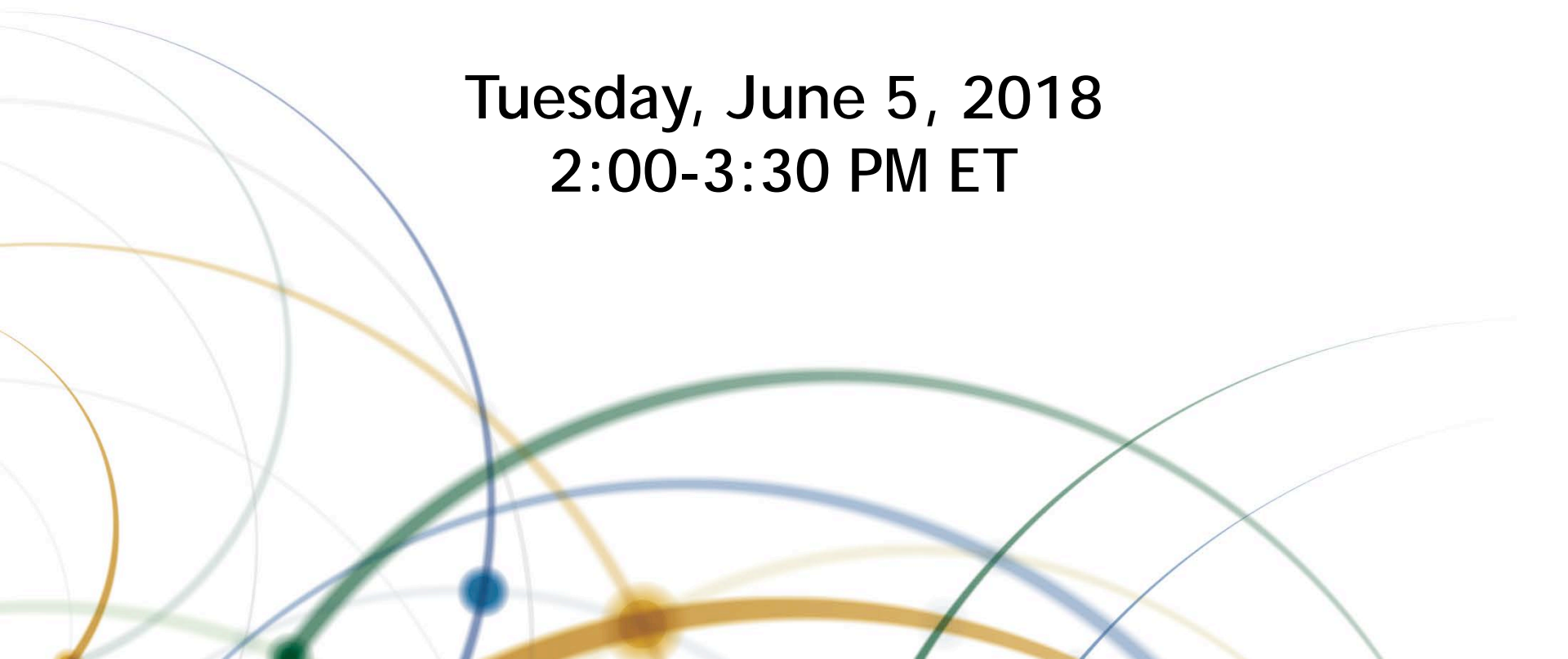


The National Academies of
SCIENCES • ENGINEERING • MEDICINE

TRANSPORTATION RESEARCH BOARD

Tools for a Sustainable Transit Agency

Tuesday, June 5, 2018
2:00-3:30 PM ET



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

- Transit Cooperative Research Program Research Report 197: Tools for a Sustainable Transit Agency
- 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



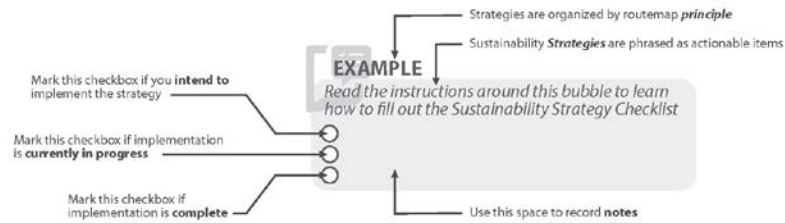


Sustainability Route Map

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



Sustainability Strategy Checklist



MISSION + VISION
Get Sustainability Included in Your Agency's Mission

- Intend to do
- In Progress
- Complete

Create a Triple Bottom Line Sustainability Policy and Action Plan

- Intend to do
- In Progress
- Complete

LEADERSHIP
Use Change Management Strategies to Win Hearts and Minds of the People in Your Transit Agency

- Intend to do
- In Progress
- Complete

Engage your Leadership in Emphasizing the Importance of Sustainability

- Intend to do
- In Progress
- Complete

INTRA-AGENCY PARTNERSHIPS
Break Down Silos With an Internal Steering Committee

- Intend to do
- In Progress
- Complete

Establish Roles and Responsibilities of Steering Committee Members

- Intend to do
- In Progress
- Complete

INSPIRING EMPLOYEES
Engage Internal Staff, Including Drivers and Maintenance Employees

- Intend to do
- In Progress
- Complete

Create a Campaign to Train and Educate Employees

- Intend to do
- In Progress
- Complete

RESOURCING
Ensure Sustainability Staff have Cross-Agency Authority

- Intend to do
- In Progress
- Complete

Continually Explore Unique Funding Opportunities

- Intend to do
- In Progress
- Complete

Use Pilot Projects to Advance the Use of Sustainable Methods and Materials

- Intend to do
- In Progress
- Complete

Quantify and Communicate Full Costs and Benefits through a SROI tool

- Intend to do
- In Progress
- Complete

PERFORMANCE + ACCOUNTABILITY
Create an Environmental & Sustainability Management System (ESMS)

- Intend to do
- In Progress
- Complete

Develop and Routinely Calculate Performance Metrics

- Intend to do
- In Progress
- Complete

Achieve Recognition through APTA's Sustainability Commitment

- Intend to do
- In Progress
- Complete

Explore Using Third Party Rating Systems Such as Envision and LEED

- Intend to do
- In Progress
- Complete

DECISION MAKING
Identify Key Decision-Making Points to Integrate Sustainability

- Intend to do
- In Progress
- Complete

Include Sustainability in Work Plans and Performance Evaluations

- Intend to do
- In Progress
- Complete

Prioritize Budgets Using Triple Bottom Line Criteria

- Intend to do
- In Progress
- Complete

Remove Obstacles to Sustainable Procurement

- Intend to do
- In Progress
- Complete

PUBLIC ENGAGEMENT
Communicate the Regional Sustainability Benefits of Transit

- Intend to do
- In Progress
- Complete

Create Report Cards and Marketing Materials to Celebrate Your Accomplishments

- Intend to do
- In Progress
- Complete

GENERAL NOTES

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

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

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.Cho@icf.com
- 

Panelists Presentations

<http://onlinepubs.trb.org/onlinepubs/webinars/180605.pdf>

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
<http://bit.ly/TRBcommittees>
 - Networking opportunities
 - May provide a path to become a Standing Committee member
- For more information: www.mytrb.org
 - Create your account
 - Update your profile