



## **Regional Express Rail Update**

Metrolinx Board of Directors  
Dec 11, 2014

# Update Highlights

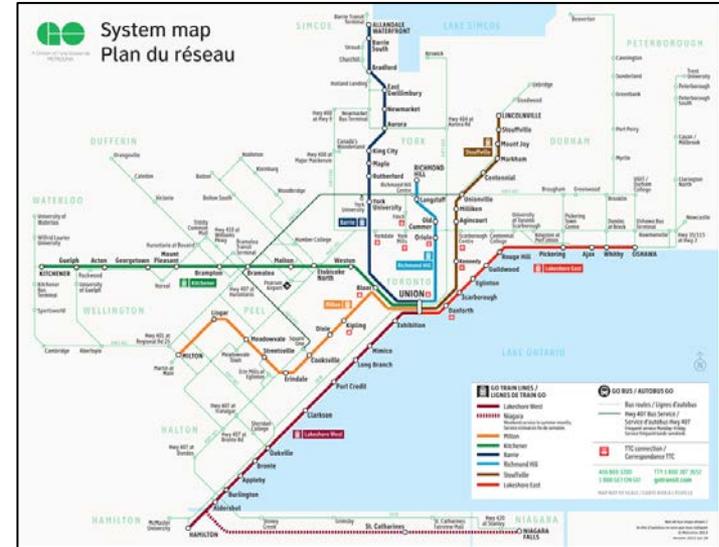
- Preliminary Business Case results on Regional Express Rail (RER) are positive
- Many areas of congruence exist between RER and SmartTrack
- Metrolinx is developing a comprehensive public and stakeholder engagement strategy
- A number of early actions have been identified to begin delivering the RER program

# Provincial Commitment

- RER is part of the Ontario Budget commitment of \$29B over 10 years across Ontario to transportation infrastructure, including \$15B dedicated to transit funding in the GTHA
  - Builds on the first wave of Big Move projects, such as the Eglinton Crosstown LRT
  - Continues expansion towards two-way, all-day GO Transit rail service, which is identified as a priority
  - Includes the proposal to electrify GO rail service on Metrolinx-owned corridors to deliver service as frequent as 15 minutes
  - States the Province will work with Metrolinx and municipalities on the prioritization of next wave projects, through the use of business case analysis
  - Sets out the opportunity to work with the federal government to secure federal funding through the Building Canada Plan

# Regional Express Rail

- RER is transformative and creates new travel choices across the GTHA
  - An electrified service on corridors Metrolinx owns with 15-minute frequencies in core areas
  - Service in both directions, throughout weekdays, in evenings and on weekends
  - All-stop and limited stop service, to meet demand and reduce travel times
- Phasing of RER delivery will consider business case analysis, ridership growth, appropriate sequencing of infrastructure projects and other evidence-based factors
- New services can be introduced in each and every year of the 10-year program



# RER Work Plan

In conjunction with the Province, Metrolinx staff continue to advance the RER work plan and are leading the analytical work which is comprised of four key elements:

1. **Service Concept**, in order to define the frequency and type of service on each corridor
2. **Infrastructure Needs**, in order to identify the infrastructure and equipment that will be needed to deliver on the Service Concept
3. **Phasing Plan**, to identify the optimal sequencing of infrastructure and service
4. **Engagement Plan**, to identify the work necessary to engage stakeholders that include the public, municipalities, and elected officials

# Update on RER Program Development

# What is a Service Concept?

## A Service Concept:

- Defines the frequency and type of service on each corridor
- Is the basis for analysis of ridership, infrastructure needs and implementation strategies

*It is made up of three components...*

| Frequency and Extent of Service                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Peak period</li><li>• Off peak periods</li><li>• Core vs. outlying tiers of the network</li></ul> |

| Type of Service                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• All-stop</li><li>• Limited-stop (express trains)</li><li>• A mix of both</li></ul> |

| Service Speed                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Electrification</li><li>• Other infrastructure improvements that may increase service speed</li></ul> |

# Developing the Service Concept

- The starting point was the provincial vision to deliver 15-minute, electrified service on Metrolinx-owned corridors in 10 years
- The 10-year time frame serves as the benchmark for translating the vision into the service concept
- Alternative service concepts are being developed to test how different levels of service performs in terms of costs and benefits
- The next step is to develop sample schedules to further refine the service and infrastructure details
- Metrolinx anticipates that the recommended service concept will be completed in the first quarter of 2015 and will be released with the Province at that time

