Sustainability Routemap

Organizational change managment strategies for transit agencies to be more sustainable

GETTING STARTED

PUBLIC ENGAGEMENT

gaining public recognition and support for transit agency sustainability initiatives

PERFORMANCE & ACCOUNTABILITY

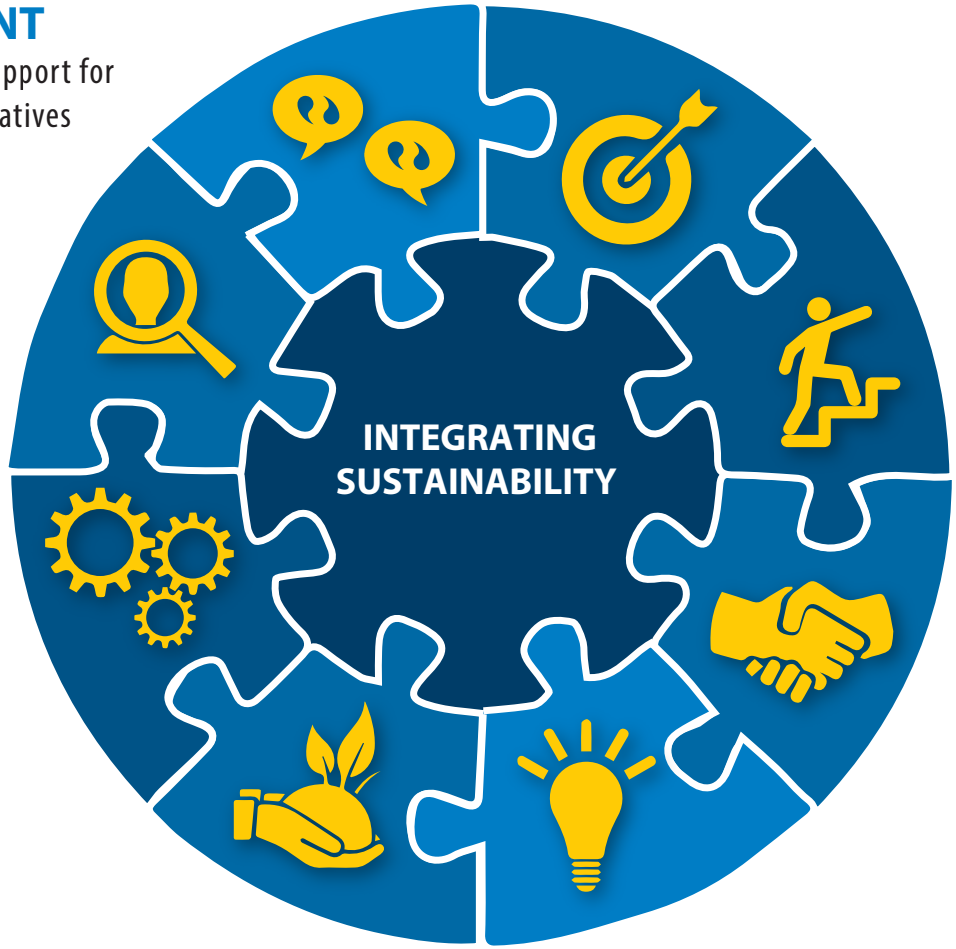
progress-tracking metrics and accountability systems for managers, employees, and Board members

DECISION-MAKING

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

RESOURCING

staffing and adequate funding



MISSION & VISION

deep integration of sustainability within the mission, values and core goals of the transit agency

LEADERSHIP

skills for Boards, chief executives, and senior management

INTRA-AGENCY PARTNERSHIPS

decision making and implementation oversight by intra-agency teams

INSPIRING EMPLOYEES

informing, engaging, and inspring individual employees; defining sustainability for every employee

About This Tool

We designed this tool to help you integrate your sustainability program throughout your transit agency.

Why? Because our research for this tool determined that transit agencies are at many different states of development of sustainability programs. Some are just starting. Others are well established and are tackling sustainability in new areas such as design and construction of facilities. All transit agencies need help with better integrating sustainability into everything that they do.

Our goal with this Routemap is to help users understand what they need to do in order to achieve strong integration of sustainability into a transit agency. To make this happen, sustainability must be integrated into the goals, communication, decision-making, and performance tracking of the transit agency. **The Routemap provides resources, recommendations, and examples of approaches to developing the necessary principles of change in a transit agency.**

Our Routemap isn't a step-by-step guide. It's also not a comprehensive description of everything a sustainable transit agency does or should do. Rather, it's a tool to understand the most important principles of integrating sustainability.

How to Use the Routemap

This PDF is designed to be navigated by **clicking on buttons, rather than "scrolling" through.** Along the way you will see **external links** that will open a resource in your web browser as well as **internal links** that lead to pages within the Routemap. While viewing with Adobe software, it is also possible to **search this pdf by pressing [ctrl]+F** and typing a search term.

If you're just starting (or re-starting) your sustainability program:

- Take a high level tour of the Routemap to understand all its components, including the eight principles
- Start with the principles of Mission and Vision, Intra-Agency Partnerships, and Performance and Accountability
- Pick one or two principles to work on that you might not have considered initially

Remember that while you don't have to do everything described in the Routemap to be successful, a comprehensive awareness will help.

If your sustainability program is already well established:

- Do a deeper dive into one or two principles that you feel need the most work at your transit agency
- Identify suggestions and leads that can help your particular situation
- Reach out to transit agencies that inspire you
- Explore cross-linkages between the principles

You might want to read the new information provided in the Leadership, Change Management for Transit Agencies section and the Intra Agency Partnerships page for ideas on how to break down silos and build ownership across the agency.

How to Use the Routemap

This checklist will help you as you explore the tool. You will see all of the actions under each of the eight principles in one list. You can check the actions that seem most helpful to explore and track your progress.

Strategies are organized by routemap ***principle***

Sustainability ***Strategies*** are phrased as actionable items

Mark this checkbox if you **intend to** implement the strategy

Mark this checkbox if implementation is **currently in progress**

Mark this checkbox if implementation is **complete**

EXAMPLE

Read the instructions around this bubble to learn how to fill out the Sustainability Strategy Checklist

Use this space to record **notes**

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*

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*

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*

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*

This user worksheet was included in the original download of this routemap. If it has been lost, you can download the package again from this link.

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

What Is in the Routemap?

The Sustainability Routemap contains four types of information:

- **All of the content in the Routemap is organized under one of eight principles. The eight principles form a framework for integrating sustainability, are interrelated, and are mutually supportive.** Use these principles as an organizing guide to understand where your program is faring well and to identify areas where you would like to improve.
- **Recommended New Practices** — In creating the Routemap, we focused on making existing information and knowledge in the transit industry more easily available. In a few cases, we needed to develop and propose new information on how to integrate sustainability into transit agencies. These sections of the Routemap contain strategic approaches and recommendations from the consultant team's own research and professional experience.
- **Best Practice Examples** — Notable practices by transit agencies that can be replicated, along with best practices from other industries that could be applied in the transit industry.
- **Links to Other Resources** — Links that lead the user to valuable resources created by other agencies such as the American Public Transportation Association (APTA) or the Federal Transit Administration (FTA).

What are the Eight Principles?

Change Management for Integrating Sustainability is essentially changing sustainability from abstract concepts a few people are tracking to an integral part of the culture of the transit agency's work.

Principles and strategies presented here have been pulled from leading change management research for both the private and public sector, the professional expertise of the consultant team, and the oversight panel.

- **Mission and Vision:** deep integration of sustainability within the mission, vision, and core goals of the transit agency
- **Leadership from the Top:** Chief Executives, Boards, and Senior Management prioritizing sustainability
- **Intra-Agency Partnerships:** decision-making and implementation oversight by cross-agency teams
- **Inspiring Employees:** informing, engaging, and inspiring employees, defining every employee's role in sustainability
- **Funding and Resources:** dedicated sustainability staff and adequate funding
- **Decision-Making:** incorporation of sustainability into existing decision-making tools including workplans, performance evaluations, budget prioritization, and procurement
- **Performance & Accountability:** progress tracking metrics and accountability systems for managers, employees, and the Board
- **Public Engagement:** gaining public recognition and support for transit agency sustainability initiatives

What is Sustainability?

There are many ways of defining sustainability. At its core, sustainability is about stewarding resources so that they may be available and enjoyable in both the present and the future.

To be more specific, we think of a sustainable transit agency as cultivating three key resource areas:

- **People** – equitable use of resources to empower the transit agency's employees, riders, and broader community
- **Planet** – environmental resources provided by the Earth
- **Prosperity** – financial resources of the transit agency itself and of the communities that it serves

This concept is alternately known as the three Ps, the three Es (Equity, Environment, and Economy), and the triple bottom line. Multiple resource types must be balanced to be truly sustainable.

How Was the Sustainability Routemap Made?

The Sustainability Routemap is a product of the Transportation Research Board Transit Cooperative Research Program (TCRP's) Project H-53 "Tools for a Sustainable Transit Agency." A consultant team of ICF and VIA Architecture researched, designed, and tested the Sustainability Routemap from 2015 to 2017, with support from Nelson\ Nygaard and Thomson Consulting.

More information on the development of the Sustainability Routemap can be found in the final report for project TCRP H-53.

Mission and Vision

Deeply integrating sustainability into transit agency mission, values, and core goals is crucial to ensuring that sustainability efforts will be prioritized by the transit agency. This section examines sample mission statements, definitions of sustainability, and general sustainability policies that incorporate sustainability into transit agency goals.

A sustainability policy is adopted by decision-makers at the transit agency's highest level. A robust policy includes sustainability mission, vision, principles, and priority outcomes. Better policies provide guidance, evaluation metrics, and an implementation plan with metrics to measure progress toward goals. **A sustainability policy with a strong tie to the transit agency mission is key to defending investments in sustainability actions and can inspire intra-agency collaboration as well as partnerships between regional actors.**

When there is a change in transit agency leadership, it is easy to fear a change in direction. However, if staffers are able to **incorporate sustainability into how the agency does its work,** similar to a safety program, its helps sustainability stay part of an agency's actions.

Best Practice Examples of Agency Sustainability Policies

The best policies encompass environmental performance of the transit agency, as well as an agency's approach to land use, housing, environment, economic development, public and employee health, and climate resilience.

Creating a Sustainability Action Plan

Policies often direct the agency to develop a Sustainability Action Plan. One resource for how to get started is the **Sustainability Planning Toolkit** developed by ICLEI-Local Governments for Sustainability USA in association with The City of New York's Mayor's Office of Long-Term Planning and Sustainability.

The American Public Transportation Association (APTA) also has resources available on sustainability planning, such as **this presentation** given in 2014.

Example: TransLink Sustainability Policy

The **TransLink Sustainability Policy** is a concise, high-level sustainability policy that clearly ties to the transit agency's corporate mission. In addition to environmental goals, the policy addresses social equity and financial sustainability.

- The policy specifies how TransLink will advance sustainability through its roles as an organization, employer, transportation provider, and community member; and
- Coordinates with TransLink's mission to "connect the region and enhance its livability by providing a **sustainable transportation network,** embraced by our communities and our people."

Example: SEPTA Sustainability Program

The Southeastern Pennsylvania Transportation Authority (SEPTA's) **comprehensive Sustainability Program** encompasses the natural environment, healthy communities and workforce, and economic vitality.

SEPTA is particularly focused on social sustainability. Their efforts include workforce development, Diverse Business Enterprise (DBE) goals, reducing fares, transit oriented development, and sponsoring such offerings as **farmers markets at the stations** to provide the public with convenient access to healthy foods.

"SEPTA is dedicated to delivering safe, reliable, sustainable, accessible, and customer-focused public transit services, contributing to the region's economic vitality, sustainability, and enhanced quality of life."

- In 2010, SEPTA used its Strategic Business Plan process to incorporate Sustainability into their corporate mission and vision, and establish sustainability as a core value and focus area for the transit agency.
- The Business Plan also led to the 2011 adoption of the award winning "SEP-TAINABLE – The Route to Regional Sustainability," its first 5-year plan.
- Each of the sustainability plan's 12 goals and targets overlap with SEPTA's six strategic focus areas, and are an outgrowth of the five-year Strategic Business Plan. Combined, sustainability has shifted to the forefront of the organizational agenda.
- It has been particularly important to SEPTA to articulate transit as a regional imperative, with a heavy influence on the long-term economic sustainability.

Leadership

Leadership from the top is essential for garnering support to fund and implement sustainability. This section includes:

- Change Management Strategies that can be used by sustainability staff or transit agency leadership to engage the hearts and minds of the people in the transit agency; and
- Specific CEO Executive Order and Top Board Management Examples.

Change Management Strategies

Executive Orders and Board Management

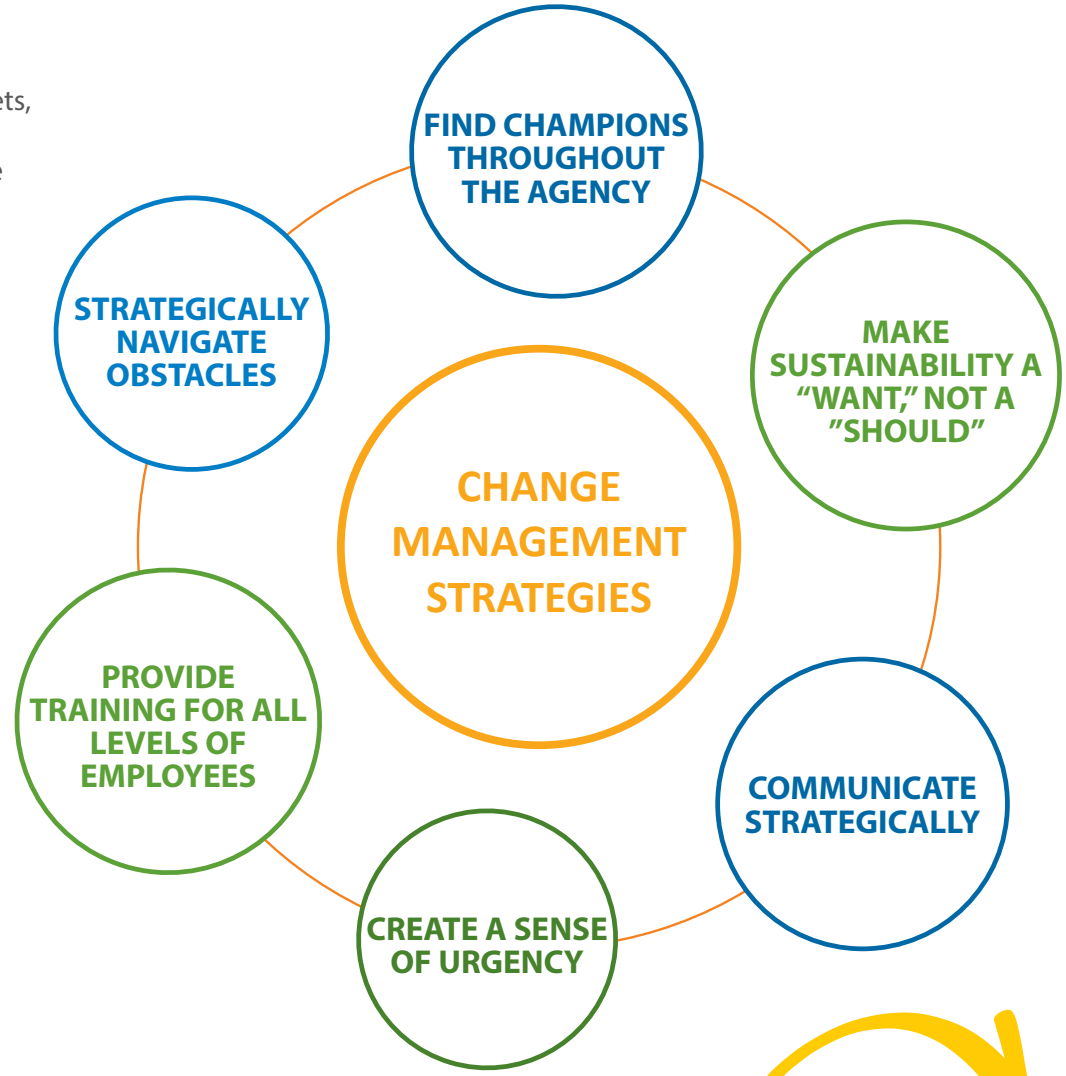
Change Management Strategies

Change Management for transit sustainability is essentially taking sustainability from being a conceptual set of actions a few people are tracking to being a vital part of the transit agency's work culture.

