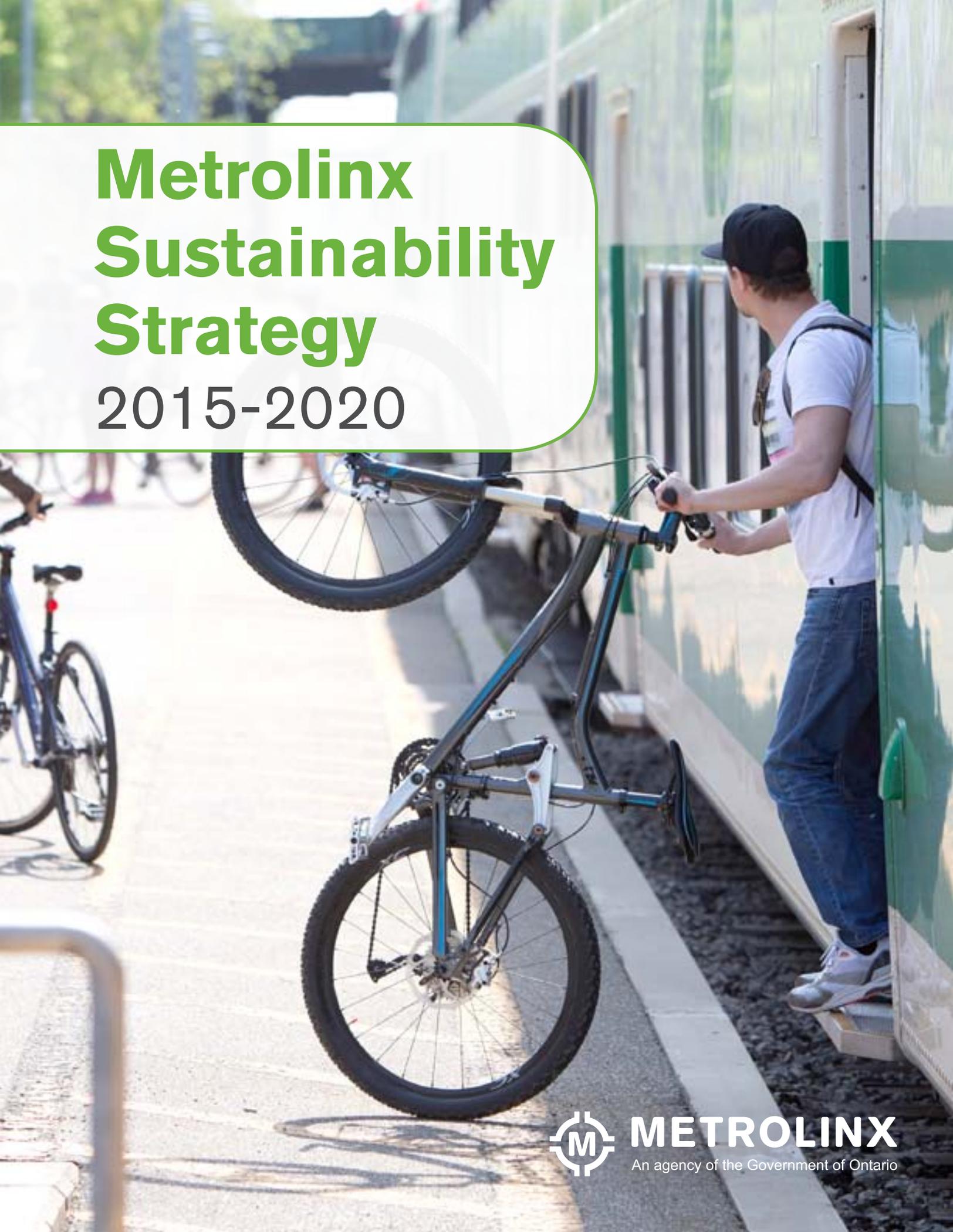


Metrolinx Sustainability Strategy 2015-2020



METROLINX

An agency of the Government of Ontario

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MESSAGE FROM THE PRESIDENT AND CEO



Enhancing the prosperity, sustainability, and quality of life of the Greater Toronto and Hamilton Area (“GTHA” or the “region”) through transportation is a critical priority. Our region faces major challenges that must be addressed, including aging infrastructure, rapid population growth, shifting demographics, increasing land use pressures, slowing economic growth, and changing weather patterns. As President and CEO of Metrolinx, I have accepted these challenges and the opportunities that come with them, on behalf of my colleagues, and the residents of the GTHA. As an active supporter and champion of sustainability, it is with great pleasure that I share the *Metrolinx Sustainability Strategy (2015-2020)* (“*Sustainability Strategy*”), a core tool to identify, understand, and take action on the critical environmental, social, and economic issues reshaping our world. The entire Metrolinx team has worked closely together to develop a vision and approach that aims to position Metrolinx and our region at the forefront of sustainable public transportation. This strategy defines how we will drive sustainability forward.

Metrolinx has always championed a responsible and inclusive approach for connecting and engaging on environmental and social issues. Our hard work has

been recognized nationally and internationally, most recently for achieving gold-level status through the American Public Transportation Association’s (APTA) Sustainability Commitment programs as well as Canada Green Building Council’s (CaGBC) Government Leadership Award. We believe that sustainability is an evolution and a journey and that is what our *Sustainability Strategy* represents. It is a tool to help us organize and accelerate our approach so that we can integrate sustainability and innovation into decision-making at all levels of our organization. We recognize the importance of working together and are committed to making connections and integrating sustainability into how we plan, build, and operate a world-class public transportation system.

Over the past year, we have worked extensively with our stakeholders, including our customers, government, non-governmental organizations, academics, media, and the like, to formalize our understanding of what steps Metrolinx should take in its own operations to help enhance the prosperity, sustainability, and quality of life of our region.

To do this:

- We have appointed an internal *Sustainability Strategy Advisory Committee* to continuously review and provide feedback on the development of the *Sustainability Strategy*.
- We have developed an inventory of sustainability topics, drawing on the most advanced sustainability tools, standards, and protocols from around the world.
- We have engaged internal and external stakeholders to assess and prioritize the sustainability areas on which we will focus.
- We have established goals, actions, and measures of success to focus on priority sustainability areas.
- We are developing an implementation plan to manage and measure our progress towards integrating the principles of sustainability into our work plans and culture.

Getting us to this point has been a journey of self-discovery, education, reflection, and thoughtful consideration. I know that I speak not only for myself when I say that I have been inspired, intrigued, and challenged by this process. It is with this in mind that we make the promise that moving forward, we will:

- Integrate – Consider the environmental, social, and economic outcomes of our decisions;
- Connect – Engage our broader stakeholders in our decisions and actions; and
- Improve – Use continuous improvement as our boundless guidepost.

I invite you to review our *Sustainability Strategy*, follow our approach and our progress, and provide comments and feedback to us through sustainability@metrolinx.com.

Bruce McCuaig
President and CEO
Metrolinx



SUSTAINABILITY AT METROLINX

UNDERSTANDING SUSTAINABILITY

Increased use of public transportation brings environmental and social benefits: reduced greenhouse gas (GHG)¹ emissions, less traffic congestion, improved air quality, access to services, and more. These are benefits inherent to public transit. At Metrolinx, we believe that a sustainable public transportation system should also consider the environment, economic and social well-being, travel choices, people, trust, ethics, and integrity. We also recognize that in our current state of unprecedented growth and expansion, we need to focus our sustainability efforts on areas that have the greatest need and will result in the greatest impact.

The development of our *Sustainability Strategy* is rooted in the three tenets of sustainable development, as outlined by the Bruntland Commission in 1987. In this context, sustainability means:

- Development that meets the needs of the present without compromising the ability of future generations to meet their needs;
- Development that considers the inherent interrelationships between our environment, the people living in it, and the economy within which we interact; and
- Development that relies on multiple perspectives to understand the complexity of issues and to garner the support needed to implement initiatives to advance development.



“Only when we consider and include the connections between environmental, social, and economic value in our processes and decision-making can we deliver fully on our mission.”

Bruce McCuaig
President and CEO
Metrolinx

¹ **Greenhouse gas:** Gases that trap the sun’s warmth within the atmosphere, causing a greenhouse effect, such as water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), and ozone (O₃).

BUILDING ON OUR CORE MANDATE - MOBILITY

The *Regional Transportation Plan* (“RTP”) guides the work being done to offer an attractive and flexible suite of transportation alternatives and to transform the way people and goods move in the GTHA. The RTP’s vision, goals, and objectives provide a blueprint to support decision-making by municipalities, agencies, and the provincial government. Developed and implemented jointly with a diverse range of partners and stakeholders, the RTP sets out how the transportation system contributes to a high quality of life, thriving environment, and prosperous economy, now and into the future.

The RTP can contribute to and support Ontario’s goal of reducing overall GHG emissions by promoting a shift in individual travel choices. This primarily includes a shift from driving single-occupant vehicles (SOVs) to more energy-efficient options such as public transit, active transportation (i.e. walking, cycling), carpooling, and/or teleworking. It aligns with the Growth Plan for the Greater Golden Horseshoe, which enables shorter, fewer, and more efficient car trips by building denser, mixed-use communities. Providing residents and commuters with an attractive and flexible suite of transportation alternatives that allow them to access work, education, shopping, health care, and social opportunities will be essential to reducing reliance on SOVs.