# Going from a Service Concept to an Infrastructure Plan: Some Key Considerations

## **New tracks**

- Bidirectional service requires two tracks
- Express Service may require additional tracks to overtake all-stop service

## **Grade separations**

- With more frequent trains, road-to-rail grade separations are needed at many locations
- At rail intersections, rail-to-rail grade separations may be required

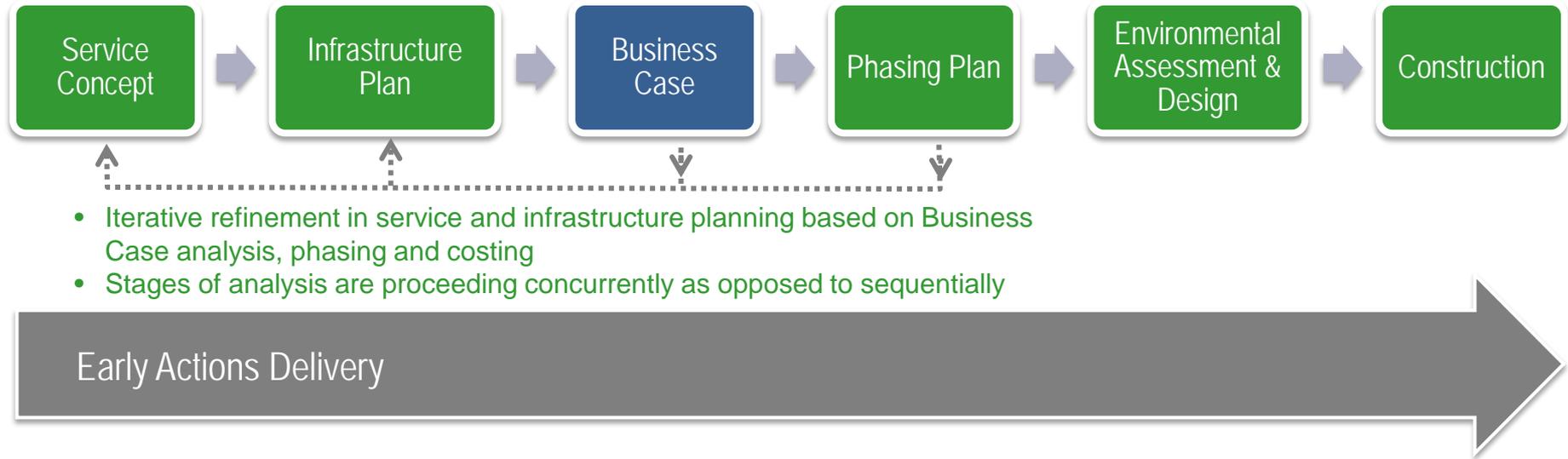
## **Station works**

- More tracks and service create need for new platforms and enhanced station access facilities (e.g., bus loops, parking). New stations are also being considered

## **Phasing construction and new service**

- Construction needs to be phased carefully with new service to optimize disruption and costs

# The Business Case within the RER Work Plan



# Business Case Update

- As committed by the Province, decision-making on the allocation of provincial funding to the RER program and other Next Wave projects will be done through an evidence-based process
- Business case analysis is a key component of the evidence being developed
- This analysis is measuring the value of benefits generated by a proposed project, relative to the costs incurred delivering the service
- Methodology includes:
  - Lifecycle approach over 60 years
  - Real 2014 prices
  - 3.5% discount rate to 2014 net present values
  - Inclusion of capital expenditures, operating expenditures, ridership, revenue and economic benefits
  - Current analysis is based on the existing system, with no new stations or fare integration; these factors will be added as more work is undertaken

# Preliminary Business Case Results

- Preliminary business case results for the network shows that RER generates positive benefits by attracting new customers and reducing congestion.
  - Initial results suggest that benefits could exceed costs by a factor of three-to-four times.
  - Ridership on GO could more than double from the current levels of just under 200,000 daily trips to over 450,000 daily trips by 2031.
  - Through RER, it is estimated that GO's share of trips over 10km in length could triple from the current 3.6% by 2041.
  - RER diverts many trips off the road and highway network, leading to benefits from congestion relief.
  - RER has the potential to reduce crowding on existing transit lines.
  - RER will make better use of existing infrastructure, building ridership cost-effectively.
  - As we consider the impact of adding new stations in Toronto and the surrounding regions, as well as greater fare and service integration, there is the potential for further benefits.
- Additional work is underway to refine the analysis, as well as to determine benefits and costs on a corridor-by-corridor basis.

