

ABOUT THE GREATER TORONTO AIRPORTS AUTHORITY (GTAA)

The GTAA has been a regional economic engine since taking over the management and operation of the Toronto Pearson International Airport in 1996. As Canada's busiest airport it handled 32 million passengers, and 430,000 aircraft movements in 2008 and handles 517,000 tonnes of cargo annually. It provides employment, directly and indirectly, for some 186,000 people and generates over \$1 billion in annual revenue. Located on 1,867 hectares (4,613 acres) at the heart of the Pearson Eco-Business Zone, the GTAA is a visionary leader in airport sustainability and a founding partner of Partners in Project Green.



An aerial overview of Toronto Pearson International Airport.

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LEVERAGING THE TRIPLE BOTTOM LINE:

GTAA'S ASPIRATIONAL JOURNEY TO AIRPORT SUSTAINABILITY LEADERSHIP

Environmental stewardship has been one of the cornerstones of the GTAA mission since it took over the commercial management of Toronto Pearson in 1996. Charged with the vision to create and manage a globally competitive airport, the Board of Directors identified corporate sustainability as one of three key strategic themes. Embedded within the GTAA's culture of global achievement, this theme has emerged as an aspirational goal to be a world leader in airport sustainability. Consequently, the triple bottom-line elements of sustainability (economic, environmental and social)

are increasingly reflected in performance measures. The combined force of this triple bottom-line approach and the organization's capacity to build relationships with its customers, neighbours, corporate communities, and staff, has created unique synergies like the Partners in Project Green.

Like any business, the GTAA has no shortage of operational challenges. The routine obstacles of rising debt (due to expansion and the replacement of aging terminals), instability in the airline industry, mounting demands for greenhouse gas emission reductions, and community concerns about noise and environmental impacts are managed along with the challenges of terrorism, aviation accidents, and pandemics. Yet in the face of these pressures, the GTAA hasn't missed a step en route to pursuing corporate sustainability. Over the last several years it has deepened its commitment by adding a Corporate Social Responsibility (CSR) function, appointing an Energy Manager, undertaking employee and executive management consultations and launching Partners in Project Green with the Toronto and Region Conservation Authority. There is recognition that the GTAA's future prosperity is linked to the sustainability of the communities it serves. Its efforts are increasingly focused on contributing to those communities.

TRIPLE BOTTOM LINE GOALS:

FINANCIAL SUSTAINABILITY

A central financial target for the GTAA is to "achieve cost reductions in operation and maintenance while preserving customer service, safety and environmental programs". Within this "no trade-offs" goal, the GTAA has managed to arrive at a point of convergence - a place where financial, environmental and social objectives align and deliver emergent benefits.

When new airport security rules restricted movement of incoming goods for vendors at the airport, the GTAA saw this as an opportunity to address waste, emissions, and traffic issues as well. It responded by opening a new logistics centre for central reception and returns. Not only did this resolve the security issues, but it also allowed the centralized return and recycling of items previously sent to landfill by vendors. The result in 2007 was \$1,115,637 in deposits returned to tenants and an increased rate of waste diversion. In addition, groundside delivery truck congestion and associated air pollution at the terminal buildings decreased. In effect this project improved passenger safety, effectively lowered operating costs to tenants, increased waste diversion and lowered CO2 emissions; multiple wins for the triple bottom line.

In another case, a Corporate Social Responsibility initiative for Earth Hour resulted in found opportunities which then saved millions of dollars and reduced greenhouse gases. In 2008, Toronto Pearson was the first airport in North America to participate in Earth Hour. The initiative became a challenge to the airport facilities and maintenance staff to see how far the GTAA could lower its power consumption while maintaining customer satisfaction. The result was a 3 MW savings in a single day, a 10 per cent reduction in electricity use. The findings from this initiative were applied to save energy year-round, resulting in a 3 per cent reduction in electrical costs in 2007 and avoiding more than 15,875 tons of CO2 emissions. Spurred on by this success, the following year the corporation saved nearly \$ 1 M through lighting reduction and relamping programs.