As a guiding document, the RTP describes what the Province of Ontario, Metrolinx, and local municipalities should address to support optimal mobility and access within the GTHA. It outlines the policies, infrastructure, and services required to meet shared goals such as managing congestion, improving the commuting experience, intensifying development, and building a transportation system that is adaptive and resilient to the stresses of a changing climate. Ontario climate change initiatives are complementing both the policy directions and the infrastructure investments to take the region even further beyond the twenty-five year horizon of the RTP. Together with numerous supporting actions by local municipalities, the private sector, the not-for-profit sector, and the *Sustainability Strategy*, we are increasingly moving forward with a coherent and integrated vision of a sustainable future for our region.

The *Sustainability Strategy* builds on the RTP, focusing on **how** Metrolinx can plan, build, and operate, to achieve meaningful progress towards sustainability within its own operations.



DRIVING SUSTAINABILITY - A Policy Perspective

There is a focus at every level of government on increasing community benefits of infrastructure projects, mitigating and adapting to climate change, and the opportunities for transitioning into a low-carbon economy. With this focus comes both pressure and opportunity to rethink the way we plan, build, and operate.

The *Sustainability Strategy* aligns and supports these initiatives and works with partner communities. Key policies and legislation that the *Sustainability Strategy* aligns with are:

- *Metrolinx Act (2006)* identifies the organization's objective to "provide leadership in the co-ordination, planning, financing, development, and implementation of an integrated, multi-modal transportation network that [...] supports a high quality of life, a sustainable environment, and a strong, prosperous, and competitive economy."
- *Growth Plan for the Greater Golden Horseshoe (2006)* is "a framework for implementing the Government of Ontario's vision for building stronger, prosperous communities by better managing growth in this region. It guides decisions on a wide range of issues – transportation, infrastructure planning, land-use planning, urban form, housing, natural heritage and resource protection – in the interest of promoting economic prosperity."
- *Regional Transportation Plan (2008)* focuses on providing the GTHA with an "integrated transportation system that enhances our quality of life, our environment and our prosperity."
- *Infrastructure for Jobs and Prosperity Act (2015)* establishes "mechanisms to encourage [...] infrastructure planning that supports job creation and training opportunities, economic growth, and protection of the environment, and incorporate design excellence into infrastructure planning". This includes a focus on community benefits and climate resilience.
- *Open Data Directive (2015)* drives transparency and collaboration by requiring all data from Ontario ministries and provincial agencies be made public, unless it is exempt for legal, privacy, security, confidentiality or commercially-sensitive reasons.
- Ontario's *Climate Change Mitigation and Low-Carbon Economy Act (2016)* establishes Ontario's climate change reduction targets to 2050 and requires the Province periodically create a Climate Change Action Plan to facilitate the achievement of those targets. It provides a framework for Ontario's cap and trade program and establishes a Greenhouse Gas Reduction Account to distribute cap and trade proceeds.
- Ontario's *Climate Change Action Plan (2016-2020)* outlines a series of actions to achieve Ontario's climate change reduction targets in various areas including transportation, buildings, and land-use planning.

WE ARE ON THE RIGHT TRACK

“Integrating sustainability into how we plan, build, and operate is part of Metrolinx’s mandate. Our sustainability commitments and the milestones we have achieved reflect the hard work and collaborative efforts of our employees in doing so.”

John Jensen
Chief Capital Officer
Metrolinx

Our sustainability journey began several years ago. It has been part of how we plan, build, and operate since our inception. The *Sustainability Strategy* intends to bring focus to our efforts and track our progress on this journey.

Did you know?

- We have required all new GO stations and maintenance facilities to meet the **LEED®² green building** rating system's **Gold** certification.
- We have committed to integrating **Community Benefits** provisions into all major infrastructure projects in 2013, beginning with the Eglinton Crosstown Light Rail Transit (LRT).
- We deliver our **Smart Commute** program to help employers and travelers explore sustainable mobility choices, such as carpooling, cycling, and transit.
- We promote **electric vehicle (EV)** charging with twenty EV chargers at ten GO stations.
- We provide access to **car and bike share services** at many of our stations.
- We have piloted **dynamic transportation** options such as GO Connect service at our Milton GO Station.
- We have installed **early weather and flood detection** systems across our transit system.
- We have committed to **electrification** of core segments of the GO Transit rail network for operational efficiency and to reduce GHG emissions and pollution from locomotives.
- We have implemented an award-winning **Environmental Management System (EMS)**.³
- We offer a **telework policy** for employees to reduce staff travel and reduce overall congestion.
- We provide **training** on sustainability and innovation to new employees.

² **Leadership in Energy and Environmental Design (LEED®)**: An internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance.

³ **Environmental Management System (EMS)**: A foundational system for managing environmental programs with consistency across all internal stakeholders, systems, and operations. It establishes a series of checks and balances to identify deviations from the environmental performance standards established by GO Transit. In 2015 the EMS received the Railway Association of Canada's Environment Award.



DEVELOPING OUR STRATEGY

Urbanization, aging infrastructure, demographic shifts, resource scarcity, environmental degradation, and related trends, challenge us to think differently about how we build our infrastructure, manage our operations, and serve the growing communities of the GTHA. This is a long-term commitment that must be done right - what we build today will be here for generations to come.

Delivering services that meet the needs of our environment, the people and the communities we serve, has always been a priority at Metrolinx. With the launch of our *Sustainability Strategy*, we now have a common understanding of where and how Metrolinx will focus, measure, and track our sustainability efforts. This strategy serves not only as a statement of our commitment but also as a framework for decision-making and a tool of accountability for our stakeholders. The *Sustainability Strategy* identifies actions and measures of success for the next five years, recognizing that our efforts will continue beyond 2020 to maintain our commitment to sustainability and continuous improvement. With the launch of this *Sustainability Strategy* we will:

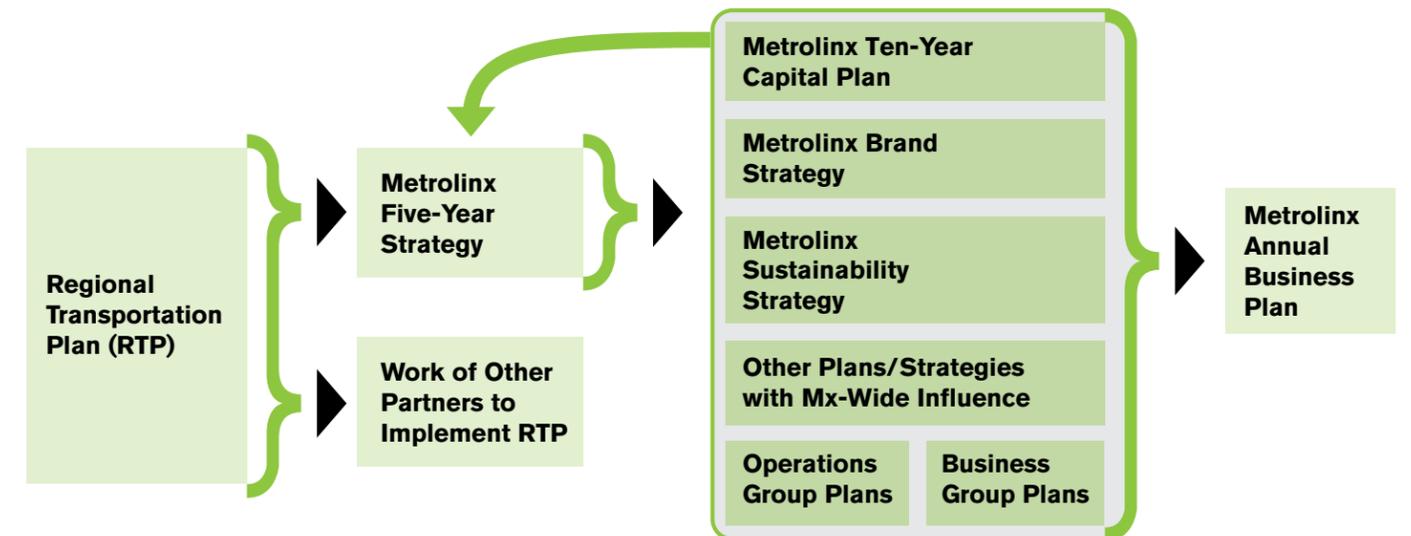
- Continue to develop an integrated transportation system that meets the needs of the GTHA, without compromising the ability of future generations to meet their needs;
- Make balanced and informed decisions that consider environmental, social, and economic impacts;
- Meet the high expectations we have set for ourselves and those of our stakeholders; and
- Accelerate and prepare our organization for change, both known and unknown.

ALIGNMENT

Metrolinx was established by the Government of Ontario under the *Metrolinx Act (2006)* with a mandate to support “a high quality of life, a sustainable environment and a strong, prosperous and competitive economy.” This commitment is reflected in the RTP and the *Metrolinx Five-Year Strategy*⁴, positioning sustainability as both a driver and a foundation for Metrolinx’s mandate.

