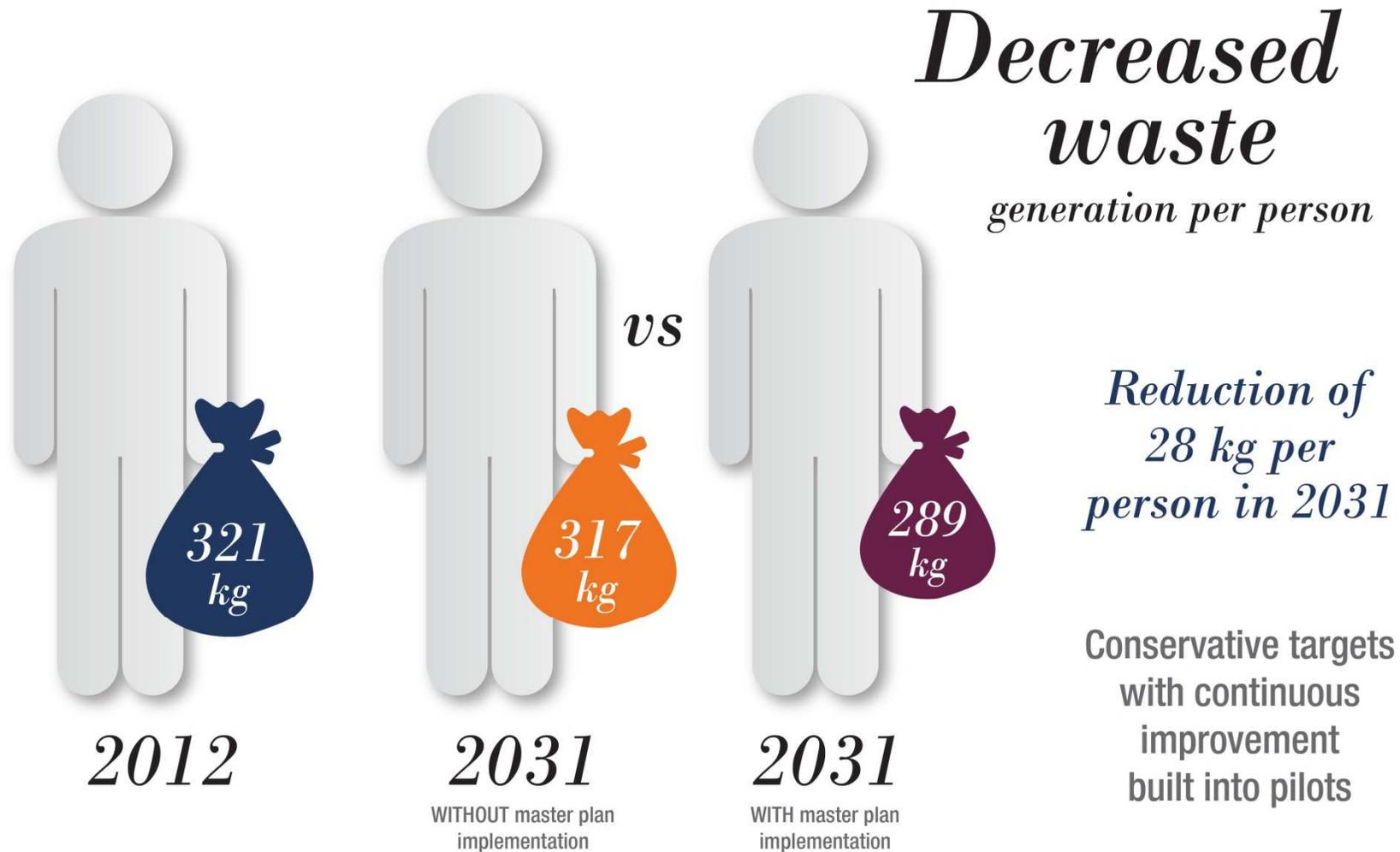
*reductions by tonne:*

-  SSO
-  Yard Waste
-  Miscellaneous
-  Waste Reuse



*Opportunity to recalibrate Master Plan based on results realized*

# Waste generation per capita reduced in longer term



# First five years of implementation reduces waste and avoids costs



***\$8.5 million***  
*investment (2014 to 2031)*  
*yields avoided costs of up*  
*to \$62 million by 2031*

- q Implementation of Master Plan projected to yield \$11M annual avoided costs in 2031 based on system costs as of July 2013
- q Operating and Capital investments required for 2014 already include 2014 outlook approved as part of 2013 budget
- q Staff resources per 2013 budget forecasts four new staff between 2014 and 2018 to maximize implementation and drive reduction

*Master Plan implementation has no impact on 2014 Budget  
Outlook as approved through 2013 Budget process*