Beyond the mission statements and performance tracking spreadsheets, hearts and minds of people in the transit agency must be engaged. The focus of this section is the human element, which also fits into the Sustainability Routemap principles of **inspiring employees, intra-agency partnerships,** and **leadership.**

We have pulled the following strategies from leading change management research for both the private and public sectors; we've tailored them for the culture of a transit agency.

Click on a bubble to learn more about that strategy or click on the button to go through the strategies in sequence.



Strategically Navigate Obstacles

Sustainability leaders are likely to encounter resistance. Change management firm Prosci writes in their paper, *"Five Tips for Managing Resistance,"* that common staff resistance to change may include:

- Employees who expect more work as a result of the change
- Lack of resources or staff time to investigate the proposed action
- Fear that integrating change will slow down the work
- Employees who are highly invested in the current way of doing work
- Creators of the current way of doing work that will be changed

When assessing how to move an initiative forward, be proactive and specific about where resistance is likely to come from and the likely objections that drive this resistance. Figure out which obstacles are important to work through and which can be addressed later. One method to address these obstacles is to get the key participants together and empower them by listening to potential barriers. In any group, some participants will want to dig into details that don't need to be addressed early on. Facilitate the discussion to identify what resources would need to be secured to implement the change. This Routemap provides tools to navigate these obstacles: for example, **pilot projects** can be used to test ideas.

Find Champions throughout the Agency

In addition to those who hold formal positions of power it is important to identify leaders who are "influencers" in your transit agency. These are individuals who have influence related to their expertise, their network, or personal qualities that engender trust. They're the people folks check with to find out how to get something done. Talk to them about what you are trying to achieve and the opportunities you see. Ask them to be part of the team in looking for ways to integrate sustainability.

Build a "volunteer army." As you work with departments on sustainability and **conduct trainings**, you will find staff members who are enthusiastic and proactively come up with strategies to improve the way they do their work. It is important to be intentional about these interactions. Conclude conversations with a specific request for that person to be part of the "green team" (whether or not you have formal meetings) and share the transit agency's sustainability goals within their own divisions.

Create a Sense of Urgency

Find an initiative for your transit agency that is critical or time-sensitive. Examples could include a new funding measure, an extension of service, or a Board or council mandate. Work with leaders to incorporate sustainability measures into that initiative. Make decisions that reflect the sustainability policy is real and will be implemented. One opportunity is to identify and develop a pilot project that will make the change tangible. Find short-term wins and publicize them within the transit agency to create a sense of momentum.

Provide Training for All Levels of Employees

Change requires leadership from the top, and **training for all employees.** In addition, it is critical to engage mid-level managers. Mid-level and frontline staffers can make or break a change initiative.

Mid-level managers can hold staff members accountable for changing practices to implement the change. Build commitment, train and prepare managers and supervisors related to their role in a change. Once onBoard, managers and supervisors then conduct both group and individual coaching sessions to engage frontline employees. Prosci has found that the "right" resistance managers in an organization are the senior leaders, middle managers, and frontline supervisors.

Make Sustainability a "Want," not a "Should"

Translate why sustainability matters to your transit agency. Appeal to your transit agency's culture and sense of pride in how it does its work. For some transit agencies, the cost savings from reducing resource use may fit with the transit agency's agenda. Others will value improving the health of future generations. Staff members may be inspired by testing a new tool or equipment that lets their work be cutting edge, the best of their field. **When you talk to divisions in your transit agency, tailor sustainability to be about the division's business and what they do.** With the maintenance crew, start with "we need some ideas to improve diesel mechanics, fuel economy, and save money." Then translate how the ideas also help sustainability.

Communicate Strategically

Reinforce why sustainability is important to the transit agency. It is not enough to highlight one case study or address the transit agency's sustainability agenda at one Board meeting. The most successful transit agencies create very purposeful communications campaigns that explain and promote their sustainability agenda in their mission statements and policies, staff meetings, team retreats, special campaigns, and through posters and other internal communications vehicles. For example, the head of the transit agency can articulate the importance of sustainability and encourage personnel to present a sustainability initiative at quarterly management team meetings. In addition, a campaign to reduce resources can engage every employee.

Conclusion

These strategies focus on the human element of change in a transit agency. Case studies and examples of tools that transit agencies have used to implement these changes can be found in the Sustainability Routemap. You will also find other important content, such as performance metrics, workplan and performance evaluation language, and funding methods in the tool: it is important to integrate sustainability into the decision-making tools of your transit agency, as well as into the hearts and minds of employees.

Research on Change Management

Language and ideas for change management were summarized and tailored for transit agencies using project team professional experience and the following sources:

Aguirre, Deanne and Micah Alpern. "10 Principles of Leading Change Management." Strategy and Business 75 (2014). https://www.strategy-business.com/article/00255?gko=9d35b

Kotter International. The 8-Step Process for Accelerating Change eBook. http://go.kotterinternational.com/8-Steps-Process-Accelerating-Change-eBook/

National Cooperative Highway Research Program (NHRP). Managing Change in State Departments of Transportation: Scan 1 of 8 Innovations in Strategic Leadership and Measurement for State DOTs. October 2001. Accessed November 21, 2016. http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w39-1.pdf

Prosci. "Five Tips for Managing Resistance." Accessed November 21, 2016, https://www.prosci.com/change-management/thought-leadership-library/managing-resistance-to-change

Jennifer A. Golech, "Meeting Environmental Program Goals at U. S. Public Transit Agencies: A Study of APTA Sustainability Commitment". 2012. Applied Research Project for MPA at Texas State University, http://www.apta.com/mc/sustainability/previous/2012/presentations/Presentations/Golech,Jenn-Meeting-Environmental-Program-Goals.pdf

Specific Executive Orders and Top Board Management Engagement

Leadership from the top is essential to garnering support to fund and implement sustainability. This section provides examples of actions that transit agency executives and Board members have taken to emphasize the importance of sustainability and direct personnel to implement sustainability. Examples include an executive order from Sound Transit, how the Board champions sustainability at Roaring Fork Transportation Authority (RFTA), and guidance on the role of Board committees in sustainability.

Transit agency leadership's frequent, strong articulation of the importance of sustainability, (together with providing relevant successful examples) can be key to achieving buy-in from all parts of the transit agency. Build Board support by presenting them with key sustainability initiatives and accomplishments. Transit agency Board members who value sustainability can help advance resource requests and pilot projects. Request leadership from management and use top-down communication to advance sustainability.

Following are examples of how other transit agency executives and Board members have directed staff members to implement sustainability, and have communicated sustainability's importance to their transit agencies.

Diagram of manager-staff relationship in the context of sustainability guidance and implementation

Example: Sound Transit Executive Order #1

Example: Board Champions for Sustainability at Roaring Fork Transportation Authority

Example: Sound Transit Executive Order #1

- The Sound Transit Board approved an initiative directing the CEO to integrate sustainability practices and strategies throughout the transit agency.
- Subsequently, Sound Transit's CEO issued her first **Executive Order**, directing transit agency staff members to implement sustainability measures to the maximum extent possible, to strive for continual improvement, and to be accountable.
- In addition to issuing this Executive Order, The CEO included an update on sustainability targets in quarterly management meetings and frequently asked the Sustainability Program Manager to highlight sustainability accomplishments in management and staff meetings.
- This approach reinforced to top management the transit agency's continued focus on sustainability.
- The Sound Transit executive order is used as a tool for the Executive to direct staff members to incorporate sustainability.
- It is critical to identify ways your Executive can reinforce expectations on sustainability in management meetings in addition to an executive order.

Former Sound Transit CEO Joni Earl directed transit agency personnel to implement sustainability and strive for continual improvement.

Best Practice Example: Board Champions for Sustainability at Roaring Fork Transportation Authority

Assistant Planner, RFTA

Transit agencies **lacking a formal sustainability program** or policy can still work with leadership to protect the environment. **At Roaring Fork Transportation Authority (RFTA), an active Board raises new ideas, helps the transit agency lead, and directs staff members to prioritize time and resources for sustainability initiatives.**

An Active Board

RFTA is the second largest transit system in Colorado and the largest rural transit system in the U.S. The RFTA Board of elected officials represent the eight jurisdictions in its service area. During the most recent strategic planning process, staff members proposed inclusion of environmental and fiscal sustainability into **RFTA's mission statement.** When approached in these terms, the Board rapidly approved and set the pace for initiatives in alternative transit fuels, bike-share, the Rio Grande Railroad Corridor Rail-to-Trail, and the first rural BRT program.

Personnel are empowered to pursue sustainability improvements, knowing they will have Board backing. With a planning team of only two full time employees, the Board serves an important role to catalyze sustainability initiatives. For example, RFTA's Board, concerned with improving both energy independence and livability, requested information on how to reduce their dependence on diesel using alternative fuels. Planning staff discovered an opportunity to invest in a community solar farm via a regional partnership. The Board's established support for sustainability secured the backing of the CFO and the CEO within the brief timeframe available for procurement opportunity.

RFTA exemplifies how a rural transit agency can implement sustainability.

Board Oversight Responsibilities for Sustainability

A transit agency Board typically approves the sustainability policy, which directs the agency to develop and implement a sustainability plan. For example, Société de transport de Montréal (STM's) Board of Directors requires project reports to provide information on how the project meets the agency's Sustainable Development Policy. See page 9-11 of **this document.**

The **Ceres website** provides guidance on the function of Board committees on sustainability. This resource provides information on how to work with your Board on its role in sustainability. (Note that while not tailored to transit agencies, the information is applicable.)

Intra-Agency Partnerships

Fostering partnerships to advance sustainability allows for a more collaborative program that has buy-in throughout the transit agency. One way to create partnerships is to form an internal transit agency steering committee, which allows an array of departments to provide input into and guide sustainability efforts.

Intra-agency Steering Committees and Staffing Sustainability

Sustainability Committees can be efficient and effective as intra-agency, **matrix-managed teams.** It is possible to assign employees to a sustainability team without removing them from their regular organizational positions. A matrixed team brings together a multi-disciplined group of diverse personnel to steer sustainability actions toward success. Depending on the goal, teams will source people from select departments, who can band together to solve a common problem or achieve a goal through collaboration.

Intra-agency teams are more successful if participation in the committee and implementing **sustainability actions are included in departmental workplans.** It is also important that participating staff have adequate accountability to accomplish goals and targets. The supporting sustainability personnel will need **leadership and coalition building skills** to motivate the team to achieve the goal.

Internal Agency Steering Committee Models

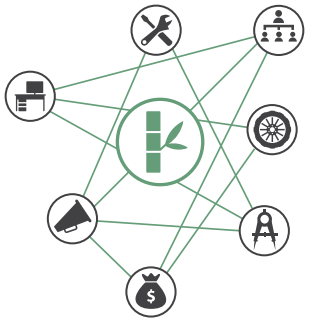
Internal agency steering committees allow for typically siloed departments to collaborate with one another to advance sustainability in a way that considers the implications for multiple components of the transit agency. This section identifies ways in which transit agencies can break down internal silos, establish and engage committees, effectively place sustainability staff members within an organization, and enable sustainability leads to use matrix management to work with departments outside of their management structure. Examples include Sound Transit's sustainability steering committee and King County Metro's technical review committee.

Sustainability Staff Should Have Cross Agency Authority

Place transit sustainability personnel in a director's office that has an overarching role across the whole transit agency. Sustainability staffers located in just one department may experience difficulties working across siloed departments. A position in the director's office also provides sustainability personnel with access to decision makers who can allocate resources and assign responsibility for actions. Furthermore, it gives sustainability staff members a connection to the public relations personnel to market success and communicate ideas. If staff members cannot be placed in a director's office, sustainability personnel particularly need to use all other ideas in this tool to create cross-agency partnerships and accountability.

Example: Sound Transit's Effective Staffing of Steering Committees

Example: King County Metro Internal Agency Technical Review Committee



Best Practice Example: Sound Transit's Effective Staffing of Steering Committees

Sustainability Manager, Sound Transit

Interagency Challenges

Sound Transit's sustainability initiatives often bridge between multiple departments, while its sustainability staff is located in one group. An appropriate committee structure can contribute to ownership across the agency, adapt to changes in personnel and agency goals, as well as identify and implement evolving programs.

Roll- It Out and Build Consensus - A Broad-Based Committee

In order to initiate and roll out an agency-wide ESMS in 2003–2004, Sound Transit established a Steering Committee. At the time, the ESMS Steering Committee's goal was to engage all divisions, build ownership, define roles, and begin to set goals for the agency's first sustainability plan. To attain the broadest reach across the agency, the Steering Committee was comprised of interested staff who had volunteered from various departments including positions from lower level administration to directors.

Decision-Making - A Streamlined Interdepartmental Executive Committee

Ten years later the committee was adapted to address a different set of circumstances. The ESMS Sustainability Steering Committee reorganized to focus on budgeting and decision-making. A charter was created to formalize participation, and each of the agency's Executive Directors appointed a senior manager or director to represent their department on the committee. These representatives from the planning, operations, design and construction management and procurement and legal departments are empowered to make decisions on behalf (and in consultation with) each Executive Director. This enables the Committee to make decisions in a timelier manner and has encouraged committee members to champion sustainability in their departments and to seek out opportunities for continual improvement and being accountable for their Division's annual sustainability workplan. Sound Transit includes participation in the ESMS and sustainability performance in the **performance evaluations** for all committee members.

Target Working Groups

Initially, information-gathering technical work related to sustainability initiatives was performed and managed by a set of ad-hoc agency-wide working groups made up of technical staffers (as approved by the ESMS Committee). These groups focused on specific sustainability targets such as energy and water efficiency and green building. Some of these groups have disbanded as the agency has added staff capacity in these arenas. However, sustainability staff still assemble short-term working groups to focus on accomplishing annual sustainability targets.

An effective steering committee can get all stakeholders to commit to their role in achieving an objective.

Best Practice Example: King County Metro Internal Agency Technical Review Committee

Sustainability Program Coordinator, King County Metro

Intra-Agency team for Electric Bus Procurement

To meet County climate and public health goals (adopted in 2016), the King County (KC) Council directed KC Metro to prepare a feasibility report on the **transition to a carbon-neutral fleet.**

In addition to its cost implications, a carbon-neutral fleet affects many departments (i.e. service and reliability, facilities for charging infrastructure, and bus operator training). To holistically evaluate the implications of electrifying the bus fleet, KC Metro assembled an internal agency technical review committee comprised of personnel with subject matter experts from a wide range of departments.

A professionally facilitated framing workshop built consensus for an opportunity statement and developed a long-term goal for a carbon-neutral fleet. The consensus statement guided a working process overseeing a consultant analysis.

Over the course of the process, the mixed committee brought forward multiple angles on the battery-bus procurement. For instance, vehicle maintenance felt that a larger fleet would be easier to maintain than a micro-fleet of two or three buses, while service delivery had greater reservations about purchasing large volumes of vehicles before testing a few.

