

Public Sector Leadership Awards UP Express – Transforming the Way Toronto Moves

Nominating Information:

Organization: Metrolinx, Union Pearson Express

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Enhancing Toronto's Urban Transportation System

Union Pearson Express (UP Express) is Toronto's long-awaited answer to a fast and efficient connection between downtown and Toronto Pearson International Airport (Toronto Pearson). Operating on a 15-minute schedule, 19 ½ hours a day, 7 days a week, UP Express is a convenient and reliable choice to bridge the 25 km between downtown Toronto and Toronto Pearson in only 25 minutes

Building an integrated transit system

For over three decades, an air-rail link was identified as critical piece of infrastructure to help Toronto respond to its rapidly growing population. In 2008 the regional transportation authority, Metrolinx, released its plan for an integrated transit system. Entitled *The Big Move*, this internationally recognized vision to keep the Greater Toronto Hamilton Area (GTHA) moving identified nine *Big Moves*, including transit connectivity between downtown Toronto and Toronto Pearson. After Toronto successfully won the rights to host the 2015 Pan Am/Parapan Am Games, a traditional catalyst for infrastructure projects, the Province of Ontario asked Metrolinx to design, build and operate the long awaited air-rail service. Launched in June 2015 after only four years of construction, UP Express is the first rail project completed as part of *The Big Move* and is just one of the ways in which Metrolinx is transforming transportation for the region.

A responsive solution to a growing city

Toronto is Canada's largest city and financial centre, and North America's fourth largest city. The population of the region is steadily growing and is forecasted to increase 43 per cent and become home to 8.6 million residents by 2031. Home to Canada's two busiest transportation hubs, Union Station in downtown Toronto and Toronto Pearson, Toronto is a key gateway into Canada and North America. Passenger volumes for Toronto Pearson are keeping pace with regional growth and by 2030 the airport is expected to be the origin and destination point for almost 60 million travelers a year. Union Station is the main integration point for the local and regional transit systems and the national passenger rail system. Each year an estimated 65 million passengers pass through Union Station and this figure is expected to double by 2031. UP Express is part of the solution to help move these passengers to their destination efficiently and effectively.

A fast, efficient and reliable choice

UP Express offers air travelers another choice on how to connect to the airport. Historically, air travelers have had few options for bridging the distance between downtown Toronto and Toronto Pearson. Personal car, taxi or private limo service are the traditionally preferred modes of transportation. This results in an estimated five million cars a year traveling between the airport and downtown, and this number will skyrocket to nine million by 2020. This gridlock means travel time to and from downtown is unpredictable and can often take between 50 - 75 minutes one-way for a 25 km trip. Car transportation can also come with a steep price. The cost for taxis ranges between \$60 and \$70 and parking costs as much as \$22.50 a day. While limited public transit is available and a low cost solution, it is not a direct route and a one-way trip can take as much as 90 minutes.

Easing an economic burden

UP Express is part of an integrated transportation plan to address the growing cost of congestion to residents and businesses alike. Toronto is home to some of the busiest highways in the world and has been recognized as having the worst congestion in North America. With the number of cars on the road steadily increasing, congestion is a significant business impairment and the costs to commuters and the economy will balloon to \$7.8 billion and \$7.2 billion, respectively.

Of the 11.9 million passengers traveling to and from the UP Express catchment area, when UP Express reaches maturity it is expected to capture 20 – 25 per cent of the market. Within three years of operations, the service will move an estimated 2.5 million people from road to rail translating to 1.2 million fewer car trips each year.

UP Express – An Innovative Approach

Part of a plan to keep Toronto moving and ready the city for long-term growth and prosperity, UP Express is a welcome piece in Toronto's transportation puzzle and a lasting legacy that enhances Toronto's position as a world-class city. UP Express is more than simply a connector service. Guided by a vision to be an undeniable symbol of Ontario's progress and prosperity, the service was designed to change the way people travel to and from the airport and elevate the way they experience our city.

Throughout construction and into operations, it has set new standards for best practices, incorporated state-of-the-art technology, and pioneered new funding opportunities for public transportation in Canada. As a result of its fastidious commitment to excellence and innovation, UP Express was delivered on time and on budget and has been recognized as a transformative benchmark for air-rail services around the globe.

Leading air-rail links are at the cross-roads of transportation and hospitality. UP Express marries functionality with customer experience to deliver an experience unparalleled to any public transportation in North America. Designed entirely through the lens of the customer, it is a welcome relief for today's busy traveler and reinforces the message that Toronto is a more

liveable, workable and leisurely place to be, and a global destination for tourists, businesses and culture.

