METROLINX

MAKING IT HAPPEN

Advancing the 2041 Regional Transportation Plan

for the Greater Toronto and Hamilton Area

March 1st version for March 8th Board Meeting

Letter from the CEO

Making it Happen launches the discussion on what together as a region we can do to make the 2041 Regional Transportation Plan (RTP) a reality. It opens the door for a more collaborative approach to fundamental aspects of planning for mobility to 2041: on how decisions are made, priorities are set for the work that needs to be done, transportation is funded for the future, and progress is measured.

Collectively, tremendous progress has been made since 2008's first RTP, *The Big Move*, and more will continue to be done in the coming decades. Roles and responsibilities continue to evolve, building on all of our capacity to bring about the changes the region needs. The 2041 RTP lays out a strategic path for building a seamless transportation system. This paper seeks to spur a deeper discussion on how to "make it happen" across our region.

At Metrolinx, the 2041 RTP will guide and inform the day-to-day work of planning, building and operating transportation. Through the RTP, we have introduced best practices to ensure that our work is informed by leading-edge technical research and know-how.

Metrolinx's unique mandate calls for a regional approach to tackling challenges in an inclusive way. Delivering the RTP will also require working with new partners from the private sector, non-governmental organizations, indigenous communities, academic institutions and the public.

I look forward to hearing from each of you on the best ways to move forward. Together we are making it happen.

Phil Verster,
President and Chief Executive Officer

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Purpose of this Document

During engagement in 2017 on the Draft 2041 regional transportation plan (RTP), many stakeholders asked Metrolinx to provide more detail on how the RTP's Strategies and Priority Actions could be delivered. A number of suggestions regarding the implementation of the 2041 RTP were identified, such as a need for greater clarity about roles and responsibilities; improved and more transparent processes; coordinated approaches to reporting on progress; and stronger linkages between funding and intended outcomes.

Over the course of 2018, Metrolinx will be expanding the conversation on how to continue to grow connectivity across the region as over 110,000 new residents make the GTHA their home this year. This paper builds on the feedback received in 2017 and is a conversation starter to begin answering very important questions.

Metrolinx is grateful for the interest and time that others have committed to assist us. Please submit your comments to theplan@metrolinx.com.

CHAPTER 1: Introduction

Ten Years of Progress

The Greater Toronto and Hamilton Area (GTHA) is becoming one of the world's great urban regions. It is widely recognized for its liveability, dynamic business environment, world-class universities, diverse cultural institutions and healthy environment. However, the scale of growth expected by 2041 - a 41% population increase from 2016 - will pose challenges to the mobility of people and of goods. Much of the region's population growth will be in greenfield areas where transportation choices are limited, and the changing nature of the economy means that travel patterns will increasingly be in all directions throughout the day. A comprehensive, integrated multi-modal transportation system is vital to ensuring that the GTHA continues to thrive.

Since 2008, when *The Big Move* regional transportation plan was released, rapid growth has continually propelled the region to consider how we are using land and how we are allocating our infrastructure and services to keep pace with growth. Growth and emerging influences such as new technologies have also required us to consider many factors in planning for mobility, such as the need to collaborate at a regional scale with new partners.

Over the last ten years, while we have developed new processes and tools for analysis and collaboration, we have realized that improved approaches are needed to realize the full potential of the GTHA's economy and quality of life that attract and retain so many people and employers. To build the complex transportation system of the future, we need to have some important conversations about how we continue to work together.

What We Heard

When engaging with municipalities, other stakeholders and the public on the Draft 2041 RTP, we heard that implementing the full range of strategies will require the region to work faster, more efficiently, and in new ways.

Many municipalities and stakeholders raised questions about how priorities will be determined among the RTP's Priority Actions, and asked Metrolinx for more specifics on implementation, noting that successful implementation will require:

- greater clarity about roles and responsibilities;
- improved and more transparent processes;
- coordinated approaches to reporting on progress; and
- stronger linkages between funding and intended outcomes.

Comments submitted by the public and provided by the Residents' Reference Panel (2017) added that decisions need to be made faster and more transparently, and that progress needs to be demonstrated sooner. Appendix A summarizes some of the most frequently cited comments and concerns about implementation received from stakeholders during RTP consultations in 2017-2018.

As a regional transportation agency with a legislated mandate to plan the multimodal transportation system in the GTHA (see the *Metrolinx Act, 2006*), Metrolinx is in a unique position to catalyze action by:

- providing technical expertise and guidance;
- coordinating regional initiatives;
- convening stakeholders; and
- providing a regional perspective on projects, programs and policies**.**

However, Metrolinx cannot undertake this work alone. Success of the 2041 RTP is premised on all stakeholders responsible for aspects of the transportation system working together. Implementing its Strategies and Priority Actions will require us to improve the ways we collaborate, and to be innovative in how we approach our regional goals for transportation.

The 2041 Regional Transportation Plan

Metrolinx has been developing the evidence-based foundation for an updated regional transportation plan (RTP) since 2015, building on the policies in *The Big Move* with new research, technical analysis and continual dialogue with stakeholders. This work was reflected in an RTP Discussion Paper that was released in 2016, and in the Draft 2041 RTP that was released in 2017. The 2041 RTP, developed in partnership with municipal and other stakeholders, sets out a broad range of directions for the region's transportation system. It provides a vision that is supported by goals, strategies and priority actions that were reviewed and refined through extensive engagement activities in 2017.

Vision

The GTHA will have a sustainable transportation system, which is aligned to land use, to support healthy and complete communities. The system will provide travellers and goods with safe, convenient and reliable connections, and support a high quality of life, a prosperous and competitive economy, and a protected environment.

Goals

1. Strong connections
2. Complete travel experiences
3. Sustainable and healthy communities

Strategies

1. Complete the delivery of current regional transit projects
2. Connect more of the region with frequent rapid transit
3. Optimize the transportation system
4. Integrate transportation and land use
5. Prepare for an uncertain future

About this Paper

Making it Happen has been developed to launch the conversation on how the 2041 RTP could best be implemented by transportation stakeholders in the region.

The 2041 RTP and this paper should be read together. While the RTP presents the vision and goals, *Making it Happen* highlights how further progress could be made to deliver on its strategies, taking into account approaches used in other jurisdictions, guiding principles, and opportunities for further analysis and engagement.

Section 2 of this paper presents the five strategies of the 2041 RTP, highlighting key considerations that will need to be addressed, and proposes ways for the region to move forward, alongside critical success factors.

Section 3 discusses moving forward on four important cross-cutting themes that emerged from stakeholder engagement on the Draft 2041 RTP:

- collaborative regional decision-making;
- setting priorities;
- funding mobility; and
- monitoring and reporting.

Section 4 presents the next steps that will follow this paper.

CHAPTER 2: 2041 RTP – Five Strategies

The 2041 RTP provides Strategies and Priority Actions to achieve its Vision and Goals. The Strategies each involve unique considerations, and implementing them will require answers to key questions, new partnerships, and may involve clarifying and formalizing processes.

Strategy 1: Complete the delivery of current regional transit projects

Delivery of regional transit infrastructure is underway, and rapid transit projects are progressing through planning and development stages. Completing *In Delivery* projects by 2025 and advancing *In Development* projects to construction will be important steps toward implementing the 2041 regional transit network.

In 2017, Metrolinx introduced a benefits management framework to strengthen its accountability and control over the projects it leads, and to ensure the benefits promised at the start of a project business case are delivered at the end (see Figure 1). This process is modelled on approaches used by other transit organizations to bring transparency and accountability to their decisions. It includes stage gates for key decisions to ensure due diligence, project-readiness and transparency, and to align decisions with evidence.

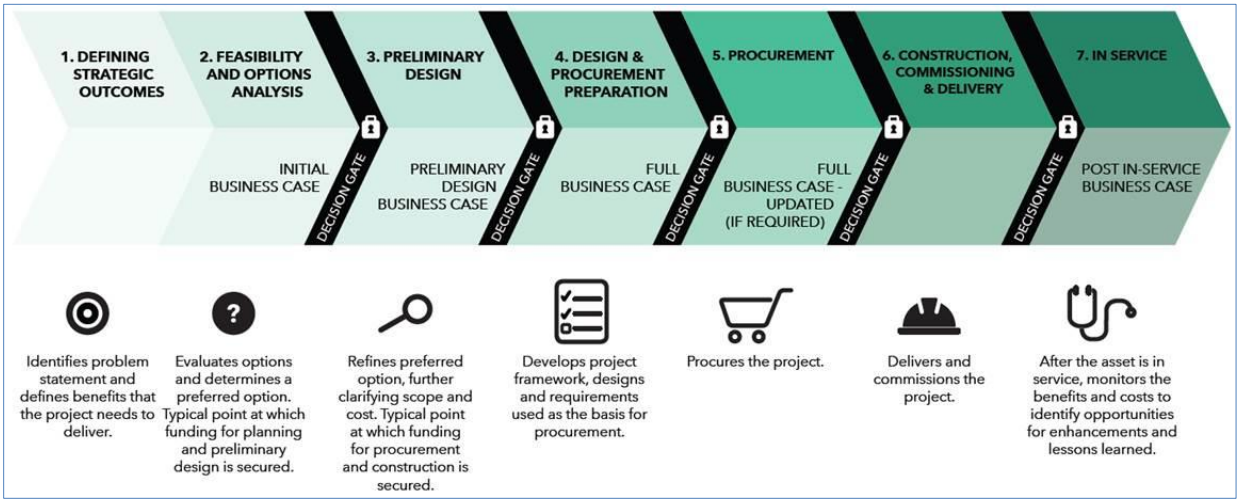
The benefits management framework is an important tool for ensuring that Metrolinx's projects are delivered not only on time and on budget, but that the benefits and strategic objectives for the project are maintained throughout its lifecycle. Currently, the Metrolinx benefits management framework is being applied to the GO Regional Express Rail (GO RER) program. Benefits management will be rolled out to a broader range of projects and programs over the coming months.