Departments not typically included in fleet decisions, such as human resources and operations, were also enabled to voice their concerns. The committee's inclusivity led to thorough vetting and, ultimately, high levels of buy-in. This in turn led to more ambitious fleet electrification and emission reduction goals. **KC Metro has now authorized the largest procurement of electric buses in the United States.**

King County Metro's All-Electric Bus

Inspiring Employees

Inspiring and engaging individual employees allows transit agencies to tap into innovative ideas throughout the organization and fosters a culture that values sustainability. This section details ideas on how transit agencies have engaged internal personnel on sustainability and on employee training and education. **Workplan and performance evaluation language** can also be used to define employee roles and responsibilities.

Engaging Internal Staff on Sustainability

This section explores innovative practices that transit agencies have used to engage internal staff members, along with ways to inspire maintenance employees to innovate on sustainability. InterCity Transit's and Metrolinx's employee engagement efforts are used to identify key elements of success.

Engaging Internal Staff

Employee Training and Education

Training, education, and marketing reinforce why sustainability is important to the transit agency. The most successful transit agencies create very purposeful communications campaigns that explain and promote their sustainability agenda in staff meetings, team retreats, special campaigns, and through posters and other internal communications vehicles. This example shows how **the head of the transit agency can articulate the importance of sustainability** and encourage personnel to present a sustainability initiative at quarterly management team meetings. In addition, **a campaign to encourage efficient use of resources can engage every employee.**

Example: Hampton Roads Transit Training, Education, and Marketing

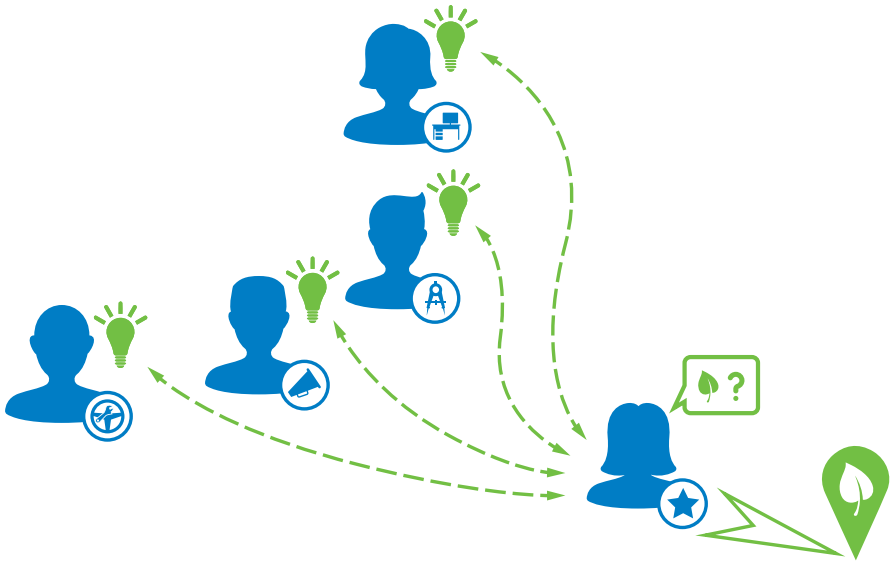
Engaging Internal Staff

Transit agencies can be complex organizations. There are administrative, planning, operational, engineering and technical staff, as well as front-line, and maintenance workers. Typically, blue collar jobs comprise 80 to 85 percent of all transit agency jobs, and 95 percent of those employees can sometimes be union members.

Since transit work is structured around the need to meet a schedule, maintenance workers may not be aware of larger transit agency initiatives and goals and how their daily behavior can have a real impact.

Steps to engage internal personnel, with focus on maintenance and operational staff:

- Role-Specific Information: Communicate the value of sustainability in terms that make sense for each person's role.
- Tap into existing programs: include environmental performance training in existing safety training programs.
- Align sustainability campaign to organizational values – make sustainability a "want" not a "should."
- Provide rewards for exceptional behaviors.
- Build ownership by allowing individuals to craft solutions to problems, and create a platform for these solutions to rise through the chain of command – such as Intercity Transit's weekly meetings and incentives or Metrolinx *Ideas at Work* campaign.



Leadership at all levels can solicit feedback on sustainability ideas from their staff members and then discuss these ideas with a sustainability manager, speak to their supervisors about it, or simply implement them.

Example: Intercity Transit O&M Engagement

Example: Metrolinx "Ideas at Work"

Best Practice Example: InterCity Transit O&M Engagement

Maintenance Manager and Sustainability Manager, InterCity Transit

To achieve its ambitious sustainability goals, InterCity Transit in Olympia, Washington, emphasizes the expertise, and creativity of its biggest resource – its operations and maintenance staff. InterCity Transit achieved International Organization for Standardization (ISO) 14001 certification in 2014, and a gold rating by the American Public Transit Association (APTA) Transit Sustainability Commitment in 2012.

Empowering Maintenance Staff

Intercity Transit's Maintenance Manager has worked to **create a climate that asks staff members to continually re-evaluate ongoing work processes.** With their mantra "assume nothing, test everything," the maintenance manager tasked his staff, in pursuit of fuel conservation, to take "an objective, fresh look at every single thing we do in Maintenance." In response to the conservation challenge, maintenance personnel advanced an array of tweaks, overhauls, and adjustments to the bus fleet from ideas on tire pressure to fuel additives and lubrication. The results are clear: InterCity Transit drove an additional 64,000 miles in the most recent twelve-month period, and used 4,300 less gallons of fuel, when compared to the previous 12-month period. An additional result of this approach is a shop where critical evaluation becomes the norm, and where new ideas can be discussed.

Ideas to increase sustainability often come from operations and maintenance personnel with practical knowledge of vehicle maintenance and common operations practices.

Celebrate and Reward Staff

InterCity Transit **uses incentive and recognition programs to demonstrate the high value the Authority places on innovation.** Employee recognition programs for sustainability include the opportunity to earn merit-based vouchers, also known as "bonus bucks," that can be cashed in once a year. Additionally, large video monitors run stories on employee successes, as well as posting pictures of the employee. The General Manager signs an individual letter of thanks to each person. Coworkers and managers write each other up for innovation and excellent customer service.

Tailor Information to the Division

InterCity Transit makes sustainability work for maintenance and operations staff members and not the other way around. The Sustainability Manager knows they need to make the work about the division's business and what they do. Maintenance thinks of energy efficiency. The sustainability manager and the maintenance manager start with "We need some ideas to improve diesel mechanics, fuel economy and save this place some money." Then they translate how the ideas generated also help sustainability. Operations think about efficient fuel usage as well as safety, service, and schedule. Maintenance and Sustainability start by using that focus first--as driving smoothly helps passenger comfort--then they explain how it also saves fuel.

Tap into Existing Culture and Programs

InterCity transit has a culture of continual improvement and the Sustainability Manager ties into that culture. InterCity Transit supports training and that training helps divisions know about new technology and methods. The sustainability manager would rather divisions hear about renewable diesel from their peers, so she herself facilitates research by calling around to other transit agencies.

Establish Expectations

The maintenance manager notes, **"Each employee receives training on our environmental and performance goals from the start.** Any time there is a change to a policy governing our efforts, it is brought to the attention of every Maintenance employee, for which they sign to verify they understand the expectations of the change." Maintenance staff members are held accountable with policy enforcement, tracking incidents, and are provided with scheduled refresher training to ensure all keep the importance of our Sustainability efforts at the forefront of how they conduct daily business.

Monitor, Understand, and Respond

In addition to annual required regulatory training, InterCity Transit relies on operational audits (via employee observation or interviews) to **uncover if a process is understood, is being followed, or simply isn't working.** If results are poor and employees are not following a process (to support sustainability efforts for example), the team will write up and issue an opportunity for improvement or non-conformance letter, with a root cause analysis . The observation is not personalized, but is focused specifically on process improvement. As a next step, the affected department might hold refresher training for all, or update a policy/ procedure that is no longer working. Also, this information is highlighted by the Maintenance Manager at weekly shift team meeting.

Best Practice Example: Metrolinx "Ideas at Work"

Organizational Development Senior Consultant, Metrolinx

Ideas at Work helps to motivate employees in a public service organization where the hierarchical work environment, a low tolerance for risk, and a high safety culture can stymie innovation. The platform has given Metrolinx a forum not only to gather input from its staff members, but also to learn how to shift the transit agency culture towards an expectation--even an investment--in positive change.

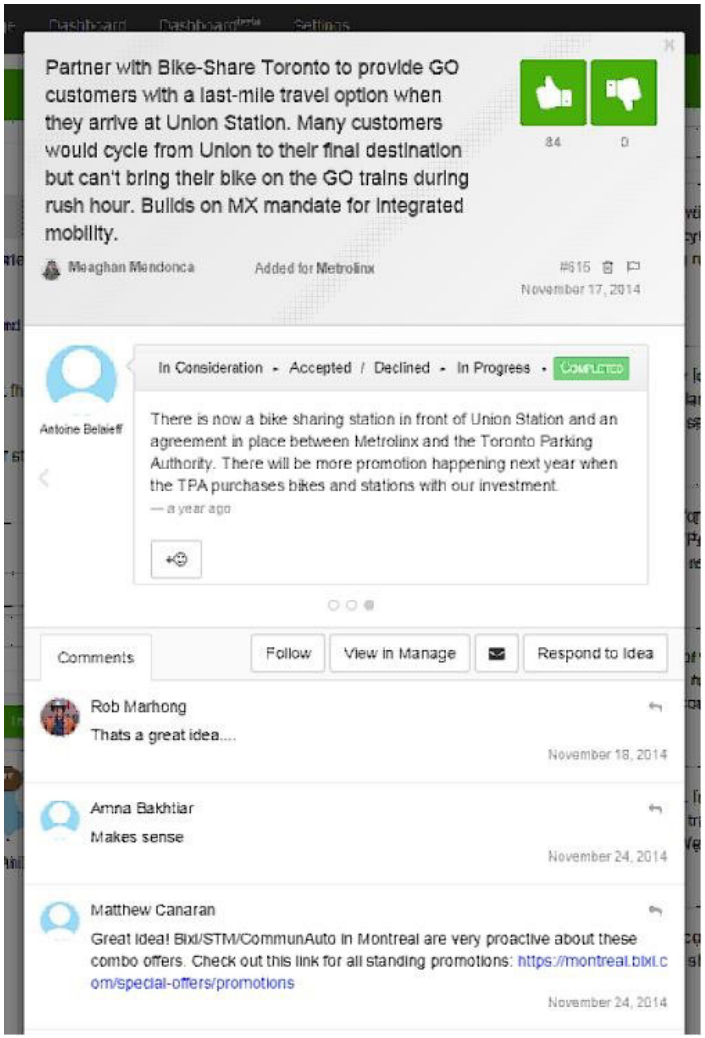
Metrolinx was created in 2006 to improve the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area. Its mission is specifically to transform the region, improve mobility, and ease congestion. Metrolinx is a complex transit agency, made up of many operating partners, and the *Ideas at Work* program was initially generated from an employee survey as a way to ensure that the insights from operations personnel were being heard.

The question: how best move the ideas from the front line, and on-the-ground employees up the pipeline?

Process

The *Ideas at Work* platform began as a paper survey. Not all of Metrolinx's employees had access to, or wanted to participate online. However, with the advent of social media platforms and smart phones the transit agency moved to a digital platform. Metrolinx collaborated on a pilot project with a local media and software provider, Soap Box, **to create an online crowd-sourced platform for idea generation.**

Like other social media platforms, *Ideas at Work* asks individuals to create an online profile, and allows them to post an idea. After the posting, peers vote--a thumbs up or thumbs down. A threshold is set



Screenshot of "Ideas at Work" social media platform developed by Metrolinx and SoapBox

(initially 25, quickly moved to 50) of "thumbs ups" to receive an official response. **Once the idea gains enough votes, it is transferred to a set of moderators who help review and adopt ideas, investigate, and circle back.**

From the platform's beginning, Metrolinx reports an unprecedented enthusiasm. Over 60 percent of their employees have contributed.

Key Takeaways

While *Ideas at Work* began with good intentions, and a high level of support from senior leadership, **the challenge for Metrolinx is now to adequately manage staff expectations.** The program was successful, capturing the passion and ideas of transit agency employees and creating an expectation of change. While this outcome is certainly positive, the risk is that senior leadership may not respond quickly enough. Staffers now work to ensure that they have the resources for the right level of response. It is important that the innovator (the employee) understand the time it might take to implement the changes–particularly within a complex, high-scrutiny environment of risk and shared decision-making.

Additionally, the *Ideas at Work* program was initially undirected, open to all ideas large and small. The Organizational Development Senior Consultant, describes how **in the platform's next phase, ideas will be funneled into specific business practice areas,** creating linkages and moving the transit agency forward in its priority areas.

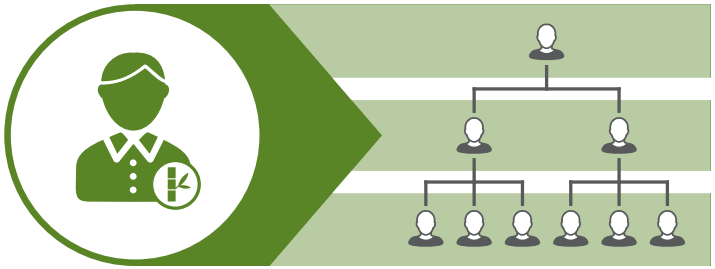
The team is also testing how posted ideas can be more easily integrated and vetted in consistent ways. The team will sort ideas into a monthly report by practice area, enabling appropriate divisions to self-select how to prioritize them. The broad success of the program has also resulted in a need to increase resources for idea management from only .5 full time employees to 1.5 full time employees.

Metrolinx Commuter Rail

Best Practice Example: Hampton Roads Transit Sustainability Training, Education, and Marketing

To raise awareness among employees about Hampton Roads Transit's (HRT) environmental management system **(EMS)** and sustainability program, the transit agency implemented employee training and education efforts, along with a marketing campaign focused on HRT's sustainability efforts.

To train and educate employees on HRT's sustainability efforts, **the transit agency developed an Annual Training Plan and a Communication Plan.** HRT began EMS employee awareness training in 2009, and as of 2013, had engaged all 900 employees in the training. The trainings comply with the International Organization for Standardization **(ISO) 14001 standard** and are routinely delivered through new employee orientation. **Employees also receive EMS wallet cards** with their employee identification badges. The cards include HRT's environmental policy, instructions for viewing EMS documents and procedures, and contact information for sustainability questions and environmental emergency reporting.



To ensure success, it is critical that personnel at all levels are engaged in the sustainability program.

Go Green HRT

In addition to implementing training and education, the EMS Team collaborated with the marketing department to create a sustainability marketing campaign. The group developed the sustainability motto and logo HRT Creating Accessible Regional Sustainability (CARES) and launched a **sustainability campaign named Go Green Go HRT.** The campaign is primarily composed of four initiatives, including:

- **Print Green,** a policy for two-sided, non-color printing, use of paper made of 30 percent postconsumer recycled material, and increased use of electronic as opposed to printed documents
- **Drink Green,** a policy eliminating Styrofoam cups and plastic water bottles and encouraging use of reusable cups and mugs
- **Pitch Green,** a single stream recycling program for all HRT facilities
- **Switch Green,** an energy conservation policy for lighting replacement, installing restroom lighting motion detectors and timers, turning off lights in rooms when unoccupied, and turning off computers and monitors on nights and weekends

In addition to these initiatives, Go Green Go HRT includes outreach such as facility and work area sign postings, articles in a biweekly employee newsletter, and posts on the employee internet and the public website.

Resourcing

This section describes how to secure resources to help run a sustainability program, including staffing, funding, pilot projects, and a Sustainability and Return on Investment (S+ROI) Calculator.

Dedicated Resources for Sustainability Staff

The location of sustainability personnel within the organization significantly impacts the amount of influence they have as well as what they influence. This section uses InterCity Transit's experience to investigate the most effective locations for sustainability staff members and how sustainability leads can use matrix management to work with departments where their influence is indirect.