Creating a new standard for excellence

When UP Express broke ground in 2010, the program was not only large in terms of size and scope, but also complexity. Delivered on time and within its budget of C\$456 million (\$2010), the UP Express program was guided by a robust plan and four key pillars:

1. Economical: value for money
2. Efficient: departures every 15 minutes with a total travel time of 25 minutes
3. Environmental: moving car trips to rail trips thereby, reducing congestion and reducing overall travel time
4. Elevated: an experience catering to the needs of today's savvy business and leisure travelers

The program consisted of over 100 projects and extensive infrastructure works including:

- design and construction of two new stations
- extensive renovations to two on-line stations to create integration points with existing public transportation
- design and construction of a 3 km elevated rail line
- design and manufacturing of 18 new vehicles
- design and development of major technology streams
- creation of an and innovative strategic partnership program
- development of customer choreographies to ensure the UP guest experience is truly memorable

Stations: UP Express consists of four stations – one at either end of the service and two community stations. Union Station was part of an extensive revitalization project and is the flagship feature. Strategically situated in the heart of the city, it provides easy access to hotels, entertainment, restaurants and the business district as well as interconnectivity with other transit options. An iconic part of the city's landscape, Union Station is a key connector point for VIA Rail, the Toronto subway system (TTC), the regional commuter service (GO Transit) and the world's largest underground shopping mall which connects downtown over a 30 km pathway.

UP Express Union Station is 18,396 sq. ft. over two levels. The first floor is the combination platform/waiting area and retail space. The second floor has additional lounge space, as well as a staff room for crews and mechanical and electrical systems.

The design and amenities of the station are what makes the UP Express Union Station spectacular. With a promise to delight guests throughout their experience, the station provides a warm ambiance with designs rooted in the UP Express brand. It has been outfitted to provide comfort and convenience while being wrapped up in an air of sophistication. The station is drenched in natural light and incorporates architectural elements that are welcoming and functional.

At the other end of the service, Pearson Station directly connects travelers to Toronto Pearson International Airport. Conveniently nestled beside Terminal 1, Pearson Station is less than 150 metres from the gates. Abutting the existing inter-terminal automated people mover, the station serves as a seamless integration point to Terminal 3 and the airport parking facilities.

Pearson Station soars 28 meters above ground and is an impressive sight to those arriving or departing the airport. With 4.5 metres high windows, this long slim space provides travelers with the first glimpse of the city skyline. There is 808 m² of finished space and the station has similar finishings to Union Station.

With customer experience being a paramount driver behind design and operations, key features of these stations include:

- Convenient connectivity with commuter, rail and airlines providers
- Wi-Fi
- airline check-in kiosks
- baggage tag printing
- flight information displays
- infotainment screens showcasing events and attractions
- charging stations
- climate controlled environment
- level boarding via perfectly synchronized platform screen doors
- picture postcard views of Toronto and comfortable seating complete with fireplace
- multi-currency automated teller machines will dispense Canadian, US dollars, Mexican Pesos, Euros and British Pound Sterling

There are also two on-line community stations at Bloor and Weston which provide travelers with seamless integration to GO Transit and the TTC. While these stations are smaller than Pearson and Union, they are the perfect quick connection for local residents on the go.

Rail Line: UP Express runs along the expanded GO Kitchener corridor that is shared with Metrolinx's regional commuter service GO Transit. Known as the Georgetown South project, UP Express was part of a \$1.2 billion initiative to accommodate two-way service and increased commuter capacity through upgraded track and signaling works. This project was one of the largest infrastructure rail initiatives ever undertaken in this region and a key enabler to UP Express.

Identified as the most cost effective way to connect UP Express to the airport, a 3 km elevated heavy rail line was constructed to connect guests directly to the busiest terminal. The longest elevated rail line in Ontario, it was not only a key element of the UP Express project, but also one of the most challenging. Running through a mature area which is next to one of the most heavily travelled highway networks in North America, the line navigates through a web of existing roads, over and underpasses, a creek, buildings and utilities. At its highest point, the rail

line climbs to 28 metres above ground and provides an impressive view punctuated by the iconic CN Tower.

Vehicles: Inspired by global best practices, the trains have been designed for service excellence. The exterior is a nod to the golden age of rail incorporating greens and golds into the colour palate. The interiors are handsome and reassuringly solid with practical finishes including warm woods, strong steel and warm felts. Simple industrial elements such as lighting, handles and switches feel functional, offset by leather details and comforting textures that bring natural elements indoors, and are warm in winter and cool in summer. Key features include:

- platform screen doors
- level boarding
- luggage storage racks
- overhead bins
- washroom
- seat-back tray tables
- charging outlets

Innovation

Being recognized for innovation is a strategic imperative guiding the UP. This commitment is most evident in the vehicles, the integration of technology and pioneering non-fare revenue initiative.