In the final analysis, what started out as a CSR initiative resulted in lower operating costs, increased employee engagement, and a boost to corporate reputation, while meeting the safety and comfort of the greater airport community.

\$4 Million in Annual Energy Savings

Between 2004 and 2008 the GTAA saved approximately \$13 million on electricity and \$730,000 on heating and cooling. Energy saving initiatives included:

- Making temperature adjustments such as decreasing winter heating temperatures by two degrees Celsius.
- Reusing steam from the Cogeneration Plant to power boilers and chillers for terminal heating and cooling.
- Zone isolation, off hours control and better management of unoccupied areas.
- Reduced lighting levels in unoccupied areas and during off hours and efficiently using natural light for daylight harvesting.
- Extensive use of photocells and schedules in the lighting management system of terminals, hangars and office buildings and installing motion sensors and switches.
- Re-lamping older fixtures from incandescent to compact fluorescent lamps.
- Employee awareness through newsletters and mass emails for load reductions during peak demand days and increased signage to turn off lights, and baggage belts.

ENVIRONMENTAL SUSTAINABILITY – BEYOND COMPLIANCE

The GTAA has demonstrated how internal management systems drive performance through continuous improvement. In 1999, the organization became the first airport in North America to certify its environmental management system (EMS) to ISO 14001. “I see our commitment to environmental stewardship as enabling our license to operate,” explains Randy McGill, Director of Environmental Programs. “Our job is to ensure that we plan for the long term. We need to set and exceed environmental targets, and anticipate critical environmental issues.” At the GTAA, environmental sustainability is as much about laying the foundation for the organization’s profitable growth as it is about being a good corporate citizen.

Setting and monitoring environmental targets for air and water quality, water use, energy efficiency, waste, spills and wildlife control form the backbone of the EMS program. For example, waste diversion increased from 13 per cent to 46 per cent in the last 10 years and is targeted to rise to 50 per cent in 2009. However, beyond the borders of a traditional EMS program, the triple bottom line approach is evident in broader initiatives to capture and recycle glycol, use green building standards and manage stormwater.



Toronto Pearson's Terminal 1 - the bottom photo shows regular lighting and the top photo shows the reduced lighting during Earth Hour 2009.

Glycol Capture and Recycling:

Glycol is used for aircraft deicing and it has the potential to kill fish if it runs into watercourses. The GTAA's upgraded Central Deicing Facility delivers the appropriate concentration of blended glycol during aircraft deicing. It also enables comprehensive glycol collection and concentration of spent glycol for resale into secondary automotive and mining markets. This system resulted in increased operational efficiency and reduced costs to the airlines while generating a small revenue stream from spent, concentrated glycol. This initiative meets the GTAA's financial objective "to reduce cost per enplaned passenger" and has decreased exceedences of stormwater contamination from more than 300 per year to zero.

Green Building and Construction Programs

Sustainable design and green building standards were added to the GTAA's Airport Construction Code and Green Building Policy in 2000. For McGill, Leadership in Energy and Environmental Design (LEED) standards have made all the difference in the world. "Today the LEED standard brings together our operations and environment departments with the architects and engineers to choose the best long term green building solution. The standard provides a common base for decision-making", notes McGill.

The GTAA's first LEED Silver-certifiable facility, The Fire and Emergency Services Training Institute (FESTI) became operational in 2007. The facility includes a solar wall, thermo decking, a green roof, water savings technologies and the use of recycled building materials. "The payback on FESTI is more than financial. It has become an effective place for environmental related seminars and meetings," says McGill. "On the bottom-line, it cost us about 5 per cent more to build and will use 35 per cent less energy, thus reducing our ongoing operating costs."



Toronto Pearson's Central Deicing Facility - at the time of construction was the largest in the world.

Green construction practices were used on the new air terminal and the demolition of Terminal 2. The reuse and recycling of construction and demolition waste (i.e., concrete, metals, wood, etc.) increased from 50 per cent in 1999 to 99 per cent in 2007. The cost of materials was decreased, truck traffic to and from the airport reduced and GHG emissions lowered.

