



UNIVERSITY OF
ALBERTA

Best Practices in Organics Management: A People-Centred Approach



TETRA TECH

October 1, 2015

Overview

- University of Alberta at a Glance
- Goals and Drivers
- Organics Collection Cost Analysis
- Zero Waste Pilot Program
- Next Steps



University of Alberta at a Glance

- Established in 1908
- 5 campuses in Edmonton and Camrose
- Teaching and research institution
- 18 faculties
- Approx. 400 programs
- > 38,000 students
- ~12,000 staff & faculty



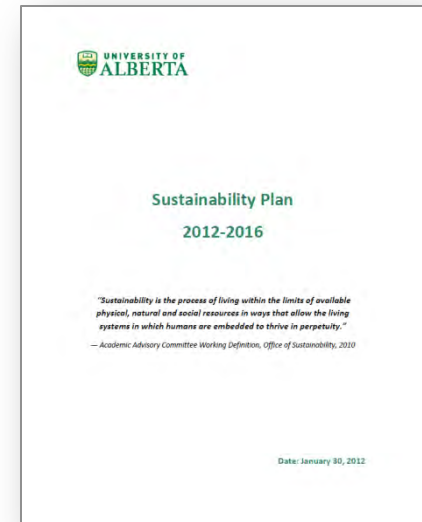
University of Alberta at a Glance

- Building types
 - Office & Classroom
 - Residences
 - Science & Lab
 - Misc. (e.g. Phys Ed & Rec)
- Four major campus dining facilities (Lister Centre, SUB, CAB, HUB)
- 23 Aramark, 25 independent and 9 Students' Union food services

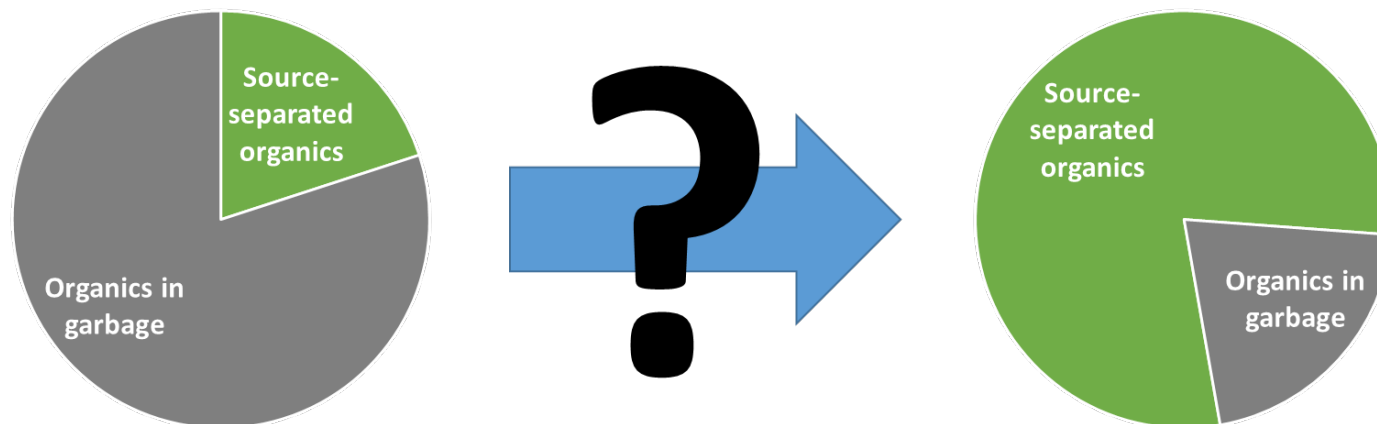


Goals and Drivers

- Divert 50% of waste from the University of Alberta's North Campus by 2015
- **“Waste Diversion Working Group”**
- Contribute 1,500 wet tonnes of organics to the City of Edmonton high solids anaerobic digestion facility (est. completion 2017)
- New waste collection contract in 2016
- Sustainability Plan 2016-2020