Moving forward on Strategy 1:

1. Work with stakeholders to broaden the use of the benefits management framework consistently across the region, utilizing business case analytics, to advance projects and programs outlined in the 2041 RTP.
2. Complete project agreements to ensure project delivery.
3. Embed design excellence, sustainability, universal access and seamlessness in early project planning stages and agreements, working with municipalities and the Province to keep the customer experience at the centre of our decisions.

4. Together with the Province and municipalities, work with the federal government to find common priorities for investment that support the 2041 RTP.
5. Future-proof Union Station investments beyond 2025, by:
    - defining the role of Union Station within the planning vision for Downtown Toronto;
    - planning for long-term capacity requirements, internal circulation and multi-modal station access that can meet growth needs; and
    - linking heritage protection and design excellence.
6. Improve coordination between passenger and freight services over the long-term.

Figure 1. Metrolinx benefits management process



Strategy 2: Connect more of the region with frequent rapid transit

The 2041 RTP calls for investment in more frequent rapid transit services to seamlessly connect more of the region, crossing municipal borders and integrating with local services. It introduces a new Frequent Rapid Transit Network (FRTN), a fully integrated network of rapid transit that runs primarily on the region's roads, requiring municipalities and transit agencies to work together toward shared objectives. The network will be operated and funded by different agencies and authorities, but is intended to operate seamlessly for customers.

Moving forward on Strategy 2:

1. Work with municipalities and other stakeholders on developing a FRTN delivery strategy by:
    - conducting a detailed corridor-by-corridor analysis;
    - undertaking full costing profiles for projects and bundles of projects;

- developing agreed-upon performance standards (e.g., frequency, reliability and customer seamlessness);
- determining the sequencing of work to align with land use and other goals; and
- identifying roles and responsibilities for funding and operating.

2. Align 5-10 Year GO Transit regional bus planning with the FRTN and integrate with local transit and land use plans

3. Work with the Province, the Greater Toronto Airports Authority, the federal government, municipalities, and other stakeholders to develop a strategic transportation plan for the Lester B. Pearson International Airport employment precinct, considering:

    - the connection of current projects, e.g., Eglinton West LRT and RER;
    - the connection of future RTP projects;
    - an interface with High Speed Rail and the Toronto-Waterloo innovation corridor;
    - the future of UP Express as part of an integrated rail network;
    - local transit connectivity;
    - road connections (as they interact with and enable transit and goods movement); and
    - phasing in relation to land use plans.

Strategy 3: Optimize the transportation system

Optimizing the transportation system means making the most of existing and committed assets, and of those that will be built over the next ten years. Strategy 3 strives to ensure the success of existing transportation investments by, for example, improving multi-modal access to stations so a greater portion of people choose to use transit. It also focuses on ensuring that transit use, walking, cycling and goods movement can be provided in a complementary way on the region's road and highway networks, as appropriate, and can help meet both transportation and land use objectives.

Moving forward on Strategy 3:

1. Continue to eliminate barriers toward full integration of transit fares;
2. Focus on service integration, beginning with the FRTN, and including planning and operating transit services as if boundaries did not exist; addressing legislative and operational changes, such as "closed door" policies; schedule alignment; access to regional destinations; specialized services; and cross-boundary services.
3. Develop a region-wide customer charter for the transit experience with shared objectives, targets and reporting, advancing shared accountability;

4. Harmonize wayfinding among all transit agencies as infrastructure, services and improvements come online;
5. As contemplated in Metrolinx's GO Rail Station Access Plan, make improvements on station property and remove obstacles to improvements to active transportation, transit and implementation of new on-demand services off station property;
6. Focusing on transit stations, develop an approach to parking cost recovery that enhances access and convenience and drives ridership;
7. Harmonize road design standards to help achieve the objectives of the Growth Plan and support RTP projects including Priority Bus, goods movement, the regional cycling network, managed lanes and Vision Zero;
8. Harmonize parking standards to allow for local conditions to more firmly anchor parking provision to land use and transportation objectives;
9. Expand the Smart Commute program with large employers and sites to improve efforts to adjust schedules, broaden telework and shift demand to transit and active transportation; and
10. With school boards and schools, boost the adoption and effective implementation of school travel programs to reduce peak demand and improve safety.

Strategy 4: Integrate land use and transportation

While the provincial land use planning framework and corresponding requirements for municipalities have been strengthened over the past ten years, guidance and requirements for transportation-related decisions are governed differently and are not aligned to support land use goals. The 2041 RTP provides further detailed transportation planning to support implementation of the *Growth Plan for the Greater Golden Horseshoe, 2017* (the *Growth Plan*), but only Metrolinx is required to implement its directions. Strategy 4 includes Priority Actions to improve the coordination of transportation and land use decisions, specifically focusing on transit station areas and to strengthen transportation policy frameworks to address issues with regional implications.

Moving forward on Strategy 4:

1. Update Metrolinx's *Mobility Hub Guidelines* to reflect lessons learned and enhance consistency with the Growth Plan requirements for Major Transit Station Areas;
2. Develop station area and mobility hub plans, prioritizing stations where infrastructure investments are underway (e.g., on Priority Transit Corridors);
3. Prioritize development at stations with high transit-oriented development potential;

4. Strengthen Metrolinx's involvement in the review of municipal plans, including through the provincial "One Window" plan review protocol; and
5. Work with the Province to enact a suitable Transportation Planning Policy Statement and a Transportation Master Plan regulation, as provided for in the Metrolinx Act, to address transportation planning matters with region-wide implications.

Strategy 5: Prepare for an uncertain future

Just as cars reshaped cities in the twentieth century, new technologies and disruptive business models are again reshaping the transportation system. These changes will affect many facets of our society and public policy at all levels of government. Regional stakeholders must be proactive in their approach to shared issues, such as the need for a better understanding of the potential impacts of autonomous vehicles. Strategy 5 addresses the need for region-wide coordination to ensure timely policy development focused on the public interest, ultimately resulting in connected, integrated and seamless traveller services.

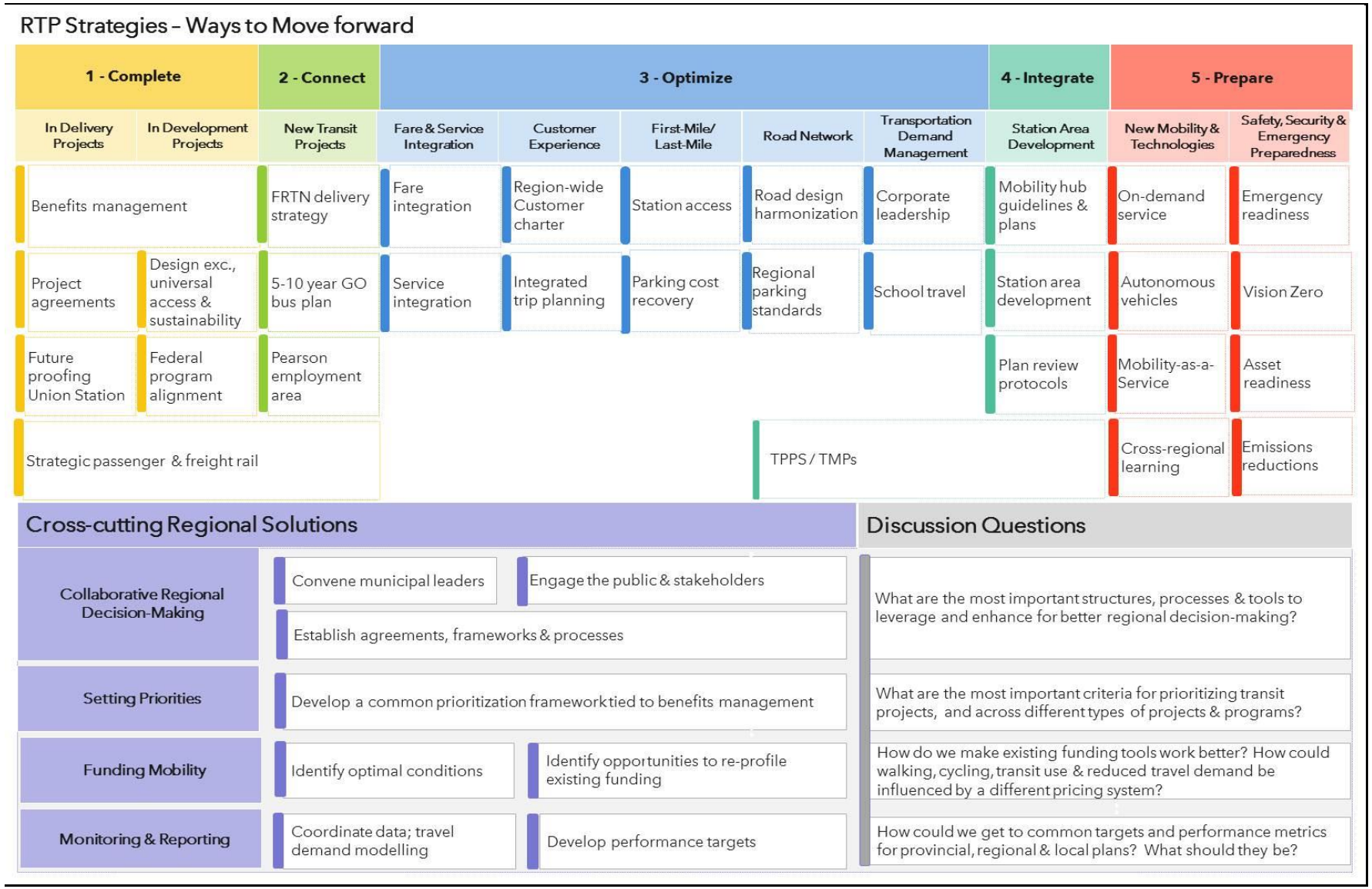
Moving forward on Strategy 5:

1. Develop a regional framework for on-demand services to complement the FRTN and local transit to:
    - enhance first and last mile options, allowing for local conditions;
    - encourage learning from new approaches and pilots introduced by early initiatives; and
    - provide enhanced options in off-peak hours and rural areas.
2. Develop a strategy for autonomous vehicles that includes:
    - a broad range of land use and transportation policy objectives;
    - a clear road map for pilots and general implementation;
    - encouragement of shared use of vehicles; and
    - assessment of opportunities for autonomous vehicle pricing.
3. Advance PRESTO to support the development of a Mobility-as-a-Service system that:
    - includes personalized trip planning;
    - is multi-modal; and
    - is linked to a long-term fare integration vision (e.g., with a subscription service).
4. With authorities responsible for emergency management, link readiness plans for the region's transportation assets and services to emergency management plans and business continuity plans to minimize impacts of:
    - extreme weather events;
    - security incidents;
    - electricity blackouts;

- network outages; and
- cyber-attacks and other future threats on travellers.

5. Undertake regular regional emergency response exercises with community participation to train staff, test infrastructure and evaluate emergency protocols.
6. With municipalities, the Province and stakeholders, advance a regional approach to Vision Zero, building on local initiatives that connect safety, security, risk management, business continuity and resilience across the region and across modes.
7. Building on the Metrolinx Climate Adaptation Strategy, convene regional stakeholders across sectors and modes to collaborate on preparing transportation assets, systems and services to adapt to climate change. Increase strategic collaboration on achieving applicable emissions reduction targets.

Figure 2: Making it Happen - Early Opportunities Dashboard



CHAPTER 3: Cross-cutting Solutions

Much of the feedback that Metrolinx received on the Draft 2041 RTP focused on the need for new or improved tools and processes at the scale of the region. This section discusses how the region can advance the 2041 RTP's Strategies in four key areas:

- collaborative regional decision-making;
- setting priorities;
- funding mobility; and
- monitoring and reporting.

This section presents approaches in other jurisdictions, significant opportunities, and key questions to stimulate discussion.

1. Collaborative regional decision-making

> *"While it may appear that a region's inability to update its farecard or to maintain a state of good repair is the result of technological or funding barriers, it is often a result of a governance structure that does not have the proper capacity to implement change or make effective investment decisions … the biggest challenges … are often rooted in the governance of and subsequent interaction between regional bodies."*
>
> – from *Getting to the Route of It*, ENO Transit Center (2014).

While partners across the GTHA have made significant progress in planning, designing and implementing transportation projects, the scale of the GTHA's anticipated growth and planned transportation investments, and the complexity and level of integration required, necessitates a new level of mature collaboration between Metrolinx, the Province, the federal government, municipalities, transit agencies, businesses, non-profit organizations, academia and other stakeholders.

Legislation and regulation determine decision-making roles, who runs services, and where funds come from. They frame the processes of selecting projects and services that will be delivered: how and where, and by whom. Provincial ministries, Metrolinx and municipalities also have their own distinct internal processes for making decisions, and existing processes and structures encourage each individual organization to prioritize meeting its own goals ahead of those of the region. Increasingly, however, as initiatives with cross-boundary and region-wide implications advance, roles, responsibilities and accountabilities may be

ambiguous. This helps explain why progress has been slower in areas that require extensive, multi-party coordination, such as regional fare and service integration.

Over the past ten years, regional collaboration has occurred through project-specific agreements or ad hoc forums (e.g., staff-level municipal technical advisory committees, meetings of land use planning leaders, or program-specific committees, such as for PRESTO and Triplinx). Input in 2017 on the Draft 2041 RTP clearly identified the importance of a discussion about decision-making to enable progress on implementation (see Appendix A), one which leads to a more holistic, structured way that takes into account interdependencies across projects and different parts of the transportation system. To deliver solutions and progress for the entire region, the region needs more effective ways of working together.

What we heard

"Without a defined framework for governance, roles and responsibilities are uncertain and often cause inefficiencies."

Stakeholder input on the Draft 2041 RTP identified a pressing need for new and improved ways of collaborating. Respondents suggested:

- The provincial *Growth Plan for the Greater Golden Horseshoe* and future regional transportation plans be reviewed and updated concurrently.
- New approaches for prioritizing projects and for monitoring progress be explored.
- The tension between capital and operating investments in areas with current and pressing needs, and those in areas with emerging needs be reconciled.
- Addressing how decisions are overly tied to current structures. Stakeholders pointed to it being easier to access capital funding than operating funding; and to how the priority given to regional over local services has resulted in higher per-ride subsidies for GO trains than for local buses, streetcars and subways, even though local services carry more riders.
- New ways of doing things will require incentives (e.g., addressing organizational capacity) to introduce change and to mitigate risks, encouraging the full participation of all stakeholders.
- Greater transparency and accountability are needed in decision-making for transportation projects, as is stable funding.
- A more integrated governance structure is needed (e.g., an integrated administrative structure to improve the coordination of routes and schedules among transit agencies.

- Discuss roles and responsibilities for project planning, delivery and operations. For example, many municipalities expressed an interest in, and a need for, a discussion on sustainable funding mechanisms for the RTP's Priority Actions (e.g., the regional cycling network, school travel and TDM).

Interjurisdictional practices

Models for collaborative decision-making among regional transportation organizations vary greatly, but there are some common practices in jurisdictions such as in Montreal, London (UK) and Berlin (see Appendix C). These models demonstrate the value of having a common understanding across jurisdictions of the problems to be addressed; standard approaches to performance measurement; clear roles and responsibilities; and the presence of processes and mechanisms for coordination at a regional scale.

In their submissions on the Draft 2041 RTP, several municipal councils recommended a thorough review of governance, decision-making and delivery models in other jurisdictions. As the region makes progress on committed and proposed RTP projects, a benchmarking exercise (conducted at arm's length) that compares GTHA approaches against its international peers would be worthwhile to enable the region to gauge the impact of changes.

Principles to guide collaborative regional decision-making

- Regional decision-making should optimize the region's transportation system regardless of funding sources, type of funding or boundaries.
- Principles should also recognize that each entity is accountable to its own board, council or minister. However, the implementation of the RTP will benefit from a broad view of regional issues, incorporating the needs of both local and regional travellers, as well as the needs of both established and growing communities.

Success factors

- Integrated approaches to planning, building, operating and funding transit projects that cross municipal boundaries;
- Alignment between transit agencies and transportation and planning departments on local roads, priorities, interests and understandings;
- Clear lines of responsibility and accountability for projects;
- Willingness by all parties to consider new processes for working together;
- Channels for effective communication and coordination among stakeholders;
- Forums for intensive coordination to deliver maximum benefits to regional customers;
- Involvement of the private sector and non-governmental organizations in leading initiatives;
- Leadership to implement the policy framework of the Growth Plan and to steer joint development partnerships;

- Facilitation of public institutions to respond to the demands of an expansive capital program; and
- Keeping up with rapid change by sharing knowledge and best practices.