Stormwater Management

The GTAA is proud of its stormwater management facilities. "This is one of our most creative projects", says Irene Hawrylyshyn, General Manager, Corporate Social Responsibility and Cultural

Affairs. “Commenced in 1996, it is one of the most state of the art in the world, and continues to be a model for other airports.” The \$100 million facility manages stormwater quality and quantity prior to it entering neighbouring watercourses.

GTAA-TRCA Stormwater Partnership Leads to Partners in Project Green

Stormwater management provided the impetus for Partners in Project Green.

“As Toronto and Region Conservation Authority (TRCA) worked with us to set up our stormwater management system; we recognized that water from neighbouring businesses and municipalities were also having an impact on the stormwater quality at our site”, notes Randy McGill. “It occurred to us if we work together; water quality could be improved and further GTAA expenditures on stormwater management might not be necessary.”

SOCIAL SUSTAINABILITY – BUILDING SOCIAL CAPITAL

The GTAA’s social sustainability programs strengthen the corporation’s financial and environmental bottom line by building social capital or “creative trust” with neighbours, corporate community members and employees.

Neighbours:

Keeping the lines of communication open is a key theme in the consultation program with neighbours and stakeholders. The Community Environment and Noise Advisory Committee is one of several forums for discussion. Here issues related to noise and environmental impacts, economic development, transit, commercial aviation and airport operations are openly discussed and studied to find positive opportunities and solutions.

Corporate Community Involvement- Partners in Project Green:

“Greening” and growing the business community around the airport are the objectives of the GTAA-sponsored Partners in Project Green initiative. “Partners in Project Green has tapped the ‘pent up demand’ to go green,” comments McGill. “Most of these businesses were unsure where to start until we got them in the same room and they started learning from one another.” McGill enthuses that the real action takes place in the informal networking sessions. “It’s valuable to hear the owner of a company talk passionately about the results of investments made with his own cash; it validates that ‘greening a company’ really works.” McGill notes that he no longer has to travel around the world to learn about the practical operation of green technologies, he can see them in his own backyard.

Employees:

It’s an age old story - a motivated and prepared workforce leads to operational efficiency and employee satisfaction. In a quest to achieve these triple bottom-line goals, the GTAA surveyed 1,200 full and part-time employees to determine what it would take to make it a more dynamic and rewarding workplace.

Responses by more than 800 employees revealed that the organization needed to do more. Simply put, employees said they needed and wanted more frequent and more meaningful communication

about every aspect of the GTAA's business, including its strategic objectives. "This was a real wake up call for us," explains Hawrylyshyn.



GTAA employees and students from a local private school help clean-up the Etobicoke Creek.

On the heels of the report, numerous initiatives were implemented. An internal communication position was created. The employee intranet portal was redesigned and computer kiosks deployed in areas where staff did not have individual computers. The employee newsletter, the suggestion program "Your Voice at the GTAA", and "Coffee With Lloyd" sessions (with CEO Lloyd McCoomb) all provided improved communication. Also, leadership and communication training was rolled out to managers.

Although the GTAA currently experiences excellent retention and low turnover; the organization is committed to fully engaging employees to achieve its financial, environmental and social goals. "We know that commitment and understanding the organization's goals are critical to employee engagement," notes Hawrylyshyn. "We just need to achieve better alignment and provide opportunities for employees to really make a difference."

LESSONS FROM THE TRIPLE BOTTOM-LINE:

The journey to become a world leader in airport sustainability, using a triple bottom-line approach, comes packed with a wealth of practical lessons.

