York Region

Corporate Services
Regional Clerk's Office

June 29, 2018

RECEIVED
JUL - 5 2018
CITY OF MARKHAM
CLERKS DEPT.

Ms. Kimberley Kitteringham
City Clerk
City of Markham
101 Town Centre Boulevard
Markham, ON L3R 9W3

Dear Ms. Kitteringham:

Re: 2017 Annual Update on SM4RT Living Integrated Waste Management Plan Implementation

Regional Council, at its meeting held on June 28, 2018, adopted the following recommendation of Committee of the Whole regarding "2017 Annual Update on SM4RT Living Integrated Waste Management Plan Implementation":

1. The Regional Clerk circulate this report to the local municipalities and the Ministry of the Environment and Climate Change.

A copy of Clause 10 of Committee of the Whole Report No. 10 is enclosed for your information.

Please contact Laura McDowell, Director, Environmental Promotion and Protection at 1-877-464-9675 ext. 75077 if you have any questions with respect to this matter.

Sincerely,

Christopher Raynor
Regional Clerk

/C. Clark
Attachments

Clause 10 in Report No. 10 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on June 28, 2018.

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2017 Annual Update on SM4RT Living Integrated Waste Management Plan Implementation

1. Receipt of the presentation by Laura McDowell, Director, Environmental Promotion and Protection and Lindsay Milne, Manager, Sustainable Waste Management, Environmental Services.

2. Adoption of the following recommendation contained in the report dated May 25, 2018 from the Commissioner of Environmental Services:

    1. The Regional Clerk circulate this report to the local municipalities and the Ministry of the Environment and Climate Change.

Report dated May 25, 2018 from the Commissioner of Environmental Services now follows:

1. Recommendation

It is recommended that:

1. The Regional Clerk circulate this report to the local municipalities and the Ministry of the Environment and Climate Change.

2. Purpose

This report provides an update on the fourth year of implementation of the SM4RT Living Integrated Waste Management Plan (SM4RT Living Plan) including a summary of achievements and learnings in 2017.

3. Background

SM4RT Living Plan helps guide waste management services with a focus on waste reduction and reuse

The SM4RT Living Integrated Waste Management Plan sets the direction for waste policy and programming in the Region to 2031. The Region and its local municipal partners collaborated to develop and finalize the plan which was endorsed by Regional Council in 2013. The name SM4RT Living Plan recognizes that the Plan addresses the 4Rs (Reduce, Reuse, Recycle and Recover) hierarchy endorsed by Regional Council, with special focus on waste reduction and reuse. The Plan's implementation is supported by strong collaboration between the Region, local municipalities and community partners.

SM4RT Living Plan implements final eight of 32 initiatives in 2017

The SM4RT Living Plan includes 32 initiatives within the first five years. Figure 1 shows the implementation schedule for those initiatives.

Figure 1
Implementation progress for 32 Initiatives under the SM4RT Living Plan

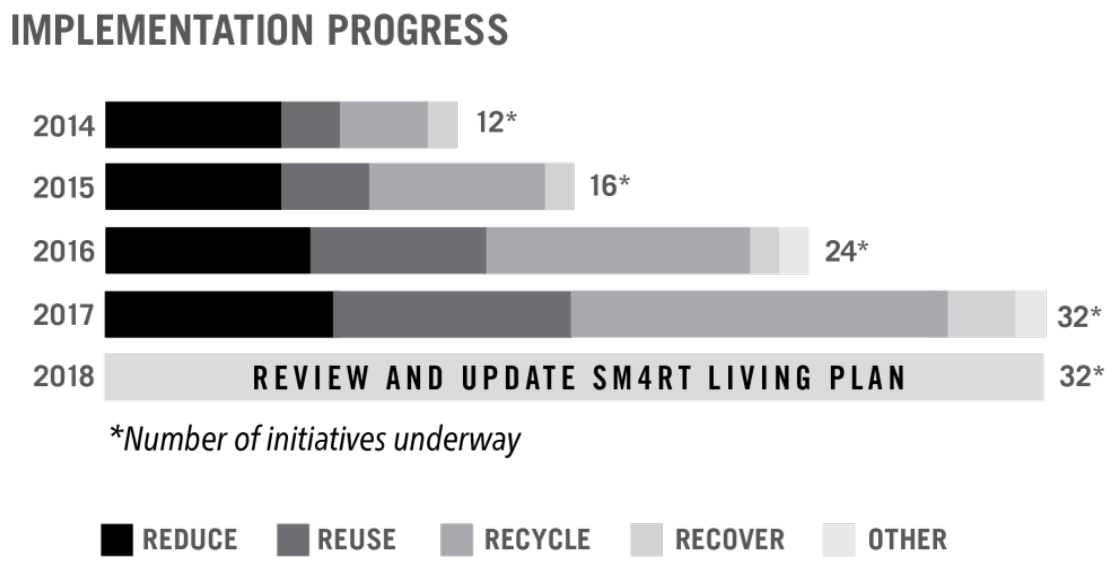


Table 1 summarizes the work completed for each of the eight initiatives launched in 2017.