Moving forward on collaborative regional decision-making

- Convene, at least annually, senior municipal leaders to discuss progress on the realization of the integrated regional multi-modal transportation system.
    - Identify all current forums and tables, assessing the need for changes and updates, and aligning their priorities with those of an intergovernmental forum.
- Establish more formal mechanisms to engage the general public and stakeholders on an ongoing basis. Examples include:
    - a standing Residents' Reference Panel;
    - stakeholder Advisory Panels by area of interest;
    - bringing together representatives of large employers to identify ways to reduce peak demand on the transportation network; and
    - bringing together representatives of the development industry to identify key opportunities for partnerships focused on development near stations.
- Review opportunities to embed conditions for land use in project agreements and at stage gates.
- Establish agreements between those responsible for delivering components of the region's transportation system, committing to:
    - advancing the planning and building work currently underway;
    - evaluating and building on existing decision-making structures, frameworks and processes;
    - confirming roles, responsibilities and the appropriate authority for decision-making at every project stage; and
    - addressing organizational capacity to support the agreements.

Questions about collaborative regional decision-making

- Learning from other jurisdictions, how can we streamline decision-making processes to take projects from strategic planning to business case to opening day faster?
- How do we advance regional integration when there are multiple decision-making processes and budgets?
- What are the most important structures, processes and tools that can be leveraged and enhanced to better champion regional decision-making? Do structural gaps exist?

- What can your organization do to build its capacity to collaborate with others?
- Would the role of Metrolinx need to change to implement the 2041 RTP? If yes, how?

2. Setting priorities

The 2041 RTP will be implemented in phases over the next 25 years. Prioritizing the Priority Actions will enable implementation to roll-out in an orderly and effective way. It will be particularly important to identify priorities for the first ten years, to maximize progress before the next RTP review (approximately 2026).

Evaluation criteria derived from the 2041 RTP's objectives were used to evaluate projects for the 2041 RTP[1] . Feedback from municipalities in their submissions and at workshops also served to highlight the diversity of possible approaches and criteria (see Appendix B).

Metrolinx is committed to maintaining best practices in setting priorities, and regularly reviews its Prioritization Framework (2013) to incorporate emerging data sources and improve outcomes. This framework was first developed to inform Metrolinx's advice to the provincial government on the order of investment in priority transit projects from *The Big Move*.

The primary prioritization criteria were:

1. **A high quality of life:**
    - Building communities – change in projected population and employment density
    - Transit ridership – total weekday boardings forecasted
    - Social need – youth, seniors and low-income population within 500m of an RT corridor or 2 km of a GO station
    - Regional connectivity/destinations – number of connections to other RT services, mobility hubs, post-secondary institutions and hospitals
2. **A thriving, sustainable and protected environment:**
    - GHG emissions reduction – tonnes saved annually based on VKT
    - New transit riders - projected total new weekday boardings
3. **A strong, prosperous and competitive economy:**
    - Economic impacts – direct and indirect wage and GDP benefits over first 30 years of operation
    - Capital cost per rider
    - Operating revenue/cost ratio – net new operative revenue/cost ratio

[1] See the Report on the 2041 RTP Evaluation Process. Metrolinx. 2018.

- Benefit-cost ratio – comprised of transportation user benefits (e.g., travel time, safety, operating savings based on VKT), capital costs, and estimated incremental operating costs

Additional prioritization criteria relate to implementation screening (e.g., constructability and deliverability) and strategic fit (e.g., leveraging other initiatives, project readiness, funding and regional network advancement).

To support 2041 RTP implementation, an updated framework will be needed to consider a range of projects, not just those projects that have completed business cases. For projects for which there is limited information, different prioritization metrics are needed (i.e., non-transit projects). Metrolinx will update the prioritization framework in 2018 to more clearly consider interdependencies and synergies among projects, programs and policies. For example, GO Regional Express Rail (RER) will be more effective if accompanied by comprehensive station access improvements; similarly, Priority Bus corridors will succeed if they are implemented alongside fare and service integration, and real-time traveller information improvements.

Updating the prioritization framework will also need to consider new metrics that reflect the goals and objectives of the 2041 RTP, such as access, equity, and safety. See Appendix B for a table of the metrics and criteria used to evaluate the long list of projects and programs and policies proposed for the 2041 RTP.

Business case analysis is a tool that Metrolinx has continually been making more robust. Metrolinx recently updated its methodology more formally through its benefits management program. While cost-benefit studies help to ensure value for money, they are considered to be one tool among a wider assortment of inputs to the process of setting priorities. Looking forward, models that include aspects of design thinking and behavioural economics could be informative, as could new sources of data.

What we heard

> *"… consider, as part of the implementation of these strategies, providing a baseline set of guidelines/standards, methodologies, and data sources for the evaluation of RTP projects such that business cases can be completed by regional and municipal agencies."*

Stakeholder input on the Draft 2041 RTP identified the importance of priority-setting. Respondents suggested:

- A method of setting priorities among the projects and programs in the RTP, including how to assess non-transit projects and programs using the prioritization framework, and how local priorities will be recognized in the implementation process.
- Prioritizing policies, programs and projects that have the biggest impact on core objectives, such as reducing the mode share of driving, and reducing emissions. They also recommended that linked or interdependent projects be bundled in such a way as to enable evaluations to proceed simultaneously.

- Smaller-scale solutions (such as first- and last-mile initiatives) might be more effective or efficient than "big ticket" transit projects, and highlighted the importance of prioritizing projects that fill existing gaps and eliminate barriers to transit use.
- Support for "quick wins" if longer-term projects also advance, to ensure there is always something "in the hopper".

Interjurisdictional practices

Metrolinx's prioritization framework is comparable to, or an improvement on, similar tools used in other jurisdictions to set priorities.

Quick wins can lead to results; however, they need to be assessed in the context of a rigorous analysis that allows decision-makers to understand the costs and benefits of pursuing them. Setting priorities helps to illuminate which initiatives are truly foundational, and pave the way for others to be successful. A best practice common in other jurisdictions is to avoid starting with "quick wins" only because they are easy to understand and implement.

It is also crucial that the proper criteria be used to prioritize potential actions, and that they be bundled in ways that reflect shared goals, common geographies and critical dependencies.

Success factors

- A rational and transparent method for advancing projects;
- Clear methodologies for developing business cases;
- Alignment of project delivery timelines with land use planning and development timelines;
- Identification of interdependencies; e.g., seamless integration of GO RER with High Speed Rail, High Frequency Rail and the "Toronto-Waterloo innovation corridor";
- Delivery of Priority Actions such as GO station access improvements;
- Applying a regional needs lens for phasing and advancing FRTN projects; and
- Finding the right balance between local and regional needs.

Moving forward on setting priorities

- Update the Metrolinx prioritization framework including a methodology to bundle projects to ensure synergies;
- Clarify how the prioritization framework will be integrated with the Metrolinx benefits management framework; and
- Work with other levels of governments towards a regional approach to prioritization, acknowledging the decision-making roles of each party.

Questions about setting priorities

- Are the prioritization criteria presented in Chapter 3 the right ones for prioritizing transit projects? Are any missing? Which ones are the most important? (See also examples in Appendix B).
- In a world of finite resources, how can the uneven needs of the region be addressed?
- What are the best processes for the region to come to an understanding of shared priorities?
- What types of social equity considerations should be emphasized early on and/or embedded throughout implementation of the 2041 RTP? What more can the transportation industry do to better address regional inequity through policy and investments?

3. Funding mobility

The issue of funding is a complex one that has several dimensions: how much capital and operating funding is needed, where funding is allocated, when funds are needed, who pays, and who makes the decisions. Some issues related to funding arise principally from governance and decision-making concerns, and are covered earlier in this chapter.

Historic levels of funding have been committed. With its commitment of more than $30 billion in transportation funding, the Province of Ontario has put the GTHA in a strong position for the near- to medium-term. This historic investment has led to the completion of nine major transit projects:

- UP Express (Union Station – Pearson International Airport);
- Highway 7 BRT (Yonge – Unionville GO);
- Davis Drive BRT (Yonge – Newmarket GO);
- Toronto-York Spadina Subway Extension;
- Mississauga Transitway (Winston Churchill – Renforth); and
- four GO Transit extensions (Kitchener, Barrie, Richmond Hill and Lakeshore West lines).

The Province has also committed $16 billion through the *Moving Ontario Forward* plan. As a result, many more transit projects are *In Delivery*, which means that they are either in the engineering design stage or under construction, including GO Regional Express Rail (RER), five LRTs, three BRTs and four GO Transit extensions.

In January 2017, the Province announced that starting in 2019 Ontario will gradually increase the municipal share of gas tax funds up to 4 cents per litre by 2021-22. The doubling of the funding envelope to an estimated $642M per year will be important for supporting municipal transit operating and capital costs in the future.

Municipalities and the federal government also play a critical role in transit infrastructure investment. For example, through Phase One of the federal Public Transit Infrastructure Fund, the federal government and municipalities have jointly committed more than $2 billion to fund approximately 200 projects across the GTHA. In addition, the Government of Canada has announced that it will be contributing more than $1.8 billion in funding towards the GO RER project, and up to $333 million to support the Finch West LRT as part of the Building Canada Fund.

