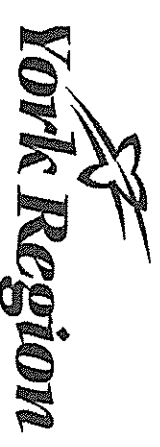


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Communication	
Pkt 1:	Nov 25/13
Item:	4



# Implementation of the SMART Living Solid Waste Master Plan

Priorities and Key Initiatives  
Committee

City of Vaughan

November 25, 2013

Dave Gordon, York Region

Brian Anthony, City of Vaughan

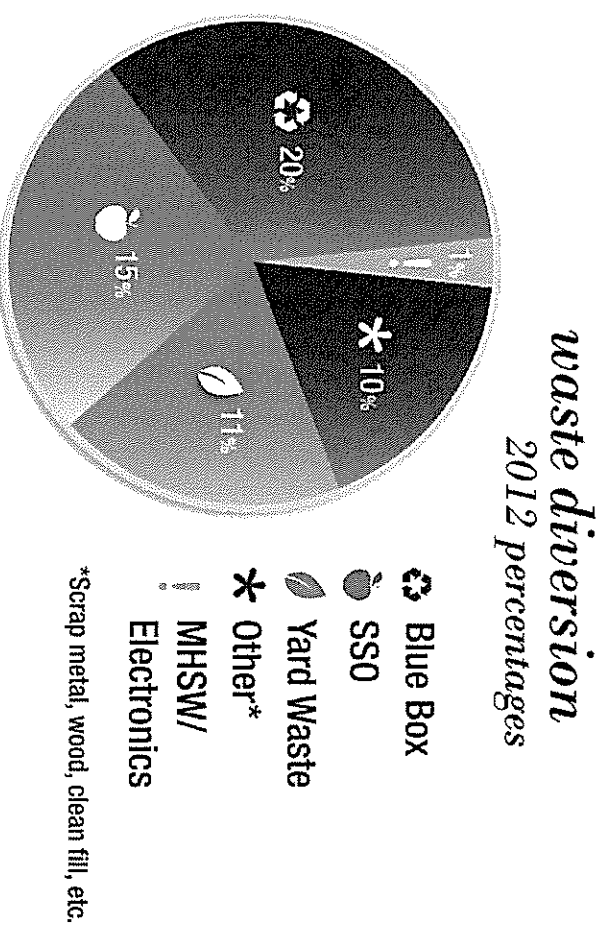
# Three key aspects of the SM4RT Living Solid Waste Master Plan

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



# Where we are

- ❑ Leaders in Ontario (2012)
  - ❑ 57% WDO diversion (unverified)
  - ❑ 82% diversion from landfill
- ❑ Council endorsed 4Rs hierarchy
- ❑ Inclusive blue box and green bin programs with high participation