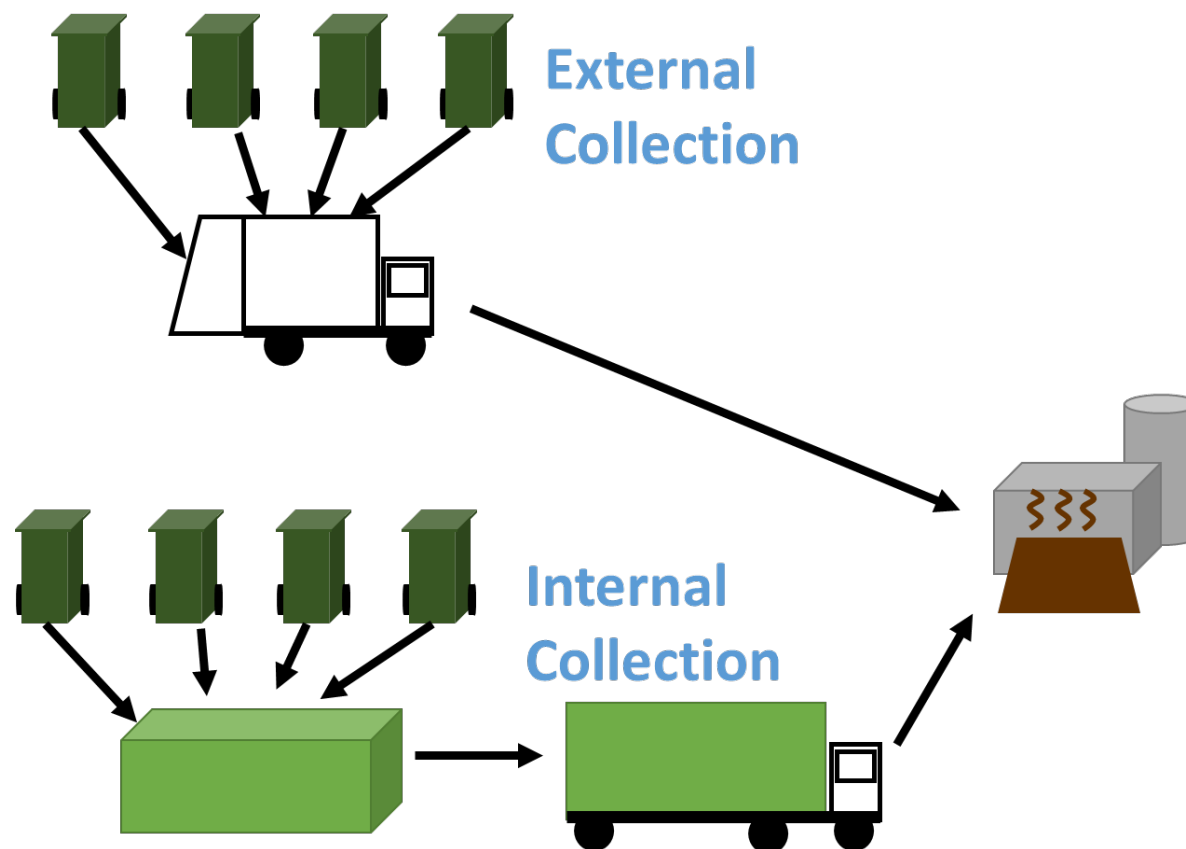


Organics Collection Cost Analysis

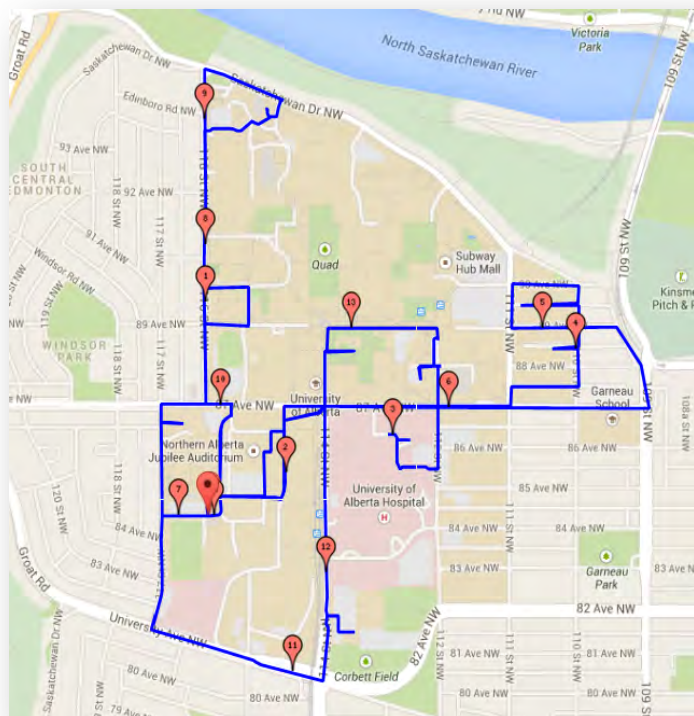


If an additional **1,500 tonnes** of organics was diverted from the waste stream, how much would it cost for collection?