What we heard

While significant investments have been made, stakeholder input provided to Metrolinx on the Draft 2041 RTP pointed to a need for dedicated investment in transportation projects (1) beyond transit infrastructure, and (2) beyond capital investment, to include operations and state of good repair.

Several stakeholders noted that the 2041 RTP should include cost estimates for operations and maintaining a state of good repair - that is, reflecting the needs of the GTHA's transportation system throughout its lifecycle. Other comments noted:

- Municipal funding tools are limited, particularly outside the City of Toronto; mechanisms such as development charges are needed.
- The current funding model needs to provide incentives for a regional, cross-boundary approach to services; however local and regional improvements that are needed to support the RTP's implementation also need to be recognized.
- There is a need to leverage private-sector investments.
- The approach to funding the 2041 RTP needs to be bold, tied to evidence, clearly describe stages and outcomes, linked to system performance and recognize how decisions are made (e.g., on land use).

Funding the 2041 RTP

The 2041 RTP calls for a complex, integrated regional transportation system with dozens of new transit projects, both big and small. The early initial estimates of capital costs for these projects, based on current information is an additional $45 billion ($2017) over 25 years, including construction costs, land acquisition, and new transit vehicles. The costs do not include financing costs or life-cycle maintenance:

- an estimated $20 billion for *In Development* projects (i.e., those in planning and design stages);
- an estimated $23 billion for other rapid transit infrastructure; and
- an estimated $2 billion for other infrastructure (e.g., walking and cycling, station access improvements).[2]

[2] Capital costs were derived from a number of sources. Many of the *In Development* projects have been the subject of feasibility studies or preliminary design work, and cost estimates were generated as part of these processes. In these cases, cost estimates over one year old were adjusted to reflect 2017 $, using the Consumer Price Index to account for inflation. Where no other information existed, Metrolinx used unit cost information derived from the 2016 CUTA Fact Book. These unit costs were developed to reflect different technologies

In addition to these capital costs, operating funding will be needed for expanded transit services, fare and service integration, and programs that integrate other modes such as cycling or walking.

The Canadian Urban Transit Association (CUTA) estimates the cost of operating transit across the GTHA net of fare revenue to be $1.05 billion annually (in 2016). By 2041, this amount is expected to more than double based on early initial estimates of the net operating funding requirements of the 2041 RTP. This includes the costs of routine infrastructure maintenance but not vehicle replacement or major rail rehabilitation, and is above and beyond the fares paid by transit users.

Full costing of projects – a component of business case analyses – will also need to consider the operating, maintenance and financing costs associated with each project. Figure 3 displays the per-kilometre total cost by different transit technologies. (Note: This chart does not include any offsetting fare revenues nor is it rescaled by anticipated passenger volumes to account for the fact that a subway costs more than other technologies but also has the highest carrying capacity).

A shared responsibility

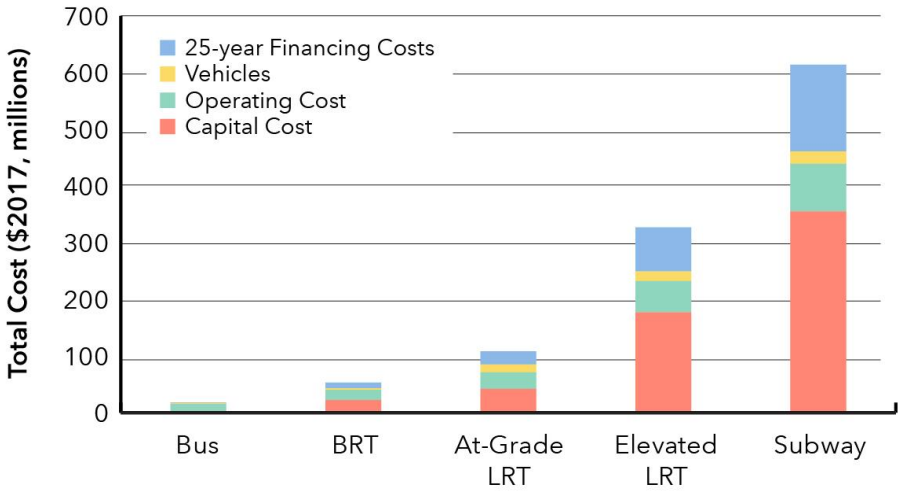
Current funding for rapid transit expansion relies heavily on senior levels of government. In times of deep commitment, as has been the case for the last 15 years in Ontario, funding is relatively secure. However, many stakeholders have identified the need for sustained capital and operating funding from federal, provincial and municipal governments to sustain the expansion of the transportation system in keeping with the growth of the region. Some municipalities have observed that the tools available to them to generate revenue are limited.

Continued investment by all stakeholders is needed to keep up with anticipated growth and specifically for new rapid transit projects after 2025, along with supporting initiatives to optimize the transportation system (e.g., expanding transit operations, maintaining a state of good repair, improving station access, integrating fares, etc.).

(LRT/BRT/Priority Bus) as well as the location of the project (primarily separating Toronto and Hamilton from the rest of the GTHA). The net operating costs for different services were also based on information from the 2016 CUTA Fact Book.

Figure 3. 60-year lifecycle costs per kilometre of new transit by mode

Source: Metrolinx Planning Analytics, 2017.



Note: Does not consider fare revenue or ridership

Principles to guide funding for mobility

Experience in the GTHA and elsewhere suggests that, regardless of its form or source, transportation funding needs to:

- be sufficient and sustainable (i.e., consistent, predictable, dedicated and reliable over time);
- take into account full costing of project lifecycles;
- be easy to implement and administer;
- be affordable;
- be fair and equitable;
- be responsive to changes in the economy;
- recognize benefits and impacts to competitiveness;
- support the goals and actions of the 2041 RTP;
- be linked to performance (i.e., projects that encourage transit use and active transportation would receive priority);
- recognize secondary community impacts (e.g., on housing affordability);
- consider and leverage opportunities for beneficiaries to contribute;
- leverage opportunities for collaboration with new partners; and
- enhance understanding by providing clarity (e.g., on what is being funded, or how much is still needed to complete a project).

Interjurisdictional practices

Many jurisdictions offer relevant examples for transportation system funding, but no single jurisdiction offers a complete model for the GTHA. For example, TransLink in Vancouver and AMT in Montreal directly receive a share of revenues to fund their 10-year plans (see Appendix C).

Success factors

- Sufficient capital and operating funding to deliver the integrated, connected, multimodal network.
- New funding approaches that recognize and encourage region-wide outcomes.

Questions about funding mobility

- What should be the scope of a renewed regional conversation about sustained capital and operating funding to advance the 2041 RTP?
- How do we make existing funding tools work better?
- Could walking, cycling and transit use and reduced travel demand be influenced by a different pricing system?
- Could better outcomes be achieved through greater pooling of resources?

4. Monitoring and reporting

An important but often overlooked part of planning is the need to monitor progress toward goals and objectives. Plans based on forecasts need to be tested against actual observations over time, so that strategies can be realigned as needed - something even more important in times of rapid change. The 2041 RTP includes a recommendation for regular monitoring, with progress reports every five years, and updates in intervening years as needed.

Good planning requires access to accurate and current data. Effective data can enable an understanding of how people in the GTHA use the transportation system, why they travel the way they do, and what preferences and perceptions inform their decisions. Data also provides insight into behavioural shifts and emerging issues (e.g., the impact of ride-sourcing services on transit ridership). Today, the variety of approaches to monitoring progress across the region makes it difficult to gain a coherent overall picture of trends and issues.

An agreed-upon evidence–based foundation is also needed for setting targets and developing key performance metrics that link actions to desired outcomes. The appropriate metrics can support accountability for transportation investments and operational decisions. Metrolinx utilizes a benefits management process that calls for three progressively more detailed business case analyses to be undertaken before final decisions are made on a

project. Metrolinx, municipalities and other stakeholders recognize the importance of common metrics and monitoring.

In measuring success of the 2041 RTP, consideration should extend beyond traditional operational measures (e.g., ridership, mode share) to include wider economic benefits, social equity and accessibility measures, congestion management and positive environmental outcomes. Metrolinx's *Big Move Baseline Monitoring Report* (2013) established a framework for monitoring progress on the first RTP, and the *Discussion Paper for the Next Regional Transportation Plan* (2016) proposed seven areas of performance measurement for the 2041 RTP. Several of these were carried over to help forecast the 2041 RTP's outcomes and benefits. In other areas (e.g., goods movement, safety) reliable metrics are still in development.

What we heard

> *"[The region] should utilize the wealth of data that will become available to monitor the performance, benefits and risks of new mobility technology, including public health."*

Stakeholder input on the Draft 2041 RTP included the following suggestions:

- The region's abundant data is often not consolidated or shared. Performance is often assessed by mode or jurisdiction rather than by traveller need, resulting in priorities set separately for each agency or municipality rather than across boundaries.
- Better data on actual growth patterns and vehicular emissions are needed.
- The region needs to be able to demonstrate progress on transportation, and this requires agreement on fundamental principles, roles and responsibilities, and collaborative efforts.
- The region needs to "keep it simple" and ensure "meaningful" indicators, while others focused on the frequency of performance measurement and reporting with consistent data management.
- The 2041 RTP should include targets for key metrics.
- Additional metrics are needed including usage counts, health impacts, traveller attitudes and travel distance, and some of these could make use of third-party data (e.g., United Way data on equity and health) and big data.