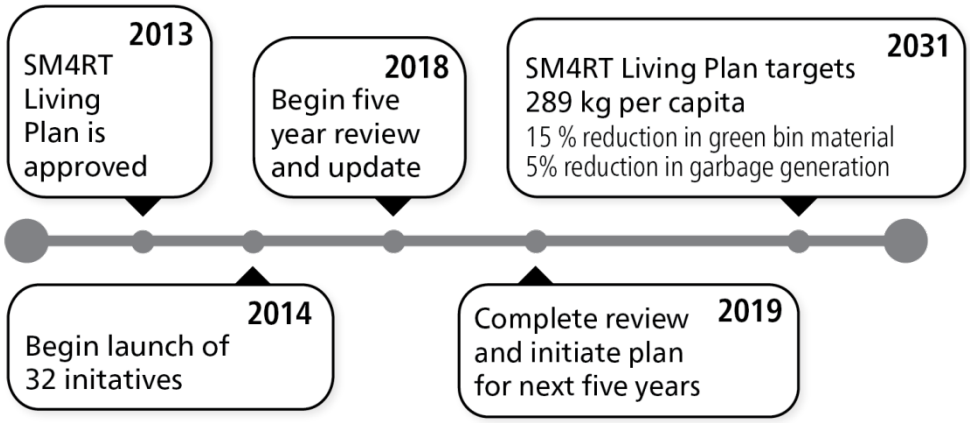
Table 1
2017 SM4RT Living Initiatives

	SM4RT Living Initiative	Work completed
Reduce	Explore approaches to reducing waste at York Region facilities	Revamped waste signage in York facilities to incorporate waste reduction messaging and improve diversion. Three buildings identified for launch of green bin program. Initiate roll out in Q3 2018.
Reuse	Promote online swapping platform to increase reuse	Employed Request for Information process to identify potential on-line swapping platforms for outreach/pilots; collaborated with York Regional Police on approaches to promote safe online selling/swapping; exploring pilot for use as an online platform to track participation in Curbside Giveaway events in 2018.
	Reuse events with community partners	Piloted two Repair cafés in partnership with NewMakeIt in 2017; increased awareness of Repair café concept and identified target audiences (seniors, women), attracted new partners, built volunteer base and refined logistics. Expanding in 2018 to five events.
	Assess feasibility of lending library in York Region	Researched successful lending library models in other communities; conducted market research through surveys at Repair cafés and focus groups; identified NewMakeIt as a partner to support development and operation of lending library to launch in mid-2019.
Recycle	Assess feasibility of model multi-residential bylaw	Scan of best practices used in other municipalities showed development standards are preferred approach. Vaughan, Markham and Richmond Hill are leading work on multi-residential development standards in their communities.
	Diversion pilots in multi-residential buildings	Electronics (13 sites), textiles (9 sites), and battery (16 sites) diversion programs launched in Aurora multi-residential buildings. 3,000 kg diverted from the garbage stream in first six months of the pilot.
	Establish performance indicators for Depots/CECs	Metrics established to track impacts of site upgrades at depots and CECs on customer satisfaction, site usage, materials collected, revenue generated; tools included surveys, scale data and paid transactions.
Recover	Assess long-term capacity needs for residual waste	Amended EFW and landfill contracts to secure additional capacity for growth. Outcomes reported to Council in November 2017.

The SM4RT Living Plan includes a review and update scheduled to occur every five years

The first five year review and update of the Plan is now underway (Figure 2). Staff are continuing to work on implementing and expanding initiatives rolled out during the first four years. Regular updates foster continuous improvement, ensure progress towards the Plan's long-term targets, as well as identify short term priorities for the next five years.

Figure 2
SM4RT Living Plan Timeline



Balanced Scorecard reports on impacts of SM4RT Living Plan and lessons learned for next phase

The Balanced Scorecard (Attachment 1) reports on the status of all 32 initiatives and shares impact metrics from the past four years. The scorecard also celebrates the efforts of our local municipal and community partners and lessons learned that have informed the scope of the Plan review and update.

4. Analysis and Implications

York Region's leadership is encouraging others to adopt reduction focus for waste policy and planning

York Region is one of the first municipalities in Canada to commit to targets on waste reduction – recognizing an important shift in thinking needed to improve sustainability of the waste system.

A focus on reducing the per capita waste generation rate allows us to stretch current processing capacity to accommodate growth without costly infrastructure investments. Other municipalities such as the City of Toronto are now adopting long term waste management plans that include recommendations for waste reduction and tracking of waste generation rate. The Province's Food and Organic Waste Framework is a key policy recognizing food waste reduction as key to addressing climate change impacts of the waste sector.

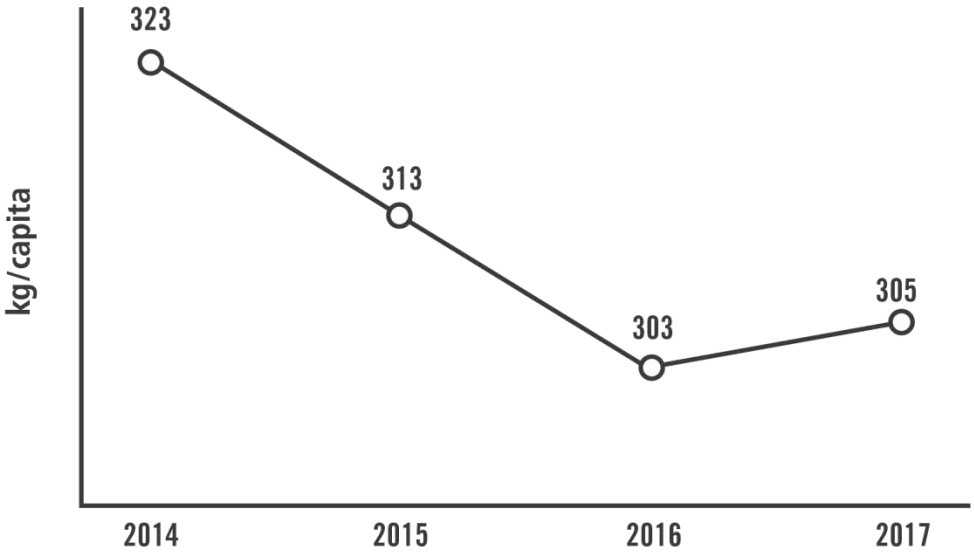
Waste generation rate metric more accurately tracks impact of waste reduction

A waste generation rate metric was introduced as part of the SM4RT Living Plan to help track progress towards waste reduction targets. It is calculated by taking the total tonnes of municipally managed waste divided by the total Regional population. SM4RT Living initiatives focus on reducing rather than diverting, yielding greater overall environmental benefits and avoiding future costs.

Five per cent decline in waste generation rate after four years is encouraging

As seen in Figure 3, the waste generation rate has fluctuated over the past four years with an overall trend indicating a 5.3 per cent reduction from 323 kg per capita to 305 kg per capita since 2014. Tracking waste generation rates is a long term undertaking that will help measure success of the SM4RT Living Plan and its impact on waste reduction.