Scenarios

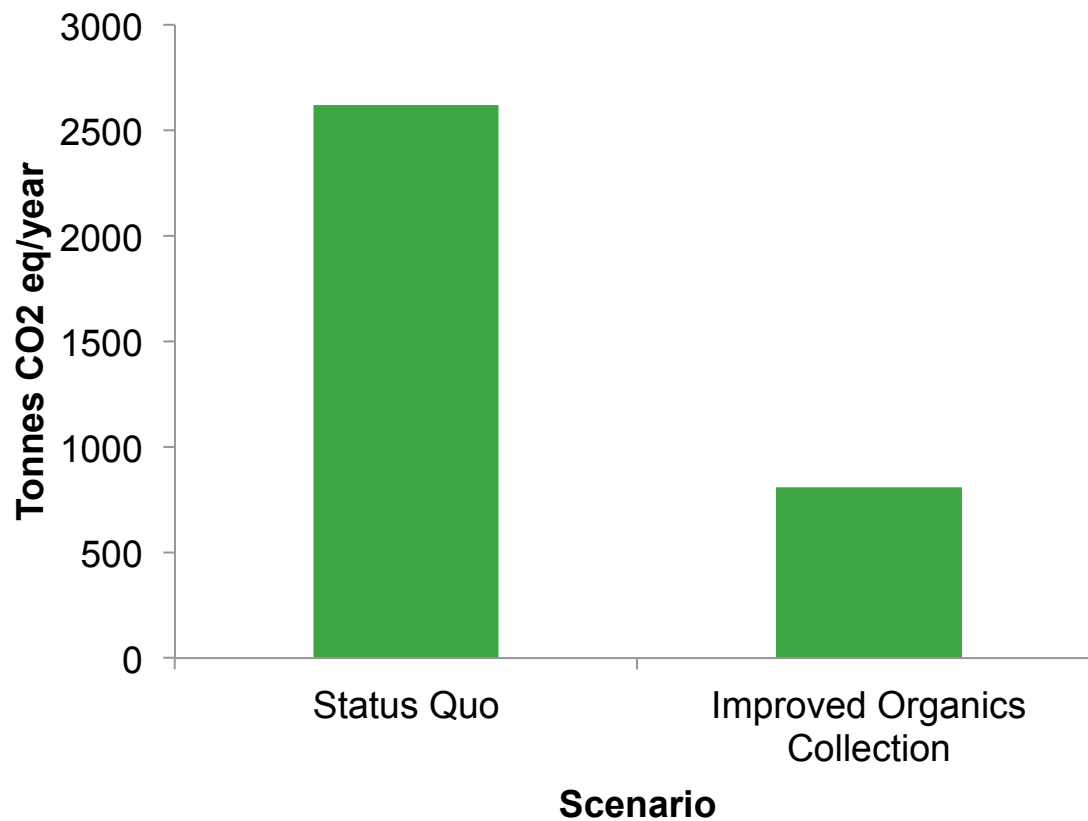


Model Development and Analysis

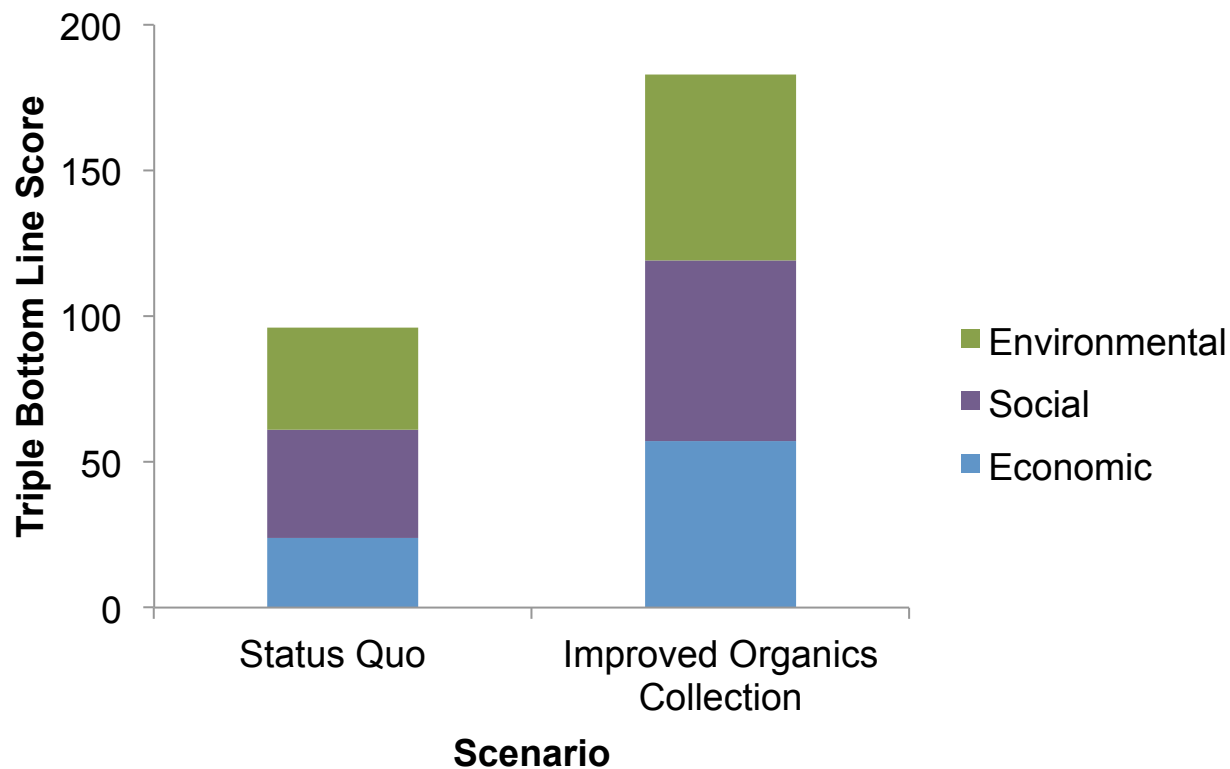


- Database of current waste management assets, services, and costs
- Route and container size optimization
- Capital and operating cost
- Escalating cost over 20 years
- Sensitivity analysis of key variables
- Greenhouse gas analysis
- Triple-bottom line analysis