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

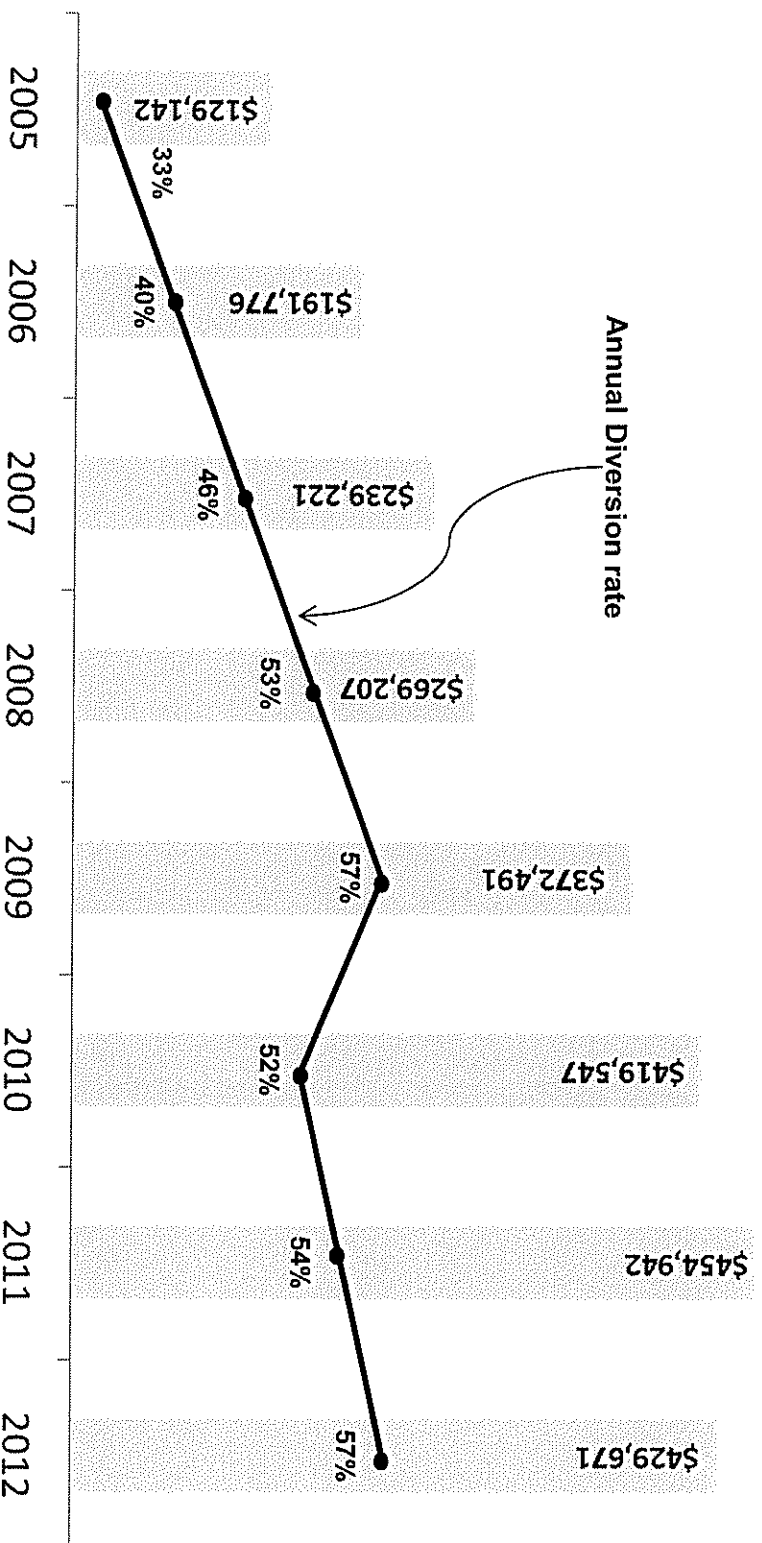
# Where we want to go

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