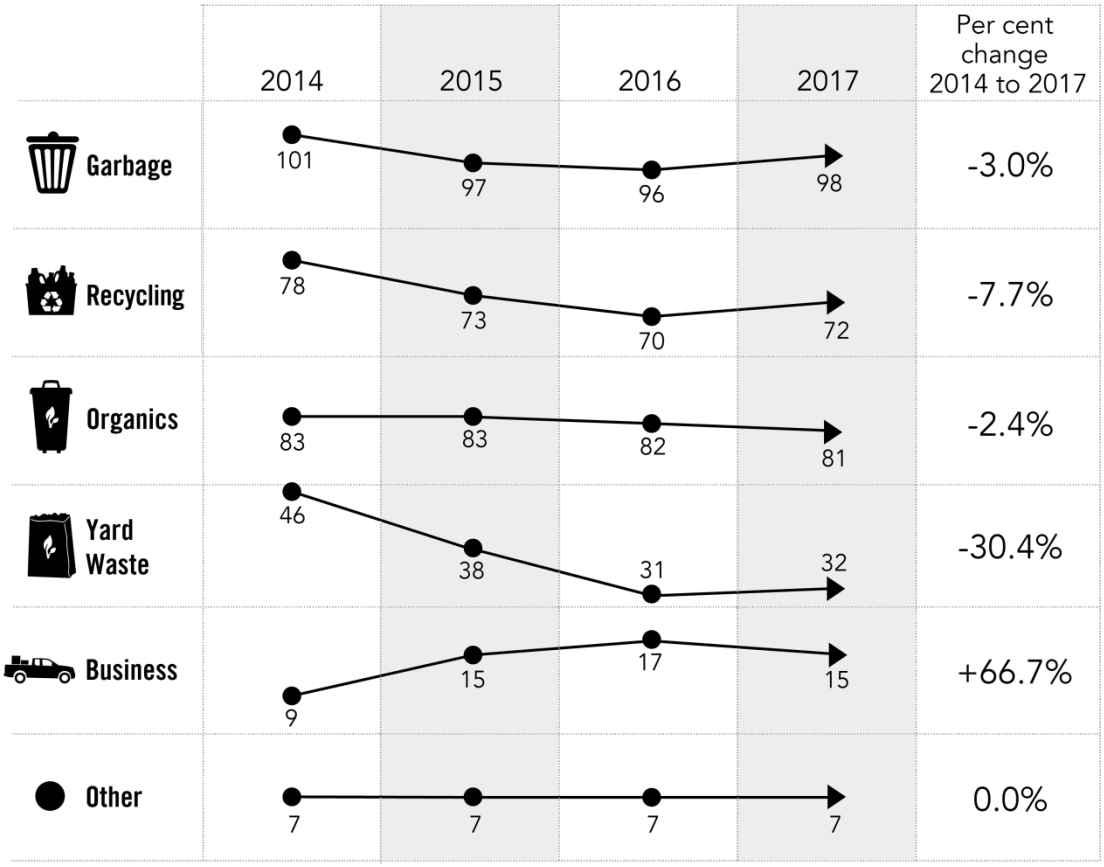
Figure 3
Regional Total Waste Generation Rate 2014-2017



Greatest variability in waste generation seen in yard waste and business waste at depots

Figure 4 illustrates Regional waste generation rate by stream, from 2014 to 2017. The biggest change is at 66.7 per cent increase in business waste brought to York Region facilities, driven by growing usage of the Community Environmental Centres and Georgina Transfer Station. It is important to note that while the percentage increase in business waste is quite high, this stream still accounts for a very small amount of overall tonnage managed by the system. The yard waste stream has seen a 30 per cent decline since 2014. A small decrease has been achieved in both the organics and garbage streams. Blue Box has also decreased overall, with a small increase in 2017.

Figure 4
Waste Generation Trends 2014 to 2017 (kg/capita)



Tracking waste generation over four years has provided insight into influences such as extreme weather event

Table 2 reviews some of the factors that may influence waste generation in York Region.

Table 2
Factors Influencing Regional Waste Generation

Factor	Impacts on Waste Generation
Precipitation	There is a correlation between precipitation and blue box/garbage generation. Moisture makes paper and cardboard heavier, leading to higher tonnages. Similarly, water and snow in open garbage containers add weight. This pattern was observed in 2017 where there was a slight increase in waste generation rates for Blue Box and Garbage along with higher precipitation rates when compared to the drier 2016.
Extreme weather events	The ice storm at the end of 2013 created a spike in yard waste in 2014 and 2015 from cleanup efforts. A drought in 2016 contributed to a decline in yard waste in the Region.
Housing type	Higher density urban areas such as Markham and Vaughan appear to generate less waste, a consistent trend seen over several years. This may be due to differing purchasing habits between those living in multi-residential versus single family dwellings.
Light-weighting of Blue Box materials	Composition of materials in the blue box is changing with shifts in packaging and consumer trends. Year over year trends suggest an increase in light-weight plastic materials and decrease in heavier materials like paper and glass.

60 per cent of initiatives will be expanded to support reaching long term targets

The first four years of implementation included piloting new programs, researching best practices and adapting programs to the York Region context. A full list of the status of all 32 initiatives can be found in Attachment 1. Sixty per cent of initiatives piloted are being expanded into full programs or on-going actions. Ten per cent are still in the pilot stage and the remainder were one off actions such as feasibility studies or pilot programs that were not recommended for expansion, such as the countertop composting pilot where the technology was not efficient. The following sections outline some of the highlights and early lessons learned that will inform the upcoming SM4RT Living Five Year Plan review and update process.

Collaborative development and delivery of programs are key to reaching target audiences with reduction messaging

Since 2015, the Good Food program has engaged over 17,500 residents with messaging, tools and workshops encouraging behaviour change to reduce food waste. The program is designed to prevent food waste and promote health benefits through meal planning, smart shopping and food storage. Environmental Services partnered with Community and Health Services to develop and deliver this messaging. This unique collaboration extends the program's reach and increase credibility by incorporating health subject matter experts.

Efforts to focus messaging and collaboration have revitalized backyard composting in the Region. Participation is promoted to those interested in gardening by highlighting the value of making and using compost to grow healthy plants. Integration with existing gardening-themed community events such as Richmond Hill's Healthy Yards program has helped with the success. Sales have expanded to 'piggy-back' on events that attract gardeners or environmentally-minded families such as Compost Giveaway Days and Forest Festivals. This has resulted in the distribution of 774 backyard composters and an estimated 77 tonnes of organic waste diverted to backyard composters.

Province's Food and Organic Waste Framework will support momentum for food waste reduction across Ontario

The Ontario Food Collaborative (the Collaborative) was launched in 2014 as a way to engage more municipalities and other stakeholders in food waste reduction and healthy eating promotion. Members include municipal waste and health staff, industry and non-profit organizations with food-related mandates. The Collaborative is developing communication tools and an audit guide to help municipalities undertake food waste reduction programming that is consistently messaged and measured across the Province. Collaborative members have also shared expertise on food waste reduction from waste and health perspectives as part of a stakeholder working group supporting the Province's Food and Organic Waste Framework development. The Framework focused on education to support food waste reduction and reinforced the importance of leveraging partners.

The Collaborative will continue to work with municipalities to tackle the long-term process of behaviour change to reduce food waste with a goal to decrease food waste in the green bin and garbage collection. The Collaborative continues to engage with the Ministry to support provincial efforts in driving food waste reduction across Ontario.

Reuse initiatives leverage community partners to support programs tailored to fit community needs

Initiatives recommended in the SM4RT Living plan must be tailored to meet the unique conditions in local municipalities across the Region. For instance, textile collection approaches differ among municipalities but the common goal of increasing reuse is still achieved.

- City of Markham has a large-scale program with charitable partners. Over 100 bins are in place at fire halls, community facilities and multi-residential buildings. The City also introduced a ban at the curb for textiles. The program has collected 3,181 tonnes since it launched in 2016.