While closely aligned with the vision, objectives, and priorities of the RTP and the *Metrolinx Five-Year Strategy*, our *Sustainability Strategy* focuses on **how** Metrolinx can implement all of its identified projects, plans, and activities to achieve

meaningful progress towards sustainability. Our *Sustainability Strategy* therefore focuses on embedding approaches, policies, and processes that cut across all of our projects and services. It is for this reason that this *Sustainability Strategy* does not make any reference to specific infrastructure projects, service upgrades, or ridership goals. Our focus is on ensuring the sustainability of these infrastructure projects, minimizing the environmental impacts of service expansion, leveraging our investments to support communities, and maintaining a safe and reliable transportation system.



⁴ **Metrolinx Five-Year Strategy:** A rolling five year outlook focusing on the activities Metrolinx will undertake including key issues and opportunities.

INVOLVING OUR STAKEHOLDERS

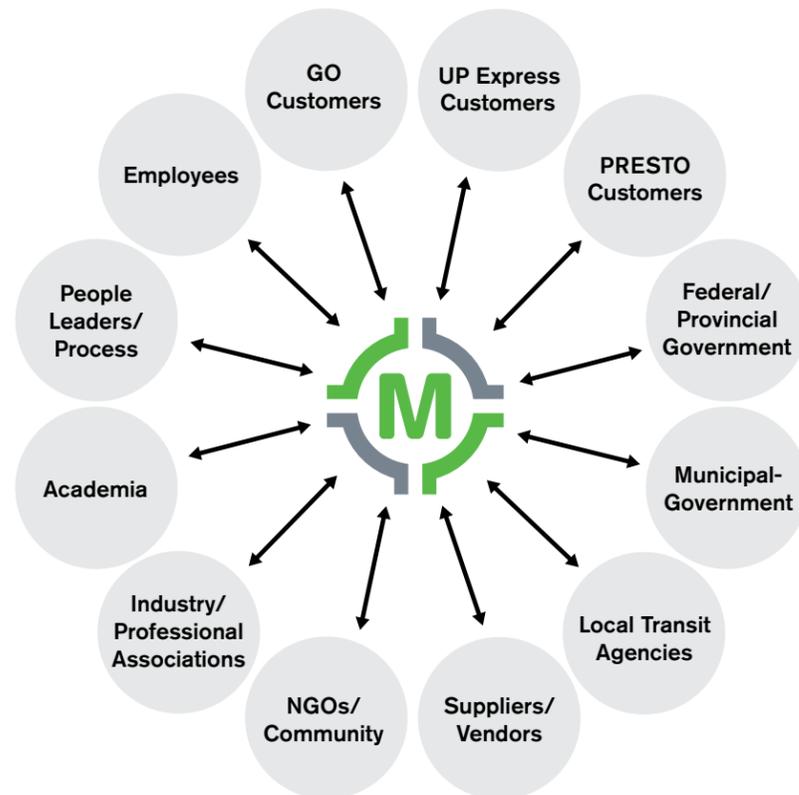
To develop our *Sustainability Strategy* we asked our internal and external stakeholders what sustainability issues are of greatest importance and priority to them, and to Metrolinx.

Starting in 2014, and over the course of several months, we used the following tools to collaborate with and gain insights from our stakeholders:

- **Electronic Surveys** distributed to nearly 3,000 internal and external stakeholders to identify, categorize, and prioritize sustainability topics. Stakeholders included customers, community leaders, suppliers, government agencies, local transit agencies, non-governmental organizations (NGOs), academics, and industry and professional associations.
- **External Sustainability Workshop** with over 20 recognized experts in sustainability, environmental issues management, social and community development, and other related

areas. We sought out specific expertise on what is necessary to achieve leadership in sustainable transportation.

- **Internal Workshop and Interviews** with over 60 stakeholders to identify existing initiatives and activities, share information regarding relevant leading practices in areas of specialization, and to understand the opportunities and challenges faced.
- **Sustainability Strategy Advisory Committee Meetings** consisting of executive and management representatives from across the organization. Four meetings with more than 20 representatives were held to gain deeper perspectives on priorities and initiatives.
- **Planning Workshops** to gain consensus on the actions, timing, goals, and targets associated with each focus area. This consisted of 18 workshops with over 100 staff from business units across the organization.



IDENTIFYING OUR PRIORITIES

“Understanding how and where we have the greatest impact allows us to focus on priority areas and needs.”

Leslie Woo
Chief Planning Officer
Metrolinx

The approach we took for identifying priority areas both within the organization and for our stakeholders was guided by the materiality⁵ concepts described in the *Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines*. We also used guidance provided in *AA1000 Stakeholder Engagement Standard*.

The materiality assessment was useful in highlighting the importance of areas such as climate resilience, energy and emissions, sustainable procurement, access to sustainable transportation, our employees, and demonstrating trust and integrity. Of these areas, some are well addressed through the *Regional Transportation Plan, Metrolinx's People Strategy, GO Passenger Charter*, and in other Metrolinx strategies and plans. Other areas, including climate resilience, energy and emissions, and sustainable procurement are not currently addressed within existing Metrolinx strategies and need further attention.

To focus our sustainability efforts on achieving the greatest impact, we evaluated our most material sustainability areas to identify those that represent both the greatest need and opportunity for Metrolinx. Consideration was given to the following questions:

- What is the level of sustainability impact of this issue to Metrolinx and its stakeholders?
- What issue represents the greatest opportunity to affect meaningful change, considering planned investments in infrastructure and services?
- What are the real and perceived impacts of the issue to Metrolinx?
- What is the extent to which managing this issue supports achieving other Metrolinx strategic objectives?
- What is the extent to which Metrolinx can demonstrate leadership on this issue?
- What is the level of organizational readiness for this issue?
- What is the extent to which managing this issue can achieve the priorities of the Government of Ontario?

⁵ **Materiality:** According to the Global Reporting Initiative (GRI), materiality reflects the significant economic, environmental and social impacts of an organization or the areas that significantly influence the assessment and decisions of stakeholders.

⁶ **Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines:** A globally recognized tool designed to help organizations assess opportunities and risks, and enable informed decision-making. GRI G4 Sustainability Reporting Guidelines provide a framework for organizations to report on and disclose standardized sustainability impacts and performance indicators.

⁷ **AA1000 Stakeholder Engagement Standard:** An international principles-based standard for evaluating stakeholder engagement and level of influence of stakeholders on the organization's strategy, business models and governance.



THE SUSTAINABILITY STRATEGY (2015-2020)

“The Sustainability Strategy is anchored to our vision, mission, and core values, serving as a roadmap for our sustainability journey.”

Robert Siddall
Chief Financial Officer
Metrolinx

OUR VISION

Building on our mandate to plan, build, and operate, the vision of the *Sustainability Strategy* is to **work together to reduce our impact on the environment and to enhance opportunities for communities.**

The *Sustainability Strategy* is our roadmap for achieving this vision. Our customers, employees, and partners have been an integral part of building this roadmap, and we remain committed to reporting on our progress at each stop along the way.

OUR SUSTAINABILITY GOALS

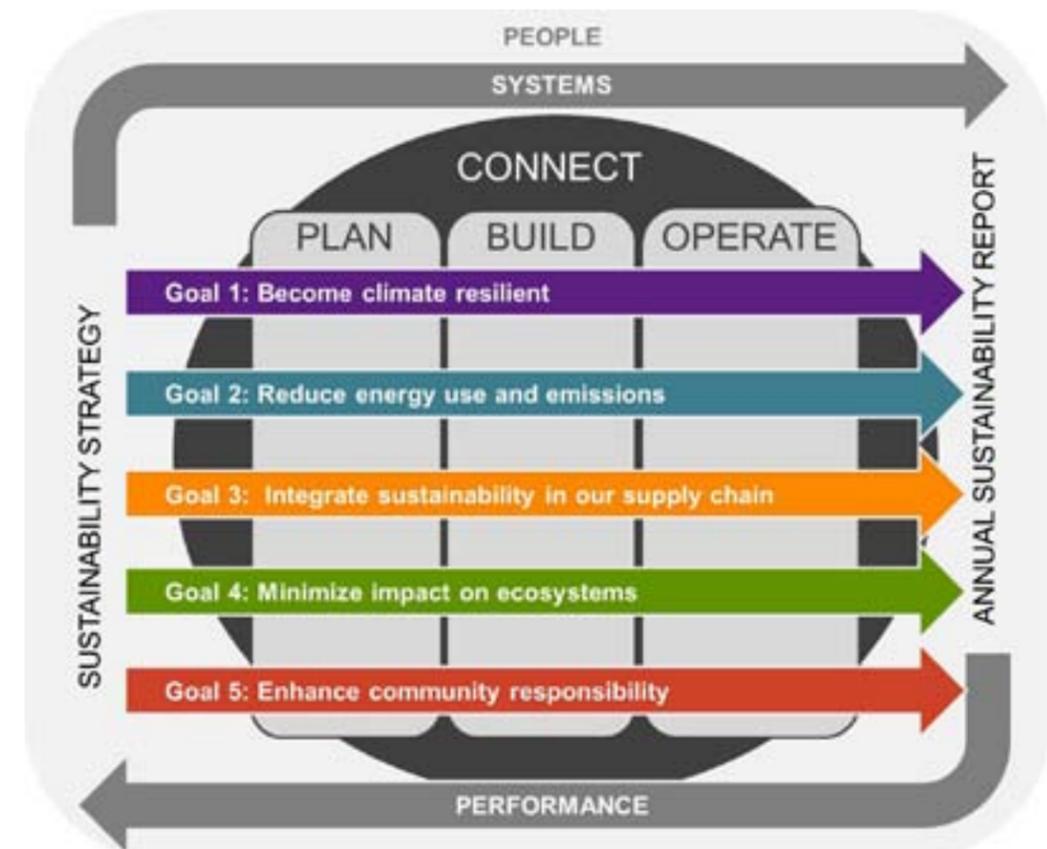
“Never do anything without asking yourself how this will impact our customers, suppliers, employees, and other stakeholders. Better yet, be sure to ask them so we know for certain what matters to them and how we can meet their needs.”