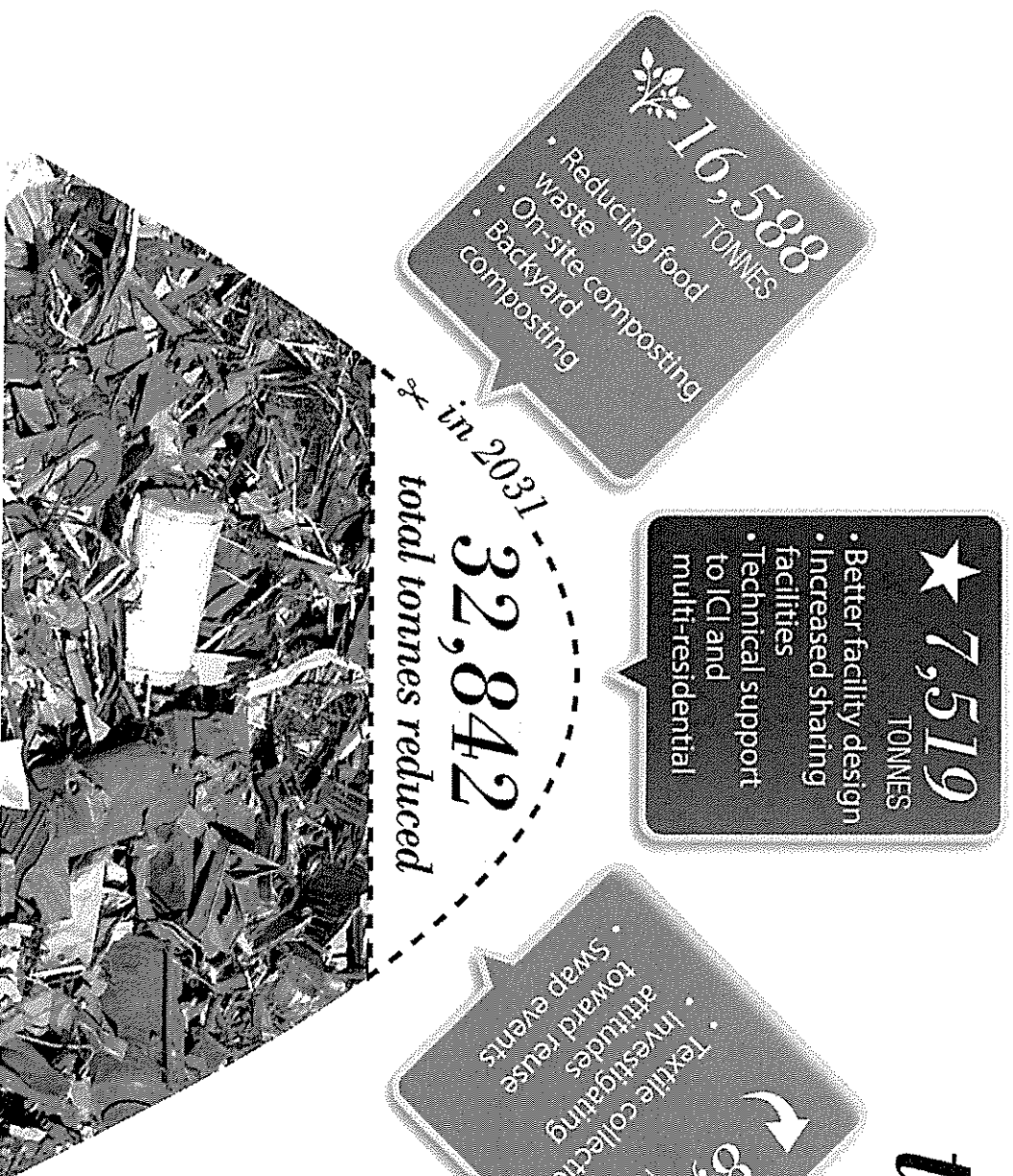
*Measures of success in waste management at a tipping point - new Waste Reduction Act pending*