Greenhouse Gas Analysis Results



Triple-Bottom Line Analysis Results



Zero Waste Pilot Program



HUB Mall



SUB



Lister Centre

Zero Waste Pilot Program

Conceptual
Design

Evaluation

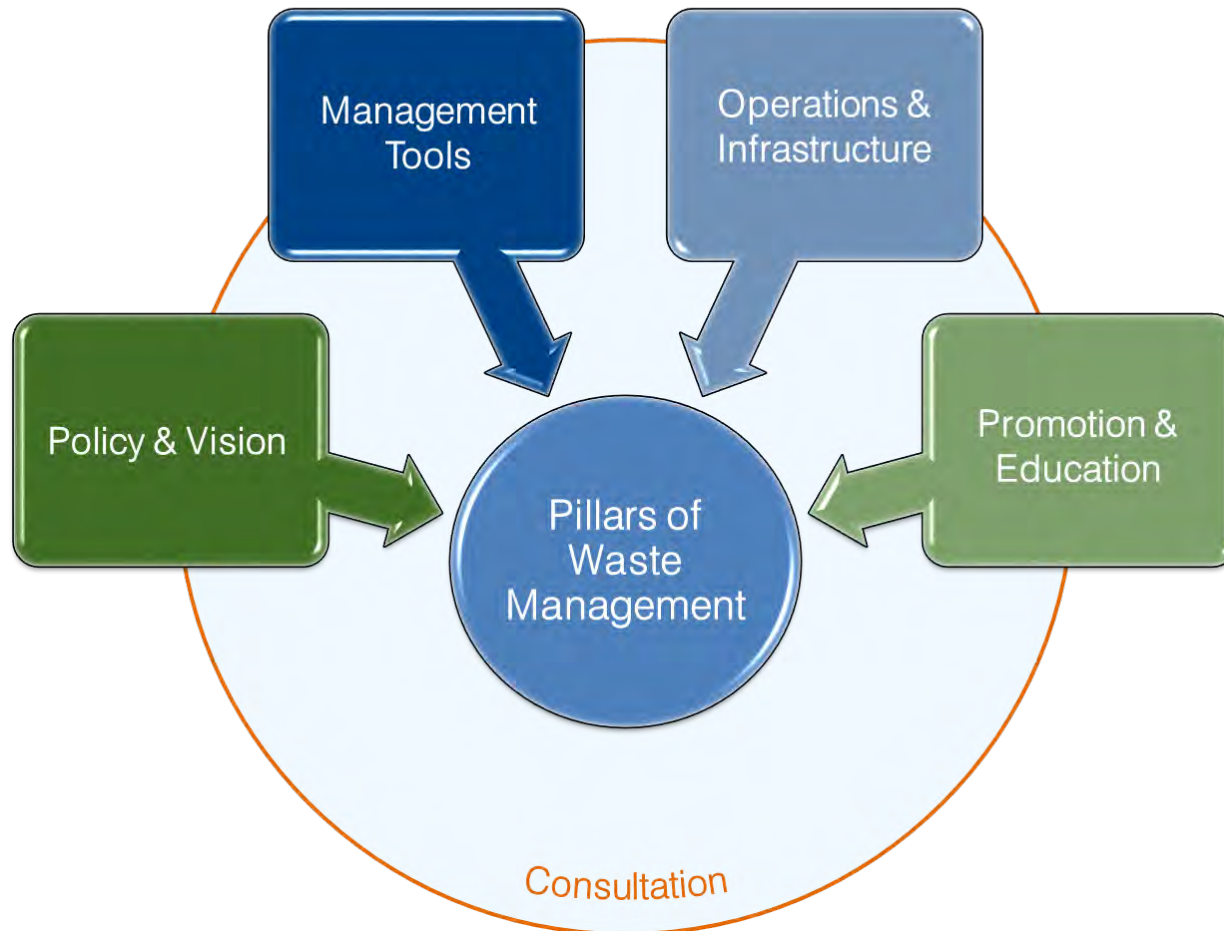


Building
Characterization



Implementation





Lister Centre - Before



Lister Centre - After



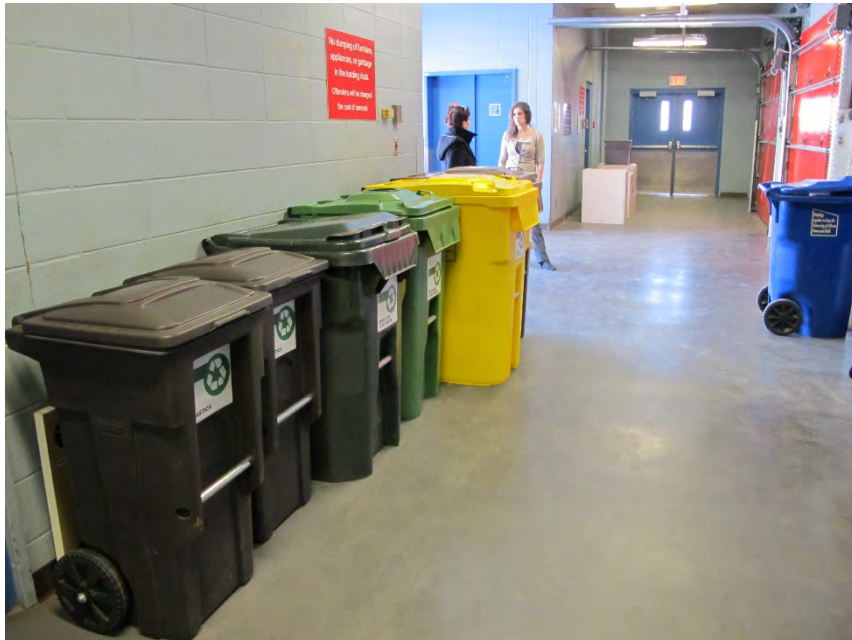
SUB - Before



SUB - After



HUB Mall - Before



HUB Mall - After



HUB Mall Vendors - Before



HUB Mall Vendors - After



Evaluation Methods

- Hauler data
- Spot/mini audits
- Full audit
- Container monitoring
- User survey



Results – Hauler Data

	Organics	Landfill
HUB	2,340 kg	↓ 36%
SUB	↑ 53%	↓ 10%
Lister Centre	↑ 1%	↓ 17%

Results – Monitoring

- Overall more waste diversion
- Low contamination in Organics stream
- Medium contamination in Recyclables stream
- High contamination in Mixed Paper stream



Results - Survey



Need more
space between
images

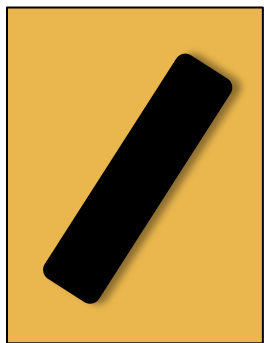


Consider adding
key terms or
clearer
instructions



Clarify key
problem items
(e.g. napkins)





Adjust opening of
Mixed Paper
to reduce
contamination



Increase contrast
between images
and stations

Evaluate if
“Mixed Paper” &
“Recyclables”
are appropriate titles

Next Steps

- **Expand zero waste program to:**
 - Public space in HUB Mall
 - Existing pre-consumer organics collection locations (update)
 - Two other large food services (Faculty Club and Dewey's)
 - One new building (Innovation Centre for Engineering)
- **Work with food vendors on procurement of compostable food service ware**
 - Eliminate Styrofoam (polystyrene)
- **Develop more comprehensive communication plan**

Thank you!

University of Alberta
Buildings and Grounds Services

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