Greg Percy
Chief Operating Officer
Metrolinx

At Metrolinx, our vision of sustainability includes consideration of our economic, environmental, and social responsibilities, as well as the need to develop and build the capacity and mindset necessary to deliver on them. As described in the section ‘Developing our Strategy,’ we are currently addressing some aspects of sustainability through existing Metrolinx strategies and plans. Other areas, as identified below, will require our collective and additional focus and attention.

Our *Sustainability Strategy* focuses on five priority sustainability goals (as seen in Figure 1.0), which are substantially material to Metrolinx and its stakeholders, and represent those areas of greatest need and opportunity. Over the next five years, we will integrate our sustainability goals into all aspects of how we plan, build, and operate a sustainable transportation system. This will be implemented by ensuring that we have in place the people, systems, and performance management systems we need to measure and achieve success.

Sustainability Goals and Implementation Snapshot

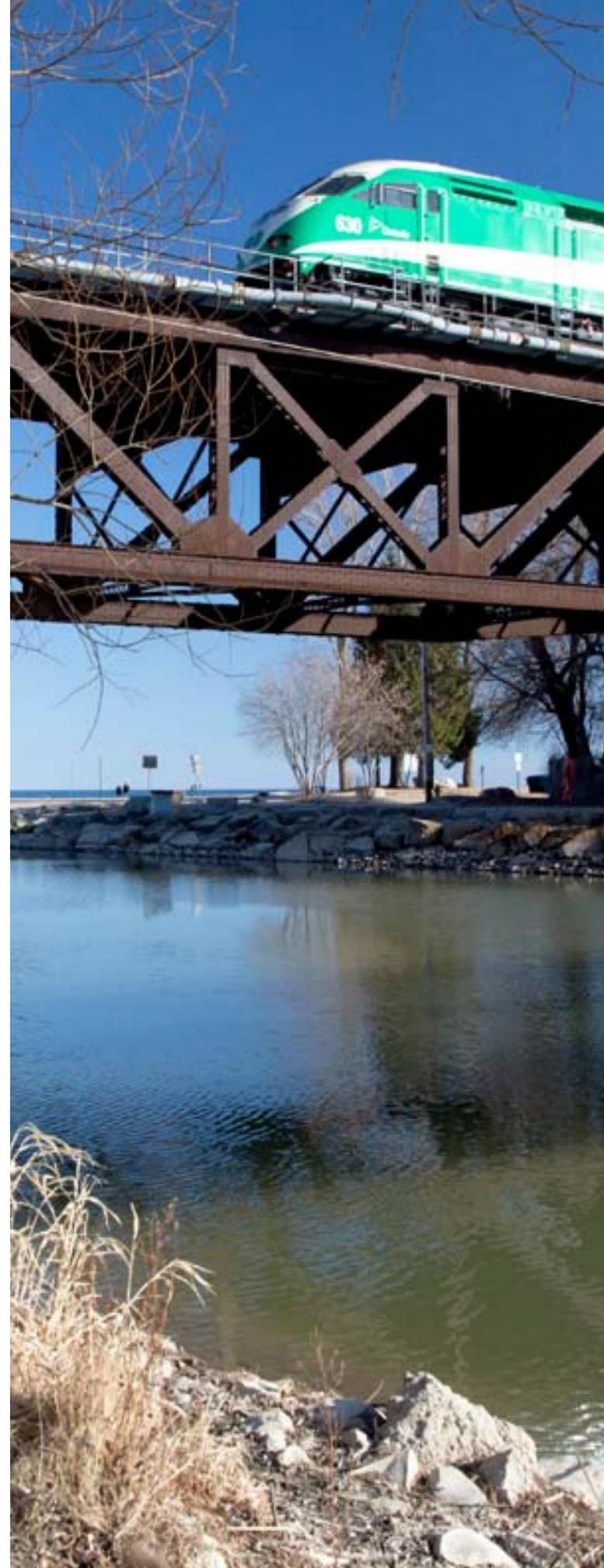




GOAL 1: BECOME CLIMATE RESILIENT

We will accelerate and intensify our efforts to implement a climate adaptation and climate resilience program to manage and mitigate the risks of climate change.

Climate change continues to present a complex challenge for the region and transit operators. The Province of Ontario intends to release its plan for adapting to climate change and becoming more resilient by 2017, as stated in Ontario's *Climate Change Action Plan (2016-2020)*. We recognize the importance of understanding our risks and vulnerabilities to the effects of climate change. These include extreme temperature, heat wave, precipitation, flooding, high winds, freezing rain, snowfall, and drought. We are addressing the need to manage and mitigate these risks by building our physical infrastructure and operating our transit network in a manner that is adaptive and resilient to future climatic conditions. To Metrolinx becoming climate resilient means taking actions now to protect and secure the people and communities affected by our assets and services, and the assets and services themselves.



HOW WE WILL MEASURE SUCCESS

The following actions and measurements have been developed to hold us accountable to our commitments:

1.1 Finalize our corporate Climate Adaptation Plan. This includes strategies to ensure that capital assets that are designed, built, and delivered by Metrolinx are resilient to the impacts of climate change.

- Complete: by the end of 2017
- Measurement: complete/incomplete

1.2 Develop climate resilience requirements for inclusion within technical standards, manuals, guidelines, Alternative Finance Procurement (AFP)⁸ project agreements, and project specific output specifications.

- Complete: by the end of 2018
- Measurement: complete/incomplete

OUR VISION OF SUCCESS FOR 2020

Our ongoing efforts to evaluate the likelihood and magnitude of climate risks provides us with the knowledge to aid the development and maintenance of climate vulnerability assessments, and implementing action plans that have minimized loss and reduced risks for our organization and the communities in which we operate. We are experiencing more frequent, volatile, and severe weather events caused by climate change, including prolonged heat waves, torrential rain storms, and ice storms. These events put our communities and our economy at risk by impacting the integrity of municipal, regional, and business infrastructure. By executing the *Sustainability Strategy*, we will maintain our ability to make timely and informed investment and planning decisions that focus beyond our immediate needs to safeguard our infrastructure and those that depend on this infrastructure from the impacts of climate change. Accordingly, we manage the uncertainties of climate change with robust solutions that are effective and efficient under a range of climate change scenarios. Our infrastructure has the capacity to move people quickly and provide critical support during times of emergency.



⁸ **Alternative Finance Procurement:** Use of private sector involvement to design, finance, and/or build infrastructure while ensuring public control.

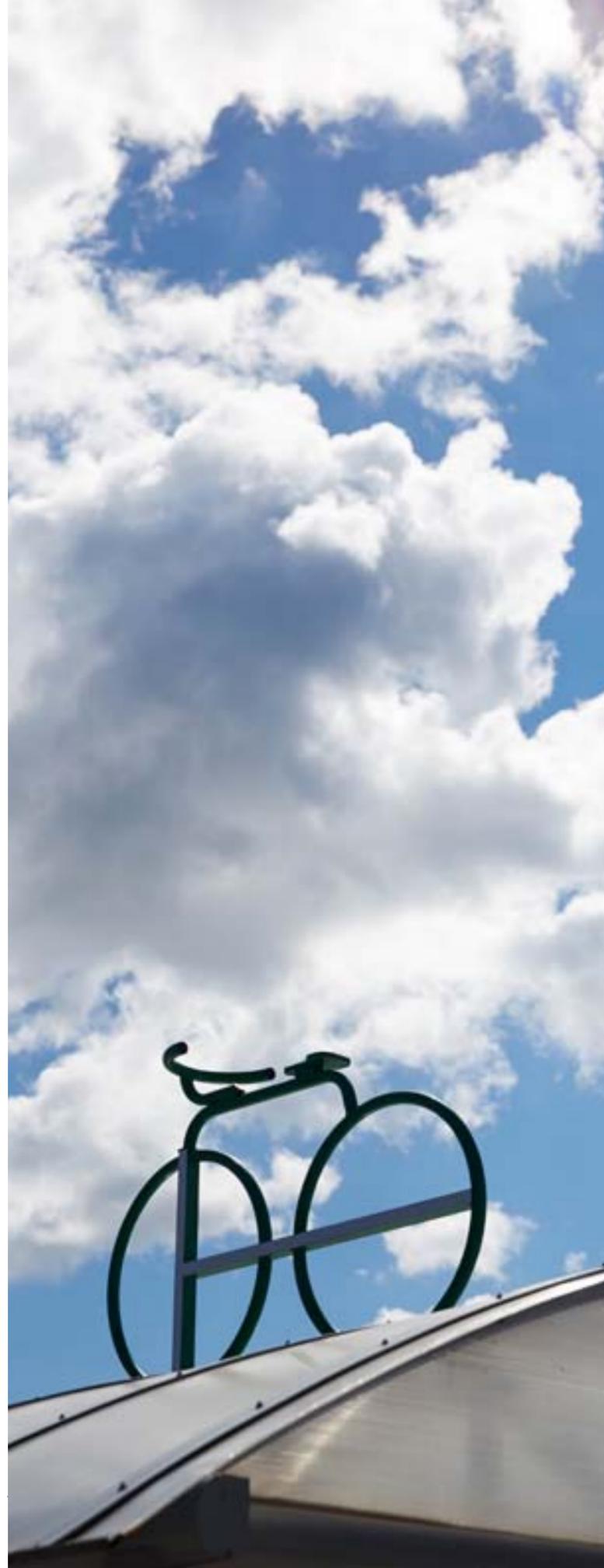


GOAL 2: REDUCE ENERGY USE AND EMISSIONS

We will adopt processes, programs, and technologies that allow us to effectively track, monitor, and reduce our energy consumption, and carbon and air emissions.