# 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

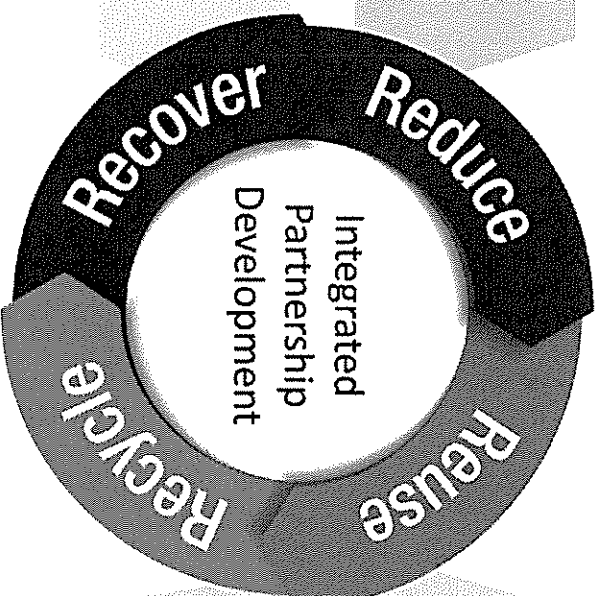


*reductions by tonne:*

-  Organics
-  Other
-  Waste Reuse
-  Total Waste Managed

# *Priority initiatives to drive long-term performance*

- Reducing Food Waste
- On-Site and Backyard Composting
- Investigating Green Procurement Opportunities
- Planning for Future Residual Processing Facility Capacity
- Policy Development for EFW
- Planning for EFW Expansion
- Exploring Alternative Financing



- Textile Collection
- Swap Events
- Investigating attitudes around reuse
- Tool Sharing
- Advocating for Change
- Planning for Growth
- Multi Residential Data Collection Program Development
- External Funding for Blue Box
- Planning for New Organics Processing Capacity
- Long term CEC and Depot Strategy

*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

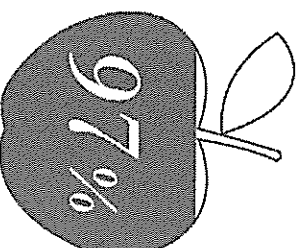


vs 7.2 million tonnes



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**

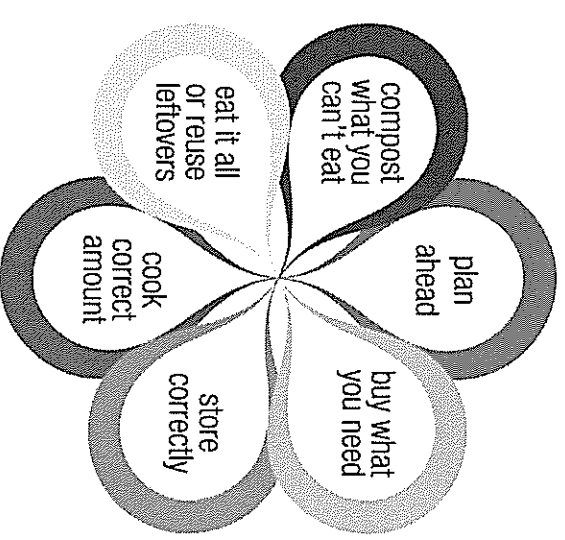
*Wasted food means wasted money  
for businesses and residences.*

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



# How We Are Going to Get There

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



*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

- ❑ Strong desire for reduced packaging and products that can be easily recycled expressed by residents during SM4RT Living Solid Waste Master Plan public consultation
- ❑ Proposed Waste Reduction Act (Bill 91) places emphasis on extended producer responsibility for the blue box and other designated wastes
- ❑ 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