- Towns of Aurora and Whitchurch-Stouffville and King Township offer smaller scale programs with drop-off locations at select town facilities and all have piloted door-to-door collection. These programs have collected 142 tonnes of material since the first pilot was launched in 2016, expanding from four bins in Aurora during the pilot in 2016 to a total of 32 bins across these three communities as of May 2018.

SM4RT Living recycling initiatives target improvements to service levels and performance in multi-residential sector

Recycling efforts target improving service levels and performance in multi-residential buildings. Since the roll-out of the SM4RT Living Plan in 2014 there has been a 30 per cent growth in residents living in multi-residential buildings compared to a five per cent increase in single family homes. Multi-residential buildings require more resources for ongoing engagement then single family homes. The Region supports smaller communities with pilots modeled on programs provided in larger communities such as the City of Markham. The Regional Official Plan requires new multi-residential developments to provide convenient three-stream diversion programs for residents. The Cities of Markham and Vaughan have collaborated with their planning departments to ensure new buildings have waste systems set up to accommodate three-stream diversion. Figure 5 includes metrics on multi-residential engagement over the past four years.

Figure 5
Multi-residential metrics for 2014-2017

Green Bin servicing to multi-residential is priority issue in Province's Food and Organic Waste Framework

The provincial Food and Organic Waste Framework includes targets for organic waste reduction and diversion in multi-residential buildings by 2025. This will trigger future plans to include municipal collection of green bin materials in multi-residential buildings. The Region will work closely with local municipal partners to encourage green bin collection to meet targets identified in the Framework. While the Framework does not require municipalities to provide service, staff anticipate buildings may seek support for implementation of the green bin program whether municipally serviced or not. The SM4RT Living Plan review and update will evaluate current progress on multi-residential programs and identify priorities and resourcing strategy to continue progress.

Region selected anaerobic digestion as preferred technology to process organics and recover energy

In 2017, a feasibility study explored potential technologies for processing source separated organics within York Region's boundaries when current contracts expire as early as 2027. Anaerobic digestion provided the overall highest value because it requires lower resource consumption and offers an opportunity to recover energy as biogas. Staff are exploring options for local solutions to process organics and recover energy including the potential for co-processing of organics and biosolids. An implementation plan for an SSO facility using anaerobic digestion technology is currently being developed.

Region and local municipal partners have seen success in advocacy efforts on circular economy and waste reduction

The SM4RT Living Plan aligns well with the *Waste-Free Ontario Act (2016)* and its focus on waste reduction and producer accountability. The SM4RT Living Plan's advocacy strategy focused on addressing problematic packaging and incenting better packaging design. The Region and local municipal partners have collaborated to submit responses to the Ministry of the Environment and Climate Change and other stakeholders on a number of key issues over the past four years. There have been numerous opportunities to comment on provincial waste legislation including 15 responses to waste-related Environmental Bill of Rights notices and attendance at over 45 advocacy meetings. Table 3 summarizes these advocacy efforts.

Table 3
Summary of Waste Management Advocacy

Issue	Advocacy position
Blue Box transition	Producers should be held accountable for costs associated with managing end-of-life for paper products and packaging. Improve environmental outcomes while improving service levels to residents and expanding and harmonizing Blue Box materials. Fair transparent process needed to ensure all stakeholder views are represented and considered in decision-making.
Food and organic waste	Focus on reducing avoidable food waste through policies and action, streamlining approvals process for new facilities; careful planning for capacity and enforcement logistics before implementation of a ban on organics from landfill disposal.
Used tire transition	Ensure seamless transition with year-end inventories managed and final payments made to municipalities; effective standards and targets with sufficient promotion and education and maintaining accessibility across the Province.

5. Financial Implications

Market restrictions and lower commodity market prices are expected to reduce 2018 blue box revenue and increase processing costs

York Region's 2018 solid waste operating budget will be impacted by markets restrictions on imported recyclables which continue to impose increasingly stringent contamination limits. As reported in a memo to committee in May 2018, problematic materials such as black plastic (i.e. take out food trays) and coffee cups and their lids have no stable end market and are difficult to sort resulting in contamination of the paper stream.

The Region and local municipalities will be collaborating on a strategy to address these challenges across the whole system. As reported in May 2018, the Region is planning technology upgrades at the Materials Recovery Facility to improve quality and marketability of newsprint. Staff are optimistic new sorting equipment will be installed by the end of 2018. Re-processing options with Canada Fibers in Toronto as a short-term solution has been implemented. A joint communication strategy with consistent messaging to educate residents on the issue associated with blue box contamination will be developed by the Region and local municipalities later in 2018.

Financial impact of changes in newsprint markets and revenue being managed throughout 2018

York Region's 2018 solid waste operating budget assumes an average price for marketed recyclables of $90 per tonne. In the first quarter of 2018, York Region marketed 15,563 tonnes of recyclables at an overall average price of approximately $70.44 per tonne, including 8,655 tonnes of newsprint at an average price of $0.84 per tonne. If the price of other recyclables remains constant and the Region pays $95 per tonne to manage all newsprint as residue for the remainder of the year, the estimated year-end average price for all marketed recyclables would be $29 per tonne, resulting in a 2018 estimated budget shortfall of $4,398,100. York Region's 2018 solid waste operating budget includes a planned contribution to the reserve fund of $2.26 million, which could be used to offset increased costs for processing or disposing of newsprint. A potential additional $2.14 million withdrawal from a reserve fund may be required to cover the operating budget shortfall under the market failure scenario as reported in May 2018 memo to Council.

Accounting study informs decision-making and facilitates tracking of budget impacts from Waste-Free Ontario Act

In 2018, the Full Cost Accounting Study was completed. The Region worked collaboratively with all nine local municipal partners to prepare a full picture of all costs and revenues in the Region's integrated waste management system. The study was based on an analysis of 2016 program costs. These costs not only included expenses paid to contractors for collection or processing services, but also included management costs associated with operating these services. For example, the blue box program includes collection contract fees, and internal costs to manage the program including customer service, promotion and education as well as support services like legal and IT. These full costs are commonly known as direct and indirect program costs.

Residual waste, blue box and green bin streams represent 87 per cent of the total system cost

Table 4 shows the total operating costs by stream for the local and regional components of the system. Managing the residual waste stream has the highest total cost, followed by green bin and blue box.