Vehicles: UP Express operates on 18 Tier 4 “clean diesel” multiple units. They are the first of their kind in North America and conform to the strictest non-road engine emissions standard available – the Tier 4 standard set by the U.S. Environmental Protection Agency. This technology reduces airborne particulate emissions by 90 per cent and nitrogen oxides by 80 per cent. The DMUs are also designed to be convertible to electric propulsion.

Integrated Technology: Creating a seamless experience for customers while ensuring delivering operational excellence required a robust technology program. To support the guest experience, key technology elements include:

- Seamless end-to-end WiFi from station-to train-to station
- Airline check-in kiosks at Union Station
- Baggage tag printing at Union Station
- Flight information displays both in the stations and on-board the trains
- Infotainment screens in stations and on-board trains showcasing events and attractions, news feeds and entertainment
- Climate controlled environment so guests can easily move between stations and trains
- Level boarding via synchronized platform screen doors to support accessibility

In order to provide flexible ticket purchase options and accommodate a complex structure based on types of guests and distance, UP Express utilizes several ticketing technologies. Stations are equipped with PRESTO machines, the regional transit fare card, so travelers can

simply “tap and go”. PRESTO users have a double bonus of a convenient experience and a preferred fare rate. Guests can also purchase tickets on the website or via a mobile app. Those who prefer to purchase a ticket at the station, ticket vending machines are readily available and provide a simple and intuitive ticketing solution. Finally, a preferred pricing plan has been developed for airport employees and the system allows for the simple management of the fare and identification of qualified individuals.

Financial opportunities

Strategic Partnerships: To further enhance the customer experience, while also creating incremental revenues and cost-avoidance opportunities, a Strategic Partnership Program was launched. Unique and innovative in the Canadian transportation and public sectors, Partnerships align leading brands with a legacy transportation initiative and the elevated UP Express positioning.

By leveraging the value businesses place on reaching UP Express guests, it has created a recurring revenue stream from partners, while also contributing to cost avoidance. Woven across the service and integral to enabling key services and amenities expected by today’s traveler, partners range from technology, telecommunications, consulting and financial services, through to retail partners offering food, beverage and consumer goods.

A Benchmark for Success

UP Express project has many learnings can be applied within other operating units of Metrolinx, as well as elsewhere in industry. The top elements of the UP program include its program management approach, technology and strategic partnerships.

Program Management

From very early on the program, there was an unwavering commitment to delivering the program on time and on budget without straying from the vision. This required a meticulous program management approach and governance structure that ensured all players (UP Express, Internal Divisions of Metrolinx and Vendors) reported under the same governance structure. This provided detailed visibility to the overarching Executive Committee and UP Express president. By ensuring executive leadership had direct visibility of all the important project risks and issues, they could quickly respond and make timely decisions to prevent program failures and/or program cost & schedule overruns.

Technology

Mobile ticketing is a relatively new feature in public transportation in Canada and UP Express has laid the ground work for other services to follow suit. Within Metrolinx, mobile ticketing is now being replicated. Additionally, key technologies are being extended to other operating units at Metrolinx and outside Metrolinx including:

- Wi-Fi
- Infotainment screens at platforms and onboard trains
- Flight Information Displays
- Level boarding

- Platform screen doors
- Airline Check-in Kiosks

Strategic Partnerships

This program is new and innovation in the public transportation sector. With a considerable investment made in understanding the opportunities and creating the framework for success, it now serves as a platform in which other services can launch a program and generate incremental revenues within their target markets. Within UP Express, the program was met with overwhelming support and within the first year, far surpassed the identified revenue targets.