Interjurisdictional practices

Practices in other jurisdictions show that monitoring and reporting processes for performance measurement are necessary for transit agencies to be fully accountable and transparent. Monitoring and reporting are most effective when they are clear, reliable, specific, flexible, realistic, linked with goals, have a timeline and are integrated in the decision-making process (see Appendix C).

In the United States, state departments of transportation and metropolitan planning organizations are increasingly moving to performance-based approaches. Guidelines and tools are provided by the federal government (e.g., the TPM Toolbox). The success of performance-based planning and programming for long-range state planning by can be attributed to legislative requirements. For instance, MAP-21 (2012) and the FAST Act (2015) require data-driven and outcome-based approaches, including requirements to establish targets related to safety, freight movement, and performance of the national highway system (among others), and to use performance measures to track progress toward meeting those targets.

The Minnesota Department of Transportation's (MnDOT) multimodal transportation plan is noteworthy for its full integration of performance-based planning into long-range planning, programming, monitoring and evaluation. Progress is tracked primarily through an annual transportation performance report that communicates status to all transportation partners and the public, holding all partners accountable. Finally, MnDOT also incorporated a process to develop additional performance measures and targets as needed.

In Australia, Transport for New South Wales (TfNSW) has a Transport Performance and Analytics (TPA) division that operates as a Centre of Excellence, providing objective and credible transport data, advice and analysis. TPA combines the Bureaus of Transport Statistics and Freight Statistics and provides the evidence that helps drive strategic decision-making in support of an effective transport system. In addition, a Research and Investigation division acts as a conduit for research collaborations. Through a Research Hub, it aims to increase visibility of transportation research, to share knowledge and to provide direction on TfNSW's priorities.

The San Francisco Bay Area has established an innovative monitoring initiative to track trends related to transportation, land use, the economy, the environment and social equity. Called "Vital Signs" – this tool creates visualizations of key trends for a public audience, illustrating progress on key regional metrics. This website, led by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), relies upon extensive collaboration with other government bodies in the region.

For data on people's use of the transportation system, mobility choices and perceptions, the GTHA can look to European mobility observatory surveys. These are conducted across different regions and countries to provide a benchmark for transportation habits and expectations.

Approaches in other jurisdictions also demonstrate the value of transparency and for the public education role of displaying findings visually to a wide variety of audiences using different mediums. Performance measure tables or dashboards are commonly used to communicate up-to-date information on measures, indicators, targets and other impact areas.

Public health and other sectors also offer a range of tools that could enhance transportation tracking and reporting in the GTHA. Public health departments use performance management to consistently review and advance the effectiveness of processes, partnerships, resource use and programs for continuous improvement.

Principles to guide monitoring and reporting

Common principles to guide regional monitoring and reporting programs noted by stakeholders include:

- frequency and consistency of activities;
- open government, transparency and coordination;
- shared goals, data and language;
- links to transportation system performance;
- usage of key performance indicators; and
- a foundation based on open government.

Success factors

- Metrics to track and report on progress;
- Aspirational regional targets that reflect local objectives; and
- A reporting framework that ties performance to funding.

Moving forward on monitoring and reporting

- Develop a coordinated regional data collection program and observatory, including approaches to real-time data, ridership, big data and goods movement data;
- Develop a more consistent approach to travel demand modelling across GTHA municipalities, provincial ministries, and academic institutions;
- Develop performance targets for 2041 RTP that inform the implementation process; and
- Building on existing practices, identify the ideal governance and funding sources for collecting, analyzing and sharing regional transportation data and insights.

Questions about monitoring and reporting

- How could we get to an environment of common targets and performance metrics for provincial, regional and local plans?

- Who should lead (and who should pay) for the creation of a coordinated transportation data repository (collection and management) to enable improved evidence based analysis and tracking of progress?
- How should data collection and analysis be governed to ensure its usefulness, transparency and objectivity?

CHAPTER 4: Next Steps

Making it Happen is intended to spur a dialogue about how Metrolinx and its partners in delivering GTHA transportation can implement the 2041 RTP. Metrolinx will gather feedback on the ideas raised in this paper and continue to work with stakeholders on implementation planning through 2018, including through a new intergovernmental forum of senior leaders.

Ongoing implementation and monitoring activities will also inform updates to Metrolinx's *Five-Year Strategy* and annual business plan. Metrolinx will also work with the Province to ensure that RTP implementation is coordinated with provincial plans. The next legislated ten-year review of the RTP, scheduled for 2026, will incorporate evidence gathered through performance measurement to be undertaken in the coming years.

See **http://www.metrolinx.com/theplan** for the 2041 RTP and the technical studies and research papers.

Please forward your comments and questions to Metrolinx' Regional Planning Office at **theplan@metrolinx.com**

Appendix A: What we heard on implementation of the 2041 RTP

Strategy 1: Complete the delivery of current regional transit projects

Stakeholder comments on the Draft 2041 RTP focused on the need for:

- A baseline set of guidelines, standards, methodologies and data sources for the evaluation of RTP projects to enable regional and municipal agencies to develop business cases;
- Consideration of the limitations of a business case in capturing and monetizing the indirect benefits associated with local transit and city-building objectives;
- Authority and decision-making processes as a region (e.g., environmental assessments);
- A formal mechanism for municipalities and local transit authorities to provide input into Metrolinx's decision-making processes;
- Evaluation of the effectiveness of Metrolinx's process for advancing and delivering projects; and
- Distinguishing roles and responsibilities in the RTP (e.g., for specific Priority Actions or bundles of actions).

Strategy 2: Connect more of the region with frequent rapid transit

While stakeholders responded positively to the concept of the FRTN in the Draft 2041 RTP, comments emphasized the importance of:

- Seeing more detail on Frequent Rapid Transit Network timeframes, scope, routes, ownership and responsibility for operations;
- Local transit service access to stations, terminals and carpool lots as "quick wins";
- Transit service integration alongside fare integration (e.g., integration of the proposed Priority Bus corridors with municipal express bus service);
- Understanding how rapid transit projects will be delivered and operated, how they will relate to GO RER, and how cross-boundary projects will be funded;
- Clarity about how the transit stations will be readied, particularly for multimodal access, capacity to support RER, and local transit; and
- Coordination among partners at the network scale, rather than individual transit projects, particularly for funding.

Strategy 3: Optimize the transportation system

Stakeholder comments on the Priority Actions proposed in the Draft 2041 RTP focused on the need for more detailed roles and responsibilities, and the scope of what is involved in implementing these actions. Specific comments included the need to:

- Design better with consideration for components such as customer comfort, safe transition between modes, all-weather access, barrier-free access, prioritizing active modes, wayfinding, lighting, less parking over time, and more;
- Address affordability of transit for all groups;
- Provide clarity on Metrolinx's role in supporting local Vision Zero initiatives;
- Detail how Metrolinx can work more effectively with municipalities on first- and last-mile initiatives, which are shaped by local context but could be elevated to a regional scale;
- Review legislation, policies and regulatory frameworks applicable to the deployment of mobility as a service to identify implementation barriers;
- Conduct pilot studies of employment areas to determine the impacts of a designated Strategic Goods Movement Network;

- Establish metrics for TDM measures that highlight health benefits and include indicators of greenhouse gas and air pollutant emissions;
- Study congestion pricing for the proposed HOV lane network;
- Define projected land use outcomes for Metrolinx assets within mobility hubs (specifically, surface parking lands); and
- Study the provision of GO Transit station parking at the regional scale, not station-by-station.

Strategy 4: Integrate transportation and land use

Stakeholder comments on the Draft 2041 RTP focused on the need to:

- Address parking at GO Transit stations with local transit agencies;
- Consider a Transportation Planning Policy Statement, to be developed through extensive consultation;
- Provide development incentives around existing transit infrastructure in order to get more people using transit, and include requirements and targets for municipal TDM plans in the Transportation Planning Policy Statement to address mode share and transit use;
- Identify how the effects of priority actions will be measured, and to whom the action applies (e.g., in design excellence);
- Consider enabling municipalities to require TDM through development approvals, including TDM-supportive infrastructure and education programs, and embed requirements and targets in the Transportation Planning Policy Statement;
- Consider charging for parking at GO Transit stations, in coordination with local municipalities, developers, transit providers and others;
- Partner with municipalities to provide dedicated, separated active transportation routes to stations; and
- Formalize the role and status of municipal transportation master plans to align with provincial land use and transportation objectives, including the 2041 RTP, through consultation and collaboration with upper- and lower-tier municipalities and allowing time to bring transportation master plans into conformity.