- 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



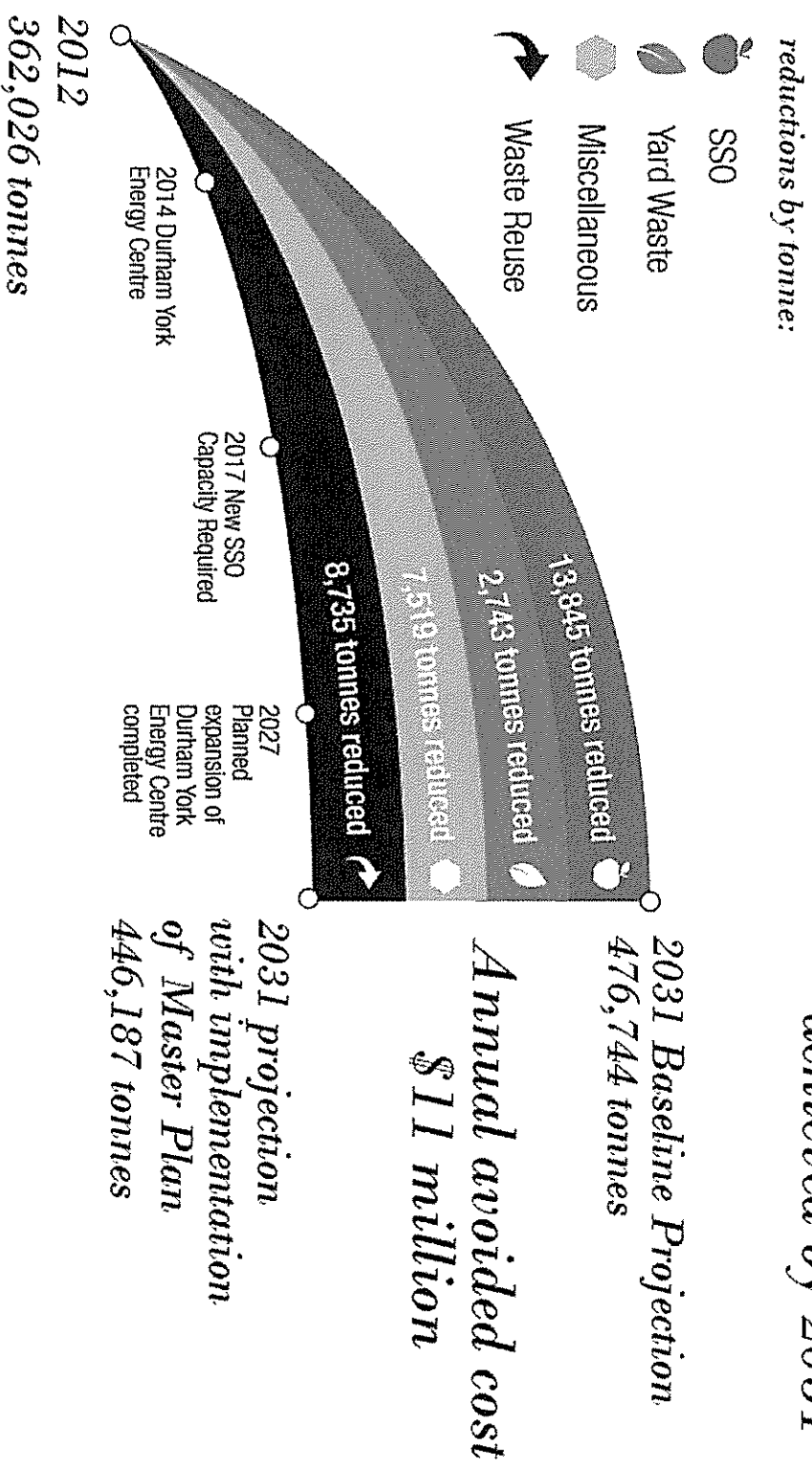
- Food waste campaign ads on collection vehicles
- Investigating adoption of waste management development standards
- Curbside 'swap' events and data collection
- Increase use and production of community gardens
- Zero waste in school programs
- Textile/electronics collection in apartment buildings



