Purpose
Discuss research from the Transit Cooperative Research Program (TCRP)’s Research Report 197: Tools for a Sustainable Transit Agency

Learning Objectives
At the end of this webinar, you will be able to:

• Understand the tool and how to apply it to develop sustainability programs
• Identify variations of S+ROI analysis
Meet the Sustainability Routemap & S+ROI Tool

Level up your sustainability program
Agenda

• Introduction (5 minutes)
• Meet the Sustainability Routemap (25 minutes)
• Meet the SROI Tool (25 minutes)
• Q and A (30 minutes)
Introduction

- Objective: Develop tools to address transit agency implementation of environmental, economic and social sustainability objectives
- Tools: How to formulate, plan, finance and integrate sustainability
Introduction

Considerations

• Define Sustainability as people, planet & prosperity
• Varied agency size; varied maturity of programs
• Focus on change management
  • Route map
  • S+ROI Tool
Sustainability Route Map

Change management strategies for completing the puzzle of integrating sustainability into transit agencies

INTRA-AGENCY PARTNERSHIPS
decision making and implementation oversight by intra-agency teams

MISSION + VISION
deep integration of sustainability within the mission, values and core goals of the agency

DECISION MAKING
new information for managers, employees, and Boards to incorporate sustainability into decision making

LEADERSHIP
skills for Boards, chief executives, and senior management

PERFORMANCE + ACCOUNTABILITY
progress-tracking metrics and accountability systems for managers, employees, and Board members

INSPIRING EMPLOYEES
informing, engaging, and inspiring individual employees; defining sustainability for every employee

RESOURCING
dedicated sustainability staff and adequate funding

PUBLIC ENGAGEMENT
gaining public recognition of and support for agency sustainability initiatives
Sustainability Strategy Checklist

1. **MISSION + VISION**
   - Get Sustainability Included in Your Agency’s Mission
     - Increase
     - In Progress
     - Complete
   - Create a Triple Bottom Line Sustainability Policy and Action Plan
     - Increase
     - In Progress
     - Complete

2. **LEADERSHIP**
   - Align Change Management Strategies to Win Hearts and Minds of the People in Your Transit Agency
     - Increase
     - In Progress
     - Complete
   - Engage Your Leadership in Emphasizing the Importance of Sustainability
     - Increase
     - In Progress
     - Complete

3. **INTRA-AGENCY PARTNERSHIPS**
   - Brook Down Silos With an Internal Steering Committee
     - Increase
     - In Progress
     - Complete
   - Establish Roles and Responsibilities of Steering Committee Members
     - Increase
     - In Progress
     - Complete

4. **INSPIRING EMPLOYEES**
   - Engage Internal Staff, Including Drivers and Maintenance Employees
     - Increase
     - In Progress
     - Complete
   - Create a Campaign to Train and Educate Employees
     - Increase
     - In Progress
     - Complete

5. **RESOURCING**
   - Ensure Sustainability Staff Have Cross-Agency Authority
     - Increase
     - In Progress
     - Complete
   - Continuously Explore Unique Funding Opportunities
     - Increase
     - In Progress
     - Complete

6. **PERFORMANCE + ACCOUNTABILITY**
   - Develop and Routinely Calculate Performance Metrics
     - Increase
     - In Progress
     - Complete
   - Use Pilot Projects to Advance the Use of Sustainable Methods and Materials
     - Increase
     - In Progress
     - Complete
   - Quantify and Communicate Full Costs and Benefits through a ROI Tool
     - Increase
     - In Progress
     - Complete

7. **DECISION MAKING**
   - Identify Key Decision-Making Points to Integrate Sustainability
     - Increase
     - In Progress
     - Complete
   - Include Sustainability in Work Plans and Performance Evaluations
     - Increase
     - In Progress
     - Complete

8. **PUBLIC ENGAGEMENT**
   - Communicate the Regional Sustainability Benefits of Transit
     - Increase
     - In Progress
     - Complete
   - Create Report Cards and Marketing Materials to Celebrate Your Accomplishments
     - Increase
     - In Progress
     - Complete
   - Prioritize Budgets Using Triple Bottom Line Criteria
     - Increase
     - In Progress
     - Complete

9. **GENERAL NOTES**
   - Remove Obstacles To Sustainable Procurement
     - Increase
     - In Progress
     - Complete
Sample Scenarios

1) You are a manager in a large transit agency and want to build ownership for sustainability throughout your agency.