Public transit is a vital part of the solution to minimize and mitigate our impact on the environment. It provides a cleaner travel option for commuters by reducing carbon emissions, improving air quality, and contributing to ecosystem health while diverting commuters from more congested and polluting modes of transportation such as SOVs. Ensuring that our rail locomotive, bus, and station operations minimize their energy use and reduce emissions must happen in parallel to our efforts to increase access to public transportation.

GO Regional Express Rail (GO RER) is a \$13.5 billion project that will introduce two-way, all day service and electrification of core areas of our rail network. As a result ridership is projected to double by 2025. As service levels increase, electrification will play an important role in reducing our energy consumption and emissions. However, these reductions will not be realized until after 2020, and are therefore not represented here.



HOW WE WILL MEASURE SUCCESS

The following actions and measurements have been developed to hold us accountable to our commitments:

2.1 Reduce energy consumption.

Achieve an 18% improvement in building energy performance over the minimum specified by the *National Energy Code for Buildings (2011)*⁹ in Metrolinx operated facilities.

- Complete: by 2020
- Measurement: complete/incomplete

Develop a re-commissioning and energy systems monitoring protocol for all GO Transit maintenance facilities.

- Complete: by 2018
- Measurement: complete/incomplete

Provide energy reduction incentives within AFP Request For Proposals (RFP). This is to be incorporated into RFP Schedule 3, 'RFP responses regarding Technical, Financial, Affordability, Scope, and submittal format.'

- Complete: by 2015 (Achieved)
- Measurement: complete/incomplete

15% reduction in fuel consumption per revenue seat kilometre (km) (from a 2012 baseline).

- Complete: by 2020
- Measurement: complete/incomplete

2.2 Reduce greenhouse gas (GHG) emissions.

15% reduction in mobile GHG emissions per revenue seat km (from a 2012 baseline).

- Complete: by 2020
- Measurement: complete/incomplete

Encourage consideration of opportunities to incorporate renewable energy sources into the design of new stations, and bus and rail maintenance facilities to reduce GHG emissions.

- Complete: by the end of 2020
- Measurement: complete/incomplete

Consider adding a quantitative target related to GHG emissions reduction within AFP Project Agreements.

- Complete: by the end of 2018
- Measurement: complete/incomplete

Develop consistent percentage reductions in idling time of revenue vehicles per litre per kilometre per year (L/km/year).

- Complete: by 2020
- Measurement: complete/incomplete

Develop an implementation plan to install EV charging stations at GO station sites, as per Ontario's *Climate Change Action Plan (2016-2020)* mandate.

- Complete: results for sustainability progress reports to be ready within this *Sustainability Strategy* reporting cycle as early as 2018 but no later than 2020
- Measurement: complete/incomplete

2.3 Reduce Criteria Air Contaminants (CACs).¹⁰

Achieve 20% reduction in total CACs per revenue seat km.

- Complete: by 2020
- Measurement: complete/incomplete

OUR VISION OF SUCCESS FOR 2020

With an eye keenly focused on our energy consumption and how it affects our carbon and air emissions profile, we aim to be recognized as a leader and capacity-builder in the transition to a low-carbon future. We will measure and track our GHG emissions and achieve reductions and efficiencies through the energy source and system choices we make and by promoting a culture of efficient energy consumption. By investing in new technologies, low-carbon fuels, and championing energy efficiency in the built environment, our activities will have measurably reduced carbon and air emissions. We are making progress towards electrification of GO RER and will begin measuring its impact on energy consumption and efficiency in the years ahead. Our choices have stimulated new and innovative businesses and technologies, and encouraged alternative and renewable energy uses, all the while mitigating energy cost volatility and reducing regional health risks from air pollution.

⁹ **National Energy Code for Buildings (2011):** Sets out Canadian requirements to design and construct more energy efficient buildings.

¹⁰ **Criteria Air Contaminants:** Atmospheric gases that contribute to poor air quality, smog, and acid rain including SOX and NOx.



GOAL 3: INTEGRATE SUSTAINABILITY IN OUR SUPPLY CHAIN

Minimize the impact associated with the use, extraction, processing, transport, maintenance, and disposal of materials.

Metrolinx is embarking upon the largest transportation infrastructure and service expansion initiative in North America: GO RER. Metrolinx therefore has a unique ability and responsibility to deploy capital and operating funds in a manner that can ensure the ongoing sustainability of the transportation system, being mindful of the life-cycle costs of this massive expansion. Establishing processes, approaches, and criteria for evaluating our contracts and purchases through a sustainability lens means we will evaluate the life-cycle impact¹¹ and cost of materials and resources when making capital or operating decisions.



¹¹ **Life-cycle Impact:** Considers whole lifecycle, or cradle-to-grave, environmental impacts of the harvesting, manufacturing, packaging, transportation, distribution, operation and disposal of materials and resources. Environmental impacts take into account both inputs (energy, water, resources, etc.) and outputs (air and water pollutants, land use, etc.).

HOW WE WILL MEASURE SUCCESS

The following actions and measurements have been developed to hold us accountable to our commitments:

3.1 Establish a viable sustainability framework for construction materials and sustainable procurement practices.

Adopt or develop a sustainability framework that can be applied to all transit infrastructures in the Metrolinx network. Evaluate the feasibility of adopting the ENVISION^{TM12} framework for use with categories of Metrolinx transit infrastructure.

- Complete: by 2018 or earlier
- Measurement: complete/incomplete

Include consideration of life-cycle impact in material selection.

- Complete: by 2018
- Measurement: complete/incomplete

3.2 Divert waste from landfills.

Require vendors to produce a waste management plan.

- Complete: all signed construction infrastructure project agreements beginning in 2017
- Measurement: complete/incomplete

Include incentives within Metrolinx construction procurements to avoid tipping fees by diverting waste.

- Complete: by 2015 (Achieved)
- Measurement: complete/incomplete

Identify which construction materials, components, and sub-assemblies can be recycled at the end of their useful life (for example, railway ties).

- Complete: RFPs for Technical Advisor Services beginning in October 2016
- Measurement: complete/incomplete

¹² **ENVISIONTM:** A framework for planning, designing, constructing, and operating a sustainable civil infrastructure.

3.3 Divert waste from operations.

80% of Metrolinx operated facilities will have a waste diversion management plan and targets.

- Complete: by 2020
- Measurement: complete/incomplete

3.4 Promote use of modular and adaptive design¹³ in our infrastructure projects

Explore opportunities for adaptive designs that facilitate recycling, deconstruction,¹⁴ and/or re-purposing of these infrastructures.

- Complete: by the end of 2020
- Measurement: complete/incomplete

During the design of new projects, document and track all opportunities identified for use of modular and adaptive design. Include commentary on the pros and cons associated with each identified opportunity, as well as the rationale for acceptance or rejection. Share lessons learned.

- Complete: report on results as early as 2018 and no later than 2020
- Measurement: complete/incomplete

3.5 Incorporate sustainability requirements within procurement practices.

Develop a *Vendor Code of Conduct*, *Sustainable Procurement Policy*, and specific technical requirements in tenders.

- Complete: by 2018
- Measurement: complete/incomplete

¹³ **Modular and Adaptive Design:** Design concepts where components and spaces are built, often offsite, as individual and separate modules and when put together reflect the larger design intent. Spaces are built to meet current and future needs, with flexibility to function to a range of uses.