Staffing Sustainability

Funding Mechanisms to Support Sustainability, Including Innovation Funds, Consultant Funds, and Sustainability Funds

Transit agencies often lack dedicated sustainability funding. This section investigates ways in which transit agencies can overcome this barrier and fund sustainability efforts, including innovative funding mechanisms and steps that are needed to set up these mechanisms. In addition, **integrating sustainability into budget decisions** provides information on how to make sure sustainability is prioritized in agency budgets and decision making.

Funding Mechanisms

Using Pilot Projects to Advance Sustainability Programs

Pilot projects can be employed in innovative ways to test new technologies and practices, thereby advancing sustainability programs. Transit projects, whether service extensions or station renovations, can run into barriers implementing sustainability ideas, particularly when these ideas alter maintenance practices and introduce risk. Industry leaders use pilot projects to test ideas. Designating a new idea as "just a pilot project" can overcome initial resistance and be used to evaluate longer-term changes. For example, Société de transport de Montréal (STM's) **program to reuse retired train cars** began as a pilot project. This section looks at how the TriMet Portland Milwaukie Rail Line project supported sustainability and overcame resistance.

Example: TriMet PMLR

Quantifying Costs and Benefits

The real cost of public transportation is lower than you think. This section includes a new calculator tool to help you estimate costs and benefits.

Quantifying Costs and Benefits

Staffing Sustainability

While it is important to have dedicated team members, sustainability leads often use matrix management to work with departments that are not under their management structure. The success of the program is greatly influenced by where the staff is placed in the organization, and by what skills they have to **oversee the work of multiple departments.**

- Sustainability personnel located in one transit agency department tend to have a hard time breaking down silos. Ensure that such staffers can access an appropriate level decision maker who can allocate resources and assign responsibility for actions. When transit agencies dedicate staff members to sustainability, ideally such staffers will be located at a level that has an overarching role across the whole transit agency and a high level of authority.
- Sustainability requires information management. Ensure that staff members have access to staff support for tracking and analyzing metrics and documenting (Environmental and Sustainability Management System) ESMS requirements.
- Sustainability requires both technical literacy and leadership and persuasion skills.
- A combination of strategic thinking and the ability to build relationships helps establish rapport at all levels, especially zeroing in on where the change can happen.
- A successful change agent values opinions and is not afraid to challenge ideas.

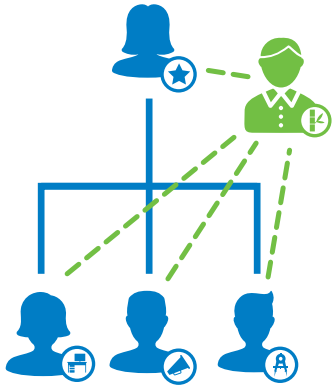
Best Practice Example: InterCity Transit Sustainability Program

Sustainability Manager, Intercity Transit

InterCity Transit evolved from an informal, employee-driven program to a formal one, achieving International Organization for Standardization (ISO)14001 ESMS certification.

When the sustainability program was formalized, Intercity Transit hired a Sustainability Manager positioned as a direct report to the General Manager. As a straight conduit to the General Manager, departments have been responsive. The Sustainability Manager also has access to Managers with decision-making authority, and the ability to assign tasks and allocate resources.

In addition to receiving leadership support from the General Manager, InterCity's Sustainability Manager builds support from the ground up. The Sustainability Manager has tapped into InterCity Transit's culture of continual improvement and tends to focus more on topics that resonate with staff members. When working with departments, the sustainability manager translates sustainability directly to the work they do. For example, Maintenance thinks of energy efficiency. The sustainability manager and the Maintenance Manager start with "we need some ideas to improve diesel mechanics, fuel economy and save this place some money". Then they translate how the ideas also help sustainability.



The sustainability manager receives support from the general manager while building support from the ground up.

Funding Mechanisms

Transit agencies often lack dedicated funding to implement sustainability initiatives, and therefore, despite long-term savings, are unable to obtain funds to make the initial investment. Innovative funding mechanisms help to support sustainability initiatives. Testing new practices and adopting those that are successful can reduce transit agency costs and advance their sustainability goals. However, project budgets are relatively rigid and are typically created well in advance based on established practices, leaving little room to **incorporate and test new ones.**

Funding can come from the energy savings of the project. One innovative idea comes from David Bell of Siemens. "I start by asking what Return on Investment (ROI) will be approved by transit agency leaders. Then I can package items with 3-year ROI with investments in items with longer ROIs that have sustainability benefits. When the whole package meets the transit agency's requirements, more projects can be financed."

Example: WMATA Sustainability Lab

Example: Green Revolving Funds: An Introductory Guide to Implementation and Management

Example: Chicago Transit Authority (CTA) Green Grants

Additional Resources

Value Capture - TCRP Report 190
Guide to Value Capture Financing for Public Transportation Projects

Public Private Partnerships - TCRP Report 191
Public Transportation Guidebook for Small- and Medium-sized Public-Private Partnership (P3) Initiatives

State Resources - US Department of Energy
Database of State Incentives for Renewables & Efficiency (DSIRE)

Partnerships with Energy Service Companies - US Department of Energy
Energy Savings Performance Contracts for Federal Agencies

Best Practice Example: WMATA Sustainability Innovation Lab

Sustainability Director, WMATA

The Washington Metropolitan Area Transportation Authority (WMATA) created the Sustainability Lab (Lab) to provide **budget flexibility and program development support to test new technologies and processes.** WMATA's Sustainability Lab awards from $500,000 to $1 million for pilot studies and programs. WMATA estimates that Lab projects will save $700,000 in operating costs from 2014 to 2019, and saved over 400,000 gallons of water and over 1.6 million kWh as of 2016. The Lab has also empowered WMATA's staff to realize the projects they'd long wanted to do, pushing the transit industry forward by trying new technologies and developing new industry best practices.

Identifying Potential Projects

A project manager identifies a new practice or need for a study and creates a proposal summarizing costs and impacts. With significant interest in exploring new technologies, the Lab receives a steady stream of project proposals. "We have lots of people who are very dedicated to their professions, who had a wealth of projects built up that they wanted to do," said WMATA's Director of Sustainability.

The Lab explores pilot projects implemented by other transit agencies relevant to WMATA. After the Southeastern Pennsylvania Transportation Authority (SEPTA) installed wayside energy, Lab staff members visited and spoke with SEPTA's traction personnel. The Lab then met with WMATA's traction power lead to determine whether it was a project they would like to pursue, and whether it was a good fit for WMATA. The Lab embraces a collaborative process, aiming to foster a sense of ownership in the project managers. As the director put it, "It helps people feel proud of what they're doing, and there's a lot to be said for that."

Evaluation

The project manager coordinates with the transit agency budget office to quantify the return on investment (ROI), and coordinates with sustainability personnel to identify additional benefits. The Lab evaluates the proposal based on ROI, sustainability, and other benefits, and whether the practice can be implemented agencywide. The most important benefits to WMATA include safety and energy, water, and labor savings, which together compose a significant portion of the transit agency's expenditures. The more benefits a project generates, the longer the ROI can be. For instance, if a project has minimal impact on customer service or safety and lacks any other co-benefits, it should have a payoff of 3 to 5 years or less. However, remote monitoring of diesel maintenance-of-way equipment was approved despite a relatively long ROI of 5 to 7 years, as it not only reduces diesel usage, but also allows for use-based instead of time-based maintenance, reducing labor costs and improving safety, and enables the transit agency to better understand the underlying cause of accidents.

Piloting a Project

If a proposal passes Lab evaluation, it is approved by the operations and budget offices. Projects are funded for 1 year, with subsequent option years that are contingent on the Lab's funding. Once approved, the Lab provides procurement and program development support needed to advance the components of the project that are outside of the business as usual project needs.

During implementation, the pilot's project manager collects data on various metrics (e.g., electricity or water consumption) in order to track the effectiveness. The Lab processes this data to quantify cost and resource savings and determine the feasibility of scaling up the project for systemwide implementation.

Reception

The Lab has been highly effective in facilitating pilot projects. Projects have included studies (e.g., solar studies, regenerative braking studies, energy audits) and implementation projects (e.g., garage lighting). Some of the most successful projects include implementation of new track switch heaters; found to be more efficient and easier to install, the replacement of station diesel generators with solar power generators (found to be less carbon- and labor-intensive and are quieter); and remote monitoring of the maintenance-of-way fleet. The Lab has also created an awards program to incentivize and recognize project managers who take on projects with particularly stellar ROIs and sustainability impacts.

Lessons for Starting Your Own Lab

WMATA's experience suggests:

- Bringing together stakeholders (such as budgeting, operations, and sustainability) early on in the process is important to generate get buy-in.
- Early project successes are vital; the first few projects will be highly watched by the transit agency. They should have short ROIs, significant benefits, and be delivered on time.
- The ability to conduct a transparent evaluation process with lifecycle analysis is critical to broad organizational support.
- To identify projects, enable both tapping into internal experts and identifying best practices from other transit agencies to produce a robust set of options. A lot of seeding of concepts must be done, and some may need to be seeded more than once to gain traction.

Example: An Introductory Guide to Implementation and Management of Green Revolving Funds

This **guidance document** explains the purpose and structure of green revolving funds (GRFs), methods to establish a successful GRF, and common obstacles to implementing GRFs.

How will it help?

This resource will answer the following questions:

- What innovative funding mechanisms are transit agencies using that can be transferred to other transit agencies?
- What steps are needed to set up such a funding mechanism?

When should I use it?

Use this resource when you want to:

- Find out more about GRFs and why they are valuable
- Get step-by-step guidance on designing, implementing, and managing a GRF
- Determine how to establish a successful GRF based on your institution's context
- Identify common barriers to successful GRF implementation and best practices for overcoming them

Green revolving funds provide an economically sustainable way to implement environmental sustainability.

Example: Chicago Transit Authority (CTA) Green Grants

The CTA **Green Grants page** lists grants to which it has applied to advance sustainability initiatives. The page lists the:

- Proposed project
- Amount requested
- Funding source
- Grant award status (whether it was fully, partially, or not awarded)

How will it help?

This resource will show what innovative funding mechanisms transit agencies are using that can be transferred to other transit agencies.

When should I use it?

Use this resource when you want to:

- Identify sustainability-related grants to which transit agencies can apply
- Identify projects that can be implemented with grant funding

Best Practice Example: TriMet Portland Milwaukie Light Rail (PMLR)

Agency Architect, TriMet

The **PMLR project** sought to vet new sustainability strategies, pilot those strategies with promise, and ultimately institutionalize and incorporate the most successful.

Highlight Opportunities

At the outset of TriMet's Portland Milwaukie Rail Line (PMLR) in 2009, the team (TriMet's Director of Capital Projects and transit agency managers) **agreed to do things differently.** Early on in the preliminary design phase, TriMet held a professionally facilitated workshop to generate a broad range of triple bottom line (social, environmental, and financial) opportunities for the project. The Sustainability Workshop required participation from all Divisions involved in project design, delivery, and operations: operations maintenance, facilities maintenance, landscape, electrical, structural, architectural, and planning. Over a 2-day period, participants vetted ideas, discussed priorities, and collectively prioritized the top strategies for advancement. The result was intra-agency buy-in on 28 potential sustainability strategies that would be supported and tracked through project design, construction, and operation.

Lay the Groundwork to Pilot Ideas

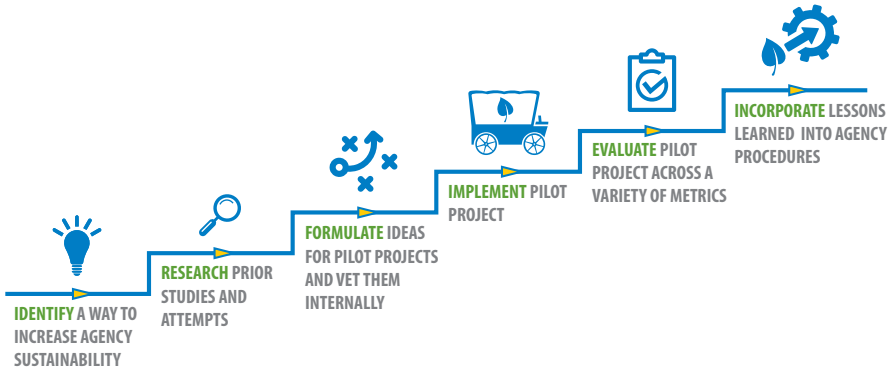
The project included a $250,000 Sustainability fund that helped to turn the good ideas into pilot projects. For specific initiatives, the project budget was also extended with supplementary grants, matches, and partnerships.

Piloting a Smart Irrigation System:

One of the financial sustainability elements discussed in the initial workshop was to find ways to help crews more successfully maintain the system, while avoiding adding to their burden or costs. Landscape Maintenance Division explained that a smart irrigation system would help them know when the irrigation system is leaking and would let them respond to different irrigation needs when the weather changes. The project found that smart irrigation system cost more upfront, but it saved long-term maintenance costs and was included using the sustainability contingency fund.

Using the PMLR opportunity, Facilities Maintenance Division also looked at the potential to introduce eco-roofs. While eco-roofs were initially met with resistance from maintenance (as they require taking on maintenance practices at height), with leadership from the General Manager to pursue this strategy, facilities maintenance agreed to hire an outside maintenance contractor to maintain the eco-roofs.

In order to implement the pilots, the project team worked with Facilities Maintenance during the design and contracting phases to seek an exception to TriMet's existing design criteria and developed new equipment specifications. After project construction, TriMet is updating its design criteria, specifications, and business procedures manual to reflect lessons learned and standardize the irrigation system, eco roofs, and other pilot project strategies.



This diagram gives an overview of how a pilot project starts as an idea and leads to an agency-wide benefit.

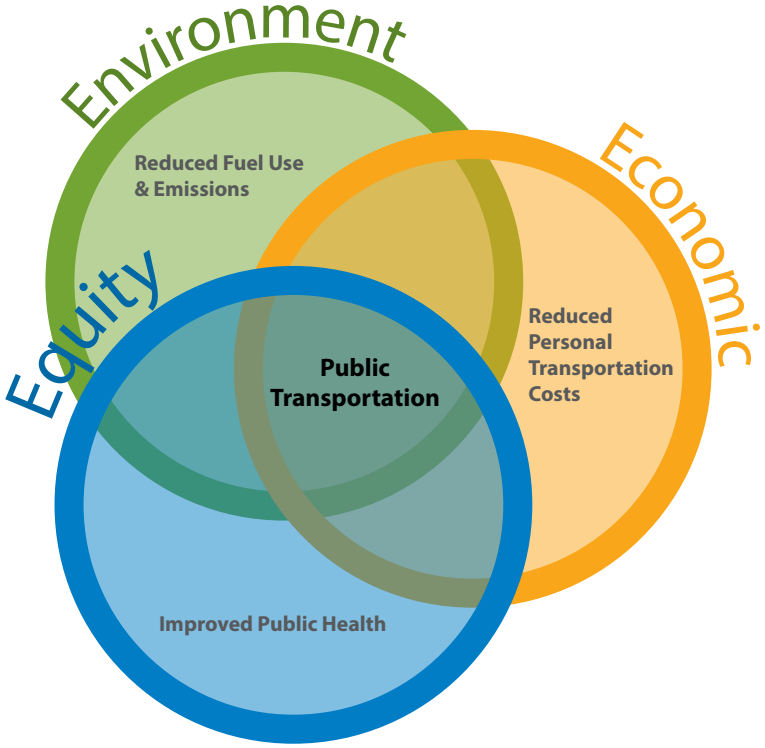
Quantifying Costs and Benefits

The real cost of public transportation is lower than you think. Building, operating, and maintaining public transit systems costs money. But the real cost of public transportation is offset by some important benefits, both monetary and otherwise. Building a strong sustainability program entails navigating conversations about the costs and benefits of public transportation projects—both internally and with regional stakeholders. The information provided in this section will help with both.