Table 4
2016 Total Local and Regional Waste Management Costs by Stream

Waste Stream	Regional cost ($ millions)	Local municipal ($ millions)	Total cost ($ millions)
Residual Waste	18.0	10.3	28.3
Green Bin	16.7	9.2	25.9
Blue Box	13.9	10.5	24.4
Yard Waste	2.8	4.5	7.3
Household Hazardous Waste	2.0	0	2.0
Electronic waste	0.7	0	0.7
Tires	0.3	0	0.3
Scrap metal	0.4	0.1	0.5
Other (e.g. drywall, cooking oil, polystyrene)	0.9	0.2	1.1
Total	**55.7**	**34.8**	**90.5**

Approximately 62 per cent of total costs are at the Regional level, driven by processing costs and provision of depot programs. Residual waste, Green Bin and Blue Box account for 87 per cent of the total waste management system cost. The SM4RT Living Plan's focus on reducing residual waste and green bin waste provide opportunity to reduce future costs as the majority of the system costs are reflected in these streams.

Table 5 includes key metrics developed from the study, using 2016 as a baseline. York Region's collaborative service delivery model provides good value for residents with an operating cost of approximately $249 per tonne in 2016. The average York Region resident pays $78 per year (or $254 per household per year) for waste services including collection, processing, depot operations and administration services. By comparison, the average household spends almost 4 times as much on natural gas and seven times that on energy.

Table 5
2016 Key metrics from Full Cost Accounting Study

Key Metric	2016 data
Cost per tonne	$249
Cost per tonne – net of revenue*	$184
Total System cost per capita	$78

*primarily Blue Box funding

The Region and local municipalities will use this information as baseline data to track changes that may result from implementing the *Waste-Free Ontario Act, 2016*. Results will also help to inform decision-making about transition from municipalities to stewards. Region staff are working with local municipalities to develop a process for updating these cost metrics annually, as part of the data call process.

6. Local Municipal Impact

Local municipalities collaboratively implement SM4RT Living pilots with limited resources

Local municipalities have collaborated with the Region to pilot and expand SM4RT Living initiatives, sharing lessons learned to continuously improve programs and leverage resources to make the most of limited staff and budget resources. For example, common dates for curbside giveaway day events in 2018 allows more cross promotion and tracking. Other local initiatives such as compost giveaway days and environment days provide opportunities to share Good Food messaging, offer composter sales and textile or electronic waste collection for residents with limited additional investment.

The local municipalities have also provided input into scope of work for the SM4RT Living Plan five year review and update and will be engaged in sharing future Plan implementation.

7. Conclusion

Review and update will set priorities for next four years

The five year review and update of the SM4RT Living Plan will include:

- Review of current SM4RT Living initiatives
- Legislation review and scan including strategies to adapt to future regulatory changes
- Assessing emerging technologies and completing a gap analysis including best practice review of similar municipalities
- Setting five year targets and updating long term projections
- Preparing and prioritizing a five year work plan
- Reviewing program communications
- Data gathering, monitoring performance measures and reporting recommendations

The review will engage Regional and local municipal staff and stakeholders to gather lessons learned from the first four years of implementation. Public engagement will occur throughout, in the form of surveys, focus groups and stakeholder sessions. Regional staff and project consultants will engage local municipalities through existing channels such as the Strategic Waste Policy Committee, as well as dedicated meetings with local municipal staff and their respective Regional Councillors planned for Q1 2019.

GHD Limited, was awarded the contract following a formal Request for Pre-Qualifications in December 2017 and Request For Proposals in February 2018. The review was launched in April 2018 and the final report and recommendations are anticipated in 2019.

For more information on this report, please contact Laura McDowell, Director, Environmental Promotion and Protection at 1-877-464-9675 ext.75077.

The Senior Management Group has reviewed this report.

May 25, 2018

Attachment

8462067

Accessible formats or communication supports are available upon request

Attachment 1

SM4RT LIVING PLAN

BALANCED SCORECARD

2014 TO 2017 HIGHLIGHTS

WASTE MANAGEMENT

york.ca/sm4rtliving

York Region

York Region and its local municipal partners developed the SM4RT Living Plan, a road map that identifies more than 60 initiatives to improve the sustainability of the integrated waste management system over the next 25 to 40 years. These initiatives include data collection, policies and new public programs to reduce and divert waste. Over the past four years, thousands of residents have helped us implement 32 priority initiatives with a focus on the 4R's: **reduce, reuse, recycle and recover.**

WHAT'S INSIDE

This scorecard will share success stories from the past four years while showcasing the key achievements and a 'spotlight' feature of 2017. We are celebrating the efforts brought forward by each local city or town and our key community partners. We would like to thank the residents who were engaged in these waste reduction initiatives and their continued efforts to reduce waste over the next five years of the plan.

Status of 32 Initiatives....04

32 Initiatives....05

Community Engagement....06

Reduce....08

Reuse....10

Recycle....12

Recover....14

SM4RT Living Initiatives by Municipality....16

Waste Management Performance....17

Review and Update....18

Lessons Learned....19

STATUS OF 32 INITIATIVES
✓ Complete 9
Piloting 4
Ongoing 19
✓ COMPLETE
Occured and will not continue
PILOTING
In testing and research stage
ONGOING
Expanded from pilot to program

32 INITIATIVES

	Status
REDUCE	
1. Food Waste Survey and Research	↻
2. Food Waste Audits	↻
3. Evaluate Countertop Composting Technology	✓
4. On-site Community Composting	↻
5. ***2017!*** Explore Approaches to Reducing Waste at York Region Facilities	↻
6. Green Procurement with School Boards and Local Municipal Partners	↻
7. Educational Support for Industrial, Commercial and Institutional Waste Generators	➡
8. Assess feasibility for Green Procurement Working Group	✓
REUSE	
9. Textile Collection	↻
10. Swap Events in Multi-Residential buildings	↻
11. Curbside Giveaway Events	↻
12. ***2017!*** Promote Online Swapping Platforms	↻
13. ***2017!*** Reuse Events with Community Partners	↻
14. Reuse Survey & Baseline Data Gathering	✓
15. ***2017!*** Assess feasibility of Tool Sharing Library in York Region	➡
RECYCLE	
16. Advocacy for Master Plan Components	↻
17. Research Construction and Demolition Diversion Options	➡
18. Model Development Standards	↻
19. ***2017!*** Assess Feasibility of Model Multi-Residential By-Law	↻
20. Assess Technology for Organics Programs in Multi-Residential Buildings	↻
21. ***2017!*** Diversion Pilots in Multi-Residential Buildings	↻
22. Multi-Residential Website and Database	↻
23. Volume Based Billing and Tracking	✓
24. Municipal Industry Program Committee Funding Formula and Calculations	✓
25. Tracking Changes in Material Composition at Materials Recovery Facility	↻
26. Source Separated Organics Feasibility Study	↻
27. Reuse and Recycle Expansion at Community Environmental Centres	➡
28. ***2017!*** Establish Performance Indicators for Depots/Community Environmental Centres	↻
RECOVER	
29. ***2017!*** Assess Long-Term Capacity Needs for Residual Waste	✓
30. Policy development for Energy from Waste	✓
31. Review Triggers for Energy from Waste Expansion	✓
OTHER	
32. Full Cost Accounting Study	✓

✓ Complete ➡ Piloting ↻ Ongoing

COMMUNITY ENGAGEMENT

SOCIAL MEDIA AND WEBSITE

123,936 Bindicator visits

91,268 Bindicator searches

2,133 comments related to waste*

1,631 waste-related posts & tweets*

46,000+ users on waste apps

EVENTS

260+ events*

19 seminars/workshops

263 presentations*

17,000+ people engaged

4,000+ students engaged

*2016/2017 metrics

PARTNERSHIPS

Over 15 new partnerships have been leveraged in the Region since 2014. Some key partnerships are:

YORK REGION FOOD NETWORK

Hosted composter build, 14 food waste workshops and promoted the Good Food program at events throughout the Region.