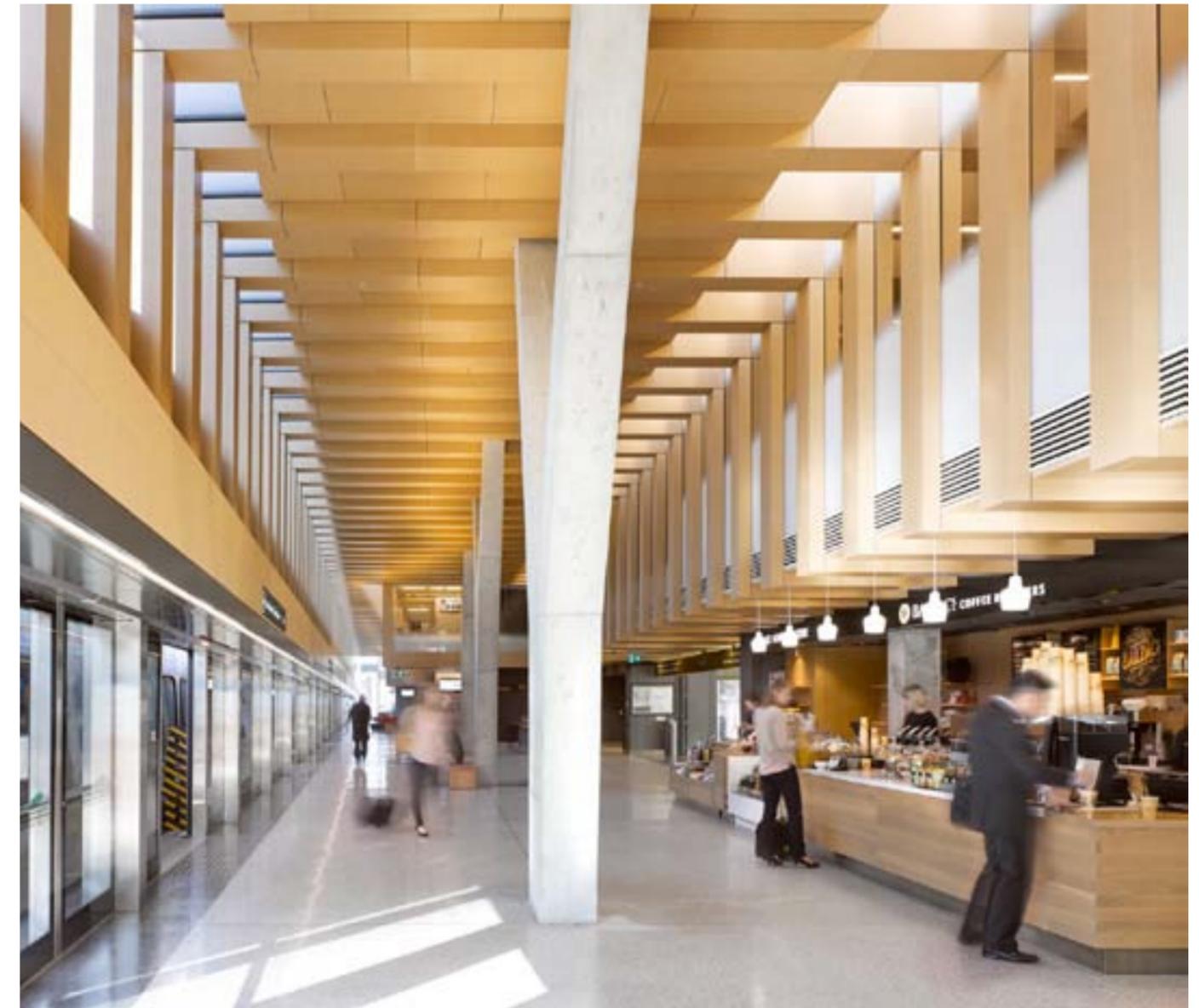
¹⁴ **Deconstruction:** Disassembly of elements from the built environment that prioritizes the reuse and recycling of building components and materials.



OUR VISION OF SUCCESS FOR 2020

As part of our commitment to enhance prosperity, sustainability, and quality of life, we will leverage our procurement capacity to lead and influence the market growth of, and demand for, more sustainable business practices, products, and services. This will support Metrolinx's broader objective to deliver long-term sustainable transportation for the GTHA. In the future, we will assess life-cycle impacts to give us a robust and holistic view of the impact of materials to enable sound decision-making. We will provide better value for our investments. We will embed consideration of the full cost impact of our goods into procurement considerations to ensure the long-term sustainability of financial investments. Our encouragement to use more environmentally

friendly, socially responsible and economically feasible options has improved collaboration with our network of vendors throughout the value chain. There is increased uptake and participation of local vendors with opportunities for innovation, product improvement and process efficiency. These opportunities offer a positive competitive advantage for the GTHA and help attract investment and a skilled workforce. By 2020, our Sustainable Procurement Policy and practices will demonstrate our due diligence to reduce risk and liability, lower health and safety costs, and improve employee and community health through cleaner air, land, and water.

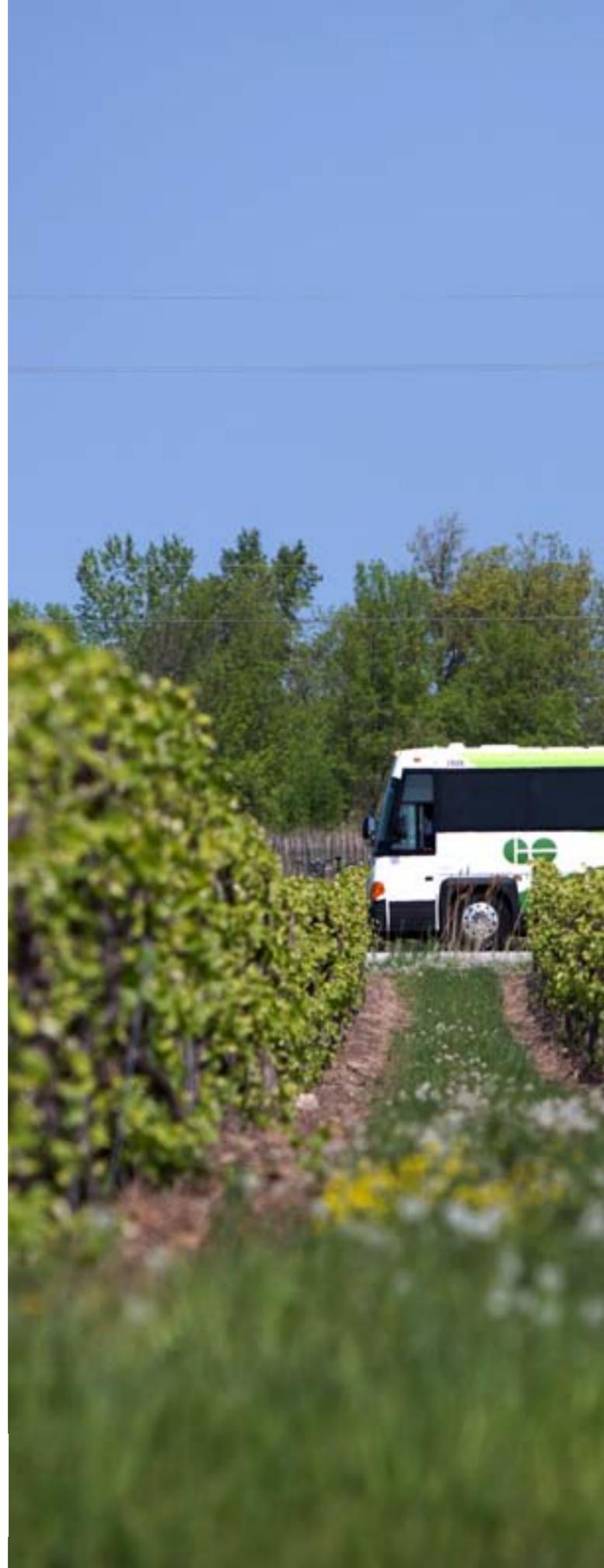




GOAL 4: MINIMIZE IMPACT ON ECOSYSTEMS

Consider the impact of infrastructure and services on ecosystems and ecosystem services,¹⁵ and make best efforts to manage, preserve, or protect them.

Our infrastructure and services can have direct and indirect impacts on habitats, species, and ecosystem services, such as fresh water purification, climate regulation, and biodiversity. As we seek to expand our transportation network to serve the needs of the GTHA, we want to do so while also understanding our impact on natural systems to ensure that we may avoid, or take any necessary steps, to mitigate any impact. Where possible, we will also seek opportunities to interact with natural systems in a synergistic and positive way, such as helping researchers restore monarch butterfly habitats by providing access to our railway corridors for planting milkweed, and other conservation efforts.



¹⁵ **Ecosystem Services:** The benefits people obtain from ecosystems. These include provisioning services such as food and water, regulating services such as flood and disease control, and supporting services such as the nutrient cycling that maintains the conditions for life on Earth.

HOW WE WILL MEASURE SUCCESS

The following actions and measurements have been developed to hold us accountable to our commitments:

4.1 Minimize the impact of new and existing infrastructure on ecosystems and consider ways to enhance the health of ecosystems (i.e., species, habitat, biodiversity).

Integrate requirements into Metrolinx procurement practices to manage and mitigate impacts of new and existing infrastructure on ecosystems.

- Complete: report on results as early as 2018 and no later than 2020
- Measurement: complete/incomplete

Identify and implement opportunities to support and enhance biodiversity conservation efforts to meet or exceed applicable legislation and guidelines.

- Complete: report on results by end of 2020
- Measurement: complete/incomplete

Identify opportunities to enhance ecosystems to meet or exceed applicable legislation and guidelines. This includes, but is not limited to, consideration of native and pollinator species.

- Complete: report on results by end of 2020
- Measurement: complete/incomplete



4.2 Minimize and manage the use of salt and other chemicals used in operations that are dispersed in the environment.

Implement salt management strategy, measure impact, and evaluate alternatives as necessary.