Quantifying Regional Benefits

Most transit agencies are challenged to articulate the benefits that their service provides to their region's stakeholders. Benefits vary depending on the stakeholder, their social and economic class, whether they ride transit, and/or any organizations they represent. While many of the benefits cannot be summarized or quantified neatly, a few can:

- Reduced Fuel Use and Emissions – Public transit service reduces driving, which in turn reduces use of fuel and emissions of air pollutants. Of those, reductions in greenhouse gas (GHG) emissions are straightforward to quantify.
- Reduced Personal Transportation Costs – Riding public transportation is generally cheaper than driving.
- Improved Public Health – Research studies show a direct link between higher public transit ridership and lower obesity rates and traffic fatalities.



Communicating those benefits requires, first and foremost, understanding the audience for the communication. Carbon reduction benefits won't resonate with stakeholders in many regions. Public health benefits may not resonate with the general public, but will resonate with government and nonprofit coalitions that promote public health.

Chicago RTA's **Ride On Campaign** is a good example of an innovative communication effort that targeted a specific audience: young professionals. The message? You'll waste less time sitting in traffic if you take public transportation to work.

Getting a Handle on Internal Costs and Benefits

Inside the transit agency, getting projects funded requires going through the transit agency's own budgeting processes. Most—if not all—transit agencies have separate budgets for capital and operating expenses. (Public funding streams, along with their individual stipulations, play some role in keeping these separate). As a result, transit agencies typically don't take a total cost of ownership (TCO) approach to financial evaluation. Unlike private agencies, which evaluate all of the cost factors and revenue streams associated with any potential project, public agencies are limited by the artificial constraints of limited view.

Getting past a simple financial analysis to examine the triple bottom line is another key challenge. Projects may reduce transit agency resource use internally, or provide environmental, economic, or social benefits to the region.

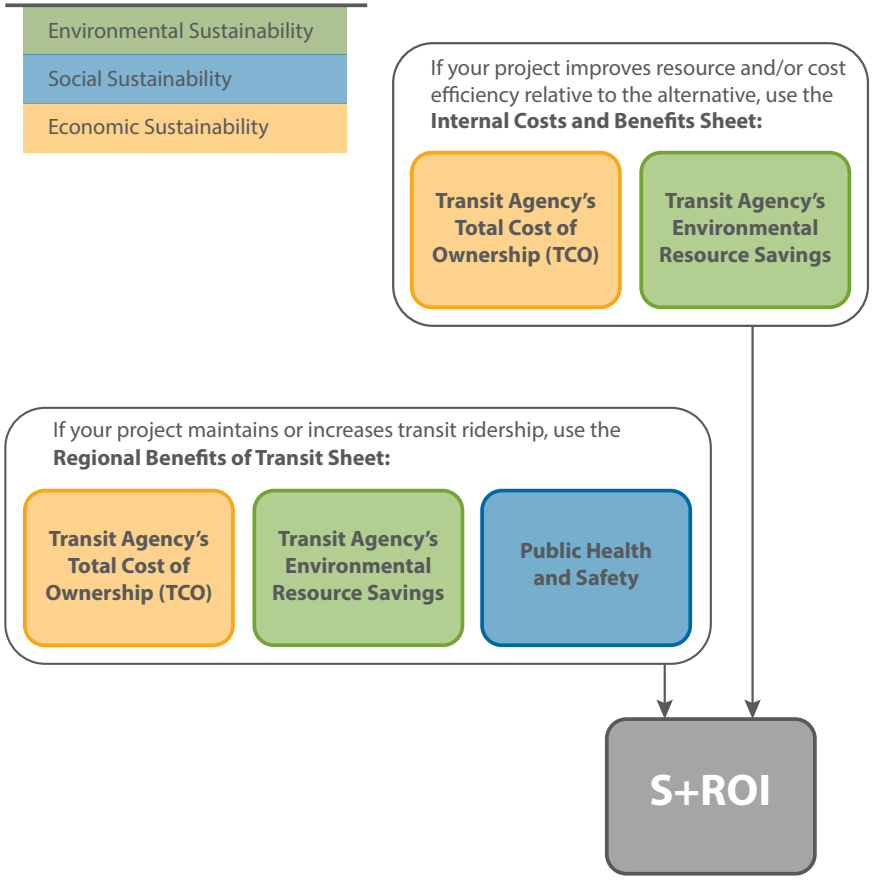
To get as complete a picture as possible for each potential transit project, we recommend conducting a **Sustainability + Return on Investment (S+ROI) analysis** for each.

The S+ROI combines:

- A Total Cost of Ownership (TCO) analysis – incorporating capital costs as well as operating and maintenance cost (or savings relative to the alternative) over the full lifecycle of the project
- Internal Transit Agency Resource Savings – including any reduction in use of energy and water or production of waste; cost savings associated with resource savings are factored into the TCO
- Regional Benefits of Transit – as described above

The S+ROI Calculator gives the most complete picture of quantitative costs and benefits for all transit projects that is available in an easy-to-use spreadsheet tool.

The Triple Bottom Line



The S+ROI Calculator was included in the original download of this routemap. If it has been lost, you can download the package again from this link:

Download the S+ROI Calculator

Decision-Making

Sustainability must be integrated into the goals, decision-making, and performance tracking of the transit agency. This ensures that sustainability is not a set of actions that a few people are tracking but is part of how a transit agency does its work. This section includes new information to help integrate sustainability into transit agencies' decision-making including: The leverage points to integrate sustainability, Sample Work plan and Performance Evaluation Language, a checklist of considerations to integrate sustainability into budget decisions, and sample procurement policies.

Leverage Points to Integrate Sustainability

This section helps the user determine key points in transit agency decision-making where sustainability should be incorporated.

Leverage Points

Work Plans and Performance Evaluation

This section outlines the importance of holding management accountable in implementing sustainability, and sample work plan and performance evaluation language for transit agency departments

Work Plans and Performance Evaluation

Integrating Sustainability into Budget Decisions

The objective of this topic is to help you get triple bottom line sustainability criteria included in your transit agency's budget decisions.

Integrating Into Budget Decisions

Procurement Policies and Specifications

This section examines the most common and challenging legal and regulatory barriers to implementing sustainable procurement, and methods that transit agencies can use to overcome them.

Procurement Policies and Specifications

Leverage Points to Integrate Sustainability

Typically, transit agency decision processes are not designed to consider sustainability. Prioritizing sustainability at key decision points allows transit agencies to meet their objectives. This section helps the user determine key points in transit agency decision-making where sustainability should be incorporated.

Too often, we write a plan and have the greatest intentions of implementing all of the metrics only to have these ideas fall flat because of politics, organizational culture, or lack of support from the top. Rather than having sustainability be perceived as a standalone program, competing for resources with other programs, sustainability teams see better results when they integrate sustainability criteria into transit agency decision-making.

Fair and transparent procedures to consider sustainability priorities can be used to guide **how a transit agency prioritizes its work. Include criteria for sustainability that encompasses specific performance metrics and methods to quantify reduction goals.**

- **Environment**
  - Support travel by more sustainable modes.
  - Incorporate green materials and practices.
- **Equity:**
  - Serve all communities equitably.
  - Meet equitable workforce development goals.
  - Identify any unintended consequences to disadvantaged populations as a result of this investment.
- **Economic:**
  - Respond to climate change impacts.
  - Identify future operations savings as a result of this investment, and what is the payback period?

When adapted to existing decision-making procedures, sustainability's triple bottom line accountability can bring forward long term, comprehensive and integrated solutions.

Overcoming Barriers to Success

Industry leaders caution that introducing new tools for sustainability that stand apart from other core agency processes are at risk of not being used. For example, a climate plan quarterly reporting matrix to track staff progress is less relevant, and will be less likely updated if targets are not incorporated into workplans or other quarterly reporting requirements. Criteria for sustainability must be inserted into existing decision-making methods, from budget evaluations to staff resource allocations.

Convincing agency leadership to modify their decision-making criteria is not a simple task. Often, fiscal sustainability and Board politics dominate the discussion. The following list contains common transit agency decision points. Use this list to prompt discussion:

Decision-Making Procedures

Decision-Making Procedures

Determine how decisions are controlled at your transit agency and find points to leverage sustainability.

- Interviewing top managers and executives about where they see opportunities to include the environment and equity into decision making.
- Working with the asset management process to incorporate sustainability into prioritizing state of good repair investments.
- **Interviewing maintenance department leads** on how current budget processes account for short to lifetime costs of investments. How can this help staff achieve their objectives, for example, helping the agency to better account for lifecycle costs of investments, energy efficiency, or integrated project delivery.
- Interviewing staff champions for sustainability about where they see opportunity to influence decisions and take action.
- Interviewing finance and budget personnel about how budget decisions are currently made. For example, finding opportunities to integrate sustainability into strategic plan implementation, capital projects, or state of good repair indices.

Discussion Prompts

- Performance metrics and goals
- Agency budget prioritization criteria
- Capital improvement project prioritization criteria
- Procurement policy and related specifications
- Division work plans and resource allocation negotiations
- Management briefing memo templates
- Staff performance evaluations
- Updates to design standards, guidelines, and specifications
- Use of third-party certifications or other pilots

Work Plans and Performance Evaluation

All employees in a transit agency need to understand how their work can contribute to the agency's sustainability goals. In most transit agencies with a performance evaluation system, supervisors set expectations at the start of the year for their employees that typically include what they do (implement project X) as well as how they do it (safety, equity, teamwork, customer service). To truly integrate sustainability into how the transit agency does its work, it must be translated into employee workplans and performance evaluations.

Sustainability can be listed as a common goal for all jobs at the start of the year in establishing workplans and performance measurement. Click on the icons below to find sample language for different positions found in a transit agency:

Labor Union Guidance

It can be challenging to include any new terms in performance evaluations of union employees. Transit agencies might need to start by including language for non-represented positions. After represented employees have a chance to see how it works for non-represented employees, they may be more able to negotiate language in future labor agreements.

However, many union members who work in public transit are reliable and effective supporters of sustainability. For example, if a climate action plan called for vastly increasing transit service, transit workers would be natural advocates.

Equity, Equal Opportunity, and Social Justice

These considerations are often already represented in performance evaluation criteria. As a result, the following language focuses on the environmental aspect of sustainability but is inclusive of triple bottom line sustainability.

Office-Based Staff

- Support goals and objectives of equal employment opportunity and disadvantaged business enterprise inclusion goals.
- Incorporate race and social justice in interactions with co-workers, customers, and in service delivery.
- Reduce electricity, water and paper use.
- Encourage reduced fuel use by suggesting alternatives to driving to events, carpooling, or driving the most efficient vehicle possible.
- Order supplies that reduce resource consumption and hazardous materials use.
- Recycle paper, cardboard, beverage containers, batteries, toner cartridges, etc.
- Plan events (food, drinks, site location) that reduce packaging and single occupancy vehicle driving.
- (IT) – Support management of data tracking to support sustainability goals.

Directors, Managers, and Supervisors

- Raise awareness and accountability as well as recognizing employee initiative towards accomplishing the transit agency's social, environmental, and economic sustainability goals.
- Incorporate sustainability into transit agency's mission and decision making tools.
- Establish performance metrics that include sustainability.
- Identify and resolve conflicts among departments within your purview and negotiate silo conflicts with peer departments that block progress in meeting sustainability goals.
- Maximize success in implementing Sustainability Action Plan and, Environmental Management System targets.
- Prioritize staff workplans and project lists for projects that implement sustainability action plan targets.
- Support staff involvement in interagency steering committees.
- Exhibit leadership in reducing your environmental footprint e.g. reduced resource use, etc.) to model expectations for all employees.
- **General office staff guidelines**

Human Resources

- Orient new employees so that they understand the transit agency's sustainability goals.
- Ensure that transit agency workplans and performance evaluations include sustainability.

Finance and Procurement Staffers

- Resolve silo conflicts among departments through alignment of departmental budgets.
- Use budget process to enforce transit agency policies.
- Develop a decision-making framework for prioritizing operating, program, and project budgets consistent with sustainability goals for the environment, equity, and fiscal sustainability.
- Consider total cost of ownership – incorporating long-term operations savings with initial costs.
- Pursue grant opportunities for resource efficiency and other sustainability actions.
- Develop and support green procurement policy and specifications.
- General office staff guidelines

Designers, Planners, Engineers, and Capital Project Managers

- Incorporate social, environmental, and economic sustainability in developing projects and plans.
- Exhibit leadership in testing new ideas and methods to reduce impact on the environment and enhance the customer experience.
- Consider third-party rating systems such as Leadership in Energy and Environmental Design (LEED) or Envision to incorporate best practice in project development and construction.
- Seek input from sustainability staff on methods to incorporate sustainability into project development.
- Integrate environmental awareness into project design including using sustainable materials, specifications, and regulatory compliance.
- Design reviews enforcing transit agency sustainability criteria.
- Communicate with operations and maintenance departments early to resolve silo conflicts between departmental specifications.
- Communicate among design team, environmental staff, contractors, and crews to minimize issues when the design is taken into the field for implementation.
- General office staff guidelines

Marketing and Public Outreach Staff

- Take initiative to promote sustainability achievements.
- Identify ways to reduce paper use in customer outreach.
- Promote awareness and accountability for sustainability (social equity, water quality and use, energy use, waste reduction, greenhouse gas emission reduction, etc.).
- Asses what your agency can do to **engage the community.**
- **General office staff guidelines**

Operations and Maintenance Staffers

- Incorporate social, environmental, and economic sustainability in developing projects and plans.
- Engage Resource Conservation and customer access to be fully incorporated into how work is scheduled and operated.
- Incorporate sustainability in selection of materials to replace infrastructure.
- Design and inspect work sites to comply with environmental regulations and follow any permit requirements.
- Use Best Management Practices; protect habitats, water quality, and air quality; minimize use of resources and generation of waste.
- Consider the environmental impact of cleaning materials purchased.
- Prepare needed materials and means to reduce driving to and from work sites.

Integrating Sustainability into Budget Decisions

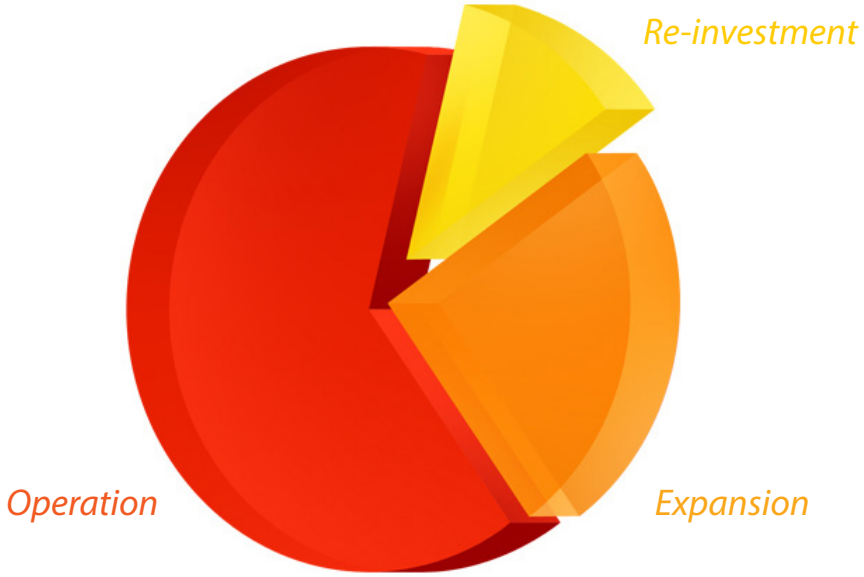
Including sustainability criteria in your transit agency's budget decisions helps to meet its equity, environmental, and economic goals. Simply put, what gets funded is what gets implemented.