# First five years of implementation reduces cost per household over long term



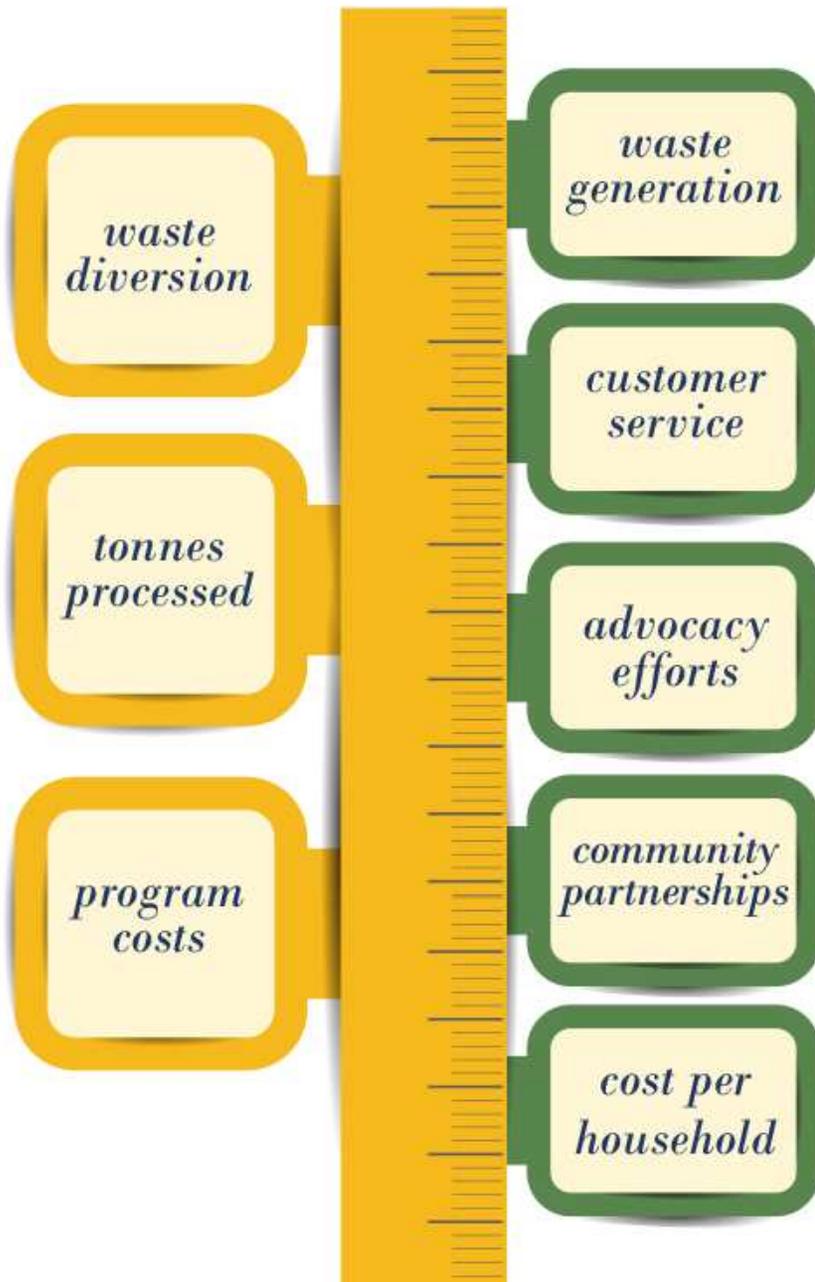
*Avoided cost  
per household*

*Estimated avoided costs  
of approximately \$22  
per household in 2031*

Decrease in waste generation  
by approximately 9% and an  
increase of just over 1%  
in diversion out to 2031

\* Based on systems costs as of July 2013

*Monitoring actual achievements along the way*

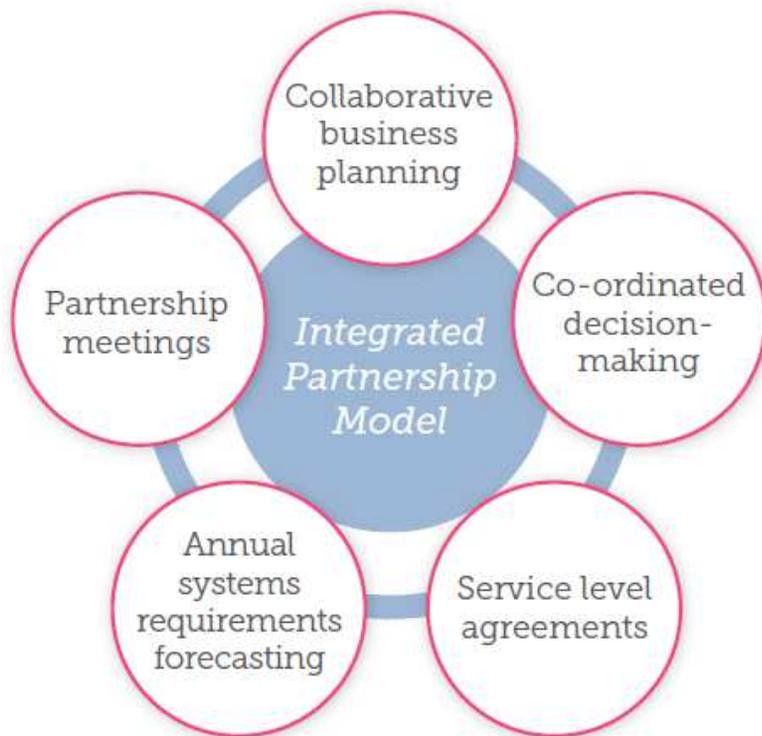


# *Setting new measures of success*



*Going beyond waste diversion to better measure program success and value to community*

# Partnership-focused delivery



- Integrated partnership
  - Coordinated decision-making
  - Maintaining local autonomy
  - Tailoring programs/pilots to suit local community needs and interests
  - Data sharing
  - Sharing of ideas, information and experience

*Delivery reflects a “one taxpayer” approach for provision of seamless, cost-effective integrated waste management services.*

# 2014 Priority Initiatives

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- q Food Waste Campaign development
- q Composting pilots
- q Binindicator update to promote reuse
- q Research feasibility of Alternative Financing
- q Development standards and incentives
- q Planning for future processing capacity
- q Advocacy on Extended Producer Responsibility and sustainable packaging
- q Pilot best practices for waste management in Regional facilities

# Next steps

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- q Local Municipal Council presentations in Q4 2013
- q Public launch Q1 2014
- q Continue development and roll out of Implementation Plan