- Complete: by 2018
- Measurement: complete/incomplete

OUR VISION OF SUCCESS FOR 2020

Our approach to identifying, managing, and mitigating the impacts of our infrastructure and services on natural habitats, species, and ecosystem services will be industry leading and viewed by others as an example of best practices. We are working closely with the Province, conservation authorities, and others to ensure that our management of water and strategies to mitigate the impacts of climate change are evidence-based, practical, and robust. We are collaborating with researchers, industries, government agencies, and NGOs to identify, develop, and implement strategies that promote and enhance our natural systems where and when possible. This includes programs that address aspects of planning, building, and operating our regional transportation system.



GOAL 5: ENHANCE COMMUNITY RESPONSIBILITY

We will leverage our significant investment in the GTHA to create a lasting legacy for our communities and to work closely with them to create economic and social value.

The benefits and challenges of developing and operating public transportation affect everyone – passengers, residents, businesses, students, seniors, persons with disabilities, and many more. Research demonstrates that effective investment in infrastructure creates jobs, increases local business performance, and reduces both household and social costs. Metrolinx has both a responsibility and an opportunity to leverage our significant investment in the GTHA to create a lasting legacy for our communities through programs that focus on key areas such as employment and training, mental health, and local economic development.



HOW WE WILL MEASURE SUCCESS

The following actions and measurements have been developed to hold us accountable to our commitments:

5.1 Minimize local impacts on communities.

Minimize or eliminate light pollution from GO stations and maintenance facilities without compromising safety and security. Adopt this as a mandatory LEED requirement.

- Complete: include within applicable project tenders beginning in April 2017
- Measurement: complete/incomplete

Develop and implement a comprehensive approach to address noise across the Metrolinx network. This includes a plan that would guide Metrolinx toward enhancing its ability to anticipate, manage, and respond to noise issues.

- Complete: by 2019
- Measurement complete/incomplete

5.2 Engage residents in the design and construction of new infrastructure.

Develop a Community Charter.

- Complete: by the end of 2017
- Measurement: complete/incomplete

5.3 Support local workforce development, including partnerships to increase the supply of skills and trades.

Develop and implement Community Benefits provisions in all Metrolinx AFP contracts.

- Complete: beginning as early as late 2016
- Measurement: complete/incomplete

5.4 Build partnerships to increase the supply of key skills and trades.

- Complete: by 2020
- Measurement: complete/incomplete

5.5 Develop, support, and engage with educational programs to build knowledge, technology, and skills that advance sustainability and innovation, within the scope of Metrolinx’s mandate.

Develop the implementation plan and commence execution.

- Complete: results reportable as early as 2018 and no later than 2020
- Measurement: complete/incomplete

5.6 Establish an online platform for public feedback and input on projects.

Measure participation and effectiveness.

- Complete: by 2016
- Measurement: complete/incomplete

OUR VISION OF SUCCESS FOR 2020

As the GTHA’s leading developer and operator of transportation infrastructure, we will engage communities affected by the operation of our services and our construction of expanded or new infrastructure. We are a recognized community partner for our efforts to incorporate social and economic value protection and creative thinking into the design, planning, construction, and operating phases of all projects. This has allowed us to deliver services and operate our business in a way that strengthens the communities in which we operate and minimizes disruptions. While we have made significant progress through individual projects and initiatives, we have clear corporate objectives to integrate these programs into our daily operations. We are delivering on our desire to promote employment and training for at-need communities, be proactive and responsive to our communities, and support local economic development. These objectives form the basis of our Community Charter. In the future, we will play a stronger role in shaping the physical, psychological, and socio-economic status of communities across the GTHA, and of those impacted by our infrastructure projects, operations and services. Our actions have achieved measurable success in terms of addressing the needs of our communities.

OUR APPROACH

Connecting sustainability with all aspects of our business will be an integral part of our approach as we implement the *Sustainability Strategy*. Achievement of our sustainability goals will also depend upon our ability to integrate sustainability within decision-making, support people, implement systems, and deliver performance improvements on our mandate.

PEOPLE

To become a leader of tomorrow we will require the knowledge, skills, and perspectives necessary to advance sustainability and innovation. Empowering our workforce with these attributes will enable us to meet the known and as-yet unknown challenges of the ever-changing environment. Our *People Strategy*, and *Diversity and Inclusion Strategy*, address important issues such as how to attract and retain a talented, diverse, and inclusive workforce, as well as promote the health, safety, and wellness of our employees. The size, scale, and scope of our mandate require us to develop our region's future workforce, to meet the needs of this unprecedented investment. We therefore remain committed to growing our region's current and future workforce, demonstrating leadership in innovation and collaboration, and creating conversations about sustainability and innovation.

To this end, we will:

- Build partnerships to increase the supply of key skills and trades;
- Within the scope of our mandate develop, support, and engage with educational programs to build knowledge, technology and skills that advance sustainability and innovation; and
- Establish forums for collaboration on shared mobility, sustainability, and innovation.



SYSTEMS

Connecting sustainability with all aspects of our business through policies, procedures, decision-making tools and systems will be an integral part of our approach as we implement the *Sustainability Strategy*. We will consider sustainability in procurement and purchasing decisions, *Enterprise Asset Management (EAM)*¹⁶ program, business case development framework, and award-winning *Environmental Management System*. We will also meet commitments made in our *GO Passenger Charter*,¹⁷ *PRESTO Customer Charter*,¹⁸ *GO Transit Customer Service Strategy*,¹⁹ the *Multi-Year Accessibility Plan*,²⁰ and the *GO Rail Park and Station Access Plan*.²¹ We will therefore continue to develop and implement our EAM program, quality and environmental management systems, and a robust business case development framework.

¹⁶ **Enterprise Asset Management:** The optimal lifecycle management of the physical assets of an organization. It covers subjects including the design, construction, commissioning, operations, maintenance, and decommissioning/replacement of plant, equipment, and facilities.

¹⁷ **GO Passenger Charter:** A set of five promises that GO Transit has made to customers to do our best; to be on time, take their safety seriously, keep them in the know, make their experience comfortable, and to help them quickly and courteously.

¹⁸ **PRESTO Customer Charter:** Outlines commitments to PRESTO customers by every PRESTO employee to ensure a better user experience.

¹⁹ **GO Transit Customer Service Strategy:** Outlines GO Transit's strategic priorities for 2016-2019 that will help GO Transit maintain its focus on being a customer-first regional transit service while integrating with service across the GTHA as part of the Regional Transportation Plan (RTP) and Regional Express Rail (RER) initiatives.

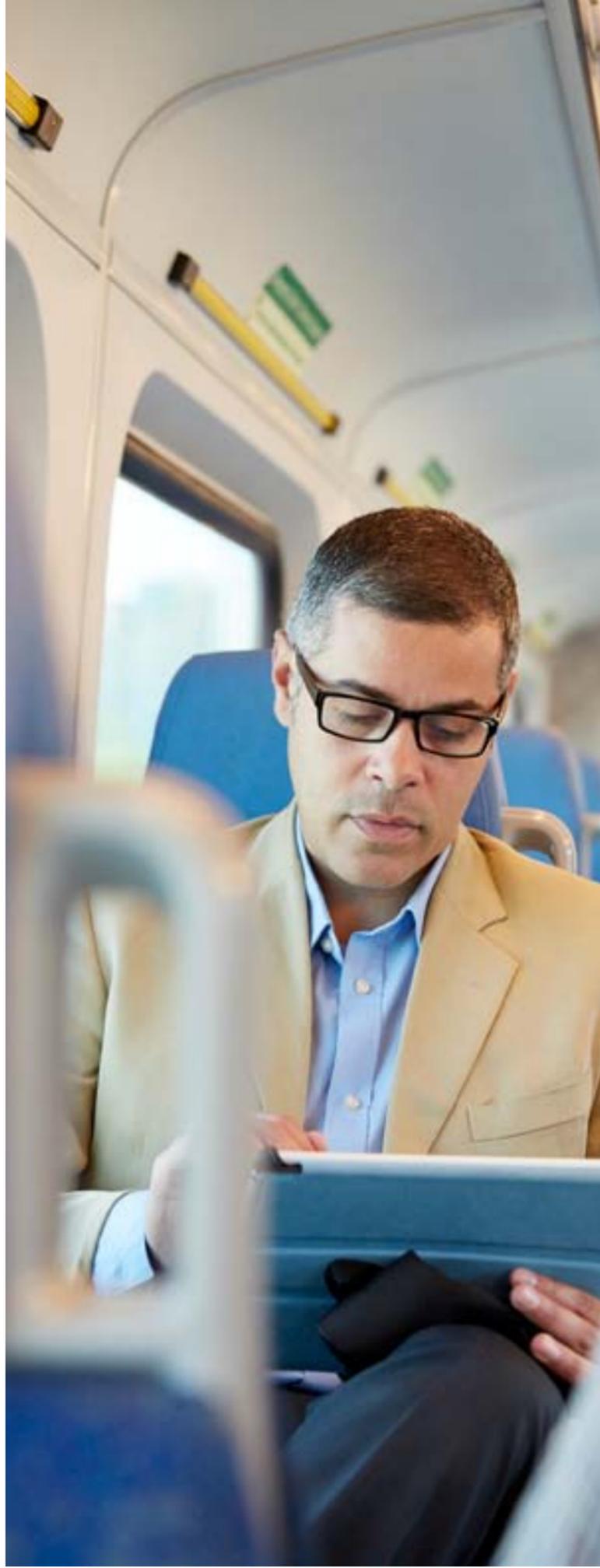
²⁰ **Metrolinx Multi-Year Accessibility Plan:** Metrolinx accessibility policy for implementation of the *Accessibility for Ontarians with Disabilities Act (2005)*.