1. Best practices come from benchmarking - Over the years, the GTAA has invested significant resources on benchmarking its practices and technologies, such as snow removal, against others. The company has saved a significant amount of money this way. Additionally, it chose to create a benchmark of its own performance over time using measures like "cost of debt/enplaned passenger".
2. Management systems and communications activate employee engagement and measurable results - Management systems such as ISO 14001 and ISO 9001, were implemented for the Operations and Environmental Departments. Surveyed employees reinforced the adage "what gets measured and communicated – gets done".
3. Find linkages within the triple bottom-line: profit, planet, people - Although Earth Hour originally appeared to meet only social sustainability goals it did provide a virtual "pilot project" from which staff could learn how much energy could be saved on an ongoing basis.
4. Focus resources on the objectives - The GTAA identified clear corporate and department objectives, roles and responsibilities for operational efficiencies and sustainability, and directed dedicated resources to energy, environment and Corporate Social Responsibility areas to ensure success.

5. Use standards like LEED as an education tool - The GTAA found that different functions had different levels of knowledge on “green technologies”. The LEED Standard gave cross functional groups (engineers, architects, operations and environmental staff) a common criteria for technology evaluation.

The three dimensions of sustainability through the triple bottom-line: profit, planet and people, work together to achieve organizational goals. The GTAA has proven it is possible to achieve organizational efficiencies and reduce the cost of operations while preserving customer services, safety and environmental programs. People, particularly employees play a critical role. Hawrylyshyn concludes,

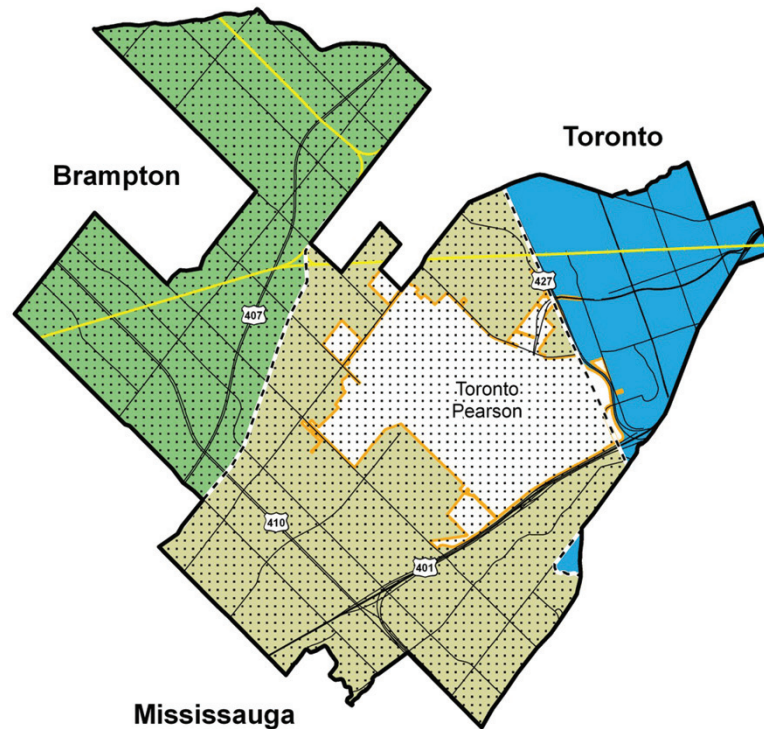
“There is a lot of pride in the organization and a desire to succeed. Whenever there are projects or things that need to be accomplished our organization as a whole works very, very well together. What we found is some fragmentation due to duplication of effort and lack of communication. Our lessons over the last two or three years are that if you open up the channels of communication, you minimize your duplication and then you get to cost savings and improved efficiencies. You also increase opportunities for employees to do more, engage more and to grow.”

WHAT IS PARTNERS IN PROJECT GREEN?

Opportunities to gain a competitive advantage through sustainable business practices are more attainable than you think. Partners in Project Green is a growing community of businesses working together to green their bottom line by creating an internationally-recognized eco-business zone around Toronto Pearson.

Through new forms of business-to-business collaboration, Partners in Project Green delivers programming that helps businesses reduce energy and resource costs, uncover new business opportunities, and address everyday operational challenges in a green and cost-effective manner.

PEARSON ECO-BUSINESS ZONE



www.partnersinprojectgreen.com