# Status of Business Case Work Components

## Work in progress:

- On going refinement of capital cost estimates
- Operating costs for system scenarios
- Ridership modelling and fare revenue predictions on a corridor-by-corridor basis
- Economic benefits
- Consideration of deliverability critical path drivers
- Early draft Business Case document, including identification of key areas of work outstanding
- Consideration of SmartTrack integration and business case impacts

## Additional work to be included in Business Case:

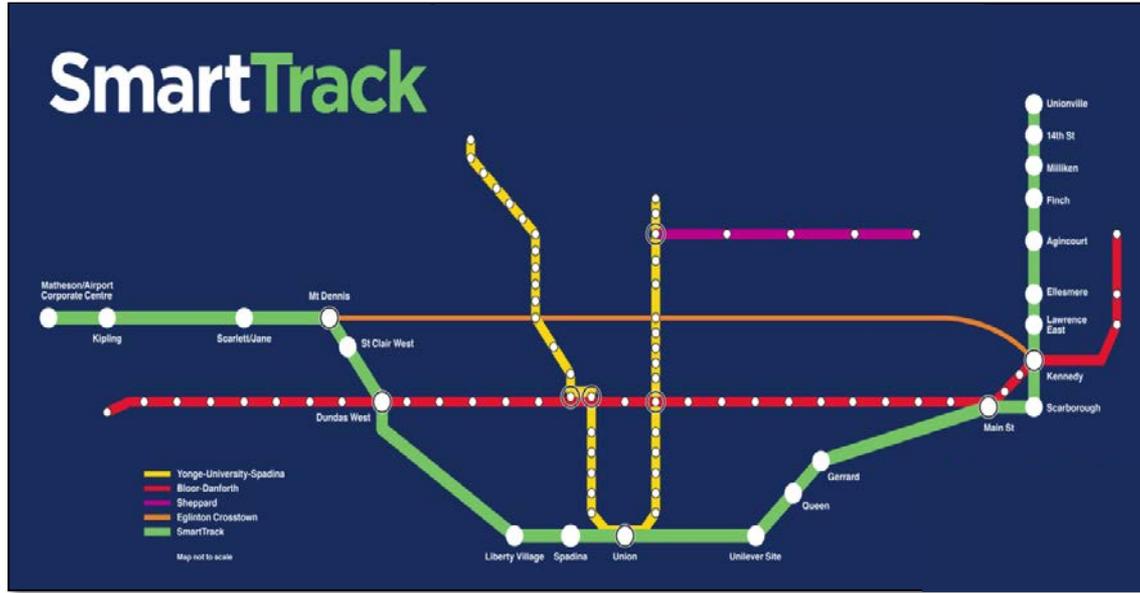
- Wider economic benefits development and inclusion in Business Case
- Socio-economic benefits development and inclusion in Business Case
- Station-by-station access analysis, looking at the origins and destinations within station catchment areas, and capability for station access by different modes
- SmartTrack costs and benefits review
- Analysis of potential development around stations, to incorporate new office, residential, or institutional uses that could drive significant non-trending ridership growth
- Incorporation of fare integration strategies into the modelling of scenarios

# RER and Other Next Wave Projects

- Planning for RER considers the full network, and interactions between RER and other existing and planned projects
- RER and other transit projects will be compared based on quality of life, environmental, and economic criteria using evidence from the business cases and other sources
- Outcome is a recommendation for a 10-year program roll-out
- Preliminary results suggest that RER, together with other committed and planned improvements, does provide material relief across the network; more work with municipalities to be completed to determine network relationships and conclusions

# Regional Express Rail and SmartTrack

# SmartTrack Proposal



- All-day, two-way, frequent express service across the city
- Use of Kitchener and Stouffville rail corridors, and Eglinton Avenue, west of Mount Dennis
- 53km, 22-stop electrified line
- To be built in seven years
- Use TTC fare system
- Metrolinx delivered and operated
- \$2.5 B funding from the City
- Requires City Council approval

# SmartTrack and RER Congruence

- Many areas of congruence between SmartTrack and RER, including level of service, use of existing rail corridors and electrification
- Metrolinx and the City of Toronto are working cooperatively to develop the proposed program
- Key topics being discussed include:
  - Integration of SmartTrack as part of RER network
  - Integration with TTC services at RER stations
  - New station locations
  - Fare policy
  - Eglinton West corridor
  - Funding and delivery

# SmartTrack in Context



- 1 RER Stouffville GO Corridor
- 2 RER Kitchener GO Corridor
- 3 Union Station Rail Corridor
- 4 Eglinton Corridor Mt. Dennis to Airport Corporate Centre