Strategy 5: Prepare for an uncertain future

Stakeholder comments on the Draft 2041 RTP focused on the need for:

- Long-range greenhouse gas emission reduction target, aligned with provincial and municipal targets;
- A commitment to electric vehicle charging and active transportation facilities at GO Transit stations;
- Metrics on health benefits as part of a regional big data strategy;
- Design criteria for resilient infrastructure, with clear financial implications of doing so; and
- Ensuring that autonomous vehicles advance the goals of the 2041 RTP and not add to congestion.

Appendix B: Approaches to prioritization

1. GTHA Transit Investment Advisory Panel Criteria (2013):

- projects must help ease congestion, not add to it;
- projects must lead to a connected region-wide network;
- projects must align with current and future major employment locations;
- projects must align, where possible, with location of public and community institutions;
- the type of transit must be appropriate for the situation, accounting for ridership, cost, and fiscal and environmental impact;
- projects must be built on a practical timeline; and
- investments must provide tangible benefits and improvements in both the short-term and long-term.

2. Municipal Stakeholder Comments

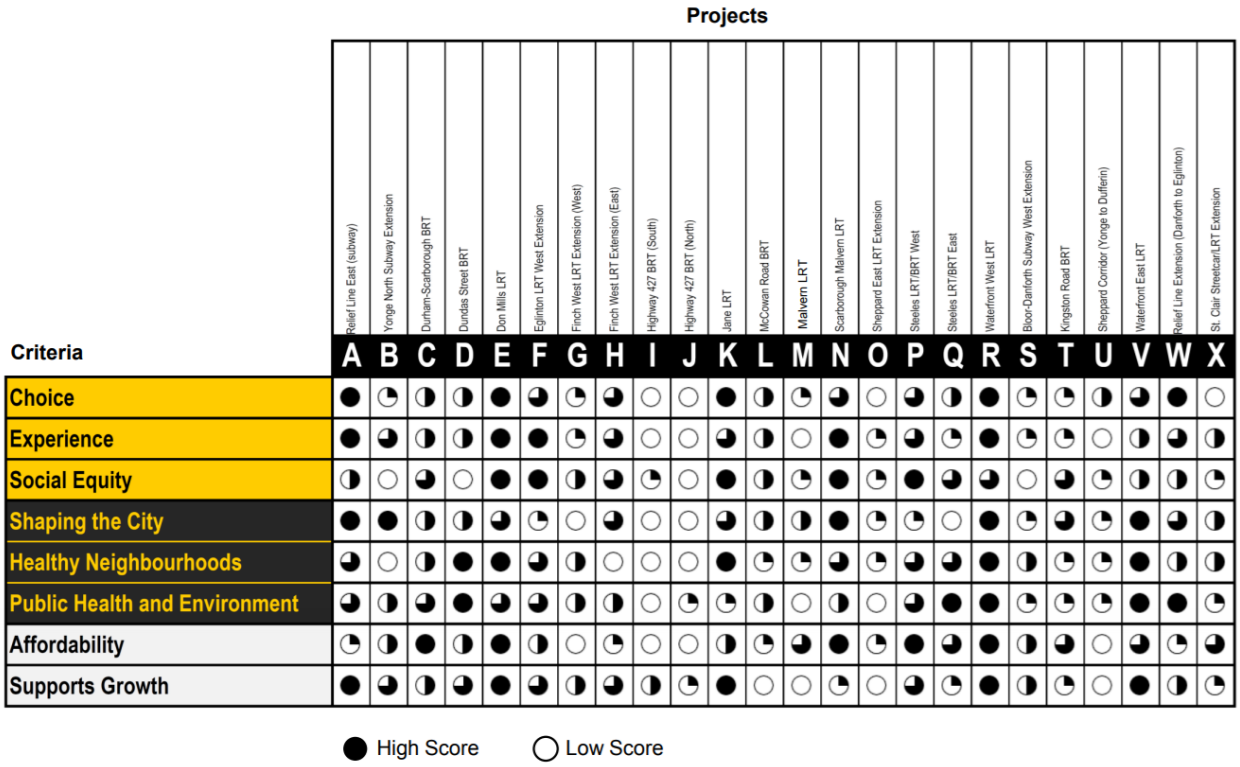
(Received from stakeholders during Draft 2041 RTP engagement in 2017):

Projects or investments should:

- contribute to safety;
- recognize project- or location-readiness;
- be relatively easy to implement (e.g., already bundled, or can be done with another at the same time);
- address capacity constraints, improve travel times, improve reliability;
- have capacity to generate revenue;
- be affordable or cost-effective;
- conform to legislated requirements;
- act as a prerequisite that facilitates related initiatives, or demonstrate value as a pilot project;
- have a demonstrated regional impact (or local, if appropriate); and
- have a positive impact on a particular key market, an existing gap or a group facing systemic barriers to transit use (e.g., low-income groups).

3. City of Toronto - Feeling Congested Evaluation Criteria

The City of Toronto developed, in consultation with public stakeholders, eight criteria on which transit projects would be evaluated as part of its "Feeling Congested" planning work in 2013. For each criterion, there are a handful of quantifiable measures used to score how a transit project performed in each category. Instead of providing a ratio or a score for each transit project, the final evaluation uses circles to rank each project. None of the criteria are weighed, and it allows the strengths and weaknesses of each project to be clearly seen.



4. 2041 RTP Evaluation Long List Evaluation Objectives

	1	2	3	4	5	6	7	8	9	10	11
	The transportation system aligns with compact development and complete communities, making walking, cycling & transit competitive for most trips.	The transportation system prioritizes active transportation options, supporting healthy communities.	Travel by transit is seamless and well-coordinated with other modes.	Transit provides good connectivity to jobs, services and other destinations, specifically for those who rely on it most.	Transportation infrastructure, services and technology are accessible to everyone.	Transit offers an attractive, high-quality user experience.	The transportation system is designed to be safe for all users.	The transportation system is maintained, expanded and continually innovating to support the region's economic growth and prosperity.	The transportation system provides a range of reliable options for the efficient movement of people and goods.	The transportation system is designed to be environmentally sustainable and resilient to climate change.	Planning, building, and operating the transportation system will be collaborative with all invested partners.
Transit Mode Share	x									x	
Travel Time									x		
Travel Reliability			x			x			x		
Service Coverage				x				x			
Active Mode Share	x	x						x		x	
Traveller Info.			x		x						
Fare Integration			x								
Seamless Travel			x								
Transit Affordability				x	x						
Universal Accessibility		x		x							
AODA Compliance				x	x		x				
Passenger Comfort						x					
Transit Capacity						x		x			
Safety (& Perceptions)		x				x	x				
Development Densities	x	x									
Network Resilience									x	x	
Efficient use of Resources									x		
Air Quality										x	
Transportation Innovation								x			
Goods Movement								x	x		
Note: meeting the collaborative objective will be assessed by monitoring whether programs or policies are applied in multiple jurisdictions or if transit projects cross municipal boundaries.											

Appendix C: Interjurisdictional practices

Greater Toronto and Hamilton Area

Investment Strategy. Metrolinx, 2013.

The 2013 Metrolinx *Investment Strategy* identified the following principles for new revenue:

- **Dedication of revenues to specific outcomes**: At all times the public should be able to see exactly what they are paying for and have an assurance that funds are not diverted to other priorities.
- **Fairness**: The costs and benefits of the *Investment Strategy* should be distributed fairly across all population groups in all parts of the GTHA. Tools should be selected so that no one group pays too much or benefits too little.
- **Equity across the region**: All parts of the region should benefit from the investment in transit and transportation infrastructure. No community should be left behind.
- **Accountability and transparency**: When implementing the *Investment Strategy*, tools and project delivery progress should be visible and the results publicly reported on a regular basis, including how funds are being collected, managed and spent.

Making the Move. The GTHA Transit Investment Strategy Advisory Panel, 2013.

The Advisory Panel report that followed the Metrolinx *Investment Strategy* proposed the following criteria:

- **Sufficient and sustainable revenue**: Building more than $50 billion in new transit investment and keeping those projects operational once complete is expensive. New revenue tools must be introduced to generate sufficient funds to support transit projects over the entire useable life of an asset, typically ranging from 25 to 50 years.
- **Fairness across regions and among income groups and sectors**: No region should be unfairly impacted by the choice of new revenue tools, nor should any one sector or income group. Options should aim to strike a fair balance where all sectors that benefit from transit contribute. The Province has already committed to ensuring that parts of Ontario outside of the GTHA will not have to pay for transit expansion within the GTHA.
- **Easy to implement and administer**: The Panel recognizes that the government has a responsibility to collect funds in the most cost-effective manner and to keep the costs of compliance as low as possible. Selection of a new revenue source with high administration and implementation costs would be counter-productive.
- **Provides choice and encourages less reliance on the automobile**: The Panel favoured revenue sources that contribute to reduced congestion and greater choice and encourage alternatives to the car. Some revenue tools have the ability to affect travel behaviour and, by extension, the performance of the GTHA's transportation network.

Selected revenue tools should send price signals that encourage efficient travel choices.