Growing a Sustainable Service

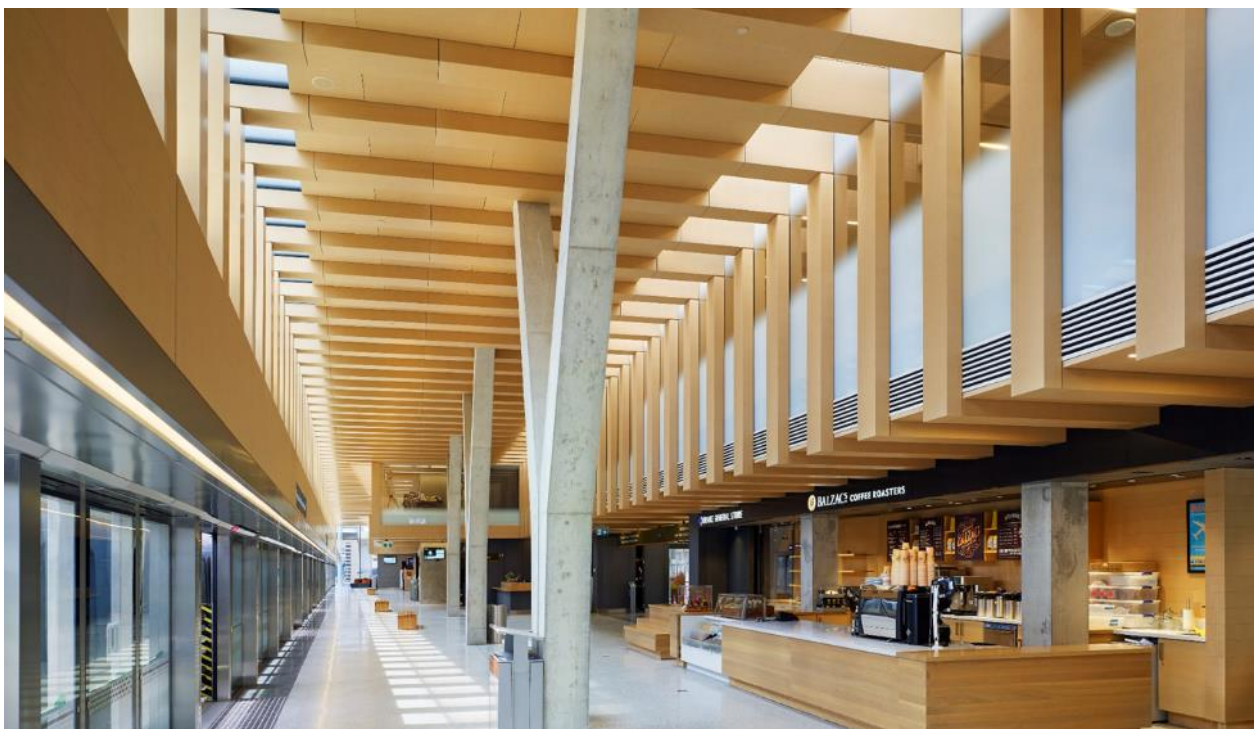
With only nine-months of operations since launch, UP Express is still in its infancy and will take upwards of five years to reach maturity. While more common place in Europe, air-rail links are a new phenomenon in North America, and as a perennial hurdle for all public modes of transportation, consumers need to break from their old, well-entrenched, travel habits and reliance on cars. To accomplish this the primary focus has been on creating awareness to generate trial of the service and ultimately build repeat use. The route and efficiency of UP Express are undisputable, the service now needs trail and adoption. Innovative approaches such as creating a corporate discounting program and targeting conferences and events are netting results, as are special promotions and marketing efforts. Throughout this ramp-up phase, UP Express remains steadfast in its vision and strategic commitment to delivering an exceptional guest experience that sets it apart and makes it the undisputed choice for connecting between downtown and the airport.

Note – please see appendices for photos of service

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UP Express – Transforming the Way Toronto Moves – Appendices

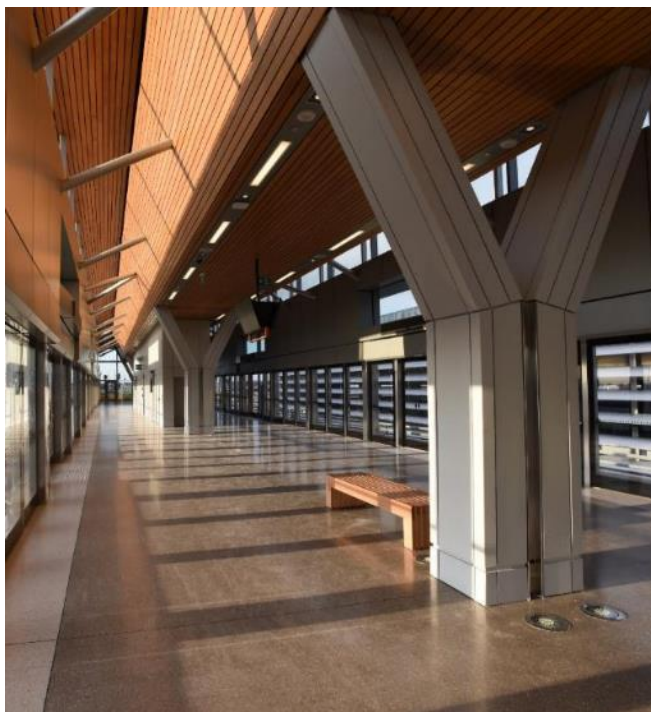
Union Station



Integrated Guest Experience



Pearson Station



UP Express Vehicles



On-Board Guest Experience