YORK SCHOOL BOARDS

Delivered the waste education program Trash Blasters to 3,548 students and supported other various waste education programs.

NEWMAKEIT

Developed and delivered Repair Cafés, including two in 2017 and six planned for 2018 throughout the Region.

TORONTO AND REGION CONSERVATION AUTHORITY

Hosted initiatives such as a composter build, workshops and a Repair Café at Kortright Centre for Conservation.

HOUSING YORK INC.

Multi-residential buildings hosted swap events, piloted new recycling initiatives and educated residents on a range of environmental initiatives.

YORK UNIVERSITY

Utilized academic expertise to enhance waste audit process and increased efficiencies for ongoing initiatives.

REDUCE

LET'S
CELEBRATE
2014 to 2017

THE TOWN OF RICHMOND HILL HAS DISTRIBUTED OVER 300 BACKYARD COMPOSTERS SINCE 2014.

ALL RESIDENTS HAVE ACCESS TO COMPOSTER SALES THROUGH LOCAL AND REGIONAL EVENTS IN THE TOWNS OF AURORA, WHITCHURCH-STOUFFVILLE, NEWMARKET AND EAST GWILLIMBURY, THE CITY OF VAUGHAN AND THE TOWNSHIP OF KING.

Waste reduction offers substantial environmental benefits and future cost avoidance for both residents and the municipal waste management system.

The 2031 target includes reduction of green bin material by 15 per cent, yard waste by five per cent and other waste streams by five per cent. Since 2014, eight initiatives focused on reduction have been piloted.

2014 TO 2017 KEY SUCCESSES

* Estimated

2017 SPOTLIGHT: **GOOD FOOD**

The Good Food program emerged from the SM4RT Living Plan's goal to achieve a 15 per cent reduction in food waste found in the green bin by 2031. This award-winning program is designed to prevent food waste by promoting benefits and creating new habits such as meal planning, shopping with a list and proper food storage.

In 2017, new tools were created and an extensive survey was conducted. Seasonal messages featured New Years, Back to School and 12 Days of Holiday Tips. Elementary schools were engaged with Good Food messages through York Region's Trash Blasters program, as well as new partnerships with York Region Nutrition, You're the Chef Cook-off and the Towns of Aurora and Georgina Healthy Kids Community Challenge.

REUSE

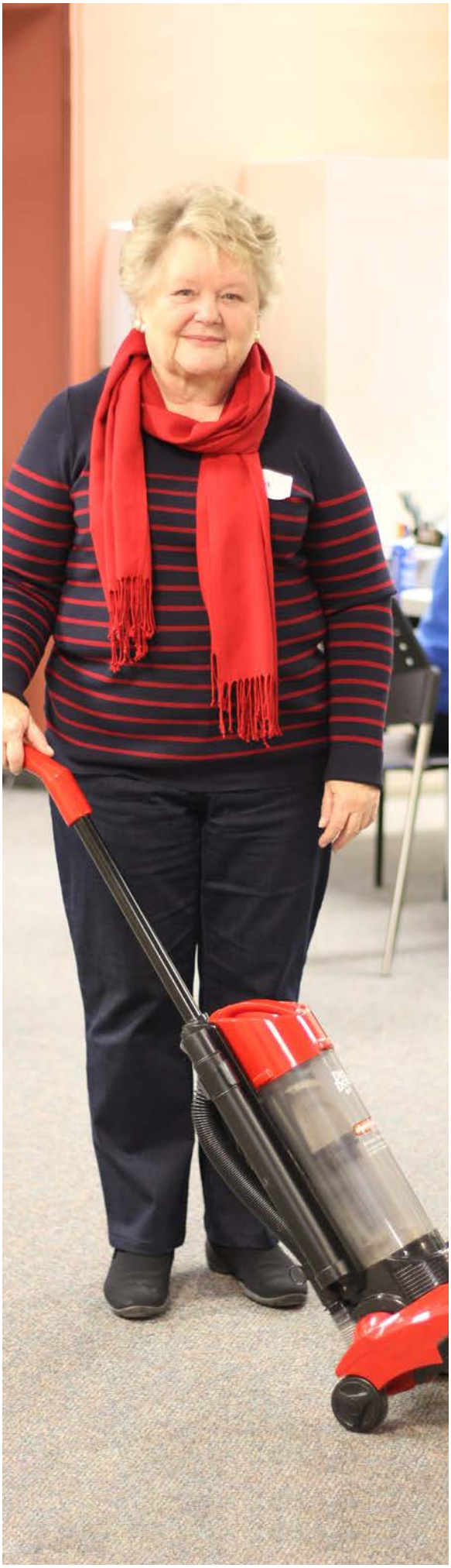
LET'S
CELEBRATE
2014 to 2017

69% OF YORK REGION RESIDENTS HAVE ACCESS TO MUNICIPAL TEXTILE COLLECTION BINS IN THEIR COMMUNITIES. THE CITY OF MARKHAM, TOWN OF AURORA, TOWN OF WHITCHURCH-STOUFFVILLE AND TOWNSHIP OF KING HAVE IMPLEMENTED A TEXTILE PROGRAM. EXPANSION IS PLANNED TO OTHER COMMUNITIES IN 2018.

In the SM4RT Living Plan, reuse is applied as an umbrella term encompassing reuse, repair and re-purpose. The Region recognizes the numerous benefits that come from supporting reuse activities and the reinvention of how goods and services are exchanged. By leveraging technology, we aim to take swapping, renting and sharing of goods and services to a new level.

The goal by 2031 is to lower garbage generation by five per cent through support of reuse initiatives, including the seven that were piloted since 2014.