Modify Existing Tools

Instead of developing a new budget prioritization tool for sustainability, it is important to get sustainability criteria inserted into the existing budget tools used by your transit agency. A new tool may be overlooked or personnel may not be aware it exists. **This strategy includes a checklist of common budget procedures that could include sustainability.** For example, you may determine that a Total Cost of Ownership tool is needed to make investment decisions. However, if the transit agency's standards do not at least refer to that new tool, it may not be consistently used. You can simply adapt the criteria in the existing tool to incorporate new goals or refer to new resources.

Typical Transit Agency Budget Structure

Budget decisions in transit agencies are divided among capital projects/expansion, operations, and re-investment. Budget decision-making processes often start at the department level, and advance to the top executives and Board. Ideally, budget decisions for a transit agency (both operating and capital) will already be prioritized using criteria that meet transit agency strategic goals. Project prioritization criteria tend to focus on overall critical need, fiscal and technical feasibility. Budget priorities may also be required to meet other goals such as safety, customer satisfaction, financial stability, and risk. Political will and interests usually factor into budget decisions.



A transit agency's priorities are reflected in its budget decisions

Checklist for Budget Decisions

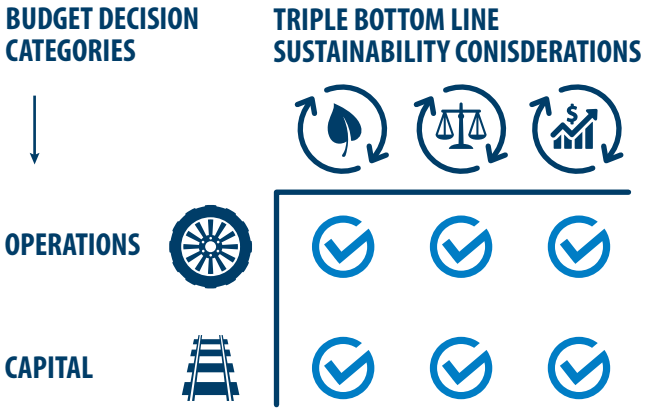
Criteria for sustainability include the three pillars of sustainability: environment, equity and economic/fiscal stability of the transit agency.

Work with your top management and budget director to include criteria for sustainability including:

- ☑ What are the future operations savings as a result of this investment, and what is the payback period?
- ☑ What impact will this have on our transit agency's ability to support travel by more sustainable modes, (i.e. transit, walking and biking)?
- ☑ How does this investment incorporate materials and practices that lessen our transit agency's impact on the environment?
- ☑ How does this proposal impact our ability to respond to climate change impacts and enhance resilience?
- ☑ How does this help the transit agency meet its goals for serving all communities equitably?
- ☑ How does this help our transit agency meets its equitable workforce development goals?
- ☑ What are any unintended consequences to disadvantaged populations as a result of this investment?

Outcomes

Inserting sustainability criteria in your budget process will encourage all parts of the transit agency to consider their impacts in order to increase the likelihood their project will be funded. Sustainability staffers can provide any needed technical assistance for staff members and decision makers to understand how their proposals can incorporate sustainable materials or practices.



Getting a Handle on Internal Costs and Benefits

Procurement

Transit agencies procure materials and products used in capital projects, ongoing operations and maintenance, and services. Procuring more sustainable materials and products can advance a transit agency's level of sustainability. This section examines the most common and pernicious legal and regulatory barriers to implementing sustainable procurement and methods that transit agencies can use to overcome them.

Environmentally Preferable Purchasing

Environmentally preferable purchasing (EPP) is commonly defined as purchasing materials, products, and services in a manner that integrates fiscal responsibility, social equity, and community and environmental stewardship.

Environmentally Preferable Products

Environmentally preferable products are commonly defined as products that have a reduced negative effect or increased positive effect on human health and the environment when compared with competing products that serve the same purpose.

- **Health Product Declaration (HPD)** certified building products must meet requirements for the protection of building occupants' health.

Common Obstacles

- **Minimum bid procurement requirements** make it difficult for transit agencies to pay more upfront for a service or a product.
- **Fixed budgets** are budgets that can't be carried forward into the next year, and where Net Present Value (NPV) cannot be accounted for. Using a single year budget exacerbates the focus on short-term outcomes and limits carry over funds between fiscal years.
- **Lack of central coordinating facilities or purchasing platforms.** Many smaller transit agencies lack resources to develop systems and protocols for purchasing. Transit agency purchasing may be decentralized by department or even outsourced. Many transit agencies also rely upon the systems developed by their operating county or city.
- **Lack of staff time and technical expertise.** The internal requirements of a green purchasing program can be significant. Procurement staffers not only work to develop specifications and protocols but also engage with and train staff and interview technical end-users about product results. The green purchasing program personnel's ultimate challenge is also cultural – changing the transit agency's collective mindset from "best value for money" to "best value across the product life cycle" requires imaginative programming.
- **Product Availability.** In some instances, goods that meet a product specification cannot be acquired in sufficient quantity to meet large requests.
- **Product Performance.** In other instances, acquired products that meet the product specification may do so at the expense of performance or quality.

Procurement Solutions

Find Commonalities with Partner Agencies

Many agencies rely on the Environmentally Preferable Purchasing Programs (EPP) initiated by the city or county where they operate. Locate your county and municipal partners to share resources and create guides to purchasing as well as to leverage pricing. Agency departments can also obtain favorable prices and reduce waste packaging and products by combining purchases/contracting for the same or similar products.

Alameda County provides accessible information for its agency and municipal partners to **piggyback on sustainable procurements** to achieve price reductions.

King County Metro does not have a separate program; rather, it takes part in **King County's Environmental Purchasing Program.**

Société de transport de Montréal **partners with external organizations to reuse traincars.** This program addresses both environmental and social aspects of sustainability with a **3R-RD** approach. In creating this program, they consulted with external and internal stakeholders as well as sustainability experts, carried out a benchmarking study to identify best practices, learned historical perspectives by contacting museums, and finally consulted the general public by soliciting comments and suggestions.

Engage Procurement Staff

Procurement Staff can support efforts to align with sustainability goals – moving a transit agency from "best value for money" to "best value across the product life cycle." Knowing the results of product purchases is attained via a relationship with the technical end user. Staff Resources can be used to:

- Set up organization and infrastructure, establish communication links between departments
- Define the goals and objectives for a new policy and develop an implementation plan
- Structure the staff committee
- Build capacity (e.g. Research specifications; Inventory products in common use by the transit agency; Create allowable products lists; Research which third-party certifications are applicable)
- Survey the market
- Develop a short list of priority initiatives and set target objectives
- Complete cost-benefit and/or total cost of ownership analysis on test issues and pilot projects
- Connect purchasing to greater sustainability goals and showcase collective impact
- Create partnerships with other transit and government organizations (e.g. Group purchasing for specific items)

Initiate a Green Purchasing Policy

A green purchasing policy is the first step to resolve low-bid procurement models. To begin, experts recommend that a policy should focus efforts on the issues most impactful to the transit agency, in other words, what specific outcomes health benefits (air quality), maintenance benefits (durable materials), cleaning products (non-toxics), or pesticide reduction most beneficial to transit agency values in the long term?

A green purchasing policy grants the transit agency the legal basis to designate a price preference for a given product type and makes explicit the tradeoff for products that can be more expensive upfront, but that offer associated benefits that can be monetized in other ways, such as health costs or longer payback periods. The policy:

- Formalizes how premiums are offset through efficiency gains, cost savings, and/or lowered risks during the product/project lifetime
- Makes explicit the transit agency's particular commitment to sustainability goals (identify a standard or a specific benefit)
- Defines responsibility and accountability – how will this policy be enacted?

Example: Toronto Green Procurement Policy

Example: Cleveland Green Commitment

Certification Standards

Toxics prevention is the reduction of toxic and hazardous chemicals acquired, used, or disposed of by a transit agency. Often, toxics reduction is accomplished through the use of bio-based and green-certified products.

SF Department of Environment (SFE)'s Green Purchasing Guide lists high-priority products, and service categories that have green purchasing specifications such as bags, carpet, cleaning products, lighting, office supplies, street cleaning detergents, and architectural paints. For example, bags must be certified compostable by the Biodegradable Products Institute (BPI); hand soap must have a Green Seal Gs-41 or EcoLogo CCD-104; fuel must be B20 biodiesel; paint must have a Green Seal GS-11; and office paper must be 100 percent post-consumer waste (PCW) recycled and processed chlorine-free.

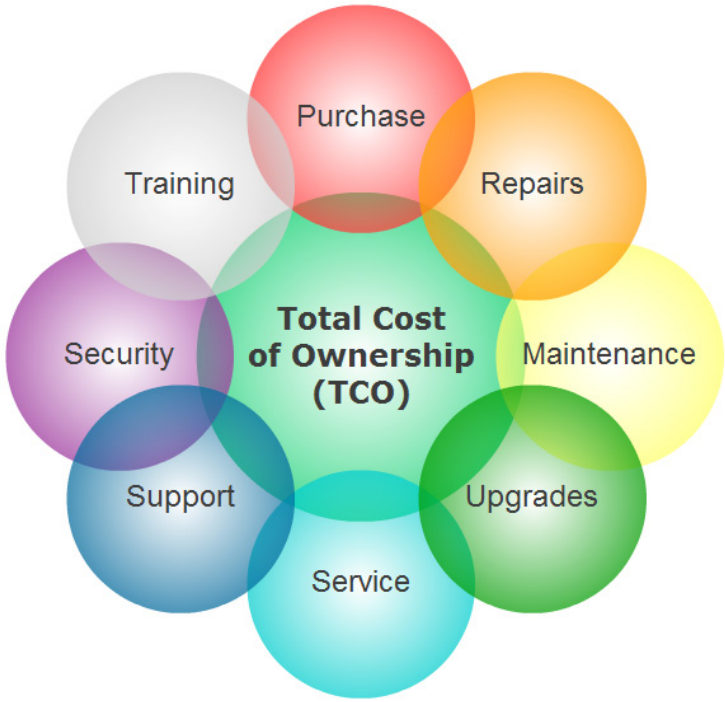
Sound Transit Environmental Policy adopted in 2004 , includes the purchase of environmentally friendly products. Sound Transit requires the inclusion of a summary of the bidding organization's environmental policy and practices with validation. The Sustainability Plan is implemented through the transit agency's internationally certified Environmental and Sustainability Management System (ESMS).

Summary of Procurement Standards and Links

Use Pilot Projects to Clarify the Business Case for Green Purchasing

While a green purchasing policy provides the groundwork for staff members to track cost savings and develop procedures to account for issues beyond the purchase price, pilot projects clarify the business case. Sustainability staff need to test how new policies can best be adopted before a full rollout. For example, a trial Total Cost of Ownership (TCO) Tool can present personnel with the opportunity to compare and contrast different variables and assess the ongoing costs of a specific purchase, as well as spend more time analyzing the performance results. This methodology examines costs over the lifecycle of a product, from the capital investment to any costs involved in operations, maintenance, replacement, and disposal. Typical pilot projects for a Total Cost of Ownership framework might be costs comparisons between vehicle types (electric versus diesel bus), or acquisition (fleet ownership vs. leasing equipment). Other pilot ideas might involve purchases of lighting, equipment, facilities, or services. The TCO model accounts for costs beyond the purchase price, such as the following:

- Delivery, installation, commissioning and insurance
- Operating costs, including utility costs such as energy, water use, and maintenance costs
- End-of-life costs, such as removal, recycling or refurbishment, and decommissioning
- Longevity and warranty timeframes of the asset



The Total Cost of Ownership model takes a comprehensive look at the life cycle of assets to compare costs between alternatives.

A product can also be excluded from an implemented product specification if acquiring that product will result in a greatly increased cost. Environmentally Preferable Purchasing (EPP) programs may establish a "price preference" for a given product type to allow purchasing agents to acquire products that are more expensive, but that will result in environmental or human health benefits. Typically, this price preference is around 5 percent, but could reach 15 percent.

Best Practice Examples

For example, Seattle's environmental purchasing efforts target minimizing its use of products containing mercury, lead, dioxin and other chemicals that are persistent in the environment, bioaccumulative and toxic (PBT). The policy also establishes a 10-percent price preference for PBT-free alternatives. In line with its PBT Reduction Policy, Seattle requires its copy paper to be processed chlorine-free (PCF) to reduce the pollution that is discharged from the paper mills common in the Pacific Northwest.

Similarly, in addition to other strategies, **King County Metro's Purchasing** has established a price preference of up to 15 percent for recycled paper products and up to 10 percent for re-refined lubricating oil. King County requires also green building and sustainable development practices be incorporated in County capital projects. At the planning level, they require consultants to consider the application of sustainable design, environmental quality, and energy conservation on facility plans. During planning level alternative analyses, "the Consultant shall include life cycle cost analyses and resource efficiencies of facility plans." The applicable policies are the **King County Green Building and Sustainable Development Ordinance,** the 2010 King County Energy Plan, and the 2015 King County Strategic Climate Action Plan.

Société de transport de Montréal (STM) has **incorporated its Sustainable Development Policy into procurement.** (See page 12)

Summary of Procurement Standards and Links

Green Seal develops lifecycle-based sustainability standards for products, services, and companies. Green Seal keeps an updated list of approved cleaning products including industrial and institutional cleaners, floor care products, hand cleaners, and degreasers.

EcoLogo™ is an environmental criteria that was developed by the Canadian Environmental Choice™ Program. See www.ecologo.org.

EPEAT (Electronic Product Environmental Assessment Tool) lets institutional purchasers in the public and private sectors evaluate, compare, and select desktop computers, notebooks, and monitors based on their environmental attributes. Resources include a database of registered products, contract language, and a summary of the standard identifying 23 required criteria and 28 optional criteria, among other tools.

The Biodegradable Products Institute (BPI) certification program is open, on a fee basis, to all materials and products that meet ASTM D6400-04 or D6868-03 based on testing in pre-approved, independent laboratories. Certified products are labeled with a BPI logo. See www.bpiworld.org.

Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy with the goal of saving money and protecting the environment through energy-efficient products and practices.

Green Guard Environmental Institute (GEI) is a certification system for products and materials for low chemical emissions. It provides a resource for choosing healthier products and materials for indoor environments.

The Forest Stewardship Council certifies products to ensure forestry is practiced in an environmentally responsible, socially beneficial, and economically viable way.

The Health Product Declaration Collaborative sets the HPD standard for disclosure, reporting, selection, and specification of building products. HPD is more comprehensive for the social 'building occupant health' aspect of procurement.

Best Practice Example: Toronto Transit Commission Green Procurement Policy

In July 2008, the Toronto Transit Commission (TTC) approved a **Green Procurement Policy** that directs the organization to continually improve purchasing decisions by integrating environmental considerations into every aspect of the purchasing process and applies to all procurement activities related to facilities, construction, revenue and non-revenue vehicles, operations, administration, and other supporting activities. Implementation occurred in three phases over the span of 2.5 years. TTC's green procurement program was awarded the 2010 Leadership in Green Procurement Award by the Canadian Urban Transit Association. Highlights of the program include in-depth staff training, integration with existing systems, and comprehensive resources (green procurement guides, forms, and tools) for personnel.

The policy has four key objectives:

- Provide a framework for the purchase of environmentally preferred products and services that complement the formal purchasing practices set out in the Commission's Procurement Policy.
- Encourage the inclusion of environmental performance criteria into Commission supply chain procedures, processes and activities –where possible–as industry and technology advances become available.
- Support the purchase of goods and services that will protect the environment, while maintaining best value for the Commission.
- Promote a corporate culture at the Commission that recognizes and places a priority on environmental issues.

TTC's green procurement program was awarded the 2010 Leadership in Green Procurement Award by the Canadian Urban Transit Association.