2) You want to implement a sustainability pilot project in your small transit agency, but need direction on how to secure funding and build support.
Meet the S+ROI Tool

Evaluate sustainability benefits
### S+ROI Tool

<table>
<thead>
<tr>
<th>Sustainability Project</th>
<th>Alternative to Project: Business as Usual or No Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>Average ongoing costs per year (YOE</em> $)</em>*</td>
<td></td>
</tr>
<tr>
<td>Operating - materials, supplies, labor, debt service (do not include resources savings covered in section below)</td>
<td></td>
</tr>
<tr>
<td>Maintenance - materials and supplies</td>
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</tr>
<tr>
<td>Maintenance - labor</td>
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</tr>
<tr>
<td>Total ongoing costs per year</td>
<td>$0</td>
</tr>
<tr>
<td>Other lump sum (non-recurring) costs (YOE* $)</td>
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</tr>
<tr>
<td>Year of cost incursion</td>
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</tr>
<tr>
<td>Total cost (YOE* $)</td>
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<tr>
<td>Resource savings per year relative to Alternative to Project</td>
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<tr>
<td>Vehicle gasoline (gal)</td>
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<tr>
<td>Vehicle diesel (gal)</td>
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<tr>
<td>Vehicle CNG (GGE)</td>
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<tr>
<td>Electricity (kWh)</td>
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<tr>
<td>Natural gas, facilities (therm)</td>
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<tr>
<td>Water (gal)</td>
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<tr>
<td>Waste diverted from landfill (ton)</td>
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</tr>
<tr>
<td>Total annual estimated value of resource savings</td>
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<tr>
<td><strong>Construction emissions</strong></td>
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</tr>
<tr>
<td>CO2e emissions associated with construction and decommissioning (tons)</td>
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</tr>
<tr>
<td><strong>Results</strong></td>
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</tr>
<tr>
<td>Present value of initial costs ($2018)</td>
<td>$0</td>
</tr>
<tr>
<td>Present value of ongoing costs ($2018)</td>
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<tr>
<td>Present value of other significant costs ($2018)</td>
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<tr>
<td>Present value of resource savings ($2018)</td>
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</tr>
<tr>
<td>Net present value ($2018) [ (net savings) / net cost ]</td>
<td>$0</td>
</tr>
<tr>
<td>Net present value ($2018)</td>
<td>$0</td>
</tr>
</tbody>
</table>
What is the S+ROI Calculator?

• Tool to capture *internal* and *external* impacts of sustainability efforts at transit agencies that are often not included in traditional financial assessments
  • *Total Cost of Ownership (TCO)* approach considers capital costs along with operating and maintenance costs and savings over the full lifecycle of project
  • *Internal* transit agency resource savings
  • *External* (public) regional benefits of transit
Two Calculators in One

• **Internal Cost-Benefit Estimator**
  - If you want to know project’s cost or environmental performance implications
  - Internal refers to costs and benefits to the transit agency

• **External Benefits Estimator**
  - If your project involves increasing (or maintaining) ridership
  - External refers to the benefits for the region, including:
    - Environmental benefits (reduction in gasoline consumption and CO2 emissions)
    - Economic benefits (transportation cost savings)
    - Social outcomes (safety in terms of reduced traffic fatalities; health in terms of reduced obesity rates)
What kind of sustainability projects can you evaluate?

- Upgrade local bus to bus rapid transit (BRT)
- Switch to hybrid or electric buses
- Install solar panel system
- Use energy efficient lighting in buildings
- Use green construction methods
- Install water-efficient fixtures
Sample Scenario

• Your agency wants to replace a local bus corridor with bus rapid transit of battery electric buses
Next Steps

Exploring this Tool
My agency needs to do _____________ to improve on sustainability

Other Resources

Networking Opportunities
Today’s Participants

• Dan Kennedy, *VIA Architecture*, dkennedy@via-architecture.com

• Jemae Hoffman, *Sound Transit*, jemae.hoffman@soundtransit.org

• Amy Shatzkin, *Sound Transit*, amy.shatzkin@soundtransit.org

• James Choe, *ICF*, James.Choe@icf.com
Panelists Presentations


After the webinar, you will receive a follow-up email containing a link to the recording
Download the Tool and Calculator

http://www.trb.org/Calendar/Blurbs/177553.aspx

Click the link to the .zip file to download both tools
Take Part in TCRP Day!

TCRP DAY is a national event aimed at creating awareness of the program, showcasing its research in action, and increasing the number of transit professionals involved in the program.

Contact Peggy Wilson at pwilson@apta.com to volunteer to host a local event, or with any questions. More information is also at bit.ly/2rkyTmO
Get Involved with TRB

• Getting involved is free!
• Join a Standing Committee (http://bit.ly/2jYRrF6)
• Become a Friend of a Committee
  – Networking opportunities
  – May provide a path to become a Standing Committee member
• For more information: www.mytrb.org
  – Create your account
  – Update your profile