2014 TO 2017 KEY SUCCESSES



2017 SPOTLIGHT: **REPAIR CAFÉ**

NewMakeIt is a collaborative space enabling residents to start innovative, creative, entrepreneurial and learning endeavors. Residents can utilize co-working space, rent meeting rooms, provide a creative space to access shared equipment and storage as well as serve as a hub for learning opportunities. NewMakeIt has been a natural fit for partnering on promoting the concept of reuse through repair with York Region. Repair Cafés are free events that connect people who need items repaired with volunteer "fixers" who bring life back to belongings like small appliances, garden tools, electronics, and bicycles with the goal of reducing waste and bringing back the "if it's broke fix it" rule. Two Repair Cafés were held at the NewMakeIt space in 2017 and this concept is spreading across the Region with six Repair Cafés planned for 2018 at local libraries and cafés.

"WE BUY SOMETHING, USE IT FOR A SPECIFIC PERIOD OF TIME, THEN CHUCK IT IN THE GARBAGE. WE HAVE TO GET AWAY FROM THAT. LET'S PURCHASE WITH THE INTENT THAT IF IT DOES BREAK, IT'S REPAIRABLE IN THE FUTURE."

Derrol,
NewMakeIt

RECYCLE

LET'S
CELEBRATE
2014 to 2017

THE TOWN OF EAST GWILLIMBURY HOSTS A 'GREEN UP, CLEAN UP' EVENT WHICH AIMS TO COLLECT LITTER FROM PUBLIC SPACES.

THE TOWN OF GEORGINA'S RESIDENTS PARTICIPATE IN A SWAP & SELL.

THE CITY OF VAUGHAN OFFERS FIVE ENVIRONMENTAL DAYS WHERE RESIDENTS CAN PARTAKE IN A MULCH GIVEAWAY, ELECTRONIC RECYCLING, CLOTHING COLLECTION, AND PURCHASE BACKYARD COMPOSTERS.

The goal supporting recycling in the SM4RT Living Plan was to increase material diverted from landfill by four per cent, which created the development of 13 pilot programs. These include staying engaged in extended producer responsibility and understanding the multi-residential community.

2014 TO 2017 KEY SUCCESSES

* Environmental Bill of Rights

** Based on Multi-Residential Municipal Collection

ADVOCACY

The province of Ontario passed the *Waste-Free Ontario Act* in 2016, to introduce more producer responsibility into the waste system. York Region and its local municipal partners actively participate in consultations with the Province and other stakeholders, advocating for policies and regulations that deal with problematic materials, encourage sustainable packaging and preserve the integrity of the waste management system.

Increasingly complex packaging sold in the marketplace and tighter restrictions on contamination from end markets is increasing costs for managing the blue box. These problematic materials are difficult to sort and market resulting in contamination of the paper stream. York Region is working together with local municipal partners to identify solutions, minimize contamination and continue to provide education as necessary.

2017 SPOTLIGHT: **MULTI-RESIDENTIAL**

The SM4RT Living Plan recognizes the importance of developing policy and programs specific to multi-residential buildings to improve waste diversion. Collaboration between the Region and local municipal partners is key to success. The Regional Official Plan requires new multi-residential developments to provide convenient three-stream diversion programs for residents. The Cities of Markham and Vaughan have collaborated with their planning departments to ensure new buildings have waste systems set up to accommodate three-stream diversion. Trisorters or separate chutes for recycling and organics are just as convenient to access as garbage chutes. Waste staff review site plans as part of the approvals process to ensure consistency. City of Markham has also incorporated electronic waste and battery recycling, textile diversion programs and uses a Letter of Credit to ensure compliance.

The Town of Aurora collaborated with the Region to develop and deliver education and programs to share with building managers. New multi-residential recycling options included collection of batteries, compact fluorescent light bulbs, electronics and textiles recycling resulting in collection of over three tonnes of materials.

RECOVER

The goal of 'recover' is to re-claim resources from waste at its end of life. The recover goal aims to capture an additional 60 to 80 per cent of metals that would otherwise end up in landfill through energy-from-waste.

Energy-from-waste provides the benefit of capturing energy content of residual waste, lowers greenhouse gas emissions, recovers metals and reduces the volume of waste going to landfill by 90 per cent.

2014 TO 2017 KEY SUCCESSES

* 2015 to 2017

** Estimated annual recovery

2017 SPOTLIGHT: **DURHAM YORK ENERGY CENTRE**

The Durham York Energy Centre is a high performing facility which began processing residual waste in February 2015, with the ability to process 30,000 tonnes of residential curbside garbage from York Region annually. The facility operates 24 hours a day, seven days a week, with an average of 35 trucks arriving each day. Emissions are monitored on a continuous basis to ensure compliance with stringent Ontario Ministry of the Environment and Climate Change air quality standards and Environmental Compliance Approval limits. The Durham York Energy Centre reuses all process water generated within the facility and there is no discharge of process water to the municipal sanitary sewer system.

DURHAM YORK
ENERGY CENTRE

SM4RT LIVING INITIATIVES BY MUNICIPALITY

Local municipal partners play a vital role in the success of the SM4RT Living Plan through their support for pilot programs such as textile collection, swapping, backyard composting and other initiatives in their communities. The table below shows initiatives being offered as of Q2 2018.

MUNICIPALITY	Repair Cafe	Backyard Composting program	Batteries/E-waste in multi-residential buildings	Composting demonstration sites	Development Standards	Good Food Promotion	Multi-residential outreach	Public Space Recycling	Textile bins, events and/or door-to-door collection	School programs	Swap events
Town of Aurora		●	●	●		●	●	●	●		●
Town of East Gwillimbury		●				●		●			●
Town of Georgina		●				●	●	●			●
Township of King	●	●				●	●	●	●		●
City of Markham	●		●		●	●	●	●	●	●	
Town of Newmarket	●	●				●	●	●		●	●
Town of Richmond Hill		●		●	●	●	●	●		●	●
City of Vaughan	●	●		●	●	●	●	●	●	●	●
Town of Whitchurch-Stouffville		●				●	●	●	●	●	●

Repair Cafe

Backyard Composting program

Batteries/E-waste in multi-residential buildings

Composting demonstration sites

Development Standards

Good Food Promotion

Multi-residential outreach

Public Space Recycling

Textile bins, events and/or door-to-door collection

School programs

Swap events

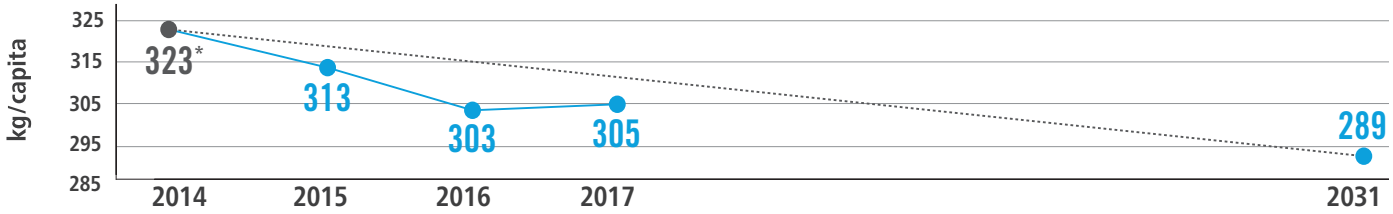
WASTE MANAGEMENT PERFORMANCE

2017 York Region Waste Generation Rate (kg/capita)

Garbage	Recycling	Organics	Yard Waste	HHW, electronics, scrap metal, tires etc.	SUBTOTAL	Small business users at Depots/CEC's	TOTAL
98	72	81	32	7	290	15	305