Toronto's Green Purchasing Policy implementation is managed by a Steering Committee, showcasing that the leadership is strongly behind the program. Chaired by the General Manager of the Executive Branch, the Steering Committee is comprised of Department heads from Engineering and Construction, Plant Maintenance, Signals/Electrical/Communications, Safety, Information Technology Services, and Materials and Procurement. Materials and Procurement also chairs a Green Procurement Working Committee comprised of representatives from the above Departments. Toronto Transit has developed general and advanced training modules for staff across 19 departments regarding procurement practices for specifications, bid evaluation processes and criteria, eco-label certification processes, and vendor claims.

Best Practice Example: Greater Cleveland Transit Authority (GCRTA) Green Commitment

"**GCRTA is committed to protecting the environment**, as it provides public transit services to Northeast Ohio. We will provide sound business practices that integrate sustainable principles throughout every level of operation to create a healthier and livable environment for our customers and the community we serve. We will strive to provide the following environmental commitments:

- Communicate and advance the use of environmental practices throughout GCRTA.
- Make environmental concerns an integral part of our planning and decision-making processes and implement effective environmental programs.
- Reduce greenhouse gas emissions and increase energy efficiencies throughout its transit operations and facilities.
- Prevent pollution and conserve resources by reducing waste, creating better disposal options, recycling and procure new and better products and technologies.
- Educate the community and our customers on the environmental benefits of public transit, and encourage biking, walking, carpooling and van pooling.
- Provide quality sustainable public spaces and amenities around our transit stations and bus shelters to promote walking and bicycle accessibility for link trip options.
- Encourage the use of transit as a viable, environmentally friendly, sustainable commuting choice.
- Incorporate sustainability and green building principles throughout the planning, design, construction and operations of our facilities.
- Continue to explore and implement renewable energy solutions to reduce energy consumptions at our facilities.
- Adhere to all state and federal EPA regulations, standards and monitoring methods regarding environmental quality."

Performance & Accountability

Accountability systems enable transit agencies to evaluate and track sustainability performance, either at an agency-wide scale or at a project level. Establishing a chain of accountability throughout the transit agency helps **engage all employees** and provides data for decision makers to adjust methods to achieve sustainability goals.

ESMS

An environmental and sustainability management system (ESMS) is a collection of practices that help to systematically integrate sustainability into transit agency practices and evaluate performance. This section explores how transit agencies can use ESMS, benefits of ESMS, and considerations in setting up an ESMS including the difference between EMS and ESMS, and International Organization for Standardization (ISO) 14001 certification and whether it's necessary.

Performance Metrics

Performance metrics are useful for quantifying a transit agency's sustainability performance, setting sustainability targets, tracking progress in achieving those goals, and **marketing their success.** This section investigates typical transit industry practices in employing sustainability metrics, how to best use performance metrics, including how to establish ambitious but achievable targets and how to incorporate performance metrics into transit agency decision-making, and what's needed to calculate performance metrics. Resources include the American Public Transportation Association (APTA's) report on quantifying and reporting transit sustainability metrics, the National Cooperative Highway Research Program (NCHRP's) guidebook on sustainability performance measurement for transit agencies, and King County's integration of performance metrics into its sustainability program.

Third-Party Rating Systems

Various third-party ratings systems exist to provide standardized evaluations of agency and project sustainability performance. This section describes relevant third-party ratings systems along with the pros and cons of each. Leadership in Energy and Environmental Design (LEED), Envision, and APTA sustainability rating systems are all discussed, along with two case studies on the application of Envision for transit projects and one case study of using LEED for a transit station.

Holistic Evaluation

Metrics and ratings alone often cannot capture the holistic benefits of sustainable practices. **The Sustainable Urban Design Framework** by the Sustainable Cities Initiative helps decision makers become mindful of how various aspects of sustainability can be achieved across multiple scales of the built environment. The framework can be used not only as a method to evaluate projects, but also as a decision making tool as projects are being planned.

ESMS

Third-Party Rating Systems

Performance Metrics

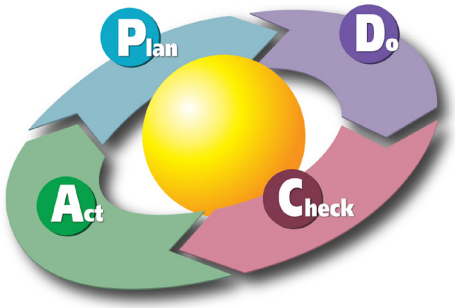
Environmental and Sustainability Management System (ESMS)

ESMS Institute is a unique, in-depth, 2-year program for transit agencies interested in developing and implementing an environmental and sustainability management systems (ESMS) using the International Organization for Standardization (ISO) 14001:2015 standard. Organizations that attend are given all the tools necessary to develop and implement an ESMS specific to their transit agency.

The Federal Transit Administration (FTA) has sponsored four ESMS academies, each with a class of 10 transit agencies. As of 2016, 13 transit agencies have received full certification. See reports from each round of assistance for details about how agencies have implemented ESMS.

How will it help?

Both an EMS (Environmental Management System) and ESMS (Environment and Sustainability Management System) help transit agencies analyze, control and reduce an organization's environmental impact. The ESMS introduces additional aspects (social and economic) into the management system.



"Taking the first step with PDCA"

Virginia Tech Center of Excellence for Environmental Management

FTA | esmsINSTITUTE
environmental & sustainability management system

What questions does it answer?

While ESMS is primarily **a tool for process management and compliance,** its structured framework also provides an avenue for collaboration. Results include the adoption of performance metrics, well-documented protocols, and accountability through audits and corrective action. The basic elements of an ESMS process include:

- **Identifying the fence line** for the program. (Is it a single facility, a single aspect area – like **Eugene Or Lane Transit District** or a facility such as a maintenance facility at **Hillsborough Area Regional Transit Authority?)**
- **Identifying organization's environmental aspects**, their associated impacts and a plan to control them
- **Identifying all legal and regulatory compliance obligations**
- **Identifying protocols** for monitoring and measuring progress in achieving the objectives
- **Ensuring employees' environmental awareness** and competence

What are the Benefits?

- Helps introduce creativity to advance environmental stewardship,and resource conservation
- Captures and applies employee knowledge
- Defines roles and responsibilities for management and staff members
- Improves and enhances standard operating procedures
- Increases internal awareness and improves communications through mandatory training and outreach
- Reinforces proactive environmental behaviors, improves efficiency, and saves costs
- Improves relationships with state and regulators

ISO 14001 Certification

International Organization for Standardization (ISO) 14001 Certification provides an audited third-party compliance piece to your ESMS. The audit provide confidence to the transit agency that it is upholding the standard and identifies areas for improvement.

While not all agencies choose to be certified, they have increasingly done so; recognizing the benefits to formalizing their commitment internally and externally and ensuring program continuity in the face of administration and staff turnover.

Third-Party Rating Systems

Various third-party ratings systems exist to provide standardized evaluations of agency and project sustainability performance. This section describes relevant third-party ratings systems along with the pros and cons of each. LEED, ENVISION, and APTA sustainability rating systems are all discussed, along with two case studies on the application of Envision for transit projects and one case study of using LEED for a transit station.

- APTA Sustainability Commitment
- LEED
- ENVISION

APTA Sustainability Commitment

The **APTA Sustainability Commitment** recognizes transit agencies and business members who commit to continuously improve their level of environmental, social, and economic sustainability.

APTA's Sustainability Commitment can serve as a "report card" for a transit agency to assess how they compare to other transit agencies in taking action on sustainability. The Commitment asks participants to report on their progress in incorporating the Commitment's four principles, including:

- Whether sustainability has been incorporated into a transit agency's **strategic objectives**;
- Whether a **sustainability champion** has been identified along with human and/or financial resources and mandates;
- Whether an **employee outreach program** has been established that engages staff members in realizing a transit agency's sustainability goals and progress towards those goals; and
- **10 sustainability inventory indicators** relating to resource consumption, waste and emissions production and reduction, costs, and level of service provided.

Achieving an APTA level of recognition allows the transit agency to be rewarded for its efforts in implementing sustainability, both within the transit industry and within the transit agency. Levels include Bronze, Silver, Gold, and Platinum and range in commitments to:

- **Action Items,** which are short-term (1–2 year) actions that address operations and maintenance, capital, products and services, and/or education and outreach (e.g., implement procurement methods that require sustainable practices);
- **Stretch goals,** which are long-term (3–5 year) programmatic, policy-related, or process goals (e.g., obtain green business certification of all corporate offices);
- **Reduction targets** for sustainability inventory indicators (e.g., a 20 percent reduction in greenhouse gas emissions per vehicle revenue mile by 2030).

LEED

LEED and Envision are two sustainability rating systems used by transit agencies. **Leadership in Energy and Environmental Design** (LEED) is among the most well-known sustainability rating systems. While it can be applied to enclosed transit agency building facilities, it doesn't lend itself well to transit agencies' infrastructure.

However, the United States Green Building Council (USGBC) has recently released **"LEED v4 Operations and Maintenance: Transit"** for the certification of existing and operational transit facilities.

USGBC is also currently developing two new rating systems for the certification of new transit, "LEED v4 BD&C: Transit Station" and "LEED v4 BD&C: Transit Infrastructure". These new LEED rating systems are expected to be coordinated with Envision.

ENVISION

A newer program, the **Envision Sustainable Infrastructure Rating System (ENVISION)**, fits transit infrastructure. The Envision tool can be applied to all non-building infrastructure types and guides project teams in enhancing sustainability and resiliency in a holistic manner, aiming to capture community, environmental, and economic benefits. Envision is the product of a joint collaboration between the Zofnass Program at Harvard University and the Institute for Sustainable Infrastructure (ISI). The framework includes 60 criteria that fall into five main categories:

- **Quality of Life:** Purpose, Wellbeing, and Community
- **Leadership:** Collaboration, Management, and Planning
- **Resource Allocation:** Materials, Energy, and Water
- **Natural World:** Siting, Land, Water, and Biodiversity
- **Climate and Risk:** Emissions and Resilience

Envision also facilitates a participatory process, providing a framework for engaging with stakeholders and navigating the choices that often face communities and elected officials. Through this process, Envision aims not only to raise a project's level of sustainability achievement, but also to enhance its connection and value to its community. Envision gives recognition to infrastructure projects that assess sustainability over the course of the project's life. Envision can be used as a project assessment and decision-making tool or to document processes , decisions and design to apply for a third-party verified Envision award.

The cost of seeking an Envision award depends on a number of variables. The earlier the Envision process is started, there more likely the project can use existing design and planning documents for award verification. In addition, the project's scope, level of achievement desired, and project complexity, influences the cost of third-party verification. ISI's verification fee is based on total estimated cost of project. The Envision tool is **free to use for assessment and project design.**

ENVISION™

Example: TriMet's Use of Envision

Example: Kansas City Streetcar Envision Award

Best Practice Example: Kansas City Streetcar Envision Award

Deputy Director, Kansas City Public Works

Kansas City's Streetcar, which opened to the public in May 2016, was created to generate economic development and revitalize Kansas City's downtown. While it has been largely successful in achieving this goal, generating over 40 development projects and $1.8 billion in economic activity in the surrounding area, it has also has been a success in many other respects. Since completion, **the Streetcar has received a multitude of honors for excellence in areas including design, construction, community impact, and sustainability. One of these honors was Envision's Platinum award**, granted in September 2016, making the Streetcar the first transit project to receive an Envision Sustainable Infrastructure Rating.

Resource Conservation

As a project focused on economic development and helping people move through the city with fewer cars, the alignment was set for Main Street. Additionally, recycled material was used for construction, and construction waste was reused and recycled where possible. For instance, around 47 percent of Singleton Yard contains recycled content, and almost 90 percent of the yard's construction waste was diverted. Similarly, all 845 tons of streetcar track steel came from recycled metal scrap. Transportation of construction material was also minimized by saving concrete and metal taken out during construction and transforming it into recycled aggregate that was reused in the project. Stormwater management was also taken into account during the planning phase, and erosion control, post-development site runoff minimization, and groundwater recharge strategies were implemented.

Community Values

In addition to protecting the environment, stakeholders of the Streetcar pushed for incorporating the user-focused elements of the Envision system. At each station, kiosks and real time arrival signs were established, aimed at enhancing the rider experience. The community focus shared by the streetcar team and the deputy director's good design principles are reflected in the Envision framework. As the deputy director put it, **"It's about making a project align with the values of the people who'll use it, and about doing the right thing for the community."**

Using Envision

The City has embraced sustainability and good design and incorporated it into their culture and wide variety of initiatives. The request for proposals (RFP) for the design of the Streetcar included a request for Envision credited professionals. In reflecting on the project, the deputy director noted that **it's important to begin thinking about and incorporating sustainability and Envision principles early on in the design.** He also noted that despite their late start in applying Envision, the organization was very accommodating and willing to collaborate with the project team.

Kansas City Streetcar

Best Practice Example: TriMet Portland Milwaukie Rail Line (Envision)

Agency Architect, TriMet

TriMet's Portland Milwaukie Light Rail (PMLR) project is well known for its **incorporation of sustainable features.** What is less known is that TriMet used the Envision Rating system to assess the project's effectiveness in pursuing sustainability. PMLR used Envision towards the end of the project, after design and construction had started. The team was interested in using Envision because it is designed for infrastructure projects and would allow them to track both the "soft side" of their leadership and community engagement efforts as well as gather data on the benefits of the sustainable elements of the project. To evaluate these metrics, the team generated a spreadsheet to track the data in each of the Envision categories.

Portland Milwaukie Light Rail Bridge

Recommendations and Lessons Learned

Envision is useful for guiding goal-setting at the beginning of a project. Identifying goals upfront allows transit agencies to establish what metrics to measure and track, which can then be included in the contracting requirements. Because TriMet used Envision so late in the project, the transit agency hadn't communicated to the contractor what data they would need to provide. As a result, the contractor had limited historical data they could gather. Ideally, TriMet wants to include that in the RFP or contractor requirements up front.

As a third-party assessment tool, Envision can help risk adverse transit agencies understand how their sustainability efforts fit into the industry norm.

In the end, TriMet was satisfied with using the Envision framework to collect project data and assess the project's level of sustainability without pursuing certification.

Performance Metrics

To incorporate sustainable performance measures in transit agency operations, it's helpful to know both **how to use metrics effectively** and **what metrics to use**. Links to **example sustainable performance metrics** are found in this section. Suggestions for leverage points in transit agency processes that can incorporate metrics are found **here.**

Finding sustainability metrics that are measurable, meaningful, and comprehensive is a challenge. Each metric requires:

- Consistently reported data
- A shared understanding of how to interpret the metric
- A meaningful connection to the transit agency's decisions

Many transit agencies have had success with environmental sustainability but have struggled to make progress on financial and social sustainability. There are two main obstacles to improvement on financial management and sustainability, and to joint management of the triple bottom line, Measurement, and Decision-Making.

Measurement

Environmental sustainability metrics are relatively easy to define and measure. Use of energy and water and production of waste and pollution are easily understood and quantified. Progress is easily tracked. There is general consensus around what should be measured. Measuring financial and social sustainability has not yet reached the same level of practice in the transit industry. The American Public Transportation Association (APTA's) current guidance on sustainability metrics includes six environmental metrics and one financial metric. Work has been underway for several years to expand the guidance with more social and financial metrics.

Triple Bottom Line Accountability

Sustainability programs in transit agencies are found most commonly within environmental or planning groups. These tend to be effective at promoting environmental sustainability, but have less influence over financial or equity sustainability—both of which have their own places within a typical transit industry structure. For most transit agencies, the challenge of creating a triple bottom line sustainability program mirrors the challenge of creating a truly integrated, cross-cutting program that coordinates multiple functions within the transit agency.

Examples

The resources below provide a mixture of practical (and in-practice) sustainable performance measures for transit agencies as well as more general guidance on how to develop sustainable performance measures.