- **Minimizes economic impacts and distortions**: The tools must not act as significant disincentives to business investment or reduce the region's ability to attract human capital in today's global economy. Any significant change in revenue tools should be phased-in to allow time for the economy to adjust.
- **Ensures accountability and transparency**: All of the research, stakeholder submissions and public consultations demonstrate that new revenue raised for transit and transportation-related activities must be dedicated in a transparent manner. The ability to monitor spending and track the progress of individual projects against plan is essential.

***Build Regional Transportation Now*. Toronto Board of Trade, 2014.**

Recommendations on governance included:

- **Improved status quo model**: An enhanced status quo scenario would maintain existing transit authorities, but would seek to enhance regional integration and planning along with improved transit decision-making through a number of changes and reforms to existing system.
- **Provincial agency model**: Upload all policy and planning, infrastructure expansion and project management, and transit operations and maintenance responsibilities now undertaken by multiple bodies to a single agency. Potentially this could mean amalgamation of GO Transit, Toronto Transit Commission and other local transit authorities under an expanded Metrolinx or other provincial ministry, department or agency. The agency would be politically accountable to a minister (e.g., Minister of Transportation).
- **Municipal special purpose body models**: Consolidation of all policy and planning, infrastructure expansion, project management and transit operations and maintenance to a single agency. Potentially this could mean amalgamation of Metrolinx, GO Transit, Toronto Transit Commission and all local transit authorities under one municipally appointed special purpose body. Such a body could be accountable to a board of directors comprised of the regional chairs (Durham, Halton, Peel, and York) and the mayors of Hamilton and Toronto, which would have responsibility for approving all major policy decisions such as overall strategy, finance, etc.

Jurisdictions outside the GTHA:

TransLink regional transportation authority – Vancouver, B.C.
TransLink is Metro Vancouver's regional transportation authority, and the first North American transportation authority responsible for planning, financing and managing all public transit, major regional roads and bridges. Together with partners, stakeholders and its operating companies, TransLink plans and manages the region's transportation system as a whole. It is governed by the Mayors' Council on Regional Transportation and its own board of directors, which includes the provincial minister responsible for TransLink, representatives of the Mayors' Council, the Vancouver Board of Trade and others appointed by the Mayors' Council.

Metro Vancouver is a political body and corporate entity operating under provincial legislation as a regional district with four "greater boards" that deliver regional services, policy and political leadership on behalf of 23 members. The federation of 21 municipalities, one electoral area and one Treaty First Nation collaboratively plans for and delivers regional-scale services, including public transit and planning for urban growth. The regional district is itself governed by a Board of Directors of elected officials from each local authority. TransLink's services are funded by taxation revenue (property, fuel and parking taxes), a hydro levy, and user fees (transit fares and bridge tolls).

Autorité régionale de transport métropolitain – Montréal, P.Q.
The Autorité régionale de transport métropolitain (ARTM) or Metropolitan Regional Transportation Authority, is an umbrella organization that manages and integrates roads and public transportation in Greater Montréal. The organization was created by the Government of Québec on June 1, 2017, along with the Réseau de transport métropolitain (RMT), its operating branch, which replaced the Agence métropolitaine de transport (AMT). The two new organizations represent a regional transit authority responsible of administering service contracts for the entire region, and an entity in charge of operating the metropolitan transit network.

Under the new governance structure, the number of parties responsible for planning and providing fixed-route and paratransit services has been reduced to four operators to support coherent service planning across the region, and to provide accessible, reliable and efficient services. The region now has an authority that can act on multiple transport modes and propose integrated mobility solutions.

The new model clarifies the role of each level of governance. At the political level, the Communauté métropolitaine de Montréal (CMM) approves capital programs, strategic plans and policies on transit funding. The ARTM plans, finances and organizes the transit services that will be delivered by the operators under contract. The ARTM will also develop carpooling and active transportation, and propose standards regarding the management of the metropolitan arterial network. Its Board of Directors will consist primarily of independent transit experts.

Funding for public transit in the Montréal region primarily comes from the provincial Land Transportation Network Fund, which mainly includes revenues from a fuel tax, driver's licence and vehicle registration fees, municipal contributions, a portion of revenues from Québec's greenhouse gas emissions cap-and-trade system; and user fees in the form of transit fares.

Regional Transportation Authority, Chicago, U.S.A.

The Regional Transportation Authority (RTA) provides transit planning and oversees local transportation operators in the Chicago metropolitan area, including the Chicago Transit Authority (CTA), Metra (the suburban rail system) and Pace (the suburban bus system). The RTA has transportation authority for six counties, including the City of Chicago. It also implements projects, administers grant programs and develops plans aimed at growing ridership and improving mobility. The RTA also provides technical and analytical expertise to municipalities and transportation agencies across the region in support of local public transit initiatives.

The RTA Board consists of 16 directors, five of which are appointed by the Mayor of the City of Chicago, and ten of which are representatives from the surrounding counties. The Board Chair, its remaining member, is elected by the Board.

The RTA operating budget is funded from different sources: fares and other operating revenue, the RTA sales tax imposed in the region, a Public Transportation Fund comprised of the state matching a percentage of RTA sales tax dollars collected, a real estate transfer tax and state funding for paratransit and additional assistance from the State of Illinois.

About half of capital funding is provided by the federal government, while a CTA Transit Tax Increment Financing funds account, RTA bond proceeds and service funds make up the remainder.

It is important to note that the RTA is not the Metropolitan Planning Organization (MPO) for the Chicago metropolitan area. The Chicago Metropolitan Agency for Planning (CMAP) is the MPO, and as such is responsible for developing the long-range transportation plan for the region, and in order to be eligible for federal funding, major capital projects, including transit projects, must be included in this fiscally-constrained long-range transportation plan.

Transport for London – London, England

Transport for London (TfL) is a local government body responsible for the transport system in Greater London, comprising 33 local government districts. TfL has responsibility for London's main road routes, rail networks, trams, buses, taxis, cycling network and river services. The services are provided by a combination of wholly owned subsidiary companies (principally London Underground), private sector franchisees (the remaining rail services, trams and most buses) and licensees (some buses, taxis and river services).

TfL is also responsible, jointly with the national Department for Transport (DfT), for commissioning the construction of the new Crossrail line, and will be responsible for franchising its operation once completed.

TfL is controlled by a board whose members are appointed by the Mayor of London. The body is organised into corporate services and three main directorates, each with responsibility for different aspects and modes of transport. TfL is funded from four main sources: fares (the largest source), grant funding from the DfT and Greater London Authority, borrowing, and other income, including advertising, property rental and congestion charging.

Verkehrsverbund Berlin-Brandenburg – Berlin, Germany
The Verkehrsverbund Berlin- Brandenburg is a transport association run by public transport providers in the German states of Berlin and Brandenburg. It is a private limited company owned jointly by the states of Berlin and Brandenburg, and the 18 counties and cities of Brandenburg. It coordinates the services of 40 public transport companies, the introduction and development of a common fare system and the improvement and quality control of services. It also assists with planning, tendering and managing regional railways.

A Verkehrsverbund is a regional governance model common in German and Swiss planning organizations. Similar to Metropolitan Planning Organizations in the United States, they provide capital and some operating funding to local transit operators, and are able to coordinate and integrate fares and schedules so that transfers between different operators are as seamless as possible. Local entities maintain control over details of the implementation of policies. Routes, schedules and fares are ultimately regional responsibilities. They also support a structure that combines efficiencies of a single regional transit provider with elements of local control.

Zürcher Verkehrsverbund – Zurich, Switzerland
The Zürcher Verkehrsverbund (ZVV) is a public transportation system that was established in 1990 as a unified fare system with a coordinated local network. It combines rail, bus, tram, trolleybus, lake boat, cable car and other services in Zürich (extending to neighbouring locations), integrating them into a single fare network with harmonized timetables. Local providers focus on operations, while ZVW is responsible for strategic planning, as well as for the financing and marketing of the transport system.

Transport for New South Wales – Sydney, Australia

Transport for New South Wales (TfNSW) was established in November 2011 as the lead agency for integrating the transport system, and improving the quality of transport services in NSW. TfNSW is an important component of the NSW Government's whole-of-government reform to restore economic growth, improve service delivery, renovate infrastructure, strengthen communities, and restore accountability to government. It reports to the Minister of Transportation and an Advisory Board.

TfNSW promotes the integration of all transport modes and coordination across all stages of transport planning and decision-making. It is intended that the operating agencies will become increasingly engaged as part of a fully integrated transport system that offers a quality, seamless travel experience to customers. Responsibilities include strategy, planning, policy, regulation, funding allocation and other non-service delivery functions for all modes of transport in the Region including road, rail, ferry, light rail, point to point, regional air, cycling and walking.

In recent years the organization has brought together the planning and decision-making functions within TfNSW from operating agencies, designed new structures to enable collaboration, and consolidated the transport budget as part of TfNSW. It also created the Long Term Transport Master Plan, which provides the opportunity to adopt governance arrangements for long term planning that will further reinforce the strengths of customer-focused and integrated transport planning, operation and delivery.