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

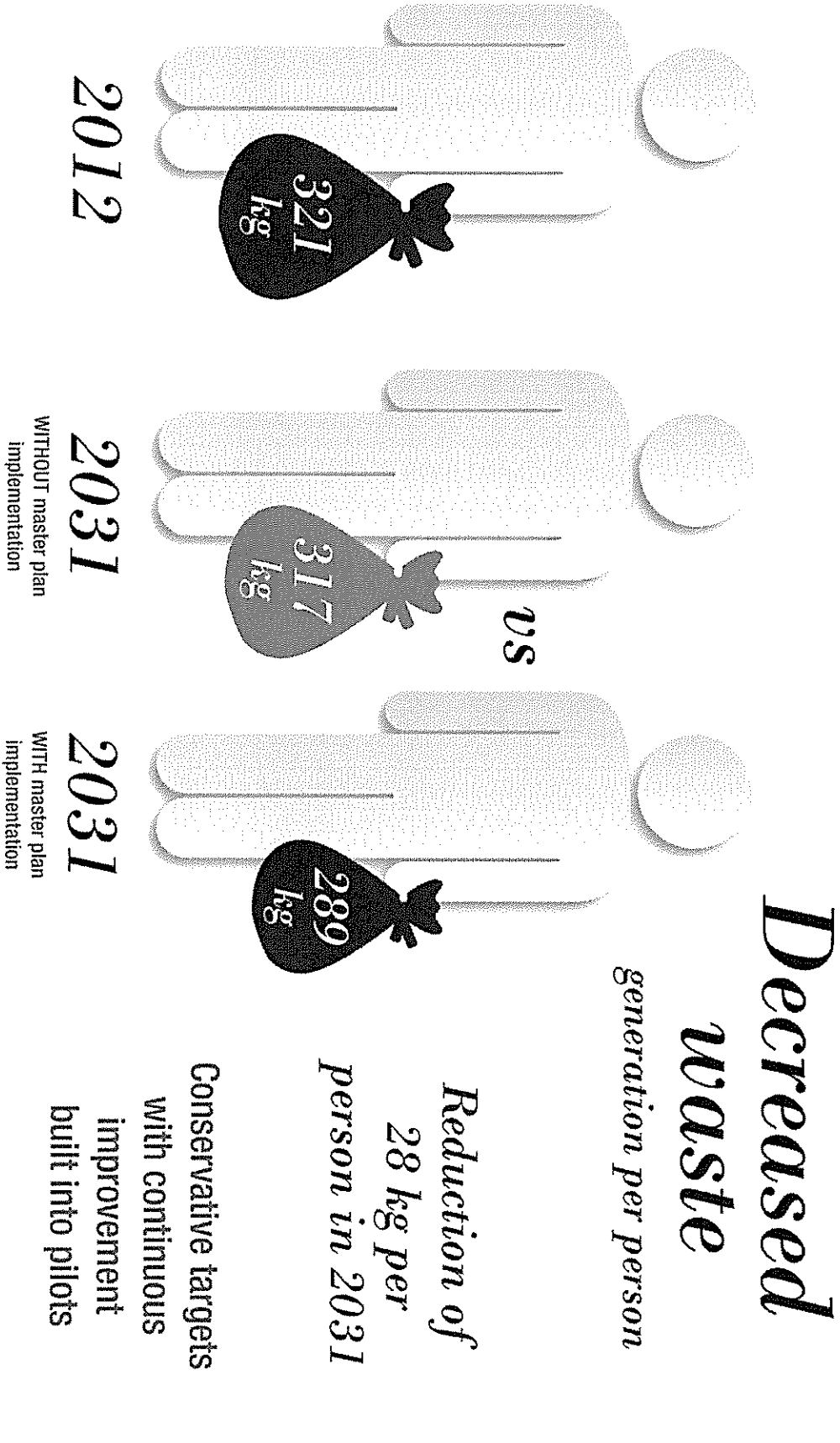
# Annual reduction

*Projected overall impact of first five years of implementation achieved by 2031*