Example: APTA's Quantifying and Reporting Transit Sustainability Metrics

Example: NCHRP Report 708: A Guidebook for Sustainability Performance Measurement for Transportation Agencies

Example: King County Code: Title 18 Environmental Sustainability Program

APTA's Quantifying and Reporting Transit Sustainability Metrics

This American Public Transportation Association (APTA) document provides guidance on measuring, tracking, and reporting sustainability metrics, including:

- Suggested water, energy, waste, trip, and air pollutant and greenhouse gas emission metrics
- Data needs and calculations for producing the metrics
- Normalization factors along with the context in which they should be used

What questions will it answer?

- What are typical industry practices for sustainability performance metrics?
- What do I need to do in order to calculate performance metrics?

When should I use it?

Use this resource when you want to:

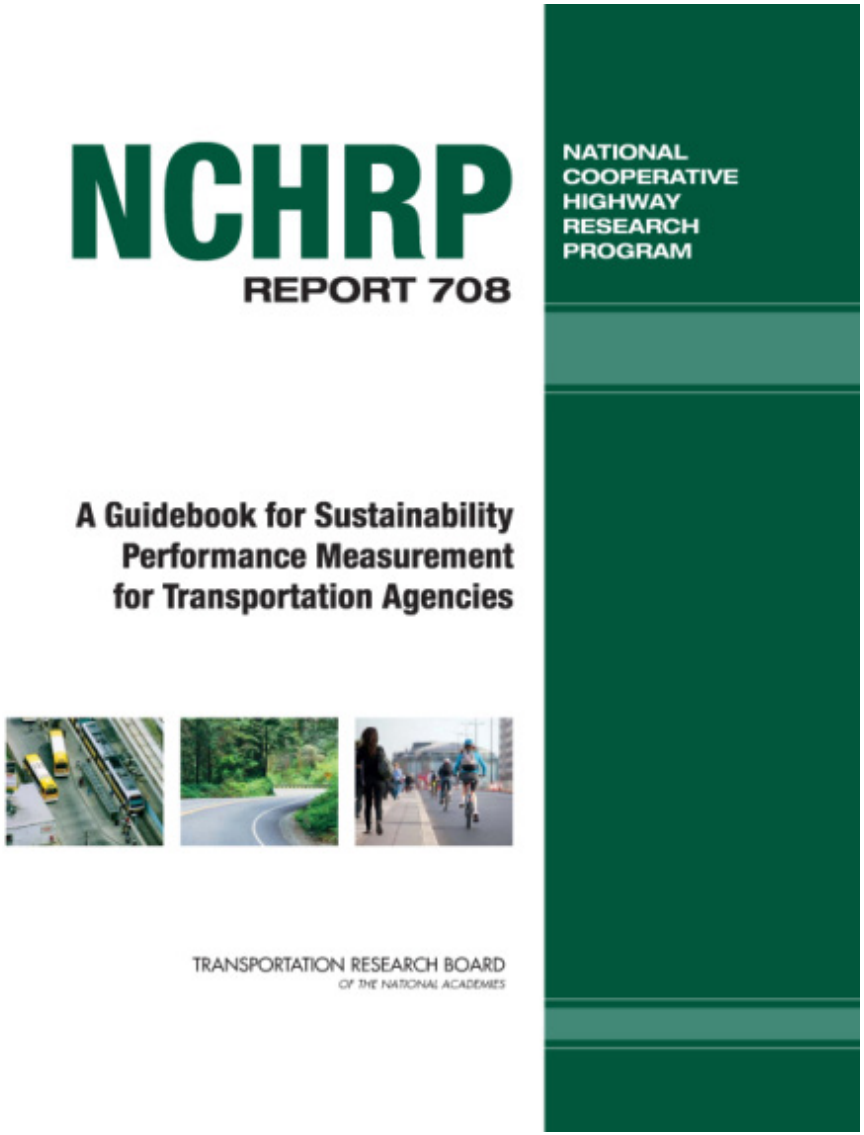
- Check APTA's standard for sustainability metrics, including those required by the APTA Sustainability Commitment.
- Determine which metrics to track, what data sources are necessary, and how to account for the transit agency's unique conditions and provide context to metrics using normalization factors.

APTA Sustainability Commitment Logo

NCHRP Report 708: A Guidebook for Sustainability Performance Measurement for Transportation Agencies

This document provides guidance for state departments of transportation and transportation agencies on measuring sustainability performance, including:

- Sustainability principles and their relationship to transportation, along with a framework for designing a sustainability performance measurement (SPM) system
- Development of goals and objectives
- Examples of sustainability principles and associated performance measures and data sources
- A checklist to evaluate your SPM framework
- Examples of programs and strategies to meet sustainability goals
- Examples of how the SPM can be integrated into a transit agency's existing performance measurement system
- Implementing performance measures

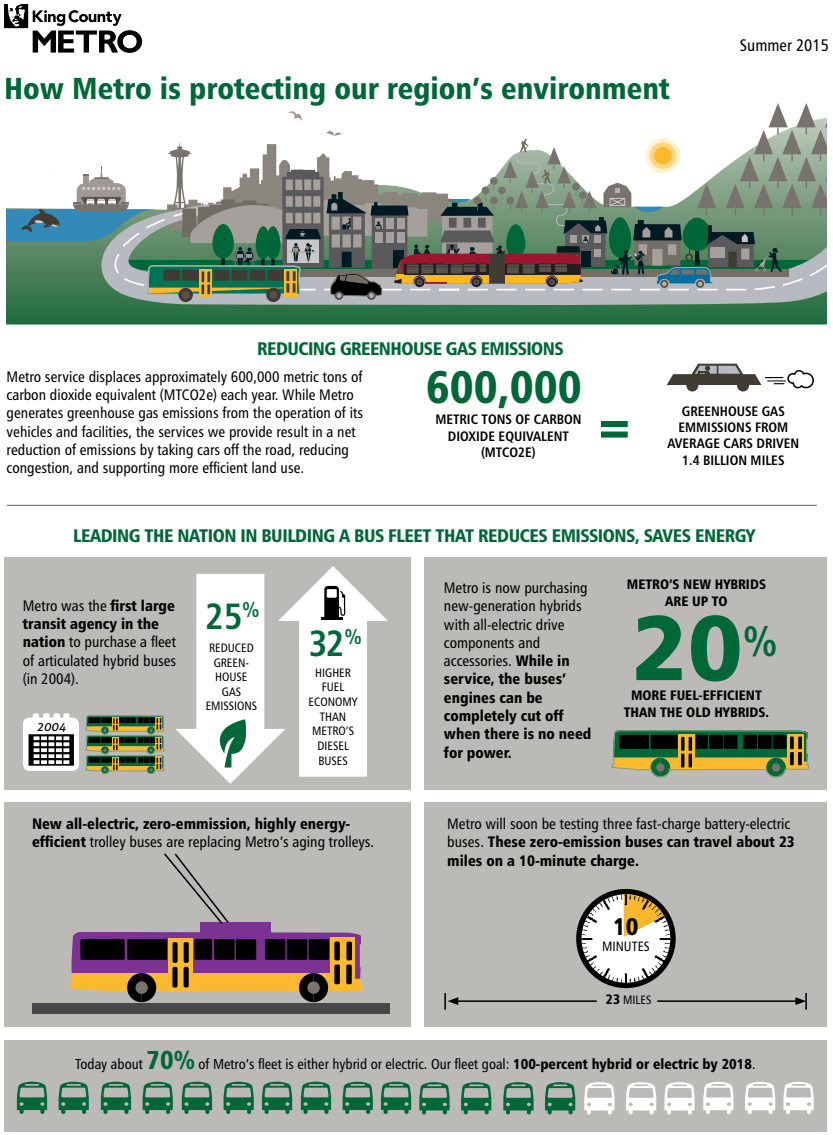


King County Code: Title 18 Environmental Sustainability Program

The **King County Code Title 18** establishes a measuring and reporting program for capital improvement and facility management. The reporting program supports project prioritization both for specific projects and for transit agency decision-making.

Title 18 requires performance metric measurement and reporting, including:

- Establishment of climate mitigation and adaptation performance measures and targets
- Annual **reporting** by all divisions in charge of capital improvements or facility management on various sustainability metrics, including green building accomplishments, waste abatement, and energy, water, and greenhouse gas savings
- **Annual performance report** that links to goals and indicators and can guide policy decisions and capital project priorities and investments
- Annual reporting to council on progress in achieving performance measure targets and priority actions along with recommendations for changes in priorities



Public Engagement

It is helpful to have members of the public and the Board support your sustainability goals. Partner and engage with local sustainability advocates to set your goals and hold the transit agency accountable. Requests from your transit agency's customers and community leaders help build support within the transit agency to be more accountable for sustainability. Widespread access to the internet and social media allows:

Communicating the Regional Sustainability Benefits of Transit

- What opportunities do transit agencies have to communicate their regional sustainability benefits to the public?
- What messaging is most compelling?
- How can metrics be used to support messaging?
- What transit agencies have had the most success with such campaigns, and how have they done it?

Communicating Benefits

Report cards, dashboards, and other marketing materials

- What kinds of collateral and marketing materials to transit agencies use in successful campaigns?
- What are the best models or templates available to help transit agencies establish their own report cards and dashboards?

Report Cards and Marketing Materials

Communicating Regional Benefits

Transit agencies can use creative branding and messaging to communicate transit's regional sustainability benefits to the public and stakeholders. The following links explore how:

- To use metrics to support messaging
- To leverage technology and social media to promote alternative transportation

Build Support From Transit Agency Board Members and the Public

It is always helpful to have members of the public and the Board support your sustainability goals. Partner and engage with local sustainability advocates to set your goals and hold the transit agency accountable. Requests from your transit agency's customers and community leaders help build support within the transit agency to be more accountable for sustainability. Additionally, build Board support by presenting them with key sustainability initiatives and accomplishments. Transit agency Board members who value sustainability can help advance resource requests and pilot projects.

Building Community Partnerships

Outreach efforts can go beyond informational campaigns and evolve into partnerships to promote social sustainability. Transit can provide access to fresh food. SEPTA and Safe Routes to School provide great examples of the process you can use to understand how you can support social sustainability.

- SEPTA **extends bus service** to provide grocery access
- **Safe Routes to Healthy Food** program
- **Mind the Gap: Using Public Transportation to Connnect Neighborhoods and Grocery Stores**
- **Wheels on the Bus go to the Grocery Store**

SEPTA also partnered to host a **community garden** and park on one of their vacant lots, a great example of looking for ways to support social sustainability.

Public outreach can lead to rewarding partnerships, even for divisions of transit agencies that are seemingly unrelated. One example of this is Société de transport de Montréal's **program to reuse traincars.**

Transit Agency Examples

APTA Examples

See also Quantifying Costs and Benefits

Sound Transit's Sustainability Webpage

Sound Transit's **sustainability website** and 2015 **Sustainability Plan Update** provide an example of how to highlight the ways regional sustainability benefits enhance quality of life, including social, economic, and environmental benefits. Sound Transit successfully uses graphics and transparent metrics to express its contributions. The website emphasizes the Sound Transit's role in:

- Providing an affordable service that connects residents to where they live, work, and play
- Supporting smart regional growth, transit-oriented development, and improved transit access
- Reducing traffic, thereby saving residents time
- Saving fuel and cleaning the air

Chicago RTA 'Ride On' Campaign

Chicago Regional Transportation Authority (RTA's) **'Ride On' campaign** highlights how public transit maximizes riders' time, money, and lifestyle and illustrates the downsides of driving in a humorous way. The campaign employs TV, radio, billboards, print, digital display, video, events, and social media. It has generated 26 million impressions, a click-thru rate double that of the industry standard, half a million uses of the RTA trip planner, and improved public perception of the transit agency. The "Ride On" campaign successfully frames transit benefits as benefits to the individual, as opposed to the region:

- It focuses on increasing transit ridership and awareness.
- It juxtaposes benefits of riding public transit against challenges of driving.

LA Metro #WalkOrBikeInstead Social Media Campaign

This is a social media **campaign** launched by LA Metro and Pedal Love to encourage Angelinos to walk and bike as opposed to driving, featuring:

- Billboards, bus posters, and social media postings
- **Weekly contests** held on Twitter and Instagram where users enter by sharing images of their favorite bikeable and walkable locations with the hashtags #BikeInstead and #WalkInstead, and prizes include fare-loaded Metro passes, tote bags, mugs, and T-shirts
- A focus on storytelling that cultivates more mindful mobility and elevates the voice of women, who are typically underrepresented among cyclists

APTA Marketing and Communications Campaign Honorees

This page lists the winners of the American Public Transportation Association (APTA's) AdWheel Awards for public transit marketing and communications campaigns, along with descriptions of each campaign. The entry materials page includes additional campaign materials. This resource answers:

- What opportunities do transit agencies have to communicate their regional sustainability benefits to the public and stakeholders?
- What messaging is most compelling?
- How can metrics be used to support messaging?
- What transit agencies have had the most success with such campaigns and how have they done it?

Use this resource when you want examples of marketing and communications materials and their impact or level of effectiveness

APTA Public Transportation Benefits Webpage

APTA's **webpage** on public transportation benefits highlights information and key statistics on the benefits of public transit, including:

- Enhancement of personal opportunity
- Fuel savings and congestion reduction
- Economic opportunity and community growth and revitalization
- Cost savings
- Gasoline consumption reduction
- Carbon footprint reduction

This resource explains how benefits can be used to support messaging. Use this resource when you want to view a list of benefits and associated statistics that illustrate the regional benefits of transit.

Report Cards & Marketing Materials

The following examples show what kinds of collateral and marketing materials are useful to successful campaigns as well as models and templates available to help transit agencies establish their own report cards and dashboards. **Third party rating systems** can also help transit agencies market their project successes.

Example: Champaign-Urbana Mass Transit District

Champaign-Urbana Mass Transit District (CUMTD, MTD) has an **interactive Dashboard** focusing on the MTD Environmental Sustainability and Management System. The dashboard reports on policies, behavior, and activities to improve sustainability. The real-time dashboard also monitors energy performance.

MTD is monitoring in real time its solar electric panel production and consumption that includes its maintenance facility that has a 1,212 panel solar rooftop. This tool is an example of how CUMTD engages with the public on its sustainability initiatives with a simple interface.

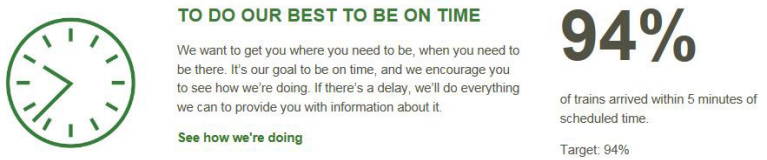
CUMTD Interactive Dashboard

Example: SEP-TAINABLE

Southeastern Pennsylvania Transportation Authority (SEPTA) is an International Organization for Standardization (ISO) 14001 certified agency, and has achieved American Public Transportation Association (APTA) Transit Sustainability Commitment gold rating. The **website** is a showcase for its sustainability initiatives. It is updated regularly with reports, plan summaries, video clips, articles, and case studies.

SEPTA's approach is user-friendly and inclusive. The website brings to light not only the transit agency's environmental metrics, but transit's regional significance to community health. The website provides inspiration for a comprehensive online presence, beyond a dashboard.

Example: MetroLinx Passenger Charter



*MetroLinx's **Passenger Charter** is an example of clear and effective public communication.*

Example: CTA Going Green

Chicago Transit Authority (CTA) **Green Initiatives** focuses on six areas: sustainable transportation, clean vehicles, multimodal connections, efficient facilities, resource recycling, green grants.

While this Sustainability dashboard links through to more complete data when available, it also provides an example for transit agencies still building their information resources.

Going Green also makes the connection between transit access, ridership and land use.