	Garbage	Recycling	Organics	Yard Waste	HHW, electronics, scrap metal, tires etc.	SUBTOTAL	Small business users at Depots/CEC's	TOTAL
Town of Aurora	113	79	76	43	5	316	8	324
Town of East Gwillimbury	111	79	73	50	10	323	55	378
Town of Georgina	139	85	71	30	5	330	136	466
Township of King	107	92	85	43	4	331	6	337
City of Markham	64	70	88	29	6	257	5	262
Town of Newmarket	106	77	74	43	7	307	19	326
Town of Richmond Hill	127	72	77	31	9	316	14	330
City of Vaughan	103	67	80	29	6	285	7	292
Town of Whitchurch-Stouffville	112	73	84	33	5	307	10	317

Waste Generation rates 2014 to 2017



* Reconciled after 2014 reporting period with third party review

Waste stream trends 2014 to 2017

	2014	2015	2016	2017	Per cent change 2014 to 2017
Garbage	101	97	96	98	-3.0%
Recycling	78	73	70	72	-7.7%
Organics	83	83	82	81	-2.4%
Yard Waste	46	38	31	32	-30.4%
Business	9	15	17	15	+66.7%
Other	7	7	7	7	0.0%

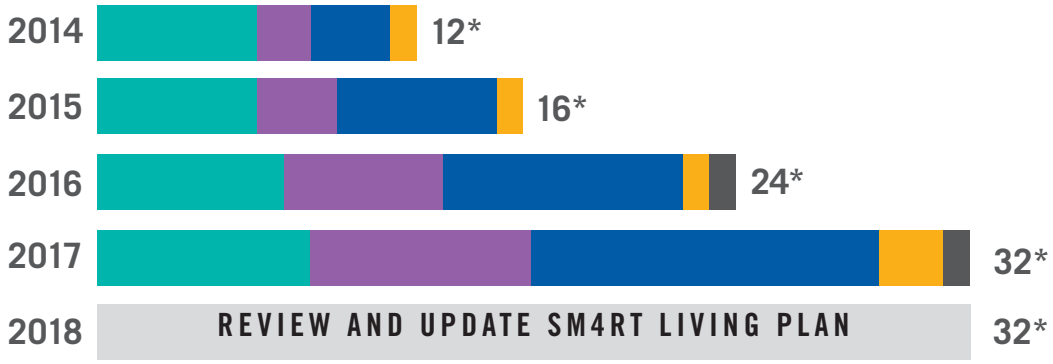
REVIEW AND UPDATE

The five year review and update of the SM4RT Living Plan will support the Region and its nine local municipal partners' commitment to lead sustainable and cost effective waste reduction and diversion solutions while accounting for impacts of the *Waste-Free Ontario Act* and strategy.

The scope of the review and update will include:

- Review of the SM4RT Living Plan strategies and initiatives
- Legislation review and scan including strategies for adapting to legislative change
- Emerging technologies and gap analysis including best practice review of similar municipalities
- Setting five year targets and updating long term projections
- Five year work plan prioritization
- Review of program communications
- Data gathering, monitoring performance measures and reporting recommendations

IMPLEMENTATION PROGRESS



**Number of initiatives underway*

EARLY OBSERVATIONS

With the upcoming five year review and update of the SM4RT Living Plan, it is important to reflect on the challenges faced and successes achieved since the beginning of the plan.

LEADERSHIP
The initiatives were innovative with few local examples to look to for guidance.

INNOVATION TAKES TIME
Predicting hours needed for each initiative posed a challenge, and shifted focus to high-quality over high-quantity.

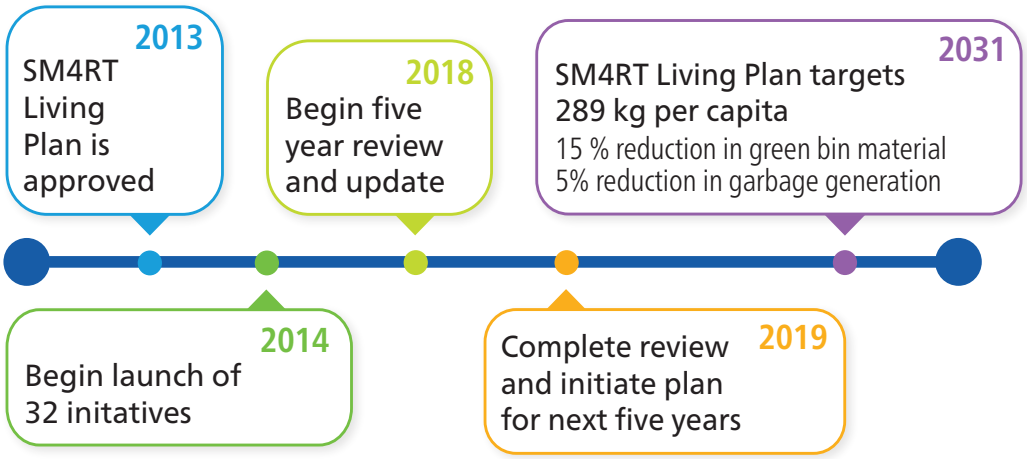
RESOURCE CONSIDERATIONS
Regional and local municipal staff face competing priorities for limited time and resources. Collaboration and leveraging existing work has been essential.

MEASURING SUCCESS
Each initiative is unique and indicators of success are not always comparable. Scaling up pilot results to assess potential long-term impact is complex.

LEVERAGING COMMUNITY PARTNERS
Establishing partnerships to provide funding and support to community-based organizations has helped extend the reach of programs.

GO ABOVE AND BEYOND 'STATUS QUO'
Creating programs to reduce waste and decrease reliance on processing infrastructure takes time and consistent effort to build momentum.

TIMELINE



AURORA · Town of East Gwillimbury · GEORGINA · KING · MARKHAM · Newmarket · Richmond Hill · VAUGHAN · TOWN OF WHITCHURCH-STOUFFVILLE