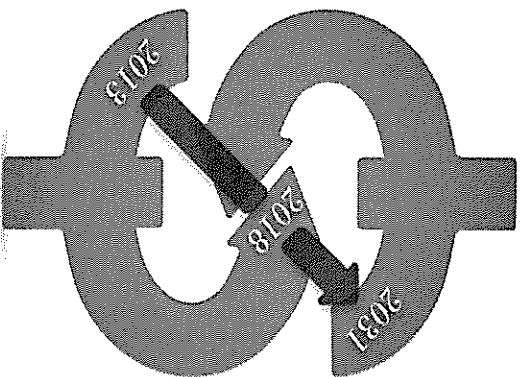


Opportunity to recalibrate Master Plan based on results realized

# 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*

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

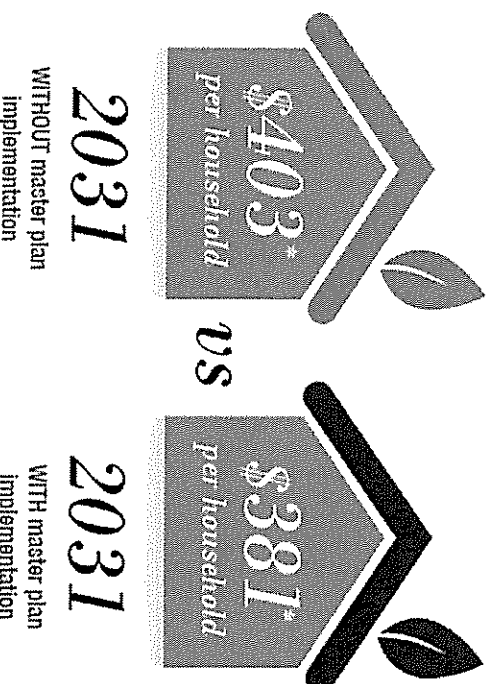
***Master Plan implementation has no impact on 2014 Budget Outlook as approved through 2013 Budget process***

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



*Avoided cost  
per household*

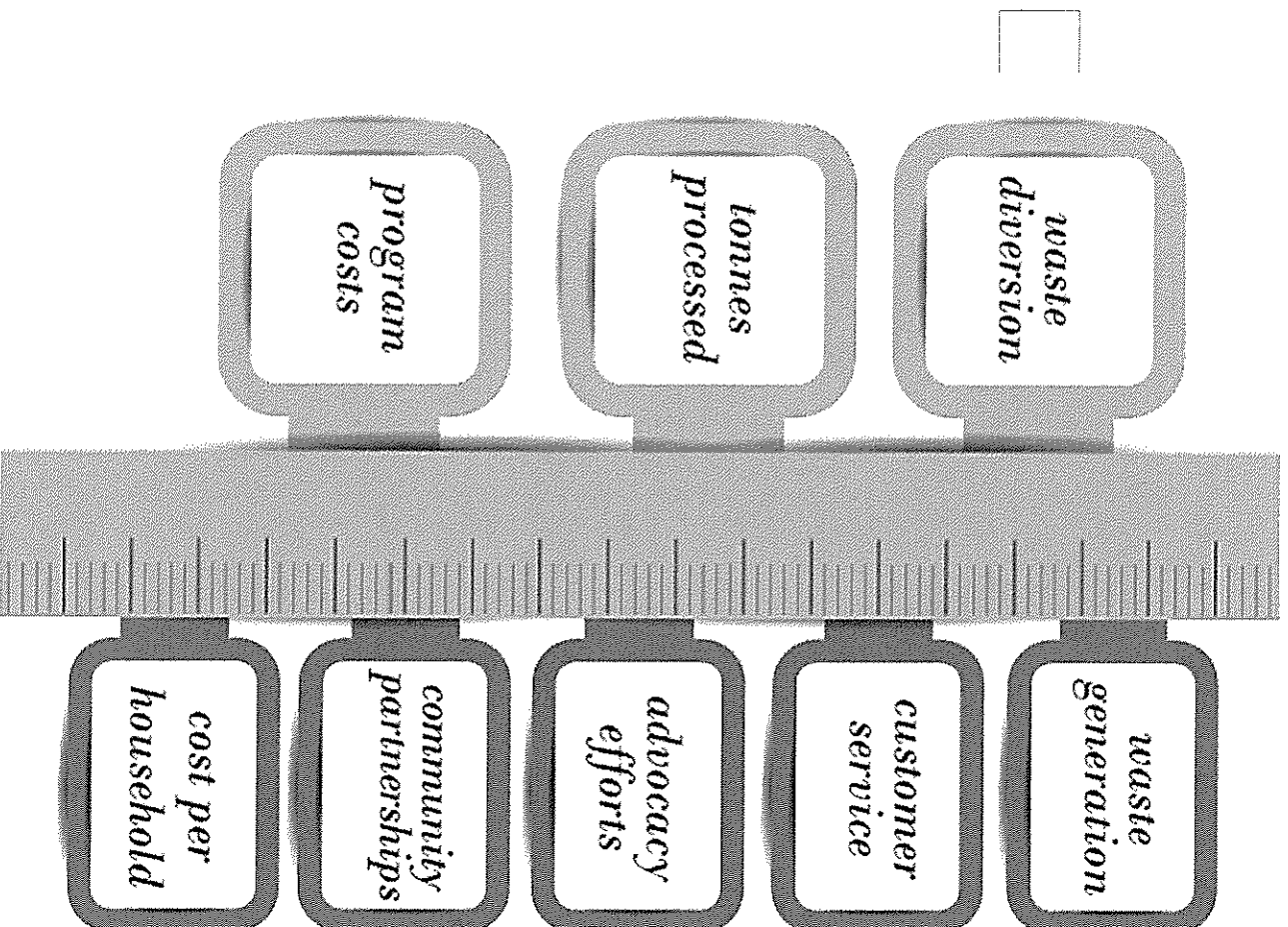
*Estimated avoided costs  
of approximately \$22  
per household in 2031*