# Next Steps

- Metrolinx and Toronto are establishing a joint program committee to:
  - Provide a coordinated approach to planning
  - Coordinate public outreach and engagement
  - Advance SmartTrack as a major element to RER

# Public and Stakeholder Engagement

# Effective Engagement is Critical

- Effective engagement with municipalities, stakeholders, communities and the public will be key to the success of RER
  - Program involves extensive construction and ongoing service expansions that impact communities and neighborhoods
  - Local transit services will need to be optimized to provide effective, high-quality access to stations
  - Close partnership with CN, CP and VIA required in order to advance service expansion and electrification, particularly on corridors owned by CN and CP
- Tools and approaches will need to be developed to engage (and work with) communities, stakeholders, the public, and elected officials throughout the planning and delivery of the program

# Engagement Phases

There are distinct phases of engagement all with different audiences:

- **Awareness and launch:** raise the understanding and scope through outreach to elected officials and create a Stakeholder Forum, and specific Corridor Committees. All will be supported by digital engagement as well as communications activities
- **Environmental Assessments:** complete the EAs required to support specific corridor enhancements, as well as a system-wide EA for electrification
- **Local community engagement:** engage and work with local communities most impacted by construction
- **Launch of new services:** the expanded service will be supported by a marketing and communications campaign

# Awareness: Regional Engagement

## **Stakeholders Committee**

- Cross section of key leaders – business, academic, labour and civil society – to provide advice on RER implementation

## **Municipal Officials**

- Municipal officials are a key constituency in RER due to the impacts on municipalities as well as the potential for greater transit in their communities
- Engagement will occur with both elected officials and senior staff

# Awareness: Corridor Engagement

## **Corridor Committees**

- The scope for these corridor committees is to discuss more local issues and implementation on each of the corridors
- Each of the seven corridors will have different needs due to infrastructure enhancements and electrification
- Membership would reflect the broad arrangement of municipal, community and business interests along each of the seven corridors

# Consultation and Engagement: Local Communities

- Once the service concept and infrastructure plan is finalized, we will be in a position to develop an overarching communications and community relations strategy, and more specifically, a neighbourhood or community focused approach
- Based upon preliminary work to date, there will be a number of Environmental Assessments as well some infrastructure enhancements that will need to be commenced that could have a local impact

# Examples of Early Actions

# Completed Environmental Assessments

- Stouffville: Additional track to Unionville; Lincolnville layover expansion
- Kitchener: UP Express electrification; additional track from Union Station to the UP Express spur and from Georgetown to Kitchener
- Lakeshore West: Expansion beyond Hamilton Junction on CN corridor
- Barrie: Additional track from York University to Rutherford

# Planned Environmental Assessments and Design

- Network-wide study for key rail/road grade separations; EA/design for selected crossings
- Lakeshore East: additional track-Union Station to Pickering Station
- Lakeshore West: additional track-Burlington Station to Aldershot Station
- Richmond Hill: Doncaster rail/rail grade separation (near Langstaff Station)
- Barrie: additional track-Toronto to Allandale Waterfront Station; new train storage facility and existing facility expansion; Davenport rail/rail grade separation (at CP North Toronto subdivision)
- Kitchener: rail/rail grade separation west of Mount Pleasant Station; new train storage facility
- Milton: train storage facility expansion

# Electrification – Early Actions

- Pursue system-wide electrification EA and electrification design
- Work with regulators to streamline EA process for electrification (Metrolinx and Hydro One processes)
- Continue to design corridor infrastructure to protect for future electrification
- Retain external advisory support to advance electrification including:
  - Program and construction management
  - Preliminary design for the electrification of the GO Network
  - Network-wide EA approval
  - Procurement advice

# Infrastructure - Early Actions

## Construction:

- Union Station Revitalization: Construction 2009-2016
- East Rail Maintenance Facility: Construction 2012-2017
- Union Station: Signaling system contract awarded, construction 2015-2019
- Barrie: Additional track between York University and Rutherford, construction 2015-2017
- Kitchener: Shirley Road layover, construction 2015-2016



# Overall Next Steps

- Refine Service Concept, Infrastructure Plan and Phasing Plan
- Initiate Metrolinx/Toronto Program Committee with mandate to advance SmartTrack within the RER program
- Engage with regions, municipalities, local transit agencies and other community stakeholders on RER planning and delivery
- Advance on identified early actions, including design, environmental assessment, and short term construction projects
- Report back to the Metrolinx Board at next meeting

