Benchmarking: Helping to Understand “the Latest and the Greatest”
Introduction

• Solid Waste Planning Lead for Tetra Tech

• Started the National Solid Waste Benchmarking Initiative in 2010

• Solid waste planning experience = 25 years
assume skipping TT intro slide then and just speaking to points? it works but slides are here if you wanted to add:
http://projects.eba.ca/sites/ebagroups/ENVSWM/Shared%20Documents/Waste%20Sector%20Planning%20Team/Presentations%20and:
Shulman, Tamara, 2015-05-12
Tetra Tech Solid Waste Practice Group

- Turnkey solid waste planning, permitting, engineering, construction, operations services
- Staff of 500+ professional, technical and field support personnel across North America
- Projects completed at 400+ solid waste facilities in North America
- Western Canadian Team of 40 with staff in Calgary, Edmonton and Vancouver
- Vancouver team of 6 with waste planning focus
Presentation Outline

- Priorities for Benchmarking
- Challenges Experienced
- Analogy Discovered
- Considerations
- Lessons Learned
- System Change and Benchmarking
- Questions to Consider for the “Latest and Greatest” Upgrades using Analogy
ST5 added a couple of quick pics for 3 and 4... for the visual and add'l context.
Shulman, Tamara, 2015-05-12
Priorities for Benchmarking

1. Costs (capital & operating)
2. Waste reduction
3. Environmental protection
4. Disposal capacity
5. Effective/efficient operations
6. Behaviour change
7. Customer satisfaction
## Benchmarking Challenges

<table>
<thead>
<tr>
<th>Attributes of Benchmarking</th>
<th>Level of Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering and Comparing Data</td>
<td>Medium</td>
</tr>
<tr>
<td>Finding Comparable Cities and Towns</td>
<td>Medium - High</td>
</tr>
<tr>
<td>Understanding the Differences in Data/Results</td>
<td>High</td>
</tr>
<tr>
<td>Finding Common Factors that Affect Data/Results</td>
<td>Very High</td>
</tr>
</tbody>
</table>
The Revelation

• Data presentation started making sense after reading Consumer Report magazine

• Best rated cars did not always result in most sales

• Car sales dependent of customer priorities, perception of car and capital and operating cost
Waste System Analogy

- Solid waste management systems are similar to a vehicle
- It’s about getting waste from Point A to Point B
- Disposal facility represents the engine
I am digesting the car/fuel economy analogy still... probably good to run by Avery too since you'll be there together.

Shulman, Tamara, 2015-05-12

The point A to point B is more linear than a more complex waste management system (which appears more matrix like... or even circular as relates to zw economy). I get that efficiencies prior to disposal/engine have value (more landfill space/less pollution).

Shulman, Tamara, 2015-05-12

But I think I like the WM system image you developed with Karen better - shows the complexities of the system and why it's imp to compare and contrast across systems to learn, reflect and fine tune.

Shulman, Tamara, 2015-05-12

Just my .02 though...

Shulman, Tamara, 2015-05-12
Fuel Economy

Disposal Rate = Fuel Economy

• Diverting waste improves fuel economy
Emissions Control

- Organics and recycling programs reduce emissions by:
  - Decreasing disposal rate
  - Controlling or preventing GHG emissions
Solid Waste System Vehicle

- High level - solid waste system is a vehicle
- Discards taken to the various parts of system
- Customers provide the fuel that runs the vehicle
Important Considerations for Benchmarking

• Provides understanding of solid waste management system
  – Shows how other systems are similar or different

• Provides metrics for performance of each component of the solid waste system

• Helps municipalities characterize and understand their customers
Community Profiles

- Developed community profiles - similar to how "Consumer Reports" describes each vehicle
- Provides perspective as if each community is a:
  - Designer
  - Manufacturer
  - Retailer
  - Operator
Lessons Learned

• Each community and their solid waste management system is specific to their customer needs and priorities

• The best rated systems are not necessarily what the customers want

• One size does not fit all

• Benchmarking helps communities understand their customer’s willingness to change
Change Happens

• Regulatory requirements
• Environmental impacts
• Economical benefits
• Shrinking disposal capacity
• Public concerns or priorities
“Change” at Your Door Step

- Benchmarking helps communities understand the finer parts of their solid waste management system.
- That knowledge helps identify where those changes would occur and what can be expected.
- Helps communities explain the impacts to changes that include:
  - Social,
  - Economical
  - Environmental
Learning from Others

- Allows communities to assess what others have done (in light of changing times)
- Dynamics of decision making
- Understanding of issues and challenges that others experienced
- Estimation of capital and operating costs
SOLID WASTE MANAGEMENT - FLOW DIAGRAM

- Single Family Home
- Multi Family Home
- Public
- Material Recovery Facility
- Private
- Compost Facility
- Bank
- Industrial/Commercial/Institution
- Depots
- Market
- Construction/Demolition
- Landfill

Source
Collection
Transfer
Processing
End Point
Latest and Greatest Gadget for Vehicle

• What will this new gizmo do?
• Will it improve system performance?
• How much does it cost to install?
• Will it reduce system operating costs?
• Has anyone else used this gizmo before?
• Are customers wiling to pay for this new gizmo?
• How does this affect the rest of the Car or System?