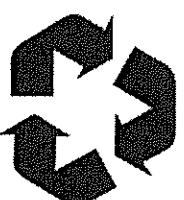
Decrease in waste generation  
by approximately 9% and an  
increase of just over 1%  
in diversion out to 2031

\* Based on systems costs as of July 2013

*Monitoring actual achievements along the way*



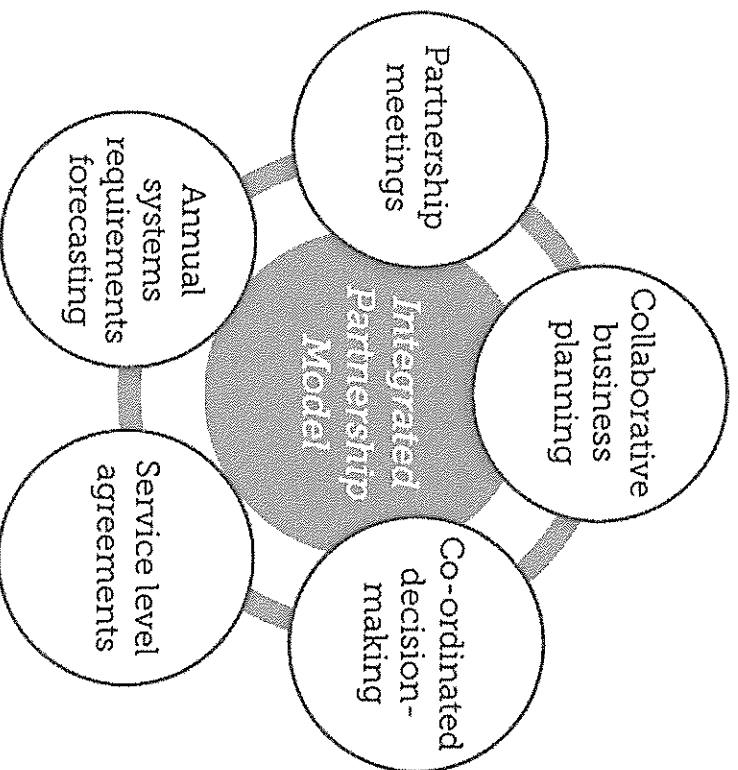
# *Setting new measures of success*



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

# Next steps

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