²¹ **GO Transit Rail Parking and Station Access Plan:** Sets forth the plan to enhance the customer experience, support ridership growth, manage demand for new parking, support transit-oriented development, promote cost effectiveness, and further align policy.



PERFORMANCE

Trust between organizations and people strengthens the social license to operate – an unwritten agreement communities strike with organizations that grant them permission to operate. In addition, strong relationships, dedicated partnerships, and committed customers result from the trust earned by holding each other accountable. As we seek to achieve our sustainability goals, we are committed to measuring, monitoring, and reporting on our sustainability performance and engaging in constructive dialogue with our stakeholders on our collective challenges, opportunities, and progress. We will therefore track and report on our performance annually, review and update our sustainability commitments regularly, and seek credible third-party certifications of our sustainability performance.



OUR PERFORMANCE SCORECARD

In order to measure, report and evaluate our progress in achieving our sustainability goals, we will measure, track, and report annually on our progress using the following scorecard.



Goal 1: Become Climate Resilient

Action

Measurement

1.1 Finalize our Corporate Climate Adaptation Plan. This includes strategies to ensure that capital assets that are designed, built, and delivered by Metrolinx are resilient to the impacts of climate change.

- Complete by the end of 2017.

1.2 Develop climate resilience requirements for inclusion within technical standards, manuals, guidelines, AFP project agreements, and project specific output specifications.

- Complete by the end of 2018.



Goal 2: Reduce Energy Use and Emissions

Action	Measurement
2.1 Reduce energy consumption.	<ul style="list-style-type: none"> Achieve an 18% improvement in building energy performance over the minimum specified by the <i>National Energy Code for Buildings</i> (2011) in Metrolinx operated facilities by 2020. Develop a re-commissioning and energy systems monitoring protocol for all GO Transit maintenance facilities by 2018. Provide energy reduction incentives within AFP request for proposals. This is to be incorporated into RFP Schedule 3, 'RFP responses regarding Technical, Financial, Affordability, Scope, and submittal format' by 2015. (Achieved) 15% reduction in fuel consumption per revenue seat km by 2020 (from a 2012 baseline).
2.2 Reduce greenhouse gas (GHG) emissions.	<ul style="list-style-type: none"> 15% reduction in mobile GHG emissions per revenue seat km by 2020 (from a 2012 baseline). Encourage consideration of opportunities to incorporate renewable energy sources into the design of new stations and bus and rail maintenance facilities to reduce greenhouse gas emissions by the end of 2020. Consider adding a quantitative target related to GHG emissions reduction within AFP Project Agreements by the end of 2018. Develop consistent percentage reduction in idling time of revenue vehicles, L/km/year by 2020. Develop an implementation plan to install Electric Vehicle charging stations at GO station sites, as per Ontario's <i>Climate Change Action Plan (2016-2020)</i> mandate with results for sustainability progress reports to be ready within this strategy reporting cycle as early as 2018 and no later than 2020.
2.3 Reduce Criteria Air Contaminants (CAC).	<ul style="list-style-type: none"> Achieve 20% reduction in total CAC per revenue seat km by 2020.



Goal 3: Integrate Sustainability in Our Supply Chain

Action	Measurement
3.1 Establish a viable sustainability framework for construction materials and sustainable procurement practices.	<ul style="list-style-type: none"> Adopt or develop a sustainability framework that can be applied to all transit infrastructures in the Metrolinx network. Evaluate the feasibility of adopting the ENVISION™ framework for use with categories of Metrolinx transit infrastructure by 2018 or earlier. Include consideration of life-cycle impact in material selection by 2018.
3.2 Divert waste from landfills.	<ul style="list-style-type: none"> Require vendors to produce a waste management plan with all signed construction infrastructure project agreements beginning in 2017. Include incentives within Metrolinx construction procurements to avoid tipping fees by diverting waste by 2015. (Achieved) Identify which construction materials, components and sub-assemblies can be recycled at the end of their useful life (for example, railway ties). RFPs for Technical Advisor Services beginning in October 2016.
3.3 Divert waste from operations.	<ul style="list-style-type: none"> 80% of Metrolinx operated facilities will have a waste diversion management plan and targets by 2020.
3.4 Promote use of modular and adaptive design in our major capital projects.	<ul style="list-style-type: none"> Explore opportunities for adaptive designs that facilitate recycling, deconstruction, and/or re-purposing of these infrastructures by the end of 2020. During the design of new projects, document, and track all opportunities identified for use of modular and adaptive design. Include commentary on the pros and cons associated with each identified opportunity, as well as the rationale for acceptance or rejection. Share lessons learned and report on results as early as 2018 and no later than the end of 2020.
3.5 Incorporate sustainability requirements within procurement practices.	<ul style="list-style-type: none"> Develop a <i>Vendor Code of Conduct, Sustainable Procurement Policy</i> and specific technical requirements in tenders by 2018.



Goal 4: Minimize Impact on Ecosystems

Action	Measurements
4.1 Minimize the impact of new and existing infrastructure on ecosystems and consider ways to enhance the health of ecosystems (i.e., species, habitat, biodiversity).	<ul style="list-style-type: none"> Integrate requirements into Metrolinx procurement practices to manage and mitigate impacts of new and existing infrastructure on ecosystems. Report on results as early as 2018 but not later than the end of 2020. Identify and implement opportunities to support and enhance biodiversity conservation efforts to meet or exceed applicable legislation and guidelines. Report on results by end of 2020. Identify opportunities to enhance ecosystems to meet or exceed applicable legislation and guidelines. This includes but is not limited to consideration of native and pollinator species. Report on results by end of 2020.
4.2 Minimize and manage the use of salt and other chemicals used in operations that are dispersed in the environment.	<ul style="list-style-type: none"> Implement salt management strategy, measure impact, and evaluate alternatives as necessary by 2018.



Goal 5: Enhance Community Responsibility

Action	Measurements
5.1 Minimize local impacts on communities.	<ul style="list-style-type: none"> Minimize or eliminate light pollution from GO stations and maintenance facilities without compromising safety and security. Adopt this as a mandatory LEED requirement and include within applicable project tenders beginning in April 2017. Develop and implement a comprehensive approach to address noise across the Metrolinx network. This includes a plan that would guide Metrolinx toward enhancing its ability to anticipate, manage and respond to noise issues by 2019.
5.2 Engage residents in the design and construction of new infrastructure.	<ul style="list-style-type: none"> Develop a Community Charter by the end of 2017.
5.3 Support local workforce development, including partnerships to increase the supply of skills and trades.	<ul style="list-style-type: none"> Develop and implement Community Benefits provisions in all Metrolinx AFP contracts with all applicable RFPs completed as early as late 2016.
5.4 Build partnerships to increase the supply of key skills and trades.	<ul style="list-style-type: none"> Complete by 2020.
5.5 Develop, support and engage with educational programs to build knowledge, technology, and skills that advance sustainability and innovation, within the scope of Metrolinx's mandate.	<ul style="list-style-type: none"> Develop the implementation plan and commence execution with results reportable as early as 2018 and no later than by end of 2020.
5.6 Establish an online platform for public feedback and input on projects.	<ul style="list-style-type: none"> Complete by 2016.

PERFORMANCE SCORECARD

Action	Measurement
PEOPLE	
Public engagement on <i>Sustainability Strategy</i> every two years.	<ul style="list-style-type: none"> Complete/incomplete
Establish forums and tools for collaboration on sustainability and innovation.	<ul style="list-style-type: none"> Complete/incomplete
SYSTEMS	
Develop and implement an Environmental Management System (EMS) for GO Transit.	<ul style="list-style-type: none"> Complete/incomplete
Aim to attain LEED Gold certification for all new facilities (i.e. GO stations, as well as maintenance, layover and storage facilities) and continue to evaluate the merit of LEED credits as they apply to project-specific conditions, and for each type of facility.	<ul style="list-style-type: none"> Complete/incomplete (number of LEED certifications and levels)
Evaluate the efficacy of ENVISION™ certification for Metrolinx's public infrastructure projects.	<ul style="list-style-type: none"> Complete/incomplete
Develop and implement an Enterprise Asset Management (EAM) Program.	<ul style="list-style-type: none"> Complete/incomplete
PERFORMANCE	
Measure our performance annually and maintain a <i>Sustainability Strategy</i> Performance Scorecard.	<ul style="list-style-type: none"> Annual Sustainability Report publicly released
Re-evaluate our priorities at least once every two years to ensure our areas of focus remain relevant and current.	<ul style="list-style-type: none"> Review of <i>Sustainability Strategy</i> every two years

GETTING YOUR FEEDBACK

Our *Sustainability Strategy* has outlined how Metrolinx responsibly addresses societal needs, protects the environment, delivers on our community responsibility, and supports the economic well-being of our region. We will do this as we work towards transforming the way the GTHA moves.

To continue doing this, we also rely on you, our key stakeholders to get in touch with us. We invite you to join us on this exciting journey by sending your feedback and comments to sustainability@metrolinx.com.





Metrolinx Sustainability Strategy (2015-2020)

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METROLINX

An agency of the Government of Ontario